N60200.AR.000633
NAS CECIL FIELD, FL
5090.3a

REMEDIAL INVESTIGATION AT OPERABLE UNIT 2 (OU 2) SITE 5 AND SITE 17 VOLUME 2 OF 3 APPENDICES C THROUGH J NAS CECIL FIELD FL
5/1/1995
ABB ENVIRONMENTAL SERVICES INC

NAS Cecil Field Administrative Record
Document Index Number

32215-002
03.07.02.0002

REMEDIAL INVESTIGATION
OPERABLE UNIT 2

VOLUME 2: APPENDICES C THROUGH J

NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

UNIT IDENTIFICATION CODE: N60200
CONTRACT NO.: N62467-89-D-0317/090

MAY 1995

SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORTH CHARLESTON, SOUTH CAROLINA
29418

PRINTED ON RECYCLED PAPER

ABB

November 10, 1995 3110-Cecil

Mr. Bart Reedy
Remedial Project Manager
Federal Facilities Section
Waste Management Division
USEPA Region IV
245 Courtland Street, N.E.
Atlanta, Georgia 30365

Subject: Signature pages for the Final Remedial Investigation Report for Operable Unit (OU) 2, and the Final Remedial Investigation and Feasibility Study Workplan for Operable Units (OU) 3, 4, 5, and 6, Naval Air Station Cecil Field, Florida

Dear Mr. Reedy,

Florida-registered professional geologist signature pages were omitted from the Final Remedial Investigation Report for OU 2, and the Final Remedial Investigation and Feasibility Study Workplan for OUs 3, 4, 5, and 6. Enclosed are the signature pages for insertion into the respective documents.

Sincerely,

ABB ENVIRONMENTAL SERVICES, INC.

Rao Angara
NAS Cecil Field
Installation Manager

Distribution:

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Mr. John Mitchell, FDEP - DNR (1 copy)
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Ms. Lynn Sims, Bechtel Environmental, Inc. (1 copy)
BCT Office, NAS Cecil Field (2 copies)
File

This document that describes the Remedial Investigation of Operable Unit 2, Naval Air Station Cecil Field, Jacksonville, Florida, has been prepared under the direction of a Florida-registered professional geologist. The work and professional opinions rendered in this report were conducted or developed in accordance with commonly accepted procedures consistent with applicable standards of practice.

Allan M. Stodghill

Professional Geologist No. 508

Date: 10 NOV 1995

This document that describes the Remedial Investigation and Feasibility Study Workplan for Operable Units 3, 4, 5, and 6 Naval Air Station Cecil Field, Jacksonville, Florida, has been prepared under the direction of a Florida-registered professional geologist. The work and professional opinions rendered in this report were conducted or developed in accordance with commonly accepted procedures consistent with applicable standards of practice.

Eric A. Blomberg

Professional Geologist No. 1695

Date: 11-10-95

APPENDIX C

FIELD SCREENING RESULTS

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THE ASSURANCE OF QUALITY

BB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	5/16/93	5/16/93	5/16/93	5/16/93
Date Analyzed :	5/18/93	5/18/93	5/18/93	5/18/93
Time Analyzed :	12:33	13:29	14:02	14:36
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 700683	10 700684	10 700685	10 700686
Run Number :	ABB0518,6	ABB0518,7	ABB0518,8	ABB0518,9
Sample Name :	**AGSS-5-2**	**AGSS-5-3**	**AGSS-5-4**	**AGSS-5-5**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	(1)	ND	ND	ND
PID pk sum based on istd conc/area (mg/Kg)				0.25			
Date Analyzed :				5/19/93	5/19/93	5/19/93	5/19/93
Time Analyzed :				1130	1135	1137	1138
Analyzed By :				DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	4.7	15.0	ND(E)	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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THE ASSURANCE OF QUALITY

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Mana Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121 600

Date Recieved:	5/16/93	5/16/93	5/16/93	5/17/93
Date Analyzed :	5/18/93	5/18/93	5/18/93	5/18/93
Time Analyzed :	15:10	15:44	16.18	19:48
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 700687	10 700688	10 700689	10 700699
Run Number :	ABB0518.10	ABB0518.11	ABB0518.12	ABB0518.15
Sample Name :	**AGSS-5-6**	**AGSS-5-7**	**AGSS-5-8**	**AGSS-5-10**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0 004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	(1)
PID pk sum based on istd conc/area (mg/Kg)							2.2
Date Analyzed :				5/19/93	5/19/93	5/19/93	5/19/93
Time Analyzed :				1139	1115	1141	1153
Analyzed By :				DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND	12.0

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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THE ASSURANCE OF QUALITY

BB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn . Mana Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	5/17/93	5/17/93	5/17/93	5/17/93
Date Analyzed :	5/18/93	5/25/93	5/18/93	5/18/93
Time Analyzed :	20:22	15:35	21:28	22:01
Analyzed By :	SAB	RJS	SAB	SAB
Sample Number:	10 700700	10 700701	10 700702	10 700703
Run Number :	ABB0518,16	ABB525,11	ABB0518,18	ABB0518,19
Sample Name :	**AGSS-5-11**	**AGSS-5-12**	**AGSS-5-13**	**AGSS-5-14**
	(0-2)	0-2	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
tal Xylenes	1330-20-7	0.006	mg/Kg	ND	0.009	ND	ND
,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	(1)	(1)	ND	ND
PID pk sum based on istd conc/area (mg/Kg)				0.38	13		
Date Analyzed :				5/19/93	5/25/93	5/25/93	5/25/93
Time Analyzed :				1154	1158	1203	1206
Analyzed By :				DLF	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	33.0	ND(E)	40.0

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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THE ASSURANCE OF QUALITY

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Mana Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	5/17/93	5/17/93	5/19/93	5/19/93
Date Analyzed :	5/25/93	5/25/93	5/20/93	5/20/93
Time Analyzed :	16:09	16.42	10:15	10:48
Analyzed By :	RJS	RJS	SAB	SAB
Sample Number:	10 700704	10 700705	10 700731	10 700732
Run Number :	ABB525,12	ABB525,13	ABB520,4	ABB520,5
Sample Name :	**AGSS-5-15**	**AGGS-5-16**	**AGSS-5-18**	**AGSS-5-19**
	0-2	**0-2**	**0-2**	**0-2**

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	0.007	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	(1)	ND	(1)	(1)
PID pk sum based on istd conc/area (mg/Kg)				15		1.9	0.86
Date Analyzed :				5/25/93	5/25/93	5/25/93	5/25/93
Time Analyzed :				1208	1216	1256	1257
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND	7.3

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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THE ASSURANCE OF QUALITY

JB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Mana Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	5/19/	5/19/93	5/19/93	5/19/93
Date Analyzed :	5/19/93	5/26/93	5/28/93	5/26/93
Time Analyzed :	9:45	11:48	10:18	12:21
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number:	10 700735	10 700736	10 700737	10 700738
Run Number :	ABB528.3	ABB526.4	ABB528.4	ABB526.5
Sample Name :	**AGSS-5-20**	**AGSS-5-21**	**AGSS-5-22**	**AGSS-5-23**
	0-2	0-2	(0-2)	0-2

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
hylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
tal Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	(1)	(1)	(1)	(1)
PID pk sum based on istd conc/area (mg/Kg)				4.9	6.8	9.4	6.3
Date Analyzed :				5/27/93	5/25/93	5/27/93	5/27/93
Time Analyzed :				11:55	1105	12:04	12:06
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	910.0	180.0	4200	ND(E)

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
)=MDL 20X higher than that listed above.
)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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THE ASSURANCE OF QUALITY

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	5/19/93	5/26/93	5/26/93	5/26/93
Date Analyzed :	5/26/93	5/27/93	5/27/93	5/26/93
Time Analyzed :	1:43	18:43	19:14	15.09
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number:	10 700739	10 700750	10 700751	10 700752
Run Number :	ABB525.30	ABB527B11	ABB527B12	ABB526.10
Sample Name :	**AGSS-5-24**	**AGSS-5-26**	**AGSS-5-27**	**AGSS-5-28**
	0-2	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
					(2)	(2)	
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	0.005(C)	0.012(C)	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	0.016(C)	0.023(C)	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	0.077(C)	0.078(C)	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	(1)	(1)	(1)
PID pk sum based on istd conc/area (mg/Kg)				0.728	33	21	4.9
Date Analyzed :				5/27/93	5/27/93	5/27/93	5/27/93
Time Analyzed :				12:07	12:16	12:20	12:22
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	16.0	6100	1000	940

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
A)= Ran At This Dilution Due To Excessive Matrix Interference
E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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THE ASSURANCE OF QUALITY

.BB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121 600

Date Recieved:	5/26/93	5/26/93	5/26/93	5/27/93
Date Analyzed :	5/26/93	5/27/93	5/27/93	5/28/93
Time Analyzed :	16:17	19:44	18:13	16 52
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number:	10 700753	10 700754	10 700755	10 700771
Run Number :	ABB526,12	ABB527B13	ABB527B10	ABB528,16
Sample Name :	**AGSS-5-29**	**AGSS-5-30**	**AGSS-5-31**	**AGSS-5-32**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
hylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
otal Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	(1)	(1)	ND	ND
PID pk sum based on istd conc/area (mg/Kg)				4.3	10		
Date Analyzed :				5/27/93	5/27/93	5/27/93	5/29/93
Time Analyzed :				12:23	12:26	12:28	9.01
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	130	2900	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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INCORPORATED
THE ASSURANCE OF QUALITY

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	5/27/93	5/27/93	5/27/93	5/28/93
Date Analyzed :	5/29/93	5/29/93	5/29/93	5/29/93
Time Analyzed :	16:32	13:16	18:14	15:23
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number:	10 700772	10 700774	10 700775	10 700785
Run Number :	ABB529,15	ABB529,9	ABB529,18	ABB529,12
Sample Name :	**AGSS-5-36 (0-2)**	**AGSS-5-35 (0-2)**	**AGSS-5-37 (0-2)**	**AGSS-5-39 0-2**

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	(2) ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	0.016	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	0.114(C)	0.007	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	(1)	(1)	(1)	(1)
PID pk sum based on istd conc/area (mg/Kg)				10	12	15	4.6
Date Analyzed :				5/29/93	5/29/93	5/29/93	5/31/93
Time Analyzed :				9:16	9:26	9:29	14:05
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	10400	4100	5300	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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THE ASSURANCE OF QUALITY

J Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn Maria Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121 600

Date Recieved:	5/28/93	5/29/93	5/30/93	5/30/93
Date Analyzed :	5/29/93	5/31/93	5/31/93	6/1/93
Time Analyzed :	17:05	10:34	15.02	10:20
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number:	10 700786	10 700805	10 700824	10 700825
Run Number :	ABB529,16	ABB531,4	ABB531,12	ABB601,4
Sample Name :	**AGSS-5-40**	**AGSS-5-43**	**AGSS-5-44**	**AGSS-5-45**
	0-2	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
vlBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
al Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	(1)	ND	ND	(1)
PID pk sum based on istd conc/area (mg/Kg)				1.1			5.4
Date Analyzed :				5/31/93	5/31/93	6/1/93	6/1/93
Time Analyzed :				14:06	14:19	16:55	16:56
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	ND(E)	44	62	990

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
=MDL 20X higher than that listed above.
=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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THE ASSURANCE OF QUALITY

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn Maria Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	5/30/93	5/30/93	5/30/93	5/31/93
Date Analyzed :	6/1/93	6/1/93	6/1/93	6/1/93
Time Analyzed :	14:47	15:21	11:59	18:45
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number:	10 700826	10 700827	10 700828	10 700840
Run Number :	ABB601,12	ABB601,13	ABB601,7	ABB601,19
Sample Name :	**AGSS-5-46**	**AGSS-5-47**	**AGSS-5-48**	**AGSS-5-51**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	(1)	ND
PID pk sum based on istd conc/area (mg/Kg)						0.24	
Date Analyzed :				6/1/93	6/8/93	6/8/93	6/8/93
Time Analyzed :				16:57	13:29	13:30	13:46
Analyzed By. :				DLB	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	16	ND	ND	10

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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THE ASSURANCE OF QUALITY

3 Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	5/31/93	5/31/93	5/31/93	6/1/93
Date Analyzed :	6/1/93	6/1/93	6/1/93	6/2/93
Time Analyzed :	19:51	20:58	22:03	.15
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number:	10 700841	10 700842	10 700843	10 700851
Run Number :	ABB601.21	ABB601.23	ABB601.25	ABB601.29
Sample Name :	**AGSS-5-52**	**AGSS-5-53**	**AGSS-5-54**	**AGSS-5-55**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
·hylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
al Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
,,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	(1)	ND	ND	ND
PID pk sum based on istd conc/area (mg/Kg)				5.4			
Date Analyzed :				6/8/93	6/8/93	6/8/93	6/8/93
Time Analyzed :				13:49	13:51	13:52	13:55
Analyzed By :				DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	1300	18	19	4.0

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Mana Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121 600

Date Recieved:	6/1/93	6/8/93	6/8/93	6/8/93
Date Analyzed :	6/2/93	6/10/93	6/10/93	6/10/93
Time Analyzed :	47	22:36	23:09	23:42
Analyzed By :	RJS	SAB	SAB	SAB
Sample Number:	10 700852	10 700861	10 700862	10 700863
Run Number :	ABB601.30	ABB0610B.17	ABB0610B.18	ABB0610B.19
Sample Name :	**AGSS-5-56**	**AGSS-5-58**	**AGSS-5-59**	**AGSS-5-60**
	(0-2)	**(0-2)**	**(0-2)**	**(0-2)**

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	(1)	ND	ND	(1)
PID pk sum based on istd conc/area (mg/Kg)				0.243			400
Date Analyzed :				6/8/93	6/10/93	6/10/93	6/10/93
Time Analyzed :				13:56	11:31	11:32	11:34
Analyzed By :				DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	ND(E)	ND	7.5	13

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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.BB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Mana Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/8/93	6/8/93	6/8/93	6/8/93
Date Analyzed :	6/11/93	6/11/93	6/11/93	6/11/93
Time Analyzed :	17:16	17:51	18.27	19 01
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 700864	10 700865	10 700866	10 700867
Run Number :	ABB0611.16	ABB0611.17	ABB0611.18	ABB0611.19
Sample Name :	**AGSS-5-61**	**AGSS-5-62**	**AGSS-5-63**	**AGSS-5-64**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
otal Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/10/93	6/10/93	6/10/93	6/10/93
Time Analyzed :	11:38	11:40	11:41	11:07
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	62	56	12	11

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/9/93	6/9/93	6/9/93	6/9/93
Date Analyzed :	6/11/93	6/11/93	6/11/93	6/12/93
Time Analyzed :	21:15	21:48	22:21	11:48
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 700873	10 700874	10 700875	10 700876
Run Number :	ABB0611.23	ABB0611.24	ABB0611.25	ABB0612.6
Sample Name :	**AGSS-5-66**	**AGSS-5-67**	**AGSS-5-68**	**AGSS-5-69**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/11/93	6/11/93	6/11/93	6/11/93
Time Analyzed :	13:31	13:33	13:34	13:35
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	8.4	250	270

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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THE ASSURANCE OF QUALITY

JB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn Maria Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/9/93	6/10/93	6/10/93	6/11/93
Date Analyzed :	6/12/93	6/12/93	6/12/93	6/12/93
Time Analyzed :	12:24	14.42	15:17	18:08
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 700877	10 700895	10 700896	10 700904
Run Number :	ABB0612.7	ABB0612.11	ABB0612.12	ABB0612B.4
Sample Name :	**AGSS-5-70**	**AGSS-5-71**	**AGSS-5-72**	**AGSS-5-74**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
ylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
tal Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/11/93	6/12/93	6/12/93	6/12/93
Time Analyzed :	13:37	16:40	16:45	16:47
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	390	150	54	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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THE ASSURANCE OF QUALITY

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/11/93	6/11/93	6/11/93	6/11/93
Date Analyzed :	6/12/93	6/12/93	6/12/93	6/12/93
Time Analyzed :	19:49	20:22	20.56	21.29
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 700905	10 700906	10 700907	10 700908
Run Number :	ABB0612B,7	ABB0612B,8	ABB0612B,9	ABB0612B,10
Sample Name :	**AGSS-5-75**	**AGSS-5-76**	**AGSS-5-77**	**AGSS-5-78**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/12/93	6/12/93	6/12/93	6/12/93
Time Analyzed :	16:48	16:49	16:50	16:52
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	100	14	130	160

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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THE ASSURANCE OF QUALITY

BB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn Mana Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121 600

Date Recieved:	6/11/93	6/12/93	6/12/93	6/12/93
Date Analyzed :	6/12/93	6/12/93	6/12/93	6/13/93
Time Analyzed :	22:02	22:35	23:08	1
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 700909	10 700916	10 700917	10 700918
Run Number :	ABB0612B,11	ABB0612B,12	ABB0612B,13	ABB0612B,14
Sample Name :	**AGSS-5-80**	**AGSS-5-1**	**AGSS-5-9**	**AGSS-5-17**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/12/93	6/14/93	6/14/93	6/14/93
Time Analyzed :	16:53	10:15	10:19	10:20
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	3.7	14	ND(E)

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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THE ASSURANCE OF QUALITY

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/12/93	6/12/93	6/12/93	6/12/93
Date Analyzed :	6/13/93	6/13/93	6/13/93	6/14/93
Time Analyzed :	.41	22:12	22:42	20:07
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 700919	10 700920	10 700921	10 700922
Run Number :	ABB0612B,15	ABB0613G,6	ABB0613G,7	ABB0614B,19
Sample Name :	**AGSS-5-25**	**AGSS-5-33**	**AGSS-5-41**	**AGSS-5-49**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/14/93	6/14/93	6/14/93	6/14/93
Time Analyzed :	10:22	10:24	10:28	10:29
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	7.3	15	ND(E)

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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THE ASSURANCE OF QUALITY

Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121 600

Date Recieved:	6/12/93	6/12/93	6/12/93	6/12/93
Date Analyzed :	6/13/93	6/14/93	6/14/93	6/14/93
Time Analyzed :	23:42	12	42	1 12
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 700923	10 700924	10 700925	10 700926
Run Number :	ABB0613G,9	ABB0613G,10	ABB0613G,11	ABB0613G,12
Sample Name :	**AGSS-5-57**	**AGSS-5-65**	**AGSS-5-73**	**AGSS-5-81**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
Ethylbenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/14/93	6/14/93	6/14/93	6/14/93
Time Analyzed :	9:59	10:30	10:32	10:33
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND	180

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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THE ASSURANCE OF QUALITY

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Mana Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/12/93	6/12/93	6/12/93	6/13/93
Date Analyzed :	6/14/93	6/14/93	6/14/93	6/14/93
Time Analyzed :	1:42	2:12	22:06	22:35
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 700927	10 700930	10 700931	10 700932
Run Number :	ABB0613G,13	ABB0613G,14	ABB0614B 23	ABB0614B,24
Sample Name :	**AGSS-5-82**	**AGSS-5-83**	**AGSS-5-84**	**AGSS-5-79**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/14/93	6/14/93	6/14/93	6/14/93
Time Analyzed :	10:34	10:35	10:36	10:38
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	17	310	200	6.8

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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THE ASSURANCE OF QUALITY

GB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn Maria Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/13/93	6/13/93	6/13/93	6/13/93
Date Analyzed :	6/14/93	6/14/93	6/14/93	6/14/93
Time Analyzed :	13:27	14 01	14:31	15.01
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 700933	10 700934	10 700935	10 700936
Run Number :	ABB06148.6	ABB06148.7	ABB06148.8	ABB06148.9
Sample Name :	**AGSS-5-85**	**AGSS-5-86**	**AGSS-5-87**	**AGSS-5-87**
	(0-2)	(0-2)	(0-2)	(0-2D)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
hylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
otal Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/14/93	6/14/93	6/14/93	6/15/93
Time Analyzed :	10:39	10:44	10:46	17:27
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	600	69	18

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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THE ASSURANCE OF QUALITY

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/13/93	6/13/93	6/13/93	6/13/93
Date Analyzed :	6/14/93	6/14/93	6/14/93	6/15/93
Time Analyzed :	15:31	16:01	16:31	10:31
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 700937	10 700938	10 700939	10 700940
Run Number :	ABB0614B,10	ABB0614B,11	ABB0614B,12	ABB0615,4
Sample Name :	**AGSS-5-88**	**AGSS-5-89**	**AGSS-5-90**	**AGSS-5-91**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/15/93	6/15/93	6/15/93	6/15/93
Time Analyzed :	17:45	17:47	17:48	17:50
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

----		MDL	MDL	MDL	MDL
	Units	3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	3.3	507	ND(E)	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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THE ASSURANCE OF QUALITY

JB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121 600

Date Recieved:	6/13/93	6/13/93	6/13/93	6/14/93
Date Analyzed :	6/14/93	6/14/93	6/14/93	6/15/93
Time Analyzed :	17:38	18:07	18:37	11:03
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 700941	10 700942	10 700943	10 700944
Run Number :	ABB0614B,14	ABB0614B,15	ABB0614B,16	ABB0615,5
Sample Name :	**AGSS-5-92**	**AGSS-5-93**	**AGSS-5-94**	**AGSS-5-95**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
hylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
otal Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/15/93	6/15/93	6/15/93	6/15/93
Time Analyzed :	17:51	17:55	17:56	17:58
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND	4.1

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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THE ASSURANCE OF QUALITY

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn . Mana Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/14/93	6/14/93	6/14/93	6/14/93
Date Analyzed :	6/15/93	6/15/93	6/15/93	6/15/93
Time Analyzed :	11:35	18:07	12:39	13:11
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 700945	10 700946	10 700947	10 700948
Run Number :	ABB0615,6	ABB0615,17	ABB0615,8	ABB0615,9
Sample Name :	**AGSS-5-96**	**AGSS-5-97**	**AGSS-5-98**	**AGSS-5-99**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg.	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/15/93	6/15/93	6/15/93	6/15/93
Time Analyzed :	17:59	18:01	18:02	18:03
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	3.6	ND	6.2	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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JB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn Maria Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121 600

Date Recieved:	6/14/93	6/14/93	6/14/93	6/22/93
Date Analyzed	6/15/93	6/15/93	6/15/93	6/23/93
Time Analyzed :	13:42	14:14	14 46	13:51
Analyzed By :	SAB	SAB	SAB	RJS
Sample Number:	10 700949	10 700952	10 700953	10 700993
Run Number	ABB0615,10	ABB0615,11	ABB0615,12	ABB0623,11
Sample Name :	**AGSS-5-100**	**AGSS-5-101**	**AGSS-5-102**	**AGSS-5-104**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
thylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
otal Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/15/93	6/15/93	6/15/93	6/23/93
Time Analyzed :	18:04	18:05	18:07	15:26
Analyzed By :	DLF	DLF	DLF	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	54	20	96	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121 600

Date Recieved:	6/22/93	6/22/93	6/22/93	6/22/93
Date Analyzed :	6/23/93	6/23/93	6/23/93	6/23/93
Time Analyzed :	14:23	14:56	15:28	16 00
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number:	10 700994	10 700995	10 700996	10 700997
Run Number :	ABB0623,12	ABB0623,13	ABB0623,14	ABB0623,15
Sample Name :	**AGSS-5-104D**	**AGSS-5-105**	**AGSS-5-106**	**AGSS-5-106D**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0 004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0 004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/23/93	6/23/93	6/23/93	6/23/93
Time Analyzed :	15:30	15:31	15:32	15:33
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	ND	12	540	480

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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Environmental Services, Inc.
590 Executive Center Circle East
allahassee, FL 32301
ttn : Mana Pijnenburg

E. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
ACE Project Number: 930121 600

ate Recieved:	6/22/93	6/22/93	6/22/93	6/22/93
ate Analyzed :	6/23/93	6/23/93	6/23/93	6/23/93
ime Analyzed :	16.33	17:10	17:41	18:14
nalyzed By :	RJS	RJS	RJS	RJS
ample Number:	10 700998	10 700999	10 701000	10 701001
un Number :	ABB0623.16	ABB0623.17	ABB0623.18	ABB0623.19
ample Name :	**AGSS-5-107**	**AGSS-5-109**	**AGSS-5-109D**	**AGSS-5-110**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

olatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
Benzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/23/93	6/23/93	6/23/93	6/23/93
Time Analyzed :	15:34	15:37	15:38	15:39
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND(E)	57	26	12

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
MDL 20X higher than that listed above.
=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/22/93	6/23/93	6/23/93	6/23/93
Date Analyzed :	6/23/93	6/23/93	6/23/93	6/24/93
Time Analyzed :	18:46	21:58	22:30	11:47
Analyzed By :	RJS	RJS	RJS	PPE
Sample Number:	10 701002	10 701008	10 701009	10 701010
Run Number :	ABB0623.20	ABB0623.26	ABB0623.27	ABB0624.6
Sample Name :	**AGSS-5-111 (0-2)**	**AGSS-5-103 (0-2)**	**AGSS-5-108 (0-2)**	**AGSS-5-112 (0-2)**

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/23/93	6/24/93	6/24/93	6/24/93
Time Analyzed :	15:40	13:02	13:09	13:10
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	23	ND	ND	3.8

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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Environmental Services, Inc.
590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/23/93	6/23/93	6/23/93	6/23/93
Date Analyzed :	6/23/93	6/24/93	6/24/93	6/24/93
Time Analyzed :	23:34	12:27	13:00	16:15
Analyzed By :	RJS	RFE	RFE	RFE
Sample Number:	10 701011	10 701012	10 701013	10 701014
Run Number :	ABB0623,29	ABB0624,7	ABB0624,8	ABB0624,14
Sample Name :	**AGSS-5-113**	**AGSS-5-114**	**AGSS-5-114**	**AGSS-5-115**
	(0-2)	(0-2)	(0-2) D	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
Benzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg.	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/24/93	6/24/93	6/24/93	6/24/93
Time Analyzed :	13:13	13:14	13:15	13:16
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/23/93	6/24/93	6/24/93	6/24/93
Date Analyzed :	6/24/93	6/24/93	6/24/93	6/24/93
Time Analyzed :	14:04	16:47	17:19	17:51
Analyzed By :	FFE	FFE	FFE	FFE
Sample Number:	10 701015	10 701016	10 701017	10 701018
Run Number :	ABB0624.10	ABB0624.15	ABB0624.16	ABB0624.17
Sample Name :	**AGSS-5-116 (0-2)**	**AGSS-5-118 (0-2)**	**AGSS-5-118 (0-2)D**	**AGSS-5-119 (0-2)**

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/24/93	6/24/93	6/24/93	6/24/93
Time Analyzed :	13:17	17:41	17:45	17:46
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND(E)	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Mana Pijnenburg

RE. On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121 600

Date Recieved:	6/24/93	6/24/93	6/24/93	6/24/93
Date Analyzed :	6/24/93	6/24/93	6/25/93	6/24/93
Time Analyzed :	18:35	19:07	11:01	20:11
Analyzed By :	FFE	FFE	FFE	FFE
Sample Number:	10 701019	10 701020	10 701021	10 701022
Run Number :	ABB0624,18	ABB0624,19	ABB0625,3	ABB0624,21
Sample Name :	**AGSS-5-120**	**AGSS-5-120**	**AGSS-5-121**	**AGSS-5-122**
	(0-2)	(0-2)D	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
Ethylbenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/24/93	6/24/93	6/24/93	6/24/93
Time Analyzed :	17:47	17:48	17:49	17:52
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND(E)	ND

MDL - Method Detection Limit
ND - Not Detected
D - Confirmed By Second Column Analysis
1)=Unable to report due to excessive matrix interference.
2)=MDL 2X higher than that listed above.
3)=MDL 5X higher than that listed above.
4)=MDL 10X higher than that listed above.
MDL 20X higher than that listed above.
MDL 50X higher than that listed above.
7)=MDL 500X higher than that listed above.
A)= Ran At This Dilution Due To Excessive Matrix Interference
E)=Previously Reported At Less Than 3.0 ppm Are Estimates

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ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Mana Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/24/93	6/24/93	6/24/93
Date Analyzed :	6/24/93	6/24/93	6/24/93
Time Analyzed :	20:43	22:20	23:56
Analyzed By :	FFE	FFE	FFE
Sample Number:	10 701023	10 701024	10 701025
Run Number :	ABB0624,22	ABB0624,25	ABB0624,28
Sample Name :	**AGSS-5-122 (0-2)D**	**AGSS-5-123 (0-2)**	**AGSS-5-124 (0-2)**

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units			
Methylene Chloride	75-09-2	0.004	mg/Kg	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/24/93	6/24/93	6/24/93
Time Analyzed :	17:53	17:54	17:55
Analyzed By :	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

pace
INCORPORATED
THE ASSURANCE OF QUALITY

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	5/27/93	5/28/93	5/29/93	5/30/93
Date Analyzed :	5/30/93	6/10/93	5/31/93	6/10/93
Time Analyzed :	23:17	19:18	20:12	18:47
Analyzed By :	RJS	SAB	RJS	SAB
Sample Number :	10 700773	10 700784	10 700804	10 700829
Run Number :	ABB530,28	ABB0610B,11	ABB531B,6	ABB0610B,10
Sample Name :	**AGSS-5-34**	**AGSS-5-38**	**AGSS-5-42**	**AGSS-5-50**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: Soil

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL mg/kg	Units				
					(4)(A)	(2)	(4)(A)
Methylene Chloride	75-09-2	0.50	mg/kg	ND	ND	ND	ND
Benzene	71-43-2	0.25	mg/kg	ND	ND	ND	ND
Toluene	108-88-3	0.25	mg/kg	ND	ND	1.82(C)	(1)
Chlorobenzene	108-90-7	0.25	mg/kg	ND	ND	ND	(1)
EthylBenzene	100-41-4	0.25	mg/kg	0.371	ND	0.97(C)	(1)
Total Xylenes	1330-20-7	0.75	mg/kg	1.57(C)	ND	7.27(C)	(1)
1,3-Dichlorobenzene	541-73-1	0.25	mg/kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.25	mg/kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.25	mg/kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.50	mg/kg	(1)	(1)	(1)	(1)
PID pk sum based on istd conc/area (ug/L)				580	43000	760	79000
Date Analyzed :				5/29/93	5/31/93	5/31/93	6/8/93
Time Analyzed :				9:22	14:04	14:17	13:36
Analyzed By :				DLB	DLB	DLB	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	6900	16000	4200	2000

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported At Less Than 3.0 ppm Are Estimates

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:	04/28/89	04/28/89	04/30/89	04/30/89
Date Analyzed :	04/30/89	04/30/89	04/30/89	04/30/89
Time Analyzed :	1028	1100	1915	1948
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number :	576	10 700577	590	591
Run Number :	ABB501,9	ABB501,10	ABB501,18	ABB501,19
Sample Name :	GSS-5-1 (2-4)	GSS-5-1 (4-6)	GSS-5-15 (0-2)	GSS-5-15 (2-4)

FIELD ANALYSIS: MID LEV Soil

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL mg/kg	Units				
				7	7	7	7
Methylene Chloride	75-09-2	0.25	mg/kg	1	1	1	1
Benzene	71-43-2	0.25	mg/kg	1	1	1	1
Toluene	108-88-3	0.25	mg/kg	1	1	1	1
Chlorobenzene	108-90-7	0.25	mg/kg	1	1	1	1
Ethyl Benzene	100-41-4	0.25	mg/kg	1	1	1	1
Total Xylenes	1330-20-7	0.75	mg/kg	1	1	1	1
1,3-Dichlorobenzene	541-73-1	0.25	mg/kg	1	1	1	1
1,4-Dichlorobenzene	106-46-7	0.25	mg/kg	1	1	1	1
1,2-Dichlorobenzene	95-50-1	0.25	mg/kg	1	1	1	1
Naphthalene	91-20-3	0.50	mg/kg	1	1	1	1

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	05/03/89	05/03/89	05/03/89	05/03/89
Time Analyzed :	1551	1559	1604	1533
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/kg	5200	13000	12000	1100

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) = Unable to report due to excessive matrix interference.
(2) = MDL 2X higher than that listed above.
(3) = MDL 5X higher than that listed above.
(4) = MDL 10X higher than that listed above.
(5) = MDL 20X higher than that listed above.
(6) = MDL 50X higher than that listed above.
(7) = MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

6/3D.1

ABB Environmental Services, Inc.
2590 Executive Center Cirde East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:			04/30/89	05/04/89	05/04/89	05/10/89
Date Analyzed :			05/01/89	05/09/89	05/09/89	05/11/89
Time Analyzed :			1658	1846	1920	1121
Analyzed By :			RJS	JRA	JRA	JRA
Sample Number :			601	623	624	637
Run Number :			ABB502B,6	ABB0510,7	ABB0510.8	ABB0512,6
Sample Name :			GSS-5-13 (4-6)	GSS-5-17 (6-8)	GSS-5-17 (8-10)	GSS-5-11 (4-6)

FIELD ANALYSIS: MID LEV Soil

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL mg/kg	Units	(A) (6)			
Methylene Chloride	75-09-2	0.25	mg/kg	ND	ND	ND	ND
Benzene	71-43-2	0.25	mg/kg	ND	ND	ND	ND
Toluene	108-88-3	0.25	mg/kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.25	mg/kg	ND	ND	ND	ND
Ethyl Benzene	100-41-4	0.25	mg/kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.75	mg/kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.25	mg/kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.25	mg/kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.25	mg/kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.50	mg/kg	1	0.63(C)	1	0.84(C)
PID pk sum based on istd conc/area (mg/Kg)						100	

Date Analyzed :	05/03/89	05/11/89	05/11/89	05/13/89
Time Analyzed :	1502	1637	1645	1544
Analyzed By :	DLB	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/kg	4200	9.5	39	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) = Unable to report due to excessive matrix interference.
(2) = MDL 2X higher than that listed above.
(3) = MDL 5X higher than that listed above.
(4) = MDL 10X higher than that listed above.
(5) = MDL 20X higher than that listed above.
(6) = MDL 50X higher than that listed above.
(7) = MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:	05/12/89	05/18/89	05/26/89	05/26/89
Date Analyzed :	05/15/89	05/30/89	05/29/89	05/30/89
Time Analyzed :	1830	1941	1917	1840
Analyzed By :	RRE	RJS	RJS	RJS
Sample Number :	661	728	778	779
Run Number :	ABB0516,17	ABB531B,5	ABB530,20	ABB531B,4
Sample Name :	GSS-5-9 (4-6)	GSS-5-16 (2-4)	GSS-5-14 (0-2)	GSS-5-14 (0-2)D

FIELD ANALYSIS: MID LEV Soil

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL mg/kg	Units				
Methylene Chloride	75-09-2	0.25	mg/kg	ND	2		
Benzene	71-43-2	0.25	mg/kg	ND	ND	ND	ND
Toluene	108-88-3	0.25	mg/kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.25	mg/kg	ND	2.91(C)	0.318(C)	ND
EthylBenzene	100-41-4	0.25	mg/kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.75	mg/kg	ND	1.55(C)	ND	ND
1,3-Dichlorobenzene	541-73-1	0.25	mg/kg	ND	10(C)	1.15(C)	ND
1,4-Dichlorobenzene	106-46-7	0.25	mg/kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.25	mg/kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.50	mg/kg	1	ND	ND	ND
					1	1	1
PID pk sum based on istd conc/area (mg/Kg)				2500	690	680	570

Date Analyzed :	05/15/89	05/24/89	05/28/89	05/28/89
Time Analyzed :	1301	1250	0939	0944
Analyzed By :	DLF	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1 -Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
Total Petroleum Hydrocarbons	mg/kg	14	1.0	1.0	1.0
		5300	6300	2000	940

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) =Unable to report due to excessive matrix interference.
(2) =MDL 2X higher than that listed above.
(3) =MDL 5X higher than that listed above.
(4) =MDL 10X higher than that listed above.
(5) =MDL 20X higher than that listed above.
(6) =MDL 50X higher than that listed above.
(7) =MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:				05/26/89	05/26/89	06/09/89	06/09/89
Date Analyzed :				05/30/89	05/29/89	06/12/89	06/12/89
Time Analyzed :				1911	1948	1304	1343
Analyzed By :				RJS	RJS	SAB	SAB
Sample Number :				780	781	889	890
Run Number :				ABB531B,3	ABB530,21	ABB0613,9	ABB0613,10
Sample Name :				GSS-5-14 (2-4)	GSS-5-14 (2-4)D	GSS-5-2 (5-7)	GSS-5-2 (5-7D)

FIELD ANALYSIS: MID LEV Soil

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL mg/kg	Units				
						2	2
Methylene Chloride	75-09-2	0.25	mg/kg	ND	ND	ND	ND
Benzene	71-43-2	0.25	mg/kg	ND	ND	ND	ND
Toluene	108-88-3	0.25	mg/kg	1.06(C)	1.31(C)	ND	ND
Chlorobenzene	108-90-7	0.25	mg/kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.25	mg/kg	0.636(C)	0.703(C)	ND	ND
Total Xylenes	1330-20-7	0.75	mg/kg	3.79(C)	3.44(C)	1	ND
1,3-Dichlorobenzene	541-73-1	0.25	mg/kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.25	mg/kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.25	mg/kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.50	mg/kg	1	1	1	1
PID pk sum based on istd conc/area (mg/Kg)				780	940	1300	890

Date Analyzed :				05/28/89	05/28/89	06/11/89	06/11/89
Time Analyzed :				0950	0959	1633	1638
Analyzed By :				DLB	DLB	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

			MDL	MDL	MDL	MDL
		Units	1.0	1.0	1.0	1.0
Total Petroleum Hydrocarbons		mg/kg	6500	6300	2200	1500

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) = Unable to report due to excessive matrix interference.
(2) = MDL 2X higher than that listed above.
(3) = MDL 5X higher than that listed above.
(4) = MDL 10X higher than that listed above.
(5) = MDL 20X higher than that listed above.
(6) = MDL 50X higher than that listed above.
(7) = MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:				
Date Analyzed :	04/30/89	04/30/89	05/01/89	05/01/89
Time Analyzed :	05/09/89	05/09/89	05/09/89	05/10/89
Analyzed By :	2247	2322	2357	1113
Sample Number :	JRA	JRA	JRA	JRA
Run Number :	602	603	604	605
Sample Name :	ABB0510,14 GSS-5-13 (8-10)	ABB0510,15 GSS-5-13 (8-10D)	ABB0510,16 GSS-5-10 (0-2)	ABB0511B,3 GSS-5-10 (2-4)

FIELD ANALYSIS: LOW LEVEL . SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	NC
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND
				-1	-1	-1	ND
PID pk sum based on istd conc/area (mg/Kg)				1.1	3.4	0.271	

Date Analyzed :	05/03/89	05/03/89	05/03/89	05/03/89
Time Analyzed :	1519	1524	1541	1526
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
Total Petroleum Hydrocarbons	mg/kg	1.0	1.0	1.0	1.0
		ND	24	7	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) =Unable to report due to excessive matrix interference.
(2) =MDL 2X higher than that listed above.
(3) =MDL 5X higher than that listed above.
(4) =MDL 10X higher than that listed above.
(5) =MDL 20X higher than that listed above.
(6) =MDL 50X higher than that listed above.
(7) =MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

6/3C.1

ABB Environmental Services, Inc.
2590 Executive Center Cirde East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:	05/01/89	05/03/89	05/03/89	05/10/89
Date Analyzed :	05/10/89	05/10/89	05/10/89	05/12/89
Time Analyzed :	108	209	1226	1036
Analyzed By :	JRA	JRA	JRA	JRA
Sample Number :	606	612	613	631
Run Number :	ABB0510,18	ABB0510,19	ABB0511B,6	ABB0513,4
Sample Name :	GSS-5-10 (2-4D)	GSS-5-7 (0-2)	GSS-5-7 (2-4)	GSS-5--18 (0-2)

FIELD ANALYSIS: LOW LEVEL . SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	05/03/89	05/03/89	05/03/89	05/11/89
Time Analyzed :	1536	1842	1844	1200
Analyzed By :	DLB	DLB	DLB	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/kg	3.4	ND	ND	52

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) =Unable to report due to excessive matrix interference.
(2) =MDL 2X higher than that listed above.
(3) =MDL 5X higher than that listed above.
(4) =MDL 10X higher than that listed above.
(5) =MDL 20X higher than that listed above.
(6) =MDL 50X higher than that listed above.
(7) =MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:	05/10/89	05/10/89	05/10/89	05/11/89
Date Analyzed :	05/12/89	05/12/89	05/12/89	05/12/89
Time Analyzed :	1111	1146	1227	1256
Analyzed By :	JRA	JRA	JRA	JRA
Sample Number :	632	638	644	645
Run Number :	ABB0513,5	ABB0513,6	ABB0513,7	ABB0513,8
Sample Name :	GSS-5-18 (2-4)	GSS-5-11 (2-4)	GSS-5-19 (6-8)	GSS-5-19 (6-8D)

FIELD ANALYSIS: LOW LEVEL . SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	0.0167(C)	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
Ethyl Benzene	100-41-4	0.002	mg/Kg	ND	0.0049(C)	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	0.0206(C)	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	0.0378(C)	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	05/11/89	05/13/89	05/13/89	05/13/89
Time Analyzed :	1202	1200	1205	1207
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	22	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) = Unable to report due to excessive matrix interference.
(2) = MDL 2X higher than that listed above.
(3) = MDL 5X higher than that listed above.
(4) = MDL 10X higher than that listed above.
(5) = MDL 20X higher than that listed above.
(6) = MDL 50X higher than that listed above.
(7) = MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

ABB Environmental Services, Inc.
2590 Executive Center Cirde East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:	05/11/89	05/11/89	05/11/89	05/11/89
Date Analyzed :	05/12/89	05/12/89	05/12/89	05/12/89
Time Analyzed :	1331	1406	1442	1553
Analyzed By :	JRA	JRA	JRA	JRA
Sample Number :	646	647	653	654
Run Number :	ABB0513,9	ABB0513,10	ABB0513,11	ABB0513,13
Sample Name :	GSS-5-19 (8-10)	GSS-5-19 (8-10D)	GSS-5-12 (0-2)	GSS-5-12 (4-6)

FIELD ANALYSIS: LOW LEVEL . SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
Ethyl Benzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	05/13/89	05/13/89	05/15/89	05/15/89
Time Analyzed :	1207	1205	1229	1246
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	13	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) =Unable to report due to excessive matrix interference.
(2) =MDL 2X higher than that listed above.
(3) =MDL 5X higher than that listed above.
(4) =MDL 10X higher than that listed above.
(5) =MDL 20X higher than that listed above.
(6) =MDL 50X higher than that listed above.
(7) =MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

ABB Environmental Services, Inc.
2590 Executive Center Cirde East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:	05/12/89	05/14/89	05/14/89	05/14/89
Date Analyzed :	05/16/89	05/18/89	05/17/89	05/17/89
Time Analyzed :	2235	2053	14	47
Analyzed By :	RRE	SAB	RRE	RRE
Sample Number :	660	670	671	680
Run Number :	ABB0517,13	ABB519,19	ABB0517,16	ABB0517,17
Sample Name :	GSS-5-9 (2-4)	GSS-5-8 (2-4)	GSS-5-8 (4-6)	GSS-5-6 (2-4)

FIELD ANALYSIS: LOW LEVEL . SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	-1	ND	ND	-1
PID pk sum based on istd conc/area (mg/Kg)				0.5			5.2
	Date Analyzed :			05/15/89	05/18/89	05/18/89	05/18/89
	Time Analyzed :			1248	1124	1126	1127
	Analyzed By :			DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1 -Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/kg	ND	3.3	ND	509

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) =Unable to report due to excessive matrix interference.
(2) =MDL 2X higher than that listed above.
(3) =MDL 5X higher than that listed above.
(4) =MDL 10X higher than that listed above.
(5) =MDL 20X higher than that listed above.
(6) =MDL 50X higher than that listed above.
(7) =MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:	05/14/89	05/15/89	05/15/89	05/16/89
Date Analyzed :	05/17/89	05/17/89	05/17/89	05/24/89
Time Analyzed :	119	1651	1858	1716
Analyzed By :	RRE	SAB	SAB	RJS
Sample Number :	681	10 700697	10 700698	712
Run Number :	ABB0517,18	ABB0518,13	ABB0518,14	ABB525,14
Sample Name :	GSS-5-6 (6-8)	GSS-5-4 (0-2)	GSS-5-4 (8-10)	GSS-5-20 (2-4)

FIELD ANALYSIS: LOW LEVEL . SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	0.049(C)	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	0.0071(C)	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	0.02(C)	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	0..094(C)	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	-1	ND	ND	ND
PID pk sum based on istd conc/area (mg/Kg)				5.9		4.3	
	Date Analyzed :			05/18/89	05/18/89	05/18/89	05/24/89
	Time Analyzed :			1129	1143	1150	1218
	Analyzed By :			DLF	DLF	DLF	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/kg	9.5	ND	2900	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) = Unable to report due to excessive matrix interference.
(2) = MDL 2X higher than that listed above.
(3) = MDL 5X higher than that listed above.
(4) = MDL 10X higher than that listed above.
(5) = MDL 20X higher than that listed above.
(6) = MDL 50X higher than that listed above.
(7) = MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:	05/16/89	05/16/89	05/17/89	05/17/89
Date Analyzed :	05/19/89	05/19/89	05/28/89	05/19/89
Time Analyzed :	10	43	1741	148
Analyzed By :	SAB	SAB	RJS	SAB
Sample Number :	713	714	720	721
Run Number :	ABB519,25	ABB519,26	ABB529,17	ABB519,28
Sample Name :	GSS-5-20 (8-10)	GSS-5-20 (8-10D)	GSS-5-21 0-2	GSS-5-21 (4-6)

FIELD ANALYSIS: LOW LEVEL . SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	-1	ND
PID pk sum based on istd conc/area (mg/Kg)						2.7	
Date Analyzed :				05/24/89	05/24/89	05/24/89	05/24/89
Time Analyzed :				1220	1221	1227	1229
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) = Unable to report due to excessive matrix interference.
(2) = MDL 2X higher than that listed above.
(3) = MDL 5X higher than that listed above.
(4) = MDL 10X higher than that listed above.
(5) = MDL 20X higher than that listed above.
(6) = MDL 50X higher than that listed above.
(7) = MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:			05/17/89	05/17/89	05/18/89	05/24/89
Date Analyzed :			05/19/89	05/19/89	05/25/89	05/25/89
Time Analyzed :			221	253	38	1255
Analyzed By :			SAB	SAB	RJS	RJS
Sample Number :			723	724	727	743
Run Number :			ABB519,29	ABB519,30	ABB5625,28	ABB526,6,1
Sample Name :			GSS-5-21 (0-2D)	GSS-5-21 (4-6D)	GSS-5-16 (0-2)	GSS-5-22 (2-4)

FIELD ANALYSIS: LOW LEVEL . SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	0.012(C)	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
Ethyl Benzene	100-41-4	0.002	mg/Kg	ND	ND	0.003(C)	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	0.046(C)	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	-1	ND
PID pk sum based on istd conc/area (mg/Kg)						6.9	
Date Analyzed :				05/24/89	05/24/89	05/24/89	05/26/89
Time Analyzed :				1231	1234	1243	1209
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1 -Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	7300	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) = Unable to report due to excessive matrix interference.
(2) = MDL 2X higher than that listed above.
(3) = MDL 5X higher than that listed above.
(4) = MDL 10X higher than that listed above.
(5) = MDL 20X higher than that listed above.
(6) = MDL 50X higher than that listed above.
(7) = MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

ABB Environmental Services, Inc.
2590 Executive Center Cirde East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:	05/24/89	05/25/89	05/25/89	05/26/89
Date Analyzed :	05/27/89	05/27/89	05/27/89	05/27/89
Time Analyzed :	1337	1304	1124	1157
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number :	744	758	759	760
Run Number :	ABB528,10	ABB528,9	ABB528,6	ABB528,7
Sample Name :	GSS-5-22 (8-10)	GSS-5-23 (6-8)	GSS-5-23 (6-8)D	GSS-5-23 (8-10)

FIELD ANALYSIS: LOW LEVEL . SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	-1	-1
PID pk sum based on istd conc/area (mg/Kg)						1.2	1.3

Date Analyzed :	05/26/89	05/26/89	05/26/89	05/26/89
Time Analyzed :	1150	1229	1230	1231
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) =Unable to report due to excessive matrix interference.
(2) =MDL 2X higher than that listed above.
(3) =MDL 5X higher than that listed above.
(4) =MDL 10X higher than that listed above.
(5) =MDL 20X higher than that listed above.
(6) =MDL 50X higher than that listed above.
(7) =MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:	05/25/89	05/27/89	05/27/89	05/27/89
Date Analyzed :	05/27/89	05/29/89	05/29/89	05/29/89
Time Analyzed :	1618	1029	1102	135
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number :	761	787	788	796
Run Number :	ABB528,15	ABB530,4	ABB530,5	ABB530,6
Sample Name :	GSS-5-23 (8-10)D	GSS-5-25 (0-2)	GSS-5-25 (2-4)	GSS-5-24 (0-2)

FIELD ANALYSIS: LOW LEVEL . SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
Ethyl Benzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	-1	ND	ND
PID pk sum based on istd conc/area (mg/Kg)					0.64		
	Date Analyzed :			05/26/89	05/30/89	05/29/89	05/29/89
	Time Analyzed :			1233	1407	1408	1408
	Analyzed By :			DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/kg	ND	130	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) = Unable to report due to excessive matrix interference.
(2) = MDL 2X higher than that listed above.
(3) = MDL 5X higher than that listed above.
(4) = MDL 10X higher than that listed above.
(5) = MDL 20X higher than that listed above.
(6) = MDL 50X higher than that listed above.
(7) = MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

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ABB Environmental Services, Inc.
2590 Executive Center Cirde East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:	05/27/89	05/28/89	05/28/89	05/28/89
Date Analyzed :	05/29/89	05/30/89	05/30/89	05/30/89
Time Analyzed :	1209	1001	1426	1108
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number :	797	798	799	809
Run Number :	ABB530,7	ABB531,3	ABB530,11	ABB531,5
Sample Name :	GSS-5-24 (2-4)	GSS-5-27 (4-6)	GSS-5-27 (6-8)	GSS-5-26 (4-6)

FIELD ANALYSIS: LOW LEVEL . SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	1
PID pk sum based on istd conc/area (mg/Kg)							0.841
Date Analyzed :				05/29/89	05/29/89	05/29/89	05/29/89
Time Analyzed :				1412	1413	1414	1420
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		1.0	1.0	1.0	1.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND	5.5

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) =Unable to report due to excessive matrix interference.
(2) =MDL 2X higher than that listed above.
(3) =MDL 5X higher than that listed above.
(4) =MDL 10X higher than that listed above.
(5) =MDL 20X higher than that listed above.
(6) =MDL 50X higher than that listed above.
(7) =MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:	05/28/89	05/29/89	05/29/89	05/29/89
Date Analyzed :	05/30/89	05/30/89	05/30/89	05/30/89
Time Analyzed :	1141	947	1247	1341
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number :	810	819	820	821
Run Number :	ABB531,6	ABB601,3	ABB531,8	ABB531,9
Sample Name :	GSS-5-26 (6-8)	GSS-5-28 (4-6)	GSS-5-28 (6-8)	GSS-5-28 (6-8D)

FIELD ANALYSIS: LOW LEVEL . SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
Ethyl Benzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	05/29/89	05/31/89	05/31/89	06/07/89
Time Analyzed :	1422	1653	1654	1328
Analyzed By :	DLB	DLB	DLB	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/kg	10.1	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) = Unable to report due to excessive matrix interference.
(2) = MDL 2X higher than that listed above.
(3) = MDL 5X higher than that listed above.
(4) = MDL 10X higher than that listed above.
(5) = MDL 20X higher than that listed above.
(6) = MDL 50X higher than that listed above.
(7) = MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

12

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:		05/30/89	05/30/89	05/30/89	05/30/89
Date Analyzed :		05/31/89	05/31/89	05/31/89	05/31/89
Time Analyzed :		1703	1340	1553	1629
Analyzed By :		RJS	RJS	RJS	RJS
Sample Number :		836	837	838	839
Run Number :		ABB601,16	ABB601,10	ABB601,14	ABB601,15
Sample Name :		GSS-5-29 (0-2)	GSS-5-29 (4-6)	GSS-5-30 (0-2)	GSS-5-30 (6-8)

FIELD ANALYSIS: LOW LEVEL . SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
Ethyl Benzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	1
PID pk sum based on istd conc/area (mg/Kg)							3.6

Date Analyzed :	06/07/89	06/07/89	06/07/89	06/07/89
Time Analyzed :	1338	1342	1343	1345
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1 -Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		1.0	1.0	1.0	1.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) =Unable to report due to excessive matrix interference.
(2) =MDL 2X higher than that listed above.
(3) =MDL 5X higher than that listed above.
(4) =MDL 10X higher than that listed above.
(5) =MDL 20X higher than that listed above.
(6) =MDL 50X higher than that listed above.
(7) =MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

13

ABB Environmental Services, Inc.
2590 Executive Center Cirde East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:			05/31/89	05/31/89	06/07/89	06/07/89
Date Analyzed :			05/31/89	05/31/89	06/09/89	06/09/89
Time Analyzed :			2309	2342	48	2202
Analyzed By :			RJS	RJS	SAB	SAB
Sample Number :			849	850	859	860
Run Number :			ABB601,27	ABB601,28	ABB0610B,21	ABB0610B,16
Sample Name :			GSS-5-31 (2-4)	GSS-5-31 (4-6)	GSS-5-32 (4-6)	GSS-5-32 (8-10)

FIELD ANALYSIS: LOW LEVEL . SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
Ethyl Benzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	-1	ND
PID pk sum based on istd conc/area (mg/Kg)						14	
	Date Analyzed :			06/07/89	06/07/89	06/09/89	06/09/89
	Time Analyzed :			1234	1354	1128	1130
	Analyzed By :			DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	2.5	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) =Unable to report due to excessive matrix interference.
(2) =MDL 2X higher than that listed above.
(3) =MDL 5X higher than that listed above.
(4) =MDL 10X higher than that listed above.
(5) =MDL 20X higher than that listed above.
(6) =MDL 50X higher than that listed above.
(7) =MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:	06/08/89	06/08/89	06/08/89	06/09/89
Date Analyzed :	06/10/89	06/10/89	06/10/89	06/10/89
Time Analyzed :	1934	2008	2041	1
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number :	870	871	872	885
Run Number :	ABB0611,20	ABB0611,21	ABB0611,22	ABB0611,28
Sample Name :	GSS-5-33 (2-4)	GSS-5-33 (6-8)	GSS-5-33 (6-8D)	GSS-5-34 (2-4)

FIELD ANALYSIS: LOW LEVEL . SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	06/10/89	06/10/89	06/10/89	06/10/89
Time Analyzed :	1324	1326	1327	1342
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/kg	6.2	ND	ND	6.7

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) =Unable to report due to excessive matrix interference.
(2) =MDL 2X higher than that listed above.
(3) =MDL 5X higher than that listed above.
(4) =MDL 10X higher than that listed above.
(5) =MDL 20X higher than that listed above.
(6) =MDL 50X higher than that listed above.
(7) =MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

15

ABB Environmental Services, Inc.
2590 Executive Center Cirde East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Received:	06/09/89	06/09/89	06/10/89	06/10/89
Date Analyzed :	06/10/89	06/11/89	06/12/89	06/11/89
Time Analyzed :	34	1407	2142	1734
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number :	886	891	902	903
Run Number :	ABB0611,29	ABB0312,10	ABB0313G,5	ABB0612B,3
Sample Name :	GSS-5-34 (6-8)	GSS-5-2 (7-9)	GSS-5-35 (4-6)	GSS-5-35 (6-8)

FIELD ANALYSIS: LOW LEVEL . SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
laphthalene	91-20-3	0.004	mg/Kg	ND	-1	ND	ND
PID pk sum based on istd conc/area (mg/Kg)					1.9		
	Date Analyzed :			06/11/89	06/11/89	06/11/89	06/11/89
	Time Analyzed :			1628	1639	1612	1646
	Analyzed By :			DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1) =Unable to report due to excessive matrix interference.
(2) =MDL 2X higher than that listed above.
(3) =MDL 5X higher than that listed above.
(4) =MDL 10X higher than that listed above.
(5) =MDL 20X higher than that listed above.
(6) =MDL 50X higher than that listed above.
(7) =MDL 500X higher than that listed above.
(A) = Ran At This Dilution Due To Excessive Matrix Interference

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ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				04/28/89	04/28/89	04/28/89	04/28/89	04/28/89	04/28/89
Date Analyzed :				04/29/89	04/29/89	04/29/89	04/29/89	04/30/89	04/29/89
Time Analyzed :				1822	1747	1855	1929	1133	2034
Run Number :				ABB430C,2	ABB430C,1	ABB430C,3	ABB430C,4	ABB501,5	ABB430C,6
Sample Name :				GS-5-1	GS-5-1	GS-5-1	GS-5-1	GS-5-1	GS-5-1
				(8-12)	(18-22)	(18-22R)	(28-32)	(38-40)	(48-52)
Volatile Organics in Soil-Modified Method 8020									
FIELD ANALYSIS:	Water	MDL							
	CAS Number	ug/l	Units						
				4	2		2	5	2
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	5.2(C)	ND	5(C)
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	190(C)	24(C)	ND	36(C)	240(C)	42(C)
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	1	1	ND	1	1	1
PID pk sum based on istd conc/area (ug/L)				7700	800		960	11000	1200
Date analyzed:				05/01/89	05/01/89		05/01/89	05/01/89	05/01/89
Time analyzed:				1209	1207		1205	1204	1203
Analyzed By :				DLB	DLB	DLB	DLB	DLB	DLB
Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	1.3	2.8	N0 SAMPLE	7.1	12.5	7.7
Total Petroleum Hydrocarbons			mg/l	8.3	ND	FOR TPH	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(A)= Run At This Dilution Due To Excessive Matrix Interference

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				04/28/89	04/28/89	04/28/89	04/28/89	04/30/89	04/30/89
Date Analyzed :				04/30/89	04/30/89	04/30/89	04/29/89	04/30/89	04/30/89
Time Analyzed :				1206	1239	1344	2245	1548	1658
Run Number :				ABB501,6	ABB501,7	ABB501,8	ABB430C,10	ABB501,12	ABB501,14
Sample Name :				GS-5-1	GS-5-1	GS-5-1	GS-5-1	GS-5-15	GS-5-15
				(60-64)	(68-72)	(68-72R)	(68-72FB)	(8-12)	8-12D
Volatile Organics in Soil-Modified Method 8020									
FIELD ANALYSIS:	Water	MDL							
	CAS Number	ug/l	Units						
				5	5			(2) (A)	(2) (A)
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	140(C)	130(C)	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	1	1	ND	ND	1	1
PID pk sum based on istd conc/area (ug/L)				5000	2600			520	800
Date analyzed:				05/01/89	05/01/89	05/01/89	05/01/89	05/01/89	05/01/89
Time analyzed:				1159	1158	1152	1150	1134	1143
Analyzed By :				DLB	DLB	DLB	DLB	DLB	DLB
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	20.0	7.7	1.0	1.0	1.5	1.5
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(A)= Run At This Dilution Due To Excessive Matrix Interfe

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				04/30/89	04/30/89	04/30/89	04/30/89	04/30/89	04/30/89
Date Analyzed :				04/30/89	04/30/89	04/30/89	04/30/89	04/30/89	05/01/89
Time Analyzed :				1733	1807	1841	2201	2234	1143
Run Number :				ABB501,15	ABB501,16	ABB501,17	ABB501,23	ABB501,24	ABB502,5
Sample Name :				GS-5-15	GS-5-15	GS-5-15	GS-5-13	GS-5-13	GS-5-13
				18-22R	18-22	28-32	(8-12)	(18-22R)	28-32
Volatile Organics in Soil-Modified Method 8020									
FIELD ANALYSIS:	Water	MDL							
	CAS Number	ug/l	Units						
					2	4	4		
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	45(C)	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	24(C)	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	13(C)	75(C)	160(C)	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	1	1	1	ND	1
PID pk sum based on istd conc/area (ug/L)					2000	9400	2100		180
Date analyzed:				05/01/89	05/01/89	05/04/89	05/04/89	05/04/89	05/04/89
Time analyzed:				1149	1147	1432	1433	1435	1436
Analyzed By :				DLB	DLB	DLB	DLB	DLB	DLB
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	1.0	1.2	4.8	1.3	1.0	1.6
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(A)= Run At This Dilution Due To Excessive Matrix Interfe

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				04/30/89	05/01/89	05/01/89	05/01/89	05/01/89	05/02/89
Date Analyzed :				05/01/89	05/01/89	05/01/89	05/01/89	05/01/89	05/03/89
Time Analyzed :				1608	1733	1807	1841	1914	1315
Run Number :				ABB502B,4	ABB502B,6	ABB502B,7	ABB502B,8	ABB502B,9	ABB504B,1
Sample Name :				GS-5-13	GS-5-10	GS-5-10	GS-5-10	GS-5-10	GS-5-10
				18-22	(8-12)	(18-22)	(28-32).	(48-52)	(56-60)
Volatile Organics in Soil-Modified Method 8020									
FIELD ANALYSIS:	Water	MDL							
	CAS Number	ug/l	Units						
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	2.6(C)	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	4(C)	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	2.1(C)	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	14(C)	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	1	1	1	1	ND	ND
PID pk sum based on istd conc/area (ug/L)				15000	290	490	32	71.	
Date analyzed:				05/04/89	05/04/89	05/04/89	05/04/89	05/04/89	05/09/89
Time analyzed:				1438	14:26	1442	1443	1445	16:40
Analyzed By :				DLB	DLB	DLB	DLB	DLB	DLF
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	2.1	1.1	3.4	2.3	3.7	5.3
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(A)= Run At This Dilution Due To Excessive Matrix Interfe

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				05/03/89	05/03/89	05/03/89	05/03/89	05/03/89
Date Analyzed :				05/03/89	05/03/89	05/03/89	05/03/89	05/03/89
Time Analyzed :				1812	1846	1921	1954	2027
Run Number :				ABB504B,10	ABB504B,11	ABB504B,12	ABB504B,13	ABB504B,14
Sample Name :				GS-5-7 (8-12)	GS-5-7 (18-22)	GS-5-7 (28-32)	GS-5-7 (28-32R)	GS-5-5 (8-12)
Volatile Organics in Soil-Modified Method 8020								
FIELD ANALYSIS:	Water	MDL						
	CAS Number	ug/l	Units					
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	7(C)	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	5.8(C)	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	18(C)	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND	ND
PID pk sum based on istd conc/area (ug/L)				-1.0 3100	-1.0 120	-1.0 270	ND	-1.0 1200
Date analyzed:				05/09/89	05/09/89	05/09/89	05/09/89	05/09/89
Time analyzed:				16:25	16:42	16:46	16:48	16:50
Analyzed By :				DLF	DLF	DLF	DLF	DLF
Modified Method 418.1-Total Petroleum Hydrocarbons (TP								
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL
			Units	1.0	1.6	1.4	1.0	1.0
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND

MDL - Method Detection Limit
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(1)=Unable to report due to excessive matrix interference.
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(6)=MDL 50X higher than that listed above.
(A)= Run At This Dilution Due To Excessive Matrix Interfe

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				05/04/89	05/04/89	05/04/89	05/04/89	05/09/89	05/09/89
Date Analyzed :				05/10/89	05/09/89	05/10/89	05/09/89	05/10/89	05/10/89
Time Analyzed :				1602	1738	1527	1812	1745	1710
Run Number :				ABB0511B,11	ABB0510,5	ABB0511B,10	ABB0510,6	ABB0511B,14	ABB0511B,13
Sample Name :				GS-5-5	GS-5-5	GS-5-5	GS-5-17	GS-5-17	GS-5-17
				(18-22)	2832	(050593) DI	(8-12)	1822	(18-22D)
Volatile Organics in Soil-Modified Method 8020									
FIELD ANALYSIS:	Water	MDL							
	CAS Number	ug/l	Units						
				2			2		
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	8.6(C)	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	34(C)	-1.0	ND	-1.0	ND	ND
PID pk sum based on istd conc/area (ug/L)					550		2200		

Date analyzed:				05/09/89	05/09/89	05/09/89	05/09/89	05/11/89	05/11/89
Time analyzed:				16:58	17:01	17:02	17:05	17:13	17:16
Analyzed By :				DLF	DLF	DLF	DLF	DLF	DLF
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	1.0	1.0	1.0	1.0	1.0	1.0
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
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(A)= Run At This Dilution Due To Excessive Matrix Interfe

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:		05/09/89	05/09/89	05/10/89	05/10/89	05/10/89	05/10/89
Date Analyzed :		05/10/89	05/10/89	05/10/89	05/10/89	05/10/89	05/10/89
Time Analyzed :		1821	1854	2032	2104	2136	2207
Run Number :		ABB0511B,15	ABB0511B,16	ABB0511B,19	ABB0511B,20	ABB0511B,21	ABB0511B,22
Sample Name :		GS-5-17 (28-32R)	GS-5-17 2832	GS-5-18 812	GS-5-18 (8-12R)	GS-5-18 1822	GS-5-18 2832
Volatile Organics in Soil-Modified Method 8020							
FIELD ANALYSIS:	Water	MDL					
	CAS Number	ug/l	Units				
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND	ND	ND
PID pk sum based on istd conc/area (ug/L)									
Date analyzed:				05/11/89	05/11/89	05/11/89	05/11/89	05/11/89	05/11/89
Time analyzed:				17:18	17:20	17:04	17:22	17:27	17:28
Analyzed By :				DLF	DLF	DLF	DLF	DLF	DLF
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	1.0	1.0	1.0	1.0	1.0	1.0
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
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(6)=MDL 50X higher than that listed above.
(A)= Run At This Dilution Due To Excessive Matrix Interfe

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				05/10/89	05/10/89	05/10/89	05/11/89	05/11/89	05/11/89
Date Analyzed :				05/10/89	05/10/89	05/11/89	05/11/89	05/11/89	05/11/89
Time Analyzed :				2239	2311	:07	1655	1731	1807
Run Number :				ABB0511B,23	ABB0511B,24	ABB0511B,25	ABB0512B,2	ABB0512B,3	ABB0512B,4
Sample Name :				GS-5-11	GS-5-11	GS-5-11	GS-5-19	GS-5-19	GS-5-19
				812	1822	2832	812	1822	(18-22D)
Volatile Organics in Soil-Modified Method 8020									
FIELD ANALYSIS:	Water	MDL							
	CAS Number	ug/l	Units						
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	9.5(C)	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	31(C)	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	19(C)	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	91(C)	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	-1.0	ND	-1.0	ND	ND	ND
PID pk sum based on istd conc/area (ug/L)				1600		150			
Date analyzed:				05/13/89	05/13/89	05/13/89	05/13/89	05/13/89	05/13/89
Time analyzed:				17:42	17:44	17:46	17:47	17:49	17:54
Analyzed By :				DLF	DLF	DLF	DLF	DLF	DLF
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	1.0	1.0	9.1	1.0	1.0	1.0
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

MDL - Method Detection Limit
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ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:		05/11/89	05/11/89	05/11/89	05/11/89	05/12/89	05/12/89
Date Analyzed :		05/11/89	05/11/89	05/11/89	05/11/89	05/12/89	05/12/89
Time Analyzed :		2307	2338	2204	2235	2039	2111
Run Number :		ABB0512B,13	ABB0512B,14	ABB0512B,11	ABB0512B,12	ABB0513,21	ABB0513,22
Sample Name :		GS-5-19	GS-5-19	GS-5-12	GS-5-12	GS-5-12	GS-5-12
		2832	(28-32R)	812	1822	2832	5458

Volatile Organics in Soil-Modified Method 8020

FIELD ANALYSIS:	Water CAS Number	MDL ug/l	Units						
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:		05/13/89	05/15/89	05/15/89	05/18/89	05/13/89	05/18/89
Time analyzed:		17:55	14:32	14:34	17:46	17:23	17:47
Analyzed By :		DLF	DLF	DLF	DLF	DLF	DLF
Modified Method 418.1-Total Petroleum Hydrocarbons (TP							
FIELD ANALYSIS: TPH Water	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.2	MDL 2.2	MDL 2.5
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND	ND	ND

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(A)= Run At This Dilution Due To Excessive Matrix Interfe

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			05/12/89	05/13/89	05/13/89	05/13/89	05/13/89	05/13/89
Date Analyzed :			05/12/89	05/15/89	05/15/89	05/15/89	05/15/89	05/15/89
Time Analyzed :			2143	35	107	139	210	1050
Run Number :			ABB0513,23	ABB0515B,20	ABB0515B,21	ABB0515B,22	ABB0515B,23	ABB0516,4
Sample Name :			GS-5-12	GS-5-9	GS-5-9	GS-5-9	GS-5-9	GS-5-9
			(051393)DI	(8-12)	(18-22)	(18-22R)	(28-32)	(54-58)
Volatile Organics in Soil-Modified Method 8020								
FIELD ANALYSIS:	Water	MDL						
	CAS Number	ug/l	Units					
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	8.8(C)	ND	ND	4.9(C)
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND	ND	6.1(C)
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	-1.0	-1.0	ND	-1.0	-1.0
PID pk sum based on istd conc/area (ug/L)					200	450		2600	2600
Date analyzed:				05/15/89	05/15/89	05/15/89	05/15/89	05/15/89	05/18/89
Time analyzed:				14:36	14:26	14:37	1438	1443	17:48
Analyzed By :				DLF	DLF	DLF	DLF	DLF	DLF
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	1.0	1.0	1.0	1.0	1.7	9.1
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

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ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				05/13/89	05/14/89	05/14/89	05/14/89	05/14/89	05/14/89
Date Analyzed :				05/15/89	05/15/89	05/15/89	05/15/89	05/15/89	05/15/89
Time Analyzed :				242	1123	1156	1229	1302	1446
Run Number :				ABB0515B,24	ABB0516,5	ABB0516,6	ABB0516,7	ABB0516,8	ABB0516,11
Sample Name :				GS-5-9	GS-5-8	GS-5-8	GS-5-8	GS-5-8	GS-5-8
				(54-58FB)	(8-12)	(8-12D)	(8-12R)	(18-22)	(28-30)
Volatile Organics in Soil-Modified Method 8020									
FIELD ANALYSIS:	Water	MDL							
	CAS Number	ug/l	Units						
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	-1.0	-1.0	ND	ND	ND
PID pk sum based on istd conc/area (ug/L)					240	120			
Date analyzed:				05/15/89	05/17/89	05/17/89	05/17/89	05/17/89	05/17/89
Time analyzed:				1445	1317	1319	1321	1322	1324
Analyzed By :				DLF	DLF	DLF	DLF	DLF	DLF
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	1.0	1.2	1.5	1.0	1.0	5.5
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
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(A)= Run At This Dilution Due To Excessive Matrix Interfe

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301

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RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			05/14/89	05/14/89	05/14/89	05/14/89	05/15/89	05/15/89
Date Analyzed :			05/15/89	05/15/89	05/15/89	05/15/89	05/15/89	05/15/89
Time Analyzed :			1520	1554	1629	1704	2322	2355
Run Number :			ABB0516,12	ABB0516,13	ABB0516,14	ABB0516,15	ABB0516,24	ABB0516,25
Sample Name :			GS-5-8	GS-5-6	GS-5-6	GS-5-6	GS-5-4	GS-5-6
			(54-58)	(8-12)	(8-12D)	(18-22)	(18-22)	(28-32)
Volatile Organics in Soil-Modified Method 8020								
FIELD ANALYSIS:	Water	MDL						
	CAS Number	ug/l	Units					
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	15	15	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	8.9	8.9	ND	2.3(C)	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	26	26	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	-1.0	-1.0	-1.0	-1.0	-1.0
PID pk sum based on istd conc/area (ug/L)					1900	1700	460	2000	300
Date analyzed:				05/17/89	05/17/89	05/17/89	05/17/89	05/17/89	05/17/89
Time analyzed:				1329	1331	1333	1335	1337	1338
Analyzed By :				DLF	DLF	DLF	DLF	DLF	DLF
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	7.7	1.1	1.0	1.0	1.0	1.0
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
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(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
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(6)=MDL 50X higher than that listed above.
(A)= Run At This Dilution Due To Excessive Matrix Interfe

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				05/15/89	05/15/89	05/15/89	05/16/89	05/16/89	05/16/89
Date Analyzed :				05/16/89	05/16/89	05/16/89	05/18/89	05/18/89	05/18/89
Time Analyzed :				29	103	718	1	31	100
Run Number :				ABB0516,26	ABB0516,27	ABB0516,28	ABB0518,23	ABB0518,24	ABB0518,25
Sample Name :				GS-5-6	GS-5-6	GS-5-4	GS-5-20	GS-5-4	GS-5-4
				(28-32R)	(54-56)	(8-12)	(18-22)	(28-32)	(28-32R)
Volatile Organics in Soil-Modified Method 8020									
FIELD ANALYSIS:	Water	MDL							
	CAS Number	ug/l	Units						
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	2.8(C)	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	17(C)	ND	2.4(C)	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	11(C)	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	26(C)	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	-1.0	-1.0	-1.0	ND	-1.0	ND
PID pk sum based on istd conc/area (ug/L)				150	1200	3700		1100	
Date analyzed:				05/18/89	05/18/89	05/17/89	05/25/89	05/25/89	05/25/89
Time analyzed:				17:50	17:53	13:07	14:12	14:14	14:15
Analyzed By :				DLF	DLF	DLF	DLB	DLB	DLB
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	1.0	2.5	1.0	1.0	1.0	1.0
Total Petroleum Hydrocarbons			mg/l	ND	ND	27	ND	ND	ND

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(6)=MDL 50X higher than that listed above.
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ABB Environmental Services, Inc.
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Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				05/16/89	05/16/89	05/17/89	05/17/89	05/17/89	
Date Analyzed :				05/18/89	05/18/89	05/18/89	05/18/89	05/18/89	
Time Analyzed :				129	158	227	1039	1120	
Run Number :				ABB0518,26	ABB0518,27	ABB0518,28	ABB519,3	ABB519,4	
Sample Name :				GS-5-4	GS-5-20	GS-5-20	GS-5-21	GS-5-21	GS-5-21
				(54-58)	(8-12)	(28-32)	(8-12)	(8-12D)	(8-12)R
Volatile Organics in Soil-Modified Method 8020									
FIELD ANALYSIS:	Water	MDL							
	CAS Number	ug/l	Units						
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	
Toluene	108-88-3	2.0	ug/l	5.3	ND	ND	ND	ND	
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	
EthylBenzene	100-41-4	2.0	ug/l	2.5	ND	ND	ND	ND	
Total Xylenes	1330-20-7	6.0	ug/l	13	ND	ND	ND	ND	
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	
Naphthalene	91-20-3	4.0	ug/l	-1.0	-1.0	ND	-1.0	-1.0	
PID pk sum based on istd conc/area (ug/L)				3000	200		200	300	
Date analyzed:				05/25/89	05/18/89	05/18/89	05/25/89	05/25/89	05/25/89
Time analyzed:				14:16	17:38	14:17	14:22	14:23	14:24
Analyzed By :				DLB	DLF	DLB	DLB	DLB	DLB
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	9.1	1.1	1.0	1.0	1.0	1.0
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

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(A)= Run At This Dilution Due To Excessive Matrix Interfe

ABB Environmental Services, Inc.
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Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				05/17/89	05/17/89	05/17/89	05/18/89	05/18/89	05/23/89
Date Analyzed :				05/18/89	05/18/89	05/18/89	05/18/89	05/18/89	05/24/89
Time Analyzed :				1150	1225	1251	1504	1535	1823
Run Number :				ABB0519,5	ABB0519,6	ABB0519,7	ABB0519,11	ABB0519,12	ABB525,16
Sample Name :				GS-5-21 (18-22)	GS-5-21 (54-56)	GS-5-21 (28-32)	GS-5-16 (8-12)	GS-5-16 (18-22)	GS-5-16 28-32
Volatile Organics in Soil-Modified Method 8020									
FIELD ANALYSIS:	Water CAS Number	MDL ug/l	Units						
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	6.8(C)	2.3(C)	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	26(C)	31(C)	7.8(C)
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	7.3(C)	7.6(C)	2.5(C)
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	51(C)	47(C)	17(C)
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	-1.0	-1.0	1
PID pk sum based on istd conc/area (ug/L)							2100	1800	940
Date analyzed:				05/18/89	05/18/89	05/18/89	05/25/89	05/25/89	05/25/89
Time analyzed:				14:25	14:26	14:27	14:06	14:29	14:30
Analyzed By :				DLB	DLB	DLB	DLB	DLB	DLB
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	1.0	1.2	1.0	1.0	1.0	2.5
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

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RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				05/23/89	05/23/89	05/24/89	05/24/89	05/24/89	05/24/89
Date Analyzed :				05/24/89	05/24/89	05/24/89	05/24/89	05/24/89	05/24/89
Time Analyzed :				1855	1927	1957	2027	2057	2126
Run Number :				ABB525,17	ABBB525,18	ABB525,19	ABB525,20	ABB525,21	ABB525,22
Sample Name :				GS-5-16	GS-5-16	GS-5-22	GS-5-22	GS-5-22	GS-5-22
				54-58	54-58R	(8-12)	18-22	28-32R	28-32
Volatile Organics in Soil-Modified Method 8020									
FIELD ANALYSIS:	Water	MDL							
	CAS Number	ug/l	Units						
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	14(C)	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	4.6(C)	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	31(C)	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	1	1	ND	ND	ND	ND
PID pk sum based on istd conc/area (ug/L)				2800	230				
Date analyzed:				05/25/89	05/25/89	05/25/89	05/25/89	05/28/89	05/28/89
Time analyzed:				14:31	14:32	14:36	14:37	14:28	14:29
Analyzed By :				DLB	DLB	DLB	DLB	DLB	DLB
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	2.1	1.0	1.0	1.0	1.0	1.0
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

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RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:							
Date Analyzed :		05/25/89	05/25/89	05/25/89	05/25/89	5/26/	05/25/89
Time Analyzed :		05/26/89	05/26/89	05/26/89	05/26/89	05/26/89	05/26/89
Run Number :		953	1023	1053	1123	1153	1317
Sample Name :		ABB527,3 GS-5-22 54-58	ABB527,4 GS-5-22 (52693)DI	ABB527,5 GS-5-23 (8-12)	ABB527,6 GS-5-23 8-12D	ABB527,7 GS-5-23 20-24R	ABB527,8 GS-5-23 20-24

Volatile Organics in Soil-Modified Method 8020
FIELD ANALYSIS: Water

	CAS Number	MDL ug/l	Units						
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND	ND	ND
PID pk sum based on istd conc/area (ug/L)				ND	ND	ND	ND	ND	ND

Date analyzed:							
Time analyzed:		05/30/89 11:56	05/28/89 14:30	05/28/89 14:31	05/28/89 14:32	05/28/89 14:37	05/28/89 14:38
Analyzed By :		DLB	DLB	DLB	DLB	DLB	DLB
Modified Method 418.1-Total Petroleum Hydrocarbons (TP							
FIELD ANALYSIS: TPH Water							
	Units	MDL 4.3	MDL 1.0	MDL 1.1	MDL 3.2	MDL 1.0	MDL 1.3
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND	ND	ND

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RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				05/25/89	05/26/89	05/26/89	05/26/89	05/26/89	05/26/89
Date Analyzed :				05/27/89	05/26/89	05/26/89	05/26/89	05/26/89	05/26/89
Time Analyzed :				22	2154	2223	2253	2323	2353
Run Number :				ABB527B22	ABB527B17	ABB527B18	ABB527B19	ABB527B20	ABB527B21
Sample Name :				GS-5-23	GS-5-14	GS-5-14	GS-5-14	GS-5-23	GS-5-14
				30-34	18-22	28-32	18-22R	54-58	(8-12)
Volatile Organics in Soil-Modified Method 8020									
FIELD ANALYSIS:	Water	MDL							
	CAS Number	ug/l	Units						
									2
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	4.6(C)
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND	ND	5.8(C)
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND	ND	6.4(C)
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND	ND	42(C)
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	1	1	ND	ND	1
PID pk sum based on istd conc/area (ug/L)					1000	460			2200
Date analyzed:				05/28/89	05/28/89	05/28/89	05/28/89	05/30/89	05/28/89
Time analyzed:				14:39	14:40	14:41	14:42	11:57	14:23
Analyzed By :				DLB	DLB	DLB	DLB	DLB	DLB
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	2.9	1.0	1.0	1.0	1.2	1.0
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	2.0

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RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:												
Date Analyzed :				05/27/89	05/27/89	05/27/89	05/27/89	05/27/89	05/27/89
Time Analyzed :				05/27/89	05/27/89	05/27/89	05/27/89	05/27/89	05/27/89
Run Number :				2007	2037	2106	2136	2205	2234
Sample Name :				ABB528,22	ABB528,23	ABB528,24	ABB528,25	ABB528,26	ABB528,27
				GS-5-14	GS-5-14	GS-5-24	GS-5-24	GS-5-24	GS-5-25
				(28-32FB)	54-56	(8-10)	18-22	18-22R	(8-12)
Volatile Organics in Soil-Modified Method 8020									
FIELD ANALYSIS:	Water	MDL							
	CAS Number	ug/l	Units						
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND	ND	ND
PID pk sum based on istd conc/area (ug/L)					1	1	ND	ND	ND
					1400	220			
Date analyzed:									
Time analyzed:				05/28/89	05/30/89	05/30/89	05/28/89	05/28/89	05/28/89
Analyzed By :				14:43	11:58	11:59	14:44	14:45	14:46
Modified Method 418.1-Total Petroleum Hydrocarbons (TP				DLB	DLB	DLB	DLB	DLB	DLB
FIELD ANALYSIS:	TPH Water								
			Units	MDL	MDL	MDL	MDL	MDL	MDL
Total Petroleum Hydrocarbons			mg/l	1.0	2.9	1.0	1.0	1.0	1.0
				ND	ND	ND	ND	ND	ND

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RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				05/27/89	05/28/89	05/28/89	05/28/89	05/28/89	05/28/89
Date Analyzed :				05/27/89	05/28/89	05/28/89	05/28/89	05/28/89	05/29/89
Time Analyzed :				2304	2023	2052	2122	2151	2248
Run Number :				ABB528,28	ABB529,22	ABB529,23	ABB529,24	ABB529,25	ABB530,27
Sample Name :				GS-5-25 8-12D	GS-5-27 (8-12)	GS-5-27 18-22	GS-5-27 18-22D	GS-5-27 28-32	GS-5-25 (18-22)
Volatile Organics in Soil-Modified Method 8020									
FIELD ANALYSIS:	Water CAS Number	MDL ug/l	Units						
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	1	1	ND	ND	ND
PID pk sum based on istd conc/area (ug/L)					1400	280			
Date analyzed:				05/28/89	05/30/89	05/30/89	05/30/89	05/30/89	05/30/89
Time analyzed:				14:50	12:00	12:04	12:05	12:06	12:07
Analyzed By :				DLB	DLB	DLB	DLB	DLB	DLB
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	1.0	1.4	1.1	2.3	5.6	1.6
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

MDL - Method Detection Limit
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(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
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(6)=MDL 50X higher than that listed above.
(A)= Run At This Dilution Due To Excessive Matrix Interfe

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				05/28/89	05/28/89	05/28/89	05/29/89	05/29/89	05/29/89
Date Analyzed :				05/28/89	05/28/89	05/28/89	05/29/89	05/29/89	05/29/89
Time Analyzed :				2249	2319	2348	2018	2048	2118
Run Number :				ABB529,27	ABB529,28	ABB529,29	ABB530,22	ABB530,23	ABB530,24
Sample Name :				GS-5-26	GS-5-26	GS-5-26	GS-5-28	GS-5-28	GS-5-28
				(8-12)	18-22	18-22R	(8-12)	(18-22)	(28-32)
Volatile Organics in Soil-Modified Method 8020									
FIELD ANALYSIS:	Water	MDL							
	CAS Number	ug/l	Units						
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND	ND	ND
PID pk sum based on istd conc/area (ug/L)							1	1	ND
							830	240	
Date analyzed:				05/30/89	05/30/89	05/30/89	05/30/89	05/30/89	05/30/89
Time analyzed:				12:08	12:09	12:10	11:53	12:11	12:12
Analyzed By :				DLB	DLB	DLB	DLB	DLB	DLB
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	1.0	1.7	1.0	1.0	1.0	1.0
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

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ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				05/29/89	05/29/89	05/30/89	05/30/89	05/30/89	05/30/89
Date Analyzed :				05/29/89	05/29/89	05/30/89	05/30/89	05/30/89	05/30/89
Time Analyzed :				2148	2218	2142	2212	2241	2311
Run Number :				ABB530,25	ABB530,26	ABB531B,9	ABB531B,10	ABB531B,11	ABB531B,12
Sample Name :				GS-5-28	GS-5-28	GS-5-29	GS-5-29	GS-5-29	GS-5-30
				(54-58)	(54-58)R	(8-12)	(18-22)R	18-22	(8-12)
Volatile Organics in Soil-Modified Method 8020									
FIELD ANALYSIS:	Water	MDL							
	CAS Number	ug/l	Units						
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	5.6(C)	ND	ND
PID pk sum based on istd conc/area (ug/L)									
Date analyzed:				05/30/89	05/30/89	05/31/89	05/31/89	05/31/89	05/31/89
Time analyzed:				12:13	12:17	11:39	11:55	11:57	11:59
Analyzed By :				DLB	DLB	DLB	DLB	DLB	DLB
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	5.6	1.0	1.0	1.0	1.0	1.0
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

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ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

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Date Recieved:			05/30/89	05/30/89	05/31/89	05/31/89	05/31/89	05/31/89
Date Analyzed :			05/30/89	05/31/89	06/01/89	06/01/89	06/01/89	06/01/89
Time Analyzed :			2340	10	1129	1159	1229	1300
Run Number :			ABB531B,13	ABB531B,14	ABB602,7	ABB602,8	ABB602,9	ABB602,10
Sample Name :			GS-5-30	GS-5-30	GS-5-31	GS-5-31	GS-5-31	GS-5-31
			18-22	28-32	(8-12)	(18-22)	(18-22)R	(28-32)
Volatile Organics in Soil-Modified Method 8020								
FIELD ANALYSIS:	Water	MDL						
	CAS Number	ug/l	Units					
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	3.3(C)	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	4.4(C)	ND	ND
PID pk sum based on istd conc/area (ug/L)									

Date analyzed:			05/31/89	05/31/89	05/31/89	05/31/89	05/31/89	06/09/89
Time analyzed:			12:00	12:01	16:41	16:43	16:44	12:00
Analyzed By :			DLB	DLB	DLB	DLB	DLB	DLF
Modified Method 418.1-Total Petroleum Hydrocarbons (TP								
FIELD ANALYSIS:	TPH Water		MDL	MDL	MDL	MDL	MDL	MDL
		Units	1.0	1.0	1.0	1.0	1.0	1.3
Total Petroleum Hydrocarbons		mg/l	ND	ND	ND	ND	ND	ND

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(A)= Run At This Dilution Due To Excessive Matrix Interfe

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				05/31/89	06/07/89	06/07/89	06/07/89	06/07/89	06/08/89
Date Analyzed :				06/01/89	06/08/89	06/08/89	06/08/89	06/08/89	06/09/89
Time Analyzed :				1330	1446	1517	1549	1620	1527
Run Number :				ABB602,11	ABB0609,10	ABB0609,11	ABB0609,12	ABB0609,13	ABB0610B,4
Sample Name :				GS-5-31	GS-5-32	GS-5-32	GS-5-32	GS-5-32	GS-5-32
				DI (060193)	(8-12)	(8-12)R	(8-12)FB	(060893)DI	(28-31)
Volatile Organics in Soil-Modified Method 8020									
FIELD ANALYSIS:	Water	MDL							
	CAS Number	ug/l	Units						
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND	ND	-1.0
PID pk sum based on istd conc/area (ug/L)									360
Date analyzed:				05/31/89	06/09/89	06/09/89	06/09/89	06/09/89	06/10/89
Time analyzed:				16:45	11:54	12:01	12:03	12:05	14:15
Analyzed By :				DLB	DLF	DLF	DLF	DLF	DLF
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	1.0	1.1	1.0	1.1	1.0	1.3
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

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(A)= Run At This Dilution Due To Excessive Matrix Interfe

ABB Environmental Services, Inc.
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Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				06/08/89	06/08/89	06/08/89	06/08/89	06/08/89	06/09/89
Date Analyzed :				06/09/89	06/09/89	06/09/89	06/09/89	06/09/89	06/10/89
Time Analyzed :				1600	1635	1707	1739	1811	1007
Run Number :				ABB0610B,5	ABB0610B,6	ABB0610B,7	ABB0610B,8	ABB0610B,9	ABB0611,3
Sample Name :				GS-5-32	GS-5-32	GS-5-33	GS-5-33	GS-5-33	GS-5-34
				(18-22)	(18-22D)	(8-12)	(28-32)	(18-22)	(8-12)
Volatile Organics in Soil-Modified Method 8020									
FIELD ANALYSIS:	Water	MDL							
	CAS Number	ug/l	Units						
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND	ND	ND
PID pk sum based on istd conc/area (ug/L)					-1.0	-1.0	ND	ND	ND
					140	120			
Date analyzed:				06/10/89	06/10/89	06/10/89	06/10/89	06/10/89	06/10/89
Time analyzed:				14:16	14:18	14:19	14:20	14:22	14:23
Analyzed By :				DLF	DLF	DLF	DLF	DLF	DLF
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	1.0	1.7	1.0	1.0	1.0	1.0
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

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Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			06/09/89	06/09/89	06/09/89	06/09/89	06/09/89	06/09/89
Date Analyzed :			06/10/89	06/10/89	06/10/89	06/10/89	06/10/89	06/10/89
Time Analyzed :			1037	1108	1139	1210	1241	1312
Run Number :			ABB0611,4	ABB0611,5	ABB0611,6	ABB0611,7	ABB0611,8	ABB0611,9
Sample Name :			GS-5-34	GS-5-34	GS-5-2	GS-5-2	GS-5-2	GS-5-2
			(18-22)	(28-32)	(8-12)	(8-12D)	(8-12R)	(18-22)
Volatile Organics in Soil-Modified Method 8020								
FIELD ANALYSIS:	Water	MDL						
	CAS Number	ug/l	Units					
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	14C	13C	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	-1.0	-1.0	ND	-1.0
PID pk sum based on istd conc/area (ug/L)						770	1100		660
Date analyzed:				06/12/89	06/10/89	06/10/89	06/10/89	06/10/89	06/10/89
Time analyzed:				14:41	14:25	14:29	14:31	14:32	14:34
Analyzed By :				DLF	DLF	DLF	DLF	DLF	DLF
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	1.4	2.0	1.0	1.2	1.0	1.0
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

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Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			06/10/89	06/10/89	06/10/89	06/10/89	06/10/89	06/10/89
Date Analyzed :			06/12/89	06/12/89	06/12/89	06/12/89	06/12/89	06/12/89
Time Analyzed :			956	1027	1058	1129	1201	1233
Run Number :			ABB0613,3	ABB0613,4	ABB0613,5	ABB0613,6	ABB0613,7	ABB0613,8
Sample Name :			GS-5-35	GS-5-35	GS-5-2	GS-5-2	GS-5-2	GS-5-35
			(28-32)	(8-12)	(54-58)	(28-32)	(28-32R)	(18-22)
Volatile Organics in Soil-Modified Method 8020								
FIELD ANALYSIS:	Water	MDL						
	CAS Number	ug/l	Units					
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	-1.0	-1.0	ND	-1.0
PID pk sum based on istd conc/area (ug/L)						1900	710		110
Date analyzed:				06/12/89	06/12/89	06/12/89	06/12/89	06/12/89	06/12/89
Time analyzed:				14:43	14:36	14:44	14:45	14:47	14:51
Analyzed By :				DLF	DLF	DLF	DLF	DLF	DLF
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	1.0	1.1	3.1	1.3	1.0	5.0
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

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ABB Environmental Services, Inc.
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Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			06/14/89	06/14/89	06/15/89	06/15/89	06/20/89	06/20/89
Date Analyzed :			06/20/89	06/20/89	06/20/89	06/20/89	06/20/89	06/20/89
Time Analyzed :			1834	1905	1935	2005	2106	2136
Run Number :			ABB0621,6	ABB0621,7	ABB0621,8	ABB0621,9	ABB0621,10	ABB0621,11
Sample Name :			GS-5-35 (72-75R)	GS-5-35 (72-75)	GS-5-35 (72-75FB)	GS-5-36 (72-76R)	GS-5-36 (72-76)	GS-5-36 (72-76D)
Volatile Organics in Soil-Modified Method 8020								
FIELD ANALYSIS:	Water	MDL						
	CAS Number	ug/l	Units					
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND	ND	ND
PID pk sum based on istd conc/area (ug/L)									
Date analyzed:				06/21/89	06/21/89	06/21/89	06/21/89	06/21/89	06/21/89
Time analyzed:				12:09	12:10	12:11	12:12	12:13	12:14
Analyzed By :				DLB	DLB	DLB	DLB	DLB	DLB
Modified Method 418.1-Total Petroleum Hydrocarbons (TP									
FIELD ANALYSIS:	TPH Water			MDL	MDL	MDL	MDL	MDL	MDL
			Units	1.0	1.0	1.0	1.0	1.4	1.4
Total Petroleum Hydrocarbons			mg/l	ND	ND	ND	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(A)= Run At This Dilution Due To Excessive Matrix Interfe

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				06/21/89	06/21/89	06/21/89
Date Analyzed :				06/22/89	06/22/89	06/22/89
Time Analyzed :				1113	1143	1214
Run Number :				ABB0623,6	ABB0623,7	ABB0623,8
Sample Name :				GS-5-37	GS-5-37	GS-5-37
				(062293)DI	(72-76)	(72-76R)

Volatile Organics in Soil-Modified Method 8020

FIELD ANALYSIS:	Water CAS Number	MDL ug/l	Units			
Methylene Chloride	75-09-2	2.0	ug/l	2.0C	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:		06/22/89	06/22/89	06/22/89
Time analyzed:		15:51	15:47	15:52
Analyzed By :		DLB	DLB	DLB
Modified Method 418.1-Total Petroleum Hydrocarbons (TP				
FIELD ANALYSIS: TPH Water		MDL	MDL	MDL
	Units	1.0	1.0	1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(A)= Run At This Dilution Due To Excessive Matrix Interfe

PHASE III RESULTS OF THE ON-SITE WATER AND SOIL ANALYSES FOR VOLATILE ORGANICS AND TPH AT THE NAS CECIL FIELD FACILITY LOCATED IN JACKSONVILLE, FLORIDA

Prepared For: Mr. Charlie Donahue
ABB Environmental Services, Inc.

Prepared By: PACE, Incorporated
1710 Douglas Drive North
Golden Valley, Minnesota 55422

PACE Project No.: 930121.600
Report Date: October 15, 1993

On-site analysis was performed by me and personnel under my direct supervision.

James R. Archer
Project Field Supervisor

All analysis and data reduction were performed by PACE, Incorporated under my supervision.

Robert R. Elliott
Manager, Field and Air Services Department

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Appendix B Site.17 - Mid Level Soil Analysis Results

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Appendix E Site 17 - AGSS Mid Level Soil Analysis Results

INTRODUCTION

PACE Incorporated was contracted by ABB Environmental Services, Inc. to perform on-site water and soil analyses for volatile organics and TPH at the NAS Cecil Field site in Jacksonville, Florida. On-site analytical services were performed under Navy Contract N62467-D-0317 subcontract no. SE2-09-049 effective June 15, 1993 through August 31, 1993.

Water and soil samples were analyzed on-site following a modification of method SW846-8010/8020 utilizing Navy Energy and Environmental Support Activity (NEESA) Quality Control Level C. Analysis was performed using an HP5890 series II gas chromatograph with a 60m DB624 megabore (0.53mm I.D) column. An OI Electrolytic Conductivity Detector (ELCD) and an OI Photo ionization Detector were used for analyte quantitation. A Horizon VG minichrom system was used for data acquisition.

Water samples were introduced into the gas chromatographic system following SW846/5030A section 7.3.1., purge and trap injection. Low level soil samples were introduced into the gas chromatographic system following SW846/5030A section 7.3.3.1. and medium level soil extracts following SW846/5030A section 7.3.3.2..

Water and soil samples were analyzed for TPH on a Perkin Elmer FTIR using EPA method 418.1

Initially when samples were received from site 17 they were analyzed following method SW846-8020 plus Methylene Chloride and Naphthalene. All samples received on July 6 and later were analyzed following a modification of method SW846-8010/8020. Also some of the samples received prior to July 6 were rerun if unknown halogenated peaks were present.

SITE 17 - LOW LEVEL SOIL ANALYSIS RESULTS

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
ı : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/28/93	6/28/93
Date Analyzed :	7/1/93	7/1/93
Time Analyzed :	2:05	2:37
Analyzed By :	FFE	FFE
Sample Number :	10 701066	10 701067
Run Number :	ABB0630B,10	ABB0630B,11
Sample Name :	**GSS-17-1 (0-2)**	**GSS-17-1 (2-4)**

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics In Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units		
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	0.0049(C)	ND
phthalene	91-20-3	0.004	mg/Kg	(1)	(1)
PID pk sum based on Istd conc/area (mg/Kg)				4	0.32
	Date Analyzed :			6/29/93	6/29/93
	Time Analyzed :			17:37	17:39
	Analyzed By :			DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	1700	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(DNV)=Did Not Validate

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/29/93	6/29/93	7/6/93	7/6/93
Date Analyzed :	7/8/93	7/8/93	7/9/93	7/9/93
Time Analyzed :	20:46	21:32	3:36	10:59
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 701081	10 701082	10 701100	10 701101
Run Number :	ABB0708,11	ABB0708,12	ABB0708,20	ABB0709,4
Sample Name :	**GSS-17-12 (4-6)**	**GSS-17-12 (6-8)**	**GSS-17-4 (2-4)**	**GSS-17-4 (4-6)**

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND	ND(E)	ND(E)	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/30/93	6/30/93	7/7/93	7/7/93
Time Analyzed :	9:47	9:47	18:48	17:56
Analyzed By :	DLB	DLB	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(DNV)=Did Not Validate

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
ACE Project Number: 930121.600

Date Recieved:				7/10/93	7/10/93	7/11/93	7/11/93
Date Analyzed :				7/19/93	7/19/93	7/13/93	7/13/93
Time Analyzed :				22:18	23:04	22:47	23:33
Analyzed By :				RJS	RJS	SAB	SAB
Sample Number:				10 701134	10 701135	10 701144	10 701145
Run Number :				ABB0719,10	ABB0719,11	ABB0713,17	ABB0713,18
Sample Name :				**GSS-17-7**	**GSS-17-7**	**GSS-17-9**	**GSS-17-9**
				(0-2)	**(2-4)**	**(2-4)**	**(4-6)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND	ND	ND	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND	ND
1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND	ND
lorobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND	ND
_thylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	7/11/93	7/11/93	7/13/93	7/13/93
Time Analyzed :	16:12	16:13	12:52	12:53
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	12	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(DNV)=Did Not Validate

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			7/13/93	7/13/93	7/19/93	7/19/93
Date Analyzed :			7/14/93	7/14/93	7/21/93	7/21/93
Time Analyzed :			:19	1:04	11:02	11:48
Analyzed By :			SAB	SAB	RJS	RJS
Sample Number:			10 701158	10 701159	10 701166	10 701167
Run Number :			ABB0713,19	ABB0713,20	ABB0721,4	ABB0721,5
Sample Name :			**GSS-17-6**	**GSS-17-6**	**GSS-17-10**	**GSS-17-10**
			(4-6)	**(6-8)**	**(0-2)**	**(2-4)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND	ND	ND	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	(1)	ND
PID pk sum based on istd conc/area (mg/Kg)						0.23	

Date Analyzed :	7/20/93	7/20/93	7/20/93	7/20/93
Time Analyzed :	14:30	14:35	14:36	14:37
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	ND	5.4	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(DNV)=Did Not Validate

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

E: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
ACE Project Number: 930121.600

Date Recieved:			7/21/93	7/21/93	7/24/93	7/24/93
Date Analyzed :			7/23/93	7/23/93	7/25/93	7/25/93
Time Analyzed :			12:04	12:50	10:56	11:41
Analyzed By :			SAB	SAB	SAB	SAB
Sample Number:			10 701177	10 701178	10 701203	10 701204
Run Number :			ABB0723,5	ABB0723,6	ABB0725,4	ABB0725,5
Sample Name :			**GSS-17-8**	**GSS-17-8**	**GSS-17-11**	**GSS-17-11**
			(0-2)	**(6-8)**	**(4-6)**	**(6-8)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND	ND	ND	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND	0.0040
1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND	ND
orobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	(1)	(1)
PID pk sum based on istd conc/area (mg/Kg)						0.34	0.53

Date Analyzed :	7/23/93	7/23/93	7/26/93	7/26/93
Time Analyzed :	15:32	15:33	11:52	11:53
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	3.5	ND	4.6	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
*)= Ran At This Dilution Due To Excessive Matrix Interference
,= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(DNV)=Did Not Validate

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				7/26/93	7/26/93	7/27/93	7/27/93
Date Analyzed :				7/27/93	7/27/93	7/28/93	7/28/93
Time Analyzed :				15:08	15:53	19:30	20:18
Analyzed By :				SAB	SAB	SAB	SAB
Sample Number:				10 701219	10 701220	10 701227	10 701228
Run Number :				ABB0727,9	ABB0727,10	ABB0728,14	ABB0728,15
Sample Name :				**GSS-17-5**	**GSS-17-5**	**GSS-17-13**	**GSS-17-13**
				(0-2)	**(4-6)**	**(0-2)**	**(2-4)**

FIELD ANALYSIS: **LOW LEVEL , SOIL**

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND	ND	ND	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :			7/28/93	7/28/93	7/28/93	7/28/93
Time Analyzed :			13:59	14:00	13:55	14:01
Analyzed By :			DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Soil**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(DNV)=Did Not Validate

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

E: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	8/2/93	8/2/93	8/4/93	8/4/93
Date Analyzed :	8/4/93	8/4/93	8/5/93	8/5/93
Time Analyzed :	12:33	13:39	1:32	2:22
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 701238	10 701239	10 701252	10 701253
Run Number :	ABB0804,5	ABB0804,6	ABB0804,20	ABB0804,21
Sample Name :	**GSS-17-14**	**GSS-17-14**	**GSS-17-15**	**GSS-17-15**
	(4-6)	**(6-8)**	**(4-6)**	**(6-8)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND	ND	ND	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	0.0025(DNC)	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND	ND
1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND	ND
ilorobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.0020	mg/Kg	ND	0.0058(DNC)	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	0.03C	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	0.0057C	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	(1)	(1)	ND	ND
PID pk sum based on istd conc/area (mg/Kg)				0.72	3.7		

Date Analyzed :	8/5/93	8/5/93	8/5/93	8/5/93
Time Analyzed :	16:27	16:28	16:29	16:30
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	18	57	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(DNV)=Did Not Validate

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			8/4/93	8/6/93	8/6/93	8/10/93
Date Analyzed :			8/5/93	8/7/93	8/7/93	8/11/93
Time Analyzed :			3:12	13:51	14:40	9:55
Analyzed By :			SAB	SAB	SAB	SAB
Sample Number:			10 701254	10 701274	10 701275	10 701302
Run Number :			ABB0804,22	ABB0807,5	ABB0807,6	ABB0811,3
Sample Name :			**GSS-17-15 (6-8)D**	**GSS-17-16 (0-2)**	**GSS-17-16 (6-8)**	**GSS-17-17 (2-4)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND	ND	ND	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND	0.0028(DNC)
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	8/5/93	8/7/93	8/7/93	8/17/93
Time Analyzed :	16:31	16:47	16:49	14:36
Analyzed By :	DLF	DLF	DLF	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	3.8	8.7	ND(E)	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(DNV)=Did Not Validate

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			8/10/93	8/16/93	8/16/93	8/17/93
Date Analyzed :			8/11/93	8/20/93	8/20/93	8/20/93
Time Analyzed :			10:40	16:49	17:30	18:10
Analyzed By :			SAB	RJS	RJS	RJS
Sample Number:			10 701303	10 701315	10 701316	10 701328
Run Number :			ABB0811,4	ABB0820,11	ABB0820,12	ABB0820,13
Sample Name :			**GSS-17-17**	**GSS-17-18**	**GSS-17-18**	**GSS-17-19**
			(4-6)	**(2-4)**	**(4-6)**	**(0-2)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND	ND	ND	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	8/17/93	8/17/93	8/17/93	8/19/93
Time Analyzed :	14:37	14:38	14:39	14:06
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

- Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(DNV)=Did Not Validate

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			8/17/93	8/20/93	8/20/93
Date Analyzed :			8/20/93	8/21/93	8/21/93
Time Analyzed :			18:52	11:50	12:33
Analyzed By :			RJS	RJS	RJS
Sample Number:			10 701329	10 701345	10 701346
Run Number :			ABB0820,14	ABB0821,5	ABB0821,6
Sample Name :			**GSS-17-19**	**GSS-17-20**	**GSS-17-20**
			(6-8)	**(0-2)**	**(6-8)**

FIELD ANALYSIS: **LOW LEVEL , SOIL**

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units			
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND	ND	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND
Chlorobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND
EthylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	8/19/93	8/21/93	8/21/93
Time Analyzed :	14:07	15:53	15:54
Analyzed By :	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Soil**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL
		3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(DNV)=Did Not Validate

SITE 17 - MEDIUM LEVEL SOIL ANALYSIS RESULTS

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/26/93	6/26/93
Date Analyzed :	6/27/93	6/27/93
Time Analyzed :	17:53	18:23
Analyzed By :	FFE	FFE
Sample Number :	10 701040	10 701041
Run Number :	ABB0627,18	ABB0627,19
Sample Name :	**GSS-17-3**	**GSS-17-3**
	(4-6)	**(6-8)**

FIELD ANALYSIS: **MID LEV Soil**

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL mg/kg	Units		
Methylene Chloride	75-09-2	0.25	mg/kg	ND	ND
Benzene	71-43-2	0.25	mg/kg	ND	ND
Toluene	108-88-3	0.25	mg/kg	2.3C	0.62C
Chlorobenzene	108-90-7	0.25	mg/kg	ND	ND
EthylBenzene	100-41-4	0.25	mg/kg	1.3C	0.37C
Total Xylenes	1330-20-7	0.75	mg/kg	6.8C	2.1C
1,3-Dichlorobenzene	541-73-1	0.25	mg/kg	ND	ND
1,4-Dichlorobenzene	106-46-7	0.25	mg/kg	ND	ND
1,2-Dichlorobenzene	95-50-1	0.25	mg/kg	0.33C	ND
Naphthalene	91-20-3	0.50	mg/kg	(1)	(1)
PID pk sum based on istd conc/area (mg/Kg)				560	490

Date Analyzed :	6/27/93	6/27/93
Time Analyzed :	15:41	15:45
Analyzed By :	DLB	DLB

FIELD ANALYSIS: **TPH Soil**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	5800	1800

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(CDV)=Changed During Validation
(DNV)=Did Not Validate

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

E: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
ACE Project Number: 930121.600

Date Recieved:	7/22/93	7/22/93	7/22/93
Date Analyzed :	7/24/93	7/24/93	7/24/93
Time Analyzed :	13:46	14:31	16:21
Analyzed By :	SAB	SAB	SAB
Sample Number:	10 701195	10 701196	10 701197
Run Number :	ABB0724A,7	ABB0724A,8	ABB0724A,10
Sample Name :	**GSS-17-2**	**GSS-17-2**	**GSS-17-2**
	(4-6)	**(4-6)D**	**(6-8)**

FIELD ANALYSIS: MID LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units			
				(2)(A)	(2)(A)	(A)
1,1-Dichloroethylene	75-35-4	0.50	mg/Kg	ND	ND	ND
Methylene Chloride	75-09-2	0.25	mg/Kg	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.25	mg/Kg	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.25	mg/Kg	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.25	mg/Kg	ND	ND	ND
Chloroform	67-66-3	0.25	mg/Kg	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.25	mg/Kg	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.25	mg/Kg	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.25	mg/Kg	ND	ND	ND
Benzene	71-43-2	0.25	mg/Kg	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.25	mg/Kg	ND	ND	ND
Toluene	108-88-3	0.25	mg/Kg	1.8C	2.3C	ND
1,2,2-Tetrachloroethene (PCE)	127-18-4	0.25	mg/Kg	ND	ND	ND
lorobenzene	108-90-7	0.25	mg/Kg	ND	ND	ND
thylBenzene	100-41-4	0.25	mg/Kg	1.2C	1.5C	ND
Total Xylenes	1330-20-7	0.75	mg/Kg	6.8C	9.1C	ND
1,3-Dichlorobenzene	541-73-1	0.25	mg/Kg	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.25	mg/Kg	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.25	mg/Kg	ND	ND	ND
Naphthalene	91-20-3	0.50	mg/Kg	(1)	(1)	(1)
PID pk sum based on istd conc/area (mg/Kg)				400	500	180
Date Analyzed :				7/23/93	7/23/93	7/23/93
Time Analyzed :				15:39	15:42	15:44
Analyzed By :				DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL
		1.0	1.0	1.0
Total Petroleum Hydrocarbons	mg/kg	7500	1700	130

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

SITE 17 - WATER ANALYSIS RESULTS

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/26/93	6/26/93	6/26/93	6/26/93
Date Analyzed :	6/27/93	6/27/93	6/27/93	6/27/93
Time Analyzed :	15:49	16:51	17:22	16:20
Analyzed By :	FFE	FFE	FFE	FFE
Sample Number :	10 701042	10 701043	10 701044	10 701048
Run Number :	ABB0627,14	ABB0627,16	ABB0627,17	ABB0627,15
Sample Name :	**GS-17-3 (9-13)**	**GS-17-3 (18-22)**	**GS-17-3 (18-22)D**	**GS-17-3 (28-32)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units	(2)			(2)
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	6.4C	ND	ND	4.0C
Toluene	108-88-3	2.0	ug/l	22C	ND	ND	32C
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	6.4C	ND	ND	11C
Total Xylenes	1330-20-7	6.0	ug/l	16C	ND	ND	58C
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	5.8C
Naphthalene	91-20-3	4.0	ug/l	(1)	(1)	(1)	(1)
PID pk sum based on istd conc/area (ug/L)				3400	550	460	4400
Date analyzed:				6/27/93	6/27/93	6/27/93	6/27/93
Time analyzed:				16:00	16:05	16:07	16:08
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		1.0	1.0	1.0	1.0
Total Petroleum Hydrocarbons	mg/l	3.2	ND	ND	2.3

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(A)= Run At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			6/26/93	6/26/93	6/26/93	6/27/93
Date Analyzed :			6/27/93	6/27/93	6/27/93	6/28/93
Time Analyzed :			10:36	10:06	13:12	12:28
Analyzed By :			FFE	FFE	FFE	FFE
Sample Number :			10 701049	10 701050	10 701051	10 701054
Run Number :			ABB0627,4	ABB0627,3	ABB0627,9	ABB0628,6
Sample Name :			**GS-17-3**	**GS-17-3**	**GS-17-3**	**GS-17-3**
			(28-32)R	**(28-32)FB**	**(52-56)**	**(72-76)**

FIELD ANALYSIS: **Water**

Volatile Organics In Water-Modified Method 8020

	CAS Number	MDL ug/l	Units			(2)	
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	15C	9.0C
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	6.4C	3.1C
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	35C	19C
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	5.2C	2.9C
Naphthalene	91-20-3	4.0	ug/l	ND	ND	(1)	(1)
PID pk sum based on istd conc/area (ug/L)						2800	1500
Date analyzed:				6/27/93	6/27/93	6/27/93	6/29/93
Time analyzed:				16:11	16:12	16:13	17:10
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.7	MDL 1.7
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(A)= Run At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/27/93	6/28/93	6/28/93	6/28/93
Date Analyzed :	6/28/93	6/29/93	6/29/93	6/29/93
Time Analyzed :	12:58	16:35	17:05	16:05
Analyzed By :	FFE	FFE	FFE	FFE
Sample Number :	10 701055	10 701074	10 701075	10 701076
Run Number :	ABB0628,7	ABB0629B,3	ABB0629,4	ABB0629B,2
Sample Name :	**GS-17-3 (72-76R)**	**GS-17-1 (28-32)**	**GS-17-1 (52-56)**	**GS-17-1 (52-56R)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	2.0C	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
phthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND
FID pk sum based on istd conc/area (ug/L)					330	450	

Date analyzed:	6/29/93	6/29/93	6/29/93	6/29/93
Time analyzed:	17:11	17:17	17:18	17:19
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(A)= Run At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/28/93	6/28/93	6/28/93	6/29/93
Date Analyzed :	6/29/93	6/29/93	6/30/93	6/30/93
Time Analyzed :	18:35	17:35	11:51	16:36
Analyzed By :	FFE	FFE	FFE	FFE
Sample Number :	10 701071	10 701072	10 701073	10 701083
Run Number :	ABB0629B,7	ABB0629B,5	ABB0630,7	ABB0630,12
Sample Name :	**GS-17-1**	**GS-17-1**	**GS-17-1**	**GS-17-1**
	(12-14)	**(18-22)**	**(18-22)D**	**(92-96)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units	(4)	(2)		
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND (2)	ND
Benzene	71-43-2	2.0	ug/l	120C	4.8C	11C	15C
Toluene	108-88-3	2.0	ug/l	120C	ND	16C	16C
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND (2)	ND
EthylBenzene	100-41-4	2.0	ug/l	49C	28C	150C(4)	5.9C
Total Xylenes	1330-20-7	6.0	ug/l	150C	150C	840C(4)	20C
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND (2)	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND (2)	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND (2)	2.9C
Naphthalene	91-20-3	4.0	ug/l	(1)	(1)	(1)	(1)
PID pk sum based on istd conc/area (ug/L)				3800	2600	9800	82
Date analyzed:				6/29/93	6/29/93	6/29/93	6/30/93
Time analyzed:				17:07	17:12	17:13	9:55
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/l	ND	1.0	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(A)= Run At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
'n : Maria Pijnenburg

HE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/29/93	6/29/93	6/29/93	6/30/93
Date Analyzed :	6/30/93	6/30/93	6/30/93	6/30/93
Time Analyzed :	15:03	18:08	16:05	17:37
Analyzed By :	FFE	FFE	FFE	FFE
Sample Number :	10 701084	10 701085	10 701086	10 701087
Run Number :	ABB0630,9	ABB0630,15	ABB0630,11	ABB0630,14
Sample Name :	**GS-17-12**	**GS-17-12**	**GS-17-12**	**GS-17-12**
	(8-12)	**(18-22)**	**(18-22)R**	**(28-32)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
aphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on Istd conc/area (ug/L)

Date analyzed:	6/30/93	6/30/93	6/30/93	7/7/93
Time analyzed:	9:57	9:58	9:59	19:21
Analyzed By :	DLB	DLB	DLB	DLF

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(A)= Run At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/30/93	6/30/93	6/30/93
Date Analyzed :	6/30/93	6/30/93	6/30/93
Time Analyzed :	18:42	19:13	19:43
Analyzed By :	FFE	FFE	FFE
Sample Number :	10 701088	10 701089	10 701090
Run Number :	ABB0630,16	ABB0630,17	ABB0630,18
Sample Name :	**GS-17-12 (28-32)R**	**GS-17-12 (28-32)D**	**GS-17-12 (52-56)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units			
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:	7/7/93	7/7/93	7/7/93
Time analyzed:	19:22	19:24	19:25
Analyzed By :	DLF	DLF	DLF

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(A)= Run At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
ACE Project Number: 930121.600

Date Recieved:	6/26/93	6/26/93	6/26/93	6/26/93
Date Analyzed :	7/10/93	7/10/93	7/10/93	7/11/93
Time Analyzed :	22:04	22:50	23:36	:21
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number :	10 701042	10 701043	10 701048	10 701051
Run Number :	ABB0710,17	ABB0710,18	ABB0710,19	ABB0710,20
Sample Name :	**GS-17-3**	**GS-17-3**	**GS-17-3**	**GS-17-3**
	(9-13)	**(18-22)**	**(28-32)**	**(52-56)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
				(B)		(B)(2)	(B)(2)
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	9.5	ND	8.2	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	8.7	ND	4.4	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	19	3.9	130	19
Toluene	108-88-3	2.0	ug/l	17	ND	33	9.2
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
hlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
thylBenzene	100-41-4	2.0	ug/l	6	ND	12	4.2
Total Xylenes	1330-20-7	6.0	ug/l	14	ND	59	22
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	6.8	ND
Naphthalene	91-20-3	4.0	ug/l	(1)	(1)	(1)	(1)
PID pk sum based on istd conc/area (ug/L)				1100	310	2600	
Date analyzed:				6/27/93	6/27/93	6/27/93	6/27/93
Time analyzed:				16:00	16:05	16:08	16:13
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.7
Total Petroleum Hydrocarbons	mg/l	3.2	ND	2.3	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opened up to 14 days prior to this run.
)= Run At This Dilution Due To Excessive Matrix Interferer
(0)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			6/27/93	6/28/93	6/28/93	6/28/93
Date Analyzed :			7/11/93	7/12/93	7/12/93	7/11/93
Time Analyzed :			1:07	1:28	2:13	1:52
Analyzed By :			SAB	SAB	SAB	SAB
Sample Number :			10 701054	10 701071	10 701072	10 701074
Run Number :			ABB0710,21	ABB0711B,5	ABB0711B,6	ABB0710,22
Sample Name :			**GS-17-3**	**GS-17-1**	**GS-17-1**	**GS-17-1**
			(72-76)	**(12-14)**	**(18-22)**	**(28-32)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
				(B)	(B)(3)	(B)(2)	(B)
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	110	9.9	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	26	20	ND	ND
Toluene	108-88-3	2.0	ug/l	5.7	110	18	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	2.1	44	150	ND
Total Xylenes	1330-20-7	6.0	ug/l	12	120	530	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	2.1	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	(1)	(1)	(1)	(1)
PID pk sum based on istd conc/area (ug/L)				760	2500	4000	140
Date analyzed:				6/29/93	6/29/93	6/29/93	6/29/93
Time analyzed:				17:10	17:07	17:12	17:17
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		1.7	1.0	1.0	1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	1.0	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

E: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
ACE Project Number: 930121.600

Date Recieved:			6/28/93	6/29/93	7/6/93	7/6/93
Date Analyzed :			7/12/93	7/12/93	7/7/93	7/8/93
Time Analyzed :			2:58	3:43	23:55	10:48
Analyzed By :			SAB	SAB	SAB	SAB
Sample Number :			10 701075	10 701083	10 701102	10 701103
Run Number :			ABB0711B,7	ABB0711B,8	ABB0707B,7	ABB0708,3
Sample Name :			**GS-17-1**	**GS-17-1**	**GS-17-4**	**GS-17-4**
			(52-56)	**(92-96)**	**(8-12)**	**(8-12)R**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
				(B)	(B)		
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	2.3	11	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	3.3	ND	ND
Toluene	108-88-3	2.0	ug/l	3	12	ND	ND
1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
lorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
thylBenzene	100-41-4	2.0	ug/l	ND	4.7	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	6.7	17	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	3.6	ND	ND
Naphthalene	91-20-3	4.0	ug/l	(1)	(1)	ND	ND
PID pk sum based on istd conc/area (ug/L)				270	690		
Date analyzed:				6/29/93	6/30/93	7/7/93	7/7/93
Time analyzed:				17:18	9:55	19:13	19:26
Analyzed By :				DLB	DLB	DLF	DLF

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

		MDL	MDL	MDL	MDL
	Units	1.0	3.0	1.1	1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
.)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			7/6/93	7/7/93	7/7/93	7/7/93
Date Analyzed :			7/8/93	7/8/93	7/8/93	7/8/93
Time Analyzed :			1:26	2:12	2:57	3:42
Analyzed By :			SAB	SAB	SAB	SAB
Sample Number :			10 701104	10 701107	10 701108	10 701109
Run Number :			ABB0707B,9	ABB0707B,10	ABB0707B,11	ABB0707B,12
Sample Name :			**GS-17-4**	**GS-17-4**	**GS-17-4**	**GS-17-4**
			(18-22)	**(28-32)**	**(28-32)FB**	**(52-56)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:	7/7/93	7/9/93	7/9/93	7/9/93
Time analyzed:	19:31	13:50	13:51	13:53
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (8)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

:E: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
.CE Project Number: 930121.600

Date Recieved:	7/10/93	7/10/93	7/10/93	7/10/93
Date Analyzed :	7/12/93	7/12/93	7/14/93	7/14/93
Time Analyzed :	4:28	5:13	16:36	17:22
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number :	10 701136	10 701137	10 701138	10 701139
Run Number :	ABB0711B,9	ABB0711B,10	ABB0714,7	ABB0714,8
Sample Name :	**GS-17-4**	**GS-17-4**	**GS-17-7**	**GS-17-7**
	(73-75)	**(071093)DI**	**(8-12)**	**(18-22)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
lorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
ıylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:	7/11/93	7/11/93	7/11/93	7/11/93
Time analyzed:	15:48	15:50	15:51	15:52
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.4	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
)= Run At This Dilution Due To Excessive Matrix Interferer
(J)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				7/10/93	7/10/93	7/10/93	7/10/93
Date Analyzed :				7/12/93	7/11/93	7/11/93	7/12/93
Time Analyzed :				10:19	23:12	23:57	:43
Analyzed By :				SAB	SAB	SAB	SAB
Sample Number :				10 701140	10 701141	10 701142	10 701143
Run Number :				ABB0712,3	ABB0711B,2	ABB0711B,3	ABB0711B,4
Sample Name :				**GS-17-7**	**GS-17-7**	**GS-17-7**	**GS-17-7**
				(18-22)D	**(18-22)R**	**(28-32)**	**(52-56)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	10(C)	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:				7/11/93	7/11/93	7/11/93	7/13/93
Time analyzed:				15:56	15:57	15:59	12:24
Analyzed By :				DLF	DLF	DLF	DLF

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

			MDL	MDL	MDL	MDL
		Units	1.1	1.0	1.0	2.0
Total Petroleum Hydrocarbons		mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
ACE Project Number: 930121.600

Date Recieved:				7/11/93	7/11/93	7/11/93	7/11/93
Date Analyzed :				7/12/93	7/12/93	7/12/93	7/12/93
Time Analyzed :				11:04	11:50	12:36	13:22
Analyzed By :				SAB	SAB	SAB	SAB
Sample Number :				10 701146	10 701147	10 701148	10 701149
Run Number :				ABB0712,4	ABB0712,5	ABB0712,6	ABB0712,7
Sample Name :				**GS-17-7**	**GS-17-7**	**GS-17-7**	**GS-17-9**
				(92-93)	**(72-76)R**	**(72-76)**	**(8-12)**

FIELD ANALYSIS: Water

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
lorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
ylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	(1)	ND	(1)	ND
PID pk sum based on istd conc/area (ug/L)				510		110	
Date analyzed:				7/13/93	7/13/93	7/13/93	7/13/93
Time analyzed:				12:26	12:27	12:29	12:18
Analyzed By :				DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Water

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.5	MDL 1.2
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
)= Run At This Dilution Due To Excessive Matrix Interferer
(J)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			7/11/93	7/12/93	7/12/93	7/12/93
Date Analyzed :			7/12/93	7/14/93	7/14/93	7/14/93
Time Analyzed :			14:08	18:08	18:55	21:14
Analyzed By :			SAB	SAB	SAB	SAB
Sample Number :			10 701150	10 701151	10 701152	10 701153
Run Number :			ABB0712,8	ABB0714,9	ABB0714,10	ABB0714,13
Sample Name :			**GS-17-9**	**GS-17-9**	**GS-17-9**	**GS-17-9**
			(18-22)	**(28-32)**	**(28-32)R**	**(52-56)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	[illegible]	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	[illegible]	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	[illegible]	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:		7/13/93	7/13/93	7/13/93	7/13/93
Time analyzed:		12:30	12:35	12:36	12:37
Analyzed By :		DLF	DLF	DLF	DLF

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
ACE Project Number: 930121.600

Date Recieved:			7/12/93	7/12/93	7/13/93	7/13/93
Date Analyzed :			7/14/93	7/14/93	7/14/93	7/15/93
Time Analyzed :			22:00	22:47	23:33	:19
Analyzed By :			SAB	SAB	SAB	SAB
Sample Number :			10 701156	10 701157	10 701160	10 701161
Run Number :			ABB0714,14	ABB0714,15	ABB0714,16	ABB0714,17
Sample Name :			**GS-17-9**	**GS-17-9**	**GS-17-6**	**GS-17-6**
			(28-32)FB	**(72-76)**	**(18-22)**	**(8-12)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
hlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
thylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:	7/13/93	7/13/93	7/14/93	7/14/93
Time analyzed:	12:39	12:41	10:49	10:51
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
\)= Run At This Dilution Due To Excessive Matrix Interferer
,O)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			7/13/93	7/13/93	7/13/93	7/13/93
Date Analyzed :			7/15/93	7/15/93	7/15/93	7/15/93
Time Analyzed :			1:05	1:51	2:36	3:22
Analyzed By :			SAB	SAB	SAB	SAB
Sample Number :			10 701162	10 701163	10 701164	10 701165
Run Number :			ABB0714,18	ABB0714,19	ABB0714,20	ABB0714,21
Sample Name :			**GS-17-6**	**GS-17-6**	**GS-17-6**	**GS-17-6**
			(28-32)	**(28-32)R**	**52-56**	**72-76**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	4.5(C)	5.2(C)

PID pk sum based on istd conc/area (ug/L)

Date analyzed:		7/14/93	7/14/93	7/20/93	7/20/93
Time analyzed:		10:52	10:53	14:52	14:53
Analyzed By :		DLF	DLF	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

		MDL	MDL	MDL	MDL
	Units	1.0	1.0	1.0	1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
ACE Project Number: 930121.600

Date Recieved:				7/19/93	7/19/93	7/19/93	7/19/93
Date Analyzed :				7/20/93	7/20/93	7/20/93	7/20/93
Time Analyzed :				2:06	2:52	3:37	4:23
Analyzed By :				RJS	RJS	RJS	RJS
Sample Number :				10 701168	10 701169	10 701170	10 701171
Run Number :				ABB0719,15	ABB0719,16	ABB0719,17	ABB0719,18
Sample Name :				**GS-17-10**	**GS-17-10**	**GS-17-10**	**GS-17-10**
				(8-12)	**(8-12)R**	**(18-22)**	**(28-32)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
lorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
thylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	(1)	ND	ND	ND
PID pk sum based on istd conc/area (ug/L)				220			
Date analyzed:				7/20/93	7/20/93	7/20/93	7/20/93
Time analyzed:				14:47	14:54	14:56	14:59
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not.Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opener
)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				7/20/93	7/20/93	7/20/93	7/20/93
Date Analyzed :				7/20/93	7/20/93	7/20/93	7/21/93
Time Analyzed :				21:45	22:31	23:17	:2
Analyzed By :				RJS	RJS	RJS	RJS
Sample Number :				10 701172	10 701173	10 701174	10 701175
Run Number :				ABB0720C,16	ABB0720C,17	ABB0720C,18	ABB0720C,19
Sample Name :				**GS-17-10**	**GS-17-10**	**GS-17-10**	**GS-17-10**
				52-56	**52-56R**	**72-74**	**72-74FB**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:				7/21/93	7/21/93	7/21/93	7/21/93
Time analyzed:				14:27	14:29	14:63	14:31
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

			MDL	MDL	MDL	MDL
		Units	1.0	1.0	4.2	1.0
Total Petroleum Hydrocarbons		mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
ACE Project Number: 930121.600

Date Recieved:		7/20/93	7/21/93	7/21/93	7/21/93
Date Analyzed :		7/21/93	7/21/93	7/22/93	7/22/93
Time Analyzed :		:48	23:32	:19	1:05
Analyzed By :		RJS	RJS	RJS	RJS
Sample Number :		10 701176	10 701179	10 701180	10 701181
Run Number :		ABB0720C,20	ABB0721C,7	ABB0721C,8	ABB0721C,9
Sample Name :		**GS-17-10**	**GS-17-8**	**GS-17-8**	**GS-17-8**
		92-95	**(8-12)**	**8-12R**	**18-22**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	(1)	ND
PID pk sum based on istd conc/area (ug/L)						170	

Date analyzed:	7/21/93	7/22/93	7/22/93	7/22/93
Time analyzed:	14:32	15:10	15:14	15:15
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 2.6	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	7/21/93	7/21/93	7/21/93	7/21/93
Date Analyzed :	7/22/93	7/22/93	7/22/93	7/22/93
Time Analyzed :	1:51	2:38	3:24	4:10
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number :	10 701182	10 701185	10 701186	10 701187
Run Number :	ABB0721C,10	ABB0721C,11	ABB0721C,12	ABB0721C,13
Sample Name :	**GS-17-8**	**GS-17-8**	**GS-17-8**	**GS-17-8**
	18-22D	**28-32**	**52-56**	**72-76**

FIELD ANALYSIS: **Water**

Volatile Organics In Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:	7/22/93	7/22/93	7/22/93	7/22/93
Time analyzed:	15:16	15:18	15:21	15:23
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

- Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

		MDL	MDL	MDL	MDL
	Units	1.0	1.0	1.0	5.6
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
ACE Project Number: 930121.600

Date Recieved:	7/21/93	7/21/93	7/22/93	7/22/93
Date Analyzed :	7/22/93	7/22/93	7/24/93	7/23/93
Time Analyzed :	4:56	5:42	12:16	23:30
Analyzed By :	RJS	RJS	SAB	SAB
Sample Number :	10 701188	10 701189	10 701190	10 701191
Run Number :	ABB0721C,14	ABB0721C,15	ABB0722,23	ABB0723,20
Sample Name :	**GS-17-8**	**GS-17-8**	**GS-17-2**	**GS-17-2**
	92-95	**(072193)DI**	**(8-10)**	**(8-10)R**

FIELD ANALYSIS: **Water**

Volatile Organics In Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	16C	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	5.8C	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	11C	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	2.8C	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	4.8C	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	170C(3)	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	140C(3)	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	490C(6)	ND
1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
lorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
ethylBenzene	100-41-4	2.0	ug/l	ND	ND	62C(3)	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	210C(3)	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	(1)	ND
PID pk sum based on istd conc/area (ug/L)						6400(3)	
Date analyzed:				7/23/93	7/22/93	7/23/93	7/23/93
Time analyzed:				15:19	15:24	15:14	15:20
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

		MDL	MDL	MDL	MDL
	Units	3.3	1.0	1.0	1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	1.0	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				7/22/93	7/22/93	7/22/93	7/23/93
Date Analyzed :				7/23/93	7/23/93	7/23/93	7/23/93
Time Analyzed :				2:35	3:20	4:06	19:41
Analyzed By :				SAB	SAB	SAB	SAB
Sample Number :				10 701192	10 701193	10 701194	10 701200
Run Number :				ABB0722.25	ABB0722.26	ABB0722.27	ABB0723.15
Sample Name :				**GS-17-2**	**GS-17-2**	**GS-17-2**	**GS-17-2**
				(18-22)	**(28-32)**	**(52-56)**	**(72-76)R**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	5.7C	24C	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	3.0C	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	4.5C	ND
Toluene	108-88-3	2.0	ug/l	ND	3.1C	11C	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	2.8C	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	10C	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	2.5C	ND
Naphthalene	91-20-3	4.0	ug/l	(1)	(1)	(1)	ND
PID pk sum based on istd conc/area (ug/L)				260	430	860	
Date analyzed:				7/23/93	7/23/93	7/23/93	7/24/93
Time analyzed:				15:21	15:22	15:23	14:51
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

T: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
ACE Project Number: 930121.600

Date Recieved:	7/23/93	7/23/93	7/24/93	7/24/93
Date Analyzed :	7/23/93	7/24/93	7/24/93	7/24/93
Time Analyzed :	20:27	13:01	20:14	21:00
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number :	10 701201	10 701202	10 701205	10 701206
Run Number :	ABB0723,16	ABB0723,17	ABB0724A,15	ABB0724A,16
Sample Name :	**GS-17-2**	**GS-17-2**	**GS-17-11**	**GS-17-11**
	(72-76)	**(92-95)**	**(8-11)**	**(18-22)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	10C	110C	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	2.0C	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	17C	23C	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	21C	14C	ND
Toluene	108-88-3	2.0	ug/l	2.9C	42C(3)	38C	ND
1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
lorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
ethylBenzene	100-41-4	2.0	ug/l	ND	12C	13C	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	47C	39C	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	6.1C	3.7C	ND
Naphthalene	91-20-3	4.0	ug/l	(1)	(1)	(1)	ND
PID pk sum based on istd conc/area (ug/L)				270	2300	1200	
Date analyzed:				7/24/93	7/24/93	7/24/93	7/24/93
Time analyzed:				14:52	14:53	15:33	14:55
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	8.2	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	7/24/93	7/24/93	7/24/93	7/24/93
Date Analyzed :	7/24/93	7/24/93	7/24/93	7/25/93
Time Analyzed :	21:46	22:32	23:17	:3
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number :	10 701208	10 701209	10 701210	10 701211
Run Number :	ABB0724A,17	ABB0724A,18	ABB0724A,19	ABB0724A,20
Sample Name :	**GS-17-11**	**GS-17-11**	**GS-17-11**	**GS-17-11**
	(28-32)	**(28-32)R**	**(52-56)**	**(72-76)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	(1)	(1)
PID pk sum based on istd conc/area (ug/L)						140	320

Date analyzed:	7/24/93	7/24/93	7/24/93	7/24/93
Time analyzed:	14:56	14:57	15:01	15:00
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

T: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
ACE Project Number: 930121.600

Date Recieved:			7/24/93	7/25/93	7/26/93	7/26/93
Date Analyzed :			7/25/93	7/25/93	7/27/93	7/27/93
Time Analyzed :			16:09	21:21	2:03	2:49
Analyzed By :			SAB	SAB	SAB	SAB
Sample Number :			10 701207	10 701218	10 701221	10 701222
Run Number :			ABB0725,11	ABB0725,18	ABB0726,11	ABB0726,12
Sample Name :			**GS-17-11**	**GS-17-11**	**GS-17-5**	**GS-17-5**
			(18-22)D	**(93-94)**	**(8-12)**	**(8-12R)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	2.7C
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	2.1C	ND	ND
1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
lorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
ethylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	(1)	ND	ND
PID pk sum based on istd conc/area (ug/L)					210		

Date analyzed:	7/24/93	7/27/93	7/27/93	7/27/93
Time analyzed:	14:55	16:25	16:22	16:26
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 2.3	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	7/26/93	7/26/93	7/26/93	7/26/93
Date Analyzed :	7/27/93	7/27/93	7/27/93	7/27/93
Time Analyzed :	3:34	19:46	20:33	21:19
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number :	10 701223	10 701224	10 701225	10 701226
Run Number :	ABB0726,13	ABB0727,15	ABB0727,16	ABB0727,17
Sample Name :	**GS-17-5**	**GS-17-5**	**GS-17-5**	**GS-17-5**
	(18-22)	**(28-32)**	**(52-56)**	**(72-76)**

FIELD ANALYSIS: **Water**

Volatile Organics In Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	(1)	ND
PID pk sum based on istd conc/area (ug/L)						200	

Date analyzed:	7/27/93	7/27/93	7/27/93	7/27/93
Time analyzed:	16:27	16:28	16:29	16:32
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 2.4	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

`E: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			7/27/93	7/27/93	7/27/93	7/27/93
Date Analyzed :			7/27/93	7/27/93	7/28/93	7/28/93
Time Analyzed :			22:05	22:52	10:57	11:46
Analyzed By :			SAB	SAB	SAB	SAB
Sample Number :			10 701229	10 701230	10 701231	10 701232
Run Number :			ABB0727,18	ABB0727,19	ABB0728,3	ABB0728,4
Sample Name :			**GS-17-5**	**GS-17-13**	**GS-17-13**	**GS-17-13**
			(92-94)	**(11-15)**	**(18-22)**	**(28-32)**

FIELD ANALYSIS: **Water**

Volatile Organics In Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
hlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	(1)	ND	ND	ND
PID pk sum based on istd conc/area (ug/L)				180			
Date analyzed:				7/28/93	7/28/93	7/28/93	7/28/93
Time analyzed:				13:42	13:44	13:45	13:47
Analyzed By :				DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

		MDL	MDL	MDL	MDL
	Units	1.8	1.0	1.0	1.0
Total Petroleum Hydrocarbons	mg/l	2.0	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:		7/27/93	7/28/93	7/28/93	7/28/93
Date Analyzed :		7/28/93	7/28/93	7/28/93	7/28/93
Time Analyzed :		12:31	13:18	14:03	14:49
Analyzed By :		SAB	SAB	SAB	SAB
Sample Number :		10 701233	10 701234	10 701235	10 701236
Run Number :		ABB0728,5	ABB0728,6	ABB0728,7	ABB0728,8
Sample Name :		GS-17-13 (28-32)R	GS-17-13 (52-56)	GS-17-13 (72-76)	GS-17-13 (90-94)

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:	7/28/93	8/3/93	8/3/93	8/3/93
Time analyzed:	13:48	13:13	13:15	13:17
Analyzed By :	DLB	DLF	DLF	DLF

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		1.0	1.3	1.0	1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	7/28/93	8/2/93	8/2/93	8/2/93
Date Analyzed :	7/28/93	8/3/93	8/3/93	8/3/93
Time Analyzed :	15:35	12:53	13:38	14:22
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number :	10 701237	10 701240	10 701241	10 701242
Run Number :	ABB0728,9	ABB0803,5	ABB0803,6	ABB0803,7
Sample Name :	**GS-17-13**	**GS-17-14**	**GS-17-14**	**GS-17-14**
	(90-94)R	**(12-16)**	**(12-16)R**	**(18-22)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
orobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:	8/3/93	8/3/93	8/3/93	8/3/93
Time analyzed:	13:19	13:20	13:22	13:23
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.2	MDL 1.1	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
)=MDL 50X higher than that listed above. (B)=Bottle opene
)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	8/2/93	8/2/93	8/3/93	8/3/93
Date Analyzed :	8/3/93	8/3/93	8/3/93	8/3/93
Time Analyzed :	15:07	15:51	20:21	21:07
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number :	10 701243	10 701246	10 701247	10 701248
Run Number :	ABB0803,8	ABB0803,9	ABB0803,15	ABB0803,16
Sample Name :	**GS-17-14**	**GS-17-14**	**GS-17-14**	**GS-17-14**
	(28-32)	**(080293)DI**	**(52-56)**	**(52-56)R**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	(1)	ND
PID pk sum based on istd conc/area (ug/L)						190	

Date analyzed:	8/3/93	8/5/93	8/5/93	8/5/93
Time analyzed:	13:25	16:46	16:47	16:48
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

E: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:		8/3/93	8/3/93	8/3/93	8/4/93
Date Analyzed :		8/3/93	8/3/93	8/3/93	8/4/93
Time Analyzed :		21:54	22:40	23:26	18:27
Analyzed By :		SAB	SAB	SAB	SAB
Sample Number :		10 701249	10 701250	10 701251	10 701255
Run Number :		ABB0803,17	ABB0803,18	ABB0803,19	ABB0804,12
Sample Name :		**GS-17-14**	**GS-17-14**	**GS-17-14**	**GS-17-15**
		(72-76)	**(90-94)**	**(90-94)D**	**(8-12)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
nlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	(1)	(1)	(1)	(1)
PID pk sum based on istd conc/area (ug/L)				370	260	280	31
Date analyzed:				8/5/93	8/5/93	8/5/93	8/5/93
Time analyzed:				16:49	16:50	16:55	16:56
Analyzed By :				DLF	DLF	DLF	DLF

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	8/4/93	8/4/93	8/4/93	8/4/93
Date Analyzed :	8/4/93	8/4/93	8/4/93	8/4/93
Time Analyzed :	19:12	20:37	21:27	22:17
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number :	10 701256	10 701257	10 701258	10 701259
Run Number :	ABB0804,13	ABB0804,14	ABB0804,15	ABB0804,16
Sample Name :	**GS-17-15**	**GS-17-15**	**GS-17-15**	**GS-17-15**
	(18-22)	**(18-22)D**	**(18-22)R**	**(18-22)FB**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:	8/5/93	8/5/93	8/5/93	8/5/93
Time analyzed:	16:41	16:57	16:58	16:59
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: **TPH Water**

- Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

		MDL	MDL	MDL	MDL
	Units	1.2	1.0	1.0	1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
ACE Project Number: 930121.600

Date Recieved:	8/4/93	8/4/93	8/5/93	8/5/93
Date Analyzed :	8/5/93	8/5/93	8/6/93	8/6/93
Time Analyzed :	10:44	11:34	11:52	1:05
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number :	10 701260	10 701261	10 701262	10 701263
Run Number :	ABB0805,3	ABB0805,4	ABB0805,22	ABB0805,16
Sample Name :	**GS-17-15**	**GS-17-15**	**GS-17-15**	**GS-17-15**
	(28-32)	**(080493)DI**	**(52-56)**	**(72-76)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
orobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
inylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:	8/5/93	8/5/93	8/6/93	8/6/93
Time analyzed:	17:01	17:02	13:03	13:05
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	8/5/93	8/5/93	8/6/93	8/6/93
Date Analyzed :	8/6/93	8/6/93	8/7/93	8/7/93
Time Analyzed :	1:49	2:33	18:29	19:17
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number :	10 701264	10 701265	10 701266	10 701267
Run Number :	ABB0805,17	ABB0805,18	ABB0807,11	ABB0807,12
Sample Name :	**GS-17-15**	**GS-17-15**	**GS-17-16**	**GS-17-16**
	(52-56)R	**(90-94)**	**(8-12)**	**(8-12)R**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:	8/6/93	8/6/93	8/7/93	8/7/93
Time analyzed:	13:06	13:07	16:59	17:12
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		1.0	1.0	1.1	1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
FACE Project Number: 930121.600

Date Recieved:	8/6/93	8/6/93	8/6/93	8/6/93
Date Analyzed :	8/7/93	8/7/93	8/7/93	8/7/93
Time Analyzed :	20:05	20:52	21:38	22:24
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number :	10 701268	10 701269	10 701270	10 701271
Run Number :	ABB0807,13	ABB0807,14	ABB0807,15	ABB0807,16
Sample Name :	**GS-17-16**	**GS-17-16**	**GS-17-16**	**GS-17-16**
	(18-22)	**(28-32)**	**(52-56)**	**(72-76)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
orobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:	8/7/93	8/7/93	8/7/93	8/7/93
Time analyzed:	17:14	17:15	17:16	17:17
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(I)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				8/7/93	8/9/93	8/10/93	8/10/93
Date Analyzed :				8/7/93	8/10/93	8/10/93	8/10/93
Time Analyzed :				23:10	16:21	20:12	20:58
Analyzed By :				SAB	SAB	SAB	SAB
Sample Number :				10 701284	10 701301	10 701304	10 701305
Run Number :				ABB0807,17	ABB0810,10	ABB0810,15	ABB0810,16
Sample Name :				**GS-17-16**	**AGSS-17-94**	**GS-17-17**	**GS-17-17**
				(90-94)	**(0-2R)**	**(8-12)**	**(8-12R)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:				8/9/93	8/10/93	8/11/93	8/11/93
Time analyzed:				15:43	15:31	12:56	12:57
Analyzed By :				DLF	DLF	DLF	DLF

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

		MDL	MDL	MDL	MDL
	Units	1.0	1.0	1.0	1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

E: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			8/10/93	8/10/93	8/10/93	8/10/93
Date Analyzed :			8/10/93	8/10/93	8/10/93	8/10/93
Time Analyzed :			21:44	22:30	23:17	:3
Analyzed By :			SAB	SAB	SAB	SAB
Sample Number :			10 701306	10 701307	10 701308	10 701309
Run Number :			ABB0810,17	ABB0810,18	ABB0810,19	ABB0810,20
Sample Name :			**GS-17-17**	**GS-17-17**	**GS-17-17**	**GS-17-17**
			(8-12)D	**(18-22)**	**(28-32)**	**(52-56)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
nlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:		8/11/93	8/11/93	8/11/93	8/11/93
Time analyzed:		12:59	13:00	13:01	13:02
Analyzed By :		DLF	DLF	DLF	DLF

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

		MDL	MDL	MDL	MDL
	Units	1.2	1.0	1.0	1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:		8/11/93	8/11/93	8/11/93	8/16/93
Date Analyzed :		8/11/93	8/11/93	8/11/93	8/17/93
Time Analyzed :		17:22	18:07	18:52	20:03
Analyzed By :		SAB	SAB	SAB	RJS
Sample Number :		10 701312	10 701313	10 701314	10 701317
Run Number :		ABB0811,13	ABB0811,14	ABB0811,15	ABB0817,16
Sample Name :		**GS-17-17 (72-76)**	**GS-17-17 (72-76R)**	**GS-17-17 (90-94)**	**GS-17-18 (10-12)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:	8/17/93	8/17/93	8/17/93	8/17/93
Time analyzed:	14:21	14:22	14:23	13:55
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		2.0	1.0	1.9	1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
ACE Project Number: 930121.600

Date Recieved:			8/16/93	8/16/93	8/16/93	8/17/93
Date Analyzed :			8/17/93	8/17/93	8/17/93	8/17/93
Time Analyzed :			20:39	21:15	21:52	23:41
Analyzed By :			RJS	RJS	RJS	RJS
Sample Number :			10 701318	10 701319	10 701320	10 701321
Run Number :			ABB0817,7	ABB0817,18	ABB0817,19	ABB0817,22
Sample Name :			**GS-17-18**	**GS-17-18**	**GS-17-18**	**GS-17-18**
			(10-12)R	**(18-22)**	**(28-32)**	**(52-56)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	2.4(CDV)
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
lorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
_thylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on Istd conc/area (ug/L)

Date analyzed:	8/17/93	8/17/93	8/17/93	8/18/93
Time analyzed:	14:26	14:27	14:28	11:32
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 2.6
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(.)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	8/17/93	8/17/93	8/17/93	8/17/93
Date Analyzed :	8/18/93	8/18/93	8/18/93	8/18/93
Time Analyzed :	:18	:54	1:31	2:07
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number :	10 701322	10 701323	10 701324	10 701325
Run Number :	ABB0817,23	ABB0817,24	ABB0817,25	ABB817,26
Sample Name :	**GS-17-18**	**GS-17-18**	**GS-17-18**	**GS-17-18**
	(52-56)R	**(52-56)FB**	**(72-76)**	**(90-94)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:	8/18/93	8/18/93	8/18/93	8/18/93
Time analyzed:	11:33	11:34	11:34	11:35
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.4	MDL 4.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

': On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	8/18/93	8/18/93	8/18/93	8/18/93
Date Analyzed :	8/18/93	8/18/93	8/19/93	8/19/93
Time Analyzed :	22:57	23:35	:13	:51
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number :	10 7001330	10 7001331	10 7001332	10 7001333
Run Number :	ABB0818,23	ABB0818,24	ABB0818,25	ABB0818,26
Sample Name :	**GS-17-19**	**GS-17-19**	**GS-17-19**	**GS-17-19**
	(8-12)R	**(8-12)**	**(18-22)**	**(28-32)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
ılorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:	8/19/93	8/19/93	8/19/93	8/19/93
Time analyzed:	14:15	14:16	14:16	14:17
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	8/18/93	8/18/93	8/18/93	8/19/93
Date Analyzed :	8/19/93	8/19/93	8/20/93	8/20/93
Time Analyzed :	1:29	2:07	13:20	14:09
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number :	10 7001334	10 7001335	10 7001336	10 701337
Run Number :	ABB0818,27	ABB0818,28	ABB0820,6	ABB0820,7
Sample Name :	**GS-17-19**	**GS-17-19**	**GS-17-19**	**GS-17-19**
	(52-56)	**(72-76)**	**(081793)DI**	**(90-94)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:	8/19/93	8/19/93	8/19/93	8/21/93
Time analyzed:	14:18	14:19	14:20	16:08
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 1.8	MDL 1.0	MDL 1.7
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
ACE Project Number: 930121.600

Date Recieved:	8/19/93	8/20/93	8/20/93	8/20/93
Date Analyzed :	8/20/93	8/20/93	8/20/93	8/20/93
Time Analyzed :	14:49	22:15	22:57	23:38
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number :	10 701338	10 701339	10 701340	10 701341
Run Number :	ABB0820,7	ABB0820,19	ABB0820,20	ABB0820,21
Sample Name :	**GS-17-19 (90-94)R**	**GS-17-20 8-12D**	**GS-17-20 8-12R**	**GS-17-20 (8-12)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
hlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
thylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:	8/21/93	8/21/93	8/21/93	8/21/93
Time analyzed:	16:09	16:11	16:12	16:03
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		1.0	1.0	1.0	1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			8/20/93	8/20/93	8/20/93	8/21/93
Date Analyzed :			8/21/93	8/21/93	8/21/93	8/22/93
Time Analyzed :			:21	1:03	1:46	1:45
Analyzed By :			RJS	RJS	RJS	RJS
Sample Number :			10 701342	10 701343	10 701344	10 701354
Run Number :			ABB0820,22	ABB0820,23	ABB0820,24	ABB0821,22
Sample Name :			**GS-17-20**	**GS-17-20**	**GS-17-20**	**GS-17-20**
			18-22	**28-32**	**52-56**	**72-76**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
EthylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	9.1C	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:		8/21/93	8/21/93	8/21/93	8/22/93
Time analyzed:		16:14	16:17	16:18	15:41
Analyzed By :		DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0	MDL 2.0	MDL 2.0	MDL 2.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
ACE Project Number: 930121.600

Date Recieved:	8/21/93	8/21/93	8/24/93	8/31/93
Date Analyzed :	8/22/93	8/22/93	8/25/93	9/1/93
Time Analyzed :	2:29	3:12	16:47	19:20
Analyzed By :	RJS	RJS	SAB	SAB
Sample Number :	10 701355	10 701356	10 701399	10 701426
Run Number :	ABB0821,23	ABB0821,24	ABB0825,13	ABB0901,16
Sample Name :	**GS-17-20**	**GS-17-20**	**GS-17-21**	**GS-17-21**
	90-94	**90-94R**	**EX (082493)**	**EX (106-116)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units				
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND	ND	ND	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND	ND	ND	ND
Chloroform	67-66-3	2.0	ug/l	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND	ND	ND	ND
Benzene	71-43-2	2.0	ug/l	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND	ND	ND	ND
Toluene	108-88-3	2.0	ug/l	ND	ND	ND	ND
1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND	ND	ND	ND
lorobenzene	108-90-7	2.0	ug/l	ND	ND	ND	ND
hylBenzene	100-41-4	2.0	ug/l	ND	ND	ND	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND	ND	ND	ND
Naphthalene	91-20-3	4.0	ug/l	ND	ND	ND	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:	8/22/93	8/22/93	8/25/93	9/1/93
Time analyzed:	15:42	15:43	14:58	17:16
Analyzed By :	DLB	DLB	DLB	DLF

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 2.0	MDL 1.0	MDL 1.0	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	8/31/93
Date Analyzed :	9/1/93
Time Analyzed :	20:00
Analyzed By :	SAB
Sample Number :	10 701427
Run Number :	ABB0901,17
Sample Name :	**GS-17-21 R EX (106-116)**

FIELD ANALYSIS: **Water**

Volatile Organics in Water-Modified Method 8020

	CAS Number	MDL ug/l	Units	
1,1-Dichloroethylene	75-35-4	4.0	ug/l	ND
Methylene Chloride	75-09-2	2.0	ug/l	ND
Trans-1,2-Dichloroethene	156-60-5	2.0	ug/l	ND
1,1-Dichloroethane	75-34-3	2.0	ug/l	ND
Cis-1,2-Dichloroethene	156-59-2	2.0	ug/l	ND
Chloroform	67-66-3	2.0	ug/l	ND
1,1,1-Trichloroethane	71-55-6	2.0	ug/l	ND
Carbon Tetrachloride	56-23-5	2.0	ug/l	ND
1,2-Dichloroethane	107-06-2	2.0	ug/l	ND
Benzene	71-43-2	2.0	ug/l	ND
1,1,2-Trichloroethene (TCE)	79-01-6	2.0	ug/l	ND
Toluene	108-88-3	2.0	ug/l	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	2.0	ug/l	ND
Chlorobenzene	108-90-7	2.0	ug/l	ND
EthylBenzene	100-41-4	2.0	ug/l	ND
Total Xylenes	1330-20-7	6.0	ug/l	ND
1,3-Dichlorobenzene	541-73-1	2.0	ug/l	ND
1,4-Dichlorobenzene	106-46-7	2.0	ug/l	ND
1,2-Dichlorobenzene	95-50-1	2.0	ug/l	ND
Naphthalene	91-20-3	4.0	ug/l	ND

PID pk sum based on istd conc/area (ug/L)

Date analyzed:	9/1/93
Time analyzed:	17:17
Analyzed By :	DLF

FIELD ANALYSIS: **TPH Water**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 1.0
Total Petroleum Hydrocarbons	mg/l	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above. (B)=Bottle opene
(A)= Run At This Dilution Due To Excessive Matrix Interferer
(D)= unable to confirm do to system contamination
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

SITE 17 - AGSS LOW LEVEL SOIL ANALYSIS RESULTS

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/15/93	6/15/93	6/15/93	6/15/93
Date Analyzed :	6/16/93	6/16/93	6/15/93	6/16/93
Time Analyzed :	11:04	11:36	20:19	12:08
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 700954	10 700955	10 700956	10 700957
Run Number :	ABB0616,4	ABB0616,5	ABB0615,21	ABB0616,6
Sample Name :	**AGSS-17-1 (0-2)**	**AGSS-17-2 (0-2)**	**AGSS-17-3 (0-2)**	**AGSS-17-4 (0-2)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/16/93	6/16/93	6/16/93	6/16/93
Time Analyzed :	12:34	12:47	12:49	12:51
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND	8.3

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
`ttn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/15/93	6/15/93	6/15/93	6/15/93
Date Analyzed :	6/15/93	6/15/93	6/15/93	6/15/93
Time Analyzed :	21:22	21:54	22:26	22:57
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 700958	10 700959	10 700960	10 700961
Run Number :	ABB0615,23	ABB0615,24	ABB0615,25	ABB0615,26
Sample Name :	**AGSS-17-4 (0-2D)**	**AGSS-17-5 (0-2)**	**AGSS-17-6 (0-2)**	**AGSS-17-6 (0-2D)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	0.0039(DNC)	0.013(DNC)
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
aphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/16/93	6/16/93	6/16/93	6/16/93
Time Analyzed :	12:52	12:53	12:58	12:59
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	4.1	ND(E)	170	500

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/16/93	6/16/93	6/16/93	6/16/93
Date Analyzed :	6/16/93	6/16/93	6/16/93	6/16/93
Time Analyzed :	18:34	19:06	19:38	20:10
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 700966	10 700967	10 700968	10 700969
Run Number :	ABB0616,9	ABB0616,10	ABB0616,11	ABB0616,12
Sample Name :	**AGSS-17-7**	**AGSS-17-8**	**AGSS-17-9**	**AGSS-17-10**
	(0-2)	**(0-2)**	**(0-2)**	**(0-2)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/22/93	6/22/93	6/22/93	6/22/93
Time Analyzed :	12:35	12:41	12:42	12:43
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	92	ND(E)	22

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
tn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/16/93	6/16/93	6/16/93	6/16/93
Date Analyzed :	6/16/93	6/16/93	6/16/93	6/16/93
Time Analyzed :	20:42	21:13	21:45	22:17
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 700970	10 700971	10 700972	10 700973
Run Number :	ABB0616,13	ABB0616,14	ABB0616,15	ABB0616,16
Sample Name :	**AGSS-17-11 (0-2)**	**AGSS-17-12 (0-2)**	**AGSS-17-13 (0-2)**	**AGSS-17-14 (0-2)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
aphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/22/93	6/22/93	6/22/93	6/22/93
Time Analyzed :	12:44	12:45	12:49	12:50
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	6.2	10	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/16/93	6/16/93	6/16/93	6/16/93
Date Analyzed :	6/16/93	6/16/93	6/16/93	6/17/93
Time Analyzed :	22:49	23:21	23:52	:24
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 700974	10 700975	10 700978	10 700979
Run Number :	ABB0616,17	ABB0616,18	ABB0616,19	ABB0616,20
Sample Name :	**AGSS-17-14**	**AGSS-17-15**	**AGSS-17-16**	**AGSS-17-17**
	(0-2D)	**(0-2)**	**(0-2)**	**(0-2)**

FIELD ANALYSIS: **LOW LEVEL , SOIL**

Volatile Organics In Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/22/93	6/22/93	6/22/93	6/22/93
Time Analyzed :	12:51	12:52	12:53	12:54
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: **TPH Soil**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND(E)	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
ttn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/21/93	6/21/93	6/21/93	6/21/93
Date Analyzed :	6/22/93	6/22/93	6/22/93	6/22/93
Time Analyzed :	12:19	12:51	13:24	13:56
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number:	10 700982	10 700983	10 700984	10 700985
Run Number :	ABB0622,7	ABB0622,8	ABB0622,9	ABB0622,10
Sample Name :	**AGSS-17-18 (0-2)**	**AGSS-17-19 (0-2)**	**AGSS-17-20 (0-2)**	**AGSS-17-21D (0-2)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on Istd conc/area (mg/Kg)

Date Analyzed :	6/22/93	6/22/93	6/22/93	6/22/93
Time Analyzed :	17:12	17:15	17:16	17:17
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND(E)	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/21/93	6/21/93	6/21/93	6/21/93
Date Analyzed :	6/22/93	6/22/93	6/22/93	6/22/93
Time Analyzed :	14:29	15:01	17:41	18:13
Analyzed By :	RJS	RJS	RJS	RJS
Sample Number:	10 700986	10 700987	10 700988	10 700989
Run Number :	ABB0622,11	ABB0622,12	ABB0622,17	ABB0622,18
Sample Name :	**AGSS-17-21**	**AGSS-17-22**	**AGSS-17-23**	**AGSS-17-24**
	(0-2)	**(0-2)**	**(0-2)**	**(0-2)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND
PID pk sum based on lstd conc/area (mg/Kg)							0.062

Date Analyzed :	6/22/93	6/22/93	6/22/93	6/22/93
Time Analyzed :	17:18	17:19	17:22	17:23
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	630	5.9

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/23/93	6/23/93	6/23/93	6/25/93
Date Analyzed :	6/24/93	6/24/93	6/24/93	6/26/93
Time Analyzed :	10:11	10:43	15:10	11:24
Analyzed By :	PPE	PPE	PPE	PPE
Sample Number:	10 701005	10 701006	10 701007	10 701028
Run Number :	ABB0624,3	ABB0624,4	ABB0624,12	ABB0626,4
Sample Name :	**AGSS-17-25**	**AGSS-17-26**	**AGSS-17-27**	**AGSS-17-28**
	(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on Istd conc/area (mg/Kg)

Date Analyzed :	6/24/93	6/24/93	6/24/93	6/26/93
Time Analyzed :	13:06	13:07	13:08	12:31
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND(E)	ND(E)	24	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/25/93	6/25/93	6/25/93	6/25/93
Date Analyzed :	6/26/93	6/26/93	6/26/93	6/26/93
Time Analyzed :	11:56	17:18	12:28	13:00
Analyzed By :	FFE	FFE	FFE	FFE
Sample Number:	10 701029	10 701030	10 701031	10 701032
Run Number :	ABB0626,5	ABB0626,15	ABB0626,6	ABB0626,7
Sample Name :	**AGSS-17-29 (0-2)**	**AGSS-17-30 (0-2)**	**AGSS-17-31 (0-2)**	**AGSS-17-32 (0-2)**

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/26/93	6/26/93	6/26/93	6/26/93
Time Analyzed :	12:33	12:28	12:34	12:35
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND(E)	ND(E)	ND(E)

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
n : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/25/93	6/25/93	6/25/93	6/25/93
Date Analyzed :	6/26/93	6/26/93	6/26/93	6/26/93
Time Analyzed :	13:32	17:51	14:37	15:09
Analyzed By :	FFE	FFE	FFE	FFE
Sample Number:	10 701033	10 701034	10 701035	10 701036
Run Number :	ABB0626,8	ABB0626,16	ABB0626,10	ABB0626,11
Sample Name :	**AGSS-17-33 (0-2)**	**AGSS-17-34 (0-2)**	**AGSS-17-34 (0-2)D**	**AGSS-17-35 (0-2)**

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics In Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
aphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/26/93	6/26/93	6/26/93	6/26/93
Time Analyzed :	12:36	12:39	12:40	12:41
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	51	ND(E)	ND	ND(E)

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/25/93	6/25/93	6/25/93	6/26/93
Date Analyzed :	6/26/93	6/26/93	6/26/93	6/28/93
Time Analyzed :	15:41	15:41	18:31	17:19
Analyzed By :	FFE	FFE	FFE	FFE
Sample Number:	10 701037	10 701038	10 701039	10 701045
Run Number :	ABB0626,12	ABB0626,13	ABB0626,17	ABB0628,14
Sample Name :	**AGSS-17-36**	**AGSS-17-36**	**AGSS-17-37**	AGSS-17-38
	(0-2)	**(0-2)D**	**(0-2)**	**(0-2)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/26/93	6/26/93	6/26/93	6/27/93
Time Analyzed :	12:42	12:43	12:44	15:47
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND(E)	46	4.5

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
'n : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/26/93	6/26/93	6/27/93	6/27/93
Date Analyzed :	6/28/93	6/29/93	6/28/93	6/28/93
Time Analyzed :	17:52	18:24	18:56	19:29
Analyzed By :	FFE	FFE	FFE	FFE
Sample Number:	10 701046	10 701047	10 701056	10 701057
Run Number :	ABB0628,15	ABB0629B,10	ABB0628,17	ABB0628,18
Sample Name :	AGSS-17-39 (0-2)	AGSS-17-40 (0-2)	**AGSS-17-41 (0-2)**	**AGSS-17-42 (0-2)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
aphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/27/93	6/27/93	6/28/93	6/28/93
Time Analyzed :	15:48	15:49	12:51	12:54
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	11	8.1	ND	ND(E)

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
7)=MDL 500X higher than that listed above.
A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/27/93	6/27/93	6/27/93	6/27/93
Date Analyzed :	6/28/93	7/1/93	7/1/93	7/1/93
Time Analyzed :	20:01	:29	1:01	1:33
Analyzed By :	FFE	FFE	FFE	FFE
Sample Number:	10 701058	10 701060	10 701062	10 701063
Run Number :	ABB0628,19	ABB0630B,7	ABB0630B,8	ABB0630B,9
Sample Name :	**AGSS-17-43 (0-2)**	**AGSS-17-44 (0-2)D**	**AGSS-17-46 (0-2)**	**AGSS-17-47 (0-2)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics In Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/28/93	6/28/93	6/28/93	6/28/93
Time Analyzed :	12:55	12:59	13:09	13:11
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	ND	18.0	9.5	ND

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
ttn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/28/93	6/28/93	6/28/93	6/29/93
Date Analyzed :	7/1/93	7/1/93	7/1/93	7/1/93
Time Analyzed :	3:09	3:41	4:13	5:17
Analyzed By :	FFE	FFE	FFE	FFE
Sample Number:	10 701068	10 701069	10 701070	10 701077
Run Number :	ABB0630B,12	ABB0630B,13	ABB0630B,14	ABB0630B,16
Sample Name :	**AGSS-17-48 (0-2)**	**AGSS-17-49 (0-2)**	**AGSS-17-50 (0-2)**	**AGSS-17-51 (0-2)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND	ND	ND
,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/29/93	6/29/93	6/29/93	6/29/93
Time Analyzed :	17:40	17:28	17:41	9:43
Analyzed By :	DLB	DLB	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	7.7	ND(E)	ND(E)	ND(E)

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/29/93	6/29/93
Date Analyzed :	7/1/93	7/1/93
Time Analyzed :	5:49	6:21
Analyzed By :	FFE	FFE
Sample Number:	10 701078	10 701079
Run Number :	ABB0630B,17	ABB0630B,18
Sample Name :	**AGSS-17-52**	**AGSS-17-53**
	(0-2)	**(0-2)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units		
Methylene Chloride	75-09-2	0.002	mg/Kg	ND	ND
Benzene	71-43-2	0.002	mg/Kg	ND	ND
Toluene	108-88-3	0.002	mg/Kg	ND	ND
Chlorobenzene	108-90-7	0.002	mg/Kg	ND	ND
EthylBenzene	100-41-4	0.002	mg/Kg	ND	ND
Total Xylenes	1330-20-7	0.006	mg/Kg	ND	ND
1,3-Dichlorobenzene	541-73-1	0.002	mg/Kg	ND	ND
1,4-Dichlorobenzene	106-46-7	0.002	mg/Kg	ND	ND
1,2-Dichlorobenzene	95-50-1	0.002	mg/Kg	ND	ND
Naphthalene	91-20-3	0.004	mg/Kg	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/29/93	6/29/93
Time Analyzed :	9:44	9:45
Analyzed By :	DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	ND	9.5

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

": On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
ACE Project Number: 930121.600

Date Recieved:	6/29/93	6/30/93	6/30/93	6/30/93
Date Analyzed :	7/8/93	7/8/93	7/12/93	7/12/93
Time Analyzed :	19:59	22:18	21:02	21:48
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 701080	10 701091	10 701092	10 701093
Run Number :	ABB0708,10	ABB0708,13	ABB0712,17	ABB0712,18
Sample Name :	**AGSS-17-52 (0-2)D**	**AGSS-17-54 (0-2)**	**AGSS-17-55 (0-2)**	**AGSS-17-56 (0-2)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND(CDV)	ND(E)	ND	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND	ND
1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND	ND
orobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND	ND
thylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	6/29/93	7/7/93	7/7/93	7/7/93
Time Analyzed :	9:46	18:31	18:33	18:34
Analyzed By :	DLB	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		1.0	1.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND(E)	ND(E)	7.2	4.6

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
7)=MDL 500X higher than that listed above.
)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			6/30/93	6/30/93	6/30/93	6/30/93
Date Analyzed :			7/9/93	7/9/93	7/12/93	7/9/93
Time Analyzed :			:35	1:20	22:34	2:51
Analyzed By :			SAB	SAB	SAB	SAB
Sample Number:			10 701094	10 701097	10 701098	10 701099
Run Number :			ABB0708,16	ABB0708,17	ABB0712,19	ABB0708,19
Sample Name :			**AGSS-17-57**	**AGSS-17-58**	**AGSS-17-59**	**AGSS-17-60**
			(0-2)	**(0-2)**	**(0-2)**	**(0-2)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND(CDV)	ND(CDV)	ND	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :		7/7/93	7/7/93	7/7/93	7/7/93
Time Analyzed :		18:36	18:37	18:44	18:47
Analyzed By :		DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	7.4	ND(E)	ND(E)	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

'E: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	7/7/93	7/7/93	7/7/93	7/7/93
Date Analyzed :	7/9/93	7/9/93	7/12/93	7/13/93
Time Analyzed :	11:44	12:30	23:21	:7
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 701110	10 701111	10 701112	10 701113
Run Number :	ABB0709,5	ABB0709,6	ABB0712,20	ABB0712,21
Sample Name :	**AGSS-17-61**	**AGSS-17-62**	**AGSS-17-63**	**AGSS-17-64**
	(0-2)	**(0-2)**	**(0-2)**	**(0-2)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/Kg)	Units				
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	0.0065	0.011	ND	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND	ND
',1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND	ND
:hlorobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	7/9/93	7/9/93	7/9/93	7/9/93
Time Analyzed :	13:24	13:25	13:26	13:28
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	15	3.5

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			7/7/93	7/7/93	7/7/93	7/7/93
Date Analyzed :			7/13/93	7/13/93	7/9/93	7/9/93
Time Analyzed :			:52	3:09	19:44	20:30
Analyzed By :			SAB	SAB	SAB	SAB
Sample Number:			10 701114	10 701115	10 701116	10 701117
Run Number :			ABB0712,22	0712,25	ABB0709,13	ABB0709,14
Sample Name :			**AGSS-17-65 (0-2)**	**AGSS-17-66 (0-2)**	**AGSS-17-67 (0-2)**	**AGSS-17-68 (0-2)**

FIELD ANALYSIS: **LOW LEVEL , SOIL**

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND	ND	ND	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :		7/9/93	7/9/93	7/9/93	7/9/93
Time Analyzed :		13:29	13:30	13:32	13:33
Analyzed By :		DLF	DLF	DLF	DLF

FIELD ANALYSIS: **TPH Soil**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	4.4	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

TE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	7/7/93	7/7/93	7/9/93	7/9/93
Date Analyzed :	7/9/93	7/13/93	7/10/93	7/10/93
Time Analyzed :	21:17	21:15	12:49	8:44
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 701118	10 701119	10 701120	10 701121
Run Number :	ABB0709,15	ABB0713,15	ABB0710,6	ABB0710,7
Sample Name :	**AGSS-17-69**	**AGSS-17-70**	**AGSS-17-71**	**AGSS-17-72**
	(0-2)	**(0-2)**	**(0-2)**	**(0-2)**

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics In Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND	ND	ND(E)	ND(CDV)
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND	ND
hlorobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	7/9/93	7/10/93	7/10/93	7/10/93
Time Analyzed :	13:38	15:42	15:31	15:44
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	11	14	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			7/9/93	7/9/93	7/9/93	7/9/93
Date Analyzed :			7/13/93	7/13/93	7/13/93	7/13/93
Time Analyzed :			4:40	12:45	13:31	14:25
Analyzed By :			SAB	SAB	SAB	SAB
Sample Number:			10 701122	10 701123	10 701124	10 701127
Run Number :			ABB0712,27	ABB0713,4	ABB0713,5	ABB0713,6
Sample Name :			**AGSS-17-72 (0-2)D**	**AGSS-17-73 (0-2)**	**AGSS-17-74 (0-2)**	**AGSS-17-75 (0-2)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND	ND	ND	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :		7/10/93	7/10/93	7/10/93	7/10/93
Time Analyzed :		15:45	15:46	15:47	15:51
Analyzed By :		DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND	ND(E)

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

TE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	7/9/93	7/9/93	7/9/93	7/9/93
Date Analyzed :	7/13/93	7/10/93	7/13/93	7/13/93
Time Analyzed :	15:03	17:27	15:49	16:35
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 701128	10 701129	10 701130	10 701131
Run Number :	ABB0713,7	ABB0710,11	ABB0713,8	ABB0713,9
Sample Name :	**AGSS-17-76**	**AGSS-17-76**	**AGSS-17-77**	**AGSS-17-78**
	(0-2)	**(0-2)D**	**(0-2)**	**(0-2)**

FIELD ANALYSIS: **LOW LEVEL , SOIL**

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND	ND(CDV)	ND	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND	ND
hlorobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND	ND
thylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	ND	ND

.PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	7/10/93	7/10/93	7/10/93	7/10/93
Time Analyzed :	15:53	15:54	15:55	15:57
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: **TPH Soil**

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:			7/9/93	7/9/93	8/8/93	8/8/93
Date Analyzed :			7/19/93	7/19/93	8/8/93	8/8/93
Time Analyzed :			20:47	21:32	18:52	19:38
Analyzed By :			RJS	RJS	SAB	SAB
Sample Number:			10 701132	10 701133	10 701285	10 701286
Run Number :			ABB0719,8	ABB0719,9	ABB0808,14	ABB0808,15
Sample Name :			**AGSS-17-79**	**AGSS-17-80**	**AGSS-17-88**	**AGSS-17-87**
			(0-2)	(0-2)	(0-2)	(0-2)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND	ND	ND	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :		7/10/93	7/10/93	8/9/93	8/9/93
Time Analyzed :		15:58	15:59	13:27	13:29
Analyzed By :		DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	ND(E)	ND(E)	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

'E: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	8/8/93	8/8/93	8/8/93	8/8/93
Date Analyzed :	8/8/93	8/8/93	8/9/93	8/9/93
Time Analyzed :	20:24	21:10	10:34	11:18
Analyzed By :	SAB	SAB	SAB	SAB
Sample Number:	10 701287	10 701288	10 701289	10 701290
Run Number :	ABB0808,16	ABB0808,17	ABB0809,3	ABB0809,4
Sample Name :	**AGSS-17-86 (0-2)**	**AGSS-17-89 (0-2)**	**AGSS-17-81 (0-2)**	**AGSS-17-82 (0-2)**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics In Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND	ND	ND	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND	ND
',1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	8/9/93	8/9/93	8/9/93	8/9/93
Time Analyzed :	13:30	13:31	13:32	13:34
Analyzed By :	DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:				8/8/93	8/8/93	8/8/93	8/8/93
Date Analyzed :				8/9/93	8/9/93	8/9/93	8/9/93
Time Analyzed :				12:03	12:47	13:34	14:17
Analyzed By :				SAB	SAB	SAB	SAB
Sample Number:				10 701291	10 701292	10 701293	10 701294
Run Number :				ABB0809,5	ABB0809,6	ABB0809,7	ABB0809,8
Sample Name :				**AGSS-17-83 (0-2)**	**AGSS-17-84 (0-2)**	**AGSS-17-85 (0-2)**	**AGSS-17-83 (0-2)D**

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND	ND	ND	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND	ND
Chlorobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND	ND
EthylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :				8/9/93	8/9/93	8/9/93	8/9/93
Time Analyzed :				13:35	13:36	13:40	13:41
Analyzed By :				DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

				MDL	MDL	MDL	MDL
			Units	3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons			mg/kg	ND	ND	ND	ND

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
ACE Project Number: 930121.600

Date Recieved:				8/9/93	8/9/93	8/9/93	8/9/93
Date Analyzed :				8/9/93	8/9/93	8/9/93	8/10/93
Time Analyzed :				18:04	18:51	19:38	11:53
Analyzed By :				SAB	SAB	SAB	SAB
Sample Number:				10 701295	10 701296	10 701297	10 701298
Run Number :				ABB0809,13	ABB0809,14	ABB0809,15	ABB0810,4
Sample Name :				**AGSS-17-90**	**AGSS-17-91**	**AGSS-17-91**	**AGSS-17-92**
				(0-2)	(0-2)	(0-2)D	(0-2)

FIELD ANALYSIS: LOW LEVEL , SOIL

Volatile Organics In Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units				
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND	ND	ND	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND	ND
hlorobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND	ND
thylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	ND	ND

PID pk sum based on Istd conc/area (mg/Kg)

Date Analyzed :		8/10/93	8/10/93	8/10/93	8/10/93
Time Analyzed :		15:05	15:14	15:16	15:17
Analyzed By :		DLF	DLF	DLF	DLF

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL	MDL	MDL	MDL
		3.0	3.0	3.0	3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND	15

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	8/9/93	8/9/93	8/23/93
Date Analyzed :	8/9/93	8/10/93	8/24/93
Time Analyzed :	21:11	12:37	22:50
Analyzed By :	SAB	SAB	RJS
Sample Number:	10 701299	10 701300	10 701387
Run Number :	ABB0809,17	ABB0810,5	ABB0824,22
Sample Name :	**AGSS-17-93**	**AGSS-17-94**	**AGSS-17-92**
	(0-2)	(0-2)	(0-2RS)

FIELD ANALYSIS: LOW LEVEL SOIL

Volatile Organics In Soil-Modified Method 8020

	CAS Number	MDL (mg/kg)	Units			
1,1-Dichloroethylene	75-35-4	0.0040	mg/Kg	ND	ND	ND
Methylene Chloride	75-09-2	0.0020	mg/Kg	ND	ND	ND
Trans-1,2-Dichloroethene	156-60-5	0.0020	mg/Kg	ND	ND	ND
1,1-Dichloroethane	75-34-3	0.0020	mg/Kg	ND	ND	ND
Cis-1,2-Dichloroethene	156-59-2	0.0020	mg/Kg	ND	ND	ND
Chloroform	67-66-3	0.0020	mg/Kg	ND	ND	ND
1,1,1-Trichloroethane	71-55-6	0.0020	mg/Kg	ND	ND	ND
Carbon Tetrachloride	56-23-5	0.0020	mg/Kg	ND	ND	ND
1,2-Dichloroethane	107-06-2	0.0020	mg/Kg	ND	ND	ND
Benzene	71-43-2	0.0020	mg/Kg	ND	ND	ND
1,1,2-Trichloroethene (TCE)	79-01-6	0.0020	mg/Kg	ND	ND	ND
Toluene	108-88-3	0.0020	mg/Kg	ND	ND	ND
1,1,2,2-Tetrachloroethene (PCE)	127-18-4	0.0020	mg/Kg	ND	ND	ND
Chlorobenzene	108-90-7	0.0020	mg/Kg	ND	ND	ND
EthylBenzene	100-41-4	0.0020	mg/Kg	ND	ND	ND
Total Xylenes	1330-20-7	0.0060	mg/Kg	ND	ND	ND
1,3-Dichlorobenzene	541-73-1	0.0020	mg/Kg	ND	ND	ND
1,4-Dichlorobenzene	106-46-7	0.0020	mg/Kg	ND	ND	ND
1,2-Dichlorobenzene	95-50-1	0.0020	mg/Kg	ND	ND	ND
Naphthalene	91-20-3	0.0040	mg/Kg	ND	ND	ND

PID pk sum based on istd conc/area (mg/Kg)

Date Analyzed :	8/10/93	8/10/93	8/24/93
Time Analyzed :	15:57	15:20	17:47
Analyzed By :	DLF	DLF	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	ND	ND	ND(E)

MDL - Method Detection Limit ND=Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

SITE 17 - AGSS MEDIUM LEVEL SOIL ANALYSIS RESULTS

ABB Environmental Services, Inc.
2590 Executive Center Circle East
Tallahassee, FL 32301
Attn : Maria Pijnenburg

RE: On-Site Analysis at the NAS Cecil Field Site
Jacksonville, Florida
PACE Project Number: 930121.600

Date Recieved:	6/27/93	6/27/93
Date Analyzed :	6/29/93	6/28/93
Time Analyzed :	19:05	21:01
Analyzed By :	FFE	FFE
Sample Number :	10 701059	10 701061
Run Number :	ABB0629B,8	ABB0628,21
Sample Name :	**AGSS-17-44**	**AGSS-17-45**
	(0-2)	**(0-2)**

FIELD ANALYSIS: MID LEV SOIL

Volatile Organics in Soil-Modified Method 8020

	CAS Number	MDL mg/kg	Units		
				(A)	(A)
Methylene Chloride	75-09-2	0.25	mg/kg	ND	ND
Benzene	71-43-2	0.25	mg/kg	ND	ND
Toluene	108-88-3	0.25	mg/kg	ND	ND
Chlorobenzene	108-90-7	0.25	mg/kg	ND	ND
EthylBenzene	100-41-4	0.25	mg/kg	ND	ND
Total Xylenes	1330-20-7	0.75	mg/kg	ND	ND
1,3-Dichlorobenzene	541-73-1	0.25	mg/kg	ND	ND
1,4-Dichlorobenzene	106-46-7	0.25	mg/kg	ND	ND
1,2-Dichlorobenzene	95-50-1	0.25	mg/kg	ND	1.9(C)
Naphthalene	91-20-3	0.50	mg/kg	(1)	(1)
PID pk sum based on istd conc/area (ug/L)				110	530
Date Analyzed :				6/28/93	6/28/93
Time Analyzed :				12:56	13:05
Analyzed By :				DLB	DLB

FIELD ANALYSIS: TPH Soil

Modified Method 418.1-Total Petroleum Hydrocarbons (TPH)

	Units	MDL 3.0	MDL 3.0
Total Petroleum Hydrocarbons	mg/kg	680	11000

MDL - Method Detection Limit
ND - Not Detected
C - Confirmed By Second Column Analysis
(1)=Unable to report due to excessive matrix interference.
(2)=MDL 2X higher than that listed above.
(3)=MDL 5X higher than that listed above.
(4)=MDL 10X higher than that listed above.
(5)=MDL 20X higher than that listed above.
(6)=MDL 50X higher than that listed above.
(7)=MDL 500X higher than that listed above.
(A)= Ran At This Dilution Due To Excessive Matrix Interference
(E)=Previously Reported Hits Are Estimates Below MDL
(DNC)=Did Not Confirm On Second Column Analysis
(CDV)=Changed During Validation

APPENDIX D

APPENDIX D

GEOTECHNICAL TESTING RESULTS

Ellis & Associates, Inc.
A GREG K. EDMONDS COMPANY
5109 STEPP AVENUE
JACKSONVILLE, FL 32216
OFFICE (904) 733-0960
FAX NUMBER (904) 448-5[illegible]

LETTER OF TRANSMITTAL

DATE 1/20/94 | JOB NO. 93-1361

ATTENTION Mr. Charles Donovan

RE: Projects 8500-08 & 8500-27

TO
ABB Environmental Services
2510 Executive Center Circle East
Berkeley Building
Tallahassee, FL 32301-5001

WE ARE SENDING YOU ☑ ATTACHED ☐ UNDER SEPARATE COVER VIA _____ THE FOLLOWING ITEMS:

☐ SHOP DRAWINGS ☐ PRINTS ☐ COPY OF LETTER ☐ SAMPLES ☐ SPECIFICATIONS
☐ CHANGE ORDER ☐ PLANS ☐ _____

COPIES	DATE	NO.	DESCRIPTION
2		2	Summary of Laboratory Test Results
2		2	Summary of Gradation Test Results
2		21	Gradation Curves
2		2	Soil Analysis Report
2		4	Chain of Custody Records

REASON FOR TRANSMITTAL CHECKED BELOW

☐ FOR APPROVAL ☐ APPROVED AS SUBMITTED ☐ RESUBMIT _____ COPIES FOR APPROVAL
☐ FOR YOUR USE ☐ RETURNED FOR CORRECTIONS ☐ SUBMIT _____ COPIES FOR DISTRIBUTION
☐ AS REQUESTED ☐ FOR REVIEW AND COMMENT ☐ RETURN _____ CORRECTED PRINTS
☐ APPROVED AS NOTED ☐ _____
☐ FOR BIDS DUE _____ 19 ____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS

Stephen R. Weaver

COPY TO _____ SIGNED: [signature]

PLEASE NOTIFY US AT ONCE IF ENCLOSURES ARE NOT AS NOTED.

SUMMARY OF LABORATORY TEST RESULTS

PROJECT: NAS Cecil Field (ABB Project No. 8500-08)
CLIENT: ABB Environmental
PROJECT NO.: 93-1361

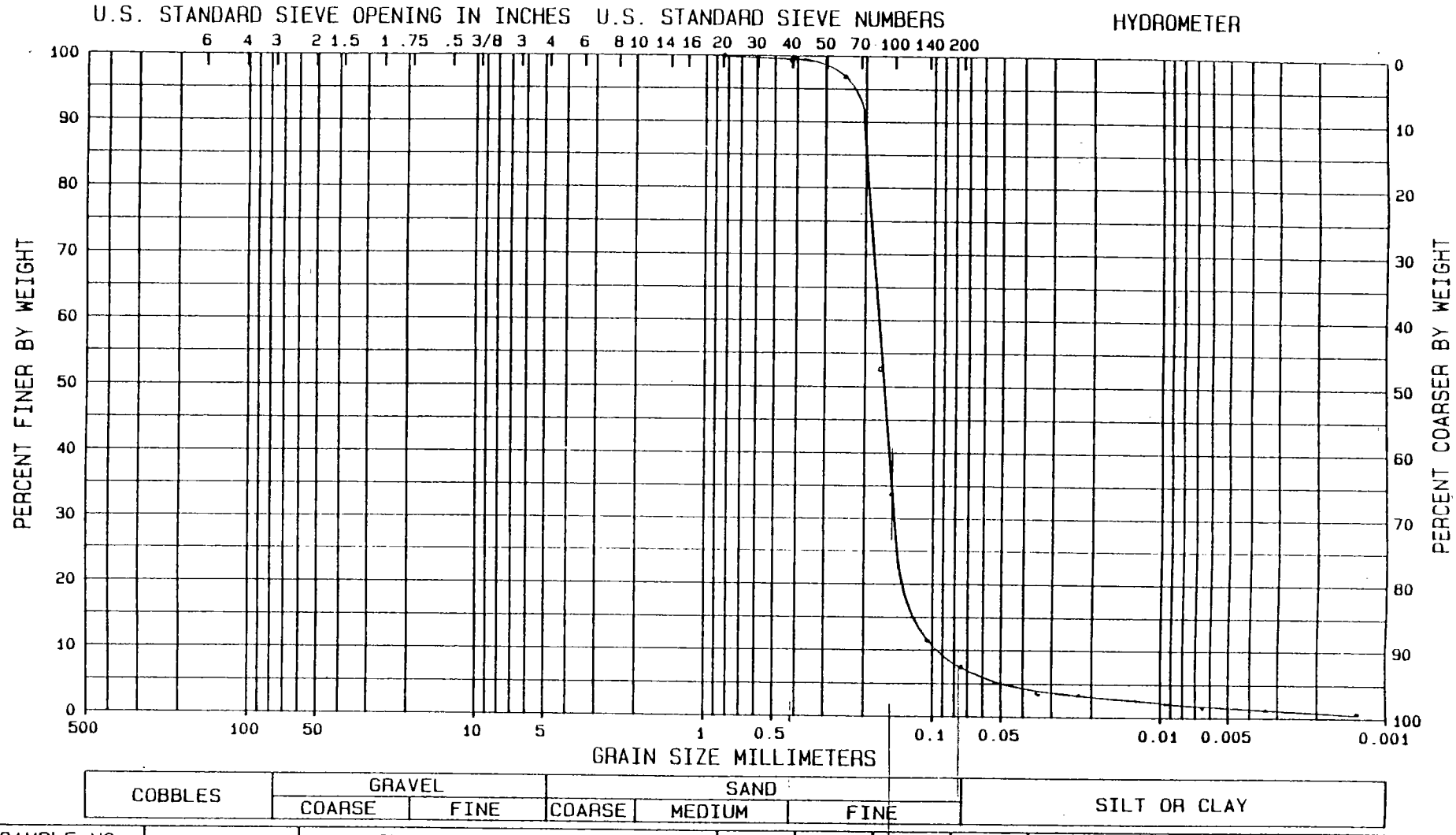
Boring/ Sample No.	Sample Depth (ft.)	Organic Content %	Fines Content %	Natural Moisture Content %	Atterberg Limits Liquid Limit %	Atterberg Limits Plastic Limit %	Atterberg Limits Plasticity Index %	Pocket Pen. (tsf)
CF17BR4S(2)				21.1	No LL	Non-Plastic		
CF17BR13S(2)				19.3	No LL	Non-Plastic		
CF5BR9S4G				21.8	No LL	Non-Plastic		

SUMMARY OF GRADATION TEST RESULTS

PROJECT: NAS Cecil Field (ABB Project No. 8500-08)
CLIENT: ABB Environmental
PROJECT NO.: 93-1361

Boring/ Sample No.	Sample Depth (ft.)	GRADATION TEST % Passing							
		No. 10	No. 20	No. 40	No. 60	No. 80	No.100	No.140	No.200
CF17BR4S(2)		100.0	100	99.8	96.9	52.4	34.3	11.6	7.3
CF17BR13S(2)		100.0	100	99.8	96.9	48.1	33.8	13.6	9.5
CF17BR8S(0)		98.6	97.1	94.2	89.7	57.3	46.3	15.2	11.1
CF17BR8S(2)		99.1	96.8	92.8	88.6	67.3	50.4	18.0	10.6
CF5MS20S6G		100.0	99.8	99.3	98.2	68.0	54.9	18.5	11.8
CF5MS19S8G		99.9	99.8	99.7	98.9	73.3	59.2	24.7	18.7
CF5MS13S12G		100.0	99.6	99.0	97.4	59.5	43.5	14.2	9.0
CF5MS8S8G		100.0	100.0	99.9	99.4	72.0	55.9	19.5	13.6
CF5BR9S4G		100.0	99.9	99.8	98.7	69.3	53.3	28.9	23
CF17MW27D10G		97.1	96.5	95.6	91.7	56.6	40.1	10.3	6.1
CF17MW27D35G		99.8	99.3	98.4	93.2	29.3	16.7	3.7	2.5
CF17MW27D50G		100.0	99.2	98.3	87.0	31.1	17.4	3.9	3.0
CF17MW27D65G		97.9	94.3	83.2	61.4	17.2	11.3	5.7	4.4
CF17MW27D80G		95.5	80.9	70.2	53.3	15.3	12.7	8.2	6.2
CF17MW28DD110G		79.7	60.8	41.9	25.8	10.4	8.0	5.1	3.6

ELLIS & ASSOCIATES, INC.

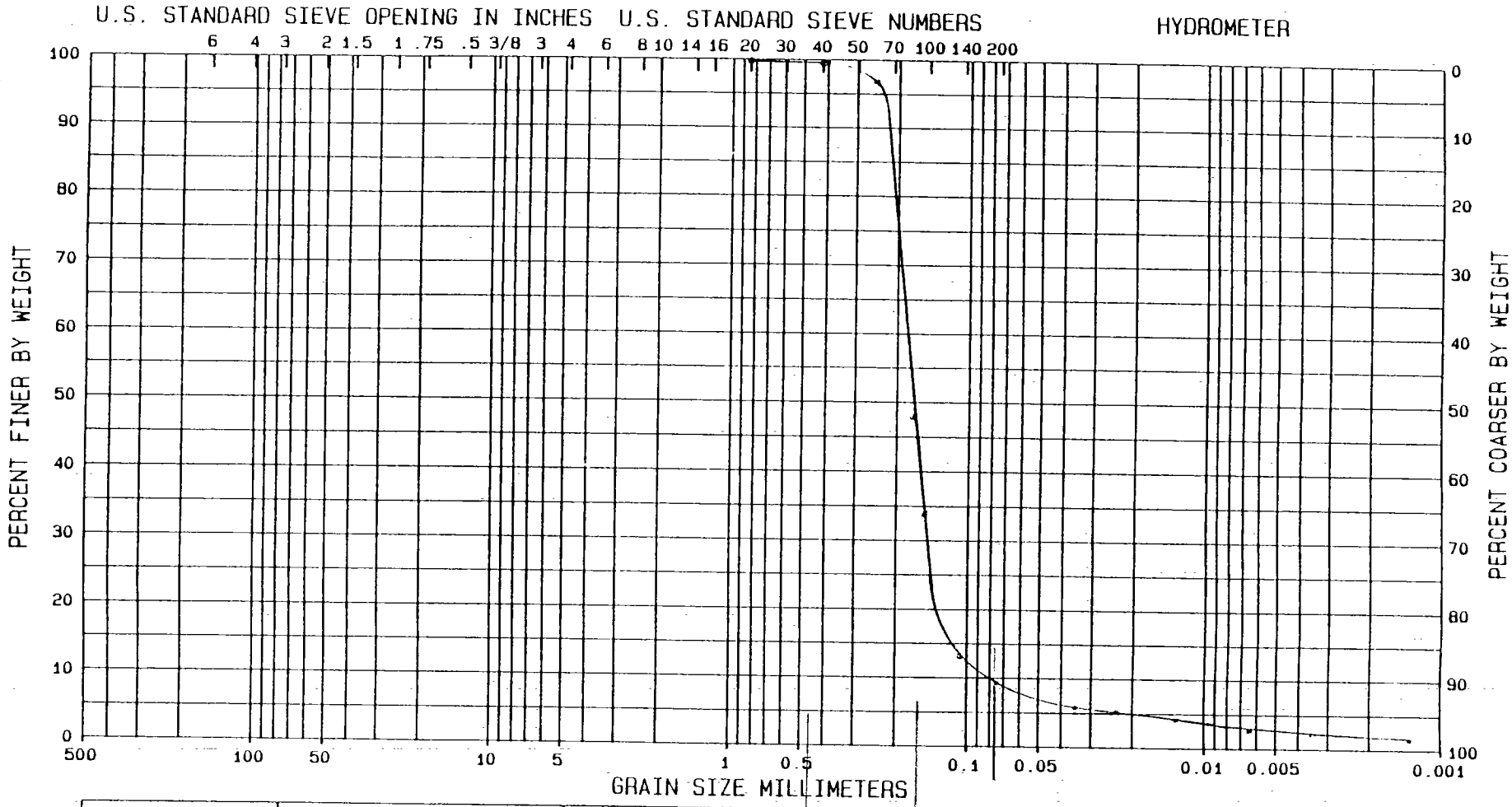


SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF17BR4S(2)						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



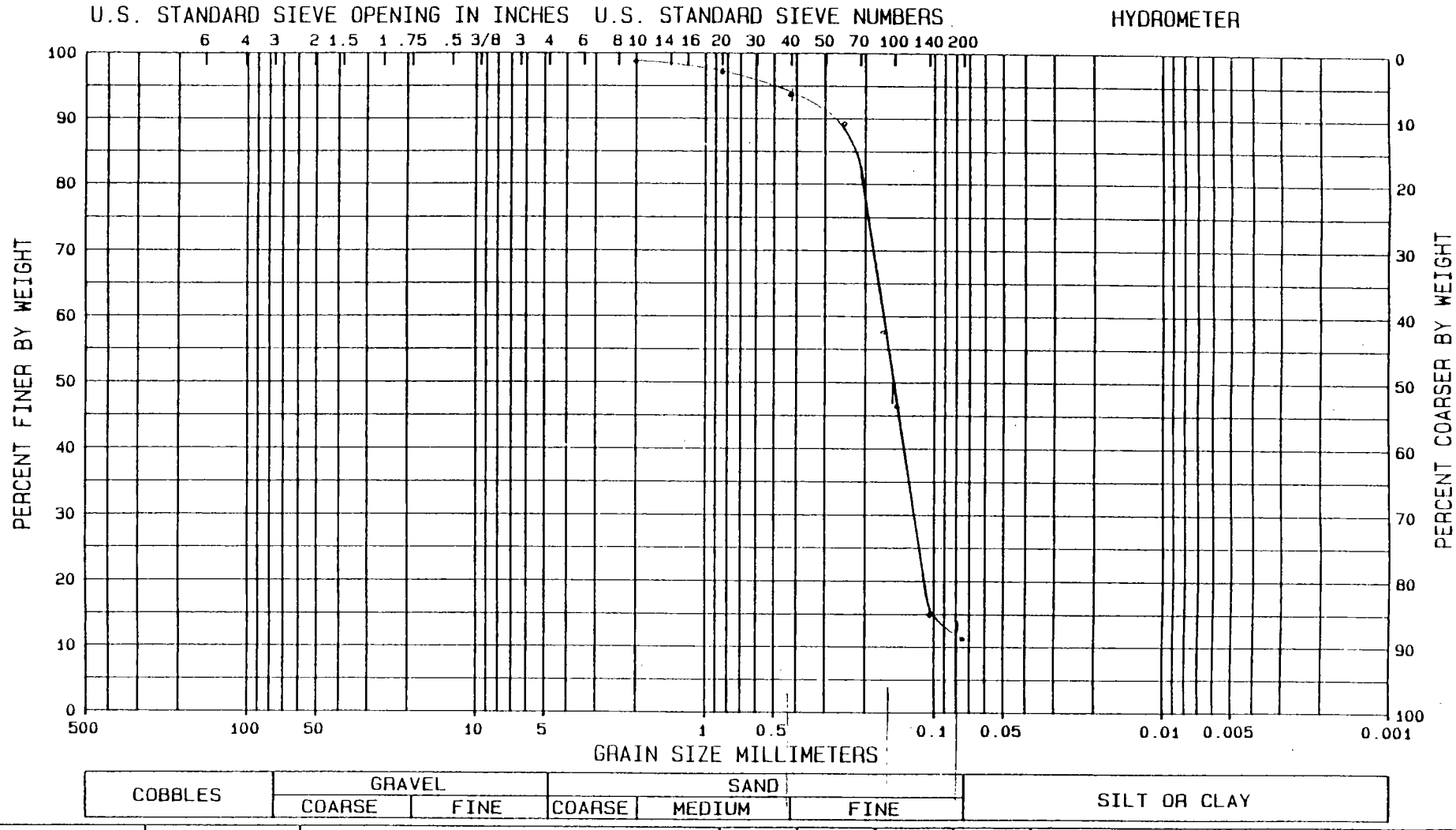
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF17BR13S(2)						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.

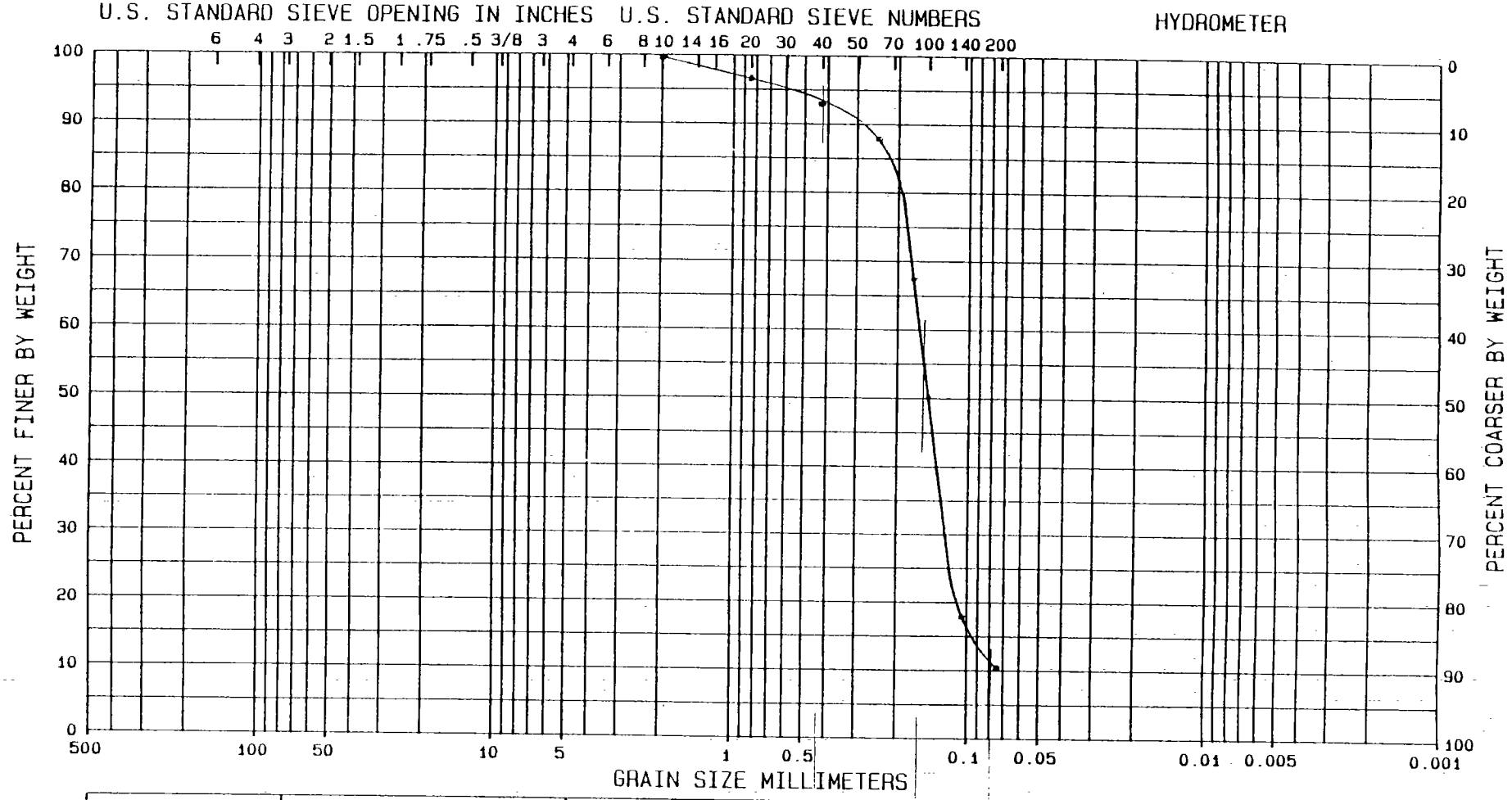


SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF17BR8S(0)						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.

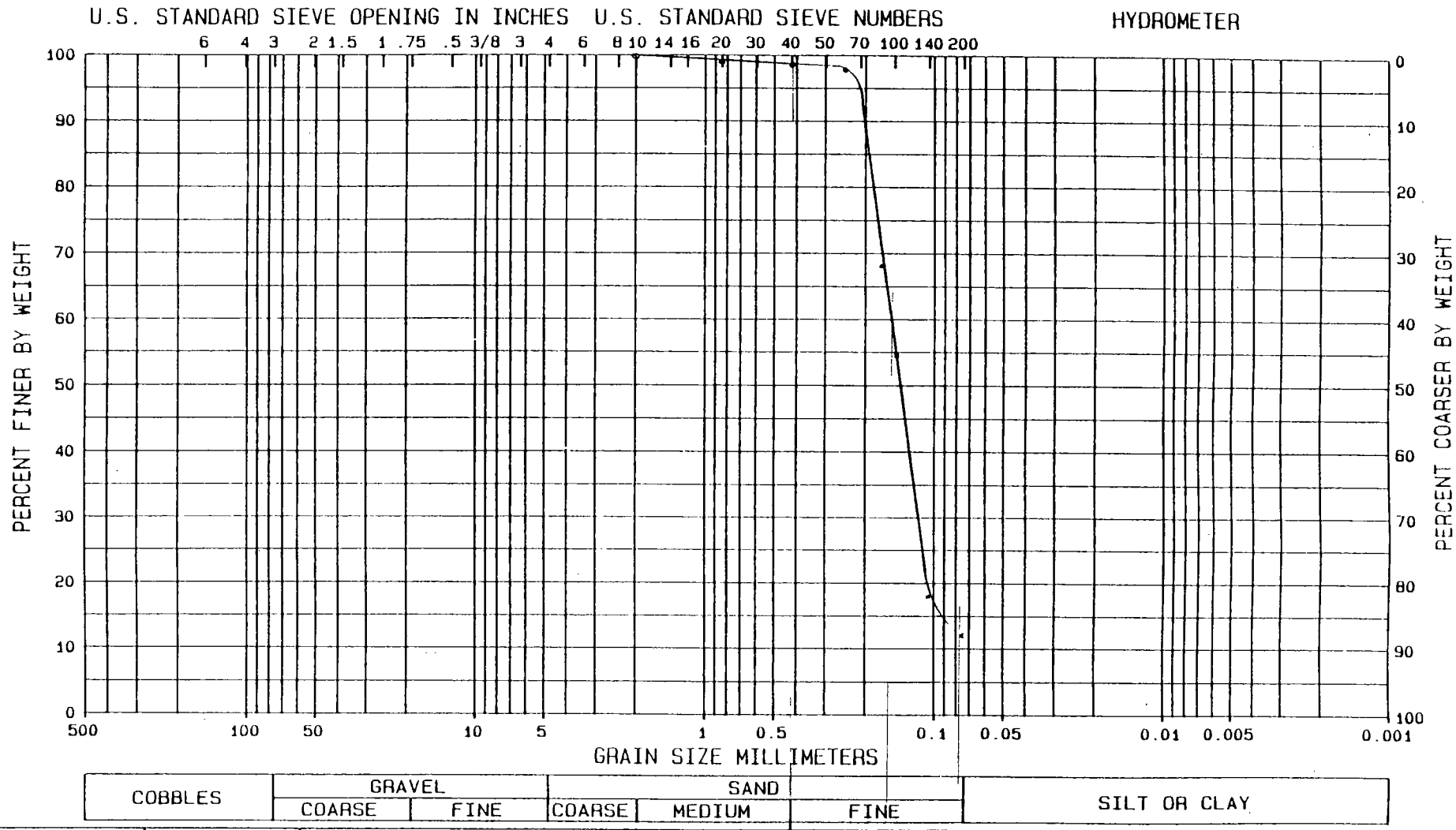


SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF17BR8S(2)						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.

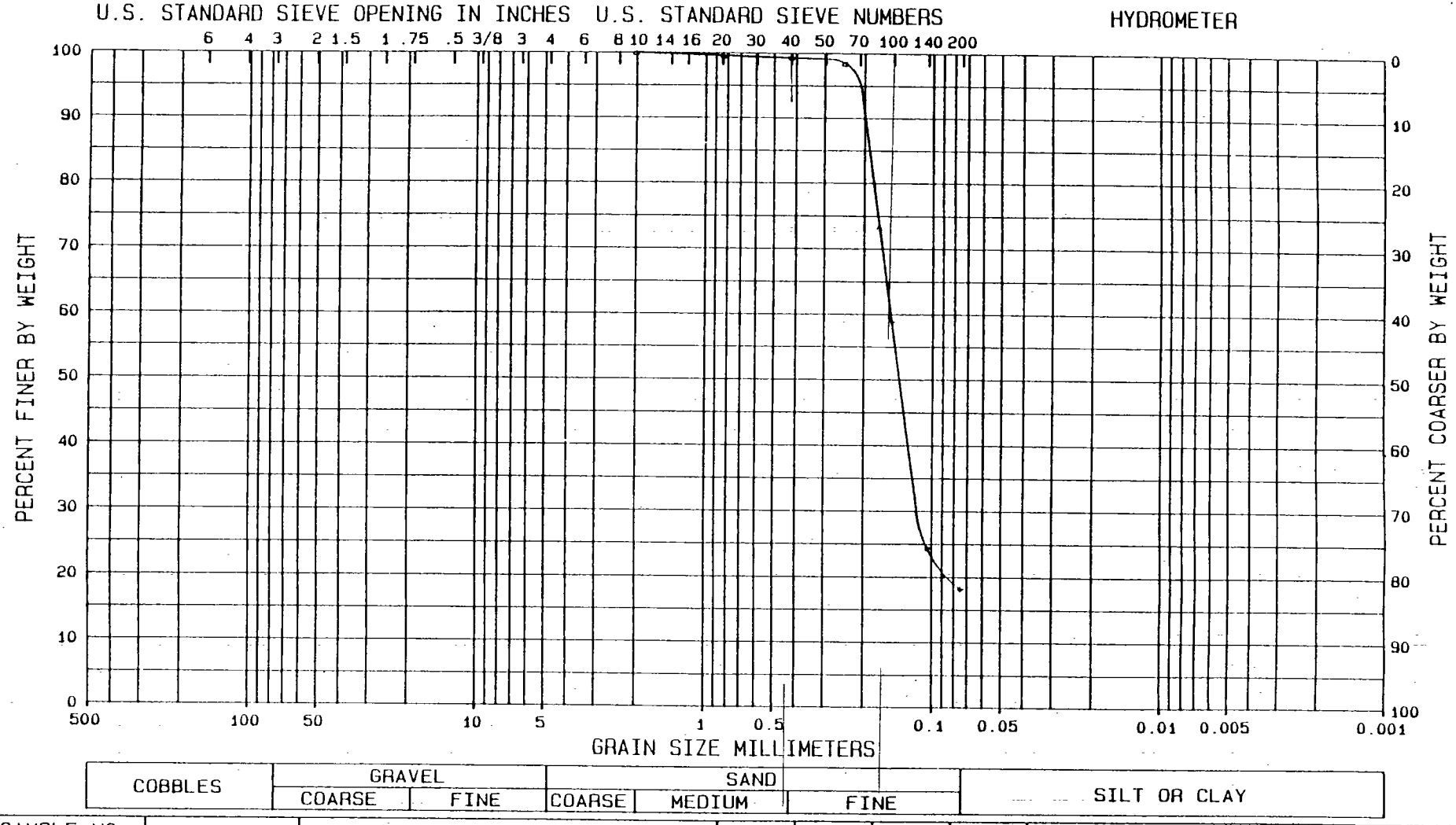


SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF5MS20S6G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.

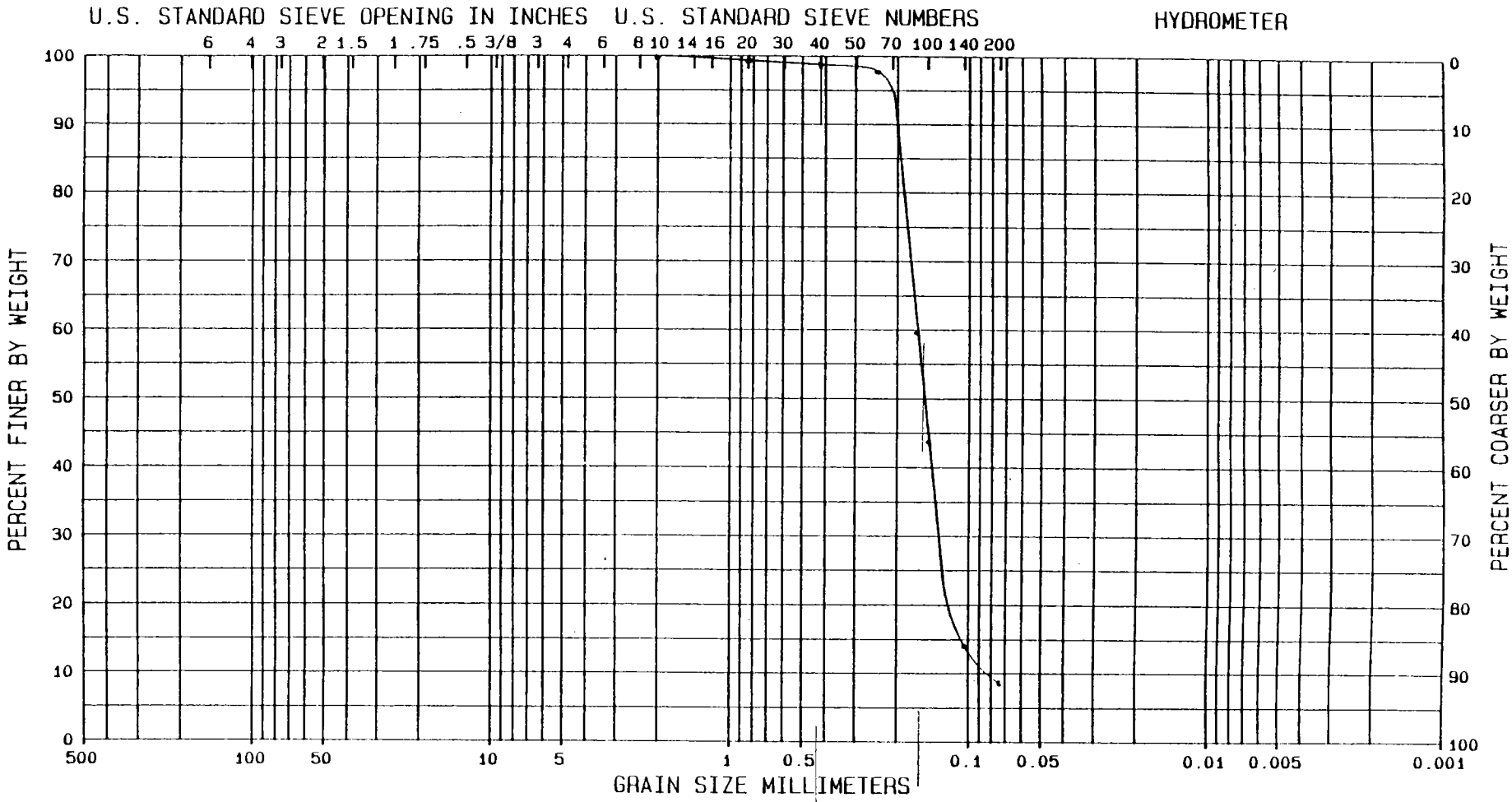


SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF5MS19S8G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



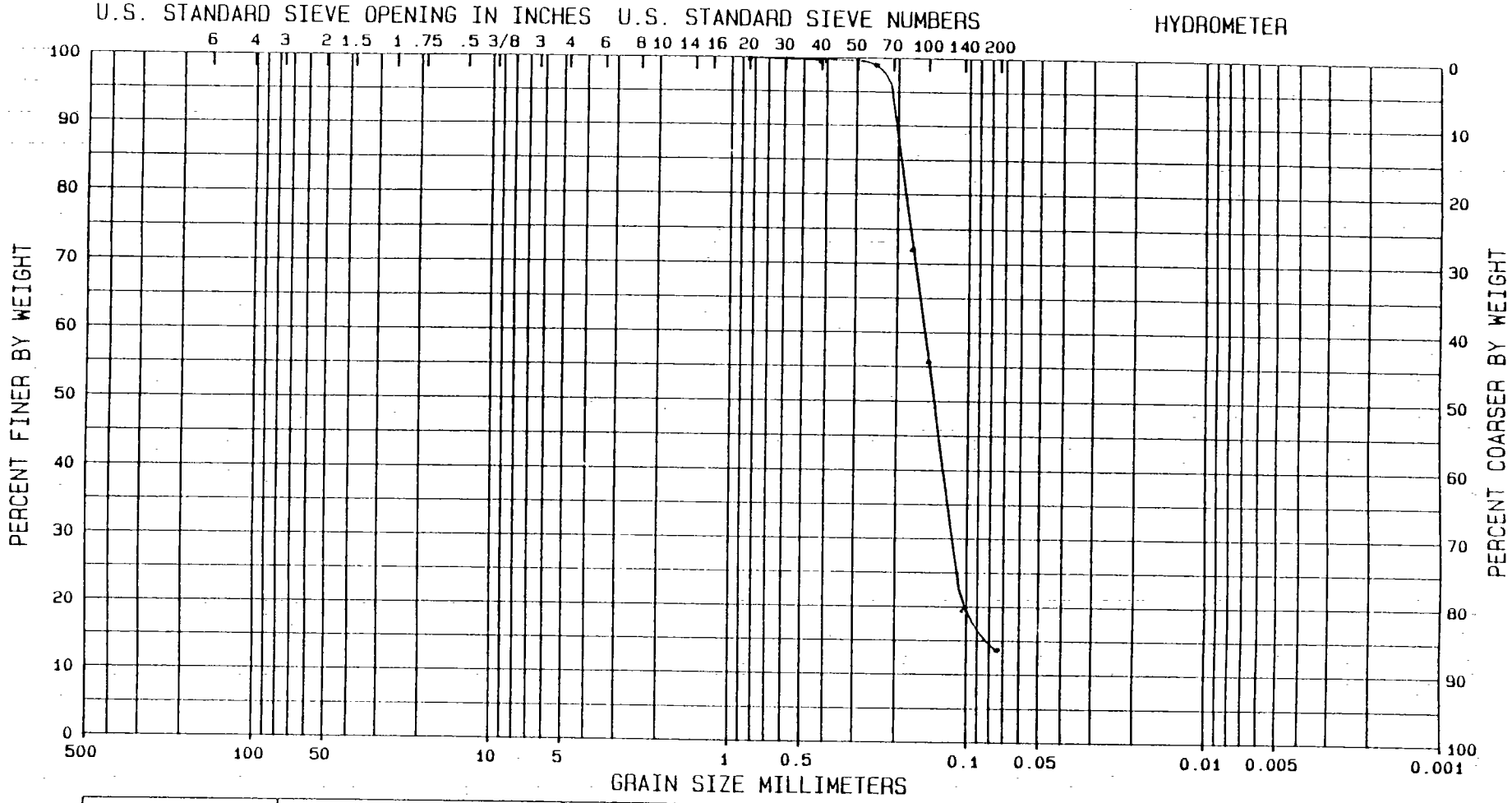
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF5MS13S12G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



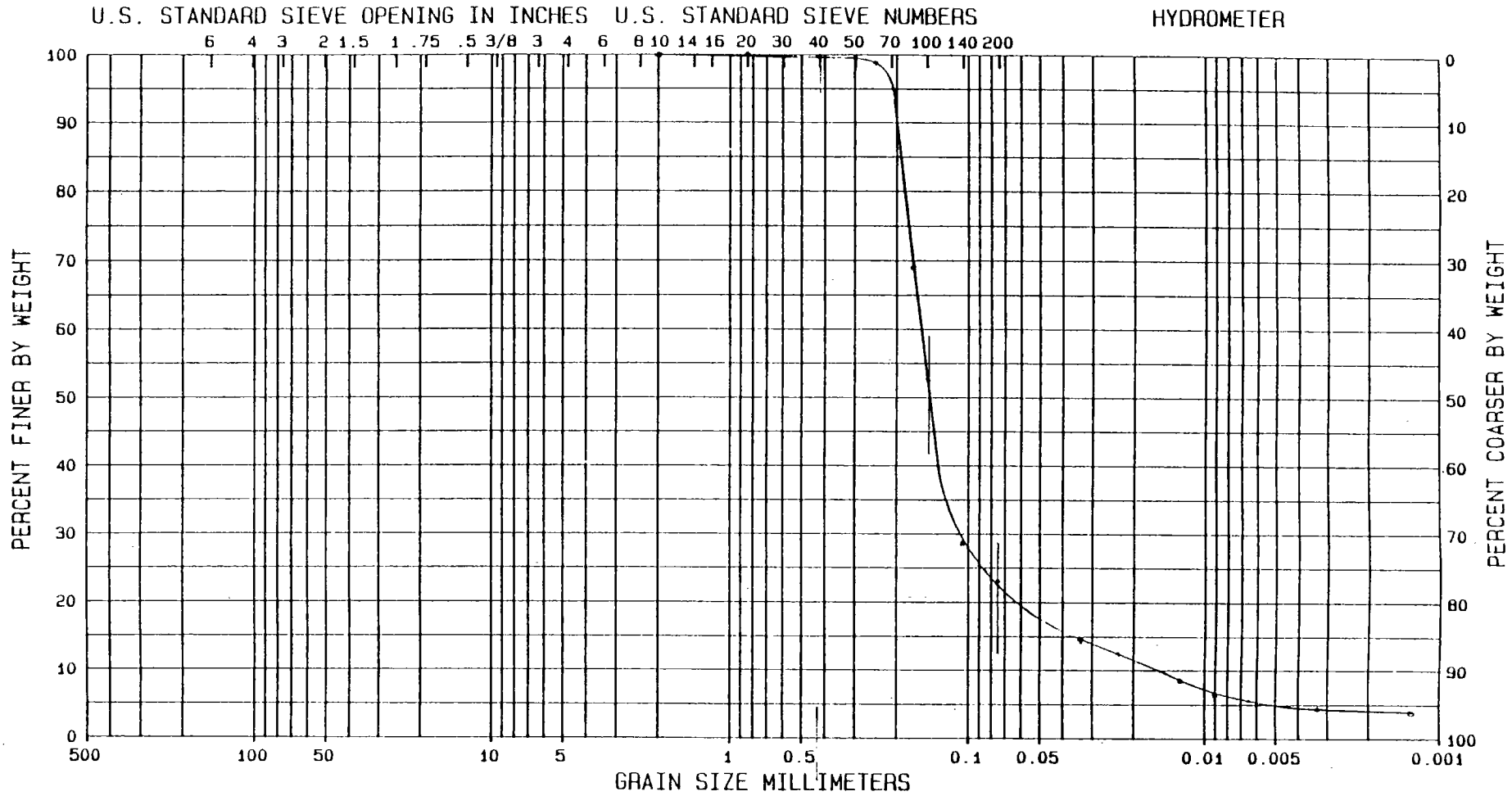
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF5MS8S8G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



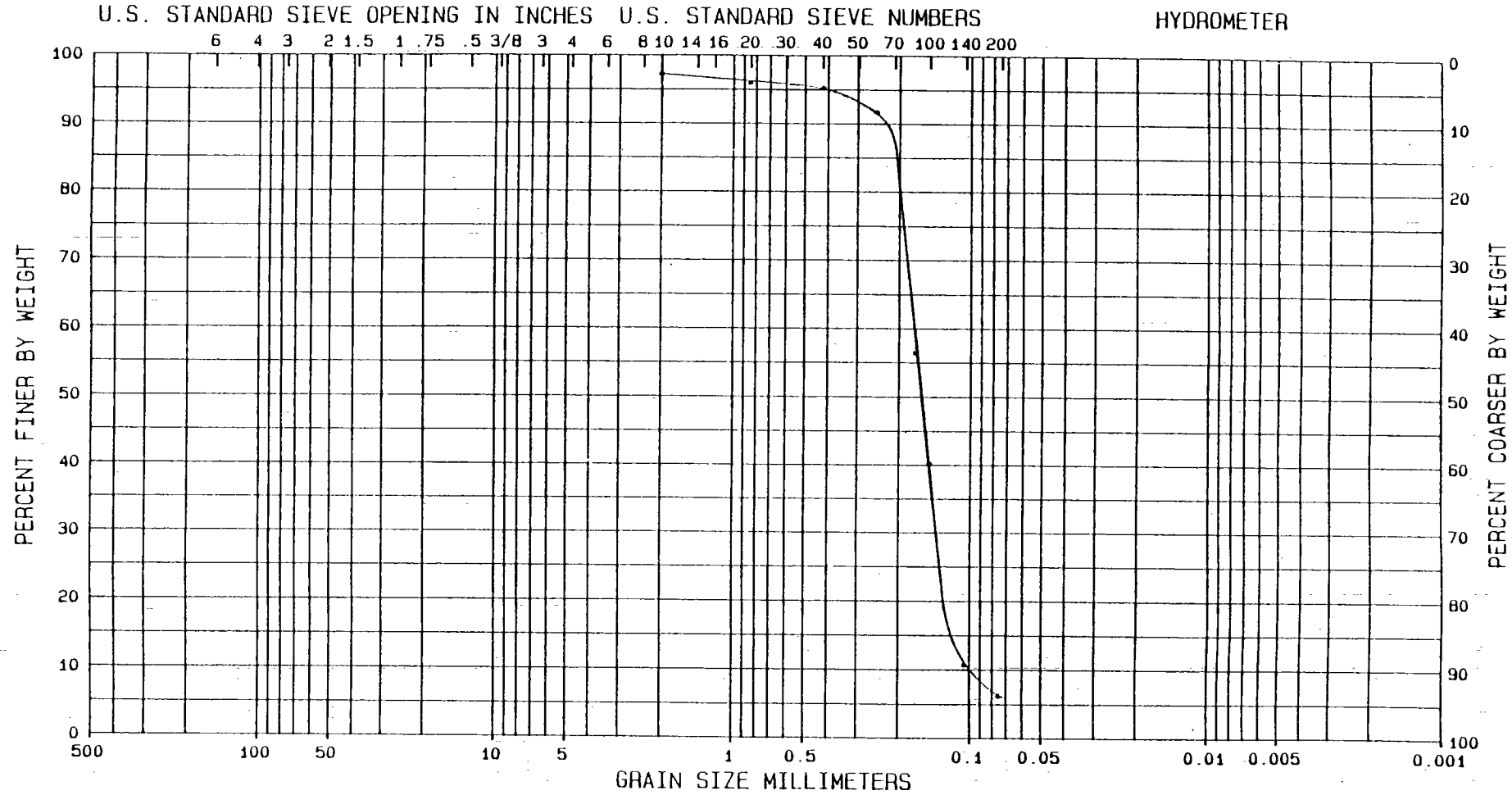
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF5BR9S4G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



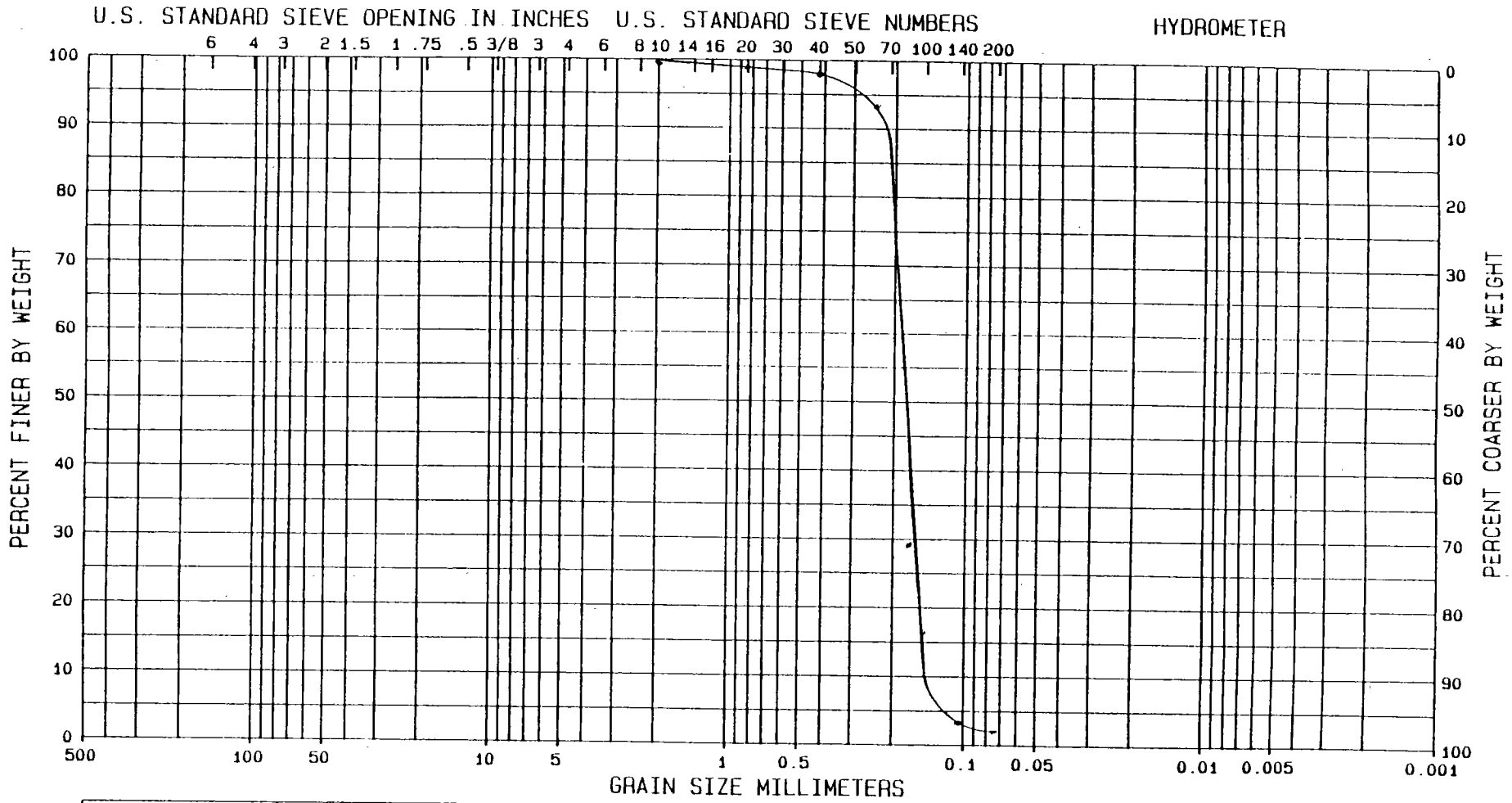
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF17MW27D10G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



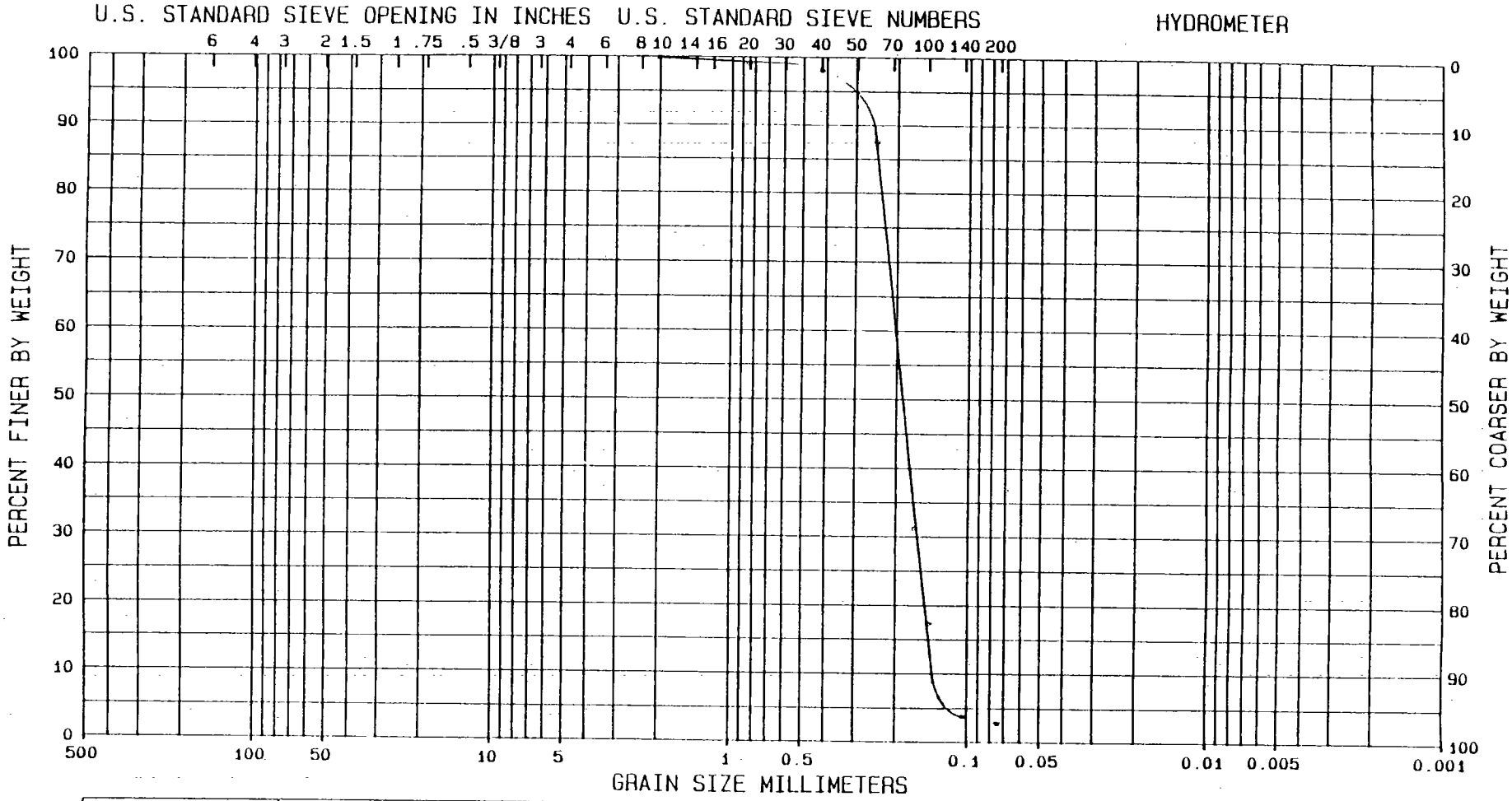
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF17MW27D35G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



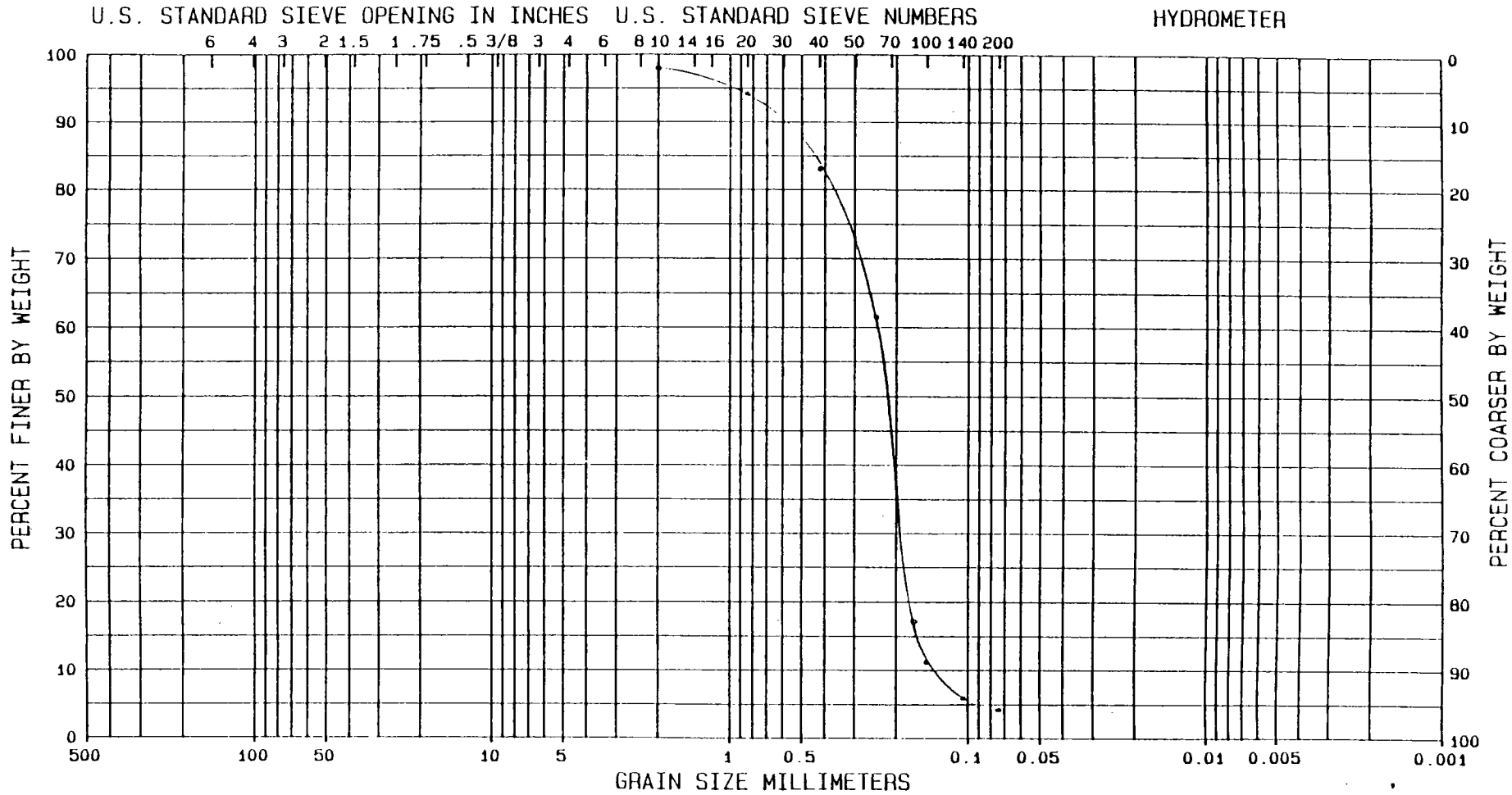
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF17MW27D50G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



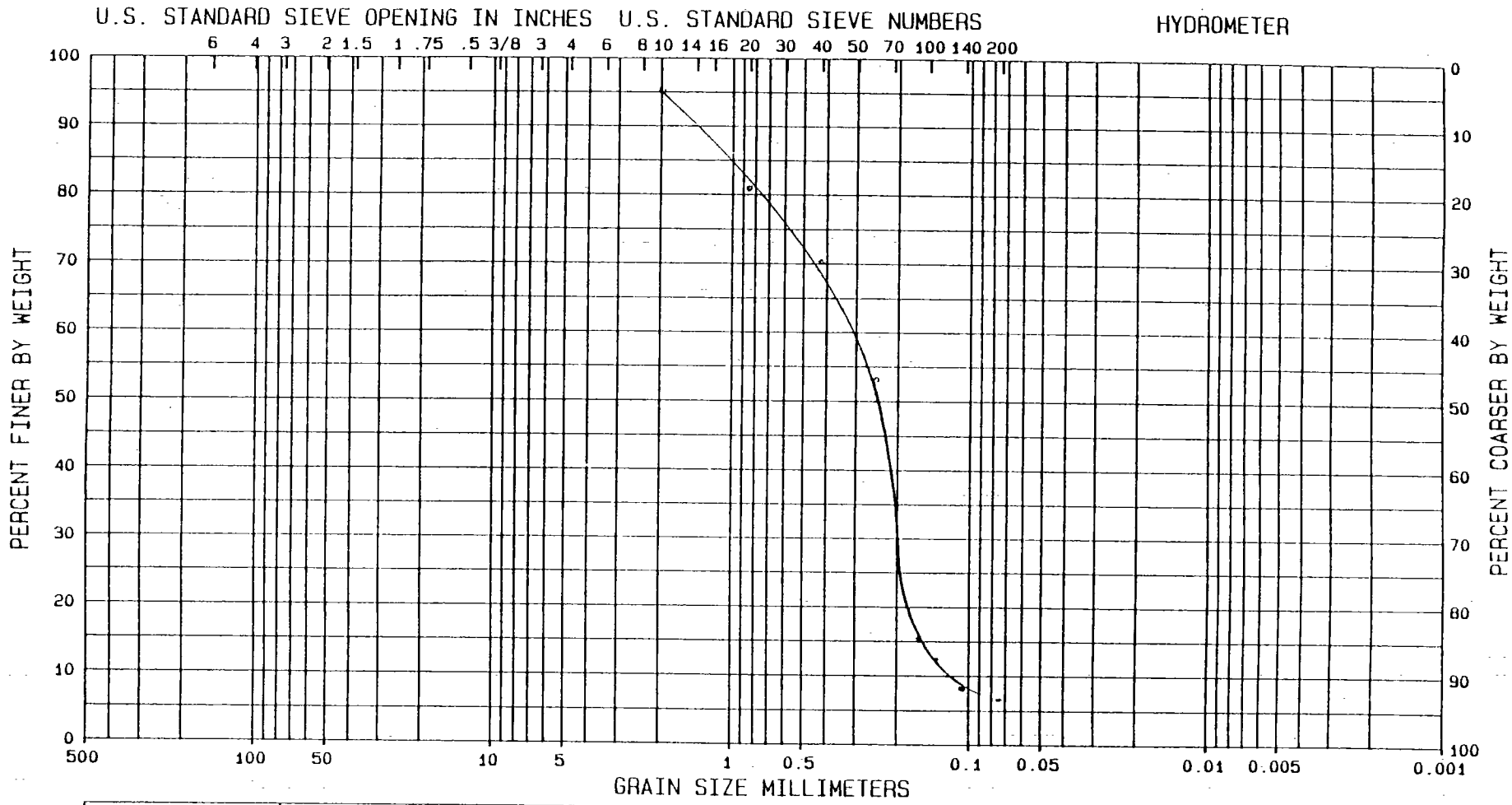
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF17MW27D65G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



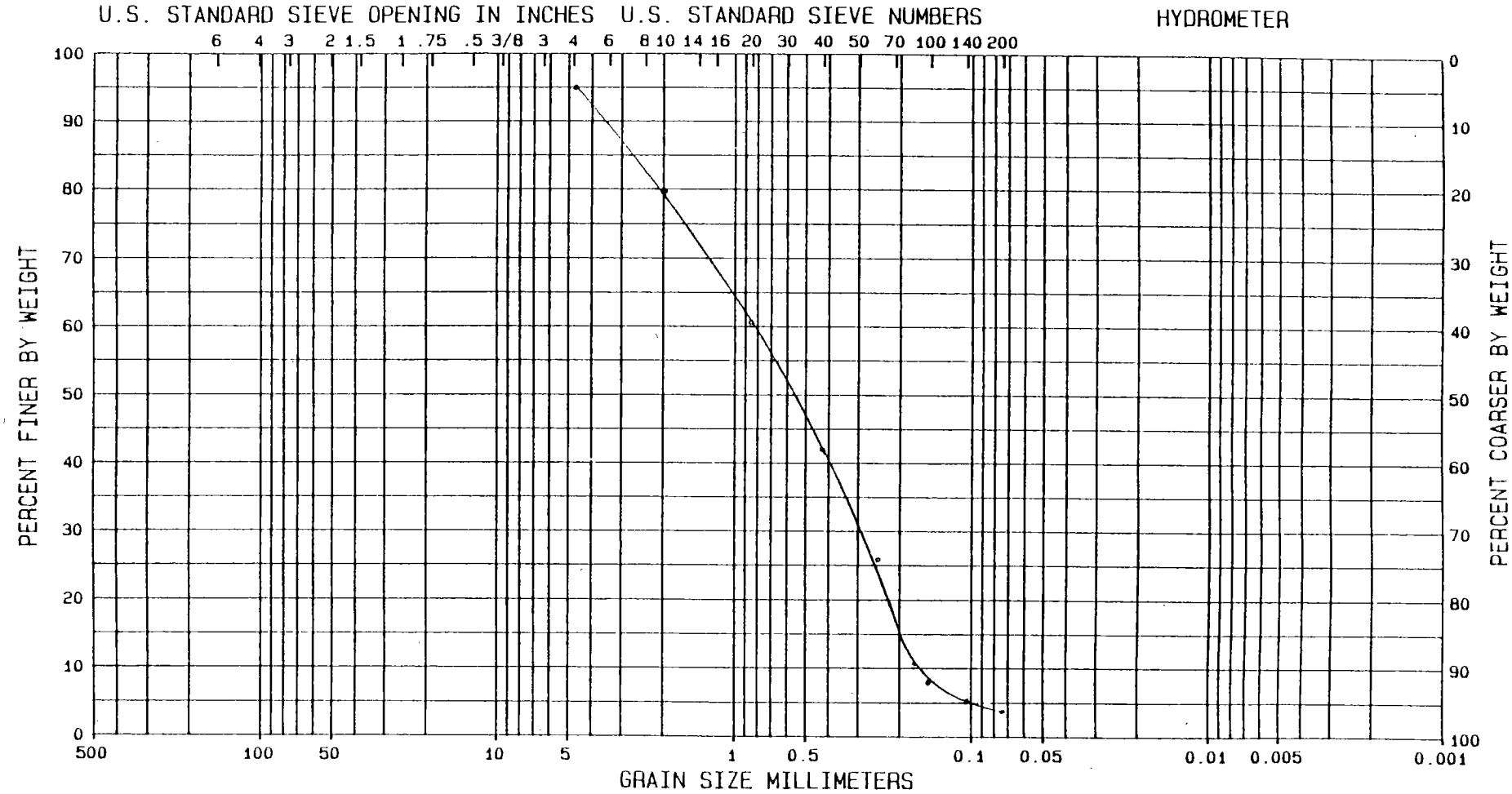
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF17MW27D80G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF17MW27DD110						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

SUMMARY OF LABORATORY TEST RESULTS

PROJECT: NAS Cecil Field (ABB Project No. 8500-27)
CLIENT: ABB Environmental
PROJECT NO.: 93-1361

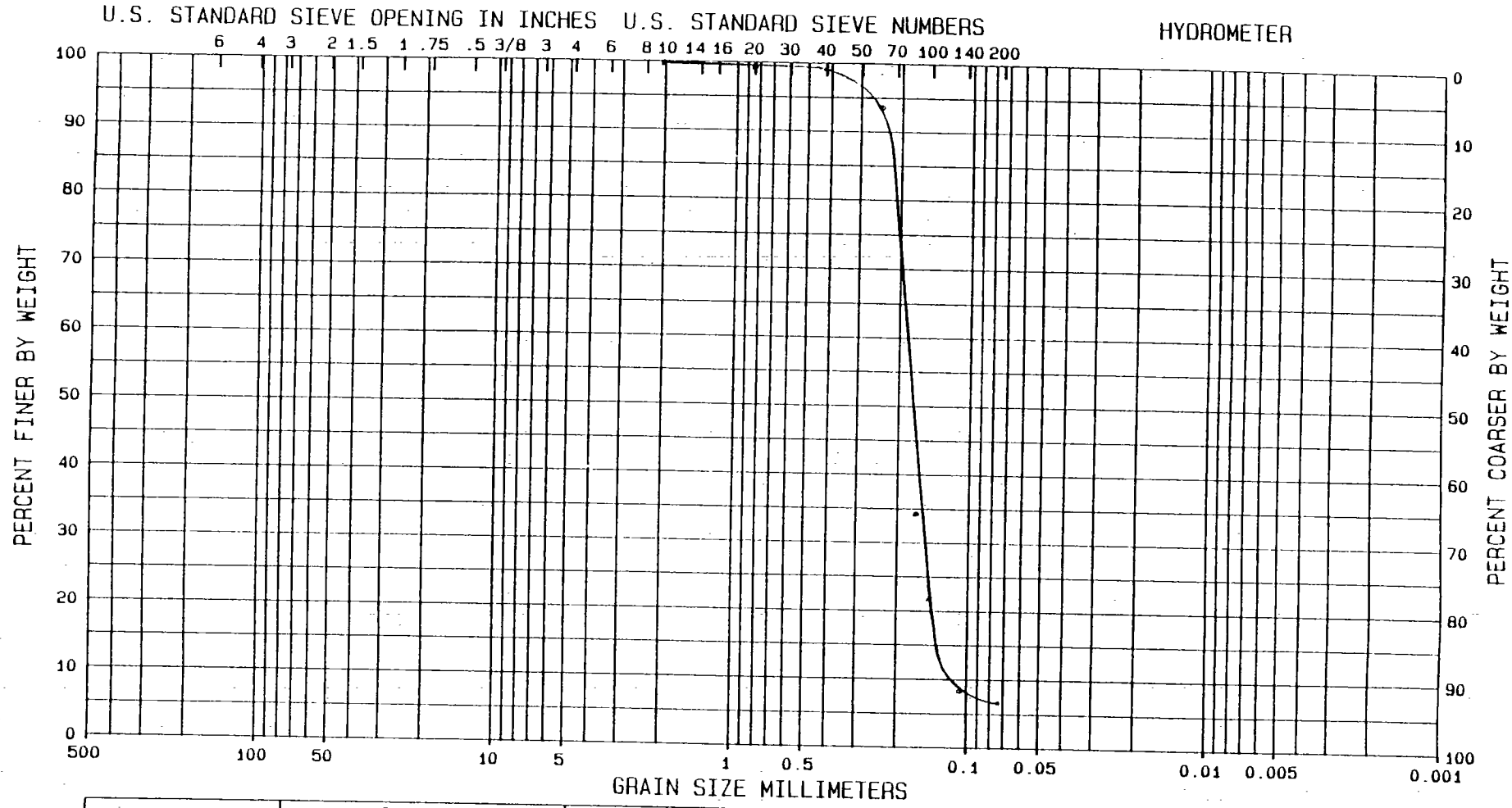
Boring/ Sample No.	Sample Depth (ft.)	Organic Content %	Fines Content %	Natural Moisture Content %	Atterberg Limits			Pocket Pen. (tsf)
					Liquid Limit %	Plastic Limit %	Plasticity Index %	
CF5MS23S0G				31.7	No LL	Non-Plastic		

SUMMARY OF GRADATION TEST RESULTS

PROJECT: NAS Cecil Field (ABB Project No. 8500-27)
CLIENT: ABB Environmental
PROJECT NO.: 93-1361

Boring/ Sample No.	Sample Depth (ft.)	GRADATION TEST % Passing							
		No. 10	No. 20	No. 40	No. 60	No. 80	No.100	No.140	No.200
CF1MS14I40G		100.0	99.8	99.4	93.8	34.9	21.4	8.9	6.7
CF5MS30S12G		100.0	99.8	99.6	98.9	71.7	55.6	16.2	10.5
CF5MS23S0G		100.0	99.6	98.3	92.6	49.8	37.0	9.9	6.3
CF5MS23S12G		100.0	100.0	99.7	97.6	60.1	44.9	15.9	10.5
CF5MS29S12G		100.0	99.9	99.8	99.0	60.6	44.9	15.2	10.3
CF5MS24S14G		100.0	99.9	99.6	98.0	54.0	36.8	10.5	7.3

ELLIS & ASSOCIATES, INC.



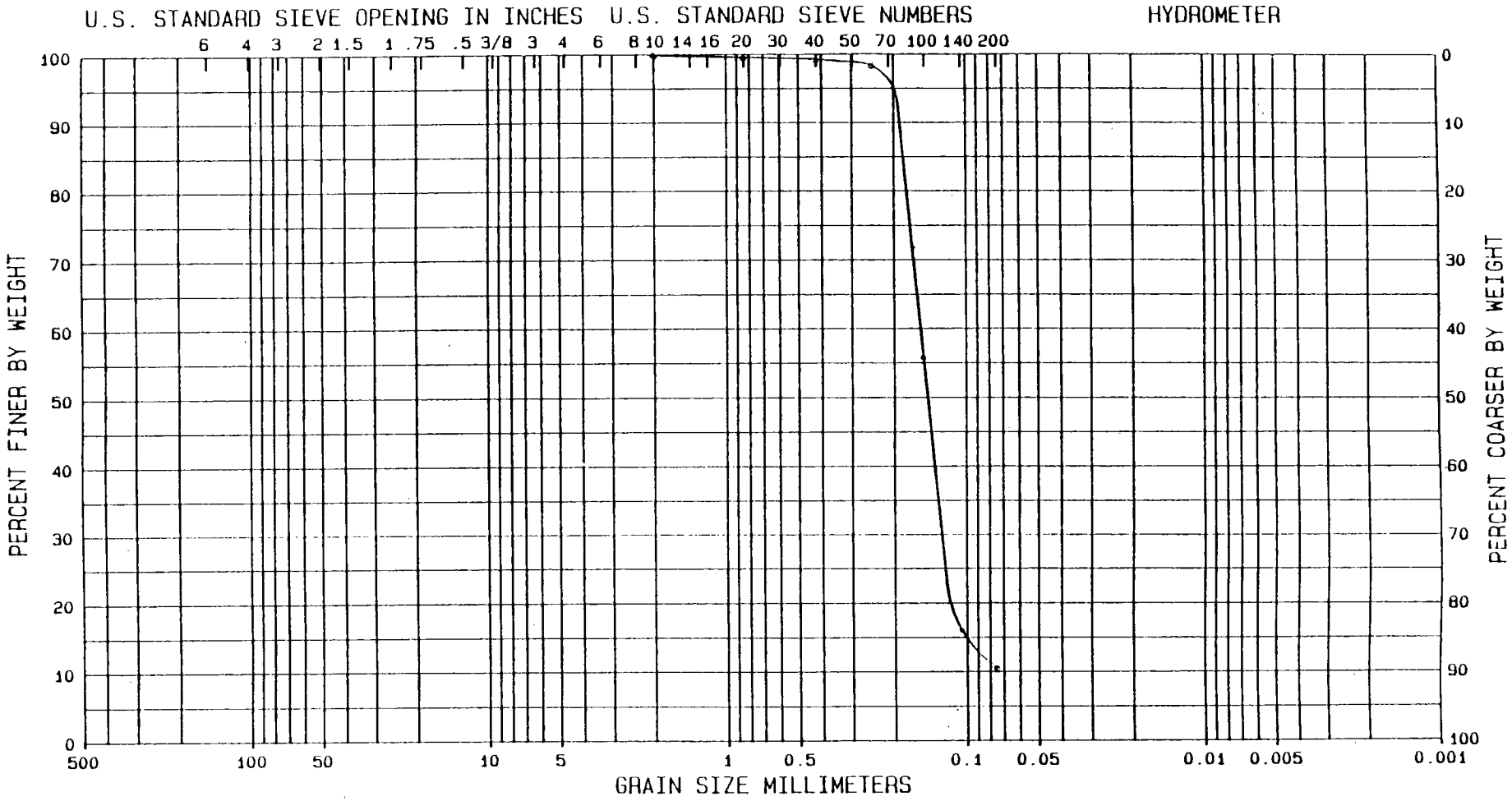
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF1MS14I40G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-27
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



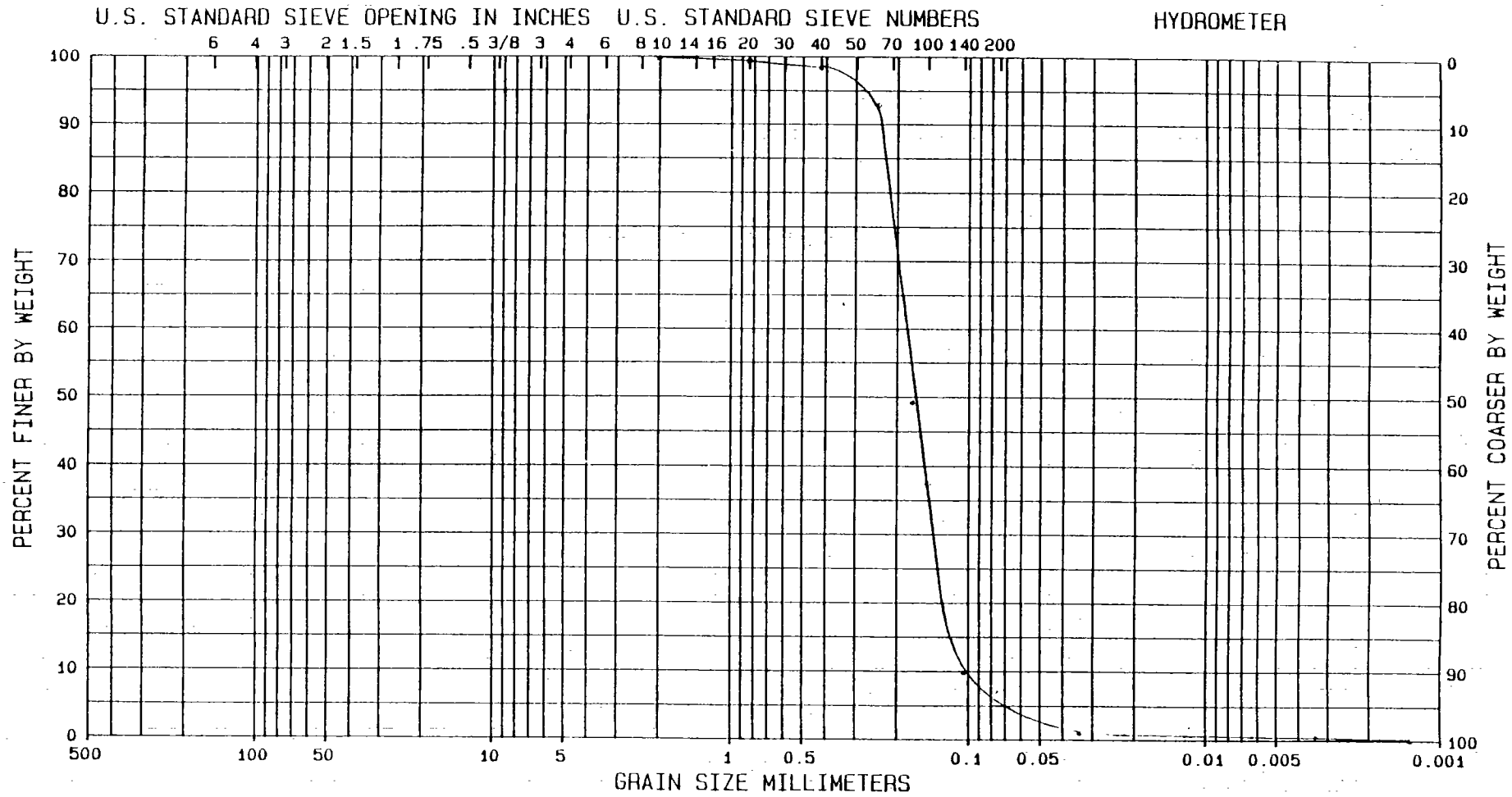
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF5MS30S12G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-27
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



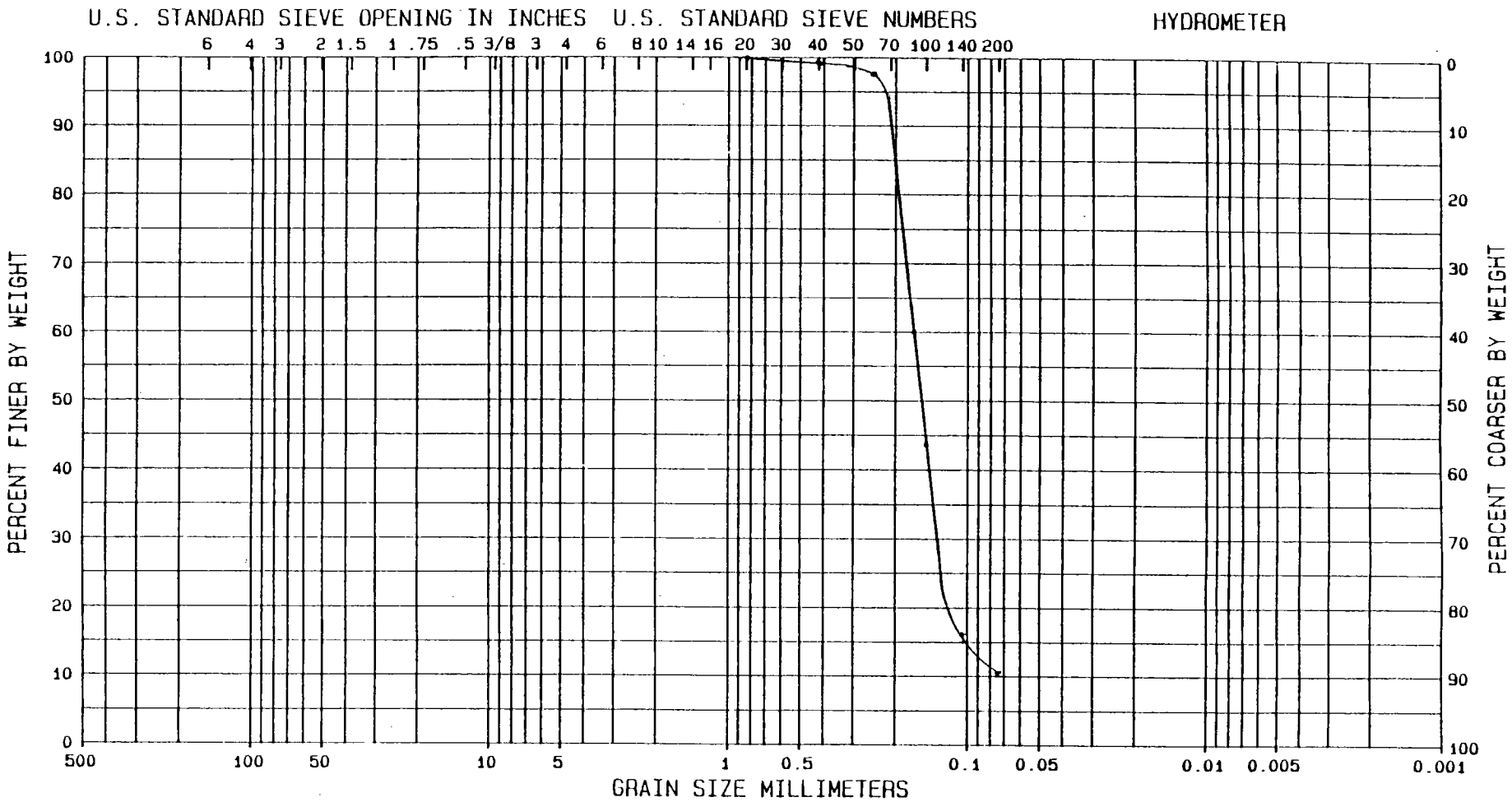
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF5MS23S0G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-27
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



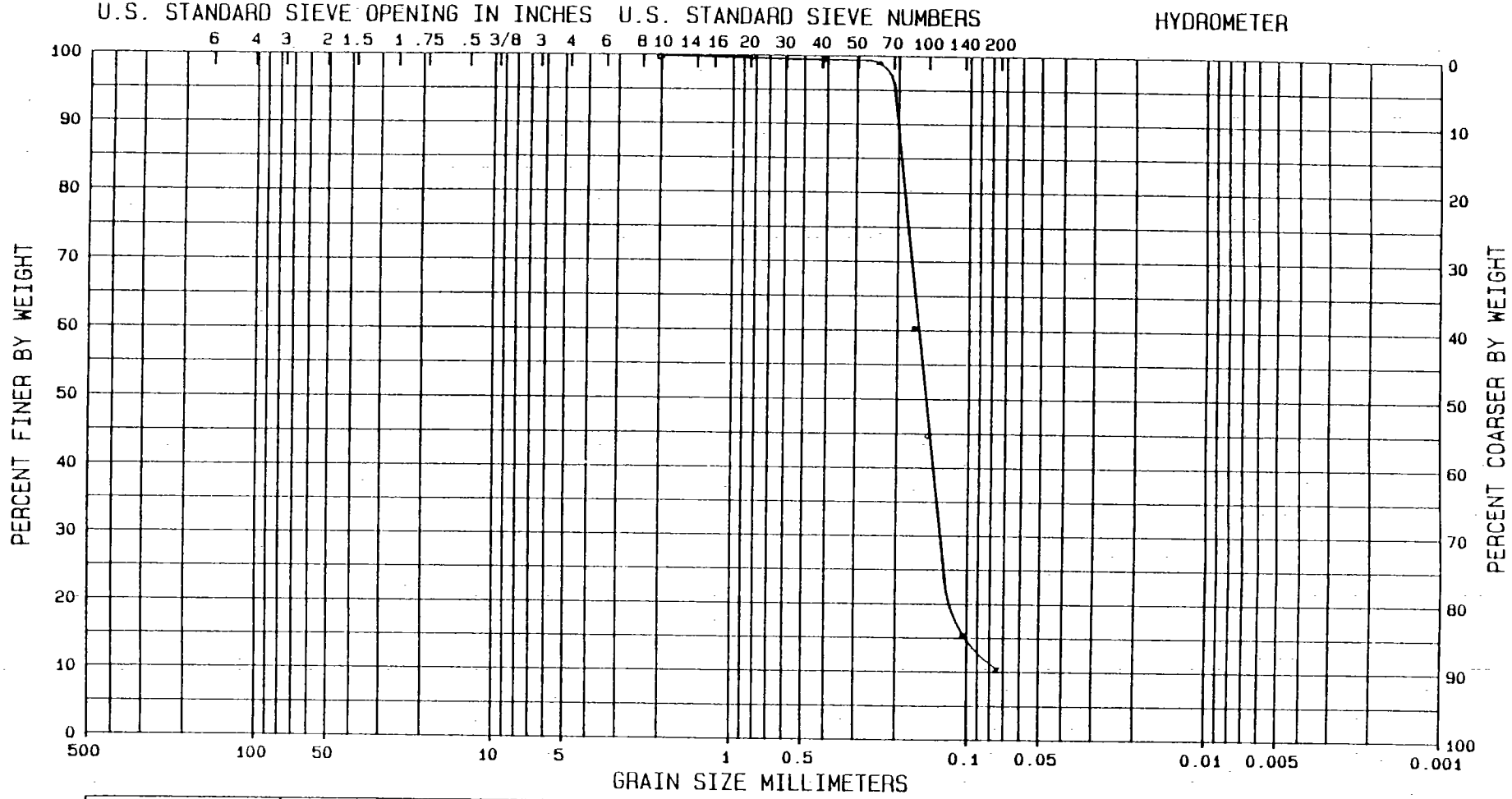
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF5MS23S12G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-27
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



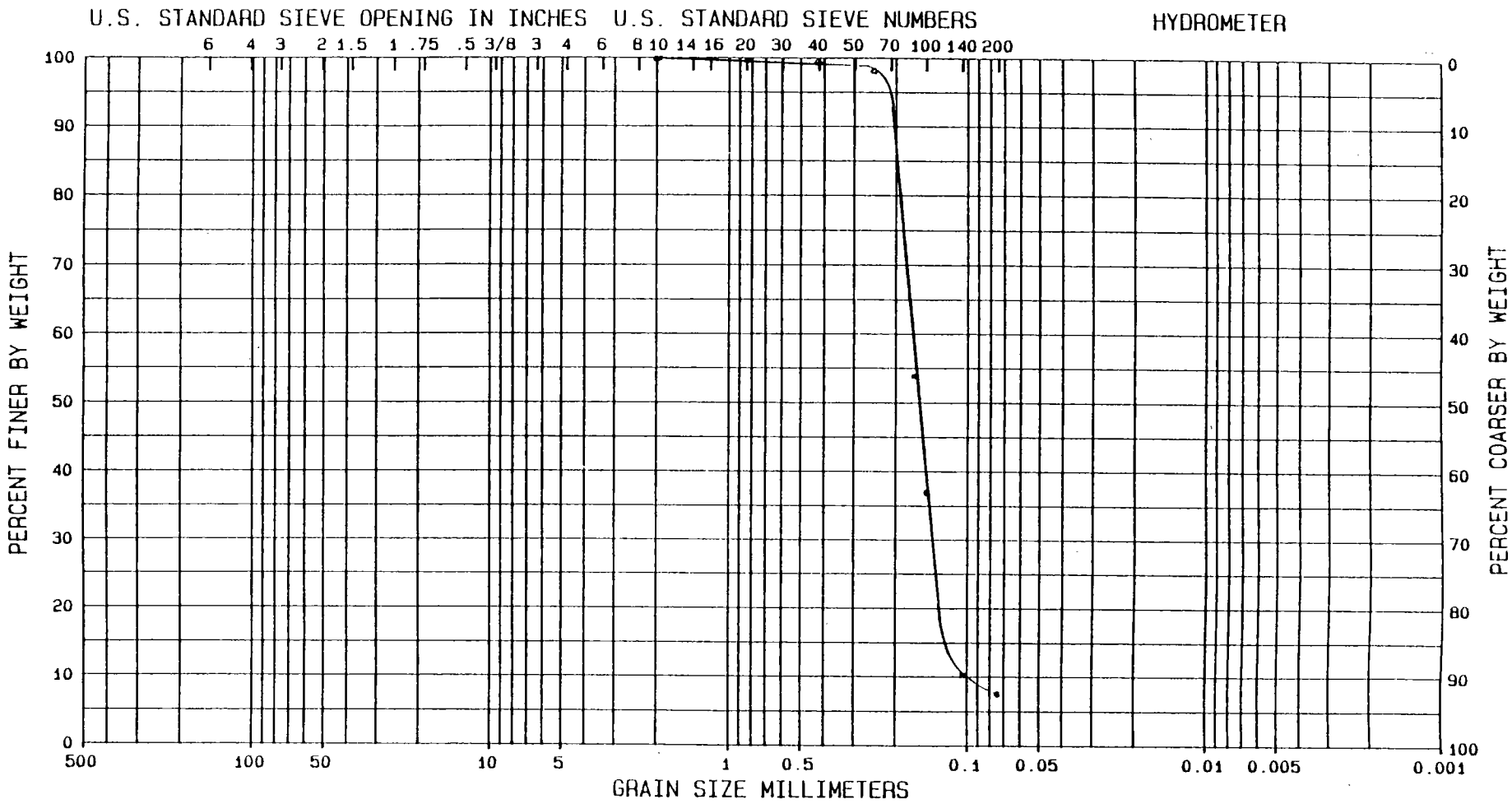
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF5MS29S12G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-27
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF5MS24S14G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-27
Jacksonville, Florida
E&A Project No. 93-1361

REPORT NUMBER F005-04

A & L SOUTHERN AGRICULTURAL LABORATORIES

1301 West Copans Road • Building D, Suite 8 • Pompano Beach, Florida 33064
Telephone (305) 972-3255 • Fax #: (305) 972-7885

SEND TO
ELLIS & ASSOCIATES
ATTN: STEVE WEAVER
5109 STEPP AVENUE
JACKSONVILLE, FL 32216

GROWER

ELLIS & ASSOCIATES, INC.
RECEIVED
JAN 10 1994
LABORATORY

SAMPLES SUBMITTED BY SAME

COPY TO: REC 01-03-94

DATE OF REPORT 01/05/94 PAGE 1

SOIL ANALYSIS REPORT

SAMPLE NUMBER	LAB NUMBER	ORGANIC MATTER % RATE	ORGANIC MATTER ENR lbs/A	PHOSPHORUS P_1 (Weak Bray) ppm-P RATE	PHOSPHORUS P_2 N_aHCO_3-P ppm-P RATE	POTASSIUM K ppm-K RATE	MAGNESIUM Mg ppm-Mg RATE	CALCIUM Ca ppm-Ca RATE	SODIUM Na ppm-Na RATE	SOIL pH	HYDROGEN H meq/100g	Cation Exchange Capacity C.E.C. meq/100g	PERCENT BASE SATURATION (COMPUTED) % K	% Mg	% Ca	% H	% Na
CF17BR1352	1430	0.8	60 L	8VL	9 L	1VL	8 L	20 L		4.9	0.1	0.3	0.9	22.2	33.3	33.3	0.0
CF5BR9546	1431	0.5	52VL	19 L	57 H	45 M	15VL	260 M		5.4	0.6	2.1	5.5	6.0	61.9	28.6	0.0
CF17BR45	1432	0.5	52VL	10 L	11 L	1VL	8VL	170VH		6.9	0.0	0.9	0.3	7.4	94.4	0.0	0.0
CF5M52350G	1433	5.4	152VH	6VL	7VL	1VL	50 L	210VL		4.1	4.2	5.7	0.0	7.3	18.4	73.7	0.0

(SEE EXPLANATION ON BACK)

SAMPLE NUMBER	NITRATE NO_3 ppm-NO_3-N RATE	SULFUR S ppm-S RATE	ZINC Zn ppm-Zn RATE	MANGANESE Mn ppm-Mn RATE	IRON Fe ppm-Fe RATE	COPPER Cu ppm-Cu RATE	BORON B ppm-B RATE	EXCESS LIME RATE	SOLUBLE SALTS mmhos/cm RATE	CHLORIDE Cl ppm-Cl RATE	MOLYBDENUM Mo ppm-Mo RATE

This report applies only to the sample(s) tested. Samples are retained a maximum of thirty days after testing.

A & L SOUTHERN AGRICULTURAL LABORATORIES

LYNN GRIFFITH LAB MANAGER

BY Lynn Griffith

AL3

CODE TO RATING: VERY LOW (VL) LOW (L) MEDIUM (M) HIGH (H) VERY HIGH (VH) AND MORE (H)
[illegible]

[illegible] THE RESULTS IN ppm BY 4.6 TO CONVERT TO lbs PER ACRE [illegible]

4

CHAIN OF CUSTODY RECORD

PROJECT NO.: 8500-08

PROJECT NAME: NAS CECIL FIELD OPERABLE UNIT

CLIENT NAME: ABB ENVIRONMENTAL SERVICES, INC.
2590 Executive Ctr. Circle East
Berkely Building
Tallahassee, Florida 32301

PROJECT MANAGER: Barry Lester

COPY TO: Charles Donahue

REQUESTED COMP. DATE:

FIELD OPERATION LEADER: NAME: MARIA PIJNENBURG
NAS Cecil Field
(904) 868-0425

SAMPLING REQUIREMENTS: SDWA NPDES RCRA OTHER

FOR LAB USE ONY
Client Code: 026323

Enseco - Wadsworth/ALERT Laboratories
4101 Shuffel Drive N.W.
North Canton, Ohio 44720

Contact: Deb Hula
(216) 497-9396 (Voice)
(216) 497-0772 (Fax)

QUOTE #: 16467

	SAMPLE ID: SITE ID CODE xx	SAMPLE MATRIX CODE XX	SAMPLE LOCATION CODE xxx	SAMPLE SEQUENCE CODE xx	DATE	TIME	DEPTH	SAMPLE MATRIX: AIR	WTR	SOIL	NO. OF CONTAINERS	CLP-VOC (4oz. gl) ice	CLP-SVOC (4oz. gl) ice	PCB/PEST (4oz. gl) ice	TAL-METALS (16oz. gl) ice	TOC (4oz. gl) ice	TPH (4oz. gl) ice		GEOtech						LAB ID	REMARKS
1	CF	17	BR	4S(2)	11-11-93	0850				X	2								✓							Valox
2	CF	17	BR	13S(2)	11-11-93	1033				X	2								✓							Valox
3	CF	17	BR	8S(0)	11-12-93	0827				X	2								✓							SP
4	CF	17	BR	8S(2)	11-12-93	0844				X	2								✓							SP

SAMPLED BY AND TITLE	DATE/TIME	RELINQUISHED BY: Paul Neal	DATE/TIME 12-13-93 1638
RECEIVED BY:	DATE/TIME	RELINQUISHED BY:	DATE/TIME
RECEIVED BY:	DATE/TIME	RELINQUISHED BY:	DATE/TIME
RECEIVED BY LAB:	DATE/TIME 12/13/93 1639	SAMPLE SHIPPED VIA: UPS BUS FED-EX HAND OTHER	AIR BILL NUMBER

HAZWRAP/NEESA Y N
QC LEVEL 1 2 3 4 5
COC | ICE
ANA REQ | TEMP
CUST SEAL | Ph
SAMPLE CONDITION

REMARKS

ENTERED INTO LIMS ____ COC REVIEWED ____

3

CHAIN OF CUSTODY RECORD

PROJECT NO.: 8500-08

PROJECT NAME: NAS CECIL FIELD OPERABLE UNIT 2

CLIENT NAME:
ABB ENVIRONMENTAL SERVICES, INC.
2590 Executive Ctr. Circle East
Berkely Building
Tallahassee, Florida 32301

PROJECT MANAGER: Barry Lester

COPY TO: Charles Donahue

REQUESTED COMP. DATE:

FIELD OPERATION LEADER: NAME: MARIA PIJNENBURG
NAS Cecil Field
(904) 868-0425

SAMPLING REQUIREMENTS: SDWA NPDES RCRA OTHER

FOR LAB USE ONY
Client Code: 026323
Enseco – Wadsworth/ALERT Laboratories
4101 Shuffel Drive N.W.
North Canton, Ohio 44720
Contact: Deb Hula
(216) 497-9396 (Voice)
(216) 497-0772 (Fax)
QUOTE #: 16467

ANALYSES REQUESTED

	SITE ID CODE xx	SAMPLE MATRIX CODE xx	SAMPLE LOCATION CODE xxx	SAMPLE SEQUENCE CODE xx	DATE	TIME	DEPTH	AIR	WTR	SOIL	NO. OF CONTAINERS	CLP-VOC (4oz. gl) ice	CLP-SVOC (4oz. gl) ice	PCB/PEST (4oz. gl) ice	TAL-METALS (16oz. gl) ice	TOC (4oz. gl) ice	TPH (4oz. gl) ice	Grain Size Analysis	LAB ID	REMARKS
5	CF	SM	S20	S6G	10-4-93	1035	6			X	1							✓		SI
6	CF	SM	S19	S8G	10-5-93	1225	8			X	1							✓		SI
7	CF	SB	R9S	4G	10-12-93	1640	4			X	2							✓		Vadose Zone
	~~CF~~	~~SB~~	~~R9S~~																	SDM
8	CF	SM	S13	S12G	10-11-93	1500	12			X	1							✓		SI
9	CF	SM	S8S	8G	10-12-93	1030	8			X	1							✓		SI

SAMPLED BY AND TITLE	DATE/TIME	RELINQUISHED BY: Paul Neal	DATE/TIME 12-13-93 1638
RECEIVED BY:	DATE/TIME	RELINQUISHED BY:	DATE/TIME
RECEIVED BY:	DATE/TIME	RELINQUISHED BY:	DATE/TIME
RECEIVED BY LAB:	DATE/TIME 12/13/93 16:39	SAMPLE SHIPPED VIA: UPS BUS FED-EX HAND OTHER	AIR BILL NUMBER

REMARKS

HAZWRAP/NEESA Y N
QC LEVEL 1 2 3 4 5
COC | ICE
ANA REQ | TEMP
CUST SEAL | Ph
SAMPLE CONDITION

ENTERED INTO LIMS ____ COC REVIEWED ____

CHAIN OF CUSTODY RECORD

2

PROJECT NO.	PROJECT NAME
8500-08	NAS CECIL FIELD OPERABLE UNIT 2

CLIENT NAME
ABB ENVIRONMENTAL SERVICES, INC.
2590 Executive Ctr. Circle East
Berkely Building
Tallahassee, Florida 32301

PROJECT MANAGER: Barry Lester

COPY TO: Charles Donahue

REQUESTED COMP. DATE:

FIELD OPERATION LEADER: NAME: MARIA PUNENBERG
NAS Cecil Field
(904) 868-0425

SAMPLING REQUIREMENTS: SDWA NPDES RCRA OTHER

FOR LAB USE ONLY
Client Code: 026323
Enseco - Wadsworth/ALERT Laboratories
4101 Shuffel Drive N.W.
North Canton, Ohio 44720
Contact: Deb Hula
(216) 497-9396 (Voice)
(216) 497-0772 (Fax)
QUOTE # 16467

ANALYSES REQUESTED

	SITE ID CODE xx	SAMPLE MATRIX CODE XX	SAMPLE LOCATION CODE xxx	SAMPLE SEQUENCE CODE xx	DATE	TIME	DEPTH	SAMPLE MATRIX AIR	WTR	SOIL	NO. OF CONTAINERS	CLP-VOC (4oz. gl) ice	CLP-SVOC (4oz. gl) ice	PCB/PEST (4oz. gl) ice	TAL-METALS (16oz. gl) ice	TOC (4oz. gl) ice	TPH (4oz. gl) ice		GEOTECH						LAB ID	REMARKS
0	CF	17	MW27	D10G	11-10-93						1								1							SR
1	CF	17	MW27	D35G	↓						1								1							↓
2	CF	17	MW27	D50G							1								1							
3	CF	17	MW27	D65G							1								1							
4	CF	17	MW27	D80G							1								1							
5	CF	17	MW28	DD110G	12-8-93						1								1							

SAMPLED BY AND TITLE	DATE/TIME	RELINQUISHED BY: Paul Neal	DATE/TIME 12-13-93 1638
RECEIVED BY:	DATE/TIME	RELINQUISHED BY:	DATE/TIME
RECEIVED BY:	DATE/TIME	RELINQUISHED BY:	DATE/TIME
RECEIVED BY LAB:	DATE/TIME 12/13/93 16:39	SAMPLE SHIPPED VIA UPS BUS FED-EX HAND OTHER	AIR BILL NUMBER

REMARKS

HAZWRAP/NEESA Y N
QC LEVEL 1 2 3 4 5
COC | ICE
ANA REQ | TEMP
CUST SEAL | Ph
SAMPLE CONDITION

ENTERED INTO LIMS ____ COC REVIEWED ____

CHAIN OF CUSTODY RECORD

1

PROJECT NO.: 8500.27

PROJECT NAME: NAS CECIL FIELD OPERABLE UNIT Site 1

CLIENT NAME: ABB ENVIRONMENTAL SERVICES, INC.
2590 Executive Ctr. Circle East
Berkely Building
Tallahassee, Florida 32301

PROJECT MANAGER: Barry Lester

COPY TO: Charles Donahue

REQUESTED COMP. DATE:

FIELD OPERATION LEADER: NAME: Marin Pijewburg
NAS Cecil Field
(904) 868-0425

SAMPLING REQUIREMENTS: SDWA NPDES RCRA OTHER

FOR LAB USE ONY
Client Code: 026323

Enseco - Wadsworth/ALERT Laboratories
4101 Shuffel Drive N.W.
North Canton, Ohio 44720

Contact: Deb Hula
(216) 497-9396 (Voice)
(216) 497-0772 (Fax)

QUOTE #: 16467

	SAMPLE ID: SITE ID CODE xx	SAMPLE MATRIX CODE XX	SAMPLE LOCATION CODE xxx	SAMPLE SEQUENCE CODE xx	DATE	TIME	DEPTH	SAMPLE MATRIX: AIR	WTR	SOIL	NO. OF CONTAINERS	CLP-VOC (4oz. gl) ice	CLP-SVOC (4oz. gl) ice	PCB/PEST (4oz. gl) ice	TAL-METALS (16oz. gl) ice	TOC (4oz. gl) ice	TPH (4oz. gl) ice	Geo Tech*							LAB ID	REMARKS
16	CF	1M	S14	I40G	9/2/93	1055	40'			X	1							1								1-4oz JAR SI
17	CF	5MS	30S	12G	9/20/93	1705	12			X	1							1								1 4oz. JAR SI
18	CF	5M	S23	S0G	9/21/93	1420	0			X	2							2								Vadose
19	CF	5M	S23	S12G	9/21/93	1510	12			X	1							1								SI
20	CF	5M	S29	S12G	9/22/93	1050	12			X	1							1								SI
21	CF	5M	S24	S14G	9/27/93	1725	14			X	1							1								SI

SAMPLED BY AND TITLE | DATE/TIME

RECEIVED BY: | DATE/TIME

RECEIVED BY: | DATE/TIME

RECEIVED BY LAB: | DATE/TIME 12/13/93 16:39

RELINQUISHED BY: Paul Neal | DATE/TIME 1638 12/13/93

RELINQUISHED BY: | DATE/TIME

RELINQUISHED BY: | DATE/TIME

SAMPLE SHIPPED VIA: UPS BUS FED-EX HAND OTHER

AIR BILL NUMBER

HAZWRAP/NEESA Y N
QC LEVEL 1 2 3 4 5
COC | ICE
ANA REQ | TEMP
CUST SEAL | Ph
SAMPLE CONDITION

REMARKS * Screen Interval / Analyze for Grain Size Only

ENTERED INTO LIMS _____ COC REVIEWED _____

SUMMARY OF LABORATORY TEST RESULTS

PROJECT: NAS Cecil Field (ABB Project No. 8500-08)
CLIENT: ABB Environmental
PROJECT NO.: 93-1361

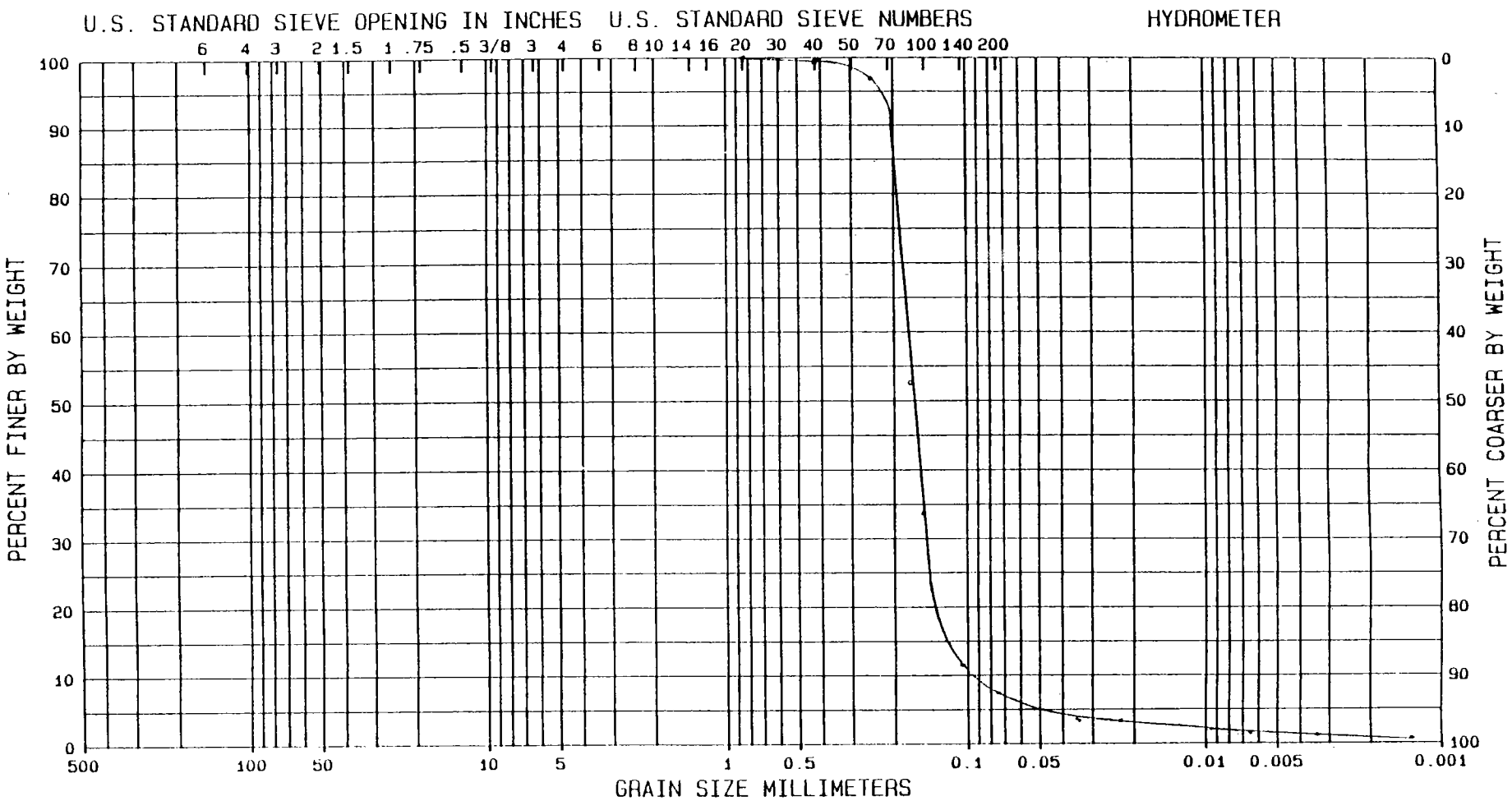
Boring/ Sample No.	Sample Depth (ft.)	Organic Content %	Fines Content %	Natural Moisture Content %	Atterberg Limits Liquid Limit %	Atterberg Limits Plastic Limit %	Atterberg Limits Plasticity Index %	Pocket Pen. (tsf)
CF17BR4S(2)				21.1	No LL	Non-Plastic		
CF17BR13S(2)				19.3	No LL	Non-Plastic		
CF5BR9S4G				21.8	No LL	Non-Plastic		

SUMMARY OF GRADATION TEST RESULTS

PROJECT: NAS Cecil Field (ABB Project No. 8500-08)
CLIENT: ABB Environmental
PROJECT NO.: 93-1361

Boring/ Sample No.	Sample Depth (ft.)	GRADATION TEST % Passing							
		No. 10	No. 20	No. 40	No. 60	No. 80	No.100	No.140	No.200
CF17BR4S(2)		100.0	100	99.8	96.9	52.4	34.3	11.6	7.3
CF17BR13S(2)		100.0	100	99.8	96.9	48.1	33.8	13.6	9.5
CF17BR8S(0)		98.6	97.1	94.2	89.7	57.3	46.3	15.2	11.1
CF17BR8S(2)		99.1	96.8	92.8	88.6	67.3	50.4	18.0	10.6
CF5MS20S6G		100.0	99.8	99.3	98.2	68.0	54.9	18.5	11.8
CF5MS19S8G		99.9	99.8	99.7	98.9	73.3	59.2	24.7	18.7
CF5MS13S12G		100.0	99.6	99.0	97.4	59.5	43.5	14.2	9.0
CF5MS8S8G		100.0	100.0	99.9	99.4	72.0	55.9	19.5	13.6
CF5BR9S4G		100.0	99.9	99.8	98.7	69.3	53.3	28.9	23
CF17MW27D10G		97.1	96.5	95.6	91.7	56.6	40.1	10.3	6.1
CF17MW27D35G		99.8	99.3	98.4	93.2	29.3	16.7	3.7	2.5
CF17MW27D50G		100.0	99.2	98.3	87.0	31.1	17.4	3.9	3.0
CF17MW27D65G		97.9	94.3	83.2	61.4	17.2	11.3	5.7	4.4
CF17MW27D80G		95.5	80.9	70.2	53.3	15.3	12.7	8.2	6.2
CF17MW28DD110G		79.7	60.8	41.9	25.8	10.4	8.0	5.1	3.6

ELLIS & ASSOCIATES, INC.



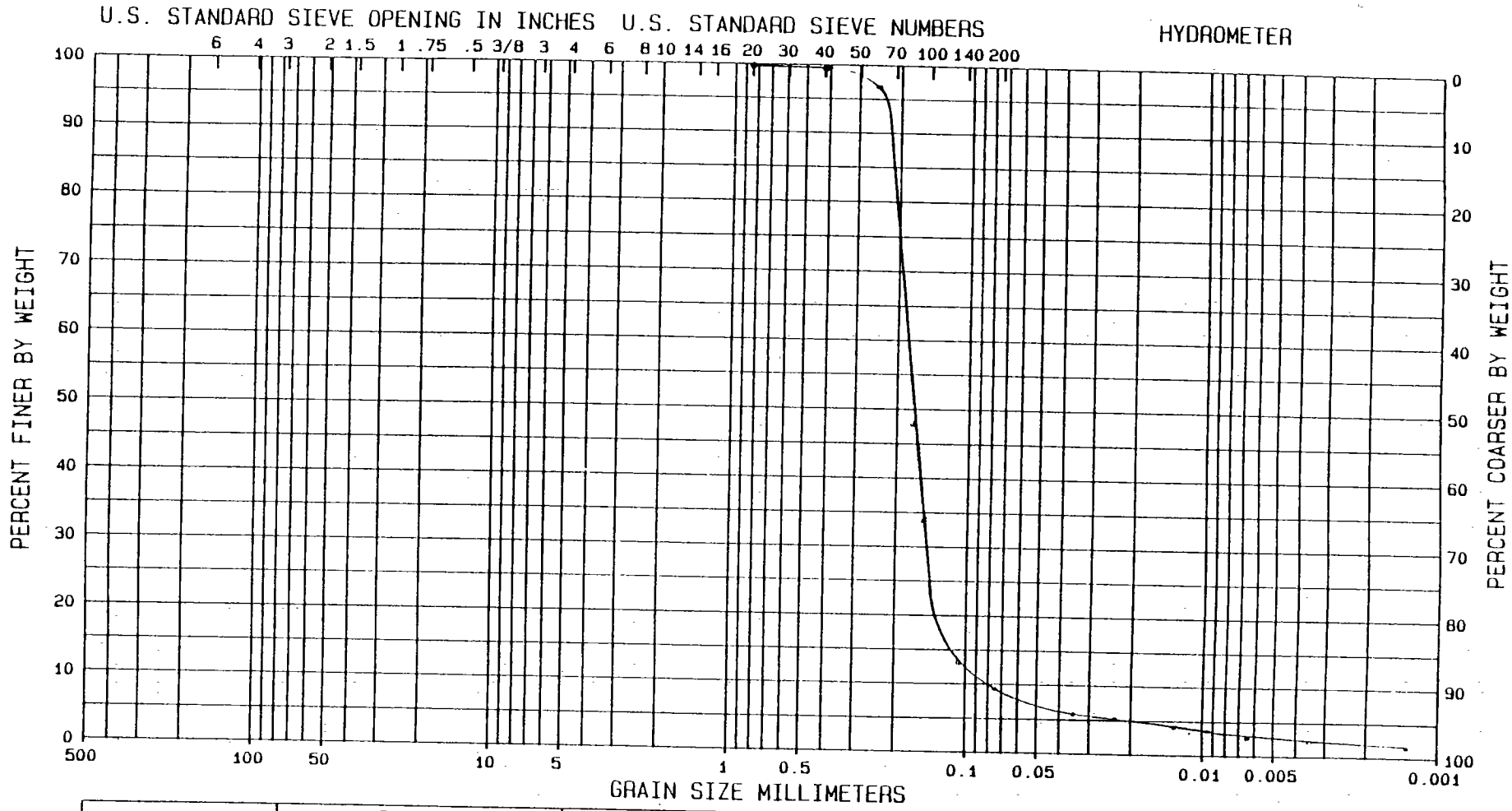
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF17BR4S(2)						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



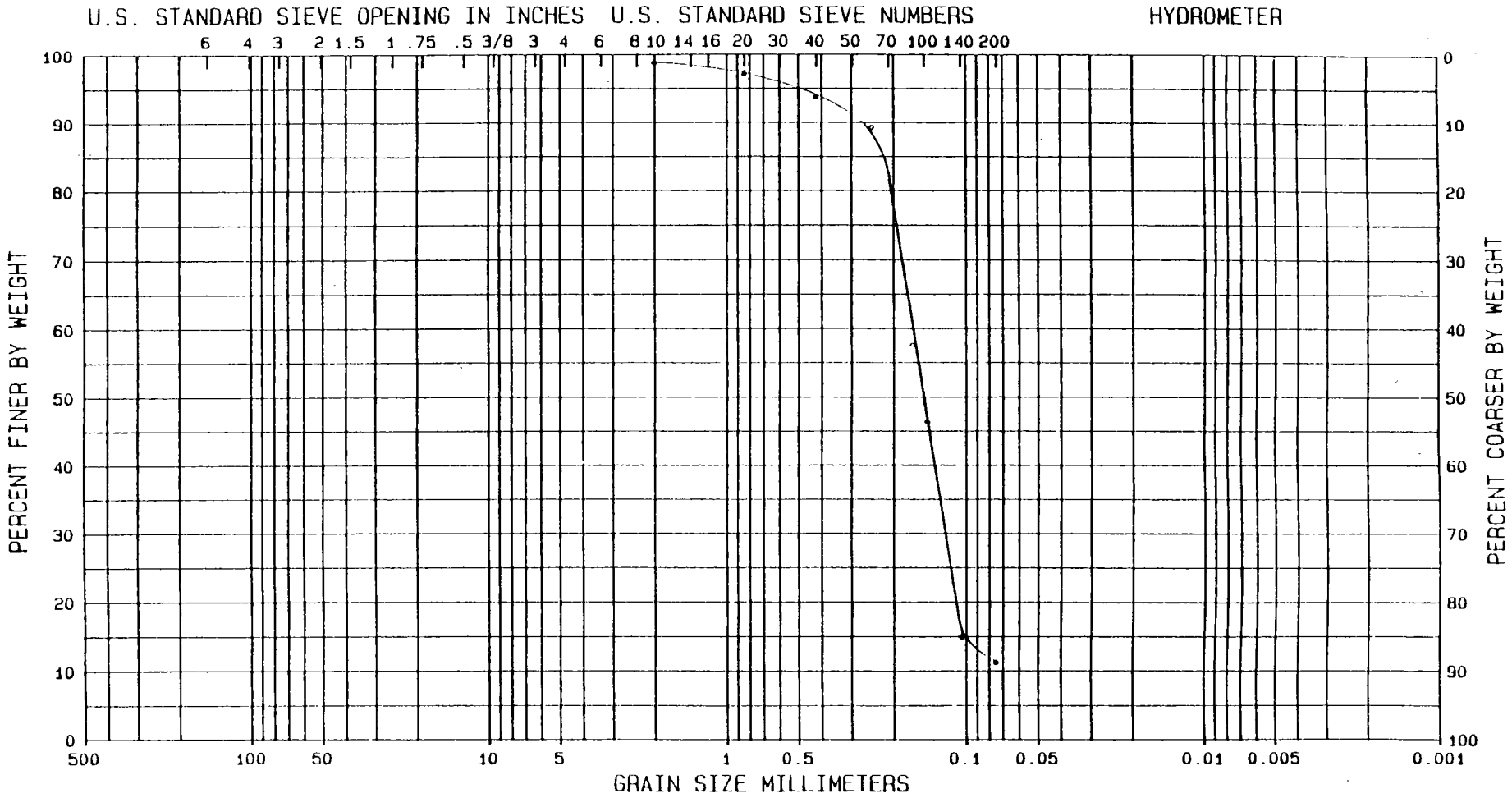
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF17BR13S(2)						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



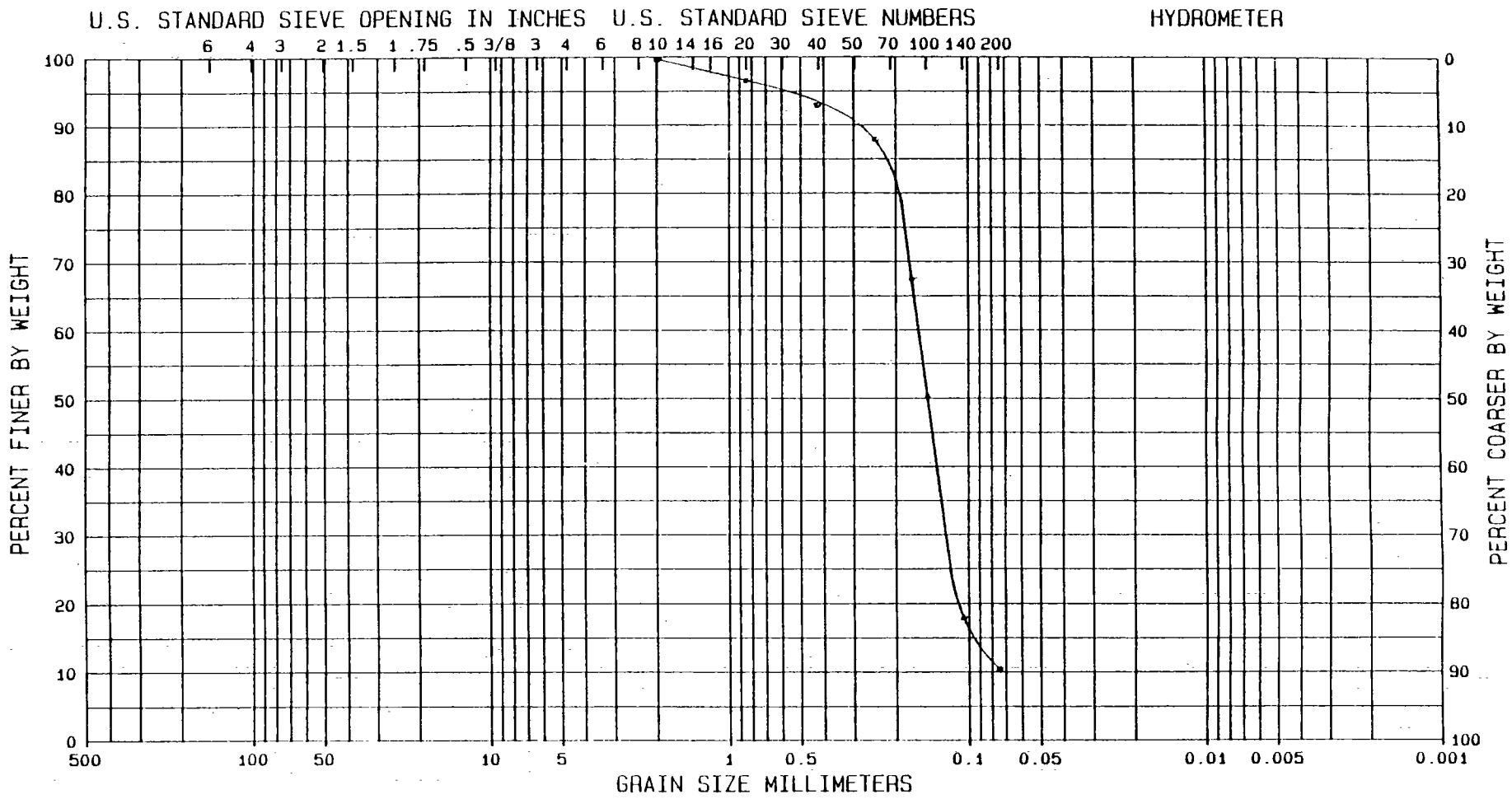
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF17BR8S(0)						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



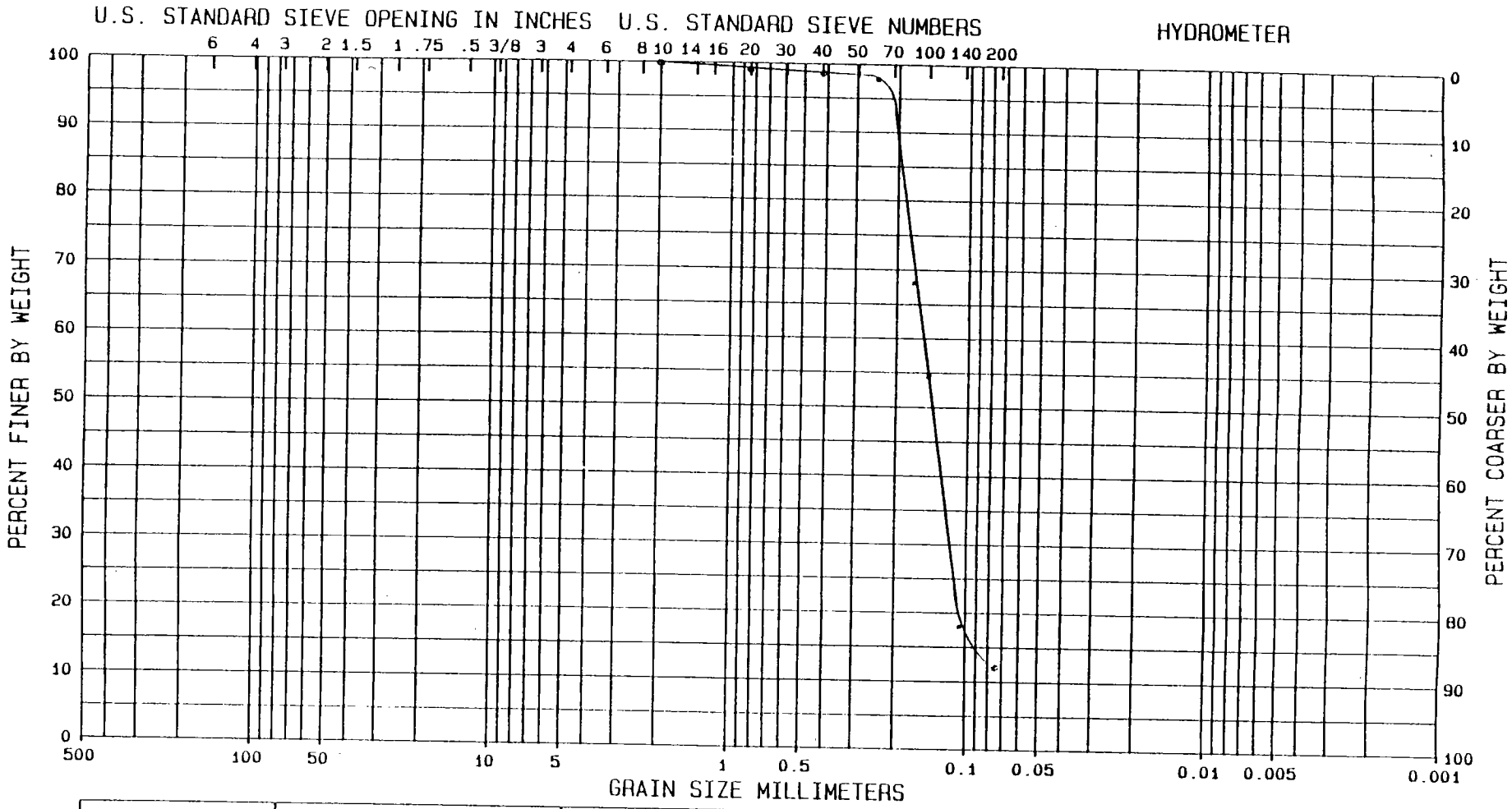
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF17BR8S(2)						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



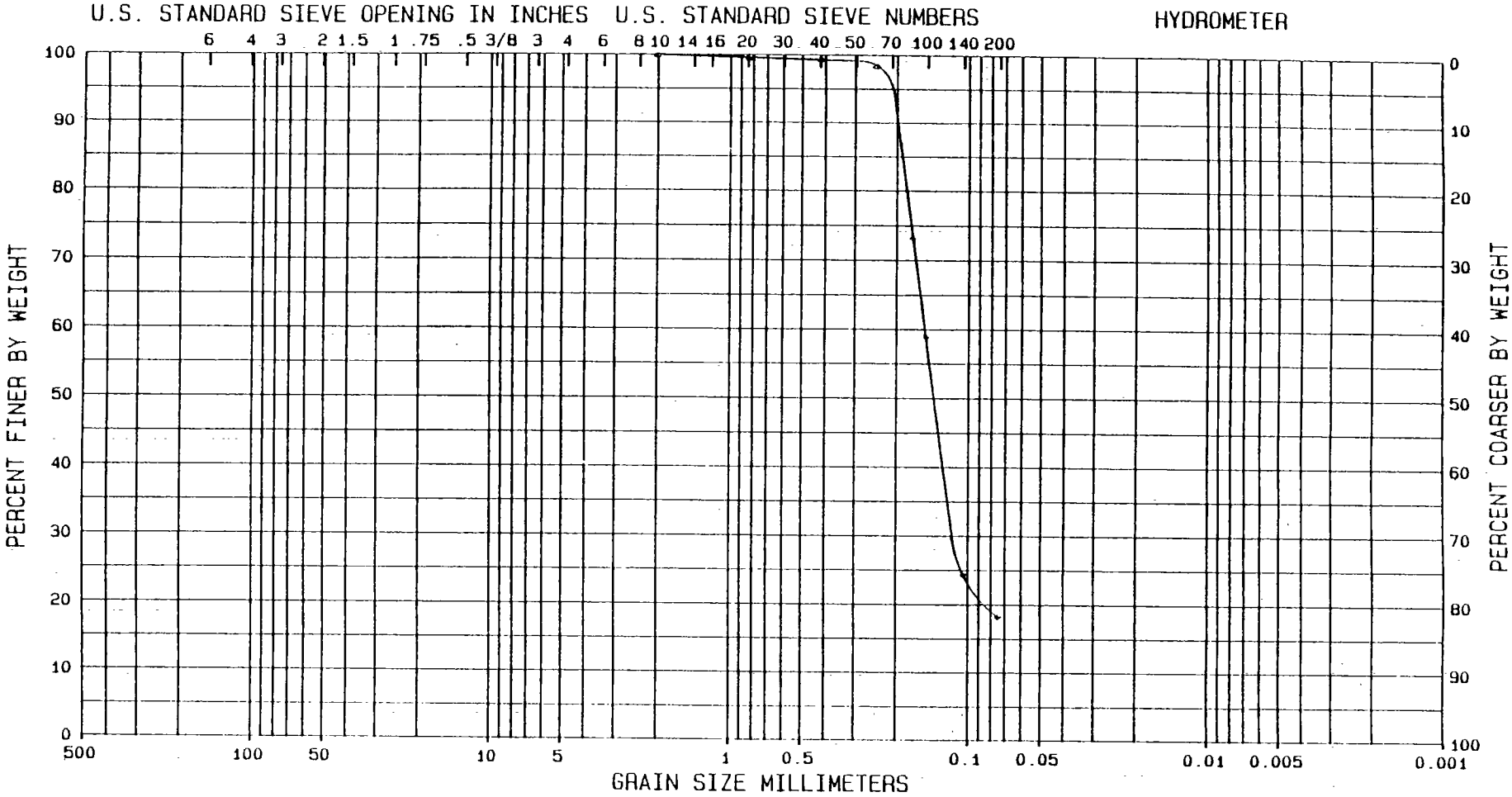
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF5MS20S6G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



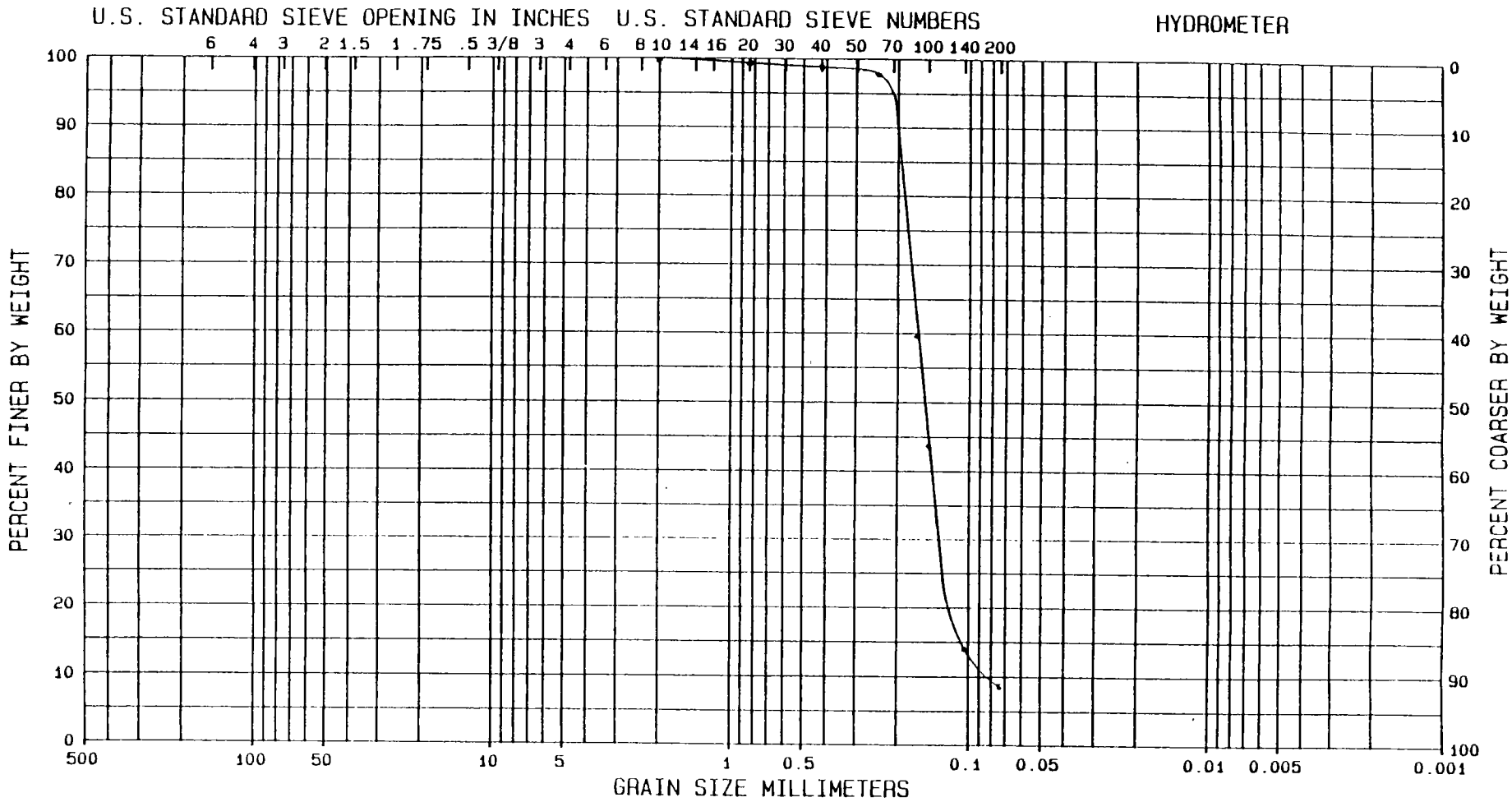
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF5MS19S8G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



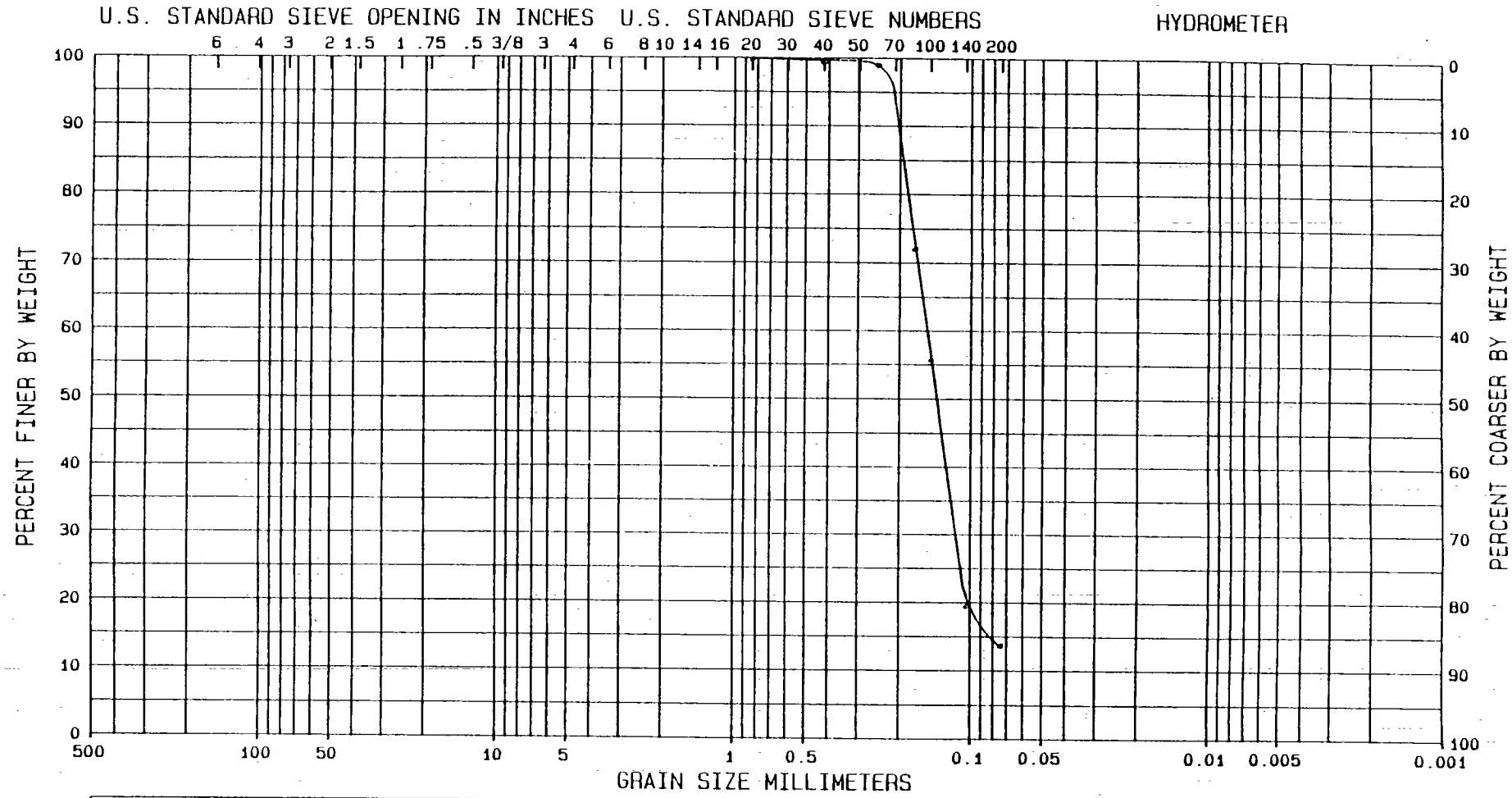
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF5MS13S12G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



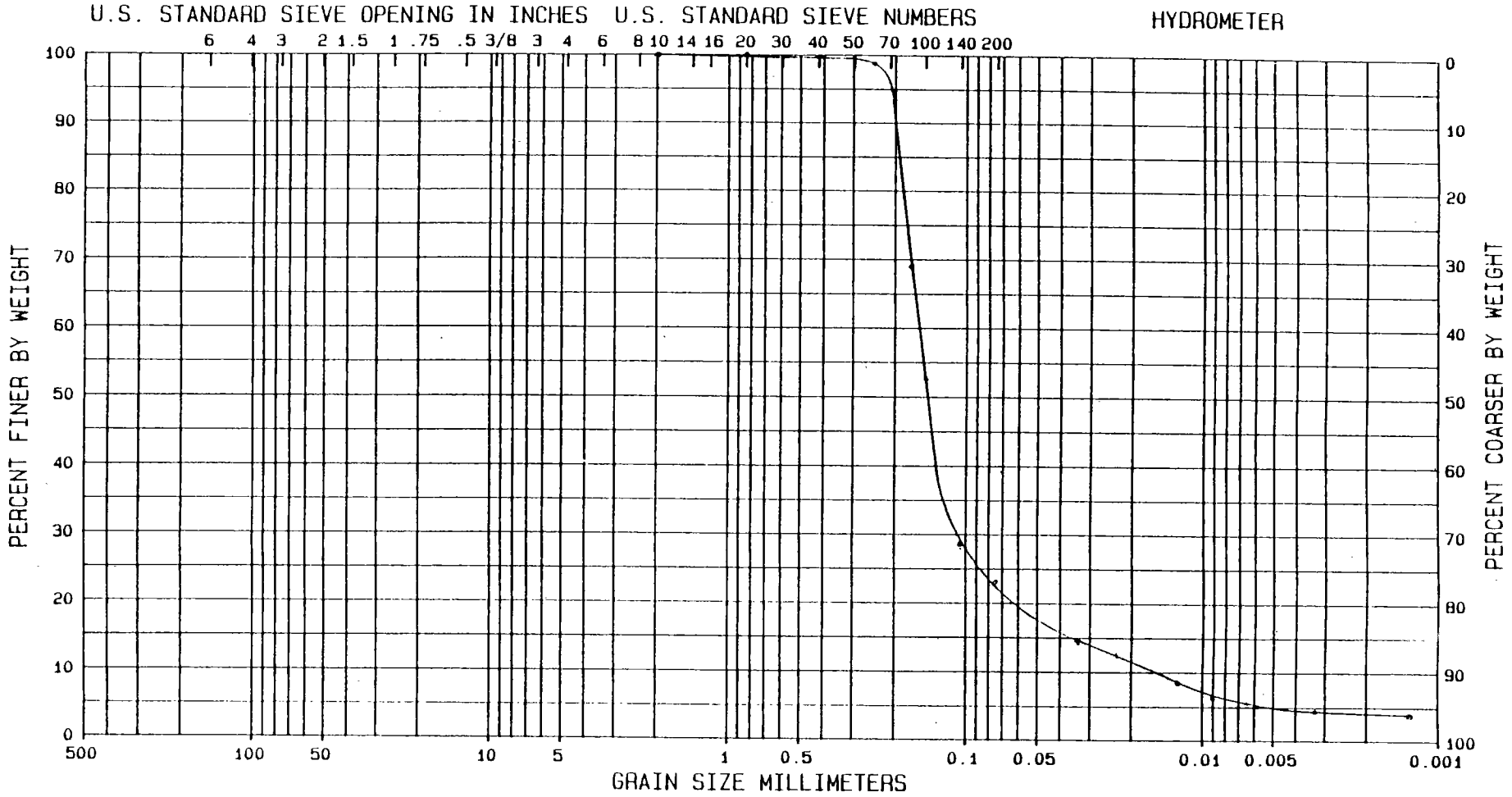
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF5MS8S8G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



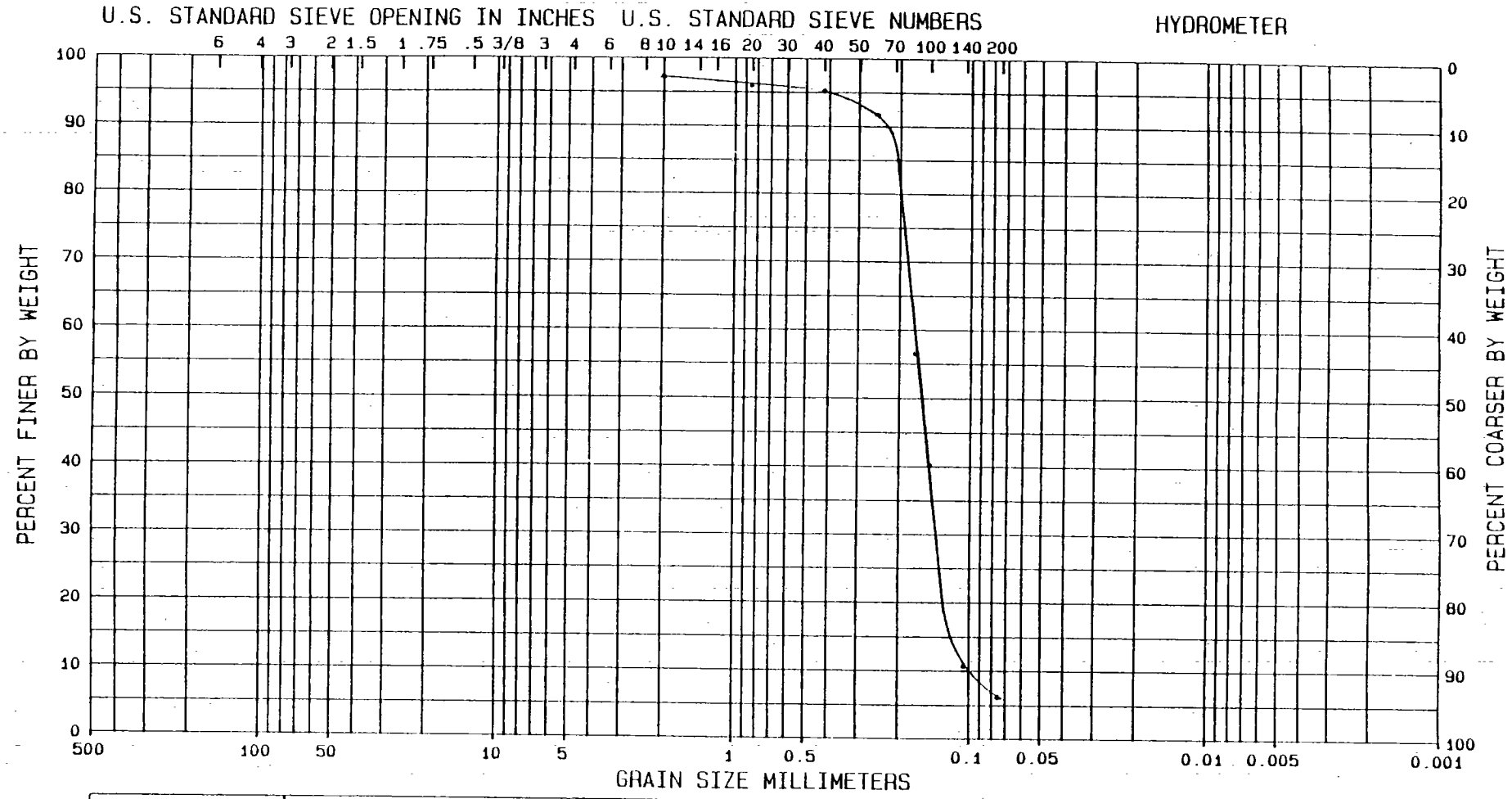
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF5BR9S4G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



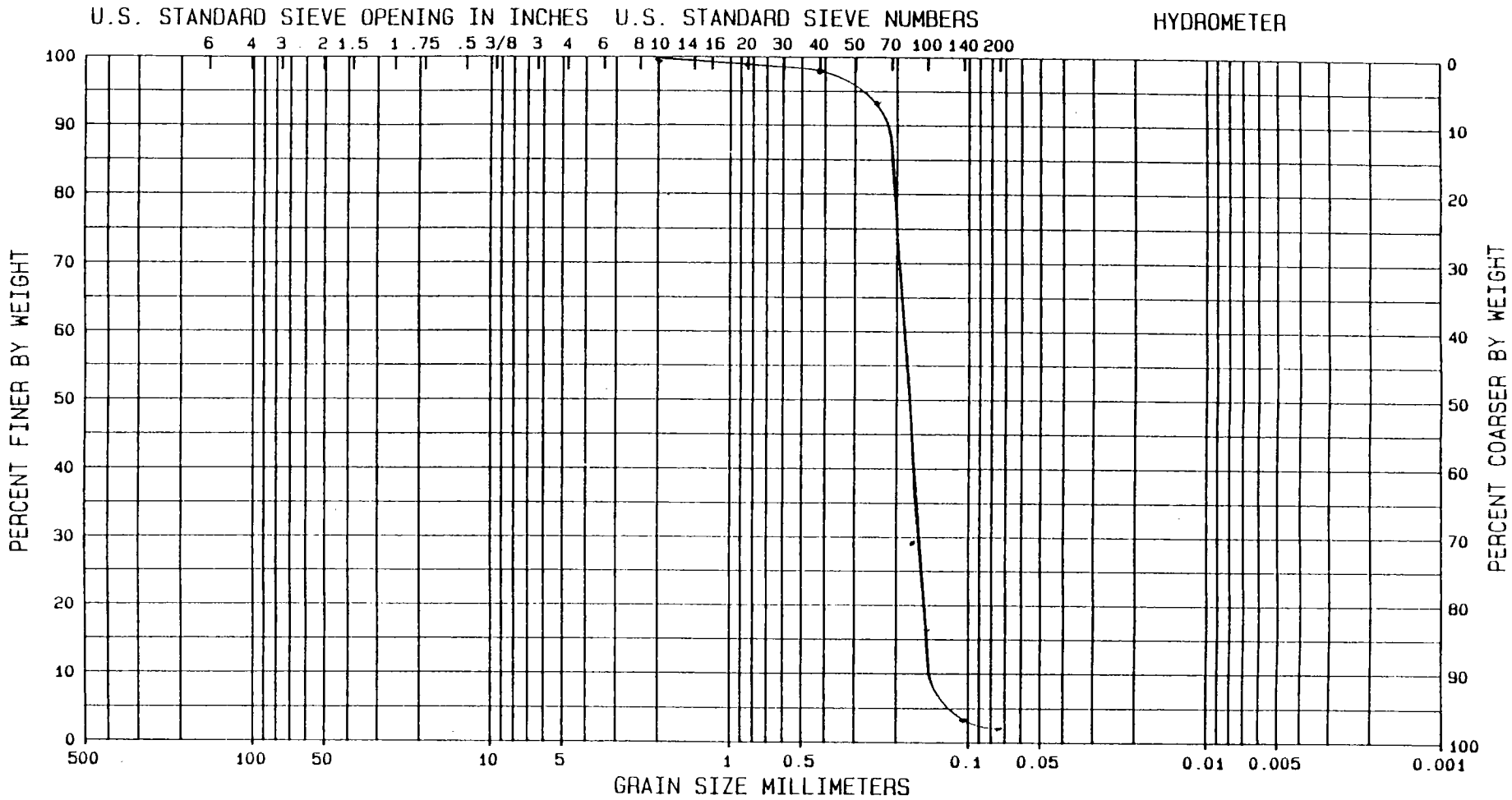
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF17MW27D10G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



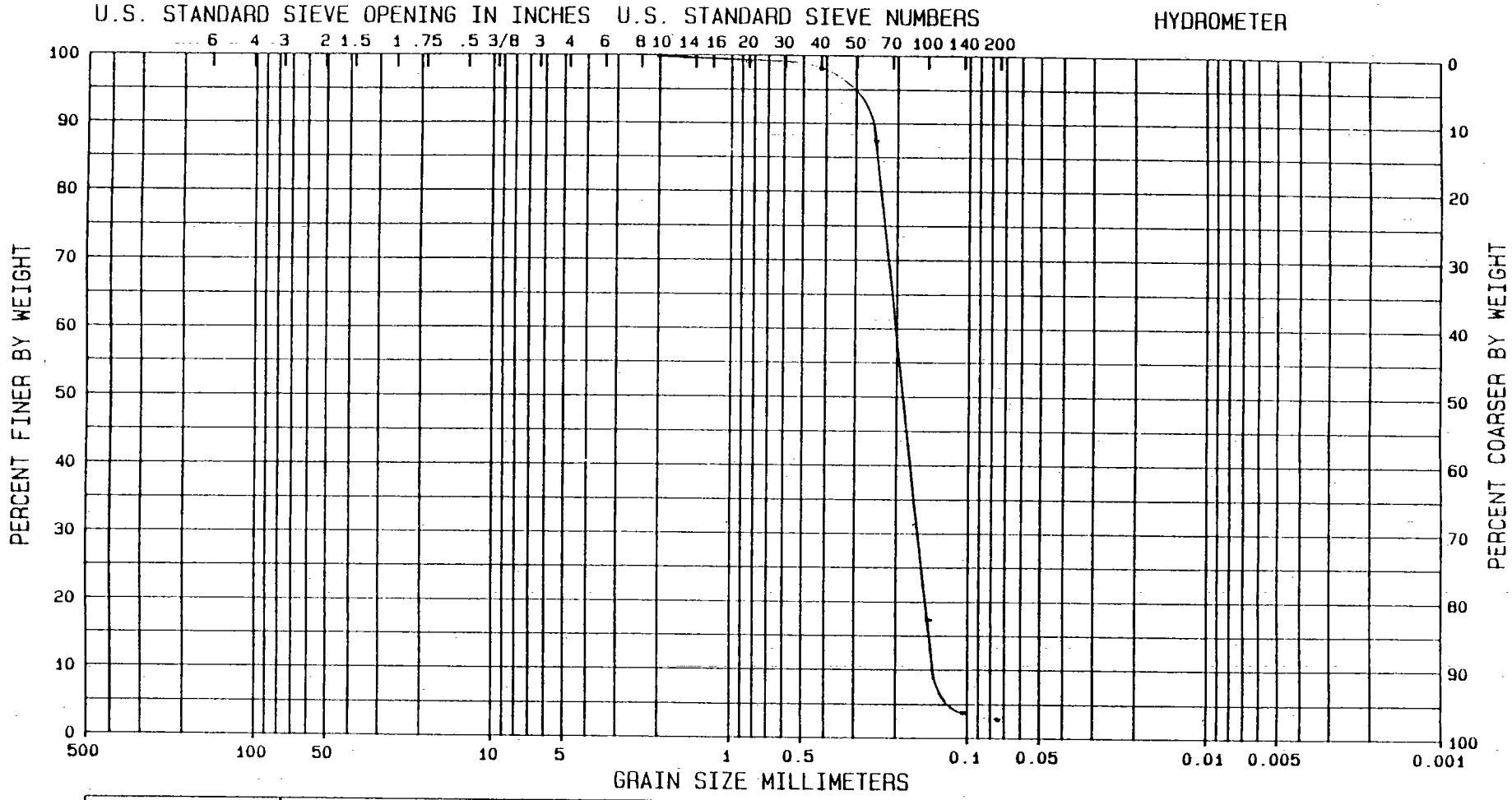
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF17MW27D35G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



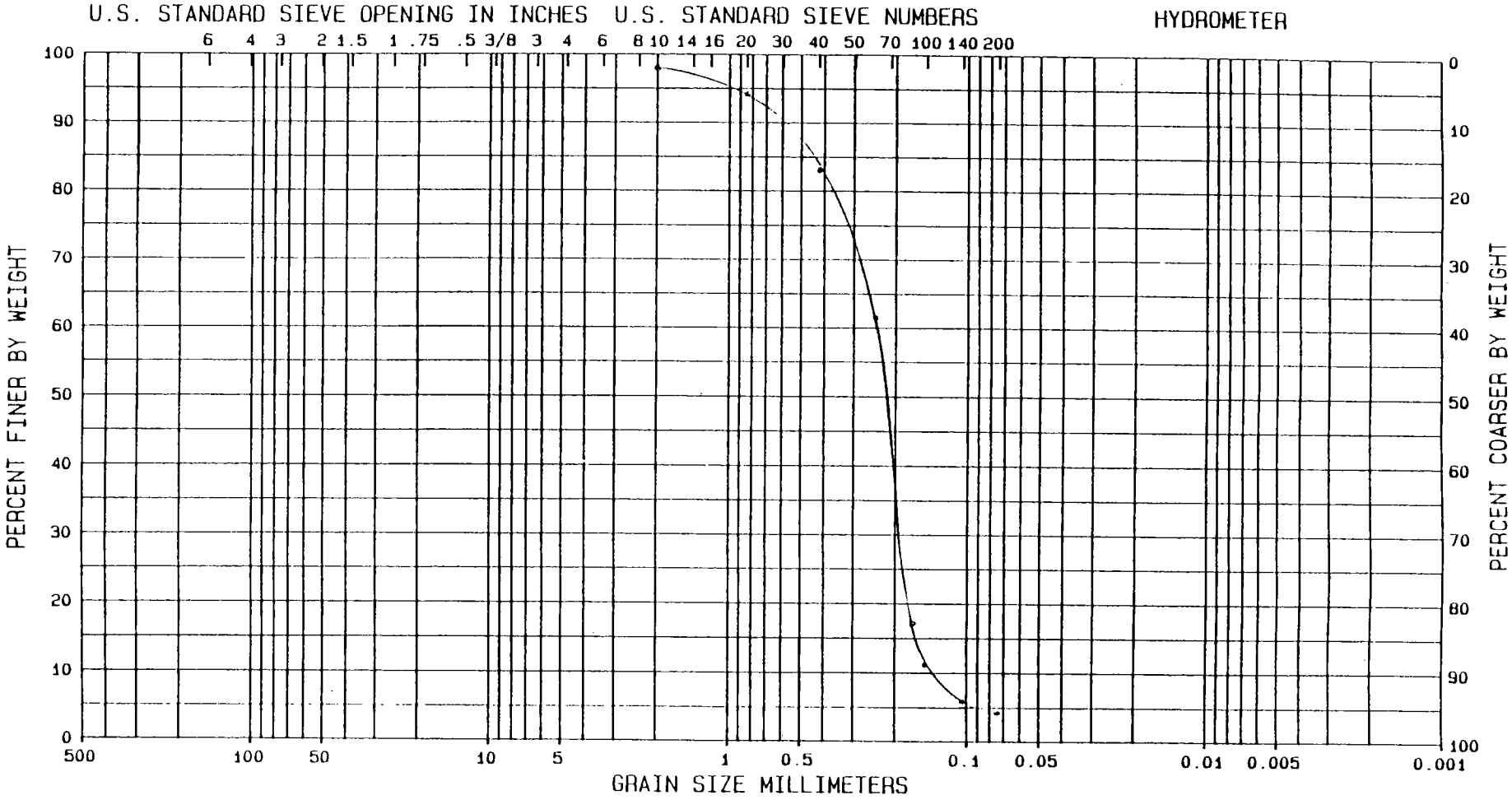
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF17MW27D50G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



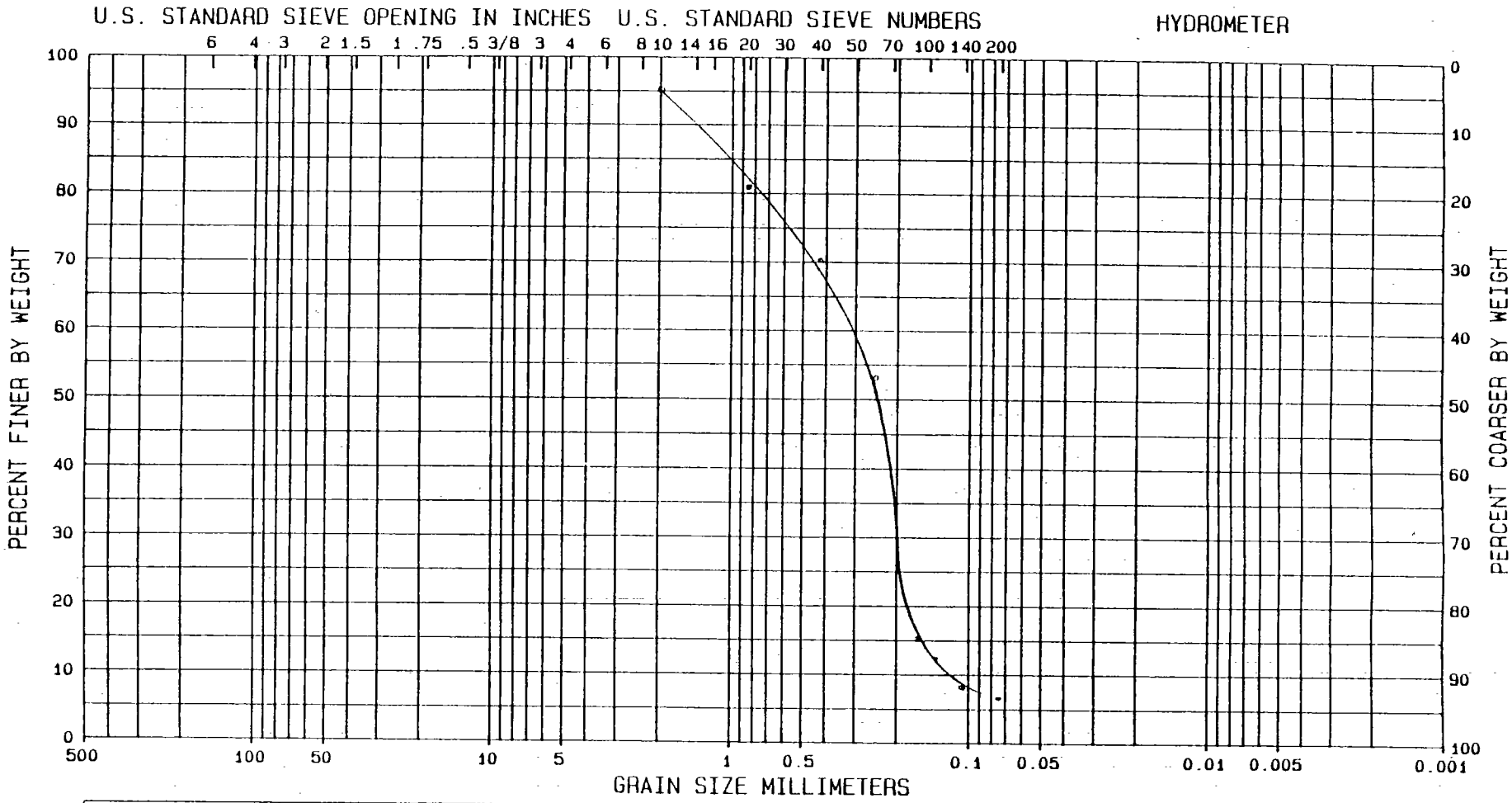
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF17MW27D65G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



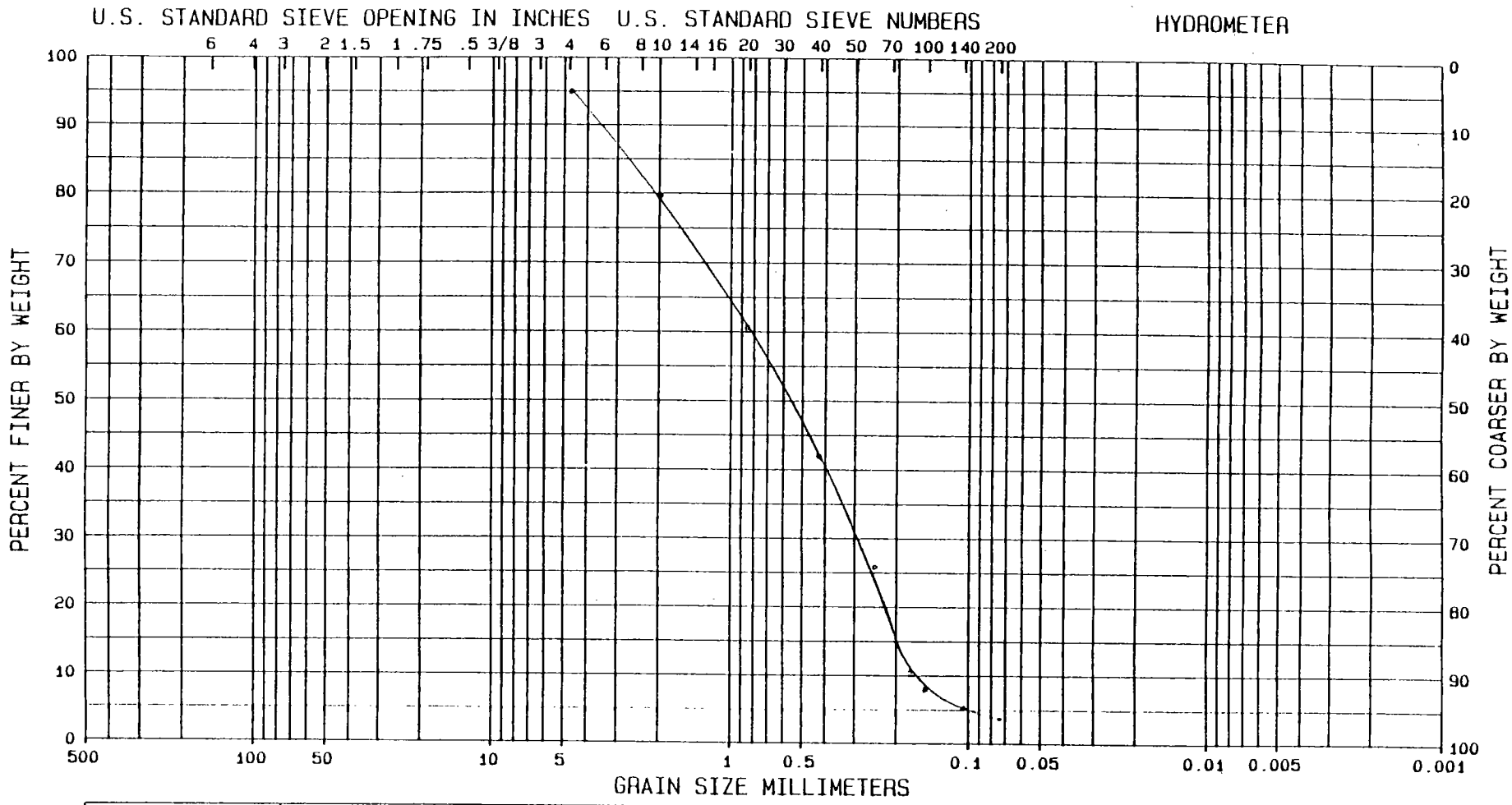
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF17MW27D80G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF17MW27DD110G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-08
Jacksonville, Florida
E&A Project No. 93-1361

SUMMARY OF LABORATORY TEST RESULTS

PROJECT: NAS Cecil Field (ABB Project No. 8500-27)
CLIENT: ABB Environmental
PROJECT NO.: 93-1361

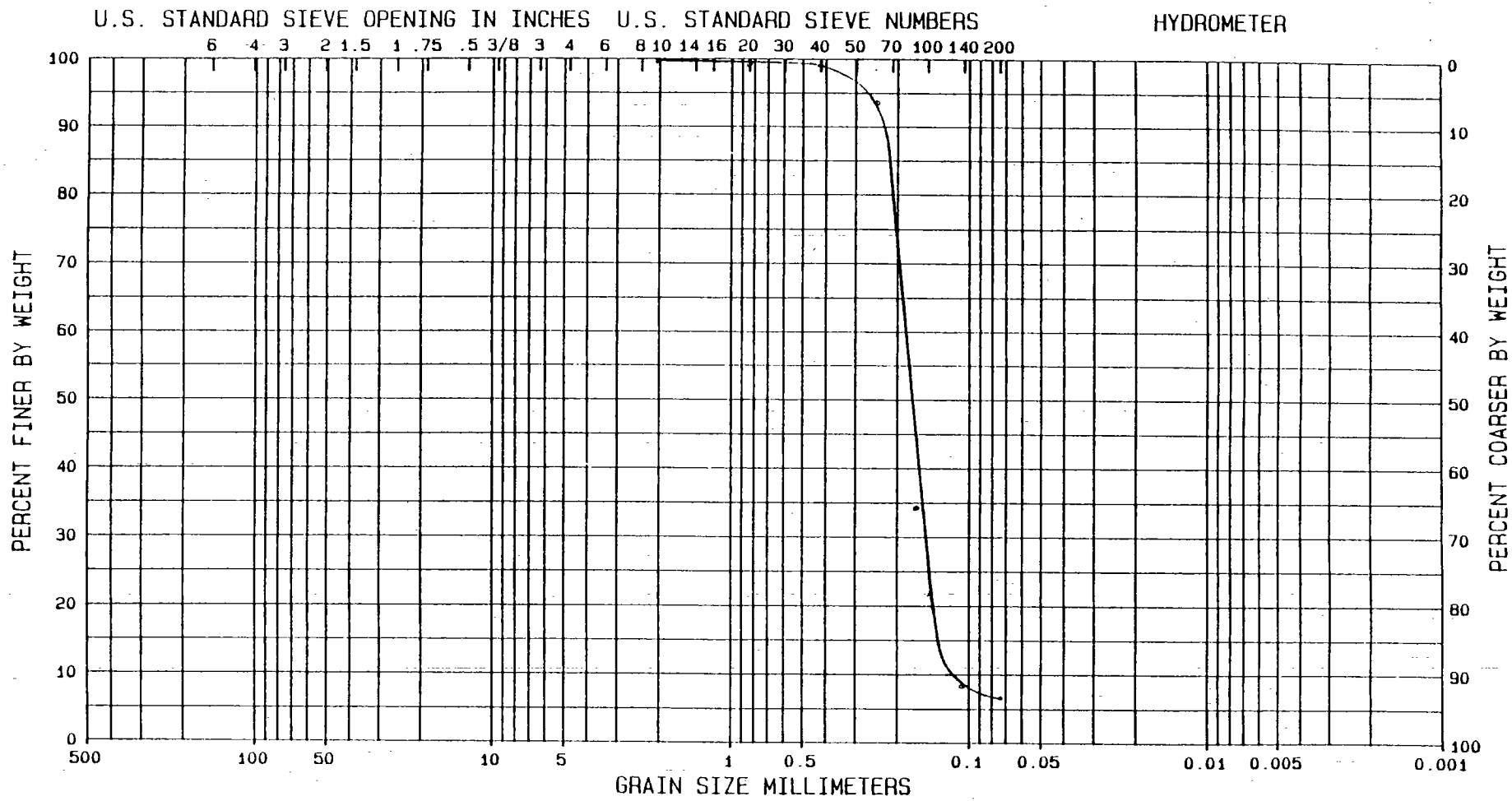
Boring/ Sample No.	Sample Depth (ft.)	Organic Content %	Fines Content %	Natural Moisture Content %	Atterberg Limits Liquid Limit %	Plastic Limit %	Plasticity Index %	Pocket Pen. (tsf)
CF5MS23S0G				31.7	No LL	Non-Plastic		

SUMMARY OF GRADATION TEST RESULTS

PROJECT: NAS Cecil Field (ABB Project No. 8500-27)
CLIENT: ABB Environmental
PROJECT NO.: 93-1361

Boring/ Sample No.	Sample Depth (ft.)	GRADATION TEST % Passing							
		No. 10	No. 20	No. 40	No. 60	No. 80	No.100	No.140	No.200
CF1MS14I40G		100.0	99.8	99.4	93.8	34.9	21.4	8.9	6.7
CF5MS30S12G		100.0	99.8	99.6	98.9	71.7	55.6	16.2	10.5
CF5MS23S0G		100.0	99.6	98.3	92.6	49.8	37.0	9.9	6.3
CF5MS23S12G		100.0	100.0	99.7	97.6	60.1	44.9	15.9	10.5
CF5MS29S12G		100.0	99.9	99.8	99.0	60.6	44.9	15.2	10.3
CF5MS24S14G		100.0	99.9	99.6	98.0	54.0	36.8	10.5	7.3

ELLIS & ASSOCIATES, INC.



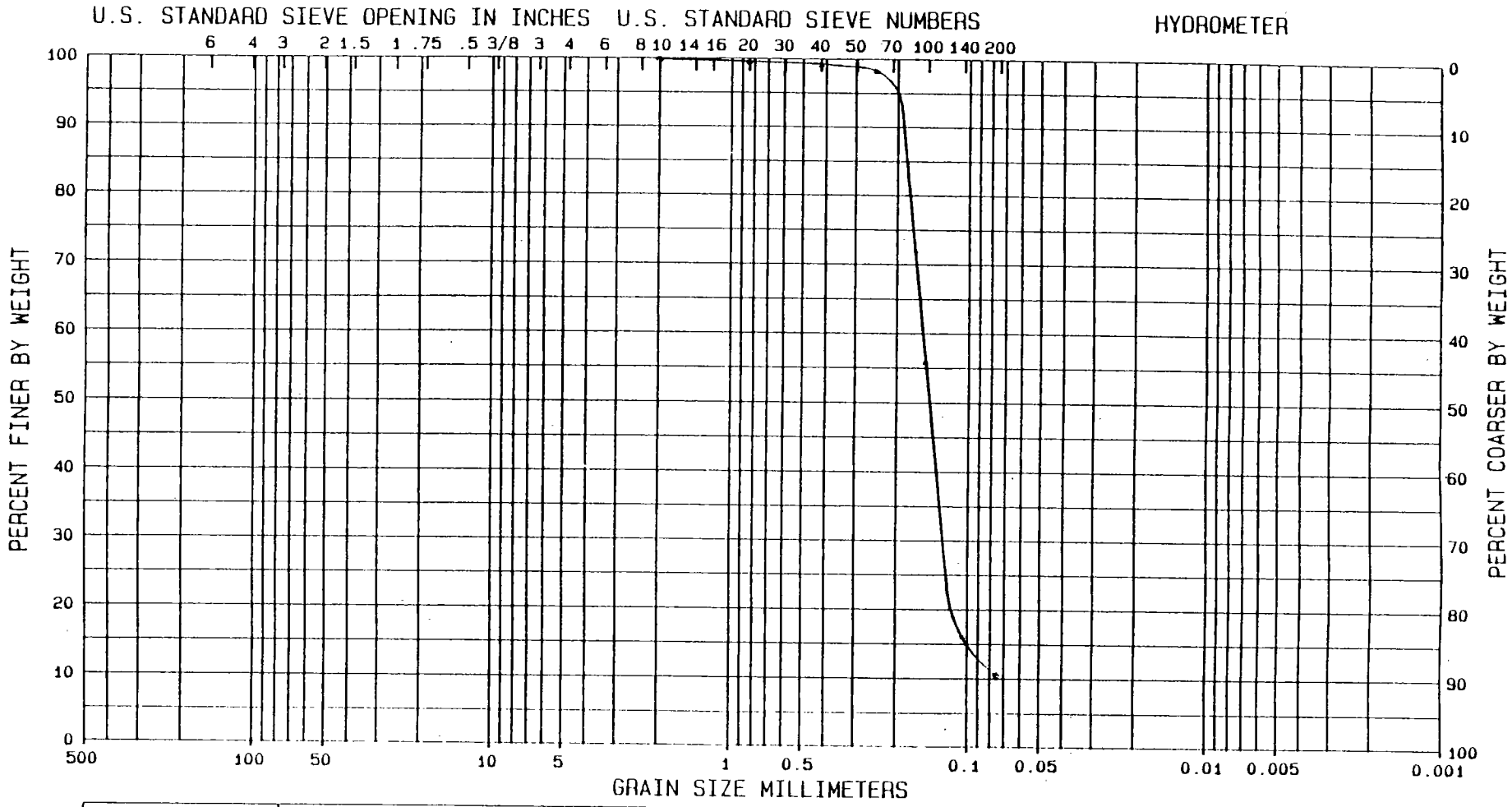
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF1MS14I40G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-27
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



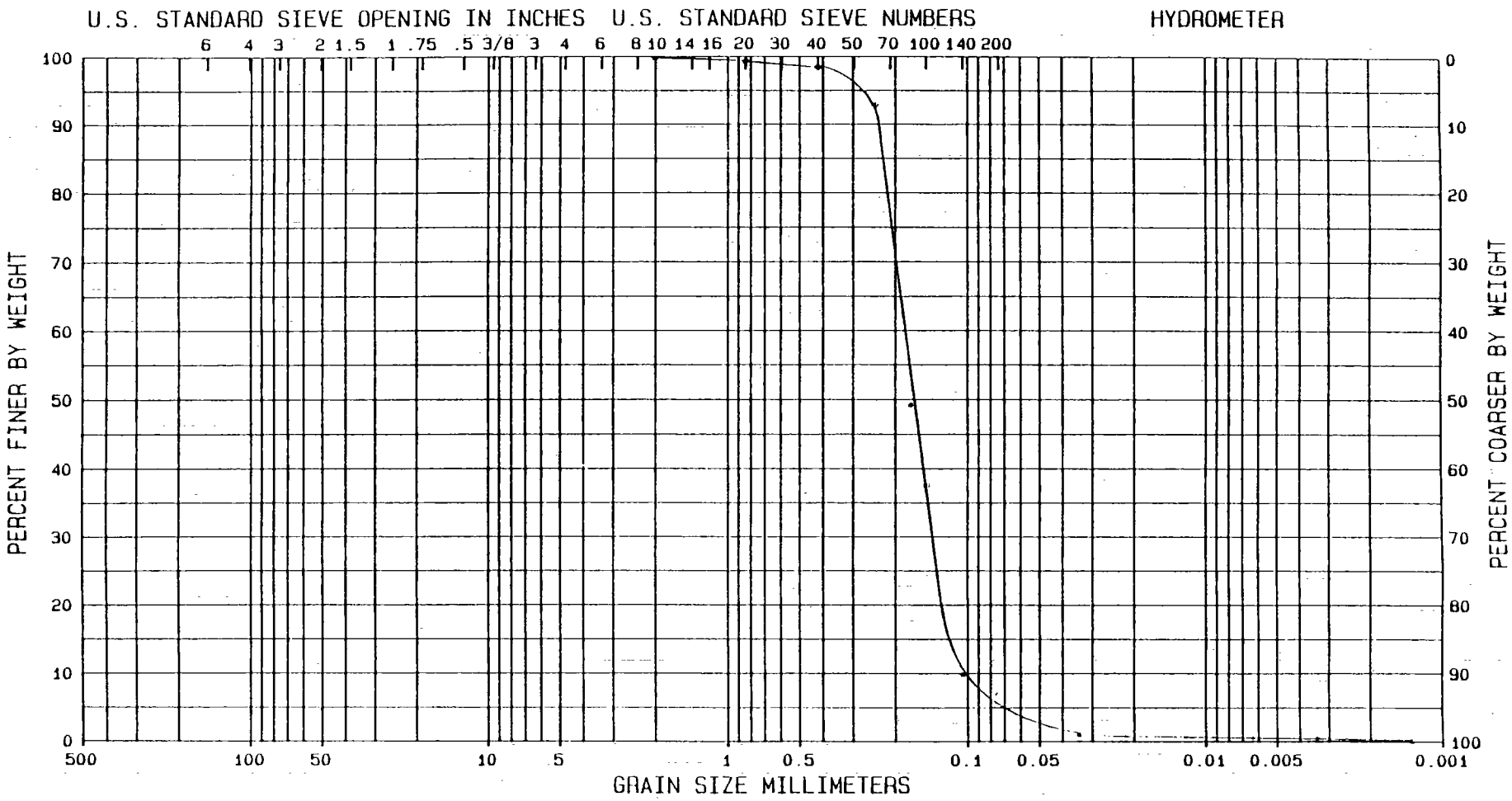
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF5MS30S12G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-27
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



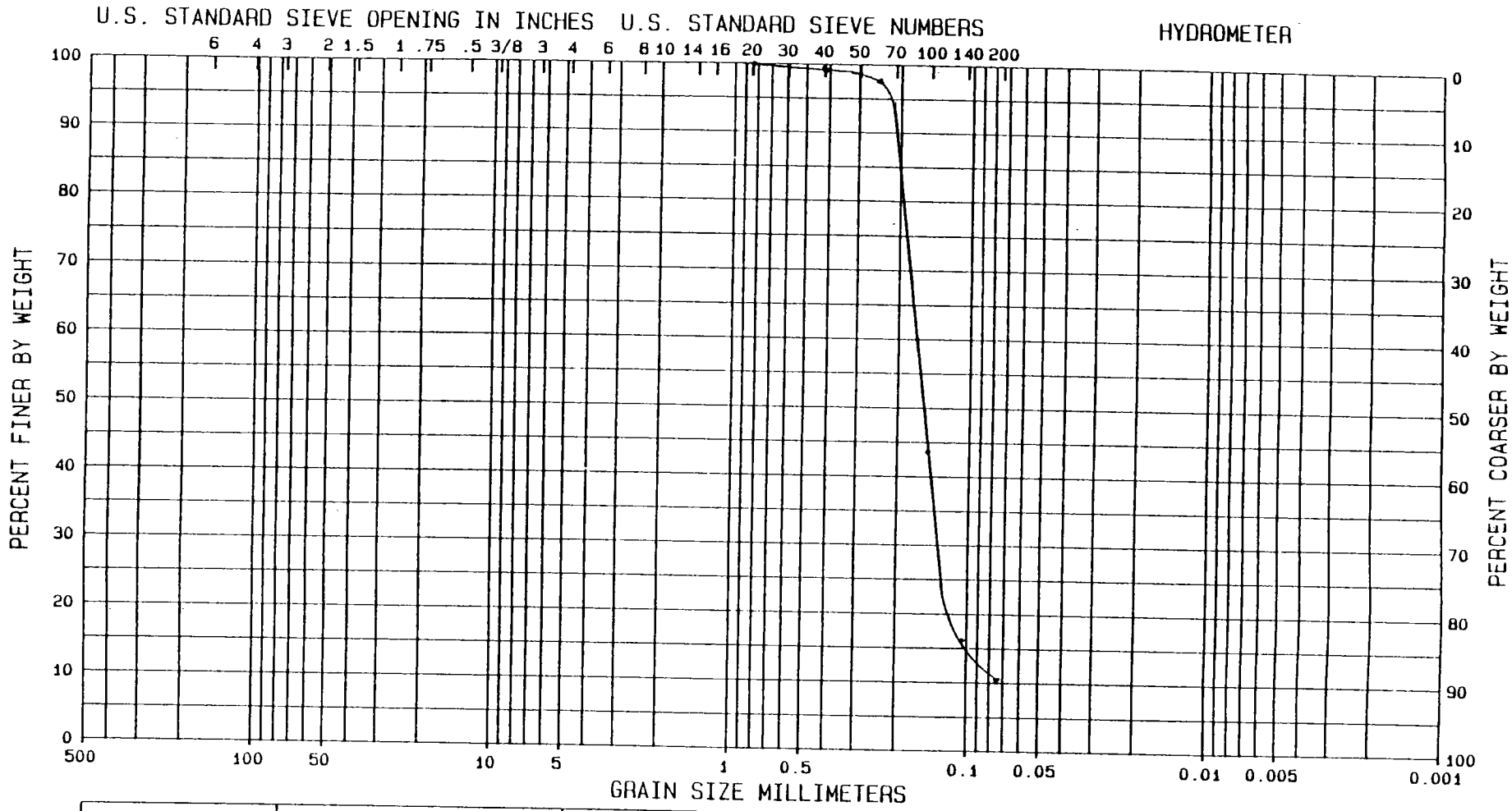
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF5MS23S0G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-27
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



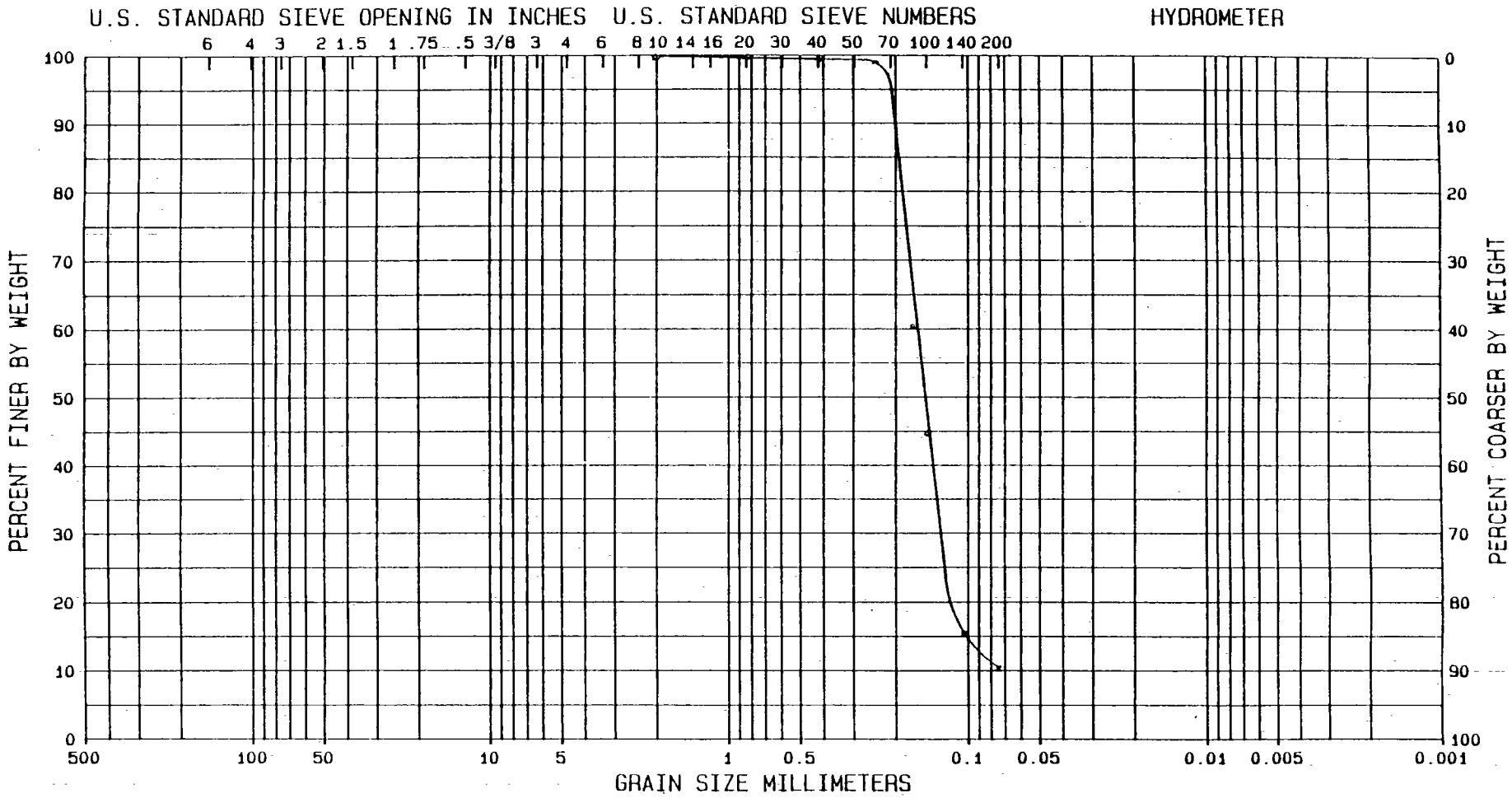
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF5MS23S12G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-27
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



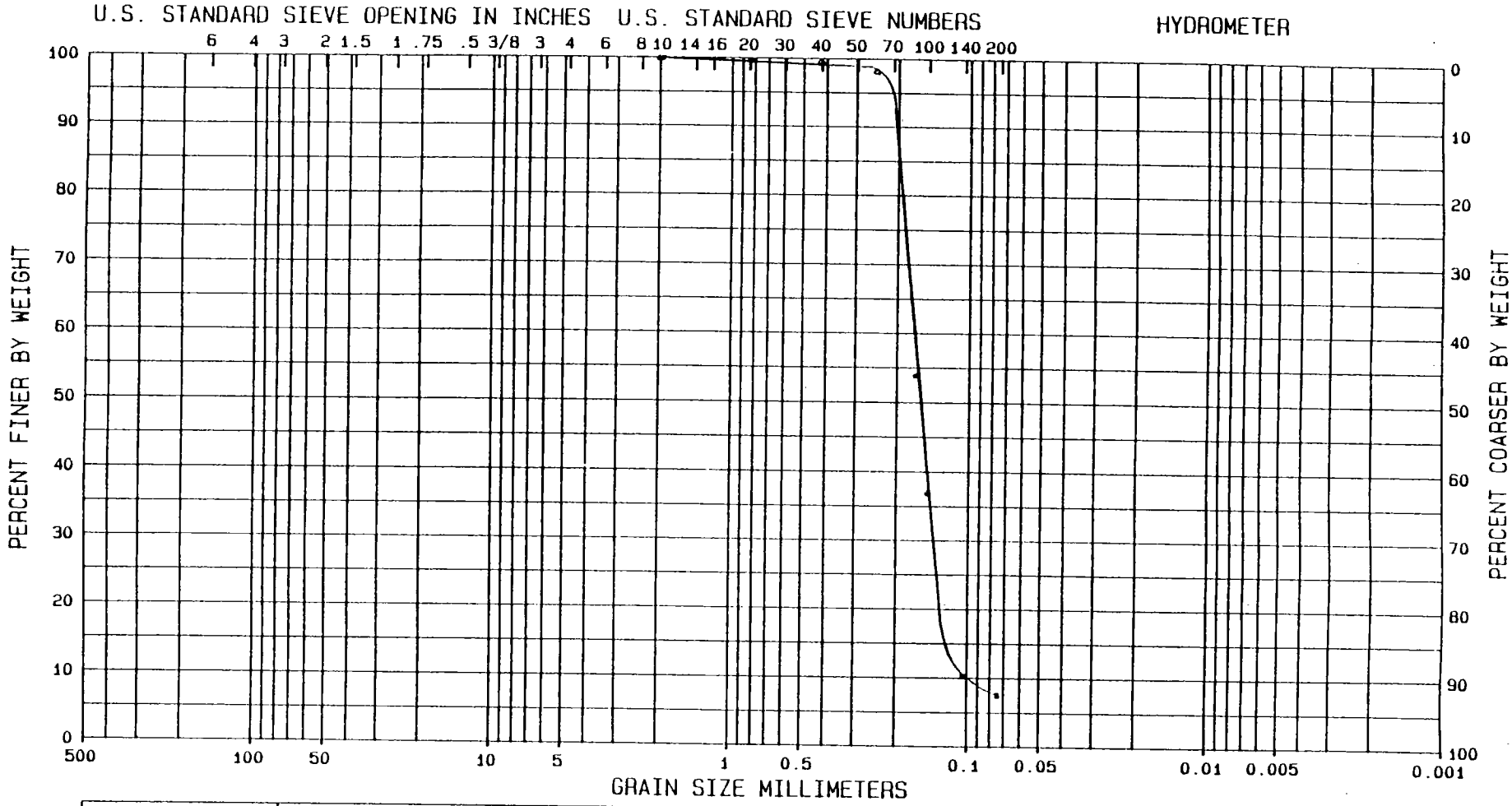
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CF5MS29S12G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-27
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT W%	LL	PL	PI
CF5MS24S14G						

GRADATION CURVES

NAS Cecil Field
ABB Project No. 8500-27
Jacksonville, Florida
E&A Project No. 93-1361

REPORT NUMBER F005-04

A & L SOUTHERN AGRICULTURAL LABORATORIES

1301 West Copans Road • Building D, Suite 8 • Pompano Beach, Florida 33064
Telephone (305) 972-3255 • Fax #: (305) 972-7885

SEND TO: ELLIS & ASSOCIATES
ATTN: STEVE WEAVER
5109 STEPP AVENUE
JACKSONVILLE, FL 32216

GROWER

ELLIS & ASSOCIATES, INC.
RECEIVED
JAN 10 1994

SAMPLES SUBMITTED BY: SAME

COPY TO: REC 01-03-94

DATE OF REPORT: 01/05/94 PAGE 1

SOIL ANALYSIS REPORT

SAMPLE NUMBER	LAB NUMBER	ORGANIC MATTER % RATE	ORGANIC MATTER ENR lbs/A	PHOSPHORUS P_1 (Weak Bray) ppm-P RATE	PHOSPHORUS P_2 N_aHCO_3-P ppm-P RATE	POTASSIUM K ppm-K RATE	MAGNESIUM Mg ppm-Mg RATE	CALCIUM Ca ppm-Ca RATE	SODIUM Na ppm-Na RATE	SOIL pH	HYDROGEN H meq/100g	Cation Exchange Capacity C.E.C. meq/100g	PERCENT BASE SATURATION (COMPUTED) % K	% Mg	% Ca	% H	% Na
CF17BR1352	1430	0.8	60 L	8VL	9 L	1VL	8 L	20 L		4.9	0.1	0.3	0.9	22.2	33.3	33.3	0.0
CF5BR9546	1431	0.5	52VL	19 L	57 H	45 M	15VL	260 M		5.4	0.6	2.1	5.5	6.0	61.9	28.6	0.0
CF17BR45	1432	0.5	52VL	10 L	11 L	1VL	8VL	170VH		6.9	0.0	0.9	0.3	7.4	94.4	0.0	0.0
CF5M52350G	1433	5.4	152VH	6VL	7VL	1VL	50 L	210VL		4.1	4.2	5.7	0.0	7.3	18.4	73.7	0.0

(SEE EXPLANATION ON BACK)

SAMPLE NUMBER	NITRATE NO_3 ppm-NO_3-N RATE	SULFUR S ppm-S RATE	ZINC Zn ppm Zn RATE	MANGANESE Mn ppm-Mn RATE	IRON Fe ppm Fe RATE	COPPER Cu ppm Cu RATE	BORON B ppm B RATE	EXCESS LIME RATE	SOLUBLE SALTS mmhos/cm RATE	CHLORIDE Cl ppm Cl RATE	MOLYBDENUM Mo ppm Mo RATE

This report applies only to the sample(s) tested. Samples are retained a maximum of thirty days after testing.

A & L SOUTHERN AGRICULTURAL LABORATORIES

LYNN GRIFFITH LAB MANAGER

BY: Lynn Griffith

ALS

CODE TO RATING: VERY LOW (VL) LOW (L) MEDIUM (M) HIGH (H) VERY HIGH (VH) AND HOW THE [illegible]

FOR THE [illegible] ppm B AS RECOMMENDED BY THE [illegible]

4

CHAIN OF CUSTODY RECORD

PROJECT NO.: 8500-08

PROJECT NAME: NAS CECIL FIELD OPERABLE UNIT

CLIENT NAME: ABB ENVIRONMENTAL SERVICES, INC.
2590 Executive Ctr. Circle East
Berkely Building
Tallahassee, Florida 32301

PROJECT MANAGER: Barry Lester

COPY TO: Charles Donahue

REQUESTED COMP. DATE:

FIELD OPERATION LEADER: NAME: MARIA PIJNENBURG
NAS Cecil Field
(904) 868-0425

SAMPLING REQUIREMENTS: SDWA NPDES RCRA OTHER

FOR LAB USE ONLY
Client Code: 026323
Enseco - Wadsworth/ALERT Laboratories
4101 Shuffel Drive N.W.
North Canton, Ohio 44720
Contact: Deb Hula
(216) 497-9396 (Voice)
(216) 497-0772 (Fax)
QUOTE #: 16467

SITE ID CODE xx	SAMPLE MATRIX CODE XX	SAMPLE LOCATION CODE xxx	SAMPLE SEQUENCE CODE xx	DATE	TIME	DEPTH	AIR	WTR	SOIL	NO. OF CONTAINERS	CLP-VOC (4oz. gl) ice	CLP-SVOC (4oz. gl) ice	PCB/PEST (4oz. gl) ice	TAL-METALS (16oz. gl) ice	TOC (4oz. gl) ice	TPH (4oz. gl) ice		GEOtech						LAB ID	REMARKS
CF	17	BR	4S(2)	11-11-93	0850				X	2								✓							Valox
CF	17	BR	13S(2)	11-11-93	1033				X	2								✓							Valox
CF	17	BR	8S(0)	11-12-93	0827				X	2								✓							SP
CF	17	BR	8S(2)	11-12-93	0844				X	2								✓							SP

SAMPLED BY AND TITLE | DATE/TIME

RELINQUISHED BY: Paul Neal | DATE/TIME 12-13-93 1638

RECEIVED BY: | DATE/TIME

RELINQUISHED BY: | DATE/TIME

RECEIVED BY: | DATE/TIME

RELINQUISHED BY: | DATE/TIME

RECEIVED BY LAB: | DATE/TIME 12/13/93 16:39

SAMPLE SHIPPED VIA: UPS BUS FED-EX HAND OTHER

AIR BILL NUMBER

HAZWRAP/NEESA Y N
QC LEVEL 1 2 3 4 5
COC | ICE
ANA REQ | TEMP
CUST SEAL | Ph
SAMPLE CONDITION

REMARKS

ENTERED INTO LIMS ____ COC REVIEWED ____

3

CHAIN OF CUSTODY RECORD

PROJECT NO. 8500-08

PROJECT NAME NAS CECIL FIELD OPERABLE UNIT 2

CLIENT NAME
ABB ENVIRONMENTAL SERVICES, INC.
2590 Executive Ctr. Circle East
Berkely Building
Tallahassee, Florida 32301

PROJECT MANAGER: Barry Lester

COPY TO: Charles Donahue

REQUESTED COMP. DATE:

FIELD OPERATION LEADER:
NAME: MARIA PIJNENBURG
NAS Cecil Field
(904) 868-0425

SAMPLING REQUIREMENTS SDWA NPDES RCRA OTHER

FOR LAB USE ONY
Client Code: 026323

Ensoco - Wadsworth/ALERT Laboratories
4101 Shuffel Drive N.W.
North Canton, Ohio 44720

Contact: Deb Hula
(216) 497-9396 (Voice)
(216) 497-0772 (Fax)

QUOTE # 16467

	SITE ID CODE xx	SAMPLE MATRIX CODE XX	SAMPLE LOCATION CODE xxx	SAMPLE SEQUENCE CODE xx	DATE	TIME	DEPTH	AIR	WTR	SOIL	NO. OF CONTAINERS	CLP-VOC (4oz. gl) ice	CLP-SVOC (4oz. gl) ice	PCB/PEST (4oz. gl) ice	TAL-METALS (16oz. gl) ice	TOC (4oz. gl) ice	TPH (4oz. gl) ice		Grain Size Analysis						LAB ID	REMARKS
5	CF	5M	S20	S6G	10-4-93	1035	6			X	1								✓							SI
6	CF	5M	S19	S8G	10-5-93	1225	8			X	1								✓							SI
7	CF	5B	R9S	4G	10-12-93	1640	4			X	2								✓							Vadose Zone
	~~CF~~	~~5B~~	~~R9S~~																							SDM
8	CF	5M	S13	S12G	10-11-93	1500	12			X	1								✓							SI
9	CF	5M	S8S	8G	10-12-93	1030	8			X	1								✓							SI

SAMPLED BY AND TITLE	DATE/TIME	RELINQUISHED BY: Paul Neal	DATE/TIME 12-13-93 1638
RECEIVED BY:	DATE/TIME	RELINQUISHED BY:	DATE/TIME
RECEIVED BY:	DATE/TIME	RELINQUISHED BY:	DATE/TIME
RECEIVED BY LAB:	DATE/TIME 12/13/93 16:39	SAMPLE SHIPPED VIA UPS BUS FED-EX HAND OTHER	AIR BILL NUMBER

REMARKS

HAZWRAP/NEESA Y N
QC LEVEL 1 2 3 4 5
COC | ICE
ANA REQ | TEMP
CUST SEAL | Ph
SAMPLE CONDITION

ENTERED INTO LIMS ____ COC REVIEWED ____

CHAIN OF CUSTODY RECORD

2

PROJECT NO.: 8500-08

PROJECT NAME: NAS CECIL FIELD OPERABLE UNIT 2

CLIENT NAME:
ABB ENVIRONMENTAL SERVICES, INC.
2590 Executive Ctr. Circle East
Berkely Building
Tallahassee, Florida 32301

PROJECT MANAGER: Barry Lester

COPY TO: Charles Donahue

REQUESTED COMP. DATE:

FIELD OPERATION LEADER: NAME: MARIA PIJNENBERG
NAS Cecil Field
(904) 868-0425

SAMPLING REQUIREMENTS: SDWA NPDES RCRA OTHER

FOR LAB USE ONLY
Client Code: 026323
Enseco - Wadsworth/ALERT Laboratories
4101 Shuffel Drive N.W.
North Canton, Ohio 44720
Contact: Deb Hula
(216) 497-9396 (Voice)
(216) 497-0772 (Fax)
QUOTE #: 16467

	SAMPLE ID: SITE ID CODE (XX)	SAMPLE MATRIX CODE (XX)	SAMPLE LOCATION CODE (XXX)	SAMPLE SEQUENCE CODE (XX)	DATE	TIME	DEPTH	SAMPLE MATRIX: AIR	WTR	SOIL	NO. OF CONTAINERS	CLP-VOC (4oz. gl) ice	CLP-SVOC (4oz. gl) ice	PCB/PEST (4oz. gl) ice	TAL-METALS (16oz. gl) ice	TOC (4oz. gl) ice	TPH (4oz. gl) ice		GEOTECH						LAB ID	REMARKS
10	CF	17	MW27	D10G	11-10-93						1								1							SP
11	CF	17	MW27	D35G	↓						1								1							↓
12	CF	17	MW27	D50G							1								1							
13	CF	17	MW27	D65G							1								1							
14	CF	17	MW27	D80G							1								1							
15	CF	17	MW28	DD110G	12-8-93						1								1							

SAMPLED BY AND TITLE | DATE/TIME

RECEIVED BY: | DATE/TIME

RECEIVED BY: | DATE/TIME

RECEIVED BY LAB: [signature] | DATE/TIME 12/13/93 16:39

REMARKS

RELINQUISHED BY: Paul Neal | DATE/TIME 12-13-93 1638

RELINQUISHED BY: | DATE/TIME

RELINQUISHED BY: | DATE/TIME

SAMPLE SHIPPED VIA: UPS BUS FED-EX HAND OTHER

AIR BILL NUMBER

HAZWRAP/NEESA Y N
QC LEVEL 1 2 3 4 5
COC | ICE
ANA REQ | TEMP
CUST SEAL | Ph
SAMPLE CONDITION

ENTERED INTO LIMS ____ COC REVIEWED ____

CHAIN OF CUSTODY RECORD

1

PROJECT NO.: 8500.27

PROJECT NAME: NAS CECIL FIELD OPERABLE UNIT Site 1

CLIENT NAME: ABB ENVIRONMENTAL SERVICES, INC.
2590 Executive Ctr. Circle East
Berkely Building
Tallahassee, Florida 32301

PROJECT MANAGER: Barry Lester

COPY TO: Charles Donahue

REQUESTED COMP. DATE:

FIELD OPERATION LEADER: NAME: Marin Pijnenburg
NAS Cecil Field
(904) 868-0425

SAMPLING REQUIREMENTS: SDWA NPDES RCRA OTHER

FOR LAB USE ONY
Client Code: 026323
Enseco - Wadsworth/ALERT Laboratories
4101 Shuffel Drive N.W.
North Canton, Ohio 44720
Contact: Deb Hula
(216) 497-9396 (Voice)
(216) 497-0772 (Fax)
QUOTE #: 16467

ANALYSES REQUESTED

	SITE ID CODE (XX)	SAMPLE MATRIX CODE (XX)	SAMPLE LOCATION CODE (XXX)	SAMPLE SEQUENCE CODE (XX)	DATE	TIME	DEPTH	AIR	WTR	SOIL	NO. OF CONTAINERS	CLP-VOC (4oz. gl) ice	CLP-SVOC (4oz. gl) ice	PCB/PEST (4oz. gl) ice	TAL-METALS (16oz. gl) ice	TOC (4oz. gl) ice	TPH (4oz. gl) ice	Geo Tech*	LAB ID	REMARKS
16	CF	IM	S14	I40G	9/2/93	1055	40'			X	1							1		1-4oz Jar SI
17	CF	SMS	305	12G	9/20/93	1705	12			X	1							1		1 4oz. JAR SI
18	CF	SM	S23	S0G	9/21/93	1420	0			X	2							2		Valoxe
19	CF	SM	S23	S12G	9/21/93	1510	12			X	1							1		SI
20	CF	SM	S29	S12G	9/22/93	1050	12			X	1							1		SI
21	CF	SM	S24	S14G	9/27/93	1725	14			X	1							1		SI

SAMPLED BY AND TITLE: | DATE/TIME:

RECEIVED BY: | DATE/TIME:

RECEIVED BY: | DATE/TIME:

RECEIVED BY LAB: [signature] | DATE/TIME: 12/13/93 16:39

RELINQUISHED BY: [signature] | DATE/TIME: 1638 12/13/93

RELINQUISHED BY: | DATE/TIME:

RELINQUISHED BY: | DATE/TIME:

SAMPLE SHIPPED VIA: UPS BUS FED-EX HAND OTHER

AIR BILL NUMBER:

HAZWRAP/NEESA Y N
QC LEVEL 1 2 3 4 5
COC | ICE
ANA REQ | TEMP
CUST SEAL | Ph
SAMPLE CONDITION

REMARKS: * Screen Interval / Analyze for Grain Size Only

ENTERED INTO LIMS _____ COC REVIEWED _____

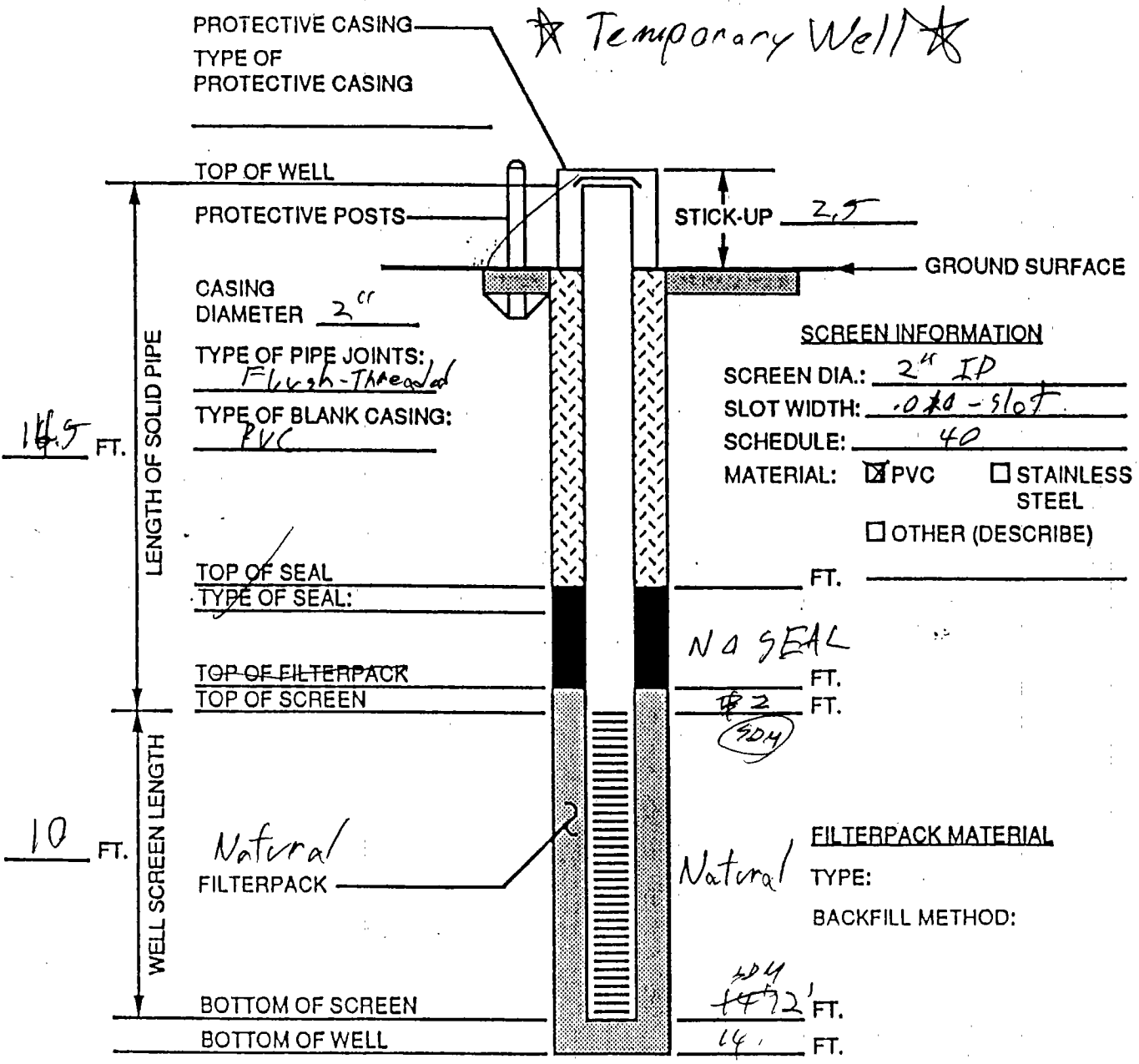
APPENDIX E

APPENDIX E

MONITORING WELL CONSTRUCTION DIAGRAMS

ATION GROUNDWATER —			PROJECT RI OUS 1, 2, 7
INSTALLED 9-30-97	STARTED 1440	COMPLETED	LOCATION (Coordinates or Station) BOR-5-10 Site 5
TOP OF HOLE —			SIGNATURE OF INSPECTOR [signature]
L DEPTH OF HOLE 14'			HOLE NO. (As shown on drawing title and file number) BOR-5-10

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD:

TIME SPENT DEVELOPMENT:

VOLUME OF WATER REMOVED:

VOLUME OF WATER ADDED:

DESCRIPTION OF PREDEVELOPMENT WATER:

DESCRIPTION OF POST DEVELOPMENT WATER:

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

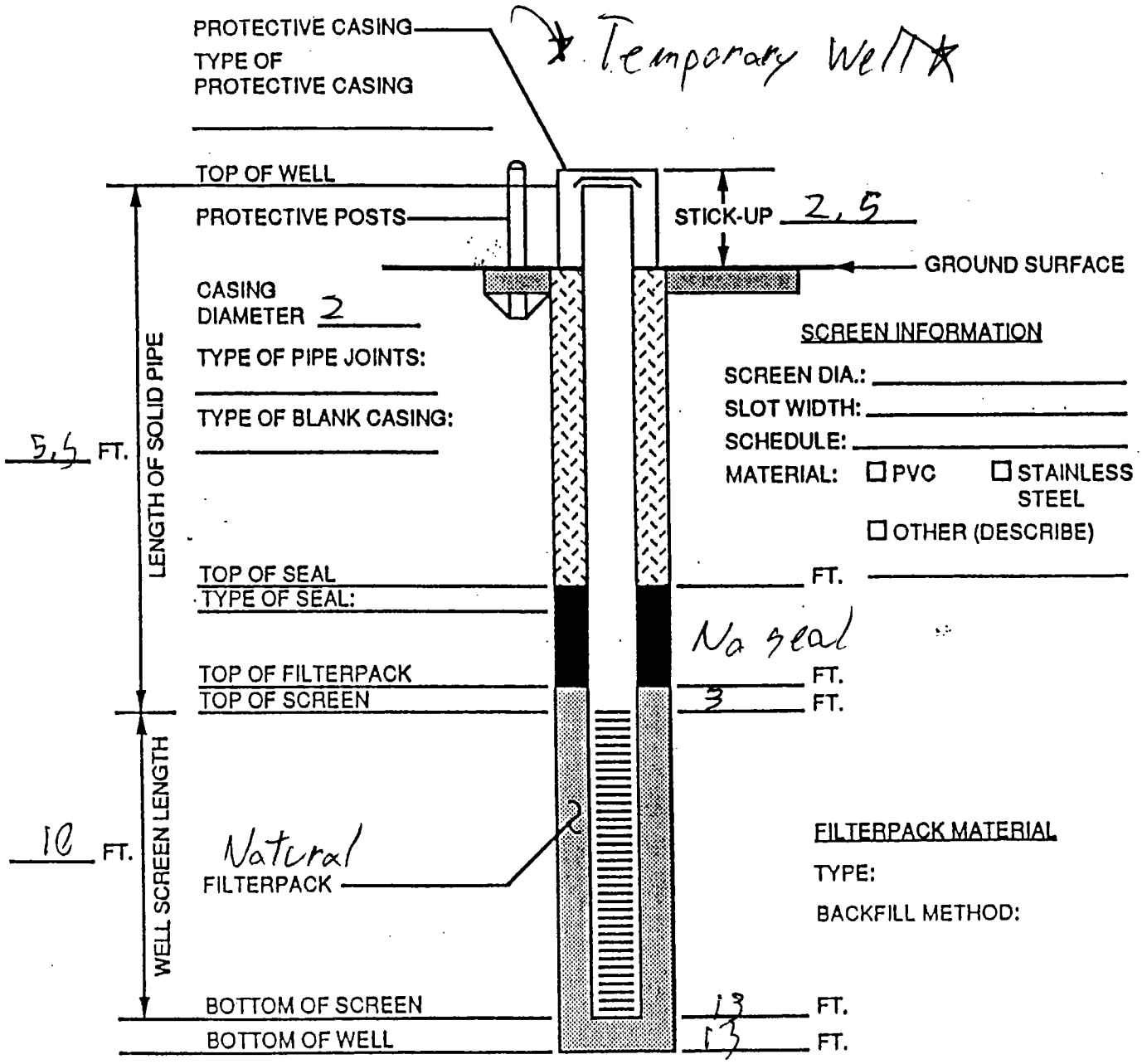
DATE/TIME/LEVEL Temp Well

SEE WL FILE

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT RI OUS. 1,2,7
DATE INSTALLED 10-1-93	STARTED 730	COMPLETED	LOCATION (Coordinates or Station) Site 5
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR [signature]
TOTAL DEPTH OF HOLE 13			HOLE NO. (As shown on drawing title and file number) BOR-5-11

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD:

TIME SPENT DEVELOPMENT:

VOLUME OF WATER REMOVED:

VOLUME OF WATER ADDED:

DESCRIPTION OF PREDEVELOPMENT WATER:

DESCRIPTION OF POST DEVELOPMENT WATER:

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

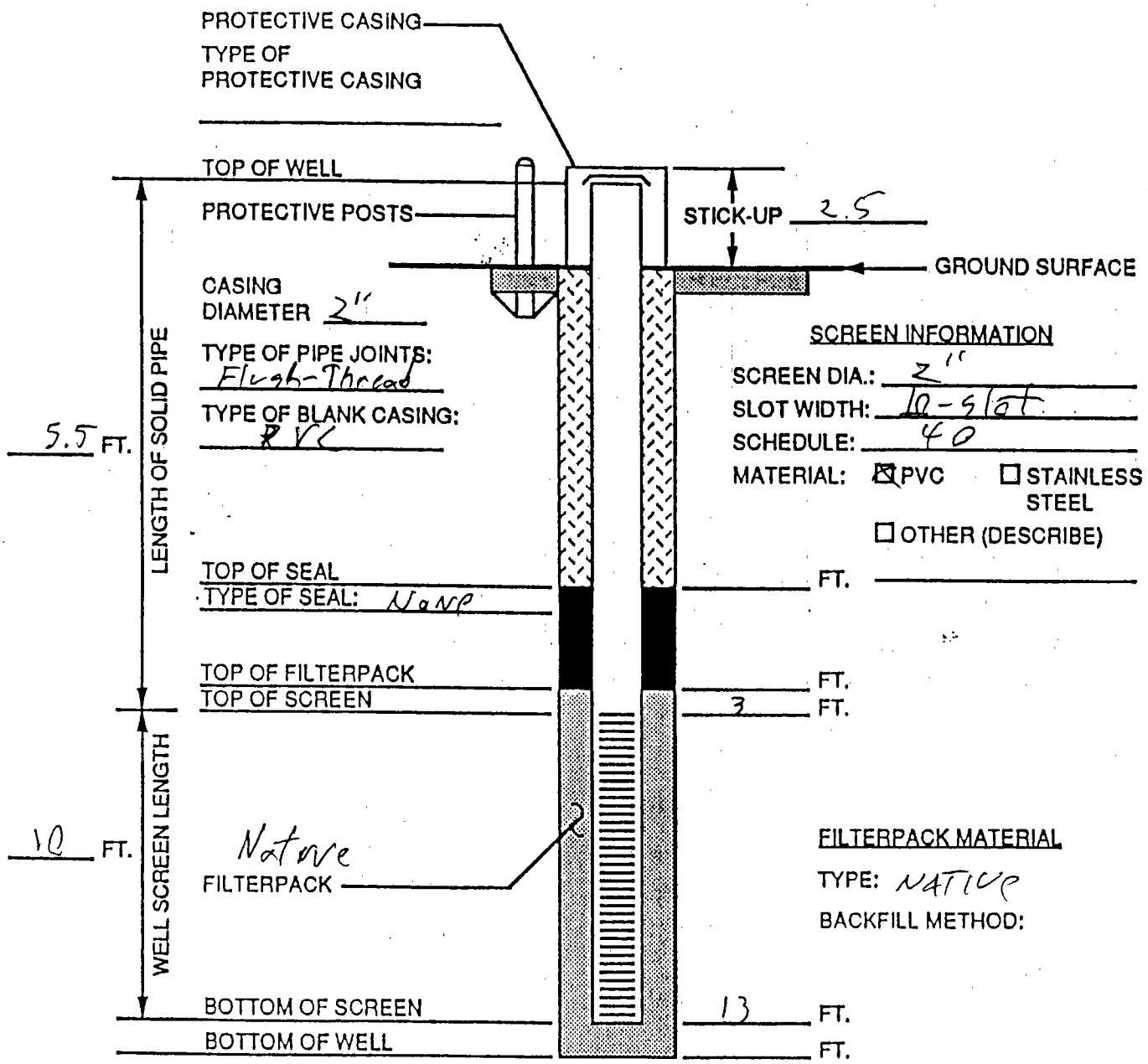
DATE/TIME/LEVEL Temp Well Pt.

SEE WL FILE

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

VATION GROUNDWATER —			PROJECT RI OUS 1, 2, 7
E INSTALLED 10-5-93	STARTED 1020	COMPLETED 1350	LOCATION (Coordinates or Station) Site 5
TOP OF HOLE			SIGNATURE OF INSPECTOR [illegible]
EPTH OF HOLE 14			HOLE NO. (As shown on drawing title and file number) BOR-5-13 BOR-5-12

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD:

TIME SPENT DEVELOPMENT:

VOLUME OF WATER REMOVED:

VOLUME OF WATER ADDED:

DESCRIPTION OF PREDEVELOPMENT WATER:

DESCRIPTION OF POST DEVELOPMENT WATER:

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

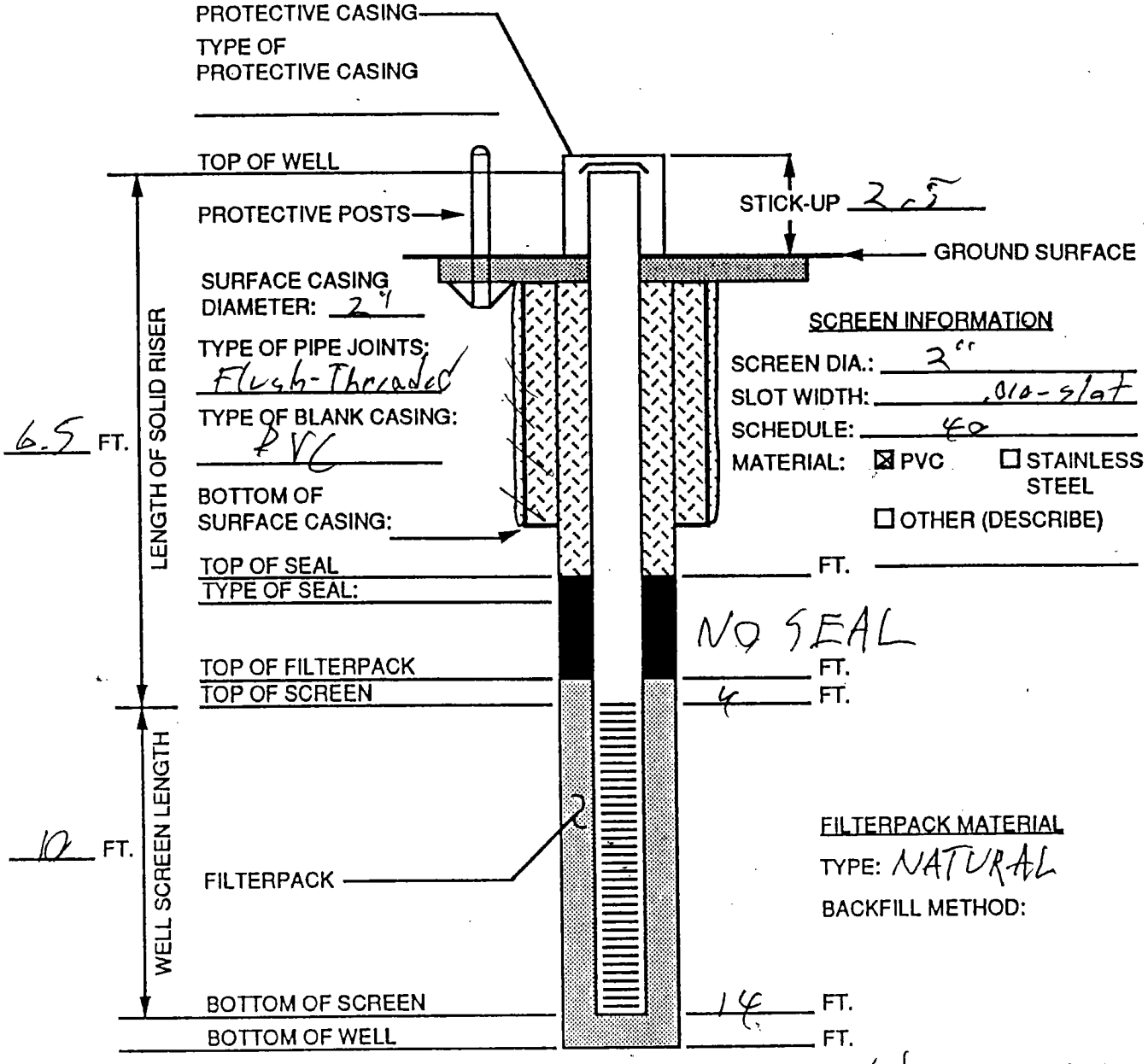
DATE/TIME/LEVEL TEMP. WELL PT

SEE WL FILE

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT RI OUS 1, 2, 7
DATE INSTALLED 10-1-93	STARTED 1430	COMPLETED 1545	LOCATION (Coordinates or Station) Site #5
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR Steve Murray
TOTAL DEPTH OF HOLE 14'			HOLE NO. (As shown on drawing title and file number) BOR-5-13

DOUBLE-CASED MONITORING WELL CONSTRUCTION DIAGRAM



10-2-93 PVI leduo to 13.5

WELL DEVELOPMENT

METHOD:

TIME SPENT DEVELOPMENT:

VOLUME OF WATER REMOVED:

VOLUME OF WATER ADDED:

DESCRIPTION OF PREDEVELOPMENT WATER:

DESCRIPTION OF POST DEVELOPMENT WATER:

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

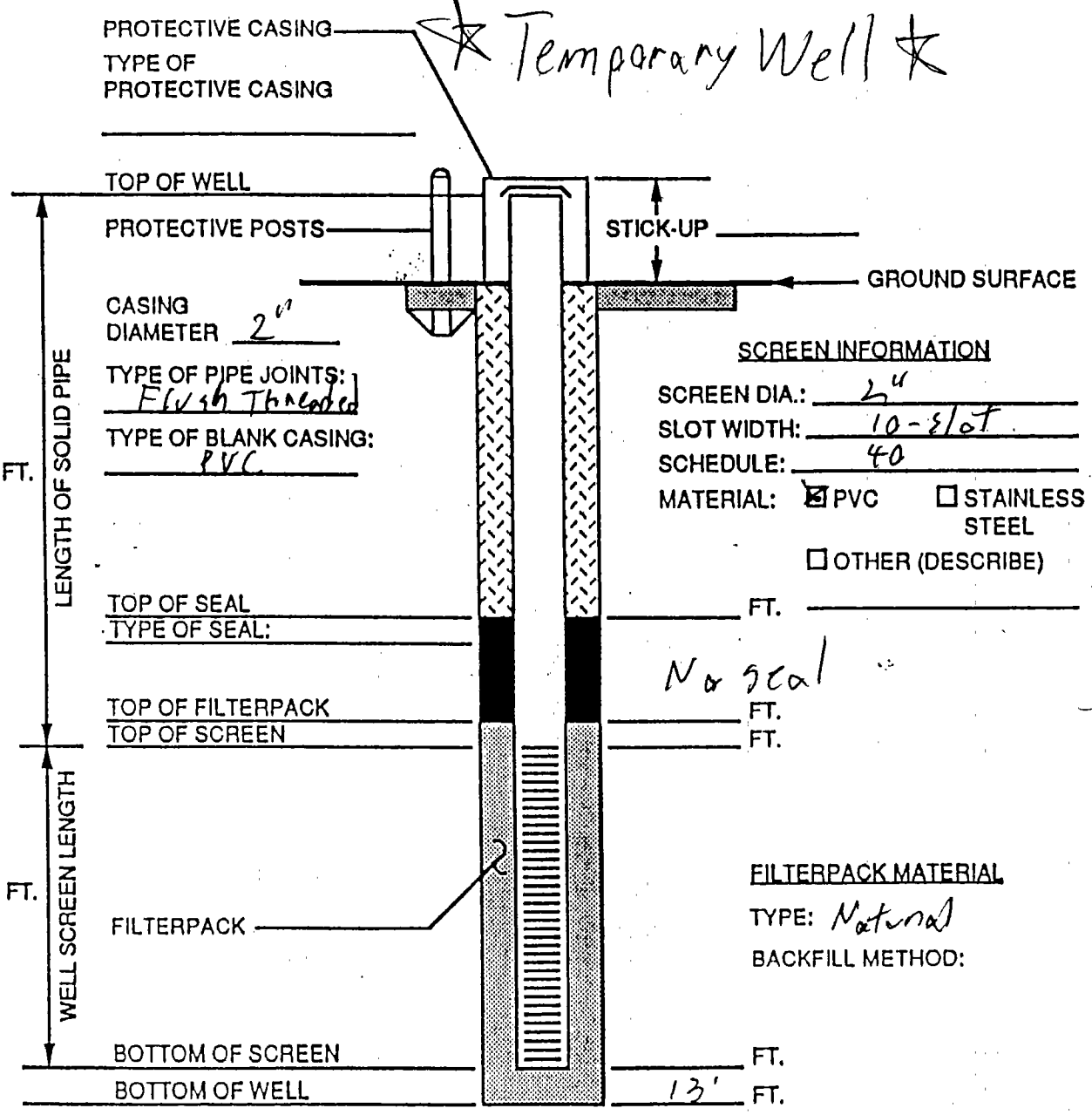
DATE/TIME/LEVEL TEMP. WELL PT.

SEE WL FILE

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ATION GROUNDWATER			PROJECT RI OUS 1, 2, 7
INSTALLED 2-2-93	STARTED 930	COMPLETED 1000	LOCATION (Coordinates or Station) Site #5
OP OF HOLE			SIGNATURE OF INSPECTOR
DEPTH OF HOLE 13'			HOLE NO. (As shown on drawing title and file number) BOR-5-14

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD:

TIME SPENT DEVELOPMENT:

VOLUME OF WATER REMOVED:

VOLUME OF WATER ADDED:

DESCRIPTION OF PREDEVELOPMENT WATER:

DESCRIPTION OF POST DEVELOPMENT WATER:

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

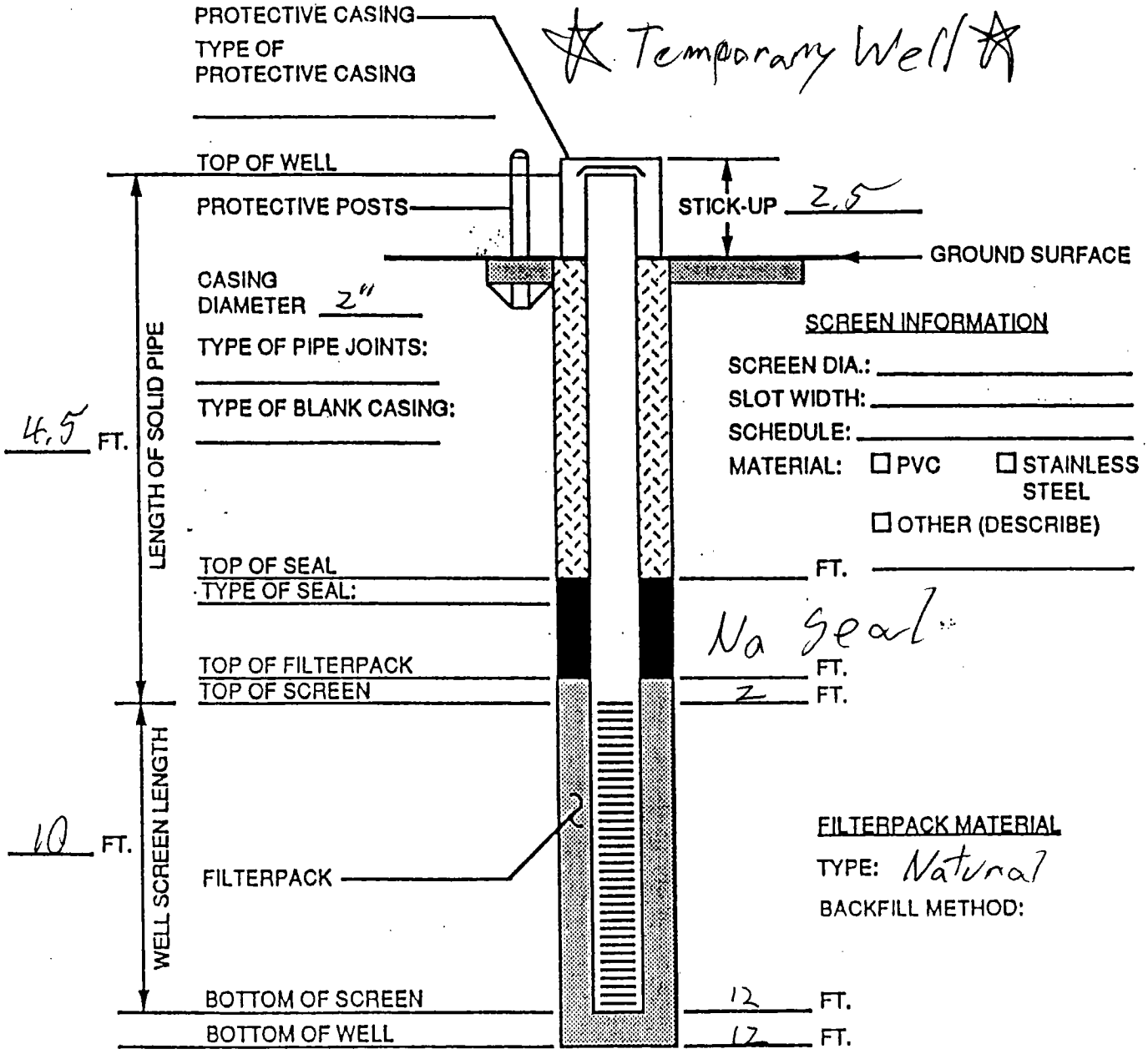
DATE/TIME/LEVEL TEMP. WELL PT.

SEE WL FILE

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT RI OUS. 1,2,7
DATE INSTALLED 10-2-93	STARTED 1045	COMPLETED 1120	LOCATION (Coordinates or Station)
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR Steven Munn
TOTAL DEPTH OF HOLE 12			HOLE NO. (As shown on drawing title and file number) BOR-5-15

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD:

TIME SPENT DEVELOPMENT:

VOLUME OF WATER REMOVED:

VOLUME OF WATER ADDED:

DESCRIPTION OF PREDEVELOPMENT WATER:

DESCRIPTION OF POST DEVELOPMENT WATER:

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

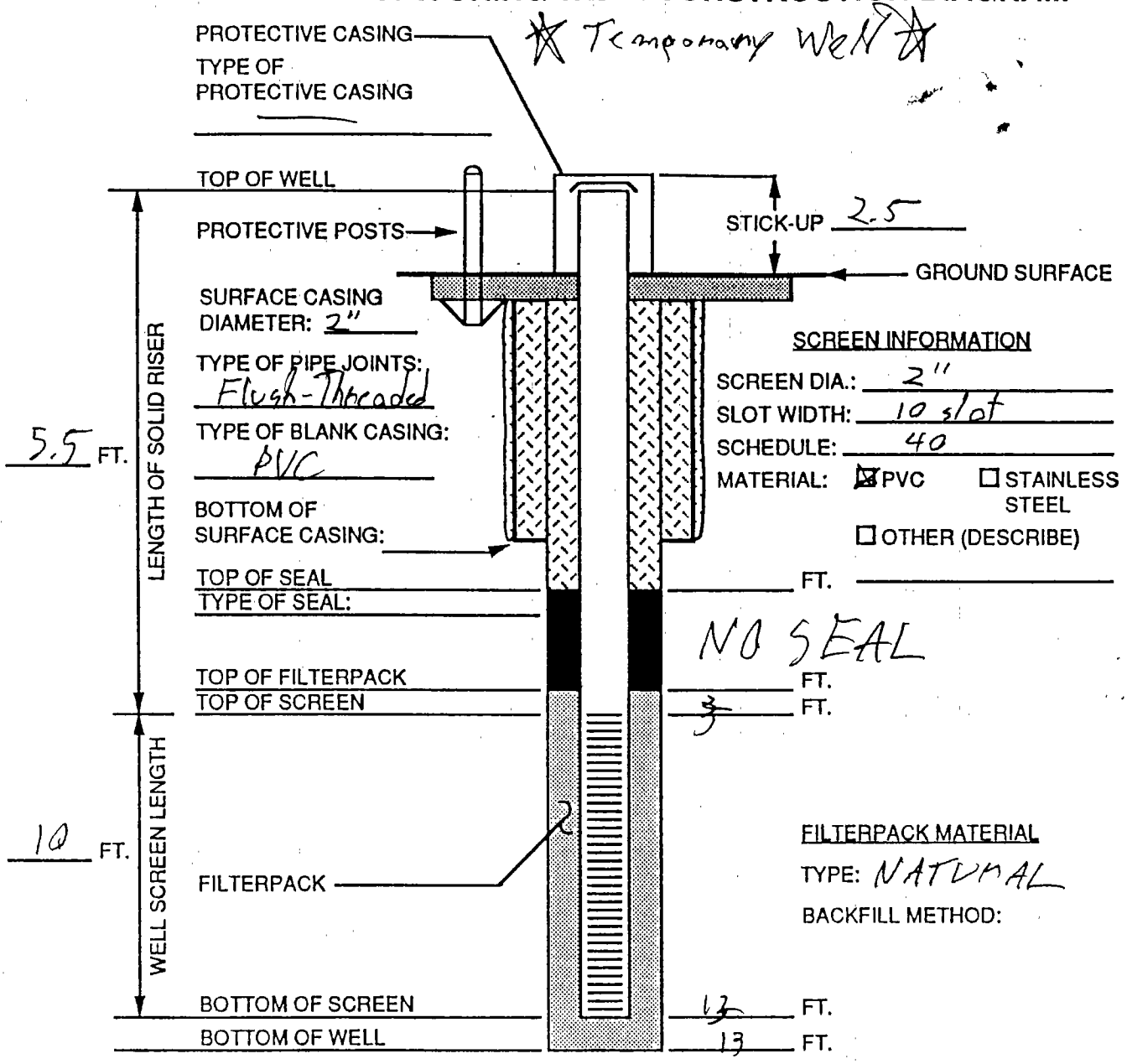
DATE/TIME/LEVEL TEMP. WELL PT.

SEE WL FILE

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT RI OUS 1, 2, 7
DATE INSTALLED 10-2-93	STARTED 1430	COMPLETED 1510	LOCATION (Coordinates or Station) Site 5
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR [signature]
OTAL DEPTH OF HOLE 13			HOLE NO. (As shown on drawing title and file number) BCR-5-16

DOUBLE-CASED MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD:

TIME SPENT DEVELOPMENT:

VOLUME OF WATER REMOVED:

VOLUME OF WATER ADDED:

DESCRIPTION OF PREDEVELOPMENT WATER:

DESCRIPTION OF POST DEVELOPMENT WATER:

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

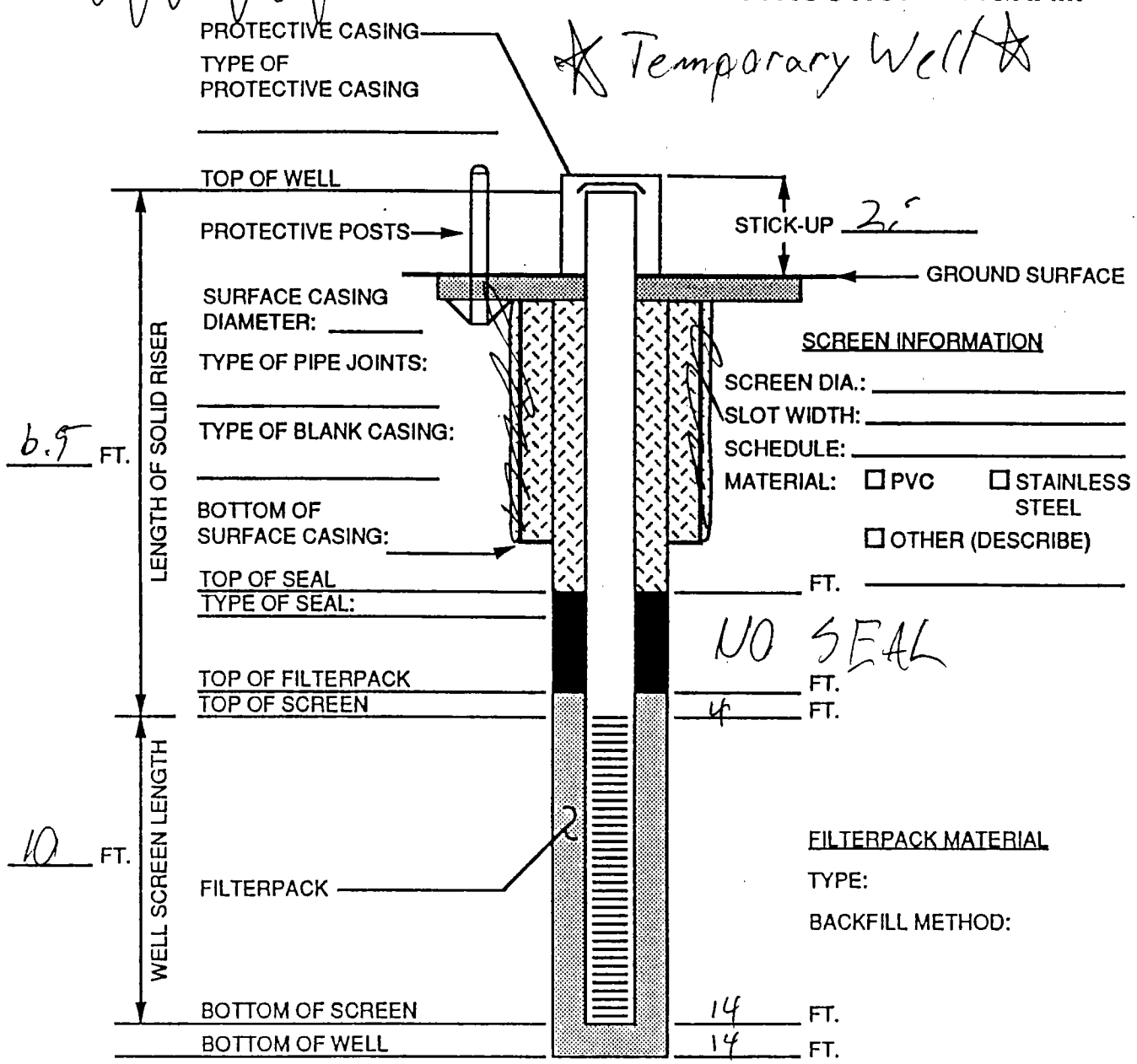
DATE/TIME/LEVEL TEMP. WELL PT

SEE WL FILE

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT
DATE INSTALLED 10-2-93	STARTED	COMPLETED	LOCATION (Coordinates or Station) BOR Site 5
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR Steven Murray
TOTAL DEPTH OF HOLE 14			HOLE NO. (As shown on drawing title and file number) BOR-5-17

~~DOUBLE-CASED~~ MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD:

TIME SPENT DEVELOPMENT:

VOLUME OF WATER REMOVED:

VOLUME OF WATER ADDED:

DESCRIPTION OF PREDEVELOPMENT WATER:

DESCRIPTION OF POST DEVELOPMENT WATER:

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

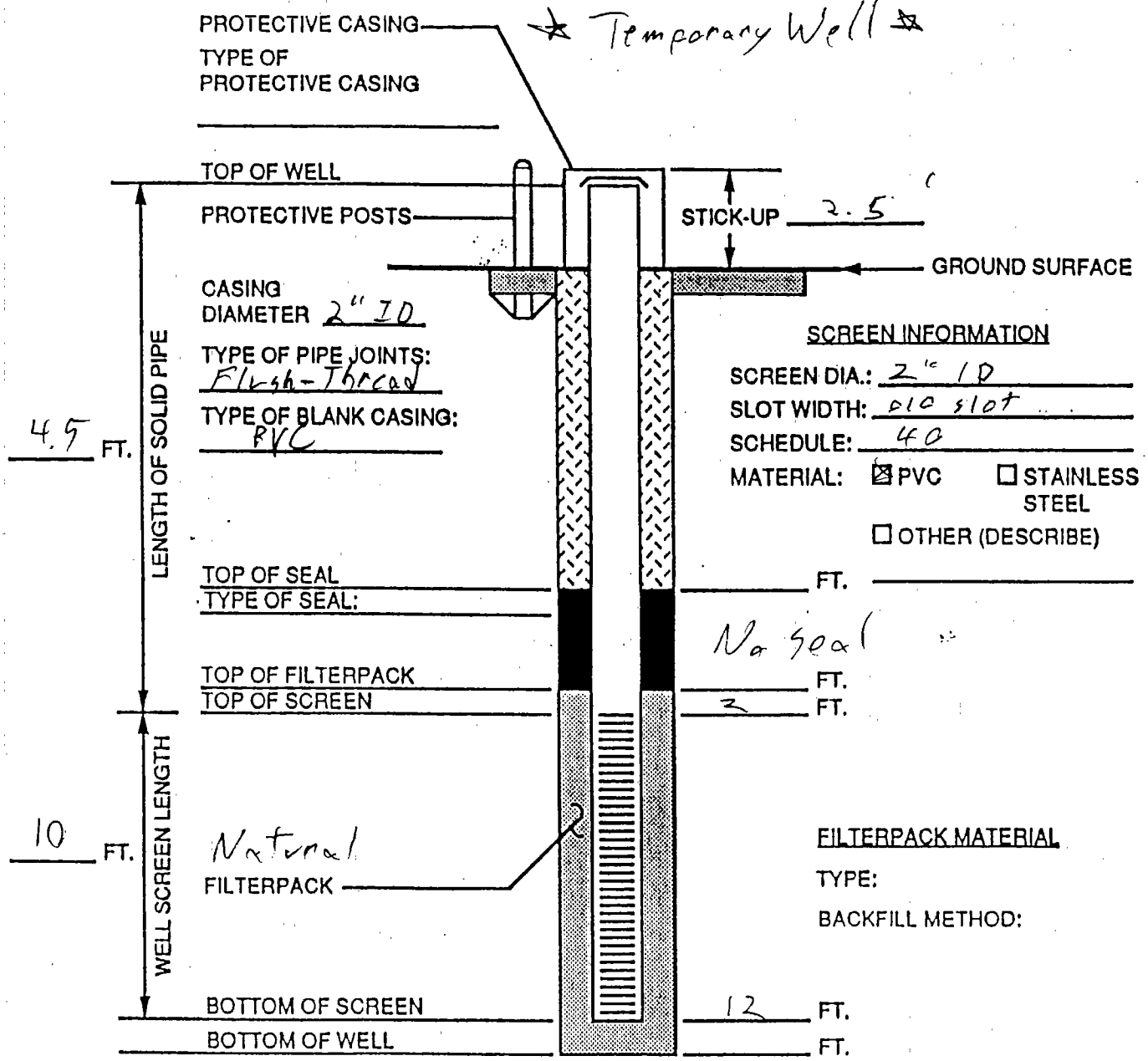
DATE/TIME/LEVEL TEMP. WELL PT

SEE WL FILE

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

EVATION GROUNDWATER			PROJECT RI OUS 1,2,7
TE INSTALLED 9-30-93	STARTED 9-30-93	COMPLETED 9-30-93	LOCATION (Coordinates or Station)
N TOP OF HOLE			SIGNATURE OF INSPECTOR Steve [illegible]
AL DEPTH OF HOLE 12			HOLE NO. (As shown on drawing title and file number) B&R-5-18

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD:

TIME SPENT DEVELOPMENT:

VOLUME OF WATER REMOVED:

VOLUME OF WATER ADDED:

DESCRIPTION OF PREDEVELOPMENT WATER:

DESCRIPTION OF POST DEVELOPMENT WATER:

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

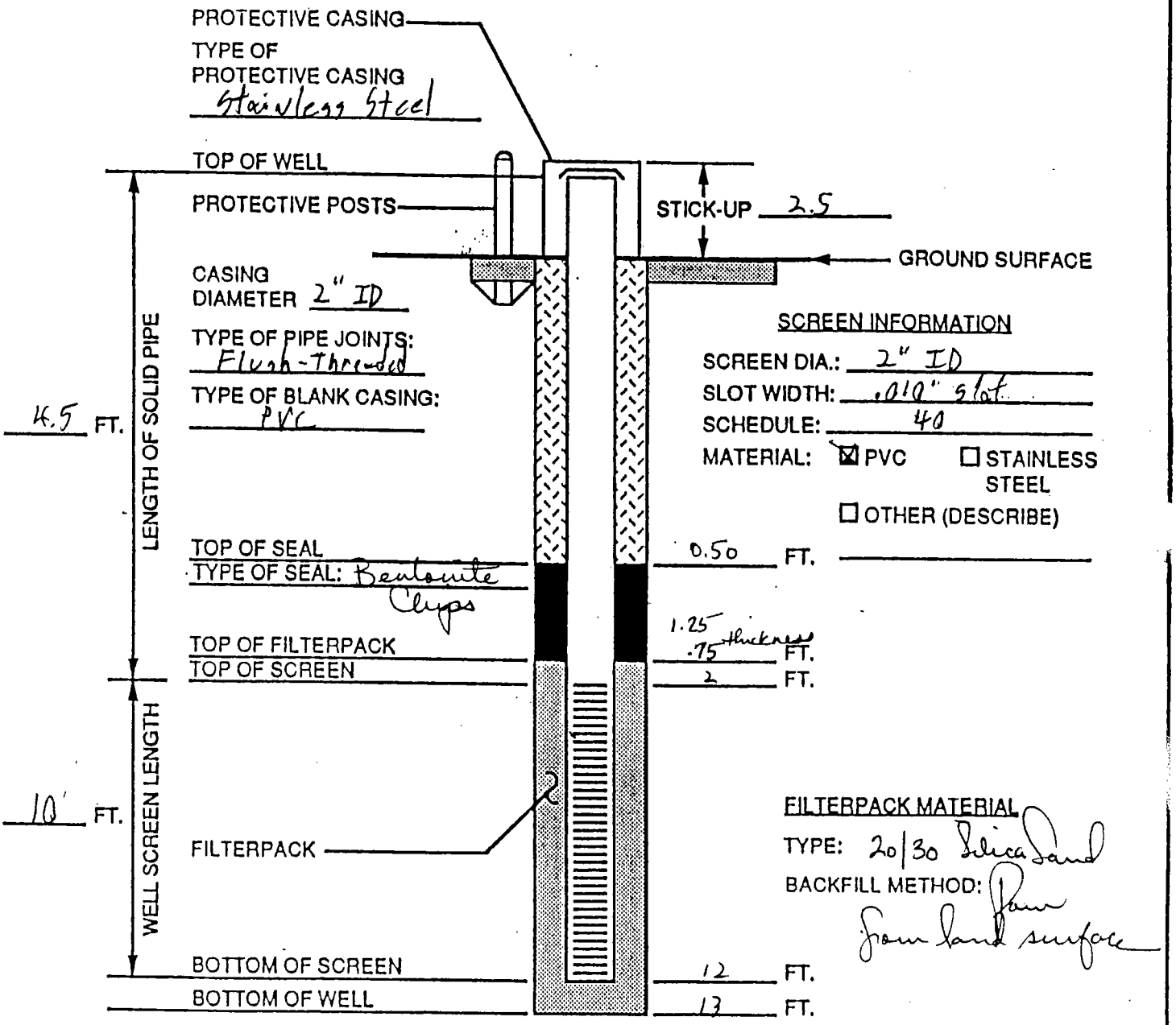
DATE/TIME/LEVEL Temp. Well Pt.

SEE WL FILE

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

EI GROUNDWATER			PROJECT: RI OU 1 2 7
DATE INSTALLED: 10/12/93	STARTED: 10/11/93	COMPLETED: 10/12/93	LOCATION (Coordinates or Station): OU 2 SITE 5
ELEVATION TOP OF HOLE:			SIGNATURE OF INSPECTOR: STEVE MURRAY
TOTAL DEPTH OF HOLE: 13' bls			HOLE NO. (As shown on drawing title and file number): CEF-5-BS

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: Over pumping

TIME SPENT DEVELOPMENT: 44 hrs.

VOLUME OF WATER REMOVED: 800 gallons

VOLUME OF WATER ADDED: 0

DESCRIPTION OF PREDEVELOPMENT WATER: turbid

DESCRIPTION OF POST DEVELOPMENT WATER: turbid

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 3.51' btoc 10/28/93

11-1-93 1530 TEMP. 61.5°F

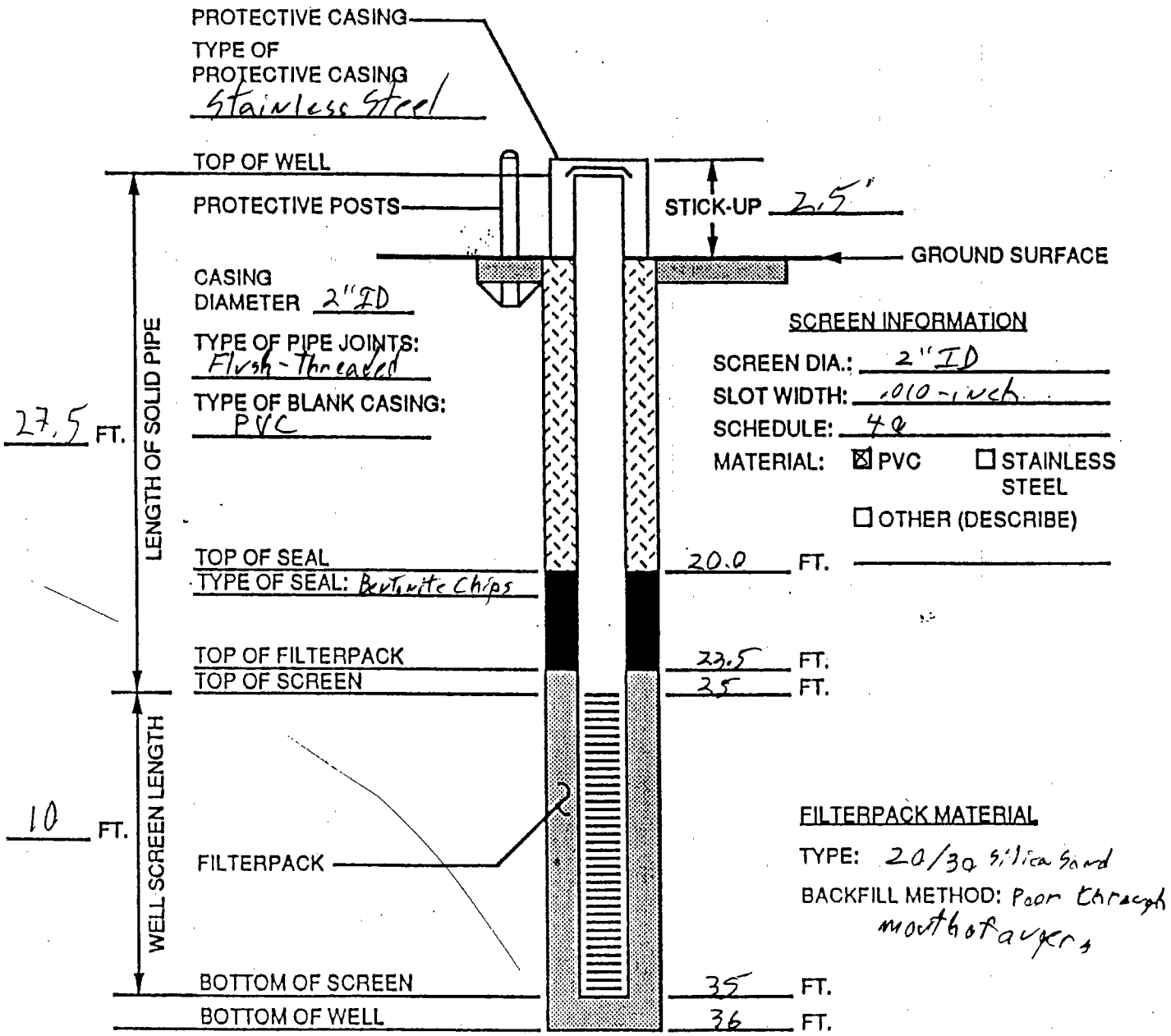
Ph 5.80 COND. 0.46

NTU >200

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

UNDWATER			PROJECT: RI OUS 1,2,7
DATE INSTALLED: 9-29-93 / 9-30-93	STARTED: 1745	COMPLETED: 945	LOCATION (Coordinates or Station): CEF-5-9I Site 5
ON TOP OF HOLE			SIGNATURE OF INSPECTOR: [signature]
OTAL DEPTH OF HOLE: 36			HOLE NO. (As shown on drawing title and file number): CEF-5-9I

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: Overpumping Cent. Pump

TIME SPENT DEVELOPMENT: 45 min / 22.5 HRS.

VOLUME OF WATER REMOVED: 180 / 4770 GAL.

VOLUME OF WATER ADDED: ≈ 70

DESCRIPTION OF PREDEVELOPMENT WATER: Very Cloudy

DESCRIPTION OF POST DEVELOPMENT WATER: Very Cloudy Odor PID reading

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

10-11-93 1230

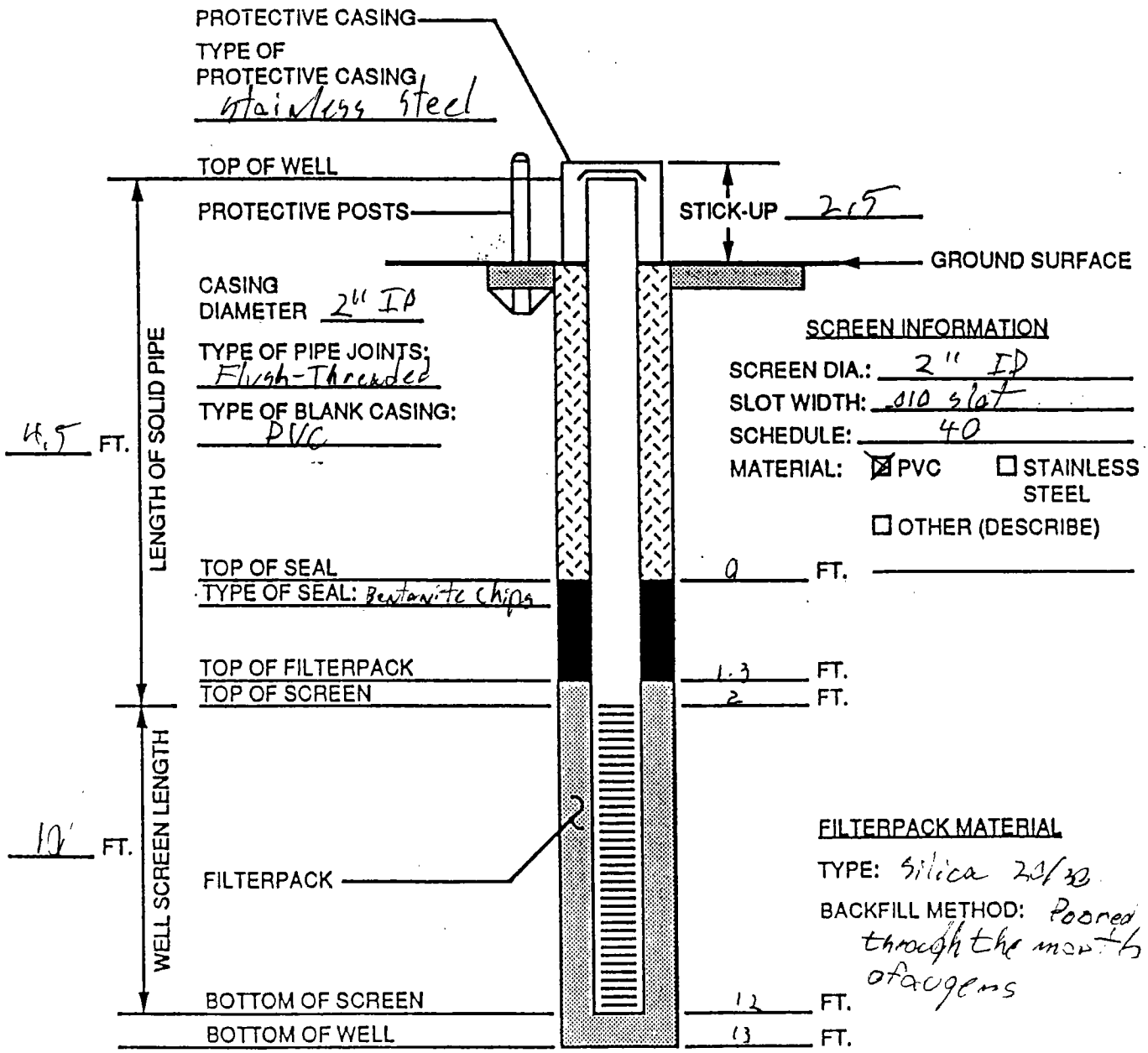
TEMP. 70.0F Ph 5.0

COND. 42.8 NTU 25.0

DEPTH FROM TOP CASING AFTER DEVELOPMENT: 6.88

ELEVATION GROUNDWATER —			PROJECT RI OUS. 1, 2, 7
DATE INSTALLED 10-11-93	STARTED 1045	COMPLETED 1130	LOCATION (Coordinates or Station) Site 5
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR Steven P. Murray
TOTAL DEPTH OF HOLE 13			HOLE NO. (As shown on drawing title and file number) CEF-S-10s

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: Over Pumping Cent. Pump

TIME SPENT DEVELOPMENT: 50 min / 4 HRS

VOLUME OF WATER REMOVED: 70 gpm / 203 GAL.

VOLUME OF WATER ADDED: 10

DESCRIPTION OF PREDEVELOPMENT WATER: Cloudy

DESCRIPTION OF POST DEVELOPMENT WATER: Slightly Cloudy

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

10-27-93 1800

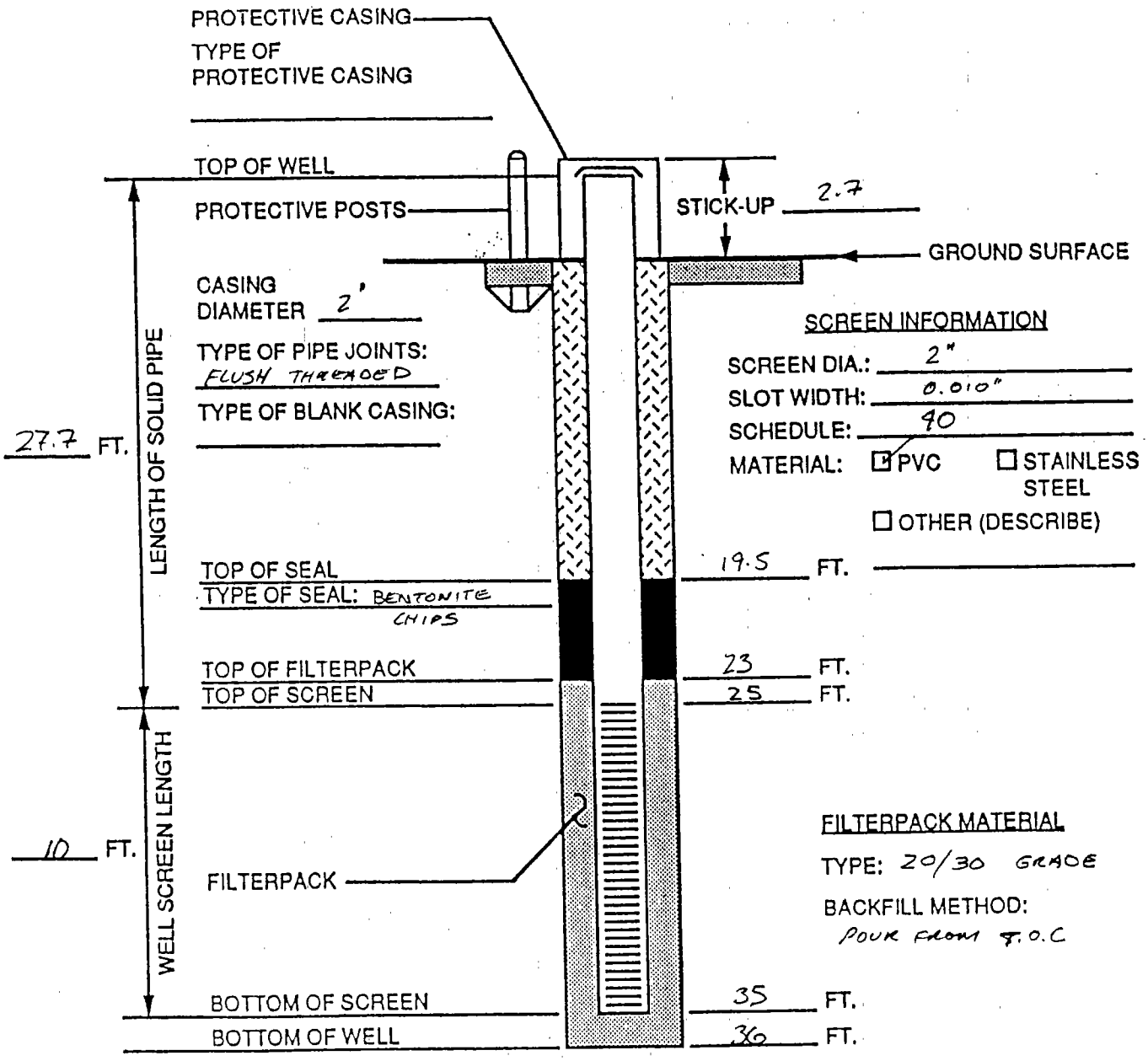
TEMP. 77.6F Ph. 5.72

COND. 1.43 NTU 28.3

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER			PROJECT: RI OU5 1,2,7
DATE INSTALLED	STARTED: 10-4-93	COMPLETED: 10-4-93	LOCATION (Coordinates or Station): SITE 5
VATION TOP OF HOLE			SIGNATURE OF INSPECTOR: Alan Workman
TOTAL DEPTH OF HOLE: 36'			HOLE NO. (As shown on drawing title and file number): CEF-5-11I

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1 hr / 53 HRS.

VOLUME OF WATER REMOVED: 880 / 1415

VOLUME OF WATER ADDED: 7100 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

11-3-93 1100

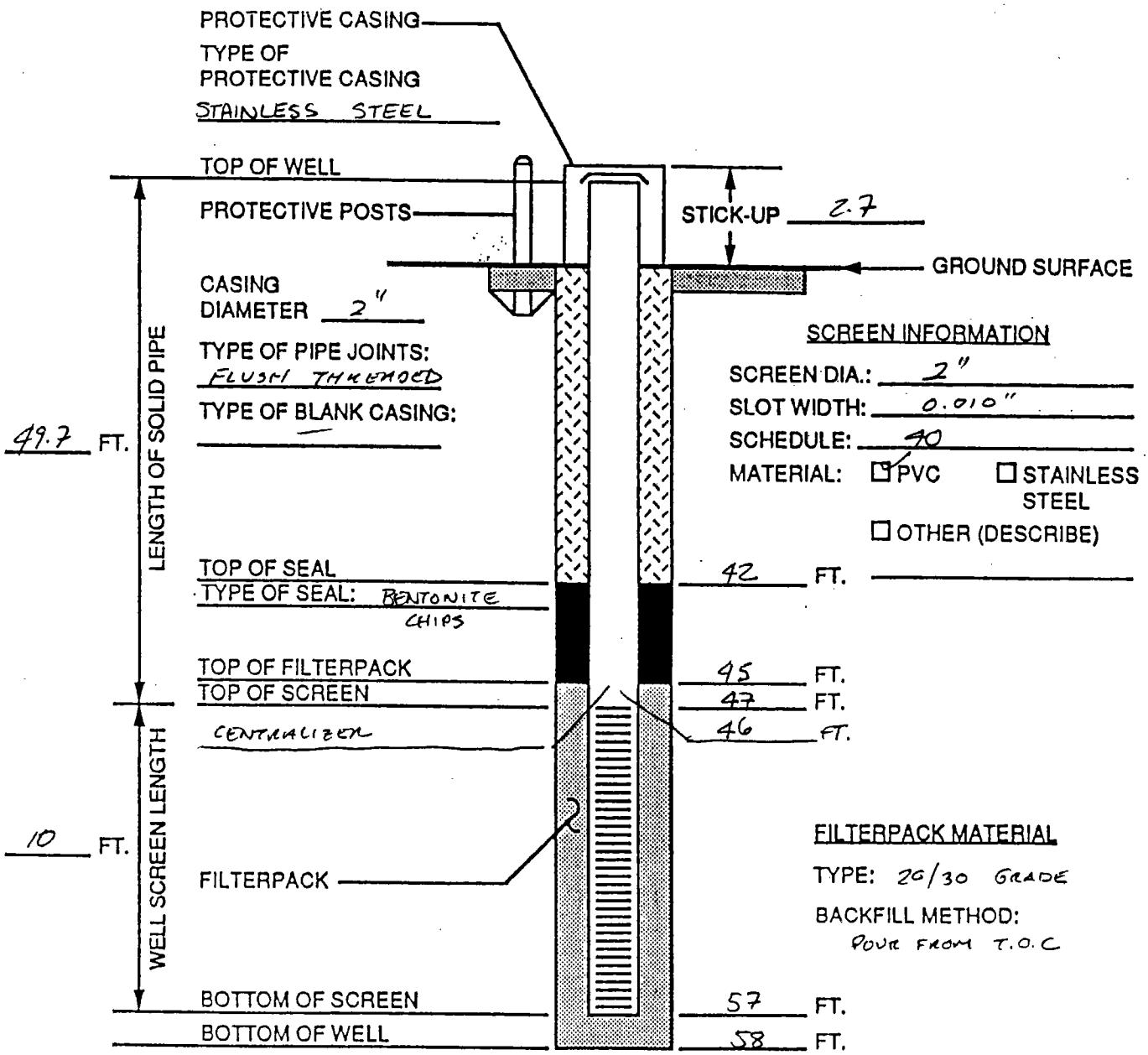
TEMP 65.3°F Ph. 5.87

COND. 43 NTU 14.7

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT: RI OUS 1, 2, 7
DATE INSTALLED	STARTED: 10-2-93	COMPLETED: 10-3-93	LOCATION (Coordinates or Station): SITE 5
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR: Alan Workman
TOTAL DEPTH OF HOLE: 58'			HOLE NO. (As shown on drawing title and file number): CEF - 5 - 12 D

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1 hr 5 min / 56 HRS

VOLUME OF WATER REMOVED: 1100 GAL / 2233 GAL

VOLUME OF WATER ADDED: > 200 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

11-3-93 1100

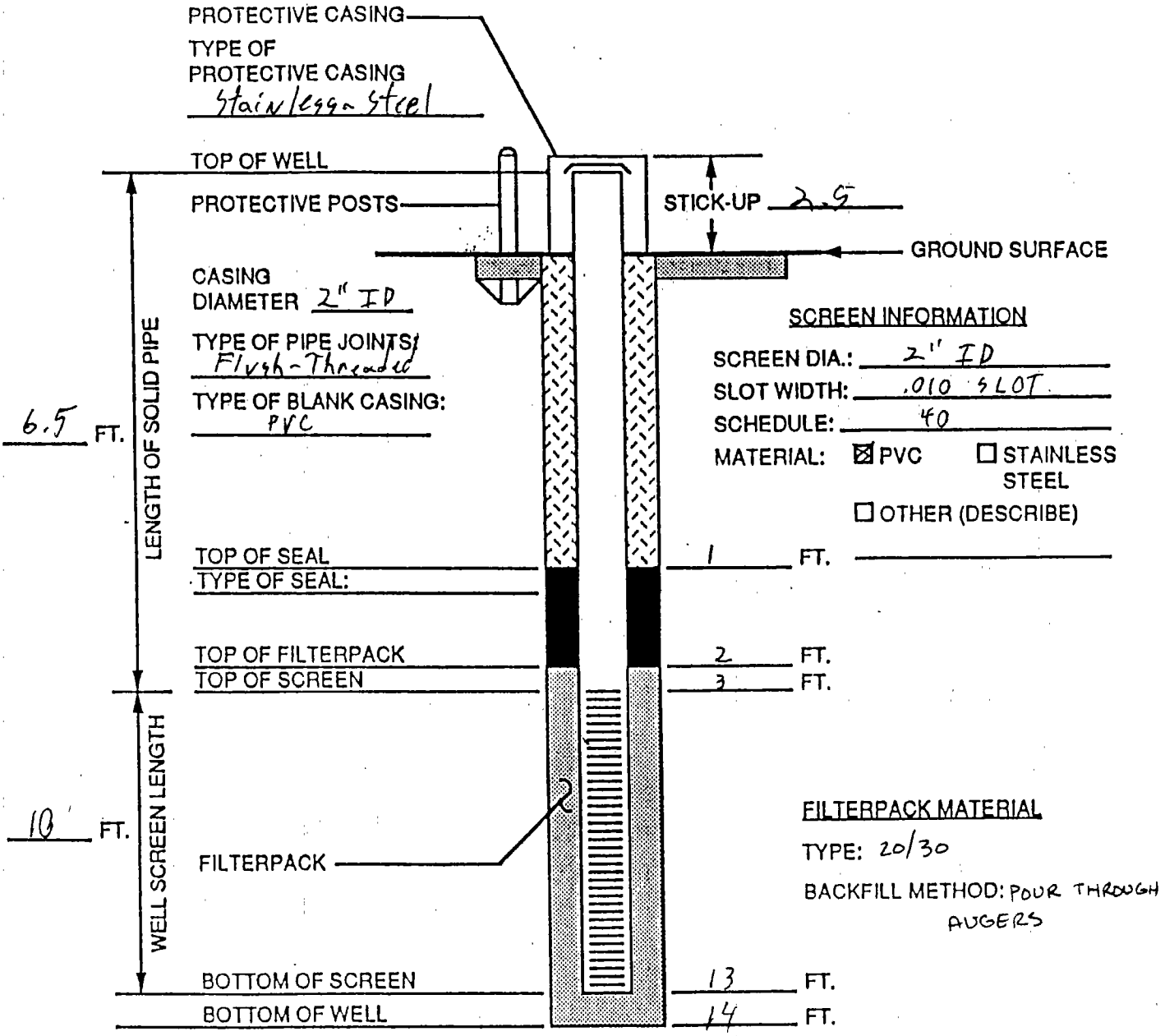
TEMP. 68.7 Ph 6.03

COND. 0.63 NTU 8.3

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER			PROJECT RI OUS 1, 2, 7
DATE INSTALLED 10-11-93	STARTED 1510	COMPLETED 1620	LOCATION (Coordinates or Station) Site #5
ELEVATION TOP OF HOLE			SIGNATURE OF INSPECTOR Steven Murray
TOTAL DEPTH OF HOLE 14			HOLE NO. (As shown on drawing title and file number) CEF-5-135

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: Over pumping Cent. Pump

TIME SPENT DEVELOPMENT: 45 min. / 3.5 HRS.

VOLUME OF WATER REMOVED: 45 / 69 GAL.

VOLUME OF WATER ADDED: 15

DESCRIPTION OF PREDEVELOPMENT WATER: cloudy

DESCRIPTION OF POST DEVELOPMENT WATER: slightly cloudy

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

10-29-93 1430

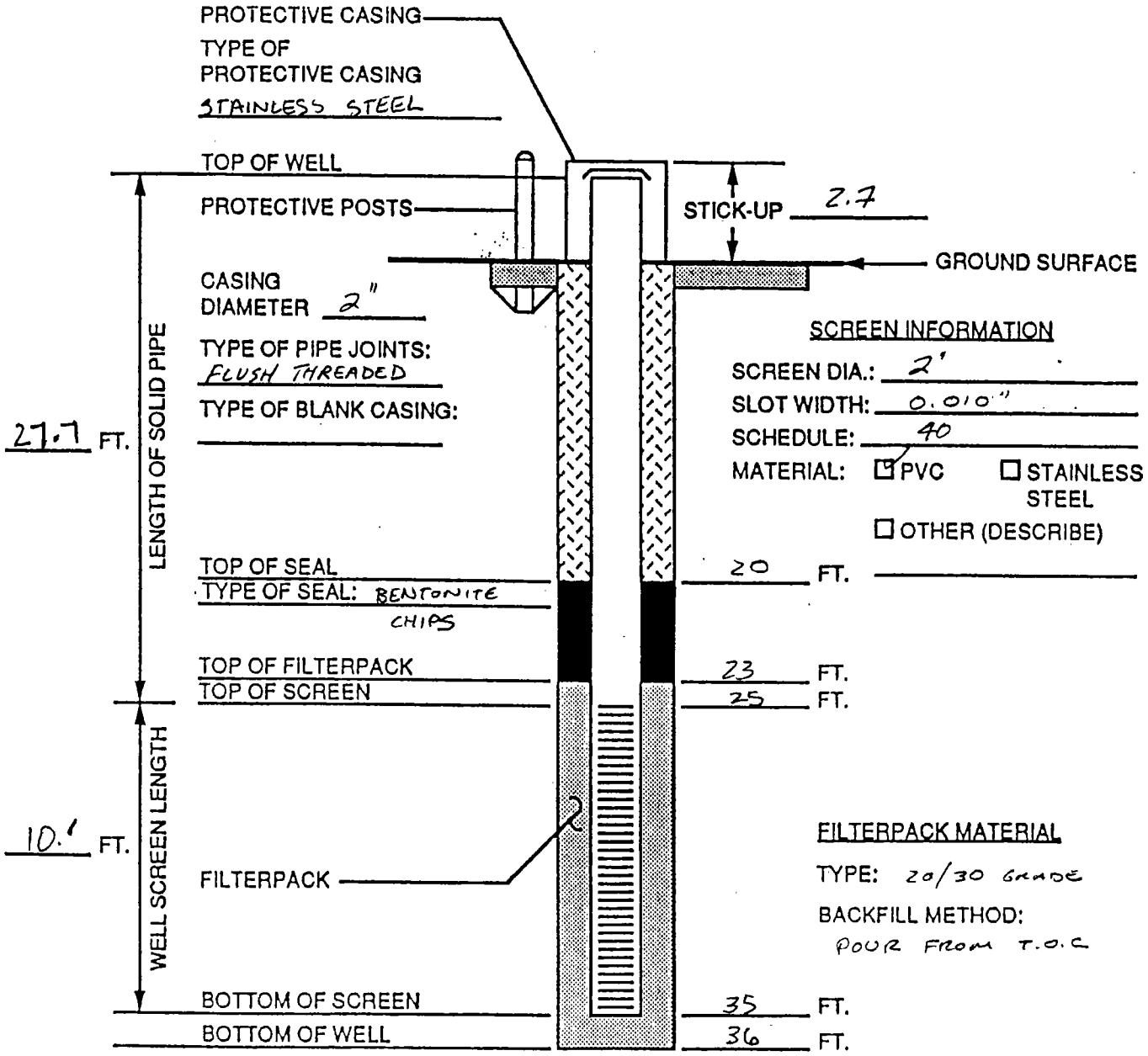
TEMP. 73.9 F Ph 4.88

COND. 1.90 NTU 0.0

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER			PROJECT: RI OUS 1, 2, 7
DATE INSTALLED	STARTED: 10-5-93	COMPLETED: 10-5-93	LOCATION (Coordinates or Station): SITE 5
ELEVATION TOP OF HOLE			SIGNATURE OF INSPECTOR: Alan Workman
TOTAL DEPTH OF HOLE: 36			HOLE NO. (As shown on drawing title and file number): CEF-5-14I

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1 hr / 27.5 HRS.

VOLUME OF WATER REMOVED: 660 GAL / 3450 GAL.

VOLUME OF WATER ADDED: >100 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

10-31-93 1700

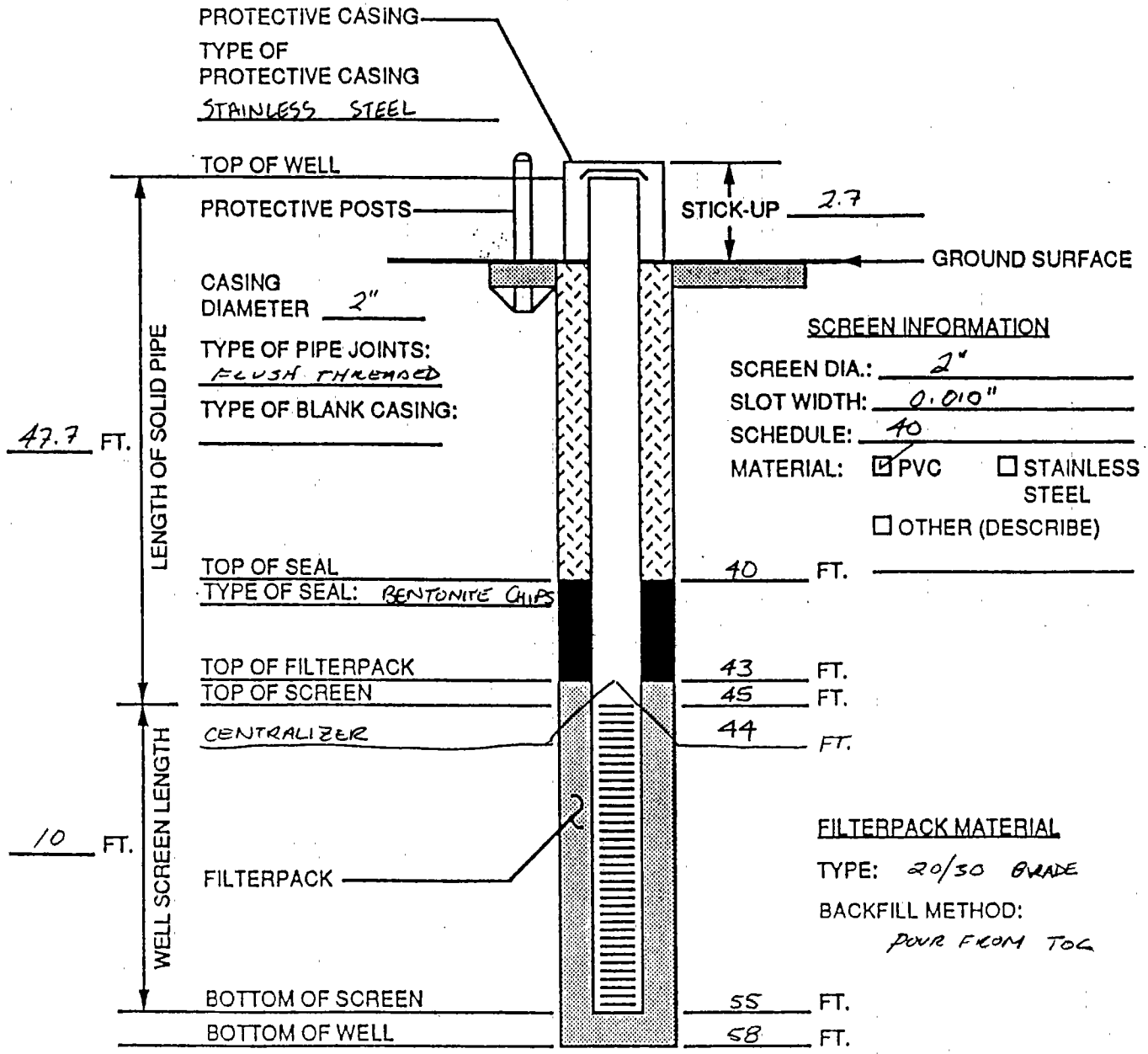
TEMP. 58.7°F Ph. 5.65

COND. 0.53 NTU 11.3

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER			PROJECT: R1 OUS 1,2,7
DATE INSTALLED	STARTED: 10-1-93	COMPLETED: 10-1-93	LOCATION (Coordinates or Station): SITE 5
ELEVATION TOP OF HOLE			SIGNATURE OF INSPECTOR: Alan Wolfman
TOTAL DEPTH OF HOLE: 55'			HOLE NO. (As shown on drawing title and file number): CEF-5-15 D

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1 hr / 39 HRS.

VOLUME OF WATER REMOVED: 770 GAL / 4768 GAL.

VOLUME OF WATER ADDED: < 100 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

11-3-93 1100

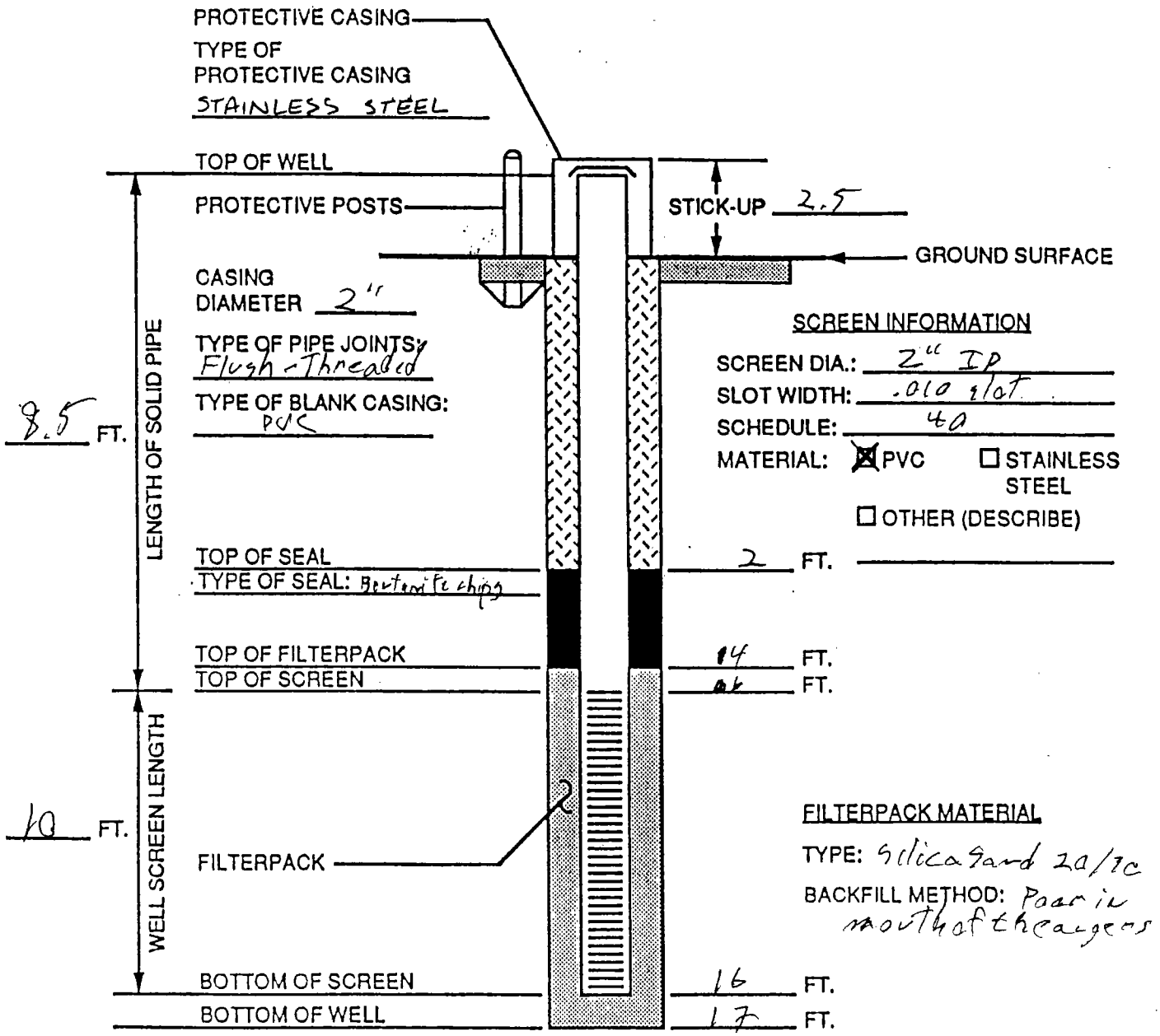
TEMP. 68.3F Ph. 6.01

COND. 0.53 NTU 95.1

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT RI OUS 1,2,7
DATE INSTALLED 10-3-93	STARTED 1130	COMPLETED	LOCATION (Coordinates or Station) site #5
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR Steven Murray
TOTAL DEPTH OF HOLE 17			HOLE NO. (As shown on drawing title and file number) CEF-5-165

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: over pumping cent pump

TIME SPENT DEVELOPMENT: 1 Hr / 8 HRS.

VOLUME OF WATER REMOVED: 30 / 140 GAL.

VOLUME OF WATER ADDED: 30

DESCRIPTION OF PREDEVELOPMENT WATER: TURBID

DESCRIPTION OF POST DEVELOPMENT WATER: SLIGHTLY CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

10-17-93 1600

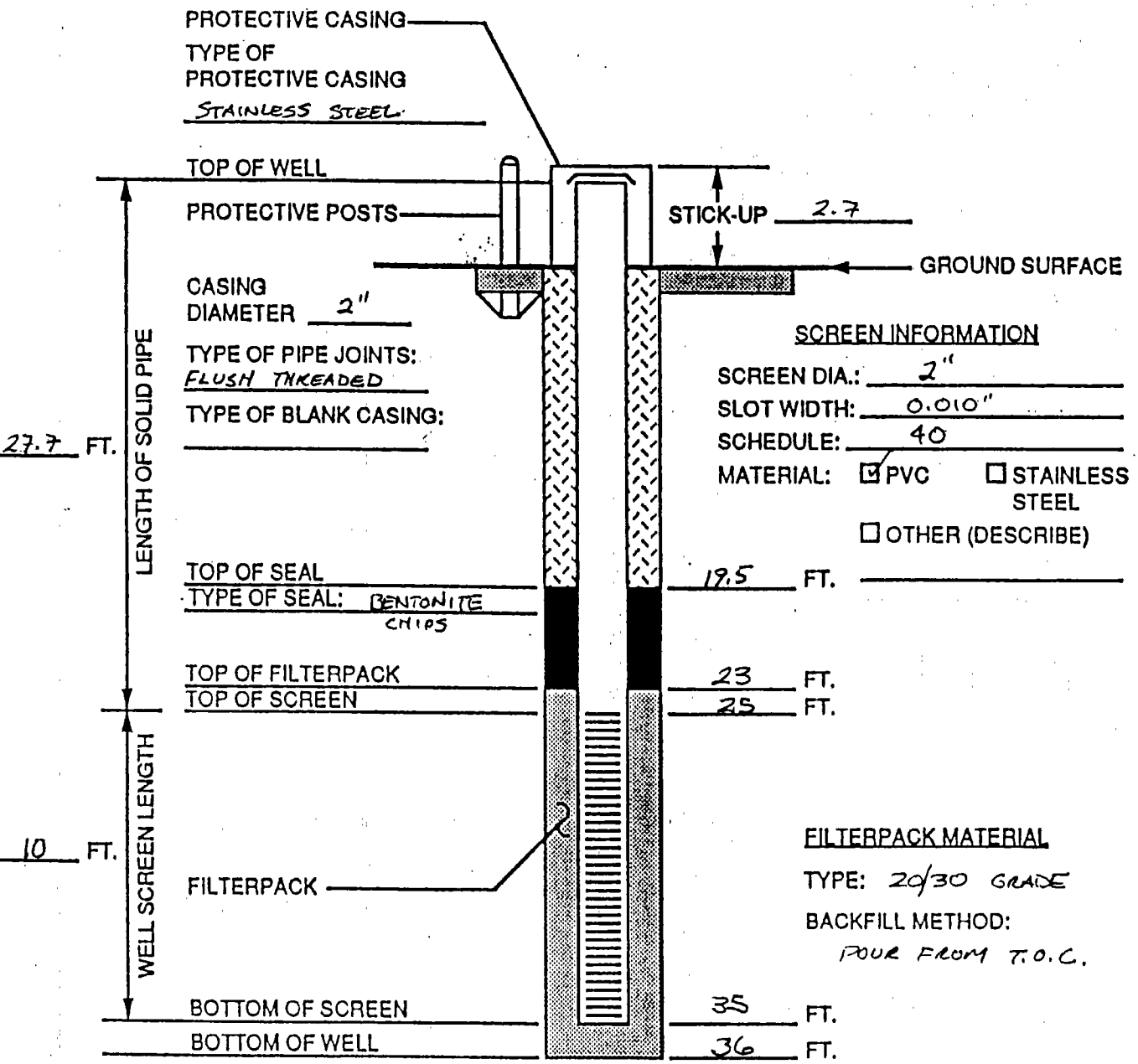
TEMP. 72.0F Ph 5.0

COND. 40 NTU 20.0

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ATION GROUNDWATER			PROJECT: RI OUS 1,2,7
INSTALLED	STARTED: 10-11-93	COMPLETED: 10-11-93	LOCATION (Coordinates or Station): SITE 5
OP OF HOLE			SIGNATURE OF INSPECTOR: Alan Wochman
DEPTH OF HOLE: 36			HOLE NO. (As shown on drawing title and file number): CEF-5-17 I

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1 hr / 8.5 HRS.

VOLUME OF WATER REMOVED: 990 / 285 GAL.

VOLUME OF WATER ADDED: >200 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: SLIGHT CLOUDINESS

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

10-17-93 1645

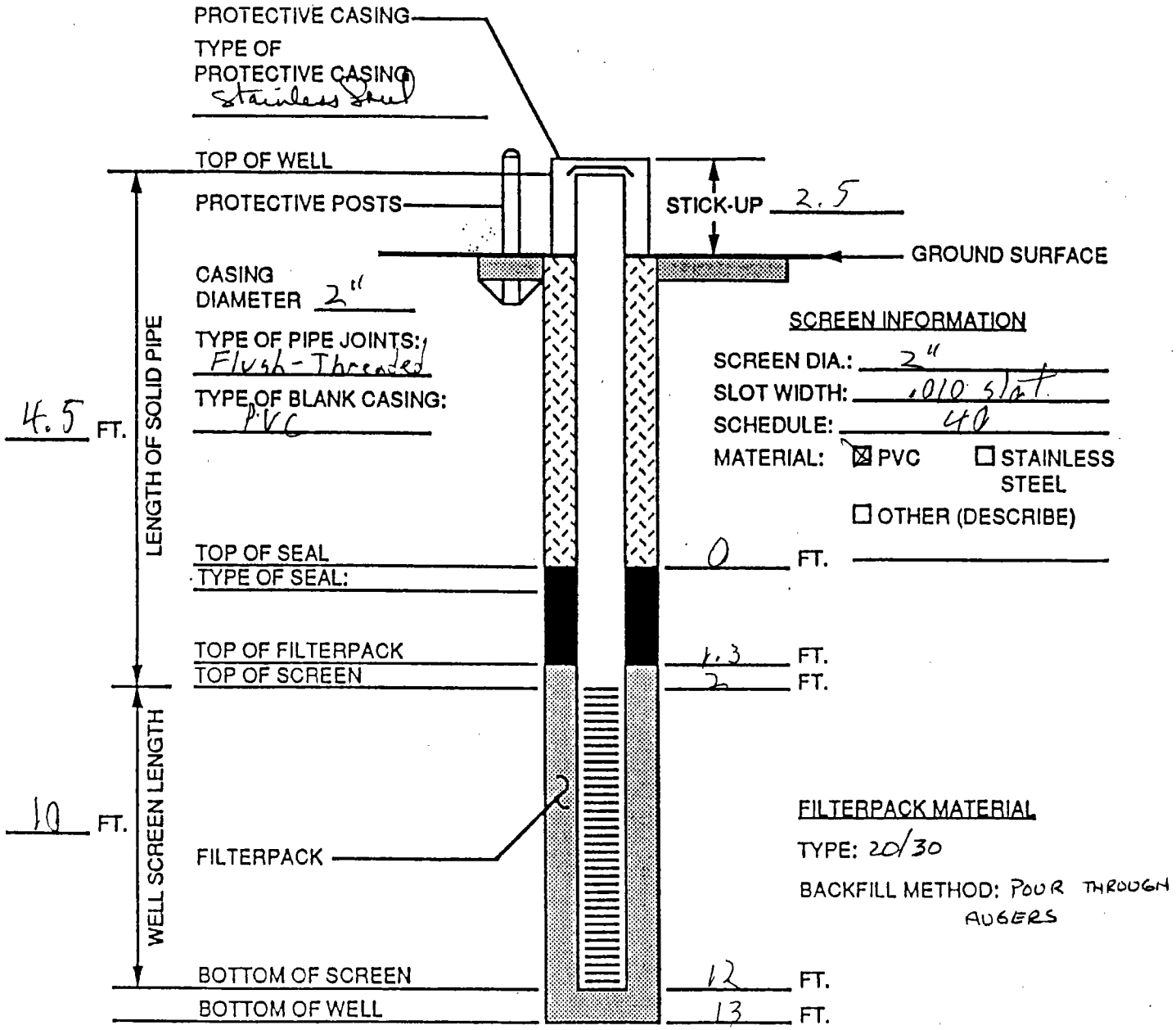
TEMP. 73.0 PH 5.0

COND. 41 NTU 21.0

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT RI OUS 1, 2, 7
DATE INSTALLED 10-5-93	STARTED 1245	COMPLETED 1315	LOCATION (Coordinates or Station) Site #5
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR [signature]
TOTAL DEPTH OF HOLE 13			HOLE NO. (As shown on drawing title and line number) CEF-5-19S

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: Pumping Centr. Pump

TIME SPENT DEVELOPMENT: 11 hrs.

VOLUME OF WATER REMOVED: 235 gal.

VOLUME OF WATER ADDED: 0

DESCRIPTION OF PREDEVELOPMENT WATER: turbid

DESCRIPTION OF POST DEVELOPMENT WATER: 2.6 NTU

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 7.16' btoc 10/5/93

10-15-93 1115

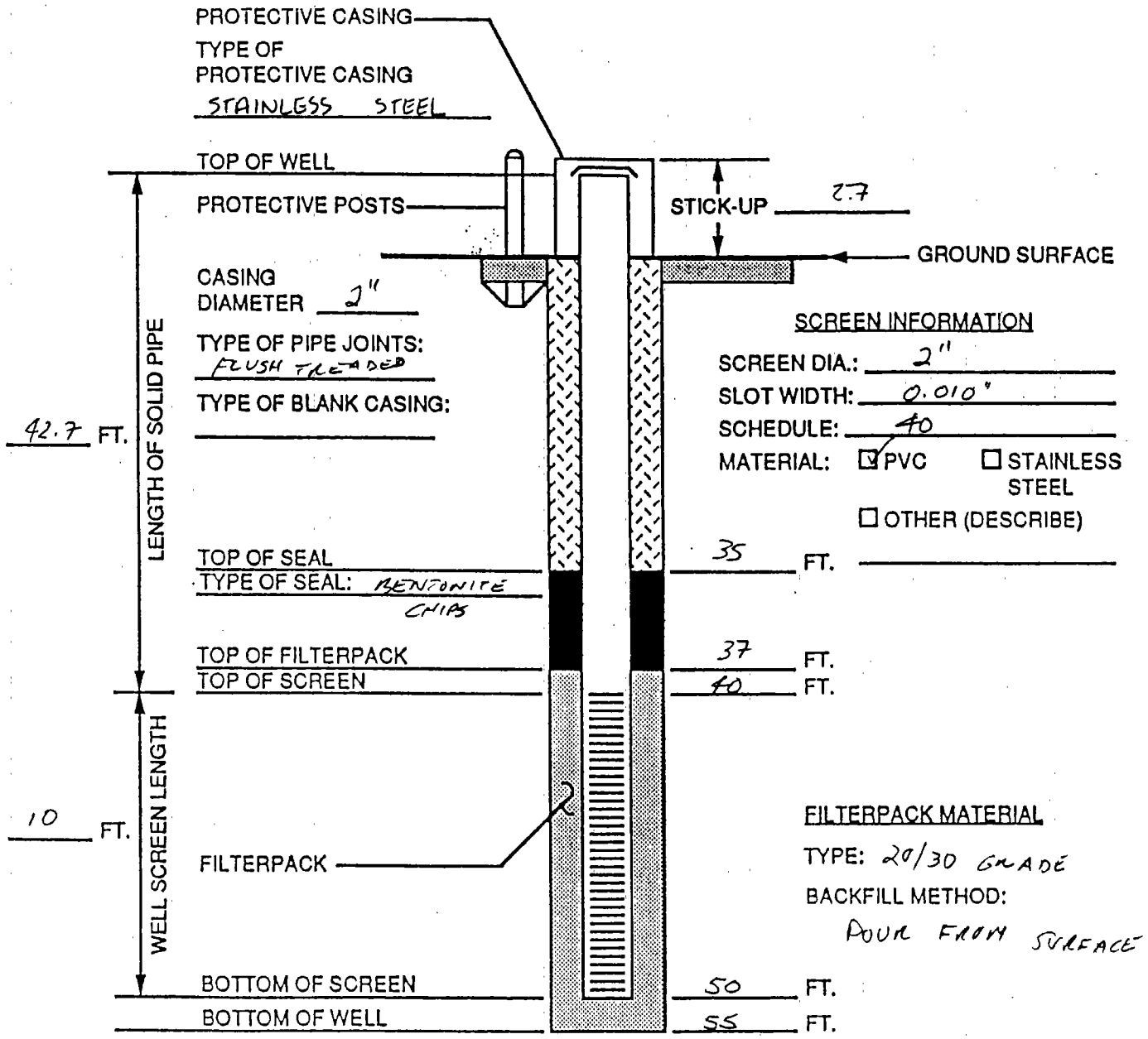
TEMP. 72.0°F Ph. 5.0

COND. 231 NTU 2.6

DEPTH FROM TOP CASING AFTER DEVELOPMENT: —

ELEVATION GROUNDWATER —			PROJECT RI OUS. 1,2,7
DATE INSTALLED	STARTED 9-27-93	COMPLETED 9-28-93	LOCATION (Coordinates or Station) SITE 5
ATION TOP OF HOLE —			SIGNATURE OF INSPECTOR Alan Workman
TOTAL DEPTH OF HOLE 55'			HOLE NO. (As shown on drawing title and file number) CEF-5-18D

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1 hr 5 min / 18.5 HRS

VOLUME OF WATER REMOVED: 880 GAL / 1430 GAL

VOLUME OF WATER ADDED: 250 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: VERY CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

10-28-93 1530

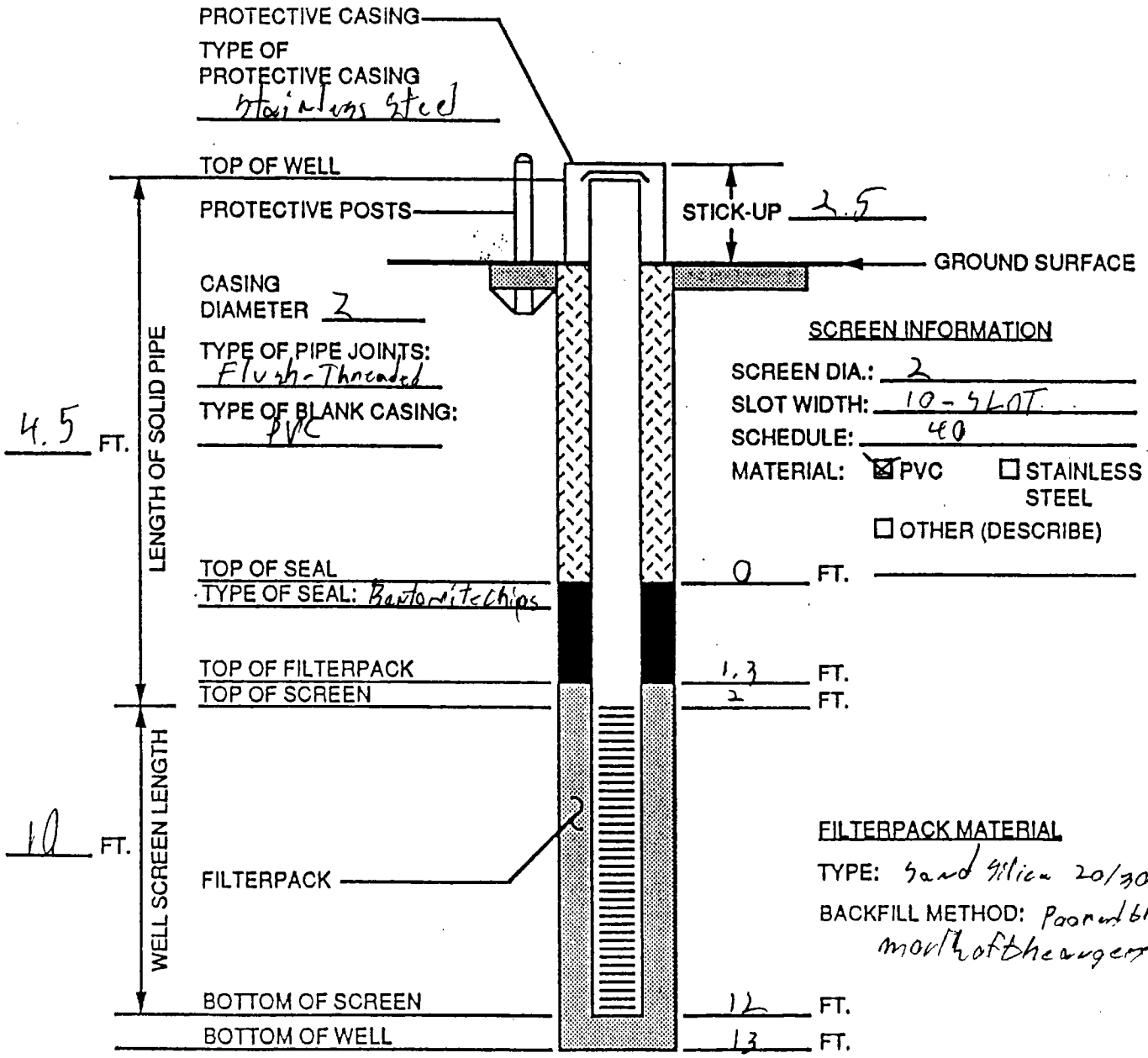
TEMP. 75.4°F Ph 4.70

COND. 0.80 NTU 40.0

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT RI OU4 1,2,7
DATE INSTALLED 10-4-93	STARTED 1100	COMPLETED 115	LOCATION (Coordinates or Station) Site #5
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR [illegible]
TOTAL DEPTH OF HOLE 13'			HOLE NO. (As shown on drawing title and file number) CEF-5-20s CEF-5-20S

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: Centrifugal Pump

TIME SPENT DEVELOPMENT: 5 hrs

VOLUME OF WATER REMOVED: 290

VOLUME OF WATER ADDED: 0

DESCRIPTION OF PREDEVELOPMENT WATER: turbid

DESCRIPTION OF POST DEVELOPMENT WATER: 0 NTU

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 3.36' btoc 10/5/93

10-13-93 1600

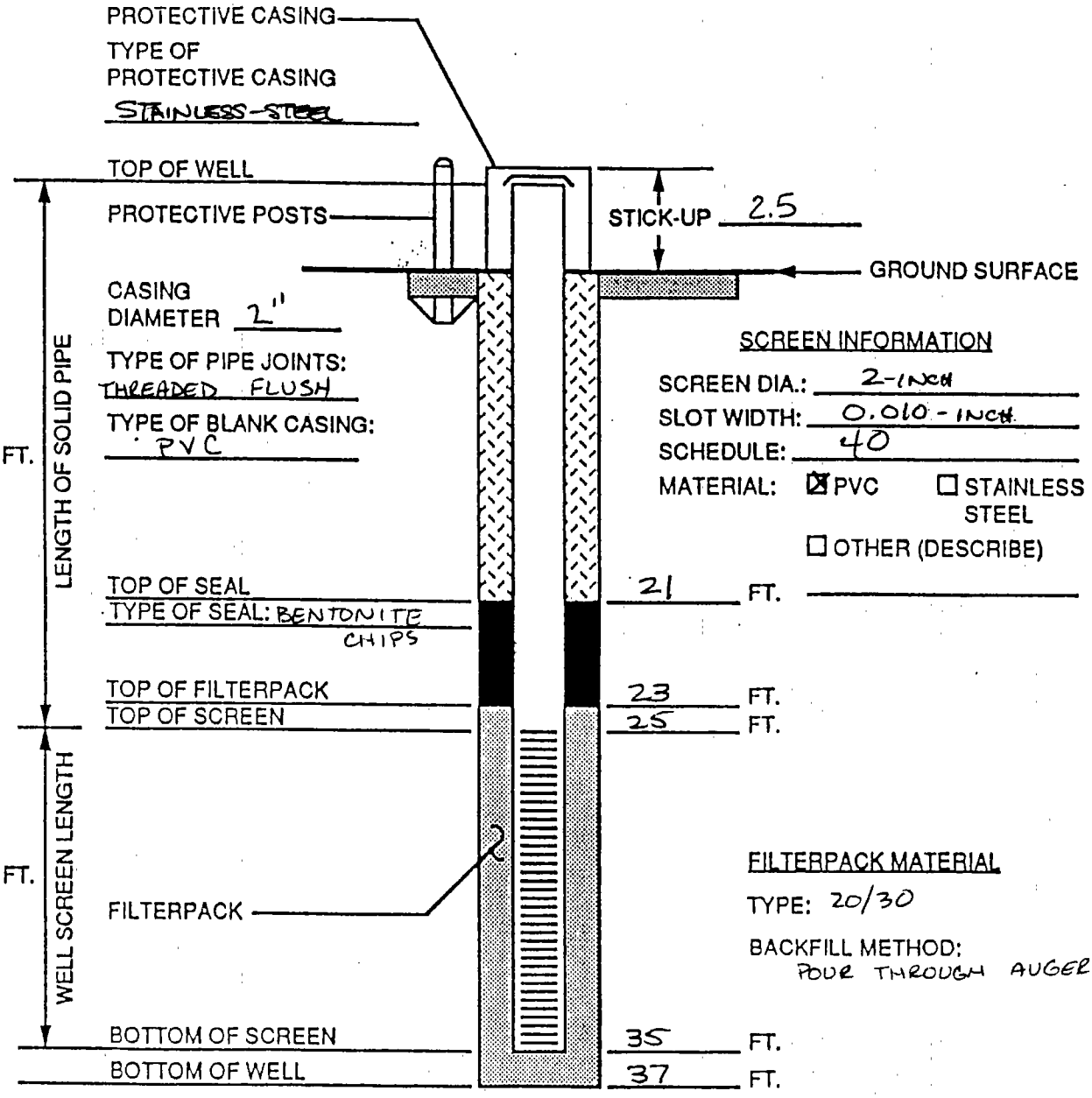
TEMP. 72.5° Ph. 5.95

COND. 70.1 NTU 0.0

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER			PROJECT: RI OUS 1, 2, 7
DATE INSTALLED: 10/4/93	STARTED: 10/4/93	COMPLETED: 10/ /93	LOCATION (Coordinates or Station): SITE 5
ELEVATION TOP OF HOLE			SIGNATURE OF INSPECTOR: Dave Hank Beban
TOTAL DEPTH OF HOLE: 37			HOLE NO. (As shown on drawing title and file number): CEF-5-21 I

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



SCREEN INFORMATION

SCREEN DIA.: 2-INCH

SLOT WIDTH: 0.010-INCH

SCHEDULE: 40

MATERIAL: ☒ PVC ☐ STAINLESS STEEL ☐ OTHER (DESCRIBE)

FILTERPACK MATERIAL

TYPE: 20/30

BACKFILL METHOD: POUR THROUGH AUGERS

WELL DEVELOPMENT

METHOD: CENTRIFUGAL

TIME SPENT DEVELOPMENT: 40 MIN. / 13 HRS

VOLUME OF WATER REMOVED: 165 GALLONS / 600 GAL.

VOLUME OF WATER ADDED: 100 GALLONS

DESCRIPTION OF PREDEVELOPMENT WATER: GRAYISH BROWN, OPAQUE

DESCRIPTION OF POST DEVELOPMENT WATER: GRAYISH BROWN, OPAQUE

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

10-16-93 0930

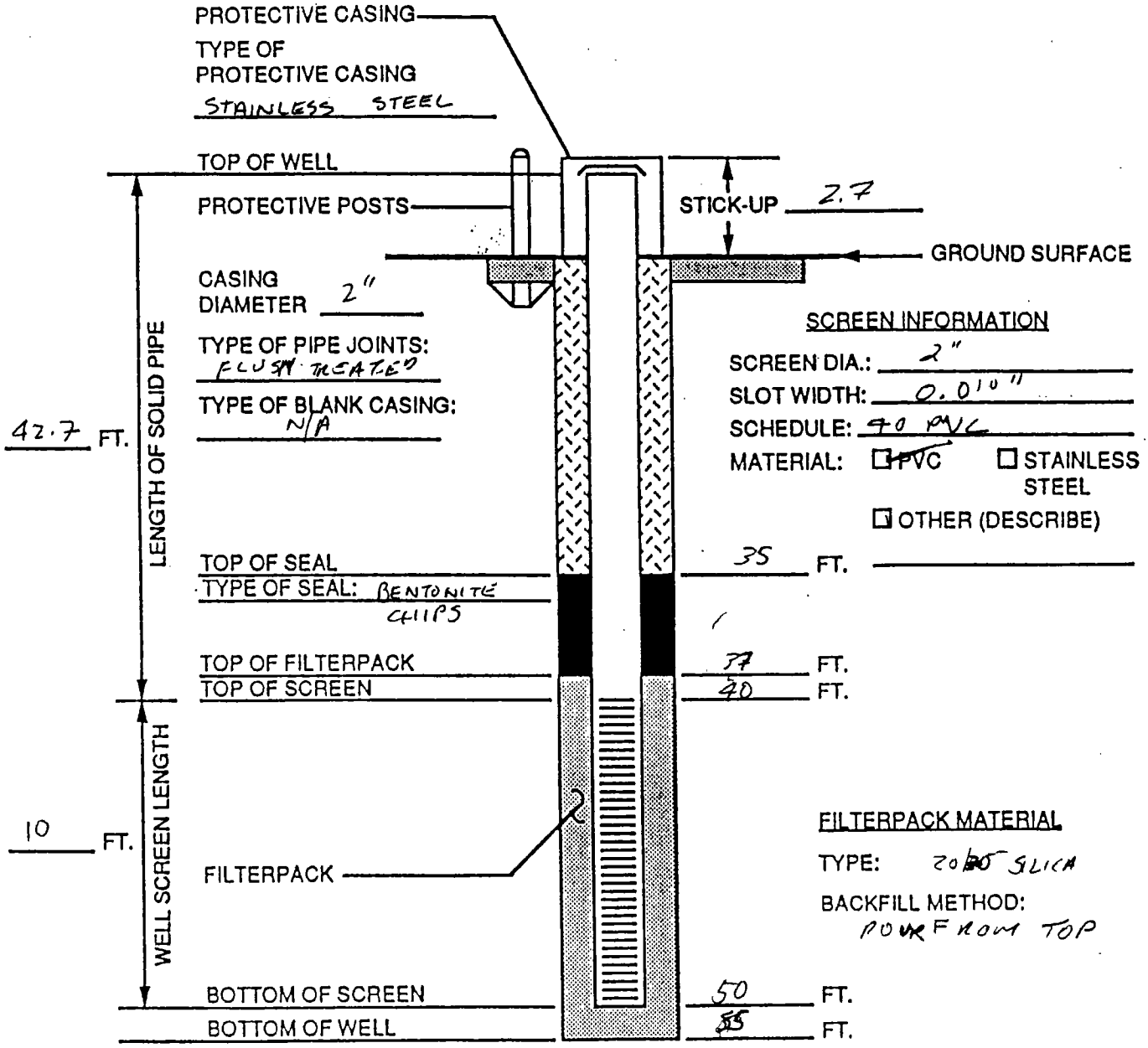
TEMP. 71.0 F Ph. 5.0

COND. 47 NTU 12.0

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT: RI OUS 1,3,7
DATE INSTALLED: 9-29-93	STARTED: 9-28-93	COMPLETED: 9-28	LOCATION (Coordinates or Station): ~~[illegible]~~ AN SITES
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR: Alan Workman
TOTAL DEPTH OF HOLE: 50			HOLE NO. (As shown on drawing title and file number): CEF-5-22D

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1hr 10 min / 11.5 HRS.

VOLUME OF WATER REMOVED: 1210 GAL / 1860 GAL.

VOLUME OF WATER ADDED: < 300 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

10-16-93 1100

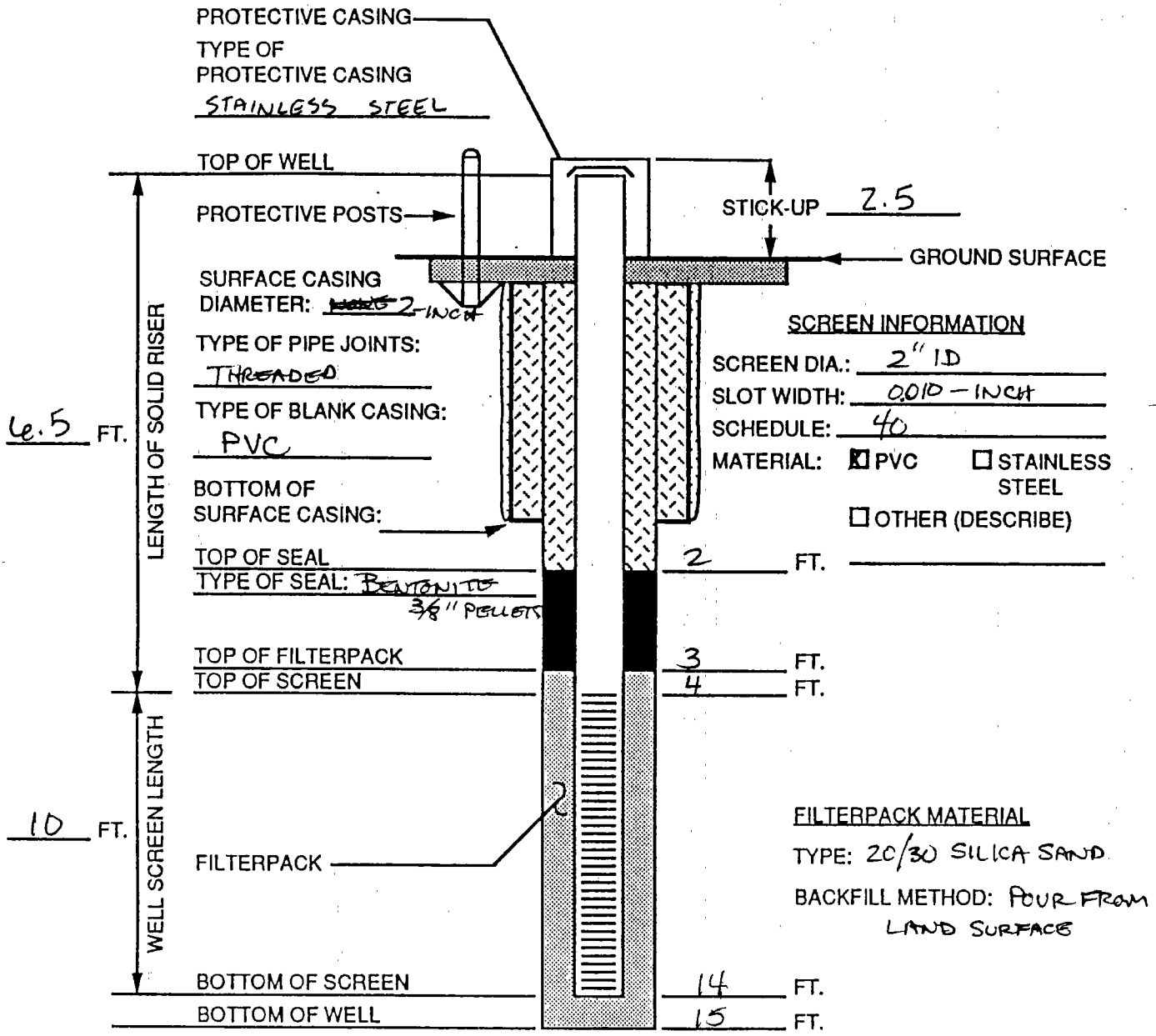
TEMP. 16.7°F Ph. 5.65

COND. 79.1 NTU 23.7

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER			PROJECT RI/OUS 62,7 ~~OU 2 3,5,6,7~~
DATE INSTALLED 9/21/93	STARTED 9/21/93	COMPLETED 9/22/93	LOCATION (Coordinates or Station) OU2 SITE 5
ELEVATION TOP OF HOLE			SIGNATURE OF INSPECTOR David H. Belan
DEPTH OF HOLE 15 ~~FT~~. BLS			HOLE NO. (As shown on drawing title and file number) CEF-5-33S

DOUBLE-CASED MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: CENTRIFUGAL

TIME SPENT DEVELOPMENT: 22 hrs.

VOLUME OF WATER REMOVED: 1275 gal.

VOLUME OF WATER ADDED: 0

DESCRIPTION OF PREDEVELOPMENT WATER: turbid

DESCRIPTION OF POST DEVELOPMENT WATER: 21.1 NTU

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

10-14-93 1200

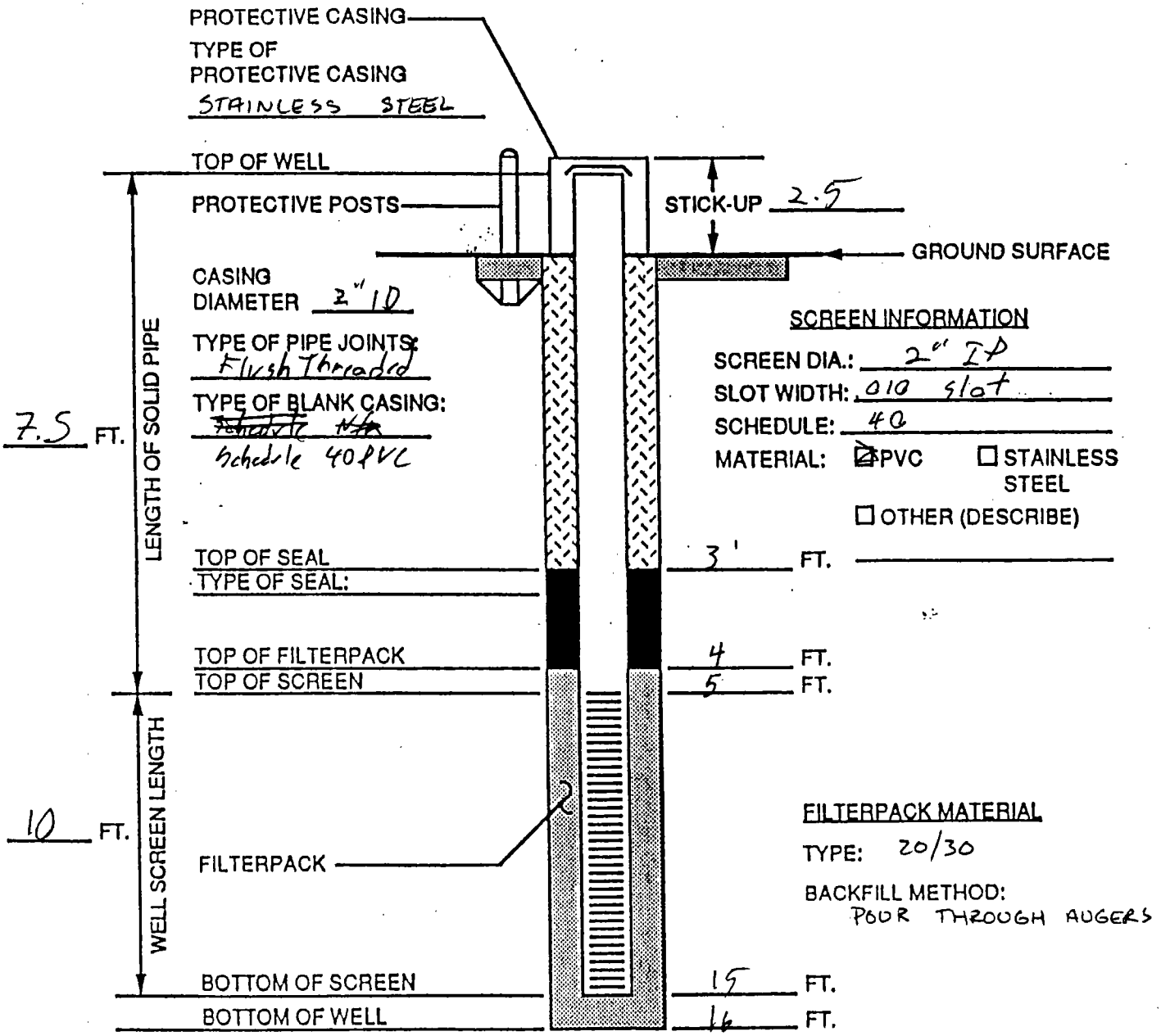
TEMP. 13.0F Ph 5.0

COND. 48.0 NTU 21.1

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT RI OVS. 1, 2, 7
DATE INSTALLED 9-27-93	STARTED 1730	COMPLETED 1830	LOCATION (Coordinates or Station) CEF-5-24s
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR [signature]
TOTAL DEPTH OF HOLE 16 feet			HOLE NO. (As shown on drawing title and file number) CEF-5-24s

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: Over Pumping Cent. Pump

TIME SPENT DEVELOPMENT: 35 / 2 HRS.

VOLUME OF WATER REMOVED: 35 / 62 GAL.

VOLUME OF WATER ADDED: 40

DESCRIPTION OF PREDEVELOPMENT WATER: Very Cloudy

DESCRIPTION OF POST DEVELOPMENT WATER: Slightly Cloudy

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 9/28/93 830 8.81

10-11-93 1530

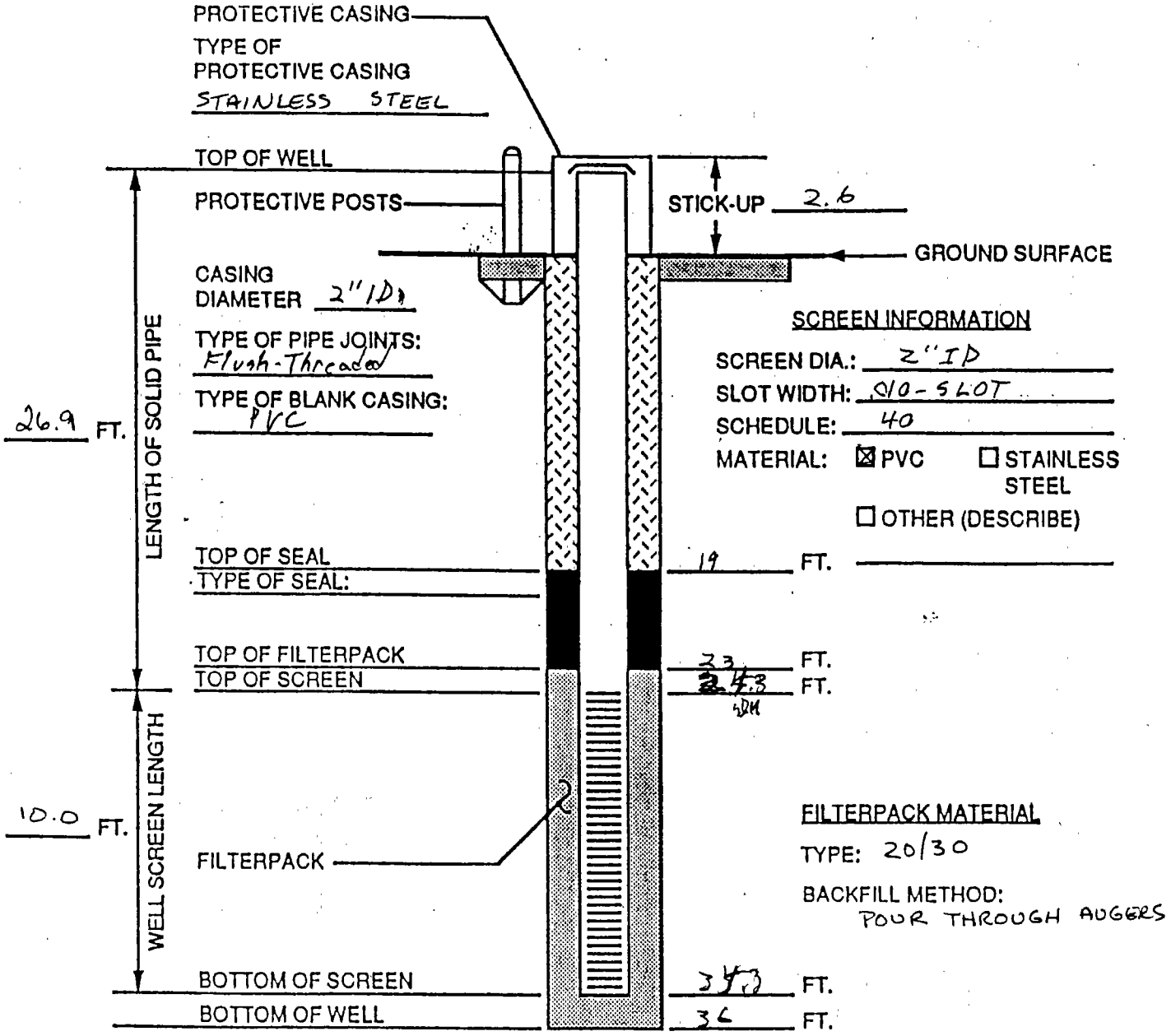
TEMP 79.4 Ph 6.00

COND. 57.0 NTU 10.3

DEPTH FROM TOP CASING AFTER DEVELOPMENT: —

ELEVATION GROUNDWATER —			PROJECT RI OUS 1,2,7
DATE INSTALLED 9-28 → 9-29-93	STARTED 1215	COMPLETED 1015 (9-29)	LOCATION (Coordinates or Station) Site #5
TION TOP OF HOLE —			SIGNATURE OF INSPECTOR Steven Munz
TOTAL DEPTH OF HOLE 36			HOLE NO. (As shown on drawing title and file number) CEF-5-25I

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: Over pumping Cent. Pump

TIME SPENT DEVELOPMENT: 40 min / 27.5 HRS.

VOLUME OF WATER REMOVED: 220 / 730 GAL.

VOLUME OF WATER ADDED: ≈ 160

DESCRIPTION OF PREDEVELOPMENT WATER: Very cloudy

DESCRIPTION OF POST DEVELOPMENT WATER: Cloudy

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

10-14-93 1345

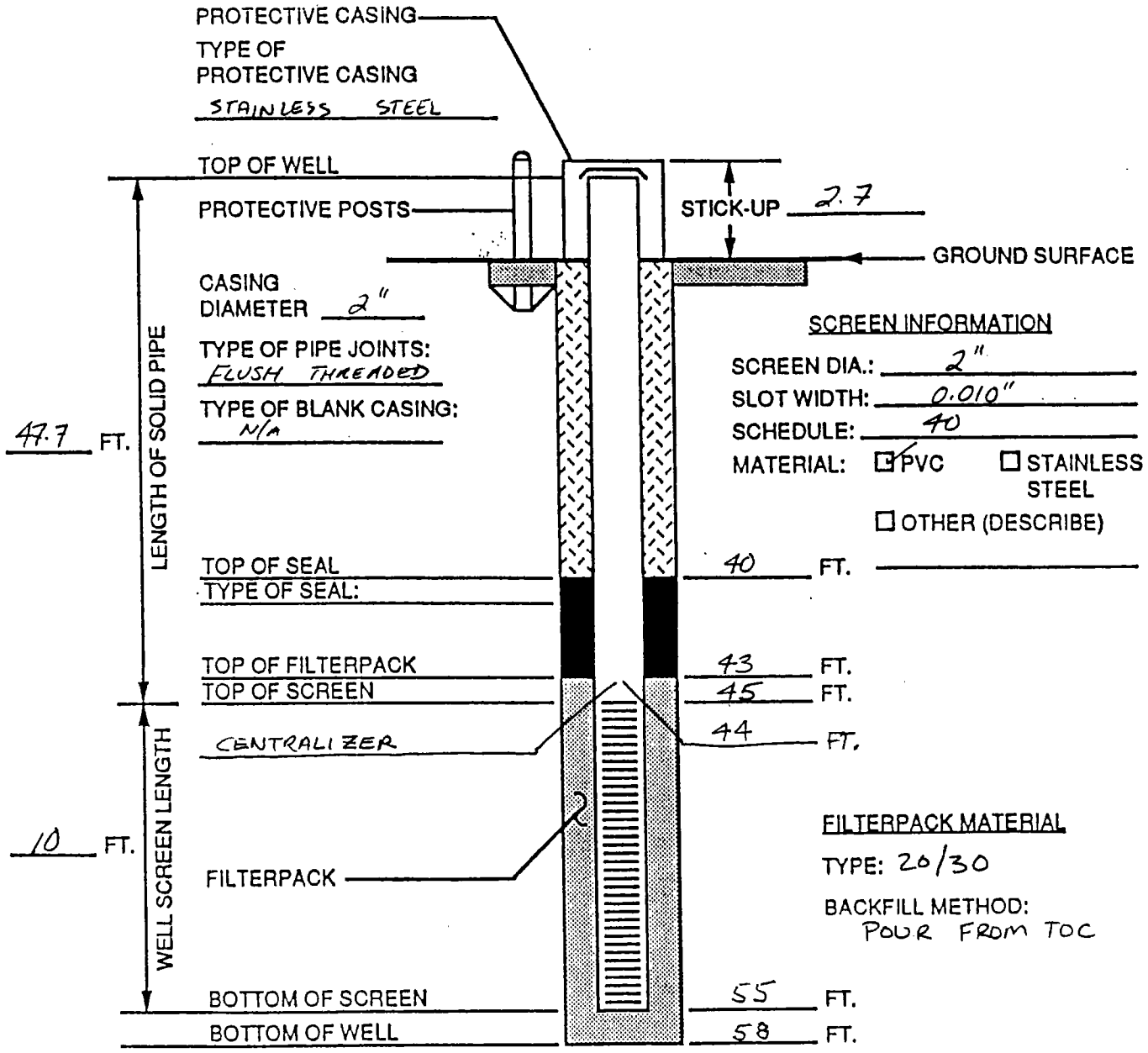
TEMP. 81.3°F PH. 5.0

COND. 39.1 NTU > 200

DEPTH FROM TOP CASING AFTER DEVELOPMENT: 8.23

ELEVATION GROUNDWATER —			PROJECT RI OUS 1,2,7
DATE INSTALLED	STARTED 9-30-93	COMPLETED 9-30-93	LOCATION (Coordinates or Station) SITE 5
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR [signature]
TOTAL DEPTH OF HOLE 58'			HOLE NO. (As shown on drawing title and file number) CEF-5-26D

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1 hr

VOLUME OF WATER REMOVED: 605 GAL

VOLUME OF WATER ADDED: <100

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

10-12-93 1300

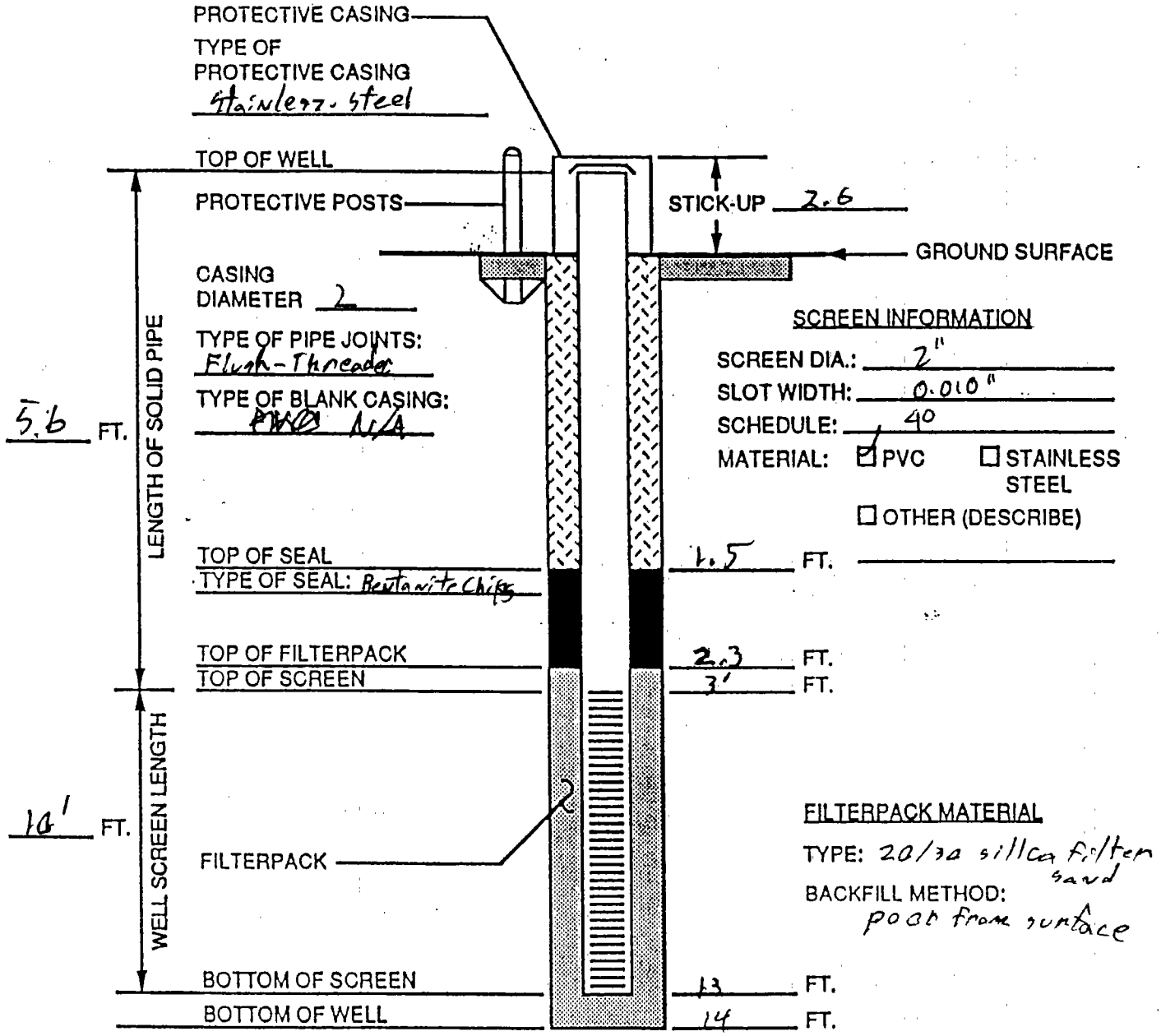
TEMP. 74.0F Ph. 5.0

COND. 64.0 NTU >200

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

VATION GROUNDWATER			PROJECT RI OU5 1,2,7
E INSTALLED 9-27-93	STARTED 1430 9-27-93	COMPLETED 1600	LOCATION (Coordinates or Station) CEF-5-27s
OP OF HOLE			SIGNATURE OF INSPECTOR Steven D. Murray
AL DEPTH OF HOLE 14 feet			HOLE NO. (As shown on drawing title and file number) CEF-5-27s

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: Overpumping Centrifugal

TIME SPENT DEVELOPMENT: 40

OLUME OF WATER REMOVED: 25

VOLUME OF WATER ADDED: 30

DESCRIPTION OF PREDEVELOPMENT WATER: ~~Centri~~ Very Cloudy

DESCRIPTION OF POST DEVELOPMENT WATER: Slightly Cloudy

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 9/28/93 825 6.21

10-5-93 1128 ~~6.37~~

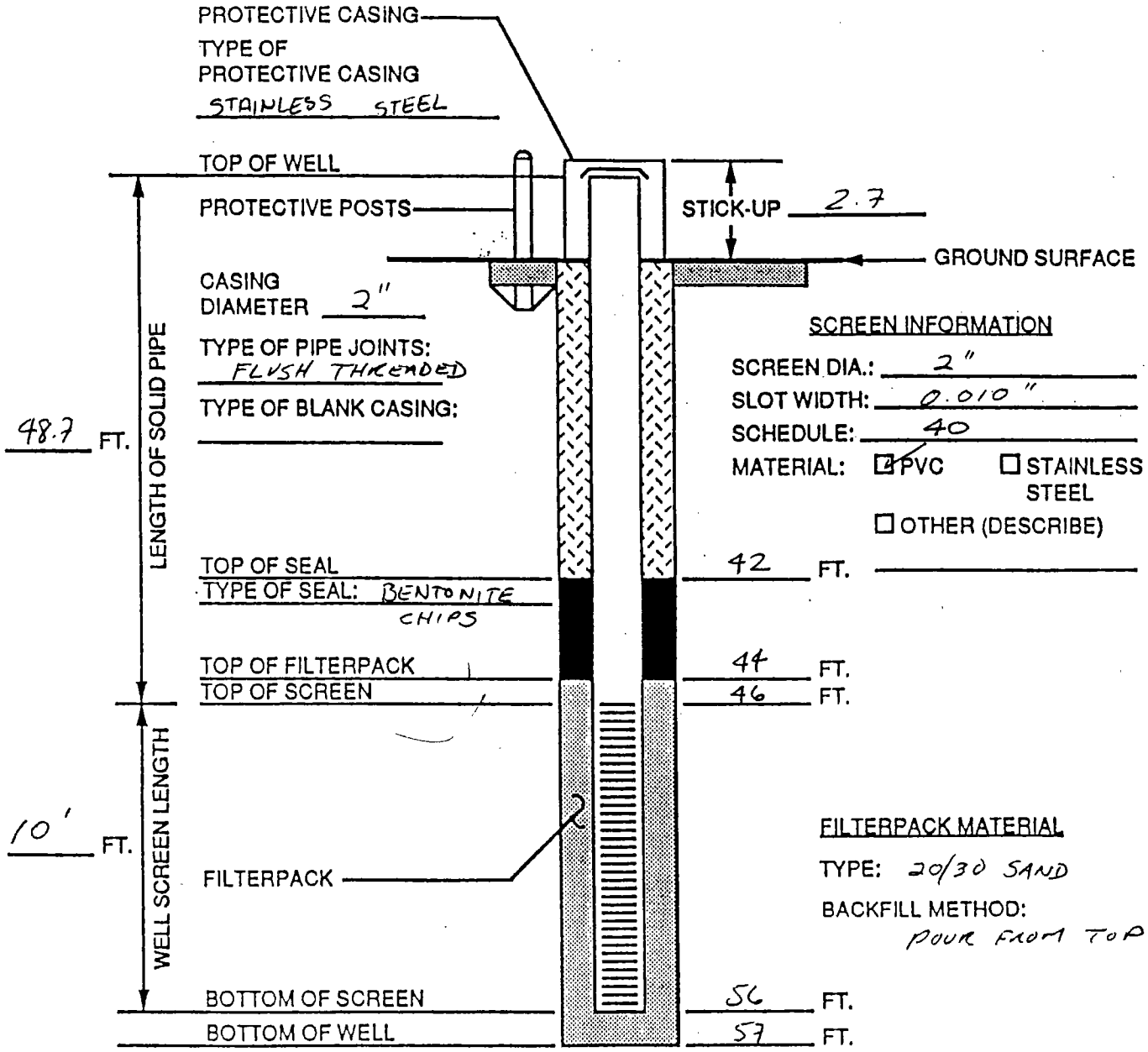
TEMP. 74.8 Ph. 4.85

COND. 68.1 NTU 9.89

DEPTH FROM TOP CASING AFTER DEVELOPMENT: 25 75 6.37

ELEVATION GROUNDWATER —			PROJECT RI ~~OU2 3,5,7~~ OU5 1,2,7
DATE INSTALLED	STARTED 9-20-93	COMPLETED 9-22-93	LOCATION (Coordinates or Station) CEF-5-28D SITE 5
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR Alan Hoffman
TOTAL DEPTH OF HOLE 57'			HOLE NO. (As shown on drawing title and file number) CEF-5-28D

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1 hr 10 min

VOLUME OF WATER REMOVED: ≈ 800 GAL

VOLUME OF WATER ADDED: ≈ 400-500 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: SL. CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

10-26-93 1130

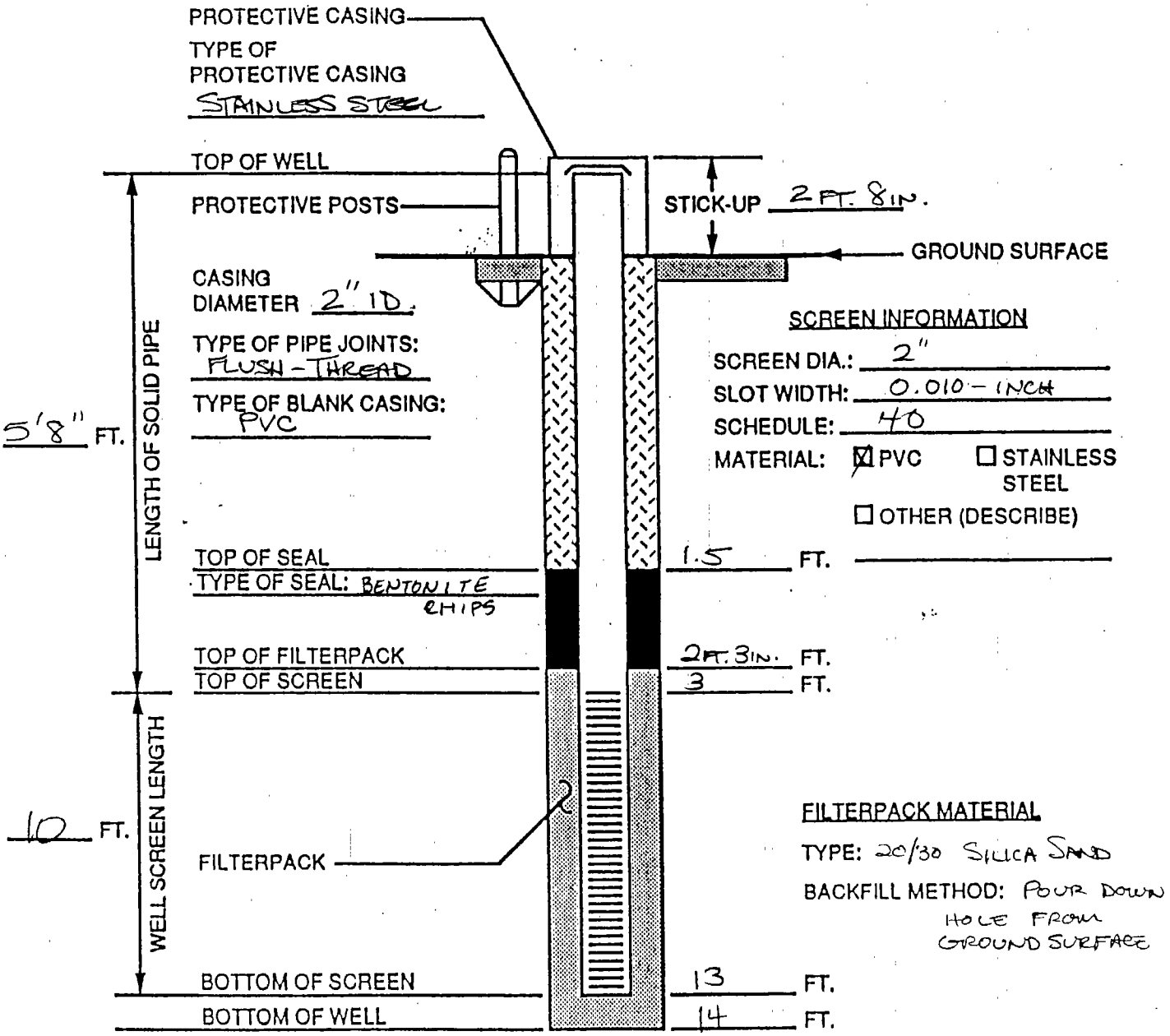
TEMP 73.0 Ph. 6.1

COND. 80 NTU 20.0

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

VATION GROUNDWATER —			PROJECT: RI OUS. 1,2,7
E INSTALLED: 9/22/93	STARTED: 9/22/93	COMPLETED: 9/23/93	LOCATION (Coordinates or Station): OU2 SITE 5
TOP OF HOLE: —			SIGNATURE OF INSPECTOR: David H. Belan
AL DEPTH OF HOLE: 14.0 FT. BLS.			HOLE NO. (As shown on drawing title and file number): CEF-5-29S

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: CENTRIFUGAL

TIME SPENT DEVELOPMENT: ½ HR. / 8.5 HRS.

VOLUME OF WATER REMOVED: 55 GAL. / 304 GAL

VOLUME OF WATER ADDED: NONE

DESCRIPTION OF PREDEVELOPMENT WATER: TURBID

DESCRIPTION OF POST DEVELOPMENT WATER: TURBID

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

10-6-93 BT 0805 0850

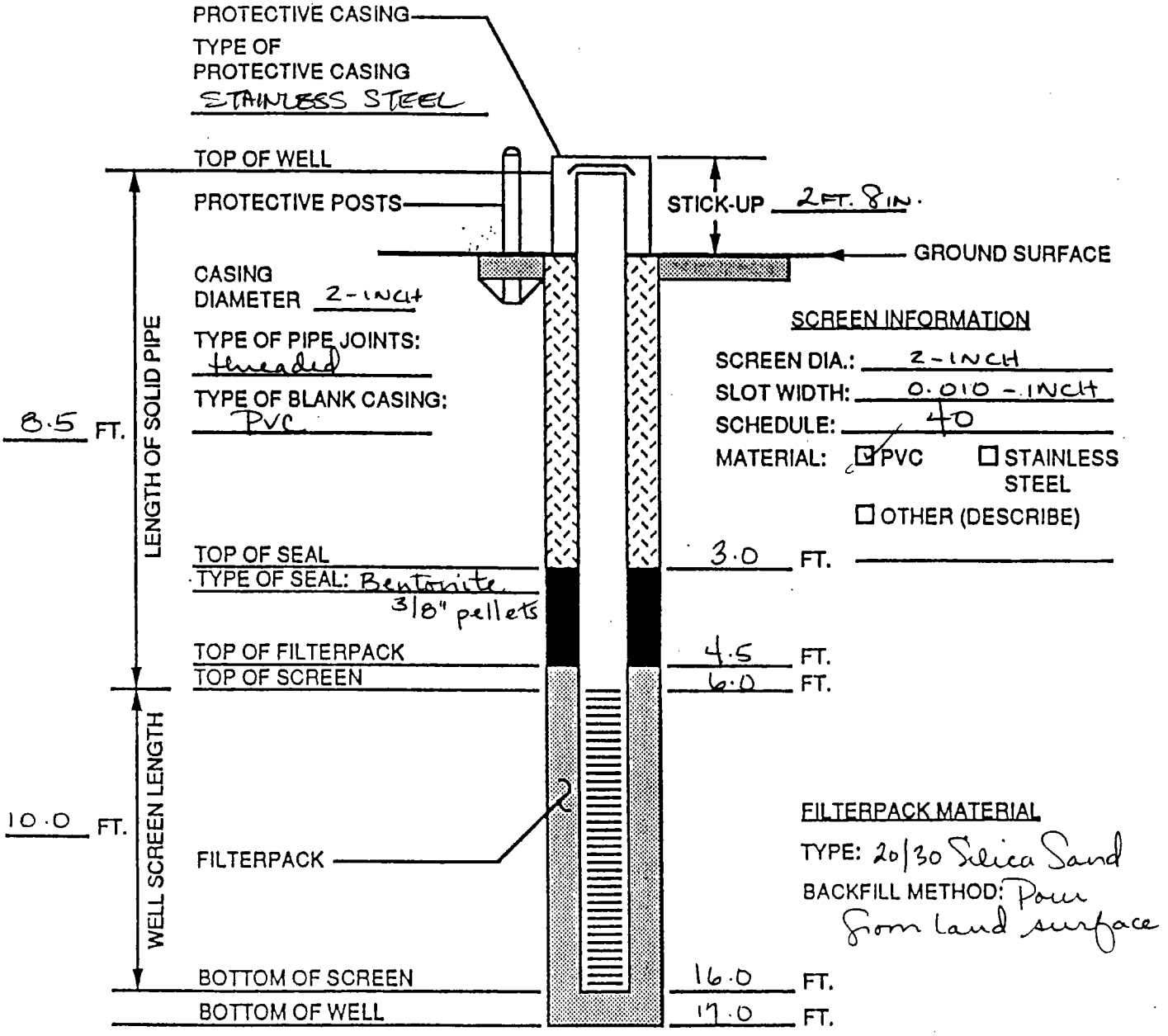
TEMP. 71.9 F Ph. 5.9

COND 42.0 NTU 15.0

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT RI OUs 1,2,7
DATE INSTALLED 9/20/93	STARTED 9/20/93	COMPLETED 9/21/93	LOCATION (Coordinates or Station) OU 2 SITE 5
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR David H. Belan
TOTAL DEPTH OF HOLE 17.0' bls			HOLE NO. (As shown on drawing title and file number) CEF-5-30S

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: CENTRIFUGAL

TIME SPENT DEVELOPMENT: ½ HOUR / 7 HRS.

VOLUME OF WATER REMOVED: 25 GALLONS / 426 GAL.

VOLUME OF WATER ADDED: —

DESCRIPTION OF PREDEVELOPMENT WATER: VERY CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLEAR

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

10-15-93 1150

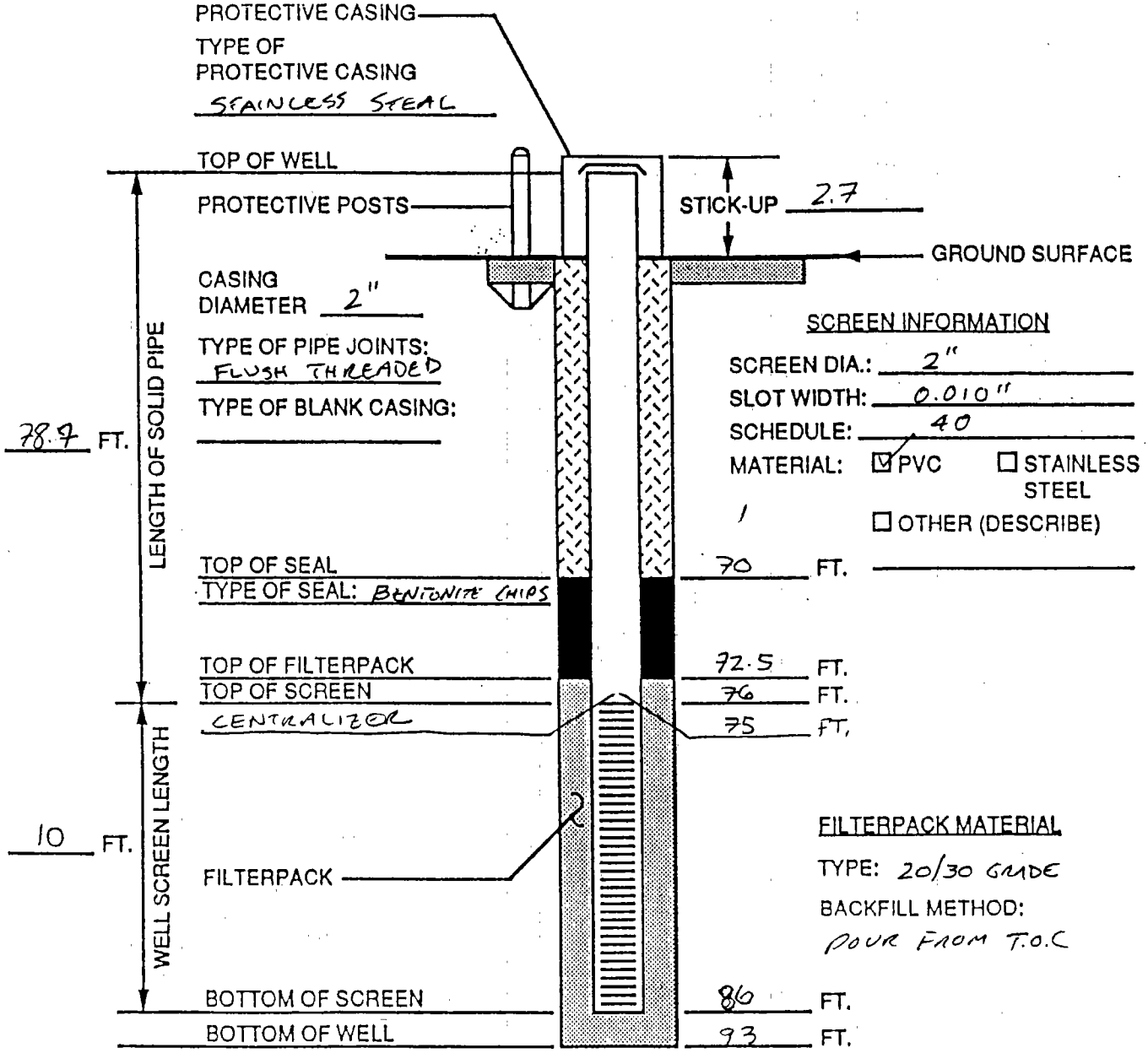
TEMP. 77.0F Ph 5.0

COND. 76 NTU 1.816

DEPTH FROM TOP CASING AFTER DEVELOPMENT: —

ELEVATION GROUNDWATER —			PROJECT RI OUS 1,2,7
DATE INSTALLED	STARTED 11-12-93	COMPLETED 11-13-93	LOCATION (Coordinates or Station) SITE 17
ATION TOP OF HOLE —			SIGNATURE OF INSPECTOR Alan Workman
AL DEPTH OF HOLE 93'			HOLE NO. (As shown on drawing title and file number) CEF-17-7D

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1 hr / 9 HR

VOLUME OF WATER REMOVED: ≈ 130 GAL / 280 GAL

VOLUME OF WATER ADDED: < 100 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLEAR

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 11-13-93 0920 NTU 42.5

12-15-93 1600 TEMP. 16.0

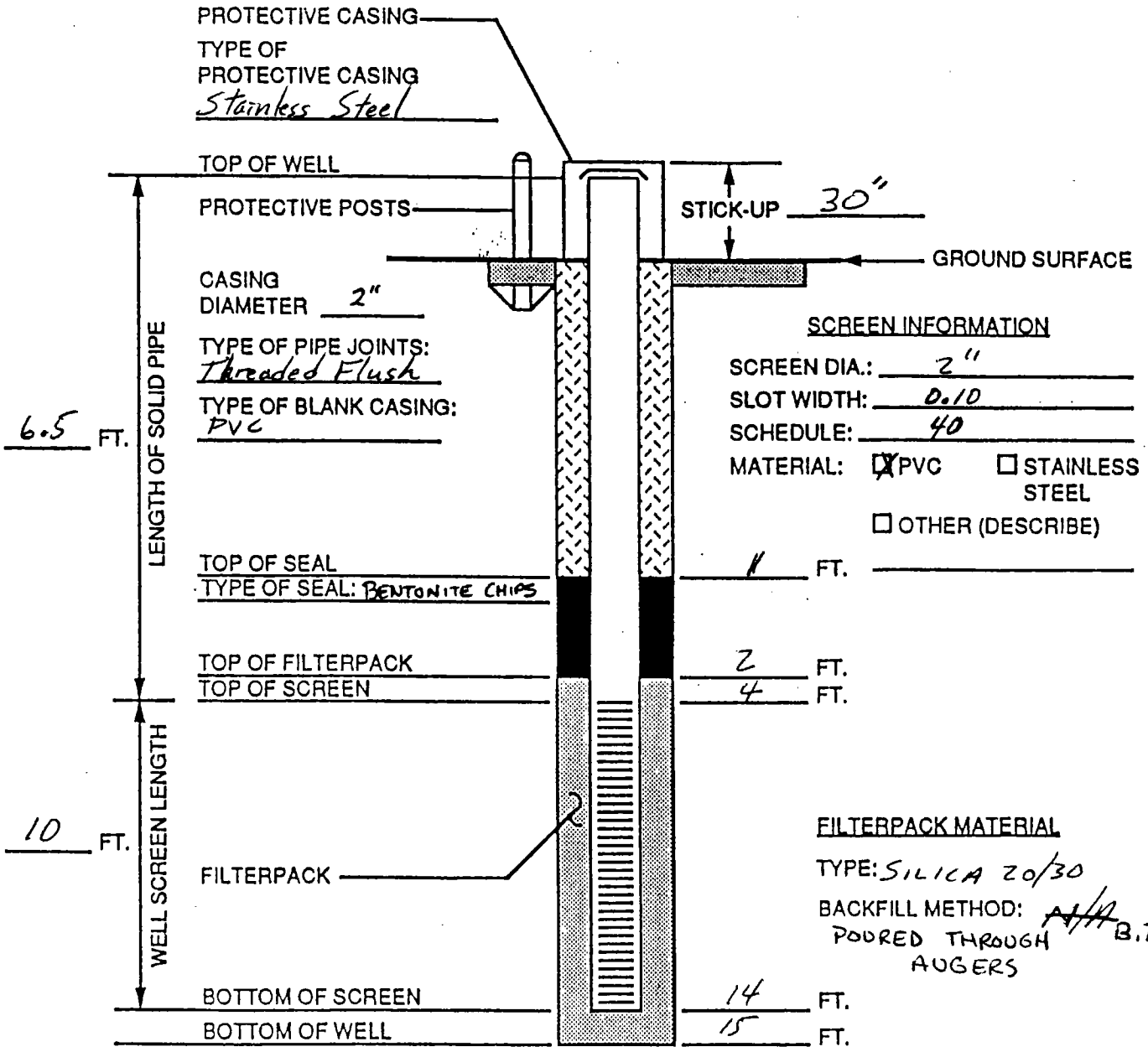
Ph. 7.12 COND. 155

NTU 4.61

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT RIDUS-1,2,7
DATE INSTALLED 10/26/93	STARTED 10/26/93	COMPLETED 10/26/93	LOCATION (Coordinates or Station) SITE 17
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR Hans Workman
TOTAL DEPTH OF HOLE 15'			HOLE NO. (As shown on drawing title and file number) CEF-17-8-5

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 30 MIN / 16½ HR.

VOLUME OF WATER REMOVED: 40 GAL / 325 GAL

VOLUME OF WATER ADDED: > 10 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: 57.2 NTU - CLEARER

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 10-26-93 1543 NTU 57.2

12-14-93 1630

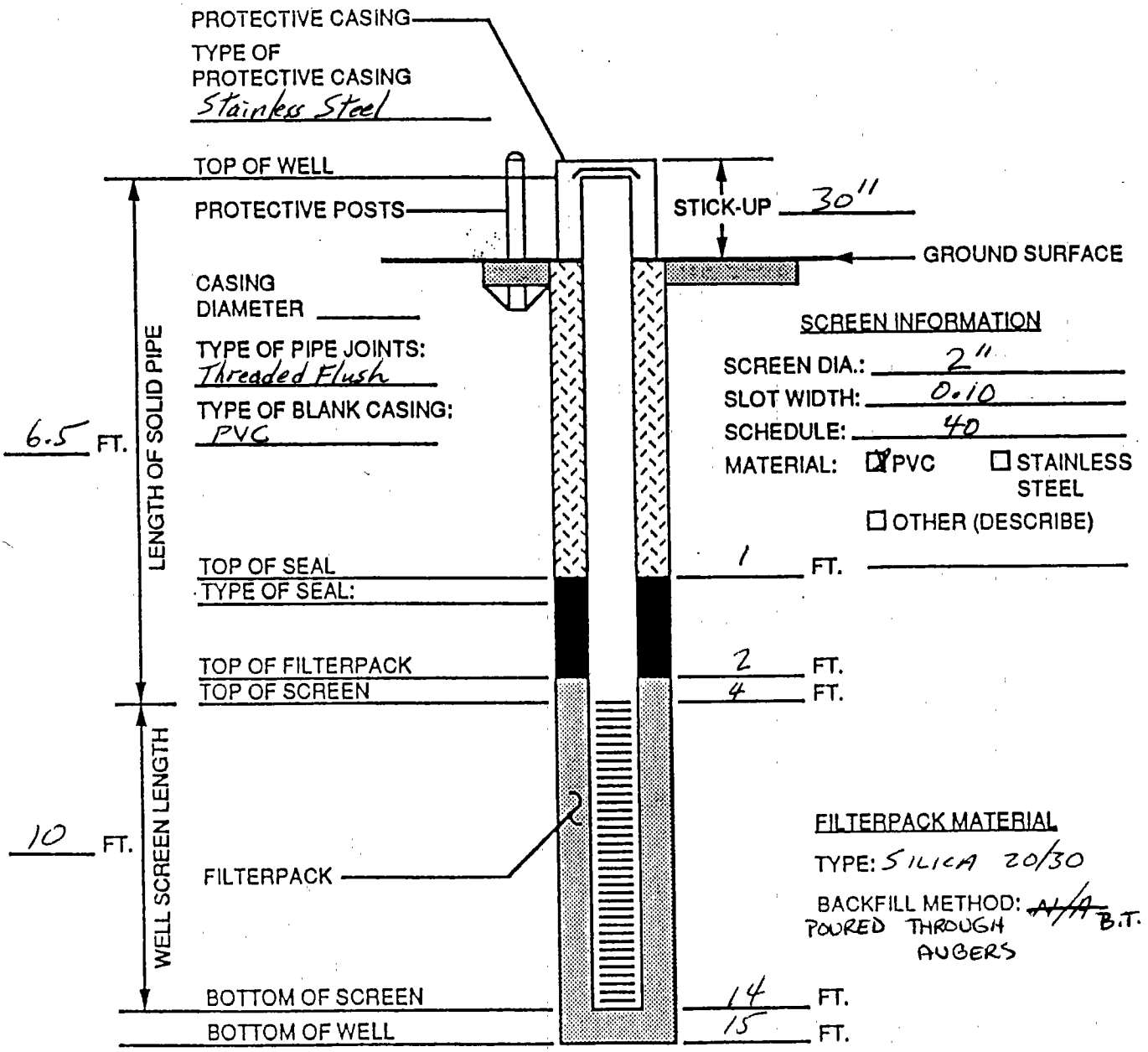
TEMP. 17.5 Ph. 5.29

COND. 20.0 NTU 6.45

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER			PROJECT: R10US-1,2,7
DATE INSTALLED: 10-26-93	STARTED: 10-26-93	COMPLETED: 10-26-93	LOCATION (Coordinates or Station): SITE 17
ELEVATION TOP OF HOLE			SIGNATURE OF INSPECTOR: Alan Workman
TOTAL DEPTH OF HOLE: 15'			HOLE NO. (As shown on drawing title and file number): CEF-17-9-5

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 30 MIN/13½ HR.

VOLUME OF WATER REMOVED: 20 GAL/210 GAL

VOLUME OF WATER ADDED: N/A

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 10-26-93 1852 NTU >200

12-16-93 1330

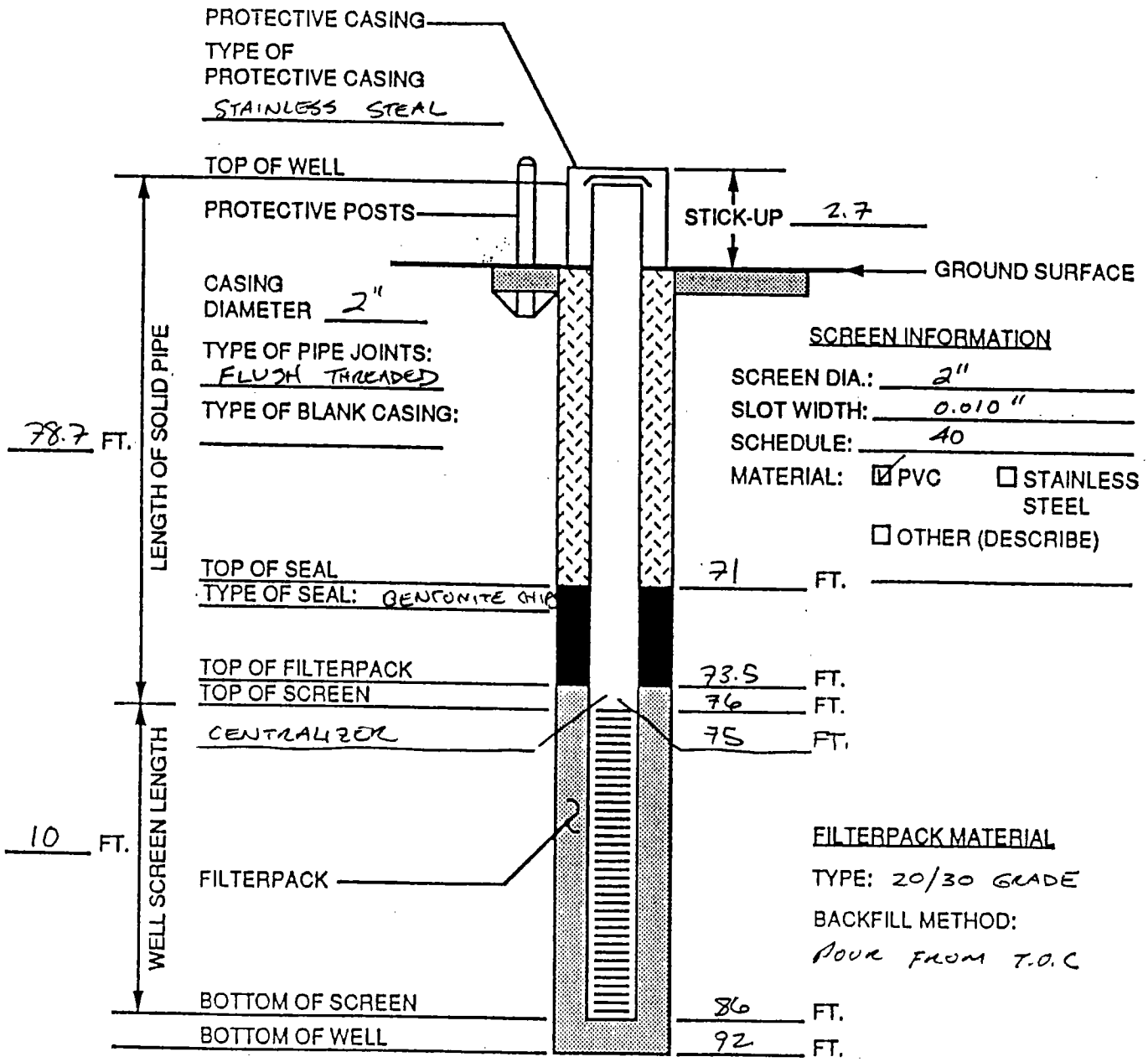
TEMP. 18 Ph. 5.49

COND. 38 NTU 5.72

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT: RI OUS 1,2,7
DATE INSTALLED	STARTED: 11-15-93	COMPLETED: 11-16-93	LOCATION (Coordinates or Station): SITE 17
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR: Alan Workman
TOTAL DEPTH OF HOLE: 92'			HOLE NO. (As shown on drawing title and file number): CEF-17-10D

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1 hr / 15 HR.

VOLUME OF WATER REMOVED: ≈ 35 GAL / 415 GAL.

VOLUME OF WATER ADDED: < 100 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 11-16-93 0950 NTU >200

12-14-93 1500

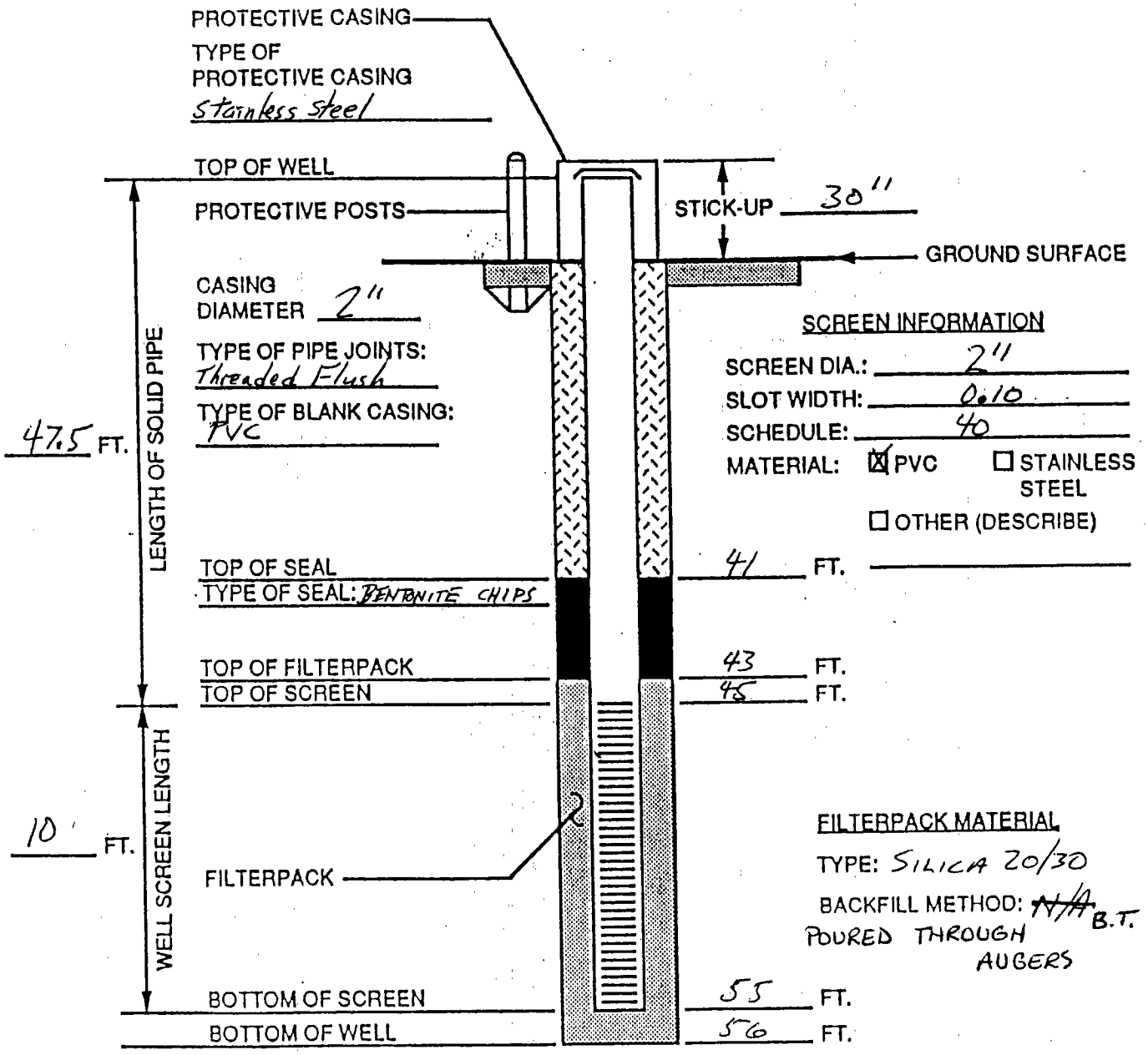
TEMP. 18 Ph. 7.10

COND. 320 NTU 13.3

DEPTH FROM TOP CASING AFTER DEVELOPMENT: —

ELEVATION GROUNDWATER —			PROJECT RIOUS 1,2,7
DATE INSTALLED 10/27/93	STARTED 10/27/93	COMPLETED 10/27/93	LOCATION (Coordinates or Station) SITE 17
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR Alan Wolfman
TOTAL DEPTH OF HOLE 56'			HOLE NO. (As shown on drawing title and file number) CEF-17-11-I

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1 hr / 16 HR.

VOLUME OF WATER REMOVED: 290 / 415 GAL.

VOLUME OF WATER ADDED: > 50

DESCRIPTION OF PREDEVELOPMENT WATER: VERY CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLOUDY

WATER LEVEL SUMMARY

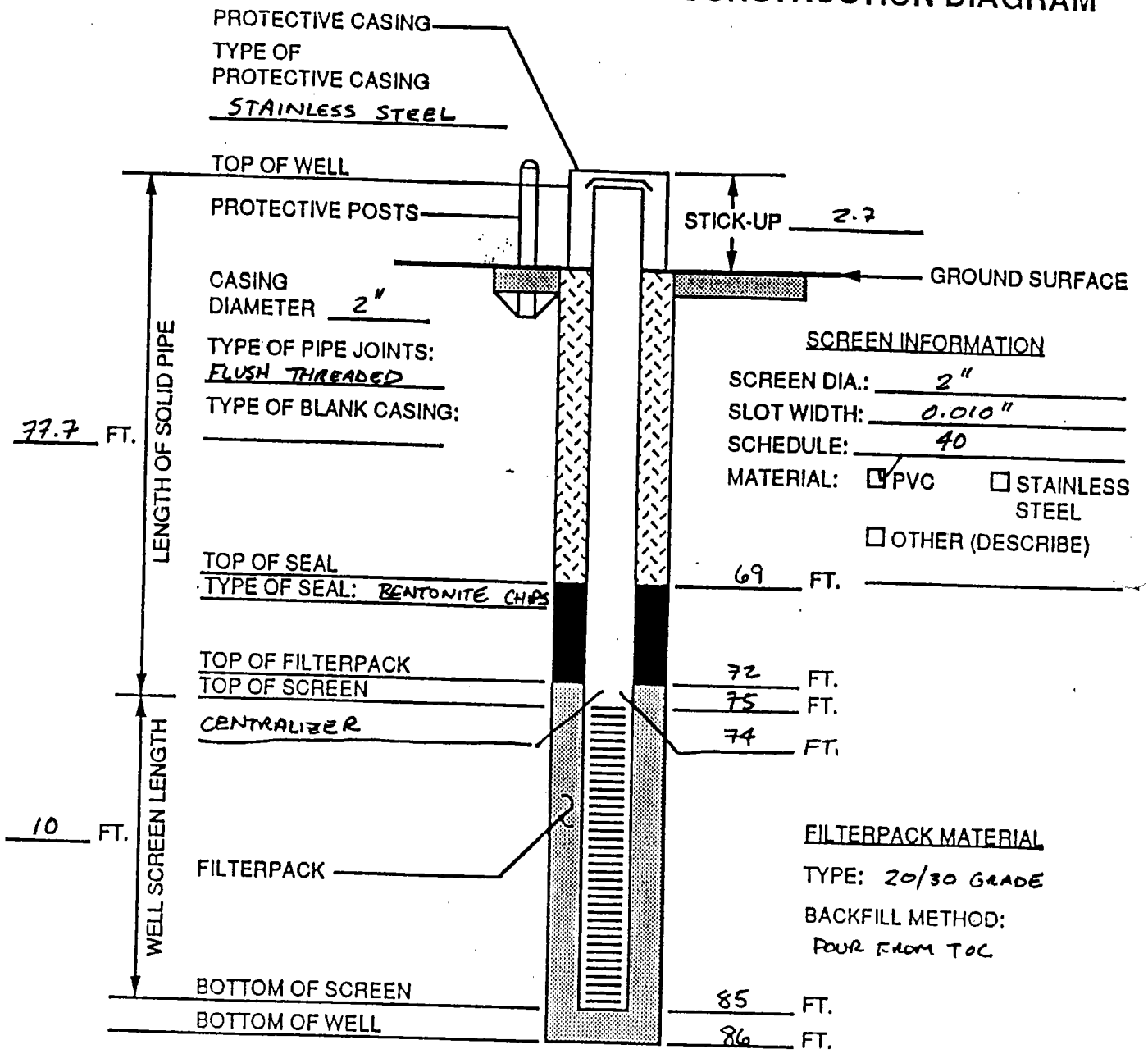
WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 10-27-93 1725 NTU >200
12-7-93 1730 TEMP. 9.7
Ph 5.08 COND. 30
NTU 17.4

DEPTH FROM TOP CASING AFTER DEVELOPMENT: —

ELEVATION GROUNDWATER —			PROJECT: RI OUs 1,2,7
DATE INSTALLED	STARTED: 10-31-93	COMPLETED: 11-2-93	LOCATION (Coordinates or Station): SITE 17
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR: Alan Workman
TOTAL DEPTH OF HOLE: 86'			HOLE NO. (As shown on drawing title and file number): CEF-17-12D

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1 hr / 57 HRS.

VOLUME OF WATER REMOVED: 66 GAL / 1750 GAL

VOLUME OF WATER ADDED: < 100 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLEAR

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 11-2-93 0915 NTU 34.7

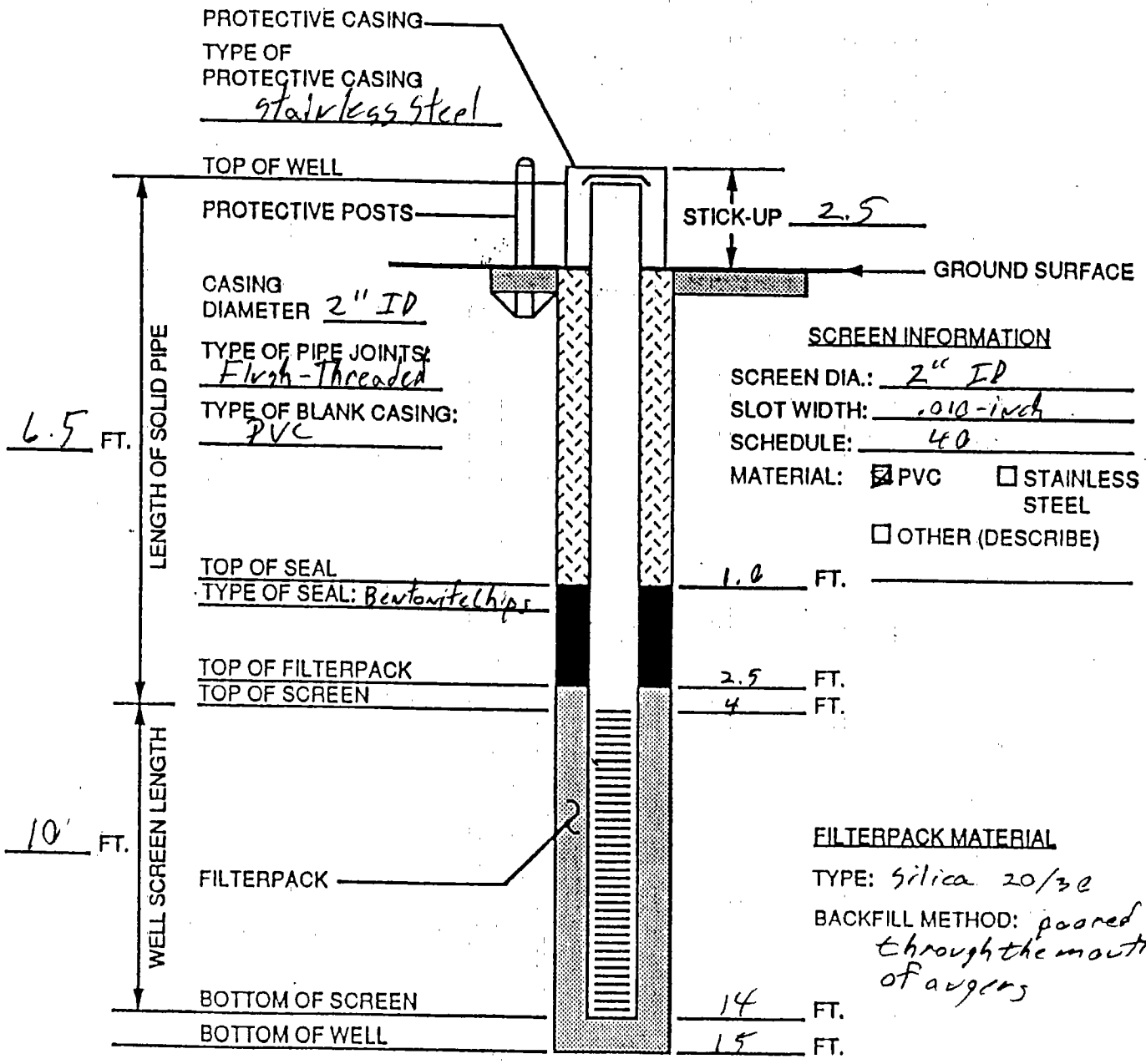
12-18-93 1730 TEMP. 20°C

Ph 6.95 COND. 250 NTU 14.50

DEPTH FROM TOP CASING AFTER DEVELOPMENT: —

ELEVATION GROUNDWATER —	PROJECT RIOUS 1,2,7
DATE INSTALLED 10-19-93 / STARTED 1430 / COMPLETED 1558	LOCATION (Coordinates or Station) Site #17
ELEVATION TOP OF HOLE —	SIGNATURE OF INSPECTOR Steven Murry
TOTAL DEPTH OF HOLE 15'	HOLE NO. (As shown on drawing title and file number) CEF-17-13S

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: over pumping

TIME SPENT DEVELOPMENT: 6 HR

VOLUME OF WATER REMOVED: 172 GAL

VOLUME OF WATER ADDED: —

DESCRIPTION OF PREDEVELOPMENT WATER: TURBID

DESCRIPTION OF POST DEVELOPMENT WATER: CLEAR

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

12-6-93 1445

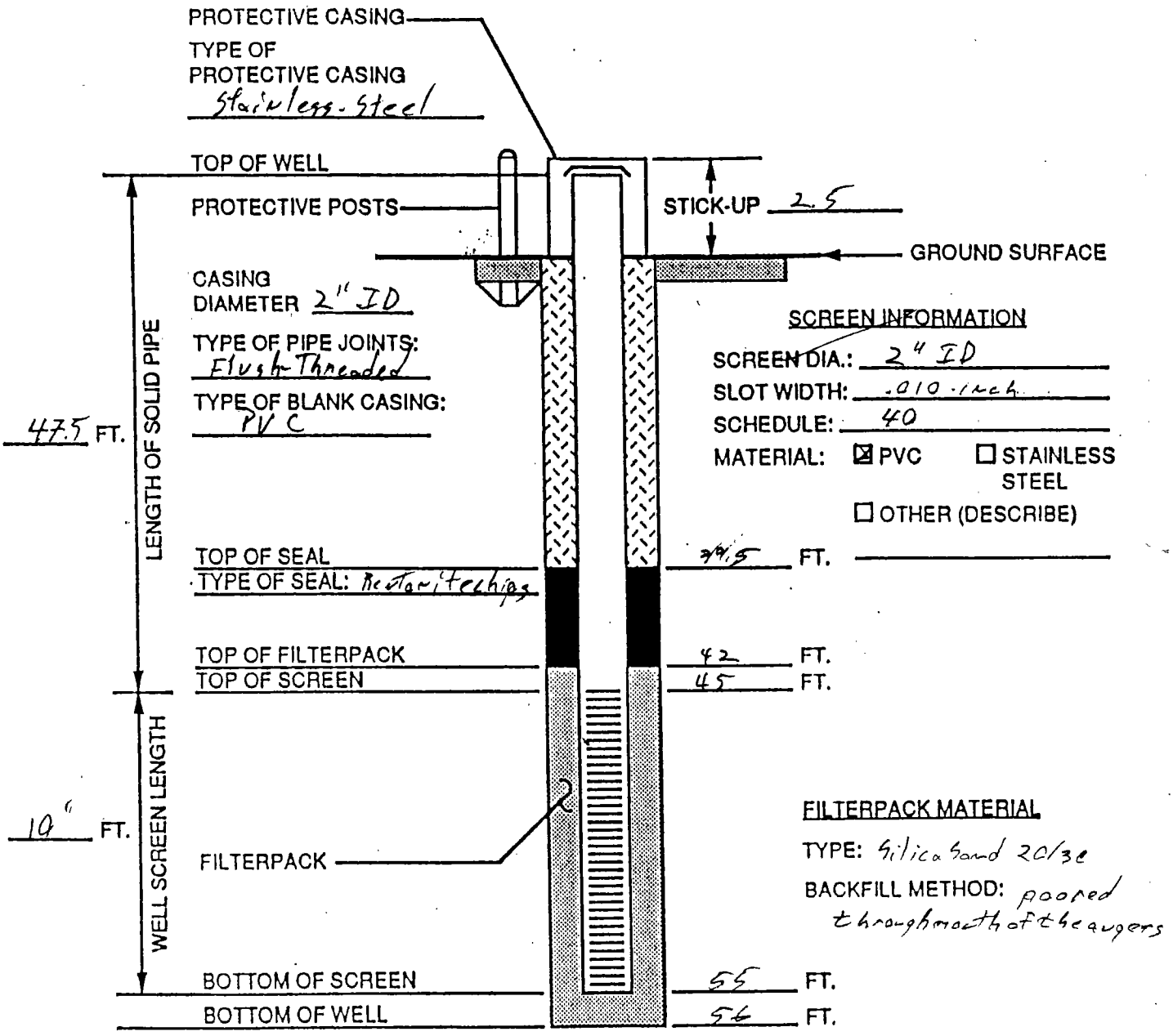
TEMP. 23.5 Ph. 5.40

COND. 80 NTU 7.09

DEPTH FROM TOP CASING AFTER DEVELOPMENT: —

ELEVATION GROUNDWATER —			PROJECT RI OUS 1, 2, 7
DATE INSTALLED 10-19-93	STARTED 1600	COMPLETED	LOCATION (Coordinates or Station) Site #1
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR Steven Murray
TOTAL DEPTH OF HOLE 56'			HOLE NO. (As shown on drawing title and file number) CEF-17-14I

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: over pumping

TIME SPENT DEVELOPMENT: 45 min / 1½ HR

VOLUME OF WATER REMOVED: 290 GAL / 485 GAL.

VOLUME OF WATER ADDED: —

DESCRIPTION OF PREDEVELOPMENT WATER: TURBID

DESCRIPTION OF POST DEVELOPMENT WATER: TURBID

WATER LEVEL SUMMARY

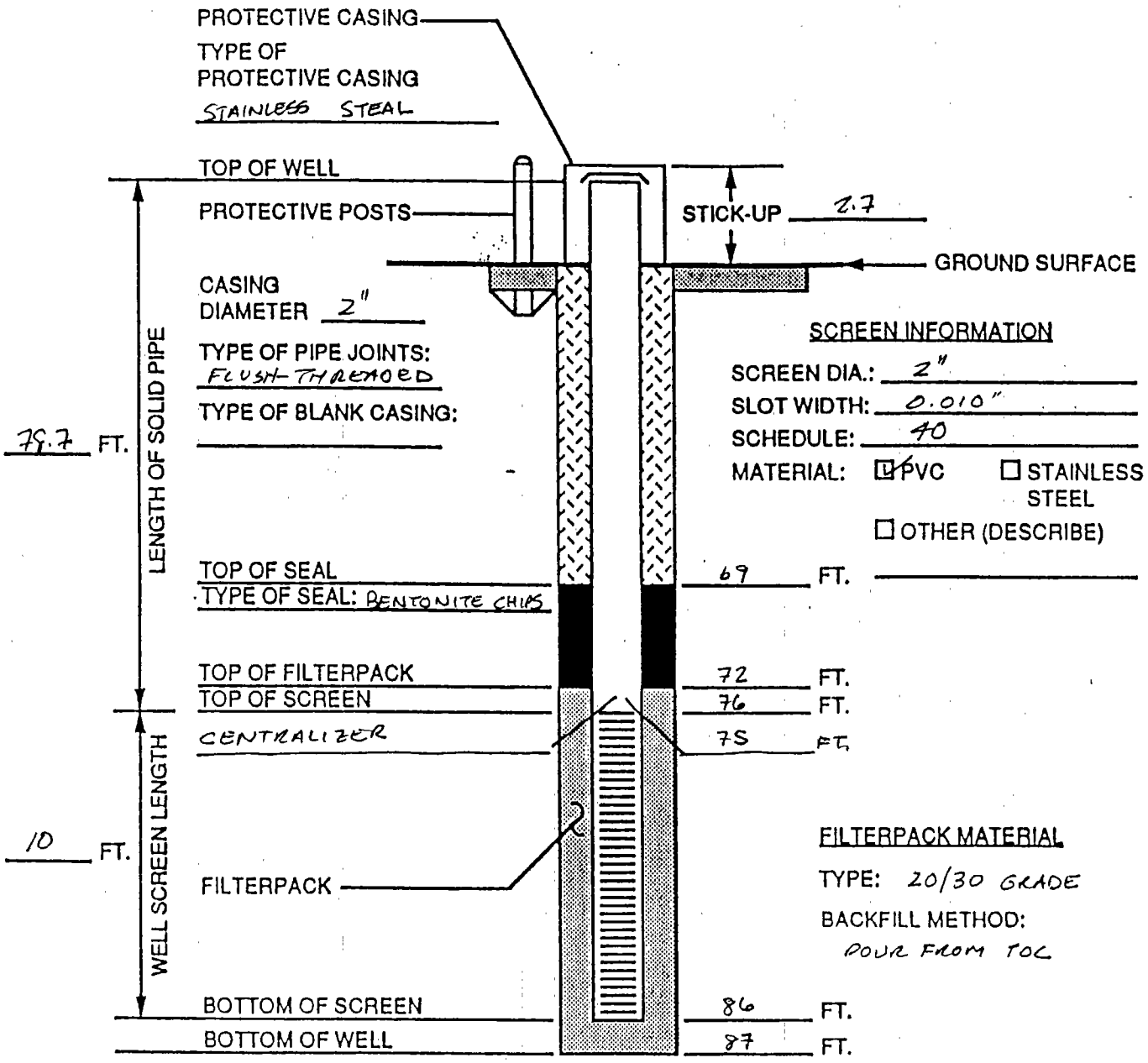
WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 10-19-93 0850 NTU >200
17-7-93 1630 TEMP. 19.9
Ph 5.16 COND. 29
NTU 12.9

DEPTH FROM TOP CASING AFTER DEVELOPMENT: —

ELEVATION GROUNDWATER —			PROJECT RI OUS 1,2,7
DATE INSTALLED	STARTED 10-28-93	COMPLETED 10-29-93	LOCATION (Coordinates or Station) SITE 17
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR Alan Wolfman
DEPTH OF HOLE 87'			HOLE NO. (As shown on drawing title and file number) CEF-17-15D

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1 hr 10 min / 6½ HR

VOLUME OF WATER REMOVED: 70 GAL / 195 GAL

VOLUME OF WATER ADDED: >100 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLEAR

WATER LEVEL SUMMARY

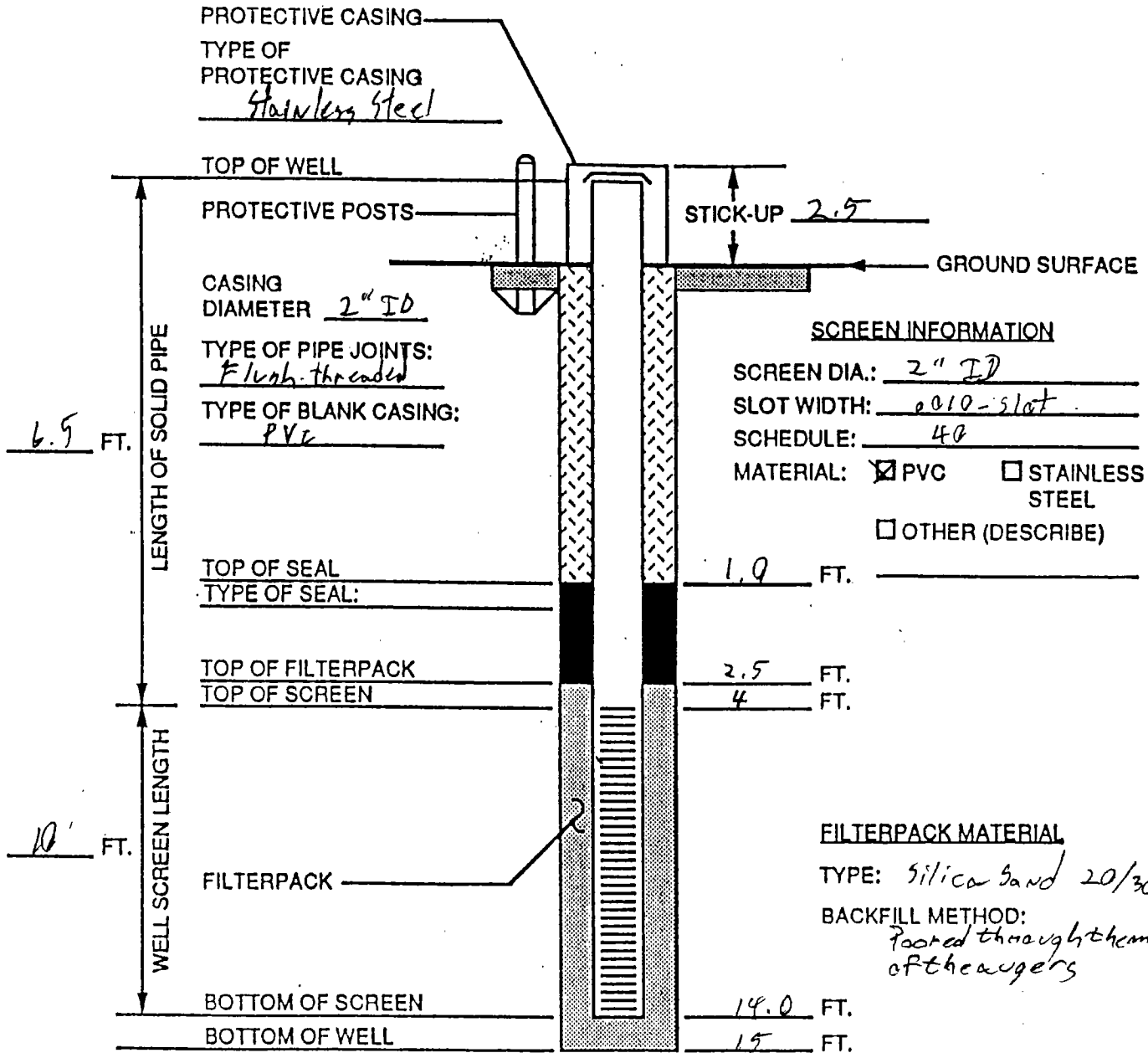
WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 10-29-93 1545 NTU 19.37
12-6-93 1530 TEMP. 20.3
Ph 6.74 COND. 372
NTU 9.85

DEPTH FROM TOP CASING AFTER DEVELOPMENT: —

ELEVATION GROUNDWATER			PROJECT: RI OU3. 1, 2, 7
DATE INSTALLED: 10-19-93	STARTED: 1615	COMPLETED: 1900	LOCATION (Coordinates or Station): Site #17
ELEVATION TOP OF HOLE			SIGNATURE OF INSPECTOR: Steven Murray
TOTAL DEPTH OF HOLE: 15'			HOLE NO. (As shown on drawing title and file number): CEF-17-~~115~~ ~~165~~ 165

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: Over Pumping

TIME SPENT DEVELOPMENT: 40 MIN. / 3 HR

VOLUME OF WATER REMOVED: 55 GAL. / 248 GAL.

VOLUME OF WATER ADDED: —

DESCRIPTION OF PREDEVELOPMENT WATER: TURBID

DESCRIPTION OF POST DEVELOPMENT WATER: CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 10-20-93 0850 NTU 110.'

12-5-93 1500

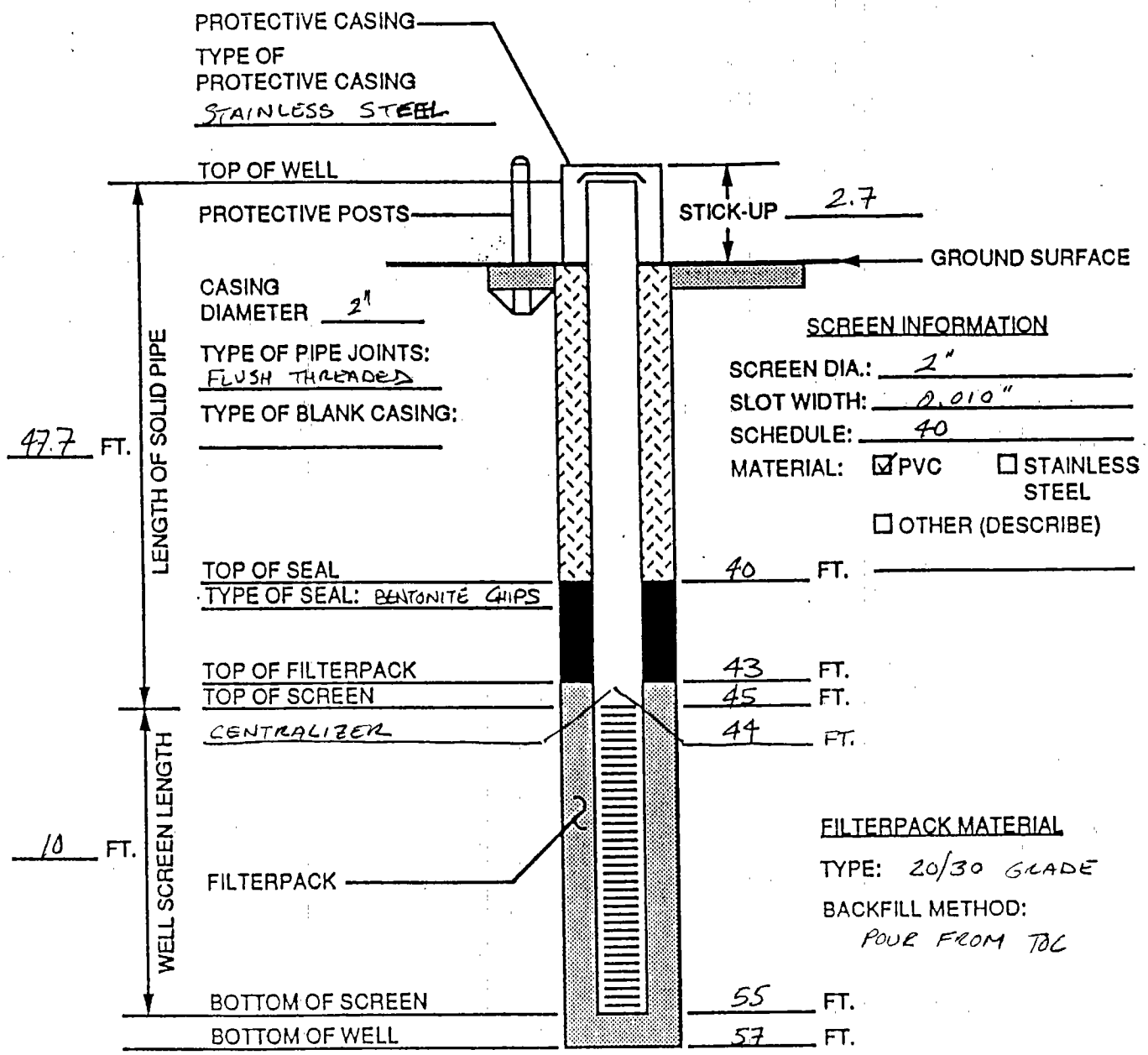
TEMP. 22.1 Ph 5.28

COND. 72 NTU 9.65

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT RI OUS 1,2,7
DATE INSTALLED	STARTED 10-25-93	COMPLETED 10-26-93	LOCATION (Coordinates or Station) SITE 17
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR [signature]
TOTAL DEPTH OF HOLE 57'			HOLE NO. (As shown on drawing title and file number) CEF-17-17I

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1 hr / 14½ HR

VOLUME OF WATER REMOVED: 660 GAL / 752 GAL

VOLUME OF WATER ADDED: > 200 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 10-26-93 0840 NTU > 200

12-6-93 1615

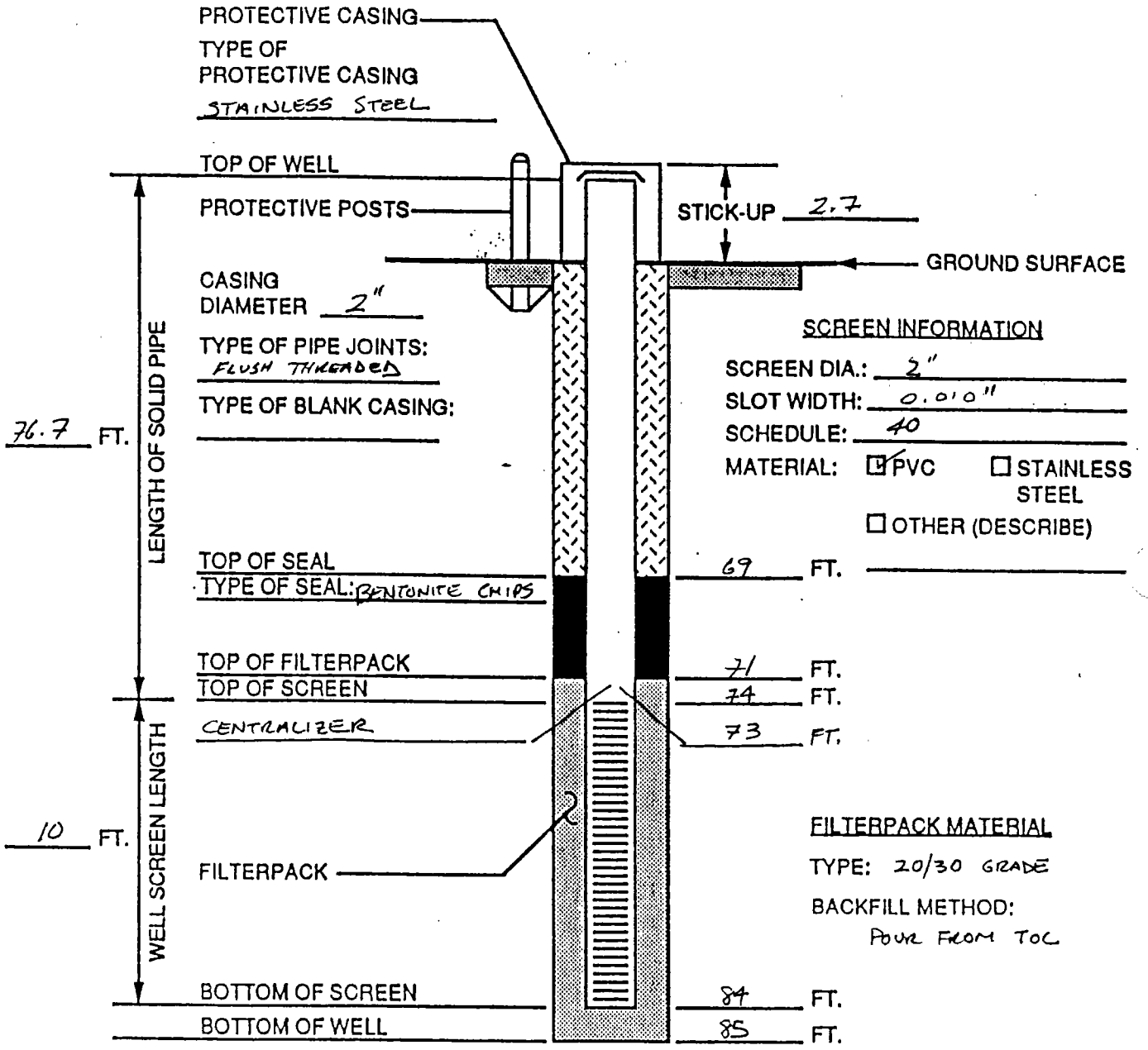
TEMP. 19.9 Ph 5.57

COND. 38 NTU 21.8

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT RI OUS 1,2,7
DATE INSTALLED	STARTED 10-27-93	COMPLETED 10-28-93	LOCATION (Coordinates or Station) SITE 17
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR Alan Workman
TOTAL DEPTH OF HOLE 85'			HOLE NO. (As shown on drawing title and file number) CEF-17-18D

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1 hr / 6½ HR

VOLUME OF WATER REMOVED: 385 GAL / 586 GAL

VOLUME OF WATER ADDED: > 200 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLEAR

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 10-28-93 0905 NTU 6.24

12-5-93 1730

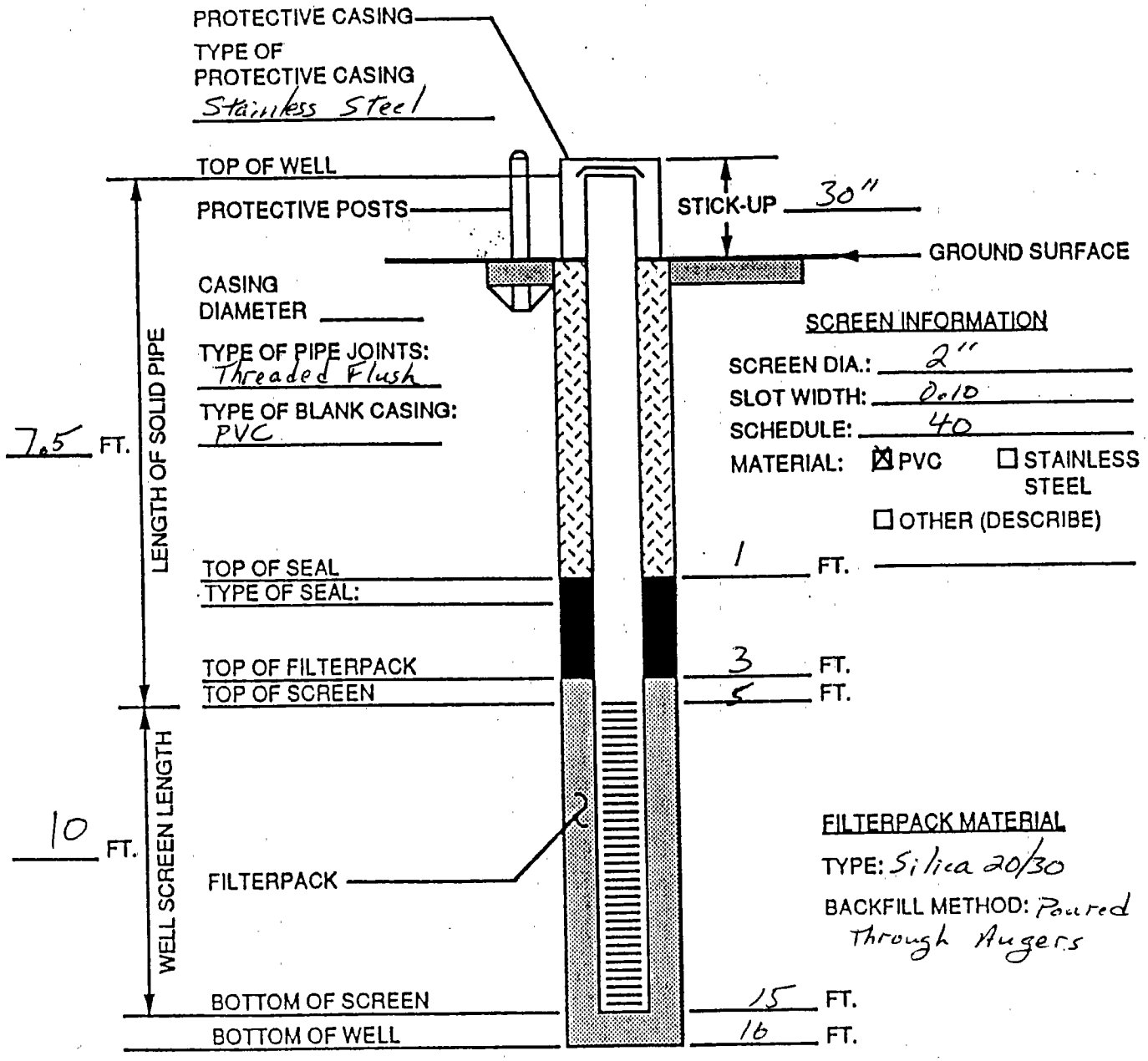
TEMP. 21.1 Ph. 6.64

COND. 332 NTU 12.19

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT RIOUS 1,2,7
DATE INSTALLED 11/3/93	STARTED 11/3/93	COMPLETED 11/3/93	LOCATION (Coordinates or Station) SITE 17
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR D. HEBERT
TOTAL DEPTH OF HOLE 16'			HOLE NO. (As shown on drawing title and file number) CEF-17-19-S

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" Centrifugal

TIME SPENT DEVELOPMENT: 30 min./2½ HR.

VOLUME OF WATER REMOVED: 55 GAL./55 GAL

VOLUME OF WATER ADDED: N/A

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: SC CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 11-3-93 1000 NTU 65.3

12-5-93 1630

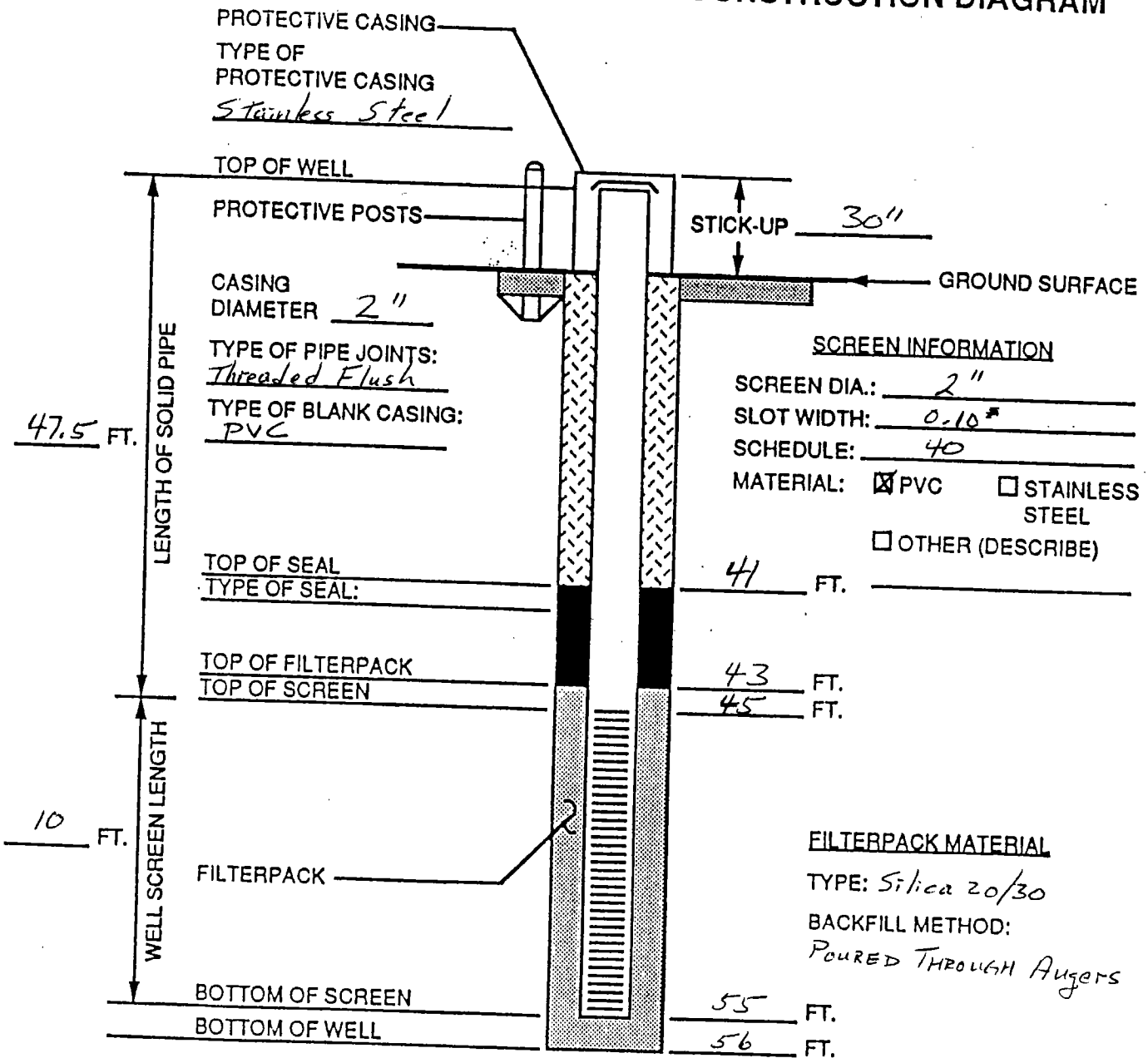
TEMP. 21.9 Ph 5.51

COND. 113 NTU 3.01

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT RIOLIS 1,2,7
DATE INSTALLED 11/1/93	STARTED 11/1/93	COMPLETED 11/1/93	LOCATION (Coordinates or Station) SITE 17
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR D. HEBERT
TOTAL DEPTH OF HOLE 56 ft.			HOLE NO. (As shown on drawing title and file number) CEF,-17-20-T

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1 Hr. / 3 HR

VOLUME OF WATER REMOVED: 350 Gal. / 55 GAL

VOLUME OF WATER ADDED: >50

DESCRIPTION OF PREDEVELOPMENT WATER: VERY CLOUDY - CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLEAR

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 11-1-93 1540 NTU 97.5

12-5-93 1715

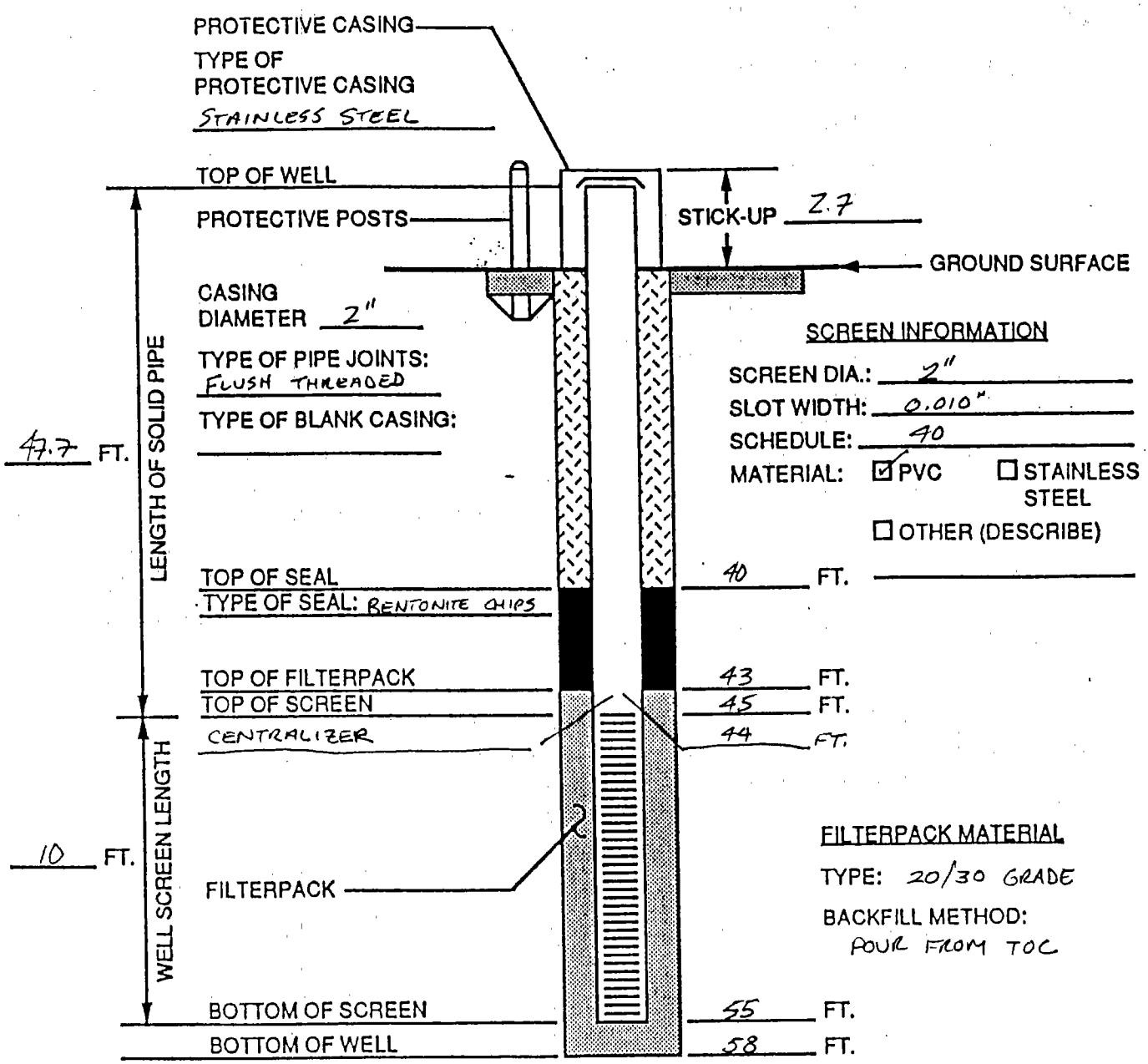
TEMP. 21.1 Ph 5.78

COND. 31 NTU 11.86

DEPTH FROM TOP CASING AFTER DEVELOPMENT: —

ELEVATION GROUNDWATER —			PROJECT RI OUS 1, 2, 7
DATE INSTALLED	STARTED 10-26-93	COMPLETED 10-27-93	LOCATION (Coordinates or Station) SITE 17
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR [signature]
TOTAL DEPTH OF HOLE 58'			HOLE NO. (As shown on drawing title and file number) CEF-17-21 I

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1 hr / 8 HR

VOLUME OF WATER REMOVED: 715 GAL / 170 GAL.

VOLUME OF WATER ADDED: > 200 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 10-26-93 1835 NTU 7200

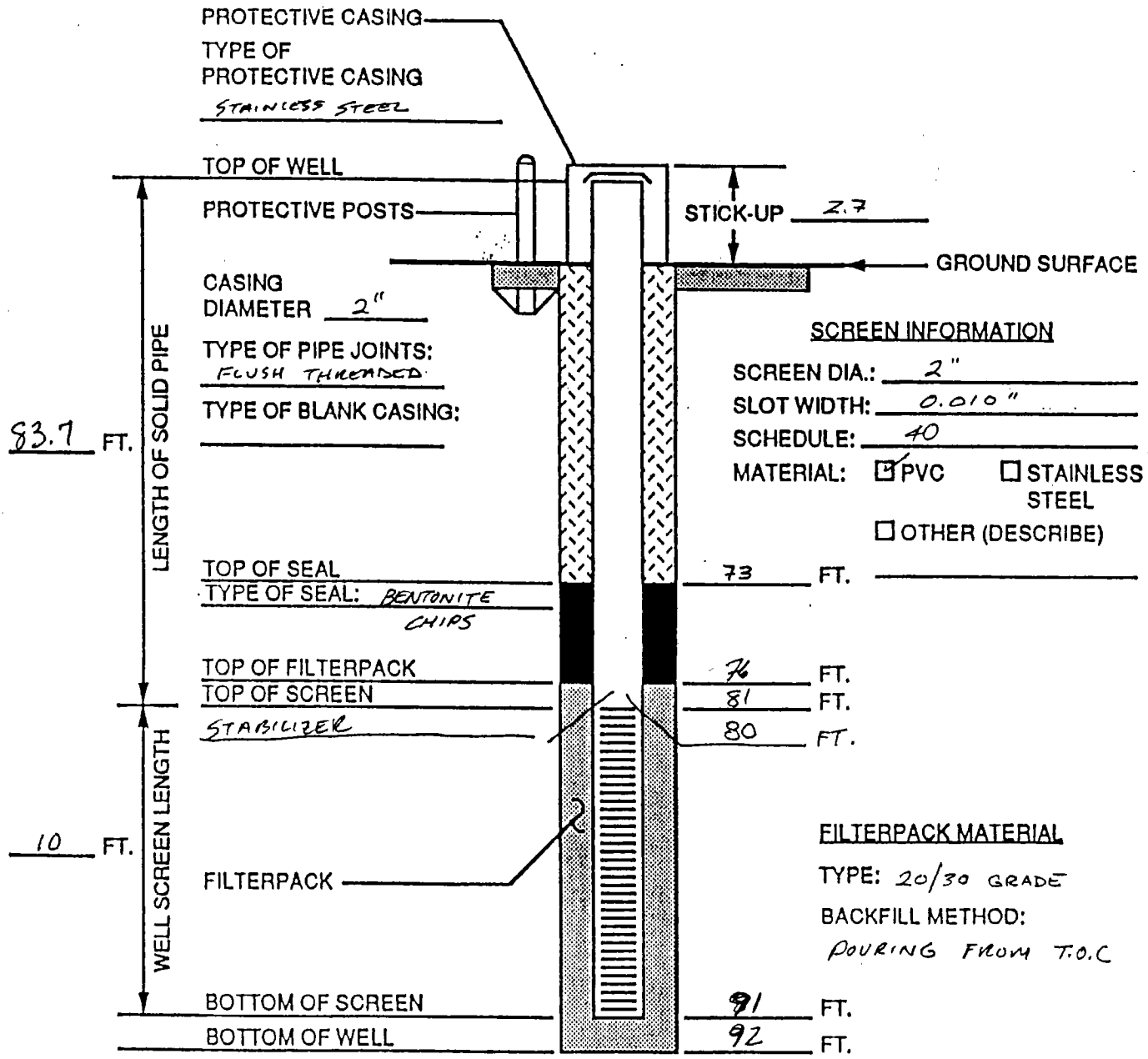
12-21-93 1730 TEMP. 18°C

PH 6.51 COND. 30 NTU 15.40

DEPTH FROM TOP CASING AFTER DEVELOPMENT: —

ELEVATION GROUNDWATER —			PROJECT RI OUS 1,2,7
DATE INSTALLED 10-17/19-93	STARTED 17 10-~~18~~-93	COMPLETED 10-19-93	LOCATION (Coordinates or Station) SITE 17
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR Alan Workman
TOTAL DEPTH OF HOLE 92'			HOLE NO. (As shown on drawing title and file number) LEF-17-22D

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: LG CAPACITY WATERRA

TIME SPENT DEVELOPMENT: 1 hr 15 MIN / 55½ HR

VOLUME OF WATER REMOVED: 75 GAL / 1350 GAL.

VOLUME OF WATER ADDED: < 100 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 10-19-93 1445 NTU >200

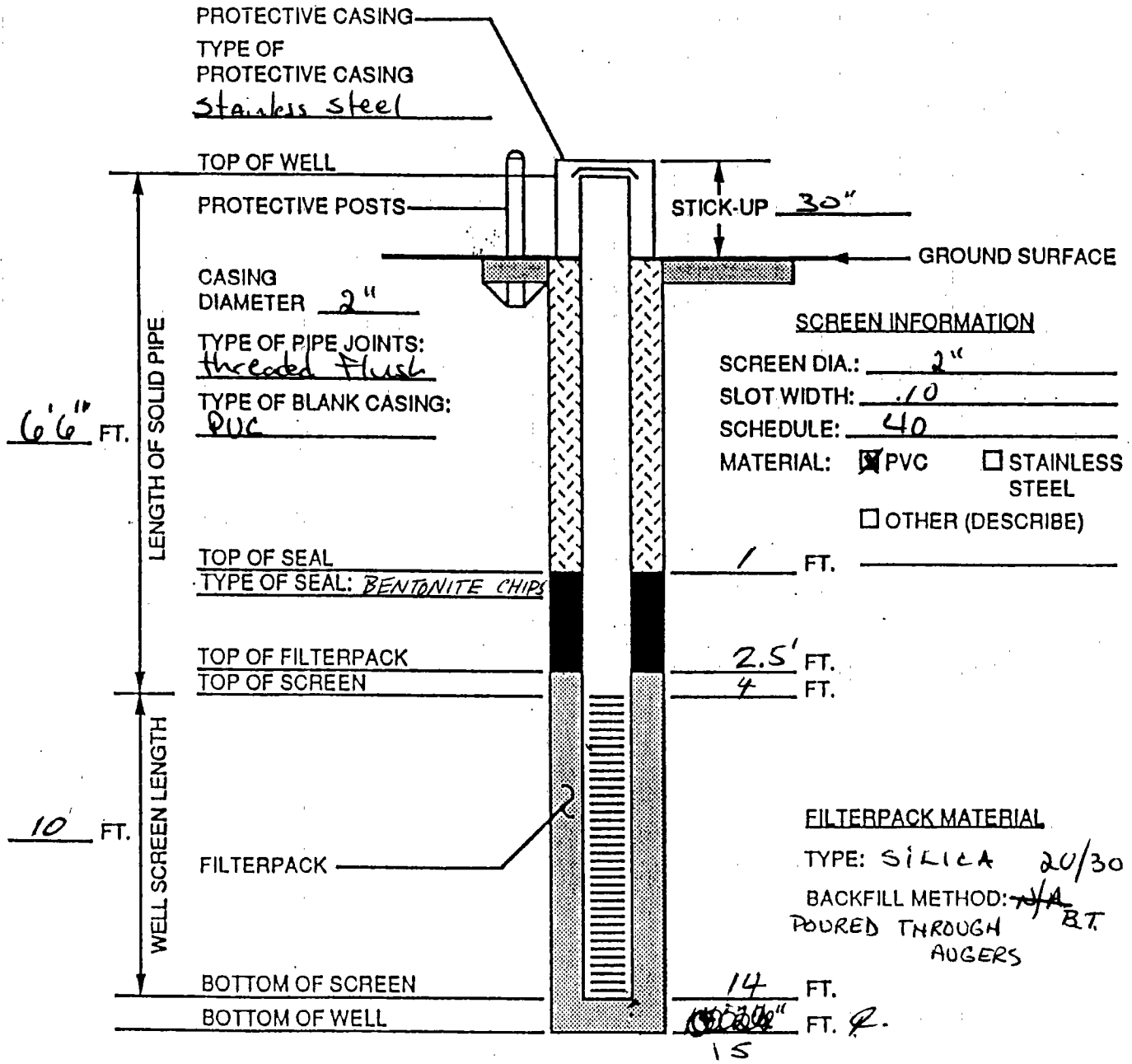
1-3-94 1700 TEMP. 19.0°C

Ph 7.03 COND 230 NTU 101.8

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT RIOUS-1,2,7
DATE INSTALLED 10/25/93	STARTED 10/25/93	COMPLETED 10/26/93	LOCATION (Coordinates or Station) SITE 17
ATION TOP OF HOLE —			SIGNATURE OF INSPECTOR Alan Workman
TOTAL DEPTH OF HOLE 15'			HOLE NO. (As shown on drawing title and file number) CEF-17-823-S

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 30 min / 4 HR.

VOLUME OF WATER REMOVED: 40 GAL / 85 GAL.

VOLUME OF WATER ADDED: > 10 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: SC CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 10-26-93 1000 NTU 152.4

12-8-93 1300

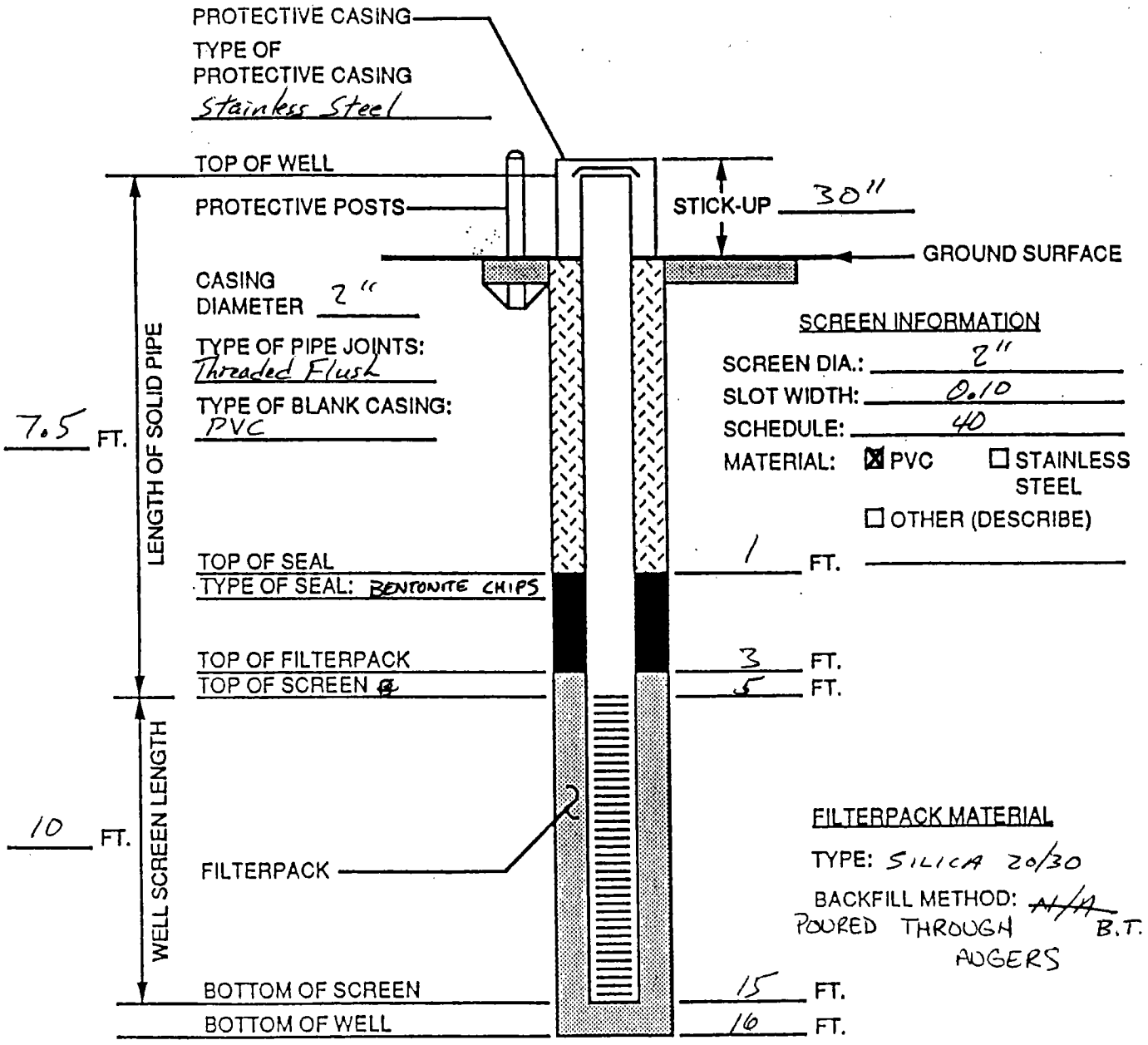
TEMP. 20.9 Ph 5.45

COND. 60 NTU 7.74

DEPTH FROM TOP CASING AFTER DEVELOPMENT: —

ELEVATION GROUNDWATER —			PROJECT RIOUS 1,2,7
DATE INSTALLED 10/29/93	STARTED 10/29/93	COMPLETED 10/29/93	LOCATION (Coordinates or Station) SITE 17
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR Alan Workman
TOTAL DEPTH OF HOLE 16'			HOLE NO. (As shown on drawing title and file number) ~~CEF-17-23-5~~ DH CEF-17-24-5

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 30 MIN / 17½ HR

VOLUME OF WATER REMOVED: 16 GAL / 530 GAL.

VOLUME OF WATER ADDED: > 10 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 10-29-93 1705 NTU >200

12-17-93 1700

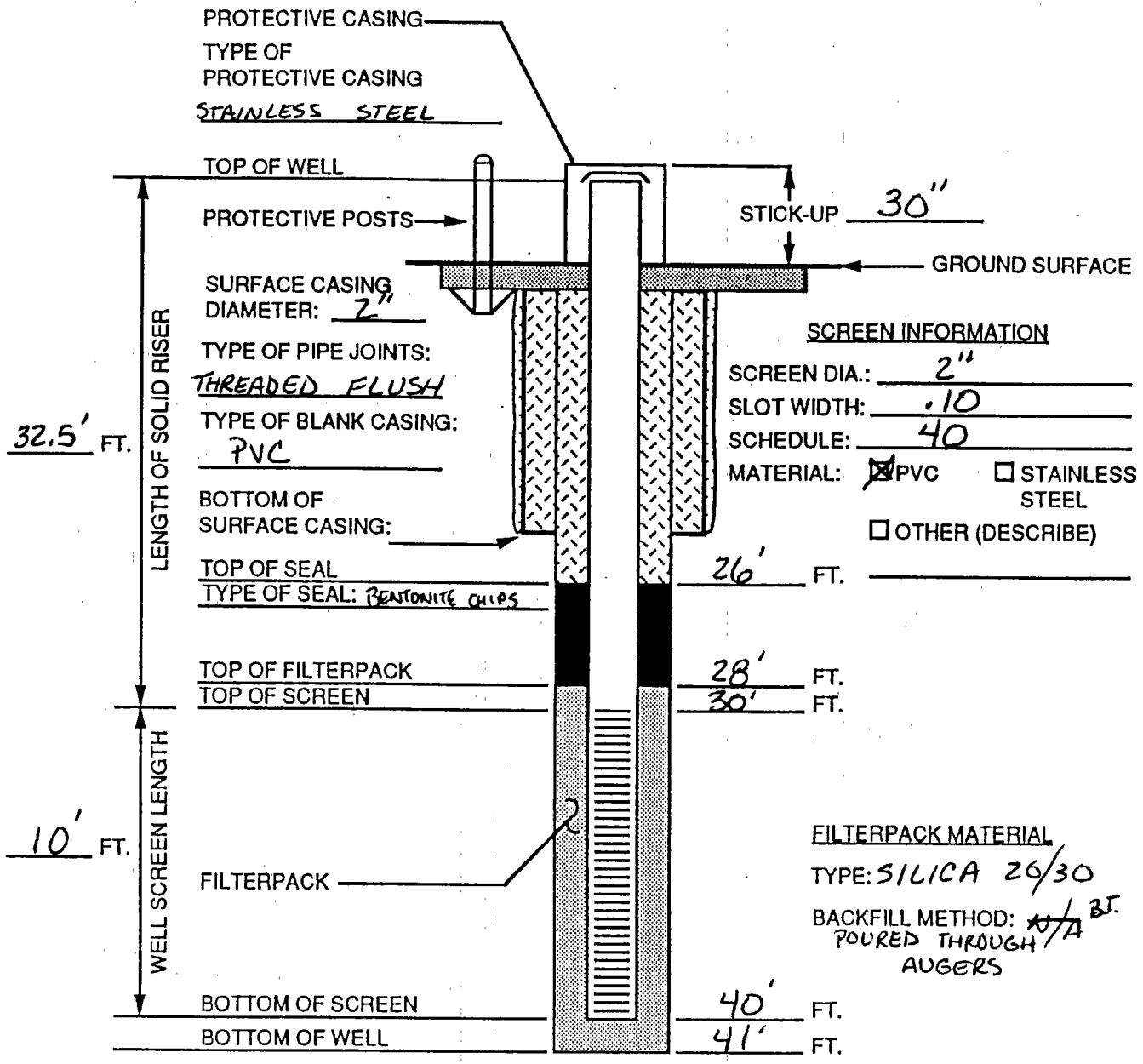
TEMP. 19.0 Ph 5.95

COND. 350 NTU 13.52

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT R100S 1,2,7
DATE INSTALLED 10/28/93	STARTED 10/28/93	COMPLETED 10/29/93	LOCATION (Coordinates or Station) SITE 17
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR Alan Workman
TOTAL DEPTH OF HOLE 41'			HOLE NO. (As shown on drawing title and file number) CEF-17-25SI

DOUBLE-CASED MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1 hr / 42 HR

VOLUME OF WATER REMOVED: 200 GAL / 879 GAL.

VOLUME OF WATER ADDED: > 10 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: 91.8 NTU SL. CLEAR

WATER LEVEL SUMMARY

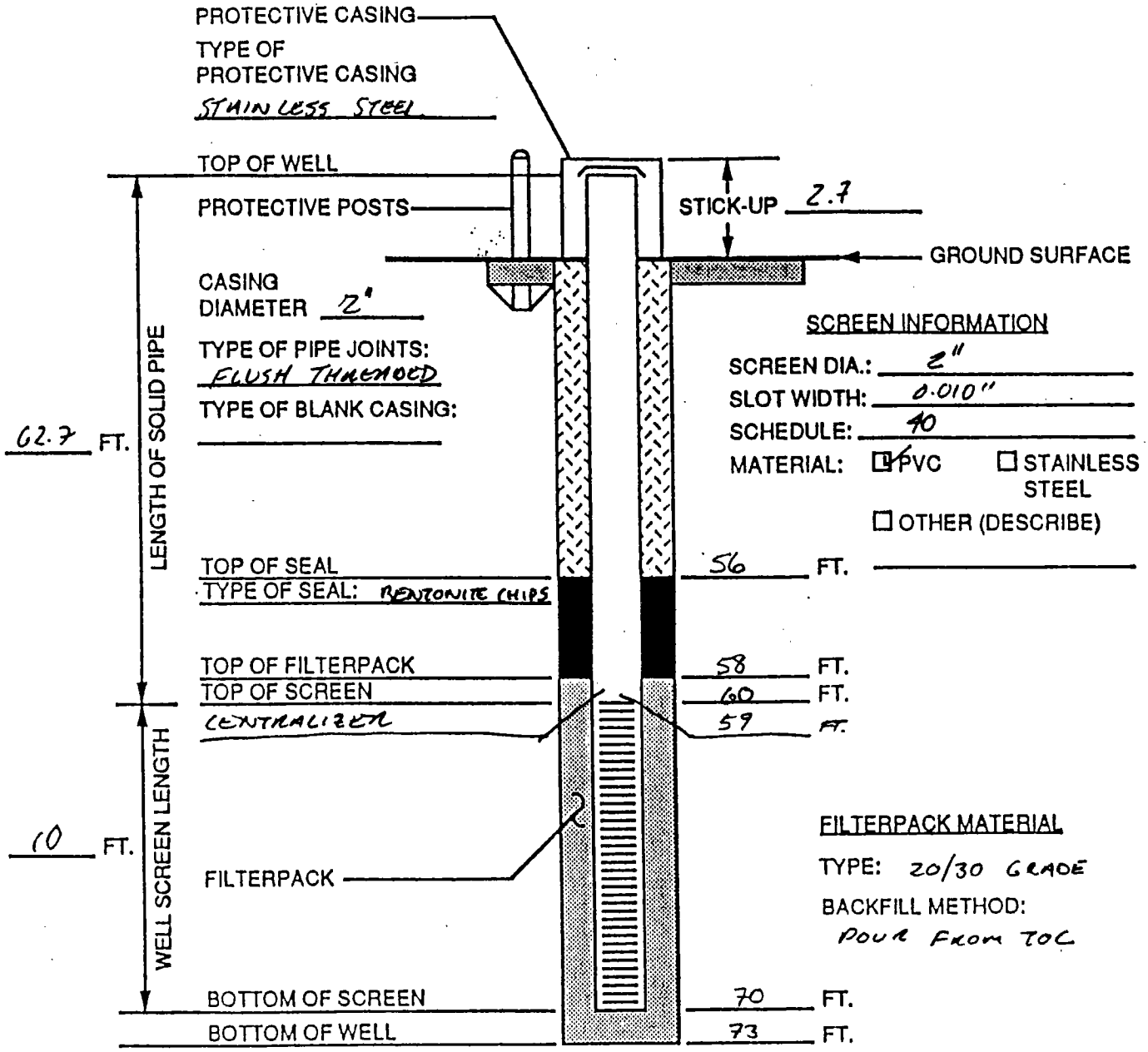
WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 10-29-93 0905 NTU 91.8
12-21-93 1130 TEMP 18.5°C
Ph 6.47 COND. 30 NTU 16.1

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT RI OU8 1,2,7
DATE INSTALLED	STARTED 11-3-93	COMPLETED 11-3-93	LOCATION (Coordinates or Station) SITE 17
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR Alan Woolman
TOTAL DEPTH OF HOLE 73			HOLE NO. (As shown on drawing title and file number) CEF-17-26I

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1 hr / 49 HR

VOLUME OF WATER REMOVED: 440 GAL / 1340 GAL.

VOLUME OF WATER ADDED: < 100 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 11-3-93 1510 NTU >200

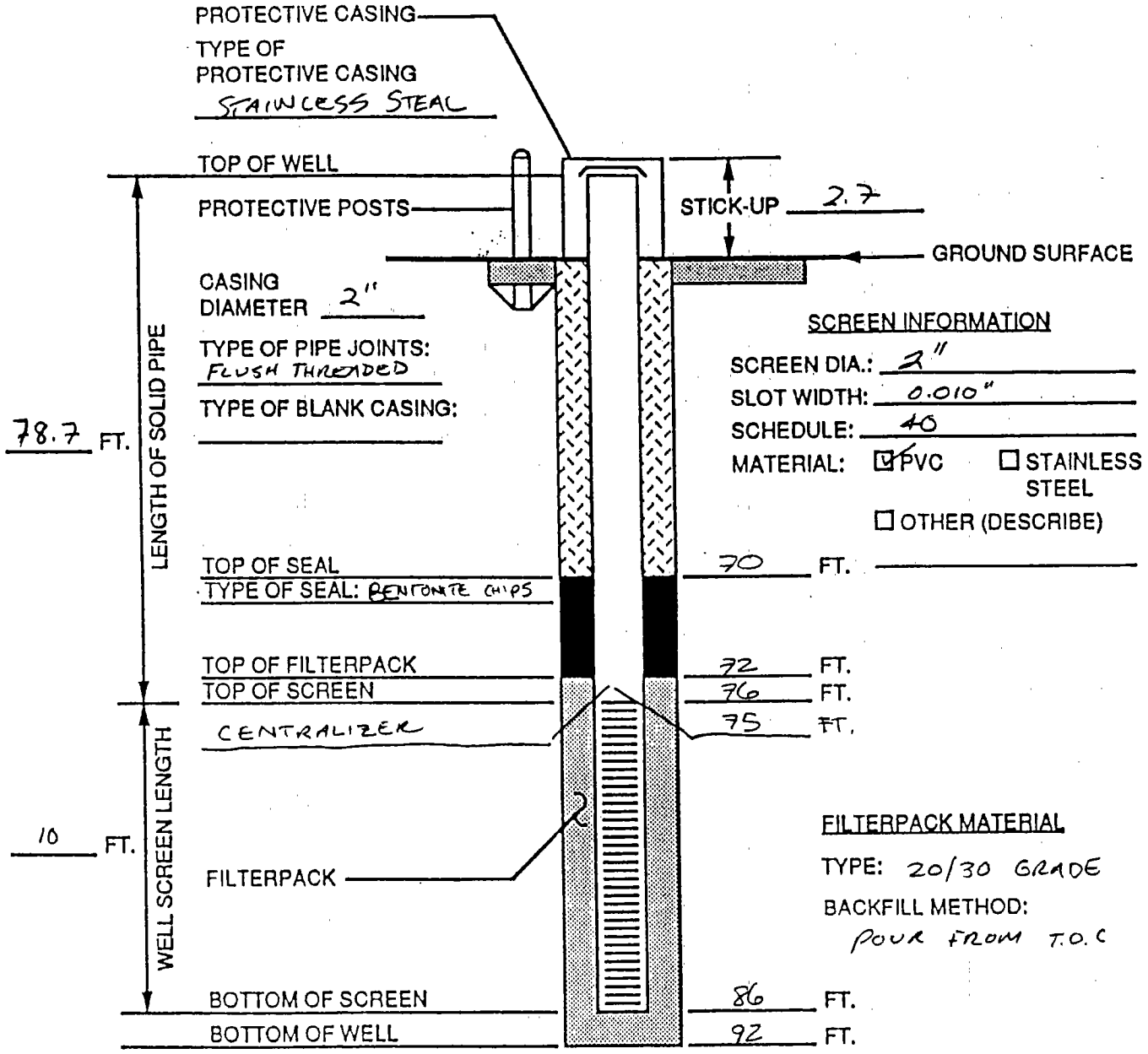
12-27-93 1700 TEMP. 19.0°C

Ph 6.05 COND. 20 NTU 17.36

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER —			PROJECT RI OUS 1,2,7
DATE INSTALLED	STARTED 11-10-93	COMPLETED 11-11-93	LOCATION (Coordinates or Station) SITE 17
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR [signature]
TOTAL DEPTH OF HOLE (W) ~~86~~ 92'			HOLE NO. (As shown on drawing title and file number) CEF-17-27D

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL PLUS WATERA

TIME SPENT DEVELOPMENT: 1 hr / 6½ HR

VOLUME OF WATER REMOVED: 220/210 GAL

VOLUME OF WATER ADDED: <200 GAL

DESCRIPTION OF PREDEVELOPMENT WATER: CLOUDY

DESCRIPTION OF POST DEVELOPMENT WATER: CLOUDY

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 11-11-93 1020 NTU >200

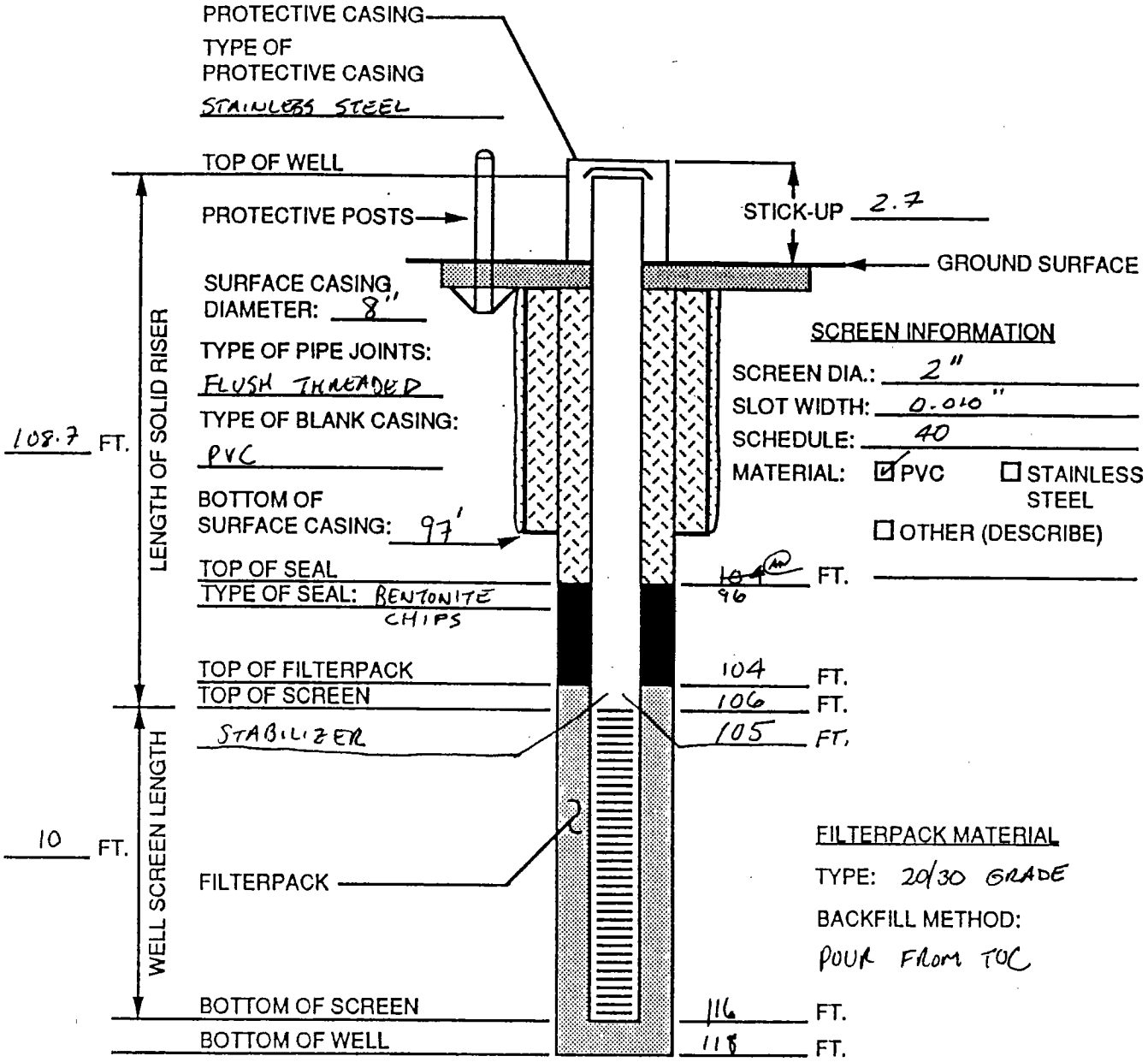
12-19-93 1530 TEMP. 17.0°C

Ph 6.95 COND. 340 NTU 15.91

DEPTH FROM TOP CASING AFTER DEVELOPMENT: —

ELEVATION GROUNDWATER —			PROJECT R1 OUS 1,2,7
DATE INSTALLED	STARTED 11-30-93	COMPLETED 12-13-93	LOCATION (Coordinates or Station) SITE 17
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR Alan Workman
TOTAL DEPTH OF HOLE 118'			HOLE NO. (As shown on drawing title and file number) CEF-17-28-D

DOUBLE-CASED MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: 2" CENTRIFUGAL

TIME SPENT DEVELOPMENT: 1hr / 3½ HR

VOLUME OF WATER REMOVED: 780 / 130 GAL

VOLUME OF WATER ADDED: < 200

DESCRIPTION OF PREDEVELOPMENT WATER: CLEAR

DESCRIPTION OF POST DEVELOPMENT WATER: CLEAR

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 12-13-93 1500 NTU 0.31

12-20-93 1030 TEMP. 19.0°C

PH 6.80 COND. 280 NTU 0.68

DEPTH FROM TOP CASING AFTER DEVELOPMENT: —

APPENDIX E

APPENDIX F

GROUNDWATER SAMPLING LOGS

V

GROUNDWATER SAMPLING LOG

CLIENT NAS Cecil Field
SITE OU2 Site 5
WELL NUMBER CEF-5-3s
JOB NUMBER 8500-08

TOTAL WELL DEPTH 13.57
WELL DIAMETER 2 inch
BOREHOLE DIAMETER 8¼ inch
TOC EL= 71.90 Ft (NGVD)

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 5.50
STANDING WATER COLUMN (FT) 8.07

AMT ONE WELL VOL (GAL) 1.13
TOTAL GAL TO BE PURGED 5.65

PURGING SYSTEM BALER
SAMPLING SYSTEM BALER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-1-93	1122 ~~1105BT~~	0.5 ~~/BT~~	102	5.10	19.8	28.2	32.9		EXSISTING WELL	
	1126	2.0	108	5.08	19.1	OFF SCALE				
	1130	4.0	103	5.05	19.9	" "	0.0			
	1133	5.5	102	5.03	20.8	" "				
	1137	7.5	102	5.02	20.2	" "	0.0			
	1141	9.0	101	5.03	19.9	" "				

ES: WELL HAS TRACES OF PRODUCT IN IT.

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT U S CECIL FIELD
SITE OU 2 SITES
WELL NUMBER CEF-5-4S
JOB NUMBER 8500.08

TOTAL WELL DEPTH 13.7'
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH
TOC ELEVATION (FT. NGVD) 71.68'

MIN NUMBER WELL VOL TO BE PURGED ____
VOL PER VERTICAL FT CASING (GAL) 0.14 GAL
VOL PER FT BOREHOLE (LESS CASING)(GAL) ____

STATIC WATER LEVEL (FT) 4.43
STANDING WATER COLUMN (FT) 8.84

AMT ONE WELL VOL (GAL) 1.24
TOTAL GAL TO BE PURGED 6.20

PURGING SYSTEM BALER
SAMPLING SYSTEM BALER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
2-1-93	1200	0.5	79.0	5.06	19.0	15.45	26.8		EXSISTING WELL	
	1205	2.0	92.0	5.02	18.9	OFF SCALE				
	1209	4.0	89.0	4.99	19.8	" "	0.0			
	1214	6.0	82.0	4.89	21.0	" "				
	1218	8.0	98.0	4.89	20.9	" "	0.0			
	1221	10.0	73.0	4.88	18.5	" "				

ES: WELL HAS SLIGHT SMELL OF PRODUCT IN IT.

TURBIDITY:

CLIENT NAS Cecil Field
SITE OU 2 Site 5
WELL NUMBER CEF-5-5s
JOB NUMBER 8500-08

TOTAL WELL DEPTH 13.52
WELL DIAMETER 2 inch
BOREHOLE DIAMETER 8¼ inch
T.O.C. El = 72.29 Ft (NGVD)

MIN NUMBER WELL VOL TO BE PURGED .5
VOL PER VERTICAL FT CASING (GAL) 0.14 gal
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

PRODUCT LEVEL 7.00 ESTIMATED
STATIC WATER LEVEL (FT) 7.80
STANDING WATER COLUMN (FT) 6.32

AMT ONE WELL VOL (GAL) .88
TOTAL GAL TO BE PURGED 4.43

PURGING SYSTEM PT ~~BALER~~ PARASALTIC PUMP
SAMPLING SYSTEM PT ~~BALER~~ PARASALTIC PUMP

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-2-93	1401	1	82.0	4.80	21.0	31.4	116		EXSISTING WELL	
	1407	3	75.0	4.77	21.3	13.37				
	1413	5	79.0	4.78	21.8	8.38	0.0			
	1419	7	79.0	4.76	21.9	2.83				
	1425	9	78.0	4.75	21.5	6.47	0.0			

NOTES: WELL HAS PRODUCT IN IT.

TURBIDITY:

PURGE [illegible].33 GAL./MIN.

CLIENT AS Cecil Field
SITE d2 site 5
WELL NUMBER CEF-5-6s
JOB NUMBER 8500-08

TOTAL WELL DEPTH 17
WELL DIAMETER 2 inch
BOREHOLE DIAMETER 8¼ inch
TOC EL = 73.92 ft (NGVD)

MIN NUMBER WELL VOL TO BE PURGED
VOL PER VERTICAL FT CASING (GAL) 0.17 gal
VOL PER FT BOREHOLE (LESS CASING)(GAL)

PRODUCT LEVEL 8.20 ESTIMATED
STATIC WATER LEVEL (FT) 9.60
STANDING WATER COLUMN (FT) 3.87

AMT ONE WELL VOL (GAL) .54
TOTAL GAL TO BE PURGED 2.80

PURGING SYSTEM PARASALTIC PUMP
SAMPLING SYSTEM BT PARASALTIC PUMP

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-2-93	1530	1	91.0	4.91	21.0	26.1	210		EXSISTING WELL	
	1536	3	84.0	4.86	21.2	14.75				
	1542	5	79.0	4.81	21.6	7.61	0.0			
	1548	7	81.0	4.78	21.1	3.29				
	1554	9	81.0	4.79	21.4	2.98	0.0			

NOTES: WELL HAS PRODUCT IN IT
PURGE RATE: .33 GAL/MIN.

TURBIDITY:

CLIENT NAS CECIL FIELD
SITE OU2 SITE 5
WELL NUMBER CEF-5-7S
JOB NUMBER 8500-08

TOTAL WELL DEPTH 12.61'
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH
TOC ELEVATION (FT. NGVD) 73.88'

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14 GAL
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 5.12
STANDING WATER COLUMN (FT) 7.49

AMT ONE WELL VOL (GAL) 1.05
TOTAL GAL TO BE PURGED 5.25

PURGING SYSTEM BALER
SAMPLING SYSTEM BALER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-1-93	0912	0.5	304	6.75	18.8	55.0	23.1		EXSISTING WELL	
	0915	1.5	315	6.56	20.7	167.0				
	0918	3.0	229	6.40	20.4	OFF SCALE	0.0			
	0921	4.5	212	6.27	20.8	" "				
	0925	6.0	182	6.17	21.0	" "	0.0			
	0930	8.0	163	6.10	21.0	" "				

NOTES:

TURBIDITY:

CLIENT CECIL FIELD
SITE OU 2 SITE 5
WELL NUMBER CEF-17BR.5-8S
JOB NUMBER 8500-08

TOTAL WELL DEPTH 14.5'
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8 1/4-INCH

MIN NUMBER WELL VOL TO BE PURGED
VOL PER VERTICAL FT CASING (GAL) 0.14 GAL
VOL PER FT BOREHOLE (LESS CASING)(GAL) ——

STATIC WATER LEVEL (FT) 3.75'
STANDING WATER COLUMN (FT) 10.55'

AMT ONE WELL VOL (GAL) 2.0
TOTAL GAL TO BE PURGED 10.01

PURGING SYSTEM Centrifugal pump
SAMPLING SYSTEM Bailer

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11-15-93	1254	1	60	6.34	26	off scale	in side well 4.0		DEVELOPMENT COMPLETE 11-1-93 @ 1530 HRS.	
	1259	3	60	6.46	25	"			NO ELEVATED PID RDS. DURING DRILLING	
	1305	5	70	6.29	25	"			PH NORMAL (4.8-6.2)	
	1309	8	60	6.09	24	"				
	1313	12	60	6.07	24	"				
	1315	14	60	6.04	24	"				

NOTES:

TURBIDITY:

MONITORING WELL DEVELOPMENT DATA

WELL: CEF-5-8S
DATE: 10/12/93
STATIC WATER LEVEL (ft): 3.52
WELL DESIGN DEPTH (ft): 12
WELL VOLUME (gal):

TIME BEGAN: 1415
TIME ENDED: 1455
NUMBER OF DRUMS: 1
DRUM DESIGNATIONS: CEF-5-8S

SITE NAME: SITE 5
PROJECT: RI OUS 1,2,7
PROJECT NUMBER: 8500-08
FIELD PERSONNEL: DAVE HANK BELAN
SHEET NO. 1 OF 1

TIME	ACTIVITY (swab/surge, bailing, pumping)	EST'D SEDIMENT THICKNESS (feet)	CUMMULATIVE WATER VOLUME (gallons)	TEMPERATURE (deg. C) °F	pH	CONDUCTIVITY (microsiemans)	TURBIDITY (NTU)	REMARKS
1415	DEVELOP			82.2	7.7	314	>200	INITIALLY DARK BROWN, OPAQUE
1425	↓			82.9	7.7	87	>200	DARK BROWN, OPAQUE
1435				81.1	7.6	48	>200	MEDIUM BROWN, OPAQUE
1445				83.0	7.7	52	>200	MEDIUM BROWN, OPAQUE
1455				80.5	7.6	47	>200	MEDIUM BROWN, OPAQUE

MONITORING WELL DEVELOPMENT DATA

WELL: CEF-5-8s
DATE: 10-16-93
STATIC WATER LEVEL (ft): 3.52
WELL DESIGN DEPTH (ft): 14.3
WELL VOLUME (gal):

TIME BEGAN: 12:00
TIME ENDED:
NUMBER OF DRUMS: 7
DRUM DESIGNATIONS:

SITE NAME: Site 5
PROJECT: RI OUs 1,2,7
PROJECT NUMBER: 8500-08
FIELD PERSONNEL: Eddie Dandy
SHEET NO. ___ OF ___

TIME	ACTIVITY (swab/surge, bailing, pumping)	EST'D SEDIMENT THICKNESS (feet)	CUMMULATIVE WATER VOLUME (gallons)	TEMPERATURE (deg. C)	pH	CONDUCTIVITY (microsiemens)	TURBIDITY (NTU)	REMARKS
12:00	pumping	0	5	70.0	5.00	90.5	off scale	
13:00	"	"	25	70.0	5.00	95.5	"	
14:00	"	"	55	71.0	5.00	44.5	150	
14:30	"	"	75	71.0	5.00	43.3	160	
15:00	"	"	100	72.0	5.00	40.1	100	
16:00	"	"	125	73.0	5.00	50.2	off scale	
10-26-93								
13:40	pumping	0	130	75.0	6.18	1.00	off scale	Very Dark
14:30	"	"	160	76.3	6.13	0.80	"	
15:30	"	"	190	79.5	5.87	0.92	"	
16:30	"	"	220	75.6	5.93	0.75	109.6	
17:30	"	"	250	73.2	6.04	0.41	1655	
10-27-93								
07:30	pumping	0	250	67.0	6.80	0.55	off scale	
08:30	"	"	274	68.0	5.80	0.58	"	
09:30	"	"	298	68.0	5.81	0.63	110	
10:30	"	"	312	69.0	6.21	0.69	100	
11:30	"	"	326	74.0	6.33	0.62	"	
13:45	"	"	340	86.0	5.98	0.61	off scale	
14:45	"	"	354	79.0	5.94	0.64	"	
15:45	"	"	368	79.2	5.83	0.67	"	
16:30	"	"	382	76.4	5.77	0.57	"	
17:30	"	"	396	72.5	5.84	0.54	"	
10-28-93								
10:30	pumping	0	396	83.8	5.39	0.52	160.1	
11:30	"	"	405	85.5	6.20	0.62	off scale	
12:00	"	"	414	86.6	6.48	0.66	"	

MONITORING WELL DEVELOPMENT DATA

WELL: CEP-5-8s
DATE: 10-28-93
STATIC WATER LEVEL (ft): 3.51
WELL DESIGN DEPTH (ft): 14.3
WELL VOLUME (gal):

TIME BEGAN: 10:30
TIME ENDED:
NUMBER OF DRUMS: 14
DRUM DESIGNATIONS:

SITE NAME: Site 5
PROJECT: RI OUs 1,2,7
PROJECT NUMBER: 8500.08
FIELD PERSONNEL: E Dowdy
SHEET NO. ___ OF ___

TIME	ACTIVITY (swab/surge, bailing, pumping)	EST'D SEDIMENT THICKNESS (feet)	CUMMULATIVE WATER VOLUME (gallons)	TEMPERATURE (deg. C)	pH	CONDUCTIVITY (microsiemens)	TURBIDITY (NTU)	REMARKS
12:30	pumping	0	423	79.1	4.78	0.56	off Scale	Very Cloudy (muddy)
13:00	"	"	432	76.5	4.82	0.55	"	
13:30	"	"	441	77.1	4.90	0.57	"	
14:00	"	"	450	76.6	4.60	0.54	"	
14:30	"	"	459	73.8	4.73	0.52	"	
15:00	"	"	468	76.0	4.93	0.58	"	
15:30	"	"	477	77.6	5.03	0.57	"	
16:00	"	"	486	75.1	4.75	0.52	"	
16:30	"	"	495	72.7	4.70	0.50	"	
17:00	"	"	504	73.8	4.72	0.52	"	
10-29-93								
13:00	pumping	0	508	76.1	5.88	0.50	0.57	Very Cloudy (muddy)
14:00	"	"	526	77.2	5.74	0.59	42.5	
15:00	"	"	544	77.4	5.69	0.50	76.8	
16:00	"	"	562	74.7	5.79	0.46	0.97	
17:00	"	"	580	73.5	5.69	0.44	155.1	
10-30-93	pumping	0	HCP					
09:00	"	"	588	74.7	5.47	0.12	5.24	Same as above
10-31-93								
09:00	pumping	0	606	64.0	6.01	0.48	2.21	Same as above
10:00	"	"	624	58.0	6.02	0.37	3.48	
11:00	"	"	642	60.6	5.92	0.40	6.28	
12:00	"	"	660	53.1	5.99	0.39	8.37	
1300	"	"	678	61.8	5.76	0.40	32.2	
1400	"	"	696	64.7	5.92	0.42	41.7	
1500	"	"	714	62.6	5.75	0.40	120.7	END
1600	"	"	732	59.7	5.40	0.37	180.4	~~Stop Development~~

MONITORING WELL DEV[illegible]MENT DATA

WELL: CEF-5-85
DATE: 11-1-93
STATIC WATER LEVEL (ft): 3.51
WELL DESIGN DEPTH (ft): 14.3
WELL VOLUME (gal):

TIME BEGAN: 08:00
TIME ENDED: 1530
NUMBER OF DRUMS: 16
DRUM DESIGNATIONS:

SITE NAME: Site 5
PROJECT: RI OUs 1,2,7
PROJECT NUMBER: 8500.08
FIELD PERSONNEL: E Doudy
SHEET NO. ___ OF ___

TIME	ACTIVITY (swab/surge, bailing, pumping)	EST'D SEDIMENT THICKNESS (feet)	CUMMULATIVE WATER VOLUME (gallons)	TEMPERATURE (deg. C)	pH	CONDUCTIVITY (microsiemens)	TURBIDITY (NTU)	REMARKS
09:00	pumping	0	747	65.7	5.92	0.53	70.0	
09:30	"	0	756	70.1	6.01	0.53	165.8	
10:00	"	0	765	71.9	6.07	0.53	192.7	
10:30	"	0	774	66.3	5.63	0.51	off Scale	
11:00	"	0	783	63.9	5.75	0.48	" "	
11:30	"	"	792	61.7	5.93	0.46	" "	
12:30	"	"	810	67.4	6.22	0.49	" "	
13:00	"	"	819	65.7	6.08	0.48	" "	
13:30			828	67.0	6.17	0.49	" "	
14:00	"	"	837	69.1	6.02	0.51	" "	
14:30	"	"	846	67.0	6.07	0.55	" "	
15:00	"	"	855	63.2	5.88	0.46	" "	
15:30	"	"	864	61.5	5.80	0.46	" "	Stop Development

GROUNDWATER SAMPLING LOG

PAGE 1 OF 1

CLIENT NAS CECIL FIELD
SITE OU 2 SITE 5
WELL NUMBER CEF-5-9I
JOB NUMBER 8500-08

TOTAL WELL DEPTH 37.73'
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14 GAL.
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 4.00
STANDING WATER COLUMN (FT) 33.73

AMT ONE WELL VOL (GAL) 4.7
TOTAL GAL TO BE PURGED 23.6

PURGING SYSTEM Centrifugal pump
SAMPLING SYSTEM Bailer

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11/16/93	1415	1	50	5.55	25	27.0	0		DEVELOPEMENT COMPLETE 10-11-93 @ 1230 HRS.	
	1418	5.5	80	5.48	24	61.4			NO ELEVATED PID RDS. DURING DRILLING	
	1424	14.5	50	5.46	26	182.4			PH NORMAL (4.5-6.0)	
	1434	29.5	50	5.75	24	148.8				
	1439	37	40	5.51	25	141.2				
	1441	41.5	40	5.43	25	134.3				

NOTES: 1.5 gal per min

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS CECIL FIELD
SITE OU 2 SITE 5
WELL NUMBER CEF-5-10S
JOB NUMBER 8500-08

TOTAL WELL DEPTH 14.8'
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED
VOL PER VERTICAL FT CASING (GAL) 0.14 GAL.
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 2.47'
STANDING WATER COLUMN (FT) 12.41'

AMT ONE WELL VOL (GAL) 2.08
TOTAL GAL TO BE PURGED 10.42

PURGING SYSTEM Centrisugal pump
SAMPLING SYSTEM Bailer

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11-15-93	1130	1	220	6.15	21	off scale	inside well		DEVELOPEMENT COMPLETE 10-27-93 @1800 HRS.	
	1145	5	190	5.24	22	"			HIGH PID READING DURING DRILLING 2'-4' INTERVAL 122	
	1158	12	170	5.22	21	"			PH NORMAL (5.3-5.9)	

NOTES:

TURBIDITY:

GROUNDWATER SAMPLING LOG

PAGE 1 OF _

CLIENT NAS Cecil Field
SITE OU 2 Site 5
WELL NUMBER CEF-5-11I
JOB NUMBER 8500-08

TOTAL WELL DEPTH 38.33
WELL DIAMETER 2-inch
BOREHOLE DIAMETER 8-1/4 inch

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14 gal
VOL PER FT BOREHOLE (LESS CASING)(GAL) ——

STATIC WATER LEVEL (FT) 2.86'
STANDING WATER COLUMN (FT) 35.47'

AMT ONE WELL VOL (GAL) 5.37
TOTAL GAL TO BE PURGED 26.83

PURGING SYSTEM ~~BATTE~~ BT WATERRA
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11-15-93	1100	1	350	7.39	26	129.8	insidewell 0		Development 0900 NS Complete 11/8/93	
	1103	11	150	5.41	23	offscale			No elevated PID readings during	clearing
	1109	21	175	5.89	23	"			PH Normal (4.3-6.9)	
	1115	41	150	6.09	23	"				
	1121	61	140	5.90	23	"				
	1124	71	120	5.93	22	"				

NOTES: 1.5 min = 5 gal

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS Cecil Field
SITE OU2 Site 5
WELL NUMBER CEF-5-12D
JOB NUMBER 8500-08

TOTAL WELL DEPTH 60 feet
WELL DIAMETER 2-inch
BOREHOLE DIAMETER 8-1/4 inch

MIN NUMBER WELL VOL TO BE PURGED
VOL PER VERTICAL FT CASING (GAL) 0.14 gal
VOL PER FT BOREHOLE (LESS CASING)(GAL)

STATIC WATER LEVEL (FT) 2.90'
STANDING WATER COLUMN (FT) 57.14'

AMT ONE WELL VOL (GAL) 8.46
TOTAL GAL TO BE PURGED 42.28

PURGING SYSTEM Centrisugal pump
SAMPLING SYSTEM Bailer

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11-15-93	1045	1	230	7.23	23	15.7	inside well 0			
	1047	6	180	5.78	21	79.5			Development Complete 11/8/93 0930 Hours	
	1049	11	170	5.81	21	80.5			no elevated PIDrds during drilling	
	1059	36	170	5.96	22	71.8			pH Normal (5.0 - 6.0)	
	1101	41	160	6.04	22	66.8				
	1111	66	150	5.96	22	51.4				

NOTES: 2 min = 5gal

TURBIDITY:

GROUNDWATER SAMPLING LOG

PAGE 1 OF 1

CLIENT NAS CECIL FIELD
SITE OU2 SITE 5
WELL NUMBER CEF-5-13S
JOB NUMBER 8500-08

TOTAL WELL DEPTH 15.50'
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14 GAL
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 4.29'
STANDING WATER COLUMN (FT) 11.21'

AMT ONE WELL VOL (GAL) 2.17
TOTAL GAL TO BE PURGED 10.85

PURGING SYSTEM Centrifugal Pump
SAMPLING SYSTEM Bailer

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11-14-93	1538	1	220	5	22	12.99	6.8		DEVELOPEMENT COMPLETE 10-29-93 @ 1430 HRS.	
11-14-93	1545	2	215	5	21	112.5			NO ELEVATED PID RDS. DURING	DRILLING
11-14-93	1557	6	210	5	21	180.7			HIGH PH 10-3-93 @0845 READING 9.9	
11-14-93	1603	8	200	5	22	123.2				
11-15-93	1608	12	200	5	22	199.3				

NOTES:

TURBIDITY:

CLIENT N CECIL FIELD
SITE OU2 SITE 5
WELL NUMBER CEF-5-14I
JOB NUMBER 8500-08

TOTAL WELL DEPTH 38.1'
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED —
VOL PER VERTICAL FT CASING (GAL) 0.14 GAL.
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 5.09'
STANDING WATER COLUMN (FT) 33.10'

AMT ONE WELL VOL (GAL) 5.35
TOTAL GAL TO BE PURGED 26.7

PURGING SYSTEM Centrifugal Pump
SAMPLING SYSTEM Bailer

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11-14-93	1421	5	475	5	25	115	0.0		DEVELOPEMENT COMPLETE 10-29-93 @ 1700 HRS.	
	1428	8	90	6	23	188			HIGH PH 10-5-93 @ 1405 READING 9.5	
	1433	15	70	5	22	166.8	0.0			
	1436	21	70	5	22	180.7				
	1440	26	70	5	21	129.9	0.0			
	1444	34	70	5	21	128.4				

NOTES:

TURBIDITY:

CLIENT NAS Cecil-Field
SITE OU2 Site 5
WELL NUMBER CEF-5-15D
JOB NUMBER 8500.08

TOTAL WELL DEPTH 58.14'
WELL DIAMETER 2-inch
BOREHOLE DIAMETER 8¼ inch

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14 gal/
VOL PER FT BOREHOLE (LESS CASING)(GAL)

STATIC WATER LEVEL (FT) 5.25'
STANDING WATER COLUMN (FT) 52.89'

AMT ONE WELL VOL (GAL) 8.139
TOTAL GAL TO BE PURGED 40.7

PURGING SYSTEM Centrisugal pump
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11-14-93	1424	5	100	6	32	offscale	0.9		Development Complete 11-3-93 @ 11:15	
	1426	10	60	5	23	offscale			pH Normal (4.4 - 5.6)	
	1431	20	50	5	22	offscale				
	1434	25	50	5	22	offscale				
	1439	30	50	5	21	"				
	1444	35	50	5	22	"				
	1447	40	50	5	22	"				
	1449	45	50	5	22	"				

NOTES:

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT N[illegible] CECIL FIELD
SITE OU 2 SITE 5
WELL NUMBER CEF-5-16S
JOB NUMBER 8500-08

TOTAL WELL DEPTH 18.[illegible]'
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8 1/4 INCH

MIN NUMBER WELL VOL TO BE PURGED [illegible]
VOL PER VERTICAL FT CASING (GAL) 0.14 GAL.
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 4.97
STANDING WATER COLUMN (FT) 13.29

AMT ONE WELL VOL (GAL) 1.90
TOTAL GAL TO BE PURGED 9.50

PURGING SYSTEM BALER
SAMPLING SYSTEM BALER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11-30-93	1400	0.5	455.0	6.24	20.9	116.3	143.0		DEVELOPEMENT COMPLETE 10-17-93 @ 1600 HRS	
	1404	2.5	433.0	6.27	21.0	OFF SCALE			NO ELEVATED PID RDS. DURING DRILLING	
	1409	5.0	300.0	6.08	21.2	" "	19.7		PH NORMAL (5.0 - 7.5)	
	1415	7.5	325.0	5.97	22.0	" "				
	1420	10.0	215.0	5.88	21.9	" "	1.2			
	1424	12.5	236.0	5.91	22.0	" "				

NOTES:

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS Cecil Field
SITE OU2 Site 5
WELL NUMBER CEF-5-17I
JOB NUMBER 8500-08

TOTAL WELL DEPTH 38.16
WELL DIAMETER 2-inch
BOREHOLE DIAMETER 8 ¼-inch

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14 gal
VOL PER FT BOREHOLE (LESS CASING)(GAL) ____

STATIC WATER LEVEL (FT) 5.31
STANDING WATER COLUMN (FT) 32.85

AMT ONE WELL VOL (GAL) 4.60
TOTAL GAL TO BE PURGED 23.0

PURGING SYSTEM WATERRA Pump
SAMPLING SYSTEM BALER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11-30-93	1340	1	51.0	5.25	21.3	2.37	110.0		Development Complete 10-17-93 @ 16:45 hrs	
	1355	9	46.0	5.06	22.0	2.94			pH Normal (5.0 – 5.2)	
	1410	16	43.0	5.62	21.0	16.7	0.0			
	1425	24	45.0	5.24	20.6	19.5				
	1440	30	45.0	5.33	21.0	17.7	0.0			
	1450	35	42.0	5.00	21.0	12.0				

NOTES:

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS Cecil Field
SITE OU2 SITE-5
WELL NUMBER CEF-5-18D
JOB NUMBER 8500-08

TOTAL WELL DEPTH 53.49
WELL DIAMETER 2 inch
BOREHOLE DIAMETER 8¼ inch

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14 gal
VOL PER FT BOREHOLE (LESS CASING)(GAL) ____

STATIC WATER LEVEL (FT) 5.62
STANDING WATER COLUMN (FT) 47.87

AMT ONE WELL VOL (GAL) 6.70
TOTAL GAL TO BE PURGED 33.51

PURGING SYSTEM WATERRA Pump
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11-30-93	1340	1	39.0	5.57	22.0	6.11	2.6		Development Completed 10-28-93 @ 15:30 hrs	
	1358	10	49.0	5.20	22.0	2.92			pH Normal (4.5 – 6.1)	
	1405	14	49.6	5.65	21.0	33.2	0.0			
	1420	22	48.0	5.68	21.1	45.4				
	1440	32	46.0	5.06	21.1	40.6	0.0			
	1500	42	48.0	5.22	21.3	31.9				

NOTES:

TURBIDITY:

CLIENT NAS Cecil Field
SITE OU2 Site 5
WELL NUMBER CEF-5-19s
JOB NUMBER 8500-08

TOTAL WELL DEPTH 14.69
WELL DIAMETER 2 inch
BOREHOLE DIAMETER 8¼ inch

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14 gal
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 5.67
STANDING WATER COLUMN (FT) 9.02

AMT ONE WELL VOL (GAL) 1.26
TOTAL GAL TO BE PURGED 6.30

PURGING SYSTEM BALER
SAMPLING SYSTEM BALER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11-30-93	0955	0.5	202	6.86	18.0	8.67	5.1		Development Completed 10-15-93 @ 11:15 hrs	
	1004	2.0	197	6.27	19.1	OFF SCALE			No elevated PID readings During drilling	
	1011	3.5	181	5.86	18.3	" "	0.0		pH Normal (5.0 - 7.9)	
	1018	5.0	176	5.62	18.9	" "				
	1025	6.5	181	5.66	19.2	" "	0.0			
	1031	8.0	180	5.55	17.9	" "				

NOTES:

TURBIDITY:

CLIENT N. Cecil Field
SITE OU 2 Site 5
WELL NUMBER CEF-5-20s
JOB NUMBER 8500-08

TOTAL WELL DEPTH 14.
WELL DIAMETER 2 inch
BOREHOLE DIAMETER 8¼ inch

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14 gal
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 1.60
STANDING WATER COLUMN (FT) 12.95

AMT ONE WELL VOL (GAL) 1.81
TOTAL GAL TO BE PURGED 9.07

PURGING SYSTEM Baler
SAMPLING SYSTEM Baler

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11-29-93	1145	0.5	51.0	4.90	17.1	1.21	2.9		Development Completed 10-13-93 @ 16:00 hrs	
	1158	2.5	49.0	4.77	19.2	OFF SCALE			No Elevated PID rds During Drilling	
	1207	5.0	51.0	4.84	20.0	" "	0.0		pH normal (5.9-7.0)	
	1217	7.5	51.0	4.73	20.0	" "				
	1224	10.0	53.0	4.91	21.0	" "	0.0			
	1228	12.0	51.0	4.75	21.0	" "				

NOTES:

TURBIDITY:

CLIENT NAS CECILFIELD
SITE OU2 Site-5
WELL NUMBER CEF-5-21I
JOB NUMBER 8500.08

TOTAL WELL DEPTH 37.47
WELL DIAMETER 2 INCH
BOREHOLE DIAMETER 8¼ INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14 gal
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 1.65
STANDING WATER COLUMN (FT) 35.82

AMT ONE WELL VOL (GAL) 5.01
TOTAL GAL TO BE PURGED 25.07

PURGING SYSTEM Waterra Pump
SAMPLING SYSTEM Bailer

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11-29-93	11:05	1	33.0	5.78	18.8	6.06	2.8			
"	11:15	7	32.0	5.49	20.0	78.00				
"	11:30	13	31.0	5.27	18.9	143.7	0.0			
"	11:45	19	31.0	5.13	19.2	132.1				
"	12:00	25	33.0	5.13	20.0	129.5	0.0			
"	12:15	31	30.0	5.16	18.1	116.9				

NOTES:

TURBIDITY:

CLIENT NA CECIL FIELD
SITE OU 2 SITE 5
WELL NUMBER CEF-5-22D
JOB NUMBER 8500-08

TOTAL WELL DEPTH 53.3
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 1.87
STANDING WATER COLUMN (FT) 51.46

AMT ONE WELL VOL (GAL) 7.20
TOTAL GAL TO BE PURGED 36.00

PURGING SYSTEM WATERRA PUMP
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11-29-93	1035	1	30.6	6.43	17.2	5.95	2.3		DEVELOPMENT COMPLETED 10-16-93 @ 1100 HRS.	
"	11:00	11	33.0	5.94	18.0	21.2			PH NORMAL (5.5-6.3)	
"	11:20	20	52.0	5.78	18.0	36.4	0.0			
"	11:40	28	40.0	5.76	17.7	31.9				
"	12:00	36	62.0	5.66	19.9	30.4	0.0			
"	1225	46	50.0	5.69	18.2	29.7				

NOTES:

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS CECIL FIELD
SITE OU2 SITE 5
WELL NUMBER CEF-5-23S
JOB NUMBER 8500-08

TOTAL WELL DEPTH 17.03'
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14 GAL.
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 2.92
STANDING WATER COLUMN (FT) 14.11

AMT ONE WELL VOL (GAL) 1.98
TOTAL GAL TO BE PURGED 9.90

PURGING SYSTEM BAILER
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11-29-93	1532	0.5	35.0	5.32	17.5	25.1	120		DEVELOPMENT COMPLETE 10-14-93 @ 1200 HRS	
	1539	2.5	22.0	5.21	17.0	OFF SCALE			NO ELEVATED PID RDS DURING DRILLING	
	1544	5.0	38.0	5.17	20.4	" "	0.7		PH NORMAL (5.0-5.5)	
	1551	7.5	38.0	5.12	20.2	" "				
	1559	10.0	22.0	5.15	17.5	" "	0.0			
	1606	12.5	36.0	5.09	20.5	" "				

NOTES:

TURBIDITY:

CLIENT N CECIL Field
SITE OU2 Site 5
WELL NUMBER CEF-5-24S
JOB NUMBER 8500.08

TOTAL WELL DEPTH 17.4
WELL DIAMETER 2-inch
BOREHOLE DIAMETER 8 1/4-inch

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 5.88
STANDING WATER COLUMN (FT) 11.57

AMT ONE WELL VOL (GAL) 1.62
TOTAL GAL TO BE PURGED 8.1

PURGING SYSTEM Centrifugal pump
SAMPLING SYSTEM Bailer

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11-16-93	1055	1	70	6.22	24	off scale	7.0	using FID -	using FID BACK GROUND - 0 -	
	1058	5.5	50	6.00	24	62.9			Development complete 10-16-93 @ 0930 Hrs	
	1101	10	50	5.88	23	31.8			P.H. Normal (5.0-7.4)	
	1104	14.5	50	5.81	23	51.8			No Elevated PID - Drilling	
	1107	19.0	50	5.82	24	58.5				

NOTES: 1.5 gal per min

TURBIDITY:

CLIENT NAS CECIL FIELD
SITE OU2 SITE 5
WELL NUMBER CEF-5-25 I
JOB NUMBER 8500-08

TOTAL WELL DEPTH 36.83'
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14 GAL
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 5.97
STANDING WATER COLUMN (FT) 30.86

AMT ONE WELL VOL (GAL) 4.41
TOTAL GAL TO BE PURGED 22.05

PURGING SYSTEM Centrifugal Pump
SAMPLING SYSTEM Bailer

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11/14/93	08:45	1	78	6.14	21.0	138.7	27.0		DEVELOPMENT COMPLETE 10-14-93 @ 1345 HRS.	
"	08:51	11	42	5.55	21.0	off scale	—		NO ELEVATED PID RDS. DURING	DRILLING
"	08:57	23	40	5.43	21.5	off scale	3.0		PH NORMAL (5.0 - 7.3)	
"	09:03	35	42	5.60	21.0	off scale	—			
"	09:09	41	42	5.42	21.0	off scale	0			
"	09:15	53	41	5.57	21.5	off scale	—			

NOTES:

TURBIDITY:

CLIENT N CECIL FIELD
SITE OU2 SITE 5
WELL NUMBER CEF-5-26D
JOB NUMBER 8500-08

TOTAL WELL DEPTH 51.
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8 1/4-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14 GAL
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 6.23
STANDING WATER COLUMN (FT) 51.65

AMT ONE WELL VOL (GAL) 7.23
TOTAL GAL TO BE PURGED 36.16

PURGING SYSTEM Centrisugal Pump
SAMPLING SYSTEM Bailer

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11/16/93	0835	1	101	5.60	~~19.9~~ 20.5	115.7	0		DEVELOPMENT COMPLETE 10-13-93 @ 1300 HRS	
"	08:40	10	68	5.94	21.5	off scale	—		PH NORMAL (5.0-6.8)	
"	08:46	22	68	5.75	22.0	off Scale	4.0			
"	08:52	34	64	5.69	22.0	off Scale	—			
"	08:58	46	67	5.61	22.0	off Scale	0			
"	09:04	52	65	5.70	22.0	off Scale	—			
"	09:07	55	65	5.84	22.0	off Scale	0			

NOTES:

TURBIDITY:

CLIENT NAS CECIL FIELD
SITE OU2 SITE 5
WELL NUMBER CEF-5-27S
JOB NUMBER 8500-08

TOTAL WELL DEPTH 15.79'
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14 GAL.
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 4.46
STANDING WATER COLUMN (FT) 11.33

AMT ONE WELL VOL (GAL) 1.6
TOTAL GAL TO BE PURGED 7.9

PURGING SYSTEM Centrifugal pump
SAMPLING SYSTEM Bailer

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11/14/93	1415	1	140	5.35	26	42.7	0		DEVELOPMENT COMPLETE 10-5-93 @ 1132 HRS	
	1418	4	130	5.49	26	197.2	—		NO ELEVATED PID RDS DURING DRILLING	
	1424	10	100	5.59	26	74.3	0		PH NORMAL (4.4-6.6)	
	1434	20	140	5.69	26	49.2	—			
					2					

NOTES: 1 gal per min

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT N... CECIL FIELD
SITE OU2 SITE 5
WELL NUMBER CEF-5-28 D
JOB NUMBER 8560-08

TOTAL WELL DEPTH 58.[illegible]'
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED [illegible]
VOL PER VERTICAL FT CASING (GAL) 0.14 GAL
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 4.65
STANDING WATER COLUMN (FT) 54.20

AMT ONE WELL VOL (GAL) 7.59
TOTAL GAL TO BE PURGED 37.95

PURGING SYSTEM WATERRA PUMP
SAMPLING SYSTEM BALER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-1-93	1105	1	44.0	6.04	18.1	10.89	43.6		DEVELOPMENT COMPLETE 10-27-93 @ 1130 HRS	
	1125	11	~~19.7~~ 42.0	5.48	19.2	133.0	—		PH NORMAL (5.7-6.1)	
	1137	22	42.0	5.50	19.8	165.9	0.0			
	1150	28	41.0	5.48	19.9	126.7	—			
	1210	38	42.0	5.43	20.2	80.0	0.0			
	1230	48	43.0	5.42	20.5	69.7	—			

NOTES:

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS Cecil Field
SITE OU 2 Site 5
WELL NUMBER CEF-5-29s
JOB NUMBER 8500-08

TOTAL WELL DEPTH 15.87
WELL DIAMETER 2 inch
BOREHOLE DIAMETER 8¼ inch

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 3.89'
STANDING WATER COLUMN (FT) 11.98'

AMT ONE WELL VOL (GAL) 1.68
TOTAL GAL TO BE PURGED 8.38

PURGING SYSTEM CENTRIFUGAL PUMP
SAMPLING SYSTEM BALER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11-17-93	0854	1	112	5.99	19.5	104.6	33.0	@ 0843 WELL HEAD	Development Completed 10-6-93 @ 08:50 hrs	
	0857	4	55	5.76	20.0	OFF SCALE	—		No Elevated PID Readings During Drilling	
	0900	7	55	5.50	21.0	OFF SCALE	—		ph Normal (4.8 - 6.7)	
	0903	10	48	5.43	20.8	" "	7.2			
	0905	12	45	5.40	21.0	" "	—			
	0907	14	32	5.43	21.0	" "	0.0			
	0910	17	31	5.37	21.0	" "	—			

NOTES: 1 GAL. PER MIN.

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS Cecil Field
SITE OU 2 Site 5
WELL NUMBER CEF-5-30s
JOB NUMBER 8500-08

TOTAL WELL DEPTH 18.37
WELL DIAMETER 2 inch
BOREHOLE DIAMETER 8¼ inch

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14 gal
VOL PER FT BOREHOLE (LESS CASING)(GAL)

STATIC WATER LEVEL (FT) 4.65
STANDING WATER COLUMN (FT) 13.72

AMT ONE WELL VOL (GAL) 1.92
TOTAL GAL TO BE PURGED 9.6

PURGING SYSTEM BALER
SAMPLING SYSTEM BALER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-2-93	0912	0.5	52.0	5.09	15.5	5.87	38.6		Development Completed 10-15-93 @ 11:50 hrs	
	0917	2.5	60.0	4.92	18.0	OFFSCALE	—		High PID Reading During Drilling 2'-4" Interval (597 cds)	
	0923	5.5	63.0	4.88	19.1	" "	0.0		pH Normal (5.0 - 6.3)	
	0929	8.0	59.0	4.94	19.5	" "	—			
	0933	10.5	61.0	4.95	20.0	" "	0.0			
	0938	13.0	61.0	4.97	17.8	" "	—			

NOTES:

TURBIDITY:

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-1
JOB NUMBER 8500-08

TOTAL WELL DEPTH 16.43'
WELL DIAMETER 2" -INCH
BOREHOLE DIAMETER 8 1/4 INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 3.66'
STANDING WATER COLUMN (FT) 12.77

AMT ONE WELL VOL (GAL) 1.79
TOTAL GAL TO BE PURGED 8.95

PURGING SYSTEM PARASTALTIC
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
1-10-94	1157	0.5	81	5.82	18.4	0.20	1.8		EXSISTING WELL	HP/BT
	1203	2.5	99	5.41	18.9	0.04	—			
	1211	5	100	5.28	19.4	0.12	0.0			
	1217	7	99	5.12	18.8	0.44	—			
	1223	9	99	4.90	19.1	0.67	0.0			
	1229	11	99	4.94	19.5	0.85	—			

NOTES: PURGED @ 1/3 GAL./MIN.

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-4S
JOB NUMBER 8500-08

TOTAL WELL DEPTH 13.39'
WELL DIAMETER 2 INCH
BOREHOLE DIAMETER 8 1/4 INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 4.01
STANDING WATER COLUMN (FT) 9.38

AMT ONE WELL VOL (GAL) 1.31
TOTAL GAL TO BE PURGED 6.55

PURGING SYSTEM BAILER
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
1-3-94	1350	0.5	258	5.37	17.2	70.2	23.1		EXSISTING WELL	HP/BT
	1356	2	250	540	17.5	OFF SCALE	—			
	1401	4	232	5.42	17.8	" "	2.3			
	1408	6	235	5.48	18.0	" "	—			
	1415	8	250	5.52	18.3	" "	1.7			

NOTES:

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-5S
JOB NUMBER 8500-08

TOTAL WELL DEPTH 14.37'
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8 1/4-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 4.85'
STANDING WATER COLUMN (FT) 9.52'

AMT ONE WELL VOL (GAL) 1.33
TOTAL GAL TO BE PURGED 6.65

PURGING SYSTEM BAILER
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
1-3-94	1603	0.5	279	4.07	17.1	15.95	37.9		EXSISTING WELL	HP/BT
	1609	2	302	4.16	19.4	OFF SCALE	—			
	1616	4	286	4.19	19.6	" "	4.0			
	1622	6	274	4.17	19.3	" "	—			
	1630	8	261	4.16	19.0	" "	1.2			

NOTES:

TURBIDITY:

GROUNDWATER SAMPLING LOG

PAGE 1 OF 1

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-6S
JOB NUMBER 8500-08

TOTAL WELL DEPTH 19.79
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8 1/4-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 4.12'
STANDING WATER COLUMN (FT) 9.67'

AMT ONE WELL VOL (GAL) 1.35
TOTAL GAL TO BE PURGED 6.75

PURGING SYSTEM BAILER
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
1-4-94	0945	0.5	122	4.39	19.1	10.80	18.0		EXSISTING WELL	HP/BT
	0952	2	118	4.21	18.8	OFF SCALE	—			
	0959	4	111	4.08	17.8	" "	0.0			
	1007	6	115	4.05	17.0	" "	—			
	1014	8	120	4.08	16.3	" "	0.0			

NOTES:

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-7D
JOB NUMBER 8500-08

TOTAL WELL DEPTH 90.63
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8 1/4-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 4.98
STANDING WATER COLUMN (FT) 85.65

AMT ONE WELL VOL (GAL) 11.99
TOTAL GAL TO BE PURGED 59.95

PURGING SYSTEM WATERRA
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-30-93	1040	1	302	6.93	19.0	4.88	2.8		DEVELOPMENT COMPLETED 12-15-93 @ 1600	HP/BT
	1050	11	310	7.21	19.0	4.91	—		NO ELEVATED PID RDS. DURING DRILLING	
	1100	21	329	7.49	19.2	6.54	0.0		PH NORMAL (6.7-7.1)	
	1110	31	328	7.32	19.6	4.37	—			
	1120	41	322	7.10	20.0	2.30	0.0			
	1130	51	322	7.08	19.8	1.96	—			
	1140	61	324	6.97	19.2	1.49	0.0			
	1150	71	329	7.11	19.6	1.32	—			

NOTES: PURGED @ 1 GAL./MIN.

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-8S
JOB NUMBER 8500-08

TOTAL WELL DEPTH 16.7
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED 3
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 2.58
STANDING WATER COLUMN (FT) 13.69

AMT ONE WELL VOL (GAL) 1.92
TOTAL GAL TO BE PURGED 9.60

PURGING SYSTEM PARASTALTIC
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-30-93	1055 ~~1040~~	0.5	56	5.30	18.2	OFF SCALE	2.0		DEVELOPMENT COMPLETED 12-14-93 @ 1630	HP/BT
	1100	2	55	5.42	19.4	114.6	—		NO ELEVATED PID RDS. DURING DRILLING	
	1106	4	52	5.27	19.8	29.9	0.0		PH NORMAL (5.2-6.1)	
	1112	6	52	5.36	19.7	26.3	—			
	1118	8	51	5.29	19.4	23.1	0.0			
	1124	10	51	5.20	19.0	21.0	—			
	1130	12	51	5.12	19.1	16.15	0.0			

NOTES: PURGED @ ⅓ GAL./MIN.

TURBIDITY:

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER B-8 CEF-17-95
JOB NUMBER 8500-08

TOTAL WELL DEPTH 16.71
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 5.27
STANDING WATER COLUMN (FT) 11.44

AMT ONE WELL VOL (GAL) 1.60
TOTAL GAL TO BE PURGED 8.00

PURGING SYSTEM BAILER
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
1-3-94	1120	0.5	105	4.96	18.2	28.1	7.1		DEVELOPMENT COMPLETED 12-16-93 @ 1330	HP/BT
	1127	2	128	5.03	18.5	OFF SCALE	—		NO ELEVATED PID RDS. DURING DRILLING	
	1136	4	146	5.11	18.9	" "	0.0		PH NORMAL (5.5-6.5)	
	1147	6	121	4.75	20.0	" "	—			
	1155	8	117	4.86	19.9	" "	0.0			
	1203	10	109	4.81	20.0	" "	—			

NOTES:

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-10D
JOB NUMBER 8500-08

TOTAL WELL DEPTH 8.05
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 3.70
STANDING WATER COLUMN (FT) 85.35

AMT ONE WELL VOL (GAL) 11.95
TOTAL GAL TO BE PURGED 59.75

PURGING SYSTEM WATERRA
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-30-93	1040	1	328	7.50	18.0	15.57	1.7		DEVELOPMENT COMPLETED 12-14-93 @ 1500	HP/BT
	1050	11	325	7.41	18.4	11.63	—		NO ELEVATED PID RDS. DURING DRILLING	
	1100	21	329	7.35	18.9	5.04	0.0		PH NORMAL (6.6-7.5)	
	1110	31	331	7.37	19.4	5.09	—			
	1120	41	336	7.31	20.1	5.42	0.0			
	1130	51	382	7.22	19.5	10.16	—			
	1140	61	385	7.29	19.4	8.63	0.0			
	1150	71	385	7.41	19.2	7.19	—			

NOTES: PURGED @ 1 GAL./MIN

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-11I
JOB NUMBER 8500-08

TOTAL WELL DEPTH 57.66
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 2.94
STANDING WATER COLUMN (FT) 54.72

AMT ONE WELL VOL (GAL) 7.66
TOTAL GAL TO BE PURGED 38.3

PURGING SYSTEM WATERRA
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-29-93	1445	1	32	5.61	20.5	5.33	0.2		DEVELOPMENT COMPLETED 12-7-93 @ 1730	HP/BT
	1455	11	30	5.54	20.5	29.7	—		NO ELEVATED PID RDS. DURING DRILLING	
	1505	21	29	5.49	20.5	40.4	0.0		PH NORMAL (5.0-5.7)	
	1515	31	29	5.47	20.4	31.6	—			
	1525	41	29	5.52	20.2	22.5	0.0			

NOTES: PURGED @ 1 GAL./MIN.

TURBIDITY:

CLIENT S CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-12D
JOB NUMBER 8500-08

TOTAL WELL DEPTH 8.13
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL)

STATIC WATER LEVEL (FT) 4.82
STANDING WATER COLUMN (FT) 80.61

AMT ONE WELL VOL (GAL) 11.28
TOTAL GAL TO BE PURGED 56.40

PURGING SYSTEM PARASTALTIC
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-29-93	0900	0.5	99	6.03	18.5	59.6	1.7		DEVELOPMENT COMPLETED 12-18-93 @ 1730	HP/BT
	0930	10	181	6.61	20.0	OFF SCALE	—		NO ELEVATED PID RDS. DURING DRILLING	
	1000	20	220	6.52	20.0	113.4	0.1		Ph NORMAL (6.3-7.4)	
	1030	30	240	6.86	20.2	75.2	—			
	1100	40	251	6.73	20.5	67.4	0.0			
	1130	50	245	6.71	20.9	64.7	—			
	1200	60	250	6.76	21.0	62.5	0.0			
	1230	70	256	6.80	21.0	60.8	—			

NOTES: PURGED @ 1/3 GAL./MIN.

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-13S
JOB NUMBER 8500-08

TOTAL WELL DEPTH 17.14
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8 1/4-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 4.26
STANDING WATER COLUMN (FT) 12.88

AMT ONE WELL VOL (GAL) 1.80
TOTAL GAL TO BE PURGED 9.02

PURGING SYSTEM Bailer
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-28-93	14:11	0.5	160	5.17	18	9.45	0.4		DEVELOPMENT COMPLETED 12-6-93 @ 1445	HP/BT
	14:17	2.5	145	4.83	19	60.3	—		NO ELEVATED PID RDS. DURING DRILLING	
	14:23	4.5	150	4.90	19	109.2	0.1		PH NORMAL (5.3-5.7)	
	14:29	6.5	145	4.82	19.5	157.8	—			
	14:35	8.5	145	4.90	19	76.5	0.1			
	14:41	10.5	145	4.87	19	196.1	—			

NOTES:

TURBIDITY:

CLIENT S CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-14I
JOB NUMBER 8500-08

TOTAL WELL DEPTH 56
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 4.18
STANDING WATER COLUMN (FT) 53.98

AMT ONE WELL VOL (GAL) 7.56
TOTAL GAL TO BE PURGED 37.8

PURGING SYSTEM WATERRA
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-29-93	0917	1	32	7.73	19.6	2.26	0.1		DEVELOPMENT COMPLETED 12-7-93 @ 1630	HP/BT
	0925	9	31	7.37	19.1	2.31	—		NO ELEVATED PID RDS. DURING DRILLING	
	0932	16	30	6.51	19.2	7.32	0.0		PH NORMAL (5.0 - 5.7)	
	0939	23	30	5.93	19.5	9.01	—			
	0947	31	30	5.72	20.1	10.75	0.0			
	0955	39	30	5.54	20.0	12.41	—			
	1002	46	30	5.45	19.9	13.02	0.0			

NOTES: PURGED @ 1 GAL. / MIN.

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-15D
JOB NUMBER 8500-08

TOTAL WELL DEPTH 89.56
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 4.32
STANDING WATER COLUMN (FT) 85.24

AMT ONE WELL VOL (GAL) 11.93
TOTAL GAL TO BE PURGED 59.65

PURGING SYSTEM WATTERRA
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-29-93	0910	1	290	7.38	18.5	18.95	0.0		DEVELOPMENT COMPLETED 12-6-93 @ 1530	HP/BT
	0920	11	332	8.10	18.8	18.80	—		NO ELEVATED PID RDS. DURING DRILLING	
	0930	21	360	7.64	19.5	16.26	0.0		PH NORMAL (6.6-6.9)	
	0940	31	339	7.01	19.8	5.16	—			
	0950	41	352	6.93	20.0	3.77	0.0			
	1000	51	360	6.82	20.1	4.94	—			
	1010	61	355	6.74	20.1	4.38	0.0			
	1020	71	371	6.98	20.2	4.20	—			

NOTES: PURGED @ 1 GAL./MIN.

TURBIDITY:

GROUNDWATL.. SA LING LOG

CLIENT NAS CECIL FIELD
SITE OU 2 SITE 17
WELL NUMBER CEF-17-16S
JOB NUMBER 8500-08

TOTAL WELL DEPTH 16.76
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8 1/4-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 4.26
STANDING WATER COLUMN (FT) 12.5

AMT ONE WELL VOL (GAL) 1.75
TOTAL GAL TO BE PURGED 8.75

PURGING SYSTEM BAILER
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-27-93	1405	1	90	5.13	17.5	168.0	0.1		DEVELOPMENT COMPLETED 12-5-93 @ 1500	HP & BT
	1408	2.5	80	4.87	19.0	OFF SCALE	—		NO ELEVATED PID RDS. DURING DRILLING	
	1411	4.5	90	4.70	20.0	" "	0.0		PH NORMAL (5.1-5.8)	
	1414	6.5	90	4.93	20.0	" "	—			
	1418	8.5	90	4.81	21.0	" "	0.0			
	1420	10	90	4.95	21.0	" "	—			

NOTES:

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-17I
JOB NUMBER 8500-08

TOTAL WELL DEPTH 57.86
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 4.32
STANDING WATER COLUMN (FT) 53.54

AMT ONE WELL VOL (GAL) 7.50
TOTAL GAL TO BE PURGED 37.5

PURGING SYSTEM WATERRA
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-27-93	1155	0.5	32	5.50	18.9	10.76	0.8		DEVELOPMENT COMPLETED 12-6-93 @ 1615	HP & BT
	1210	8.0	31	5.87	19.3	6.88	—		NO ELEVATED PID RDS. DURING DRILLING	
	1225	15.5	32	6.02	20.5	6.48	0.0		PH NORMAL (5.2-6.7)	
	1240	23.0	32	6.19	20.8	7.46	—			
	1255	30.5	31	6.31	21.0	8.87	0.0			
	1310	38.0	31	6.18	20.9	10.59	—			
	1325	45.5	31	6.11	20.5	10.96	0.0			

NOTES: PURGED @ ½ GAL./MIN.

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-18D
JOB NUMBER 8500-08

TOTAL WELL DEPTH 87.93
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8 1/4-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 5.57
STANDING WATER COLUMN (FT) 84.36

AMT ONE WELL VOL (GAL) 11.81
TOTAL GAL TO BE PURGED 59.1

PURGING SYSTEM WATERRA
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-27-93	1145	0.5	318	6.81	18.6	7.43	4.0		DEVELOPMENT COMPLETED 12-5-93 @ 1730	HP & BT
	1200	8.0	315	6.44	18.9	23.9	—		NO ELEVATED PID RDS. DURING DRILLING	
	1220	18.0	338	6.93	20.6	29.6	0.0		PH NORMAL (6.3-7.2)	
	1240	28.0	344	6.96	20.8	20.9	—			
	1300	38.0	360	6.88	20.8	11.52	0.0			
	1320	48.0	365	6.69	20.7	7.31	—			
	1340	58.0	368	6.54	20.4	4.66	0.0			
	1400	68.0	372	6.47	20.0	3.72	—			

NOTES: PURGED @ 1/2 GAL./MIN.

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-19S
JOB NUMBER 8500-08

TOTAL WELL DEPTH 17.44
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 4.70
STANDING WATER COLUMN (FT) 12.74

AMT ONE WELL VOL (GAL) 1.78
TOTAL GAL TO BE PURGED 8.90

PURGING SYSTEM PARASTALTIC ~~WATERRAT~~
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-28-93	0920	1	150	5.69	19.0	93.7	0.4		DEVELOPMENT COMPLETED 12-5-93 @ 1630	HP/BT
	0924	3	99	5.66	17.8	89.3	—		NO ELEVATED PID RDS. DURING DRILLING	
	0928	5	72	5.60	18.0	71.6	0.0		PH NORMAL (5.5-5.7)	
	0932	7	87	5.64	18.1	62.7	—			
	0936	9	145	5.72	18.5	50.6	0.0			
	0940	11	142	5.55	19.9	43.5	—			

NOTES: PURGED @ ½ GAL. / MIN.

TURBIDITY:

GROUNDWATL..: MPLING LOG

PAGE 1 OF 1

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-20 I
JOB NUMBER 8500-08

TOTAL WELL DEPTH 57.54
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 4.81
STANDING WATER COLUMN (FT) 52.73

AMT ONE WELL VOL (GAL) 7.38
TOTAL GAL TO BE PURGED 36.90

PURGING SYSTEM WATERRA
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-28-93	0915	1	41	5.36	18.1	3.27	0.0		DEVELOPMENT COMPLETED 12-5-93 @ 1715	HP/BT
	0925	11	37	5.21	18.8	31.6	—		NO ELEVATED PID RDS. DURING DRILLING	
	0935	21	32	5.05	19.5	27.8	0.0		PH NORMAL (5.2-5.7)	
	0945	31	31	5.18	19.9	26.7	—			
	0955	41	31	4.99	19.8	32.7	0.0			

NOTES: PURGED @ 1 GAL./MIN.

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-21 I
JOB NUMBER 8500-08

TOTAL WELL DEPTH 57.73'
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 4.56'
STANDING WATER COLUMN (FT) 53.17

AMT ONE WELL VOL (GAL) 7.44
TOTAL GAL TO BE PURGED 37.20

PURGING SYSTEM WATERRA
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
1-10-94	1145	1	50	7.96	18.0	4.94	2.0		DEVELOPMENT COMPLETED 12-21-93 @ 1730	HP/BT
	1201	9	38	7.79	19.1	3.34	—		NO ELEVATED PID RDS. DURING DRILLING	
	1217	17	31	7.60	19.8	5.82	0.0		Ph NORMAL (5.9-7.8)	
	1230	23.5	28	6.29	19.9	33.0	—			
	1245	31	25	5.63	20.0	48.9	0.0			
	1259	38	28	5.80	20.1	69.2	—			
	1313	45	26	5.59	20.1	94.6	0.0			

NOTES: PURGED @ ½ GAL./MIN.

TURBIDITY:

CLIENT IS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-22D
JOB NUMBER 8500-08

TOTAL WELL DEPTH 33'
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 6.41'
STANDING WATER COLUMN (FT) 88.92

AMT ONE WELL VOL (GAL) 12.45
TOTAL GAL TO BE PURGED 62.25

PURGING SYSTEM WATERRA
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
1-10-94	1143	1	251	8.67	18.2	21.7	2.9		DEVELOPMENT COMPLETED 1-3-94 @ 1700	HP/BT
	1200	9	240	8.75	18.9	30.2	—		NO ELEVATED PID RDS. DURING DRILLING	
	1215	16.5	248	8.82	19.3	35.5	0.0		Ph NORMAL (5.8-8.0)	
	1235	26.5	129	7.27	20.0	OFF SCALE	—			
	1256	37	202	6.44	19.2	" "	0.0			
	1320	49	218	6.53	20.0	" "	—			
	1340	59	229	6.59	19.7	" "	0.0			
	1400	69	230	6.67	18.9	" "	—			

NOTES: PURGED @ ½ GAL. / MIN.

TURBIDITY:

CLIENT NAS CECIL FIELD
SITE SITE 17
WELL NUMBER CEF-17-23S
JOB NUMBER 8500-08

TOTAL WELL DEPTH 16.66
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) ____

STATIC WATER LEVEL (FT) 2.81
STANDING WATER COLUMN (FT) 13.85

AMT ONE WELL VOL (GAL) 1.94
TOTAL GAL TO BE PURGED 9.70

PURGING SYSTEM ~~PERI~~PERISTALTIC
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-29-93	1445	0.5	69	4.76	20.0	77.6	37.2		DEVELOPMENT COMPLETED 12-8-93 @ 1300	HP/BT
	1450	2	68	4.79	20.1	81.2	—		NO ELEVATED PID RDS. DURING DRILLING	
	1456	4	65	4.82	19.9	92.5	0.4		PH NORMAL (5.3-5.7)	
	1502	6	66	4.78	20.0	79.7	—			
	1508	8	61	4.84	20.0	52.3	0.0			
	1514	10	61	4.78	20.1	37.6	—			
	1520	12	61	4.71	20.0	23.4	0.0			

NOTES:

TURBIDITY:

GROUNDWATER SAMPLING LOG

PAGE 1 OF

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-24S
JOB NUMBER 8500-08

TOTAL WELL DEPTH 17.53
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8 1/4-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 3.98'
STANDING WATER COLUMN (FT) 13.55

AMT ONE WELL VOL (GAL) 1.90
TOTAL GAL TO BE PURGED 9.50

PURGING SYSTEM PERASTALTIC
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
11-~~20~~-94	1006	0.5	720	5.86	17.5	15.42	196.2		DEVELOPMENT COMPLETED 12-17-93 @ 1700	HP/BT
	1011	2	730	5.82	18.0	11.94	—		HIGH PID RDS. DURING DRILLING 4'-6' -229.0	
	1017	4	710	5.80	18.0	9.27	15.6		PH NORMAL (4.3-6.4)	
	1023	6	690	5.74	18.2	7.93	—			
	1029	8	700	5.76	18.5	7.01	0.0			
	1035	10	700	5.76	18.7	6.42	—			
	1041	12	710	5.73	19.0	6.95	0.0			

NOTES: PURGED @ 1/3 GAL./MIN.

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-25SI
JOB NUMBER 8500-08

TOTAL WELL DEPTH 42.43'
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8 1/4-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 4.18
STANDING WATER COLUMN (FT) 38.25

AMT ONE WELL VOL (GAL) 5.35
TOTAL GAL TO BE PURGED 26.75

PURGING SYSTEM WATERRA
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
1-11-94	1001	1	45	5.06	17.7	2.02	11.3		DEVELOPMENT COMPLETED 12-21-93 @ 1130	HP/BT
	1011	6	42	5.10	18.0	6.67	~~0.0~~		NO ELEVATED PID RDS. DURING DRILLING	
	1027	14	41	5.25	18.2	8.59	0.0		Ph NORMAL (5.6-7.0)	
	1039	20	41	5.37	19.0	14.16	—			
	1051	26	41	5.30	19.3	38.1	0.0			
	1105	33	42	5.26	19.8	73.5	—			

NOTES: PURGED @ 1/2 GAL. / MIN.

TURBIDITY:

CLIENT CECIL FIELD
SITE SITE 17
WELL NUMBER CEF-17-26T
JOB NUMBER 8500-08

TOTAL WELL DEPTH 73'
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8 1/4-INCH

MIN NUMBER WELL VOL TO BE PURGED
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 4.58'
STANDING WATER COLUMN (FT) 68.63

AMT ONE WELL VOL (GAL) 9.61
TOTAL GAL TO BE PURGED 48.05

PURGING SYSTEM PARASTALTIC
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
1-12-94	0851	0.5	31	5.08	20.0	8.75	1.1		DEVELOPMENT COMPLETED 12-27-93 @ 1700	HP/BT
	0905	5	26	5.46	20.9	4.47	—		NO ELEVATED PID RDS DURING DRILLING	
	0920	10	27	5.50	20.8	26.8	0.0		Ph. NORMAL (5.7-7.3)	
	0940	16.5	25	5.58	21.0	29.8	—			
	1000	23	26	5.52	21.2	26.3	0.0			
	1020	29.5	25	5.47	21.0	24.7	—			
	1050	39.5	25	5.54	21.5	24.2	0.0			
	1120	49.5	26	5.56	21.7	27.1	—			
	1140	56	27	5.60	21.9	33.6	0.0			

NOTES: PURGED @ 1/3 GAL./MIN.

TURBIDITY:

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-27D
JOB NUMBER 8500-08

TOTAL WELL DEPTH 88.99'
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 5.80'
STANDING WATER COLUMN (FT) 83.19

AMT ONE WELL VOL (GAL) 11.65
TOTAL GAL TO BE PURGED 58.25

PURGING SYSTEM WATERRA
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
12-~~10~~-94	0900	1	280	6.47	19.1	6.00	0.0		DEVELOPMENT COMPLETED 12-19-93 @ 1530	HP/BT
	0910	11	275	6.97	20.8	6.62	—		NO ELEVATED PID RDS. DURING DRILLING	
	0925	26	281	7.03	21.0	52.2	0.0		Ph NORMAL (6.6-7.1)	
	0942	43	300	7.06	21.1	50.6	—			
	0955	56	311	7.11	21.3	38.7	0.0			
	1010	71	320	7.19	21.0	22.2	—			

NOTES: PURGED @ 1 GAL./MIN.

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS CECIL FIELD
SITE OU2 SITE 17
WELL NUMBER CEF-17-28DD
JOB NUMBER 8500-08

TOTAL WELL DEPTH 119.13'
WELL DIAMETER 2-INCH
BOREHOLE DIAMETER 8¼-INCH

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 6.72'
STANDING WATER COLUMN (FT) 112.41

AMT ONE WELL VOL (GAL) 15.74
TOTAL GAL TO BE PURGED 78.70

PURGING SYSTEM WATERRA
SAMPLING SYSTEM BAILER

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
1-12-94	0855	1	285	7.24	20.7	1.95	0.0		DEVELOPMENT COMPLETED 12-20-93 @ 1030	HP/BT
	0905	11	310	7.02	21.1	1.26	—		Ph NORMAL (6.6 - 7.0)	
	0915	21	316	7.09	21.0	0.71	0.0		NO ELEVATED PID RDS. DURING DRILLING	
	0925	31	320	7.17	21.2	0.64	—			
	0940	46	317	7.13	21.1	0.40	0.0			
	1000	66	321	7.09	21.2	0.45	—			
	1015	81	328	7.15	21.5	0.72	0.0			
	1025	91	329	7.21	21.9	0.62	—			

NOTES: PURGED @ 1 GAL. / MIN.

TURBIDITY:

APPENDIX G

APPENDIX G

SLUG TEST DATA

A Q T E S O L V

A Program for

Automatic Estimation of Aquifer Coefficients

From Aquifer Test Data

By:

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and
James O. Rumbaugh, III

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A Q T E S O L V is a user-friendly program designed to analyze data from aquifer tests automatically. Aquifer coefficients for a variety of aquifer test conditions can be estimated by A Q T E S O L V , including the following:

- o confined aquifers, unconfined aquifers, and leaky aquifers
- o pumping tests, injection tests, recovery tests, and slug tests

Features:

- o Interactive, menu-driven program design
- o Nonlinear least-squares estimation of aquifer coefficients
- o Statistical analysis of results
- o Complete graphical display of results

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A Q T E S O L V   R E S U L T S

Version 1.10

12/02/93 13:30:15

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TEST DESCRIPTION

Data set...........
Data set title..... CEF-5-28D RUN NO. 1

Knowns and Constants:
- No. of data points.................. 61
- Radius of well casing............... 0.083
- Radius of well...................... 0.25
- Aquifer saturated thickness......... 55.75
- Well screen length.................. 10
- Static height of water in well...... 21.9
- Log(Re/Rw).......................... 2.704
- A, B, C............................. 2.760, 0.448, 0.000

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ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

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RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	9.4085E-003	+/-	1.2564E-003
y0 =	2.7596E+000	+/-	1.7175E-001

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals................. 61
- Number of estimated parameters...... 2
- Degrees of freedom.................. 59
- Residual mean....................... 0.03376
- Residual standard deviation......... 0.3466
- Residual variance................... 0.1202

Model Residuals:

Time	Observed	Calculated	Residual	Weight

RUN 1

0.0066	1.613	2.5816	-0.96858	1
0.01	3.527	2.4944	1.0326	1
0.0133	4.355	2.4126	1.9424	1
0.0166	1.99	2.3335	-0.3435	1
0.02	2.159	2.2547	-0.095703	1
0.0233	1.971	2.1808	-0.20977	1
0.0266	1.783	2.1093	-0.32626	1
0.03	1.607	2.038	-0.43104	1
0.0333	1.475	1.9712	-0.49621	1
0.05	1.287	1.6652	-0.37817	1
0.0666	1.155	1.4081	-0.25306	1
0.0833	1.029	1.1895	-0.16045	1
0.1	0.929	1.0048	-0.075782	1
0.1166	0.841	0.84964	-0.0086416	1
0.1333	0.759	0.71773	0.04127	1
0.15	0.69	0.6063	0.083702	1
0.1666	0.634	0.51268	0.12132	1
0.1833	0.577	0.43309	0.14391	1
0.2	0.521	0.36585	0.15515	1
0.2166	0.483	0.30936	0.17364	1
0.2333	0.445	0.26133	0.18367	1
0.25	0.401	0.22076	0.18024	1
0.2666	0.27	0.18667	0.083329	1
0.2833	0.345	0.15769	0.18731	1
0.3	0.314	0.13321	0.18079	1
0.3166	0.295	0.11264	0.18236	1
0.3333	0.276	0.095152	0.18085	1
0.4166	0.182	0.041013	0.14099	1
0.5	0.131	0.01766	0.11334	1
0.5833	0.1	0.0076118	0.092388	1
0.6666	0.069	0.0032809	0.065719	1
0.75	0.056	0.0014127	0.054587	1
0.8333	0.044	0.00060892	0.043391	1
0.9166	0.037	0.00026246	0.036738	1
1	0.025	0.00011301	0.024887	1
1.0833	0.031	4.8711E-005	0.030951	1
1.1666	0.025	2.0996E-005	0.024979	1
1.25	0.018	9.0406E-006	0.017991	1
1.333	0.012	3.9085E-006	0.011996	1
1.4166	0.012	1.6796E-006	0.011998	1
1.5	0.012	7.2321E-007	0.011999	1
1.5833	0.006	3.1172E-007	0.0059997	1
1.6666	0.012	1.3436E-007	0.012	1
1.75	0.012	5.7854E-008	0.012	1
1.8333	0.012	2.4937E-008	0.012	1
1.9166	0.018	1.0748E-008	0.018	1
2	0.018	4.6281E-009	0.018	1
2.5	0.018	2.9617E-011	0.018	1
3	0.006	1.8953E-013	0.006	1
3.5	0.012	1.2129E-015	0.012	1
4.5	0.018	4.9672E-020	0.018	1
5	0.012	3.1787E-022	0.012	1
5.5	0.018	2.0342E-024	0.018	1
6	0.006	1.3018E-026	0.006	1
6.5	0.006	8.3306E-029	0.006	1
7	0.012	5.3311E-031	0.012	1
7.5	0.018	3.4116E-033	0.018	1
8.5	0.006	1.3971E-037	0.006	1
9	0.012	8.9408E-040	0.012	1

CEF-5-28D
RUN 1

9.5	0.018	5.7216E-042	0.018	1
10	0.012	3.6615E-044	0.012	1

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RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	9.4085E-003
y0 =	2.7596E+000

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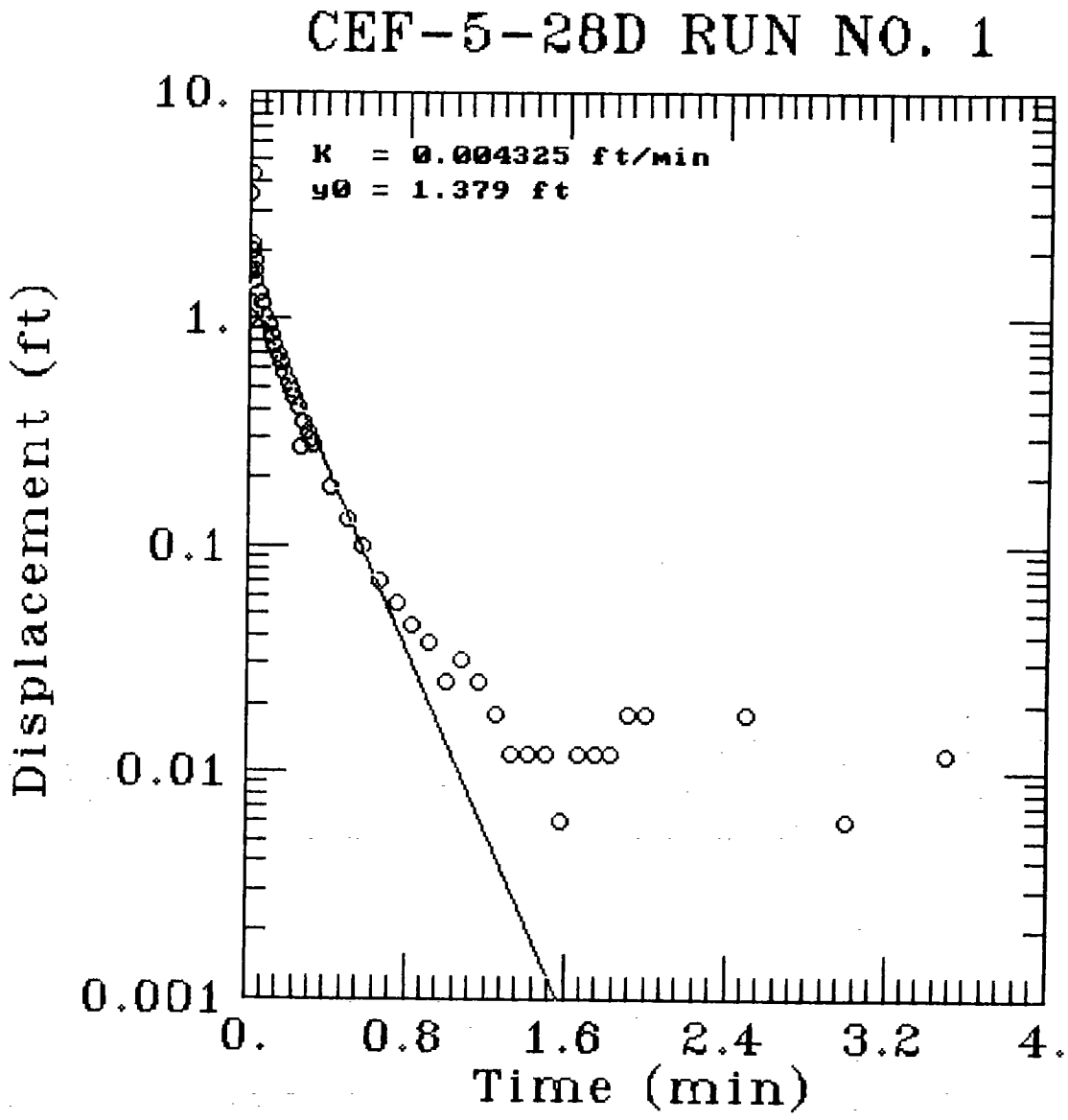
TYPE CURVE DATA

K = 4.32528E-003
y0 = 1.37910E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.379E+000	4.000E+000	1.178E-008		


CEF-5-28D RUN NO. 1
K = 0.004325 ft/min
y0 = 1.379 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
0.8
1.6
2.4
3.2
4.
Time (min)

CEF5-28D

SE1000C
Environmental Logger
11/12 14:23

Unit# 01597 Test 3

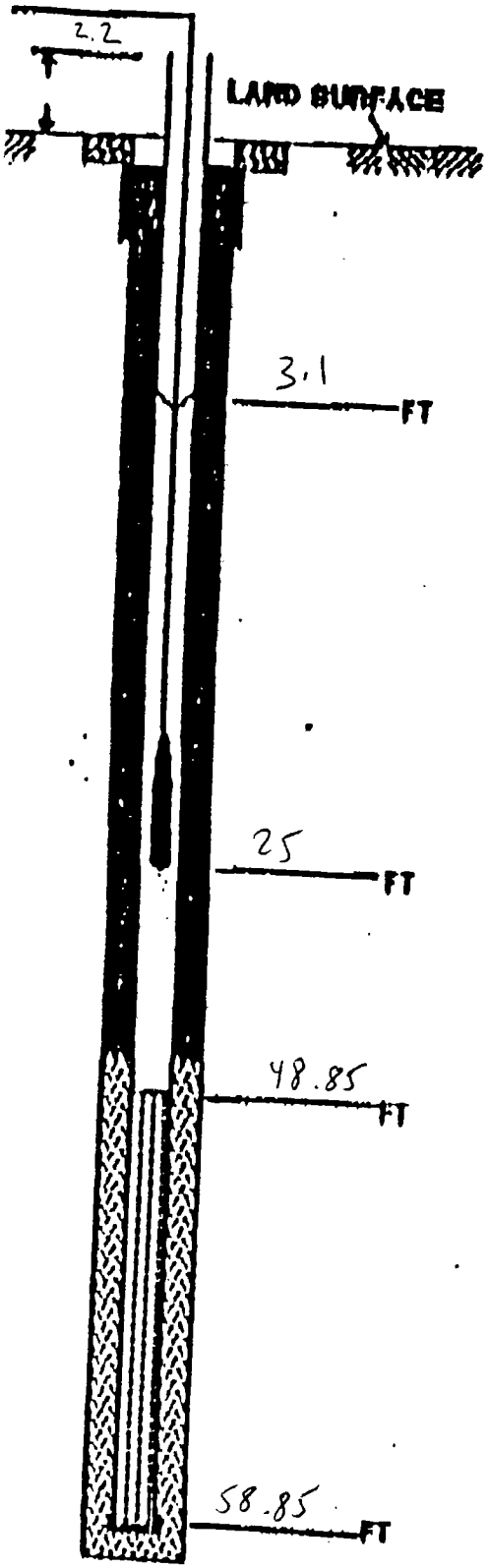
Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 11/12 11:53:38

Elapsed Time	INPUT 1
0.0000	0.006
0.0033	-0.012
0.0066	1.613
0.0100	3.527
0.0133	4.355
0.0166	1.990
0.0200	~~2.159~~
0.0233	1.971
0.0266	1.783
0.0300	1.607
0.0333	1.475
0.0500	1.287
0.0666	1.155
0.0833	1.029
0.1000	0.929
0.1166	0.841
0.1333	0.759
0.1500	0.690
0.1666	0.634
0.1833	0.577
0.2000	0.521
0.2166	0.483
0.2333	0.445
0.2500	0.401
0.2666	0.370
0.2833	0.345
0.3000	0.314
0.3166	0.295
0.3333	0.276
0.4166	0.182
0.5000	0.131

0.5833	0.100
0.6666	0.069
0.7500	0.056
0.8333	0.044
0.9166	0.037
1.0000	0.025
1.0833	0.031
1.1666	0.025
1.2500	0.018
1.3333	0.012
1.4166	0.012
1.5000	0.012
1.5833	0.006
1.6666	0.012
1.7500	0.012
1.8333	0.012
1.9166	0.018
2.0000	0.018
2.5000	0.018
3.0000	0.006
3.5000	0.012
4.0000	0.000
4.5000	0.018
5.0000	0.012
5.5000	0.018
6.0000	0.006
6.5000	0.006
7.0000	0.012
7.5000	0.018
8.0000	0.000
8.5000	0.006
9.0000	0.012
9.5000	0.018
10.0000	0.012

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT RI OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-28D PUMPING WELL —

DATE 11-12-93 TIME 1053

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 3

TEST DURATION 10 min

TIME OF INSTALLATION 1053

STATIC DEPTH TO WATER 3.1 FT. ____ PSI

DEPTH OF TRANSDUCER 25 ft.

CALIBRATION
DEPTH 10 FT 7.15 PSI
DEPTH 11 FT 8.15 PSI
DEPTH 12 FT 9.15 PSI

CLOCKS SYNCHRONIZED? ____

STATIC DEPTH TO WATER ____

TIME PUMPING STARTS —

____ VERIFICATION OF DATA ACQUISITION (HR)
____ VERIFICATION OF DATA ACQUISITION (HR)
____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER ____ FT ____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER ____ FT ____ PSI

END RECOVERY ____

RECALIBRATION OF TRANSDUCER
DEPTH 12 FT 9.14 PSI
DEPTH 11 FT 8.14 PSI
DEPTH 10 FT 7.15 PSI

```
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

                      A Q T E S O L V   R E S U L T S
                                Version 1.10

12/01/93                                                               17:14:39

================================================================================
                              TEST DESCRIPTION

Data set...........
Data set title..... CEF-5-29S RUN NO. 1

Knowns and Constants:
   No. of data points.................. 64
   Radius of well casing............... 0.083
   Radius of well...................... 0.25
   Aquifer saturated thickness......... 12.22
   Well screen length.................. 10
   Static height of water in well...... 11.24
   Log(Re/Rw).......................... 2.679
   A, B, C.............................  2.760,  0.448,  0.000

================================================================================
                              ANALYTICAL METHOD

   wer-Rice (Unconfined Aquifer Slug Test)

================================================================================
                    RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

           Estimate          Std. Error
   K  =    4.9209E-005 +/-   1.6613E-005
   y0 =    2.4504E+000 +/-   1.1196E-001

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
   Number of residuals............... 64
   Number of estimated parameters.... 2
   Degrees of freedom................ 62
   Residual mean..................... 0.002036
   Residual standard deviation....... 0.6947
   Residual variance................. 0.4826

Model Residuals:

     Time          Observed      Calculated      Residual        Weight
```

0.0033	1.809	2.45	-0.641	1
0.0066	1.809	2.4496	-0.64057	1
0.01	1.809	2.4491	-0.64012	1
0.0133	1.872	2.4487	-0.57669	1
0.0166	7.114	2.4483	4.6657	1
0.02	2.441	2.4478	-0.0068162	1
0.0233	2.861	2.4474	0.41361	1
0.0266	3.518	2.447	1.071	1
0.03	3.055	2.4465	0.60849	1
0.0333	3.111	2.4461	0.66492	1
0.05	2.992	2.4439	0.5481	1
0.0666	2.886	2.4417	0.44426	1
0.0833	2.798	2.4396	0.35843	1
0.1	2.729	2.4374	0.29161	1
0.1166	2.667	2.4352	0.23176	1
0.1333	2.617	2.4331	0.18393	1
0.15	2.56	2.4309	0.1291	1
0.1666	2.517	2.4288	0.088248	1
0.1833	2.479	2.4266	0.05241	1
0.2	2.441	2.4244	0.016571	1
0.2166	2.404	2.4223	-0.018284	1
0.2333	2.379	2.4201	-0.041127	1
0.25	2.348	2.418	-0.069973	1
0.2666	2.322	2.4158	-0.093833	1
0.2833	2.297	2.4137	-0.11668	1
0.3	2.272	2.4115	-0.13953	1
0.3166	2.254	2.4094	-0.1554	1
0.3333	2.235	2.4073	-0.17225	1
0.4166	2.147	2.3966	-0.24958	1
0.5	2.091	2.3859	-0.29495	1
0.5833	2.041	2.3754	-0.33437	1
0.6666	2.009	2.3648	-0.35584	1
0.75	1.978	2.3543	-0.37635	1
0.8333	1.959	2.3439	-0.38491	1
0.9166	1.941	2.3335	-0.39252	1
1	1.928	2.3232	-0.39516	1
1.0833	1.916	2.3129	-0.39686	1
1.1666	1.903	2.3026	-0.39961	1
1.25	1.897	2.2924	-0.39539	1
1.3333	1.891	2.2822	-0.39123	1
1.4166	1.878	2.2721	-0.39411	1
1.5	1.872	2.262	-0.39003	1
1.5833	1.872	2.252	-0.38	1
1.6666	1.872	2.242	-0.37002	1
1.75	1.859	2.2321	-0.37307	1
1.8333	1.859	2.2222	-0.36318	1
1.9166	1.853	2.2123	-0.35932	1
2	1.853	2.2025	-0.34951	1
2.5	1.84	2.1445	-0.30455	1
3	1.84	2.0881	-0.24812	1
3.5	1.834	2.0332	-0.19917	1
4	1.834	1.9797	-0.14567	1
4.5	1.834	1.9276	-0.093573	1
5	1.828	1.8769	-0.048851	1
5.5	1.834	1.8275	0.0065376	1
6	1.834	1.7794	0.054626	1
6.5	1.834	1.7326	0.10145	1
7	1.834	1.687	0.14704	1
7.5	1.834	1.6426	0.19143	1

CEF-5-295

8	1.828	1.5993	0.22865	1
8.5	1.828	1.5573	0.27074	1
9	1.828	1.5163	0.31172	1
9.5	1.828	1.4764	0.35162	1
10	1.834	1.4375	0.39647	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	4.9209E-005
y0 =	2.4504E+000

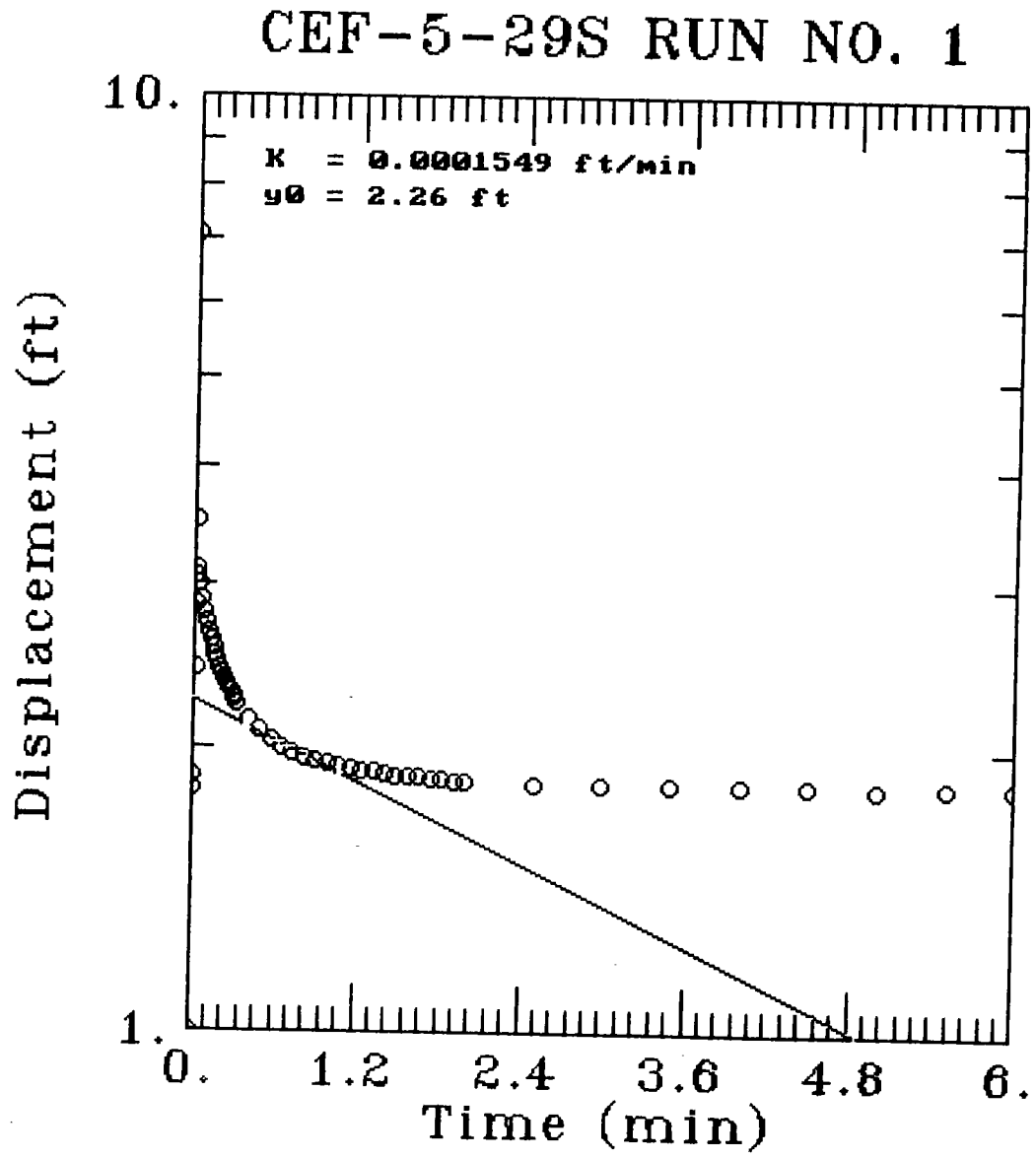
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 1.54940E-004
y0 = 2.25996E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	2.260E+000	6.000E+000	8.251E-001		

CEF-5-298
RUN 1


CEF-5-29S RUN NO. 1
K = 0.0001549 ft/min
y0 = 2.26 ft
10.
1.
Displacement (ft)
0.
1.2
2.4
3.6
4.8
6.
Time (min)

CEF-S-295

SE1000C
Environmental Logger
11/13 14:05

Unit# 01597 Test 6

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

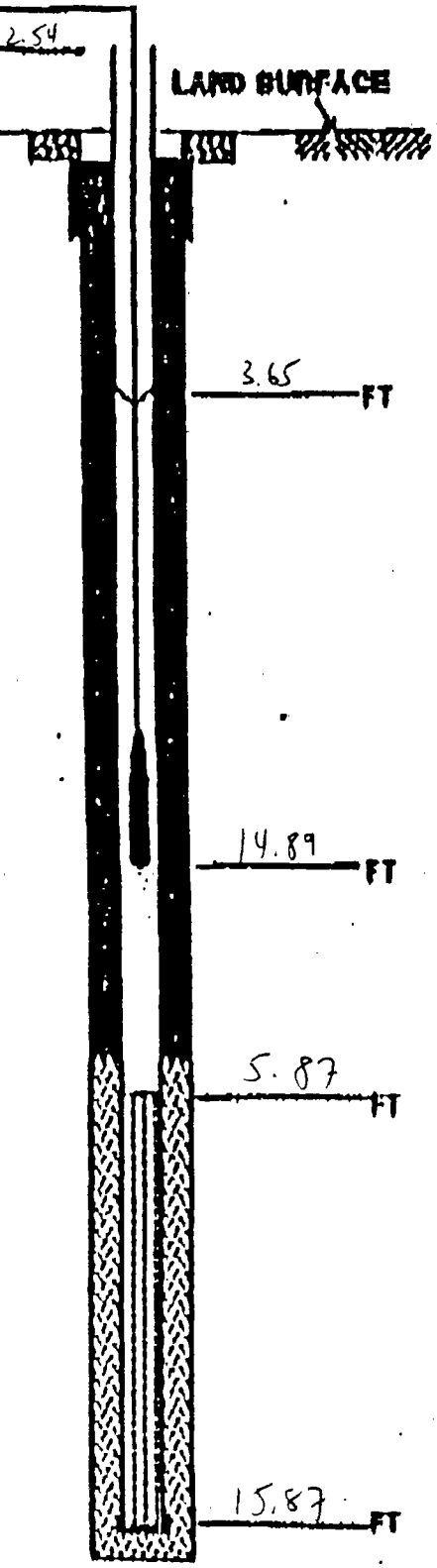
Step 0 11/13 12:30:29

Elapsed Time	INPUT 1
0.0000	1.803
0.0033	1.809
0.0066	1.809
0.0100	1.809
0.0133	1.872
0.0166	7.114
0.0200	2.441
0.0233	2.861
0.0266	3.518
0.0300	3.055
0.0333	3.111
0.0500	2.992
0.0666	2.886
0.0833	2.798
0.1000	2.729
0.1166	2.667
0.1333	2.617
0.1500	2.560
0.1666	2.517
0.1833	2.479
0.2000	2.441
0.2166	2.404
0.2333	2.379
0.2500	2.348
0.2666	2.322
0.2833	2.297
0.3000	2.272
0.3166	2.254
0.3333	2.235
0.4166	2.147
0.5000	2.091

0.5833	2.041
0.6666	2.009
0.7500	1.978
0.8333	1.959
0.9166	1.941
1.0000	1.928
1.0833	1.916
1.1666	1.903
1.2500	1.897
1.3333	1.891
1.4166	1.878
1.5000	1.872
1.5833	1.872
1.6666	1.872
1.7500	1.859
1.8333	1.859
1.9166	1.853
2.0000	1.853
2.5000	1.840
3.0000	1.840
3.5000	1.834
4.0000	1.834
4.5000	1.834
5.0000	1.828
5.5000	1.834
6.0000	1.834
6.5000	1.834
7.0000	1.834
7.5000	1.834
8.0000	1.828
8.5000	1.828
9.0000	1.828
9.5000	1.828
10.0000	1.834

CEF-5-295
RUN 1

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT R1 OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-29S PUMPING WELL —

DATE 11-13-93 TIME 1130

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 6

TEST DURATION 10 min

TIME OF INSTALLATION 1130

STATIC DEPTH TO WATER 3.65 FT. _____ PSI

DEPTH OF TRANSDUCER 14.87

CALIBRATION
DEPTH 10 FT 6.60 PSI
DEPTH 11 FT 7.63 PSI
DEPTH 12 FT 8.60 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT. _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT. _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER

DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S

Version 1.10

12/01/93 17:22:4

TEST DESCRIPTION

Data set...........
Data set title..... CEF-5-12D RUN NO. 1

Knowns and Constants:
- No. of data points.................... 60
- Radius of well casing................. 0.083
- Radius of well........................ 0.25
- Aquifer saturated thickness........... 57.29
- Well screen length.................... 10
- Static height of water in well........ 22.41
- Log(Re/Rw)............................ 2.71
- A, B, C............................... 2.760, 0.448, 0.000

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.2159E-002	+/-	1.5547E-003
y0 =	2.2584E+000	+/-	1.4584E-001

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals................. 60
- Number of estimated parameters...... 2
- Degrees of freedom.................. 58
- Residual mean....................... 0.01929
- Residual standard deviation......... 0.2288
- Residual variance................... 0.05234

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.01	3.314	1.9826	1.3314	1
0.0133	0.96	1.8992	-0.93919	1
0.0166	1.281	1.8193	-0.53829	1
0.02	1.714	1.7405	-0.026483	1
0.0233	1.732	1.6673	0.064739	1
0.0266	1.651	1.5971	0.05388	1
0.03	1.557	1.5279	0.029062	1
0.0333	1.494	1.4637	0.030343	1
0.05	1.105	1.1775	-0.072544	1
0.0666	0.866	0.94859	-0.082595	1
0.0833	0.715	0.76316	-0.048165	1
0.1	0.59	0.61398	-0.023983	1
0.1166	0.496	0.49461	0.0013937	1
0.1333	0.42	0.39792	0.022078	1
0.15	0.358	0.32014	0.037863	1
0.1666	0.32	0.25789	0.062108	1
0.1833	0.27	0.20748	0.06252	1
0.2	0.226	0.16692	0.059078	1
0.2166	0.207	0.13447	0.072532	1
0.2333	0.188	0.10818	0.079818	1
0.25	0.15	0.087035	0.062965	1
0.2666	0.15	0.070113	0.079887	1
0.2833	0.125	0.056407	0.068593	1
0.3	0.119	0.045381	0.073619	1
0.3166	0.106	0.036557	0.069443	1
0.3333	0.094	0.029411	0.064589	1
0.4166	0.056	0.0099388	0.046061	1
0.5	0.05	0.0033542	0.046646	1
0.5833	0.037	0.0011335	0.035867	1
0.6666	0.025	0.00038303	0.024617	1
0.75	0.025	0.00012927	0.024871	1
0.8333	0.018	4.3682E-005	0.017956	1
0.9166	0.025	1.4761E-005	0.024985	1
1	0.018	4.9817E-006	0.017995	1
1.0833	0.018	1.6834E-006	0.017998	1
1.1666	0.012	5.6888E-007	0.011999	1
1.25	0.012	1.9199E-007	0.012	1
1.3333	0.018	6.4877E-008	0.018	1
1.4166	0.018	2.1924E-008	0.018	1
1.5	0.018	7.3989E-009	0.018	1
1.5833	0.012	2.5003E-009	0.012	1
1.6666	0.012	8.4491E-010	0.012	1
1.75	0.006	2.8514E-010	0.006	1
1.8333	0.018	9.6357E-011	0.018	1
1.9166	0.012	3.2561E-011	0.012	1
2	0.006	1.0989E-011	0.006	1
2.5	0.018	1.6321E-014	0.018	1
3	0.012	2.424E-017	0.012	1
3.5	0.012	3.6002E-020	0.012	1
4	0.018	5.3471E-023	0.018	1
4.5	0.006	7.9416E-026	0.006	1
5	0.006	1.1795E-028	0.006	1
5.5	0.012	1.7518E-031	0.012	1
6	0.012	2.6018E-034	0.012	1
6.5	0.006	3.8643E-037	0.006	1
7.5	0.018	8.5241E-043	0.018	1
8	0.006	1.266E-045	0.006	1
8.5	0.012	1.8803E-048	0.012	1
9	0.012	2.7926E-051	0.012	1

CEF-5-12D
RUN 1

9.5	0.012	4.1477E-054	0.012	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.2159E-002
y0 =	2.2584E+000

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>

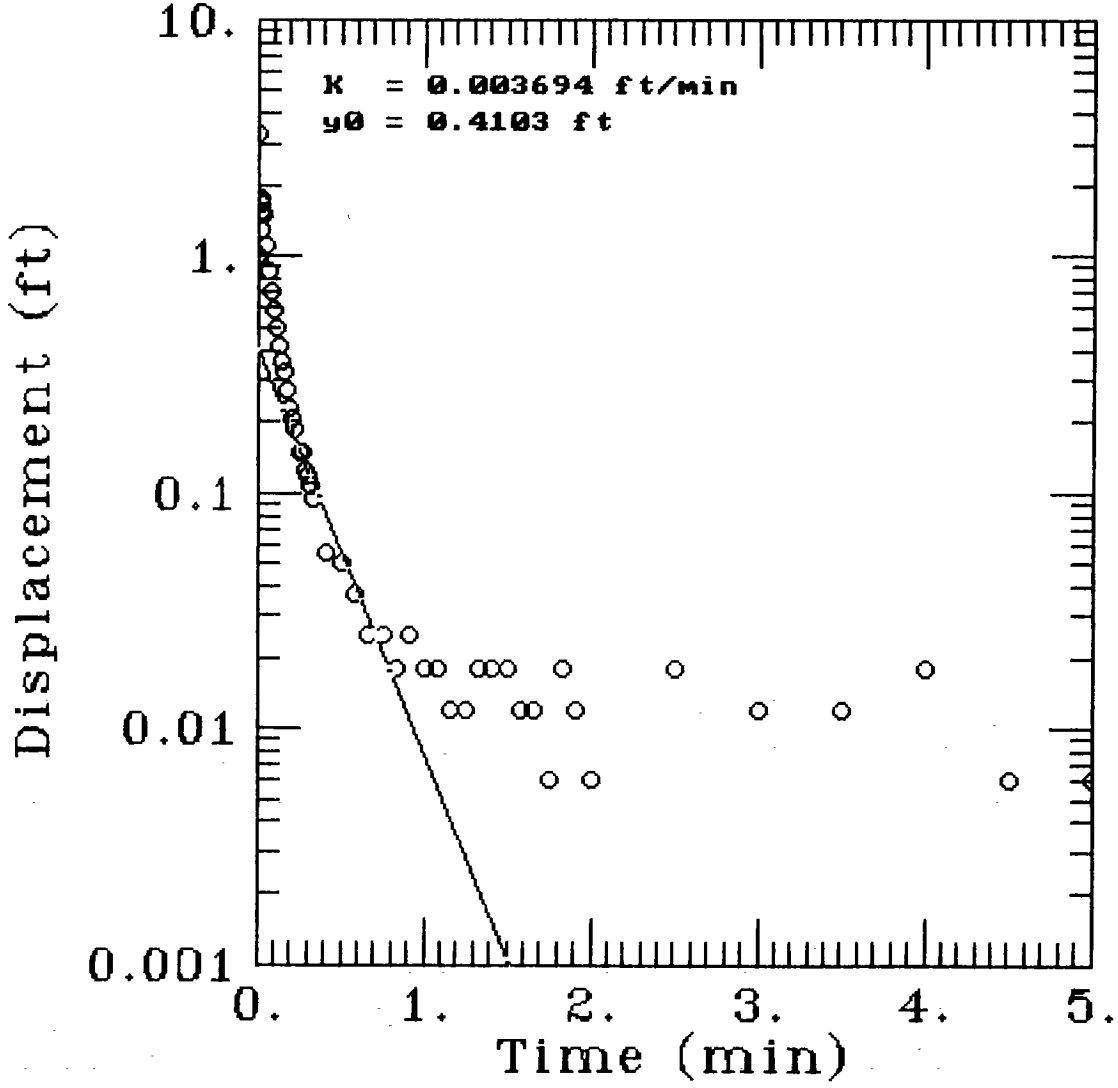
TYPE CURVE DATA

K = 3.69414E-003
y0 = 4.10268E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	4.103E-001	5.000E+000	1.049E-009		

CEF-5-120
RUN 1

CEF-5-12D RUN NO. 1



CEF-5-12D

SE1000C
Environmental Logger
11/14 09:17

Unit# 01597 Test 3

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

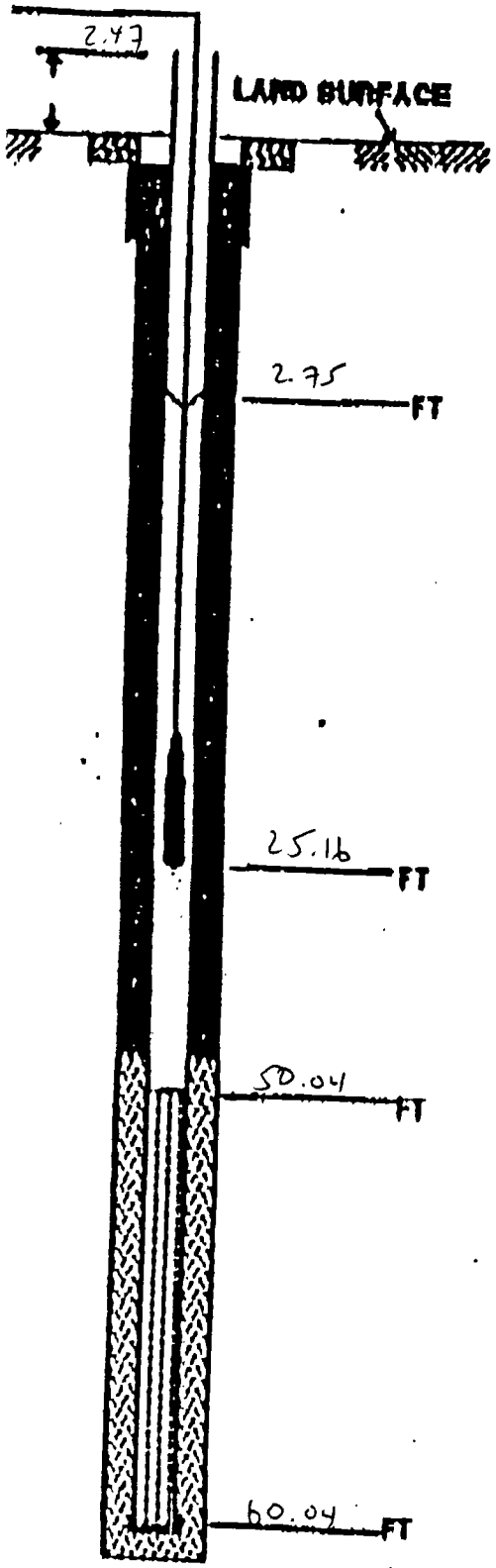
Step 0 11/13 16:36:28

Elapsed Time	INPUT 1
0.0000	-0.018
0.0033	-0.012
0.0066	0.000
0.0100	3.314
0.0133	0.960
0.0166	1.281
0.0200	1.714
0.0233	1.732
0.0266	1.651
0.0300	1.557
0.0333	1.494
0.0500	1.105
0.0666	0.866
0.0833	0.715
0.1000	0.590
0.1166	0.496
0.1333	0.420
0.1500	0.358
0.1666	0.320
0.1833	0.270
0.2000	0.226
0.2166	0.207
0.2333	0.188
0.2500	0.150
0.2666	0.150
0.2833	0.125
0.3000	0.119
0.3166	0.106
0.3333	0.094
0.4166	0.056
0.5000	0.050

0.5833	0.037
0.6666	0.025
0.7500	0.025
0.8333	0.018
0.9166	0.025
1.0000	0.018
1.0833	0.018
1.1666	0.012
1.2500	0.012
1.3333	0.018
1.4166	0.018
1.5000	0.018
1.5833	0.012
1.6666	0.012
1.7500	0.006
1.8333	0.018
1.9166	0.012
2.0000	0.006
2.5000	0.018
3.0000	0.012
3.5000	0.012
4.0000	0.018
4.5000	0.006
5.0000	0.006
5.5000	0.012
6.0000	0.012
6.5000	0.006
7.0000	0.000
7.5000	0.018
8.0000	0.006
8.5000	0.012
9.0000	0.012
9.5000	0.012
10.0000	0.000

CEF-5-12D

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT RI OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-120 PUMPING WELL —

DATE 11-13-93 TIME 1336

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. (3)

TEST DURATION 10 min

TIME OF INSTALLATION 1336

STATIC DEPTH TO WATER 2.75 FT. _____ PSI

DEPTH OF TRANSDUCER 25.16

CALIBRATION
DEPTH 10 FT 6.94 PSI
DEPTH 11 FT 7.95 PSI
DEPTH 12 FT 8.95 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S
Version 1.10

12/02/93 07:25:17

==

TEST DESCRIPTION

Data set...........
Data set title..... CEF-5-17I RUN NO. 1

Knowns and Constants:
- No. of data points................... 48
- Radius of well casing............... 0.083
- Radius of well...................... 0.25
- Aquifer saturated thickness......... 30.22
- Well screen length.................. 10
- Static height of water in well...... 20.22
- Log(Re/Rw).......................... 2.772
- A, B, C............................. 2.760, 0.448, 0.000

==

ANALYTICAL METHOD

:wer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.0005E-002	+/-	2.2355E-003
y0 =	1.0369E+000	+/-	1.0172E-001

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals............... 48
- Number of estimated parameters.... 2
- Degrees of freedom................ 46
- Residual mean..................... -0.002315
- Residual standard deviation....... 0.2222
- Residual variance................. 0.04939

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.0033	0.012	1.0016	-0.98964	1
0.0066	0.947	0.96761	-0.020606	1
0.01	0.445	0.93374	-0.48874	1
0.0133	0.985	0.90201	0.082987	1
0.0166	1.179	0.87136	0.30764	1
0.02	1.229	0.84087	0.38813	1
0.0233	1.261	0.81229	0.44871	1
0.0266	1.217	0.78469	0.43231	1
0.03	1.142	0.75723	0.38477	1
0.0333	1.054	0.7315	0.3225	1
0.05	0.464	0.61408	-0.15008	1
0.0666	0.269	0.51605	-0.24705	1
0.0833	0.276	0.43322	-0.15722	1
0.1	0.251	0.36368	-0.11268	1
0.1166	0.2	0.30563	-0.10563	1
0.1333	0.156	0.25657	-0.10057	1
0.15	0.131	0.21539	-0.084386	1
0.1666	0.125	0.181	-0.056003	1
0.1833	0.1	0.15195	-0.05195	1
0.2	0.087	0.12756	-0.04056	1
0.2166	0.081	0.1072	-0.026197	1
0.2333	0.062	0.089991	-0.027991	1
0.25	0.062	0.075546	-0.013546	1
0.2666	0.056	0.063486	-0.0074862	1
0.2833	0.056	0.053296	0.0027042	1
0.3	0.056	0.044741	0.011259	1
0.3166	0.037	0.037599	-0.00059894	1
0.3333	0.037	0.031564	0.0054362	1
0.4166	0.031	0.013188	0.017812	1
0.5	0.025	0.0055042	0.019496	1
0.5833	0.006	0.0022997	0.0037003	1
0.6666	0.012	0.00096084	0.011039	1
0.75	0.006	0.00040103	0.005599	1
0.8333	0.012	0.00016755	0.011832	1
0.9166	0.006	7.0005E-005	0.00593	1
1.0833	0.006	1.2208E-005	0.0059878	1
1.1666	0.012	5.1005E-006	0.011995	1
1.25	0.012	2.1288E-006	0.011998	1
1.4166	0.006	3.7162E-007	0.0059996	1
1.5	0.006	1.551E-007	0.0059998	1
1.5833	0.006	6.4803E-008	0.0059999	1
1.75	0.012	1.1301E-008	0.012	1
1.9166	0.006	1.9727E-009	0.006	1
4.5	0.006	3.4705E-021	0.006	1
6	0.018	5.1914E-028	0.018	1
6.5	0.006	2.7558E-030	0.006	1
8	0.006	4.1223E-037	0.006	1
9.5	0.006	6.1663E-044	0.006	1

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.0005E-002
y0 =	1.0369E+000

CEF-5-17 I

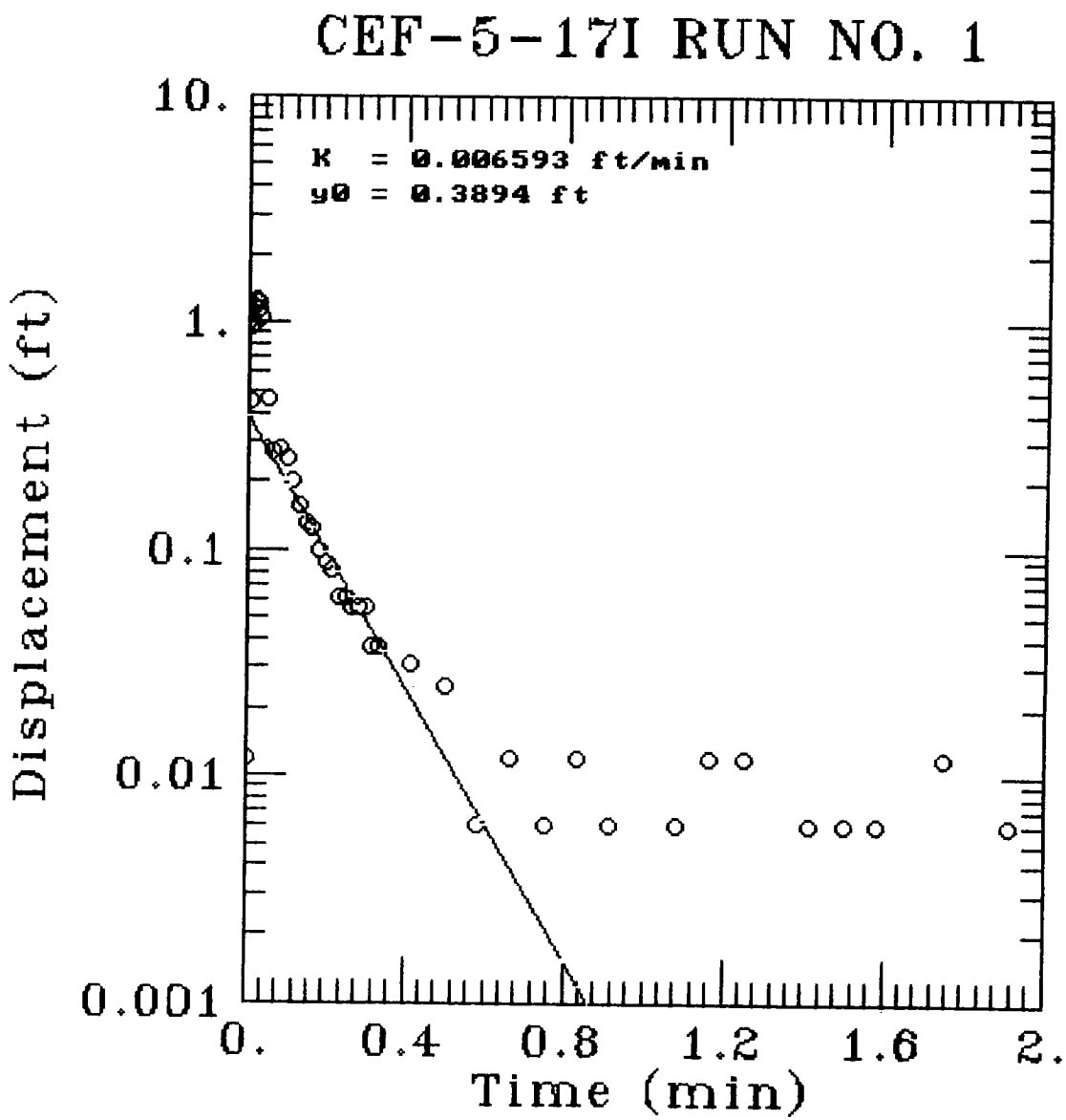
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>

TYPE CURVE DATA

K = 6.59305E-003
y0 = 3.89386E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	3.894E-001	2.000E+000	3.923E-007		

CEF 5-17I
RUN 1


CEF-5-17I RUN NO. 1
K = 0.006593 ft/min
y0 = 0.3894 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
0.4
0.8
1.2
1.6
2.
Time (min)

CEF-5-175

SE1000C
Environmental Logger
11/12 14:18

Unit# 01597 Test 1

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

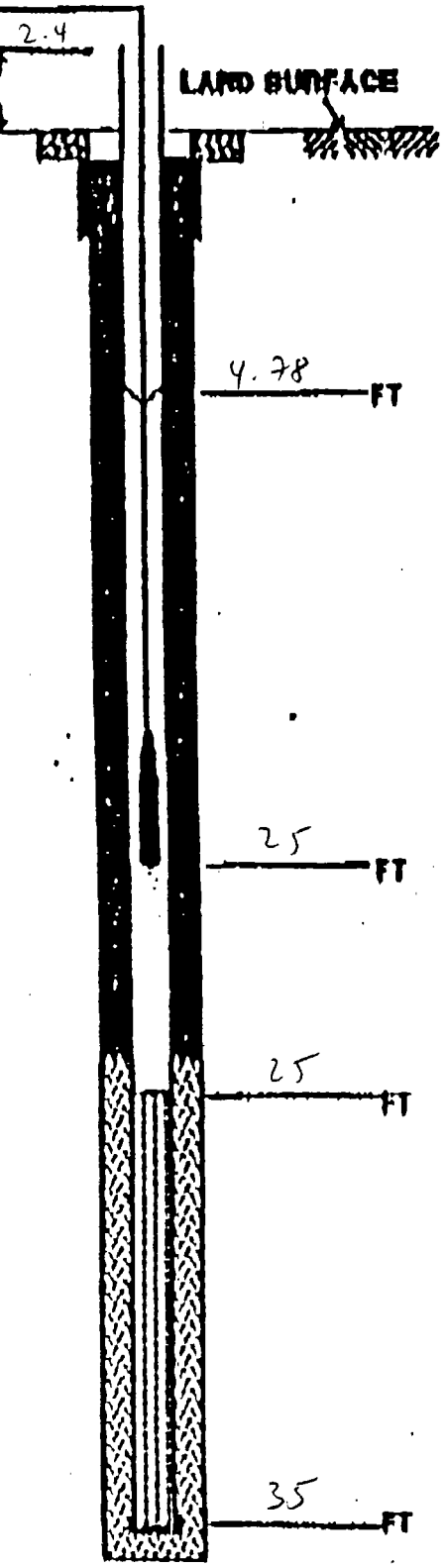
Step 0 11/12 11:07:45

Elapsed Time	INPUT 1
0.0000	0.000
0.0033	0.012
0.0066	0.947
0.0100	0.445
0.0133	0.985
0.0166	1.179
0.0200	1.229
0.0233	1.261
0.0266	1.217
0.0300	1.142
0.0333	1.054
0.0500	0.464
0.0666	0.269
0.0833	0.276
0.1000	0.251
0.1166	0.200
0.1333	0.156
0.1500	0.131
0.1666	0.125
0.1833	0.100
0.2000	0.087
0.2166	0.081
0.2333	0.062
0.2500	0.062
0.2666	0.056
0.2833	0.056
0.3000	0.056
0.3166	0.037
0.3333	0.037
0.4166	0.031
0.5000	0.025

0.5833	0.006
0.6666	0.012
0.7500	0.006
0.8333	0.012
0.9166	0.006
1.0000	0.000
1.0833	0.006
1.1666	0.012
1.2500	0.012
1.3333	0.000
1.4166	0.006
1.5000	0.006
1.5833	0.006
1.6666	0.000
1.7500	0.012
1.8333	0.000
1.9166	0.006
2.0000	-0.006
2.5000	0.000
3.0000	0.000
3.5000	0.000
4.0000	0.000
4.5000	0.006
5.0000	0.000
5.5000	-0.006
6.0000	0.018
6.5000	0.006
7.0000	0.000
7.5000	0.000
8.0000	0.006
8.5000	0.000
9.0000	0.000
9.5000	0.006
10.0000	-0.006

CEF-5-17 I
RUN 1

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT RI OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-17I PUMPING WELL —

DATE 11-12-93 TIME 1007

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 1

TEST DURATION 10 min

TIME OF INSTALLATION 1007

STATIC DEPTH TO WATER 4.78 FT. _____ PSI

DEPTH OF TRANSDUCER 25

CALIBRATION
DEPTH 10 FT 5.37 PSI
DEPTH 11 FT 6.36 PSI
DEPTH 12 FT 7.38 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER

DEPTH 12 FT 7.36 PSI
DEPTH 11 FT 6.36 PSI
DEPTH 10 FT 5.37 PSI

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A Q T E S O L V   R E S U L T S
Version 1.10

12/02/93

07:56:2

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TEST DESCRIPTION

Data set..........
Data set title..... CEF-5-25I RUN NO. 1

Knowns and Constants:
- No. of data points.................. 114
- Radius of well casing............... 0.083
- Radius of well...................... 0.25
- Aquifer saturated thickness......... 31.34
- Well screen length.................. 10
- Static height of water in well...... 19.72
- Log(Re/Rw).......................... 2.749
- A, B, C............................. 2.760, 0.448, 0.000

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ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

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RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.0077E-002	+/-	1.6915E-003
y0 =	1.3028E+000	+/-	1.0204E-001

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals................ 114
- Number of estimated parameters.... 2
- Degrees of freedom................ 112
- Residual mean..................... -0.004848
- Residual standard deviation....... 0.2839
- Residual variance................. 0.08061

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.0066	0.006	1.2144	-1.2084	1
0.01	0.062	1.1713	-1.1093	1
0.0133	1.286	1.1308	0.15515	1
0.0166	1.455	1.0918	0.36318	1
0.02	1.606	1.053	0.55298	1
0.0233	1.612	1.0167	0.59533	1
0.0266	1.568	0.98158	0.58642	1
0.03	1.468	0.9467	0.5213	1
0.0333	1.349	0.91402	0.43498	1
0.05	0.803	0.76518	0.03782	1
0.0666	0.52	0.64126	-0.12126	1
0.0833	0.364	0.53683	-0.17283	1
0.1	0.269	0.44941	-0.18041	1
0.1166	0.188	0.37663	-0.18863	1
0.1333	0.156	0.3153	-0.1593	1
0.15	0.125	0.26395	-0.13895	1
0.1666	0.106	0.22121	-0.11521	1
0.1833	0.081	0.18518	-0.10418	1
0.2	0.069	0.15503	-0.086027	1
0.2166	0.075	0.12992	-0.05492	1
0.2333	0.056	0.10876	-0.052763	1
0.25	0.056	0.091052	-0.035052	1
0.2666	0.05	0.076306	-0.026306	1
0.2833	0.037	0.06388	-0.02688	1
0.3	0.037	0.053477	-0.016477	1
0.3166	0.037	0.044817	-0.0078166	1
0.3333	0.037	0.037519	-0.00051852	1
0.4166	0.031	0.01546	0.01554	1
0.5	0.025	0.0063635	0.018636	1
0.5833	0.018	0.0026221	0.015378	1
0.6666	0.018	0.0010805	0.01692	1
0.75	0.012	0.00044474	0.011555	1
0.8333	0.018	0.00018326	0.017817	1
0.9166	0.006	7.5512E-005	0.0059245	1
1	0.006	3.1082E-005	0.0059689	1
1.0833	0.018	1.2808E-005	0.017987	1
1.25	0.012	2.1723E-006	0.011998	1
1.3333	0.006	8.9511E-007	0.0059991	1
1.4166	0.006	3.6883E-007	0.0059996	1
1.5	0.012	1.5182E-007	0.012	1
1.5833	0.006	6.2558E-008	0.0059999	1
1.6666	0.006	2.5777E-008	0.006	1
1.8333	0.006	4.3721E-009	0.006	1
1.9166	0.006	1.8015E-009	0.006	1
2	0.012	7.4155E-010	0.012	1
2.5	0.012	3.622E-012	0.012	1
3	0.006	1.7692E-014	0.006	1
3.5	0.006	8.6413E-017	0.006	1
4	0.006	4.2208E-019	0.006	1
5	0.006	1.007E-023	0.006	1
5.5	0.006	4.9186E-026	0.006	1
6	0.012	2.4024E-028	0.012	1
6.5	0.006	1.1735E-030	0.006	1
7	0.006	5.7317E-033	0.006	1
7.5	0.006	2.7996E-035	0.006	1
9	0.006	3.2624E-042	0.006	1
10	0.006	7.7833E-047	0.006	1
0.0066	0.006	1.2144	-1.2084	1
0.01	0.062	1.1713	-1.1093	1

CEF-5-25I
RUN 1

0.0133	1.286	1.1308	0.15515	1
0.0166	1.455	1.0918	0.36318	1
0.02	1.606	1.053	0.55298	1
0.0233	1.612	1.0167	0.59533	1
0.0266	1.568	0.98158	0.58642	1
0.03	1.468	0.9467	0.5213	1
0.0333	1.349	0.91402	0.43498	1
0.05	0.803	0.76518	0.03782	1
0.0666	0.52	0.64126	-0.12126	1
0.0833	0.364	0.53683	-0.17283	1
0.1	0.269	0.44941	-0.18041	1
0.1166	0.188	0.37663	-0.18863	1
0.1333	0.156	0.3153	-0.1593	1
0.15	0.125	0.26395	-0.13895	1
0.1666	0.106	0.22121	-0.11521	1
0.1833	0.081	0.18518	-0.10418	1
0.2	0.069	0.15503	-0.086027	1
0.2166	0.075	0.12992	-0.05492	1
0.2333	0.056	0.10876	-0.052763	1
0.25	0.056	0.091052	-0.035052	1
0.2666	0.05	0.076306	-0.026306	1
0.2833	0.037	0.06388	-0.02688	1
0.3	0.037	0.053477	-0.016477	1
0.3166	0.037	0.044817	-0.0078166	1
0.3333	0.037	0.037519	-0.00051852	1
0.4166	0.031	0.01546	0.01554	1
0.5	0.025	0.0063635	0.018636	1
0.5833	0.018	0.0026221	0.015378	1
0.6666	0.018	0.0010805	0.01692	1
0.75	0.012	0.00044474	0.011555	1
0.8333	0.018	0.00018326	0.017817	1
0.9166	0.006	7.5512E-005	0.0059245	1
1	0.006	3.1082E-005	0.0059689	1
1.0833	0.018	1.2808E-005	0.017987	1
1.25	0.012	2.1723E-006	0.011998	1
1.3333	0.006	8.9511E-007	0.0059991	1
1.4166	0.006	3.6883E-007	0.0059996	1
1.5	0.012	1.5182E-007	0.012	1
1.5833	0.006	6.2558E-008	0.0059999	1
1.6666	0.006	2.5777E-008	0.006	1
1.8333	0.006	4.3721E-009	0.006	1
1.9166	0.006	1.8015E-009	0.006	1
2	0.012	7.4155E-010	0.012	1
2.5	0.012	3.622E-012	0.012	1
3	0.006	1.7692E-014	0.006	1
3.5	0.006	8.6413E-017	0.006	1
4	0.006	4.2208E-019	0.006	1
5	0.006	1.007E-023	0.006	1
5.5	0.006	4.9186E-026	0.006	1
6	0.012	2.4024E-028	0.012	1
6.5	0.006	1.1735E-030	0.006	1
7	0.006	5.7317E-033	0.006	1
7.5	0.006	2.7996E-035	0.006	1
9	0.006	3.2624E-042	0.006	1
10	0.006	7.7833E-047	0.006	1

RESULTS FROM VISUAL CURVE MATCHING

CEF-5-25I
RUN 1

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.0077E-002
y0 =	1.3028E+000

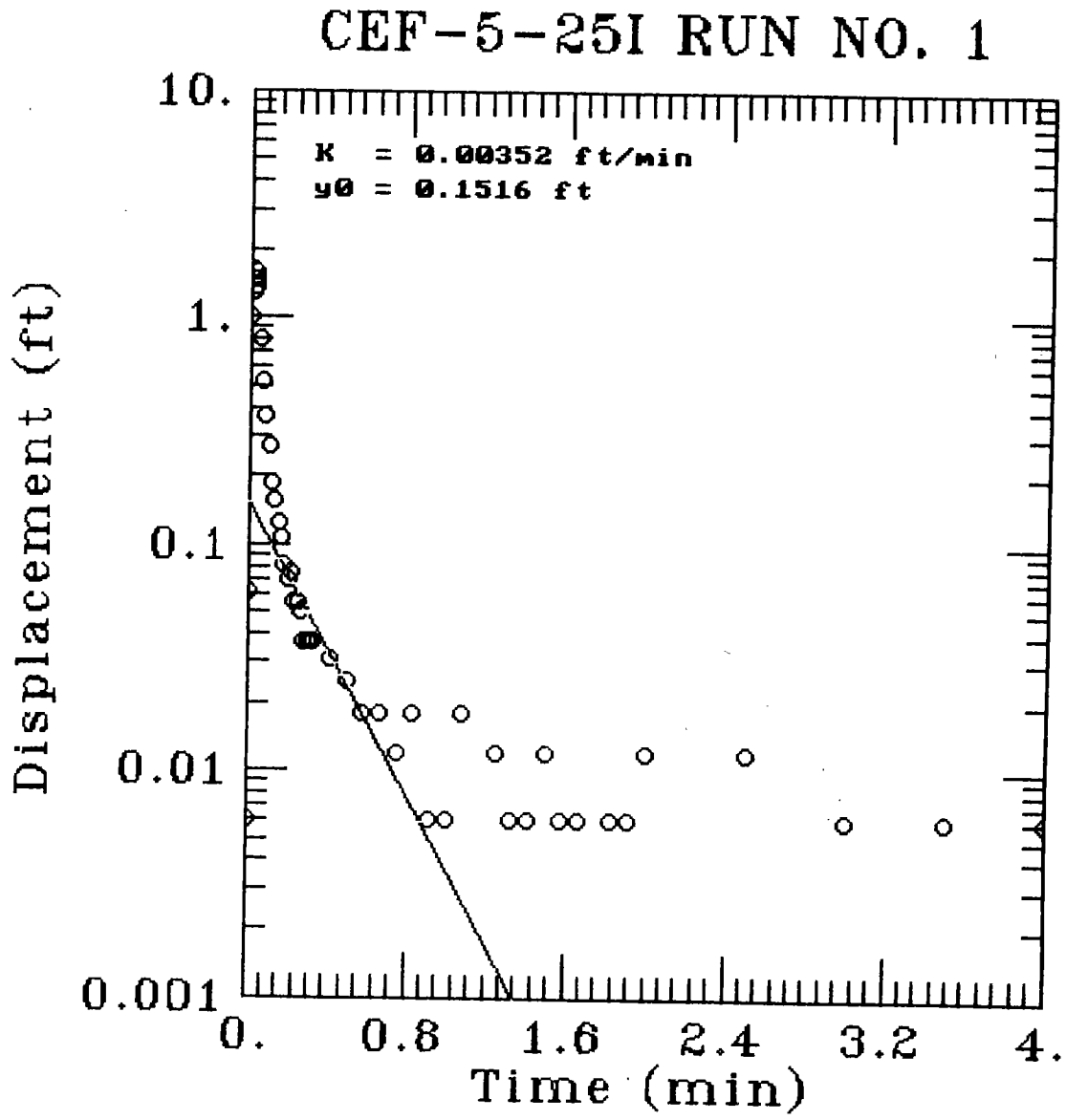
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>

TYPE CURVE DATA

K = 3.52049E-003
y0 = 1.51610E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.516E-001	4.000E+000	5.263E-008		

CEF-5-25I
RUN 1


CEF-5-25I RUN NO. 1
K = 0.00352 ft/min
y0 = 0.1516 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
0.8
1.6
2.4
3.2
4.
Time (min)

CEF-5257

SE1000C
Environmental Logger
11/13 13:54

Unit# 01597 Test 2

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

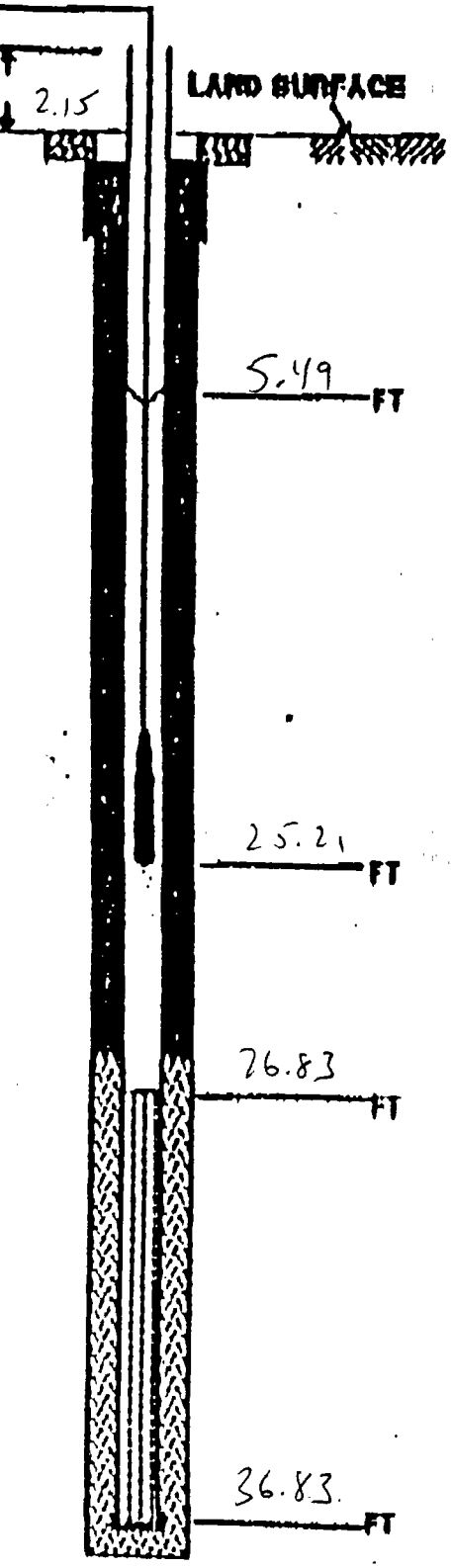
Step 0 11/13 10:22:54

Elapsed Time	INPUT 1
0.0000	0.000
0.0033	-0.006
0.0066	0.006
0.0100	0.062
0.0133	1.286
0.0166	1.455
0.0200	1.606
0.0233	1.612
0.0266	1.568
0.0300	1.468
0.0333	1.349
0.0500	0.803
0.0666	0.520
0.0833	0.364
0.1000	0.269
0.1166	0.188
0.1333	0.156
0.1500	0.125
0.1666	0.106
0.1833	0.081
0.2000	0.069
0.2166	0.075
0.2333	0.056
0.2500	0.056
0.2666	0.050
0.2833	0.037
0.3000	0.037
0.3166	0.037
0.3333	0.037
0.4166	0.031
0.5000	0.025

0.5833	0.018
0.6666	0.018
0.7500	0.012
0.8333	0.018
0.9166	0.006
1.0000	0.006
1.0833	0.018
1.1666	0.000
1.2500	0.012
1.3333	0.006
1.4166	0.006
1.5000	0.012
1.5833	0.006
1.6666	0.006
1.7500	0.000
1.8333	0.006
1.9166	0.006
2.0000	0.012
2.5000	0.012
3.0000	0.006
3.5000	0.006
4.0000	0.006
4.5000	0.000
5.0000	0.006
5.5000	0.006
6.0000	0.012
6.5000	0.006
7.0000	0.006
7.5000	0.006
8.0000	0.000
8.5000	0.000
9.0000	0.006
9.5000	0.000
10.0000	0.006

CEF-5-25I
RUN 1

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT RI OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-25I PUMPING WELL —

DATE 11-13-93 TIME 1254

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 2

TEST DURATION 10 min

TIME OF INSTALLATION _____

STATIC DEPTH TO WATER 5.49 FT. _____ PSI

DEPTH OF TRANSDUCER 25.21

CALIBRATION
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S
Version 1.10

12/02/93

08:04:4

TEST DESCRIPTION

Data set...........
Data set title..... CEF-5-30S RUN NO. 1

Knowns and Constants:
- No. of data points................... 128
- Radius of well casing................ 0.083
- Radius of well....................... 0.25
- Aquifer saturated thickness......... 14.13
- Well screen length.................. 10
- Static height of water in well...... 13.05
- Log(Re/Rw).......................... 2.751
- A, B, C............................. 2.760, 0.448, 0.000

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	5.8905E-004	+/-	1.2253E-004
y0 =	1.3293E+000	+/-	8.4805E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals................ 128
- Number of estimated parameters.... 2
- Degrees of freedom................ 126
- Residual mean..................... 0.0007685
- Residual standard deviation....... 0.5421
- Residual variance................. 0.2939

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.0033	0.006	1.3266	-1.3206	1
0.0066	0.006	1.3239	-1.3179	1
0.01	0.006	1.3211	-1.3151	1
0.0133	0.012	1.3184	-1.3064	1
0.0166	1.202	1.3157	-0.11367	1
0.02	4.381	1.3129	3.0681	1
0.0233	0.4	1.3102	-0.91021	1
0.0266	2.235	1.3075	0.92748	1
0.03	1.578	1.3048	0.27324	1
0.0333	1.477	1.3021	0.17491	1
0.05	1.534	1.2886	0.24536	1
0.0666	1.496	1.2754	0.22059	1
0.0833	1.465	1.2622	0.20276	1
0.1	1.427	1.2492	0.1778	1
0.1166	1.396	1.2364	0.15962	1
0.1333	1.377	1.2236	0.15339	1
0.15	1.346	1.211	0.13503	1
0.1666	1.327	1.1985	0.12846	1
0.1833	1.308	1.1862	0.12184	1
0.2	1.29	1.1739	0.11609	1
0.2166	1.264	1.1619	0.10214	1
0.2333	1.246	1.1499	0.096136	1
0.25	1.227	1.138	0.089011	1
0.2666	1.208	1.1263	0.081694	1
0.2833	1.189	1.1147	0.074326	1
0.3	1.177	1.1032	0.073837	1
0.3166	1.158	1.0918	0.066162	1
0.3333	1.139	1.0806	0.058438	1
0.4166	1.058	1.026	0.031967	1
0.5	0.995	0.9742	0.020804	1
0.5833	0.933	0.92503	0.007965	1
0.6666	0.87	0.87835	-0.0083548	1
0.75	0.814	0.83398	-0.019978	1
0.8333	0.77	0.79189	-0.021893	1
0.9166	0.72	0.75193	-0.031932	1
1	0.682	0.71394	-0.031942	1
1.0833	0.638	0.67791	-0.039915	1
1.1666	0.601	0.6437	-0.042705	1
1.25	0.569	0.61118	-0.042183	1
1.3333	0.538	0.58034	-0.042341	1
1.4166	0.507	0.55106	-0.044055	1
1.5	0.475	0.52321	-0.048215	1
1.5833	0.45	0.49681	-0.046812	1
1.6666	0.425	0.47174	-0.046741	1
1.75	0.407	0.44791	-0.040908	1
1.8333	0.382	0.4253	-0.043305	1
1.9166	0.363	0.40384	-0.040843	1
2	0.344	0.38344	-0.03944	1
2.5	0.25	0.281	-0.031005	1
3	0.181	0.20594	-0.024935	1
3.5	0.137	0.15092	-0.01392	1
4	0.112	0.1106	0.0013977	1
4.5	0.081	0.081055	-5.5243E-005	1
5	0.075	0.059402	0.015598	1
5.5	0.056	0.043533	0.012467	1
6	0.05	0.031903	0.018097	1
6.5	0.043	0.02338	0.01962	1
7	0.037	0.017134	0.019866	1
7.5	0.037	0.012557	0.024443	1

CEF- 5- ~~251~~ 305
RUN 1

8	0.031	0.0092024	0.021798	1
8.5	0.031	0.006744	0.024256	1
9	0.031	0.0049423	0.026058	1
9.5	0.025	0.003622	0.021378	1
10	0.025	0.0026544	0.022346	1
0.0033	0.006	1.3266	-1.3206	1
0.0066	0.006	1.3239	-1.3179	1
0.01	0.006	1.3211	-1.3151	1
0.0133	0.012	1.3184	-1.3064	1
0.0166	1.202	1.3157	-0.11367	1
0.02	4.381	1.3129	3.0681	1
0.0233	0.4	1.3102	-0.91021	1
0.0266	2.235	1.3075	0.92748	1
0.03	1.578	1.3048	0.27324	1
0.0333	1.477	1.3021	0.17491	1
0.05	1.534	1.2886	0.24536	1
0.0666	1.496	1.2754	0.22059	1
0.0833	1.465	1.2622	0.20276	1
0.1	1.427	1.2492	0.1778	1
0.1166	1.396	1.2364	0.15962	1
0.1333	1.377	1.2236	0.15339	1
0.15	1.346	1.211	0.13503	1
0.1666	1.327	1.1985	0.12846	1
0.1833	1.308	1.1862	0.12184	1
0.2	1.29	1.1739	0.11609	1
0.2166	1.264	1.1619	0.10214	1
0.2333	1.246	1.1499	0.096136	1
0.25	1.227	1.138	0.089011	1
0.2666	1.208	1.1263	0.081694	1
0.2833	1.189	1.1147	0.074326	1
0.3	1.177	1.1032	0.073837	1
0.3166	1.158	1.0918	0.066162	1
0.3333	1.139	1.0806	0.058438	1
0.4166	1.058	1.026	0.031967	1
0.5	0.995	0.9742	0.020804	1
0.5833	0.933	0.92503	0.007965	1
0.6666	0.87	0.87835	-0.0083548	1
0.75	0.814	0.83398	-0.019978	1
0.8333	0.77	0.79189	-0.021893	1
0.9166	0.72	0.75193	-0.031932	1
1	0.682	0.71394	-0.031942	1
1.0833	0.638	0.67791	-0.039915	1
1.1666	0.601	0.6437	-0.042705	1
1.25	0.569	0.61118	-0.042183	1
1.3333	0.538	0.58034	-0.042341	1
1.4166	0.507	0.55106	-0.044055	1
1.5	0.475	0.52321	-0.048215	1
1.5833	0.45	0.49681	-0.046812	1
1.6666	0.425	0.47174	-0.046741	1
1.75	0.407	0.44791	-0.040908	1
1.8333	0.382	0.4253	-0.043305	1
1.9166	0.363	0.40384	-0.040843	1
2	0.344	0.38344	-0.03944	1
2.5	0.25	0.281	-0.031005	1
3	0.181	0.20594	-0.024935	1
3.5	0.137	0.15092	-0.01392	1
4	0.112	0.1106	0.0013977	1
4.5	0.081	0.081055	-5.5243E-005	1
5	0.075	0.059402	0.015598	1
5.5	0.056	0.043533	0.012467	1

CEF-5-30S

6	0.05	0.031903	0.018097	1
6.5	0.043	0.02338	0.01962	1
7	0.037	0.017134	0.019866	1
7.5	0.037	0.012557	0.024443	1
8	0.031	0.0092024	0.021798	1
8.5	0.031	0.006744	0.024256	1
9	0.031	0.0049423	0.026058	1
9.5	0.025	0.003622	0.021378	1
10	0.025	0.0026544	0.022346	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	5.8905E-004
y0 =	1.3293E+000

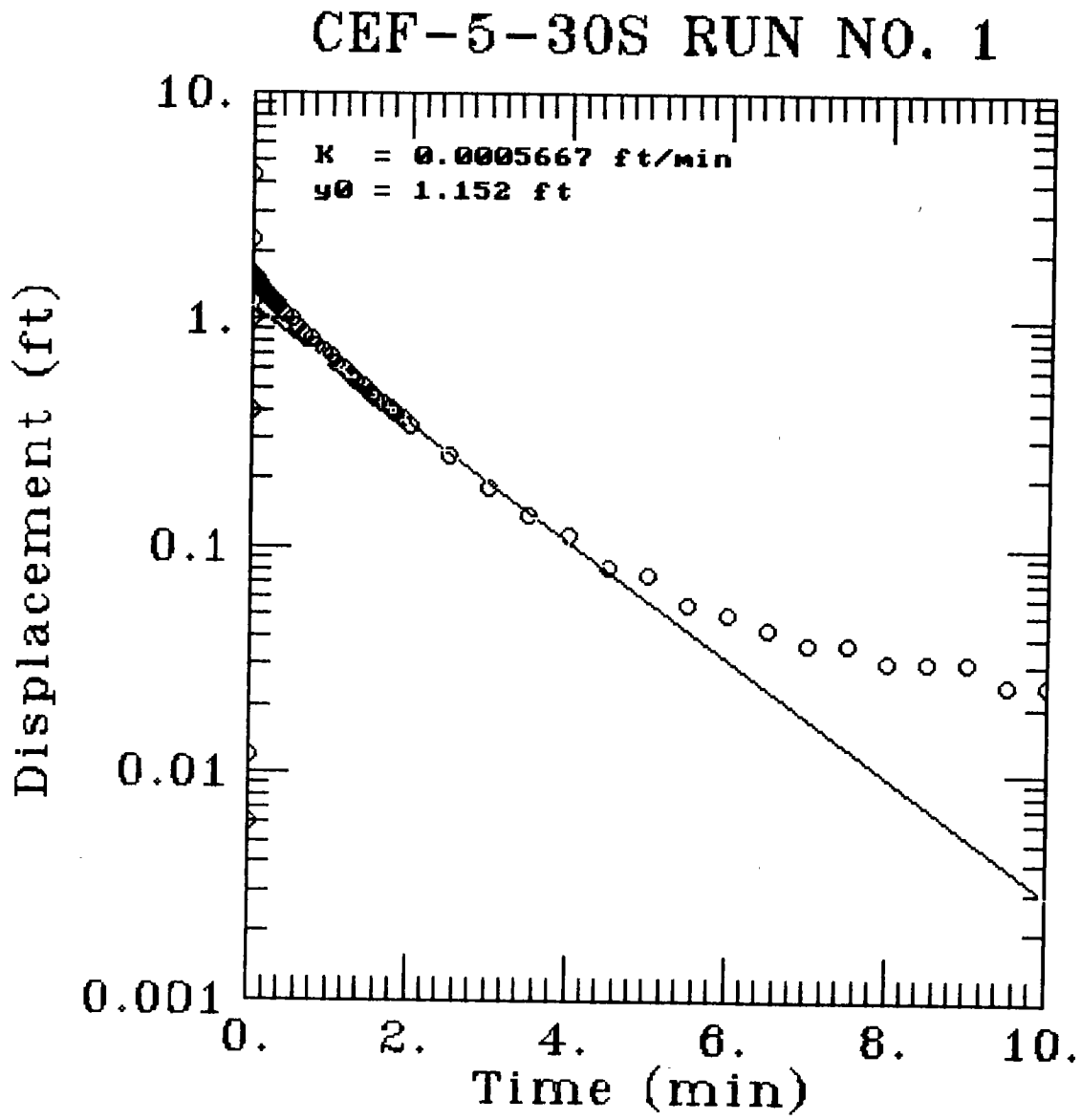
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 5.66700E-004
y0 = 1.15197E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.152E+000	1.000E+001	2.912E-003		

CEF-5-305
RUN 1


CEF-5-30S RUN NO. 1
K = 0.0005667 ft/min
y0 = 1.152 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
2.
4.
6.
8.
10.
Time (min)

CEF-5-305

SE1000C
Environmental Logger
11/13 14:06

Unit# 01597 Test 7

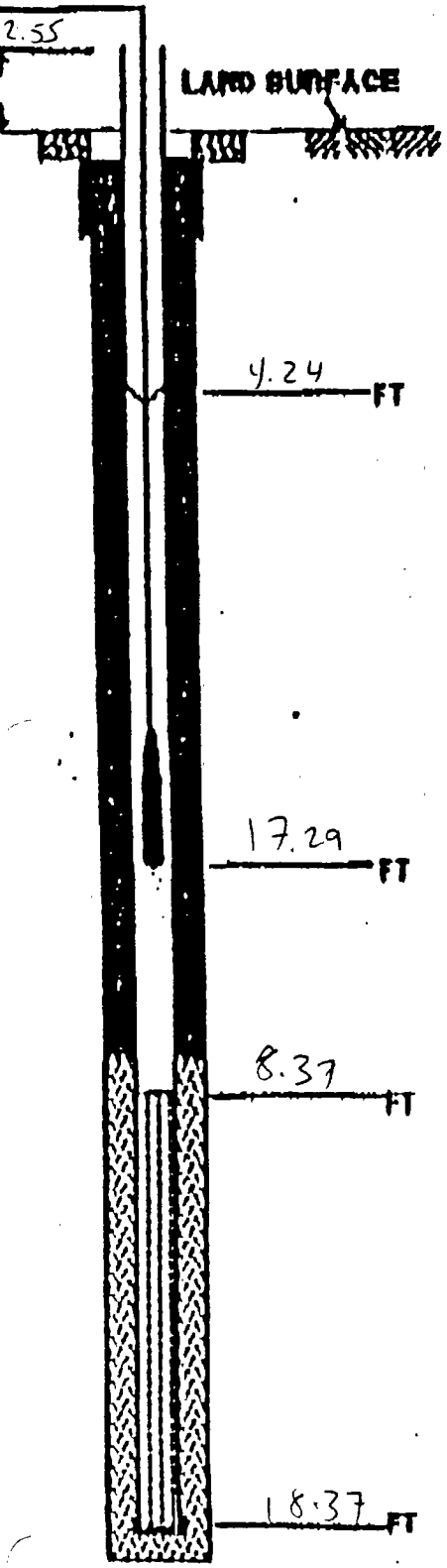
Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 11/13 12:54:48

Elapsed Time	INPUT 1
0.0000	0.006
0.0033	0.006
0.0066	0.006
0.0100	0.006
0.0133	0.012
0.0166	1.202
0.0200	4.381
0.0233	0.400
0.0266	2.235
0.0300	1.578
0.0333	1.477
0.0500	1.534
0.0666	1.496
0.0833	1.465
0.1000	1.427
0.1166	1.396
0.1333	1.377
0.1500	1.346
0.1666	1.327
0.1833	1.308
0.2000	1.290
0.2166	1.264
0.2333	1.246
0.2500	1.227
0.2666	1.208
0.2833	1.189
0.3000	1.177
0.3166	1.158
0.3333	1.139
0.4166	1.058
0.5000	0.995

0.5833	0.933
0.6666	0.870
0.7500	0.814
0.8333	0.770
0.9166	0.720
1.0000	0.682
1.0833	0.638
1.1666	0.601
1.2500	0.569
1.3333	0.538
1.4166	0.507
1.5000	0.475
1.5833	0.450
1.6666	0.425
1.7500	0.407
1.8333	0.382
1.9166	0.363
2.0000	0.344
2.5000	0.250
3.0000	0.181
3.5000	0.137
4.0000	0.112
4.5000	0.081
5.0000	0.075
5.5000	0.056
6.0000	0.050
6.5000	0.043
7.0000	0.037
7.5000	0.037
8.0000	0.031
8.5000	0.031
9.0000	0.031
9.5000	0.025
10.0000	0.025

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT R1 OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-305 PUMPING WELL —

DATE 11-13-93 TIME 1154

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 7

TEST DURATION 10 min

TIME OF INSTALLATION 1154

STATIC DEPTH TO WATER 4.24 FT. _____ PSI

DEPTH OF TRANSDUCER 17.29

CALIBRATION
DEPTH 10 FT 6.05 PSI
DEPTH 11 FT 7.06 PSI
DEPTH 12 FT 8.03 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER

DEPTH 12 FT 8.04 PSI
DEPTH 11 FT 7.05 PSI
DEPTH 10 FT 6.05 PSI

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S
Version 1.10

12/02/93

08:1

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TEST DESCRIPTION

Data set...........
Data set title..... CEF-5-11I RUN NO. 1

Knowns and Constants:
No. of data points.................. 128
Radius of well casing............... 0.083
Radius of well...................... 0.25
Aquifer saturated thickness......... 35.61
Well screen length.................. 10
Static height of water in well...... 21.54
Log(Re/Rw).......................... 2.77
A, B, C............................. 2.760, 0.448, 0.000

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ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

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RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.0307E-002	+/-	9.1972E-004
y0 =	1.8222E+000	+/-	7.1369E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
Number of residuals............... 128
Number of estimated parameters.... 2
Degrees of freedom................ 126

Residual mean..................... 0.02003
Residual standard deviation....... 0.2177
Residual variance................. 0.04738

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.0033	0.427	1.7584	-1.3314	1
0.0066	1.783	1.6968	0.08615	1
0.01	1.695	1.6357	0.059336	1
0.0133	1.896	1.5784	0.31761	1
0.0166	2.053	1.5231	0.52988	1
0.02	1.921	1.4682	0.4528	1
0.0233	1.896	1.4168	0.47922	1
0.0266	1.601	1.3672	0.23383	1
0.03	1.381	1.3179	0.063126	1
0.0333	1.186	1.2717	-0.085726	1
0.05	0.69	1.0618	-0.37183	1
0.0666	0.665	0.88753	-0.22253	1
0.0833	0.577	0.74104	-0.16404	1
0.1	0.483	0.61873	-0.13573	1
0.1166	0.414	0.51717	-0.10317	1
0.1333	0.364	0.43181	-0.067811	1
0.15	0.326	0.36054	-0.034541	1
0.1666	0.288	0.30136	-0.013359	1
0.1833	0.257	0.25162	0.0053808	1
0.2	0.219	0.21009	0.0089106	1
0.2166	0.213	0.1756	0.037396	1
0.2333	0.188	0.14662	0.04138	1
0.25	0.182	0.12242	0.05958	1
0.2666	0.157	0.10233	0.054675	1
0.2833	0.15	0.085437	0.064563	1
0.3	0.131	0.071335	0.059665	1
0.3166	0.131	0.059626	0.071374	1
0.3333	0.131	0.049784	0.081216	1
0.4166	0.087	0.020246	0.066754	1
0.5	0.069	0.0082244	0.060776	1
0.5833	0.056	0.0033446	0.052655	1
0.6666	0.056	0.0013601	0.05464	1
0.75	0.044	0.00055253	0.043447	1
0.8333	0.044	0.0002247	0.043775	1
0.9166	0.044	9.1376E-005	0.043909	1
1	0.037	3.712E-005	0.036963	1
1.0833	0.037	1.5095E-005	0.036985	1
1.1666	0.037	6.1388E-006	0.036994	1
1.25	0.031	2.4938E-006	0.030998	1
1.3333	0.037	1.0141E-006	0.036999	1
1.4166	0.037	4.1241E-007	0.037	1
1.5	0.025	1.6753E-007	0.025	1
1.5833	0.025	6.8131E-008	0.025	1
1.6666	0.031	2.7707E-008	0.031	1
1.75	0.018	1.1255E-008	0.018	1
1.8333	0.025	4.5771E-009	0.025	1
1.9166	0.018	1.8614E-009	0.018	1
2	0.025	7.5615E-010	0.025	1
2.5	0.025	3.4128E-012	0.025	1
3	0.018	1.5403E-014	0.018	1
3.5	0.025	6.9519E-017	0.025	1
4	0.025	3.1377E-019	0.025	1
4.5	0.025	1.4161E-021	0.025	1
5	0.018	6.3916E-024	0.018	1
5.5	0.025	2.8847E-026	0.025	1
6	0.025	1.302E-028	0.025	1
6.5	0.018	5.8764E-031	0.018	1
7	0.025	2.6522E-033	0.025	1
7.5	0.018	1.197E-035	0.018	1

CEF-5-III
RUN I

8.5	0.018	2.4384E-040	0.018	1
9	0.018	1.1005E-042	0.018	1
9.5	0.031	4.9672E-045	0.031	1
10	0.025	2.2419E-047	0.025	1
0.0033	0.427	1.7584	-1.3314	1
0.0066	1.783	1.6968	0.08615	1
0.01	1.695	1.6357	0.059336	1
0.0133	1.896	1.5784	0.31761	1
0.0166	2.053	1.5231	0.52988	1
0.02	1.921	1.4682	0.4528	1
0.0233	1.896	1.4168	0.47922	1
0.0266	1.601	1.3672	0.23383	1
0.03	1.381	1.3179	0.063126	1
0.0333	1.186	1.2717	-0.085726	1
0.05	0.69	1.0618	-0.37183	1
0.0666	0.665	0.88753	-0.22253	1
0.0833	0.577	0.74104	-0.16404	1
0.1	0.483	0.61873	-0.13573	1
0.1166	0.414	0.51717	-0.10317	1
0.1333	0.364	0.43181	-0.067811	1
0.15	0.326	0.36054	-0.034541	1
0.1666	0.288	0.30136	-0.013359	1
0.1833	0.257	0.25162	0.0053808	1
0.2	0.219	0.21009	0.0089106	1
0.2166	0.213	0.1756	0.037396	1
0.2333	0.188	0.14662	0.04138	1
0.25	0.182	0.12242	0.05958	1
0.2666	0.157	0.10233	0.054675	1
0.2833	0.15	0.085437	0.064563	1
0.3	0.131	0.071335	0.059665	1
0.3166	0.131	0.059626	0.071374	1
0.3333	0.131	0.049784	0.081216	1
0.4166	0.087	0.020246	0.066754	1
0.5	0.069	0.0082244	0.060776	1
0.5833	0.056	0.0033446	0.052655	1
0.6666	0.056	0.0013601	0.05464	1
0.75	0.044	0.00055253	0.043447	1
0.8333	0.044	0.0002247	0.043775	1
0.9166	0.044	9.1376E-005	0.043909	1
1	0.037	3.712E-005	0.036963	1
1.0833	0.037	1.5095E-005	0.036985	1
1.1666	0.037	6.1388E-006	0.036994	1
1.25	0.031	2.4938E-006	0.030998	1
1.3333	0.037	1.0141E-006	0.036999	1
1.4166	0.037	4.1241E-007	0.037	1
1.5	0.025	1.6753E-007	0.025	1
1.5833	0.025	6.8131E-008	0.025	1
1.6666	0.031	2.7707E-008	0.031	1
1.75	0.018	1.1255E-008	0.018	1
1.8333	0.025	4.5771E-009	0.025	1
1.9166	0.018	1.8614E-009	0.018	1
2	0.025	7.5615E-010	0.025	1
2.5	0.025	3.4128E-012	0.025	1
3	0.018	1.5403E-014	0.018	1
3.5	0.025	6.9519E-017	0.025	1
4	0.025	3.1377E-019	0.025	1
4.5	0.025	1.4161E-021	0.025	1
5	0.018	6.3916E-024	0.018	1
5.5	0.025	2.8847E-026	0.025	1

CEF-5-111

6	0.025	1.302E-028	0.025	1
6.5	0.018	5.8764E-031	0.018	1
7	0.025	2.6522E-033	0.025	1
7.5	0.018	1.197E-035	0.018	1
8	0.018	5.4027E-038	0.018	1
8.5	0.018	2.4384E-040	0.018	1
9	0.018	1.1005E-042	0.018	1
9.5	0.031	4.9672E-045	0.031	1
10	0.025	2.2419E-047	0.025	1

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RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.0307E-002
y0 =	1.8222E+000

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

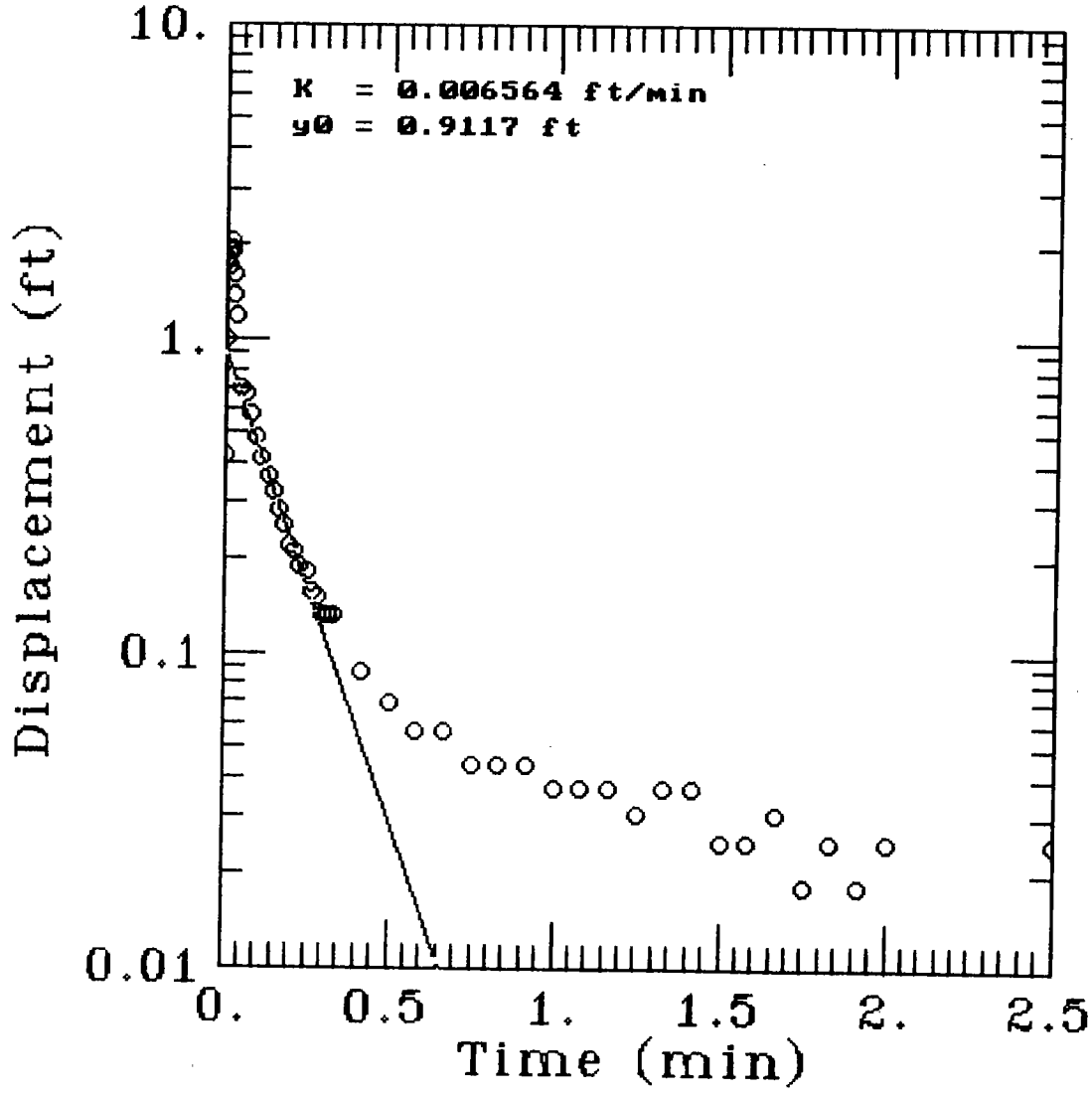
TYPE CURVE DATA

K = 6.56448E-003
y0 = 9.11674E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	9.117E-001	2.500E+000	3.096E-008		

CEF-5-11I
RUN 1

CEF-5-11I RUN NO. 1



CEF-5-11I r1

SE1000C
Environmental Logger
11/14 09:19

Unit# 01597 Test 4

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

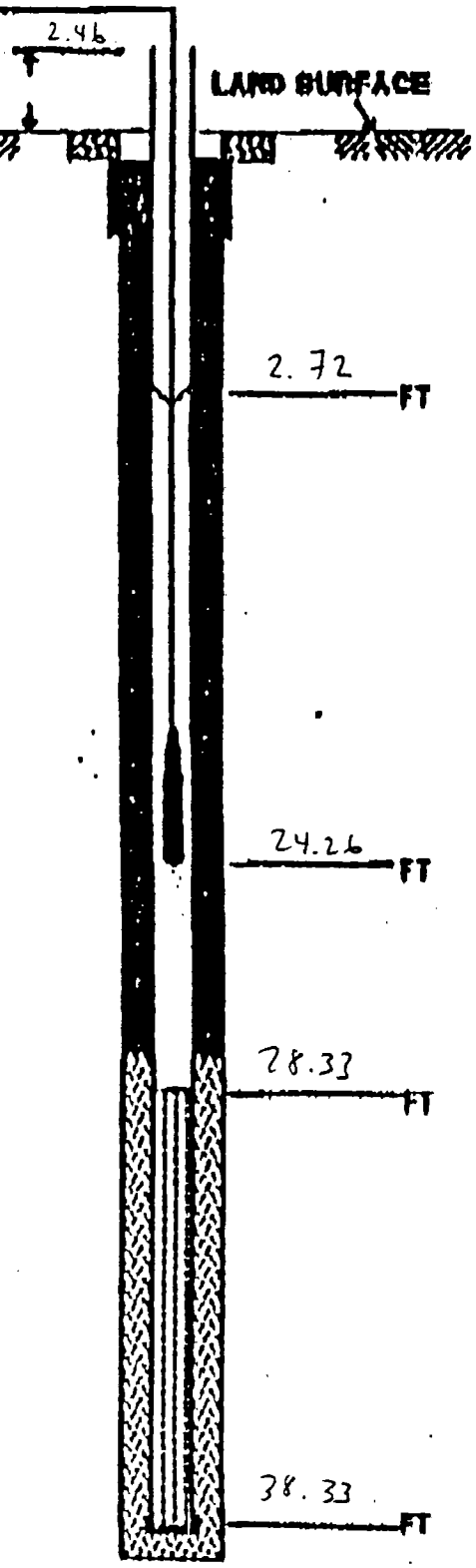
Step 0 11/13 16:52:55

Elapsed Time	INPUT 1
0.0000	0.006
0.0033	0.427
0.0066	1.783
0.0100	1.695
0.0133	1.896
0.0166	2.053
0.0200	1.921
0.0233	1.896
0.0266	1.601
0.0300	1.381
0.0333	1.186
0.0500	0.690
0.0666	0.665
0.0833	0.577
0.1000	0.483
0.1166	0.414
0.1333	0.364
0.1500	0.326
0.1666	0.288
0.1833	0.257
0.2000	0.219
0.2166	0.213
0.2333	0.188
0.2500	0.182
0.2666	0.157
0.2833	0.150
0.3000	0.131
0.3166	0.131
0.3333	0.131
0.4166	0.087
0.5000	0.069

0.5833	0.056
0.6666	0.056
0.7500	0.044
0.8333	0.044
0.9166	0.044
1.0000	0.037
1.0833	0.037
1.1666	0.037
1.2500	0.031
1.3333	0.037
1.4166	0.037
1.5000	0.025
1.5833	0.025
1.6666	0.031
1.7500	0.018
1.8333	0.025
1.9166	0.018
2.0000	0.025
2.5000	0.025
3.0000	0.018
3.5000	0.025
4.0000	0.025
4.5000	0.025
5.0000	0.018
5.5000	0.025
6.0000	0.025
6.5000	0.018
7.0000	0.025
7.5000	0.018
8.0000	0.018
8.5000	0.018
9.0000	0.018
9.5000	0.031
10.0000	0.025

CEF-5-11I
RUN 1

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT R1 OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-4-11 I PUMPING WELL —

DATE 11-3-93 TIME ~~8:47~~ 1352

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 4

TEST DURATION 10 min

TIME OF INSTALLATION 1352

STATIC DEPTH TO WATER 2.72 FT. _____ PSI

DEPTH OF TRANSDUCER 24.26

CALIBRATION

DEPTH 10 FT 7.08 PSI

DEPTH 11 FT 8.09 PSI

DEPTH 12 FT 9.08 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)

_____ VERIFICATION OF DATA ACQUISITION (HR)

_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER

DEPTH 12 FT 9.07 PSI

DEPTH 11 FT 8.06 PSI

DEPTH 10 FT 7.08 PSI

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S

Version 1.10

12/02/93

10:48:2

TEST DESCRIPTION

Data set..........
Data set title..... CEF5-15D RUN NO. 1

Knowns and Constants:
- No. of data points.................. 42
- Radius of well casing............... 0.083
- Radius of well...................... 0.25
- Aquifer saturated thickness......... 53.06
- Well screen length.................. 1
- Static height of water in well...... 25.21
- Log(Re/Rw).......................... 1.047
- A, B, C............................. 1.689, 0.250, 0.000

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	2.0624E-001	+/-	4.4506E-002
y0 =	7.8210E+000	+/-	2.1651E+000

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals............... 42
- Number of estimated parameters.... 2
- Degrees of freedom................ 40
- Residual mean..................... 0.0743
- Residual standard deviation....... 0.3644
- Residual variance................. 0.1328

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.0166	4.377	3.0279	1.3491	1
0.02	0.997	2.4931	-1.4961	1
0.0233	1.6	2.0645	-0.46447	1
0.0266	1.549	1.7096	-0.16055	1
0.03	1.556	1.4076	0.14842	1
0.0333	1.474	1.1656	0.30841	1
0.05	0.909	0.44869	0.46031	1
0.0666	0.571	0.17371	0.39729	1
0.0833	0.42	0.06687	0.35313	1
0.1	0.351	0.025742	0.32526	1
0.1166	0.295	0.009966	0.28503	1
0.1333	0.251	0.0038364	0.24716	1
0.15	0.207	0.0014768	0.20552	1
0.1666	0.169	0.00057175	0.16843	1
0.1833	0.144	0.00022009	0.14378	1
0.2	0.125	8.4725E-005	0.12492	1
0.2166	0.1	3.2802E-005	0.099967	1
0.2333	0.094	1.2627E-005	0.093987	1
0.25	0.081	4.8607E-006	0.080995	1
0.2666	0.069	1.8818E-006	0.068998	1
0.2833	0.062	7.2441E-007	0.061999	1
0.3	0.056	2.7886E-007	0.056	1
0.3166	0.05	1.0796E-007	0.05	1
0.3333	0.05	4.156E-008	0.05	1
0.4166	0.025	3.5534E-010	0.025	1
0.5	0.012	3.0209E-012	0.012	1
0.5833	0.012	2.5829E-014	0.012	1
0.6666	0.018	2.2084E-016	0.018	1
0.75	0.006	1.8775E-018	0.006	1
0.8333	0.012	1.6053E-020	0.012	1
0.9166	0.006	1.3725E-022	0.006	1
1	0.006	1.1668E-024	0.006	1
1.0833	0.006	9.9767E-027	0.006	1
1.1666	0.006	8.5302E-029	0.006	1
1.25	0.006	7.2519E-031	0.006	1
1.3333	0.006	6.2005E-033	0.006	1
1.5	0.006	4.507E-037	0.006	1
1.6666	0.012	3.2948E-041	0.012	1
3	0.006	2.5973E-074	0.006	1
4	0.006	3.875E-099	0.006	1
7	0.006	1.2868E-173	0.006	1
10	0.006	4.2734E-248	0.006	1

===

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	2.0624E-001
y0 =	7.8210E+000

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

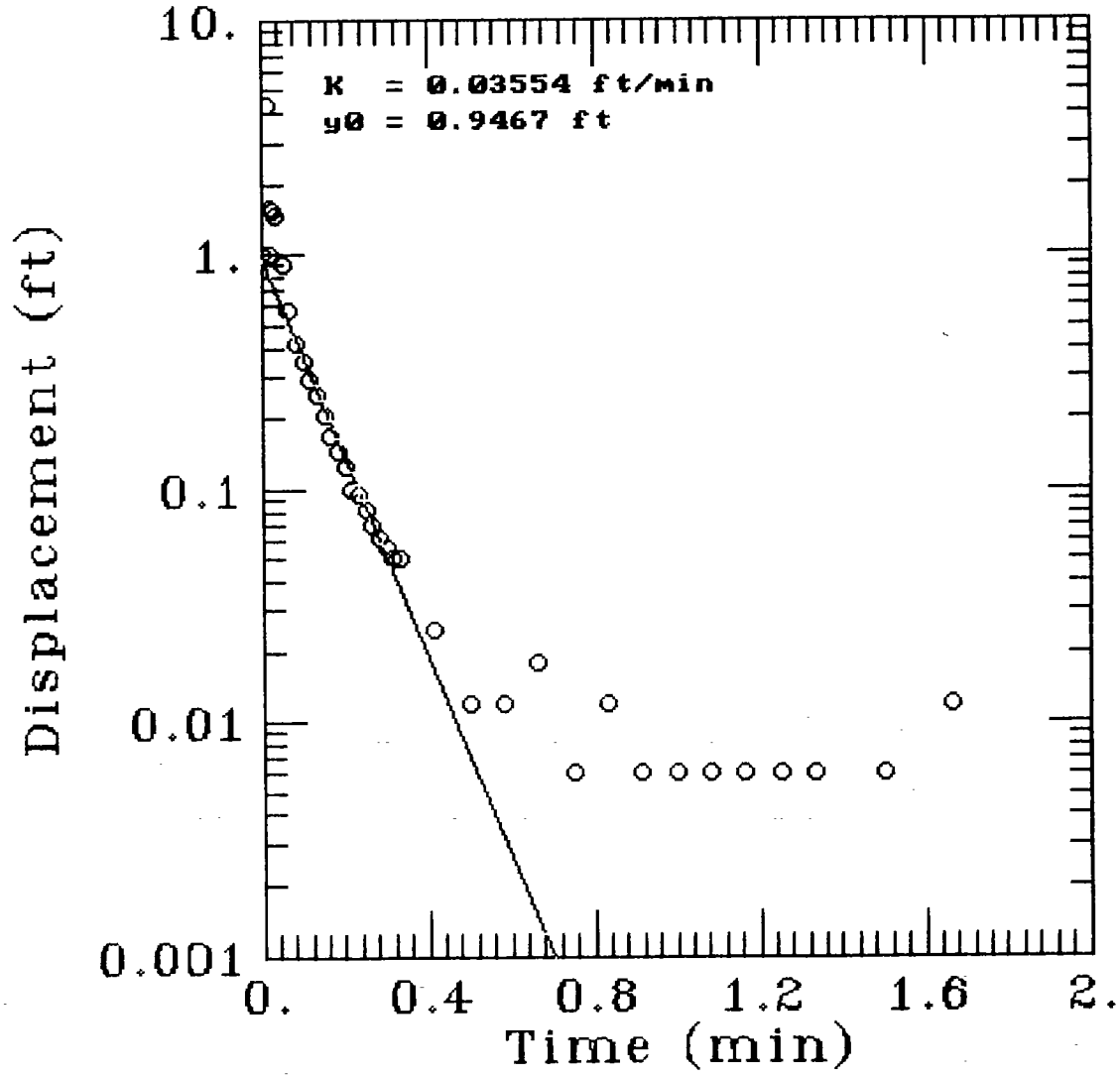
5-
CEF-15D
Run 1

K = 3.55441E-002
y0 = 9.46706E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	9.467E-001	2.000E+000	2.625E-009		

5'-
CEF-15D
RUN 1

CEF5-15D RUN NO. 1



CEF-5-15D r1

SE1000C
Environmental Logger
11/14 09:09

Unit# 01597 Test 1

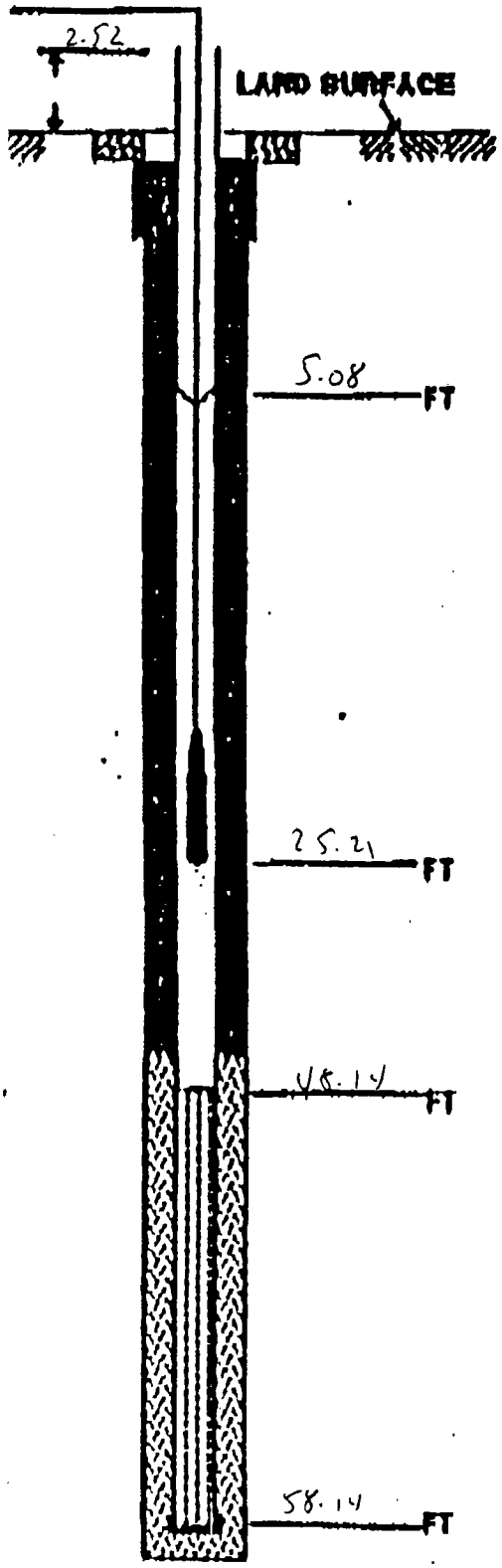
Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 11/13 15:49:06

Elapsed Time	INPUT 1
0.0000	-0.006
0.0033	-0.006
0.0066	-0.006
0.0100	0.000
0.0133	-0.006
0.0166	4.377
0.0200	0.997
0.0233	1.600
0.0266	1.549
0.0300	1.556
0.0333	1.474
0.0500	0.909
0.0666	0.571
0.0833	0.420
0.1000	0.351
0.1166	0.295
0.1333	0.251
0.1500	0.207
0.1666	0.169
0.1833	0.144
0.2000	0.125
0.2166	0.100
0.2333	0.094
0.2500	0.081
0.2666	0.069
0.2833	0.062
0.3000	0.056
0.3166	0.050
0.3333	0.050
0.4166	0.025
0.5000	0.012

0.5833	0.012
0.6666	0.018
0.7500	0.006
0.8333	0.012
0.9166	0.006
1.0000	0.006
1.0833	0.006
1.1666	0.006
1.2500	0.006
1.3333	0.006
1.4166	0.000
1.5000	0.006
1.5833	0.000
1.6666	0.012
1.7500	0.000
1.8333	0.000
1.9166	0.000
2.0000	0.000
2.5000	0.000
3.0000	0.006
3.5000	0.000
4.0000	0.006
4.5000	0.000
5.0000	0.000
5.5000	0.000
6.0000	-0.006
6.5000	0.000
7.0000	0.006
7.5000	0.000
8.0000	0.000
8.5000	0.000
9.0000	0.000
9.5000	0.000
10.0000	0.006

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT RI OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-150 PUMPING WELL —

DATE 11-13-93 TIME ~~0809~~ 1449

DATALOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 1

TEST DURATION 10 min

TIME OF INSTALLATION ~~0809~~ 1449

STATIC DEPTH TO WATER 5.08 FT. _____ PSI

DEPTH OF TRANSDUCER 25.21 ft

CALIBRATION
DEPTH 10 FT 4.8 PSI
DEPTH 11 FT 5.76 PSI
DEPTH 12 FT 6.78 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER

DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI

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<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
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A Q T E S O L V   R E S U L T S
Version 1.10

12/02/93 10:54:34

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TEST DESCRIPTION

Data set...........
Data set title..... CEF-5-23S RUN NO. 1

Knowns and Constants:
No. of data points.................... 65
Radius of well casing............... 0.083
Radius of well...................... 0.25
Aquifer saturated thickness......... 20
Well screen length.................. 10
Static height of water in well...... 16.06
Log(Re/Rw)........................ 2.746
A, B, C............................ 2.760, 0.448, 0.000

===

ANALYTICAL METHOD

wer-Rice (Unconfined Aquifer Slug Test)

===

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.4254E-003	+/-	3.9663E-004
y0 =	1.4119E+000	+/-	1.3532E-001

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
Number of residuals............... 65
Number of estimated parameters.... 2
Degrees of freedom................ 63
Residual mean..................... 0.003736
Residual standard deviation....... 0.5062
Residual variance................. 0.2562

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.0033	0.006	1.4049	-1.3989	1
0.0066	0.012	1.3979	-1.3859	1
0.01	0.012	1.3908	-1.3788	1
0.0133	1.127	1.3839	-0.25686	1
0.0166	4.381	1.377	3.004	1
0.02	2.222	1.37	0.85204	1
0.0233	0.989	1.3632	-0.37417	1
0.0266	1.34	1.3564	-0.016407	1
0.03	1.866	1.3495	0.51652	1
0.0333	1.615	1.3428	0.27222	1
0.05	1.459	1.3094	0.14959	1
0.0666	1.383	1.2771	0.10593	1
0.0833	1.327	1.2453	0.081665	1
0.1	1.277	1.2144	0.06261	1
0.1166	1.233	1.1844	0.048609	1
0.1333	1.189	1.155	0.03404	1
0.15	1.146	1.1263	0.01974	1
0.1666	1.114	1.0984	0.015561	1
0.1833	1.077	1.0711	0.0058561	1
0.2	1.039	1.0445	-0.0055268	1
0.2166	1.008	1.0187	-0.010725	1
0.2333	0.976	0.99341	-0.01741	1
0.25	0.951	0.96872	-0.017725	1
0.2666	0.92	0.94479	-0.024795	1
0.2833	0.895	0.92132	-0.026318	1
0.3	0.87	0.89842	-0.028424	1
0.3166	0.845	0.87623	-0.03123	1
0.3333	0.82	0.85446	-0.034457	1
0.4166	0.72	0.75367	-0.033668	1
0.5	0.626	0.66467	-0.038667	1
0.5833	0.551	0.58626	-0.035265	1
0.6666	0.482	0.51711	-0.035111	1
0.75	0.425	0.45605	-0.031045	1
0.8333	0.369	0.40225	-0.033252	1
0.9166	0.331	0.3548	-0.023803	1
1	0.294	0.3129	-0.018905	1
1.0833	0.263	0.276	-0.012995	1
1.1666	0.238	0.24344	-0.0054397	1
1.25	0.206	0.21469	-0.0086919	1
1.3333	0.194	0.18937	0.0046325	1
1.4166	0.169	0.16703	0.0019697	1
1.5	0.156	0.14731	0.0086943	1
1.5833	0.137	0.12993	0.00707	1
1.6666	0.125	0.1146	0.010396	1
1.75	0.112	0.10107	0.01093	1
1.8333	0.106	0.089148	0.016852	1
1.9166	0.093	0.078633	0.014367	1
2	0.081	0.069347	0.011653	1
2.5	0.043	0.032646	0.010354	1
3	0.031	0.015369	0.015631	1
3.5	0.025	0.0072352	0.017765	1
4	0.018	0.0034061	0.014594	1
4.5	0.025	0.0016035	0.023397	1
5	0.018	0.00075487	0.017245	1
5.5	0.018	0.00035537	0.017645	1
6	0.012	0.0001673	0.011833	1
6.5	0.012	7.8758E-005	0.011921	1
7	0.018	3.7077E-005	0.017963	1
7.5	0.012	1.7455E-005	0.011983	1

8	0.018	8.2171E-006	0.017992	1
8.5	0.018	3.8684E-006	0.017996	1
9	0.018	1.8211E-006	0.017998	1
9.5	0.018	8.5732E-007	0.017999	1
10	0.012	4.036E-007	0.012	1
12	0.018	1.9824E-008	0.018	1

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RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.4254E-003
y0 =	1.4119E+000

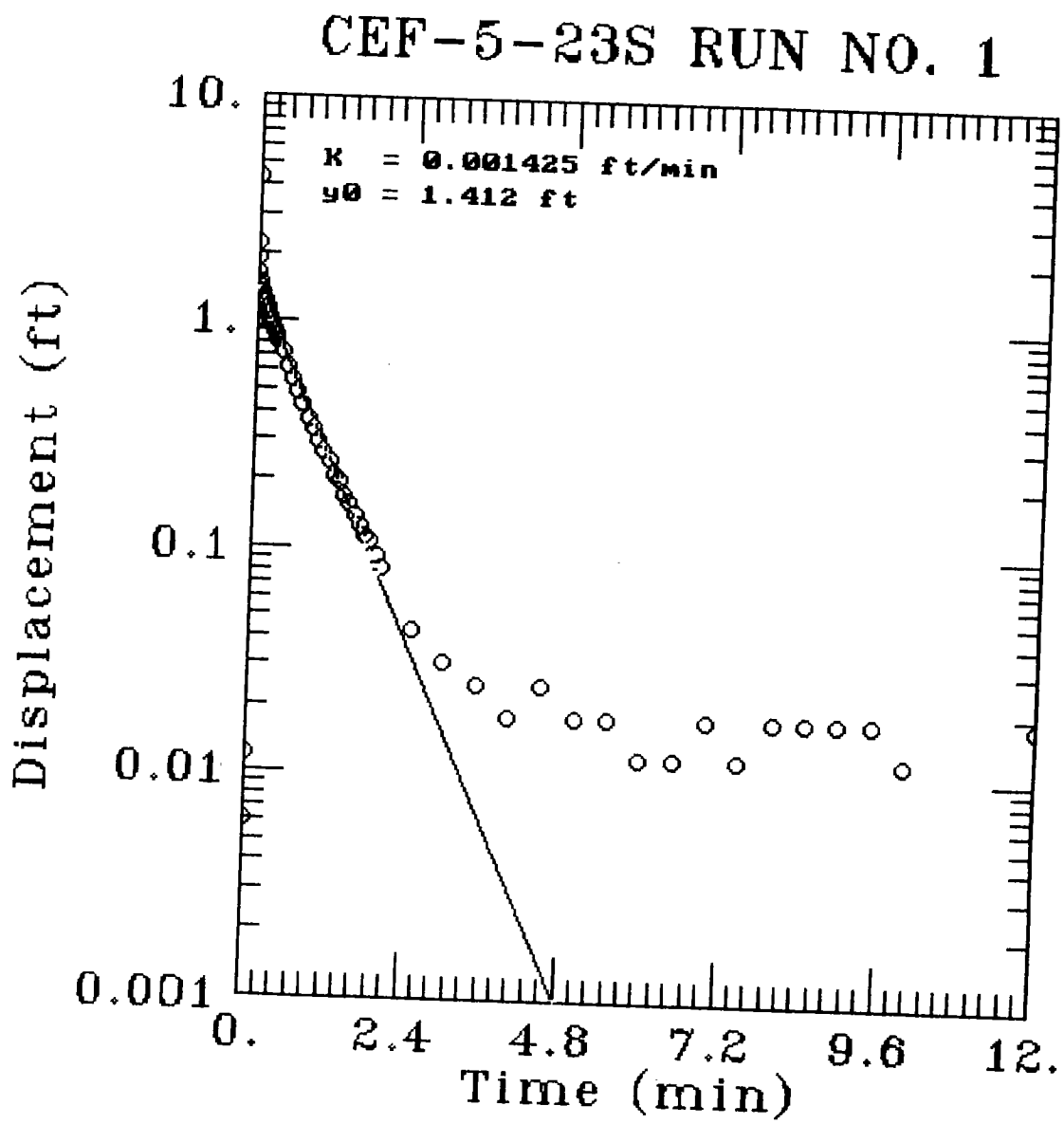
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 1.42537E-003
y0 = 1.41188E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
000E+000	1.412E+000	1.200E+001	1.982E-008		

CEF-5-235
RUN 1


CEF-5-23S RUN NO. 1
K = 0.001425 ft/min
y0 = 1.412 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
2.4
4.8
7.2
9.6
12.
Time (min)

CEF-5-235

SE1000C
Environmental Logger
11/12 14:25

Unit# 01597 Test 4

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

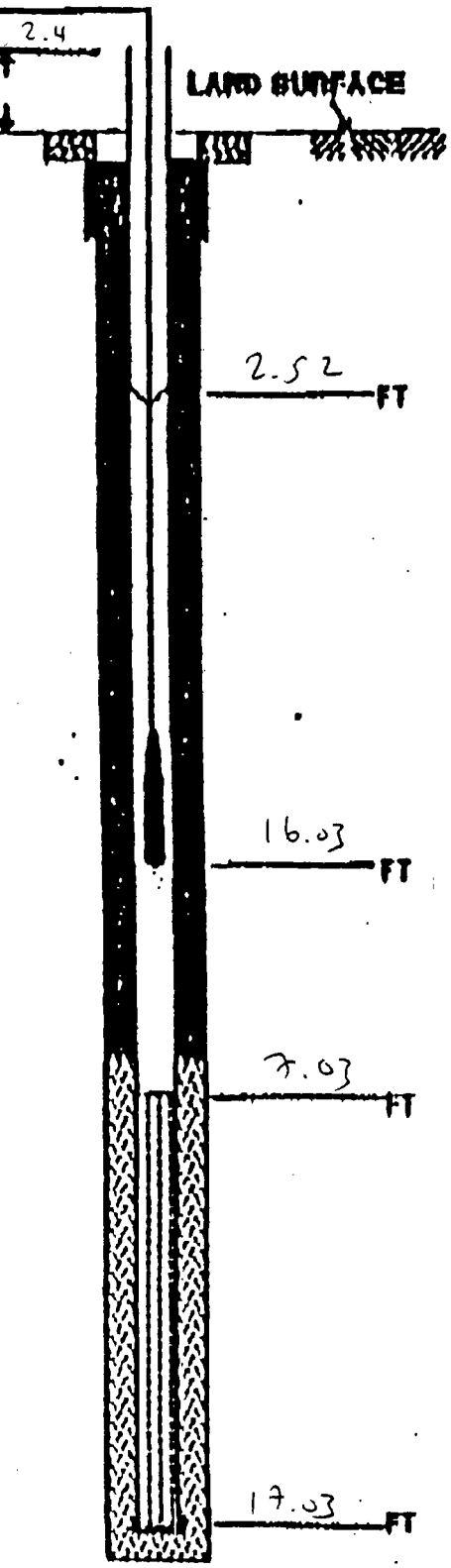
Step 0 11/12 12:15:01

Elapsed Time	INPUT 1
0.0000	-0.006
0.0033	0.006
0.0066	0.012
0.0100	0.012
0.0133	1.127
0.0166	4.381
0.0200	2.222
0.0233	0.989
0.0266	1.340
0.0300	~~1.866~~
0.0333	1.615
0.0500	1.459
0.0666	1.383
0.0833	1.327
0.1000	1.277
0.1166	1.233
0.1333	1.189
0.1500	1.146
0.1666	1.114
0.1833	1.077
0.2000	1.039
0.2166	1.008
0.2333	0.976
0.2500	0.951
0.2666	0.920
0.2833	0.895
0.3000	0.870
0.3166	0.845
0.3333	0.820
0.4166	0.720
0.5000	0.626

0.5833	0.551
0.6666	0.482
0.7500	0.425
0.8333	0.369
0.9166	0.331
1.0000	0.294
1.0833	0.263
1.1666	0.238
1.2500	0.206
1.3333	0.194
1.4166	0.169
1.5000	0.156
1.5833	0.137
1.6666	0.125
1.7500	0.112
1.8333	0.106
1.9166	0.093
2.0000	0.081
2.5000	0.043
3.0000	0.031
3.5000	0.025
4.0000	~~0.018~~
4.5000	0.025
5.0000	0.018
5.5000	0.018
6.0000	0.012
6.5000	0.012
7.0000	0.018
7.5000	0.012
8.0000	0.018
8.5000	0.018
9.0000	0.018
9.5000	0.018
10.0000	0.012
12.0000	0.018

CEF-5-235
Run 1

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT R1 OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-235 PUMPING WELL —

DATE 11-12-93 TIME 1115

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. (9)

TEST DURATION 12 min

TIME OF INSTALLATION 1115

STATIC DEPTH TO WATER 2.52 FT. _____ PSI

DEPTH OF TRANSDUCER 16.03

CALIBRATION
DEPTH 10 FT 6.69 PSI
DEPTH 11 FT 7.68 PSI
DEPTH 12 FT 8.69 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT. _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT. _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER
DEPTH 12 FT 8.69 PSI
DEPTH 11 FT 7.69 PSI
DEPTH 10 FT 6.69 PSI

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S

Version 1.10

12/02/93 13:38:29

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TEST DESCRIPTION

Data set...........
Data set title..... CEF-5-13S RUN NO. 1

Knowns and Constants:
- No. of data points.................. 62
- Radius of well casing............... 0.083
- Radius of well...................... 0.25
- Aquifer saturated thickness......... 20
- Well screen length.................. 10
- Static height of water in well...... 14.21
- Log(Re/Rw)........................... 2.656
- A, B, C............................. 2.760, 0.448, 0.000

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ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

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RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	2.2568E-003	+/-	5.0768E-004
y0 =	1.7238E+000	+/-	1.5117E-001

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals............... 62
- Number of estimated parameters.... 2
- Degrees of freedom................ 60
- Residual mean..................... 0.02242
- Residual standard deviation....... 0.4485
- Residual variance................. 0.2012

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.01	0.025	1.6818	-1.6568	1
0.0133	3.627	1.6682	1.9588	1
0.0166	3.233	1.6546	1.5784	1
0.02	0.544	1.6408	-1.0968	1
0.0233	2.539	1.6275	0.91148	1
0.0266	0.882	1.6143	-0.73233	1
0.03	1.807	1.6009	0.20615	1
0.0333	1.382	1.5879	-0.20588	1
0.05	1.382	1.5238	-0.1418	1
0.0666	1.326	1.4627	-0.13668	1
0.0833	1.269	1.4037	-0.13466	1
0.1	1.213	1.347	-0.13402	1
0.1166	1.163	1.293	-0.12998	1
0.1333	1.113	1.2408	-0.12781	1
0.15	1.069	1.1907	-0.12174	1
0.1666	1.032	1.143	-0.11098	1
0.1833	0.994	1.0969	-0.10286	1
0.2	0.957	1.0526	-0.095596	1
0.2166	0.932	1.0104	-0.078372	1
0.2333	0.9	0.9696	-0.069602	1
0.25	0.875	0.93048	-0.055478	1
0.2666	0.85	0.89315	-0.043152	1
0.2833	0.825	0.85711	-0.032113	1
0.3	0.807	0.82253	-0.015527	1
0.3166	0.782	0.78953	-0.0075323	1
0.3333	0.757	0.75767	-0.00067389	1
0.4166	0.656	0.61696	0.039038	1
0.5	0.575	0.50226	0.072741	1
0.5833	0.5	0.40898	0.091018	1
0.6666	0.437	0.33303	0.10397	1
0.75	0.387	0.27111	0.11589	1
0.8333	0.337	0.22076	0.11624	1
0.9166	0.3	0.17976	0.12024	1
1	0.262	0.14634	0.11566	1
1.0833	0.231	0.11916	0.11184	1
1.1666	0.2	0.097034	0.10297	1
1.25	0.181	0.078994	0.10201	1
1.3333	0.162	0.064323	0.097677	1
1.4166	0.143	0.052378	0.090622	1
1.5	0.125	0.04264	0.08236	1
1.5833	0.118	0.034721	0.083279	1
1.6666	0.1	0.028273	0.071727	1
1.75	0.093	0.023016	0.069984	1
1.8333	0.087	0.018742	0.068258	1
1.9166	0.075	0.015261	0.059739	1
2	0.068	0.012424	0.055576	1
2.5	0.037	0.0036199	0.03338	1
3	0.025	0.0010547	0.023945	1
3.5	0.018	0.00030732	0.017693	1
4	0.012	8.9543E-005	0.01191	1
4.5	0.012	2.609E-005	0.011974	1
5	0.012	7.6018E-006	0.011992	1
5.5	0.006	2.2149E-006	0.0059978	1
6	0.006	6.4536E-007	0.0059994	1
6.5	0.006	1.8804E-007	0.0059998	1
7	0.012	5.4789E-008	0.012	1
7.5	0.012	1.5964E-008	0.012	1
8	0.012	4.6513E-009	0.012	1
8.5	0.006	1.3553E-009	0.006	1

CEF-5-13S
RUN 1

9	0.012	3.9488E-010	0.012	1
9.5	0.006	1.1506E-010	0.006	1
10	0.006	3.3524E-011	0.006	1

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	2.2568E-003
y0 =	1.7238E+000

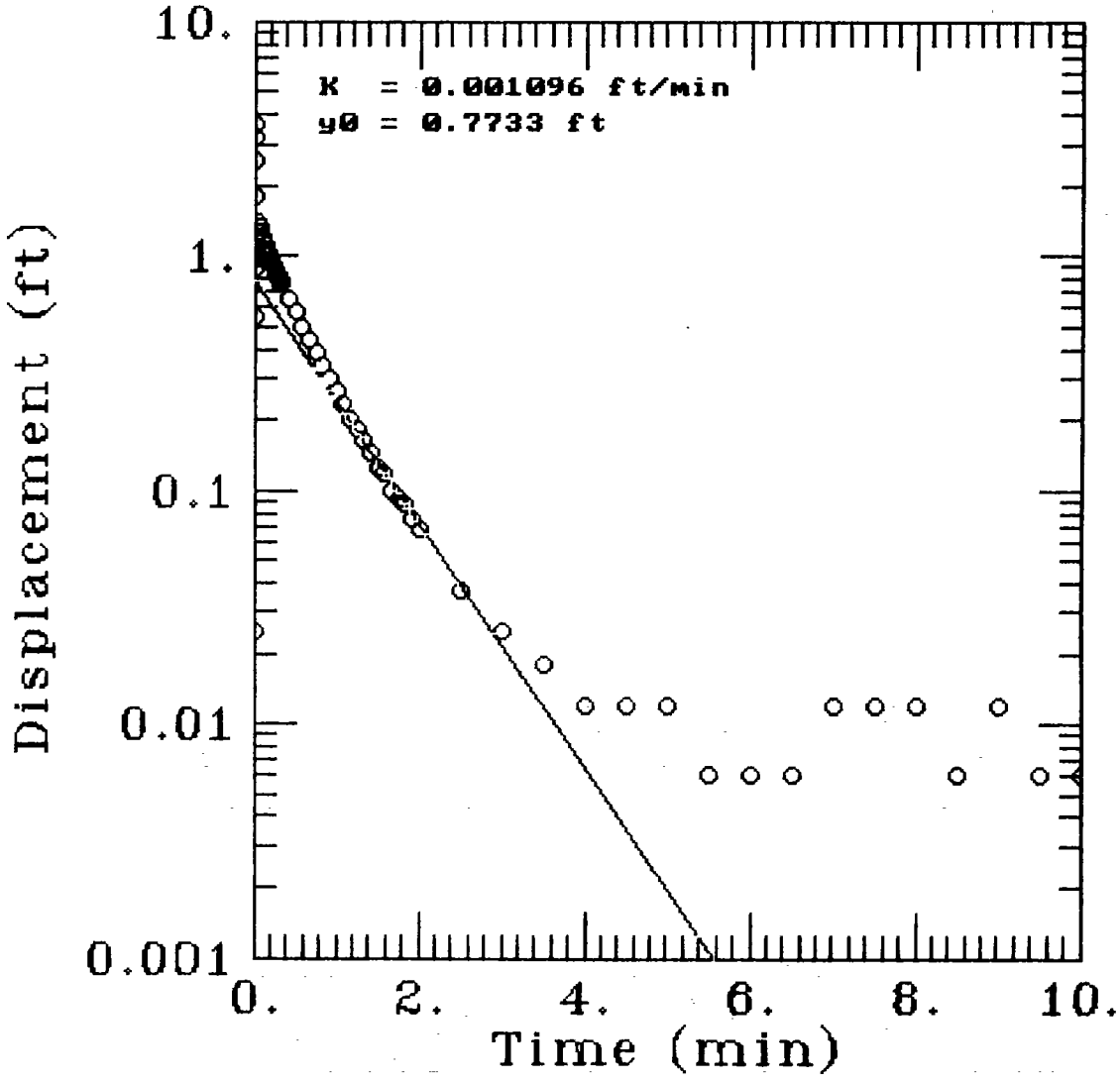
TYPE CURVE DATA

K = 1.09559E-003
y0 = 7.73303E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	7.733E-001	1.000E+001	4.880E-006		

CEF-5-135
Run 1

CEF-5-13S RUN NO. 1



CEF-513s

SE1000C
Environmental Logger
11/14 09:15

Unit# 01597 Test 2

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

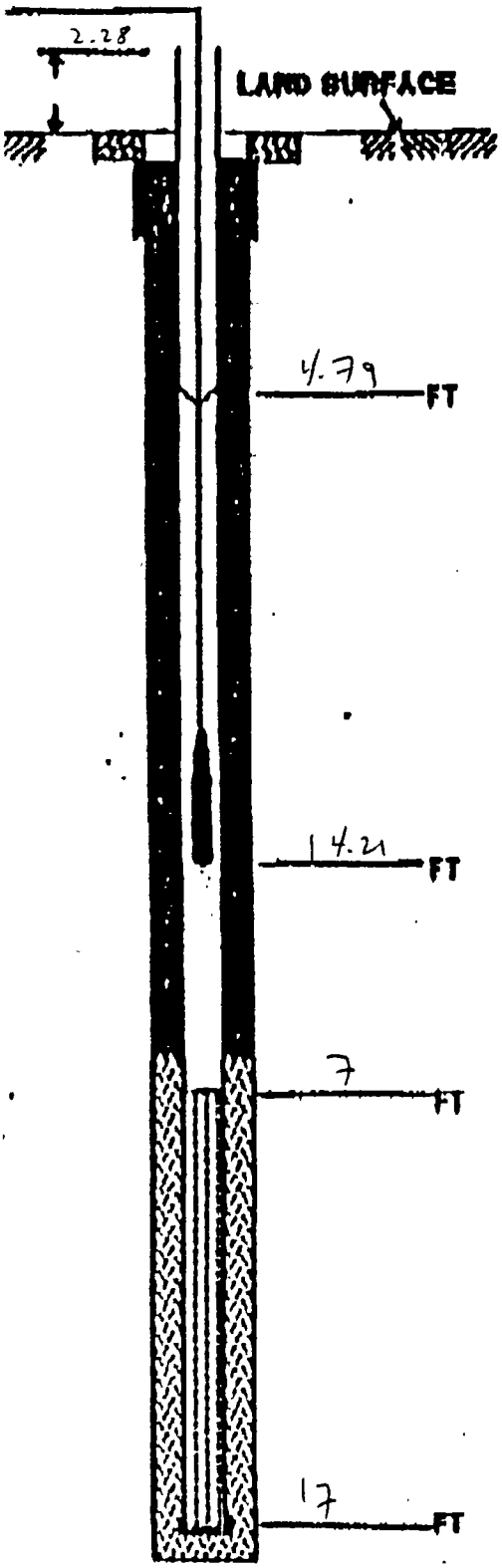
Step 0 11/13 16:12:10

Elapsed Time	INPUT 1
0.0000	0.000
0.0033	0.000
0.0066	0.000
0.0100	0.025
0.0133	3.627
0.0166	3.233
0.0200	0.544
0.0233	2.539
0.0266	0.882
0.0300	1.807
0.0333	1.382
0.0500	1.382
0.0666	1.326
0.0833	1.269
0.1000	1.213
0.1166	1.163
0.1333	1.113
0.1500	1.069
0.1666	1.032
0.1833	0.994
0.2000	0.957
0.2166	0.932
0.2333	0.900
0.2500	0.875
0.2666	0.850
0.2833	0.825
0.3000	0.807
0.3166	0.782
0.3333	0.757
0.4166	0.656
0.5000	0.575

0.5833	0.500
0.6666	0.437
0.7500	0.387
0.8333	0.337
0.9166	0.300
1.0000	0.262
1.0833	0.231
1.1666	0.200
1.2500	0.181
1.3333	0.162
1.4166	0.143
1.5000	0.125
1.5833	0.118
1.6666	0.100
1.7500	0.093
1.8333	0.087
1.9166	0.075
2.0000	0.068
2.5000	0.037
3.0000	0.025
3.5000	0.018
4.0000	0.012
4.5000	0.012
5.0000	0.012
5.5000	0.006
6.0000	0.006
6.5000	~~0.006~~
7.0000	0.012
7.5000	0.012
8.0000	0.012
8.5000	0.006
9.0000	0.012
9.5000	0.006
10.0000	0.006

CEF-5-13S
RUN I

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT R1 OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-13S PUMPING WELL —

DATE 11-13-93 TIME 1512

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 7

TEST DURATION 10 min

TIME OF INSTALLATION 1512

STATIC DEPTH TO WATER 4.79 FT. _____ PSI

DEPTH OF TRANSDUCER 14.21

CALIBRATION
DEPTH 10 FT 5.15 PSI
DEPTH 11 FT 6.16 PSI
DEPTH 12 FT 7.17 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT. _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT. _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER
DEPTH 12 FT 7.17 PSI
DEPTH 11 FT 6.17 PSI
DEPTH 10 FT 5.16 PSI

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S
Version 1.10

12/02/93 08:48:00

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TEST DESCRIPTION

Data set...........
Data set title..... CEF-5-20S RUN NO. 1

Knowns and Constants:
No. of data points................... 63
Radius of well casing............... 0.083
Radius of well...................... 0.25
Aquifer saturated thickness......... 13.2
Well screen length.................. 10
Static height of water in well...... 12.2
Log(Re/Rw).......................... 2.721
A, B, C............................. 2.760, 0.448, 0.000

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ANALYTICAL METHOD

uwer-Rice (Unconfined Aquifer Slug Test)

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RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.5497E-003	+/-	2.9734E-004
y0 =	1.5436E+000	+/-	1.0541E-001

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
Number of residuals............... 63
Number of estimated parameters.... 2
Degrees of freedom................ 61
Residual mean..................... 0.008811
Residual standard deviation....... 0.3702
Residual variance................. 0.1371

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.0066	0.006	1.5269	-1.5209	1
0.01	1.058	1.5183	-0.4603	1
0.0133	3.904	1.51	2.394	1
0.0166	1.496	1.5018	-0.0058204	1
0.02	1.352	1.4934	-0.1414	1
0.0233	1.658	1.4853	0.17272	1
0.0266	1.402	1.4772	-0.075196	1
0.03	1.483	1.4689	0.014084	1
0.0333	1.496	1.4609	0.035075	1
0.05	1.427	1.4211	0.0058577	1
0.0666	1.371	1.3827	-0.011672	1
0.0833	1.32	1.345	-0.025021	1
0.1	1.277	1.3084	-0.031394	1
0.1166	1.239	1.273	-0.033976	1
0.1333	1.195	1.2383	-0.043312	1
0.15	1.164	1.2046	-0.040592	1
0.1666	1.133	1.172	-0.038983	1
0.1833	1.101	1.1401	-0.039069	1
0.2	1.07	1.109	-0.039024	1
0.2166	1.039	1.079	-0.040003	1
0.2333	1.014	1.0496	-0.035621	1
0.25	0.982	1.021	-0.039039	1
0.2666	0.951	0.9934	-0.042399	1
0.2833	0.926	0.96635	-0.040348	1
0.3	0.907	0.94003	-0.033033	1
0.3166	0.882	0.91459	-0.032587	1
0.3333	0.863	0.88968	-0.026682	1
0.4166	0.745	0.77522	-0.030224	1
0.5	0.657	0.67538	-0.018379	1
0.5833	0.582	0.58849	-0.0064917	1
0.6666	0.519	0.51278	0.0062179	1
0.75	0.463	0.44674	0.016261	1
0.8333	0.407	0.38927	0.017734	1
0.9166	0.356	0.33919	0.016814	1
1	0.325	0.2955	0.029499	1
1.0833	0.288	0.25748	0.030515	1
1.1666	0.262	0.22436	0.037641	1
1.25	0.237	0.19546	0.041537	1
1.3333	0.206	0.17032	0.035683	1
1.4166	0.194	0.14841	0.045595	1
1.5	0.175	0.12929	0.045708	1
1.5833	0.156	0.11266	0.043342	1
1.6666	0.144	0.098165	0.045835	1
1.75	0.125	0.085522	0.039478	1
1.8333	0.112	0.074519	0.037481	1
1.9166	0.106	0.064932	0.041068	1
2	0.093	0.056569	0.036431	1
2.5	0.05	0.024751	0.025249	1
3	0.031	0.010829	0.020171	1
3.5	0.025	0.0047382	0.020262	1
4	0.018	0.0020731	0.015927	1
4.5	0.012	0.00090707	0.011093	1
5	0.012	0.00039687	0.011603	1
5.5	0.012	0.00017364	0.011826	1
6	0.012	7.5975E-005	0.011924	1
6.5	0.012	3.3242E-005	0.011967	1
7	0.012	1.4544E-005	0.011985	1
7.5	0.012	6.3637E-006	0.011994	1
8	0.006	2.7843E-006	0.0059972	1

CEF-5-208

8.5	0.012	1.2182E-006	0.011999	1
9	0.012	5.3302E-007	0.011999	1
9.5	0.012	2.3321E-007	0.012	1
10	0.012	1.0204E-007	0.012	1

===

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

		Estimate
K	=	1.5497E-003
y0	=	1.5436E+000

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 1.07941E-003
y0 = 9.64661E-001

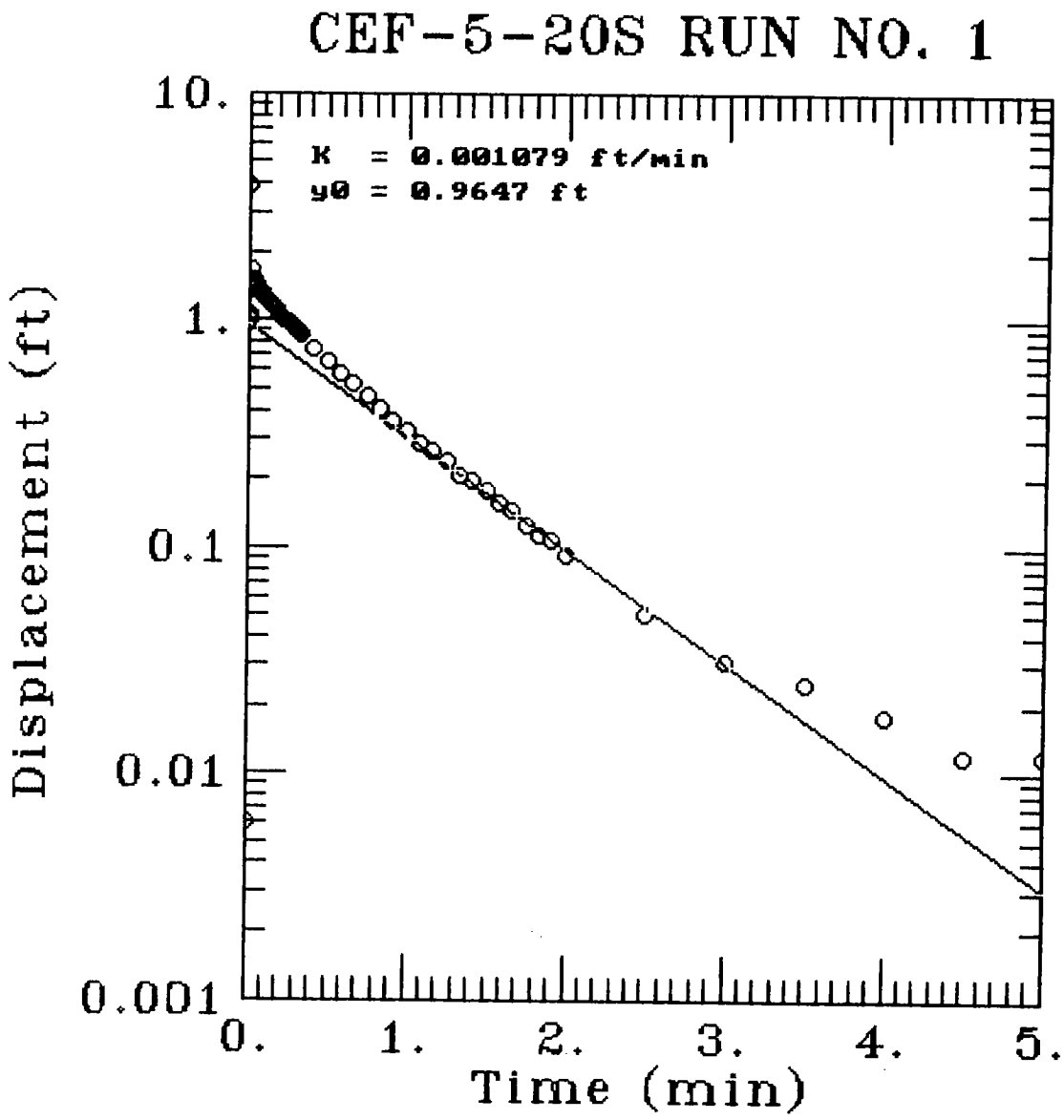
Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	9.647E-001	5.000E+000	3.047E-003		

PE CURVE DATA

K = 1.07941E-003
y0 = 9.64661E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	9.647E-001	5.000E+000	3.047E-003		

CEF-5-205
Run 1


CEF-5-20S RUN NO. 1
K = 0.001079 ft/min
y0 = 0.9647 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
1.
2.
3.
4.
5.
Time (min)

CEF-5-205

SE1000C
Environmental Logger
11/12 14:27

Unit# 01597 Test 5

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

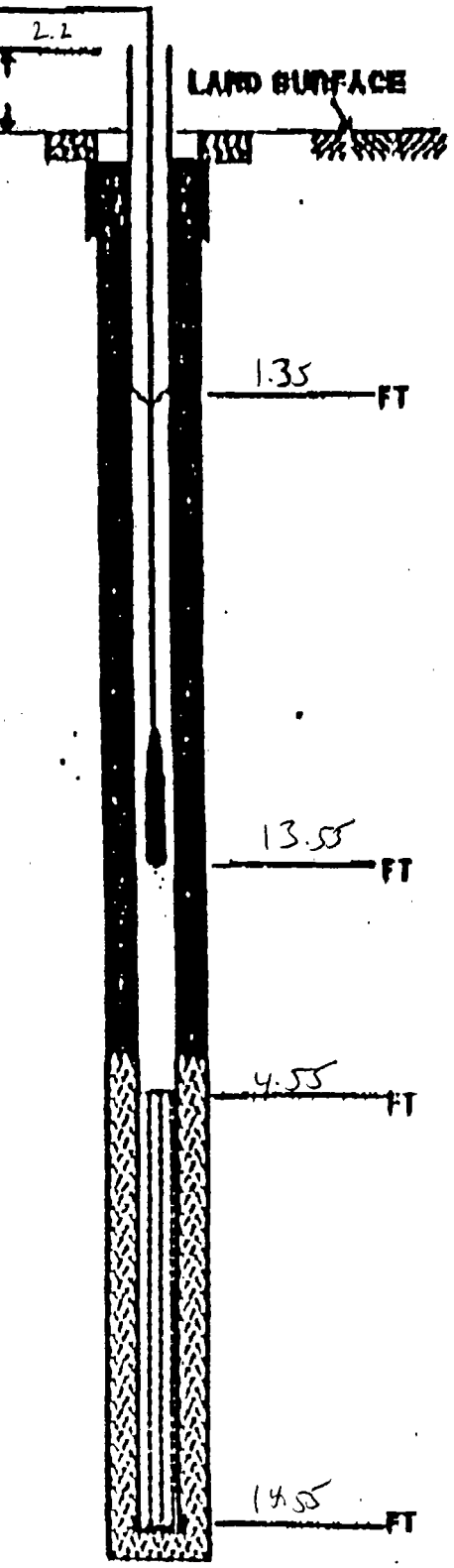
Step 0 11/12 12:38:32

Elapsed Time	INPUT 1
0.0000	-0.006
0.0033	0.000
0.0066	0.006
0.0100	1.058
0.0133	3.904
0.0166	1.496
0.0200	1.352
0.0233	1.658
0.0266	1.402
0.0300	1.483
0.0333	1.496
0.0500	1.427
0.0666	1.371
0.0833	1.320
0.1000	1.277
0.1166	1.239
0.1333	1.195
0.1500	1.164
0.1666	1.133
0.1833	1.101
0.2000	1.070
0.2166	1.039
0.2333	1.014
0.2500	0.982
0.2666	0.951
0.2833	0.926
0.3000	0.907
0.3166	0.882
0.3333	0.863
0.4166	0.745
0.5000	0.657

0.5833	0.582
0.6666	0.519
0.7500	0.463
0.8333	0.407
0.9166	0.356
1.0000	0.325
1.0833	0.288
1.1666	0.262
1.2500	0.237
1.3333	0.206
1.4166	0.194
1.5000	0.175
1.5833	0.156
1.6666	0.144
1.7500	0.125
1.8333	0.112
1.9166	0.106
2.0000	0.093
2.5000	0.050
3.0000	0.031
3.5000	0.025
4.0000	0.018
4.5000	0.012
5.0000	0.012
5.5000	0.012
6.0000	0.012
6.5000	0.012
7.0000	0.012
7.5000	0.012
8.0000	0.006
8.5000	0.012
9.0000	0.012
9.5000	0.012
10.0000	0.012

CEF-5-205

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT RI OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-205 PUMPING WELL —

DATE 11-12-93 TIME 1138

DATALOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 5

TEST DURATION 10 min

TIME OF INSTALLATION 1138

STATIC DEPTH TO WATER 1.35 FT. _____ PSI

DEPTH OF TRANSDUCER 13.55

CALIBRATION
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI

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A Q T E S O L V   R E S U L T S
Version 1.10

12/02/93 09:08:42

TEST DESCRIPTION

Data set..........
Data set title..... CEF-5-24S RUN NO. 1

Knowns and Constants:
- No. of data points.................. 60
- Radius of well casing............... 0.083
- Radius of well...................... 0.25
- Aquifer saturated thickness......... 11.84
- Well screen length.................. 10
- Static height of water in well...... 10.1
- Log(Re/Rw).......................... 2.577
- A, B, C............................. 2.760, 0.448, 0.000

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.4587E-003	+/-	3.1960E-004
y0 =	1.8896E+000	+/-	1.5945E-001

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals............... 60
- Number of estimated parameters.... 2
- Degrees of freedom................ 58
- Residual mean..................... 0.03868
- Residual standard deviation....... 0.4968
- Residual variance................. 0.2468

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.0133	1.351	1.8488	-0.49777	1
0.0166	4.84	1.8388	3.0012	1
0.02	2.052	1.8285	0.22348	1
0.0266	3.321	1.8088	1.5122	1
0.03	1.238	1.7987	-0.56071	1
0.0333	0.813	1.789	-0.97598	1
0.05	1.188	1.7405	-0.55255	1
0.0666	1.363	1.6937	-0.3307	1
0.0833	1.382	1.6478	-0.26584	1
0.1	1.345	1.6032	-0.25823	1
0.1166	1.295	1.5601	-0.26508	1
0.1333	1.276	1.5178	-0.24184	1
0.15	1.245	1.4767	-0.23174	1
0.1666	1.22	1.437	-0.217	1
0.1833	1.195	1.3981	-0.20309	1
0.2	1.176	1.3602	-0.18424	1
0.2166	1.145	1.3236	-0.17862	1
0.2333	1.132	1.2878	-0.15579	1
0.25	1.107	1.2529	-0.14592	1
0.2666	1.082	1.2192	-0.1372	1
0.2833	1.063	1.1862	-0.12319	1
0.3	1.044	1.1541	-0.11007	1
0.3166	1.026	1.123	-0.09701	1
0.3333	1.007	1.0926	-0.085604	1
0.4166	0.919	0.9528	-0.033801	1
0.5	0.838	0.83075	0.0072498	1
0.5833	0.775	0.72445	0.050547	1
0.6666	0.707	0.63176	0.075244	1
0.75	0.65	0.55083	0.09917	1
0.8333	0.606	0.48035	0.12565	1
0.9166	0.556	0.41889	0.13711	1
1	0.513	0.36523	0.14777	1
1.0833	0.475	0.3185	0.1565	1
1.1666	0.444	0.27774	0.16626	1
1.25	0.413	0.24217	0.17083	1
1.3333	0.381	0.21118	0.16982	1
1.4166	0.356	0.18416	0.17184	1
1.5	0.331	0.16057	0.17043	1
1.5833	0.312	0.14002	0.17198	1
1.6666	0.294	0.12211	0.17189	1
1.75	0.275	0.10646	0.16854	1
1.8333	0.256	0.092842	0.16316	1
1.9166	0.237	0.080963	0.15604	1
2	0.225	0.070592	0.15441	1
2.5	0.156	0.031035	0.12497	1
3	0.112	0.013644	0.098356	1
3.5	0.081	0.0059984	0.075002	1
4	0.068	0.0026371	0.065363	1
4.5	0.062	0.0011594	0.060841	1
5	0.05	0.0005097	0.04949	1
5.5	0.043	0.00022408	0.042776	1
6	0.037	9.8516E-005	0.036901	1
6.5	0.043	4.3311E-005	0.042957	1
7	0.031	1.9041E-005	0.030981	1
7.5	0.031	8.3712E-006	0.030992	1
8	0.031	3.6803E-006	0.030996	1
8.5	0.031	1.618E-006	0.030998	1
9	0.025	7.1133E-007	0.024999	1
9.5	0.031	3.1273E-007	0.031	1

CEF-5-24S
RUN 1

10	0.025	1.3749E-007	0.025	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.4587E-003
y0 =	1.8896E+000

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

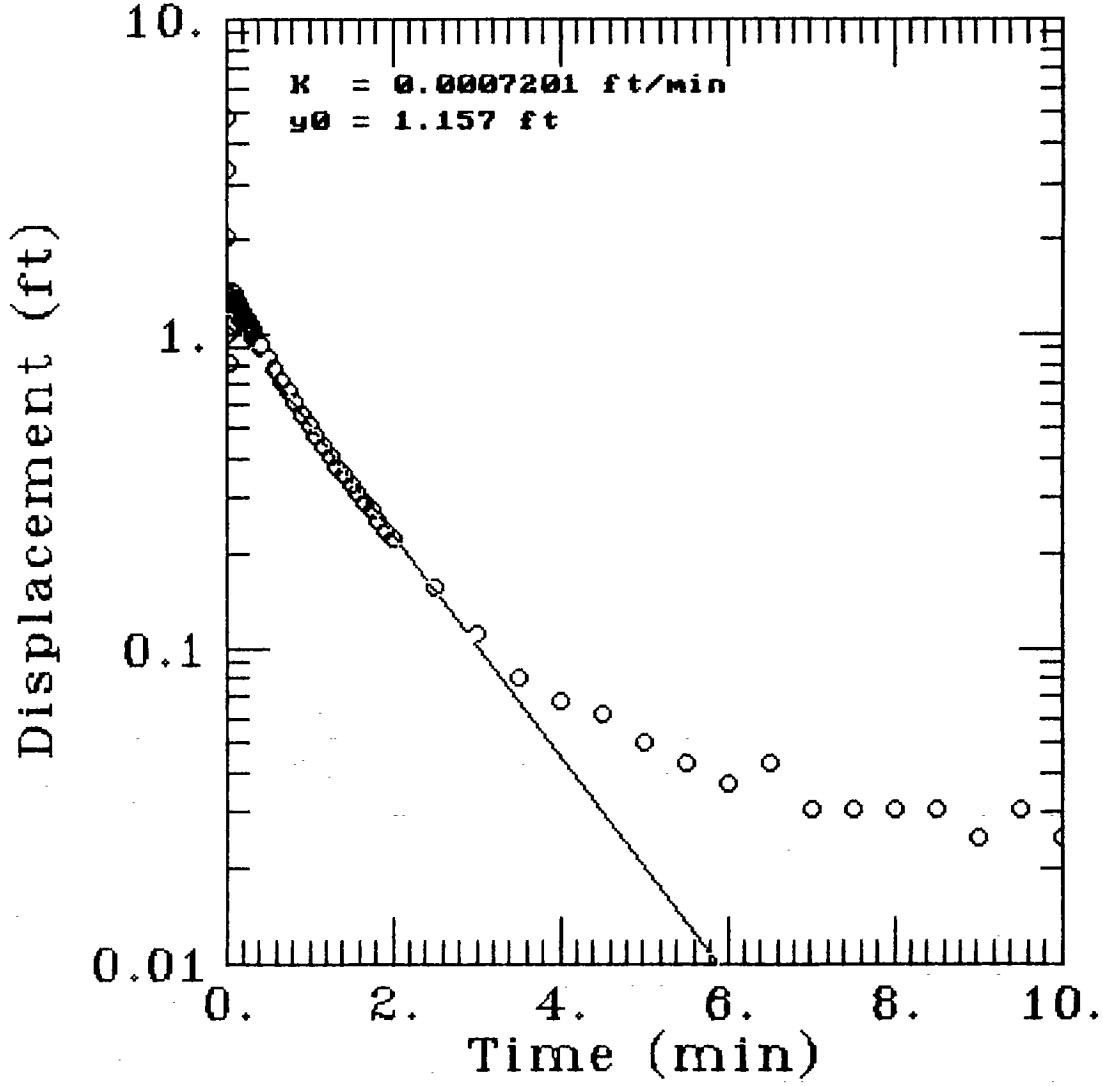
TYPE CURVE DATA

K = 7.20089E-004
y0 = 1.15749E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.157E+000	1.000E+001	3.466E-004		

CEF-5-245
Run 1

CEF-5-24S RUN NO. 1



CEE5-245

SE1000C
Environmental Logger
11/13 13:57

Unit# 01597 Test 3

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

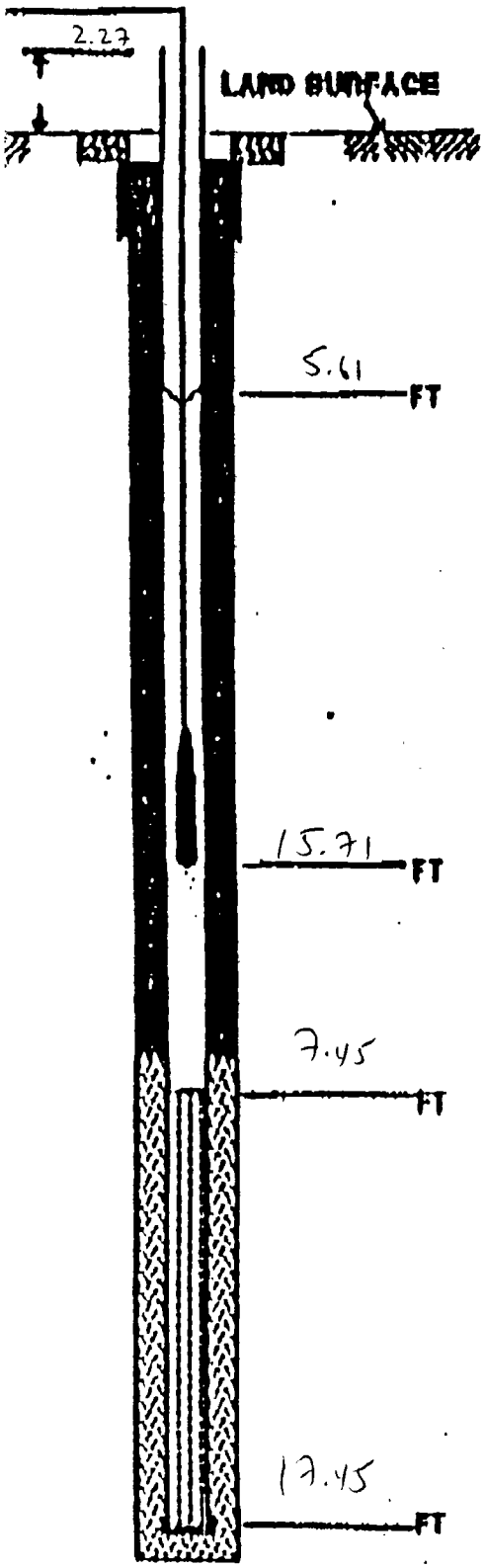
Step 0 11/13 11:10:49

Elapsed Time	INPUT 1
0.0000	0.000
0.0033	0.000
0.0066	0.000
0.0100	0.000
0.0133	1.351
0.0166	4.840
0.0200	2.052
0.0233	-0.143
0.0266	3.321
0.0300	1.238
0.0333	0.813
0.0500	1.188
0.0666	1.363
0.0833	1.382
0.1000	1.345
0.1166	1.295
0.1333	1.276
0.1500	1.245
0.1666	1.220
0.1833	1.195
0.2000	1.176
0.2166	1.145
0.2333	1.132
0.2500	1.107
0.2666	1.082
0.2833	1.063
0.3000	1.044
0.3166	1.026
0.3333	1.007
0.4166	0.919
0.5000	0.838

0.5833	0.775
0.6666	0.707
0.7500	0.650
0.8333	0.606
0.9166	0.556
1.0000	0.513
1.0833	0.475
1.1666	0.444
1.2500	0.413
1.3333	0.381
1.4166	0.356
1.5000	0.331
1.5833	0.312
1.6666	0.294
1.7500	0.275
1.8333	0.256
1.9166	0.237
2.0000	0.225
2.5000	0.156
3.0000	0.112
3.5000	0.081
4.0000	0.068
4.5000	0.062
5.0000	0.050
5.5000	0.043
6.0000	0.037
6.5000	0.043
7.0000	0.031
7.5000	0.031
8.0000	0.031
8.5000	0.031
9.0000	0.025
9.5000	0.031
10.0000	0.025

CEF-5-24S

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT RI OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-24s PUMPING WELL —

DATE 11-13-93 TIME 1010

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 3

TEST DURATION 10 min

TIME OF INSTALLATION 1010

STATIC DEPTH TO WATER 5.61 FT. _____ PSI

DEPTH OF TRANSDUCER 15.71

CALIBRATION
DEPTH 10 FT 4.73 PSI
DEPTH 11 FT 5.75 PSI
DEPTH 12 FT 6.70 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT. _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT. _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER

DEPTH 12 FT 6.70 PSI
DEPTH 11 FT 5.75 PSI
DEPTH 10 FT 4.73 PSI

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S
Version 1.10

12/02/93 09:14:47

==

TEST DESCRIPTION

Data set..........
Data set title..... CEF-5-14I RUN NO. 1

Knowns and Constants:
- No. of data points.................. 100
- Radius of well casing.............. 0.083
- Radius of well...................... 0.25
- Aquifer saturated thickness......... 33.25
- Well screen length.................. 10
- Static height of water in well...... 20.27
- Log(Re/Rw).......................... 2.751
- A, B, C.............................. 2.760, 0.448, 0.000

==

ANALYTICAL METHOD

uwer-Rice (Unconfined Aquifer Slug Test)

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RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.2460E-002	+/-	1.5197E-003
y0 =	2.4765E+000	+/-	1.9149E-001

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals............... 100
- Number of estimated parameters.... 2
- Degrees of freedom................ 98
- Residual mean..................... 0.02117
- Residual standard deviation....... 0.2945
- Residual variance................. 0.08673

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.02	0.508	1.9039	-1.3959	1
0.0233	1.763	1.823	-0.060038	1
0.0266	2.716	1.7456	0.97037	1
0.03	2.315	1.6693	0.64569	1
0.0333	2.29	1.5984	0.69157	1
0.05	0.872	1.2833	-0.41131	1
0.0666	0.684	1.0317	-0.34767	1
0.0833	0.621	0.82829	-0.20729	1
0.1	0.527	0.665	-0.138	1
0.1166	0.451	0.5346	-0.083603	1
0.1333	0.401	0.42921	-0.028211	1
0.15	0.357	0.3446	0.012405	1
0.1666	0.307	0.27703	0.029975	1
0.1833	0.282	0.22241	0.059588	1
0.2	0.257	0.17857	0.078434	1
0.2166	0.225	0.14355	0.081448	1
0.2333	0.207	0.11525	0.091748	1
0.25	0.188	0.092531	0.095469	1
0.2666	0.169	0.074387	0.094613	1
0.2833	0.156	0.059722	0.096278	1
0.3	0.15	0.047949	0.10205	1
0.3166	0.144	0.038547	0.10545	1
0.3333	0.125	0.030947	0.094053	1
0.4166	0.087	0.010351	0.076649	1
0.5	0.069	0.0034572	0.065543	1
0.5833	0.043	0.0011563	0.041844	1
0.6666	0.037	0.00038673	0.036613	1
0.75	0.031	0.00012917	0.030871	1
0.8333	0.025	4.3203E-005	0.024957	1
0.9166	0.025	1.4449E-005	0.024986	1
1	0.018	4.8263E-006	0.017995	1
1.0833	0.012	1.6142E-006	0.011998	1
1.1666	0.012	5.3987E-007	0.011999	1
1.25	0.012	1.8033E-007	0.012	1
1.3333	0.006	6.0311E-008	0.0059999	1
1.4166	0.012	2.0171E-008	0.012	1
1.5	0.012	6.7375E-009	0.012	1
1.5833	0.006	2.2534E-009	0.006	1
1.6666	0.012	7.5366E-010	0.012	1
1.75	0.012	2.5173E-010	0.012	1
1.8333	0.012	8.4194E-011	0.012	1
1.9166	0.006	2.8159E-011	0.006	1
2	0.006	9.4055E-012	0.006	1
2.5	0.006	1.313E-014	0.006	1
4	0.006	3.5721E-023	0.006	1
4.5	0.006	4.9867E-026	0.006	1
5	0.006	6.9614E-029	0.006	1
7.5	0.006	3.6908E-043	0.006	1
8.5	0.006	7.1927E-049	0.006	1
9	0.006	1.0041E-051	0.006	1
0.02	0.508	1.9039	-1.3959	1
0.0233	1.763	1.823	-0.060038	1
0.0266	2.716	1.7456	0.97037	1
0.03	2.315	1.6693	0.64569	1
0.0333	2.29	1.5984	0.69157	1
0.05	0.872	1.2833	-0.41131	1
0.0666	0.684	1.0317	-0.34767	1
0.0833	0.621	0.82829	-0.20729	1
0.1	0.527	0.665	-0.138	1

0.1166	0.451	0.5346	-0.083603	1
0.1333	0.401	0.42921	-0.028211	1
0.15	0.357	0.3446	0.012405	1
0.1666	0.307	0.27703	0.029975	1
0.1833	0.282	0.22241	0.059588	1
0.2	0.257	0.17857	0.078434	1
0.2166	0.225	0.14355	0.081448	1
0.2333	0.207	0.11525	0.091748	1
0.25	0.188	0.092531	0.095469	1
0.2666	0.169	0.074387	0.094613	1
0.2833	0.156	0.059722	0.096278	1
0.3	0.15	0.047949	0.10205	1
0.3166	0.144	0.038547	0.10545	1
0.3333	0.125	0.030947	0.094053	1
0.4166	0.087	0.010351	0.076649	1
0.5	0.069	0.0034572	0.065543	1
0.5833	0.043	0.0011563	0.041844	1
0.6666	0.037	0.00038673	0.036613	1
0.75	0.031	0.00012917	0.030871	1
0.8333	0.025	4.3203E-005	0.024957	1
0.9166	0.025	1.4449E-005	0.024986	1
1	0.018	4.8263E-006	0.017995	1
1.0833	0.012	1.6142E-006	0.011998	1
1.1666	0.012	5.3987E-007	0.011999	1
1.25	0.012	1.8033E-007	0.012	1
1.3333	0.006	6.0311E-008	0.0059999	1
1.4166	0.012	2.0171E-008	0.012	1
1.5	0.012	6.7375E-009	0.012	1
1.5833	0.006	2.2534E-009	0.006	1
1.6666	0.012	7.5366E-010	0.012	1
1.75	0.012	2.5173E-010	0.012	1
1.8333	0.012	8.4194E-011	0.012	1
1.9166	0.006	2.8159E-011	0.006	1
2	0.006	9.4055E-012	0.006	1
2.5	0.006	1.313E-014	0.006	1
4	0.006	3.5721E-023	0.006	1
4.5	0.006	4.9867E-026	0.006	1
5	0.006	6.9614E-029	0.006	1
7.5	0.006	3.6908E-043	0.006	1
8.5	0.006	7.1927E-049	0.006	1
9	0.006	1.0041E-051	0.006	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.2460E-002
y0 =	2.4765E+000

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

TYPE CURVE DATA

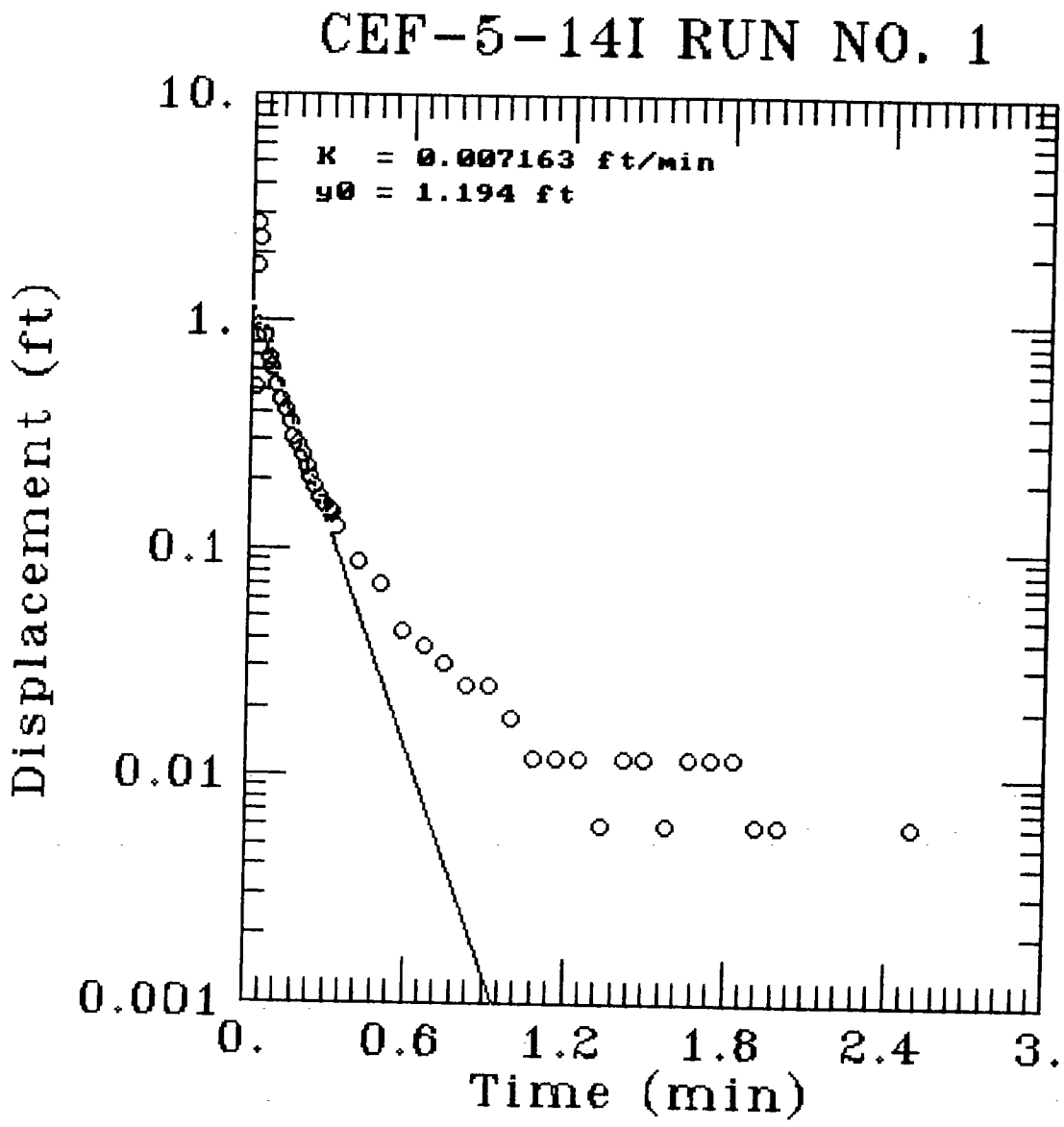
K = 7.16330E-003

CEF-5-14I
RUN 1

y0 = 1.19382E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.194E+000	3.000E+000	1.692E-010		

CEF-5-14I
RUN 1


CEF-5-14I RUN NO. 1
K = 0.007163 ft/min
y0 = 1.194 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
0.6
1.2
1.8
2.4
3.
Time (min)

CGF-5-141 r1

^X

SE1000C
Environmental Logger
11/14 09:08

Unit# 01597 Test 0

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

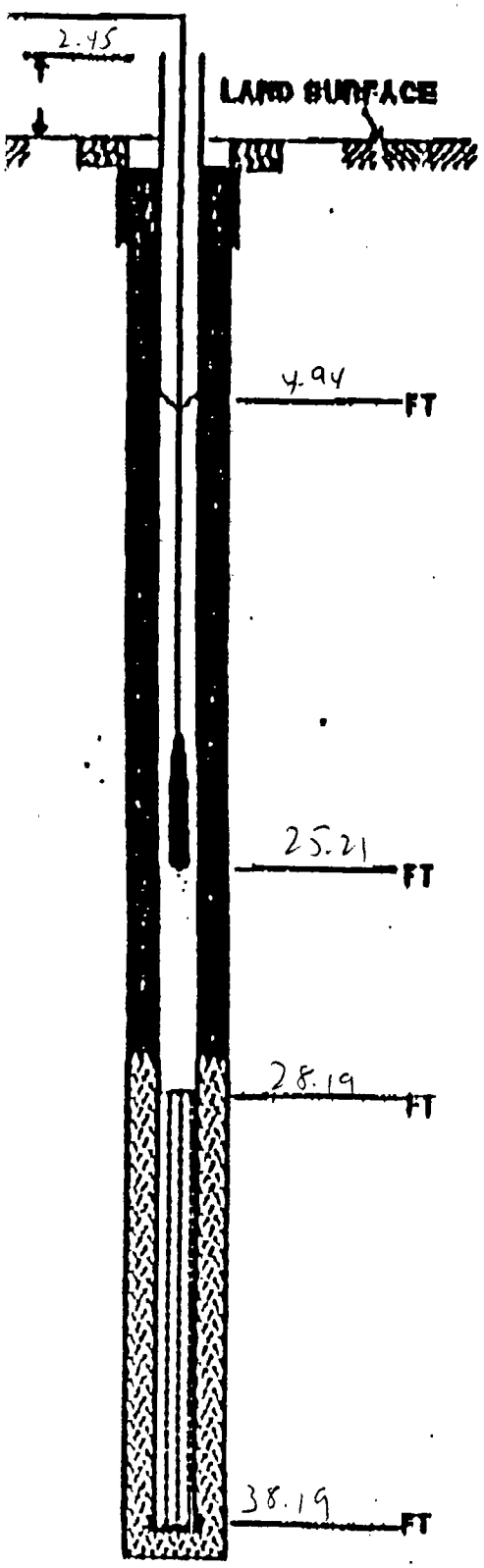
Step 0 11/13 15:32:34

Elapsed Time	INPUT 1
0.0000	0.000
0.0033	0.000
0.0066	0.000
0.0100	0.000
0.0133	-0.006
0.0166	0.000
0.0200	0.508
0.0233	1.763
0.0266	2.716
0.0300	2.315
0.0333	2.290
0.0500	0.872
0.0666	0.684
0.0833	0.621
0.1000	0.527
0.1166	0.451
0.1333	0.401
0.1500	0.357
0.1666	0.307
0.1833	0.282
0.2000	0.257
0.2166	0.225
0.2333	0.207
0.2500	0.188
0.2666	0.169
0.2833	0.156
0.3000	0.150
0.3166	0.144
0.3333	0.125
0.4166	0.087
0.5000	0.069

0.5833	0.043
0.6666	0.037
0.7500	0.031
0.8333	0.025
0.9166	0.025
1.0000	0.018
1.0833	0.012
1.1666	0.012
1.2500	0.012
1.3333	0.006
1.4166	0.012
1.5000	0.012
1.5833	0.006
1.6666	0.012
1.7500	0.012
1.8333	0.012
1.9166	0.006
2.0000	0.006
2.5000	0.006
3.0000	0.000
3.5000	-0.006
4.0000	0.006
4.5000	0.006
5.0000	0.006
5.5000	0.000
6.0000	0.000
6.5000	-0.006
7.0000	-0.006
7.5000	0.006
8.0000	0.000
8.5000	0.006
9.0000	0.006
9.5000	0.000
10.0000	0.000

CEF-5-14I
RUN I

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT R1 OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-14I PUMPING WELL —

DATE 11-93 TIME 1432

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 6

TEST DURATION ~~1432~~ 10 min

TIME OF INSTALLATION 1432

STATIC DEPTH TO WATER 4.94 FT. _____ PSI

DEPTH OF TRANSDUCER 25.21 ft.

CALIBRATION
DEPTH 10 FT 4.83 PSI
DEPTH 11 FT 5.88 PSI
DEPTH 12 FT 6.96 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER

DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S

Version 1.10

12/02/93 09:28:01

TEST DESCRIPTION

Data set..........
Data set title..... CEF-5-10S RUN NO. 1

Knowns and Constants:

No. of data points..................	63
Radius of well casing..............	0.083
Radius of well......................	0.25
Aquifer saturated thickness.........	12.54
Well screen length..................	10
Static height of water in well......	10.2
Log(Re/Rw)..........................	2.56
A, B, C.............................	2.760, 0.448, 0.000

ANALYTICAL METHOD

ıwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	3.4034E-003	+/-	1.4288E-003
y0 =	1.8745E+000	+/-	3.2960E-001

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:

Number of residuals...............	63
Number of estimated parameters....	2
Degrees of freedom................	61
Residual mean.....................	0.02349
Residual standard deviation.......	0.9151
Residual variance.................	0.8374

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.0033	0.006	1.8508	-1.8448	1
0.01	0.169	1.8035	-1.6345	1
0.0133	8.244	1.7807	6.4633	1
0.0166	1.389	1.7582	-0.36917	1
0.02	0.212	1.7352	-1.5232	1
0.0233	2.177	1.7133	0.46372	1
0.0266	1.42	1.6916	-0.2716	1
0.03	1.42	1.6695	-0.24955	1
0.0333	1.445	1.6484	-0.20342	1
0.05	1.32	1.5455	-0.22551	1
0.0666	1.232	1.4496	-0.2176	1
0.0833	1.163	1.3591	-0.19611	1
0.1	1.107	1.2743	-0.16727	1
0.1166	1.051	1.1952	-0.14418	1
0.1333	1.001	1.1206	-0.11957	1
0.15	0.951	1.0506	-0.099622	1
0.1666	0.907	0.98542	-0.078418	1
0.1833	0.869	0.9239	-0.054904	1
0.2	0.826	0.86623	-0.04023	1
0.2166	0.794	0.81247	-0.01847	1
0.2333	0.757	0.76175	-0.0047524	1
0.25	0.725	0.7142	0.010799	1
0.2666	0.7	0.66988	0.030124	1
0.2833	0.663	0.62806	0.034941	1
0.3	0.638	0.58885	0.049147	1
0.3166	0.613	0.55231	0.060692	1
0.3333	0.588	0.51783	0.07017	1
0.4166	0.475	0.37545	0.099548	1
0.5	0.387	0.27212	0.11488	1
0.5833	0.325	0.1973	0.1277	1
0.6666	0.269	0.14305	0.12595	1
0.75	0.225	0.10368	0.12132	1
0.8333	0.187	0.075172	0.11183	1
0.9166	0.156	0.054503	0.1015	1
1	0.137	0.039502	0.097498	1
1.0833	0.118	0.028641	0.089359	1
1.1666	0.106	0.020766	0.085234	1
1.25	0.087	0.015051	0.071949	1
1.3333	0.081	0.010912	0.070088	1
1.4166	0.068	0.0079121	0.060088	1
1.5	0.062	0.0057344	0.056266	1
1.5833	0.056	0.0041577	0.051842	1
1.6666	0.05	0.0030146	0.046985	1
1.75	0.043	0.0021849	0.040815	1
1.8333	0.043	0.0015841	0.041416	1
1.9166	0.037	0.0011486	0.035851	1
2	0.037	0.00083245	0.036168	1
2.5	0.018	0.00012084	0.017879	1
3	0.012	1.7543E-005	0.011982	1
3.5	0.012	2.5466E-006	0.011997	1
4	0.012	3.6968E-007	0.012	1
4.5	0.012	5.3666E-008	0.012	1
5	0.012	7.7905E-009	0.012	1
5.5	0.006	1.1309E-009	0.006	1
6	0.006	1.6417E-010	0.006	1
6.5	0.012	2.3832E-011	0.012	1
7	0.012	3.4597E-012	0.012	1
7.5	0.006	5.0223E-013	0.006	1
8	0.012	7.2908E-014	0.012	1

CEF-5-105
RUN 1

8.5	0.012	1.0584E-014	0.012	1
9	0.012	1.5364E-015	0.012	1
9.5	0.006	2.2304E-016	0.006	1
10	0.012	3.2378E-017	0.012	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	3.4034E-003
y0 =	1.8745E+000

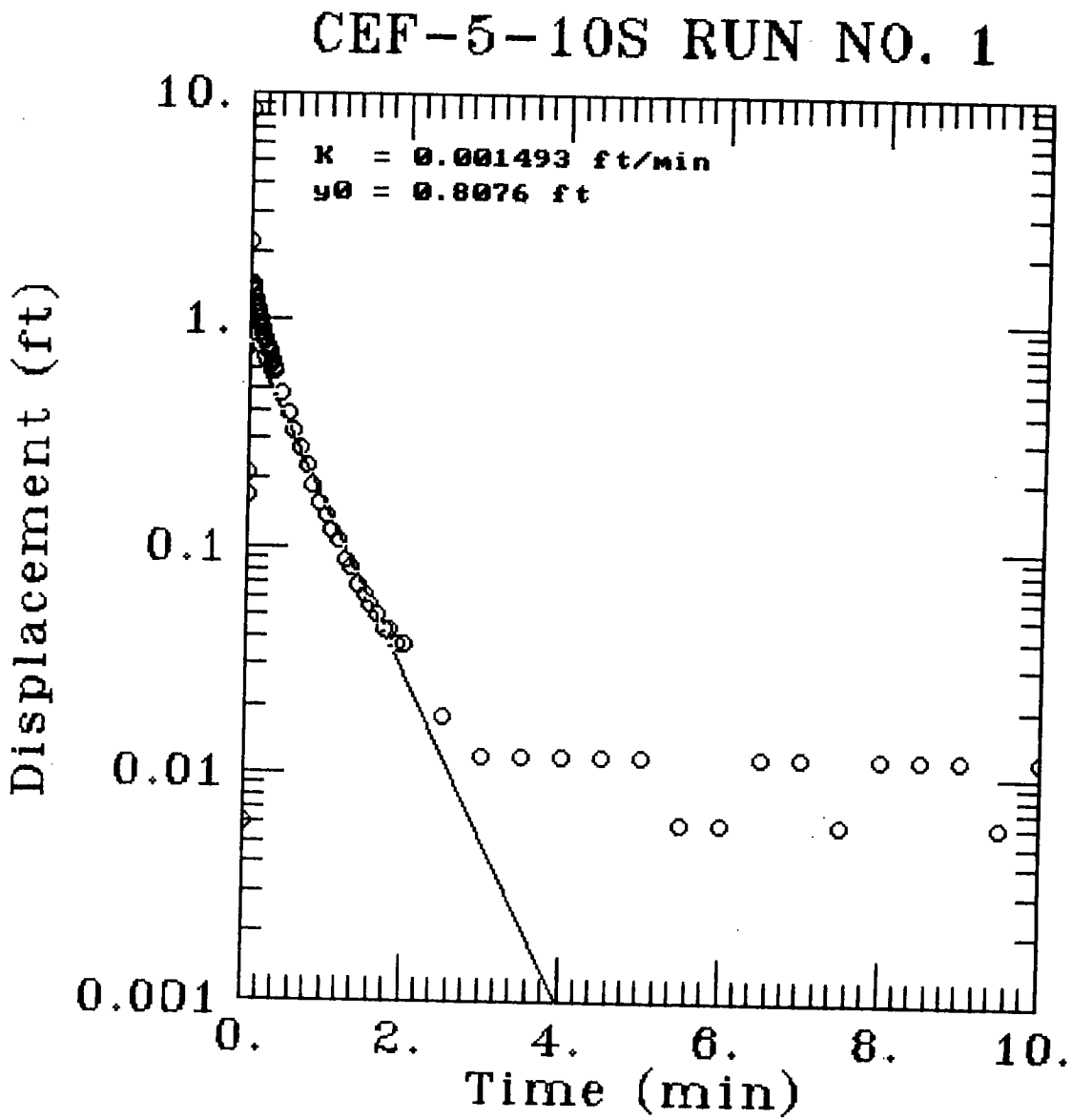
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 1.49258E-003
y0 = 8.07583E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	8.076E-001	1.000E+001	3.596E-008		

CEF-5-105
Run 1



CEF-5-10S
Run 1

CEK-5705

SE1000C
Environmental Logger
11/14 09:20

Unit# 01597 Test 5

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

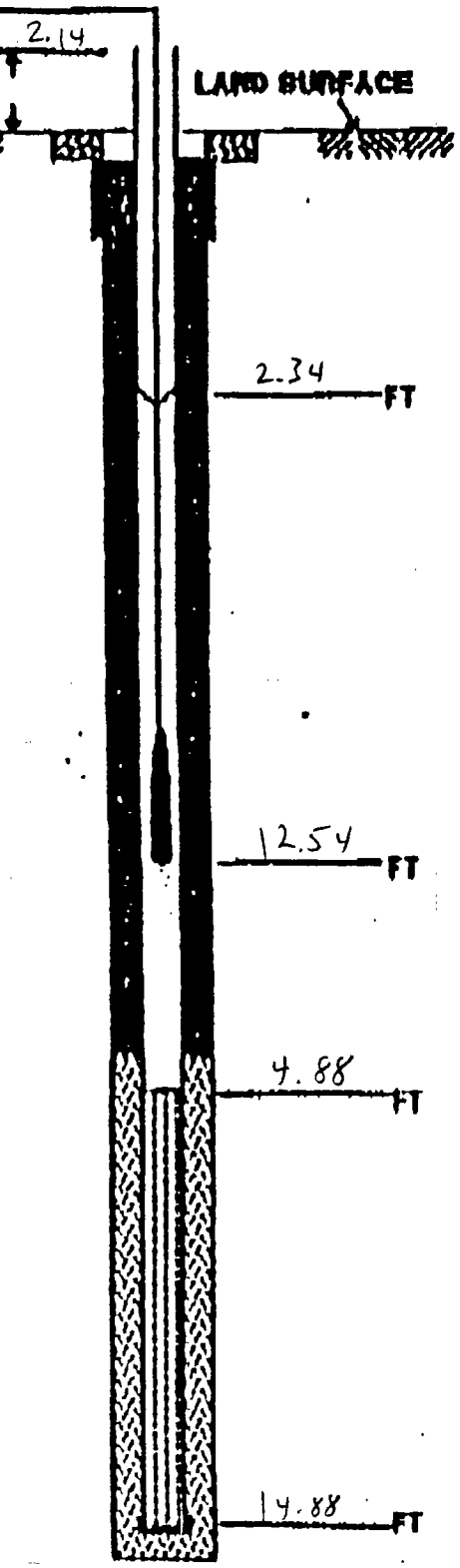
Step 0 11/13 17:15:28

Elapsed Time	INPUT 1
0.0000	0.018
0.0033	0.006
0.0066	0.000
0.0100	0.169
0.0133	8.244
0.0166	1.389
0.0200	0.212
0.0233	2.177
0.0266	1.420
0.0300	1.420
0.0333	1.445
0.0500	1.320
0.0666	1.232
0.0833	1.163
0.1000	1.107
0.1166	1.051
0.1333	1.001
0.1500	0.951
0.1666	0.907
0.1833	0.869
0.2000	0.826
0.2166	0.794
0.2333	0.757
0.2500	0.725
0.2666	0.700
0.2833	0.663
0.3000	0.638
0.3166	0.613
0.3333	0.588
0.4166	0.475
0.5000	0.387

0.5833	0.325
0.6666	0.269
0.7500	0.225
0.8333	0.187
0.9166	0.156
1.0000	0.137
1.0833	0.118
1.1666	0.106
1.2500	0.087
1.3333	0.081
1.4166	0.068
1.5000	0.062
1.5833	0.056
1.6666	0.050
1.7500	0.043
1.8333	0.043
1.9166	0.037
2.0000	0.037
2.5000	0.018
3.0000	0.012
3.5000	0.012
4.0000	0.012
4.5000	0.012
5.0000	0.012
5.5000	0.006
6.0000	0.006
6.5000	0.012
7.0000	0.012
7.5000	0.006
8.0000	0.012
8.5000	0.012
9.0000	0.012
9.5000	0.006
10.0000	0.012

CEF-5-105
RUN 1

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT RI OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-10s PUMPING WELL —

DATE 11-13-93 TIME ~~0820~~ 1615

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 5

TEST DURATION 10 min

TIME OF INSTALLATION ~~0820~~ 1615

STATIC DEPTH TO WATER 2.34 FT. _____ PSI

DEPTH OF TRANSDUCER 12.54

CALIBRATION
DEPTH 10 FT 7.43 PSI
DEPTH 11 FT 8.47 PSI
DEPTH 12 FT 9.50 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT. _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT. _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER

DEPTH 12 FT 9.50 PSI
DEPTH 11 FT 8.45 PSI
DEPTH 10 FT 7.45 PSI

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S

Version 1.10

12/02/93

09:38:02

===

TEST DESCRIPTION

Data set...........
Data set title..... CEF-5-18D RUN NO. 1

Knowns and Constants:
- No. of data points.................. 54
- Radius of well casing............... 0.083
- Radius of well...................... 0.25
- Aquifer saturated thickness......... 48.38
- Well screen length.................. 10
- Static height of water in well...... 20
- Log(Re/Rw).......................... 2.681
- A, B, C............................. 2.760, 0.448, 0.000

===

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

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RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.2115E-002	+/-	1.0705E-003
y0 =	1.9246E+000	+/-	7.4857E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals............... 54
- Number of estimated parameters.... 2
- Degrees of freedom................ 52
- Residual mean..................... 0.008427
- Residual standard deviation....... 0.1474
- Residual variance................. 0.02171

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.0033	1.461	1.843	-0.38202	1
0.0066	2.239	1.7649	0.47407	1
0.01	1.217	1.6879	-0.47094	1
0.0133	1.499	1.6164	-0.11742	1
0.0166	1.405	1.5479	-0.14293	1
0.02	1.725	1.4804	0.2446	1
0.0233	1.449	1.4177	0.031319	1
0.0266	1.8	1.3576	0.44238	1
0.03	1.681	1.2984	0.38261	1
0.0333	1.254	1.2434	0.010622	1
0.05	0.834	0.99874	-0.16474	1
0.0666	0.621	0.8033	-0.1823	1
0.0833	0.533	0.64525	-0.11225	1
0.1	0.451	0.5183	-0.067296	1
0.1166	0.376	0.41687	-0.040868	1
0.1333	0.301	0.33485	-0.033849	1
0.15	0.232	0.26897	-0.036968	1
0.1666	0.194	0.21633	-0.022332	1
0.1833	0.175	0.17377	0.0012308	1
0.2	0.15	0.13958	0.01042	1
0.2166	0.138	0.11227	0.025735	1
0.2333	0.125	0.090177	0.034823	1
0.25	0.1	0.072435	0.027565	1
0.2666	0.094	0.05826	0.03574	1
0.2833	0.081	0.046797	0.034203	1
0.3	0.075	0.03759	0.03741	1
0.3166	0.075	0.030234	0.044766	1
0.3333	0.069	0.024285	0.044715	1
0.4166	0.05	0.0081421	0.041858	1
0.5	0.031	0.0027262	0.028274	1
0.5833	0.031	0.00091403	0.030086	1
0.6666	0.018	0.00030645	0.017694	1
0.75	0.018	0.00010261	0.017897	1
0.8333	0.012	3.4401E-005	0.011966	1
0.9166	0.006	1.1534E-005	0.0059885	1
1	0.012	3.8618E-006	0.011996	1
1.0833	0.018	1.2948E-006	0.017999	1
1.1666	0.006	4.341E-007	0.0059996	1
1.25	0.012	1.4535E-007	0.012	1
1.3333	0.006	4.8731E-008	0.006	1
1.4166	0.006	1.6338E-008	0.006	1
1.5	0.006	5.4705E-009	0.006	1
1.5833	0.012	1.8341E-009	0.012	1
1.6666	0.025	6.1492E-010	0.025	1
1.8333	0.012	6.903E-011	0.012	1
1.9166	0.006	2.3144E-011	0.006	1
2	0.012	7.7492E-012	0.012	1
2.5	0.012	1.0977E-014	0.012	1
3	0.006	1.555E-017	0.006	1
3.5	0.012	2.2027E-020	0.012	1
4.5	0.012	4.42E-026	0.012	1
5	0.006	6.2611E-029	0.006	1
6.5	0.006	1.7797E-037	0.006	1
9.5	0.006	1.4379E-054	0.006	1

RESULTS FROM VISUAL CURVE MATCHING

CEF-5-18D
Run 1

VISUAL MATCH PARAMETER ESTIMATES

		Estimate
K	=	1.2115E-002
y0	=	1.9246E+000

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>

TYPE CURVE DATA

K = 9.23549E-003
y0 = 1.07977E+000

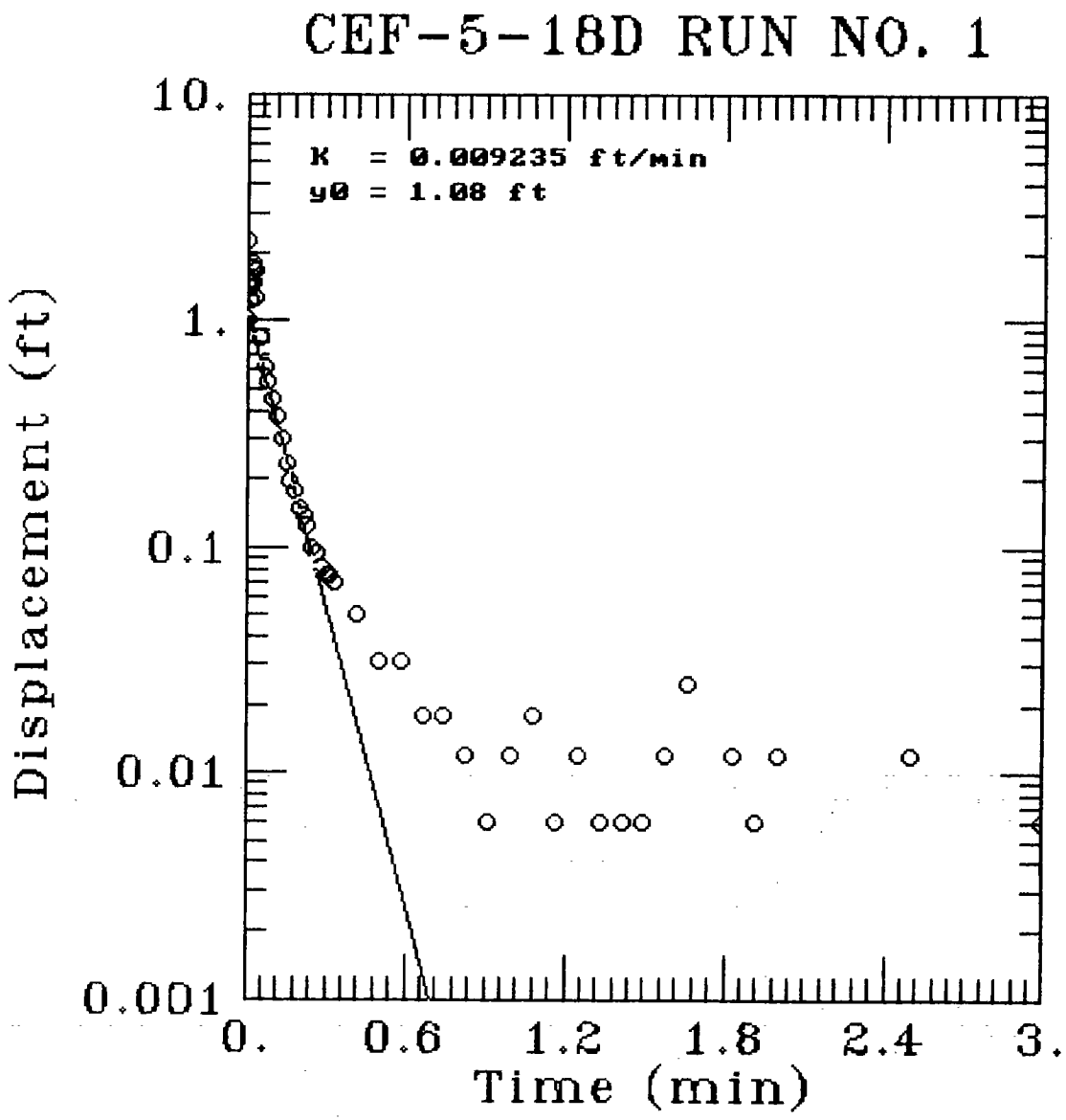
Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.080E+000	3.000E+000	1.007E-013		

TYPE CURVE DATA

K = 9.23549E-003
y0 = 1.07977E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.080E+000	3.000E+000	1.007E-013		

CEF-5-18D
Run 1


CEF-5-18D RUN NO. 1
K = 0.009235 ft/min
y0 = 1.08 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
0.6
1.2
1.8
2.4
3.
Time (min)

CEF-518D

SE1000C
Environmental Logger
11/12 14:09

Unit# 01597 Test 0

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

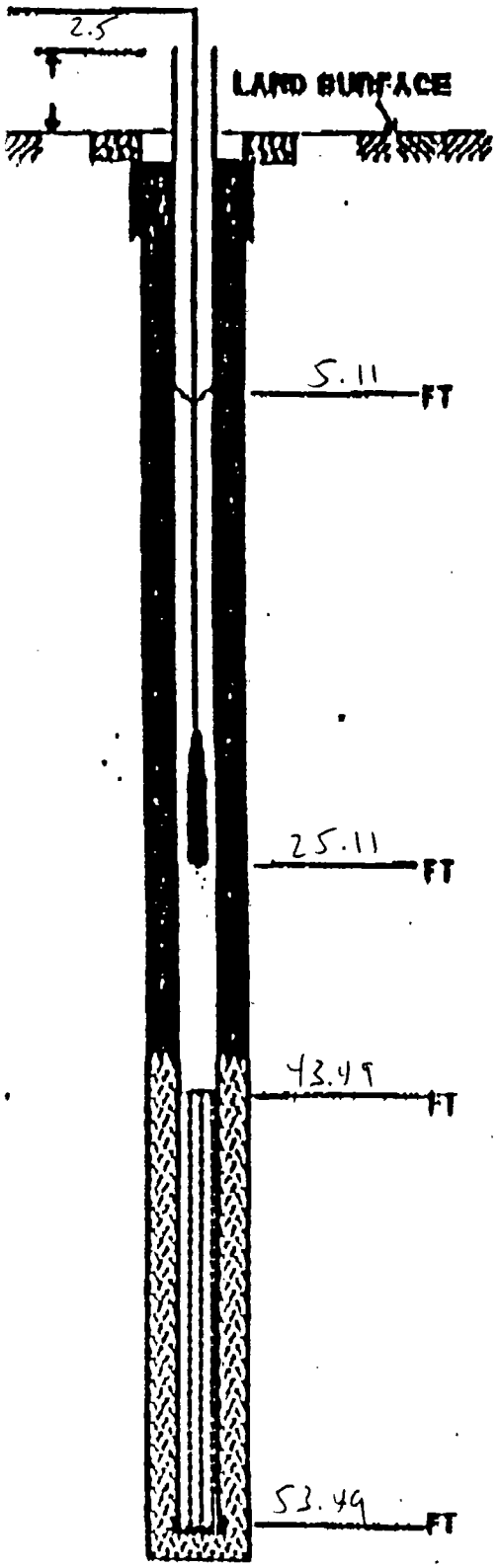
Step 0 11/12 10:48:14

Elapsed Time	INPUT 1
0.0000	0.000
0.0033	1.461
0.0066	2.239
0.0100	1.217
0.0133	1.499
0.0166	1.405
0.0200	1.725
0.0233	1.449
0.0266	1.800
0.0300	1.681
0.0333	1.254
0.0500	0.834
0.0666	0.621
0.0833	0.533
0.1000	0.451
0.1166	0.376
0.1333	0.301
0.1500	0.232
0.1666	0.194
0.1833	0.175
0.2000	0.150
0.2166	0.138
0.2333	0.125
0.2500	0.100
0.2666	0.094
0.2833	0.081
0.3000	0.075
0.3166	0.075
0.3333	0.069
0.4166	0.050
0.5000	0.031

0.5833	0.031
0.6666	0.018
0.7500	0.018
0.8333	0.012
0.9166	0.006
1.0000	0.012
1.0833	0.018
1.1666	0.006
1.2500	0.012
1.3333	0.006
1.4166	0.006
1.5000	0.006
1.5833	0.012
1.6666	0.025
1.7500	0.000
1.8333	0.012
1.9166	0.006
2.0000	0.012
2.5000	0.012
3.0000	0.006
3.5000	0.012
4.0000	0.000
4.5000	0.012
5.0000	0.006
5.5000	0.000
6.0000	0.000
6.5000	0.006
7.0000	0.000
7.5000	0.000
8.0000	0.000
8.5000	0.000
9.0000	0.000
9.5000	0.006
10.0000	0.000

CEF-5-18D
RUN 1

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT R1 OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-18D PUMPING WELL —

DATE 11-12-93 TIME 0948

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 0

TEST DURATION 10 min

TIME OF INSTALLATION 0948

STATIC DEPTH TO WATER 5.11 FT. _____ PSI

DEPTH OF TRANSDUCER 25.11

CALIBRATION
DEPTH 10 FT 5.1 PSI
DEPTH 11 FT 6.1 PSI
DEPTH 12 FT 7.1 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT. _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT. _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER
DEPTH 12 FT 7.1 PSI
DEPTH 11 FT 6.1 PSI
DEPTH 10 FT 5.1 PSI

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>

A Q T E S O L V   R E S U L T S
Version 1.10

12/02/93

10:01:30

===

TEST DESCRIPTION

Data set..........
Data set title..... CEF-5-21I RUN NO. 1

Knowns and Constants:
No. of data points.................. 64
Radius of well casing............... 0.083
Radius of well...................... 0.25
Aquifer saturated thickness......... 36.12
Well screen length.................. 10
Static height of water in well...... 21.25
Log(Re/Rw).......................... 2.76
A, B, C............................. 2.760, 0.448, 0.000

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ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

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RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.2072E-002	+/-	1.2762E-003
y0 =	1.7500E+000	+/-	8.1337E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
Number of residuals................ 64
Number of estimated parameters.... 2
Degrees of freedom................ 62
Residual mean..................... 0.01164
Residual standard deviation....... 0.1627
Residual variance................. 0.02648

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.0033	0.81	1.6782	-0.86821	1
0.0066	1.319	1.6093	-0.29034	1
0.01	1.739	1.5413	0.19767	1
0.0133	1.727	1.4781	0.24893	1
0.0166	1.495	1.4174	0.077587	1
0.02	2.022	1.3575	0.66448	1
0.0233	1.551	1.3018	0.2492	1
0.0266	1.438	1.2484	0.18962	1
0.03	1.312	1.1956	0.11638	1
0.0333	1.187	1.1466	0.040447	1
0.05	0.779	0.92745	-0.14845	1
0.0666	0.59	0.75117	-0.16117	1
0.0833	0.452	0.60763	-0.15563	1
0.1	0.351	0.49151	-0.14051	1
0.1166	0.295	0.39809	-0.10309	1
0.1333	0.245	0.32202	-0.07702	1
0.15	0.194	0.26048	-0.066484	1
0.1666	0.176	0.21097	-0.034974	1
0.1833	0.15	0.17066	-0.020658	1
0.2	0.132	0.13805	-0.0060463	1
0.2166	0.125	0.11181	0.013192	1
0.2333	0.1	0.090442	0.0095578	1
0.25	0.088	0.073159	0.014841	1
0.2666	0.088	0.059254	0.028746	1
0.2833	0.081	0.047931	0.033069	1
0.3	0.069	0.038772	0.030228	1
0.3166	0.069	0.031402	0.037598	1
0.3333	0.056	0.025402	0.030598	1
0.4166	0.05	0.0088196	0.04118	1
0.5	0.044	0.0030584	0.040942	1
0.5833	0.031	0.0010619	0.029938	1
0.6666	0.031	0.0003687	0.030631	1
0.75	0.031	0.00012785	0.030872	1
0.8333	0.031	4.4392E-005	0.030956	1
0.9166	0.031	1.5413E-005	0.030985	1
1	0.031	5.3448E-006	0.030995	1
1.0833	0.025	1.8558E-006	0.024998	1
1.1666	0.025	6.4434E-007	0.024999	1
1.25	0.025	2.2344E-007	0.025	1
1.3333	0.018	7.7579E-008	0.018	1
1.4166	0.031	2.6936E-008	0.031	1
1.5	0.025	9.3407E-009	0.025	1
1.5833	0.018	3.2432E-009	0.018	1
1.6666	0.025	1.1261E-009	0.025	1
1.75	0.018	3.9048E-010	0.018	1
1.8333	0.025	1.3558E-010	0.025	1
1.9166	0.018	4.7074E-011	0.018	1
2	0.025	1.6324E-011	0.025	1
2.5	0.018	2.8527E-014	0.018	1
3	0.018	4.9855E-017	0.018	1
3.5	0.012	8.7126E-020	0.012	1
4	0.018	1.5226E-022	0.018	1
4.5	0.018	2.661E-025	0.018	1
5	0.025	4.6503E-028	0.025	1
5.5	0.012	8.1269E-031	0.012	1
6	0.018	1.4203E-033	0.018	1
6.5	0.031	2.482E-036	0.031	1
7	0.031	4.3376E-039	0.031	1
7.5	0.012	7.5805E-042	0.012	1

CEP-5-21 I

8	0.012	1.3248E-044	0.012	1
8.5	0.012	2.3152E-047	0.012	1
9	0.018	4.046E-050	0.018	1
9.5	0.018	7.0708E-053	0.018	1
10	0.018	1.2357E-055	0.018	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.2072E-002
y0 =	1.7500E+000

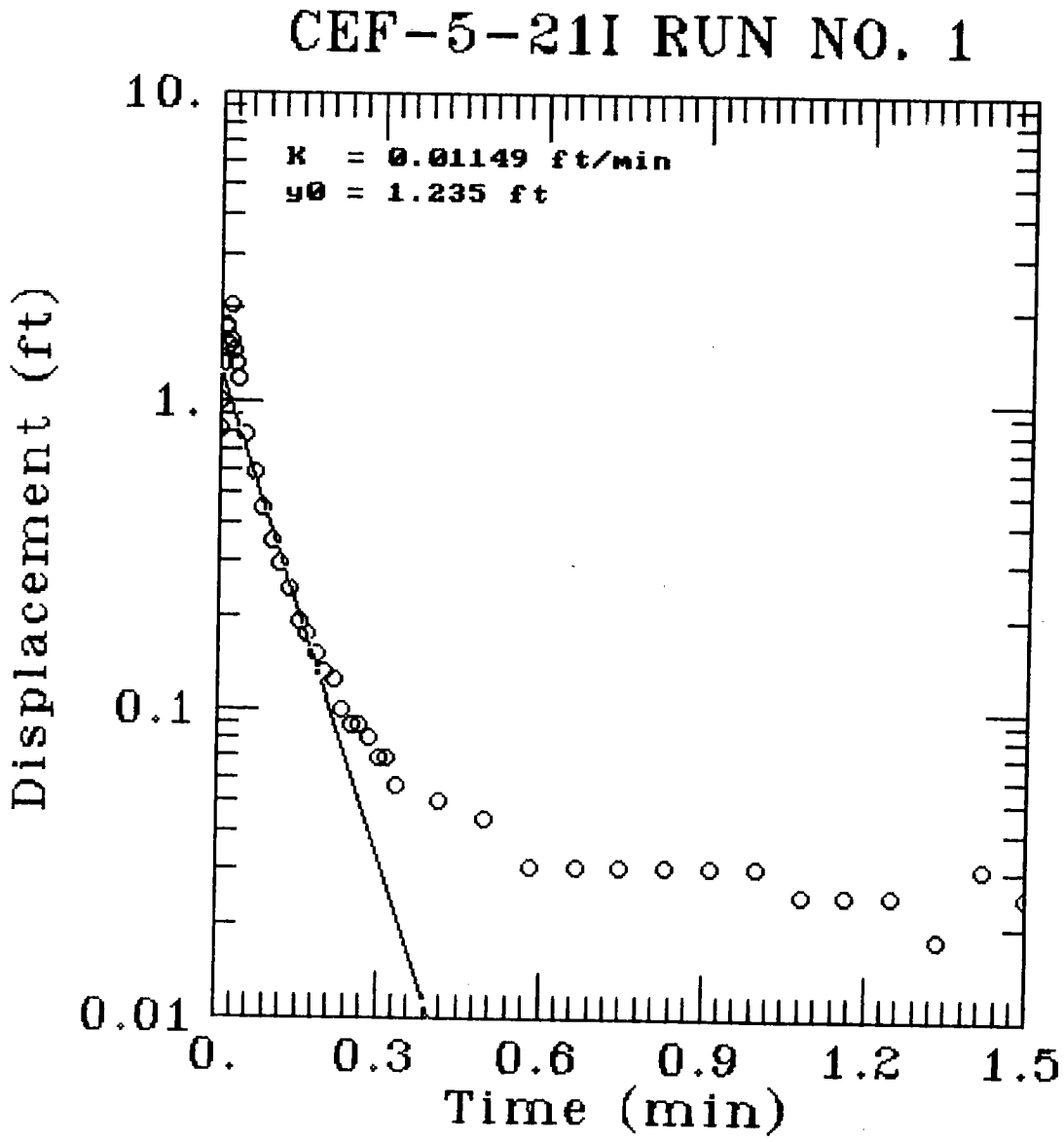
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 1.14939E-002
y0 = 1.23537E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.235E+000	1.500E+000	1.642E-008		

CEF-5-21 I
RUN 1


CEF-5-21I RUN NO. 1
K = 0.01149 ft/min
y0 = 1.235 ft
10.
1.
0.1
0.01
Displacement (ft)
0.
0.3
0.6
0.9
1.2
1.5
Time (min)

CEF 5-21I

SE1000C
Environmental Logger
11/12 14:29

Unit# 01597 Test 6

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 11/12 12:56:05

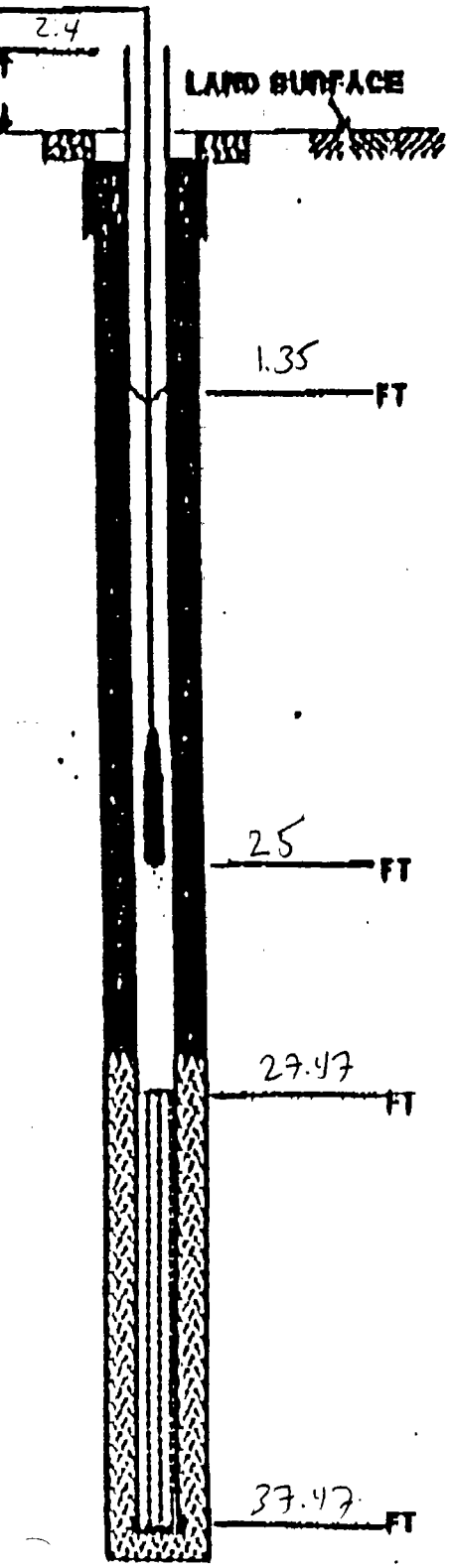
Elapsed Time	INPUT 1
0.0000	0.119
0.0033	0.810
0.0066	1.319
0.0100	1.739
0.0133	1.727
0.0166	1.495
0.0200	2.022
0.0233	1.551
0.0266	1.438
0.0300	1.312
0.0333	1.187
0.0500	0.779
0.0666	0.590
0.0833	0.452
0.1000	0.351
0.1166	0.295
0.1333	0.245
0.1500	0.194
0.1666	0.176
0.1833	0.150
0.2000	0.132
0.2166	0.125
0.2333	0.100
0.2500	0.088
0.2666	0.088
0.2833	0.081
0.3000	0.069
0.3166	0.069
0.3333	0.056
0.4166	0.050
0.5000	0.044

CEF-5-21 I
RUN 1

0.5833	0.031
0.6666	0.031
0.7500	0.031
0.8333	0.031
0.9166	0.031
1.0000	0.031
1.0833	0.025
1.1666	0.025
1.2500	0.025
1.3333	0.018
1.4166	0.031
1.5000	0.025
1.5833	0.018
1.6666	~~0.025~~
1.7500	0.018
1.8333	0.025
1.9166	0.018
2.0000	0.025
2.5000	0.018
3.0000	0.018
3.5000	0.012
4.0000	0.018
4.5000	0.018
5.0000	0.025
5.5000	0.012
6.0000	0.018
6.5000	0.031
7.0000	0.031
7.5000	0.012
8.0000	0.012
8.5000	0.012
9.0000	0.018
9.5000	0.018
10.0000	0.018

CEF-5-21 I
RUN 1

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT RI OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-21I PUMPING WELL —

DATE 11-12-93 TIME 1156

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 6

TEST DURATION 10 min

TIME OF INSTALLATION 1156

STATIC DEPTH TO WATER 1.35 FT. _____ PSI

DEPTH OF TRANSDUCER 25 ft

CALIBRATION
DEPTH 10 FT 8.7 PSI
DEPTH 11 FT 9.69 PSI
DEPTH 12 FT 10.71 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT. _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT. _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER

DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

A Q T E S O L V   R E S U L T S
Version 1.10

12/02/93

10:15:5

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TEST DESCRIPTION

Data set..........
Data set title..... CEF-5-9I RUN NO. 1

Knowns and Constants:
No. of data points.................. 60
Radius of well casing............... 0.083
Radius of well...................... 0.25
Aquifer saturated thickness......... 34.07
Well screen length.................. 10
Static height of water in well...... 25.22
Log(Re/Rw).......................... 2.879
A, B, C............................. 2.760, 0.448, 0.000

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ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

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RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	8.5792E-003	+/-	2.0194E-003
y0 =	1.4474E+000	+/-	1.7553E-001

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
Number of residuals............... 60
Number of estimated parameters.... 2
Degrees of freedom................ 58
Residual mean..................... -0.00272
Residual standard deviation....... 0.3314
Residual variance................. 0.1098

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.0033	0.006	1.4066	-1.4006	1
0.0166	0.025	1.2538	-1.2288	1
0.02	1.613	1.2174	0.39558	1
0.0233	1.82	1.1832	0.63685	1
0.0266	2.109	1.1499	0.95915	1
0.03	1.964	1.1165	0.84748	1
0.0333	1.807	1.0851	0.7219	1
0.05	0.985	0.93913	0.045869	1
0.0666	0.747	0.8135	-0.066501	1
0.0833	0.59	0.70407	-0.11407	1
0.1	0.458	0.60936	-0.15136	1
0.1166	0.376	0.52784	-0.15184	1
0.1333	0.307	0.45683	-0.14983	1
0.15	0.257	0.39538	-0.13838	1
0.1666	0.213	0.34249	-0.12949	1
0.1833	0.188	0.29642	-0.10842	1
0.2	0.157	0.25654	-0.099543	1
0.2166	0.138	0.22222	-0.084225	1
0.2333	0.119	0.19233	-0.073331	1
0.25	0.094	0.16646	-0.072458	1
0.2666	0.094	0.14419	-0.050191	1
0.2833	0.075	0.12479	-0.049794	1
0.3	0.062	0.10801	-0.046007	1
0.3166	0.062	0.093558	-0.031558	1
0.3333	0.056	0.080973	-0.024973	1
0.4166	0.037	0.039389	-0.0023887	1
0.5	0.031	0.019144	0.011856	1
0.5833	0.025	0.0093124	0.015688	1
0.6666	0.025	0.00453	0.02047	1
0.75	0.012	0.0022017	0.0097983	1
0.8333	0.018	0.001071	0.016929	1
0.9166	0.012	0.00052098	0.011479	1
1	0.018	0.00025321	0.017747	1
1.0833	0.018	0.00012317	0.017877	1
1.1666	0.006	5.9916E-005	0.0059401	1
1.25	0.012	2.9121E-005	0.011971	1
1.3333	0.018	1.4166E-005	0.017986	1
1.4166	0.006	6.8908E-006	0.0059931	1
1.5	0.006	3.3491E-006	0.0059967	1
1.5833	0.012	1.6291E-006	0.011998	1
1.6666	0.006	7.9249E-007	0.0059992	1
1.75	0.012	3.8517E-007	0.012	1
1.8333	0.018	1.8736E-007	0.018	1
1.9166	0.018	9.1141E-008	0.018	1
2	0.006	4.4297E-008	0.006	1
2.5	0.006	5.859E-010	0.006	1
3	0.012	7.7494E-012	0.012	1
4	0.006	1.3557E-015	0.006	1
4.5	0.006	1.7931E-017	0.006	1
5	0.012	2.3717E-019	0.012	1
5.5	0.006	3.137E-021	0.006	1
6	0.012	4.1491E-023	0.012	1
6.5	0.018	5.4879E-025	0.018	1
7	0.006	7.2586E-027	0.006	1
7.5	0.012	9.6007E-029	0.012	1
8	0.012	1.2698E-030	0.012	1
8.5	0.012	1.6796E-032	0.012	1
9	0.006	2.2215E-034	0.006	1
9.5	0.018	2.9383E-036	0.018	1

CEF-5-91
RUN 1

10	0.018	3.8863E-038	0.018	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	8.5792E-003
y0 =	1.4474E+000

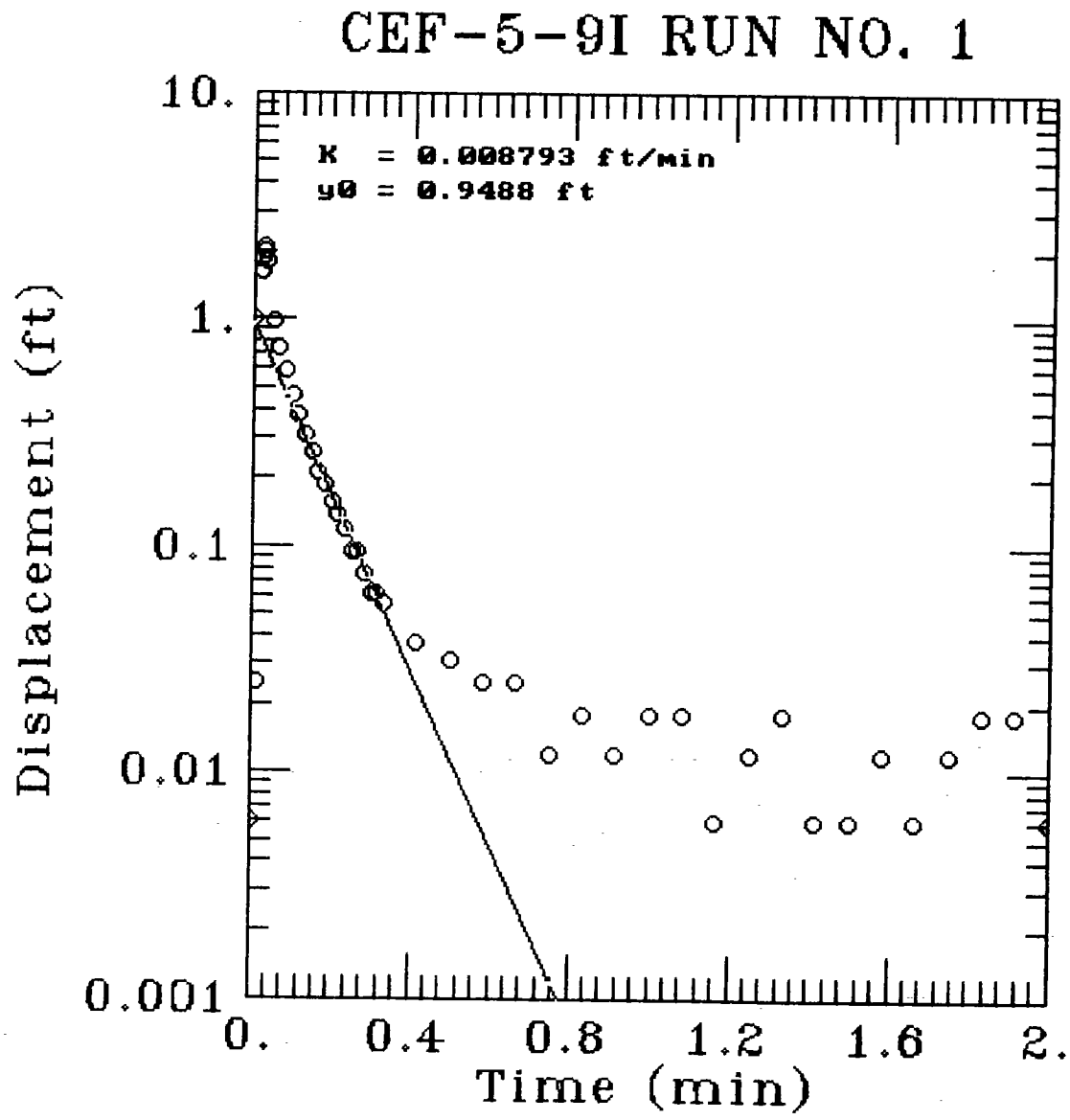
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 8.79289E-003
y0 = 9.48828E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	9.488E-001	2.000E+000	1.887E-008		

CEF-5-9I
Run 1


CEF-5-9I RUN NO. 1
K = 0.008793 ft/min
y0 = 0.9488 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
0.4
0.8
1.2
1.6
2.
Time (min)

CEF-5-9I

SE1000C
Environmental Logger
11/13 14:01

Unit# 01597 Test 4

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 11/13 11:39:59

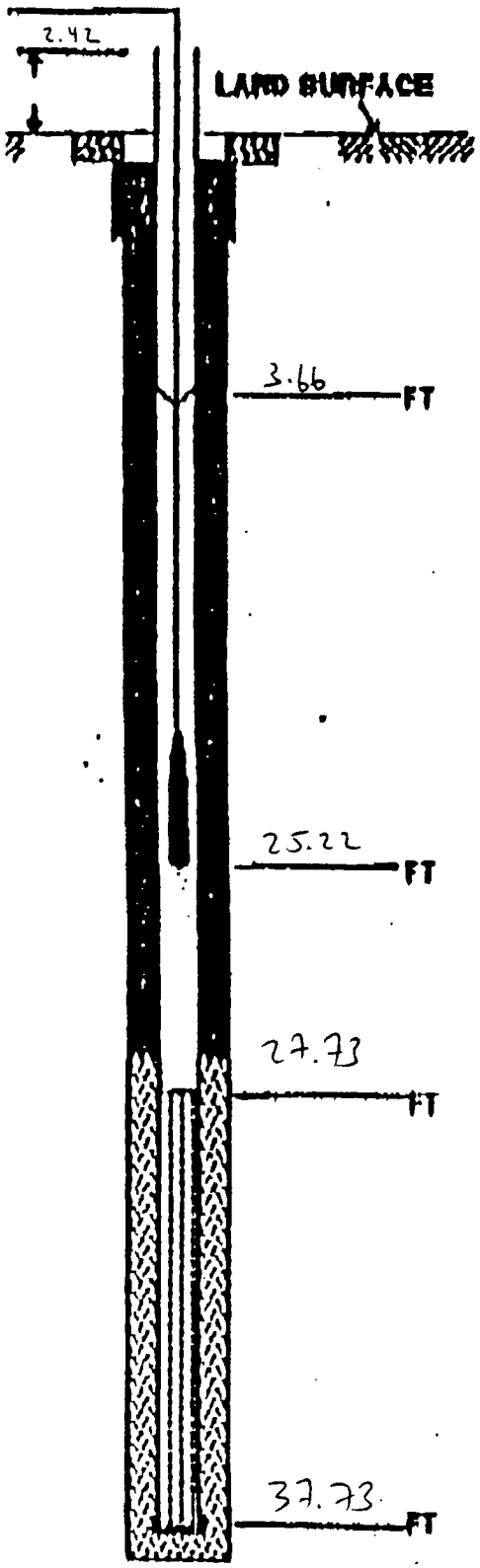
Elapsed Time	INPUT 1
0.0000	0.006
0.0033	0.006
0.0066	-0.006
0.0100	0.000
0.0133	0.000
0.0166	0.025
0.0200	1.613
0.0233	1.820
0.0266	2.109
0.0300	1.964
0.0333	1.807
0.0500	0.985
0.0666	0.747
0.0833	0.590
0.1000	0.458
0.1166	0.376
0.1333	0.307
0.1500	0.257
0.1666	0.213
0.1833	0.188
0.2000	0.157
0.2166	0.138
0.2333	0.119
0.2500	0.094
0.2666	0.094
0.2833	0.075
0.3000	0.062
0.3166	0.062
0.3333	0.056
0.4166	0.037
0.5000	0.031

CEF-5-9I
RUN 1

0.5833	0.025
0.6666	0.025
0.7500	0.012
0.8333	0.018
0.9166	0.012
1.0000	0.018
1.0833	~~0.018~~
1.1666	0.006
1.2500	0.012
1.3333	0.018
1.4166	0.006
1.5000	0.006
1.5833	0.012
1.6666	0.006
1.7500	0.012
1.8333	0.018
1.9166	0.018
2.0000	0.006
2.5000	0.006
3.0000	0.012
3.5000	0.000
4.0000	0.006
4.5000	0.006
5.0000	0.012
5.5000	0.006
6.0000	0.012
6.5000	0.018
7.0000	0.006
7.5000	0.012
8.0000	0.012
8.5000	0.012
9.0000	0.006
9.5000	0.018
10.0000	0.018

CEF-5-91
RUN 1

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT RI OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-9I PUMPING WELL —

DATE 11-13-93 TIME ~~1045~~ 1039

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 4

TEST DURATION 1039

TIME OF INSTALLATION 1039

STATIC DEPTH TO WATER 3.66 FT. _____ PSI

DEPTH OF TRANSDUCER 25.22

CALIBRATION
DEPTH 10 FT 6.47 PSI
DEPTH 11 FT 7.46 PSI
DEPTH 12 FT 8.47 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT. _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT. _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER

DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S

Version 1.10

12/02/93 10:33:22

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TEST DESCRIPTION

Data set..........
Data set title..... CEF-5-8S RUN NO. 1

Knowns and Constants:
- No. of data points.................. 64
- Radius of well casing............... 0.083
- Radius of well...................... 0.25
- Aquifer saturated thickness......... 20
- Well screen length.................. 10
- Static height of water in well...... 13.3
- Log(Re/Rw).......................... 2.614
- A, B, C............................. 2.760, 0.448, 0.000

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ANALYTICAL METHOD

wer-Rice (Unconfined Aquifer Slug Test)

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RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.6631E-003	+/-	3.8837E-004
y0 =	1.6412E+000	+/-	1.3460E-001

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals............... 64
- Number of estimated parameters.... 2
- Degrees of freedom................ 62
- Residual mean..................... 0.02333
- Residual standard deviation....... 0.4761
- Residual variance................. 0.2266

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.0033	0.106	1.6312	-1.5252	1
0.0066	4.919	1.6213	3.2977	1
0.01	0.869	1.6111	-0.74215	1
0.0133	1.738	1.6014	0.13664	1
0.0166	1.557	1.5916	-0.034625	1
0.02	1.544	1.5817	-0.03766	1
0.0233	1.538	1.572	-0.034047	1
0.0266	1.513	1.5625	-0.049493	1
0.03	1.507	1.5527	-0.04571	1
0.0333	1.494	1.5433	-0.049273	1
0.05	1.419	1.4964	-0.077389	1
0.0666	1.357	1.4512	-0.094198	1
0.0833	1.313	1.4071	-0.094112	1
0.1	1.263	1.3644	-0.10136	1
0.1166	1.219	1.3232	-0.10416	1
0.1333	1.182	1.283	-0.10096	1
0.15	1.144	1.244	-0.099988	1
0.1666	1.113	1.2064	-0.09342	1
0.1833	1.075	1.1698	-0.09477	1
0.2	1.05	1.1342	-0.084233	1
0.2166	1.019	1.1	-0.080979	1
0.2333	0.988	1.0666	-0.078562	1
0.25	0.963	1.0342	-0.071161	1
0.2666	0.938	1.0029	-0.064929	1
0.2833	0.913	0.97246	-0.059461	1
0.3	0.894	0.94292	-0.048918	1
0.3166	0.869	0.91444	-0.045442	1
0.3333	0.844	0.88666	-0.042662	1
0.4166	0.738	0.7602	-0.0222	1
0.5	0.656	0.65165	0.0043454	1
0.5833	0.587	0.55871	0.028289	1
0.6666	0.525	0.47902	0.045976	1
0.75	0.469	0.41063	0.058374	1
0.8333	0.419	0.35206	0.06694	1
0.9166	0.381	0.30185	0.079153	1
1	0.343	0.25875	0.084252	1
1.0833	0.312	0.22184	0.090157	1
1.1666	0.281	0.1902	0.090798	1
1.25	0.256	0.16304	0.092956	1
1.3333	0.237	0.13979	0.09721	1
1.4166	0.212	0.11985	0.092148	1
1.5	0.2	0.10274	0.097261	1
1.5833	0.187	0.088086	0.098914	1
1.6666	0.168	0.075522	0.092478	1
1.75	0.156	0.064739	0.091261	1
1.8333	0.15	0.055505	0.094495	1
1.9166	0.131	0.047589	0.083411	1
2	0.125	0.040794	0.084206	1
2.5	0.081	0.016198	0.064802	1
3	0.062	0.0064315	0.055569	1
3.5	0.05	0.0025537	0.047446	1
4	0.037	0.001014	0.035986	1
4.5	0.037	0.00040261	0.036597	1
5	0.031	0.00015986	0.03084	1
5.5	0.031	6.3475E-005	0.030937	1
6	0.031	2.5204E-005	0.030975	1
6.5	0.025	1.0007E-005	0.02499	1
7	0.031	3.9736E-006	0.030996	1
7.5	0.031	1.5778E-006	0.030998	1

CEF 5-85

8	0.031	6.2647E-007	0.030999	1
8.5	0.031	2.4875E-007	0.031	1
9	0.025	9.8768E-008	0.025	1
9.5	0.031	3.9217E-008	0.031	1
10	0.025	1.5572E-008	0.025	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.6631E-003
y0 =	1.6412E+000

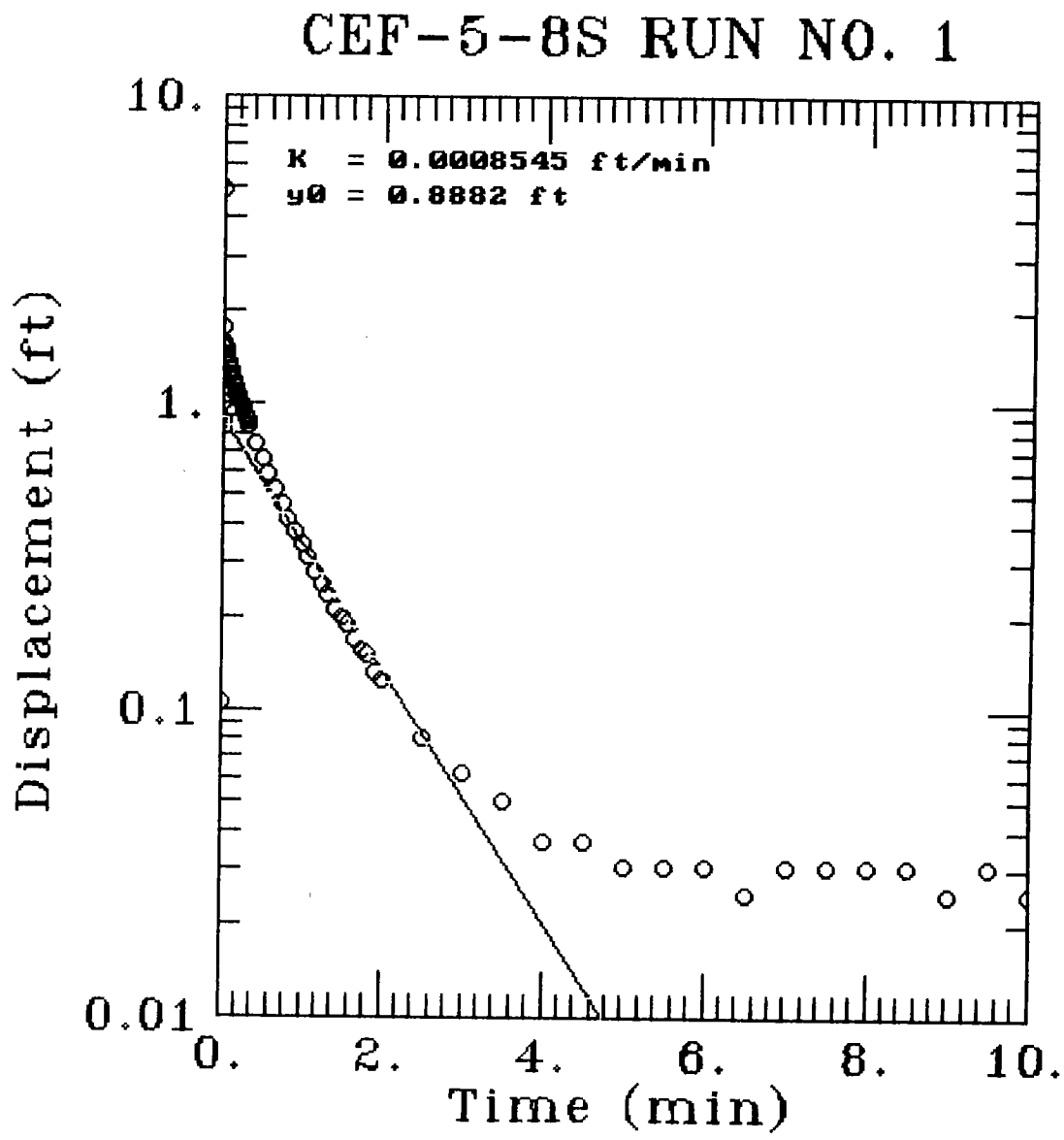
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 8.54522E-004
y0 = 8.88199E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
000E+000	8.882E-001	1.000E+001	6.703E-005		

CEF-5-85
RUN 1


CEF-5-8S RUN NO. 1
K = 0.0008545 ft/min
y0 = 0.8882 ft
Displacement (ft)
10.
1.
0.1
0.01
0.
2.
4.
6.
8.
10.
Time (min)

CEF-5-85

SE1000C
Environmental Logger
11/14 09:22

Unit# 01597 Test 6

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

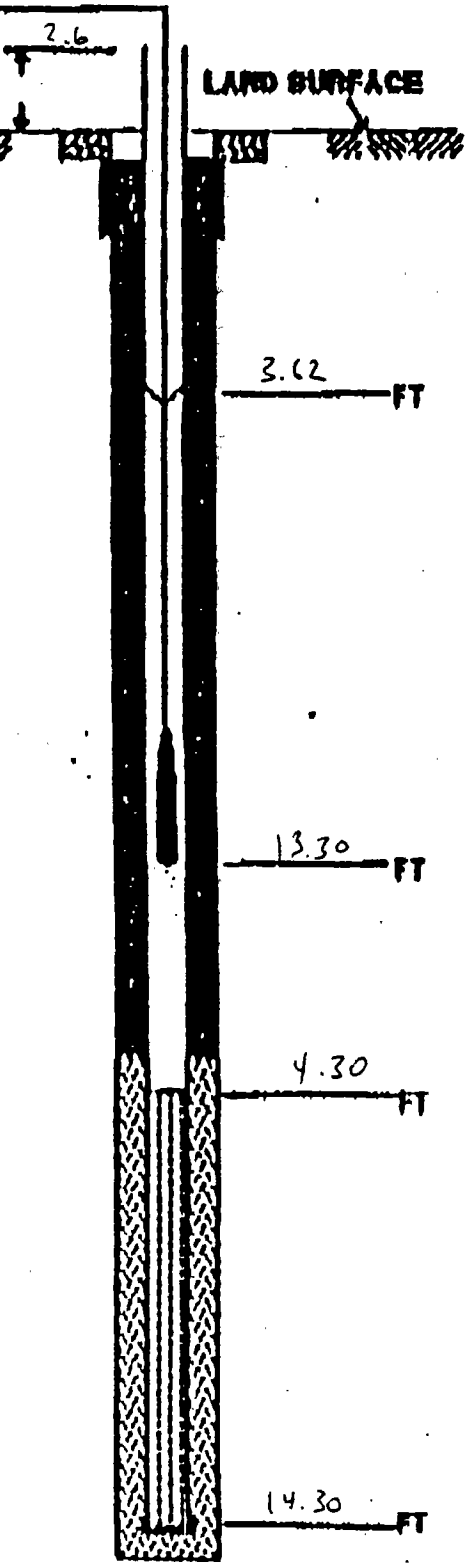
Step 0 11/13 17:35:53

Elapsed Time	INPUT 1
0.0000	0.000
0.0033	0.106
0.0066	4.919
0.0100	0.869
0.0133	1.738
0.0166	1.557
0.0200	1.544
0.0233	1.538
0.0266	1.513
0.0300	1.507
0.0333	1.494
0.0500	1.419
0.0666	1.357
0.0833	1.313
0.1000	1.263
0.1166	1.219
0.1333	1.182
0.1500	1.144
0.1666	1.113
0.1833	1.075
0.2000	1.050
0.2166	1.019
0.2333	0.988
0.2500	0.963
0.2666	0.938
0.2833	0.913
0.3000	0.894
0.3166	0.869
0.3333	0.844
0.4166	0.738
0.5000	0.656

0.5833	0.587
0.6666	0.525
0.7500	0.469
0.8333	0.419
0.9166	0.381
1.0000	0.343
1.0833	0.312
1.1666	0.281
1.2500	0.256
1.3333	0.237
1.4166	0.212
1.5000	0.200
1.5833	0.187
1.6666	0.168
1.7500	0.156
1.8333	0.150
1.9166	0.131
2.0000	0.125
2.5000	0.081
3.0000	0.062
3.5000	0.050
4.0000	0.037
4.5000	0.037
5.0000	0.031
5.5000	0.031
6.0000	0.031
6.5000	0.025
7.0000	0.031
7.5000	0.031
8.0000	0.031
8.5000	0.031
9.0000	0.025
9.5000	0.031
10.0000	0.025

CEF-5-85
RUN 1

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT RI OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-8s PUMPING WELL —

DATE 11-13-93 TIME 1635

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. (6)

TEST DURATION 10 min

TIME OF INSTALLATION 1635

STATIC DEPTH TO WATER 3.62 FT. _____ PSI

DEPTH OF TRANSDUCER 13.20 ft

CALIBRATION
DEPTH 10 FT 6.13 PSI
DEPTH 11 FT 7.15 PSI
DEPTH 12 FT 8.20 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT. _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT. _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER

DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S

Version 1.10

12/01/93 07:44:14

TEST DESCRIPTION

Data set...........
Data set title..... CEF-5-16S RUN NO. 1

Knowns and Constants:
- No. of data points................. 64
- Radius of well casing............... 0.083
- Radius of well...................... 0.25
- Aquifer saturated thickness......... 13.84
- Well screen length.................. 10
- Static height of water in well...... 12.84
- Log(Re/Rw).......................... 2.749
- A, B, C............................. 2.760, 0.448, 0.000

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	3.9973E-004	+/-	9.8156E-005
y0 =	5.2328E-001	+/-	3.6240E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:

Number of residuals..... 64
Number of estimated parameters.... 2
Degrees of freedom..... 62
Residual mean..... 0.00127
Residual standard deviation..... 0.1754
Residual variance..... 0.03076

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0033	0.006	0.52255	-0.51655	1
0.0066	0.006	0.52182	-0.51582	1
0.01	0.012	0.52107	-0.50907	1
0.0133	0.087	0.52035	-0.43335	1
0.0166	1.421	0.51962	0.90138	1
0.02	0.538	0.51888	0.019122	1
0.0233	0.463	0.51816	-0.055155	1
0.0266	0.732	0.51743	0.21457	1
0.03	0.582	0.51669	0.065308	1
0.0333	0.576	0.51597	0.060028	1
0.05	0.594	0.51235	0.081652	1
0.0666	0.582	0.50877	0.07323	1
0.0833	0.576	0.5052	0.070805	1
0.1	0.563	0.50165	0.061354	1
0.1166	0.557	0.49814	0.058857	1
0.1333	0.551	0.49464	0.056357	1
0.15	0.544	0.49117	0.052832	1
0.1666	0.538	0.48774	0.050262	1
0.1833	0.532	0.48431	0.047688	1
0.2	0.526	0.48091	0.045091	1
0.2166	0.519	0.47755	0.041449	1
0.2333	0.513	0.4742	0.038804	1
0.25	0.507	0.47086	0.036136	1
0.2666	0.507	0.46758	0.039424	1
0.2833	0.507	0.46429	0.042709	1
0.3	0.5	0.46103	0.038971	1
0.3166	0.494	0.45781	0.03619	1
0.3333	0.488	0.45459	0.033406	1
0.4166	0.457	0.43889	0.018115	1
0.5	0.444	0.4237	0.020299	1
0.5833	0.419	0.40906	0.0099397	1
0.6666	0.4	0.39493	0.0050749	1
0.75	0.382	0.38126	0.00073773	1
0.8333	0.369	0.36809	0.00091233	1
0.9166	0.35	0.35537	-0.0053683	1
1	0.344	0.34307	0.000926	1
1.0833	0.319	0.33122	-0.012219	1
1.1666	0.313	0.31977	-0.0067737	1
1.25	0.294	0.30871	-0.014711	1
1.3333	0.281	0.29804	-0.017043	1
1.4166	0.275	0.28774	-0.012744	1
1.5	0.263	0.27779	-0.014789	1

CEF-5-165
RUN 1

1.5833	0.25	0.26819	-0.01819	1
1.6666	0.244	0.25892	-0.014923	1
1.75	0.225	0.24997	-0.024965	1
1.8333	0.225	0.24133	-0.016328	1
1.9166	0.212	0.23299	-0.020989	1
2	0.206	0.22493	-0.018928	1
2.5	0.156	0.18213	-0.026126	1
3	0.125	0.14747	-0.022469	1
3.5	0.112	0.11941	-0.0074064	1
4	0.093	0.096684	-0.0036842	1
4.5	0.075	0.078286	-0.0032859	1
5	0.062	0.063389	-0.0013887	1
5.5	0.062	0.051326	0.010674	1
6	0.043	0.041559	0.0014408	1
6.5	0.043	0.033651	0.0093492	1
7	0.037	0.027247	0.0097527	1
7.5	0.037	0.022062	0.014938	1
8	0.037	0.017864	0.019136	1
8.5	0.037	0.014465	0.022535	1
9	0.031	0.011712	0.019288	1
9.5	0.037	0.0094834	0.027517	1
10	0.025	0.0076788	0.017321	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	3.9973E-004
y0 =	5.2328E-001

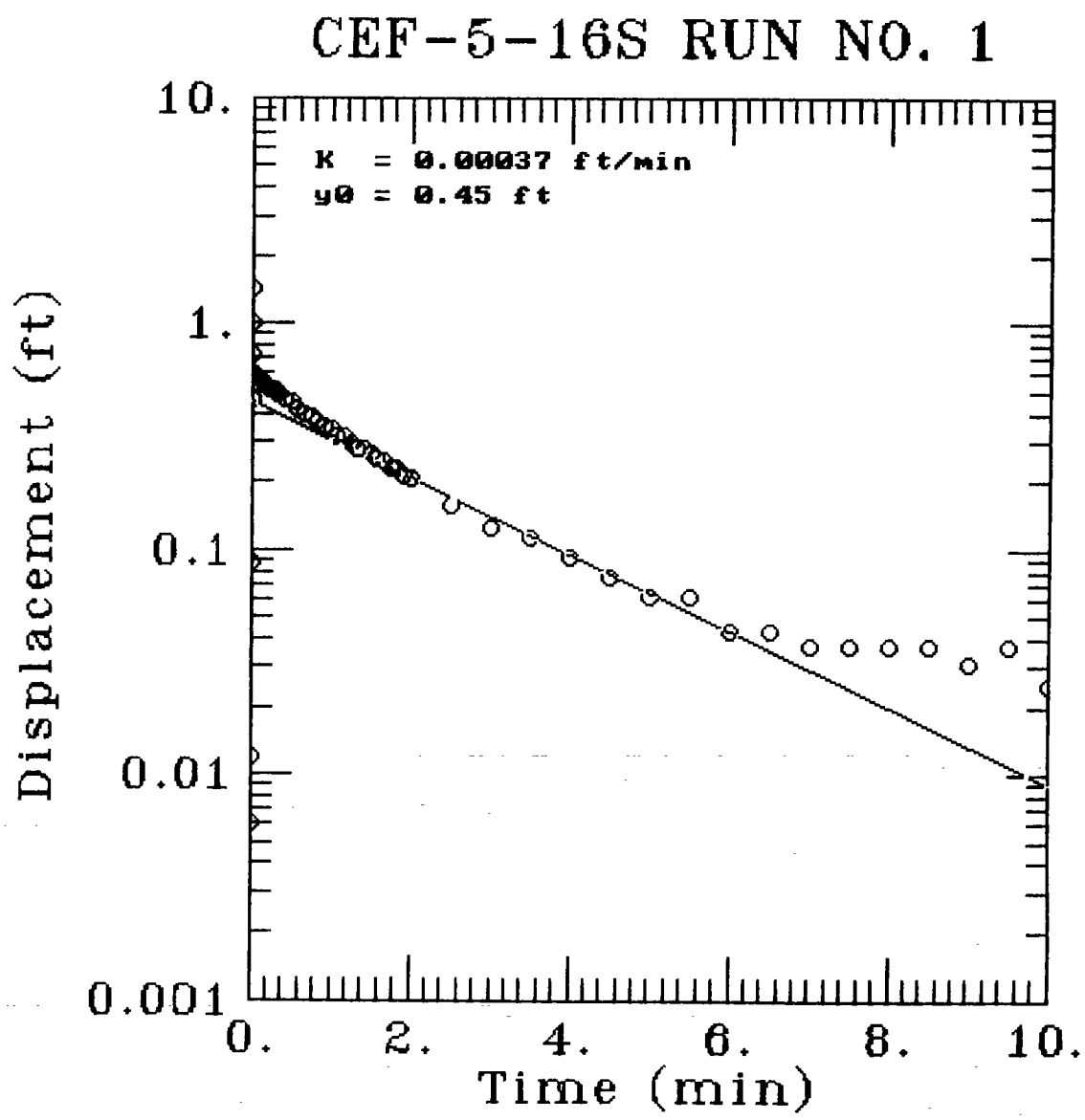
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 3.70045E-004
y0 = 4.49958E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	4.500E-001	1.000E+001	9.034E-003		

CEF-5-165
RUN 1


CEF-5-16S RUN NO. 1
K = 0.00037 ft/min
y0 = 0.45 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
2.
4.
6.
8.
10.
Time (min)

CEF-5-165

SE1000C
Environmental Logger
11/12 14:21

Unit# 01597 Test 2

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 11/12 11:30:51

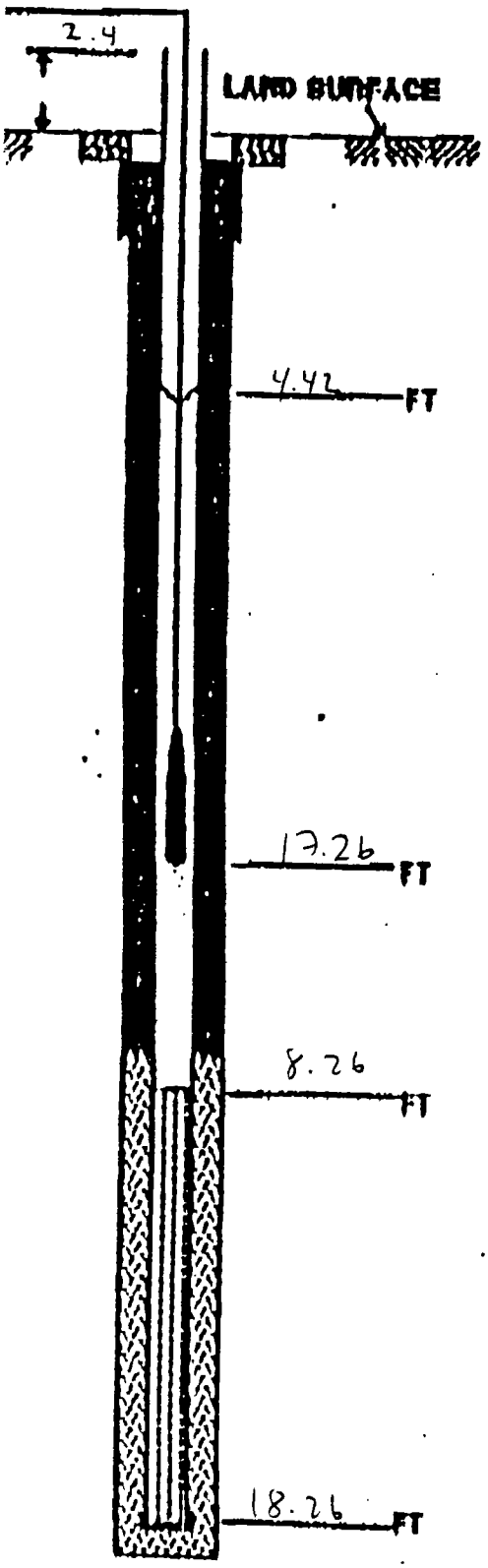
Elapsed Time	INPUT 1
0.0000	0.000
0.0033	0.006
0.0066	0.006
0.0100	0.012
0.0133	0.087
0.0166	1.421
0.0200	0.538
0.0233	0.463
0.0266	0.732
0.0300	0.582
0.0333	0.576
0.0500	0.594
0.0666	0.582
0.0833	0.576
0.1000	0.563
0.1166	0.557
0.1333	0.551
0.1500	0.544
0.1666	0.538
0.1833	0.532
0.2000	0.526
0.2166	0.519
0.2333	0.513
0.2500	0.507
0.2666	0.507
0.2833	0.507
0.3000	0.500
0.3166	0.494
0.3333	0.488
0.4166	0.457
0.5000	0.444

CEF-5-165
RUN 1

0.5833	0.419
0.6666	0.400
0.7500	0.382
0.8333	0.369
0.9166	0.350
1.0000	0.344
1.0833	0.319
1.1666	0.313
1.2500	0.294
1.3333	0.281
1.4166	0.275
1.5000	0.263
1.5833	0.250
1.6666	0.244
1.7500	0.225
1.8333	0.225
1.9166	0.212
2.0000	0.206
2.5000	0.156
3.0000	0.125
3.5000	0.112
4.0000	0.093
4.5000	0.075
5.0000	0.062
5.5000	0.062
6.0000	0.043
6.5000	0.043
7.0000	0.037
7.5000	0.037
8.0000	0.037
8.5000	0.037
9.0000	~~0.031~~
9.5000	0.037
10.0000	0.025

CEF-5-165
RUN 1

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT RI OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-165 PUMPING WELL —

DATE 11-12-93 TIME 1030

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 2

TEST DURATION 10 min

TIME OF INSTALLATION 1030

STATIC DEPTH TO WATER 4.42 FT. _____ PSI

DEPTH OF TRANSDUCER 17.26

CALIBRATION
DEPTH 10 FT 5.66 PSI
DEPTH 11 FT 6.67 PSI
DEPTH 12 FT 7.67 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER

DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S

Version 1.10

/01/93

14:43:13

TEST DESCRIPTION

Data set...........

Data set title..... CEF-5-27S RUN NO. 1

Knowns and Constants:

No. of data points.................. 64

Radius of well casing............... 0.083

Radius of well...................... 0.25

Aquifer saturated thickness......... 11.55

Well screen length.................. 10

Static height of water in well...... 10.21

Log(Re/Rw).......................... 2.602

A, B, C............................. 2.760, 0.448, 0.000

ANALYTICAL METHOD

ouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM STATISTICAL CURVE MATCHING

TATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	6.9189E-004	+/-	1.8440E-004
y0 =	1.5974E+000	+/-	1.4423E-001

NALYSIS OF MODEL RESIDUALS

esidual = calculated - observed

eighted residual = residual * weight

eighted Residual Statistics:

Number of residuals.............. 64

Number of estimated parameters.... 2

Degrees of freedom............... 62

Residual mean.................... 0.03471

Residual standard deviation....... 0.5778

Residual variance................ 0.3338

del Residuals:

Time	Observed	Calculated	Residual	Weight

0.01	0.006	1.5851	-1.5791	1
0.0133	0.732	1.5811	-0.84911	1
0.0166	5.227	1.5771	3.6499	1
0.02	2.108	1.573	0.53505	1
0.0266	0.969	1.565	-0.59596	1
0.03	3.115	1.5609	1.5541	1
0.0333	1.72	1.5569	0.16312	1
0.05	1.076	1.5369	-0.46094	1
0.0666	1.532	1.5174	0.014627	1
0.0833	1.22	1.4979	-0.27794	1
0.1	1.345	1.4787	-0.13375	1
0.1166	1.257	1.4599	-0.20292	1
0.1333	1.27	1.4412	-0.17122	1
0.15	1.238	1.4228	-0.18476	1
0.1666	1.226	1.4046	-0.17864	1
0.1833	1.213	1.3867	-0.17365	1
0.2	1.201	1.3689	-0.16789	1
0.2166	1.182	1.3515	-0.16946	1
0.2333	1.17	1.3342	-0.16415	1
0.25	1.157	1.3171	-0.16006	1
0.2666	1.145	1.3003	-0.15529	1
0.2833	1.132	1.2836	-0.15164	1
0.3	1.113	1.2672	-0.15419	1
0.3166	1.107	1.2511	-0.14406	1
0.3333	1.095	1.235	-0.14003	1
0.4166	1.032	1.1581	-0.12612	1
0.5	0.982	1.0859	-0.1039	1
0.5833	0.926	1.0183	-0.092273	1
0.6666	0.882	0.95485	-0.072855	1
0.75	0.844	0.89532	-0.051317	1
0.8333	0.8	0.83956	-0.039556	1
0.9166	0.769	0.78727	-0.018268	1
1	0.732	0.73818	-0.00618	1
1.0833	0.7	0.69221	0.0077942	1
1.1666	0.669	0.64909	0.019905	1
1.25	0.644	0.60862	0.035378	1
1.3333	0.613	0.57072	0.042283	1
1.4166	0.594	0.53517	0.058828	1
1.5	0.569	0.5018	0.067197	1
1.5833	0.55	0.47055	0.07945	1
1.6666	0.525	0.44124	0.083756	1
1.75	0.506	0.41373	0.092269	1
1.8333	0.488	0.38796	0.10004	1
1.9166	0.469	0.3638	0.1052	1
2	0.45	0.34112	0.10888	1
2.5	0.369	0.23189	0.13711	1
3	0.3	0.15763	0.14237	1
3.5	0.256	0.10716	0.14884	1
4	0.219	0.072843	0.14616	1
4.5	0.187	0.049517	0.13748	1
5	0.175	0.033661	0.14134	1
5.5	0.156	0.022882	0.13312	1
6	0.143	0.015555	0.12744	1
6.5	0.131	0.010574	0.12043	1
7	0.125	0.0071881	0.11781	1
7.5	0.118	0.0048863	0.11311	1
8	0.112	0.0033217	0.10868	1
8.5	0.106	0.002258	0.10374	1
9	0.1	0.001535	0.098465	1

CEF-5-275

9.5	0.1	0.0010434	0.098957	1
10	0.093	0.00070931	0.092291	1
12	0.106	0.00015147	0.10585	1
14	0.081	3.2345E-005	0.080968	1
16	0.075	6.907E-006	0.074993	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	6.9189E-004
y0 =	1.5974E+000

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 3.70436E-004
y0 = 1.08616E+000

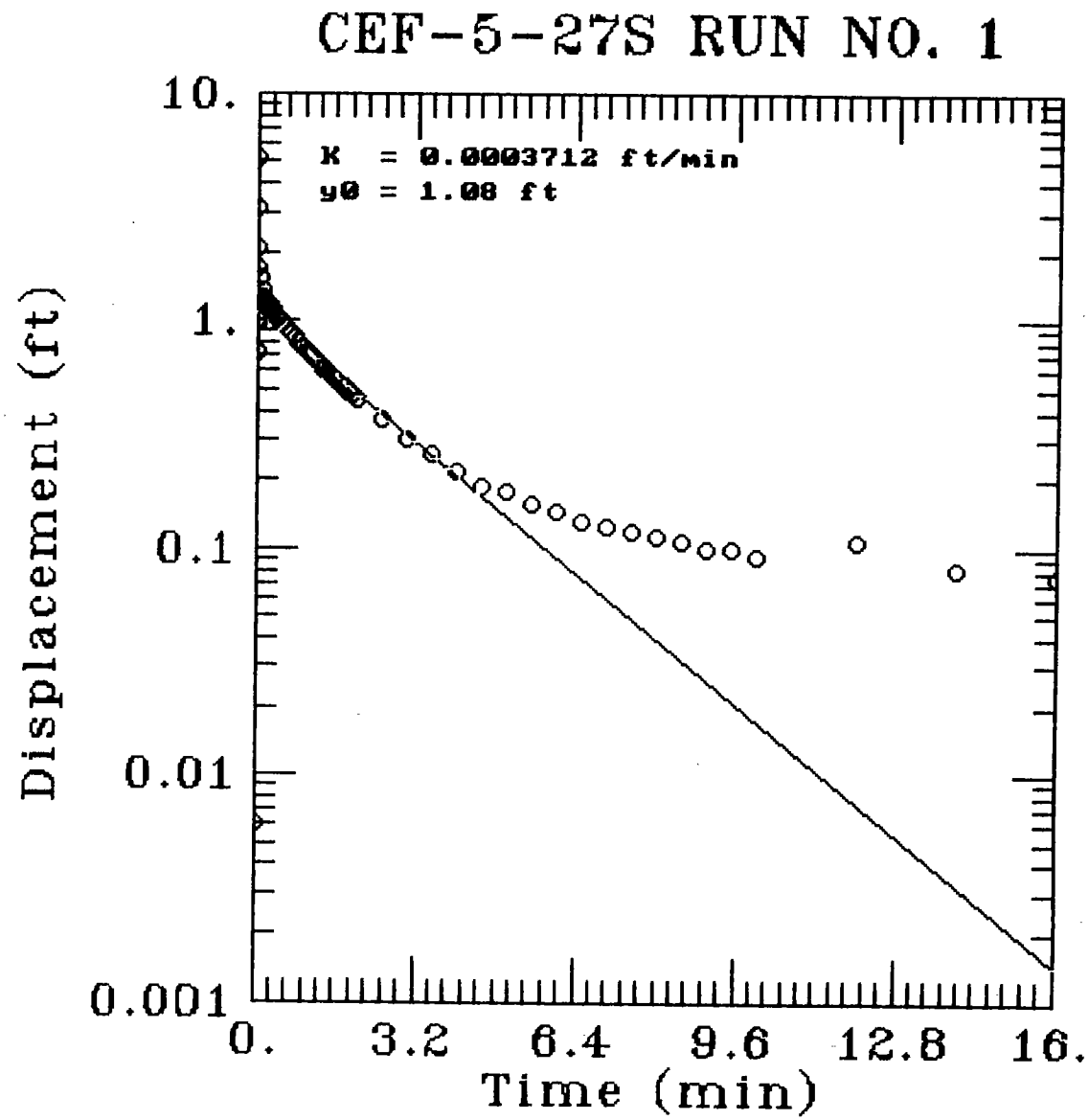
Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.086E+000	1.600E+001	1.459E-003		

TYPE CURVE DATA

K = 3.71170E-004
y0 = 1.07970E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.080E+000	1.600E+001	1.431E-003		

CEF-5-275
run 1


CEF-5-27S RUN NO. 1
K = 0.0003712 ft/min
y0 = 1.08 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
3.2
6.4
9.6
12.8
16.
Time (min)

CEF-5-77s

SE1000C
Environmental Logger
11/13 14:03

Unit# 01597 Test 5

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

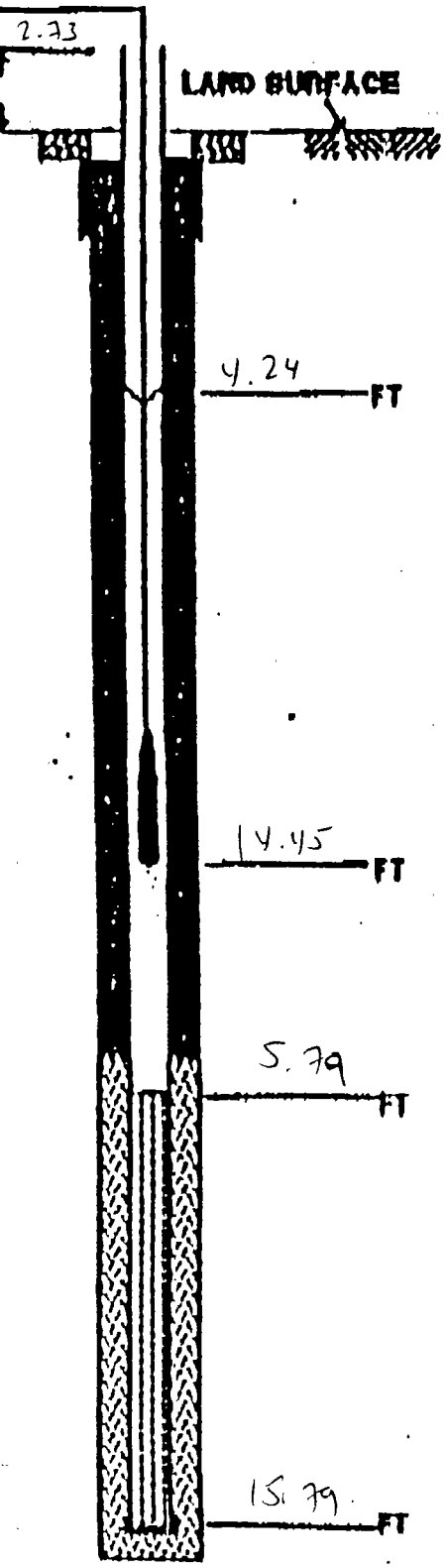
Step 0 11/13 12:03:19

Elapsed Time	INPUT 1
0.0000	0.037
0.0033	-0.025
0.0066	-0.012
0.0100	0.006
0.0133	0.732
0.0166	5.227
0.0200	2.108
0.0233	-0.807
0.0266	0.969
0.0300	3.115
0.0333	1.720
0.0500	1.076
0.0666	1.532
0.0833	1.220
0.1000	1.345
0.1166	1.257
0.1333	1.270
0.1500	1.238
0.1666	1.226
0.1833	1.213
0.2000	1.201
0.2166	1.182
0.2333	1.170
0.2500	1.157
0.2666	1.145
0.2833	1.132
0.3000	1.113
0.3166	1.107
0.3333	1.095
0.4166	1.032
0.5000	0.982

0.5833	0.926
0.6666	0.882
0.7500	0.844
0.8333	0.800
0.9166	0.769
1.0000	0.732
1.0833	0.700
1.1666	0.669
1.2500	0.644
1.3333	0.613
1.4166	0.594
1.5000	0.569
1.5833	0.550
1.6666	0.525
1.7500	0.506
1.8333	0.488
1.9166	0.469
2.0000	0.450
2.5000	0.369
3.0000	0.300
3.5000	0.256
4.0000	0.219
4.5000	0.187
5.0000	0.175
5.5000	0.156
6.0000	0.143
6.5000	0.131
7.0000	0.125
7.5000	0.118
8.0000	0.112
8.5000	0.106
9.0000	0.100
9.5000	0.100
10.0000	0.093
12.0000	~~0.106~~
14.0000	0.081
16.0000	0.075

CEF-5-275
Run 1

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT R1 OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-S-27s PUMPING WELL —

DATE 11-13-93 TIME 1103

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 5

TEST DURATION 16 min

TIME OF INSTALLATION 1103

STATIC DEPTH TO WATER 4.24 FT. _____ PSI

DEPTH OF TRANSDUCER 14.45

CALIBRATION
DEPTH 10 FT 6.07 PSI
DEPTH 11 FT 7.06 PSI
DEPTH 12 FT 8.06 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER

DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S

Version 1.10

12/01/93

16:46:18

TEST DESCRIPTION

Data set...........
Data set title..... CEF-5-19S RUN NO. 1

Knowns and Constants:
No. of data points.................. 192
Radius of well casing............... 0.083
Radius of well...................... 0.25
Aquifer saturated thickness......... 9.29
Well screen length.................. 10
Static height of water in well...... 8.37
Log(Re/Rw).......................... 2.52
A, B, C............................. 2.760, 0.448, 0.000

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.1811E-003	+/-	1.5017E-004
y0 =	1.1575E+000	+/-	5.1407E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
Number of residuals............... 192
Number of estimated parameters.... 2
Degrees of freedom................ 190
Residual mean..................... 0.04876
Residual standard deviation....... 0.3317
Residual variance................. 0.11

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.0033	0.006	1.1523	-1.1463	1
0.0066	0.0112	1.1471	-1.1359	1
0.01	0.913	1.1418	-0.22884	1
0.0133	1.038	1.1367	-0.09872	1
0.02	0.293	1.1264	-0.8334	1
0.0233	1.8	1.1214	0.67865	1
0.0266	2.301	1.1163	1.1847	1
0.03	1.075	1.1112	-0.036176	1
0.0333	1.813	1.1062	0.7068	1
0.05	1.482	1.0813	0.40066	1
0.0666	1.369	1.0572	0.31182	1
0.0833	1.3	1.0334	0.26657	1
0.1	1.238	1.0102	0.22779	1
0.1166	1.175	0.98764	0.18736	1
0.1333	1.125	0.96545	0.15955	1
0.15	1.069	0.94375	0.12525	1
0.1666	1.019	0.92267	0.096331	1
0.1833	0.969	0.90194	0.067065	1
0.2	0.919	0.88167	0.037332	1
0.2166	0.875	0.86197	0.013027	1
0.2333	0.831	0.8426	-0.011603	1
0.25	0.794	0.82367	-0.029669	1
0.2666	0.75	0.80527	-0.05527	1
0.2833	0.712	0.78717	-0.075174	1
0.3	0.675	0.76949	-0.094485	1
0.3166	0.637	0.7523	-0.1153	1
0.3333	0.606	0.73539	-0.12939	1
0.4166	0.469	0.65657	-0.18757	1
0.5	0.381	0.58613	-0.20513	1
0.5833	0.344	0.52331	-0.17931	1
0.6666	0.312	0.46722	-0.15522	1
0.75	0.293	0.41709	-0.12409	1
0.8333	0.281	0.37239	-0.091388	1
0.9166	0.268	0.33248	-0.064477	1
1	0.262	0.2968	-0.034803	1
1.0833	0.25	0.26499	-0.014992	1
1.1666	0.243	0.23659	0.0064084	1
1.25	0.237	0.21121	0.025794	1
1.333	0.231	0.18865	0.042353	1
1.4166	0.231	0.16836	0.06264	1
1.5	0.225	0.15029	0.074705	1
1.5833	0.218	0.13419	0.083813	1
1.666	0.218	0.1199	0.098097	1
1.75	0.218	0.10695	0.11105	1
1.8333	0.212	0.095488	0.11651	1
1.9166	0.206	0.085254	0.12075	1
2	0.206	0.076106	0.12989	1
2.5	0.193	0.038539	0.15446	1
3	0.187	0.019515	0.16748	1
3.5	0.187	0.0098821	0.17712	1
4	0.175	0.0050041	0.17	1
4.5	0.175	0.002534	0.17247	1
5	0.175	0.0012832	0.17372	1
5.5	0.175	0.00064977	0.17435	1
6	0.168	0.00032903	0.16767	1
6.5	0.168	0.00016661	0.16783	1
7	0.168	8.437E-005	0.16792	1
7.5	0.162	4.2723E-005	0.16196	1
8	0.168	2.1634E-005	0.16798	1

CEF-5-195
Run 1

8.5	0.162	1.0955E-005	0.16199	1
9	0.162	5.5475E-006	0.16199	1
9.5	0.162	2.8091E-006	0.162	1
10	0.162	1.4225E-006	0.162	1
12	0.162	9.3531E-008	0.162	1
0.0033	0.006	1.1523	-1.1463	1
0.0066	0.0112	1.1471	-1.1359	1
0.01	0.913	1.1418	-0.22884	1
0.0133	1.038	1.1367	-0.09872	1
0.02	0.293	1.1264	-0.8334	1
0.0233	1.8	1.1214	0.67865	1
0.0266	2.301	1.1163	1.1847	1
0.03	1.075	1.1112	-0.036176	1
0.0333	1.813	1.1062	0.7068	1
0.05	1.482	1.0813	0.40066	1
0.0666	1.369	1.0572	0.31182	1
0.0833	1.3	1.0334	0.26657	1
0.1	1.238	1.0102	0.22779	1
0.1166	1.175	0.98764	0.18736	1
0.1333	1.125	0.96545	0.15955	1
0.15	1.069	0.94375	0.12525	1
0.1666	1.019	0.92267	0.096331	1
0.1833	0.969	0.90194	0.067065	1
0.2	0.919	0.88167	0.037332	1
0.2166	0.875	0.86197	0.013027	1
0.2333	0.831	0.8426	-0.011603	1
0.25	0.794	0.82367	-0.029669	1
0.2666	0.75	0.80527	-0.05527	1
0.2833	0.712	0.78717	-0.075174	1
0.3	0.675	0.76949	-0.094485	1
0.3166	0.637	0.7523	-0.1153	1
0.3333	0.606	0.73539	-0.12939	1
0.4166	0.469	0.65657	-0.18757	1
0.5	0.381	0.58613	-0.20513	1
0.5833	0.344	0.52331	-0.17931	1
0.6666	0.312	0.46722	-0.15522	1
0.75	0.293	0.41709	-0.12409	1
0.8333	0.281	0.37239	-0.091388	1
0.9166	0.268	0.33248	-0.064477	1
1	0.262	0.2968	-0.034803	1
1.0833	0.25	0.26499	-0.014992	1
1.1666	0.243	0.23659	0.0064084	1
1.25	0.237	0.21121	0.025794	1
1.333	0.231	0.18865	0.042353	1
1.4166	0.231	0.16836	0.06264	1
1.5	0.225	0.15029	0.074705	1
1.5833	0.218	0.13419	0.083813	1
1.666	0.218	0.1199	0.098097	1
1.75	0.218	0.10695	0.11105	1
1.8333	0.212	0.095488	0.11651	1
1.9166	0.206	0.085254	0.12075	1
2	0.206	0.076106	0.12989	1
2.5	0.193	0.038539	0.15446	1
3	0.187	0.019515	0.16748	1
3.5	0.187	0.0098821	0.17712	1
4	0.175	0.0050041	0.17	1
4.5	0.175	0.002534	0.17247	1
5	0.175	0.0012832	0.17372	1
5.5	0.175	0.00064977	0.17435	1
6	0.168	0.00032903	0.16767	1

CEF-5-195
RUN 1

6.5	0.168	0.00016661	0.16783	1
7	0.168	8.437E-005	0.16792	1
7.5	0.162	4.2723E-005	0.16196	1
8	0.168	2.1634E-005	0.16798	1
8.5	0.162	1.0955E-005	0.16199	1
9	0.162	5.5475E-006	0.16199	1
9.5	0.162	2.8091E-006	0.162	1
10	0.162	1.4225E-006	0.162	1
12	0.162	9.3531E-008	0.162	1
0.0033	0.006	1.1523	-1.1463	1
0.0066	0.0112	1.1471	-1.1359	1
0.01	0.913	1.1418	-0.22884	1
0.0133	1.038	1.1367	-0.09872	1
0.02	0.293	1.1264	-0.8334	1
0.0233	1.8	1.1214	0.67865	1
0.0266	2.301	1.1163	1.1847	1
0.03	1.075	1.1112	-0.036176	1
0.0333	1.813	1.1062	0.7068	1
0.05	1.482	1.0813	0.40066	1
0.0666	1.369	1.0572	0.31182	1
0.0833	1.3	1.0334	0.26657	1
0.1	1.238	1.0102	0.22779	1
0.1166	1.175	0.98764	0.18736	1
0.1333	1.125	0.96545	0.15955	1
0.15	1.069	0.94375	0.12525	1
0.1666	1.019	0.92267	0.096331	1
0.1833	0.969	0.90194	0.067065	1
0.2	0.919	0.88167	0.037332	1
0.2166	0.875	0.86197	0.013027	1
0.2333	0.831	0.8426	-0.011603	1
0.25	0.794	0.82367	-0.029669	1
0.2666	0.75	0.80527	-0.05527	1
0.2833	0.712	0.78717	-0.075174	1
0.3	0.675	0.76949	-0.094485	1
0.3166	0.637	0.7523	-0.1153	1
0.3333	0.606	0.73539	-0.12939	1
0.4166	0.469	0.65657	-0.18757	1
0.5	0.381	0.58613	-0.20513	1
0.5833	0.344	0.52331	-0.17931	1
0.6666	0.312	0.46722	-0.15522	1
0.75	0.293	0.41709	-0.12409	1
0.8333	0.281	0.37239	-0.091388	1
0.9166	0.268	0.33248	-0.064477	1
1	0.262	0.2968	-0.034803	1
1.0833	0.25	0.26499	-0.014992	1
1.1666	0.243	0.23659	0.0064084	1
1.25	0.237	0.21121	0.025794	1
1.333	0.231	0.18865	0.042353	1
1.4166	0.231	0.16836	0.06264	1
1.5	0.225	0.15029	0.074705	1
1.5833	0.218	0.13419	0.083813	1
1.666	0.218	0.1199	0.098097	1
1.75	0.218	0.10695	0.11105	1
1.8333	0.212	0.095488	0.11651	1
1.9166	0.206	0.085254	0.12075	1
2	0.206	0.076106	0.12989	1
2.5	0.193	0.038539	0.15446	1
3	0.187	0.019515	0.16748	1
3.5	0.187	0.0098821	0.17712	1
4	0.175	0.0050041	0.17	1

CEF-5-195
RUN 1

4.5	0.175	0.002534	0.17247	1
5	0.175	0.0012832	0.17372	1
5.5	0.175	0.00064977	0.17435	1
6	0.168	0.00032903	0.16767	1
6.5	0.168	0.00016661	0.16783	1
7	0.168	8.437E-005	0.16792	1
7.5	0.162	4.2723E-005	0.16196	1
8	0.168	2.1634E-005	0.16798	1
8.5	0.162	1.0955E-005	0.16199	1
9	0.162	5.5475E-006	0.16199	1
9.5	0.162	2.8091E-006	0.162	1
10	0.162	1.4225E-006	0.162	1
12	0.162	9.3531E-008	0.162	1

===

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.1811E-003
y0 =	1.1575E+000

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

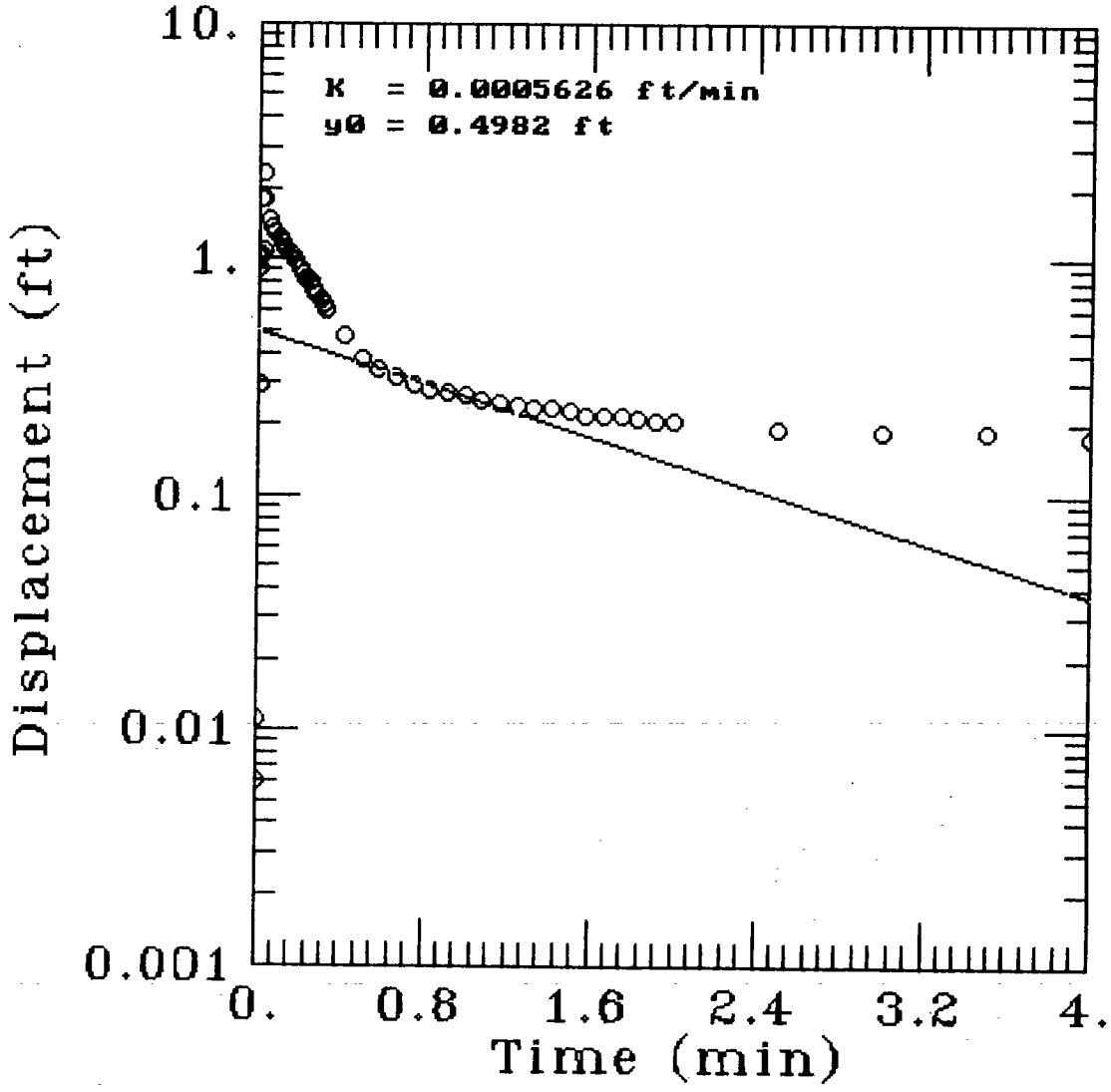
TYPE CURVE DATA

K = 5.62608E-004
y0 = 4.98191E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	4.982E-001	4.000E+000	3.726E-002		

CEF-5-295
Rev 1

CEF-5-19S RUN NO. 1



CEF-5-195

SE1000C
Environmental Logger
11/12 14:32

Unit# 01597 Test 8

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

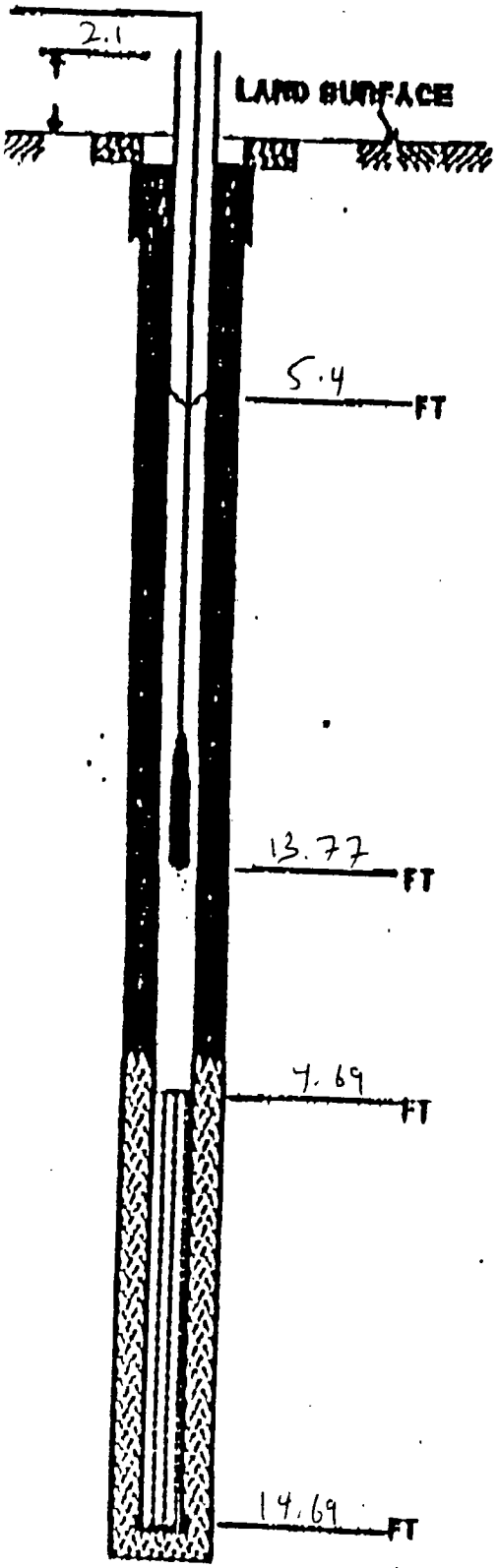
Step 0 11/12 13:33:24

Elapsed Time	INPUT 1
0.0000	0.006
0.0033	0.006
0.0066	0.012
0.0100	0.913
0.0133	1.038
0.0166	-0.638
0.0200	0.293
0.0233	1.800
0.0266	2.301
0.0300	1.075
0.0333	~~1.813~~
0.0500	1.482
0.0666	1.369
0.0833	1.300
0.1000	1.238
0.1166	1.175
0.1333	1.125
0.1500	1.069
0.1666	1.019
0.1833	0.969
0.2000	0.919
0.2166	0.875
0.2333	0.831
0.2500	0.794
0.2666	0.750
0.2833	0.712
0.3000	0.675
0.3166	0.637
0.3333	0.606
0.4166	0.469
0.5000	0.381

0.5833	0.344
0.6666	0.312
0.7500	0.293
0.8333	0.281
0.9166	0.268
1.0000	0.262
1.0833	0.250
1.1666	0.243
1.2500	0.237
1.3333	0.231
1.4166	0.231
1.5000	0.225
1.5833	0.218
1.6666	0.218
1.7500	0.218
1.8333	0.212
1.9166	0.206
2.0000	0.206
2.5000	0.193
3.0000	0.187
3.5000	0.187
4.0000	0.175
4.5000	0.175
5.0000	0.175
5.5000	0.175
6.0000	0.168
6.5000	0.168
7.0000	0.168
7.5000	0.162
8.0000	0.168
8.5000	0.162
9.0000	0.162
9.5000	0.162
10.0000	0.162
12.0000	0.162

CEF-5-195
RUN 1

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT RI OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-195 PUMPING WELL —

DATE 11-12-93 TIME 1233

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 8

TEST DURATION 12 min

TIME OF INSTALLATION 1233

STATIC DEPTH TO WATER 5.4 FT. _____ PSI

DEPTH OF TRANSDUCER 13.77

CALIBRATION
DEPTH 10 FT 4.92 PSI
DEPTH 11 FT 5.93 PSI
DEPTH 12 FT 6.91 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT. _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT. _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER
DEPTH 12 FT 6.92 PSI
DEPTH 11 FT 5.91 PSI
DEPTH 10 FT 4.90 PSI

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S
Version 1.10

12/01/93 17:05:34

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TEST DESCRIPTION

Data set...........
Data set title..... CEF-5-26D RUN NO. 1

Knowns and Constants:
- No. of data points.................. 49
- Radius of well casing.............. 0.083
- Radius of well...................... 0.25
- Aquifer saturated thickness......... 52.15
- Well screen length.................. 10
- Static height of water in well...... 19.48
- Log(Re/Rw).......................... 2.659
- A, B, C............................. 2.760, 0.448, 0.000

==

ANALYTICAL METHOD

.wer-Rice (Unconfined Aquifer Slug Test)

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RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	3.4706E-003	+/-	9.7529E-004
y0 =	1.1475E+000	+/-	1.3462E-001

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals............... 49
- Number of estimated parameters.... 2
- Degrees of freedom................ 47
- Residual mean..................... -0.005229
- Residual standard deviation....... 0.3741
- Residual variance.................. 0.1399

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.0066	0.125	1.1192	-0.99417	1
0.01	0.006	1.1048	-1.0988	1
0.0133	0.018	1.0911	-1.0731	1
0.0166	0.953	1.0776	-0.12455	1
0.02	2.396	1.0638	1.3322	1
0.0233	0.953	1.0505	-0.097537	1
0.0266	1.48	1.0375	0.44252	1
0.03	1.668	1.0242	0.6438	1
0.0333	1.718	1.0115	0.70653	1
0.05	1.342	0.94945	0.39255	1
0.0666	1.123	0.89156	0.23144	1
0.0833	1.003	0.83689	0.16611	1
0.1	0.89	0.78557	0.10443	1
0.1166	0.79	0.73768	0.052324	1
0.1333	0.709	0.69244	0.01656	1
0.15	0.646	0.64998	-0.0039784	1
0.1666	0.583	0.61035	-0.027352	1
0.1833	0.533	0.57292	-0.039923	1
0.2	0.483	0.53779	-0.05479	1
0.2166	0.439	0.505	-0.066003	1
0.2333	0.401	0.47404	-0.073035	1
0.25	0.37	0.44497	-0.074966	1
0.2666	0.345	0.41784	-0.072838	1
0.2833	0.307	0.39222	-0.085216	1
0.3	0.288	0.36816	-0.080164	1
0.3166	0.257	0.34572	-0.088718	1
0.3333	0.238	0.32452	-0.086518	1
0.4166	0.156	0.23667	-0.080674	1
0.5	0.112	0.17254	-0.060543	1
0.5833	0.075	0.12584	-0.050837	1
0.6666	0.062	0.091774	-0.029774	1
0.75	0.043	0.066907	-0.023907	1
0.8333	0.037	0.048796	-0.011796	1
0.9166	0.031	0.035587	-0.0045871	1
1	0.018	0.025944	-0.0079442	1
1.0833	0.018	0.018921	-0.00092133	1
1.1666	0.006	0.0138	-0.0077995	1
1.25	0.018	0.01006	0.0079397	1
1.3333	0.006	0.0073371	-0.0013371	1
1.4166	0.012	0.005351	0.006649	1
1.5	0.012	0.0039011	0.0080989	1
1.5833	0.006	0.0028451	0.0031549	1
1.75	0.012	0.0015127	0.010487	1
1.8333	0.006	0.0011032	0.0048968	1
2.5	0.006	8.8199E-005	0.0059118	1
3	0.006	1.3262E-005	0.0059867	1
5	0.012	6.7791E-009	0.012	1
5.5	0.006	1.0193E-009	0.006	1
7	0.006	3.4653E-012	0.006	1

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	3.4706E-003

CEF-5-26D
Run 1

y0 =   1.1475E+000

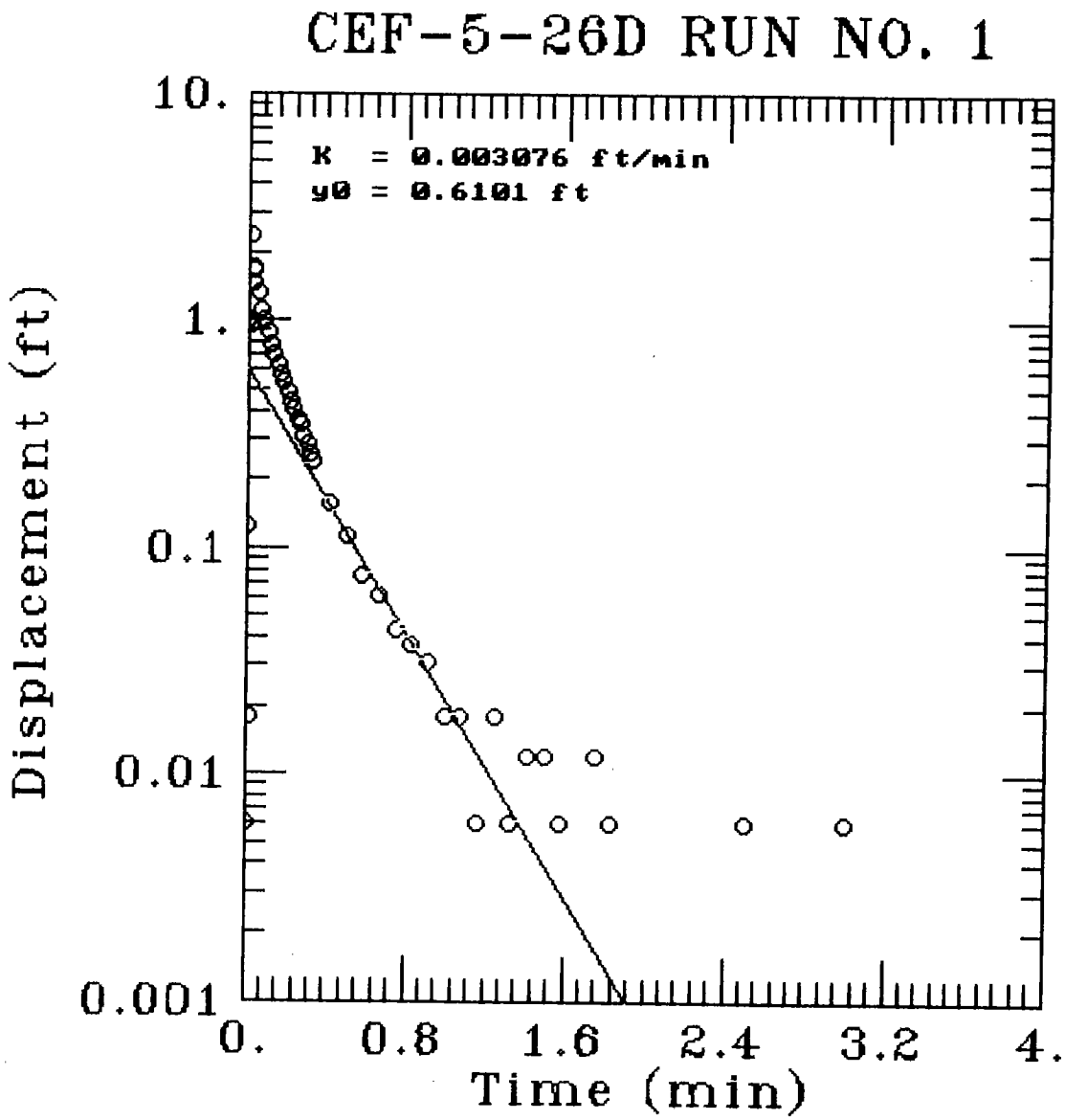
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 3.07595E-003
y0 = 6.10122E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	6.101E-001	4.000E+000	8.934E-007		

CEF - 5-26D
RUN 1


CEF-5-26D RUN NO. 1
K = 0.003076 ft/min
y0 = 0.6101 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
0.8
1.6
2.4
3.2
4.
Time (min)

(EE-5-26D

SE1000C
Environmental Logger
11/13 13:53

Unit# 01597 Test 1

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

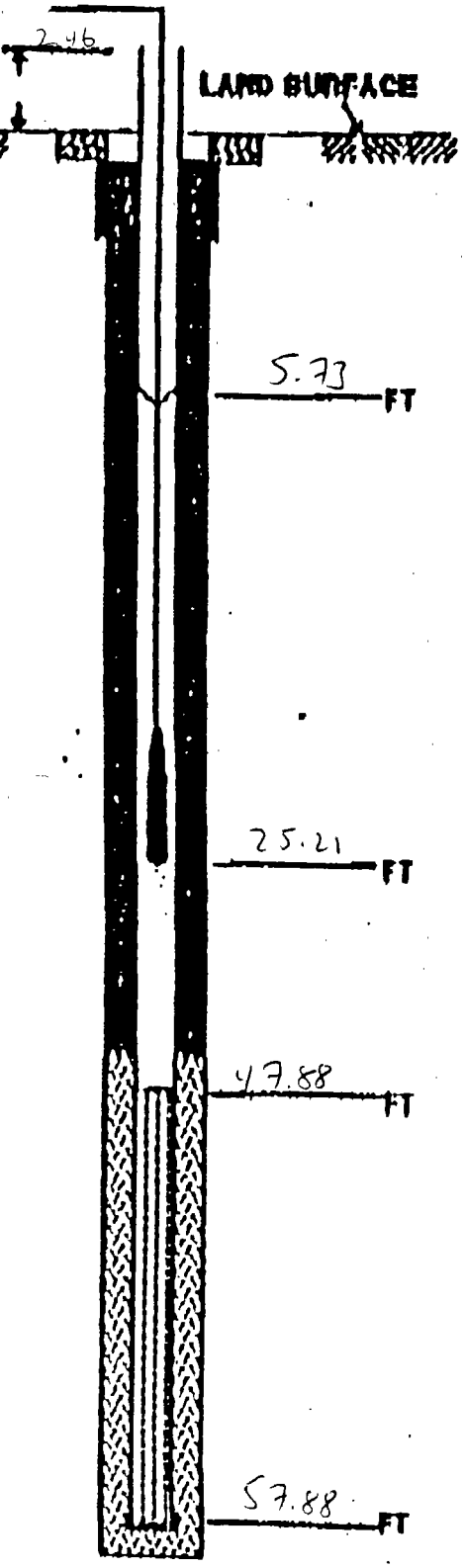
Step 0 11/13 10:06:56

Elapsed Time	INPUT 1
0.0000	0.332
0.0033	-0.207
0.0066	0.125
0.0100	0.006
0.0133	0.018
0.0166	0.953
0.0200	2.396
0.0233	0.953
0.0266	1.480
0.0300	1.668
0.0333	1.718
0.0500	1.342
0.0666	1.123
0.0833	1.003
0.1000	0.890
0.1166	0.790
0.1333	0.709
0.1500	0.646
0.1666	0.583
0.1833	0.533
0.2000	0.483
0.2166	0.439
0.2333	0.401
0.2500	0.370
0.2666	0.345
0.2833	0.307
0.3000	0.288
0.3166	0.257
0.3333	0.238
0.4166	0.156
0.5000	0.112

0.5833	0.075
0.6666	0.062
0.7500	0.043
0.8333	0.037
0.9166	0.031
1.0000	0.018
1.0833	0.018
1.1666	~~0.006~~
1.2500	0.018
1.3333	0.006
1.4166	0.012
1.5000	0.012
1.5833	0.006
1.6666	0.000
1.7500	0.012
1.8333	0.006
1.9166	0.000
2.0000	-0.006
2.5000	0.006
3.0000	0.006
3.5000	0.000
4.0000	-0.006
4.5000	0.000
5.0000	0.012
5.5000	0.006
6.0000	0.000
6.5000	0.000
7.0000	0.006
7.5000	0.000
8.0000	0.000
8.5000	0.000
9.0000	-0.006
9.5000	0.000
10.0000	0.000

CEF-5-26D
RUN 1

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT RI OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-260 PUMPING WELL —

DATE 11-13-93 TIME 0906

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 1

TEST DURATION 10 min

TIME OF INSTALLATION 0906

STATIC DEPTH TO WATER 5.73 FT. _____ PSI

DEPTH OF TRANSDUCER 25.21 ft

CALIBRATION

DEPTH 10 FT 4.52 PSI

DEPTH 11 FT 5.52 PSI

DEPTH 12 FT 6.52 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)

_____ VERIFICATION OF DATA ACQUISITION (HR)

_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER

DEPTH _____ FT _____ PSI

DEPTH _____ FT _____ PSI

DEPTH _____ FT _____ PSI

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A Q T E S O L V   R E S U L T S
Version 1.10

12/01/93

08:21:47

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TEST DESCRIPTION

Data set..........
Data set title..... CEF-5-22D RUN NO. 1

Knowns and Constants:
No. of data points.................. 63
Radius of well casing............... 0.083
Radius of well...................... 0.25
Aquifer saturated thickness......... 51.79
Well screen length.................. 10
Static height of water in well...... 23.46
Log(Re/Rw).......................... 2.746
A, B, C............................. 2.760, 0.448, 0.000

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	5.8690E-003	+/-	1.1193E-003
y0 =	1.3583E+000	+/-	1.1810E-001

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
Number of residuals............... 63
Number of estimated parameters.... 2
Degrees of freedom................ 61
Residual mean..................... 0.00786
Residual standard deviation....... 0.2872
Residual variance................. 0.08246

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.0066	0.006	1.3038	-1.2978	1
0.01	0.018	1.2766	-1.2586	1
0.0133	2.135	1.2507	0.8843	1
0.0166	1.438	1.2254	0.21264	1
0.02	1.325	1.1998	0.12522	1
0.0233	1.513	1.1755	0.33754	1
0.0266	1.62	1.1516	0.46837	1
0.03	1.582	1.1276	0.45441	1
0.0333	1.639	1.1047	0.53426	1
0.05	1.143	0.996	0.147	1
0.0666	0.885	0.89852	-0.013515	1
0.0833	0.772	0.81007	-0.038071	1
0.1	0.672	0.73033	-0.058333	1
0.1166	0.577	0.65885	-0.081853	1
0.1333	0.515	0.594	-0.079	1
0.15	0.452	0.53553	-0.083531	1
0.1666	0.401	0.48312	-0.082116	1
0.1833	0.358	0.43556	-0.077562	1
0.2	0.32	0.39269	-0.072688	1
0.2166	0.295	0.35425	-0.059254	1
0.2333	0.27	0.31938	-0.049384	1
0.25	0.238	0.28795	-0.049946	1
0.2666	0.219	0.25976	-0.040763	1
0.2833	0.213	0.23419	-0.021194	1
0.3	0.194	0.21114	-0.017142	1
0.3166	0.163	0.19048	-0.027476	1
0.3333	0.169	0.17173	-0.0027272	1
0.4166	0.119	0.10242	0.016584	1
0.5	0.087	0.061042	0.025958	1
0.5833	0.062	0.036405	0.025595	1
0.6666	0.056	0.021711	0.034289	1
0.75	0.05	0.01294	0.03706	1
0.8333	0.037	0.0077174	0.029283	1
0.9166	0.031	0.0046026	0.026397	1
1	0.024	0.0027432	0.021257	1
1.0833	0.043	0.001636	0.041364	1
1.1666	0.024	0.0009757	0.023024	1
1.25	0.018	0.00058153	0.017418	1
1.3333	0.018	0.00034682	0.017653	1
1.4166	0.018	0.00020684	0.017793	1
1.5	0.024	0.00012328	0.023877	1
1.5833	0.024	7.3522E-005	0.023926	1
1.6666	0.024	4.3848E-005	0.023956	1
1.75	0.031	2.6134E-005	0.030974	1
1.8333	0.024	1.5586E-005	0.023984	1
1.9166	0.012	9.2953E-006	0.011991	1
2	0.018	5.5402E-006	0.017994	1
2.5	0.006	2.4897E-007	0.0059998	1
3	0.012	1.1189E-008	0.012	1
3.5	0.018	5.0283E-010	0.018	1
4	0.012	2.2597E-011	0.012	1
4.5	0.012	1.0155E-012	0.012	1
5	0.012	4.5637E-014	0.012	1
5.5	0.018	2.0509E-015	0.018	1
6	0.024	9.2167E-017	0.024	1
6.5	0.018	4.142E-018	0.018	1
7	0.012	1.8614E-019	0.012	1
7.5	0.024	8.3651E-021	0.024	1
8	0.018	3.7593E-022	0.018	1

CEF-5-22D
RUN 2

8.5	0.012	1.6894E-023	0.012	1
9	0.012	7.5922E-025	0.012	1
9.5	0.024	3.4119E-026	0.024	1
10	0.018	1.5333E-027	0.018	1

```
================================================================================
```

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	5.8690E-003
y0 =	1.3583E+000

```
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
```

TYPE CURVE DATA

K = 1.89597E-003
y0 = 1.97148E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.971E-001	3.000E+000	4.822E-004		

TYPE CURVE DATA

K = 1.89597E-003
y0 = 1.97148E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.971E-001	3.000E+000	4.822E-004		

TYPE CURVE DATA

K = 1.89597E-003
y0 = 1.97148E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.971E-001	3.000E+000	4.822E-004		

TYPE CURVE DATA

K = 1.89597E-003
y0 = 1.97148E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.971E-001	3.000E+000	4.822E-004		

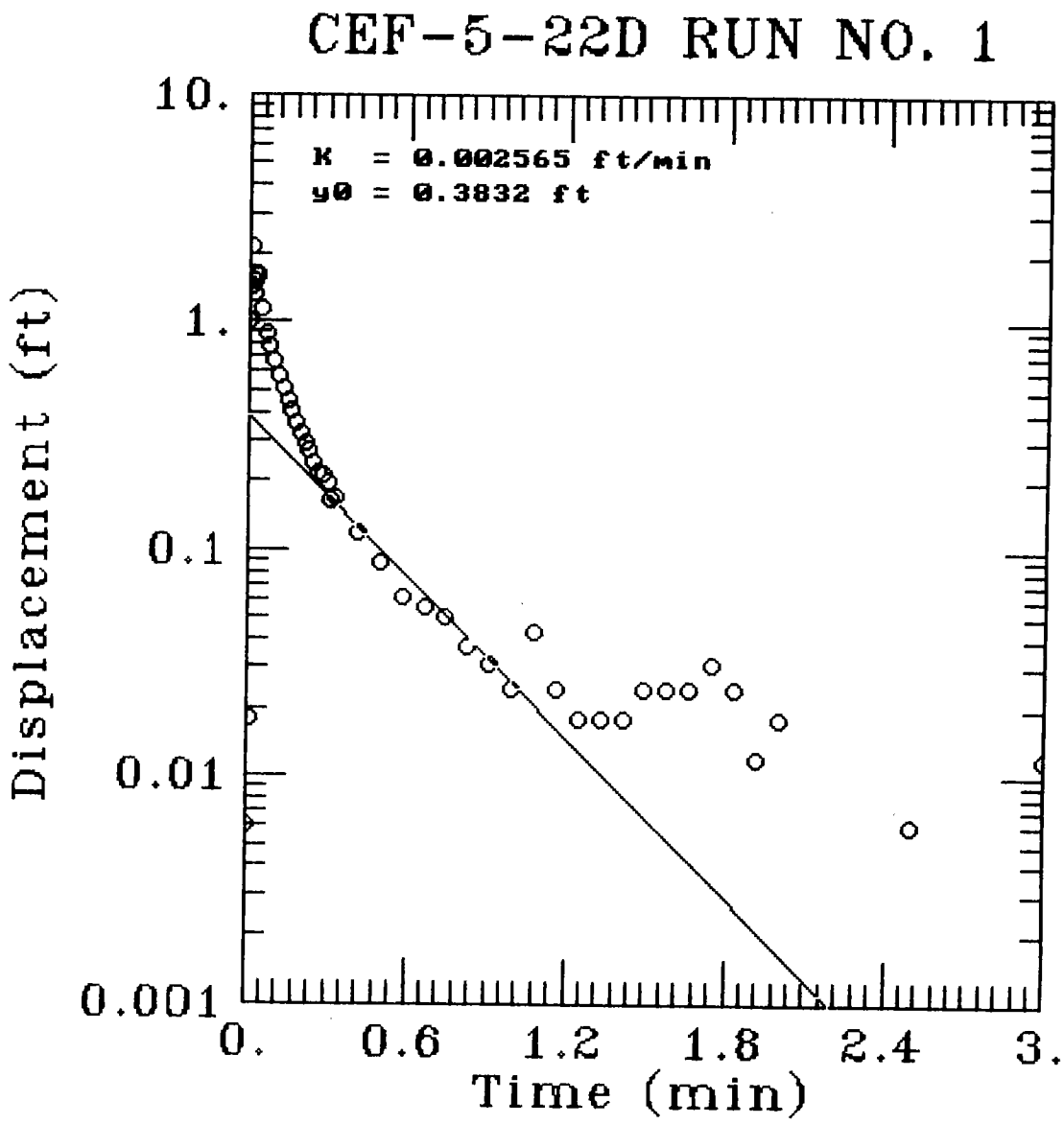
CEF-5-22D
RUN 1

TYPE CURVE DATA

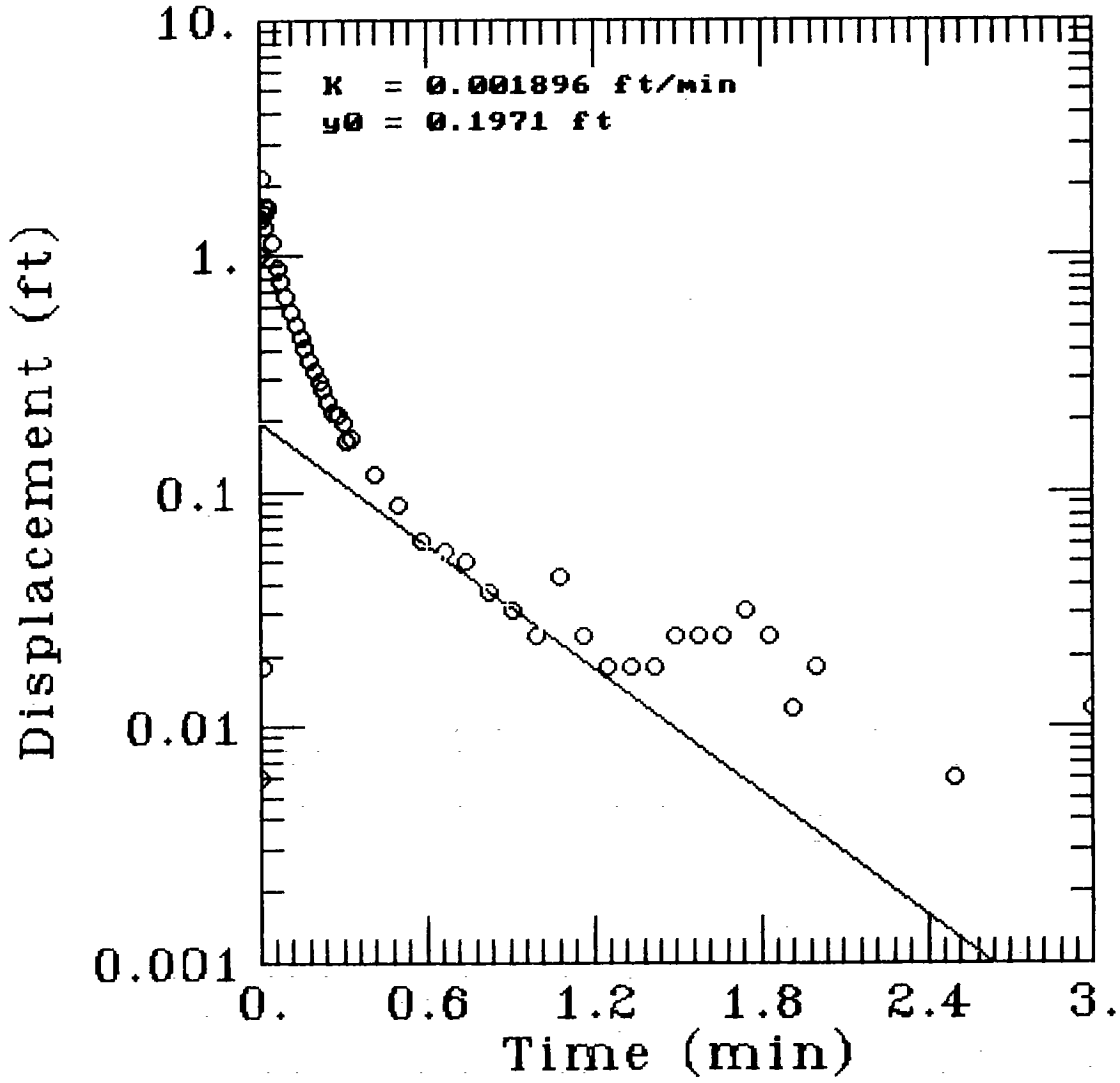
K = 2.56493E-003
y0 = 3.83246E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	3.832E-001	3.000E+000	1.123E-004		

CEF-5-22D
RUN 1


CEF-5-22D RUN NO. 1
K = 0.002565 ft/min
y0 = 0.3832 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
0.6
1.2
1.8
2.4
3.
Time (min)

CEF-5-22D RUN NO. 1



CEF-5-22A

SE1000C
Environmental Logger
11/12 14:31

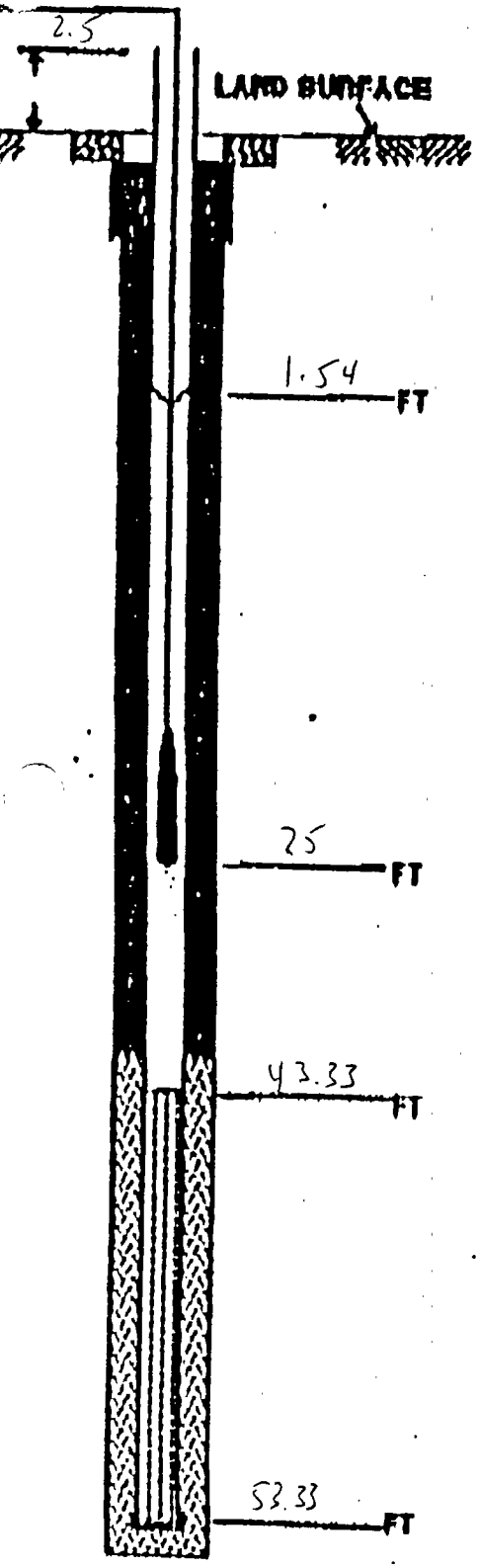
Unit# 01597 Test 7

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000
Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 11/12 13:14:40

Elapsed Time	INPUT 1
0.0000	-0.006
0.0033	-0.006
0.0066	0.006
0.0100	0.018
0.0133	2.135
0.0166	1.438
0.0200	1.325
0.0233	1.513
0.0266	1.620
0.0300	1.582
0.0333	1.639
0.0500	1.143
0.0666	0.885
0.0833	0.772
0.1000	0.672
0.1166	0.577
0.1333	0.515
0.1500	0.452
0.1666	0.401
0.1833	0.358
0.2000	0.320
0.2166	0.295
0.2333	0.270
0.2500	0.238
0.2666	0.219
0.2833	0.213
0.3000	0.194
0.3166	0.163
0.3333	0.169
0.4166	0.119
0.5000	0.087

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



51.79

NAS Cecil Field

PROJECT RI OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-22D PUMPING WELL —

DATE 11-12-93 TIME 1214

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 7

TEST DURATION 10 min

TIME OF INSTALLATION 1214

STATIC DEPTH TO WATER 1.54 FT. _____ PSI

DEPTH OF TRANSDUCER 25 ft.

CALIBRATION
DEPTH 10 FT 8.57 PSI
DEPTH 11 FT 9.56 PSI
DEPTH 12 FT 10.57 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT. _____ PSI

TIME PUMPING STOPS —

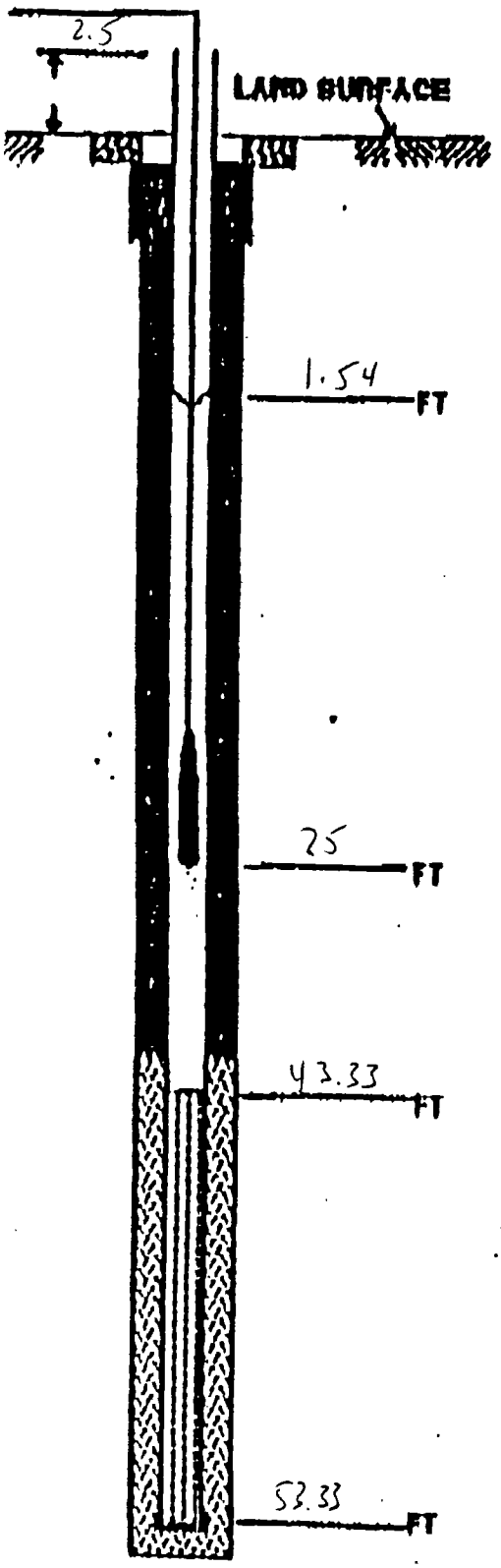
MAXIMUM RECOVERY DEPTH TO WATER _____ FT. _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER

DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



NAS Cecil Field

PROJECT R1 OUs 1,2,7

PROJECT NUMBER 08500.07

WELL NO. CEF-5-220 PUMPING WELL —

DATE 11-12-93 TIME 1214

DATALOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20

CHANNEL NO. 7

TEST DURATION 10 min

TIME OF INSTALLATION 1214

STATIC DEPTH TO WATER 1.54 FT. _____ PSI

DEPTH OF TRANSDUCER 25 ft.

CALIBRATION
DEPTH 10 FT 8.57 PSI
DEPTH 11 FT 9.56 PSI
DEPTH 12 FT 10.57 PSI

CLOCKS SYNCHRONIZED? _____

STATIC DEPTH TO WATER _____

TIME PUMPING STARTS —

_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)
_____ VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER _____ FT. _____ PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER _____ FT. _____ PSI

END RECOVERY _____

RECALIBRATION OF TRANSDUCER

DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI
DEPTH _____ FT _____ PSI

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A Q T E S O L V   R E S U L T S

Version 1.10

04/19/94 06:23:15

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TEST DESCRIPTION

Data set...........
Data set title..... CEF-17-7D RUN NO.3

Knowns and Constants:

No. of data points..................	51
Radius of well casing...............	0.083
Radius of well......................	0.2604
Aquifer saturated thickness.........	86.97
Well screen length..................	10
Static height of water in well......	15.3
Log(Re/Rw)..........................	2.469
A, B, C.............................	2.709, 0.440, 0.000

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

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RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	5.5248E-004	+/-	9.3772E-006
y0 =	1.5868E+000	+/-	1.0182E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:

Number of residuals...............	51
Number of estimated parameters....	2
Degrees of freedom................	49
Residual mean.....................	0.01322
Residual standard deviation.......	0.03363
Residual variance.................	0.001131

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0166	1.604	1.5698	0.034192	1
0.0333	1.579	1.5529	0.026129	1
0.05	1.572	1.5361	0.035883	1
0.0666	1.541	1.5196	0.021358	1
0.0833	1.516	1.5032	0.012753	1
0.1	1.503	1.487	0.015972	1
0.1166	1.491	1.4711	0.01992	1
0.1333	1.453	1.4552	-0.0022084	1
0.15	1.434	1.4395	-0.005508	1
0.1666	1.441	1.4241	0.016931	1
0.1833	1.384	1.4087	-0.024705	1
0.2	1.372	1.3935	-0.021506	1
0.2166	1.391	1.3786	0.012439	1
0.2333	1.34	1.3637	-0.023688	1
0.3166	1.297	1.2919	0.0051389	1
0.4	1.209	1.2237	-0.014738	1
0.4833	1.134	1.1593	-0.025283	1
0.5666	1.065	1.0982	-0.033222	1
0.65	1.027	1.0403	-0.01331	1
0.7333	0.958	0.98552	-0.027516	1
0.8166	0.914	0.93361	-0.019608	1
0.9	0.858	0.88438	-0.026377	1
0.9833	0.814	0.8378	-0.023796	1
1.0666	0.77	0.79367	-0.023668	1
1.15	0.714	0.75182	-0.037816	1
1.2333	0.689	0.71222	-0.023217	1
1.3166	0.676	0.6747	0.0012957	1
1.4	0.651	0.63913	0.011875	1
1.4833	0.595	0.60546	-0.010462	1
1.5666	0.564	0.57357	-0.0095719	1
1.65	0.564	0.54333	0.020674	1
1.7333	0.501	0.51471	-0.013709	1
1.8166	0.513	0.4876	0.025402	1
1.9	0.463	0.46189	0.0011139	1
2.4	0.344	0.3338	0.010202	1
2.9	0.3	0.24123	0.058769	1
3.4	0.206	0.17433	0.031666	1
3.9	0.175	0.12599	0.049012	1
4.4	0.131	0.09105	0.03995	1
4.9	0.1	0.0658	0.0342	1
5.4	0.106	0.047553	0.058447	1
5.9	0.081	0.034366	0.046634	1
6.4	0.056	0.024836	0.031164	1
6.9	0.075	0.017948	0.057052	1
7.4	0.062	0.012971	0.049029	1
7.9	0.075	0.0093739	0.065626	1
8.4	0.056	0.0067744	0.049226	1
8.9	0.05	0.0048957	0.045104	1
9.4	0.056	0.0035381	0.052462	1
9.9	0.068	0.0025569	0.065443	1
11.9	0.05	0.00069745	0.049303	1

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RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	5.5248E-004
y0 =	1.5868E+000

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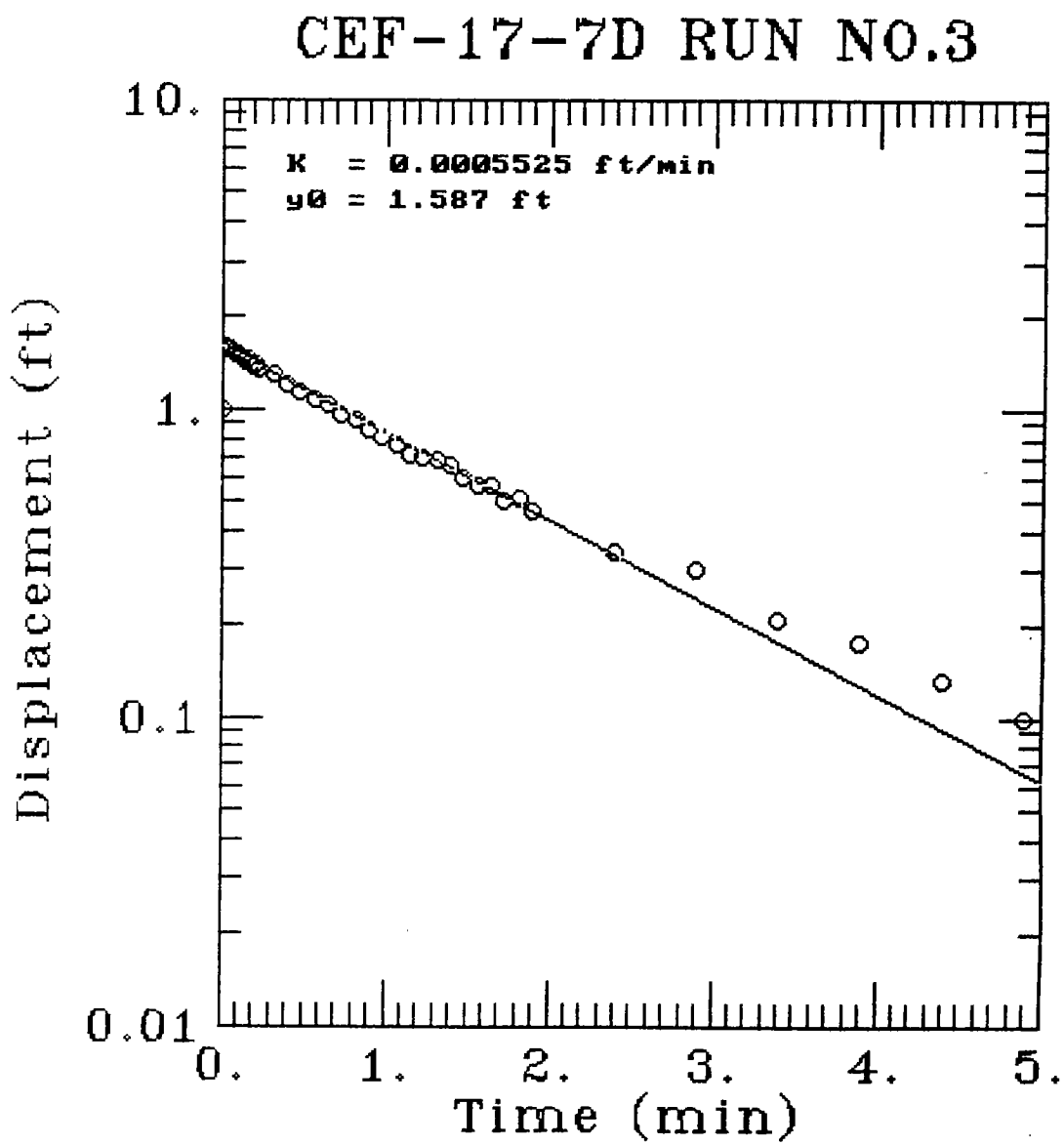
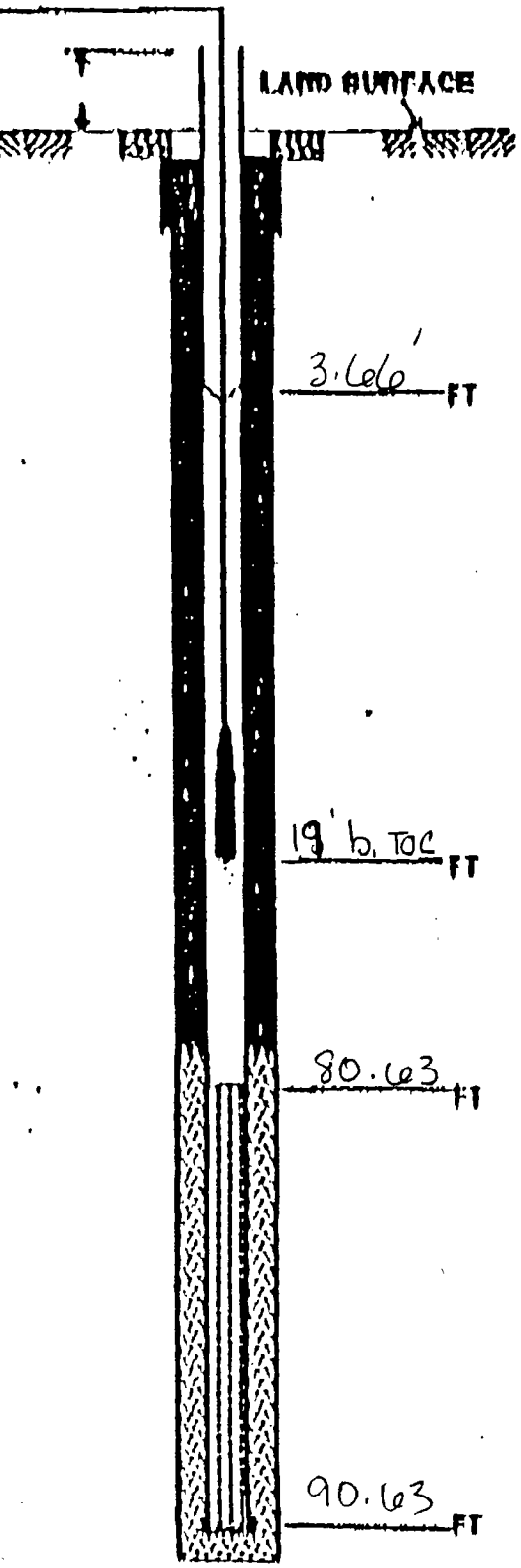
TYPE CURVE DATA

K = 5.52483E-004
y0 = 1.58683E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.587E+000	5.000E+000	6.166E-002		


CEF-17-7D RUN NO.3
K = 0.0005525 ft/min
y0 = 1.587 ft
10.
1.
0.1
0.01
Displacement (ft)
0.
1.
2.
3.
4.
5.
Time (min)

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECIL FIELD RI OUS 1, 2, & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-7D PUMPING WELL —

DATE 2-1-94 TIME 0803

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 12 MIN.

TIME OF INSTALLATION 0803

STATIC DEPTH TO WATER 3.66' FT. — PSI

DEPTH OF TRANSDUCER 19' b.TOC

b.TOC CALIBRATION

11' DEPTH 13.32' FT — PSI

18' DEPTH 14.31' FT — PSI

19' DEPTH 15.30 FT — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 3.66'

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (INI)

— VERIFICATION OF DATA ACQUISITION (INI)

— VERIFICATION OF DATA ACQUISITION (INI)

MAXIMUM PUMPING DEPTH TO WATER — FT. — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT. — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

SE1000C
Environmental Logger
02/01 17:03

Unit# 01597 Test 1

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-7D

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 02/01 08:52:17

Elapsed Time	INPUT 1
0.0000	0.006
0.0033	0.000
0.0066	0.000
0.0100	0.219
0.0133	0.658
0.0166	0.914
0.0200	1.384
0.0233	1.109
0.0266	1.084
0.0300	0.739
0.0333	1.140
0.0500	1.503
0.0666	1.384
0.0833	1.629
0.1000	1.647
0.1166	1.604
0.1333	1.579
0.1500	1.572
0.1666	1.541
0.1833	1.516
0.2000	1.503
0.2166	1.491
0.2333	1.453
0.2500	1.434
0.2666	1.441
0.2833	1.384
0.3000	1.372

CEF-17-7D

0.3166	1.391
0.3333	1.340
0.4166	1.297
0.5000	1.209
0.5833	1.134
0.6666	1.065
0.7500	1.027
0.8333	0.958
0.9166	0.914
1.0000	0.858
1.0833	0.814
1.1666	0.770
1.2500	0.714
1.3333	0.689
1.4166	0.676
1.5000	0.651
1.5833	0.595
1.6666	0.564
1.7500	0.564
1.8333	0.501
1.9166	0.513
2.0000	0.463
2.5000	0.344
3.0000	0.300
3.5000	0.206
4.0000	0.175
4.5000	0.131
5.0000	0.100
5.5000	0.106
6.0000	0.081
6.5000	0.056
7.0000	0.075
7.5000	0.062
8.0000	0.075
8.5000	0.056
9.0000	0.050
9.5000	0.056
10.0000	0.068
12.0000	0.050

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

AQTESOLV RESULTS

Version 1.10

04/19/94 06:31:25

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TEST DESCRIPTION

Data set...........
Data set title..... CEF-17-8S RUN NO.2

Knowns and Constants:
No. of data points.................. 52
Radius of well casing............... 0.083
Radius of well...................... 0.2604
Aquifer saturated thickness......... 13.91
Well screen length.................. 10
Static height of water in well...... 10.66
Log(Re/Rw).......................... 2.526
A, B, C............................. 2.709, 0.440, 0.000

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.1942E-003	+/-	2.3393E-005
y0 =	1.2361E+000	+/-	1.0208E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
Number of residuals................ 52
Number of estimated parameters.... 2
Degrees of freedom................ 50
Residual mean..................... 0.009282
Residual standard deviation....... 0.02791
Residual variance................. 0.0007792

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0166	1.282	1.2083	0.0737	1
0.0333	1.251	1.1809	0.070075	1
0.05	1.182	1.1542	0.027829	1
0.0666	1.132	1.1282	0.0038226	1
0.0833	1.12	1.1026	0.017382	1
0.1	1.076	1.0776	-0.0016376	1
0.1166	1.038	1.0534	-0.015368	1
0.1333	1.026	1.0295	-0.0035032	1
0.15	0.995	1.0062	-0.011179	1
0.1666	0.97	0.98352	-0.013519	1
0.1833	0.938	0.96124	-0.023237	1
0.2	0.932	0.93946	-0.0074593	1
0.2166	0.894	0.9183	-0.024301	1
0.2333	0.869	0.8975	-0.028497	1
0.25	0.851	0.87716	-0.026164	1
0.2666	0.832	0.85741	-0.025409	1
0.2833	0.813	0.83798	-0.024984	1
0.3666	0.713	0.74747	-0.034469	1
0.45	0.632	0.66664	-0.03464	1
0.5333	0.575	0.59463	-0.019633	1
0.6166	0.513	0.5304	-0.017403	1
0.7	0.463	0.47305	-0.010047	1
0.7833	0.4	0.42195	-0.021951	1
0.8666	0.375	0.37637	-0.0013738	1
0.95	0.331	0.33567	-0.0046737	1
1.0333	0.313	0.29942	0.013584	1
1.1166	0.269	0.26707	0.0019255	1
1.2	0.244	0.23819	0.0058062	1
1.2833	0.225	0.21247	0.012535	1
1.3666	0.225	0.18952	0.035484	1
1.45	0.212	0.16902	0.042978	1
1.5333	0.175	0.15077	0.024235	1
1.6166	0.175	0.13448	0.04052	1
1.7	0.15	0.11994	0.030062	1
1.7833	0.144	0.10698	0.037017	1
1.8666	0.119	0.095427	0.023573	1
1.95	0.131	0.085108	0.045892	1
2.45	0.068	0.042854	0.025146	1
2.95	0.062	0.021579	0.040421	1
3.45	0.05	0.010865	0.039135	1
3.95	0.037	0.0054711	0.031529	1
4.45	0.025	0.0027549	0.022245	1
4.95	0.031	0.0013872	0.029613	1
5.45	0.006	0.00069848	0.0053015	1
5.95	0.012	0.00035171	0.011648	1
6.45	0.018	0.00017709	0.017823	1
6.95	0.012	8.9173E-005	0.011911	1
7.45	0.012	4.4901E-005	0.011955	1
7.95	0.031	2.2609E-005	0.030977	1
8.45	0.018	1.1384E-005	0.017989	1
9.45	0.018	2.8864E-006	0.017997	1
9.95	0.012	1.4534E-006	0.011999	1

RESULTS FROM VISUAL CURVE MATCHING

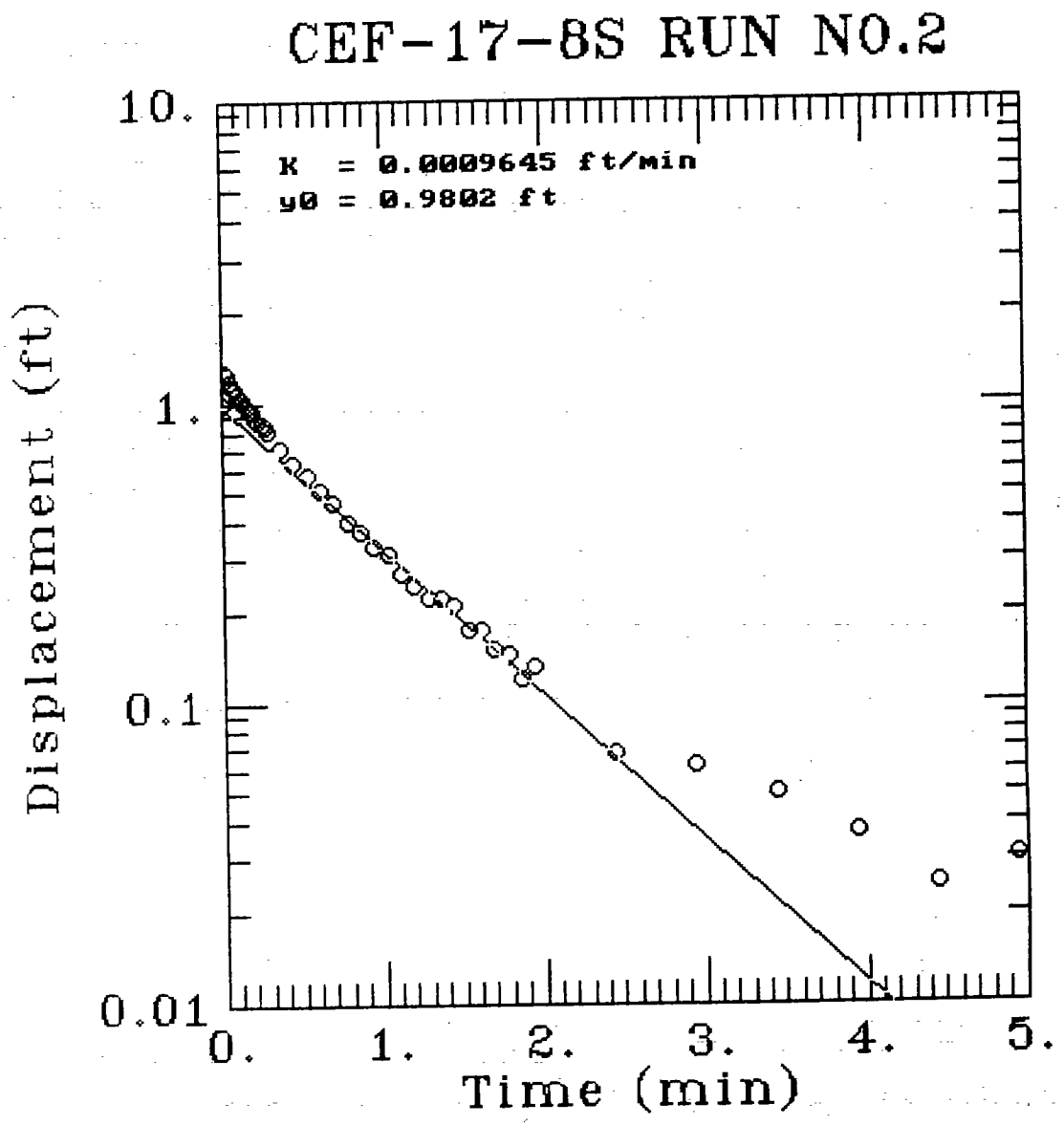
VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.1942E-003
y0 =	1.2361E+000

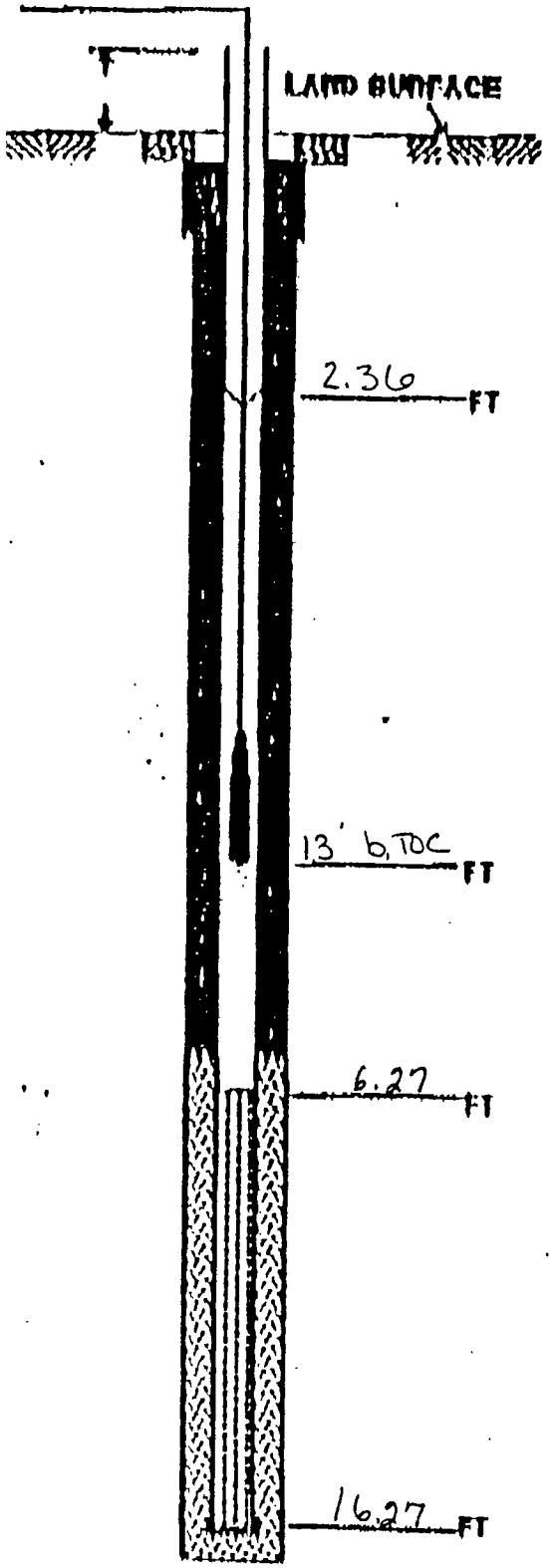
TYPE CURVE DATA

K = 9.64515E-004
y0 = 9.80186E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	9.802E-001	5.000E+000	3.843E-003		


CEF-17-8S RUN NO.2
K = 0.0009645 ft/min
y0 = 0.9802 ft
10.
1.
0.1
0.01
Displacement (ft)
0.
1.
2.
3.
4.
5.
Time (min)

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECIL FIELD RI OUS 1, 2, & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-8s PUMPING WELL —

DATE 1-27-94 TIME 0855

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 10 MIN

TIME OF INSTALLATION 0855

STATIC DEPTH TO WATER 2.36' FT. — PSI

DEPTH OF TRANSDUCER 13' b.TOC

b.TOC CALIBRATION

11' DEPTH 8.68 FT — PSI

12' DEPTH 9.67 FT — PSI

13' DEPTH 10.66 FT — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 2.36'

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (MIN)

— VERIFICATION OF DATA ACQUISITION (MIN)

— VERIFICATION OF DATA ACQUISITION (MIN)

MAXIMUM PUMPING DEPTH TO WATER — FT — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

r2

SE1000C
Environmental Logger
01/27 11:54

Unit# 01597 Test 3

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-8S

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 01/27 09:23:51

Elapsed Time	INPUT 1
0.0000	0.012
0.0033	0.000
0.0066	0.012
0.0100	0.212
0.0133	0.719
0.0166	1.339
0.0200	1.770
0.0233	1.802
0.0266	1.589
0.0300	1.126
0.0333	0.688
0.0500	1.514
0.0666	1.282
0.0833	1.251
0.1000	1.182
0.1166	1.132
0.1333	1.120
0.1500	1.076
0.1666	1.038
0.1833	1.026
0.2000	0.995
0.2166	0.970
0.2333	0.938
0.2500	0.932
0.2666	0.894

CEF-17-8S

0.2833	0.869
0.3000	0.851
0.3166	0.832
0.3333	0.813
0.4166	0.713
0.5000	0.632
0.5833	0.575
0.6666	0.513
0.7500	0.463
0.8333	0.400
0.9166	0.375
1.0000	0.331
1.0833	0.313
1.1666	0.269
1.2500	0.244
1.3333	0.225
1.4166	0.225
1.5000	0.212
1.5833	0.175
1.6666	0.175
1.7500	0.150
1.8333	0.144
1.9166	0.119
2.0000	0.131
2.5000	0.068
3.0000	0.062
3.5000	0.050
4.0000	0.037
4.5000	0.025
5.0000	0.031
5.5000	0.006
6.0000	0.012
6.5000	0.018
7.0000	0.012
7.5000	0.012
8.0000	0.031
8.5000	0.018
9.0000	0.000
9.5000	0.018
10.0000	0.012

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A Q T E S O L V   R E S U L T S

Version 1.10

04/19/94 06:38:11

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TEST DESCRIPTION

Data set...........
Data set title..... CEF-17-9S RUN NO.1

Knowns and Constants:
- No. of data points.................... 56
- Radius of well casing................ 0.083
- Radius of well........................ 0.2604
- Aquifer saturated thickness......... 13.85
- Well screen length.................. 10
- Static height of water in well...... 10.21
- Log(Re/Rw)........................... 2.496
- A, B, C.............................. 2.709, 0.440, 0.000

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ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

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RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	2.0878E-004	+/-	7.0513E-006
y0 =	1.4795E+000	+/-	1.5023E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals............... 56
- Number of estimated parameters.... 2
- Degrees of freedom................ 54
- Residual mean..................... 0.01282
- Residual standard deviation....... 0.06537
- Residual variance................. 0.004273

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0167	1.614	1.4735	0.14049	1
0.0334	1.582	1.4675	0.11446	1
0.05	1.564	1.4616	0.10236	1
0.0667	1.526	1.4557	0.070275	1
0.0834	1.52	1.4498	0.070166	1
0.1	1.526	1.444	0.081998	1
0.1167	1.489	1.4382	0.050841	1
0.1334	1.489	1.4323	0.05666	1
0.15	1.451	1.4266	0.024422	1
0.1667	1.439	1.4208	0.018195	1
0.1834	1.439	1.4151	0.023944	1
0.2	1.42	1.4094	0.010636	1
0.2167	1.414	1.4037	0.010339	1
0.2334	1.407	1.[illegible]98	0.0090193	1
0.25	1.395	1.[illegible]4	0.0026425	1
0.2667	1.376	1.[illegible]67	-0.010723	1
0.35	1.332	1.359	-0.026958	1
0.4334	1.295	1.3317	-0.036716	1
0.5167	1.245	1.3051	-0.060052	1
0.6	1.213	1.2789	-0.065922	1
0.6834	1.195	1.2533	-0.058284	1
0.7667	1.176	1.2282	-0.052191	1
0.85	1.151	1.2036	-0.0526	1
0.9334	1.119	1.1795	-0.060472	1
1.0167	1.088	1.1559	-0.067856	1
1.1	1.076	1.1327	-0.056713	1
1.1834	1.044	1.11	-0.066007	1
1.2667	1.001	1.0878	-0.086782	1
1.35	1.007	1.066	-0.059002	1
1.4334	0.994	1.0446	-0.050633	1
1.5167	0.963	1.0237	-0.060717	1
1.6	0.963	1.0032	-0.04022	1
1.6834	0.926	0.98311	-0.057109	1
1.7667	0.913	0.96342	-0.050425	1
1.85	0.888	0.94413	-0.056135	1
1.9334	0.875	0.92521	-0.050209	1
2.4334	0.782	0.81944	-0.037437	1
2.9334	0.694	0.72576	-0.031758	1
3.4334	0.625	0.64279	-0.017788	1
3.9334	0.581	0.5693	0.011696	1
4.4334	0.525	0.50422	0.02078	1
4.9334	0.469	0.44658	0.022423	1
5.4334	0.431	0.39552	0.035477	1
5.9334	0.381	0.35031	0.030694	1
6.4334	0.362	0.31026	0.051741	1
6.9334	0.325	0.27479	0.05021	1
7.4334	0.331	0.24338	0.087625	1
7.9334	0.287	0.21555	0.071448	1
8.4334	0.281	0.19091	0.09009	1
8.9334	0.244	0.16908	0.074915	1
9.4334	0.237	0.14975	0.087245	1
9.9334	0.218	0.13263	0.085366	1
11.933	0.175	0.081613	0.093387	1
13.933	0.15	0.050219	0.099781	1
15.933	0.15	0.030901	0.1191	1
17.933	0.131	0.019014	0.11199	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	2.0878E-004
y0 =	1.4795E+000

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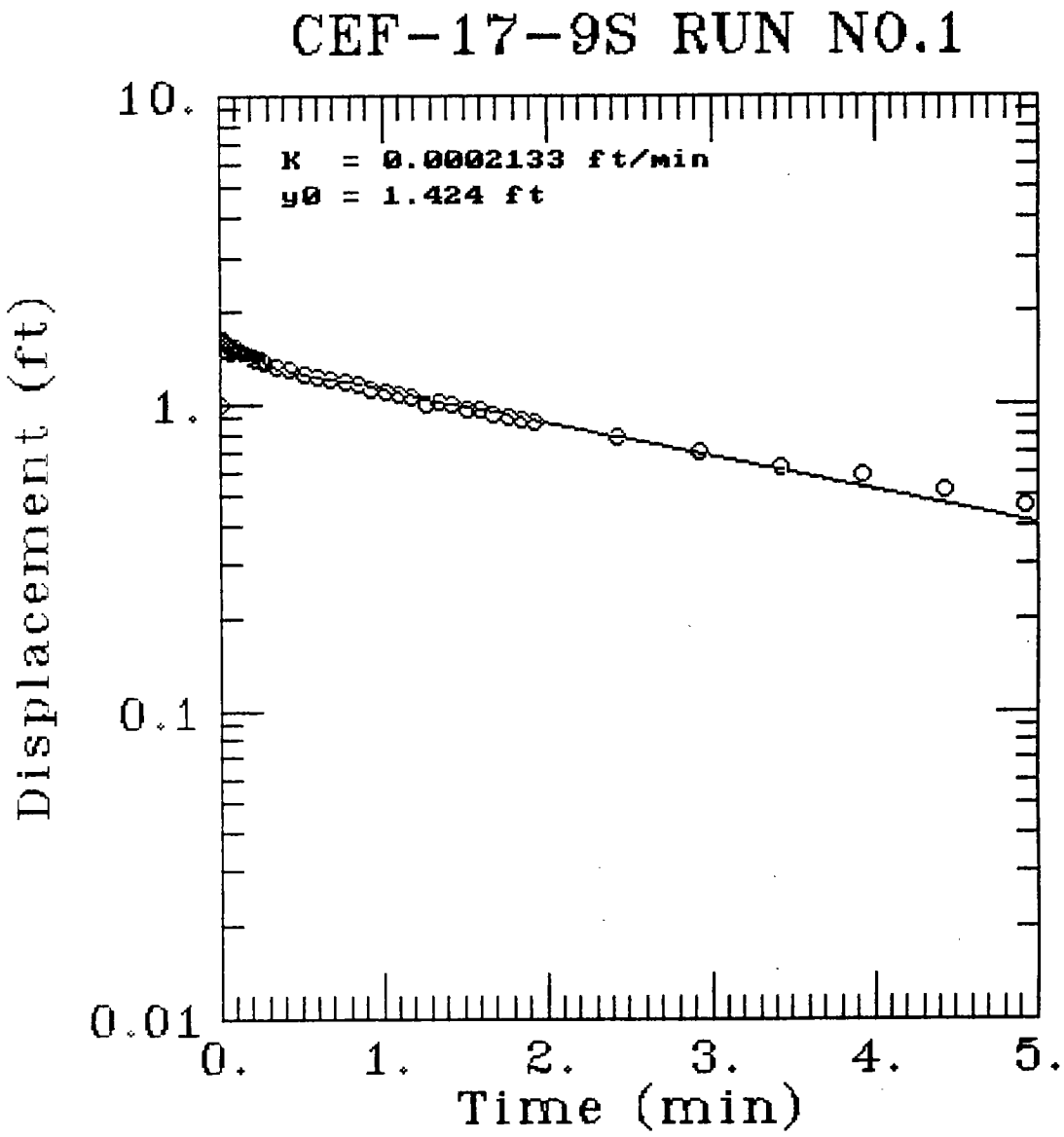
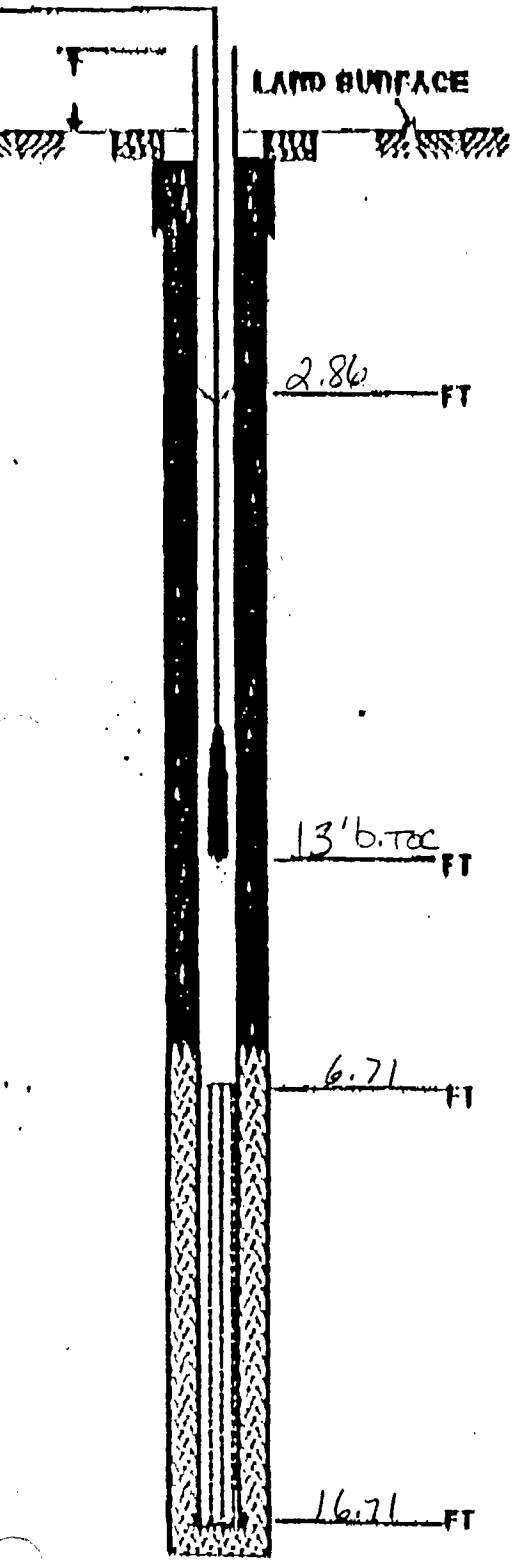
TYPE CURVE DATA

K = 2.13259E-004
y0 = 1.42372E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.424E+000	5.000E+000	4.120E-001		


CEF-17-9S RUN NO.1
K = 0.0002133 ft/min
y0 = 1.424 ft
10.
1.
0.1
0.01
Displacement (ft)
0.
1.
2.
3.
4.
5.
Time (min)

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECILFIELD RI OUS 1, 2, & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-9S PUMPING WELL —

DATE 1-30-94 TIME 0905

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 18 MIN

TIME OF INSTALLATION 0905

STATIC DEPTH TO WATER 2.86 FT. — PSI

DEPTH OF TRANSDUCER 13' bTOC

CALIBRATION

11' b.TOC	DEPTH	8.23	FT —	PSI
12'	DEPTH	9.22	FT —	PSI
13	DEPTH	10.21	FT —	PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 2.86

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (1M)
— VERIFICATION OF DATA ACQUISITION (1M)
— VERIFICATION OF DATA ACQUISITION (1M)

MAXIMUM PUMPING DEPTH TO WATER — FT — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI
DEPTH — FT — PSI
DEPTH — FT — PSI

SE1000C
Environmental Logger
01/30 11:40

Unit# 01597 Test 0

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-9S

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 01/30 09:19:39

Elapsed Time	INPUT 1
0.0000	0.025
0.0033	0.018
0.0066	0.018
0.0100	0.012
0.0133	0.319
0.0166	0.581
0.0200	1.307
0.0233	1.970
0.0266	2.214
0.0300	1.407
0.0333	1.745
0.0500	1.532
0.0666	1.620
0.0833	1.614
0.1000	1.582
0.1166	1.564
0.1333	1.526
0.1500	1.520
0.1666	1.526
0.1833	1.489
0.2000	1.489
0.2166	1.451
0.2333	1.439
0.2500	1.439
0.2666	1.420

CEF-17-9S

0.2833	1.414
0.3000	1.407
0.3166	1.395
0.3333	1.376
0.4166	1.332
0.5000	1.295
0.5833	1.245
0.6666	1.213
0.7500	1.195
0.8333	1.176
0.9166	1.151
1.0000	1.119
1.0833	1.088
1.1666	1.076
1.2500	1.044
1.3333	1.001
1.4166	1.007
1.5000	0.994
1.5833	0.963
1.6666	0.963
1.7500	0.926
1.8333	0.913
1.9166	0.888
2.0000	0.875
2.5000	0.782
3.0000	0.694
3.5000	0.625
4.0000	0.581
4.5000	0.525
5.0000	0.469
5.5000	0.431
6.0000	0.381
6.5000	0.362
7.0000	0.325
7.5000	0.331
8.0000	0.287
8.5000	0.281
9.0000	0.244
9.5000	0.237
10.0000	0.218
12.0000	0.175
14.0000	0.150
16.0000	0.150
18.0000	0.131

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A Q T E S O L V   R E S U L T S

Version 1.10

04/19/94 06:42:51

TEST DESCRIPTION

Data set...........
Data set title..... CEF-17-10D RUN NO.3

Knowns and Constants:
- No. of data points.................... 55
- Radius of well casing................ 0.083
- Radius of well....................... 0.2604
- Aquifer saturated thickness......... 86.76
- Well screen length................... 10
- Static height of water in well...... 16.81
- Log(Re/Rw)........................... 2.509
- A, B, C.............................. 2.709, 0.440, 0.000

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	2.1444E-004	+/-	5.8080E-006
y0 =	1.5865E+000	+/-	1.3240E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals............... 55
- Number of estimated parameters.... 2
- Degrees of freedom................ 53
- Residual mean..................... 0.01225
- Residual standard deviation....... 0.05559
- Residual variance................. 0.00309

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0166	1.661	1.58	0.080991	1
0.0333	1.648	1.5735	0.074526	1
0.05	1.629	1.567	0.062033	1
0.0666	1.617	1.5605	0.056474	1
0.0833	1.623	1.5541	0.068928	1
0.1	1.592	1.5476	0.044355	1
0.1166	1.579	1.5413	0.037717	1
0.1333	1.579	1.5349	0.044092	1
0.15	1.567	1.5286	0.038439	1
0.1666	1.56	1.5223	0.037723	1
0.1833	1.529	1.516	0.013019	1
0.2	1.554	1.5097	0.044288	1
0.2166	1.517	1.5035	0.013495	1
0.2333	1.517	1.4973	0.019712	1
0.3166	1.466	1.4667	-0.00065433	1
0.4	1.416	1.4366	-0.020612	1
0.4833	1.379	1.4072	-0.02822	1
0.5666	1.341	1.3784	-0.03743	1
0.65	1.322	1.3502	-0.028195	1
0.7333	1.278	1.3226	-0.044571	1
0.8166	1.247	1.2955	-0.048512	1
0.9	1.216	1.269	-0.052976	1
0.9833	1.191	1.243	-0.052014	1
1.0666	1.159	1.2176	-0.058583	1
1.15	1.14	1.1926	-0.052642	1
1.2333	1.115	1.1682	-0.053242	1
1.3166	1.078	1.1443	-0.066341	1
1.4	1.072	1.1209	-0.048901	1
1.4833	1.053	1.098	-0.044968	1
1.5666	1.009	1.0755	-0.066504	1
1.65	0.996	1.0535	-0.057474	1
1.7333	0.99	1.0319	-0.041921	1
1.8166	0.965	1.0108	-0.045809	1
1.9	0.915	0.9901	-0.075104	1
2.4	0.821	0.87457	-0.05357	1
2.9	0.752	0.77252	-0.020518	1
3.4	0.658	0.68237	-0.024374	1
3.9	0.589	0.60275	-0.013748	1
4.4	0.558	0.53241	0.025586	1
4.9	0.489	0.47029	0.018712	1
5.4	0.451	0.41541	0.03559	1
5.9	0.42	0.36694	0.053063	1
6.4	0.363	0.32412	0.038881	1
6.9	0.351	0.2863	0.064702	1
7.4	0.332	0.25289	0.07911	1
7.9	0.288	0.22338	0.064619	1
8.4	0.25	0.19731	0.052685	1
8.9	0.257	0.17429	0.08271	1
9.4	0.25	0.15395	0.096047	1
9.9	0.225	0.13599	0.089012	1
11.9	0.169	0.082786	0.086214	1
13.9	0.112	0.050398	0.061602	1
15.9	0.119	0.030681	0.088319	1
17.9	0.087	0.018678	0.068322	1
19.9	0.081	0.01137	0.06963	1

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RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	2.1444E-004
y0 =	1.5865E+000

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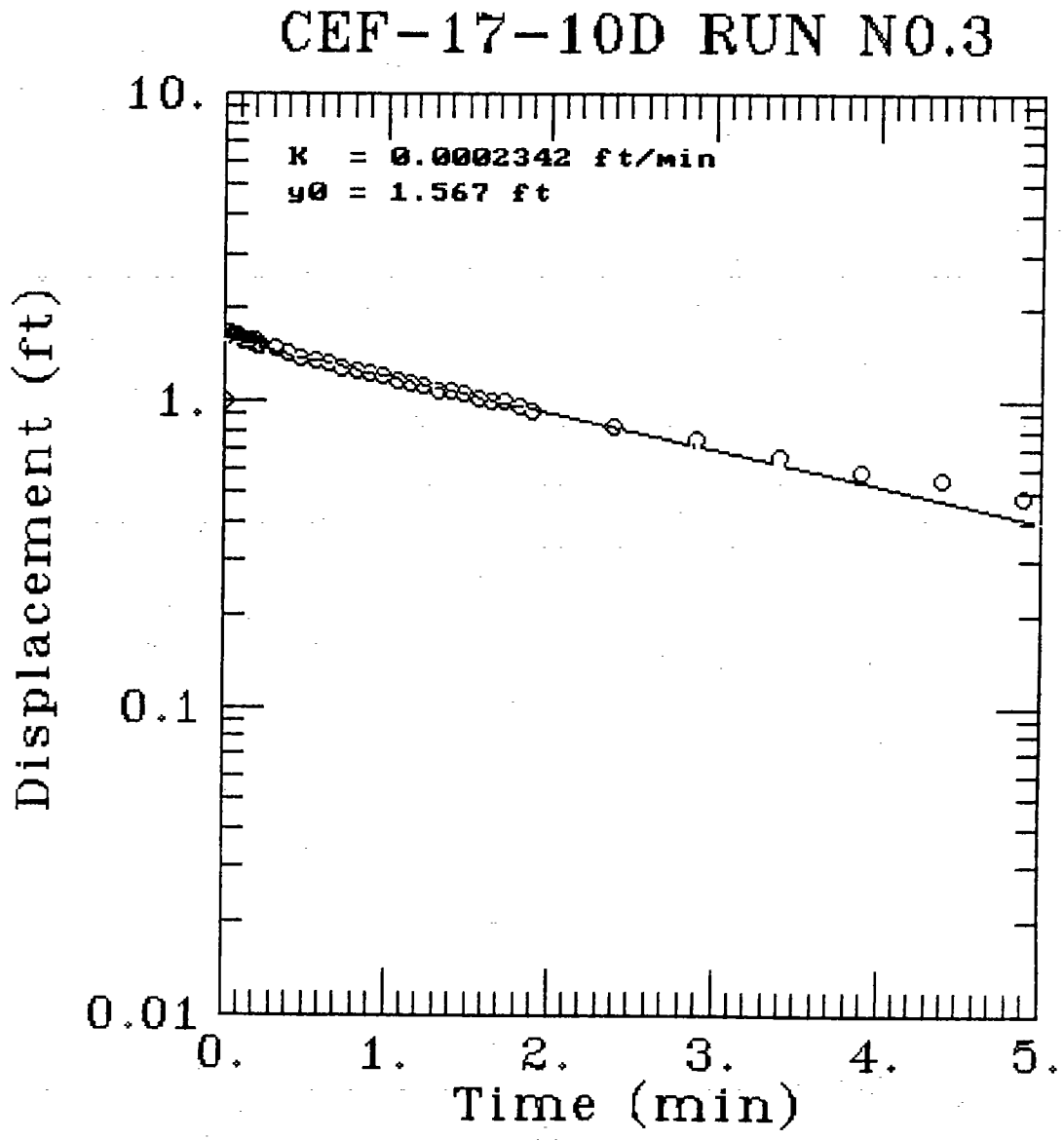
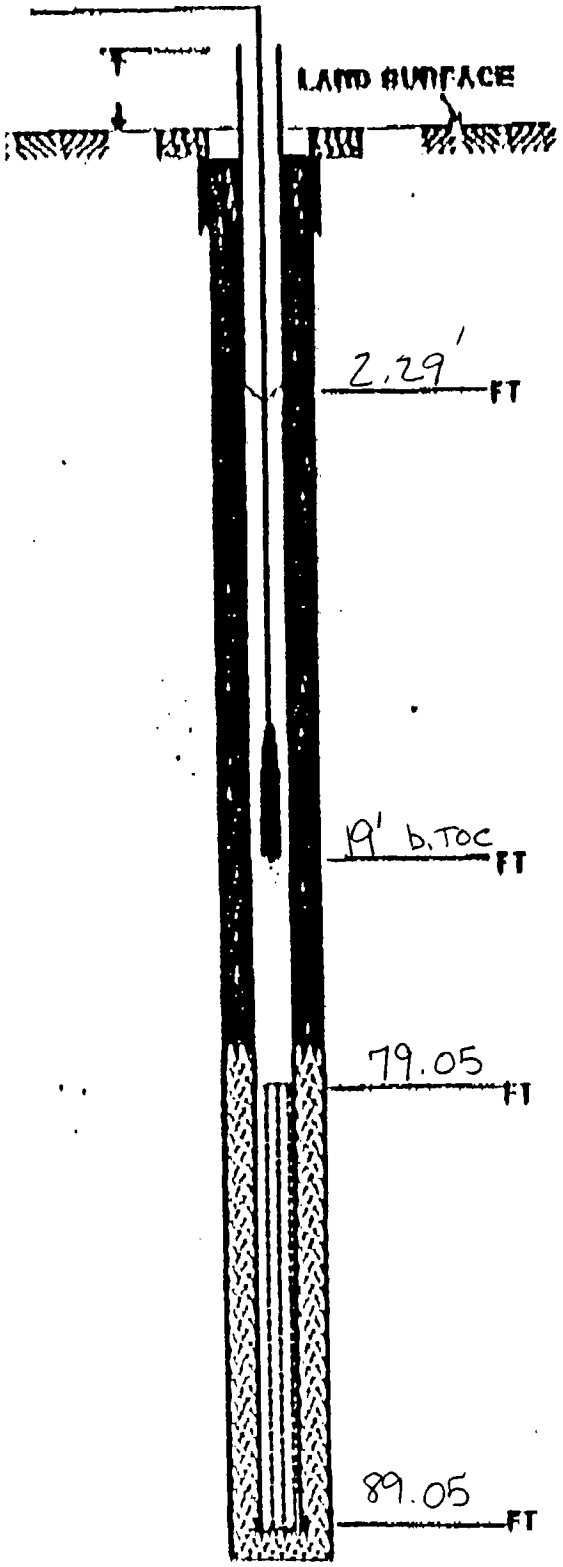
TYPE CURVE DATA

K = 2.34185E-004
y0 = 1.56691E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.567E+000	5.000E+000	4.042E-001		


CEF-17-10D RUN NO.3
K = 0.0002342 ft/min
y0 = 1.567 ft
10.
1.
0.1
0.01
Displacement (ft)
0.
1.
2.
3.
4.
5.
Time (min)

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECIL FIELD RI OUS 1, 2, & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-10D PUMPING WELL —

DATE 2-1-94 TIME 1248

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 20 MIN

TIME OF INSTALLATION 1248

STATIC DEPTH TO WATER 2.29' FT. — PSI

DEPTH OF TRANSDUCER 19' b.TOC

CALIBRATION (b.TOC)

17' DEPTH 14.80 FT — PSI

18' DEPTH 15.80 FT — PSI

19' DEPTH 16.81 FT — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 2.29'

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (1M)

— VERIFICATION OF DATA ACQUISITION (1M)

— VERIFICATION OF DATA ACQUISITION (1M)

MAXIMUM PUMPING DEPTH TO WATER — FT — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

r3

SE1000C
Environmental Logger
02/01 17:08

Unit# 01597 Test 4

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-10D

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 02/01 13:53:56

Elapsed Time	INPUT 1
0.0000	0.018
0.0033	-0.006
0.0066	0.000
0.0100	0.018
0.0133	-0.012
0.0166	0.620
0.0200	1.592
0.0233	1.673
0.0266	2.024
0.0300	2.268
0.0333	2.162
0.0500	0.771
0.0666	1.642
0.0833	1.416
0.1000	1.673
0.1166	1.661
0.1333	1.648
0.1500	1.629
0.1666	1.617
0.1833	1.623
0.2000	1.592
0.2166	1.579
0.2333	1.579
0.2500	1.567
0.2666	1.560
0.2833	1.529
0.3000	1.554

CEF-17-10D

0.3166	1.517
0.3333	1.517
0.4166	1.466
0.5000	1.416
0.5833	1.379
0.6666	1.341
0.7500	1.322
0.8333	1.278
0.9166	1.247
1.0000	1.216
1.0833	1.191
1.1666	1.159
1.2500	1.140
1.3333	1.115
1.4166	1.078
1.5000	1.072
1.5833	1.053
1.6666	1.009
1.7500	0.996
1.8333	0.990
1.9166	0.965
2.0000	0.915
2.5000	0.821
3.0000	0.752
3.5000	0.658
4.0000	0.589
4.5000	0.558
5.0000	0.489
5.5000	0.451
6.0000	0.420
6.5000	0.363
7.0000	0.351
7.5000	0.332
8.0000	0.288
8.5000	0.250
9.0000	0.257
9.5000	0.250
10.0000	0.225
12.0000	0.169
14.0000	0.112
16.0000	0.119
18.0000	0.087
20.0000	0.081

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A Q T E S O L V   R E S U L T S

Version 1.10

04/19/94 06:47:01

TEST DESCRIPTION

Data set...........
Data set title..... CEF-17-11I RUN NO.5

Knowns and Constants:
- No. of data points.................... 49
- Radius of well casing................ 0.083
- Radius of well....................... 0.2604
- Aquifer saturated thickness.......... 55.09
- Well screen length................... 10
- Static height of water in well...... 16.38
- Log(Re/Rw).......................... 2.542
- A, B, C.............................. 2.709, 0.440, 0.000

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	7.8354E-003	+/-	1.8044E-004
y0 =	2.1100E+000	+/-	3.4821E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals................ 49
- Number of estimated parameters.... 2
- Degrees of freedom................. 47
- Residual mean...................... 0.01485
- Residual standard deviation....... 0.0369
- Residual variance.................. 0.001361

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0167	1.955	1.817	0.13798	1
0.0334	1.472	1.5648	-0.09275	1
0.05	1.347	1.3487	-0.0017113	1
0.0667	1.122	1.1615	-0.03946	1
0.0834	0.94	1.0002	-0.060206	1
0.1	0.833	0.86211	-0.029112	1
0.1167	0.708	0.74242	-0.034418	1
0.1334	0.639	0.63934	-0.00034306	1
0.15	0.551	0.55107	-7.1458E-005	1
0.1667	0.47	0.47456	-0.0045622	1
0.1834	0.413	0.40868	0.0043247	1
0.2	0.369	0.35225	0.016749	1
0.2167	0.332	0.30335	0.028654	1
0.2334	0.3	0.26123	0.03877	1
0.25	0.263	0.22516	0.037837	1
0.2667	0.257	0.1939	0.063098	1
0.35	0.137	0.092	0.045	1
0.4334	0.1	0.043611	0.056389	1
0.5167	0.087	0.020692	0.066308	1
0.6	0.056	0.0098177	0.046182	1
0.6834	0.031	0.004654	0.026346	1
0.7667	0.037	0.0022081	0.034792	1
0.85	0.031	0.0010477	0.029952	1
0.9334	0.018	0.00049664	0.017503	1
1.0167	0.025	0.00023564	0.024764	1
1.1	0.025	0.0001118	0.024888	1
1.1834	0.012	5.2999E-005	0.011947	1
1.2667	0.031	2.5146E-005	0.030975	1
1.35	0.025	1.1931E-005	0.024988	1
1.4334	0.031	5.6557E-006	0.030994	1
1.5167	0.006	2.6835E-006	0.0059973	1
1.6	0.012	1.2732E-006	0.011999	1
1.6834	0.006	6.0355E-007	0.0059994	1
1.7667	0.018	2.8636E-007	0.018	1
1.85	0.012	1.3587E-007	0.012	1
1.9334	0.012	6.4407E-008	0.012	1
2.4334	0.012	7.3346E-010	0.012	1
2.9334	0.006	8.3526E-012	0.006	1
3.4334	0.006	9.5119E-014	0.006	1
3.9334	0.006	1.0832E-015	0.006	1
4.4334	0.006	1.2336E-017	0.006	1
5.4334	0.018	1.5997E-021	0.018	1
6.4334	0.012	2.0746E-025	0.012	1
6.9334	0.006	2.3625E-027	0.006	1
7.9334	0.012	3.0639E-031	0.012	1
8.4334	0.006	3.4891E-033	0.006	1
8.9334	0.018	3.9734E-035	0.018	1
9.4334	0.012	4.5248E-037	0.012	1
9.9334	0.006	5.1529E-039	0.006	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	7.8354E-003
y0 =	2.1100E+000

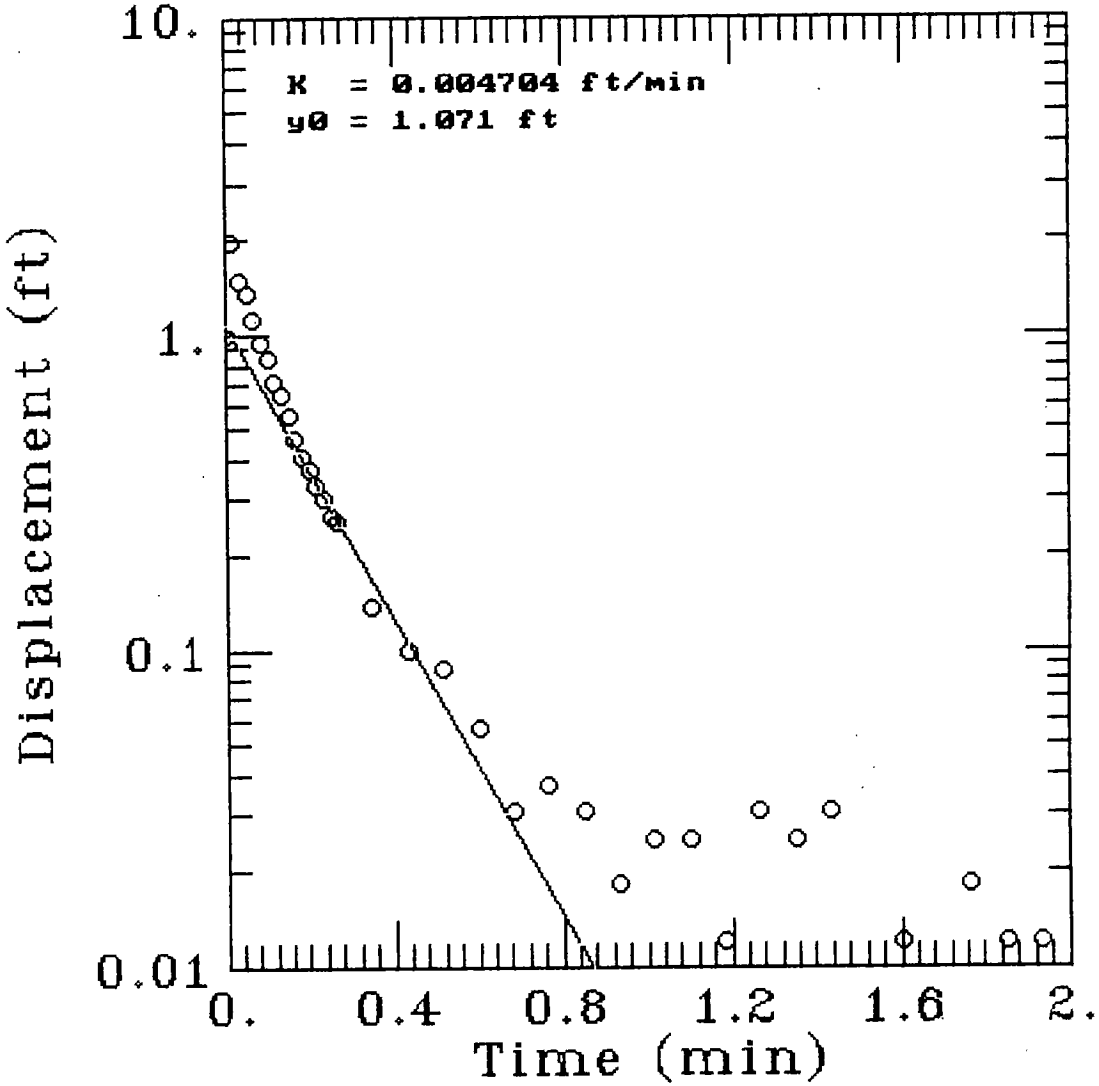
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>

TYPE CURVE DATA

K = 4.70422E-003
y0 = 1.07107E+000

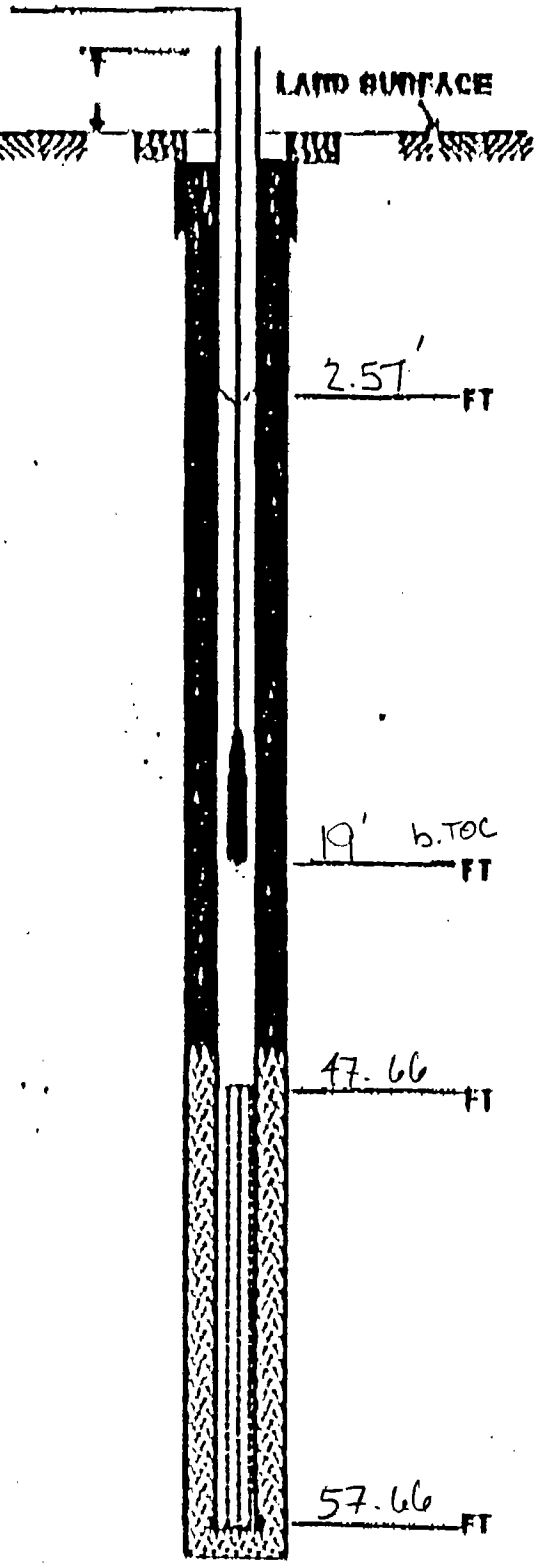
Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.071E+000	2.000E+000	2.303E-005		

CEF-17-11I RUN NO.5



#2

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECILFIELD RI OUS 1, 2, & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-11I PUMPING WELL —

DATE 1-27-94 TIME 0747

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 10 MIN

TIME OF INSTALLATION 0747

STATIC DEPTH TO WATER 2.57 FT. — PSI

DEPTH OF TRANSDUCER 19' b.Toc

b.TOC CALIBRATION

17' DEPTH 14.37 FT — PSI

18' DEPTH 15.36 FT — PSI

19' DEPTH 16.38 FT — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 2.57

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (1M)

— VERIFICATION OF DATA ACQUISITION (1M)

— VERIFICATION OF DATA ACQUISITION (1M)

MAXIMUM PUMPING DEPTH TO WATER — FT. — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

r5

SE1000C
Environmental Logger
01/27 11:13

Unit# 01597 Test 1

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-11I

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 01/27 08:21:21

Elapsed Time	INPUT 1
0.0000	0.012
0.0033	-0.012
0.0066	0.520
0.0100	2.130
0.0133	2.199
0.0166	2.619
0.0200	2.945
0.0233	2.863
0.0266	2.638
0.0300	2.369
0.0333	1.861
0.0500	1.266
0.0666	1.980
0.0833	1.955
0.1000	1.472
0.1166	1.347
0.1333	1.122
0.1500	0.940
0.1666	0.833
0.1833	0.708
0.2000	0.639
0.2166	0.551
0.2333	0.470
0.2500	0.413
0.2666	0.369
0.2833	0.332
0.3000	0.300

CEF-17-11I

0.3166	0.263
0.3333	0.257
0.4166	0.137
0.5000	0.100
0.5833	0.087
0.6666	0.056
0.7500	0.031
0.8333	0.037
0.9166	0.031
1.0000	0.018
1.0833	0.025
1.1666	0.025
1.2500	0.012
1.3333	0.031
1.4166	0.025
1.5000	0.031
1.5833	0.006
1.6666	0.012
1.7500	0.006
1.8333	0.018
1.9166	0.012
2.0000	0.012
2.5000	0.012
3.0000	0.006
3.5000	0.006
4.0000	0.006
4.5000	0.006
5.0000	0.000
5.5000	0.018
6.0000	0.000
6.5000	0.012
7.0000	0.006
7.5000	0.000
8.0000	0.012
8.5000	0.006
9.0000	0.018
9.5000	0.012
10.0000	0.006

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A Q T E S O L V   R E S U L T S

Version 1.10

04/19/94 06:51:24

TEST DESCRIPTION

Data set...........
Data set title..... CEF-17-12D RUN NO.2

Knowns and Constants:
- No. of data points.................. 53
- Radius of well casing............... 0.083
- Radius of well...................... 0.2604
- Aquifer saturated thickness......... 83.18
- Well screen length.................. 10
- Static height of water in well...... 16.84
- Log(Re/Rw).......................... 2.513
- A, B, C............................. 2.709, 0.440, 0.000

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	4.0532E-004	+/-	1.0433E-005
y0 =	1.5103E+000	+/-	1.3257E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals............... 53
- Number of estimated parameters.... 2
- Degrees of freedom................ 51
- Residual mean..................... 0.01543
- Residual standard deviation....... 0.04877
- Residual variance................. 0.002379

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0167	1.56	1.4986	0.061444	1
0.0334	1.548	1.4869	0.061115	1
0.05	1.535	1.4754	0.059626	1
0.0667	1.498	1.4639	0.034116	1
0.0834	1.485	1.4525	0.032517	1
0.1	1.473	1.4412	0.031762	1
0.1167	1.46	1.43	0.029987	1
0.1334	1.448	1.4189	0.029124	1
0.15	1.423	1.4079	0.015109	1
0.1667	1.41	1.3969	0.013074	1
0.1834	1.379	1.386	-0.0070467	1
0.2	1.372	1.3753	-0.0033162	1
0.2167	1.366	1.3646	0.0013951	1
0.2334	1.36	1.354	0.0060229	1
0.25	1.329	1.3435	-0.014495	1
0.2667	1.316	1.333	-0.017031	1
0.35	1.253	1.282	-0.029044	1
0.4334	1.209	1.2329	-0.023949	1
0.5167	1.153	1.1858	-0.03279	1
0.6	1.097	1.1404	-0.043434	1
0.6834	1.04	1.0968	-0.056762	1
0.7667	1.015	1.0548	-0.039812	1
0.85	0.959	1.0145	-0.055466	1
0.9334	0.946	0.97562	-0.029618	1
1.0167	0.896	0.9383	-0.042301	1
1.1	0.852	0.90241	-0.050412	1
1.1834	0.815	0.86785	-0.052854	1
1.2667	0.815	0.83466	-0.01966	1
1.35	0.783	0.80273	-0.019735	1
1.4334	0.746	0.77199	-0.025994	1
1.5167	0.708	0.74247	-0.034466	1
1.6	0.683	0.71407	-0.031067	1
1.6834	0.67	0.68672	-0.016723	1
1.7667	0.645	0.66046	-0.015456	1
1.85	0.626	0.63519	-0.0091942	1
1.9334	0.608	0.61087	-0.0028699	1
2.4334	0.514	0.48337	0.030626	1
2.9334	0.413	0.38249	0.030512	1
3.4334	0.338	0.30266	0.035342	1
3.9334	0.282	0.23949	0.04251	1
4.4334	0.269	0.18951	0.079495	1
4.9334	0.213	0.14995	0.063047	1
5.4334	0.206	0.11866	0.087344	1
5.9334	0.188	0.093891	0.094109	1
6.4334	0.156	0.074295	0.081705	1
6.9334	0.131	0.058789	0.072211	1
7.4334	0.112	0.046519	0.065481	1
7.9334	0.112	0.03681	0.07519	1
8.4334	0.106	0.029127	0.076873	1
8.9334	0.1	0.023048	0.076952	1
9.4334	0.081	0.018238	0.062762	1
9.9334	0.1	0.014431	0.085569	1
11.933	0.062	0.0056577	0.056342	1

RESULTS FROM VISUAL CURVE MATCHING

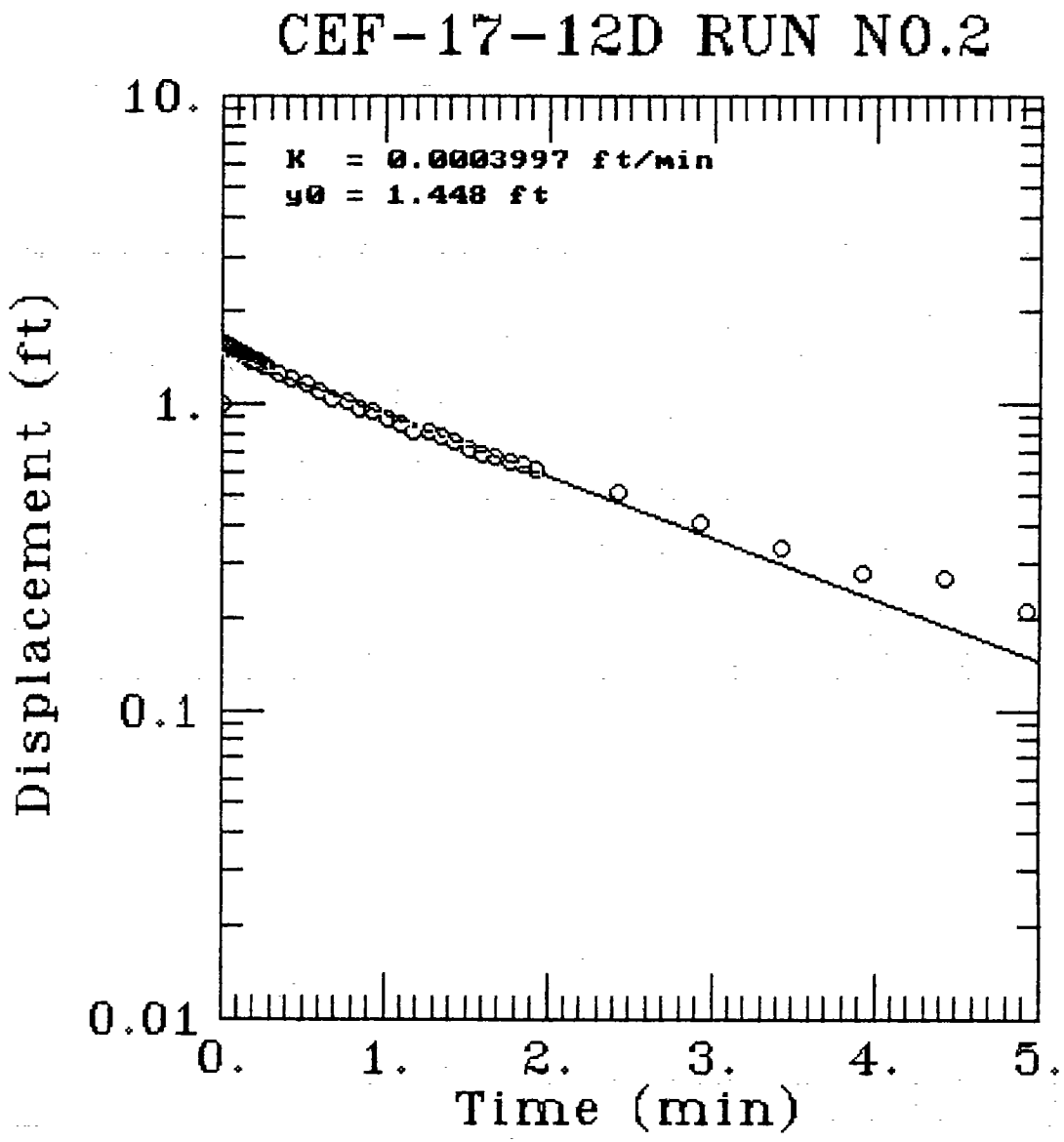
VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	4.0532E-004
y0 =	1.5103E+000

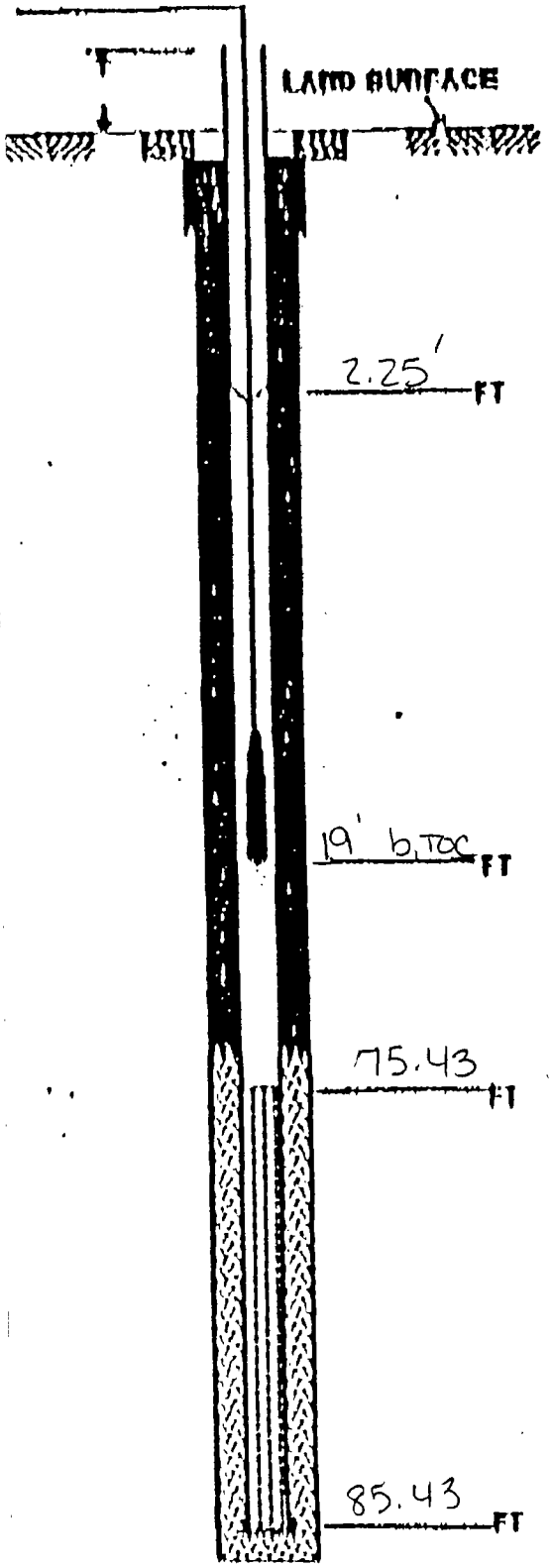
TYPE CURVE DATA

K = 3.99655E-004
y0 = 1.44778E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.448E+000	5.000E+000	1.440E-001		


CEF-17-12D RUN NO.2
K = 0.0003997 ft/min
y0 = 1.448 ft
10.
1.
0.1
0.01
Displacement (ft)
0.
1.
2.
3.
4.
5.
Time (min)

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECIL FIELD RI OUS 1, 2, & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-12D PUMPING WELL —

DATE 2-1-94 TIME 1430

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 12 MIN

TIME OF INSTALLATION 1430

STATIC DEPTH TO WATER 2.25 FT. — PSI

DEPTH OF TRANSDUCER 19' b.TOC

b.TOC. CALIBRATION

17' DEPTH 14.85 FT — PSI

18' DEPTH 15.85 FT — PSI

19' DEPTH 16.84 FT — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 2.25'

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (INI)

— VERIFICATION OF DATA ACQUISITION (INI)

— VERIFICATION OF DATA ACQUISITION (INI)

MAXIMUM PUMPING DEPTH TO WATER — FT — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

SE1000C
Environmental Logger
02/01 17:09

Unit# 01597 Test 5

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-12D

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 02/01 14:45:51

Elapsed Time	INPUT 1
0.0000	-0.025
0.0033	0.000
0.0066	0.570
0.0100	0.783
0.0133	0.752
0.0166	1.441
0.0200	1.711
0.0233	1.573
0.0266	2.381
0.0300	1.874
0.0333	1.629
0.0500	1.379
0.0666	1.623
0.0833	1.560
0.1000	1.548
0.1166	1.535
0.1333	1.498
0.1500	1.485
0.1666	1.473
0.1833	1.460
0.2000	1.448
0.2166	1.423
0.2333	1.410
0.2500	1.379
0.2666	1.372
0.2833	1.366
0.3000	1.360

CEF-17-12D

0.3166	1.329
0.3333	1.316
0.4166	1.253
0.5000	1.209
0.5833	1.153
0.6666	1.097
0.7500	1.040
0.8333	1.015
0.9166	0.959
1.0000	0.946
1.0833	0.896
1.1666	0.852
1.2500	0.815
1.3333	0.815
1.4166	0.783
1.5000	0.746
1.5833	0.708
1.6666	0.683
1.7500	0.670
1.8333	0.645
1.9166	0.626
2.0000	0.608
2.5000	0.514
3.0000	0.413
3.5000	0.338
4.0000	0.282
4.5000	0.269
5.0000	0.213
5.5000	0.206
6.0000	0.188
6.5000	0.156
7.0000	0.131
7.5000	0.112
8.0000	0.112
8.5000	0.106
9.0000	0.100
9.5000	0.081
10.0000	0.100
12.0000	0.062

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A Q T E S O L V   R E S U L T S

Version 1.10

04/19/94 06:57:29

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TEST DESCRIPTION

Data set...........
Data set title..... CEF-17-13S RUN NO.1

Knowns and Constants:
No. of data points.................... 56
Radius of well casing................. 0.083
Radius of well........................ 0.2604
Aquifer saturated thickness........... 13.32
Well screen length.................... 10
Static height of water in well........ 9.22
Log(Re/Rw)............................ 2.436
A, B, C............................... 2.709, 0.440, 0.000

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ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.3977E-003	+/-	5.0671E-005
y0 =	1.5970E+000	+/-	2.4313E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
Number of residuals............... 56
Number of estimated parameters.... 2
Degrees of freedom................ 54
Residual mean..................... 0.01374
Residual standard deviation....... 0.06484
Residual variance................. 0.004205

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0033	1.888	1.5882	0.29977	1
0.02	1.788	1.5447	0.24335	1
0.0366	1.401	1.5025	-0.10153	1
0.0533	1.432	1.4613	-0.029302	1
0.07	1.388	1.4212	-0.03321	1
0.0866	1.344	1.3824	-0.038449	1
0.1033	1.307	1.3445	-0.03752	1
0.12	1.257	1.3076	-0.050632	1
0.1366	1.219	1.272	-0.052969	1
0.1533	1.182	1.2371	-0.055071	1
0.17	1.157	1.2031	-0.046131	1
0.1866	1.126	1.1703	-0.044317	1
0.2033	1.088	1.1382	-0.050209	1
0.22	1.082	1.107	-0.024981	1
0.2366	1.038	1.0768	-0.03879	1
0.2533	1.013	1.0472	-0.034247	1
0.27	0.975	1.0185	-0.043515	1
0.2866	0.95	0.99074	-0.040737	1
0.3033	0.919	0.96356	-0.044555	1
0.3866	0.819	0.83871	-0.019712	1
0.47	0.731	0.72992	0.0010773	1
0.5533	0.638	0.63535	0.0026498	1
0.6366	0.55	0.55303	-0.003031	1
0.72	0.487	0.4813	0.0057027	1
0.8033	0.437	0.41894	0.018062	1
0.8866	0.394	0.36466	0.029342	1
0.97	0.356	0.31736	0.038642	1
1.0533	0.306	0.27624	0.02976	1
1.1366	0.275	0.24045	0.034551	1
1.22	0.25	0.20926	0.04074	1
1.3033	0.237	0.18215	0.054853	1
1.3866	0.212	0.15855	0.053453	1
1.47	0.181	0.13798	0.043018	1
1.5533	0.168	0.1201	0.047895	1
1.6366	0.156	0.10454	0.051457	1
1.72	0.137	0.090983	0.046017	1
1.8033	0.125	0.079195	0.045805	1
1.8866	0.112	0.068934	0.043066	1
1.97	0.1	0.059992	0.040008	1
2.47	0.081	0.026084	0.054916	1
2.97	0.043	0.011341	0.031659	1
3.47	0.043	0.0049308	0.038069	1
3.97	0.012	0.0021438	0.0098562	1
4.47	0.037	0.0009321	0.036068	1
4.97	0.018	0.00040526	0.017595	1
5.47	0.012	0.0001762	0.011824	1
5.97	0.031	7.6609E-005	0.030923	1
6.47	0.018	3.3308E-005	0.017967	1
6.97	0.037	1.4482E-005	0.036986	1
7.47	0.012	6.2965E-006	0.011994	1
7.97	0.018	2.7376E-006	0.017997	1
8.47	0.006	1.1903E-006	0.0059988	1
8.97	0.018	5.1751E-007	0.017999	1
9.47	0.006	2.2501E-007	0.0059998	1
9.97	0.025	9.7829E-008	0.025	1
11.97	0.018	3.4959E-009	0.018	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

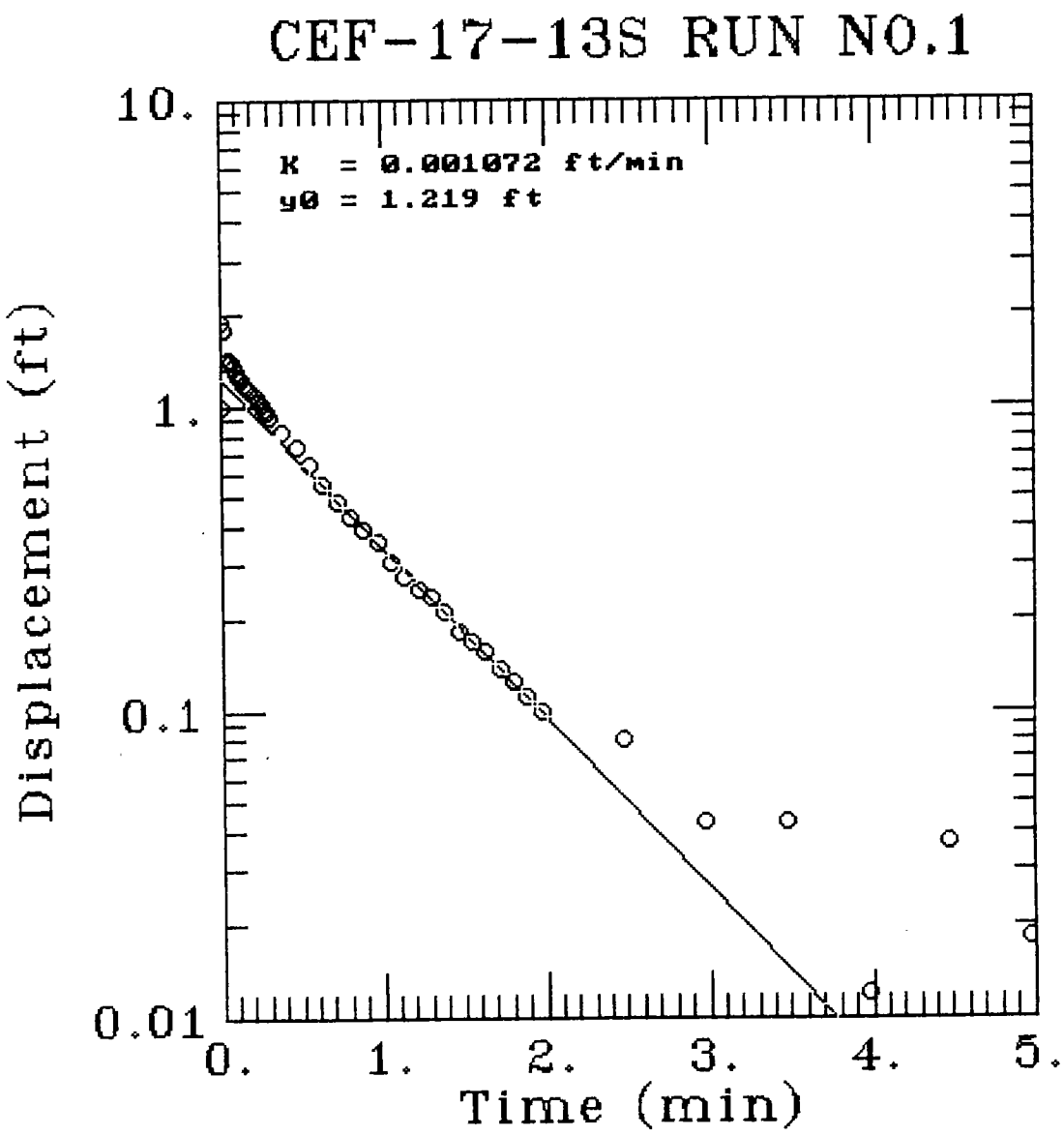
	Estimate
K =	1.3977E-003
y0 =	1.5970E+000

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

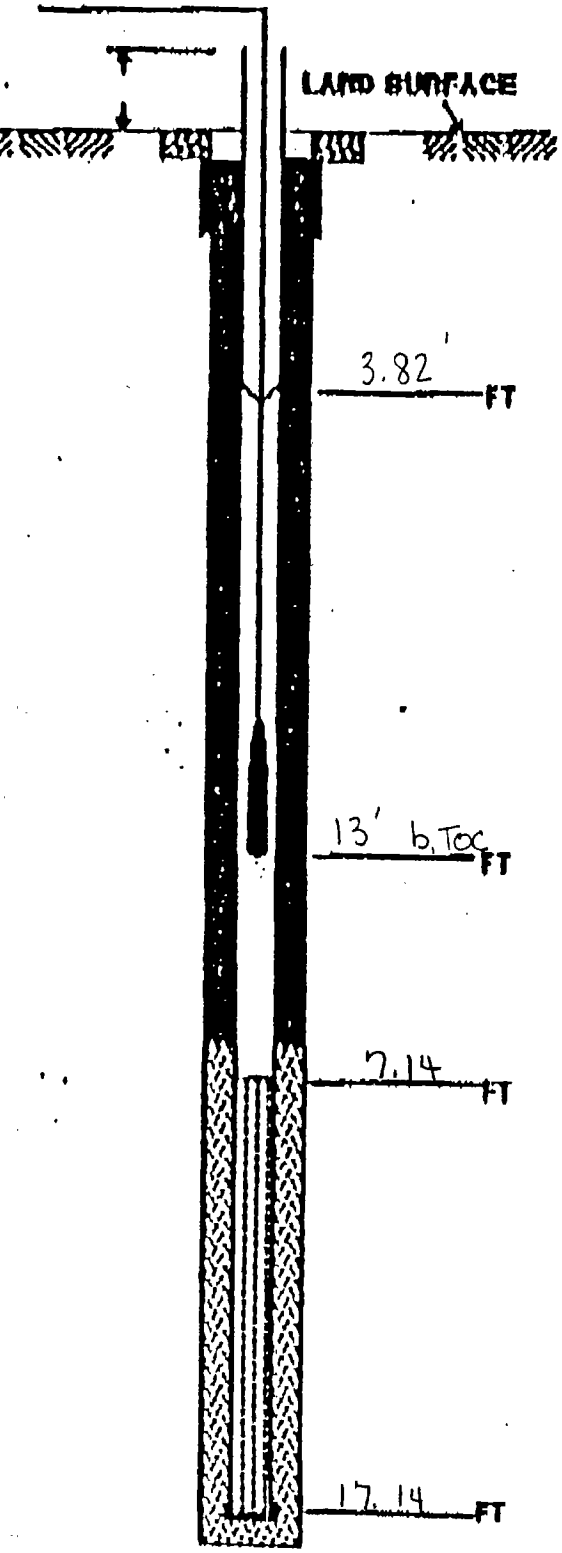
TYPE CURVE DATA

K = 1.07189E-003
y0 = 1.21919E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.219E+000	5.000E+000	2.051E-003		


CEF-17-13S RUN NO.1
K = 0.001072 ft/min
y0 = 1.219 ft
10.
1.
0.1
0.01
Displacement (ft)
0.
1.
2.
3.
4.
5.
Time (min)

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECIL FIELD RI OUs 1,2 & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-13S PUMPING WELL —

DATE 1-26-94 TIME 0746

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 12 MIN.

TIME OF INSTALLATION 0746

STATIC DEPTH TO WATER 3.82' FT. — PSI

DEPTH OF TRANSDUCER 13' b.TOC

CALIBRATION

11' b.TOC DEPTH 7.23 FT — PSI

12' DEPTH 8.22 FT — PSI

13' DEPTH 9.22 FT — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 3.82'

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (HR)

— VERIFICATION OF DATA ACQUISITION (HR)

— VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER — FT — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

SE1000C
Environmental Logger
01/26 10:21

Unit# 01597 Test 0

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-13S

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 01/26 07:58:16

Elapsed Time	INPUT 1
0.0000	-0.006
0.0033	0.025
0.0066	0.006
0.0100	0.025
0.0133	0.031
0.0166	0.337
0.0200	0.825
0.0233	1.382
0.0266	1.782
0.0300	2.057
0.0333	1.888
0.0500	1.788
0.0666	1.401
0.0833	1.432
0.1000	1.388
0.1166	1.344
0.1333	1.307
0.1500	1.257
0.1666	1.219
0.1833	1.182
0.2000	1.157
0.2166	1.126
0.2333	1.088
0.2500	1.082
0.2666	1.038
0.2833	1.013
0.3000	0.975
0.3166	0.950

CEF-17-13S

0.3333	0.919
0.4166	0.819
0.5000	0.731
0.5833	0.638
0.6666	0.550
0.7500	0.487
0.8333	0.437
0.9166	0.394
1.0000	0.356
1.0833	0.306
1.1666	0.275
1.2500	0.250
1.3333	0.237
1.4166	0.212
1.5000	0.181
1.5833	0.168
1.6666	0.156
1.7500	0.137
1.8333	0.125
1.9166	0.112
2.0000	0.100
2.5000	0.081
3.0000	0.043
3.5000	0.043
4.0000	0.012
4.5000	0.037
5.0000	0.018
5.5000	0.012
6.0000	0.031
6.5000	0.018
7.0000	0.037
7.5000	0.012
8.0000	0.018
8.5000	0.006
9.0000	0.018
9.5000	0.006
10.0000	0.025
12.0000	0.018

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S

Version 1.10

04/19/94 07:04:08

===

TEST DESCRIPTION

Data set..........
Data set title..... CEF-17-14I RUN NO.3

Knowns and Constants:
No. of data points.................. 37
Radius of well casing............... 0.083
Radius of well...................... 0.2604
Aquifer saturated thickness......... 54.42
Well screen length.................. 10
Static height of water in well...... 15.18
Log(Re/Rw).......................... 2.509
A, B, C............................. 2.709, 0.440, 0.000

===

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

===

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.2866E-002	+/-	1.1394E-003
y0 =	2.3751E+000	+/-	1.3731E-001

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
Number of residuals............... 37
Number of estimated parameters.... 2
Degrees of freedom................ 35
Residual mean..................... 0.02676
Residual standard deviation....... 0.1564
Residual variance................. 0.02447

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0033	2.743	2.2612	0.48178	1
0.02	1.027	1.7634	-0.73644	1
0.0366	1.466	1.3773	0.088709	1
0.0533	1.065	1.0741	-0.0090979	1
0.07	0.82	0.83765	-0.017649	1
0.0866	0.658	0.65422	0.0037751	1
0.1033	0.513	0.51021	0.0027943	1
0.12	0.444	0.39789	0.046109	1
0.1366	0.357	0.31076	0.046238	1
0.1533	0.3	0.24235	0.057648	1
0.17	0.256	0.189	0.066999	1
0.1866	0.238	0.14761	0.090385	1
0.2033	0.2	0.11512	0.084881	1
0.22	0.162	0.089777	0.072223	1
0.2366	0.156	0.070118	0.085882	1
0.2533	0.131	0.054683	0.076317	1
0.27	0.125	0.042645	0.082355	1
0.2866	0.112	0.033307	0.078693	1
0.3033	0.1	0.025975	0.074025	1
0.3866	0.062	0.0075151	0.054485	1
0.47	0.05	0.0021711	0.047829	1
0.5533	0.031	0.00062814	0.030372	1
0.6366	0.018	0.00018174	0.017818	1
0.72	0.031	5.2503E-005	0.030947	1
0.8033	0.018	1.519E-005	0.017985	1
0.8866	0.031	4.3949E-006	0.030996	1
0.97	0.006	1.2697E-006	0.0059987	1
1.0533	0.006	3.6734E-007	0.0059996	1
1.1366	0.006	1.0628E-007	0.0059999	1
1.22	0.012	3.0704E-008	0.012	1
1.3033	0.012	8.8834E-009	0.012	1
1.3866	0.006	2.5702E-009	0.006	1
1.5533	0.006	2.1483E-010	0.006	1
1.8866	0.006	1.5031E-012	0.006	1
6.47	0.012	3.4742E-042	0.012	1
6.97	0.006	2.0317E-045	0.006	1
11.97	0.006	9.5062E-078	0.006	1

==========

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.2866E-002
y0 =	2.3751E+000

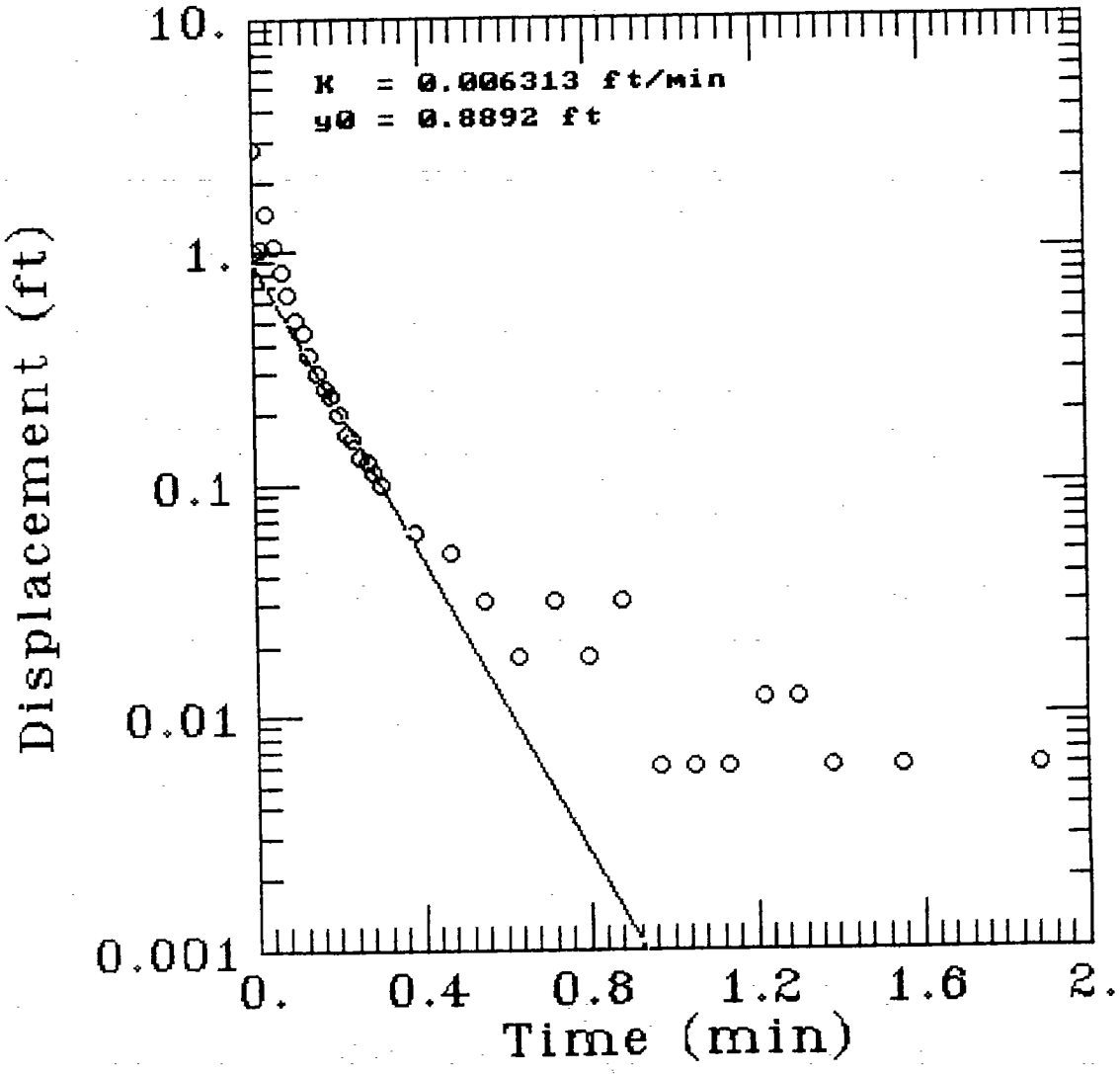
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>

TYPE CURVE DATA

K = 6.31255E-003
y0 = 8.89249E-001

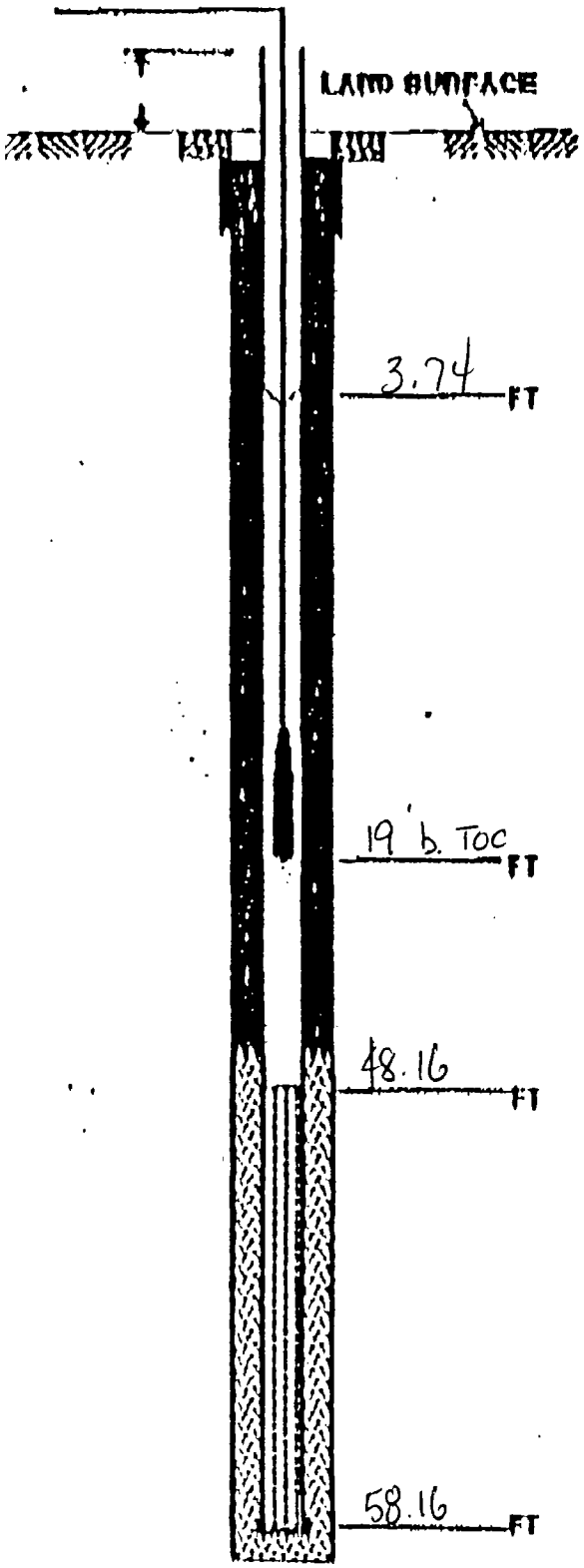
Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	8.892E-001	2.000E+000	4.019E-007		

CEF-17-14I RUN NO.3



#2

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECIL FIELD RI OUS 1, 2, & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-14I PUMPING WELL —

DATE 1-26-94 TIME 1258

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 12 MIN.

TIME OF INSTALLATION 1258

STATIC DEPTH TO WATER 3.74 FT. — PSI

DEPTH OF TRANSDUCER 19' b. TOC

CALIBRATION (b. TOC)

17' DEPTH 13.19 FT. — PSI

18' DEPTH 14.17 FT. — PSI

19' DEPTH 15.18 FT. — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 3.74

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (Y/N)

— VERIFICATION OF DATA ACQUISITION (Y/N)

— VERIFICATION OF DATA ACQUISITION (Y/N)

MAXIMUM PUMPING DEPTH TO WATER — FT. — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT. — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT. — PSI

DEPTH — FT. — PSI

DEPTH — FT. — PSI

SE1000C
Environmental Logger
01/26 15:45

Unit# 01597 Test 1

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-14I

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 01/26 13:27:32

Elapsed Time	INPUT 1
0.0000	-0.006
0.0033	0.000
0.0066	0.006
0.0100	-0.018
0.0133	2.656
0.0166	4.728
0.0200	3.401
0.0233	4.665
0.0266	1.146
0.0300	2.969
0.0333	2.743
0.0500	1.027
0.0666	1.466
0.0833	1.065
0.1000	0.820
0.1166	0.658
0.1333	0.513
0.1500	0.444
0.1666	0.357
0.1833	0.300
0.2000	0.256
0.2166	0.238
0.2333	0.200
0.2500	0.162
0.2666	0.156
0.2833	0.131
0.3000	0.125

CEF-17-14I

0.3166	0.112
0.3333	0.100
0.4166	0.062
0.5000	0.050
0.5833	0.031
0.6666	0.018
0.7500	0.031
0.8333	0.018
0.9166	0.031
1.0000	0.006
1.0833	0.006
1.1666	0.006
1.2500	0.012
1.3333	0.012
1.4166	0.006
1.5000	0.000
1.5833	0.006
1.6666	-0.006
1.7500	-0.006
1.8333	0.000
1.9166	0.006
2.0000	0.000
2.5000	-0.006
3.0000	0.000
3.5000	-0.012
4.0000	-0.006
4.5000	0.000
5.0000	-0.006
5.5000	-0.006
6.0000	-0.006
6.5000	0.012
7.0000	0.006
7.5000	-0.006
8.0000	0.000
8.5000	-0.006
9.0000	0.000
9.5000	-0.012
10.0000	0.000
12.0000	0.006

```
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
                         A Q T E S O L V   R E S U L T S
                                  Version 1.10

04/19/94                                                                  07:08:40

==================================================================================
                                TEST DESCRIPTION

Data set...........
Data set title..... CEF-17-15D RUN NO.1

Knowns and Constants:
   No. of data points.................. 51
   Radius of well casing............... 0.083
   Radius of well...................... 0.2604
   Aquifer saturated thickness......... 85.69
   Well screen length.................. 10
   Static height of water in well...... 9.24
   Log(Re/Rw).......................... 2.253
   A, B, C.............................  2.709,  0.440,  0.000

==================================================================================
                                ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==================================================================================
                      RESULTS FROM STATISTICAL CURVE MATCHING


STATISTICAL MATCH PARAMETER ESTIMATES

           Estimate          Std. Error
   K  =   4.0514E-004 +/-   1.0877E-005
   y0 =   1.4794E+000 +/-   1.4052E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
   Number of residuals............... 51
   Number of estimated parameters.... 2
   Degrees of freedom................ 49
   Residual mean..................... 0.01672
   Residual standard deviation....... 0.04961
   Residual variance................. 0.002462
```

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0167	1.526	1.4665	0.05945	1
0.0333	1.52	1.4539	0.066105	1
0.05	1.482	1.4413	0.040726	1
0.0667	1.469	1.4288	0.040238	1
0.0833	1.444	1.4164	0.027566	1
0.1	1.432	1.4041	0.027862	1
0.1167	1.401	1.3919	0.0090511	1
0.1333	1.388	1.3799	0.0080622	1
0.15	1.382	1.368	0.014041	1
0.1667	1.376	1.3561	0.019916	1
0.1833	1.357	1.3444	0.012618	1
0.2	1.332	1.3327	-0.00071202	1
0.2167	1.319	1.3211	-0.0021431	1
0.2333	1.301	1.3097	-0.0087429	1
0.25	1.282	1.2984	-0.016373	1
0.3333	1.226	1.2431	-0.017119	1
0.4167	1.163	1.1902	-0.027153	1
0.5	1.113	1.1395	-0.026504	1
0.5833	1.044	1.091	-0.047011	1
0.6667	0.988	1.0445	-0.056526	1
0.75	0.944	1.0001	-0.056075	1
0.8333	0.913	0.95751	-0.044515	1
0.9167	0.888	0.91672	-0.028718	1
1	0.825	0.87771	-0.052705	1
1.0833	0.794	0.84035	-0.046353	1
1.1667	0.763	0.80455	-0.041548	1
1.25	0.731	0.77031	-0.039309	1
1.3333	0.706	0.73753	-0.031528	1
1.4167	0.694	0.7061	-0.012104	1
1.5	0.675	0.67605	-0.0010544	1
1.5833	0.625	0.64728	-0.022284	1
1.6667	0.606	0.61971	-0.013705	1
1.75	0.588	0.59333	-0.0053324	1
1.8333	0.575	0.56808	0.006918	1
1.9167	0.544	0.54388	0.0001221	1
2.4167	0.437	0.41892	0.018077	1
2.9167	0.362	0.32268	0.039324	1
3.4167	0.306	0.24854	0.057458	1
3.9167	0.256	0.19144	0.06456	1
4.4167	0.231	0.14746	0.083543	1
4.9167	0.181	0.11358	0.067421	1
5.4167	0.162	0.087484	0.074516	1
5.9167	0.15	0.067385	0.082615	1
6.4167	0.131	0.051904	0.079096	1
6.9167	0.118	0.039979	0.078021	1
7.4167	0.125	0.030794	0.094206	1
7.9167	0.093	0.023719	0.069281	1
8.4167	0.087	0.01827	0.06873	1
8.9167	0.1	0.014072	0.085928	1
9.4167	0.081	0.010839	0.070161	1
9.9167	0.093	0.0083488	0.084651	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

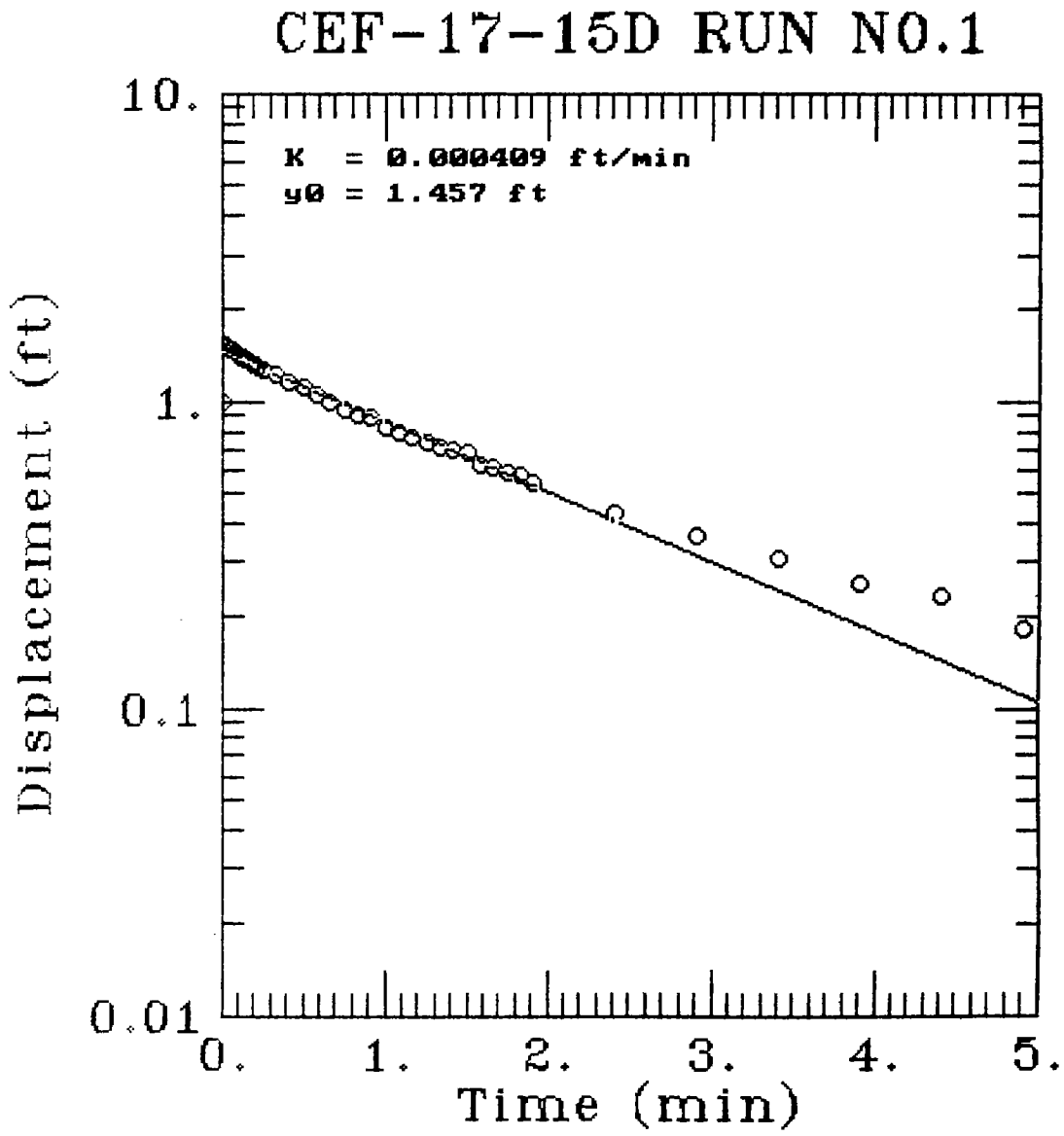
```
          Estimate
   K  =   4.0514E-004
   y0 =   1.4794E+000
```

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

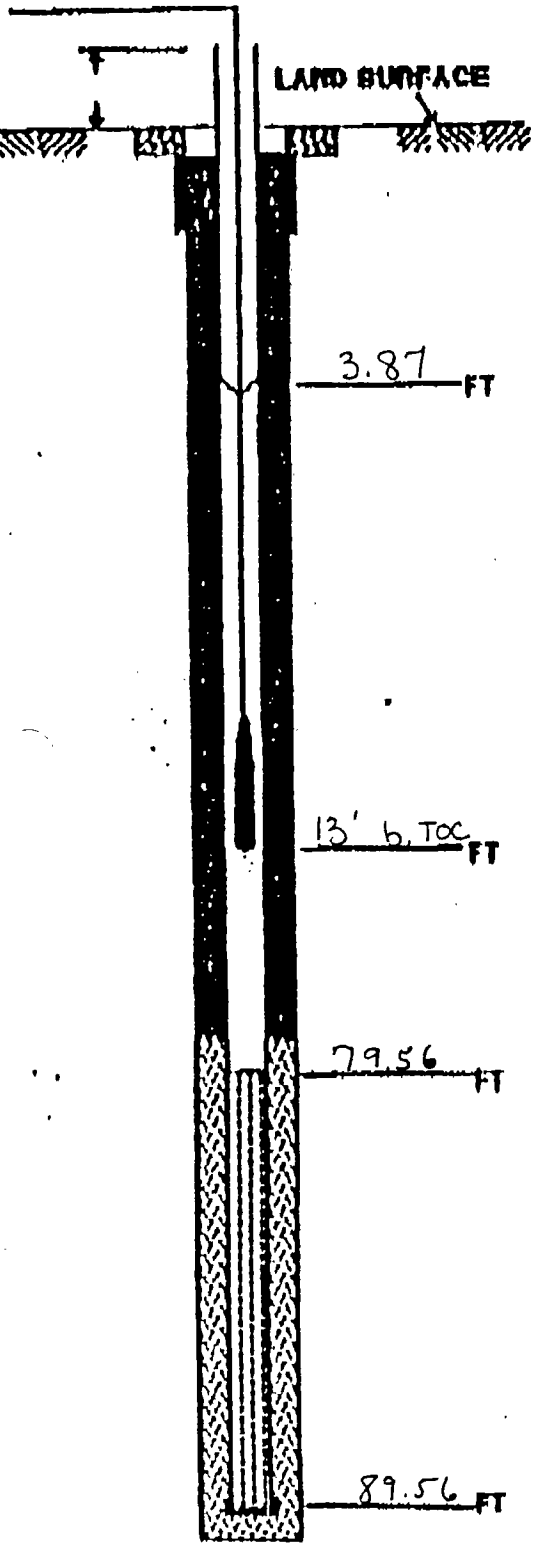
TYPE CURVE DATA

```
     K  = 4.08982E-004
     y0 = 1.45650E+000
```

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.457E+000	5.000E+000	1.044E-001		


CEF-17-15D RUN NO.1
K = 0.000409 ft/min
y0 = 1.457 ft
10.
1.
0.1
0.01
Displacement (ft)
0.
1.
2.
3.
4.
5.
Time (min)

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECIL FIELD RI OUs 1,2 & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-15D PUMPING WELL —

DATE 1-26-94 TIME 0908

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 10 MIN

TIME OF INSTALLATION 0908

STATIC DEPTH TO WATER 3.87 FT. — PSI

DEPTH OF TRANSDUCER 13' b. TOC

b.TOC. CALIBRATION

11' DEPTH 7.96 FT — PSI

12' DEPTH 8.26 FT — PSI

13' DEPTH 9.24 FT — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 3.87

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (HR)

— VERIFICATION OF DATA ACQUISITION (HR)

— VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER — FT — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

SE1000C
Environmental Logger
01/26 10:26

Unit# 01597 Test 2

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-15D

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 01/26 09:10:11

Elapsed Time	INPUT 1
0.0000	0.000
0.0033	0.000
0.0066	-0.006
0.0100	-0.006
0.0133	-0.006
0.0166	0.306
0.0200	0.538
0.0233	1.232
0.0266	1.701
0.0300	2.820
0.0333	2.776
0.0500	1.657
0.0666	1.576
0.0833	1.638
0.1000	1.526
0.1166	1.520
0.1333	1.482
0.1500	1.469
0.1666	1.444
0.1833	1.432
0.2000	1.401
0.2166	1.388
0.2333	1.382
0.2500	1.376
0.2666	1.357
0.2833	1.332
0.3000	1.319

CEF-17-15D

0.3166	1.301
0.3333	1.282
0.4166	1.226
0.5000	1.163
0.5833	1.113
0.6666	1.044
0.7500	0.988
0.8333	0.944
0.9166	0.913
1.0000	0.888
1.0833	0.825
1.1666	0.794
1.2500	0.763
1.3333	0.731
1.4166	0.706
1.5000	0.694
1.5833	0.675
1.6666	0.625
1.7500	0.606
1.8333	0.588
1.9166	0.575
2.0000	0.544
2.5000	0.437
3.0000	0.362
3.5000	0.306
4.0000	0.256
4.5000	0.231
5.0000	0.181
5.5000	0.162
6.0000	0.150
6.5000	0.131
7.0000	0.118
7.5000	0.125
8.0000	0.093
8.5000	0.087
9.0000	0.100
9.5000	0.081
10.0000	0.093

```
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
```

A Q T E S O L V   R E S U L T S

Version 1.10

04/19/94 07:13:02

TEST DESCRIPTION

```
Data set...........
Data set title..... CEF-17-16S RUN NO.3

Knowns and Constants:
   No. of data points.................. 44
   Radius of well casing............... 0.083
   Radius of well...................... 0.2604
   Aquifer saturated thickness......... 13.94
   Well screen length.................. 10
   Static height of water in well...... 10.19
   Log(Re/Rw).......................... 2.493
   A, B, C.............................  2.709,  0.440,  0.000
```

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	2.1082E-003	+/-	3.6260E-005
y0 =	1.2710E+000	+/-	9.8847E-003

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

```
Weighted Residual Statistics:
   Number of residuals................ 44
   Number of estimated parameters.... 2
   Degrees of freedom................ 42
   Residual mean..................... 0.007988
   Residual standard deviation....... 0.02028
   Residual variance................. 0.0004114
```

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0167	1.27	1.2199	0.050072	1
0.0333	1.207	1.1712	0.035786	1
0.05	1.145	1.1242	0.020831	1
0.0667	1.082	1.079	0.002987	1
0.0833	1.038	1.0359	0.0020744	1
0.1	0.988	0.99431	-0.0063146	1
0.1167	0.932	0.95438	-0.022375	1
0.1333	0.894	0.91626	-0.022265	1
0.15	0.857	0.87946	-0.02246	1
0.1667	0.819	0.84413	-0.025134	1
0.1833	0.794	0.81043	-0.016426	1
0.2	0.757	0.77787	-0.020873	1
0.2167	0.738	0.74663	-0.0086274	1
0.2333	0.7	0.71681	-0.016813	1
0.25	0.682	0.68802	-0.00602	1
0.3333	0.544	0.56078	-0.016778	1
0.4167	0.444	0.45696	-0.012955	1
0.5	0.369	0.37245	-0.0034459	1
0.5833	0.312	0.30357	0.0084343	1
0.6667	0.256	0.24736	0.0086365	1
0.75	0.225	0.20162	0.023384	1
0.8333	0.175	0.16433	0.010671	1
0.9167	0.156	0.13391	0.022095	1
1	0.131	0.10914	0.021859	1
1.0833	0.112	0.088956	0.023044	1
1.1667	0.093	0.072487	0.020513	1
1.25	0.093	0.059081	0.033919	1
1.3333	0.056	0.048155	0.0078453	1
1.4167	0.05	0.039239	0.010761	1
1.5	0.062	0.031982	0.030018	1
1.5833	0.056	0.026068	0.029932	1
1.6667	0.043	0.021241	0.021759	1
1.75	0.037	0.017313	0.019687	1
1.8333	0.043	0.014111	0.028889	1
1.9167	0.025	0.011499	0.013501	1
2.4167	0.018	0.0033695	0.01463	1
3.4167	0.018	0.00028935	0.017711	1
3.9167	0.006	8.479E-005	0.0059152	1
6.9167	0.006	5.3689E-008	0.0059999	1
7.4167	0.006	1.5733E-008	0.006	1
7.9167	0.025	4.6104E-009	0.025	1
8.4167	0.012	1.351E-009	0.012	1
8.9167	0.006	3.959E-010	0.006	1
9.9167	0.012	3.3996E-011	0.012	1

==========

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	2.1082E-003
y0 =	1.2710E+000

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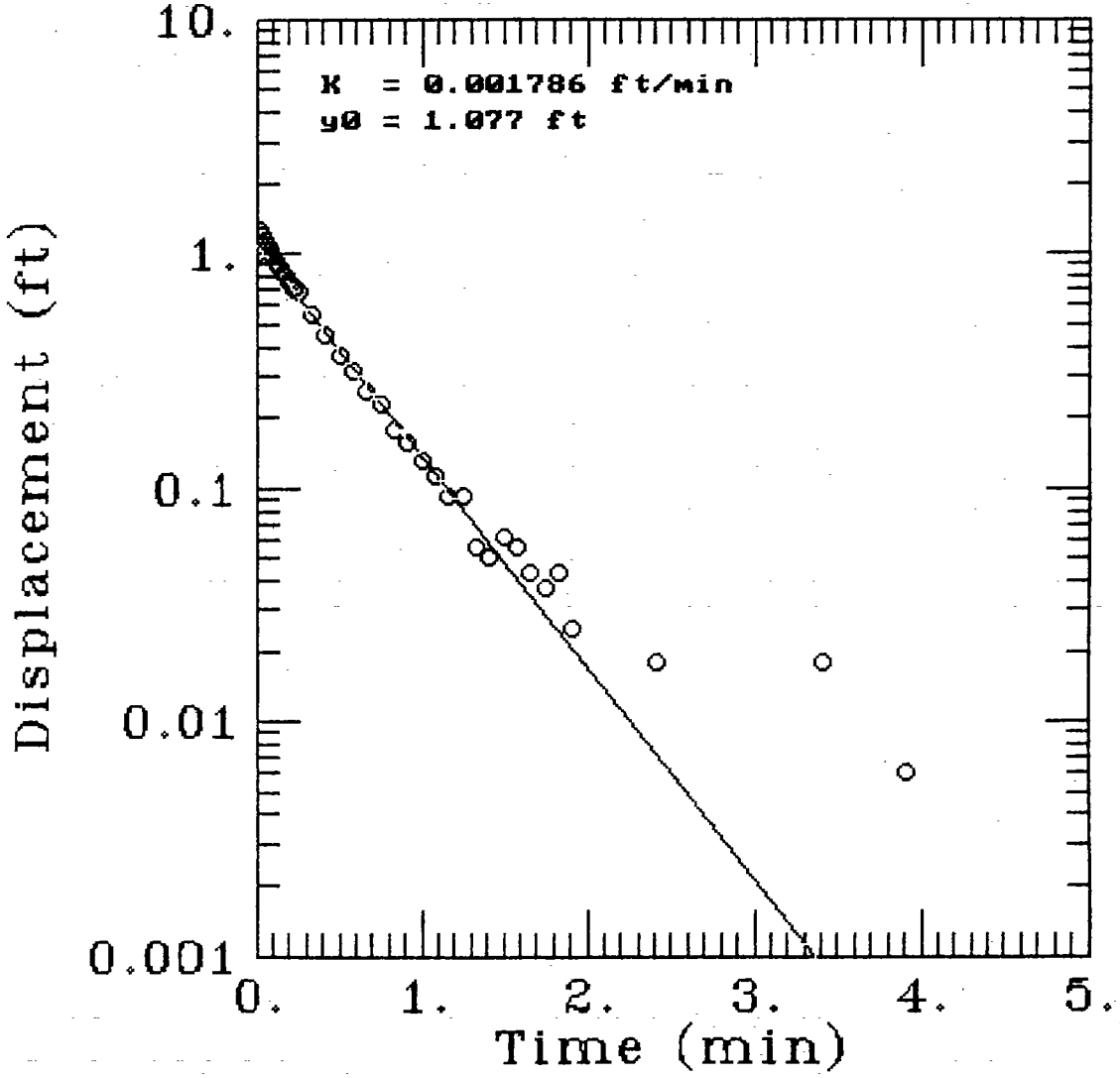
TYPE CURVE DATA

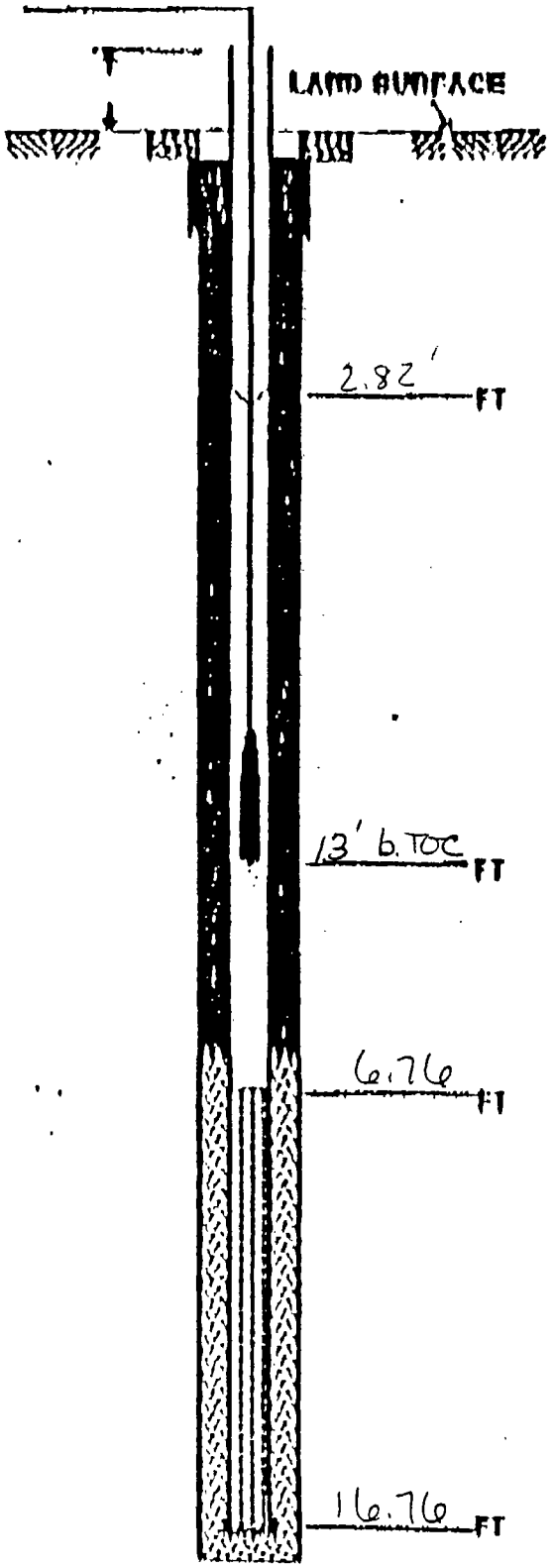
K = 1.78638E-003
y0 = 1.07685E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.077E+000	5.000E+000	3.275E-005		

CEF-17-16S RUN NO.3



AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECIL FIELD RI OUS 1, 2, & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-165 PUMPING WELL —

DATE 2-1-94 TIME 1543

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 12 MIN.

TIME OF INSTALLATION BTX 1543

STATIC DEPTH TO WATER 2.82 FT. — PSI

DEPTH OF TRANSDUCER 13' b.TOC

b.TOC. CALIBRATION

11' DEPTH 8.19 FT — PSI

12' DEPTH 9.20 FT — PSI

13' DEPTH 10.19 FT — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 2.82

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (IN)

— VERIFICATION OF DATA ACQUISITION (IN)

— VERIFICATION OF DATA ACQUISITION (IN)

MAXIMUM PUMPING DEPTH TO WATER — FT — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

SE1000C
Environmental Logger
02/01 17:12

Unit# 01597 Test 7

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-16S

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 02/01 15:53:06

Elapsed Time	INPUT 1
0.0000	-0.012
0.0033	-0.006
0.0066	0.006
0.0100	0.050
0.0133	0.425
0.0166	0.744
0.0200	0.901
0.0233	1.126
0.0266	1.057
0.0300	0.988
0.0333	1.370
0.0500	0.500
0.0666	1.326
0.0833	1.345
0.1000	1.270
0.1166	1.207
0.1333	1.145
0.1500	1.082
0.1666	1.038
0.1833	0.988
0.2000	0.932
0.2166	0.894
0.2333	0.857
0.2500	0.819
0.2666	0.794
0.2833	0.757
0.3000	0.738

CEF-17-16S

0.3166	0.700
0.3333	0.682
0.4166	0.544
0.5000	0.444
0.5833	0.369
0.6666	0.312
0.7500	0.256
0.8333	0.225
0.9166	0.175
1.0000	0.156
1.0833	0.131
1.1666	0.112
1.2500	0.093
1.3333	0.093
1.4166	0.056
1.5000	0.050
1.5833	0.062
1.6666	0.056
1.7500	0.043
1.8333	0.037
1.9166	0.043
2.0000	0.025
2.5000	0.018
3.0000	-0.006
3.5000	0.018
4.0000	0.006
4.5000	-0.006
5.0000	0.000
5.5000	0.000
6.0000	-0.012
6.5000	0.000
7.0000	0.006
7.5000	0.006
8.0000	0.025
8.5000	0.012
9.0000	0.006
9.5000	0.000
10.0000	0.012

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A Q T E S O L V   R E S U L T S

Version 1.10

04/19/94 07:39:48

TEST DESCRIPTION

Data set...........
Data set title..... CEF-17-17I RUN NO.7

Knowns and Constants:
- No. of data points.................. 53
- Radius of well casing............... 0.083
- Radius of well...................... 0.2604
- Aquifer saturated thickness......... 54.76
- Well screen length.................. 10
- Static height of water in well...... 15.83
- Log(Re/Rw).......................... 2.527
- A, B, C............................. 2.709, 0.440, 0.000

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	3.5549E-002	+/-	3.5455E-003
y0 =	2.9149E+000	+/-	2.9631E-001

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals............... 53
- Number of estimated parameters.... 2
- Degrees of freedom................ 51
- Residual mean..................... 0.0495
- Residual standard deviation....... 0.07778
- Residual variance................. 0.00605

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0167	1.504	1.4737	0.030328	1
0.0333	0.72	0.7481	-0.028097	1
0.05	0.288	0.37822	-0.090217	1
0.0667	0.131	0.19122	-0.060216	1
0.0833	0.156	0.097069	0.058931	1
0.1	0.194	0.049075	0.14492	1
0.1167	0.225	0.024811	0.20019	1
0.1333	0.213	0.012595	0.2004	1
0.15	0.181	0.0063678	0.17463	1
0.1667	0.156	0.0032194	0.15278	1
0.1833	0.137	0.0016343	0.13537	1
0.2	0.119	0.00082625	0.11817	1
0.2167	0.119	0.00041773	0.11858	1
0.2333	0.112	0.00021206	0.11179	1
0.25	0.119	0.00010721	0.11889	1
0.2667	0.1	5.4202E-005	0.099946	1
0.2833	0.112	2.7515E-005	0.11197	1
0.3	0.087	1.3911E-005	0.086986	1
0.3833	0.075	4.6326E-007	0.075	1
0.4667	0.062	1.5364E-008	0.062	1
0.55	0.05	5.1165E-010	0.05	1
0.6333	0.037	1.7039E-011	0.037	1
0.7167	0.037	5.651E-013	0.037	1
0.8	0.031	1.8819E-014	0.031	1
0.8833	0.043	6.2669E-016	0.043	1
0.9667	0.025	2.0785E-017	0.025	1
1.05	0.025	6.9216E-019	0.025	1
1.1333	0.037	2.305E-020	0.037	1
1.2167	0.031	7.6447E-022	0.031	1
1.3	0.018	2.5458E-023	0.018	1
1.3833	0.037	8.4779E-025	0.037	1
1.4667	0.037	2.8118E-026	0.037	1
1.55	0.006	9.3636E-028	0.006	1
1.6333	0.031	3.1182E-029	0.031	1
1.7167	0.025	1.0342E-030	0.025	1
1.8	0.037	3.444E-032	0.037	1
1.8833	0.006	1.1469E-033	0.006	1
1.9667	0.025	3.8037E-035	0.025	1
2.4667	0.012	5.1457E-044	0.012	1
2.9667	0.006	6.9611E-053	0.006	1
3.4667	0.037	9.417E-062	0.037	1
3.9667	0.025	1.2739E-070	0.025	1
4.4667	0.012	1.7234E-079	0.012	1
4.9667	0.012	2.3314E-088	0.012	1
5.4667	0.025	3.1539E-097	0.025	1
5.9667	0.018	4.2666E-106	0.018	1
6.4667	0.012	5.7718E-115	0.012	1
7.4667	0.025	1.0563E-132	0.025	1
7.9667	0.012	1.4289E-141	0.012	1
8.4667	0.018	1.9331E-150	0.018	1
8.9667	0.006	2.615E-159	0.006	1
9.4667	0.018	3.5376E-168	0.018	1
9.9667	0.025	4.7857E-177	0.025	1

RESULTS FROM VISUAL CURVE MATCHING

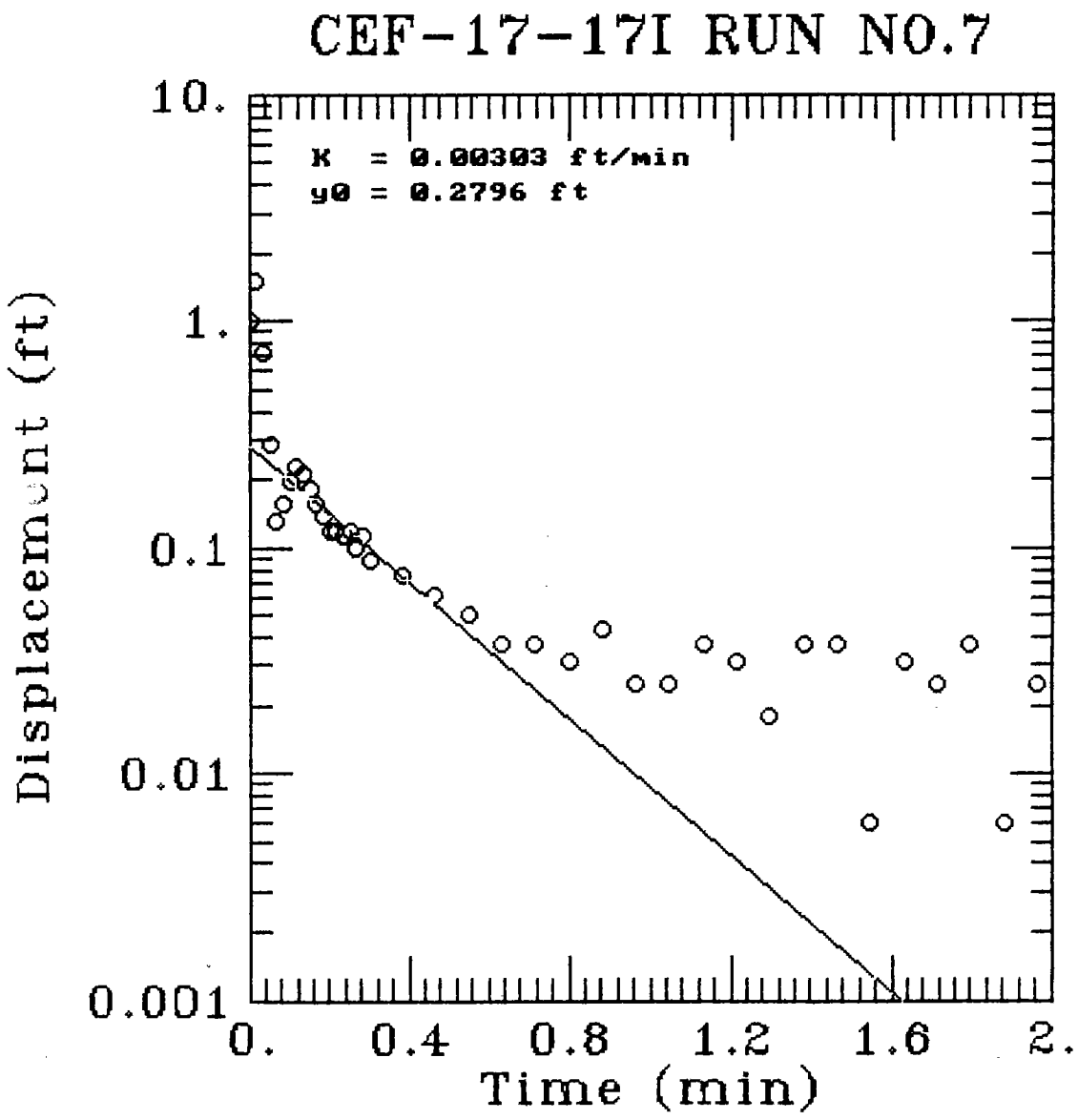
VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	3.5549E-002
y0 =	2.9149E+000

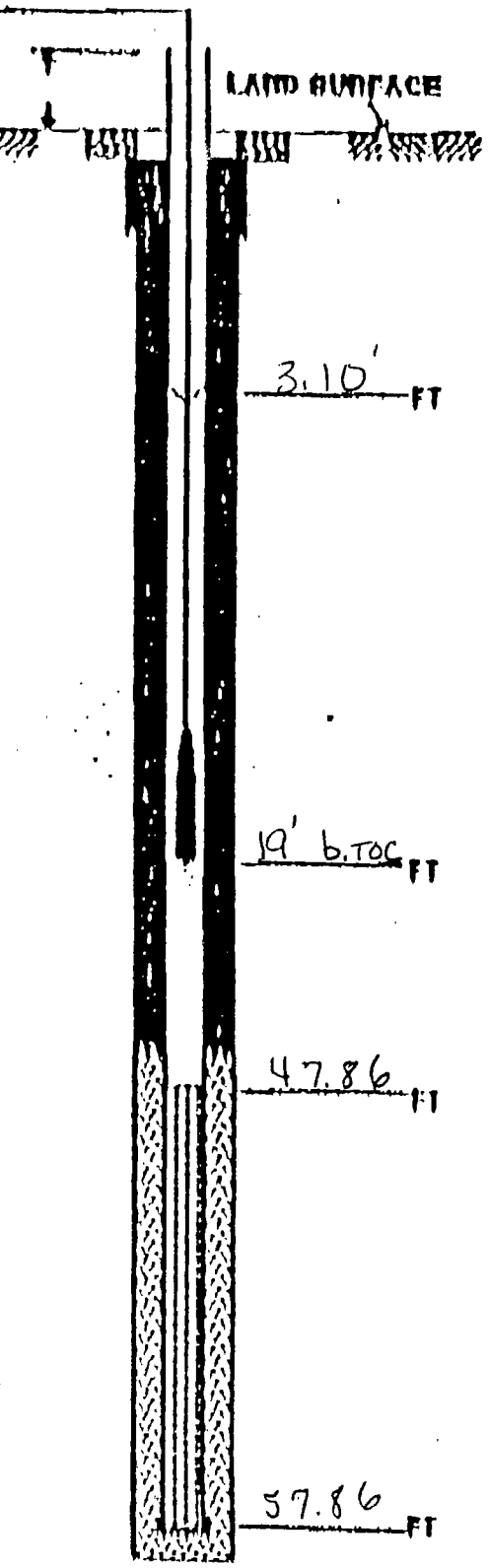
TYPE CURVE DATA

K = 3.02955E-003
y0 = 2.79589E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	2.796E-001	2.000E+000	2.650E-004		


CEF-17-17I RUN NO.7
K = 0.00303 ft/min
y0 = 0.2796 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
0.4
0.8
1.2
1.6
2.
Time (min)

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECIL FIELD RI OUS 1, 2, & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-17I PUMPING WELL —

DATE 2-7-94 TIME 0845

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 10 min.

TIME OF INSTALLATION 0845

STATIC DEPTH TO WATER 3.10' FT. — PSI

DEPTH OF TRANSDUCER 19' b.TOC

CALIBRATION

b.TOC.

17' DEPTH 13.86 FT — PSI

18' DEPTH 14.85 FT — PSI

19' DEPTH 15.83 FT — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 3.10'

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (INI)

— VERIFICATION OF DATA ACQUISITION (INI)

— VERIFICATION OF DATA ACQUISITION (INI)

MAXIMUM PUMPING DEPTH TO WATER — FT — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

SE1000C
Environmental Logger
02/07 12:22

Unit# 01597 Test 1

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-17I

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 02/07 09:28:53

Elapsed Time	INPUT 1
0.0000	0.018
0.0033	0.012
0.0066	0.006
0.0100	0.927
0.0133	0.689
0.0166	0.745
0.0200	1.222
0.0233	1.228
0.0266	1.297
0.0300	1.416
0.0333	1.742
0.0500	1.504
0.0666	0.720
0.0833	0.288
0.1000	0.131
0.1166	0.156
0.1333	0.194
0.1500	0.225
0.1666	0.213
0.1833	0.181
0.2000	0.156
0.2166	0.137
0.2333	0.119
0.2500	0.119
0.2666	0.112
0.2833	0.119
0.3000	0.100

CEF-17-17I

0.3166	0.112
0.3333	0.087
0.4166	0.075
0.5000	0.062
0.5833	0.050
0.6666	0.037
0.7500	0.037
0.8333	0.031
0.9166	0.043
1.0000	0.025
1.0833	0.025
1.1666	0.037
1.2500	0.031
1.3333	0.018
1.4166	0.037
1.5000	0.037
1.5833	0.006
1.6666	0.031
1.7500	0.025
1.8333	0.037
1.9166	0.006
2.0000	0.025
2.5000	0.012
3.0000	0.006
3.5000	0.037
4.0000	0.025
4.5000	0.012
5.0000	0.012
5.5000	0.025
6.0000	0.018
6.5000	0.012
7.0000	-0.006
7.5000	0.025
8.0000	0.012
8.5000	0.018
9.0000	0.006
9.5000	0.018
10.0000	0.025

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A Q T E S O L V   R E S U L T S

Version 1.10

04/19/94

07:44:40

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TEST DESCRIPTION

Data set...........
Data set title..... CEF-17-18D RUN NO.2

Knowns and Constants:
No. of data points.................. 53
Radius of well casing............... 0.083
Radius of well...................... 0.2604
Aquifer saturated thickness......... 83.69
Well screen length.................. 10
Static height of water in well...... 14.74
Log(Re/Rw).......................... 2.457
A, B, C............................. 2.709, 0.440, 0.000

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ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

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RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	2.4624E-003	+/-	5.3647E-005
y0 =	2.6837E+000	+/-	2.7999E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
Number of residuals............... 53
Number of estimated parameters.... 2
Degrees of freedom................ 51
Residual mean..................... 0.02836
Residual standard deviation....... 0.05231
Residual variance................. 0.002736

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0167	2.662	2.5564	0.10559	1
0.0334	2.493	2.4352	0.057843	1
0.05	2.361	2.3203	0.040672	1
0.0667	2.23	2.2103	0.01973	1
0.0834	2.111	2.1054	0.005567	1
0.1	1.992	2.0062	-0.014152	1
0.1167	1.879	1.911	-0.031996	1
0.1334	1.785	1.8204	-0.035354	1
0.15	1.697	1.7345	-0.037516	1
0.1667	1.622	1.6522	-0.030245	1
0.1834	1.541	1.5739	-0.032876	1
0.2	1.447	1.4997	-0.05266	1
0.2167	1.372	1.4285	-0.056528	1
0.2334	1.309	1.3608	-0.051771	1
0.25	1.259	1.2966	-0.037604	1
0.2667	1.196	1.2351	-0.039104	1
0.35	0.933	0.96925	-0.036251	1
0.4334	0.764	0.7604	0.0035985	1
0.5167	0.601	0.59673	0.0042727	1
0.6	0.495	0.46828	0.026716	1
0.6834	0.413	0.36738	0.04562	1
0.7667	0.338	0.2883	0.049697	1
0.85	0.294	0.22625	0.067754	1
0.9334	0.238	0.1775	0.060504	1
1.0167	0.225	0.13929	0.08571	1
1.1	0.188	0.10931	0.078692	1
1.1834	0.156	0.085755	0.070245	1
1.2667	0.15	0.067297	0.082703	1
1.35	0.112	0.052811	0.059189	1
1.4334	0.125	0.041432	0.083568	1
1.5167	0.119	0.032514	0.086486	1
1.6	0.112	0.025515	0.086485	1
1.6834	0.106	0.020017	0.085983	1
1.7667	0.075	0.015709	0.059291	1
1.85	0.075	0.012327	0.062673	1
1.9334	0.075	0.0096711	0.065329	1
2.4334	0.043	0.0022575	0.040743	1
2.9334	0.037	0.00052695	0.036473	1
3.4334	0.05	0.000123	0.049877	1
3.9334	0.037	2.8712E-005	0.036971	1
4.4334	0.056	6.702E-006	0.055993	1
4.9334	0.037	1.5644E-006	0.036998	1
5.4334	0.018	3.6517E-007	0.018	1
5.9334	0.037	8.5239E-008	0.037	1
6.4334	0.031	1.9897E-008	0.031	1
6.9334	0.037	4.6444E-009	0.037	1
7.4334	0.037	1.0841E-009	0.037	1
7.9334	0.018	2.5306E-010	0.018	1
8.4334	0.012	5.907E-011	0.012	1
8.9334	0.037	1.3788E-011	0.037	1
9.4334	0.031	3.2185E-012	0.031	1
9.9334	0.025	7.5127E-013	0.025	1
11.933	0.025	2.2304E-015	0.025	1

RESULTS FROM VISUAL CURVE MATCHING

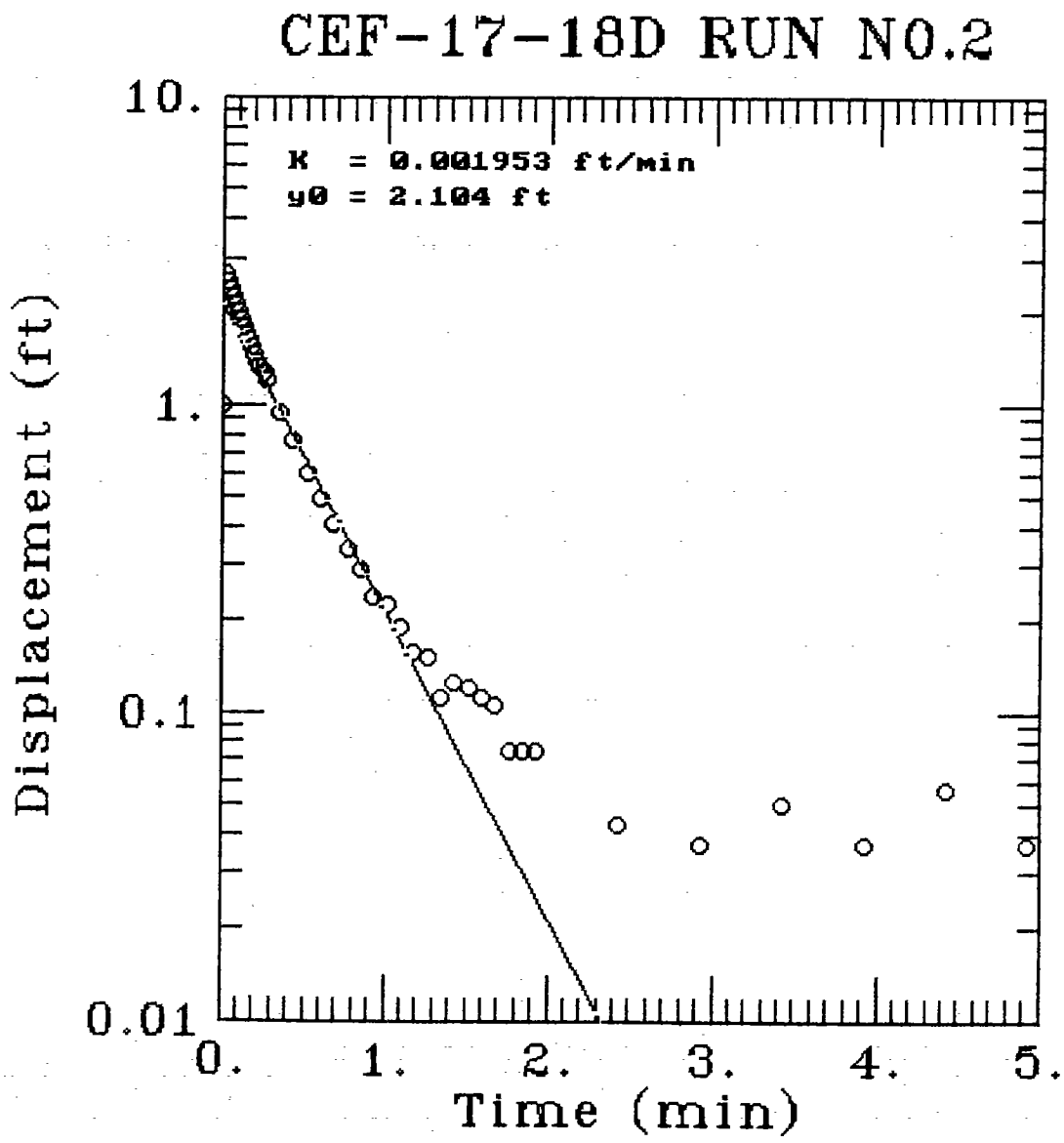
VISUAL MATCH PARAMETER ESTIMATES

		Estimate
K	=	2.4624E-003
y0	=	2.6837E+000

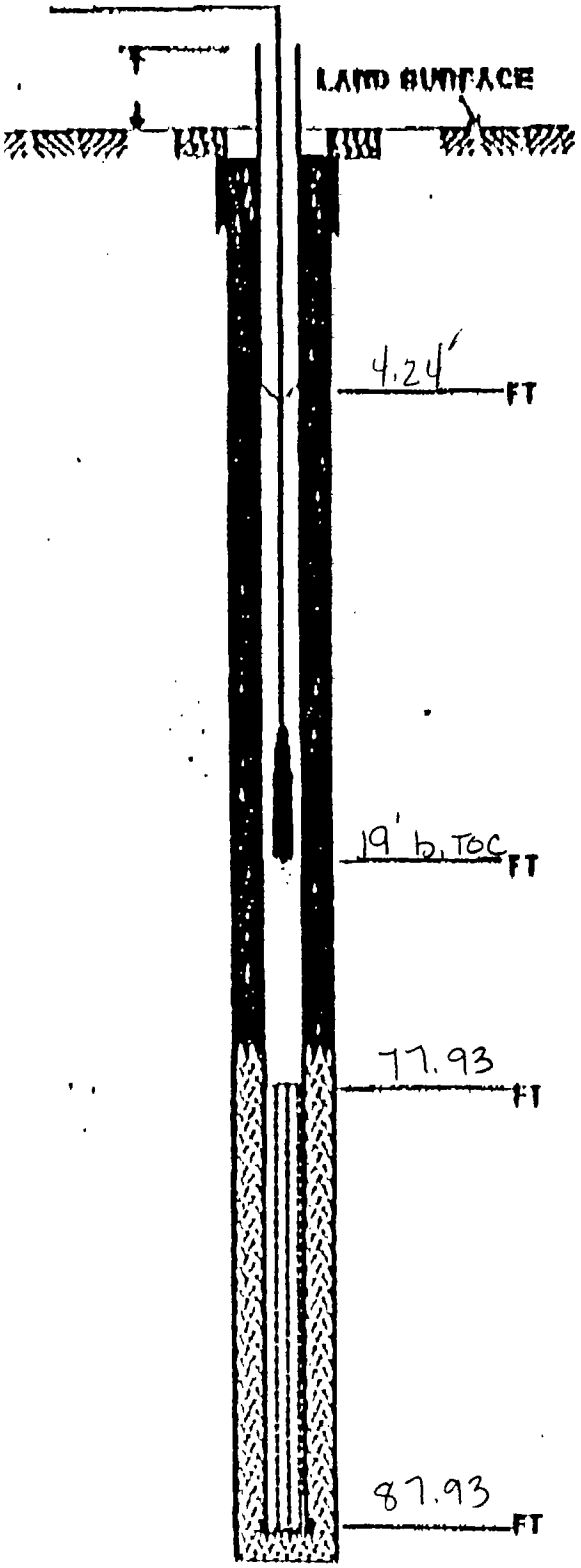
TYPE CURVE DATA

K = 1.95336E-003
y0 = 2.10366E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	2.104E+000	5.000E+000	2.045E-005		


CEF-17-18D RUN NO.2
K = 0.001953 ft/min
y0 = 2.104 ft
10.
1.
0.1
0.01
Displacement (ft)
0.
1.
2.
3.
4.
5.
Time (min)

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECIL FIELD RI OUS 1, 2, & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-18D PUMPING WELL —

DATE 1-31-94 TIME 1523

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 10 MIN

TIME OF INSTALLATION 1523

STATIC DEPTH TO WATER 4.24' FT. — PSI

DEPTH OF TRANSDUCER 19' b.TOC

b.TOC. CALIBRATION

17' DEPTH 12.76 FT. — PSI

18' DEPTH 13.76 FT. — PSI

19' DEPTH 14.74 FT. — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 4.24'

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (HR)

— VERIFICATION OF DATA ACQUISITION (HR)

— VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER — FT. — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT. — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

r2

SE1000C
Environmental Logger
01/31 17:33

Unit# 01597 Test 2

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-18D

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 01/31 15:32:10

Elapsed Time	INPUT 1
0.0000	-0.006
0.0033	-0.006
0.0066	0.018
0.0100	0.012
0.0133	-0.006
0.0166	2.486
0.0200	4.296
0.0233	3.037
0.0266	3.814
0.0300	3.031
0.0333	3.119
0.0500	2.831
0.0666	3.344
0.0833	2.662
0.1000	2.493
0.1166	2.361
0.1333	2.230
0.1500	2.111
0.1666	1.992
0.1833	1.879
0.2000	1.785
0.2166	1.697
0.2333	1.622
0.2500	1.541
0.2666	1.447
0.2833	1.372
0.3000	1.309
0.3166	1.259
0.3333	1.196

CEF-17-18D

0.4166	0.933
0.5000	0.764
0.5833	0.601
0.6666	0.495
0.7500	0.413
0.8333	0.338
0.9166	0.294
1.0000	0.238
1.0833	0.225
1.1666	0.188
1.2500	0.156
1.3333	0.150
1.4166	0.112
1.5000	0.125
1.5833	0.119
1.6666	0.112
1.7500	0.106
1.8333	0.075
1.9166	0.075
2.0000	0.075
2.5000	0.043
3.0000	0.037
3.5000	0.050
4.0000	0.037
4.5000	0.056
5.0000	0.037
5.5000	0.018
6.0000	0.037
6.5000	0.031
7.0000	0.037
7.5000	0.037
8.0000	0.018
8.5000	0.012
9.0000	0.037
9.5000	0.031
10.0000	0.025
12.0000	0.025

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<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
                         A Q T E S O L V   R E S U L T S
                                  Version  1.10

04/19/94                                                                07:53:54

================================================================================
                                TEST DESCRIPTION

Data set...........
Data set title..... CEF-17-19S RUN NO.3

Knowns and Constants:
   No. of data points.................. 41
   Radius of well casing............... 0.083
   Radius of well...................... 0.2604
   Aquifer saturated thickness......... 14.51
   Well screen length.................. 10
   Static height of water in well...... 10.1
   Log(Re/Rw).......................... 2.477
   A, B, C.............................  2.709,  0.440,  0.000

================================================================================
                                ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

================================================================================
                    RESULTS FROM STATISTICAL CURVE MATCHING


STATISTICAL MATCH PARAMETER ESTIMATES

            Estimate          Std. Error
   K  =   2.1597E-003 +/-   2.6394E-005
   y0 =   1.3065E+000 +/-   7.4592E-003

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
   Number of residuals............... 41
   Number of estimated parameters.... 2
   Degrees of freedom................ 39
   Residual mean..................... 0.003525
   Residual standard deviation....... 0.01506
   Residual variance................. 0.0002267
```

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0166	1.295	1.2527	0.042304	1
0.0333	1.213	1.2008	0.012151	1
0.05	1.157	1.1511	0.0058526	1
0.0666	1.107	1.1038	0.0032176	1
0.0833	1.051	1.0581	-0.0070986	1
0.1	1.001	1.0143	-0.013305	1
0.1166	0.969	0.97257	-0.003571	1
0.1333	0.926	0.93232	-0.0063178	1
0.15	0.888	0.89373	-0.0057305	1
0.1666	0.851	0.85696	-0.0059572	1
0.1833	0.807	0.82149	-0.014489	1
0.2	0.788	0.78749	0.00051112	1
0.2166	0.744	0.75509	-0.011087	1
0.2333	0.707	0.72384	-0.016835	1
0.25	0.675	0.69388	-0.018877	1
0.2666	0.675	0.66533	0.0096735	1
0.2833	0.625	0.63779	-0.01279	1
0.3666	0.5	0.51655	-0.016548	1
0.45	0.406	0.41825	-0.012248	1
0.5333	0.356	0.33874	0.01726	1
0.6166	0.281	0.27435	0.0066533	1
0.7	0.231	0.22214	0.008862	1
0.7833	0.206	0.17991	0.02609	1
0.8666	0.156	0.14571	0.01029	1
0.95	0.15	0.11798	0.032019	1
1.0333	0.106	0.095553	0.010447	1
1.1166	0.075	0.077389	-0.0023888	1
1.2	0.087	0.062662	0.024338	1
1.2833	0.05	0.05075	-0.00074979	1
1.3666	0.05	0.041102	0.0088976	1
1.45	0.037	0.033281	0.0037195	1
1.5333	0.025	0.026954	-0.001954	1
1.6166	0.056	0.02183	0.03417	1
1.7	0.031	0.017676	0.013324	1
1.7833	0.006	0.014316	-0.0083157	1
1.8666	0.006	0.011594	-0.0055943	1
1.95	0.025	0.0093879	0.015612	1
2.95	0.006	0.00074701	0.005253	1
3.45	0.006	0.00021072	0.0057893	1
3.95	0.006	5.944E-005	0.0059406	1
6.45	0.006	1.0616E-007	0.0059999	1

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RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

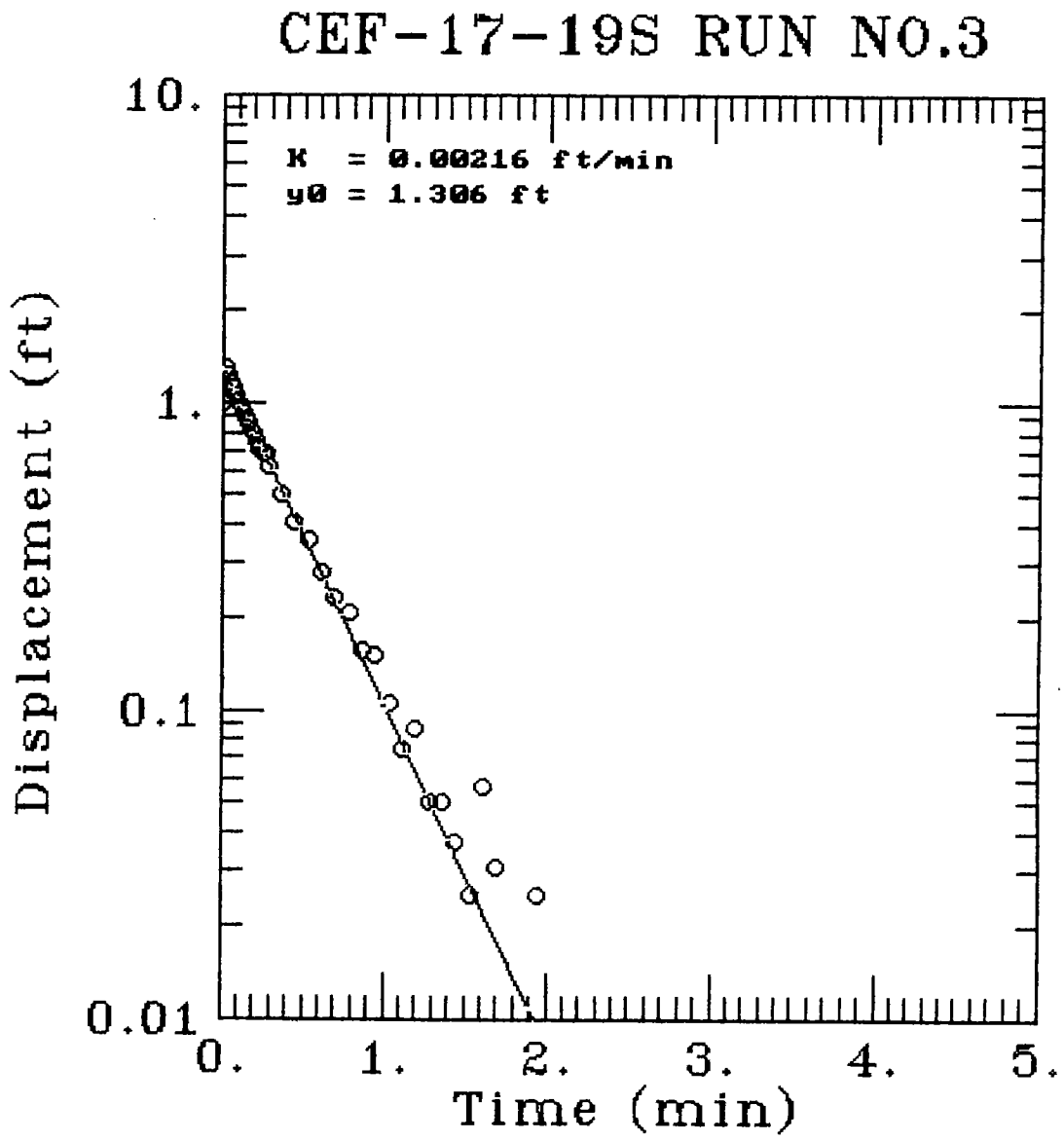
	Estimate
K =	2.1597E-003
y0 =	1.3065E+000

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

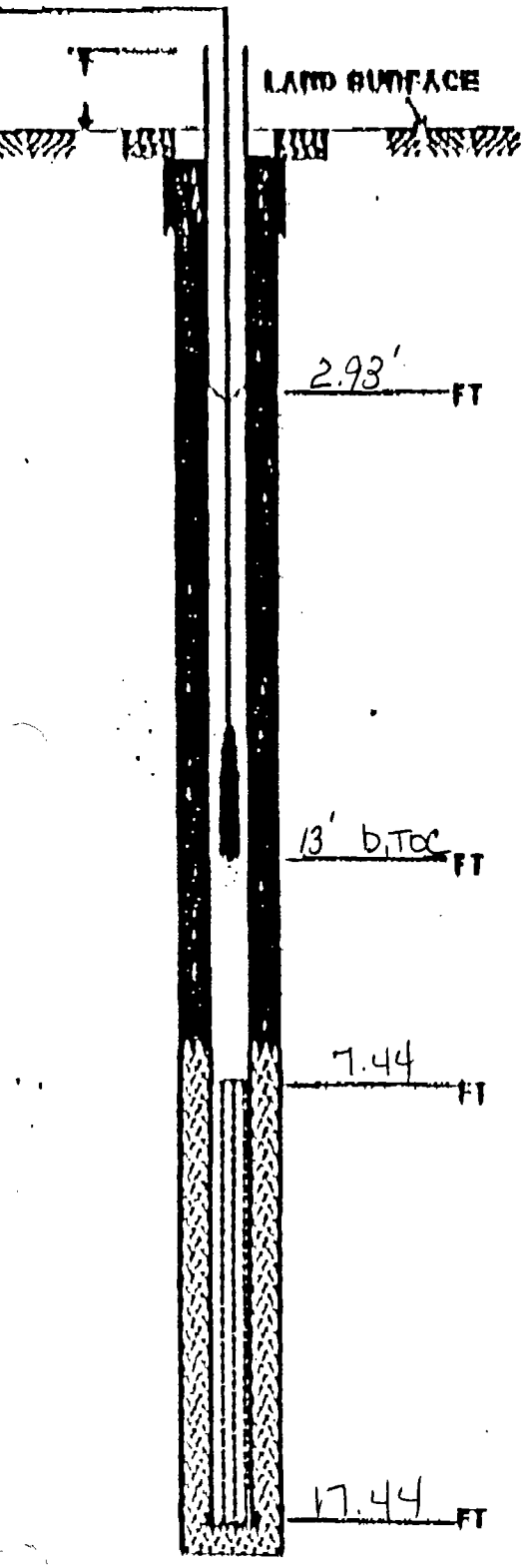
TYPE CURVE DATA

K = 2.15975E-003
y0 = 1.30645E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.306E+000	5.000E+000	4.168E-006		


CEF-17-19S RUN NO.3
K = 0.00216 ft/min
y0 = 1.306 ft
10.
1.
0.1
0.01
Displacement (ft)
0.
1.
2.
3.
4.
5.
Time (min)

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECIL FIELD RI OUS 1, 2, & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-19S PUMPING WELL —

DATE 1-31-94 TIME 1022

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 12 MIN.

TIME OF INSTALLATION 1022

STATIC DEPTH TO WATER 2.93' FT. — PSI

DEPTH OF TRANSDUCER 13' b.TOC

b.TOC CALIBRATION

11' DEPTH 8.13 FT — PSI

12' DEPTH 9.10 FT — PSI

13' DEPTH 10.10 FT — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 2.93'

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (1 hr)

— VERIFICATION OF DATA ACQUISITION (1 hr)

— VERIFICATION OF DATA ACQUISITION (1 hr)

MAXIMUM PUMPING DEPTH TO WATER — FT — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

r 3

SE1000C
Environmental Logger
01/31 12:40

Unit# 01597 Test 3

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-19S

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 01/31 10:33:08

Elapsed Time	INPUT 1
0.0000	-0.031
0.0033	-0.025
0.0066	-0.006
0.0100	-0.018
0.0133	-0.031
0.0166	0.156
0.0200	1.420
0.0233	1.632
0.0266	1.945
0.0300	1.526
0.0333	1.038
0.0500	1.382
0.0666	1.295
0.0833	1.213
0.1000	1.157
0.1166	1.107
0.1333	1.051
0.1500	1.001
0.1666	0.969
0.1833	0.926
0.2000	0.888
0.2166	0.851
0.2333	0.807
0.2500	0.788
0.2666	0.744
0.2833	0.707
0.3000	0.675

CEF-17-19S

0.3166	0.675
0.3333	0.625
0.4166	0.500
0.5000	0.406
0.5833	0.356
0.6666	0.281
0.7500	0.231
0.8333	0.206
0.9166	0.156
1.0000	0.150
1.0833	0.106
1.1666	0.075
1.2500	0.087
1.3333	0.050
1.4166	0.050
1.5000	0.037
1.5833	0.025
1.6666	0.056
1.7500	0.031
1.8333	0.006
1.9166	0.006
2.0000	0.025
2.5000	-0.012
3.0000	0.006
3.5000	0.006
4.0000	0.006
4.5000	-0.012
5.0000	-0.012
5.5000	-0.012
6.0000	-0.018
6.5000	0.006
7.0000	-0.012
7.5000	-0.025
8.0000	-0.025
8.5000	-0.006
9.0000	0.000
9.5000	-0.012
10.0000	-0.018
12.0000	0.000

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S

Version 1.10

04/19/94 07:58:04

TEST DESCRIPTION

Data set...........
Data set title..... CEF-17-20I RUN NO.1

Knowns and Constants:
- No. of data points.................. 42
- Radius of well casing............... 0.083
- Radius of well...................... 0.2604
- Aquifer saturated thickness......... 53.26
- Well screen length.................. 10
- Static height of water in well...... 8.7
- Log(Re/Rw).......................... 2.257
- A, B, C............................. 2.709, 0.440, 0.000

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.0105E-002	+/-	2.9449E-004
y0 =	1.0494E+000	+/-	2.3753E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals............... 42
- Number of estimated parameters.... 2
- Degrees of freedom................ 40
- Residual mean..................... 0.01139
- Residual standard deviation....... 0.01992
- Residual variance................. 0.000397

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0167	0.894	0.84471	0.049293	1
0.0334	0.656	0.67991	-0.023912	1
0.05	0.519	0.54798	-0.028979	1
0.0667	0.412	0.44107	-0.029073	1
0.0834	0.344	0.35502	-0.011023	1
0.1	0.275	0.28613	-0.011133	1
0.1167	0.237	0.23031	0.006689	1
0.1334	0.187	0.18538	0.0016207	1
0.15	0.143	0.14941	-0.0064075	1
0.1667	0.131	0.12026	0.010741	1
0.1834	0.118	0.096798	0.021202	1
0.2	0.087	0.078015	0.0089852	1
0.2167	0.1	0.062795	0.037205	1
0.2334	0.068	0.050544	0.017456	1
0.25	0.068	0.040736	0.027264	1
0.2667	0.056	0.032789	0.023211	1
0.35	0.037	0.011107	0.025893	1
0.4334	0.025	0.0037574	0.021243	1
0.5167	0.031	0.0012728	0.029727	1
0.6	0.006	0.00043113	0.0055689	1
0.6834	0.012	0.00014585	0.011854	1
0.7667	0.012	4.9405E-005	0.011951	1
0.85	0.018	1.6735E-005	0.017983	1
0.9334	0.018	5.6615E-006	0.017994	1
1.0167	0.012	1.9178E-006	0.011998	1
1.1	0.012	6.4961E-007	0.011999	1
1.1834	0.012	2.1976E-007	0.012	1
1.2667	0.006	7.4442E-008	0.0059999	1
1.6834	0.031	3.3113E-010	0.031	1
1.7667	0.031	1.1217E-010	0.031	1
1.85	0.012	3.7995E-011	0.012	1
1.9334	0.012	1.2853E-011	0.012	1
2.4334	0.012	1.9367E-014	0.012	1
3.9334	0.025	6.6251E-023	0.025	1
4.4334	0.006	9.9825E-026	0.006	1
4.9334	0.006	1.5041E-028	0.006	1
5.9334	0.012	3.4148E-034	0.012	1
7.4334	0.012	1.1682E-042	0.012	1
8.4334	0.006	2.6521E-048	0.006	1
8.9334	0.012	3.9961E-051	0.012	1
9.4334	0.012	6.0211E-054	0.012	1
9.9334	0.012	9.0724E-057	0.012	1

==========

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

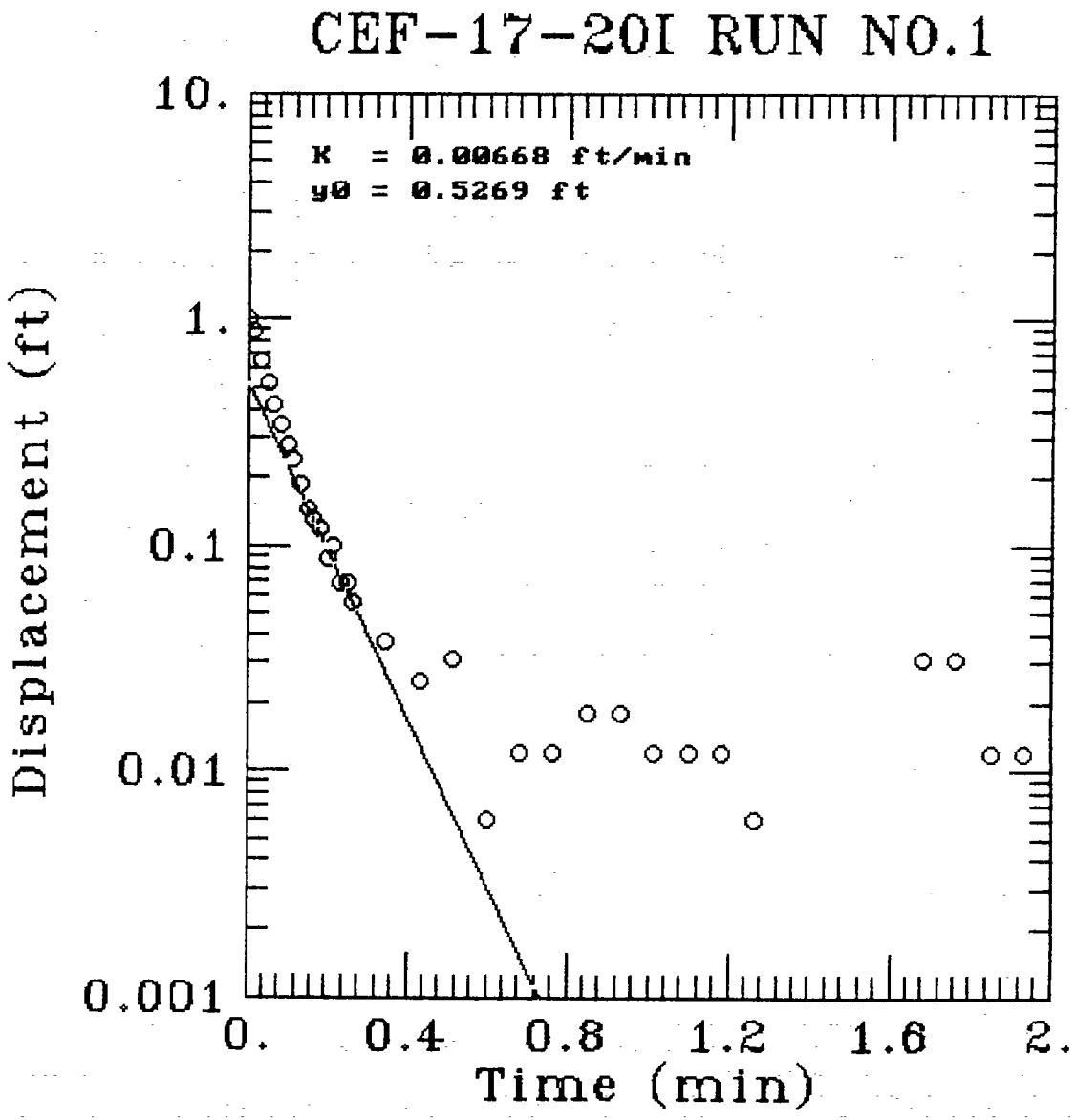
	Estimate
K =	1.0105E-002
y0 =	1.0494E+000

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

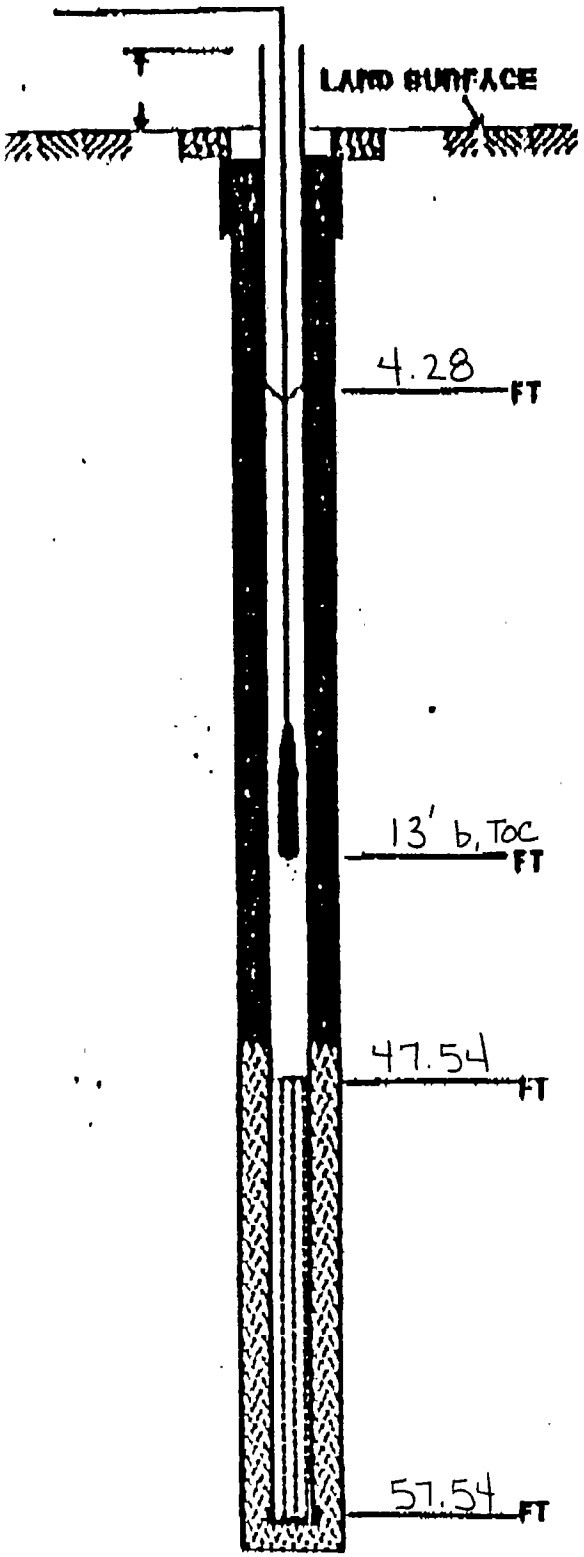
TYPE CURVE DATA

K = 6.68005E-003
y0 = 5.26878E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	5.269E-001	2.000E+000	1.819E-008		


CEF-17-20I RUN NO.1
K = 0.00668 ft/min
y0 = 0.5269 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
0.4
0.8
1.2
1.6
2.
Time (min)

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECIL FIELD RI OUs 1,2 & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-20I PUMPING WELL —

DATE 1-25-94 TIME 0945

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 12 MIN.

TIME OF INSTALLATION 0945

STATIC DEPTH TO WATER 4.28 FT. — PSI

DEPTH OF TRANSDUCER 13' b, TOC

B, TOC CALIBRATION

11' DEPTH 6.70 FT — PSI

12' DEPTH 7.72 FT — PSI

13' DEPTH 8.70 FT — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 4.28

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (HR)

— VERIFICATION OF DATA ACQUISITION (HR)

— VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER — FT — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

SE1000C
Environmental Logger
01/25 13:13

Unit# 01597 Test 2

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-20I

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 01/25 09:52:09

Elapsed Time	INPUT 1
0.0000	0.006
0.0033	0.006
0.0066	0.018
0.0100	-0.006
0.0133	0.012
0.0166	0.006
0.0200	0.350
0.0233	0.663
0.0266	1.225
0.0300	1.544
0.0333	1.225
0.0500	0.731
0.0666	1.125
0.0833	0.894
0.1000	0.656
0.1166	0.519
0.1333	0.412
0.1500	0.344
0.1666	0.275
0.1833	0.237
0.2000	0.187
0.2166	0.143
0.2333	0.131
0.2500	0.118
0.2666	0.087
0.2833	0.100
0.3000	0.068
0.3166	0.068
0.3333	0.056

CEF-17-20I

0.4166	0.037
0.5000	0.025
0.5833	0.031
0.6666	0.006
0.7500	0.012
0.8333	0.012
0.9166	0.018
1.0000	0.018
1.0833	0.012
1.1666	0.012
1.2500	0.012
1.3333	0.006
1.4166	0.000
1.5000	-0.006
1.5833	0.000
1.6666	-0.006
1.7500	0.031
1.8333	0.031
1.9166	0.012
2.0000	0.012
2.5000	0.012
3.0000	-0.012
3.5000	0.000
4.0000	0.025
4.5000	0.006
5.0000	0.006
5.5000	-0.006
6.0000	0.012
6.5000	0.000
7.0000	0.000
7.5000	0.012
8.0000	0.000
8.5000	0.006
9.0000	0.012
9.5000	0.012
10.0000	0.012
12.0000	0.000

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A Q T E S O L V   R E S U L T S

Version 1.10

04/19/94 08:10:35

==

TEST DESCRIPTION

Data set...........
Data set title..... CEF-17-21I RUN NO.5

Knowns and Constants:
- No. of data points.................. 51
- Radius of well casing............... 0.083
- Radius of well...................... 0.2604
- Aquifer saturated thickness......... 54.6
- Well screen length.................. 10
- Static height of water in well...... 15.82
- Log(Re/Rw).......................... 2.527
- A, B, C............................. 2.709, 0.440, 0.000

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.2600E-002	+/-	4.3070E-004
y0 =	2.0001E+000	+/-	5.4127E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals............... 51
- Number of estimated parameters.... 2
- Degrees of freedom................ 49
- Residual mean..................... 0.02342
- Residual standard deviation....... 0.04218
- Residual variance................. 0.001779

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0166	1.685	1.5728	0.11217	1
0.0333	1.197	1.2351	-0.038057	1
0.05	0.877	0.96982	-0.092822	1
0.0666	0.702	0.76265	-0.060652	1
0.0833	0.551	0.59887	-0.047869	1
0.1	0.445	0.47026	-0.025259	1
0.1166	0.351	0.3698	-0.018803	1
0.1333	0.307	0.29039	0.016614	1
0.15	0.263	0.22802	0.034975	1
0.1666	0.238	0.17931	0.058685	1
0.1833	0.188	0.14081	0.047194	1
0.2	0.169	0.11057	0.058433	1
0.2166	0.144	0.086948	0.057052	1
0.2333	0.131	0.068276	0.062724	1
0.25	0.119	0.053613	0.065387	1
0.2666	0.106	0.04216	0.06384	1
0.2833	0.087	0.033106	0.053894	1
0.3666	0.075	0.0099128	0.065087	1
0.45	0.062	0.0029638	0.059036	1
0.5333	0.043	0.00088743	0.042113	1
0.6166	0.043	0.00026572	0.042734	1
0.7	0.012	7.9446E-005	0.011921	1
0.7833	0.025	2.3788E-005	0.024976	1
0.8666	0.037	7.1226E-006	0.036993	1
0.95	0.037	2.1296E-006	0.036998	1
1.0333	0.043	6.3765E-007	0.042999	1
1.1166	0.006	1.9093E-007	0.0059998	1
1.2	0.031	5.7085E-008	0.031	1
1.2833	0.018	1.7092E-008	0.018	1
1.3666	0.012	5.1178E-009	0.012	1
1.45	0.012	1.5302E-009	0.012	1
1.5333	0.018	4.5817E-010	0.018	1
1.6166	0.012	1.3719E-010	0.012	1
1.7	0.012	4.1017E-011	0.012	1
1.7833	0.031	1.2281E-011	0.031	1
1.8666	0.006	3.6773E-012	0.006	1
1.95	0.025	1.0995E-012	0.025	1
2.45	0.025	7.9002E-016	0.025	1
2.95	0.031	5.6765E-019	0.031	1
3.95	0.025	2.9307E-025	0.025	1
4.45	0.018	2.1058E-028	0.018	1
4.95	0.012	1.5131E-031	0.012	1
5.45	0.037	1.0872E-034	0.037	1
5.95	0.018	7.812E-038	0.018	1
6.45	0.025	5.6132E-041	0.025	1
6.95	0.043	4.0332E-044	0.043	1
7.45	0.006	2.898E-047	0.006	1
7.95	0.025	2.0823E-050	0.025	1
8.95	0.006	1.0751E-056	0.006	1
9.45	0.018	7.7248E-060	0.018	1
9.95	0.012	5.5505E-063	0.012	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

```
          Estimate
K   =    1.2600E-002
y0  =    2.0001E+000
```

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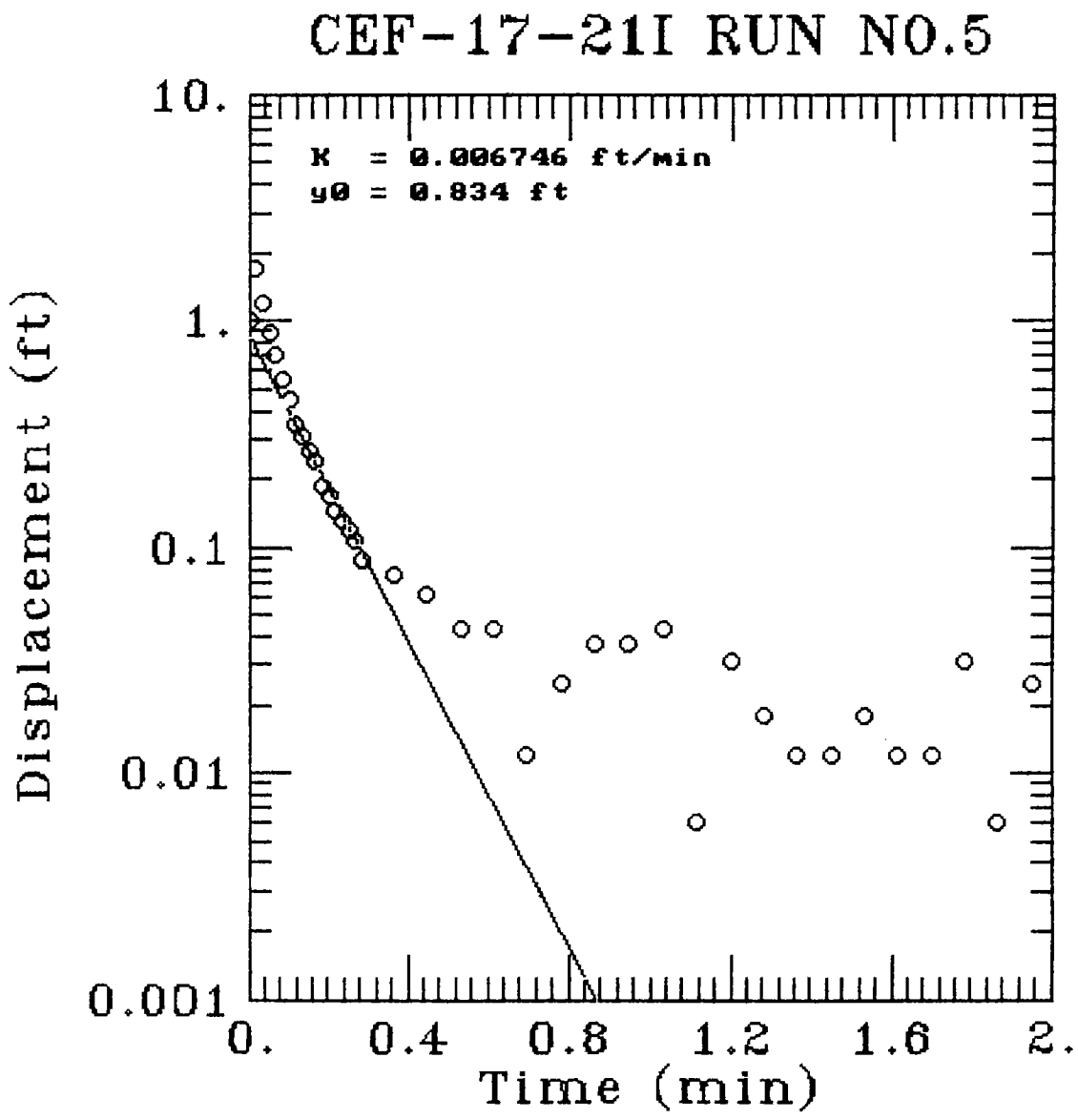
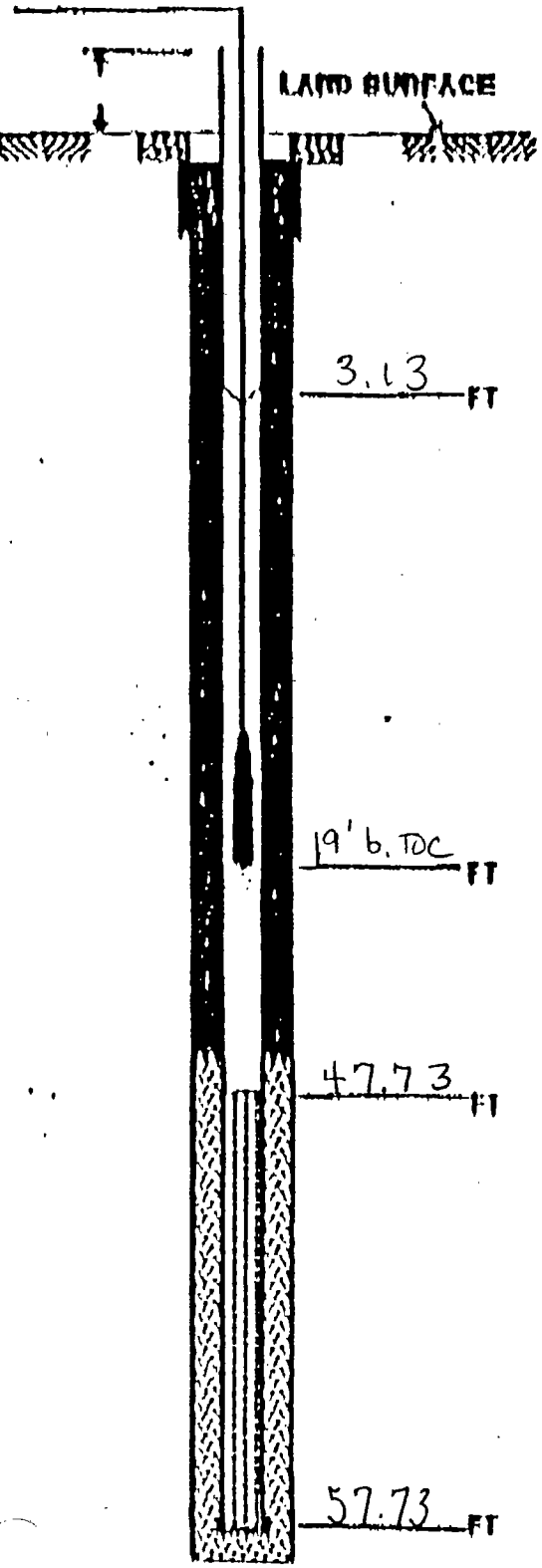
TYPE CURVE DATA

```
K  = 6.74600E-003
y0 = 8.33976E-001
```

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	8.340E-001	2.000E+000	1.546E-007		


CEF-17-21I RUN NO.5
K = 0.006746 ft/min
y0 = 0.834 ft
10.
1.
0.1
0.01
0.001
Displacement (ft)
0.
0.4
0.8
1.2
1.6
2.
Time (min)

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECILFIELD RI OUS 1, 2, & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-21I PUMPING WELL —

DATE 2-2-94 TIME 0730

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 10 MIN

TIME OF INSTALLATION 0730

STATIC DEPTH TO WATER 3.13 FT. — PSI

DEPTH OF TRANSDUCER 19' b. TOC

CALIBRATION (b. TOC)

17' DEPTH 13.82 FT — PSI

18' DEPTH 14.82 FT — PSI

19' DEPTH 15.82 FT — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 3.13

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (1M)

— VERIFICATION OF DATA ACQUISITION (1M)

— VERIFICATION OF DATA ACQUISITION (1M)

MAXIMUM PUMPING DEPTH TO WATER — FT — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

SE1000C
Environmental Logger
02/02 12:29

Unit# 01597 Test 1

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-21I

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 02/02 07:58:24

Elapsed Time	INPUT 1
0.0000	0.000
0.0033	0.012
0.0066	0.018
0.0100	0.037
0.0133	0.532
0.0166	0.551
0.0200	0.595
0.0233	0.695
0.0266	0.814
0.0300	0.777
0.0333	1.040
0.0500	2.155
0.0666	1.685
0.0833	1.197
0.1000	0.877
0.1166	0.702
0.1333	0.551
0.1500	0.445
0.1666	0.351
0.1833	0.307
0.2000	0.263
0.2166	0.238
0.2333	0.188
0.2500	0.169
0.2666	0.144
0.2833	0.131
0.3000	0.119

CEF-17-21I

0.3166	0.106
0.3333	0.087
0.4166	0.075
0.5000	0.062
0.5833	0.043
0.6666	0.043
0.7500	0.012
0.8333	0.025
0.9166	0.037
1.0000	0.037
1.0833	0.043
1.1666	0.006
1.2500	0.031
1.3333	0.018
1.4166	0.012
1.5000	0.012
1.5833	0.018
1.6666	0.012
1.7500	0.012
1.8333	0.031
1.9166	0.006
2.0000	0.025
2.5000	0.025
3.0000	0.031
3.5000	0.000
4.0000	0.025
4.5000	0.018
5.0000	0.012
5.5000	0.037
6.0000	0.018
6.5000	0.025
7.0000	0.043
7.5000	0.006
8.0000	0.025
8.5000	0.000
9.0000	0.006
9.5000	0.018
10.0000	0.012

```
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                    A Q T E S O L V   R E S U L T S
                              Version 1.10

04/19/94                                                            10:43:47

================================================================================
                            TEST DESCRIPTION

Data set...........
Data set title..... CEF-17-22D RUN NO.2

Knowns and Constants:
   No. of data points................... 59
   Radius of well casing................ 0.083
   Radius of well....................... 0.2604
   Aquifer saturated thickness.......... 90.1
   Well screen length................... 10
   Static height of water in well....... 14.04
   Log(Re/Rw)........................... 2.43
   A, B, C..............................  2.709,  0.440,  0.000

================================================================================
                            ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

================================================================================
                RESULTS FROM STATISTICAL CURVE MATCHING


STATISTICAL MATCH PARAMETER ESTIMATES

           Estimate          Std. Error
   K  =   5.8307E-005 +/-   1.8780E-006
   y0 =   1.6174E+000 +/-   1.2390E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
   Number of residuals............... 59
   Number of estimated parameters.... 2
   Degrees of freedom................ 57
   Residual mean..................... 0.0051
   Residual standard deviation....... 0.06662
   Residual variance................. 0.004438
```

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0167	1.722	1.6155	0.10647	1
0.0333	1.697	1.6137	0.083335	1
0.05	1.603	1.6118	-0.0087889	1
0.0667	1.666	1.6099	0.056085	1
0.0833	1.691	1.6081	0.082945	1
0.1	1.685	1.6062	0.078815	1
0.1167	1.691	1.6043	0.086682	1
0.1333	1.659	1.6025	0.056536	1
0.15	1.641	1.6006	0.040399	1
0.1667	1.653	1.5987	0.05426	1
0.1833	1.647	1.5969	0.050107	1
0.2	1.641	1.595	0.045964	1
0.2167	1.628	1.5932	0.034818	1
0.2333	1.628	1.5913	0.036659	1
0.25	1.628	1.5895	0.038509	1
0.3333	1.616	1.5803	0.035705	1
0.4167	1.597	1.5711	0.025858	1
0.5	1.578	1.5621	0.015948	1
0.5833	1.553	1.553	-1.5242E-005	1
0.6667	1.54	1.544	-0.0040198	1
0.75	1.503	1.5351	-0.032087	1
0.8333	1.515	1.5262	-0.011206	1
0.9167	1.503	1.5174	-0.014366	1
1	1.478	1.5086	-0.030587	1
1.0833	1.472	1.4999	-0.02786	1
1.1667	1.465	1.4912	-0.026172	1
1.25	1.459	1.4825	-0.023545	1
1.3333	1.44	1.474	-0.033968	1
1.4167	1.421	1.4654	-0.04443	1
1.5	1.421	1.457	-0.035952	1
1.5833	1.409	1.4485	-0.039523	1
1.6667	1.396	1.4401	-0.044133	1
1.75	1.371	1.4318	-0.060801	1
1.8333	1.365	1.4235	-0.058518	1
1.9167	1.371	1.4153	-0.044273	1
2.4167	1.296	1.3668	-0.070832	1
2.9167	1.259	1.32	-0.061049	1
3.4167	1.196	1.2749	-0.078867	1
3.9167	1.171	1.2312	-0.060231	1
4.4167	1.127	1.1891	-0.06209	1
4.9167	1.077	1.1484	-0.07139	1
5.4167	1.039	1.1091	-0.070084	1
5.9167	1.008	1.0711	-0.063123	1
6.4167	0.989	1.0345	-0.045461	1
6.9167	0.927	0.99905	-0.072054	1
7.4167	0.92	0.96486	-0.044859	1
7.9167	0.87	0.93183	-0.061835	1
8.4167	0.852	0.89994	-0.047941	1
8.9167	0.814	0.86914	-0.055138	1
9.4167	0.801	0.83939	-0.03839	1
9.9167	0.801	0.81066	-0.0096596	1
11.917	0.726	0.70524	0.020758	1
13.917	0.639	0.61353	0.025467	1
15.917	0.582	0.53375	0.048251	1
17.917	0.563	0.46434	0.098659	1
19.917	0.545	0.40396	0.14104	1
21.917	0.488	0.35143	0.13657	1
23.917	0.482	0.30573	0.17627	1
25.917	0.444	0.26597	0.17803	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

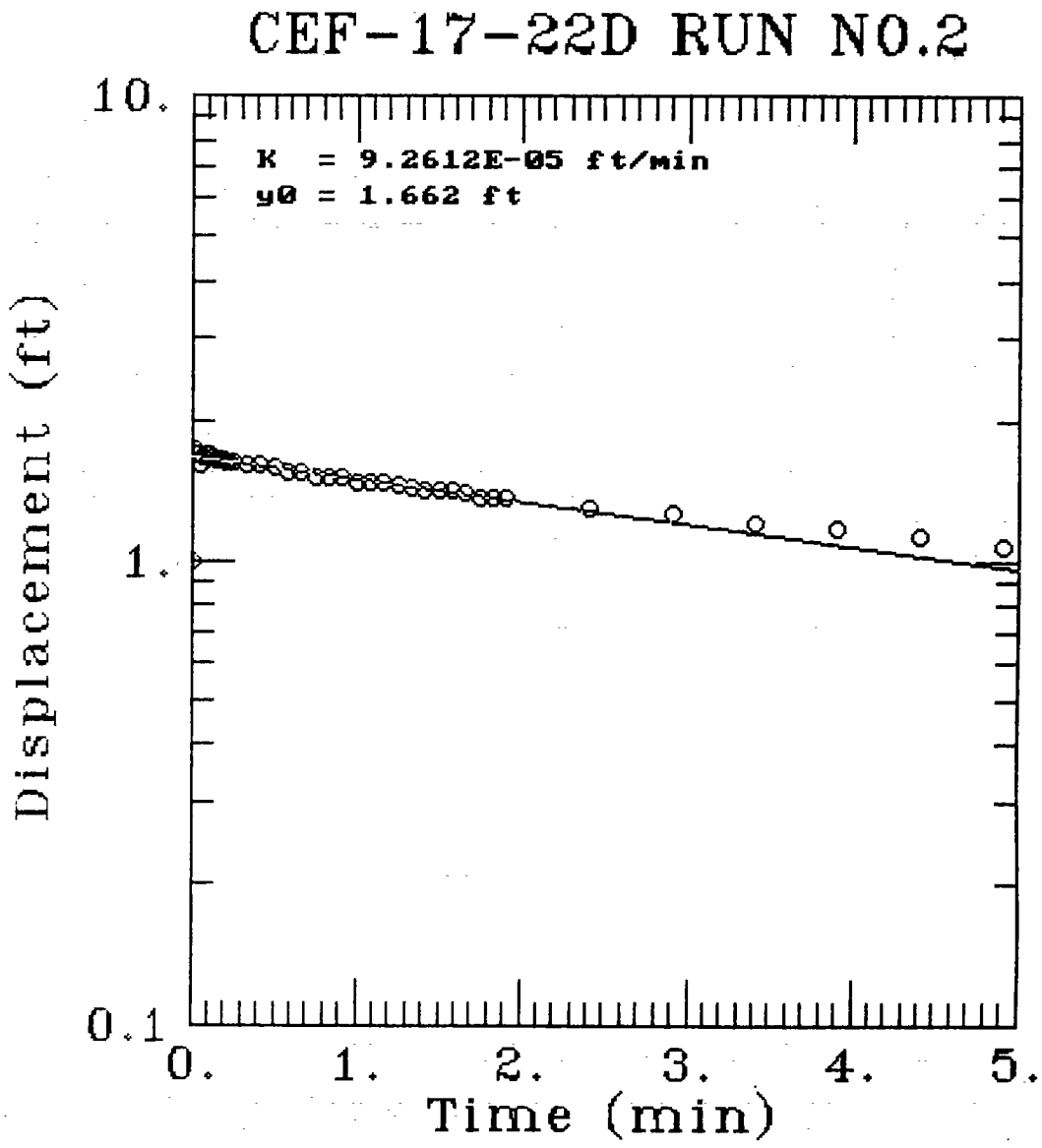
	Estimate
K =	5.8307E-005
y0 =	1.6174E+000

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

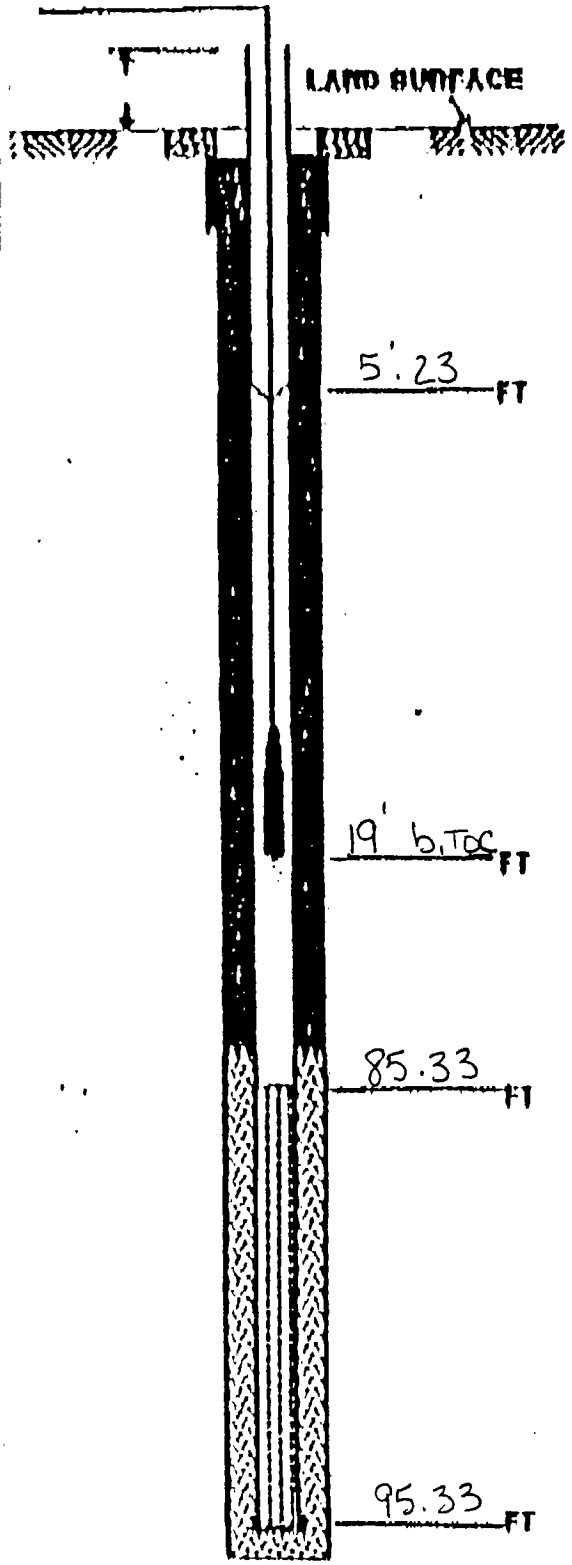
TYPE CURVE DATA

K = 9.26125E-005
y0 = 1.66189E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.662E+000	5.000E+000	9.558E-001		


CEF-17-22D RUN NO.2
K = 9.2612E-05 ft/min
y0 = 1.662 ft
10.
1.
0.1
Displacement (ft)
0.
1.
2.
3.
4.
5.
Time (min)

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECILFIELD RI OUS 1, 2, & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-22D PUMPING WELL —

DATE 1-31-94 TIME 0927

DATALOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 26 MIN.

TIME OF INSTALLATION 0927

STATIC DEPTH TO WATER 5.23' FT. — PSI

DEPTH OF TRANSDUCER 19' b.TOC

b.TOC CALIBRATION

17' DEPTH 12.03 FT — PSI

18' DEPTH 13.05 FT — PSI

19' DEPTH 14.09 FT — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 5.23'

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (INI)

— VERIFICATION OF DATA ACQUISITION (INI)

— VERIFICATION OF DATA ACQUISITION (INI)

MAXIMUM PUMPING DEPTH TO WATER — FT — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

SE1000C
Environmental Logger
01/31 12:38

Unit# 01597 Test 2

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-22D

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 01/31 09:45:17

Elapsed Time	INPUT 1
0.0000	0.000
0.0033	-0.012
0.0066	0.000
0.0100	0.012
0.0133	0.037
0.0166	0.482
0.0200	0.595
0.0233	0.664
0.0266	0.845
0.0300	0.795
0.0333	0.645
0.0500	0.820
0.0666	1.428
0.0833	1.841
0.1000	1.722
0.1166	1.697
0.1333	1.603
0.1500	1.666
0.1666	1.691
0.1833	1.685
0.2000	1.691
0.2166	1.659
0.2333	1.641
0.2500	1.653
0.2666	1.647
0.2833	1.641
0.3000	1.628

CEF-17-22D

0.3166	1.628
0.3333	1.628
0.4166	1.616
0.5000	1.597
0.5833	1.578
0.6666	1.553
0.7500	1.540
0.8333	1.503
0.9166	1.515
1.0000	1.503
1.0833	1.478
1.1666	1.472
1.2500	1.465
1.3333	1.459
1.4166	1.440
1.5000	1.421
1.5833	1.421
1.6666	1.409
1.7500	1.396
1.8333	1.371
1.9166	1.365
2.0000	1.371
2.5000	1.296
3.0000	1.259
3.5000	1.196
4.0000	1.171
4.5000	1.127
5.0000	1.077
5.5000	1.039
6.0000	1.008
6.5000	0.989
7.0000	0.927
7.5000	0.920
8.0000	0.870
8.5000	0.852
9.0000	0.814
9.5000	0.801
10.0000	0.801
12.0000	0.726
14.0000	0.639
16.0000	0.582
18.0000	0.563
20.0000	0.545
22.0000	0.488
24.0000	0.482
26.0000	0.444

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A Q T E S O L V   R E S U L T S

Version 1.10

04/19/94 10:48:25

TEST DESCRIPTION

Data set...........
Data set title..... CEF-17-23S RUN NO.1

Knowns and Constants:

No. of data points..................	54
Radius of well casing...............	0.083
Radius of well......................	0.2604
Aquifer saturated thickness.........	14.1
Well screen length..................	10
Static height of water in well......	10.53
Log(Re/Rw)..........................	2.513
A, B, C.............................	2.709, 0.440, 0.000

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	5.9755E-004	+/-	1.3335E-005
y0 =	1.5379E+000	+/-	1.2759E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:

Number of residuals...............	54
Number of estimated parameters....	2
Degrees of freedom................	52
Residual mean.....................	0.01413
Residual standard deviation.......	0.04372
Residual variance.................	0.001911

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0167	1.695	1.5203	0.17474	1
0.0333	1.564	1.5029	0.061058	1
0.05	1.533	1.4857	0.047283	1
0.0667	1.489	1.4687	0.020309	1
0.0833	1.464	1.452	0.012041	1
0.1	1.445	1.4353	0.0096808	1
0.1167	1.407	1.4189	-0.01187	1
0.1333	1.395	1.4027	-0.0077061	1
0.15	1.37	1.3866	-0.016631	1
0.1667	1.364	1.3707	-0.0067394	1
0.1833	1.339	1.3551	-0.016124	1
0.2	1.326	1.3396	-0.013594	1
0.2167	1.307	1.3242	-0.017241	1
0.2333	1.282	1.3092	-0.027156	1
0.25	1.264	1.2942	-0.030152	1
0.2667	1.245	1.2793	-0.034321	1
0.2833	1.232	1.2647	-0.032747	1
0.3	1.226	1.2503	-0.024252	1
0.3833	1.145	1.1804	-0.035397	1
0.4667	1.076	1.1144	-0.038368	1
0.55	1.026	1.0521	-0.026105	1
0.6333	0.957	0.99332	-0.036321	1
0.7167	0.913	0.93776	-0.024757	1
0.8	0.863	0.88536	-0.022361	1
0.8833	0.813	0.83589	-0.022894	1
0.9667	0.776	0.78914	-0.013135	1
1.05	0.738	0.74504	-0.0070442	1
1.1333	0.688	0.70342	-0.015416	1
1.2167	0.644	0.66407	-0.020069	1
1.3	0.619	0.62697	-0.0079653	1
1.3833	0.588	0.59193	-0.0039349	1
1.4667	0.563	0.55882	0.0041767	1
1.55	0.531	0.5276	0.0033998	1
1.6333	0.513	0.49812	0.014878	1
1.7167	0.481	0.47026	0.010742	1
1.8	0.456	0.44398	0.012017	1
1.8833	0.444	0.41918	0.024824	1
1.9667	0.413	0.39573	0.017271	1
2.4667	0.312	0.28023	0.031766	1
2.9667	0.244	0.19845	0.045554	1
3.4667	0.181	0.14053	0.040471	1
3.9667	0.15	0.099515	0.050485	1
4.4667	0.125	0.070471	0.054529	1
4.9667	0.112	0.049904	0.062096	1
5.4667	0.093	0.035339	0.057661	1
5.9667	0.087	0.025025	0.061975	1
6.4667	0.068	0.017722	0.050278	1
6.9667	0.075	0.01255	0.06245	1
7.4667	0.068	0.0088869	0.059113	1
7.9667	0.062	0.0062932	0.055707	1
8.4667	0.062	0.0044565	0.057543	1
8.9667	0.062	0.0031559	0.058844	1
9.4667	0.05	0.0022348	0.047765	1
9.9667	0.068	0.0015826	0.066417	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

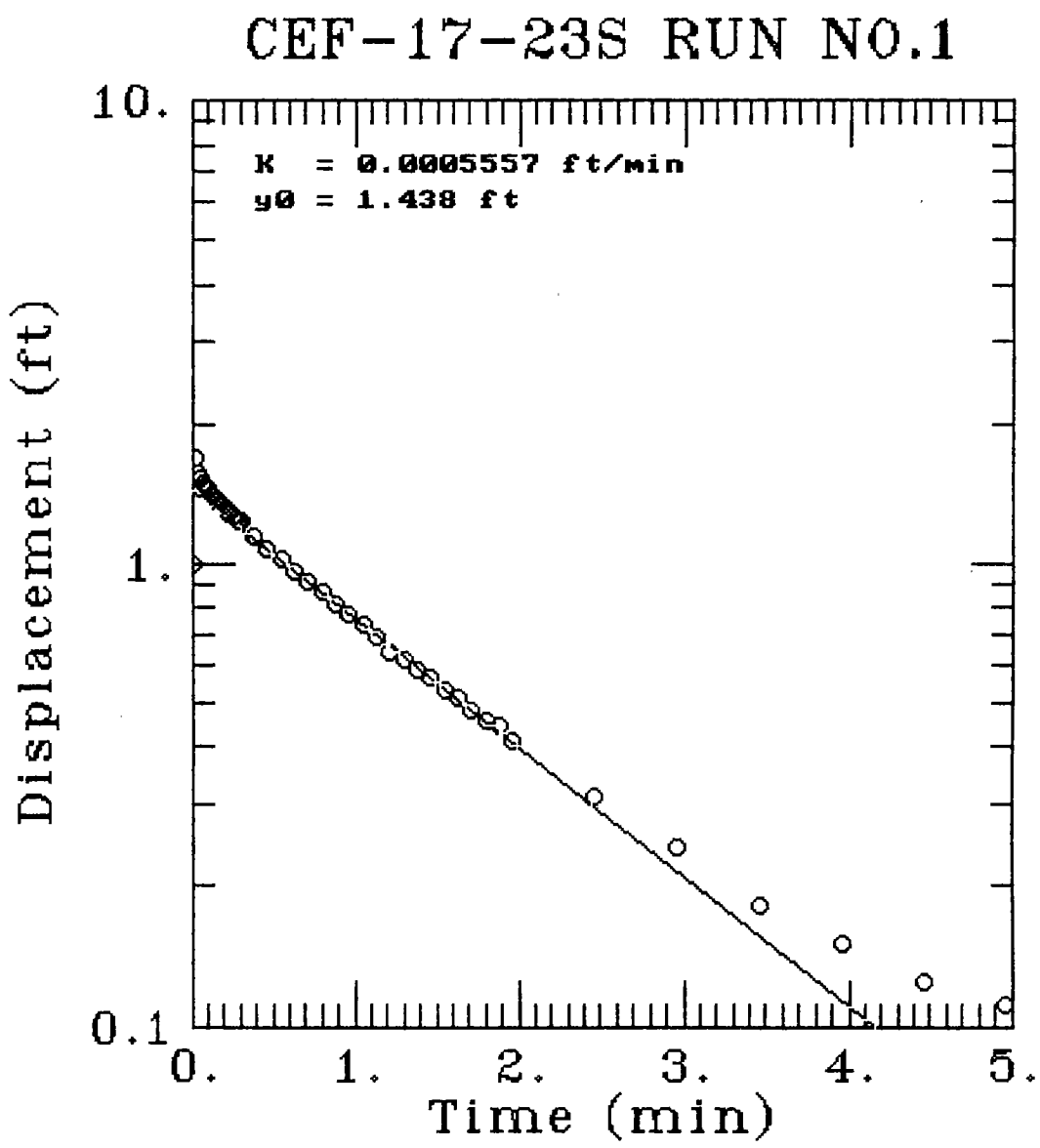
		Estimate
K	=	5.9755E-004
y0	=	1.5379E+000

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

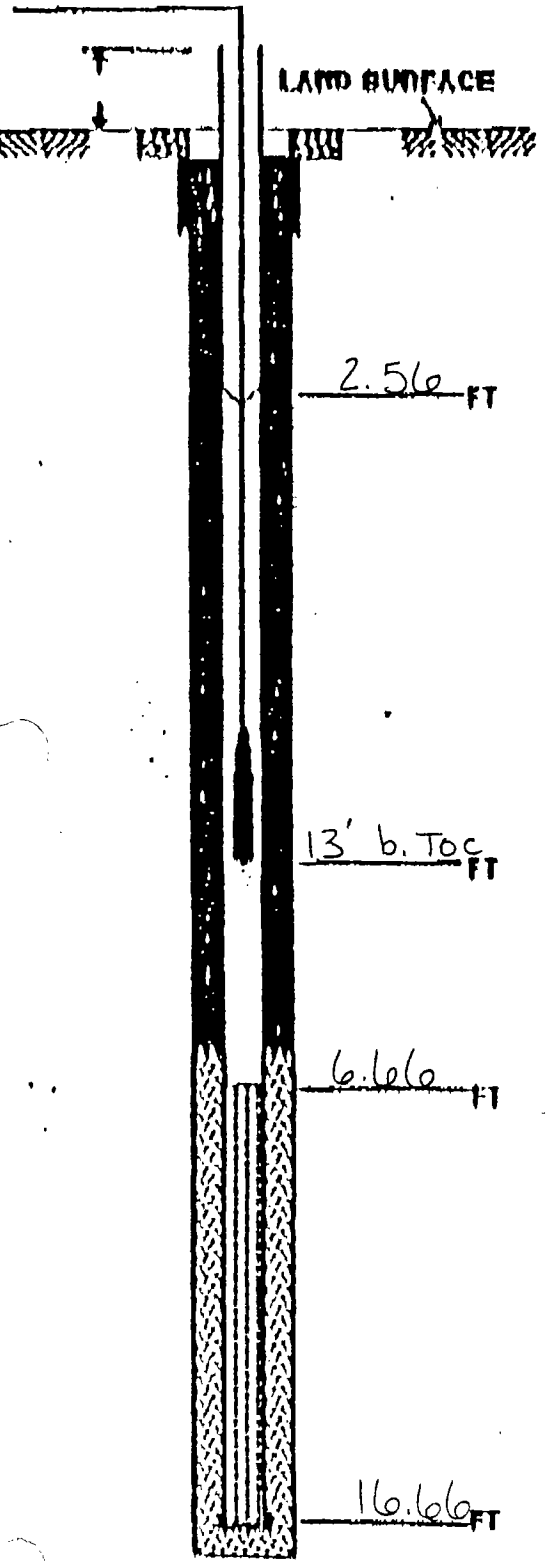
TYPE CURVE DATA

K = 5.55683E-004
y0 = 1.43832E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.438E+000	5.000E+000	5.809E-002		


CEF-17-23S RUN NO.1
K = 0.0005557 ft/min
y0 = 1.438 ft
10.
1.
0.1
Displacement (ft)
0.
1.
2.
3.
4.
5.
Time (min)

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECIL FIELD RI OUS 1, 2, & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-23S PUMPING WELL —

DATE 1-26-94 TIME 1505

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 10 MIN

TIME OF INSTALLATION 1505

STATIC DEPTH TO WATER 2.56 FT. — PSI

DEPTH OF TRANSDUCER 13' b. Toc

b.Toc. CALIBRATION

11' DEPTH 8.56 FT — PSI

12' DEPTH 9.55 FT — PSI

13' DEPTH 10.53 FT — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 2.56

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (1ST)

— VERIFICATION OF DATA ACQUISITION (1ST)

— VERIFICATION OF DATA ACQUISITION (1ST)

MAXIMUM PUMPING DEPTH TO WATER — FT — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

SE1000C
Environmental Logger
01/26 15:51

Unit# 01597 Test 5

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-23S

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 01/26 15:08:56

Elapsed Time	INPUT 1
0.0000	0.031
0.0033	0.037
0.0066	0.043
0.0100	0.037
0.0133	0.350
0.0166	1.326
0.0200	1.902
0.0233	2.477
0.0266	2.540
0.0300	2.208
0.0333	2.602
0.0500	1.695
0.0666	1.564
0.0833	1.533
0.1000	1.489
0.1166	1.464
0.1333	1.445
0.1500	1.407
0.1666	1.395
0.1833	1.370
0.2000	1.364
0.2166	1.339
0.2333	1.326
0.2500	1.307
0.2666	1.282
0.2833	1.264
0.3000	1.245

CEF-17-23S

0.3166	1.232
0.3333	1.226
0.4166	1.145
0.5000	1.076
0.5833	1.026
0.6666	0.957
0.7500	0.913
0.8333	0.863
0.9166	0.813
1.0000	0.776
1.0833	0.738
1.1666	0.688
1.2500	0.644
1.3333	0.619
1.4166	0.588
1.5000	0.563
1.5833	0.531
1.6666	0.513
1.7500	0.481
1.8333	0.456
1.9166	0.444
2.0000	0.413
2.5000	0.312
3.0000	0.244
3.5000	0.181
4.0000	0.150
4.5000	0.125
5.0000	0.112
5.5000	0.093
6.0000	0.087
6.5000	0.068
7.0000	0.075
7.5000	0.068
8.0000	0.062
8.5000	0.062
9.0000	0.062
9.5000	0.050
10.0000	0.068

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S

Version 1.10

04/19/94 10:52:08

TEST DESCRIPTION

Data set...........
Data set title..... CEF-17-24S RUN NO.1

Knowns and Constants:
No. of data points.................. 44
Radius of well casing............... 0.083
Radius of well...................... 0.2604
Aquifer saturated thickness......... 14.58
Well screen length.................. 10
Static height of water in well...... 10
Log(Re/Rw).......................... 2.47
A, B, C............................. 2.709, 0.440, 0.000

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.5311E-003	+/-	3.1820E-005
y0 =	1.2589E+000	+/-	1.1357E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
Number of residuals............... 44
Number of estimated parameters.... 2
Degrees of freedom................ 42
Residual mean..................... 0.008195
Residual standard deviation....... 0.02742
Residual variance................. 0.0007517

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0167	1.301	1.2217	0.079349	1
0.0334	1.238	1.1855	0.052524	1
0.05	1.176	1.1506	0.02542	1
0.0667	1.132	1.1165	0.015491	1
0.0834	1.082	1.0834	-0.0014477	1
0.1	1.057	1.0516	0.0054456	1
0.1167	1.001	1.0204	-0.019416	1
0.1334	0.976	0.9902	-0.0142	1
0.15	0.938	0.96105	-0.023052	1
0.1667	0.913	0.93259	-0.019594	1
0.1834	0.901	0.90498	-0.003978	1
0.2	0.844	0.87834	-0.034338	1
0.2167	0.826	0.85233	-0.026329	1
0.2334	0.794	0.82709	-0.033091	1
0.25	0.769	0.80274	-0.033744	1
0.2667	0.75	0.77897	-0.028973	1
0.35	0.638	0.67051	-0.032513	1
0.4334	0.55	0.57705	-0.02705	1
0.5167	0.494	0.4967	-0.002704	1
0.6	0.425	0.42755	-0.0025453	1
0.6834	0.369	0.36795	0.0010504	1
0.7667	0.319	0.31672	0.002282	1
0.85	0.281	0.27262	0.0083803	1
0.9334	0.237	0.23462	0.0023808	1
1.0167	0.219	0.20195	0.017048	1
1.1	0.2	0.17383	0.026167	1
1.1834	0.175	0.1496	0.025398	1
1.2667	0.156	0.12877	0.027227	1
1.35	0.144	0.11084	0.033157	1
1.4334	0.112	0.095392	0.016608	1
1.5167	0.125	0.08211	0.04289	1
1.6	0.106	0.070678	0.035322	1
1.6834	0.1	0.060826	0.039174	1
1.7667	0.081	0.052357	0.028643	1
1.85	0.075	0.045067	0.029933	1
1.9334	0.068	0.038785	0.029215	1
2.4334	0.043	0.015769	0.027231	1
2.9334	0.031	0.0064116	0.024588	1
3.4334	0.025	0.0026068	0.022393	1
3.9334	0.006	0.0010599	0.0049401	1
4.4334	0.006	0.00043094	0.0055691	1
4.9334	0.012	0.00017521	0.011825	1
5.4334	0.012	7.1239E-005	0.011929	1
6.9334	0.012	4.7881E-006	0.011995	1

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RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.5311E-003
y0 =	1.2589E+000

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TYPE CURVE DATA

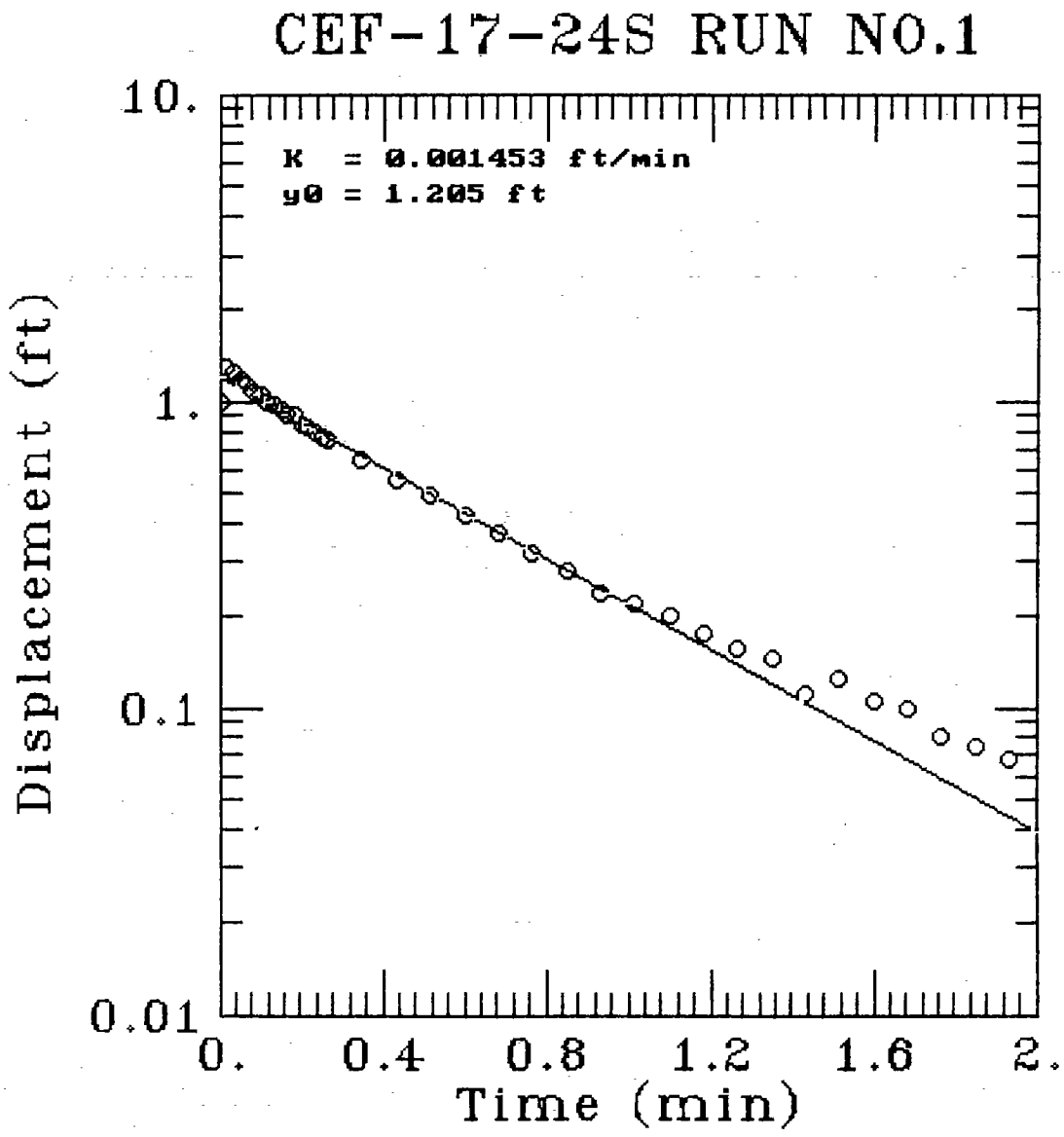
K = 1.45330E-003
y0 = 1.20531E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.205E+000	2.000E+000	3.955E-002		

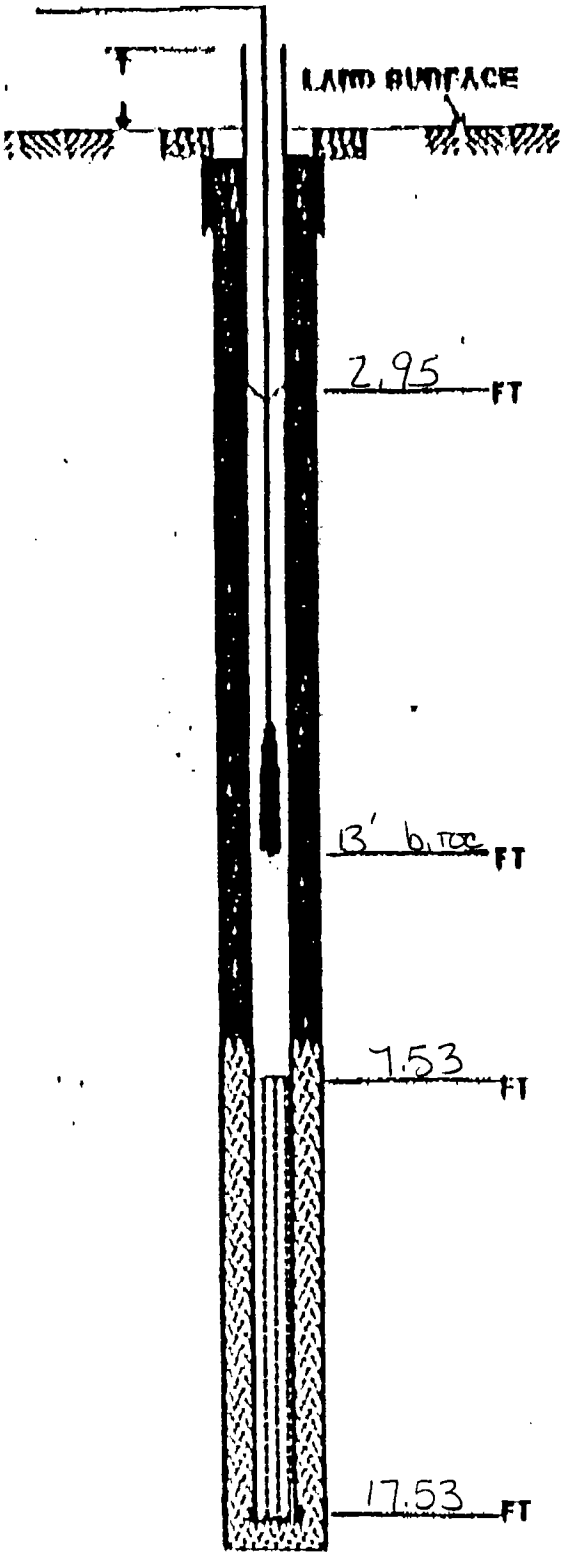
TYPE CURVE DATA

K = 1.45330E-003
y0 = 1.20531E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.205E+000	2.000E+000	3.955E-002		


CEF-17-24S RUN NO.1
K = 0.001453 ft/min
y0 = 1.205 ft
10.
1.
0.1
0.01
Displacement (ft)
0.
0.4
0.8
1.2
1.6
2.
Time (min)

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECIL FIELD RI OUS 1, 2, & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-245 PUMPING WELL —

DATE 2-7-94 TIME 1135

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 10 MIN.

TIME OF INSTALLATION 1135

STATIC DEPTH TO WATER 2.95' FT. — PSI

DEPTH OF TRANSDUCER 13' b.TOC

b.TOC CALIBRATION

11' DEPTH 8.01 FT — PSI

12' DEPTH 9.01 FT — PSI

13' DEPTH 10.00 FT — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 2.95'

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (Y/N)

— VERIFICATION OF DATA ACQUISITION (Y/N)

— VERIFICATION OF DATA ACQUISITION (Y/N)

MAXIMUM PUMPING DEPTH TO WATER — FT — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

SE1000C
Environmental Logger
02/07 12:27

Unit# 01597 Test 5

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-24S

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 02/07 11:43:37

Elapsed Time	INPUT 1
0.0000	-0.018
0.0033	0.006
0.0066	0.000
0.0100	-0.012
0.0133	-0.025
0.0166	0.231
0.0200	0.632
0.0233	0.813
0.0266	0.869
0.0300	0.951
0.0333	0.944
0.0500	1.163
0.0666	1.389
0.0833	1.301
0.1000	1.238
0.1166	1.176
0.1333	1.132
0.1500	1.082
0.1666	1.057
0.1833	1.001
0.2000	0.976
0.2166	0.938
0.2333	0.913
0.2500	0.901
0.2666	0.844
0.2833	0.826
0.3000	0.794

CEF-17-24S

0.3166	0.769
0.3333	0.750
0.4166	0.638
0.5000	0.550
0.5833	0.494
0.6666	0.425
0.7500	0.369
0.8333	0.319
0.9166	0.281
1.0000	0.237
1.0833	0.219
1.1666	0.200
1.2500	0.175
1.3333	0.156
1.4166	0.144
1.5000	0.112
1.5833	0.125
1.6666	0.106
1.7500	0.100
1.8333	0.081
1.9166	0.075
2.0000	0.068
2.5000	0.043
3.0000	0.031
3.5000	0.025
4.0000	0.006
4.5000	0.006
5.0000	0.012
5.5000	0.012
6.0000	0.000
6.5000	0.000
7.0000	0.012
7.5000	-0.006
8.0000	-0.012
8.5000	-0.012
9.0000	-0.012
9.5000	-0.006
10.0000	-0.006

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S

Version 1.10

04/19/94 10:57:18

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TEST DESCRIPTION

Data set...........
Data set title..... CEF-17-25SI RUN NO.1

Knowns and Constants:

- No. of data points.................. 39
- Radius of well casing............... 0.083
- Radius of well...................... 0.2604
- Aquifer saturated thickness......... 39.43
- Well screen length.................. 10
- Static height of water in well...... 15.97
- Log(Re/Rw).......................... 2.568
- A, B, C............................. 2.709, 0.440, 0.000

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ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

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RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.0123E-002	+/-	2.3866E-004
y0 =	1.8912E+000	+/-	3.3961E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:

- Number of residuals................ 39
- Number of estimated parameters..... 2
- Degrees of freedom................. 37
- Residual mean...................... 0.0155
- Residual standard deviation........ 0.03123
- Residual variance.................. 0.0009756

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0166	1.629	1.564	0.064993	1
0.0333	1.297	1.292	0.0050388	1
0.05	1.027	1.0672	-0.040235	1
0.0666	0.839	0.88261	-0.043608	1
0.0833	0.677	0.72909	-0.052086	1
0.1	0.582	0.60227	-0.020268	1
0.1166	0.47	0.49808	-0.028078	1
0.1333	0.413	0.41144	0.0015586	1
0.15	0.325	0.33987	-0.014875	1
0.1666	0.307	0.28108	0.025922	1
0.1833	0.25	0.23219	0.017813	1
0.2	0.231	0.1918	0.0392	1
0.2166	0.181	0.15862	0.022381	1
0.2333	0.163	0.13103	0.031971	1
0.25	0.163	0.10824	0.054763	1
0.2666	0.125	0.089513	0.035487	1
0.2833	0.125	0.073943	0.051057	1
0.3666	0.087	0.028506	0.058494	1
0.45	0.056	0.010977	0.045023	1
0.5333	0.025	0.004232	0.020768	1
0.6166	0.037	0.0016315	0.035368	1
0.7	0.018	0.00062826	0.017372	1
0.7833	0.025	0.00024221	0.024758	1
0.8666	0.031	9.3376E-005	0.030907	1
0.95	0.006	3.5957E-005	0.005964	1
1.0333	0.006	1.3862E-005	0.0059861	1
1.1166	0.006	5.3442E-006	0.0059947	1
1.2	0.025	2.0579E-006	0.024998	1
1.2833	0.012	7.9338E-007	0.011999	1
1.45	0.006	1.1778E-007	0.0059999	1
1.6166	0.025	1.7506E-008	0.025	1
1.7833	0.006	2.5988E-009	0.006	1
1.8666	0.025	1.0019E-009	0.025	1
1.95	0.006	3.8581E-010	0.006	1
2.95	0.018	4.1396E-015	0.018	1
3.45	0.025	1.356E-017	0.025	1
8.45	0.025	1.9283E-042	0.025	1
9.45	0.018	2.069E-047	0.018	1
9.95	0.012	6.7773E-050	0.012	1

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RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.0123E-002
y0 =	1.8912E+000

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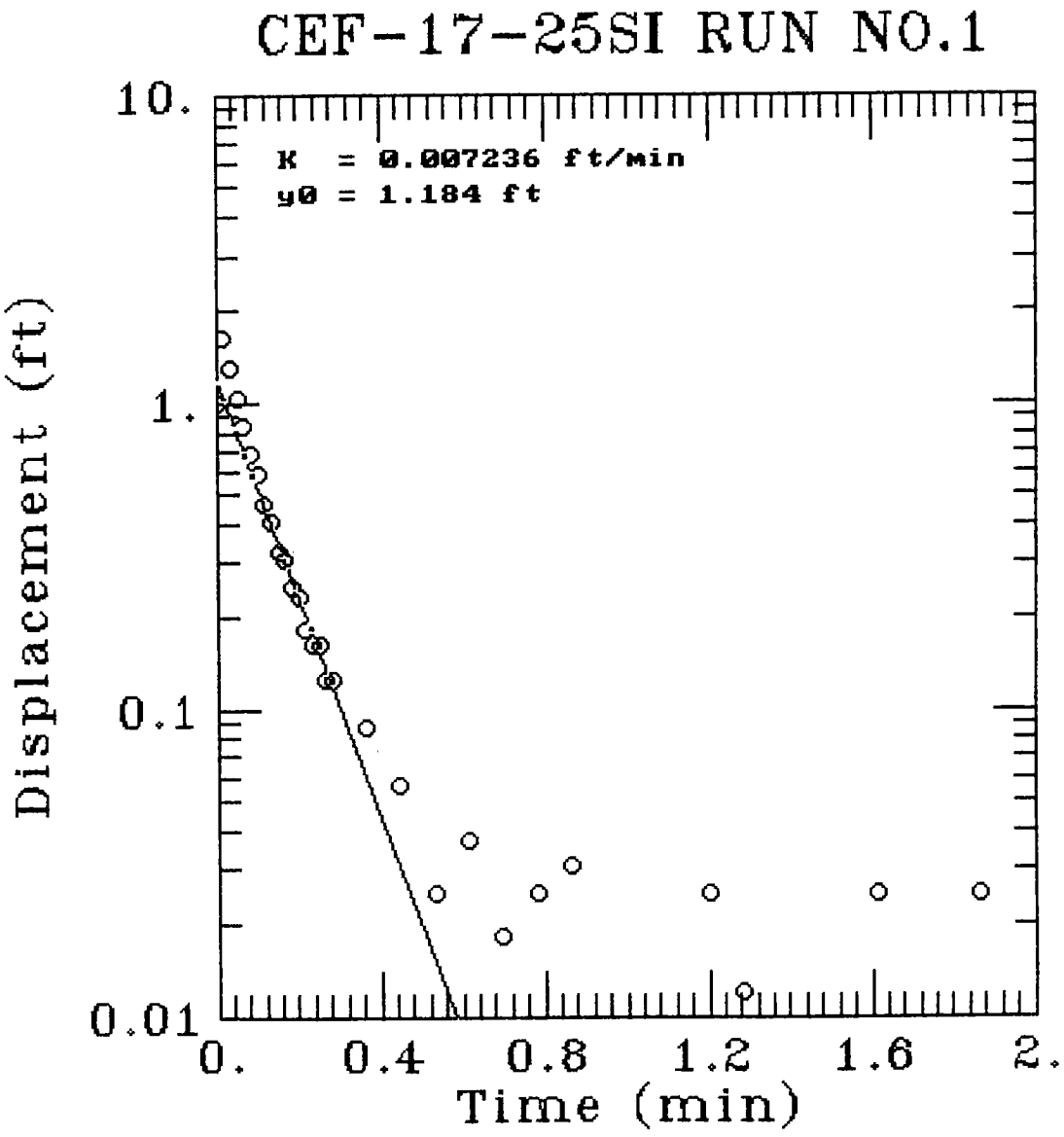
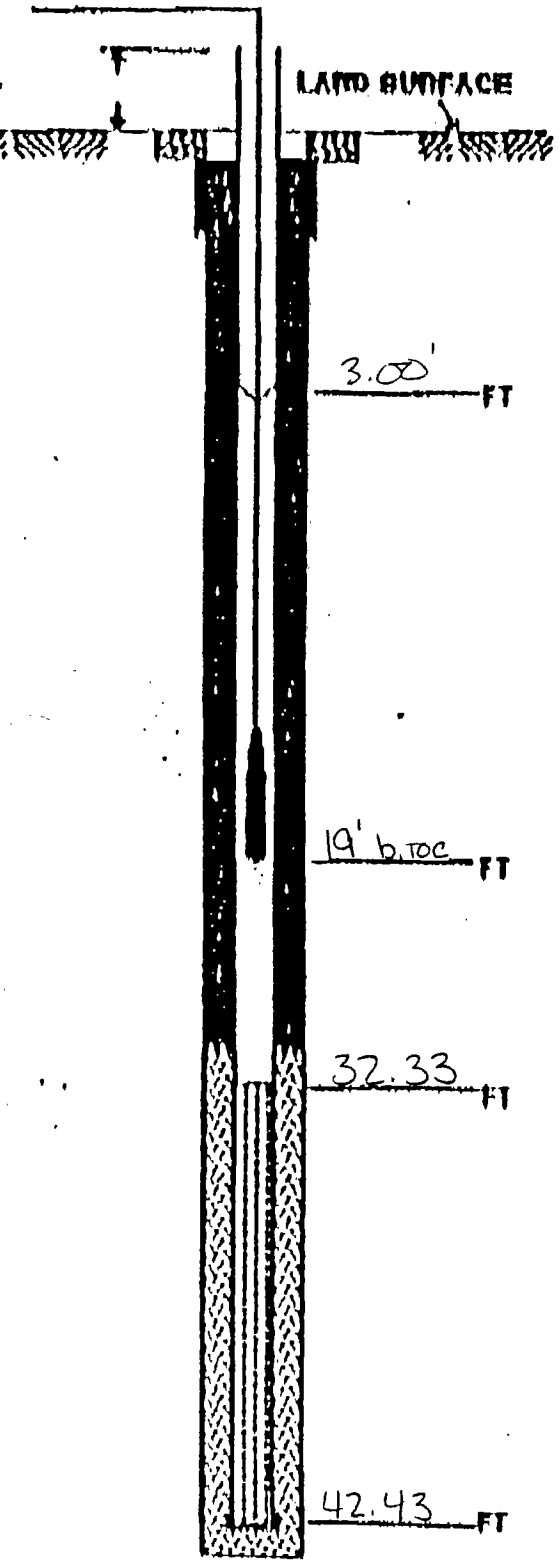
TYPE CURVE DATA

K = 7.23558E-003
y0 = 1.18430E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.184E+000	2.000E+000	9.316E-008		


CEF-17-25SI RUN NO.1
K = 0.007236 ft/min
y0 = 1.184 ft
10.
1.
0.1
0.01
Displacement (ft)
0.
0.4
0.8
1.2
1.6
2.
Time (min)

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECIL FIELD RI OUS 1, 2, & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-255I PUMPING WELL —

DATE Oct 2 -94 TIME 1057

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 10 MIN

TIME OF INSTALLATION 1057

STATIC DEPTH TO WATER 3.00 FT. — PSI

DEPTH OF TRANSDUCER 19' b.TOC

b.TOC CALIBRATION

17' DEPTH 13.96 FT — PSI

18' DEPTH 14.96 FT — PSI

19' DEPTH 15.97 FT — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 3.00'

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (HR)

— VERIFICATION OF DATA ACQUISITION (HR)

— VERIFICATION OF DATA ACQUISITION (HR)

MAXIMUM PUMPING DEPTH TO WATER — FT. — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT. — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

SE1000C
Environmental Logger
02/02 12:38

Unit# 01597 Test 7

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-25SI

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 02/02 11:04:46

Elapsed Time	INPUT 1
0.0000	0.000
0.0033	0.012
0.0066	0.257
0.0100	0.457
0.0133	0.915
0.0166	0.664
0.0200	0.827
0.0233	0.902
0.0266	1.428
0.0300	1.316
0.0333	1.698
0.0500	2.149
0.0666	1.629
0.0833	1.297
0.1000	1.027
0.1166	0.839
0.1333	0.677
0.1500	0.582
0.1666	0.470
0.1833	0.413
0.2000	0.325
0.2166	0.307
0.2333	0.250
0.2500	0.231
0.2666	0.181
0.2833	0.163
0.3000	0.163

CEF-17-25SI

0.3166	0.125
0.3333	0.125
0.4166	0.087
0.5000	0.056
0.5833	0.025
0.6666	0.037
0.7500	0.018
0.8333	0.025
0.9166	0.031
1.0000	0.006
1.0833	0.006
1.1666	0.006
1.2500	0.025
1.3333	0.012
1.4166	-0.006
1.5000	0.006
1.5833	-0.006
1.6666	0.025
1.7500	0.000
1.8333	0.006
1.9166	0.025
2.0000	0.006
2.5000	0.000
3.0000	0.018
3.5000	0.025
4.0000	-0.006
4.5000	0.000
5.0000	0.000
5.5000	-0.006
6.0000	0.000
6.5000	-0.025
7.0000	-0.012
7.5000	0.000
8.0000	0.000
8.5000	0.025
9.0000	-0.006
9.5000	0.018
10.0000	0.012

```
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
```

A Q T E S O L V   R E S U L T S

Version 1.10

04/19/94 11:02:22

TEST DESCRIPTION

```
Data set...........
Data set title..... CEF-17-26I RUN NO.3

Knowns and Constants:
   No. of data points.................. 53
   Radius of well casing............... 0.083
   Radius of well...................... 0.2604
   Aquifer saturated thickness......... 69.64
   Well screen length.................. 10
   Static height of water in well...... 15.36
   Log(Re/Rw).......................... 2.49
   A, B, C.............................  2.709,  0.440,  0.000
```

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.7755E-003	+/-	2.5927E-005
y0 =	2.4187E+000	+/-	1.5757E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

```
Weighted Residual Statistics:
   Number of residuals............... 53
   Number of estimated parameters.... 2
   Degrees of freedom................ 51
   Residual mean..................... 0.01538
   Residual standard deviation....... 0.03546
   Residual variance................. 0.001258
```

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0166	2.387	2.337	0.050035	1
0.0333	2.33	2.2576	0.072431	1
0.05	2.224	2.1809	0.043129	1
0.0666	2.149	2.1072	0.041786	1
0.0833	2.036	2.0356	0.00037598	1
0.1	1.961	1.9665	-0.005466	1
0.1166	1.873	1.9001	-0.027051	1
0.1333	1.835	1.8355	-0.00049883	1
0.15	1.767	1.7731	-0.0061399	1
0.1666	1.691	1.7133	-0.022254	1
0.1833	1.629	1.655	-0.026048	1
0.2	1.56	1.5988	-0.03882	1
0.2166	1.516	1.5448	-0.028822	1
0.2333	1.441	1.4923	-0.051338	1
0.25	1.409	1.4416	-0.032638	1
0.2666	1.359	1.3929	-0.033948	1
0.2833	1.315	1.3456	-0.030624	1
0.3666	1.09	1.1325	-0.042525	1
0.45	0.914	0.95298	-0.038977	1
0.5333	0.802	0.80206	-5.9271E-005	1
0.6166	0.683	0.67504	0.0079582	1
0.7	0.582	0.56802	0.013978	1
0.7833	0.476	0.47807	-0.0020675	1
0.8666	0.426	0.40236	0.023641	1
0.95	0.357	0.33857	0.018431	1
1.0333	0.325	0.28495	0.040048	1
1.1166	0.263	0.23983	0.023174	1
1.2	0.231	0.2018	0.029196	1
1.2833	0.219	0.16985	0.049154	1
1.3666	0.194	0.14295	0.051052	1
1.45	0.194	0.12029	0.073715	1
1.5333	0.15	0.10124	0.048763	1
1.6166	0.119	0.085204	0.033796	1
1.7	0.131	0.071696	0.059304	1
1.7833	0.125	0.060342	0.064658	1
1.8666	0.1	0.050786	0.049214	1
1.95	0.075	0.042734	0.032266	1
2.45	0.043	0.015183	0.027817	1
2.95	0.043	0.005394	0.037606	1
3.45	0.031	0.0019164	0.029084	1
3.95	0.031	0.00068083	0.030319	1
4.45	0.031	0.00024188	0.030758	1
4.95	0.025	8.5935E-005	0.024914	1
5.45	0.025	3.0531E-005	0.024969	1
5.95	0.031	1.0847E-005	0.030989	1
6.45	0.018	3.8536E-006	0.017996	1
6.95	0.006	1.3691E-006	0.0059986	1
7.45	0.018	4.8641E-007	0.018	1
7.95	0.018	1.7281E-007	0.018	1
8.45	0.031	6.1394E-008	0.031	1
8.95	0.006	2.1812E-008	0.006	1
9.45	0.025	7.7493E-009	0.025	1
9.95	0.018	2.7531E-009	0.018	1

RESULTS FROM VISUAL CURVE MATCHING

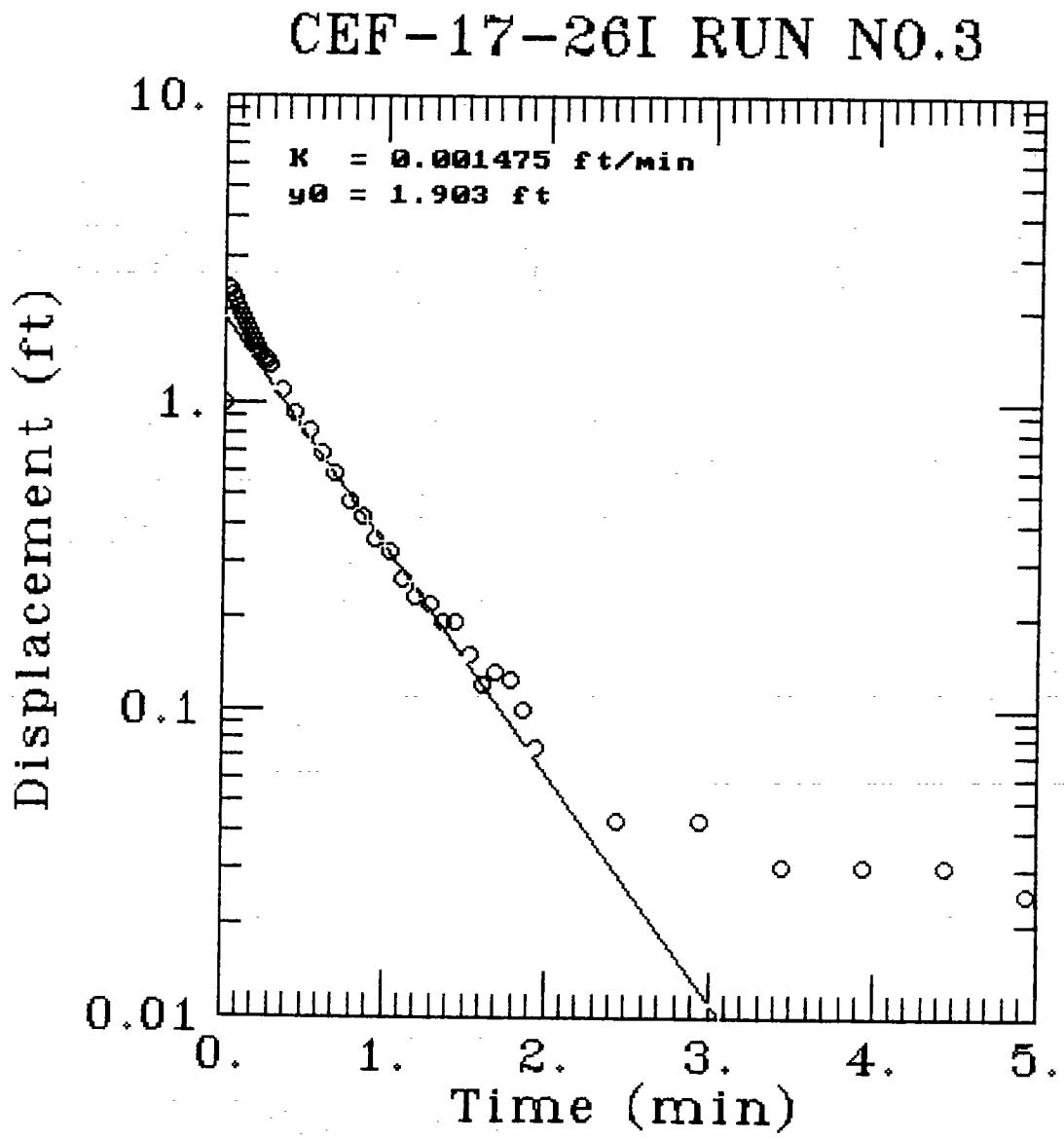
VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.7755E-003
y0 =	2.4187E+000

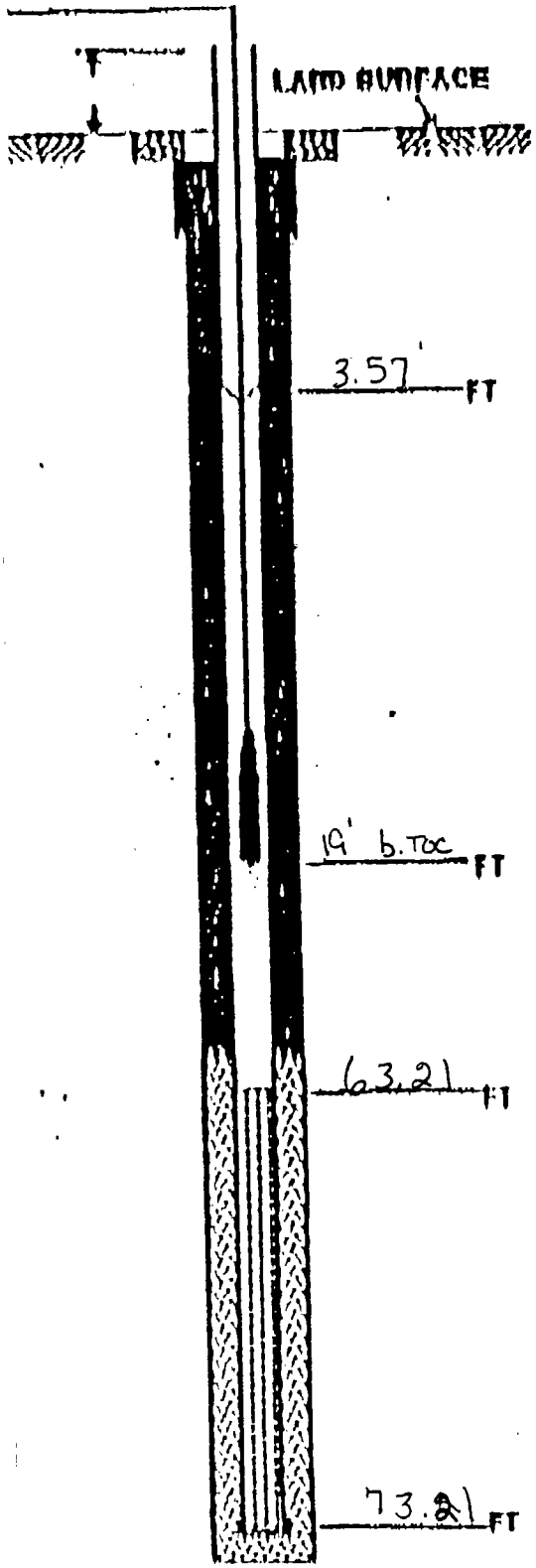
TYPE CURVE DATA

K = 1.47512E-003
y0 = 1.90272E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.903E+000	5.000E+000	3.510E-004		


CEF-17-26I RUN NO.3
K = 0.001475 ft/min
y0 = 1.903 ft
10.
1.
0.1
0.01
Displacement (ft)
0.
1.
2.
3.
4.
5.
Time (min)

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECIL FIELD RI OUS 1, 2, & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-26I PUMPING WELL —

DATE 2-7-94 TIME 1043

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 10 MIN.

TIME OF INSTALLATION 1043

STATIC DEPTH TO WATER 3.57' FT. — PSI

DEPTH OF TRANSDUCER 19' b.TOC

CALIBRATION

17' DEPTH 13.35 FT — PSI

18' DEPTH 14.37 FT — PSI

19' DEPTH 15.36 FT — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 3.57'

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (IN)

— VERIFICATION OF DATA ACQUISITION (IN)

— VERIFICATION OF DATA ACQUISITION (IN)

MAXIMUM PUMPING DEPTH TO WATER — FT — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

SE1000C
Environmental Logger
02/07 12:25

Unit# 01597 Test 3

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-26I

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 02/07 10:52:06

Elapsed Time	INPUT 1
0.0000	0.018
0.0033	0.025
0.0066	0.000
0.0100	0.614
0.0133	1.033
0.0166	0.795
0.0200	0.582
0.0233	0.620
0.0266	0.983
0.0300	1.178
0.0333	1.434
0.0500	2.643
0.0666	2.387
0.0833	2.330
0.1000	2.224
0.1166	2.149
0.1333	2.036
0.1500	1.961
0.1666	1.873
0.1833	1.835
0.2000	1.767
0.2166	1.691
0.2333	1.629
0.2500	1.560
0.2666	1.516
0.2833	1.441
0.3000	1.409

CEF-17-26I

0.3166	1.359
0.3333	1.315
0.4166	1.090
0.5000	0.914
0.5833	0.802
0.6666	0.683
0.7500	0.582
0.8333	0.476
0.9166	0.426
1.0000	0.357
1.0833	0.325
1.1666	0.263
1.2500	0.231
1.3333	0.219
1.4166	0.194
1.5000	0.194
1.5833	0.150
1.6666	0.119
1.7500	0.131
1.8333	0.125
1.9166	0.100
2.0000	0.075
2.5000	0.043
3.0000	0.043
3.5000	0.031
4.0000	0.031
4.5000	0.031
5.0000	0.025
5.5000	0.025
6.0000	0.031
6.5000	0.018
7.0000	0.006
7.5000	0.018
8.0000	0.018
8.5000	0.031
9.0000	0.006
9.5000	0.025
10.0000	0.018

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A Q T E S O L V   R E S U L T S

Version 1.10

04/19/94 11:09:00

==

TEST DESCRIPTION

Data set...........
Data set title..... CEF-17-27D RUN NO.1

Knowns and Constants:
```
   No. of data points.................. 57
   Radius of well casing............... 0.083
   Radius of well...................... 0.2604
   Aquifer saturated thickness......... 84.35
   Well screen length.................. 10
   Static height of water in well...... 14.5
   Log(Re/Rw).......................... 2.449
   A, B, C............................. 2.709, 0.440, 0.000
```

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	3.2158E-004	+/-	8.8887E-006
y0 =	2.6161E+000	+/-	2.3497E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
```
   Number of residuals............... 57
   Number of estimated parameters.... 2
   Degrees of freedom................ 55
   Residual mean..................... 0.02942
   Residual standard deviation....... 0.09108
   Residual variance................. 0.008296
```

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0167	2.737	2.5995	0.1375	1
0.0334	2.712	2.583	0.129	1
0.05	2.661	2.5667	0.094292	1
0.0667	2.643	2.5504	0.092579	1
0.0834	2.611	2.5342	0.076763	1
0.1	2.58	2.5183	0.061748	1
0.1167	2.542	2.5023	0.039727	1
0.1334	2.524	2.4864	0.037606	1
0.15	2.505	2.4707	0.034289	1
0.1667	2.467	2.455	0.011967	1
0.1834	2.461	2.4395	0.021545	1
0.2	2.436	2.4241	0.011932	1
0.2167	2.424	2.4087	0.015314	1
0.2334	2.405	2.3934	0.011599	1
0.25	2.373	2.3783	-0.0053047	1
0.2667	2.355	2.3632	-0.0082132	1
0.35	2.267	2.2894	-0.022354	1
0.4334	2.148	2.2177	-0.069719	1
0.5167	2.092	2.1484	-0.056408	1
0.6	2.01	2.0813	-0.071262	1
0.6834	1.941	2.0161	-0.075139	1
0.7667	1.891	1.9531	-0.062127	1
0.85	1.804	1.8921	-0.088085	1
0.9334	1.747	1.8329	-0.085881	1
1.0167	1.685	1.7756	-0.090597	1
1.1	1.647	1.7201	-0.073103	1
1.1834	1.597	1.6663	-0.06928	1
1.2667	1.534	1.6142	-0.080203	1
1.35	1.484	1.5638	-0.079753	1
1.4334	1.434	1.5148	-0.080823	1
1.5167	1.384	1.4675	-0.083479	1
1.6	1.353	1.4216	-0.068615	1
1.6834	1.321	1.3771	-0.056132	1
1.7667	1.303	1.3341	-0.031092	1
1.85	1.234	1.2924	-0.058397	1
1.9334	1.202	1.252	-0.049957	1
2.4334	1.008	1.0347	-0.026706	1
2.9334	0.877	0.85515	0.021845	1
3.4334	0.764	0.70676	0.057239	1
3.9334	0.657	0.58412	0.072883	1
4.4334	0.576	0.48276	0.093244	1
4.9334	0.501	0.39898	0.10202	1
5.4334	0.432	0.32975	0.10225	1
5.9334	0.426	0.27253	0.15347	1
6.4334	0.382	0.22524	0.15676	1
6.9334	0.313	0.18615	0.12685	1
7.4334	0.281	0.15385	0.12715	1
7.9334	0.281	0.12715	0.15385	1
8.4334	0.269	0.10509	0.16391	1
8.9334	0.231	0.086851	0.14415	1
9.4334	0.213	0.07178	0.14122	1
9.9334	0.206	0.059324	0.14668	1
11.933	0.156	0.027678	0.12832	1
13.933	0.131	0.012914	0.11809	1
15.933	0.119	0.0060251	0.11297	1
17.933	0.1	0.0028111	0.097189	1
19.933	0.075	0.0013115	0.073688	1

==
RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

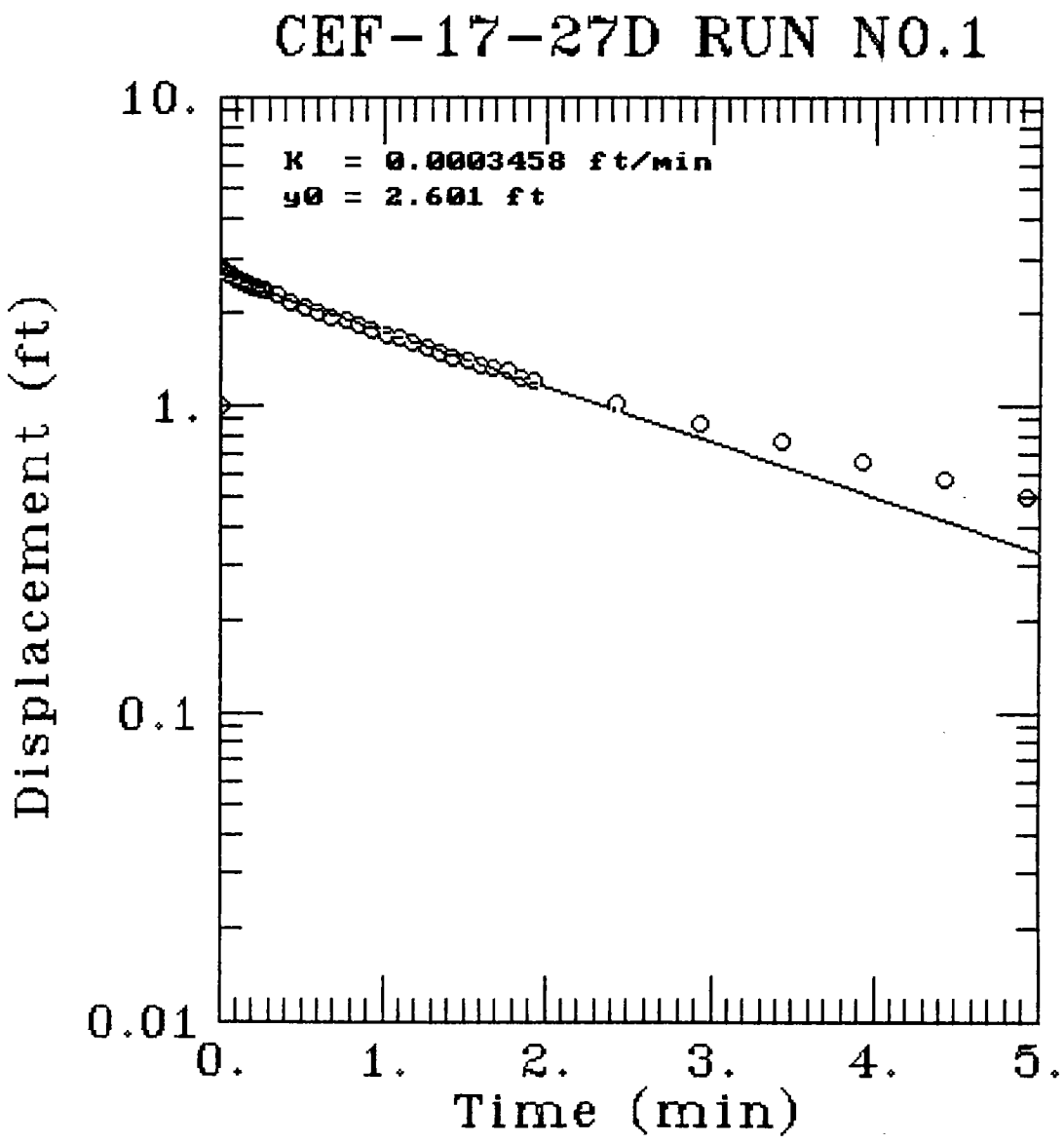
	Estimate
K =	3.2158E-004
y0 =	2.6161E+000

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

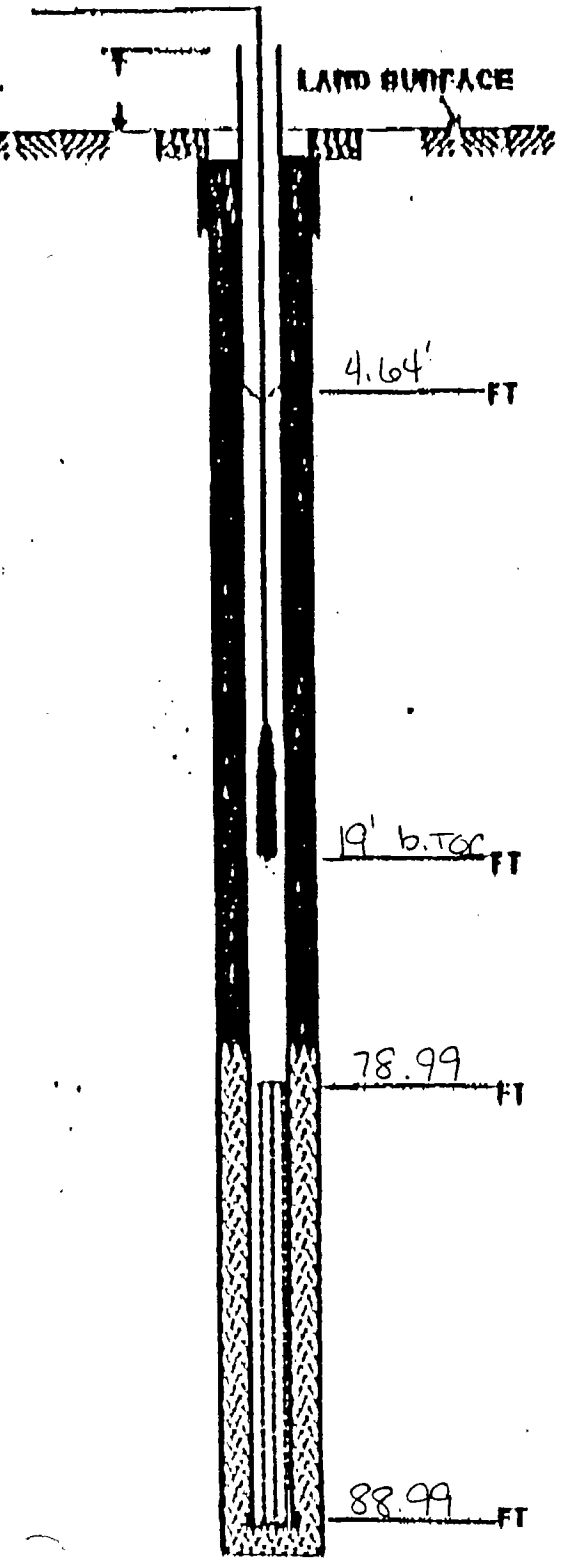
TYPE CURVE DATA

K = 3.45772E-004
y0 = 2.60133E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	2.601E+000	5.000E+000	3.351E-001		


CEF-17-27D RUN NO.1
K = 0.0003458 ft/min
y0 = 2.601 ft
10.
1.
0.1
0.01
Displacement (ft)
0.
1.
2.
3.
4.
5.
Time (min)

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECIL FIELD RI OUS 1, 2, & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-27D PUMPING WELL —

DATE 2-2-94 TIME 0920

DATA LOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 20 MIN

TIME OF INSTALLATION 0920

STATIC DEPTH TO WATER 4.64' FT. — PSI

DEPTH OF TRANSDUCER 19' b.TOC

b.TOC CALIBRATION

17' DEPTH 12.50 FT — PSI

18' DEPTH 13.49 FT — PSI

19' DEPTH 14.50 FT — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 4.64'

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (TM)

— VERIFICATION OF DATA ACQUISITION (TM)

— VERIFICATION OF DATA ACQUISITION (TM)

MAXIMUM PUMPING DEPTH TO WATER — FT — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

SE1000C
Environmental Logger
02/02 12:33

Unit# 01597 Test 4

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-27D

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 02/02 09:36:53

Elapsed Time	INPUT 1
0.0000	-0.037
0.0033	-0.043
0.0066	-0.050
0.0100	0.006
0.0133	0.476
0.0166	0.676
0.0200	1.115
0.0233	0.538
0.0266	0.213
0.0300	0.200
0.0333	0.620
0.0500	1.904
0.0666	2.793
0.0833	2.737
0.1000	2.712
0.1166	2.661
0.1333	2.643
0.1500	2.611
0.1666	2.580
0.1833	2.542
0.2000	2.524
0.2166	2.505
0.2333	2.467
0.2500	2.461
0.2666	2.436
0.2833	2.424
0.3000	2.405

CEF-17-27D

0.3166	2.373
0.3333	2.355
0.4166	2.267
0.5000	2.148
0.5833	2.092
0.6666	2.010
0.7500	1.941
0.8333	1.891
0.9166	1.804
1.0000	1.747
1.0833	1.685
1.1666	1.647
1.2500	1.597
1.3333	1.534
1.4166	1.484
1.5000	1.434
1.5833	1.384
1.6666	1.353
1.7500	1.321
1.8333	1.303
1.9166	1.234
2.0000	1.202
2.5000	1.008
3.0000	0.877
3.5000	0.764
4.0000	0.657
4.5000	0.576
5.0000	0.501
5.5000	0.432
6.0000	0.426
6.5000	0.382
7.0000	0.313
7.5000	0.281
8.0000	0.281
8.5000	0.269
9.0000	0.231
9.5000	0.213
10.0000	0.206
12.0000	0.156
14.0000	0.131
16.0000	0.119
18.0000	0.100
20.0000	0.075

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A Q T E S O L V   R E S U L T S

Version 1.10

04/19/94 11:12:39

==

TEST DESCRIPTION

```
Data set...........
Data set title..... CEF-17-28DD RUN NO.5

Knowns and Constants:
   No. of data points.................. 44
   Radius of well casing............... 0.083
   Radius of well...................... 0.2604
   Aquifer saturated thickness......... 113.3
   Well screen length.................. 10
   Static height of water in well...... 13.12
   Log(Re/Rw).......................... 2.384
   A, B, C.............................  2.709,  0.440,  0.000
```

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.2109E-002	+/-	1.5954E-003
y0 =	3.1255E+000	+/-	2.6174E-001

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

```
Weighted Residual Statistics:
   Number of residuals................ 44
   Number of estimated parameters.... 2
   Degrees of freedom................ 42
   Residual mean..................... 0.0188
   Residual standard deviation....... 0.1745
   Residual variance................. 0.03045
```

Model Residuals:

Time	Observed	Calculated	Residual	Weight
0.0167	2.003	2.4433	-0.44034	1
0.0333	2.51	1.9129	0.59709	1
0.05	1.922	1.4954	0.42658	1
0.0667	1.083	1.169	-0.086049	1
0.0833	0.225	0.91526	-0.69026	1
0.2	0.106	0.1638	-0.057798	1
0.2167	0.187	0.12805	0.058951	1
0.2333	0.212	0.10025	0.11175	1
0.25	0.2	0.078371	0.12163	1
0.2667	0.156	0.061267	0.094733	1
0.2833	0.112	0.047966	0.064034	1
0.3	0.043	0.037498	0.0055024	1
0.3833	0.025	0.010981	0.014019	1
0.4667	0.043	0.0032108	0.039789	1
0.55	0.025	0.00094025	0.02406	1
0.6333	0.037	0.00027534	0.036725	1
0.7167	0.037	8.0512E-005	0.036919	1
0.8	0.018	2.3577E-005	0.017976	1
0.8833	0.012	6.9042E-006	0.011993	1
0.9667	0.018	2.0188E-006	0.017998	1
1.05	0.037	5.9119E-007	0.036999	1
1.1333	0.025	1.7312E-007	0.025	1
1.2167	0.006	5.0622E-008	0.0059999	1
1.3	0.018	1.4824E-008	0.018	1
1.3833	0.018	4.341E-009	0.018	1
1.4667	0.012	1.2693E-009	0.012	1
1.55	0.006	3.7171E-010	0.006	1
1.8	0.018	9.3207E-012	0.018	1
1.8833	0.018	2.7294E-012	0.018	1
1.9667	0.031	7.9811E-013	0.031	1
2.4667	0.037	5.0181E-016	0.037	1
2.9667	0.025	3.1552E-019	0.025	1
3.4667	0.012	1.9838E-022	0.012	1
3.9667	0.025	1.2473E-025	0.025	1
4.4667	0.012	7.8427E-029	0.012	1
4.9667	0.006	4.9311E-032	0.006	1
5.4667	0.018	3.1005E-035	0.018	1
5.9667	0.025	1.9494E-038	0.025	1
6.4667	0.006	1.2257E-041	0.006	1
6.9667	0.025	7.7067E-045	0.025	1
7.9667	0.018	3.0467E-051	0.018	1
8.9667	0.006	1.2045E-057	0.006	1
9.4667	0.006	7.5731E-061	0.006	1
9.9667	0.012	4.7616E-064	0.012	1

==========

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

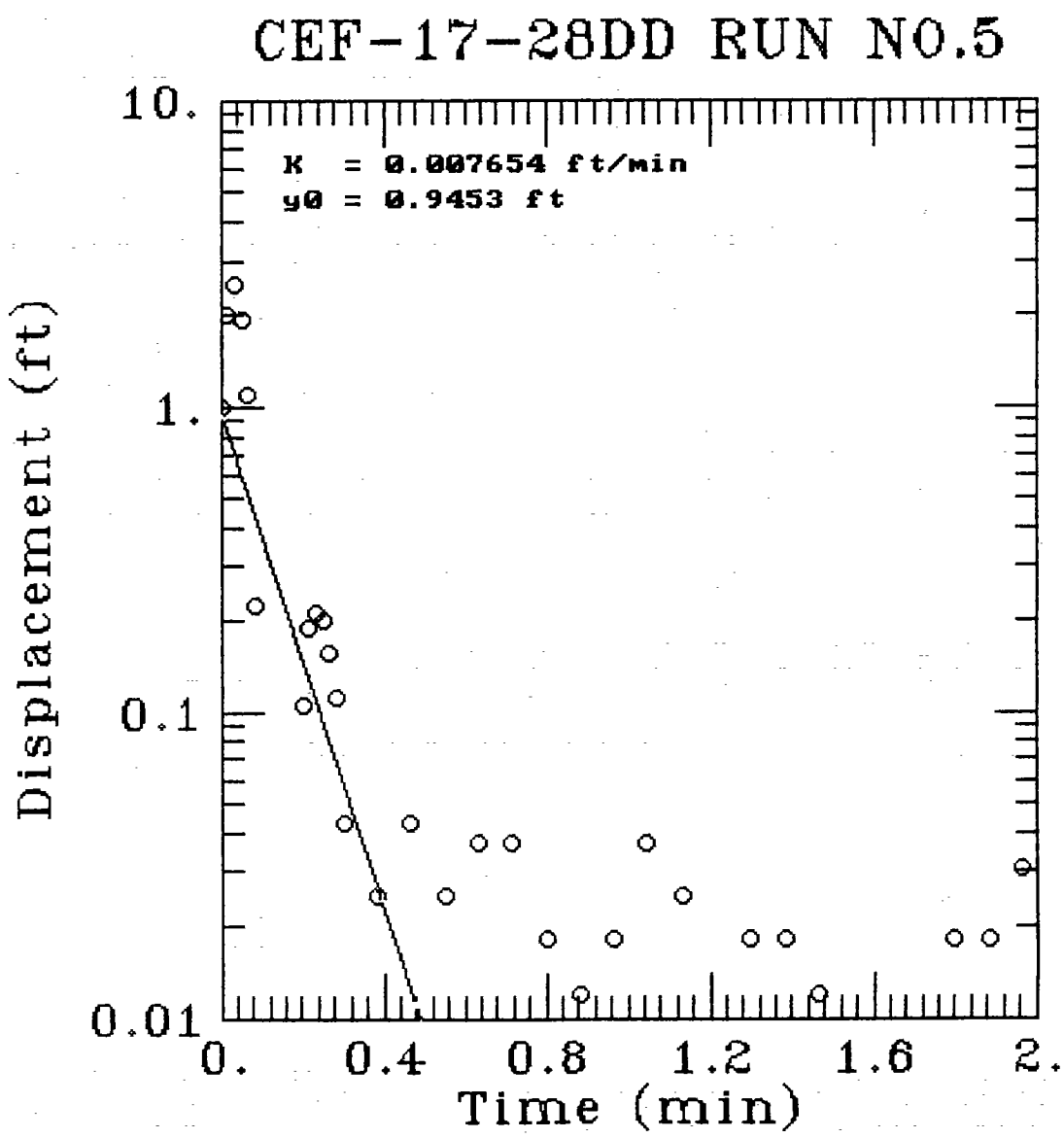
	Estimate
K =	1.2109E-002
y0 =	3.1255E+000

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

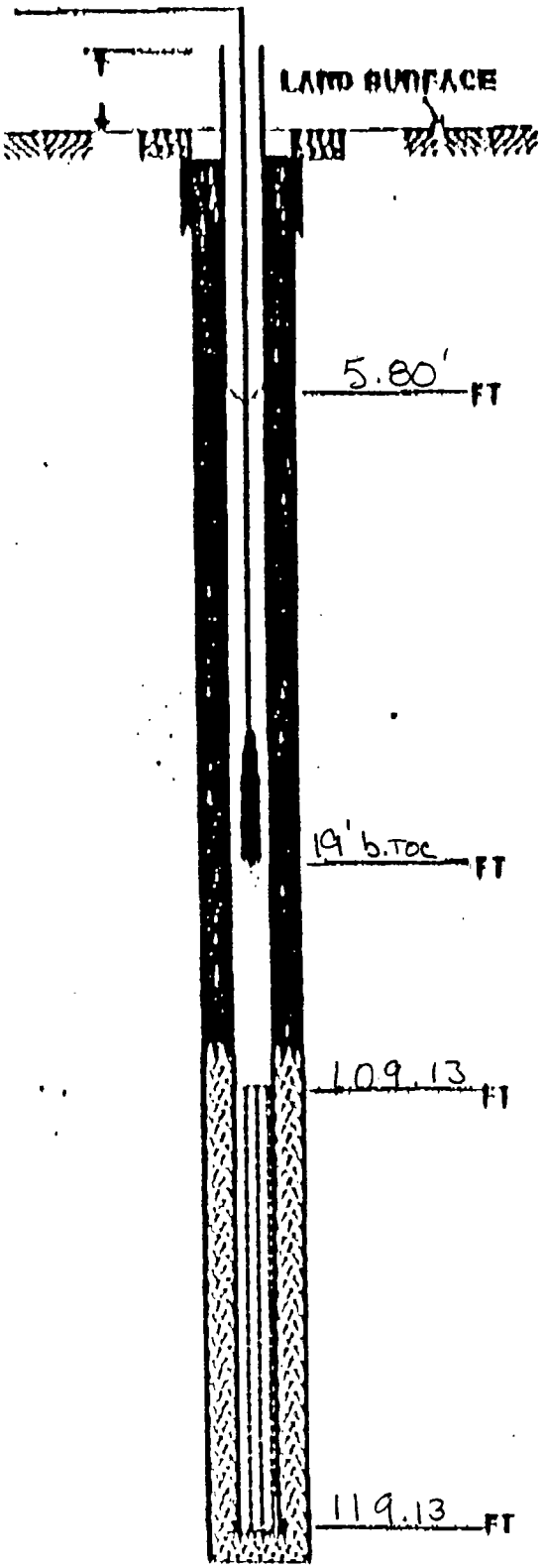
TYPE CURVE DATA

K = 7.65425E-003
y0 = 9.45335E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	9.453E-001	2.000E+000	7.592E-009		


CEF-17-28DD RUN NO.5
K = 0.007654 ft/min
y0 = 0.9453 ft
10.
1.
0.1
0.01
Displacement (ft)
0.
0.4
0.8
1.2
1.6
2.
Time (min)

AQUIFER PERFORMANCE TEST
TRANSDUCER CALIBRATION LOG



PROJECT NAS CECILFIELD RI OUS 1, 2, & 7

PROJECT NUMBER 8500-08

WELL NO. CEF-17-28DD PUMPING WELL —

DATE 2-7-94 TIME 1000

DATALOGGER SERIAL NO. 656116

TRANSDUCER SERIAL NO. 656118

TRANSDUCER RANGE 20 PSIG

CHANNEL NO. 1

TEST DURATION 10 MIN.

TIME OF INSTALLATION 1000

STATIC DEPTH TO WATER 5.80' FT. — PSI

DEPTH OF TRANSDUCER 19' b.TOC

b.TOC. CALIBRATION

17' DEPTH 11.13 FT — PSI

18' DEPTH 12.13 FT — PSI

19' DEPTH 13.12 FT — PSI

CLOCKS SYNCHRONIZED? —

STATIC DEPTH TO WATER 5.80'

TIME PUMPING STARTS —

— VERIFICATION OF DATA ACQUISITION (Y/N)

— VERIFICATION OF DATA ACQUISITION (Y/N)

— VERIFICATION OF DATA ACQUISITION (Y/N)

MAXIMUM PUMPING DEPTH TO WATER — FT — PSI

TIME PUMPING STOPS —

MAXIMUM RECOVERY DEPTH TO WATER — FT — PSI

END RECOVERY —

RECALIBRATION OF TRANSDUCER

DEPTH — FT — PSI

DEPTH — FT — PSI

DEPTH — FT — PSI

r5

SE1000C
Environmental Logger
02/07 12:23

Unit# 01597 Test 2

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

CEF-17-28DD

Reference	0.000
Linearity	0.130
Scale factor	19.820
Offset	-0.040
Delay mSEC	50.000

Step 0 02/07 10:13:21

Elapsed Time	INPUT 1
0.0000	-0.018
0.0033	-0.012
0.0066	0.012
0.0100	-0.006
0.0133	-0.006
0.0166	0.801
0.0200	1.408
0.0233	1.302
0.0266	1.077
0.0300	1.740
0.0333	2.829
0.0500	2.003
0.0666	2.510
0.0833	1.922
0.1000	1.083
0.1166	0.225
0.1333	-0.281
0.1500	-0.513
0.1666	-0.545
0.1833	-0.426
0.2000	-0.231
0.2166	-0.037
0.2333	0.106
0.2500	0.187
0.2666	0.212
0.2833	0.200
0.3000	0.156

CEF-17-28DD

0.3166	0.112
0.3333	0.043
0.4166	0.025
0.5000	0.043
0.5833	0.025
0.6666	0.037
0.7500	0.037
0.8333	0.018
0.9166	0.012
1.0000	0.018
1.0833	0.037
1.1666	0.025
1.2500	0.006
1.3333	0.018
1.4166	0.018
1.5000	0.012
1.5833	0.006
1.6666	0.000
1.7500	0.000
1.8333	0.018
1.9166	0.018
2.0000	0.031
2.5000	0.037
3.0000	0.025
3.5000	0.012
4.0000	0.025
4.5000	0.012
5.0000	0.006
5.5000	0.018
6.0000	0.025
6.5000	0.006
7.0000	0.025
7.5000	-0.006
8.0000	0.018
8.5000	0.000
9.0000	0.006
9.5000	0.006
10.0000	0.012

APPENDIX H

APPENDIX H

WATER LEVEL DATA

Water Level Data
NAS Cecil Field Operable Units 1, 2, 7 and Background
Jacksonville, Florida
February 8–9, 1994

Operable Unit Well No.	Elevation TOC (Ft, NGVD)	Screened Interval (Ft, bls)	Water Level (Ft, below TOC)	Water Level Elevation (Ft, NGVD)	Comments
Site 1					
CEF-1-1	54.58	10-15	7.33	47.25	
CEF-1-4	52.90	8-18	2.68	50.22	
CEF-1-5S	62.02	5-15	4.57	57.45	
CEF-1-6S	55.67	5-15	5.88	49.79	
CEF-1-7DD	55.39	81-91	N/A	55.39	Artesian
CEF-1-8D	55.62	52-62	1.16	54.46	
CEF-1-9S	52.96	4-14	4.16	48.80	
CEF-1-10S	58.34	5-15	4.74	53.60	
CEF-1-12D	61.48	36-46	2.29	59.19	
CEF-1-13S	56.05	4-14	4.13	51.92	
CEF-1-14D	49.90	35-45	10.00	59.90	* Artesian
CEF-1-15S	52.20	4-14	3.08	49.12	
CEF-1-16D	55.40	42-52	7.33	62.73	Artesian
CEF-1-17D	50.80	42-52	3.83	54.63	Artesian
CEF-1-18S	61.93	4-14	3.04	58.89	
Site 2					
CEF-2-1	61.25	12-22	6.40	54.85	
CEF-2-3S	74.33	5-15	7.20	67.13	
CEF-2-4S	65.77	5-15	6.95	58.82	
CEF-2-5S	57.99	5-15	3.28	54.71	
CEF-2-6S	57.47	3-13	3.73	53.74	
CEF-2-7D	57.34	30-40	2.59	54.75	
CEF-2-8D	61.56	30-40	6.51	55.05	
CEF-2-9D	73.93	65-75	7.32	66.61	
CEF-2-10DD	74.00	106-116	7.49	66.51	
CEF-2-11D	54.90	39-49	10.00	64.90	* Artesian
Site 3					
CEF-3-1	77.33	30-40	5.23	72.10	
CEF-3-3S	78.53	4-14	5.71	72.82	
CEF-3-4S	77.08	4-14	5.34	71.74	
CEF-3-5S	78.19	4-14	5.25	72.94	
CEF-3-6S	78.24	4-14	6.07	72.17	
CEF-3-7D	78.01	58-68	6.57	71.44	
CEF-3-7DD	77.81	100-110	8.95	68.86	
CEF-3-7S	78.01	4-14	6.17	71.84	
CEF-3-8S	77.17	4-14	3.80	73.37	
CEF-3-9I	76.77	45-55	3.72	73.05	
CEF-3-10D	76.77	88-98	7.65	69.12	
CEF-3-11I	57.10	25-35	N/A	N/A	Artesian
CEF-3-12D	57.20	55-65	N/A	N/A	Artesian
CEF-3-13S	76.76	8-18	5.34	71.42	
CEF-3-14I	76.63	45-55	5.32	71.31	
CEF-3-15D	76.54	88-98	7.77	68.77	
CEF-3-16S	75.49	6-16	5.81	69.68	
CEF-3-17D	75.37	84-94	7.30	68.07	
CEF-3-25S	72.65	84-94	N/A	N/A	
CEF-3-26I	72.44	45-55	4.45	67.99	
CEF-3-27D	72.37	81-91	3.61	68.76	
CEF-3-31S	58.00	20-30	1.91	56.09	
CEF-3-32D	55.10	56-66	N/A	N/A	Artesian
Site 4					
CEF-4-1	73.74	10-15	5.10	68.64	
CEF-4-2	72.51	95-120	4.07	68.44	
CEF-4-3	72.53	8-13	3.48	69.05	
CEF-4-4	75.02	20-50	5.28	69.74	
CEF-4-1S	77.89	4-14	4.52	73.37	
CEF-4-2S	77.29	4-14	5.41	71.88	

Water Level Data
NAS Cecil Field Operable Units 1, 2, 7 and Background
Jacksonville, Florida
February 8–9, 1994

Operable Unit Well No.	Elevation TOC (Ft, NGVD)	Screened Interval (Ft, bls)	Water Level (Ft, below TOC)	Water Level Elevation (Ft, NGVD)	Comments
Site 5					
CEF-5-3S	71.88	4–14	4.08	67.80	Odor
CEF-5-4S	71.64	4–14	4.01	67.63	Odor
CEF-5-5S	72.26	4–14	5.06	67.20	DTP 4.50 (Ft, TOC
CEF-5-6S	73.91	4–14	8.85	65.06	DTP 5.24 (Ft, TOC
CEF-5-7S	73.90	4–14	5.11	68.79	LIGHT ODOR
CEF-5-8S	71.34	2–12	3.64	67.70	
CEF-5-9I	71.60	25–35	3.66	67.94	
CEF-5-10S	71.17	2–12	2.35	68.82	
CEF-5-11I	71.64	25–35	2.72	68.92	
CEF-5-12D	71.69	47–57	2.76	68.93	
CEF-5-13S	74.56	3–13	4.84	69.72	
CEF-5-14I	74.64	25–35	5.01	69.63	
CEF-5-15D	74.79	45–55	5.14	69.65	
CEF-5-16S	72.96	6–16	4.72	68.24	
CEF-5-17I	73.17	25–35	5.01	68.16	
CEF-5-18D	73.50	40–50	5.33	68.17	
CEF-5-19S	72.79	2–12	5.53	67.26	
CEF-5-20S	68.28	2–12	1.46	66.82	
CEF-5-21I	68.34	25–35	1.46	66.88	
CEF-5-22D	68.58	40–50	1.66	66.92	
CEF-5-23S	69.58	4–14	2.62	66.96	
CEF-5-24S	73.12	5–15	5.58	67.54	
CEF-5-25I	73.11	24–34	5.44	67.67	
CEF-5-26D	73.39	45–55	5.68	67.71	
CEF-5-27S	71.70	3–13	4.33	67.37	
CEF-5-28D	N/A	46–56	3.20	N/A	
CEF-5-29S	70.86	3–13	3.80	67.06	
CEF-5-30S	72.03	6–16	4.39	67.64	
Site 7					
CEF-7-1D	78.99	20–50	6.65	72.34	
CEF-7-2D	78.22	20–50	7.01	71.21	
CEF-7-3D	78.74	20–50	7.73	71.01	
Site 8					
CEF-8-1	69.10	20–50	8.64	60.46	
CEF-8-2	71.01	20–50	5.59	65.42	
CEF-8-3	72.64	20–50	5.48	67.16	
CEF-8-4	73.42	20–50	5.08	68.34	
Site 10					
CEF-10-1D	69.87	95–115	6.55	63.32	
CEF-10-2	50.81	18–38	0.56	50.25	
CEF-10-3S	58.62	14–24	4.06	54.56	
CEF-10-4	58.49	10–30	5.63	52.86	
Site 11					
CEF-11-1	78.06	20–50	5.92	72.14	
CEF-11-2	78.23	20–50	6.10	72.13	
Site 17					
CEF-17-1	73.89	10–15	2.57	71.32	
CEF-17-4S	73.20	3–13	3.32	69.88	Odor
CEF-17-5S	72.72	4–14	3.25	69.47	Odor
CEF-17-6S	72.92	5–15	3.41	69.51	Odor
CEF-17-7D	72.44	76–86	3.98	68.46	
CEF-17-8S	70.96	4–14	2.18	68.78	
CEF-17-9S	73.67	4–14	3.31	70.36	
CEF-17-10D	71.01	76–86	2.60	68.41	

Water Level Data
NAS Cecil Field Operable Units 1, 2, 7 and Background
Jacksonville, Florida
February 8–9, 1994

Operable Unit Well No.	Elevation TOC (Ft, NGVD)	Screened Interval (Ft, bls)	Water Level (Ft, below TOC)	Water Level Elevation (Ft, NGVD)	Comments
CEF-17-11I	71.19	45-55	2.12	69.07	
CEF-17-12D	71.21	75-85	2.60	68.61	
CEF-17-13S	72.74	4-14	3.35	69.39	
CEF-17-14I	72.56	45-55	3.21	69.35	
CEF-17-15D	71.93	76-86	3.33	68.60	
CEF-17-16S	73.53	4-14	3.28	70.25	
CEF-17-17I	73.42	45-55	3.28	70.14	
CEF-17-18D	73.38	74-84	4.58	68.80	
CEF-17-19S	74.61	5-15	3.57	71.04	
CEF-17-20I	74.63	45-55	3.70	70.93	
CEF-17-21I	74.70	45-55	3.53	71.17	
CEF-17-22D	74.51	81-91	5.44	69.07	
CEF-17-23S	71.07	4-14	2.30	68.77	
CEF-17-24S	73.41	4-14	3.13	70.28	Strong odor
CEF-17-25SI	73.63	30-40	3.32	70.31	
CEF-17-26I	73.79	60-70	3.69	70.10	
CEF-17-27D	74.00	76-86	4.93	69.07	
CEF-17-28DD	73.88	106-116	5.89	67.99	
Site 16					
CEF-16-1	80.03	20-50	7.65	72.38	
CEF-16-2	81.42	20-50	9.46	71.96	
CEF-16-3	80.86	17-47	8.86	72.00	
CEF-16-4S	78.14	4-14	5.96	72.18	
CEF-16-5S	78.31	4-14	5.96	72.35	Broken lock cap
CEF-16-6S	77.95	4-14	5.61	72.34	
CEF-16-7S	78.09	4-14	6.08	72.01	
CEF-16-8DD	78.02	105-115	5.43	72.59	
CEF-16-9D	77.92	91-101	5.82	72.10	
CEF-16-10S	77.86	4-14	6.01	71.85	
Background					
CEF-BK-1S	66.77	5-15	4.14	62.63	
CEF-BK-2S	84.09	5-15	4.78	79.31	
CEF-BK-3D	84.06	37-47	4.80	79.26	
CEF-BK-4S	78.17	5-15	4.19	73.98	
CEF-BK-5S	76.96	5-15	4.49	72.47	
CEF-BK-6D	77.15	37-47	4.82	72.33	
CEF-BK-7S	80.28	5-15	3.47	76.81	
CEF-BK-8S	80.19	5-15	6.72	73.47	
CEF-BK-9D	80.09	50-60	6.64	73.45	
Truck Stand Facility					
Site 372					
CEF-372-4	78.81	N/A	2.32	76.49	
CEF-372-7	78.98	N/A	3.19	75.79	
CEF-372-10D	74.99	N/A	4.00	70.99	
North Fuel Farm					
Site 76					
CEF-76-1	79.55	N/A	2.14	77.41	ODOR
CEF-76-3	77.68	N/A	N/A	N/A	Could not locate
CEF-76-4	77.31	N/A	2.69	74.62	DTP 1.14 (Ft, TOC
CEF-76-5	77.70	N/A	1.91	75.79	
CEF-76-6	78.05	N/A	2.15	75.90	
CEF-76-7	79.32	N/A	N/A	N/A	Rusted shut
CEF-76-9	78.90	N/A	2.44	76.46	
CEF-76-11	77.74	N/A	1.91	75.83	
CEF-76-12	76.76	N/A	0.88	75.88	
CEF-76-20	77.73	N/A	1.70	76.03	
CEF-76-21	77.94	N/A	3.44	74.50	

Water Level Data
NAS Cecil Field Operable Units 1, 2, 7 and Background
Jacksonville, Florida
February 8–9, 1994

Operable Unit Well No.	Elevation TOC (Ft, NGVD)	Screened Interval (Ft, bls)	Water Level (Ft, below TOC)	Water Level Elevation (Ft, NGVD)	Comments
CEF-76-24	78.85	N/A	N/A	N/A	Could not locate
CEF-76-25D	77.94	N/A	2.10	75.84	
CEF-76-26D	78.86	N/A	3.09	75.77	
CEF-76-27D	79.19	N/A	4.01	75.18	
CEF-76-28D	77.77	N/A	1.99	75.78	
CEF-76-29	N/A	N/A	0.43	N/A	
CEF-76-30	N/A	N/A	N/A	N/A	Artesian
South Fuel Farm Site 43					
CEF-43-7	79.38	N/A	4.98	74.40	
CEF-43-8	79.85	N/A	6.08	73.77	
CEF-43-10	80.97	N/A	5.99	74.98	
CEF-43-14	78.66	N/A	4.35	74.31	
CEF-43-15	79.87	N/A	5.64	74.23	
CEF-43-16	79.44	N/A	5.07	74.37	
CEF-43-17	N/A	N/A	4.96	N/A	
CEF-43-18	79.87	N/A	4.13	75.74	
CEF-43-19	80.97	N/A	N/A	N/A	Rusted shut
CEF-43-20	80.95	N/A	5.08	75.87	
CEF-43-21	79.15	N/A	4.08	75.07	
CEF-43-22	79.68	N/A	5.37	74.31	
CEF-43-25	75.38	N/A	4.87	70.51	
CEF-43-26D	79.97	N/A	6.72	73.25	
CEF-43-27D	78.75	N/A	6.81	71.94	
CEF-43-28D	76.14	N/A	4.63	71.51	
CEF-43-29	77.84	N/A	5.05	72.79	
CEF-43-30	N/A	N/A	4.64	N/A	
CEF-43-31	N/A	N/A	4.59	N/A	

DTP = Depth To Product
N/A = Data Not Available
* – Measurement not made at heigt above 10.00'above land surface (als)
Artesian well elevations represent land surface elevations

Water Level Data
NAS Cecil Field Operable Units 1, 2, 7 and Background
Jacksonville, Florida
February 27–March 2, 1994

Operable Unit Well No.	Elevation TOC (Ft, NGVD)	Screened Interval (Ft, bls)	Water Level (Ft, below TOC)	Water Level Elevation (Ft, NGVD)	Comments
Site 1					
CEF-1-1	54.58	10-15	8.02	46.56	
CEF-1-4	52.90	8-18	2.96	49.94	
CEF-1-5S	62.02	5-15	5.39	56.63	
CEF-1-6S	55.67	5-15	6.65	49.02	
CEF-1-7DD	55.39	81-91	0.30	55.09	
CEF-1-8D	55.62	52-62	1.37	54.25	
CEF-1-9S	52.96	4-14	4.45	48.51	
CEF-1-10S	58.34	5-15	4.97	53.37	
CEF-1-12D	61.48	36-46	2.83	58.65	
CEF-1-13S	56.05	4-14	4.46	51.59	
CEF-1-14D	49.90	35-45	10.00	59.90	* Artesian
CEF-1-15S	52.20	4-14	3.51	48.69	
CEF-1-16D	55.40	42-52	6.91	62.31	Artesian
CEF-1-17D	50.80	42-52	3.58	54.38	Artesian
CEF-1-18S	61.93	4-14	3.68	58.25	
Site 2					
CEF-2-1	61.25	12-22	6.65	54.60	
CEF-2-3S	74.33	5-15	7.95	66.38	
CEF-2-4S	65.77	5-15	7.69	58.08	
CEF-2-5S	57.99	5-15	3.58	54.41	
CEF-2-6S	57.47	3-13	3.83	53.64	
CEF-2-7D	57.34	30-40	2.82	54.52	
CEF-2-8D	61.56	30-40	6.62	54.94	
CEF-2-9D	73.93	65-75	7.91	66.02	
CEF-2-10DD	74.00	106-116	7.93	66.07	
CEF-2-11D	54.90	39-49	10.00	64.90	* Artesian
Site 3					
CEF-3-1	77.33	30-40	5.81	71.52	
CEF-3-3S	78.53	4-14	6.45	72.08	
CEF-3-4S	77.08	4-14	5.91	71.17	
CEF-3-5S	78.19	4-14	5.85	72.34	
CEF-3-6S	78.24	4-14	6.69	71.55	
CEF-3-7D	78.01	58-68	7.15	70.86	
CEF-3-7DD	77.81	100-110	9.45	68.36	
CEF-3-7S	78.01	4-14	6.80	71.21	
CEF-3-8S	77.17	4-14	4.60	72.57	
CEF-3-9I	76.77	45-55	4.42	72.35	
CEF-3-10D	76.77	88-98	8.24	68.53	
CEF-3-11I	57.10	25-35	2.63	59.73	Artesian
CEF-3-12D	57.20	55-65	6.30	63.50	Artesian
CEF-3-13S	76.76	8-18	5.91	70.85	
CEF-3-14I	76.63	45-55	5.91	70.72	
CEF-3-15D	76.54	88-98	8.24	68.30	
CEF-3-16S	75.49	6-16	6.23	69.26	
CEF-3-17D	75.37	84-94	7.75	67.62	
CEF-3-18S	N/A	15-25	1.62	N/A	
CEF-3-19D	N/A	66-76	4.96	N/A	Artesian
CEF-3-20S	58.37	4-14	7.58	50.79	
CEF-3-21I	55.90	40-50	4.86	60.76	Artesian
CEF-3-22D	55.70	60-70	10.00	65.70	* Artesian
CEF-3-23S	63.71	15-25	2.29	61.42	
CEF-3-24D	61.20	62.5-72.5	10.00	71.20	* Artesian
CEF-3-25S	72.65	84-94	4.92	67.73	
CEF-3-26I	72.44	45-55	4.96	67.48	
-3-27D	72.37	81-91	4.17	68.20	

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Water Level Data
NAS Cecil Field Operable Units 1, 2, 7 and Background
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Operable Unit Well No.	Elevation TOC (Ft. NGVD)	Screened Interval (Ft. bls)	Water Level (Ft. below TOC)	Water Level Elevation (Ft. NGVD)	Comments
CEF-3-28S	N/A	20-30	2.88	N/A	
CEF-3-29D	N/A	72-82	4.37	N/A	Artesian
CEF-3-30DD	N/A	94-104	10.00	N/A	* Artesian
CEF-3-31S	58.00	20-30	2.58	55.42	
CEF-3-32D	55.10	56-66	10.00	65.10	* Artesian
CEF-3-33DD	N/A	105-115	8.46	N/A	
Site 4					
CEF-4-1	73.74	10-15	5.60	68.14	
CEF-4-2	72.51	95-120	4.63	67.88	
CEF-4-3	72.53	8-13	4.10	68.43	
CEF-4-4	75.02	20-50	5.86	69.16	
CEF-4-1S	77.89	4-14	6.09	71.80	
CEF-4-2S	77.29	4-14	5.94	71.35	
Site 5					
CEF-5-3S	71.88	4-14	4.41	67.47	Odor
CEF-5-4S	71.64	4-14	4.33	67.31	Odor
CEF-5-5S	72.26	4-14	5.43	66.83	DTP 4.82 (Ft. TOC)
CEF-5-6S	73.91	4-14	8.98	64.93	DTP 5.59 (Ft. TOC)
CEF-5-7S	73.90	4-14	5.48	68.42	
CEF-5-8S	71.34	2-12	3.87	67.47	
CEF-5-9I	71.60	25-35	4.05	67.55	
CEF-5-10S	71.17	2-12	2.73	68.44	
CEF-5-11I	71.64	25-35	3.09	68.55	
CEF-5-12D	71.69	47-57	3.12	68.57	
CEF-5-13S	74.56	3-13	5.31	69.25	
CEF-5-14I	74.64	25-35	5.43	69.21	
CEF-5-15D	74.79	45-55	5.57	69.22	
CEF-5-16S	72.96	6-16	4.98	67.98	
CEF-5-17I	73.17	25-35	5.28	67.89	
CEF-5-18D	73.50	40-50	5.60	67.90	
CEF-5-19S	72.79	2-12	5.68	67.11	
CEF-5-20S	68.28	2-12	1.66	66.62	
CEF-5-21I	68.34	25-35	1.70	66.64	
CEF-5-22D	68.58	40-50	1.91	66.67	
CEF-5-23S	69.58	4-14	2.89	66.69	
CEF-5-24S	73.12	5-15	6.03	67.09	
CEF-5-25I	73.11	24-34	5.88	67.23	
CEF-5-26D	73.39	45-55	6.12	67.27	
CEF-5-27S	71.70	3-13	4.74	66.96	
CEF-5-28D	71.06	46-56	3.53	67.53	
CEF-5-29S	70.86	3-13	4.06	66.80	
CEF-5-30S	72.03	6-16	4.61	67.42	
Site 7					
CEF-7-1D	78.99	20-50	7.60	71.39	
CEF-7-2D	78.22	20-50	7.96	70.26	
CEF-7-3D	78.74	20-50	8.80	69.94	
Site 8					
CEF-8-1	69.10	20-50	9.12	59.98	
CEF-8-2	71.01	20-50	5.32	65.69	
CEF-8-3	72.64	20-50	5.99	66.65	
CEF-8-4	73.42	20-50	5.64	67.78	
Site 10					
CEF-10-1D	69.87	95-115	7.04	62.83	

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Water Level Data
NAS Cecil Field Operable Units 1, 2, 7 and Background
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Operable Unit Well No.	Elevation TOC (Ft, NGVD)	Screened Interval (Ft, bls)	Water Level (Ft, below TOC)	Water Level Elevation (Ft, NGVD)	Comments
CEF-10-2	50.81	18-38	1.19	49.62	
CEF-10-3S	58.62	14-24	4.63	53.99	
CEF-10-4	58.49	10-30	6.33	52.16	
Site 11					
CEF-11-1	78.06	20-50	6.86	71.20	
CEF-11-2	78.23	20-50	7.04	71.19	
Site 17					
CEF-17-1	73.89	10-15	3.22	70.67	
CEF-17-4S	73.20	3-13	3.69	69.51	Odor
CEF-17-5S	72.72	4-14	3.52	69.20	Odor
CEF-17-6S	72.92	5-15	3.74	69.18	Odor
CEF-17-7D	72.44	76-86	4.43	68.01	
CEF-17-8S	70.96	4-14	2.35	68.61	
CEF-17-9S	73.67	4-14	3.78	69.89	
CEF-17-10D	71.01	76-86	3.03	67.98	
CEF-17-11I	71.19	45-55	2.58	68.61	
CEF-17-12D	71.21	75-85	3.06	68.15	
CEF-17-13S	72.74	4-14	3.82	68.92	
CEF-17-14I	72.56	45-55	3.71	68.85	
CEF-17-15D	71.93	76-86	3.79	68.14	
CEF-17-16S	73.53	4-14	3.84	69.69	
CEF-17-17I	73.42	45-55	3.84	69.58	
CEF-17-18D	73.38	74-84	5.05	68.33	
CEF-17-19S	74.61	5-15	4.20	70.41	
CEF-17-20I	74.63	45-55	4.28	70.35	
CEF-17-21I	74.70	45-55	4.11	70.59	
CEF-17-22D	74.51	81-91	5.89	68.62	
CEF-17-23S	71.07	4-14	2.55	68.52	
CEF-17-24S	73.41	4-14	3.61	69.80	Strong odor
CEF-17-25SI	73.63	30-40	3.80	69.83	
CEF-17-26I	73.79	60-70	4.17	69.62	
CEF-17-27D	74.00	76-86	5.40	68.60	
CEF-17-28DD	73.88	106-116	6.34	67.54	
Site 16					
CEF-16-1	80.03	20-50	8.39	71.64	
CEF-16-2	81.42	20-50	10.15	71.27	
CEF-16-3	80.86	17-47	9.55	71.31	
CEF-16-4S	78.14	4-14	6.59	71.55	
CEF-16-5S	78.31	4-14	6.69	71.62	Broken lock cap
CEF-16-6S	77.95	4-14	6.37	71.58	
CEF-16-7S	78.09	4-14	6.80	71.29	
CEF-16-8DD	78.02	105-115	6.23	71.79	
CEF-16-9D	77.92	91-101	6.51	71.41	
CEF-16-10S	77.86	4-14	6.73	71.13	
Background					
CEF-BK-1S	66.77	5-15	5.71	61.06	
CEF-BK-2S	84.09	5-15	5.40	78.69	
CEF-BK-3D	84.06	37-47	5.42	78.64	
CEF-BK-4S	78.17	5-15	4.80	73.37	
CEF-BK-5S	76.96	5-15	5.16	71.80	
CEF-BK-6D	77.15	37-47	5.47	71.68	
CEF-BK-7S	80.28	5-15	4.38	75.90	
CEF-BK-8S	80.19	5-15	8.03	72.16	
CEF-BK-9D	80.09	50-60	7.94	72.15	

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Operable Unit Well No.	Elevation TOC (Ft, NGVD)	Screened Interval (Ft, bls)	Water Level (Ft, below TOC)	Water Level Elevation (Ft, NGVD)	Comments
Truck Stand Facility					
Site 372					
CEF–372–4	78.81	N/A	1.70	77.11	
CEF–372–7	78.98	N/A	3.65	75.33	
CEF–372–10D	74.99	N/A	4.22	70.77	
North Fuel Farm					
Site 76					
CEF–76–1	79.55	N/A	2.79	76.76	DTP 2.25 (Ft, TOC)
CEF–76–3	77.68	N/A	2.58	75.10	
CEF–76–4	77.31	N/A	2.49	74.82	DTP 1.13 (Ft, TOC)
CEF–76–5	77.70	N/A	1.42	76.28	
CEF–76–6	78.05	N/A	1.86	76.19	
CEF–76–7	79.32	N/A	N/A	N/A	Rusted shut
CEF–76–9	78.90	N/A	2.70	76.20	
CEF–76–11	77.74	N/A	2.50	75.24	
CEF–76–12	76.76	N/A	1.16	75.60	
CEF–76–20	77.73	N/A	1.61	76.12	
CEF–76–21	77.94	N/A	1.64	76.30	
CEF–76–24	78.85	N/A	N/A	N/A	Could not locate
CEF–76–25D	77.94	N/A	2.83	75.11	
CEF–76–26D	78.86	N/A	3.25	75.61	
CEF–76–27D	79.19	N/A	4.19	75.00	
CEF–76–28D	77.77	N/A	3.20	74.57	
CEF–76–29	N/A	N/A	0.27	N/A	
CEF–76–30	N/A	N/A	N/A	N/A	Artesian
South Fuel Farm					
Site 43					
CEF–43–7	79.38	N/A	5.98	73.40	
CEF–43–8	79.85	N/A	6.81	73.04	
CEF–43–10	80.97	N/A	6.98	73.99	
CEF–43–14	78.66	N/A	N/A	N/A	
CEF–43–15	79.87	N/A	7.01	72.86	
CEF–43–16	79.44	N/A	6.36	73.08	
CEF–43–17	N/A	N/A	6.19	N/A	
CEF–43–18	79.87	N/A	5.03	74.84	
CEF–43–19	80.97	N/A	N/A	N/A	Rusted shut
CEF–43–20	80.95	N/A	6.03	74.92	
CEF–43–21	79.15	N/A	4.91	74.24	
CEF–43–22	79.68	N/A	6.13	73.55	
CEF–43–25	75.38	N/A	5.16	70.22	
CEF–43–26D	79.97	N/A	7.00	72.97	
CEF–43–27D	78.75	N/A	7.71	71.04	
CEF–43–28D	76.14	N/A	4.76	71.38	
CEF–43–29	77.84	N/A	5.73	72.11	
CEF–43–30	N/A	N/A	5.26	N/A	
CEF–43–31	N/A	N/A	5.25	N/A	

DTP = Depth To Product
N/A = Data Not Available
* – Artesian head greater than 10.00' above pad
Artesian well TOC elevations represent ground elevations

Water Level Data
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Jacksonville, Florida
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Operable Unit Well No.	Elevation TOC (Ft, NGVD)	Screened Interval (Ft, bls)	Water Level (Ft, below TOC)	Water Level Elevation (Ft, NGVD)	Comments
Site 1					
CEF-1-1	54.58	10–15	8.66	45.92	
CEF-1-4	52.90	8–18	3.26	49.64	
CEF-1-5S	62.02	5–15	6.64	55.38	
CEF-1-6S	55.67	5–15	7.18	48.49	
CEF-1-7DD	55.39	81–91	0.79	54.60	
CEF-1-8D	55.62	52–62	2.28	53.34	
CEF-1-9S	52.96	4–14	5.45	47.51	
CEF-1-10S	58.34	5–15	5.30	53.04	
CEF-1-12D	61.48	36–46	3.85	57.63	
CEF-1-13S	56.05	4–14	5.33	50.72	
CEF-1-14D	49.90	35–45	7.76	57.66	Artesian
CEF-1-15S	52.20	4–14	4.85	47.35	
CEF-1-16D	55.40	42–52	6.00	61.40	Artesian
CEF-1-17D	50.80	42–52	2.64	53.44	Artesian
CEF-1-18S	61.93	4–14	4.91	57.02	
Site 2					
CEF-2-1	61.25	12–22	6.83	54.42	
CEF-2-3S	74.33	5–15	8.80	65.53	
CEF-2-4S	65.77	5–15	8.61	57.16	
CEF-2-5S	57.99	5–15	4.70	53.29	
CEF-2-6S	57.47	3–13	4.48	52.99	
CEF-2-7D	57.34	30–40	3.42	53.92	
CEF-2-8D	61.56	30–40	10.26	51.30	
CEF-2-9D	73.93	65–75	8.80	65.13	
CEF-2-10DD	74.00	106–116	8.86	65.14	
CEF-2-11D	54.90	39–49	15.00	69.90	* Artesian
Site 3					
CEF-3-1	77.33	30–40	6.96	70.37	
CEF-3-3S	78.53	4–14	7.92	70.61	
CEF-3-4S	77.08	4–14	7.04	70.04	
CEF-3-5S	78.19	4–14	7.11	71.08	
CEF-3-6S	78.24	4–14	7.86	70.38	
CEF-3-7D	78.01	58–68	8.01	70.00	
CEF-3-7DD	77.81	100–110	8.32	69.49	
CEF-3-7S	78.01	4–14	10.45	67.56	
CEF-3-8S	77.17	4–14	5.78	71.39	
CEF-3-9I	76.77	45–55	5.62	71.15	
CEF-3-10D	76.77	88–98	9.20	67.57	
CEF-3-11I	57.10	25–35	N/A	57.10	Artesian
CEF-3-12D	57.20	55–65	3.35	60.55	Artesian
CEF-3-13S	76.76	8–18	7.05	69.71	
CEF-3-14I	76.63	45–55	7.05	69.58	
CEF-3-15D	76.54	88–98	9.24	67.30	
CEF-3-16S	75.49	6–16	7.48	68.01	
CEF-3-17D	75.37	84–94	8.76	66.61	
CEF-3-18S	N/A	15–25	2.23	N/A	
CEF-3-19D	N/A	66–76	3.92	N/A	Artesian
CEF-3-20S	58.37	4–14	8.04	50.33	
CEF-3-21I	55.90	40–50	4.08	59.98	Artesian
CEF-3-22D	55.70	60–70	15.00	70.70	* Artesian
CEF-3-23S	63.71	15–25	2.78	60.93	
CEF-3-24D	61.20	62.5–72.5	5.44	66.64	Artesian
CEF-3-25S	72.65	84–94	6.09	66.56	

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Operable Unit Well No.	Elevation TOC (Ft, NGVD)	Screened Interval (Ft, bls)	Water Level (Ft, below TOC)	Water Level Elevation (Ft, NGVD)	Comments
CEF-3-26I	72.44	45–55	6.10	66.34	
CEF-3-27D	72.37	81–91	5.15	67.22	
CEF-3-28S	N/A	20–30	3.74	N/A	
CEF-3-29D	N/A	72–82	3.36	N/A	Artesian
CEF-3-30DD	N/A	94–104	3.03	N/A	Artesian
CEF-3-31S	58.00	20–30	3.33	54.67	
CEF-3-32D	55.10	56–66	11.60	66.70	Artesian
CEF-3-33DD	N/A	105–115	9.53	N/A	
Site 4					
CEF-4-1	73.74	10–15	6.64	67.10	
CEF-4-2	72.51	95–120	5.52	66.99	
CEF-4-3	72.53	8–13	5.28	67.25	
CEF-4-4	75.02	20–50	6.97	68.05	
CEF-4-1S	77.89	4–14	7.13	70.76	
CEF-4-2S	77.29	4–14	6.99	70.30	
Site 5					
CEF-5-3S	71.88	4–14	5.19	66.69	Odor
CEF-5-4S	71.64	4–14	5.05	66.59	Odor
CEF-5-5S	72.26	4–14	5.70	66.56	DTP 5.67 (Ft, TOC
CEF-5-6S	73.91	4–14	9.03	64.88	DTP 6.59 (Ft, TOC
CEF-5-7S	73.90	4–14	6.49	67.41	
CEF-5-8S	71.34	2–12	4.46	66.88	
CEF-5-9I	71.60	25–35	4.90	66.70	
CEF-5-10S	71.17	2–12	3.68	67.49	
CEF-5-11I	71.64	25–35	4.05	67.59	
CEF-5-12D	71.69	47–57	4.10	67.59	
CEF-5-13S	74.56	3–13	6.44	68.12	
CEF-5-14I	74.64	25–35	6.53	68.11	
CEF-5-15D	74.79	45–55	6.65	68.14	
CEF-5-16S	72.96	6–16	5.88	67.08	
CEF-5-17I	73.17	25–35	6.09	67.08	
CEF-5-18D	73.50	40–50	6.42	67.08	
CEF-5-19S	72.79	2–12	6.34	66.45	
CEF-5-20S	68.28	2–12	2.34	65.94	
CEF-5-21I	68.34	25–35	2.35	65.99	
CEF-5-22D	68.58	40–50	2.57	66.01	
CEF-5-23S	69.58	4–14	3.59	65.99	
CEF-5-24S	73.12	5–15	6.86	66.26	
CEF-5-25I	73.11	24–34	6.72	66.39	
CEF-5-26D	73.39	45–55	6.98	66.41	
CEF-5-27S	71.70	3–13	5.48	66.22	
CEF-5-28D	71.06	46–56	4.35	66.71	
CEF-5-29S	70.86	3–13	4.59	66.27	
CEF-5-30S	72.03	6–16	5.28	66.75	
Site 7					
CEF-7-1D	78.99	20–50	8.78	70.21	
CEF-7-2D	78.22	20–50	9.08	69.14	
CEF-7-3D	78.74	20–50	9.82	68.92	
Site 8					
CEF-8-1	69.10	20–50	9.99	59.11	
CEF-8-2	71.01	20–50	6.12	64.89	
CEF-8-3	72.64	20–50	6.55	66.09	

Water Level Data
NAS Cecil Field Operable Units 1, 2, 7 and Background
Jacksonville, Florida
April 5–6, 1994

Operable Unit Well No.	Elevation TOC (Ft, NGVD)	Screened Interval (Ft, bls)	Water Level (Ft, below TOC)	Water Level Elevation (Ft, NGVD)	Comments
CEF–8–4	73.42	20–50	6.30	67.12	
Site 10					
CEF–10–1D	69.87	95–115	7.80	62.07	
CEF–10–2	50.81	18–38	1.70	49.11	
CEF–10–3S	58.62	14–24	5.47	53.15	
CEF–10–4	58.49	10–30	7.31	51.18	
Site 11					
CEF–11–1	78.06	20–50	8.12	69.94	
CEF–11–2	78.23	20–50	8.31	69.92	
Site 17					
CEF–17–1	73.89	10–15	4.49	69.40	
CEF–17–4S	73.20	3–13	4.81	68.39	Odor
CEF–17–5S	72.72	4–14	4.52	68.20	Odor
CEF–17–6S	72.92	5–15	4.75	68.17	Odor
CEF–17–7D	72.44	76–86	5.47	66.97	
CEF–17–8S	70.96	4–14	3.22	67.74	
CEF–17–9S	73.67	4–14	4.98	68.69	
CEF–17–10D	71.01	76–86	4.05	66.96	
CEF–17–11I	71.19	45–55	3.55	67.64	
CEF–17–12D	71.21	75–85	4.09	67.12	
CEF–17–13S	72.74	4–14	4.89	67.85	
CEF–17–14I	72.56	45–55	4.75	67.81	
CEF–17–15D	71.93	76–86	4.83	67.10	
CEF–17–16S	73.53	4–14	5.01	68.52	
CEF–17–17I	73.42	45–55	4.96	68.46	
CEF–17–18D	73.38	74–84	6.10	67.28	
CEF–17–19S	74.61	5–15	5.38	69.23	
CEF–17–20I	74.63	45–55	5.45	69.18	
CEF–17–21I	74.70	45–55	5.35	69.35	
CEF–17–22D	74.51	81–91	6.88	67.63	
CEF–17–23S	71.07	4–14	3.46	67.61	
CEF–17–24S	73.41	4–14	4.77	68.64	Strong odor
CEF–17–25SI	73.63	30–40	4.95	68.68	
CEF–17–26I	73.79	60–70	5.30	68.49	
CEF–17–27D	74.00	76–86	6.48	67.52	
CEF–17–28DD	73.88	106–116	7.31	66.57	
Site 16					
CEF–16–1	80.03	20–50	9.09	70.94	
CEF–16–2	81.42	20–50	10.82	70.60	
CEF–16–3	80.86	17–47	10.17	70.69	
CEF–16–4S	78.14	4–14	7.33	70.81	
CEF–16–5S	78.31	4–14	4.70	73.61	Broken lock cap
CEF–16–6S	77.95	4–14	7.04	70.91	
CEF–16–7S	78.09	4–14	7.44	70.65	
CEF–16–8DD	78.02	105–115	7.13	70.89	
CEF–16–9D	77.92	91–101	7.00	70.92	
CEF–16–10S	77.86	4–14	7.37	70.49	
Background					
CEF–BK–1S	66.77	5–15	7.65	59.12	
CEF–BK–2S	84.09	5–15	6.10	77.99	
CEF–BK–3D	84.06	37–47	6.10	77.96	

Water Level Data
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Jacksonville, Florida
April 5–6, 1994

Operable Unit Well No.	Elevation TOC (Ft, NGVD)	Screened Interval (Ft, bls)	Water Level (Ft, below TOC)	Water Level Elevation (Ft, NGVD)	Comments
CEF-BK-4S	78.17	5–15	5.94	72.23	
CEF-BK-5S	76.96	5–15	6.28	70.68	
CEF-BK-6D	77.15	37–47	6.60	70.55	
CEF-BK-7S	80.28	5–15	5.47	74.81	
CEF-BK-8S	80.19	5–15	9.53	70.66	
CEF-BK-9D	80.09	50–60	9.41	70.68	
Site 76	North Fuel Farm				
CEF-76-1	79.55	N/A	4.10	75.45	DTP 3.45 (Ft, TOC
CEF-76-3	77.68	N/A	N/A	N/A	
CEF-76-4	77.31	N/A	3.13	74.18	DTP 3.08 (Ft, TOC
CEF-76-5	77.70	N/A	3.99	73.71	
CEF-76-6	78.05	N/A	4.32	73.73	
CEF-76-7	79.32	N/A	N/A	N/A	Rusted shut
CEF-76-9	78.90	N/A	4.04	74.86	
CEF-76-11	77.74	N/A	4.05	73.69	
CEF-76-12	76.76	N/A	2.65	74.11	
CEF-76-20	77.73	N/A	3.81	73.92	
CEF-76-21	77.94	N/A	4.18	73.76	
CEF-76-24	78.85	N/A	N/A	N/A	Could not locate
CEF-76-25D	77.94	N/A	4.36	73.58	
CEF-76-26D	78.86	N/A	4.35	74.51	
CEF-76-27D	79.19	N/A	5.80	73.39	
CEF-76-28D	77.77	N/A	4.01	73.76	
CEF-76-29	N/A	N/A	N/A	N/A	
CEF-76-30	N/A	N/A	N/A	N/A	Artesian
Site 43	South Fuel Farm				
CEF-43-7	79.38	N/A	6.84	72.54	
CEF-43-8	79.85	N/A	N/A	79.85	
CEF-43-10	80.97	N/A	7.85	73.12	
CEF-43-14	78.66	N/A	N/A	N/A	
CEF-43-15	79.87	N/A	7.94	71.93	
CEF-43-16	79.44	N/A	7.50	71.94	
CEF-43-17	N/A	N/A	7.44	N/A	
CEF-43-18	79.87	N/A	6.28	73.59	
CEF-43-19	80.97	N/A	N/A	N/A	Rusted shut
CEF-43-20	80.95	N/A	7.00	73.95	
CEF-43-21	79.15	N/A	5.60	73.55	
CEF-43-22	79.68	N/A	6.83	72.85	
CEF-43-25	75.38	N/A	5.37	70.01	
CEF-43-26D	79.97	N/A	7.74	72.23	
CEF-43-27D	78.75	N/A	8.44	70.31	
CEF-43-28D	76.14	N/A	4.95	71.19	
CEF-43-29	77.84	N/A	6.34	71.50	
CEF-43-30	N/A	N/A	5.94	N/A	
CEF-43-31	N/A	N/A	6.03	N/A	
Site 372	Truck Stand Facility				
CEF-372-4	78.81	N/A	4.51	74.30	
CEF-372-7	78.98	N/A	5.40	73.58	
CEF-372-10D	74.99	N/A	5.29	69.70	

DTP = Depth to Product
N/A = Data Not Available
* – Artesian head greater than 15.00' above pad
Artesian well TOC elevations represent ground elevations

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Operable Unit Well No.	Elevation TOC (Ft, NGVD)	Screened Interval (Ft, bls)	Water Level (Ft, below TOC)	Water Level Elevation (Ft, NGVD)	Comments
Site 1					
CEF–1–1	54.58	10–15	8.69	45.89	
CEF–1–4	52.90	8–18	3.31	49.59	
CEF–1–5S	62.02	5–15	6.63	55.39	
CEF–1–6S	55.67	5–15	7.20	48.47	
CEF–1–7DD	55.39	81–91	0.80	54.59	
CEF–1–8D	55.62	52–62	2.29	53.33	
CEF–1–9S	52.96	4–14	5.47	47.49	
CEF–1–10S	58.34	5–15	5.33	53.01	
CEF–1–12D	61.48	36–46	3.85	57.63	
CEF–1–13S	56.05	4–14	5.34	50.71	
CEF–1–14D	49.90	35–45	7.77	57.67	Artesian (ALS)
CEF–1–15S	52.20	4–14	4.87	47.33	
CEF–1–16D	55.40	42–52	6.00	61.40	Artesian (ALS)
CEF–1–17D	50.80	42–52	2.65	53.45	Artesian (ALS)
CEF–1–18S	61.93	4–14	4.95	56.98	
Site 2					
CEF–2–1	61.25	12–22	6.85	54.40	
CEF–2–3S	74.33	5–15	8.81	65.52	
CEF–2–4S	65.77	5–15	8.63	57.14	
CEF–2–5S	57.99	5–15	4.70	53.29	
CEF–2–6S	57.47	3–13	4.47	53.00	
CEF–2–7D	57.34	30–40	3.45	53.89	
CEF–2–8D	61.56	30–40	10.30	51.26	
CEF–2–9D	73.93	65–75	8.81	65.12	
CEF–2–10DD	74.00	106–116	8.85	65.15	
CEF–2–11D	54.90	39–49	15.00	69.90	* Artesian (ALS)
Site 3					
CEF–3–1	77.33	30–40	6.95	70.38	
CEF–3–3S	78.53	4–14	7.95	70.58	
CEF–3–4S	77.08	4–14	7.10	69.98	
CEF–3–5S	78.19	4–14	7.12	71.07	
CEF–3–6S	78.24	4–14	7.85	70.39	
CEF–3–7D	78.01	58–68	8.10	69.91	
CEF–3–7DD	77.81	100–110	8.35	69.46	
CEF–3–7S	78.01	4–14	10.49	67.52	
CEF–3–8S	77.17	4–14	5.79	71.38	
CEF–3–9I	76.77	45–55	5.61	71.16	
CEF–3–10D	76.77	88–98	9.21	67.56	
CEF–3–11I	57.10	25–35	N/A	57.10	Artesian (ALS)
CEF–3–12D	57.20	55–65	3.37	60.57	Artesian (ALS)
CEF–3–13S	76.76	8–18	7.07	69.69	
CEF–3–14I	76.63	45–55	7.05	69.58	
CEF–3–15D	76.54	88–98	9.30	67.24	
CEF–3–16S	75.49	6–16	N/A	N/A	
CEF–3–17D	75.37	84–94	N/A	N/A	
CEF–3–18S	64.71	15–25	2.25	62.46	
CEF–3–19D	62.60	66–76	3.90	66.50	Artesian (ALS)
CEF–3–20S	58.37	4–14	8.05	50.32	
CEF–3–21I	55.90	40–50	4.09	59.99	Artesian (ALS)
CEF–3–22D	55.70	60–70	15.00	70.70	* Artesian (ALS)
CEF–3–23S	63.71	15–25	2.79	60.92	
CEF–3–24D	61.20	62.5–72.5	5.50	66.70	Artesian (ALS)
CEF–3–25S	72.65	84–94	6.10	66.55	

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Operable Unit Well No.	Elevation TOC (Ft, NGVD)	Screened Interval (Ft, bls)	Water Level (Ft, below TOC)	Water Level Elevation (Ft, NGVD)	Comments
CEF-3-26I	72.44	45–55	6.11	66.33	
CEF-3-27D	72.37	81–91	5.13	67.24	
CEF-3-28S	66.24	20–30	3.75	62.49	
CEF-3-29D	63.30	72–82	3.38	66.68	Artesian (ALS)
CEF-3-30DD	63.50	94–104	3.00	66.50	Artesian (ALS)
CEF-3-31S	58.00	20–30	3.40	54.60	
CEF-3-32D	55.10	56–66	11.95	67.05	Artesian (ALS)
CEF-3-33DD	76.85	105–115	9.55	67.30	
CEF-3-34S	58.86	25–35	0.65	58.21	
CEF-3-35D	56.50	55–65	7.50	64.00	Artesian (ALS)
Site 4					
CEF-4-1	73.74	10–15	6.71	67.03	
CEF-4-2	72.51	95–120	5.50	67.01	
CEF-4-3	72.53	8–13	5.30	67.23	
CEF-4-4	75.02	20–50	6.98	68.04	
CEF-4-1S	77.89	4–14	7.20	70.69	
CEF-4-2S	77.29	4–14	6.99	70.30	
Site 5					
CEF-5-3S	71.88	4–14	5.18	66.70	Odor
CEF-5-4S	71.64	4–14	5.04	66.60	
CEF-5-5S	72.26	4–14	5.75	66.51	DPT 5.66
CEF-5-6S	73.91	4–14	9.00	64.91	DPT 6.57
CEF-5-7S	73.90	4–14	6.50	67.40	
CEF-5-8S	71.34	2–12	4.45	66.89	
CEF-5-9I	71.60	25–35	4.90	66.70	
CEF-5-10S	71.17	2–12	3.95	67.22	
CEF-5-11I	71.64	25–35	4.03	67.61	
CEF-5-12D	71.69	47–57	4.10	67.59	
CEF-5-13S	74.56	3–13	6.50	68.06	
CEF-5-14I	74.64	25–35	6.58	68.06	
CEF-5-15D	74.79	45–55	6.65	68.14	
CEF-5-16S	72.96	6–16	5.89	67.07	
CEF-5-17I	73.17	25–35	6.08	67.09	
CEF-5-18D	73.50	40–50	6.52	66.98	
CEF-5-19S	72.79	2–12	6.43	66.36	
CEF-5-20S	68.28	2–12	2.35	65.93	
CEF-5-21I	68.34	25–35	2.36	65.98	
CEF-5-22D	68.58	40–50	2.59	65.99	
CEF-5-23S	69.58	4–14	3.60	65.98	
CEF-5-24S	73.12	5–15	6.89	66.23	
CEF-5-25I	73.11	24–34	6.75	66.36	
CEF-5-26D	73.39	45–55	6.99	66.40	
CEF-5-27S	71.70	3–13	5.50	66.20	
CEF-5-28D	71.06	46–56	4.35	66.71	
CEF-5-29S	70.86	3–13	4.59	66.27	
CEF-5-30S	72.03	6–16	5.29	66.74	
Site 7					
CEF-7-1D	78.99	20–50	8.89	70.10	
CEF-7-2D	78.22	20–50	9.05	69.17	
CEF-7-3D	78.74	20–50	9.91	68.83	
Site 8					
CEF-8-1	69.10	20–50	9.98	59.12	

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Operable Unit Well No.	Elevation TOC (Ft, NGVD)	Screened Interval (Ft, bls)	Water Level (Ft, below TOC)	Water Level Elevation (Ft, NGVD)	Comments
CEF-8-2	71.01	20-50	6.20	64.81	
CEF-8-3	72.64	20-50	6.65	65.99	
CEF-8-4	73.42	20-50	6.31	67.11	
Site 10					
CEF-10-1D	69.87	95-115	7.90	61.97	
CEF-10-2	50.81	18-38	1.75	49.06	
CEF-10-3S	58.62	14-24	5.49	53.13	
CEF-10-4	58.49	10-30	7.35	51.14	
Site 11					
CEF-11-1	78.06	20-50	8.13	69.93	
CEF-11-2	78.23	20-50	8.32	69.91	
Site 17					
CEF-17-1	73.89	10-15	4.50	69.39	
CEF-17-4S	73.20	3-13	4.82	68.38	Odor
CEF-17-5S	72.72	4-14	4.51	68.21	Odor
CEF-17-6S	72.92	5-15	4.75	68.17	Odor
CEF-17-7D	72.44	76-86	5.48	66.96	
CEF-17-8S	70.96	4-14	3.23	67.73	
CEF-17-9S	73.67	4-14	4.99	68.68	
CEF-17-10D	71.01	76-86	4.06	66.95	
CEF-17-11I	71.19	45-55	3.57	67.62	
CEF-17-12D	71.21	75-85	4.10	67.11	
CEF-17-13S	72.74	4-14	4.89	67.85	
CEF-17-14I	72.56	45-55	4.77	67.79	
CEF-17-15D	71.93	76-86	4.85	67.08	
CEF-17-16S	73.53	4-14	5.05	68.48	
CEF-17-17I	73.42	45-55	4.95	68.47	
CEF-17-18D	73.38	74-84	6.11	67.27	
CEF-17-19S	74.61	5-15	5.39	69.22	
CEF-17-20I	74.63	45-55	5.55	69.08	
CEF-17-21I	74.70	45-55	5.38	69.32	
CEF-17-22D	74.51	81-91	6.89	67.62	
CEF-17-23S	71.07	4-14	3.56	67.51	
CEF-17-24S	73.41	4-14	4.78	68.63	Odor
CEF-17-25SI	73.63	30-40	4.97	68.66	
CEF-17-26I	73.79	60-70	5.33	68.46	
CEF-17-27D	74.00	76-86	6.49	67.51	
CEF-17-28DD	73.88	106-116	7.41	66.47	
Site 16					
CEF-16-1	80.03	20-50	9.10	70.93	
CEF-16-2	81.42	20-50	10.91	70.51	
CEF-16-3	80.86	17-47	10.18	70.68	
CEF-16-4S	78.14	4-14	7.34	70.80	
CEF-16-5S	78.31	4-14	4.71	73.60	
CEF-16-6S	77.95	4-14	7.01	70.94	
CEF-16-7S	78.09	4-14	7.44	70.65	
CEF-16-8DD	78.02	105-115	7.15	70.87	
CEF-16-9D	77.92	91-101	7.02	70.90	
CEF-16-10S	77.86	4-14	7.38	70.48	
Background					
CEF-BK-1S	66.77	5-15	7.65	59.12	

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Operable Unit Well No.	Elevation TOC (Ft, NGVD)	Screened Interval (Ft, bls)	Water Level (Ft, below TOC)	Water Level Elevation (Ft, NGVD)	Comments
CEF-BK-2S	84.09	5–15	6.11	77.98	
CEF-BK-3D	84.06	37–47	6.15	77.91	
CEF-BK-4S	78.17	5–15	5.95	72.22	
CEF-BK-5S	76.96	5–15	6.29	70.67	
CEF-BK-6D	77.15	37–47	6.65	70.50	
CEF-BK-7S	80.28	5–15	5.49	74.79	
CEF-BK-8S	80.19	5–15	9.58	70.61	
CEF-BK-9D	80.09	50–60	9.44	70.65	
Site 76	North Fuel Farm				
CEF-76-1	79.55	N/A	4.11	75.44	Free Product
CEF-76-3	77.68	N/A	2.58	75.10	
CEF-76-4	77.31	N/A	3.14	74.17	Free Product
CEF-76-5	77.70	N/A	3.97	73.73	
CEF-76-6	78.05	N/A	4.35	73.70	
CEF-76-9	78.90	N/A	4.09	74.81	
CEF-76-11	77.74	N/A	4.06	73.68	
CEF-76-12	76.76	N/A	2.67	74.09	
CEF-76-20	77.73	N/A	3.82	73.91	
CEF-76-21	77.94	N/A	4.19	73.75	
CEF-76-25D	77.94	N/A	4.40	73.54	
CEF-76-26D	78.86	N/A	4.36	74.50	
CEF-76-27D	79.19	N/A	5.81	73.38	
CEF-76-28D	77.77	N/A	4.03	73.74	
CEF-76-29	N/A	N/A	2.22	N/A	
CEF-76-30	N/A	N/A	0.58	N/A	Artesian (ALS)
Site 43	South Fuel Farm				
CEF-43-7	79.38	N/A	6.85	72.53	
CEF-43-8	79.85	N/A	N/A	N/A	
CEF-43-10	80.97	N/A	7.85	73.12	
CEF-43-15	79.87	N/A	7.94	71.93	
CEF-43-16	79.44	N/A	7.50	71.94	
CEF-43-17	N/A	N/A	7.44	N/A	
CEF-43-18	79.87	N/A	6.28	73.59	
CEF-43-20	80.95	N/A	7.00	73.95	
CEF-43-21	79.15	N/A	5.70	73.45	
CEF-43-22	79.68	N/A	6.83	72.85	
CEF-43-25	75.38	N/A	5.37	70.01	
CEF-43-26D	79.97	N/A	7.74	72.23	
CEF-43-27D	78.75	N/A	8.44	70.31	
CEF-43-28D	76.14	N/A	4.95	71.19	
CEF-43-29	77.84	N/A	6.39	71.45	
CEF-43-30	N/A	N/A	5.99	N/A	
CEF-43-31	N/A	N/A	6.03	N/A	
Site 372	Truck Stand Facility				
CEF-372-4	78.81	N/A	4.52	74.29	
CEF-372-7	78.98	N/A	5.45	73.53	
CEF-372-10D	74.99	N/A	5.30	69.69	

N/A = Data Not Available
* – Artesian head greater than 15.00' above pad
Artesian well TOC elevations represent ground elevations
(ALS)=ABOVE LAND SURFACE

APPENDIX I

APPENDIX I

TREATABILITY STUDY RESULTS, PRODUCT FINGERPRINTS, PRODUCT THICKNESS RESULTS, AND PCB SAMPLING RESULTS

DATA ANALYSIS AND INTERPRETATION

The information gathered from the laboratory treatability evaluation will be used to determine if the bioremediation and SVE technologies are viable treatment options for soil and groundwater located at OU 2. If results dictate, the information will be used to design a field pilot-scale study.

The data will be reviewed and analyzed so that the project objectives described in Chapter 3.0 can be met. The most critical parameter being measured in this study is the removal of VOCs, PAHs, and TPH. Critical target compound reductions will be measured using modified USEPA Method 3550/8100, USEPA Method 5030/8010 and 8020, and modified USEPA Method 418.1 (equivalent to USEPA Method 9073).

Prior to conducting treatment simulation tests for bioremedial remedies, toxicity tests will be performed on vadose and saturated soil and groundwater. These tests will be used to determine if conditions exist that inhibit bacterial activity. Carbon dioxide evolution will be used as a measure of biological activity. Carbon dioxide evolution rates in microcosms prepared with soil or groundwater from OU 2 will compared to those generated in control microcosms that contain garden soil. It will be necessary to demonstrate that bacterial activity can be enhanced in OU 2 test microcosms before subsequent treatment simulation tests can be started.

Physical tests will be used to measure air flow through the soil. These data will be used to establish conditions for treatability testing and will also be used to develop pilot-scale designs.

Chemical tests will be performed to establish the range of mineral nutrients that can be used for *in-situ* bioremediation based on precipitate formation. The stability of hydrogen peroxide will also be measured to determine if hydrogen peroxide can be used as an oxygen source at sites within OU 2. If the hydrogen peroxide is completely degraded within 1 hour, then other methods of oxygen delivery should be considered.

Treatment simulations will be conducted using information provided by earlier tasks. The goal of this test is to ascertain whether land treatment, SVE, heat enhanced SVE, or bioventing is capable of reducing levels of target compounds in soil and if *in-situ* bioremediation can be used to reduce the concentration of contaminants in groundwater. The results from chemical analyses will be used to calculate removal rates. Killed controls will be run with tests as part of the *in-situ* bioremediation and biological land treatment studies. Those data will be compared and the level of contaminant removal that is due to biodegradation will be calculated. Chemical data generated from testing will be presented graphically. The extent of removal will also be reviewed and compared with treatment criteria. If treatment criteria are met, then the technology will be retained for further investigations as part of the FS. If criteria are not met, then the technology will be eliminated. A summary of the technological decision process is presented in Figures 2-1 and 2-2.

It is possible that the experiment will not be run long enough to establish the extent of biodegradation of TPH or PAH experimentally. If evidence suggests biodegradation is occurring, then an extrapolated value for the endpoint TPH or PAH concentration may be estimated based on the biodegradation rate. Two

extrapolation methods may be used in this study. One method generates values by extending the degradation curve over time using the same slope that was exhibited during the experimental period. The time it takes to achieve treatment goals will be estimated. Another method that could be used to extrapolate degradation values involves calculating contaminant half life ($t_{1/2}$), which is based on first order rate kinetics. Assuming degradation is first order, the first order rate constant (k_1) will be generated for target compound degradation. The $t_{1/2}$ is calculated by the relationship $t_{1/2} = (0.693/k_1)$ (Ventullo and Larson, 1985). Both of these methods will be evaluated for applicability. Estimates will be made regarding the probability of achieving treatment objectives, if they have not already been reached. If, however, no significant reduction has been observed, then it will be concluded that the target compounds will not be biodegraded under the proposed treatment conditions.

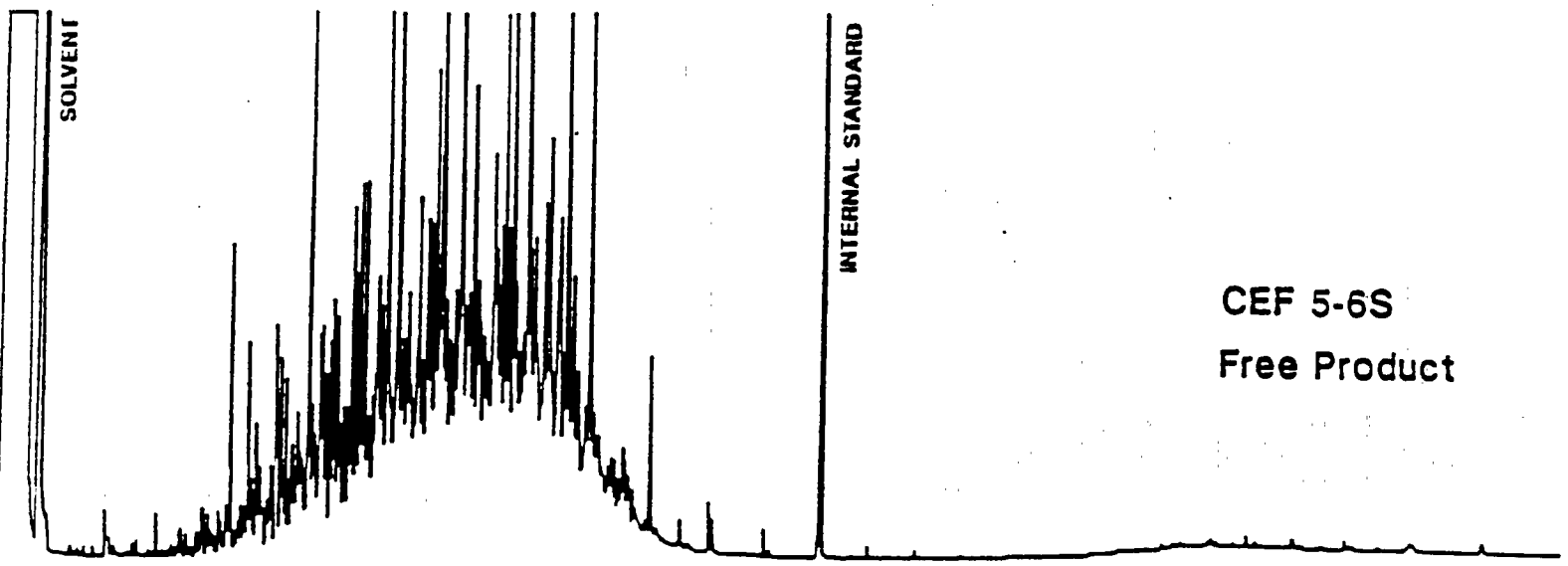
Data obtained from the tests used to measure the natural biodegradation rates of target compounds *in-situ* will be used to develop estimates of contaminant migration rates. Chemical data developed under anaerobic and microaerophilic conditions will be used to calculate biodegradation rates. Data from these tests will also be presented graphically.

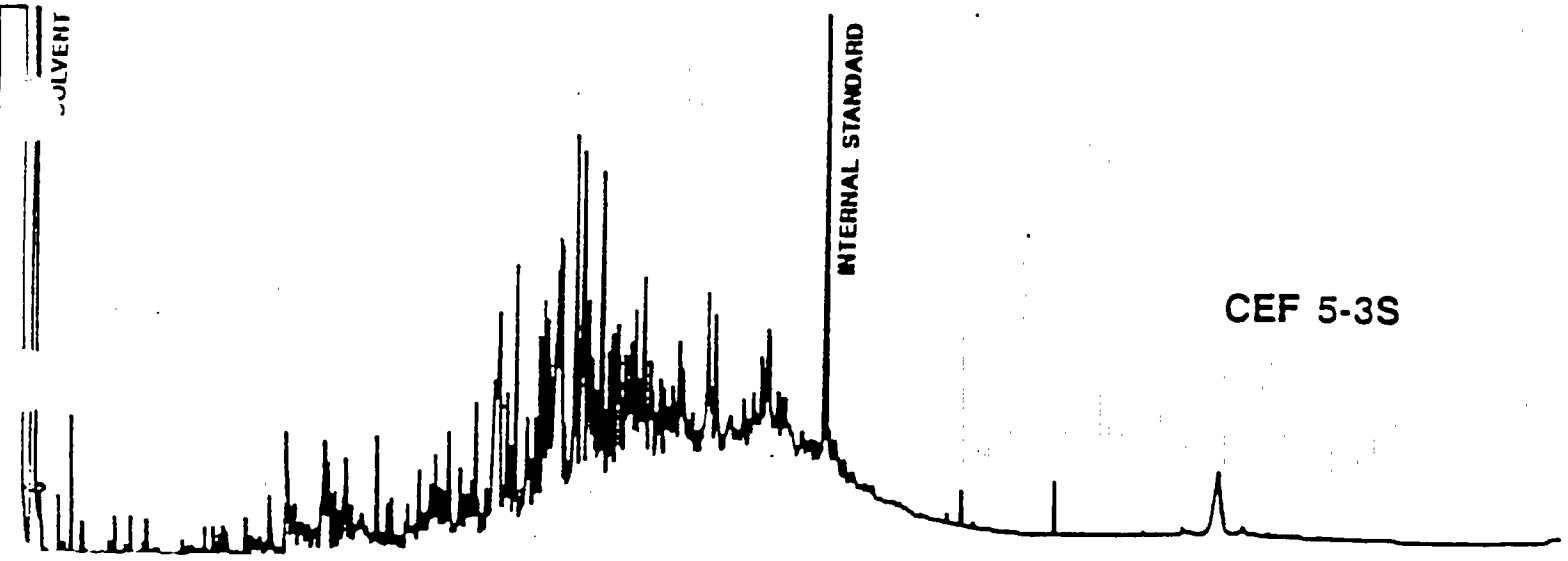
It will be necessary to confirm results of treatability testing under a field pilot scale phase of testing before a final process can be selected. Field pilot test designs will be prepared for technologies that meet performance criteria. As part of the design process, estimates will be made regarding treatment time and the costs for treatment will be developed. These data will be reviewed and ABB-ES will recommend up to two technologies for field testing based on these data and the results from treatability testing.

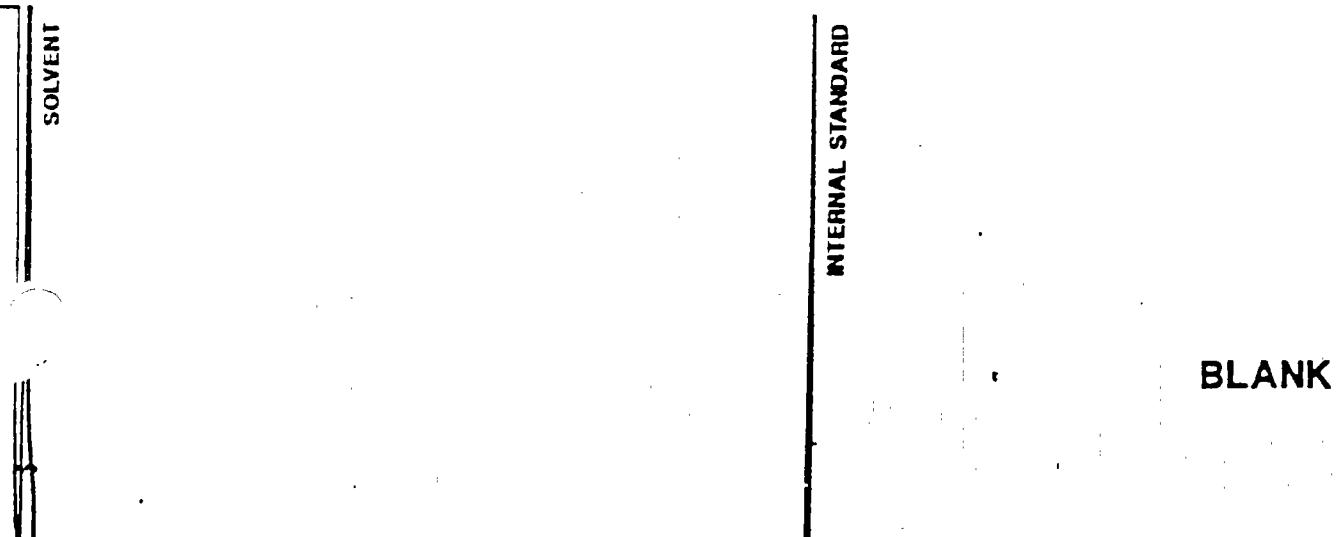
PETROLEUM FINGERPRINT

MODIFIED 3550/8100

Project: Cecil Field

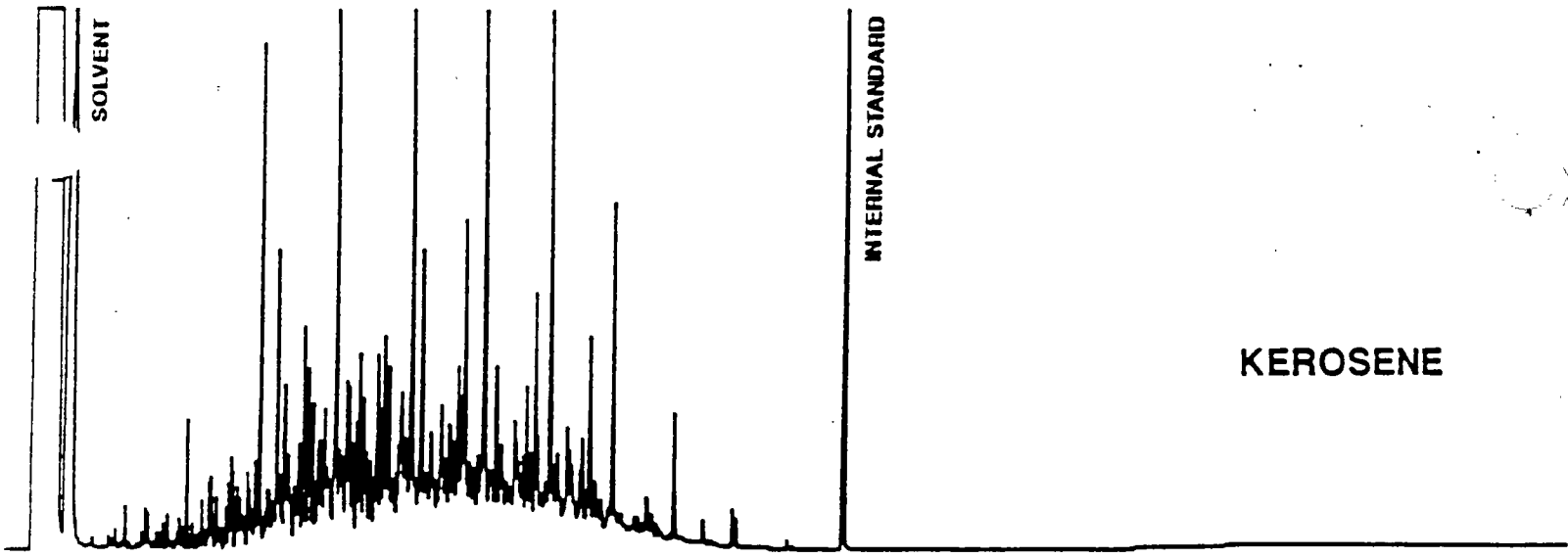


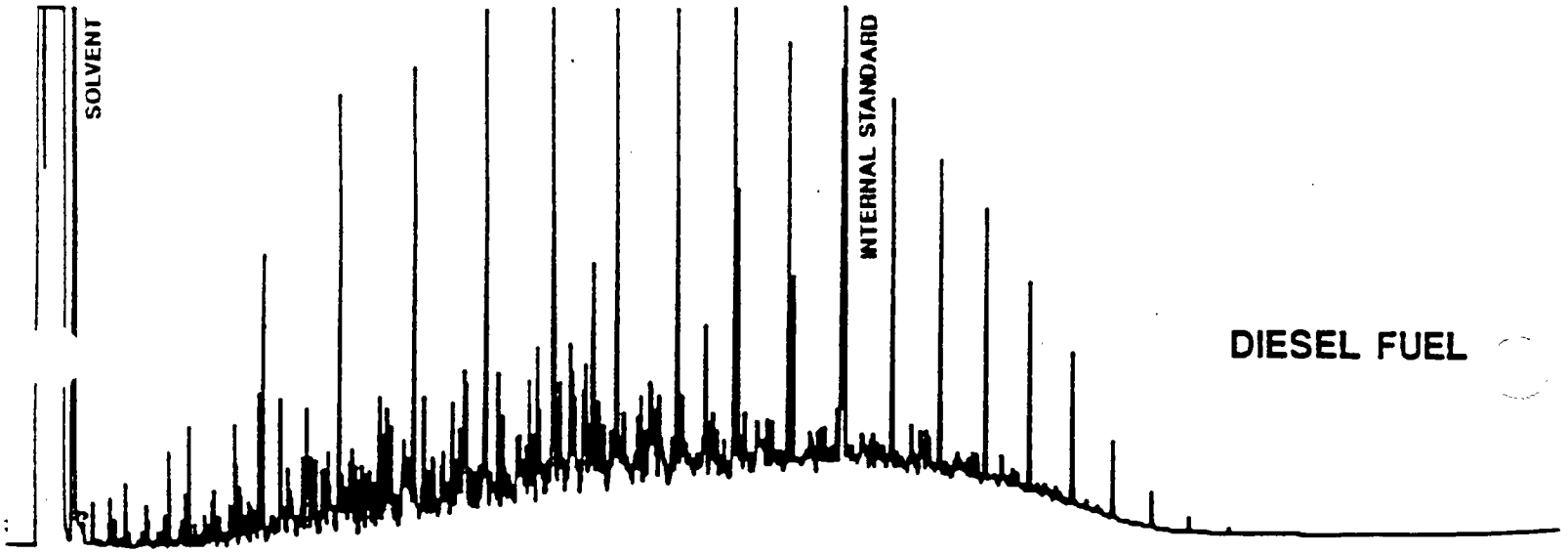




MODIFIED 3550/8100

Project: Cecil Field





SITE 5 BAILDOWN TEST AT CEF-5-6S

TIME min	DTP(toc) ft	DTW(toc) ft	DTP(ngvd)	DTW(ngvd)
0	5.51	8.75	68.4	65.16
0.25	8.5	8.53	65.41	65.38
0.5	8.29	8.41	65.62	65.5
1	8.15	8.3	65.76	65.61
1.5	8.08	8.2	65.83	65.71
2	7.93	8.09	65.98	65.82
2.5	7.83	7.97	66.08	65.94
3	7.73	7.86	66.18	66.05
3.5	7.59	7.72	66.32	66.19
4	7.44	7.6	66.47	66.31
4.5	7.32	7.51	66.59	66.4
5	7.2	7.4	66.71	66.51
5.5	7.1	7.32	66.81	66.59
6	6.99	7.24	66.92	66.67
6.5	6.93	7.24	66.98	66.67
7	6.85	7.21	67.06	66.7
7.5	6.78	7.16	67.13	66.75
8	6.72	7.13	67.19	66.78
8.5	6.67	7.11	67.24	66.8
9	6.62	7.08	67.29	66.83
9.5	6.57	7.07	67.34	66.84
10	6.54	7.07	67.37	66.84
11	6.45	7.01	67.46	66.9
12	6.38	7	67.53	66.91
13	6.31	7	67.6	66.91
14	6.26	7.02	67.65	66.89 — 7.02 - 6.26 = 0.76 ft (9 in) ACTUAL PRODUCT THICKNESS
15	6.22	7.02	67.69	66.89 — 0.80 ft SAY (10 in)
16	6.18	7.03	67.73	66.88
17	6.15	7.05	67.76	66.86
18	6.12	7.07	67.79	66.84
19	6.09	7.08	67.82	66.83
20	6.07	7.11	67.84	66.8
21	6.05	7.13	67.86	66.78
22	6.03	7.15	67.88	66.76
23	6.01	7.17	67.9	66.74
24	6	7.19	67.91	66.72
25	5.99	7.21	67.92	66.7
26	5.98	7.23	67.93	66.68
27	5.96	7.23	67.95	66.68
28	5.95	7.24	67.96	66.67
29	5.94	7.3	67.97	66.61

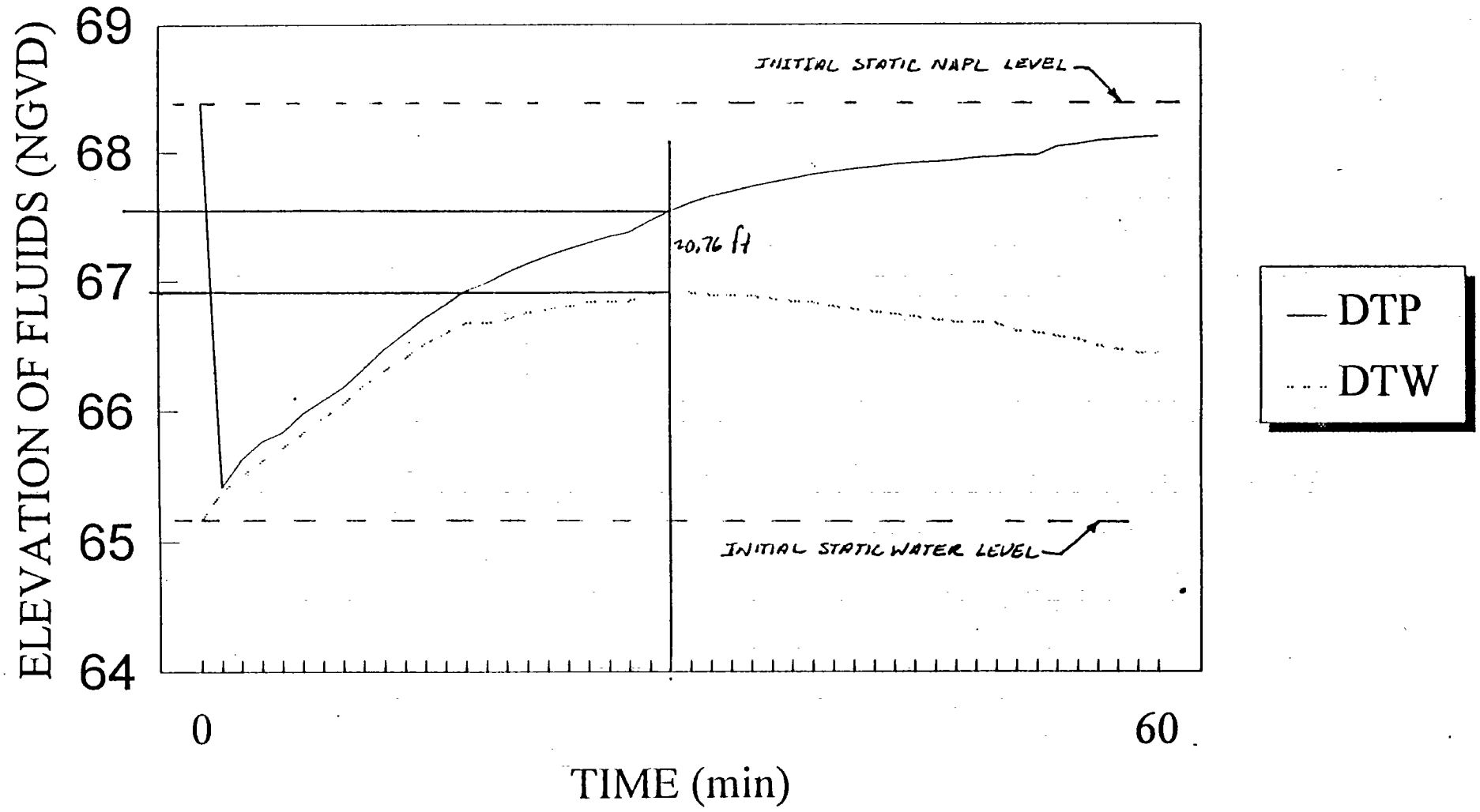
02/17/94

SITE 5 BAILDOWN TEST [illegible] CEF-5-6S

30	[illegible].94	7.31	67.97	66.6
35	[illegible].37	7.34	68.01	66.57
40	5.85	7.36	68.06	66.55
45	5.82	7.41	68.09	66.5
50	5.81	7.44	68.1	66.47
55	5.9	7.47	68.11	66.44
60	5.79	7.47	68.12	66.44

SITE 5 BA[illegible]OWN TEST AT CEF-5-6S

DEPTH TO PRODUCT/WATER INTERFACE VS TIME



INITIAL PRODUCT THICKNESS (STATIC) = 3.24 ft
ACTUAL PRODUCT THICKNESS = 0.76 ft

02/17/94

Post-it™ Fax Note 7671	Date	# of pages ▶
To	From	
Co./Dept.	Co.	
Phone #	Phone #	
Fax #	Fax #	

Monitoring Well Product Level Summary
NAS Cecil Field Operable Units 1, 2, 7, and Background
Site 5
Jacksonville, Florida

DATE	TIME	WELL#	D.T.P.	D.T.W.	THICKNESS
4-9-94	1327	CEF-5-5S	5.87	5.9	0.03
	1329	TWP-1	7.76	7.77	0.01
	1331	TWP-2	7.89	9.61	1.72
	1333	TWP-3	7.03	7.04	0.01
	1335	TWP-4	7.36	7.37	0.01
	1337	TWP-5	7.89	7.9	0.01
	1339	CEF-5-6S	6.79	9.04	2.25
4-12-94	1424	CEF-5-5S	6.03	6.06	0.03
	1426	TWP-1	–	7.9	–
	1428	TWP-2	8.05	9.62	1.57
	1430	TWP-3	–	7.2	–
	1432	TWP-4	7.57	7.58	0.01
	1434	TWP-5	–	8.07	–
	1436	CEF-5-6S	6.96	9.11	2.15

PROJECT	COMP. BY	JOB NO.
Cecil Field OU2	MPM	8520-35
	CHK. BY	DATE
	SCP	3/28/94

OBJECTIVE: Better Estimate Volume of free product

		stick up	observed thickness	depth
Day 1:	5-5S	2.8	0.04'	2.8 bgs
	5-6S	2.8	2.39'	3.5 bgs
Day 2:	5-5S		0.04'	2.9 bgs
	5-6S		2.39'	3.5 bgs
	P-2 (10'W)		1.06'	3.8' bgs
Day 3:	5-5S		0.04'	2.9 bgs
	5-6S		2.36'	3.6 bgs
	P-1 (20'W)		0.01'	3.6' bgs
	P-2 (10'W)		1.47'	3.8 bgs
Day 4:	5-5S		0.04'	3.0 bgs
	5-6S		2.39'	3.6 bgs
	P-1 (20'W)		0.01'	3.7 bgs
	P-2 (10'W)		1.73'	3.8 bgs
	P-4 (20'SE)		0.01'	3.2' bgs
Day 5:	5-5S		0.03'	2.5 bgs
	5-6S		2.71	3.2 bgs
	P-2 (10'W)		1.67'	3.4 bgs

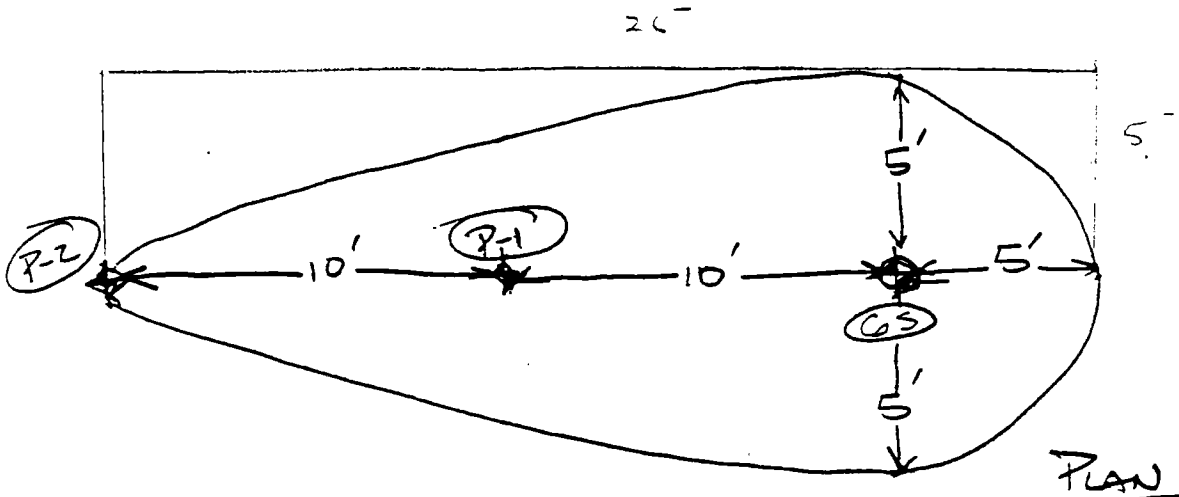
⇒ From the 5 days observed, conclude there is a pocket that is deepest at 5-6S, 75% @ 10'W and 0.5% @ 20'W (& inconsistently showing product)

Need more data, stick up on 6S, 5S?

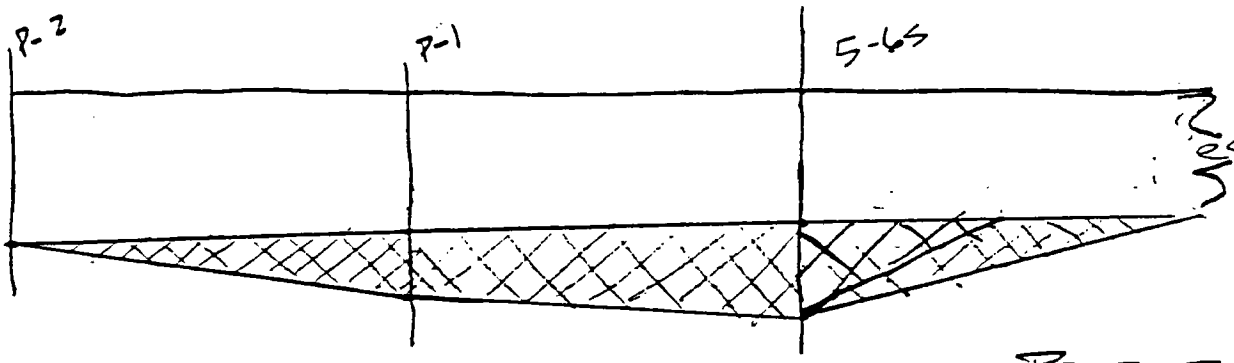
Preliminary volume at 6-5S would be: ⇒

@ 6S product (from baildown) = 10" ∴ P-1 = 7.5"

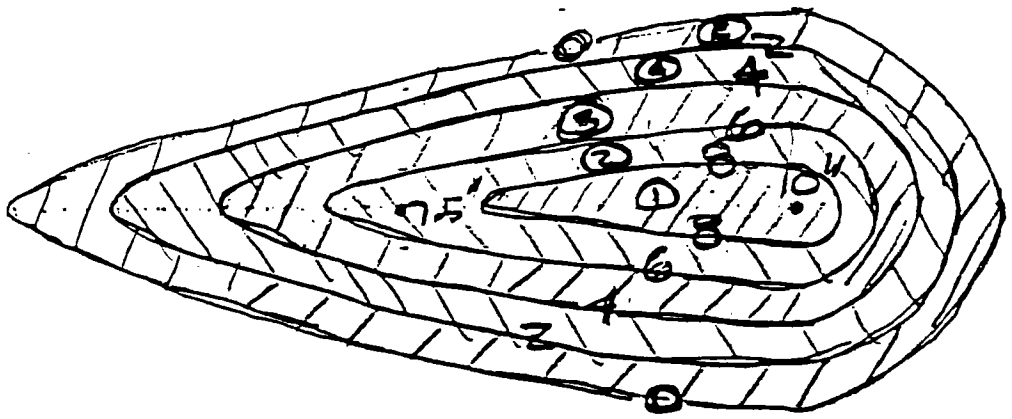
PROJECT	COMP. BY	JOB NO.
CECIL FIELD OUZ	MPM	8520-35
	CHK. BY	DATE
	Scp	3/28/94



PLAN VIEW



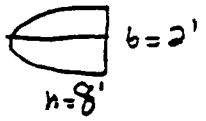
PROFILE VIEW



CONTAMINANT. CONTOURS
(Free Product)

PROJECT	COMP. BY	JOB NO.
Cecil-Field Site 5	scp	8520-35
	CHK. BY NRM	DATE 4/6/94

• 1). Between 8" – 10"



Surface Area: $\frac{2}{3} bh$ (parabola) $+ \frac{1}{2}\pi r^2$ (semi-circle)

$= \frac{2}{3} \cdot 2' \cdot 8' + \frac{1}{2} \cdot \pi (1)^2$

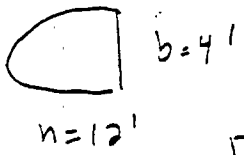
$= 10.7 + 1.57 = 12.3 \text{ ft}^2$

at 9" depth

Volume: $12.3 \times 9/12$

$= 9.2$ c.f. ✓

• 2) Between 6" – 8"



Surface Area: $(2/3) \cdot (4') \cdot (12) + 1/2 (\pi)(2)^2$

$= 38.3 \text{ ft}^2 - 12.3 \text{ ft}^2$ (area 1)

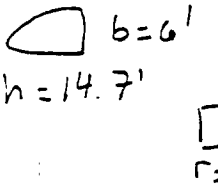
$= 26.0 \text{ ft}^2$

7" depth

Volume $= 26.0 \text{ ft}^2 \cdot 7/12$

$= 15.1 \text{ ft}^3$ ✓

• 3) Between 4" – 6"



Surface Area: $(2/3)(6)(14.7) + 1/2(\pi)(3^2)$

$= 72.9 - 38.3$ (area 2)

$= 34.6 \text{ ft}^2$

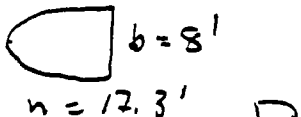
5" depth

Volume $= 34.6 \cdot 5/12$

$= 14.4 \text{ ft}^3$ ✓

PROJECT	COMP. BY	JOB NO.
Cecil Field Site 5	SCP	8520-35
	CHK. BY MKM	DATE 4/6/94

4) Between 2" - 4" Surface Area: $(2/3)(8)(17.3) + 1/2\,\pi(4^2)$



$= 117.4 - 72.9$ (area 3)

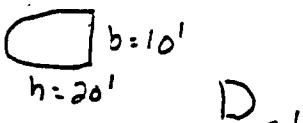
$= 44.5\ ft^2$

3" depth

Volume $= 44.5\ ft^2 \cdot 3/12$

$= 11.1\ ft^3$ ✓

5) Between 0" - 2" Surface Area: $(2/3)(10')(20') + 1/2\,\pi(5^2)$



$= 172.6 - 117.4$

$= 55.2\ ft^2$

1" depth

Volume: $55.2 \cdot 1/12$

$= 4.6\ ft^3$ ✓

Total Volume: 54.4×1.75 (safety factor) $= 95\ ft^3$

Say $100\ ft^3$

Void ratio of 0.34 ∴ Free product

$= 0.34(100) = 34\ ft^3\ (7.48\ gal/ft^3)$

$= 254$ gals

For well CEF-5-5S a sheen was detected at roughly 2% of the thickness at 6S

2% of 10" = 0.2" Say 1" product layer (to be conservative)

Assume distance of 5' in every direction

R = 5' Surface Area $= \pi(5^2) = 78.5\ ft^2$

Volume $= 78.5 \cdot 1/12 = 6.5\ ft^3$

$\times 0.34 = 2.23\ ft^3$

$\times 7.48 = 16.6$ gal

Total Volume: 254 + 17 = 271 gal

Table C-1
Soil Analytical Summary,
Operable Unit 2, Site 5

Identifier:	BOR5-1-1		BOR5-1-2		BOR5-2-1		BOR5-2-2		BOR5-3-1		BOR5-3-2		BOR5-4-1		BOR5-4-1-D Dup of BOR5-4-1	
Sample Depth (feet, bls):	0-2'		2-4'		0-2'		2-4'		0-2'		2-4'		0-2'			
Volatiles (µg/kg)																
Ethyl benzene	690	U	790		760	U	1,100		29	UJ	5,300		740	U	200	J
Methylene chloride	730	U	1,100	U	1,200	U	900	U	85	U	2,400	U	850	U	800	U
Toluene	690	U	160	J	760	U	160	J	29	UJ	4,900		740	U	740	U
Trichloroethene	690	U	770	U	760	U	740	U	29	UJ	380	J	740	U	740	U
Xylenes (total)	240	J	2,000		760	U	2,800		29	UJ	33,000		740	U	930	
Semivolatiles (µg/kg)																
4-Methylphenol	3,100	U	1,600	U	1,500	U	1,600	U	7,800	U	1,900	U	3,800	U	4,500	U
2,4-Dimethylphenol	3,100	U	1,600	U	1,500	U	1,600	U	7,800	U	1,900	U	3,800	U	4,500	U
Benzoic acid	15,000	U	7,800	U	7,300	U	7,700	U	38,000	U	9,400	U	18,000	U	22,000	U
Dibenzofuran	3,100	U	1,600	U	1,500	U	1,600	U	7,800	U	1,900	U	3,800	U	4,500	U
Fluoranthene	3,100	U	1,600	U	1,500	U	1,600	U	7,800	U	1,900	U	3,800	U	4,500	U
Fluorene	3,100	U	1,600	U	1,500	U	1,600	U	7,800	U	1,900	U	3,800	U	4,500	U
Naphthalene	3,100	U	1,900		1,500	U	1,200	J	10,000		15,000		2,000	J	1,800	J
Pentachlorophenol	15,000	U	7,800	U	7,300	U	7,700	U	38,000	U	9,400	U	18,000	U	22,000	U
Phenanthrene	3,100	U	1,600	U	1,500	U	1,600	U	7,800	U	650	J	3,800	U	4,500	U
Phenol	3,100	U	1,600	U	1,500	U	1,600	U	7,800	U	1,900	U	3,800	U	4,500	U
Pyrene	3,100	U	1,600	U	1,500	U	1,600	U	780	U	1,900	U	3,800	U	4,500	U
2-Methylphenol	3,100	U	1,600	U	1,500	U	1,600	U	7,800	U	1,900	U	3,800	U	4,500	U
Benzo (g,h,i) perylene	3,100	U	1,600	U	1,500	U	1,600	U	7,800	U	1,900	U	3,800	U	4,500	U
2-Methylnaphthalene	3,100	U	1,600	U	1,500	U	1,600	U	7,800	U	1,900	U	4,800		4,300	J
Diethylphthalate	3,100	U	1,600	U	1,500	U	1,600	U	7,800	U	1,900	U	3,800	U	4,500	U
Benzo (a) anthracene	3,100	U	1,600	U	1,500	U	1,600	U	7,800	U	1,900	U	3,800	U	4,500	U
bis(2-Ethylhexyl)phthalate	470	J	350	J	280	J	1,600	U	7,800	U	1,300	J	3,800	U	4,500	U
Di-n-octylphthalate	3,100	U	1,600	U	1,500	U	1,600	U	7,800	U	1,900	U	3,800	U	4,500	U
Benzo (b) fluoranthene	3,100	U	1,600	U	1,500	U	1,600	U	7,800	U	1,900	U	3,800	U	4,500	U
Benzo (k) fluoranthene	3,100	U	1,600	U	1,500	U	1,600	U	7,800	U	1,900	U	3,800	U	4,500	U

See notes at end of table.

Table C-1 (Continued)
Soil Analytical Summary,
Operable Unit 2, Site 5

Identifier:	BOR5-1-1		BOR5-1-2		BOR5-2-1		BOR5-2-2		BOR5-3-1		BOR5-3-2		BOR5-4-1		BOR5-4-1-D Dup of BOR5-4-1	
Sample Depth (feet, bls):	0-2'		2-4'		0-2'		2-4'		0-2'		2-4'		0-2'			
Semivolatiles (continued)																
Benzo (a) pyrene	3,100	U	1,600	U	1,500	U	1,600	U	7,800	U	1,900	U	3,800	U	4,500	U
Indeno (1,2,3-cd) pyrene	3,100	U	1,600	U	1,00	U	1,600	U	7,800	U	1,900	U	3,800	U	4,500	U
Pesticides (µg/kg)																
beta-BHC	190	UJ	9.8	U	45	U	9.6	U	94	UJ	47	U	46	U	11	U
Aroclor 1260	1,500	J	180	J	1,000	J	120	J	940	J	1,200	J	320	J	370	J
Inorganics (mg/kg)																
Aluminum	1,069.03		14,168.07		1,165.42		8,687.4		1,524.7		4,624.22		1,129.03		1,125.09	
Antimony	9.47	UJ	9.77	UJ	8.98	UJ	9.36	UJ	9.36	UJ	9.31	UJ	9.27	U	9.38	U
Barium	2.61	U	11.93	U	2	U	8.28	U	4.29	U	9.53	U	2.47	U	2.2	U
Beryllium	0.02	U	0.04	UJ	0.16	UJ	0.13	UJ	0.21	UJ	0.19	UJ	0.02	UJ	0.02	UJ
Cadmium	0.38	U	0.39	U	0.38	U	0.38	U	0.38	U	0.38	U	0.37	U	0.38	U
Calcium	399.05	UJ	164.16	UJ	323.96	UJ	146.94	UJ	488.06	UJ	163.35	UJ	408.76	UJ	511.65	UJ
Chromium	2.03	U	12.8		1.63	U	8.22		1.85	U	5.42		1.65	U	1.1	U
Copper	0.38	J	1.2	J	0.32	UJ	0.41	J	1.26	J	0.99	J	2.4	U	0.34	U
Iron	432.4		1,059.58		170.65		983.4		298.97		1,163.19		140.43	J	143.46	J
Lead	3.97	J	6.67	J	8.92	J	18.71	J	109.43	J	87.41	J	10.04	J	16.3	J
Magnesium	21.99	UJ	138.66	J	25.11	UJ	70.16	UJ	29.58	UJ	82.95	J	37.83	UJ	17	UJ
Manganese	2.26	J	4.23		2.78	J	2.72	J	2.1	J	2.88	J	0.85	J	0.41	J
Mercury	0.09	UJ	0.1	UJ	0.09	UJ	0.1	UJ	0.1	UJ	0.09	UJ	0.09	U	0.07	U
Nickel	1.65	U	3.45	U	1.57	U	1.78	U	1.63	U	2.04	U	1.62	U	1.64	U
Potassium	41.78	U	77.3	U	39.62	U	140.29	U	41.57	U	112.51	U	40.9	U	41.38	U
Selenium	0.3	J	0.28	UJ	0.26	UJ	0.29	J	0.27	UJ	0.28	J	0.43	J	0.35	J
Thallium	0.33	U	0.34	U	0.32	U	0.33	U	0.33	UJ	0.33	U	0.33	UJ	0.33	UJ
Vanadium	1.72	U	7.38	U	0.65	U	4.58	U	2.65	U	4.43	U	0.62	UJ	0.63	UJ
Zinc	10.05	UJ	20.49	J	4.85	UJ	9.17	UJ	12.22	J	7.81	UJ	2,207.84		3.8	U
Total Petroleum Hydrocarbons (mg/kg)	---		4,050		5,220		1,240		7,590		17,400		4,090		2,520	

See notes at end of table.

Table C-1 (Continued)
Soil Analytical Summary,
Operable Unit 2, Site 5

Identifier:	BOR5-4-2		BOR5-5-1		BOR5-5-2		BOR5-6-1		BOR5-6-2		BOR5-7-1		BOR5-7-2		BOR5-8-1		BOR5-8-2	
Sample Depth (feet, bls):	2-4'		0-2'		2-4'		0-2'		2-4'		0-2'		2-4'		0-2'		2-4'	
Volatiles (µg/kg)																		
Acetone	2,600	U	1,500	U	1,600	U	1,500	U	1,400	U	11	U	2,700	U	12	U	12	U
Benzene	760	U	740	U	760	U	740	U	160	J	6	U	750	U	6	UJ	6	UJ
2-Butanone	1,500	U	1,500	U	1,500	U	1,500	U	1,400	U	11	U	1,500	U	11	UJ	12	UJ
Carbon Disulfide	760	U	740	U	760	U	740	U	690	U	6	U	750	U	6	UJ	6	UJ
Chloroform	760	U	740	U	760	U	740	U	690	U	6	U	750	U	6	UJ	6	UJ
1,2-Dichloroethene (total)	760	U	740	U	760	U	740	U	690	U	6	U	750	U	6	UJ	6	UJ
Ethyl benzene	6,000		740	U	1,000		740	U	11,000	J	6	U	250	J	6	UJ	6	UJ
2-Hexanone	1,500	U	1,500	U	1,500	U	1,500	U	1,400	U	11	U	1,500	U	11	UJ	12	UJ
4-Methyl-2-pentanone	1,500	U	1,500	U	1,500	U	1,500	U	1,400	U	11	U	1,500	U	11	UJ	12	UJ
Methylene chloride	920	U	900	U	930	U	900	U	890	U	14	U	880	U	35	U	31	UJ
Toluene	5,400		740	U	400	J	150	J	10,000	J	6	U	330	J	6	UJ	6	UJ
Trichloroethene	760	U	740	U	760	U	740	U	630	J	6	U	300	J	6	UJ	6	UJ
Xylenes (total)	29,000		740	U	6,200		980		70,000	J	2	J	1,300		5	J	4	UJ
Semivolatiles (µg/kg)																		
4-Methylphenol	3,900	U	3,900	U	3,500	U	1,900	J	42,000		380	U	4,000	U	380	U	380	U
2,4-Dimethylphenol	3,900	U	3,900	U	3,500	U	3,700	U	3,900	U	380	U	4,000	U	380	U	380	U
Benzoic acid	19,000	U	19,000	U	17,000	U	18,000	U	19,000	U	1,800	U	20,000	U	1,800	U	1,900	U
Dibenzofuran	970	J	530	J	490	J	1,100	J	1,600	J	380	U	690	J	380	U	380	U
Fluoranthene	3,900	U	3,900	U	3,500	U	3,700	U	3,900	U	380	U	4,000	U	380	U	380	U
Fluorene	3,900	U	3,900	U	3,500	U	3,700	U	3,900	U	380	U	4,000	U	380	U	380	U
Naphthalene	16,000		6,000		5,900		10,000		26,000		380	U	7,900		380	U	380	U
Pentachlorophenol	19,000	U	19,000	U	17,000	U	18,000	U	19,000	U	1,800	U	20,000	U	1,800	U	1,900	U
Phenanthrene	3,900	U	3,900	U	3,500	U	3,700	U	470	J	380	U	4,000	U	380	U	380	U
Phenol	3,900	U	3,900	U	3,500	U	3,700	U	14,000		380	U	4,000	U	380	U	380	U
Pyrene	3,900	U	3,900	U	3,500	U	3,700	U	3,900	U	380	U	4,000	U	380	U	380	U
2-Methylphenol	3,900	U	3,900	U	3,500	U	3,700	U	4,700		380	U	4,000	U	380	U	380	U
Benzo (g,h,i) perylene	3,900	U	3,900	U	3,500	U	3,700	U	3,900	U	380	U	4,000	U	380	U	380	U
2-Methylnaphthalene	23,000		13,000		14,000		19,000		32,000		380	U	16,000		380	U	380	U
Diethylphthalate	3,900	U	3,900	U	3,500	U	3,700	U	3,900	U	380	U	4,000	U	380	U	380	U
Benzo (a) anthracene	3,900	U	3,900	U	3,500	U	3,700	U	3,900	U	380	U	4,000	U	380	U	380	U
bis(2-Ethylhexyl)phthalate	460	J	3,900	U	3,500	U	410	J	830	J	96	UJ	4,000	U	380	U	380	U
Di-n-octylphthalate	3,900	U	3,900	U	3,500	U	3,700	U	3,900	U	380	U	4,000	U	380	U	380	U
Benzo (b) fluoranthene	3,900	U	3,900	U	3,500	U	3,700	U	3,900	U	380	U	4,000	U	380	U	380	U
Benzo (k) fluoranthene	3,900	U	3,900	U	3,500	U	3,700	U	3,900	U	380	U	4,000	U	380	U	380	U

See notes at end of table.

Table C-1 (Continued)
Soil Analytical Summary,
Operable Unit 2, Site 5

Identifier:	BOR5-4-2		BOR5-5-1		BOR5-5-2		BOR5-6-1		BOR5-6-2		BOR5-7-1		BOR5-7-2		BOR5-8-1		BOR5-8-2	
Sample Depth (feet, bls):	2-4'		0-2'		2-4'		0-2'		2-4'		0-2'		2-4'		0-2'		2-4'	
Semivolatiles (continued)																		
Benzo (a) pyrene	3,900	U	3,900	U	3,500	U	3,700	U	3,900	U	380	U	4,000	U	380	U	380	U
Indeno (1,2,3-cd) pyrene	3,900	U	3,900	U	3,500	U	3,700	U	3,900	U	380	U	4,000	U	380	U	380	U
Pesticides (µg/kg)																		
beta-BHC	95	U	94	U	42	U	45	U	24	U	46	UJ	49	U	9.2	U	9.3	U
Aroclor 1260	610	J	770	J	490	J	770	J	700	J	580	J	700	J	180	U	190	U
Inorganics (mg/kg)																		
Aluminum	6,434.04		881.71		6,487.03		937.98		4,912.22		1,312.42		3,681.54		1,196.23		1,674.4	
Antimony	9.64	U	9.46	U	9.55	U	9.01	U	9.35	U	12.55	UJ	9.68	U	9.1	U	9.39	U
Barium	5.61	U	6.82	U	5.31	U	5.07	U	7.57	U	3.6	U	3.39	U	28.18	U	3.36	U
Beryllium	0.03	UJ	0.02	UJ	0.03	UJ	0.02	UJ	0.02	UJ	0.29	UJ	0.03	UJ	0.02	UJ	0.02	UJ
Cadmium	0.39	U	0.59	U	0.38	U	0.36	U	0.38	U	0.51	U	0.48	U	0.49	U	0.38	U
Calcium	174.25	UJ	531.99	UJ	313.31	UJ	3,043.31	J	1,354.59	J	38,678.01		1,484.76	J	233.49	UJ	429.99	UJ
Chromium	8.16		1.05	U	7.25		1.38	U	5		3.02	U	6.1		1.56	U	2.42	
Copper	0.78	U	0.34	U	0.34	U	0.52	U	0.33	U	3.25	J	0.35	U	0.33	U	0.37	U
Iron	705.25	J	135.99	J	445.64	J	283.86	J	773.33	J	319.5		286.94	J	109.08	J	167.19	J
Lead	8.84	J	8.66	J	10.41	J	70.33	J	38.04	J	6.26	J	5	J	2.54	J	2.39	J
Magnesium	54.13	UJ	44.14	UJ	49.77	UJ	43.38	UJ	53.45	UJ	282.31	U	41.26	UJ	14.04	UJ	26.19	UJ
Manganese	1.75	J	0.48	J	1.47	J	1.48	J	2.11	J	6.79		0.69	J	0.49	J	0.57	J
Mercury	0.09	U	0.09	U	0.09	U	0.09	U	0.08	U	0.12	UJ	0.1	U	0.07	U	0.08	U
Nickel	2.57	U	1.65	U	1.67	U	1.57	U	1.87	U	2.19	U	1.69	U	1.59	U	1.64	U
Potassium	42.53	U	41.73	U	71.78	U	39.75	U	152.2	U	55.35	U	42.69	U	40.16	U	41.43	U
Selenium	0.46	J	0.65	J	0.34	J	0.3	J	0.63	J	0.36	UJ	0.37	J	0.72	J	0.51	J
Thallium	0.34	U	0.33	U	0.34	UJ	0.32	UJ	0.33	UJ	0.44	U	0.34	UJ	0.37	J	0.33	UJ
Vanadium	3.01	J	0.63	UJ	2.3	J	0.74	J	2.59	J	2.04	U	2.29	J	0.61	UJ	0.63	UJ
Zinc	10.43		9.46		4.15	U	4.46	U	4.16	U	6.85	UJ	12.92		6.98		4.3	U
Total Petroleum Hydrocarbons (mg/kg)	8,740		7,450		4,280		12,800		9,810		228		5,200		3.9		2.7	

Notes: µg/kg = micrograms per kilogram.
mg/kg = milligrams per kilogram.
— = data not available.
bls = below land surface.

U = undetected.
J = estimated.
UJ = quantitation estimated.

Table C-2
Sediment Analytical Summary, Operable Unit 2, Site 5

Identifier:	SD-9		SD-10	
Description:	Upstream of Site 5		Downstream of Site 5	
Volatiles (µg/kg)				
Semivolatiles (µg/kg)				
Di-n-butylphthalate	50	J	420	U
Pyrene	420	U	420	U
bis(2-Ethylhexyl)phthalate	56	J	420	U
Pesticides (µg/kg)				
Aroclor 1260	410	U	92	J
Inorganics (mg/kg)				
Aluminum	1,261.92		416.27	
Beryllium	0.19	J	0.03	UJ
Calcium	49,295.13		332.16	UJ
Iron	1,883.11		55.52	
Lead	4.82	J	2.11	J
Magnesium	2,493.93		20.84	UJ
Manganese	23.4	J	1.1	J
Vanadium	2.51	J	0.75	UJ
Zinc	27.72		3.24	U
TPH (mg/kg)	585		29.1	
Total Organic Carbon (mg/kg)	4,600		1,950	

Notes: µg/kg = micrograms per kilogram.
mg/kg = milligrams per kilogram.
U = undetected, reported value is the quantitation limit.
J = estimated.
UJ = quantitation limit estimated.
TPH = total petroleum hydrocarbons.

Site 5 Surface soil sample

ORGANICS ANALYSIS DATA SHEET

Laboratory Name:	CH2M HILL/MGM	Concentration:	LOW	Date Extracted:	06/29/93
Lab Sample ID:	90051001	Sample Matrix:	SOIL	Date Analyzed:	07/07/93
Client Sample ID:	GSS51E	Percent Moisture:	7	Dilution Factor:	20.0

PCB COMPOUNDS

CAS Number		ug/Kg		CAS Number	ug/Kg
12674-11-2	Aroclor-1016	710	U		
11104-28-2	Aroclor-1221	1400	U		
11141-16-5	Aroclor-1232	710	U		
53469-21-9	Aroclor-1242	710	U		
12672-29-6	Aroclor-1248	710	U		
11097-69-1	Aroclor-1254	710	U		
11096-82-5	Aroclor-1260	2200			
	Tetrachloro-m-xylene - SS	ND			
	Decachlorobiphenyl - SS	ND			

U - Analyzed for but not detected.
B - Detected in QC blank.
J - Detected, concentration estimated.
SS - Surrogate Standard reported as percent recovery.

Comments: ND - Surrogate not determined due to dilution requirements.

Form I

ORGANICS ANALYSIS DATA SHEET

ratory Name:	CH2M HILL/MGM	Concentration:	LOW	Date Extracted:	06/29/93
Sample ID:	90051002	Sample Matrix:	SOIL	Date Analyzed:	07/07/93
Client Sample ID:	GSS52W	Percent Moisture:	6	Dilution Factor:	40.0

PCB COMPOUNDS

CAS Number		ug/Kg		CAS Number	ug/Kg
12674-11-2	Aroclor-1016	1400	U		
11104-28-2	Aroclor-1221	2800	U		
11141-16-5	Aroclor-1232	1400	U		
53469-21-9	Aroclor-1242	1400	U		
12672-29-6	Aroclor-1248	1400	U		
11097-69-1	Aroclor-1254	1400	U		
11096-82-5	Aroclor-1260	4000			
	Tetrachloro-m-xylene - SS	ND			
	Decachlorobiphenyl - SS	ND			

U - Analyzed for but not detected.
B - Detected in QC blank.
J - Detected, concentration estimated.
SS - Surrogate Standard reported as percent recovery.

Comments: ND - Surrogate not determined due to dilution requirements.

Form I

APPENDIX J

APPENDIX J

BACKGROUND SAMPLING PROGRAM

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J-1 Background Media Locations for Soil and Groundwater
J-2 Background Media Locations at East 1 (E1)
J-3 Background Media Locations at East 2 (E2)
J-4 Background Media Locations at South 1 (S1)
J-5 Background Media Locations at South 2 (S2)
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J-7 Background Media Locations at West 2 (W2)

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J-1 Soil Units at OUs 1, 2, 7, and 8
J-2 Background Soil and Groundwater Sampling Program
J-3 Background Monitoring Well Construction Details
J-4 Background Surface Soil Summary
J-5 Descriptive Statistics for Background Surface Soil
J-6 Descriptive Statistics for Surface Soil from S1 Location
J-7 Background Subsurface Soil Summary
J-8 Descriptive Statistics for Background Subsurface Soil
J-9 Background Groundwater Analytical Summary
J-10 Descriptive Statistics for Groundwater, Upper Surficial Wells
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APPENDICES

J-1 Lithologic Boring Logs for Background Wells
J-2 Background Monitoring Well Construction Diagrams
J-3 Complete Background Chemical Analytical Data Set
J-4 Precision, Accuracy, Representativeness, Completeness, Comparative (PARCCs) Summary Report for Background Samples
J-5 Population Statistics for Background Surface Soil
J-6 Background Geotechnical Testing Results
J-7 Background Groundwater Sampling Logs
J-8 Wet Chemistry Analyses for Background Groundwater

Surface soil, subsurface soil, and groundwater samples were collected during the 1993 sampling program to characterize existing background conditions for the first investigative set to be considered at Naval Air Station (NAS) Cecil Field (Operable Units [OUs] 1, 2, 7, and 8). OU 1 includes Sites 1 and 2. OU 2 includes Sites 5 and 17. (PSC 4 is currently classified as requiring site screening and has not been assigned to an OU; PSC 4 was, however, included in this evaluation because the site is currently under investigation.) Site 16 has been identified as OU 7. Site 3 has been identified as OU 8.

The purpose of the background monitoring network is to establish concentrations (or concentration ranges) for inorganic parameters (metals) that occur naturally in soils and groundwater. It is first necessary to assess, to the extent possible, if the locations selected have been affected by past waste disposal or handling practices. If the locations have not been affected by past activities, the metals concentrations at a particular location are considered to be representative of existing background conditions. To provide a higher level of confidence in the representativeness of the background locations selected, full target compound list (TCL) organics, in addition to target analyte list (TAL) metals analyses, were completed for all soil samples collected above the water table and all groundwater samples (soil samples from below the water table were also submitted for geotechnical testing, but not for chemical analytical testing).

Discussion of the soil and groundwater background investigation is divided into two subsections. The sampling program, including the rationale for the selection of sampling locations, is discussed in Section J.1. A summary of the findings of the background sampling is presented in Subsection J.2. The approach for selecting background locations consisted of (1) identifying the soil types present at sites in OUs 1, 2, and 7; (2) targeting areas (with those soil types) that appear to be representative of background conditions, via aerial photograph review; and (3) distributing the background surface soil samples, subsurface soil samples, and monitoring wells between those locations.

J.1 SAMPLING PROGRAM.

Surface Soil A detailed review of the *Soil Survey of the City of Jacksonville, Duval County, Florida* (U.S. Department of Agriculture [USDA], Soil Conservation Service, 1978) was completed to guide the selection of background surface soil sampling locations.

The soil survey (USDA, 1978) presents a general soil map for Duval County. Soil in Duval County have been divided into four groups: soil of the sand ridges, soil of the flatwoods, soil of the hardwood and cypress swamps, and soil of the tidal marsh. Cecil Field, located in southwestern Duval County, is on the soil of the flatwoods.

Flatwoods soil is comprised of the (1) Leon-Ortega, (2) Leon-Ridgeland-Wesconnett, and (3) Pelham-Mascotte-Sapelo map units. Only the Leon-Ridgeland-Wesconnett series and the Pelham-Mascotte-Sapelo series are present at NAS Cecil Field. Some isolated areas of the Leon-Ortega are present in southwestern Duval County, but these lie to the east of NAS Cecil Field.

The spatial distribution of the Leon-Ridgeland-Wesconnett and the Pelham-Mascotte-Sapelo soil in the vicinity of NAS Cecil Field is not complicated. The mapped contact between the two soil units trends north to south (with the Pelham-Mascotte-Sapelo lying to the west of the contact) and passes through the intersection of Normandy Boulevard and 103rd Street near the main entrance to the facility. South of the intersection of these streets, the contact moves slightly to the west to follow Rowell Creek south to Sal Taylor Creek and continues southward.

The Leon-Ridgeland-Wesconnett, therefore, occupies the eastern part of NAS Cecil Field and the Pelham-Mascotte-Sapelo occupies the western. The majority of the potential sources of contamination (PSCs) identified at NAS Cecil Field are located on the western part of the facility and are mapped as Pelham-Mascotte-Sapelo.

The soil survey (USDA, 1978) has further divided the Leon-Ridgeland-Wesconnett and the Pelham-Mascotte-Sapelo into specific soil types based on soil characteristics. These characteristics include the inclination of slopes formed by the soil, the permeability of the soil, and the composition (e.g., sandy, loamy, etc.) of the soil horizons present. Five specific soil units have been identified at OUs 1, 2, 7, and 8. Arents and Arents-Sanitary Landfill are considered as one specific soil unit as both are disturbed soil. These specific soil units include:

- Albany Fine Sand,
- Arents and Arents-Sanitary Landfill,
- Ridgeland Fine Sand,
- Urban Land, and
- Wesconnett Fine Sand.

As presented in the Technical Memorandum for Supplemental Sampling (TMSS) (ABB-ES, 1992) at OUs 1, 2, 7, and 8, a total 15 samples (excluding quality assurance and quality control [QA/QC] samples) were collected to generate a database for the concentrations of naturally occurring inorganic parameters (metals) in the surficial soil at NAS Cecil Field. Three general locations were selected (in the TMSS) for the collection of the background samples, one east of the facility, one to the west, and one south of the facility. A brief discussion of the selection of the sampling locations follows.

The Unified Soil Classification System (USCS) soil maps were used to estimate the percentage of each site occupied by a particular soil unit. Table J-1 presents the sites included in OUs 1, 2, 7, and 8 and the percentage of each site's area occupied by a specific soil unit.

One of the five specific soil units, Urban Land, was not considered during the selection of background soil sampling locations. OU 7, Site 16, is mapped as being on the Urban Land specific soil unit. The composition of the individual soil mapped as Urban Land is not known, but may vary greatly based on the land use in developed parts of the facility. For this reason, site-specific background samples were used to characterize existing background concentrations for inorganic parameters at Site 16.

Table J-1

Remedial Investigation
Operable Unit 2, NAS Cecil Field
Jacksonville, Florida

Site	Soil (Percentage)				
	Albany Fine Sand	Arents	Ridgeland Fine Sand	Urban Land	Wensconnett Fine Sand
1		85	5		10
2		95			5
3	85	5	10		
4	90		10		
5		50	50		
17			100		
16				100	

As shown by the percentages in Table J-1, Site 5 is half Arents and half Ridgeland Fine Sand. Due to the presence of rubble and debris north of the pit it is possible that more than 50 percent of the soil at site 5 is Arents. Soil at Site 17 is shown to be 100 percent Ridgeland Fine Sand. Aerial photographs, however, show parts of the site to have been excavated and it is reasonable to assume that the pit area is now composed of Arents.

The final locations for collection of background surface soil samples were selected in the following manner. Analyses of the percentage data (Table J-1) showed that the area occupied by the sites of OUs 1, 2, and 8 (OU 7 was removed) was distributed more or less evenly between the Albany Fine Sand, Arents, and Ridgeland Fine Sand with minor representation of the Wesconnett Fine Sand (at OU 1). Based on this distribution, the 15 samples were distributed among the soil units in the following manner:

- Albany Fine Sand, five samples;
- Arents, four samples;
- Ridgeland Fine Sand, five samples; and
- Wesconnett Fine Sand, one sample.

Following the determination of background sample distribution between the various soil units present, the maps presented in the Duval County soil survey (USDA, 1978) were evaluated in conjunction with the three general background sampling locations from the TMSS (east, west, and south). Tentative sampling locations from each of the soil units were selected. Following the selection of the tentative locations, historical aerial photographs were reviewed to look for obvious signs of human activities in the targeted areas. The only area that showed obvious signs of activity was the Arents locations; soil must be reworked to be designated as Arents (the Arents background locations are discussed below).

Finally, field reconnaissance of the selected locations was completed to check for recent activity and evaluate the accessibility of the locations. The accessibility of the locations was important as wells would be installed in the immediately vicinity of the surface soil samples.

Figure J-1 shows the locations selected for inclusion in the background soil and groundwater monitoring network. Figures J-2 through J-7 show the individual sampling locations and the media sampled at each. Table J-2 summarizes the laboratory analytical program completed for the media sampled. All surface soil samples were collected from a depth of 0 to 12 inches below land surface (bls).

<u>Subsurface Soil and Groundwater</u> The historical aerial photograph review had established that the general locations selected for surface soil samples did not show obvious signs of human activity. Following the selection of the surface soil sampling locations for the background network (described above), the monitoring wells were divided among the background locations selected. Subsurface soil samples were then collected during the installation of each monitoring well.

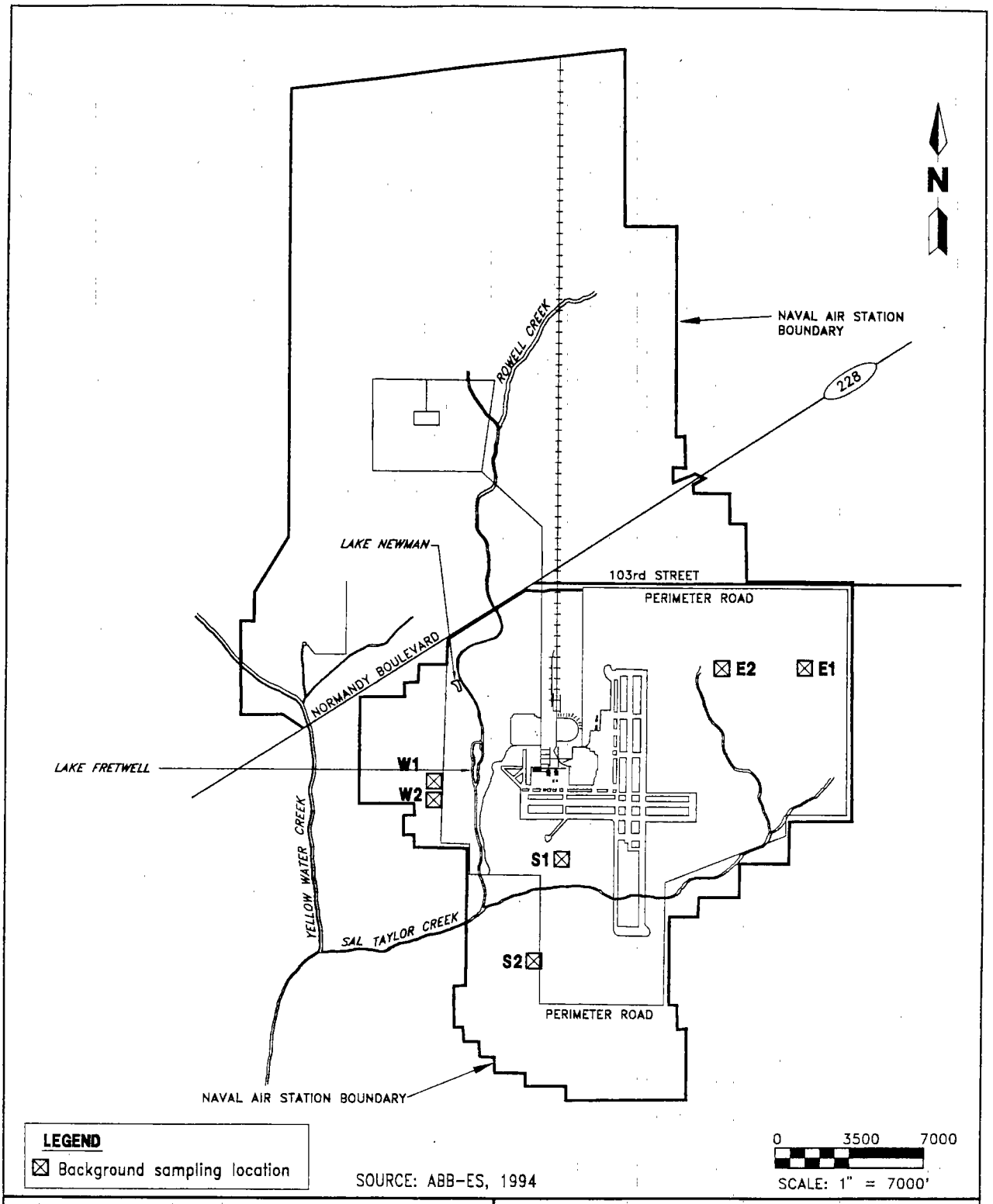
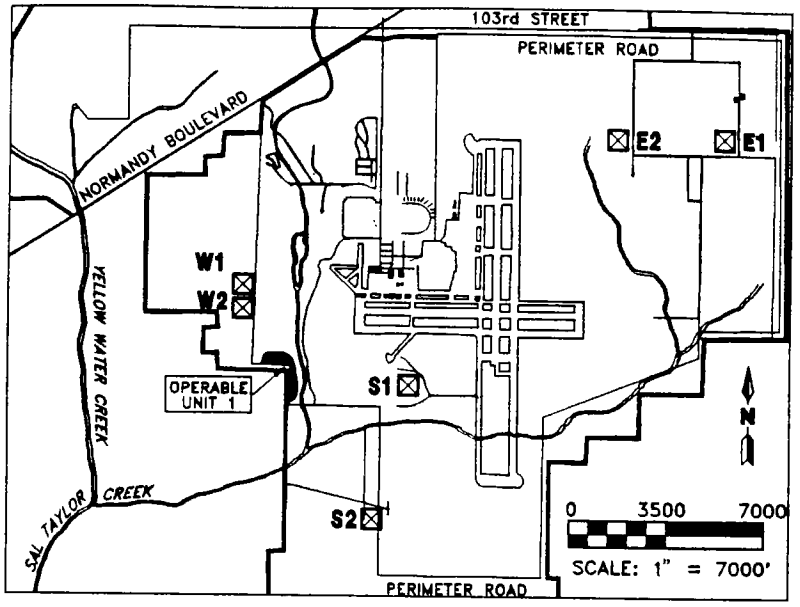


FIGURE J-1
BACKGROUND MEDIA LOCATIONS, SOIL AND GROUNDWATER

CECIL/FFSFACIL/NP-WDW/10-13-94

REMEDIAL INVESTIGATION, OPERABLE UNIT 2

NAS CECIL FIELD
JACKSONVILLE, FLORIDA



N

CEFBKSS9

CEFBK7S
BBMS7S0
BBMS7S4
BBMS7S6

LEGEND

CEFBKSS14	Surface soil sample
CEFBK5S	Monitoring well location with subsurface soil samples
BBMS7S0	Surface soil sample at 0 to 2 feet below land surface

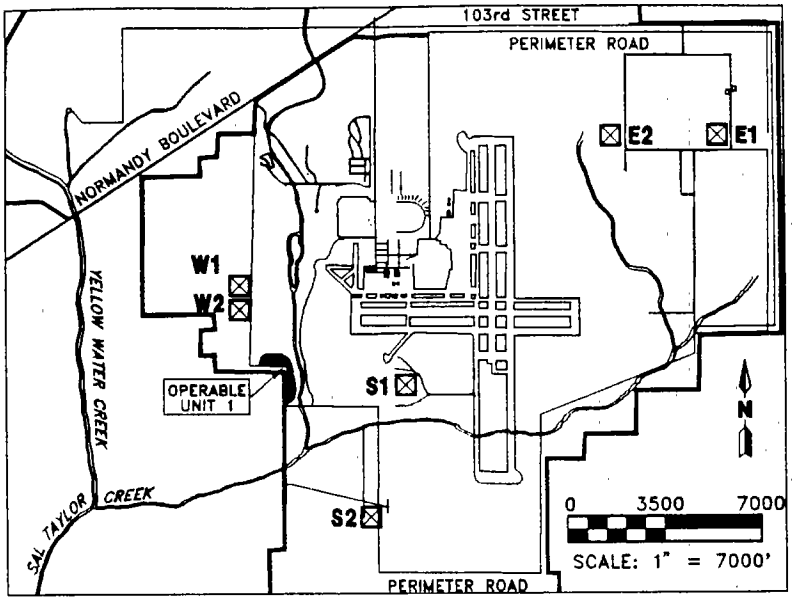
0 50 100
SCALE: 1" = 100'

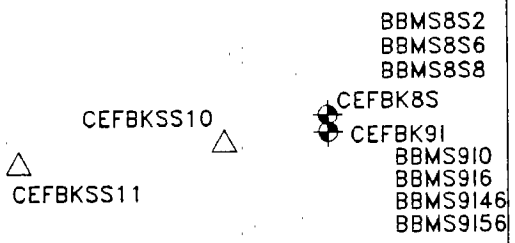
FIGURE J-2
BACKGROUND MEDIA LOCATIONS AT EAST 1 (E1)

H/CECIL/BML1/MAH-WDW/10-27-94

REMEDIAL INVESTIGATION, OPERABLE UNIT 2

NAS CECIL FIELD
JACKSONVILLE, FLORIDA





LEGEND

CEFBKSS14 △	Surface soil sample
CEFBK5S ⊕	Monitoring well location with subsurface soil samples
BBMS8S2	Surface soil sample at 0 to 2 feet below land surface

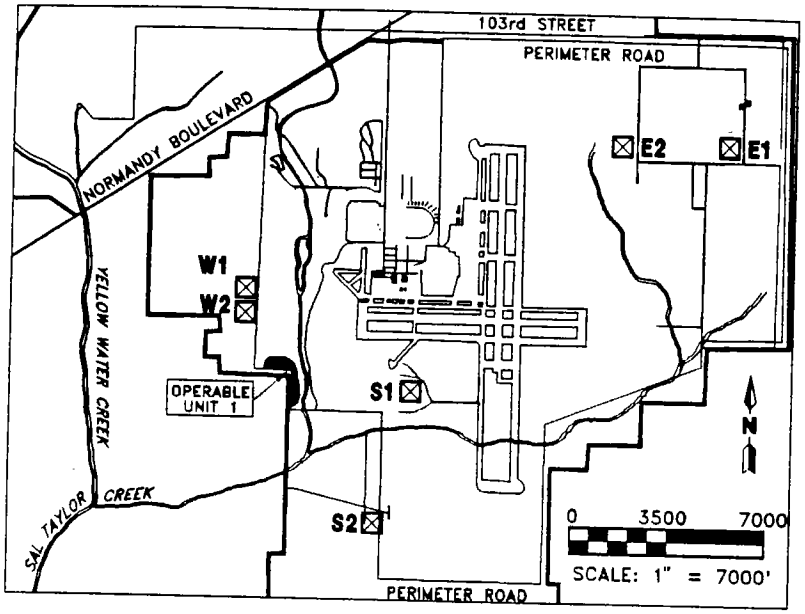
0 50 100
SCALE: 1" = 100'

FIGURE J-3
BACKGROUND MEDIA LOCATIONS AT EAST 2 (E2)

H/CECIL/BML1/MAH-WDW/10-27-94

REMEDIAL INVESTIGATION, OPERABLE UNIT 2

NAS CECIL FIELD
JACKSONVILLE, FLORIDA



N

DIRT ROAD

CEFBKSS4

CEFBKSS1

CEFBKSS2

CEFBK1S
BBMSIS0 (0-2')
BBMSIS6 (6-8')

CEFBKSS3

LEGEND

CEFBKSS14	Surface soil sample
CEFBK5S	Monitoring well location with subsurface soil samples
BBMS1S0	Surface soil sample at 0 to 2 feet below land surface

0 50 100
SCALE: 1" = 100'

FIGURE J-4
BACKGROUND MEDIA LOCATIONS AT SOUTH 1 (S1)

H/CECIL/BML1/MAH-WDW/10-27-94

REMEDIAL INVESTIGATION, OPERABLE UNIT 2

NAS CECIL FIELD
JACKSONVILLE, FLORIDA

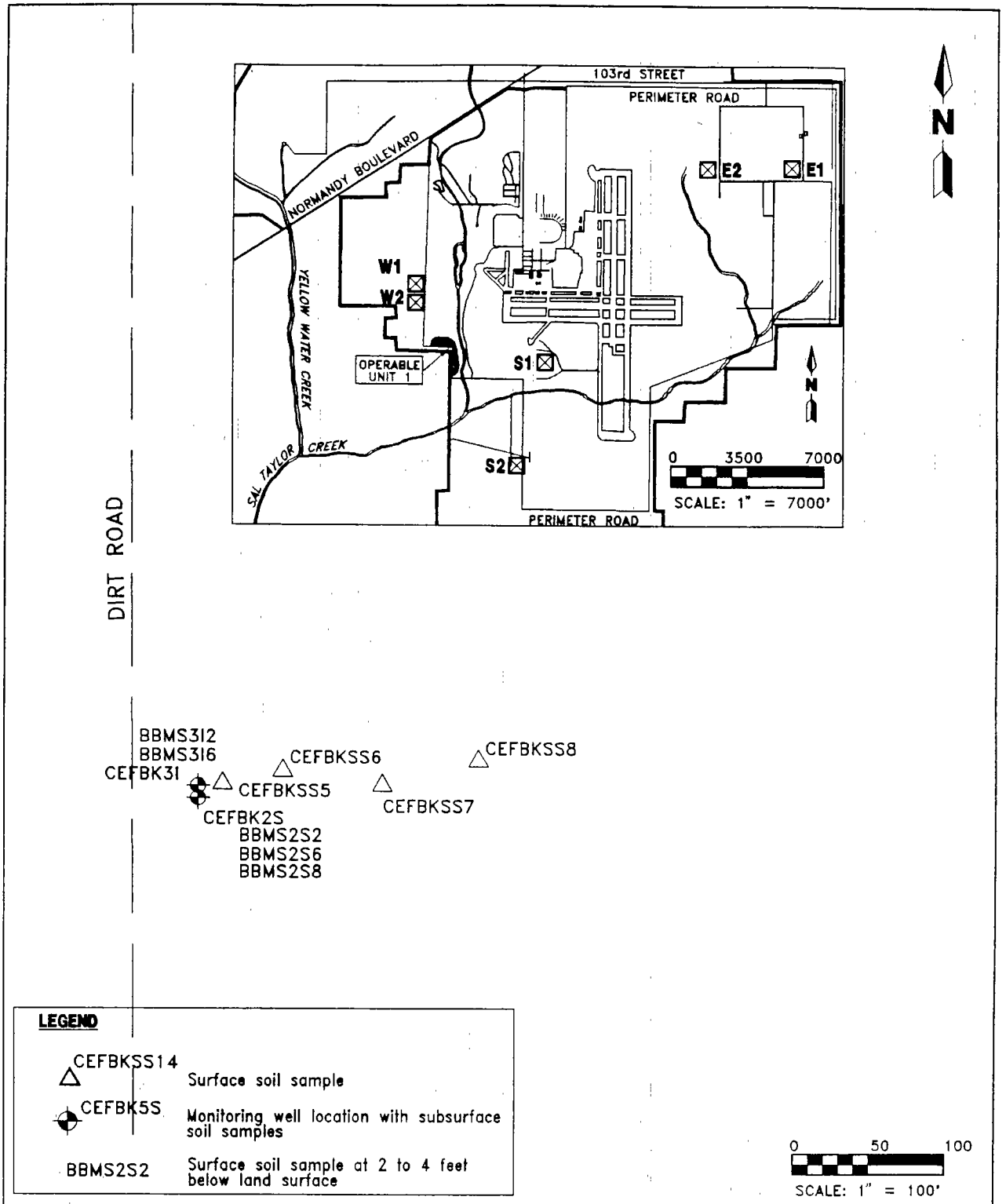


FIGURE J-5
BACKGROUND MEDIA LOCATIONS AT SOUTH 2 (S2)

H/CECIL/BML1/MAH-WDW/10-27-94

REMEDIAL INVESTIGATION, OPERABLE UNIT 2

NAS CECIL FIELD
JACKSONVILLE, FLORIDA

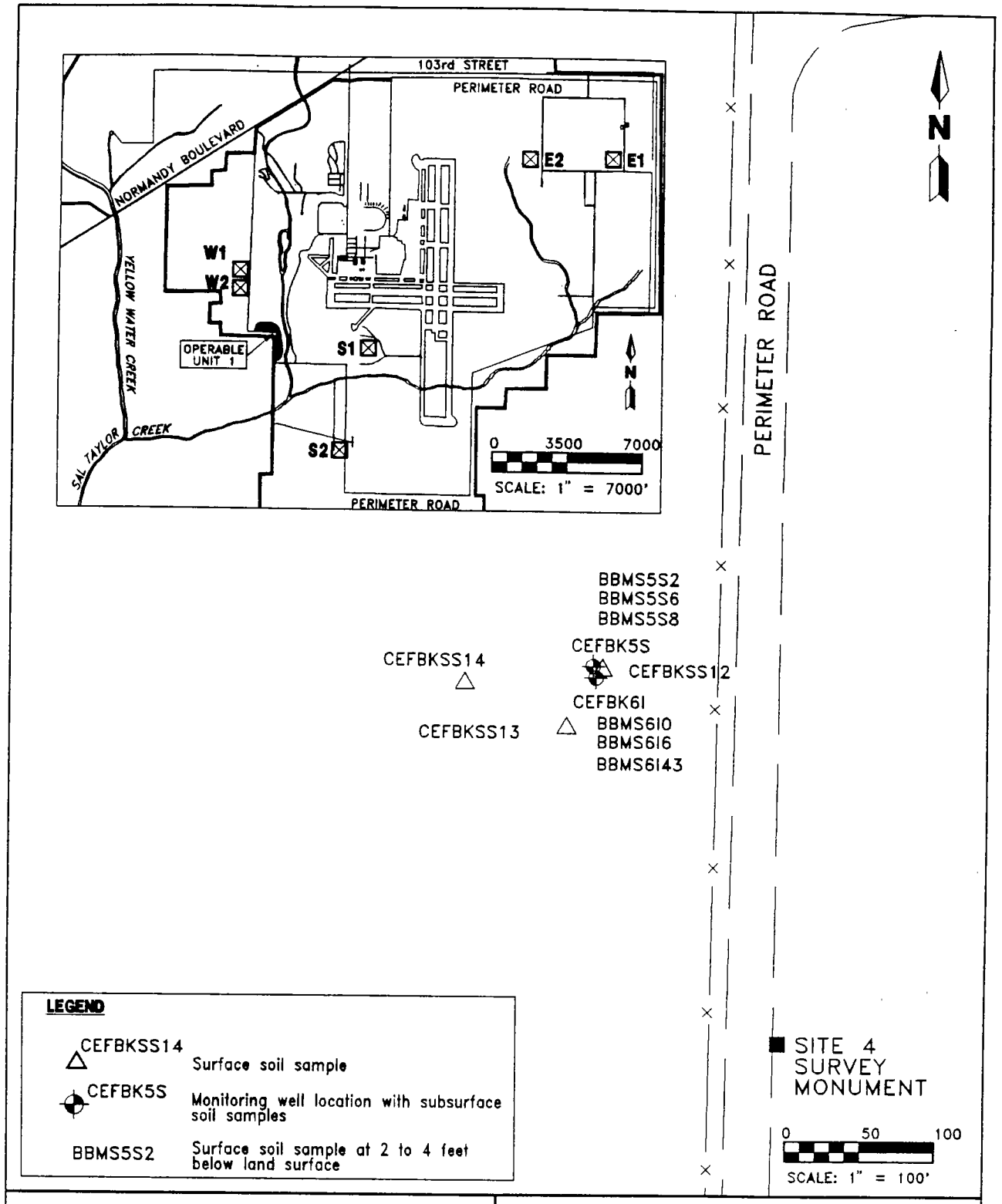


FIGURE J-6
BACKGROUND MEDIA LOCATIONS AT WEST 1 (W1)

H/CECIL/BML1/MAH-WDW/10-27-94

REMEDIAL INVESTIGATION, OPERABLE UNIT 2

NAS CECIL FIELD
JACKSONVILLE, FLORIDA

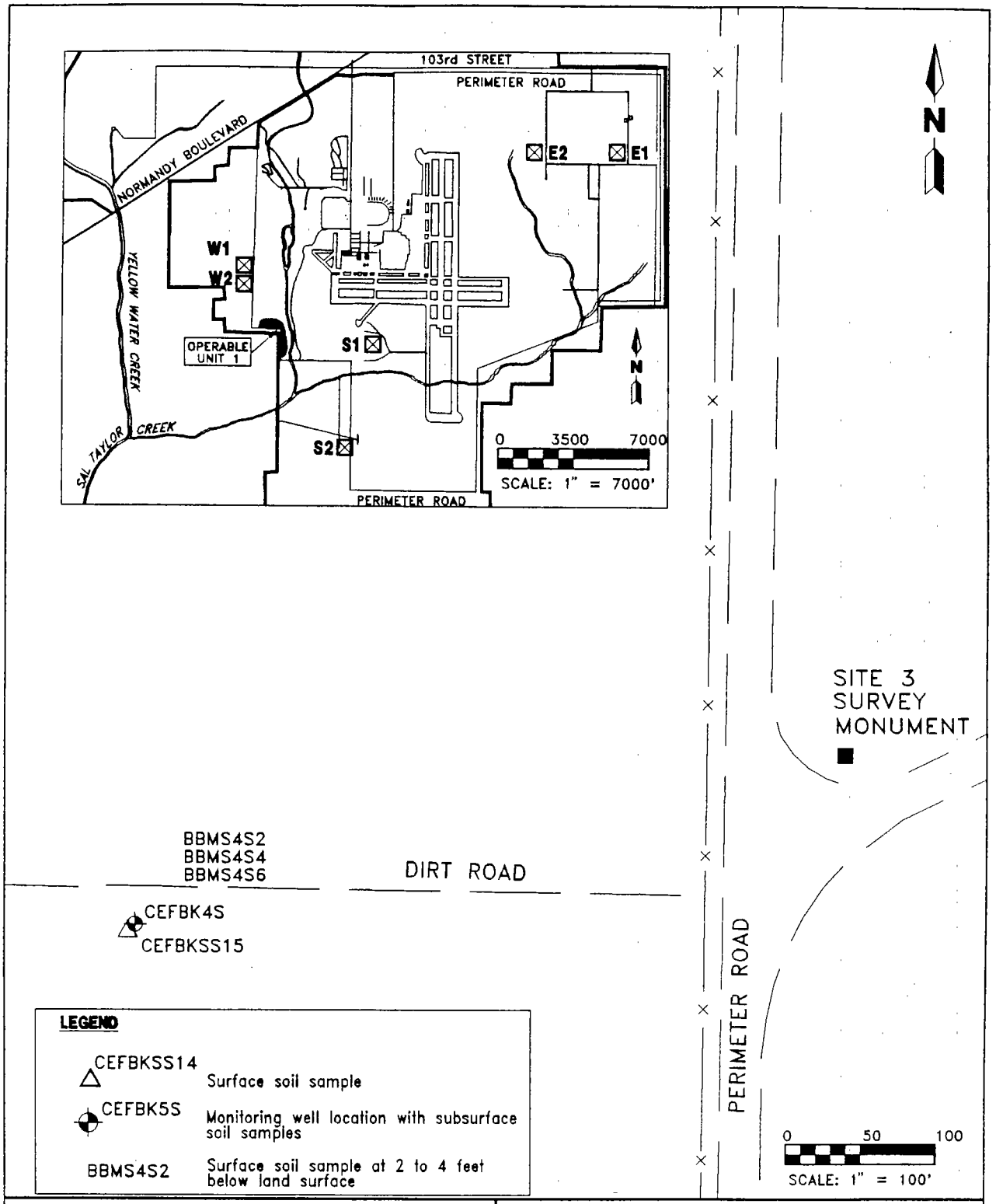


FIGURE J-7
BACKGROUND MEDIA LOCATIONS AT WEST 2 (W2)

H/CECIL/BML1/MAH-WDW/10-27-94

REMEDIAL INVESTIGATION, OPERABLE UNIT 2

NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Table J-2
Background Soil and Groundwater Sampling Program

Remedial Investigation
Operable Unit 2, NAS Cecil Field
Jacksonville, Florida

Sample Identification	TCL	TAL	TPH	TOC	WET CHEM	GEOTECH
Surface Soil						
CEFBSS01	X	X	X			
CEFBSS02	X	X	X			
CEFBSS03	X	X	X			
CEFBSS04	X	X	X			
CEFBSS05	X	X	X			
CEFBSS06	X	X	X			
CEFBSS07	X	X	X			
CEFBSS08	X	X	X			
CEFBSS09	X	X	X			
CEFBSS10	X	X	X			
CEFBSS11	X	X	X			
CEFBSS12	X	X	X			
CEFBSS13	X	X	X			
CEFBSS14	X	X	X			
CEFBSS15	X	X	X			
Subsurface Soil						
CFBBMS1S0	X	X	X			
CFBBMS1S6	X	X	X			
CFBBMS1S8						X
CFBBMS2S2	X	X	X			
CFBBMS2S6						X
CFBBMS2S8				X		X
CFBBMS3I2	X	X	X			
CFBBMS3I6	X	X	X			
CFBBMS4S2	X	X	X			

See notes at end of table.

Table J-2 (Continued)
Background Soil and Groundwater Sampling Program

Remedial Investigation
Operable Unit 2, NAS Cecil Field
Jacksonville, Florida

Sample Identification	TCL	TAL	TPH	TOC	WET CHEM	GEOTECH
Subsurface Soil (Continued)						
CFBBMS4S4	X	X	X			X
CFBBMS4S6						X
CFBBMS5S2	X	X	X			
CFBBMS5S6	X	X	X			X
CFBBMS5S8						X
CFBBMS6I0	X	X	X			
CFBBMS6I6	X	X	X			
CFBBMS6I43				X		X
CFBBMS7S0	X	X	X			
CFBBMS7S4	X	X	X			X
CFBBMS7S6				X		X
CFBBMS8S2	X	X	X			
CFBBMS8S6	X	X	X			X
CFBBMS8S8						X
CFBBMS9I0	X	X	X			
CFBBMS9I6	X	X	X			
CFBBMS9I46				X		
CFBBMS9I56				X		X
Groundwater						
CFBK1S	X	X	X		X	
CFBK2S	X	X	X		X	
CFBK3I	X	X	X		X	
CFBK4S	X	X	X		X	
CFBK5S	X	X	X		X	

See notes at end of table.

Table J-2 (Continued)
Background Soil and Groundwater Sampling Program

Remedial Investigation
Operable Unit 2, NAS Cecil Field
Jacksonville, Florida

Sample Identification	TCL	TAL	TPH	TOC	WET CHEM	GEOTECH
Groundwater (Continued)						
CFBK6I	X	X	X		X	
CFBK7S	X	X	X		X	
CFBK8S	X	X	X		X	
CFBK9I	X	X	X		X	

Notes: TCL = U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program target compound list.
TAL = USEPA Contract Laboratory Program target analyte list.
TPH = total petroleum hydrocarbons (USEPA Method 418.1).
TOC = total organic carbon.
WET CHEM includes hardness, cations, anions, sulfides, chromium^{+3}, and chromium^{+6}.
GEOTECH includes grain size, moisture content, and Atterberg limits.
CEF/CF = NAS Cecil Field.
MS1S0 = boring from monitoring well.
BB/BK = background well CFBK1S.
SS = surface soil.
0 = top of 2-foot below land surface interval sample.

The monitoring well network consists of six upper surficial monitoring wells and three lower surficial monitoring wells. Monitoring wells completed in the upper part of the surficial aquifer are identified by "S" at the end of the well designator; lower surficial wells are indicated by "I" at the end of the designator. Table J-2 summarizes the groundwater analytical program. Table J-3 presents monitoring well construction details for background wells. Figures J-2 through J-7 show the locations at which monitoring wells were installed. Appendix J-1 presents lithologic descriptions of the subsurface encountered at each monitoring well location. Appendix J-2 presents construction diagrams for background wells.

Subsurface soil samples were collected during the installation of groundwater monitoring wells. Subsurface soil sample refers to a sample that was collected from a depth of greater 1 foot bls (i.e., 0 to 2 feet bls and deeper). Soil borings, separate from those for monitoring wells, were not completed during the background sampling program. All subsurface soil samples were collected from split-spoon samplers and represent 2-foot intervals. Subsurface soil sampling designators indicate (1) the completed well number from which the sample was collected and (2) the depth of the top of the interval sampled (e.g., for sample CFBBMS1S6, "BBMS" indicates that the sample was collected during installation of background well, "1S" (CFBK1S), from a depth of 6 to 8 feet bls. Table J-2 summarizes the subsurface soil analytical program. Sampling locations and the depths from which subsurface soil samples were collected are shown on Figures J-2 through J-7.

J.2 RESULTS OF BACKGROUND SAMPLING.

J.2.1 **Surface Soil** Chemical analytical data from the collection and analyses of background surface soil samples is summarized (detections only) in Table J-4. Complete analytical data from the analyses of surface soil samples are presented in Appendix J-3. Appendix J-4 presents the precision, accuracy, representativeness, completeness, comparability (PARCCs) summary report for background samples. The PARCC report assesses quality control measures taken during the sampling and analytical efforts and comments on the suitability of the data for interpretative uses. Two duplicate samples were collected; the sample designator ends with "D" for duplicate samples.

Volatile organics compounds (VOCs) were not detected in any of the samples analyzed (VOCs, therefore, do not appear in Table J-4). Four semivolatile organic compounds (SVOCs) were reported. Three of the SVOCs reported (diethylphthalate, di-n-butylphthalate, and bis(2-ethylhexyl)phthalate) are phthalate esters. These phthalate esters are common laboratory contaminants and may not be representative of existing site conditions at the background locations. The fourth SVOC detected, phenol, was detected at 5 of the 15 background locations sampled at concentrations ranging from 190 J μg/kg (micrograms per kilogram) to 21 J μg/kg. The presence of phenol in the surface soil at background locations is not unexpected as phenol (in the low microgram per kilogram levels) is produced by the decomposition of leaf litter.

Surface soil samples were analyzed for TCL pesticides and polychlorinated biphenyls (PCBs). No detections of PCBs were reported during the analyses of

Table J-3
Background Monitoring Well Construction Details

Remedial Investigation
Operable Unit 2, NAS Cecil Field
Jacksonville, Florida

Well Number	Date Installed	Top of Casing Elevation (feet, msl)	Length of Casing Above Land Surface[1] (feet)	Land Surface Elevation[2] (feet, msl)	Length of Screen (feet)	Total Depth of Well[3] (feet)	Screen Slot Size (inches)	Construction/Remarks	Drilling Method
Background									
CEF-BK-1S	08/05/93	66.77	2.47	64.30	10	16.0	0.010	2" PVC Silica Sand Pack 20/30	HSA
CEF-BK-2S	08/05/93	84.09	2.36	81.73	10	16.0	0.010	2" PVC Silica Sand Pack 20/30	HSA
CEF-BK-3I	08/09/93	84.06	2.33	81.73	10	48.0	0.010	2" PVC Silica Sand Pack 20/30	HSA/ODEX
CEF-BK-4S	08/08/93	78.17	2.47	75.70	10	16.0	0.010	2" PVC Silica Sand Pack 20/30	HSA
CEF-BK-5S	08/08/93	76.96	2.26	74.70	10	16.0	0.010	2" PVC Silica Sand Pack 20/30	HSA
CEF-BK-6I	08/10/93	77.15	2.22	74.93	10	48.5	0.010	2" PVC Silica Sand Pack 20/30	HSA/ODEX
CEF-BK-7S	08/09/93	80.28	2.40	77.88	10	16.0	0.010	2" PVC Silica Sand Pack 20/30	HSA
CEF-BK-8S	08/09/93	80.19	2.39	77.80	10	16.0	0.010	2" PVC Silica Sand Pack 20/30	HSA
CEF-BK-9I	08/16/93	80.09	3.37	76.72	10	63.0	0.010	2" PVC Silica Sand Pack 20/30	HSA/ODEX

[1]Measured from land surface elevation.
[2]Elevation of northeast corner of concrete pad.
[3]Measured from land surface elevation; includes any sump.

Notes: msl = mean sea level datum.
" = inch.
PVC = polyvinyl chloride.
HSA = hollow-stem auger.
ODEX = reverse circulation.

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Table J-4
Background Surface Soil Analytical Summary

Remedial Investigation
Operable Unit 2, NAS Cecil Field
Jacksonville, Florida

Locator:	CEFBSS01	CEFBSS02	CEFBSS02D	CEFBSS03	CEFBSS04	CEFBSS05	CEFBSS06	CEFBSS07	CEFBSS08	CEFBSS09
Collect Date:	19-Jul-93	19-Jul-93	19-Jul-93	19-Jul-93	19-Jul-93	20-Jul-93	20-Jul-93	20-Jul-93	20-Jul-93	20-Jul-93
Semivolatiles Organic Compounds (SVOCs) (μg/kg)										
Phenol	52 J	--	--	--	--	--	190 J	--	--	22 J
Diethylphthalate	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate	34 J	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate	48 J	51 J	42 J	--	--	--	--	48 J	52 J	--
Pesticides and PCBs (μg/kg)										
4,4'-DDE	--	--	--	--	--	--	--	--	--	--
Endrin	--	--	.32 J	--	--	--	--	--	--	.97 J
Endosulfan II	--	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	0.45	--	--	--	--	--	--
Inorganic Compounds (mg/kg)										
Aluminum	4,720	18,500	23,600	24,000	8,400	680	344	284	2,130	442
Arsenic	--	1.4 J	--	2.2 J	--	--	--	--	--	--
Barium	5.4 J	13.4 J	19.3 J	13.4 J	6.8 J	2.4 J	--	--	2.9 J	--
Calcium	--	--	--	--	--	--	--	--	--	--
Chromium	5.9	18.4	23.6	24.9	10.6	--	--	--	--	--
Iron	716	6,090	7,440	7,140	1,500	252	194	136	454	119
Lead	4.8	10.3	10.6	8.3	7.6	2.4	2.7	--	3.6	--
Magnesium	123 J	326 J	425 J	319 J	129 J	24.4 J	--	--	55.7 J	--
Manganese	8.8	9	10.1	10.9	4.8	4.1	4.1	3.6	3.7	--
Nickel	2 J	5.2 J	6.1 J	5.4 J	1.5 J	--	--	--	--	--
Potassium	69.7 J	199 J	255 J	236 J	87.5 J	--	--	--	--	--
Vanadium	4.9 J	20.2	23.8	30.7	10.9	1.9 J	1.6 J	1.3 J	3 J	1.3 J
TPH (mg/kg)	--	--	--	--	14	--	--	13	23	--

See notes at end of table.

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Table J-4 (Continued)
Background Surface Soil Summary

Remedial Investigation
Operable Unit 2, NAS Cecil Field
Jacksonville, Florida

Locator:	CEFBSS09D	CEFBSS10	CEFBSS11	CEFBSS12	CEFBSS13	CEFBSS14	CEFBSS15
Collect Date:	20-Jul-93	20-Jul-93	20-Jul-93	20-Jul-93	20-Jul-93	20-Jul-93	20-Jul-93
SVOCs (μg/kg)							
Phenol	21 J	--	--	--	23 J	--	--
Diethylphthalate	--	--	19 J	--	--	--	--
Di-n-butylphthalate	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate	--	--	--	17 J	--	--	--
Pesticides and PCBs (μg/kg)							
4,4'-DDE	--	0.51	.21 J	--	--	.26 J	--
Endrin	--	--	--	--	--	--	--
Endosulfan II	--	--	--	--	--	--	.33 J
Endrin aldehyde	--	--	--	--	--	--	--
Inorganic Compounds (mg/kg)							
Aluminum	557	183	195	2,350	2,770	2,170	1,430
Arsenic	--	--	--	--	--	--	.22 UJB
Barium	2.4 J	2.1 J	2.6 J	3.7 J	4.1 J	4.8 J	6.8 JB
Calcium	--	269 J	211 J	--	220 J	--	217 J
Chromium	--	--	--	--	--	2.3	--
Iron	154	102	69.6	480	734	636	367
Lead	4	2.3	2.5	3.5	5.1	3.7	3.5
Magnesium	--	50.4 J	36.1 J	69.8 J	69.1 J	75.9 J	50 J
Manganese	--	5.2	2.5 J	5.5	5	5.9	3.8
Nickel	--	--	--	--	--	--	--
Potassium	--	--	--	--	--	--	--
Vanadium	1.4 J	1.5 J	1.3 J	3.3 J	3.9 J	3.3 J	2.6 J
TPH (mg/kg)	--	35	18	11	25	58	12

Notes: μg/kg = micrograms per kilogram.
-- = not detected.
J = estimated.
4,4'-DDE = 4,4-dichlorodiphenyldichloroethene.
PCBs = polychlorinated biphenyls.
TPH = total petroleum hydrocarbons.
mg/kg = milligrams per kilogram.

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background surface soil samples. Four pesticides were reported during the analyses of surface soil samples; 6 of the 15 locations sampled had reported detections. Pesticide detections ranged from a high of 0.97 J μg/kg of Endrin to a low of 0.21 J μg/kg of 4,4'-dichlorodiphenyl dichloroethene (DDE). No sampling location had more than one pesticide detection reported.

TAL metals analyses were completed on each surface soil sample. Inorganics analyses are presented on Table J-4. Table J-5 presents descriptive statistics for inorganics in surface soil (data from all 15 sampling locations are included in Table J-5).

Because of the various soil types sampled and the various parts of the base present in the background surface soil database, the surface soil data were analyzed to determine if separate populations were present or if the surface soil data should be considered as a single population. The statistical population analysis consisted of running a Student T-Test using a 95 percent confidence interval and comparing soil units from the E, S, and W locations (Figure J-1) in several different combinations. The results of this analysis, presented in Appendix J-4, indicated that the S1 location represented a distinct population and the remaining locations (E1, E2, S2, W1, and W2) could be considered be as a single population. The S1 location (Figure J-4) is the Arents background location; Arents was the soil unit mapped for part of Site 5.

To assess if the S1 location represented soil native to the facility or consisted of imported fill, the analyses of surface soil samples from the S1 location were compared with subsurface soil samples. The comparison was completed for analytical results from all intervals sampled (0 to 2, 2 to 4, 4 to 6, and 6 to 8 feet bls). This analysis, presented in Appendix J-4, indicated that the S1 location was not significantly different from the subsurface soil at the site, with the comparison to the 4 to 6 and 6 to 8 feet bls intervals being the best match to the S1 surface soil population. Therefore, the S1 location is considered to represent surface soil that has been disturbed, as the Arent designation by the soil survey implies, and that it could be derived from within the facility by reworking existing soil from deeper depths (0 to 8 feet bls).

The soil from each pit at Site 5 and Site 17 was excavated, and probably set to one side of the pit or removed from the site. After operations ceased either the soil from the pit or soil from an offsite source was placed back into the pit. In either case, the excavation and replacement of the soil would destroy any soil profile, creating in its stead characteristics similar to that of Arents. For this reason, the S1 background surface soil sampling location was selected as the background location for surface soil at Sites and 5 and 17. Table J-6 presents descriptive statistics for inorganics for surface soil from the S1 location.

J.2.2 **Subsurface Soil** Subsurface soil samples were collected during the installation of background groundwater monitoring wells. Samples were collected from above the water table and from the screened interval of monitoring wells. Samples collected above the water table (total of 19) were analyzed for full TCL organics and TAL metals and other samples were only submitted for sieve or total organic carbon analysis. Table J-2 summarizes the chemical analytical program

Table J-5
Descriptive Statistics for Background Surface Soil[1]

Remedial Investigation
Operable Unit 2, NAS Cecil Field
Jacksonville, Florida

Chem.name	Min.dl	Max.dl	Min.lv	Max.lv	ADL.Avg	Median	Num.Det/ Tot.Sample
Aluminum	N/A	N/A	183	24,000	5,456.18	2,130	17/17
Antimony	3.2	3.7	N/A	N/A	N/A	U 3.3	0/17
Arsenic	0.21	0.86	1.4	2.2	1.8	UJ 0.25	2/17
Barium	1.2	2	2.1	19.3	6.44	J 3.7	14/17
Beryllium	0.21	0.25	N/A	N/A	N/A	U 0.22	0/17
Cadmium	0.84	0.99	N/A	N/A	N/A	U 0.88	0/17
Calcium	67.7	198	211	269	229.25	U 119	4/17
Chromium	1.7	1.8	2.3	24.9	14.28	U 1.8	6/17
Cobalt	1.3	1.5	N/A	N/A	N/A	U 1.3	0/17
Copper	0.43	2.3	N/A	N/A	N/A	U 0.7	0/17
Cyanide	0.48	0.6	N/A	N/A	N/A	U 0.53	0/17
Iron	N/A	N/A	69.6	7,440	1,563.74	454	17/17
Lead	2	2.1	2.3	10.6	4.99	3.6	15/17
Magnesium	12.6	18.8	24.4	425	134.88	J 55.7	13/17
Manganese	0.69	1.2	2.5	10.9	5.8	4.8	15/17
Mercury	0.1	0.13	N/A	N/A	N/A	U 0.11	0/17
Nickel	1.5	1.6	1.5	6.1	4.04	U 1.5	5/17
Potassium	13.8	39.9	69.7	255	169.44	U 33.9	5/17
Selenium	0.21	0.25	N/A	N/A	N/A	U 0.22	0/17
Silver	0.84	0.99	N/A	N/A	N/A	U 0.88	0/17
Sodium	149	241	N/A	N/A	N/A	U 182	0/17
Thallium	0.41	0.5	N/A	N/A	N/A	U 0.44	0/17
Vanadium	N/A	N/A	1.3	30.7	6.88	J 3	17/17
Zinc	2.4	20.2	N/A	N/A	N/A	U 4.1	0/17

[1]Background surface samples taken at sample locations CEFBSS01, CEFBSS02, CEFBSS03, CEFBSS04, CEFBSS05, CEFBSS06, CEFBSS07, CEFBSS08, CEFBSS09, CEFBSS10, CEFBSS11, CEFBSS12, CEFBSS13, CEFBSS14, and CEFBSS15.

Notes: Chem.name = chemical name.
Min.dl = minimum reported detection level.
Max.dl = maximum reported detection level.
Min.lv = minimum level reported.
Max.lv = maximum level reported.
ADL.Avg = above detection level average value.
Median is median of all values above and below detection level.
Num.Det/Tot.Sample = number of detects / total number sampled.

Table J-6
Descriptive Statistics for Surface Soil from Site 1 Location

Remedial Investigation
Operable Unit 2, NAS Cecil Field
Jacksonville, Florida

Chem.name	Min.dl	Max.dl	Min.lv	Max.lv	ADL.Avg	ADL.SD	Median	Num.Det/ Tot.Sample
Aluminum	N/A	N/A	4,720.000	24,000.000	15,844.000	8,844.302	18,500.000	5/5
Antimony	3.200	3.700	N/A	N/A	N/A	N/A	3.300 U	0/5
Arsenic	0.250	2.200	1.400	2.200	1.800	0.566	1.400 J	2/5
Barium	N/A	N/A	5.400	19.300	11.660	5.640	13.400 J	5/5
Beryllium	0.210	0.250	N/A	N/A	N/A	N/A	0.220 U	0/5
Cadmium	0.860	0.990	N/A	N/A	N/A	N/A	0.890 U	0/5
Calcium	67.700	167.000	N/A	N/A	N/A	N/A	111.000 U	0/5
Chromium	N/A	N/A	5.900	24.900	16.680	8.240	18.400	5/5
Cobalt	1.300	1.500	N/A	N/A	N/A	N/A	1.300 U	0/5
Copper	0.430	0.950	N/A	N/A	N/A	N/A	0.760 U	0/5
Cyanide	0.490	0.600	N/A	N/A	N/A	N/A	0.540 U	0/5
Iron	N/A	N/A	716.000	7,440.000	4,577.200	3,218.313	6,090.000	5/5
Lead	N/A	N/A	4.800	10.600	8.320	2.347	8.300	5/5
Magnesium	N/A	N/A	123.000	425.000	264.400	133.131	319.000 J	5/5
Manganese	N/A	N/A	4.800	10.900	8.720	2.351	9.000	5/5
Mercury	0.110	0.130	N/A	N/A	N/A	N/A	0.120 U	0/5
Nickel	N/A	N/A	1.500	6.100	4.040	2.124	5.200 J	5/5
Potassium	N/A	N/A	69.700	255.000	169.440	85.567	199.000 J	5/5
Selenium	0.220	0.250	N/A	N/A	N/A	N/A	0.220 U	0/5
Silver	0.860	0.990	N/A	N/A	N/A	N/A	0.890 U	0/5
Sodium	159.000	241.000	N/A	N/A	N/A	N/A	182.000 U	0/5
Thallium	0.430	0.500	N/A	N/A	N/A	N/A	0.440 U	0/5
Vanadium	N/A	N/A	4.900	30.700	18.100	10.268	20.200	5/5
Zinc	4.400	10.100	20.200	20.200	20.200	N/A	8.500 U	1/5

Notes: Chem.name = chemical name.
Min.dl = minimum reported detection level.
Max.dl = maximum reported detection level.
Min.lv = minimum level reported.
Max.lv = maximum level reported.
ADL.Avg = above detection level average value.
Median = median of all values above and below detection level.
Num.Det/Tot.Sample = number of detects / total number sampled.
N/A = not applicable.

completed for subsurface soil. Table J-7 summarizes the detections reported during TCL and TAL analysis of background subsurface soil. Complete analytical data from the analyses of subsurface soil samples is presented in Appendix J-3. Appendix J-4 presents the PARCC summary report for background samples.

VOCs were not reported during the analyses of background subsurface soil samples. One SVOC, pentachlorophenol, was reported in subsurface soil samples. Pentachlorophenol was used widely in the past as a wood preservative. Two detections of pentachlorophenol were reported at concentrations of 180 J and 420 J μg/kg during the installation of background wells CFBK1S and CFBK2S, respectively (Figures J-4 and J-5). Both detections were reported in the sample collected from the 6 to 8 feet bls sampling interval. Pentachlorophenol was not reported in other subsurface soil samples or groundwater samples collected from these two wells. The analytical laboratory re-analyzed these two samples (CFBBMS1S6 and CFBBMS2S6) because of poor surrogate recoveries. Detections of pentachlorophenol were not reported during these re-analyses. The original analyses (with the pentachlorophenol detections), however, were included in the summary table because the re-analyzed samples were extracted outside of holding-time requirements.

TCL pesticide and PCB analyses were also completed on subsurface soil samples. Two pesticides, 4,4'-DDT and 4,4'-DDD (the latter is a breakdown product of 4,4'-DDT) were reported. Both detections were reported in the 0- to 2-foot bls sample I interval collected during the installation of well CFBK1S. The maximum pesticide detection was 0.73 μg/kg of 4,4'-DDT. One PCB, Aroclor 1260, was reported at a concentration of 9.7 J μg/kg in the 2- to 4-feet bls sample interval collected during the installation of background monitoring well CFBK2S.

Table J-7 presents the detections reported during the analyses of background subsurface soil. Table J-8 presents descriptive statistics for inorganics in subsurface soil. Subsurface soil samples were also submitted for geotechnical testing. The results of these analyses are presented in Appendix J-6

Appendix J-5 presents gradation curves for sieve analyses completed on background subsurface soil.

J.2.3 **Groundwater Sampling** Groundwater samples were collected from each of the nine wells in the background monitoring well network. As with surface and subsurface soil, all groundwater samples were analyzed for full TCL inorganics and TAL metals (filtered and unfiltered). Table J-2 summarizes the chemical analytical program completed for groundwater. Groundwater sampling logs, including measurements of temperature, conductivity, pH, and turbidity taken during purging, are presented in Appendix J-7. Table J-9 summarizes the detections reported for the background groundwater samples. Complete analytical data from the analyses of groundwater samples are presented in Appendix J-3. Appendix J-4 presents the PARCC summary report for background samples. Wet chemistry analyses for several parameters (anions, hardness, alkalinity, total dissolved solids, etc.) were also completed for background groundwater samples. Appendix J-8 presents the results of the wet chemistry analyses.

Groundwater monitoring wells were installed only in the surficial aquifer. Six wells were completed in the upper part of the surficial aquifer; screens in these wells were set to intercept the water table. Groundwater monitoring wells were also completed in the lower part of the surficial aquifer. Nine background wells were installed; six were completed across the water table (with an "S" in the well designator) and three wells were completed in the lower part of the surficial aquifer (with an "I" designator). Appendices J-1 and J-2 present lithologic logs and monitoring well construction diagrams (respectively) for background wells.

Four VOCs were reported during the analyses of background groundwater samples (acetone, carbon disulfide, toluene, and xylene). The maximum reported VOC detection was 23 micrograms per liter ($\mu g/\ell$) of acetone in a sample from well CFBK3I (Figure J-5). The other three VOCs were only reported during the analyses of groundwater from one well, CFBK9I (Figure J-3). The maximum reported concentration was 2 $\mu g/\ell$ (for toluene and xylene).

Four SVOCs were reported during the analyses of groundwater samples (phenol, naphthalene, 2-methylnaphthalene, and bis(2-ethylhexyl)phthalate). Bis(2-ethylhexyl)phthalate was the most frequently reported SVOC (present in eight of nine samples) with a maximum concentration of 3 J $\mu g/\ell$ in a sample from well CFBK9I. Phenol was reported in two of the groundwater samples (CFBK3I and CFBK9I) at a maximum concentration of 4 J $\mu g/\ell$ in CFBK3I. Naphthalene and 2-methylnaphthalene were reported only in the sample from CFBK9I; both at concentrations of 0.5 J $\mu g/\ell$.

Groundwater samples were also analyzed for TCL pesticides and PCBs. No detections were reported.

Both filtered and unfiltered groundwater samples from background wells were submitted for TAL metals analyses. Filtering was completed on samples from all wells because the fine-grained nature of the aquifer materials at NAS Cecil Field causes samples collected with a bailer to have a high turbidity. Table J-9 presents the results of the inorganics analyses for groundwater samples. Table J-10 presents descriptive statistics for inorganics in groundwater samples from the upper surficial wells. Table J-11 presents descriptive statistics for inorganics in groundwater samples from the lower part of the surficial aquifer. Filtered results are indicated on Tables J-10 and J-11 by a "DISS" (indicating dissolved) before the parameter name.

Several rounds of water level measurements have been collected from the background monitoring wells. Water level data from background groundwater monitoring wells are presented in Appendix H (of the OU 2 RI report).

Table J-7
Background Subsurface Soil Summary

Remedial Investigation
Operable Unit 2, NAS Cecil Field
Jacksonville, Florida

Locator:	CFBBMS1S0	CFBBMS1S6	CFBBMS2S2	CFBBMS2S6	CFBBMS3I2	CFBBMS3I6	CFBBMS4S2	CFBBMS4S4	CFBBMS5S2	CFBBMS5S6
Collect Date:	5-Aug-93	5-Aug-93	6-Aug-93	6-Aug-93	9-Aug-93	9-Aug-93	8-Aug-93	8-Aug-93	8-Aug-93	8-Aug-93
Semivolatiles Organic Compounds (SVOCs) (µg/kg)										
Pentachlorophenol	--	420 J	--	180 J	--	--	--	--	--	--
Pesticides and PCBs (µg/kg)										
4,4'-DDD	0.68 J	--	--	--	--	--	--	--	--	--
4,4'-DDT	0.73 J	--	--	--	--	--	--	--	--	--
Aroclor-1260	--	--	9.7 J	--	--	--	--	--	--	--
Inorganic Compounds (mg/kg)										
Aluminum	5,920	7,040	877	9,630	934 J	15,600 J	1,360 J	7,770 J	1,160 J	10,000 J
Arsenic	0.65 J	--	--	0.98 J	--	--	--	--	--	--
Barium	7.8 J	4.7 J	--	6.8 J	--	7.7	--	10.6 J	--	6.8 J
Calcium	127 J	102 J	103 J	109 J	--	--	--	--	--	--
Chromium	--	--	--	12.2	2.5	15.1	2.7	11.1	2.5	10.4
Copper	--	--	--	--	--	--	--	--	--	--
Iron	4,360	2,100	208	4,270	206 J	5,660 J	418 J	1,080 J	293 J	2,640 J
Lead	6.8 J	3.6 J	1.6 J	5.4 J	--	18.8	2.8	11.6	--	8.3
Magnesium	79.6 J	80.2 J	--	76.8 J	--	185	--	123 J	--	153 J
Manganese	4.5	4.3	--	--	--	--	--	4.1	--	--
Mercury	--	--	--	--	--	--	--	--	--	--
Nickel	--	--	--	--	--	2.6 J	--	1.9 J	--	1.8 J
Potassium	54.1 J	64.9 J	--	50.6 J	17 J	130	--	72.9 J	--	129 J
Sodium	138 J	142 J	117 J	136 J	--	--	--	--	--	--
Vanadium	10.5 J	6.4 J	1.4 J	14	--	15.1	--	--	--	6.6 J
TPH (mg/kg)	--	--	--	--	--	--	--	--	--	--

See notes at end of table.

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Table J-7 (Continued)
Background Subsurface Soil Summary

Remedial Investigation
Operable Unit 2, NAS Cecil Field
Jacksonville, Florida

Locator:	CFBBMS6I0	CFBBMS6I6	CFBBMS7S0	CFBBMS7S0D	CFBBMS7S4	CFBBMS8S2	CFBBMS8S6	CFBBMS9I0	CFBBMS9I6
Collect Date:	10-Aug-93	10-Aug-93	9-Aug-93	9-Aug-93	9-Aug-93	9-Aug-93	9-Aug-93	16-Aug-93	16-Aug-93
SVOCs (μg/kg)									
Pentachlorophenol	--	--	--	--	--	--	--	--	--
Pesticides and PCBs (μg/kg)									
4,4'-DDD	--	--	--	--	--	--	--	--	--
4,4'-DDT	--	--	--	--	--	--	--	--	--
Aroclor-1260	--	--	--	--	--	--	--	--	--
Inorganic Compounds (mg/kg)									
Aluminum	1,910	15,500	710 J	547 J	3,620 J	1,590 J	9,720 J	2,130	5,680
Arsenic	--	--	--	--	--	--	--	--	--
Barium	2.2 J	9.8 J	4.4 J	--	--	--	10.3 J	--	5.5 J
Calcium	162 J	133 J	312 J	216 J	--	--	--	277 J	--
Chromium	--	17.4	2.2 J	--	6	2.2	12	2.7	6.7
Copper	--	0.58 J	--	--	--	--	--	--	--
Iron	449	1,940	195 J	116 J	104 J	191 J	598 J	207 J	671 J
Lead	3	9.2	3.6	--	3.8	--	13	3 J	6.7 J
Magnesium	--	239 J	11.5 J	--	--	--	90.5 J	--	60.1 J
Manganese	3.6	3.2 J	--	--	--	--	--	--	--
Mercury	--	--	--	--	--	--	--	--	--
Nickel	--	3.3 J	--	--	--	--	3.9 J	--	--
Potassium	17.1 J	158 J	--	--	--	--	70.4 J	--	--
Sodium	--	179 J	--	--	225 J	--	--	--	--
Vanadium	--	11 J	--	--	--	--	6.2 J	1.7 J	4 J

Notes: μg/kg = micrograms per kilogram.
-- = not detected.
J = estimated.
4,4'-DDD = 4,4'-dichlorodiphenyldichloroethane.
4,4'-DDE = 4,4'-dichlorodiphenyldichloroethene.
PCBs = polychlorinated biphenyls.
mg/kg = milligrams per kilogram.
TPH = total petroleum hydrocarbons.

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Table J-8
Descriptive Statistics for Background Subsurface Soil[1]

Remedial Investigation
Operable Unit 2, NAS Cecil Field
Jacksonville, Florida

Chem.name	Min.dl	Max.dl	Min.lv	Max.lv	ADL.Avg	Median	Num.Det/ Tot.Sample
Aluminum	N/A	N/A	547.000	15,600.000	5,566.313	4,650.000	16/16
Antimony	3.100	3.600	N/A	N/A	N/A	3.400 U	0/16
Arsenic	0.410	1.800	0.650	0.650	0.650	0.465 U	1/16
Barium	1.700	3.100	2.200	10.600	6.980	4.550 B	10/16
Beryllium	0.210	0.240	N/A	N/A	N/A	0.230 U	0/16
Cadmium	0.840	0.970	N/A	N/A	N/A	0.915 U	0/16
Calcium	74.200	107.000	102.000	312.000	175.333	104.500 U	6/16
Chromium	1.700	1.800	2.200	17.400	7.829	6.350	14/16
Cobalt	1.300	1.500	N/A	N/A	N/A	1.400 U	0/16
Copper	0.420	2.400	0.580	1.800	1.227	0.840 U	3/16
Cyanide	0.510	0.600	N/A	N/A	N/A	0.565 U	016
Iron	N/A	N/A	104.000	5,660.000	1,313.813	523.500 J	16/16
Lead	1.200	2.100	2.800	18.800	7.600	3.700	12/16
Magnesium	11.000	41.100	11.500	239.000	113.544	50.600 J	9/16
Manganese	0.660	2.100	3.200	4.500	3.940	1.850 U	5/16
Mercury	0.050	0.130	0.550	0.550	0.550	0.110 UJ	1/16
Nickel	1.500	2.500	1.800	3.900	2.700	1.650 U	5/16
Potassium	14.200	49.500	17.000	158.000	73.470	40.700 U	10/16
Selenium	0.210	0.630	N/A	N/A	N/A	0.295 UJ	0/16
Silver	0.840	0.970	N/A	N/A	N/A	0.915 U	0/16
Sodium	52.000	139.000	138.000	225.000	171.000	133.500 U	4/16
Thallium	0.200	0.240	N/A	N/A	N/A	0.230 UJ	0/16
Vanadium	0.910	5.100	1.700	15.100	7.688	3.550 J	8/16
Zinc	0.980	5.900	6.800	7.200	7.000	3.400 U	2/16

[1]Descriptive statistics for selected inorganic parameters for background subsurface soil taken at sample locations CEFBBMS1S0, CEFBBMS1S6, CEFBBMS2S2, CEFBBMS2S6, CEFBBMS3I2, CEFBBMS3I6, CEFBBMS4S2, CEFBBMS4S4, CEFBBMS5S2, CEFBBMS5S6, CEFBBMS6I0, CEFBBMS6I6, CEFBBMS7S0, CEFBBMS7S4, CEFBBMS8S2, CEFBBMS8S6, CEFBBMS9I0, and CEFBBMS9I6.

Notes: Chem.name = chemical name.
Min.dl = minimum reported detection level.
Max.dl = maximum reported detection level.
Min.lv = minimum level reported.
Max.lv is maximum level reported.
ADL.Avg = above detection level average value.
Median is median of all values above and below detection level.
Num.Det/Tot.Sample = number of detects / total number sampled.

Table J-9
Background Groundwater Analytical Summary

Remedial Investigation
Operable Unit 2, NAS Cecil Field
Jacksonville, Florida

Locator:	CFBK1S	CFBK1SF	CFBK2S	CFBK2SF	CFBK3I	CFBK3IF	CFBK4S	CFBK4SF	CFBK5S	CFBK5SF
Collect Date:	12-Sep-93	12-Sep-93	12-Sep-93	12-Sep-93	12-Sep-93	12-Sep-93	9-Sep-93	9-Sep-93	9-Sep-93	9-Sep-93
Volatile Organic Compounds (VOCs) (μg/ℓ)										
Acetone	--		--		23 J		--		--	
Carbon disulfide	--		--		--		--		--	
Toluene	--		--		--		--		--	
Xylenes (total)	--		--		--		--		--	
Semivolatile Organic Compounds (SVOCs) (μg/ℓ)										
Phenol	--		--		4 J		--		--	
Naphthalene	--		--		--		--		--	
2-Methylnaphthalene	--		--		--		--		--	
bis(2-Ethylhexyl)phthalate	0.6 J		2 J		1 J		2 J		2 J	
Inorganic Compounds (μg/ℓ)										
Aluminum	168,000 J	1,030 J	275,000 J	--	1,810 J	259 J	313,000 J	233 J	163,000 J	573 J
Arsenic	5.1 J	--	3.4 J	--	12.5 J	9 J	7.1 J	--	--	--
Barium	81.4 J	--	177 J	--	35 J	29.7 J	193 J	--	126 J	--
Calcium	1,300 J	--	2,730 J	942 J	1,720 J	1,210 J	2,730 J	1,170 J	2,080 J	--
Chromium	137 J	--	230 J	--	--	--	218 J	--	119 J	--
Cobalt	9.5 J	--	22.4 J	--	--	--	17.8 J	--	13.7 J	--
Copper	21.1 J	--	33.8	--	--	--	31.1	--	24.2 J	--
Iron	33,600 J	2,460	58,200 J	--	1,320 J	948 J	24,400 J	189 J	21,400 J	--
Lead	26.2 J	1.6 J	42 J	3.5 J	3.5 J	2.2 J	72.5 J	1.3 J	59.2 J	1.7 J
Magnesium	2,740 J	717 J	6,630	741 J	1,000 J	1,020 J	7,100	776 J	4,310 J	391 J
Manganese	35.3	--	70	11.5 J	10.4 J	--	42	--	42.2	--
Mercury	0.14 J	--	0.35	--	--	--	0.49	--	0.33	--
Nickel	42.1	--	103	--	11.1 J	--	84.1	--	52.7	--
Potassium	2,240 J	--	3,690 J	--	1,030 J	1,280 J	5,900	--	3,890 J	--
Selenium	--	--	--	--	1.8 J	--	--	--	--	--
Sodium	7,400	6,350	5,300	3,670 J	5,680	6,310	7,120	5,280	6,890	5,290
Vanadium	130	--	243	--	6.9 J	--	162	4.2 J	118	5.3 J
Zinc	--	--	114	--	--	--	--	--	--	--
TPH (mg/ℓ)	--		--		--		--		--	

See notes at end of table.

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Table J-9 (Continued)
Background Groundwater Analytical Summary

Remedial Investigation
Operable Unit 2, NAS Cecil Field
Jacksonville, Florida

Locator:	CFBK6I	CFBK6IF	CFBK7S	CFBK7SF	CFBK8S	CFBK8SF	CFBK9I	CFBK9IF
Collect Date:	9-Sep-93	9-Sep-93	9-Sep-93	9-Sep-93	9-Sep-93	9-Sep-93	9-Sep-93	9-Sep-93
VOCs (μg/ℓ)								
Acetone	--		--		--		--	
Carbon disulfide	--		--		--		1	
Toluene	--		--		--		2	
Xylenes (total)	--		--		--		2	
SVOCs (μg/ℓ)								
Phenol	--		--		--		3 J	
Naphthalene	--		--		--		.5 J	
2-Methylnaphthalene	--		--		--		.5 J	
bis(2-Ethylhexyl)phthalate	2 J		--		.6 J		3 J	
Inorganic Compounds (μg/ℓ)								
Aluminum	475 J	--	173,000 J	461 J	493,000 J	5,810 J	2,700 J	--
Arsenic	--	--	4.5 J	2.2 J	--	2.1 J	27.3 J	21.3
Barium	--	--	121 J	17.4 J	241	--	37.1 J	37.1 J
Calcium	--	--	2,740 J	1,030 J	3,340 J	2,820 J	2,280 J	2,660 J
Chromium	--	--	160 J	--	489 J	12.2	--	--
Cobalt	--	--	10.7 J	--	48.6 J	--	59.9	56.3
Copper	--	--	55.1	--	129	--	--	--
Iron	264 J	--	13,200 J	3,010 J	34,400 J	1,100 J	7,830 J	6,110 J
Lead	1.7 J	1.5 J	150 J	1.8 J	115 J	4.4 J	4.5 J	1.3 J
Magnesium	514 J	522 J	3,290 J	1,290 J	8,290	695 J	774 J	735 J
Manganese	--	--	28.7	--	57.6	--	--	10.1 J
Mercury	--	--	1.1	0.12 J	2.3	--	--	--
Nickel	--	--	46.2	--	131	8.7 J	115	110
Potassium	673 J	583 J	1,710 J	158 J	5,450	--	1,110 J	1,130 J
Selenium	--	--	4.6 J	--	13 J	--	--	--
Sodium	4,410 J	4,520 J	9,990	8,290	3,090 J	2,510 J	3,000 J	3,240 J
Vanadium	--	--	167	7.1 J	226	5.2 J	6.9 J	--
Zinc	--	--	--	--	--	--	42.6	--
TPH (mg/ℓ)	0.5		--		--		--	

Notes: μg/ℓ = micrograms per liter.
-- = not detected.
J = estimated.
TPH = total petroleum hydrocarbons.
mg/ℓ = milligrams per liter.

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Table J-10
Descriptive Statistics for Groundwater, Upper Surficial Wells

Remedial Investigation
Operable Unit 2, Cecil Field
Jacksonville, Florida

Chem.name	Min.dl	Max.dl	Min.lv	Max.lv	ADL.Avg	Median	Num.Det/ Tot.Sample
Alkalinity, bicarbonate	5	5	8	14	12	6.5	3/6
Alkalinity, carbonate	5	5	N/A	N/A	N/A	U 5	0/6
Alkalinity, total	20	20	N/A	N/A	N/A	U 20	0/6
Aluminum	N/A	N/A	N/A	493,000	264,166.67	J 224,000	6/6
Antimony	15	15	N/A	N/A	N/A	UJ 15	0/6
Arsenic	2	8	3.4	7.1	5.025	J 4.8	4/6
Barium	N/A	N/A	81.4	241	156.57	J 151.5	6/6
Beryllium	1	3.7	N/A	N/A	N/A	U 2.05	0/6
Cadmium	5.5	12	N/A	N/A	N/A	U 6.6	0/6
Calcium	N/A	N/A	1,300	3,340	2,486.67	J 2,730	6/6
Chloride	N/A	N/A	3	59	15.5	7.5	6/6
Chromium	N/A	N/A	0.12	489	112.86	J 59.745	12/12
Cobalt	N/A	N/A	9.5	48.6	20.45	J 15.75	6/6
Copper	N/A	N/A	21.1	129	49.05	32.45	6/6
Cyanide	5	5	N/A	N/A	N/A	UJ 5	0/6
Diss. aluminum	207	207	233	5,810	1,621.4	J 517	5/6
Diss. antimony	15	15	N/A	N/A	N/A	U 15	0/6
Diss. arsenic	2	2	2.1	2.2	2.15	U 2	2/6
Diss. barium	5.8	15	17.4	17.4	17.4	U 9.65	1/6
Diss. beryllium	1	1	N/A	N/A	N/A	U 1	0/6
Diss. cadmium	4	4.1	N/A	N/A	N/A	U 4	0/6
Diss. calcium	447	692	942	2,820	1,490.5	J 986	4/6
Diss. chromium	8	8	12.2	12.2	12.2	U 8	1/6
Diss. cobalt	6	6	N/A	N/A	N/A	U 6	0/6
Diss. copper	2	5.3	N/A	N/A	N/A	U 2	0/6
Diss. iron	94.5	102	189	3,010	1,689.75	J 644.5	4/6
Diss. lead	N/A	N/A	1.3	4.4	2.38	J 1.75	6/6
Diss. magnesium	N/A	N/A	391	1,290	768.33	J 729	6/6
Diss. manganese	6	8.7	11.5	11.5	11.5	U 7.9	1/6
Diss. mercury	0.1	0.1	0.12	0.12	0.12	U 0.1	1/6
Diss. nickel	7	7	8.7	8.7	8.7	U 7	1/6
Diss. potassium	146	278	158	158	158	U 198.5	1/6
Diss. selenium	1	1	N/A	N/A	N/A	U 1	0/6
Diss. silver	4	6.9	N/A	N/A	N/A	U 4	0/6
Diss. sodium	N/A	N/A	2,510	8,290	5,231.67	5,285	6/6
Diss. thallium	1	1	N/A	N/A	N/A	U 1	0/6
Diss. vanadium	4	4	4.2	7.1	5.45	J 4.7	4/6
Diss. zinc	11.5	45.7	N/A	N/A	N/A	U 22.7	0/6
Hardness	5	62.5	8	220	79.33	U 30	3/6
Hexavalent chromium	0.02	0.02	N/A	N/A	N/A	UJ 0.02	0/6
Iron	N/A	N/A	13,200	58,200	30,866.67	J 29,000	6/6
Lead	N/A	N/A	26.2	150	77.48	J 65.85	6/6
Magnesium	N/A	N/A	2,740	8,290	5,393.33	5,470	6/6
Manganese	N/A	N/A	28.7	70	45.97	42.1	6/6
Mercury	N/A	N/A	0.14	2.3	0.785	0.42	6/6
Nickel	N/A	N/A	42.1	131	76.52	68.4	6/6
Potassium	N/A	N/A	1,710	5,900	3,813.33	J 3,790	6/6
Selenium	5	5	4.6	13	8.8	UJ 5	2/6
Silver	4	6.5	N/A	N/A	N/A	U 4	0/6
Sodium	N/A	N/A	3,090	9,990	6,631.67	7,005	6/6
Sulfate	5	5	11	52	31.5	U 5	2/6
Sulfide	1	1	1	1	1	U 1	1/6
Thallium	1	1	N/A	N/A	N/A	U 1	0/6
Total dissolved solids	N/A	N/A	61	940	254.17	119	6/6
Total organic carbon	N/A	N/A	31	160	95.5	95.5	2/2
Vanadium	N/A	N/A	118	243	174.33	164.5	6/6
Zinc	28.8	86.4	114	114	114	U 58.5	1/6

See notes on next page.

Table J-10 (Continued)
Descriptive Statistics for Groundwater, Upper Surficial Wells

Remedial Investigation
Operable Unit 2, NAS Cecil Field
Jacksonville, Florida

Notes: Chem.name = chemical name.
Min.dl = minimum reported detection level.
Max.dl = maximum reported detection level.
Min.lv = minimum level reported.
Max.lv is maximum level reported.
ADL.Avg = above detection level average value.
Median is median of all values above and below detection level.
Num.Det/Tot.Sample = number of detects / total number sampled.
Diss. = dissolved; results from filtered analysis.

Table J-11
Descriptive Statistics for Groundwater, Lower Surficial Wells

Remedial Investigation
Operable Unit 2, Cecil Field
Jacksonville, Florida

Chem.name	Min.dl	Max.dl	Min.lv	Max.lv	ADL.Avg	Median	Num.Det/ Tot.Sample
Alkalinity, bicarbonate	5	5	6	6	6	U 5	1/3
Alkalinity, carbonate	5	5	N/A	N/A	N/A	U 5	0/3
Alkalinity, total	20	20	N/A	N/A	N/A	U 20	0/3
Aluminum	N/A	N/A	475	2,700	1,661.67	J 1,810	3/3
Antimony	15	15	N/A	N/A	N/A	UJ 15	0/3
Arsenic	2	2	12.5	27.3	19.9	J 12.5	2/3
Barium	13	13	35	37.1	36.05	J 35	2/3
Beryllium	1	1	N/A	N/A	N/A	U 1	0/3
Cadmium	4	4	N/A	N/A	N/A	U 4	0/3
Calcium	595	595	1,720	2,280	2,000	J 1,720	2/3
Chloride	N/A	N/A	2	11	6.33	6	3/3
Chromium	0.02	8	N/A	N/A	N/A	UJ 4.01	0/6
Cobalt	6	6	59.9	59.9	59.9	U 6	1/3
Copper	4.6	6	N/A	N/A	N/A	U 5.8	0/3
Cyanide	5	5	N/A	N/A	N/A	UJ 5	0/3
Diss. aluminum	70.3	123	259	259	259	U 123	1/3
Diss. antimony	15	15	N/A	N/A	N/A	U 15	0/3
Diss. arsenic	2	2	9	21.3	15.15	J 9	2/3
Diss. barium	9.8	9.8	29.7	37.1	33.4	J 29.7	2/3
Diss. beryllium	1	1	N/A	N/A	N/A	U 1	0/3
Diss. cadmium	4	4	N/A	N/A	N/A	U 4	0/3
Diss. calcium	621	621	1,210	2,660	1,935	J 1,210	2/3
Diss. chromium	8	8	N/A	N/A	N/A	U 8	0/3
Diss. cobalt	6	6	56.3	56.3	56.3	U 6	1/3
Diss. copper	2	3.7	N/A	N/A	N/A	U 2	0/3
Diss. iron	78.6	78.6	948	6,110	3,529	J 948	2/3
Diss. lead	N/A	N/A	1.3	2.2	1.67	J 1.5	3/3
Diss. magnesium	N/A	N/A	522	1,020	759	J 735	3/3
Diss. manganese	4.9	8.7	10.1	10.1	10.1	U 8.7	1/3
Diss. mercury	0.1	0.1	N/A	N/A	N/A	U 0.1	0/3
Diss. nickel	7	7	110	110	110	U 7	1/3
Diss. potassium	N/A	N/A	583	1,280	997.67	J 1,130	3/3
Diss. selenium	1	1	N/A	N/A	N/A	U 1	0/3
Diss. silver	4	4	N/A	N/A	N/A	U 4	0/3
Diss. sodium	N/A	N/A	3,240	6,310	4,690	J 4,520	3/3
Diss. thallium	1	1	N/A	N/A	N/A	U 1	0/3
Diss. vanadium	4	4	N/A	N/A	N/A	U 4	0/3
Diss. zinc	38.5	72.7	N/A	N/A	N/A	U 60.5	0/3
Hardness	5	5	7	46	26.5	7	2/3
Hexavalent chromium	0.02	0.02	N/A	N/A	N/A	UJ 0.02	0/3
Iron	N/A	N/A	264	7,830	3,138	J 1,320	3/3
Lead	N/A	N/A	1.7	4.5	3.23	J 3.5	3/3
Magnesium	N/A	N/A	514	1,000	762.67	J 774	3/3
Manganese	3.7	8.4	10.4	10.4	10.4	U 8.4	1/3
Mercury	0.1	0.1	N/A	N/A	N/A	U 0.1	0/3
Nickel	7	7	11.1	115	63.05	J 11.1	2/3
Potassium	N/A	N/A	673	1,110	937.67	J 1,030	3/3
Selenium	1	1	1.8	1.8	1.8	U 1	1/3
Silver	4	7.4	N/A	N/A	N/A	U 4	0/3
Sodium	N/A	N/A	3,000	5,680	4,363.33	J 4,410	3/3
Sulfate	5	5	16	16	16	U 5	1/3
Sulfide	1	1	2	2	2	U 1	1/3
Thallium	1	1	N/A	N/A	N/A	U 1	0/3
Total dissolved solids	N/A	N/A	40	64	48	40	3/3
Total organic carbon	N/A	N/A	8	8	8	8	1/1
Vanadium	4	4	6.9	6.9	6.9	J 6.9	2/3
Zinc	29.2	45.2	42.6	42.6	42.6	42.6	1/3

See notes on next page.

Table J-11 (Continued)
Descriptive Statistics for Groundwater, Lower Surficial Wells

Remedial Investigation
Operable Unit 2, NAS Cecil Field
Jacksonville, Florida

Notes: Chem.name = chemical name.
Min.dl = minimum reported detection level.
Max.dl = maximum reported detection level.
Min.lv = minimum level reported.
Max.lv is maximum level reported.
ADL.Avg = above detection level average value.
Median is median of all values above and below detection level.
Num.Det/Tot.Sample = number of detects / total number sampled.
Diss. = dissolved; results from filtered analysis.

APPENDIX J-1

LITHOLOGIC BORING LOGS FOR BACKGROUND WELLS

TITLE: Nas Cecil Field, RI OUs 1,2,7		**LOG of WELL:** CEF-BK-90	**BORING NO.**
CLIENT: SOUTHNAVFACENCOM			**PROJECT NO:** 8500-10
CONTRACTOR: Hardin Huber Incorporated		**DATE STARTED:** 8-16-93	**COMPLTD:** 8-17-93
METHOD: Mobil Drill B-80 odex tools	**CASE SIZE:** 2"	**SCREEN INT.:** 50-60	**PROTECTION LEVEL:** D
TOC ELEV.: 80.09 FT.	**MONITOR INST.:** Microtip-PID	**TOT DPTH:** 63FT.	**DPTH TO ▽** 7 FT.
LOGGED BY: A. Workman	**WELL DEVELOPMENT DATE:** 8-17/23-93		**SITE:** Background

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					Continued from PAGE 3				
					60.0-63.0 *Clay (CH)*, 100%, dark olive gray, plastic, medium stiff, moist.		CH		
					End of boring.				
65									
70									
75									
80									

TITLE: Nas Cecil Field, RI OUs 1,2,7		**LOG of WELL:** CEF-BK-90	**BORING NO.**
CLIENT: SOUTHNAVFACENCOM			**PROJECT NO:** 8500-10
CONTRACTOR: Hardin Huber Incorporated		**DATE STARTED:** 8-16-93	**COMPLTD:** 8-17-93
METHOD: Mobil Drill B-80 odex tools	**CASE SIZE:** 2"	**SCREEN INT.:** 50-60	**PROTECTION LEVEL:** D
TOC ELEV.: 80.09 FT.	**MONITOR INST.:** Microtip-PID	**TOT DPTH:** 63FT.	**DPTH TO ∇** 7 FT.
LOGGED BY: A. Workman	**WELL DEVELOPMENT DATE:** 8-17/23-93		**SITE:** Background

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					Continued from PAGE 2				
					Sand continued, brown.		SW		
45									
50									
55					dark olive gray.				
	58-58 toc								
60	60-62 (3)						CH		

TITLE: Nas Cecil Field, RI OUs 1,2,7		**LOG of WELL:** CEF-BK-9D	**BORING NO.**
CLIENT: SOUTHNAVFACENCOM			**PROJECT NO:** 8500-10
CONTRACTOR: Hardin Huber Incorporated		**DATE STARTED:** 8-18-93	**COMPLTD:** 8-17-93
METHOD: Mobil Drill B-80 odex tools	**CASE SIZE:** 2"	**SCREEN INT.:** 50-60	**PROTECTION LEVEL:** D
TOC ELEV.: 80.09 FT.	**MONITOR INST.:** Microtip-PID	**TOT DPTH:** 63FT.	**DPTH TO ∇** 7 FT.
LOGGED BY: A. Workman	**WELL DEVELOPMENT DATE:** 8-17/23-93		**SITE:** Background

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					Continued from PAGE 1				
							SW		
					Sand continued.				
25									
30									
35					olive gray.				
40									

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TITLE: Nas Cecil Field, RI OUs 1,2,7		**LOG of WELL:** CEF-BK-9D	**BORING NO.**
CLIENT: SOUTHNAVFACENCOM			**PROJECT NO:** 8500-10
CONTRACTOR: Hardin Huber Incorporated		**DATE STARTED:** 8-16-93	**COMPLTD:** 8-17-93
METHOD: Mobil Drill B-80 odex tools	**CASE SIZE:** 2"	**SCREEN INT.:** 50-60	**PROTECTION LEVEL:** D
TOC ELEV.: 80.09 FT.	**MONITOR INST.:** Microtip-PID	**TOT DPTH:** 63FT.	**DPTH TO ▽** 7 FT.
LOGGED BY: A. Workman	**WELL DEVELOPMENT DATE:** 8-17/23-93		**SITE:** Background

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
	0-2 soil ms,msd		100%	41.4	0-5.0 *Sand (SW)*, 100%, qtz, light gray to gray to dark red, very fine to fine grained, sub-rounded to sub-angular, loose, dry to moist, well sorted.		SW	3-4-13-8	
			100%	11.1	red to yellow red to very pale brown.			8-9-15-8	
				0				14-13-18-22	
5	6-8 soil		100%	n/a	5.0-8.0 *Clayey Sand (SC)*, 100%, qtz, white to pale brown to yellowish brown, very fine to fine grained, sub-rounded to sub-angular, medium dense, non plastic.		SC	9-12-18-11	
			100%		Groundwater encountered, brown to dark brown.				
					8.0-60.0 *Sand (SW)*, 100%, qtz, brown to dark brown, very fine to fine grained, sub-rounded to sub-angular, well sorted, loose, saturated.		SW		
10									
15									
20									

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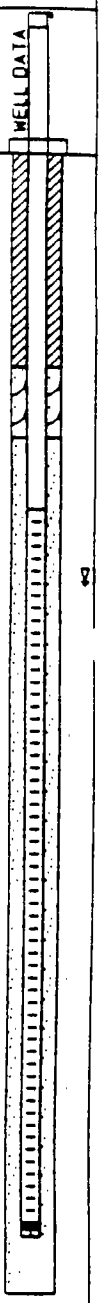
TITLE: Nas Cecil Field, RI OUs 1,2,7	**LOG of WELL:** CEF-BK-8S	**BORING NO.**
CLIENT: SOUTHNAVFACENCOM		**PROJECT NO:** 8500-10
CONTRACTOR: Hardin Huber Incorporated	**DATE STARTED:** 8-9-93	**COMPLTD:** 8-9-93
METHOD: Mobil Drill B-53 w/4.25"ID HSA	**CASE SIZE:** 2" / **SCREEN INT.:** 5-15	**PROTECTION LEVEL:** D
TOC ELEV.: 80.19 FT.	**MONITOR INST.:** Microtip-PID / **TOT DPTH:** 16FT.	**DPTH TO ▽** 8 FT.
LOGGED BY: R. White	**WELL DEVELOPMENT DATE:** 8-10/23-93	**SITE:** Background

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN
			100%	0	0-4.5 *Sand (SW)*, 100%, light gray to gray to dark red, very fine to fine grained, sub-rounded to subangular, well sorted.		SW	2-2-6-10
	2-4 soil		100%	0	red to yellow red to very pale brown.			6-9-13-16
			80%	0	very damp.			5-7-11-15
5					4.5-7.5 *Clayey Sand (SC)*, 100%, white to pale brown to yellowish brown, very fine to fine grained, sub-rounded to sub-angular, well sorted.		SC	
	6-8 soil 6-8 (v)		100%	0	Groundwater encountered, brown to dark brown.			9-9-10-14
	8-10 (s)		90%	0	7.5-16.0 *Sand (SW)*, 100%, brown to dark brown, very fine to fine grained, sub-rounded to sub-angular, well sorted.		SW	8-8-10-10
10			90%	n/a				3-3-2-5
			85%	n/a				5-5-8-8
15			80%	n/a				5-5-7-9
					End of boring.			
20								

WELL DATA



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TITLE: Nas Cecil Field, RI OUs 1,2,7	**LOG of WELL:** CEF-BK-7S	**BORING NO.**
CLIENT: SOUTHNAVFACENCOM		**PROJECT NO:** 8500-10
CONTRACTOR: Hardin Huber Incorporated	**DATE STARTED:** 8-9-93	**COMPLTD:** 8-10-93
METHOD: Mobil Drill B-53 w/4.25"ID HSA	**CASE SIZE:** 2" / **SCREEN INT.:** 5-15	**PROTECTION LEVEL:** D
TOC ELEV.: 80.28 FT.	**MONITOR INST.:** Microtip-PID / **TOT DPTH:** 16FT.	**DPTH TO ▽** 6 FT.
LOGGED BY: R. White	**WELL DEVELOPMENT DATE:** 8-10/23-93	**SITE:** Background

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN
	0-2 soil dup		100%	0	0-16.0 *Sand (SM)*, 100%, black to very dark gray to gray, very fine to fine grained, well sorted, sub-rounded to sub-angular.		SM	6-7-8-7
			100%	0				7-8-12-15
	4-6 soil 4-6 (v)		95%	0	wet @3.8'.			7-8-9-11
5	6-8 (s)		90%	0	black, wet to saturated.			7-5-5-4
			85%	0	vbery silty.			12-15-18-23
10			80%	0	very dark brown.			18-25-33-37
			75%	0				7-12-21-25
15			80%	0				9-9-17-21
					End of boring.			
20								

WELL DATA

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: Nas Cecil Field, RI OUs 1,2,7		**LOG of WELL:** CEF-BK-6D	**BORING NO.**
CLIENT: SOUTHNAVFACENCOM			**PROJECT NO:** 8500-10
CONTRACTOR: Hardin Huber Incorporated		**DATE STARTED:** 8-10-93	**COMPLTD:** 8-11-93
METHOD: Mobil Drill B-80 odex tools	**CASE SIZE:** 2"	**SCREEN INT.:** 37-47	**PROTECTION LEVEL:** D
TOC ELEV.: 77.15 FT.	**MONITOR INST.:** Microtip-PID	**TOT DPTH:** 48.5FT.	**DPTH TO ∇** 7 FT.
LOGGED BY: A. Workman	**WELL DEVELOPMENT DATE:** 8-16/22/24/25/30/31-93		**SITE:** Background

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					Continued from PAGE 2				
					Sand continued.		SW		
45									
					48.0-48.5 *Clay (CH)*, 100%, very dark gray, plastic, medium stiff, moist.		CH		
					End of boring.				
50									
55									
60									

TITLE: Nas Cecil Field, RI OUs 1,2,7		**LOG of WELL:** CEF-BK-6D	**BORING NO.**
CLIENT: SOUTHNAVFACENCOM			**PROJECT NO:** 8500-10
CONTRACTOR: Hardin Huber Incorporated		**DATE STARTED:** 8-10-93	**COMPLTD:** 8-11-93
METHOD: Mobil Drill B-80 odex tools	**CASE SIZE:** 2"	**SCREEN INT.:** 37-47	**PROTECTION LEVEL:** D
TOC ELEV.: 77.15 FT.	**MONITOR INST.:** Microtip-PID	**TOT DPTH:** 48.5FT.	**DPTH TO ∇** 7 FT.
LOGGED BY: A. Workman	**WELL DEVELOPMENT DATE:** 8-16/22/24/25/30/31-93		**SITE:** Background

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					Continued from PAGE 1		SW		
					Sand continued.				
					brown, some clay content.				
25					grayish brown.				
30					pale brown.				
35									
40									

TITLE: Nas Cecil Field, RI OUs 1,2,7		**LOG of WELL:** CEF-BK-6D	**BORING NO.**
CLIENT: SOUTHNAVFACENCOM			**PROJECT NO:** 8500-10
CONTRACTOR: Hardin Huber Incorporated		**DATE STARTED:** 8-10-93	**COMPLTD:** 8-11-93
METHOD: Mobil Drill B-80 odex tools	**CASE SIZE:** 2"	**SCREEN INT.:** 37-47	**PROTECTION LEVEL:** D
TOC ELEV.: 77.15 FT.	**MONITOR INST.:** Microtip-PID	**TOT DPTH:** 48.5FT.	**DPTH TO ∇** 7 FT.
LOGGED BY: A. Workman	**WELL DEVELOPMENT DATE:** 8-16/22/24/25/30/31-93		**SITE:** Background

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN
	0-2 soil		100%	0	0-5.5 *Sand (SW)*, 100%, very pale brown, qtz, very fine to fine grained, well sorted, loose, dry, rounded to sub-angular.		SW	3-4-4-6
			100%	0	white to light brown.			5-7-10-12
			100%	0	white to dark gray.			28-10-12-9
5			100%		5.5-10 *Clayey Sand (SC)*, 100%, brownish yellow to yellow, qtz, very fine to fine grained, slightly plastic, medium dense, wet to saturated.		SC	
	6-8 soil		100%	0	Groundwater encountered.			3-5-7-9
					Begin odex drilling.			
10					10.0-48.0 *Sand (SW)*, 100%, qtz, brown, very fine to fine grained, well sorted, loose, saturated, rounded to sub-angular.		SW	
15					very pale brown.			
20								

WELL DATA

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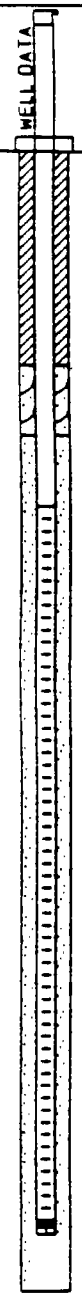
TITLE: Nas Cecil Field, RI OUs 1,2,7	**LOG of WELL:** CEF-BK-5S	**BORING NO.**
CLIENT: SOUTHNAVFACENCOM		**PROJECT NO:** 8500-10
CONTRACTOR: Hardin Huber Incorporated	**DATE STARTED:** 8-8-93	**COMPLTD:** 8-8-93
METHOD: Mobil Drill B-53 w/4.25"ID HSA	**CASE SIZE:** 2" **SCREEN INT.:** 5-15	**PROTECTION LEVEL:** D
TOC ELEV.: 78.98 FT.	**MONITOR INST.:** Microtip-PID **TOT DPTH:** 16FT.	**DPTH TO ∇** 6 FT.
LOGGED BY: R. White	**WELL DEVELOPMENT DATE:** 8-8/22-93	**SITE:** Background

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN
			100%	0	0-5.5 *Sand (SW)*, 100%, dark gray to dark grayish brown, very fine to fine grained, well sorted, rounded to sub-angular.		SW	2-2-3-5
	2-4 soil		100%	0				3-1-17-14
			95%	0	dark gray to white, white to brownish yellow.			3-7-14-7
5	6-8 soil		95%	0	5.5-10.0 *Clayey Sand (SC)*, 100%, brownish yellow to yellowish red, very fine to fine grained, well sorted, sub-rounded to sub-angular. Groundwater encountered.		SC	4-7-9-9
	8-10 (s)		85%	n/a	pinkish gray to light gray.			2-3-4-3
10			90%	n/a	10.0-16.0 *Sand (SW)*, 100%, light gray, very fine grained, sub-rounded to sub-angular, well sorted.		SW	3-4-3-5
			90%	n/a				woh-12-3-4
15			90%	n/a				woh-4-4-5
					End of boring.			
20								

WELL DATA



METHOD: Mobil Drill B-53 w/4.25"ID HSA	CASE SIZE: 2"	SCREEN INT.: 5-15	PROTECTION LEVEL: D
TOC ELEV.: 78.17 FT.	MONITOR INST.: Microtip-PID	TOT DPTH: 16FT.	DPTH TO ▽ 8 FT.
LOGGED BY: R. White	WELL DEVELOPMENT DATE: 8-8/22-93		SITE: Background

DEPTH FT	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN
			100%	0	0-16.0 *Sand (SM)*, 100%, very dark gray to dark brown to light yellowish brown, very fine to fine grained, sub-rounded to sub-angular, well sorted.		SM	2-3-3-5
	2-4 soil		100%	0	pale yellow.			3-7-8-5
	4-6 soil		100%	0	wet @ 4', saturated @ 5'.			2-1-1-1
5				n/a	Groundwater encountered.			woh
				n/a				1-1-2-1
10				n/a	light gray to pale yellow.			1-2-2-2
				n/a				1-1-2-1
				n/a				1-1-2-1
15					End of boring.			
20								

WELL DATA

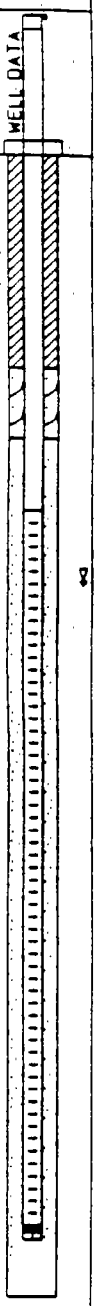


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: Nas Cecil Field, RI OUs 1,2,7		**LOG of WELL:** CEF-BK-3D	**BORING NO.**
CLIENT: SOUTHNAVFACENCOM			**PROJECT NO:** 8500-10
CONTRACTOR: Hardin Huber Incorporated		**DATE STARTED:** 8-9-93	**COMPLTD:** 8-10-93
METHOD: Mobil Drill B-80 odex tools	**CASE SIZE:** 2"	**SCREEN INT.:** 37-47	**PROTECTION LEVEL:** D
TOC ELEV.: 84.08 FT.	**MONITOR INST.:** Microtip-PID	**TOT DPTH:** 48FT.	**DPTH TO ∇** 7 FT.
LOGGED BY: A. Workman	**WELL DEVELOPMENT DATE:** 8-10/18/19/22-93		**SITE:** Background

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					Continued from PAGE 2				
					Clayey Sand continued.		SC		
					olive gray to dark olive gray.				
45									
					48.0 *Clay (CH)*, 100%, dark olive gray, plastic, medium soft, moist.		CH		
50					End of boring.				
55									
60									

TITLE: Nas Cecil Field, RI OUs 1,2,7		**LOG of WELL:** CEF-BK-3D	**BORING NO.**
CLIENT: SOUTHNAVFACENCOM			**PROJECT NO:** 8500-10
CONTRACTOR: Hardin Huber Incorporated		**DATE STARTED:** 8-9-93	**COMPLTD:** 8-10-93
METHOD: Mobil Drill B-80 odex tools	**CASE SIZE:** 2"	**SCREEN INT.:** 37-47	**PROTECTION LEVEL:** D
TOC ELEV.: 84.06 FT.	**MONITOR INST.:** Microtip-PID	**TOT DPTH:** 48FT.	**DPTH TO ∇** 7 FT.
LOGGED BY: A. Workman	**WELL DEVELOPMENT DATE:** 8-10/18/19/22-93		**SITE:** Background

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					Continued from PAGE 1				
					Clayey Sand continued.		SC		
25									
30					pale brown.				
35									
40									

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: Nas Cecil Field, RI OUs 1,2,7		**LOG of WELL:** CEF-BK-3D	**BORING NO.**
CLIENT: SOUTHNAVFACENCOM			**PROJECT NO:** 8500-10
CONTRACTOR: Hardin Huber Incorporated		**DATE STARTED:** 8-9-93	**COMPLTD:** 8-10-93
METHOD: Mobil Drill B-80 odex tools	**CASE SIZE:** 2"	**SCREEN INT.:** 37-47	**PROTECTION LEVEL:** D
TOC ELEV.: 84.06 FT.	**MONITOR INST.:** Microtip-PID	**TOT DPTH:** 48FT.	**DPTH TO ∇** 7 FT.
LOGGED BY: A. Workman	**WELL DEVELOPMENT DATE:** 8-10/18/19/22-93		**SITE:** Background

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN
			100%	0	0-5.0 *Silty Sand (SM)*, 100%, gray to dark brown, qtz, very fine to fine grained, sub-angular to sub-rounded, well sorted, dry, loose.		SM	4-4-5-6
	2-4 soil		100%	0	pale yellow, moist.			5-6-10-8
			100%	0				5-4-5-9
5			100%		5.0-48.0 *Clayey Sand (SC)*, 100%, brownish yellow to gray, qtz, very fine to fine grained, well sorted, slightly plastic, moist, compact.		SC	
	6-8 soil		100%	0				10-18-26-19
					Groundwater encountered. Less clay @ 7.5-8.0, yellowish red.			
					begin drilling odex.			
10								
15					pale brown.			
20								

WELL DATA

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: Nas Cecil Field, RI OUs 1,2,7	**LOG of WELL:** CEF-BK-2S	**BORING NO.**
CLIENT: SOUTHNAVFACENCOM		**PROJECT NO:** 8500-10
CONTRACTOR: Hardin Huber Incorporated	**DATE STARTED:** 8-5-93	**COMPLTD:** 8-6-93
METHOD: Mobil Drill B-53 w/4.25"ID HSA	**CASE SIZE:** 2" / **SCREEN INT.:** 5-15	**PROTECTION LEVEL:** D
TOC ELEV.: 84.09 FT.	**MONITOR INST.:** Microtip-PID / **TOT DPTH:** 16FT.	**DPTH TO ▽** 5.5 FT.
LOGGED BY: R. White	**WELL DEVELOPMENT DATE:** 8-6/8-18-93	**SITE:** Background

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN
			100%	0	0-4.0 *Sand (SM)*, 100%, grayish brown to very dark grayish brown, very fine to fine grained, sub-rounded to sub-angular, well sorted, trace phosphate.		SM	3-2-3-3
	2-4 soil		95%	0	very dark grayish brown to pale yellow.			3-4-4-6
5			90%	0	4.0-8.0 *Clayey Sand (SC)*, 100%, yellowish red to light grayish brown, very fine to fine grained, trace phosphate, well sorted.		SC	4-5-6-14
	6-8 soil 6-8 (v)		95%	0	Groundwater encountered.			8-16-17-15
	8-10 (s)		100%	0	8.0-16.0 *Sand (SM)*, 100%, light grayish brown to reddish brown, very fine to fine grained, sub-angular to sub-rounded.		SM	3-4-8-13
10			80%	0				3-3-4-2
			90%	0				3-3-5-3
15			n/a	n/a				2-3-3-5
					End of boring.			
20								

WELL DATA

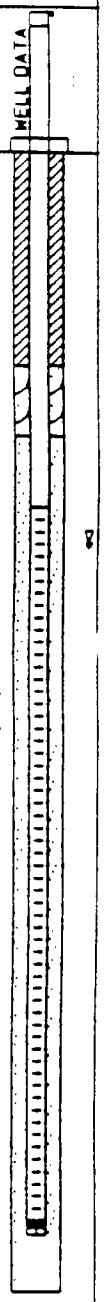


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: Nas Cecil Field, RI OUs 1,2,7	**LOG of WELL:** CEF-BK-1S	**BORING NO.**
CLIENT: SOUTHDIVNAVFACENCOM		**PROJECT NO:** 8500-10
CONTRACTOR: Hardin Huber Incorporated	**DATE STARTED:** 8-5-93	**COMPLTD:** 8-6-93
METHOD: Mobil Drill B-53 w/4.25"ID HSA	**CASE SIZE:** 2" / **SCREEN INT.:** 5-15	**PROTECTION LEVEL:** D
TOC ELEV.: 66.77 FT.	**MONITOR INST.:** Microtip-PID / **TOT DPTH:** 16FT.	**DPTH TO ▽** 6 FT.
LOGGED BY: R. White	**WELL DEVELOPMENT DATE:** 8-6,8-19-93	**SITE:** Background

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN
	0-2 soil		100%	12	0-3.5 *Sand (SW)*, 100%, fine grained, reddish gray to reddish brown.		SW	5-7-12-20
			100%	11.3				10-19-30-33
			100%	0.5	3.5-16.0 *Clayey Silty Sand (SM)*, 100%, reddish yellow to pinkish gray.		SM	11-17-27-23
5			100%					
	6-8 soil 6-8 (v)		90%	6.5	Groundwater encountered.			9-9-11-13
	8-10 (s)		85%	0				6-6-5-6
10			90%	0				140-12-3-3
			75%	0				3-5-6-6
			75%	0				7-7-9-5
15					End of boring.			
20								

WELL DATA

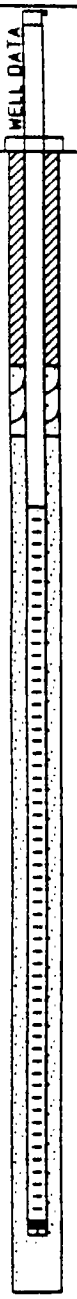


 ABB ENVIRONMENTAL SERVICES, INC.

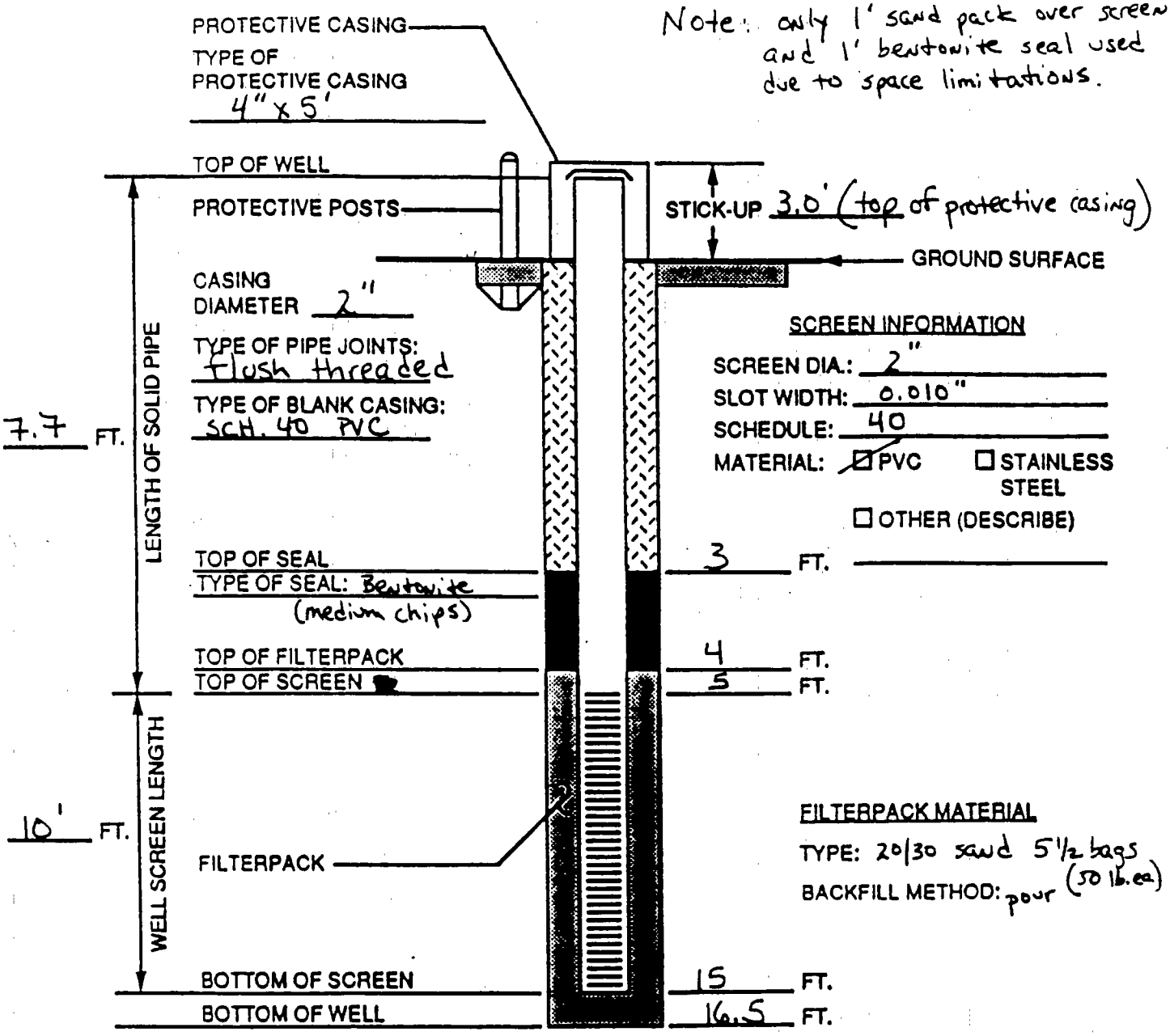
APPENDIX J-2

BACKGROUND MONITORING WELL CONSTRUCTION DIAGRAMS

ELEVATION GROUNDWATER			PROJECT: Cecil Field 8500-27
DATE INSTALLED: 8/6/93	STARTED: 8/5/93	COMPLETED: 8/6/93	LOCATION (Coordinates or Station): Background
ELEVATION TOP OF HOLE			SIGNATURE OF INSPECTOR: Aaron Cohen AJC
TOTAL DEPTH OF HOLE: 16.0'			HOLE NO. (As shown on drawing title and file number): CEF-BB-1S CEF-BK-1S

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM

Note: only 1' sand pack over screen and 1' bentonite seal used due to space limitations.



SCREEN INFORMATION

SCREEN DIA.: 2"
SLOT WIDTH: 0.010"
SCHEDULE: 40
MATERIAL: ☑ PVC ☐ STAINLESS STEEL ☐ OTHER (DESCRIBE)

FILTERPACK MATERIAL

TYPE: 20/30 sand 5½ bags (50 lb. ea)
BACKFILL METHOD: pour

WELL DEVELOPMENT

METHOD: Centrifugal Pump
TIME SPENT DEVELOPMENT: 25 min / 5 hrs 20 min
VOLUME OF WATER REMOVED: ~75 gal / 150 gal
VOLUME OF WATER ADDED: None
DESCRIPTION OF PREDEVELOPMENT WATER: silty, cloudy
DESCRIPTION OF POST DEVELOPMENT WATER: clear, sediment free

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

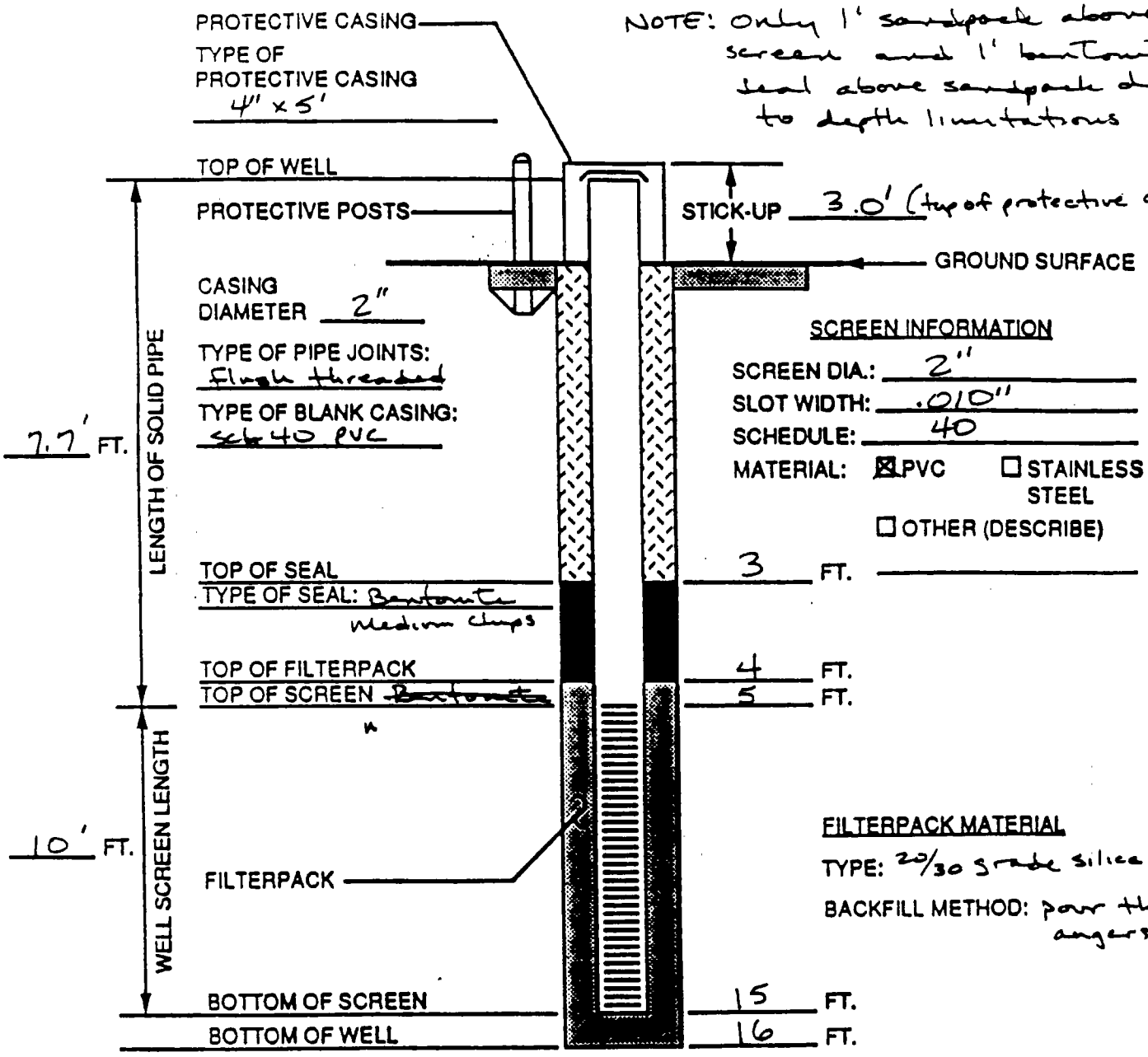
DATE/TIME/LEVEL			
8/6/93	0800	3.3' bls	
8/18/93	1350	6.1' bls	
Temp 85.8°		pH 5.14	
Cond. 32.5		NTU 9.87	

DEPTH FROM TOP CASING AFTER DEVELOPMENT: 8/18/93 1700 hrs. 6.4' bls

ELEVATION GROUNDWATER —			PROJECT Cecil Field 8500-27
DATE INSTALLED 8/6/93	STARTED 8/6/93	COMPLETED 8/7/93	LOCATION (Coordinates or Station) OU-1 Background
ELEVATION TOP OF HOLE —			SIGNATURE OF INSPECTOR [signature]
TOTAL DEPTH OF HOLE 16.0'			HOLE NO. (As shown on drawing title and file number) CEF-BB-25 CEF-BK-~~25~~ 20

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM

NOTE: Only 1' sandpack above screen and 1' bentonite seal above sandpack due to depth limitations



WELL DEVELOPMENT

METHOD: Centrifugal Pump

TIME SPENT DEVELOPMENT: 30 min / 2 hrs 20 min

VOLUME OF WATER REMOVED: ~95 gal / 725 gal

VOLUME OF WATER ADDED: None

DESCRIPTION OF PREDEVELOPMENT WATER: cloudy, silty light pale brown

DESCRIPTION OF POST DEVELOPMENT WATER: clear sediment free

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 8/18/93 1550 hrs 7.48' bls

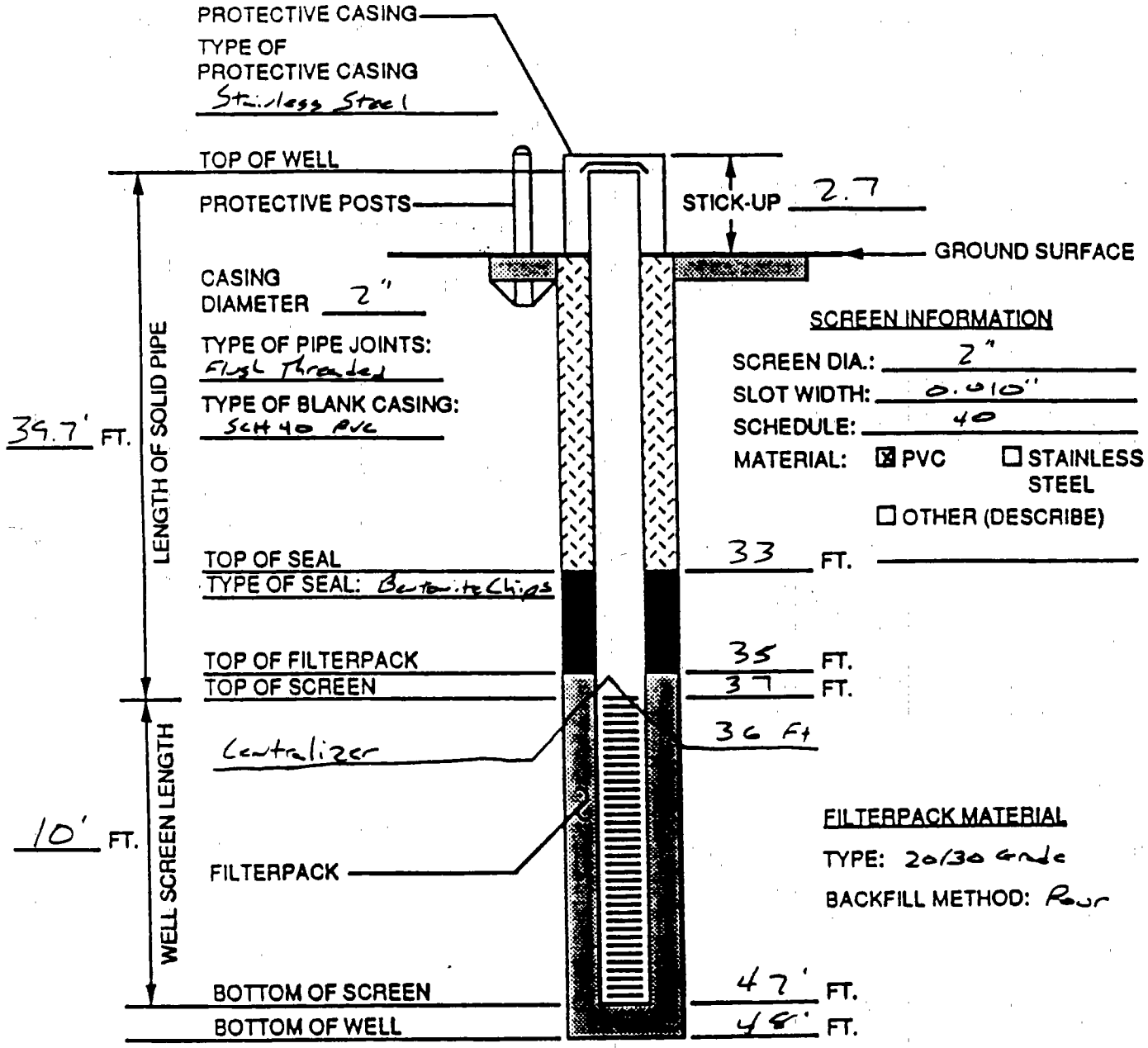
TEMP. 81.3°F Ph 5.12

COND. 33.7 NTU 6.67

DEPTH FROM TOP CASING AFTER DEVELOPMENT: 8/18/93 1700 hrs 7.52' bls

ATION GROUNDWATER —			PROJECT R1 OUS 1,2,7
E INSTALLED 8-9-93	STARTED 8-9-93	COMPLETED 8-10-93	LOCATION (Coordinates or Station) Background
N TOP OF HOLE —			SIGNATURE OF INSPECTOR [illegible] AR
AL DEPTH OF HOLE 48'			HOLE NO. (As shown on drawing title and file number) CEF-BB-30 CEF-BK-3D

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: Centrifugal Pump

TIME SPENT DEVELOPMENT: 40 min / 19 HRS.

VOLUME OF WATER REMOVED: 600 Gal / 2550 Gal

VOLUME OF WATER ADDED: —

DESCRIPTION OF PREDEVELOPMENT WATER: Very Cloudy

DESCRIPTION OF POST DEVELOPMENT WATER: Very Cloudy

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 8/10/93 0845 5.2' bls.

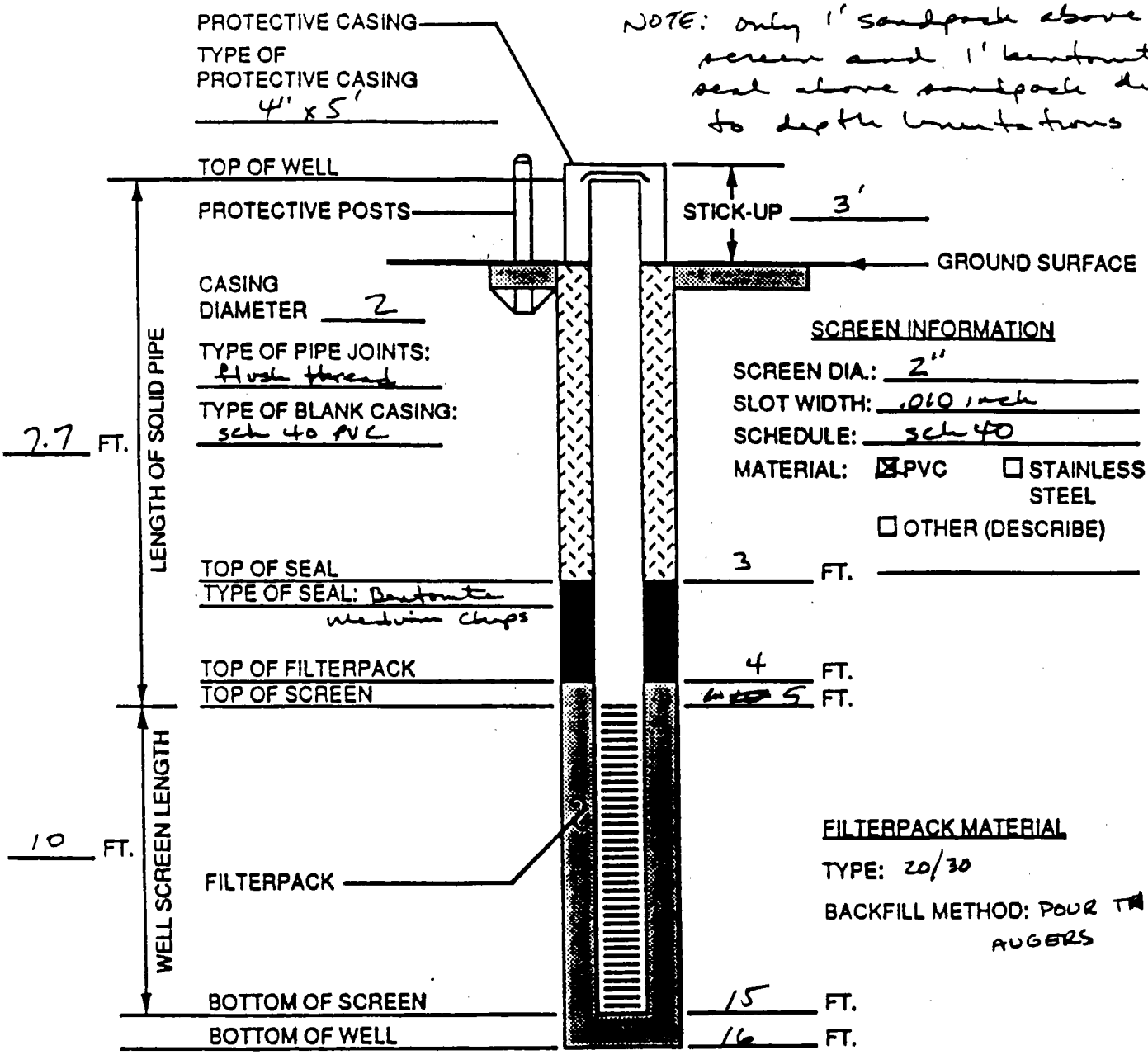
8/22/93 1630 TEMP. 78.1 F Ph 5.10 COND 64.5 NTU 8.22

DEPTH FROM TOP CASING AFTER DEVELOPMENT: —

ELEVATION GROUNDWATER			PROJECT: Cecil Field 8500-27
DATE INSTALLED: 8/7/93	STARTED: 8/7/93	COMPLETED: 8/8/93	LOCATION (Coordinates or Station): OU-1 Background
ELEVATION TOP OF HOLE:			SIGNATURE OF INSPECTOR: Tom Wolter
TOTAL DEPTH OF HOLE: 16.0'			HOLE NO. (As shown on drawing title and file number): CEF-BB-45 CEF-BK-45

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM

NOTE: only 1' sandpack above screen and 1' bentonite seal above sandpack due to depth limitations



WELL DEVELOPMENT

METHOD: Centrifugal Pump

TIME SPENT DEVELOPMENT: 25 min | 4 HRS.

VOLUME OF WATER REMOVED: 90 gal | 530 GAL.

VOLUME OF WATER ADDED: NONE

DESCRIPTION OF PREDEVELOPMENT WATER: turbid

DESCRIPTION OF POST DEVELOPMENT WATER: clear, non-turbid

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 8/8/93 1115 hrs 5.8' bls

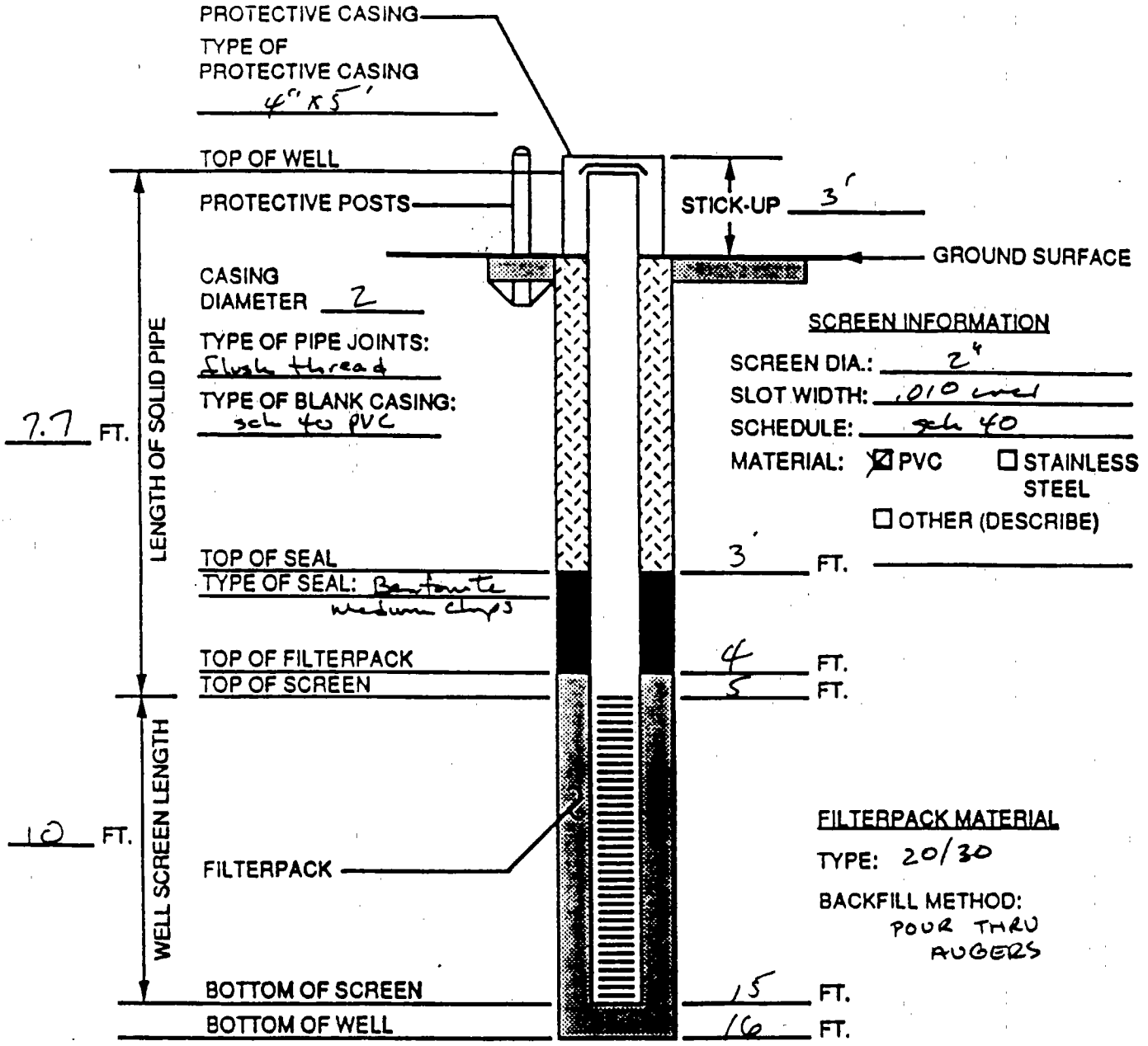
Temp 83.0° pH 5.22

Cond 39.5 NTU .84

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

EVATION GROUNDWATER			PROJECT: Cecil Field 8500-27
TE INSTALLED: 8/7/93	STARTED: 8/7/93	COMPLETED: 8/8/93	LOCATION (Coordinates or Station): OU-1 Background
ON TOP OF HOLE			SIGNATURE OF INSPECTOR: [signature] ATL
AL DEPTH OF HOLE: 16.0'			HOLE NO. (As shown on drawing title and file number): CEF-BB-55 (LP) CEF-BK-55

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: Centrifugal Pump

TIME SPENT DEVELOPMENT: 25 min / 3.5 HRS

VOLUME OF WATER REMOVED: 55 gal / 145 GAL.

VOLUME OF WATER ADDED: NONE

DESCRIPTION OF PREDEVELOPMENT WATER: turbid

DESCRIPTION OF POST DEVELOPMENT WATER: Clear, non-turbid

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 8/8/93 0915 hrs 5.6' bls.

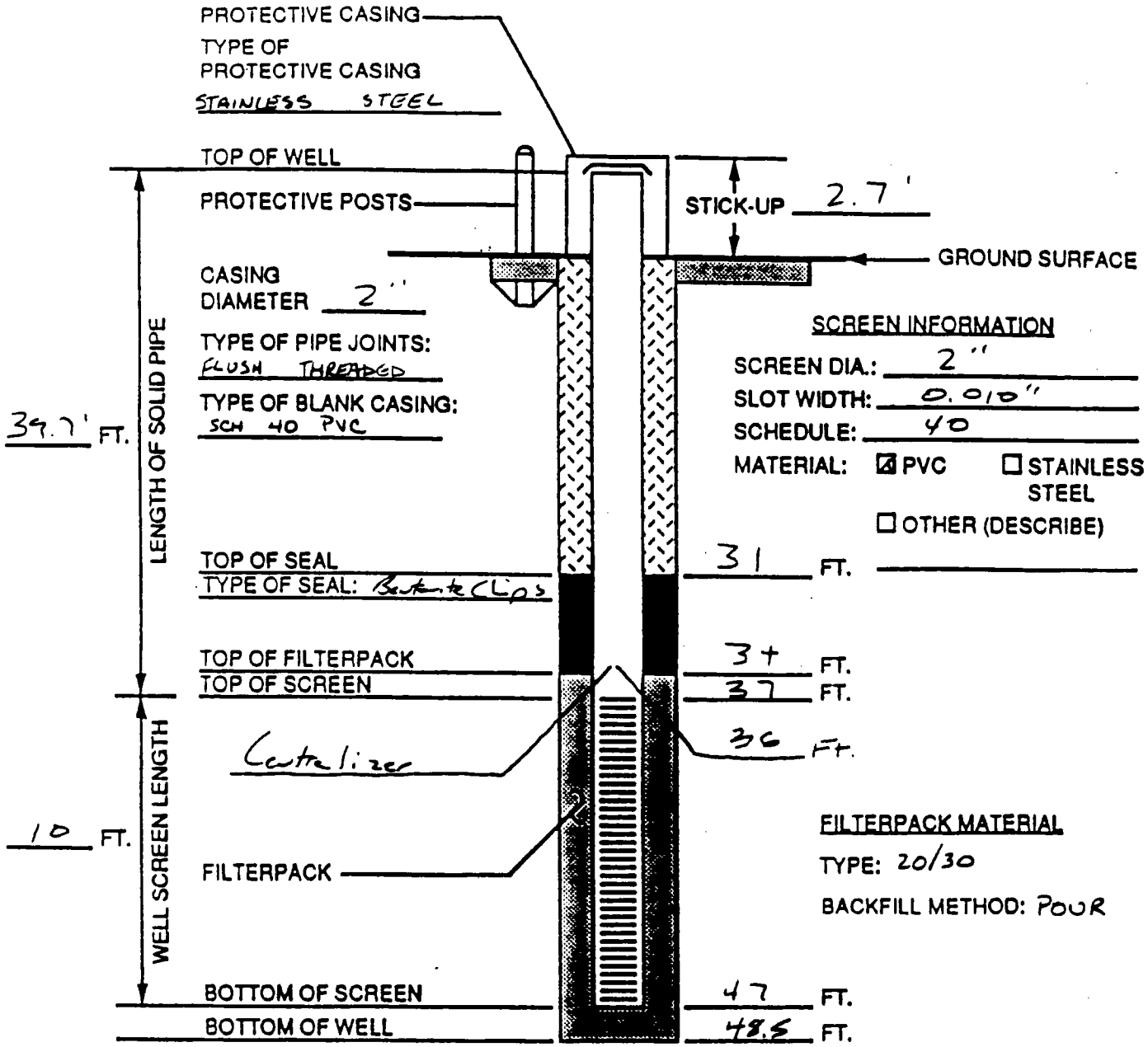
Temp 84.3 pH 5.03

Cond. 46.6 N.T.U. 3.49

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER			PROJECT: Cecil Field RI OUs 1, 2, 7
DATE INSTALLED: 8-10-93	STARTED: 8-10-93	COMPLETED: 8-11-93	LOCATION (Coordinates or Station): Background
ELEVATION TOP OF HOLE			SIGNATURE OF INSPECTOR: C. [illegible] ATL
TOTAL DEPTH OF HOLE: 48.5'			HOLE NO. (As shown on drawing title and file number): CEF-BB-6D CEF-BK-6D

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



SCREEN INFORMATION

SCREEN DIA.: 2"

SLOT WIDTH: 0.010"

SCHEDULE: 40

MATERIAL: ☒ PVC ☐ STAINLESS STEEL ☐ OTHER (DESCRIBE)

FILTERPACK MATERIAL

TYPE: 20/30

BACKFILL METHOD: POUR

WELL DEVELOPMENT

METHOD: Centrifugal Pump

TIME SPENT DEVELOPMENT: 55 min

VOLUME OF WATER REMOVED: 550 gal

VOLUME OF WATER ADDED: 50 gal

DESCRIPTION OF PREDEVELOPMENT WATER: Very Cloudy

DESCRIPTION OF POST DEVELOPMENT WATER: Slightly Cloudy

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 8/11/93 0815

6.1' bls

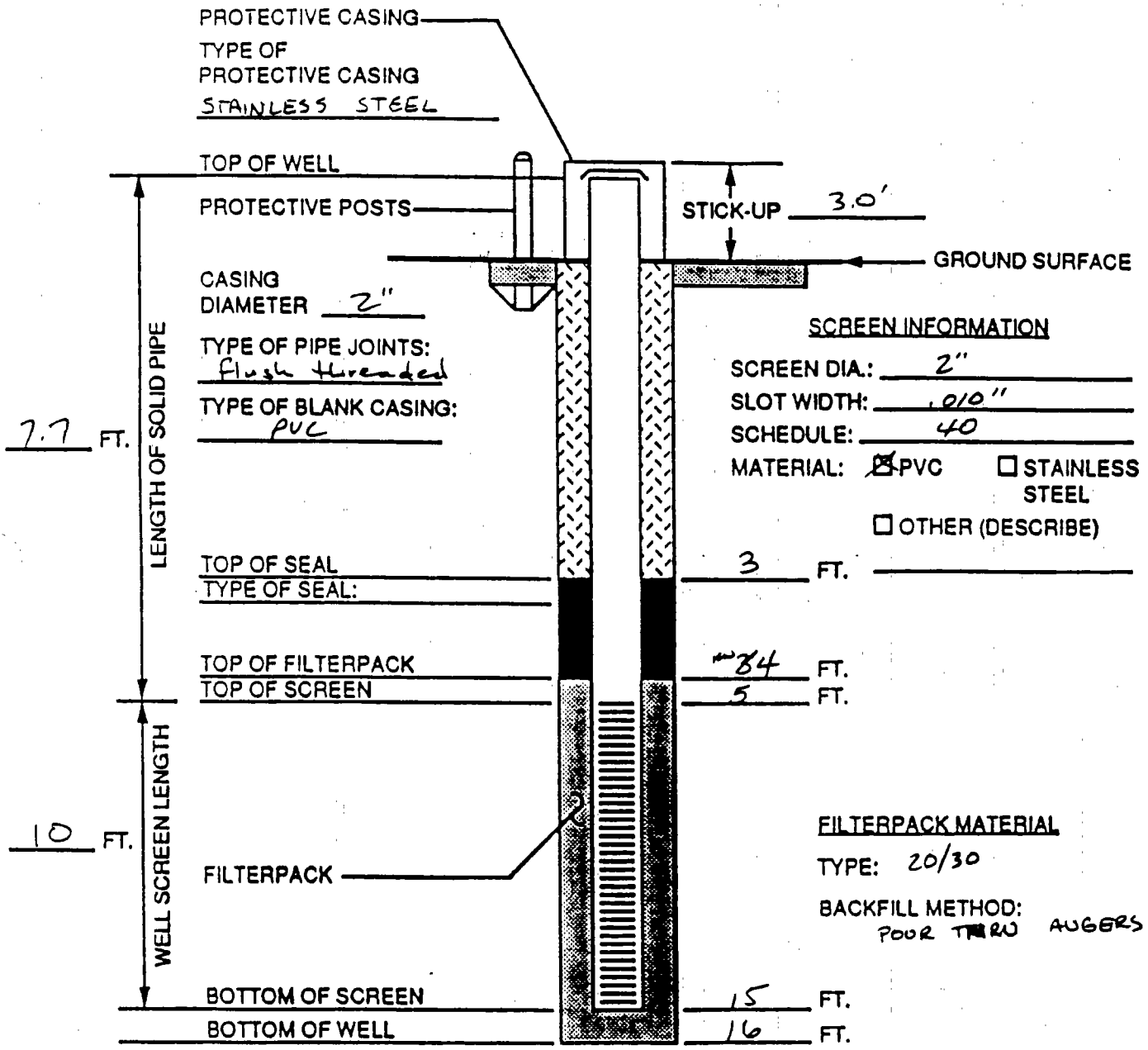
Temp 71.1°F PH 5.3

Cond 34.1 NTU 4.1

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER			PROJECT: Carol Field
DATE INSTALLED: 8/9/93	STARTED: 8/9/93	COMPLETED: 8/9/93	LOCATION (Coordinates or Station): ~~CEF-BB-7S~~ Background
ELEVATION TOP OF HOLE:			SIGNATURE OF INSPECTOR: [signature]
DEPTH OF HOLE: 16'			HOLE NO. (As shown on drawing title and file number): CEF-BB-7S CEF-BK-7S

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: Centrifugal Pump

TIME SPENT DEVELOPMENT: 60 min / 6 HRS.

VOLUME OF WATER REMOVED: 27 gal / 640 GAL.

VOLUME OF WATER ADDED: —

DESCRIPTION OF PREDEVELOPMENT WATER: dark brown cloudy sediment

DESCRIPTION OF POST DEVELOPMENT WATER: brown some sediment

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 8/10/93 0940 hrs 5.5' bls

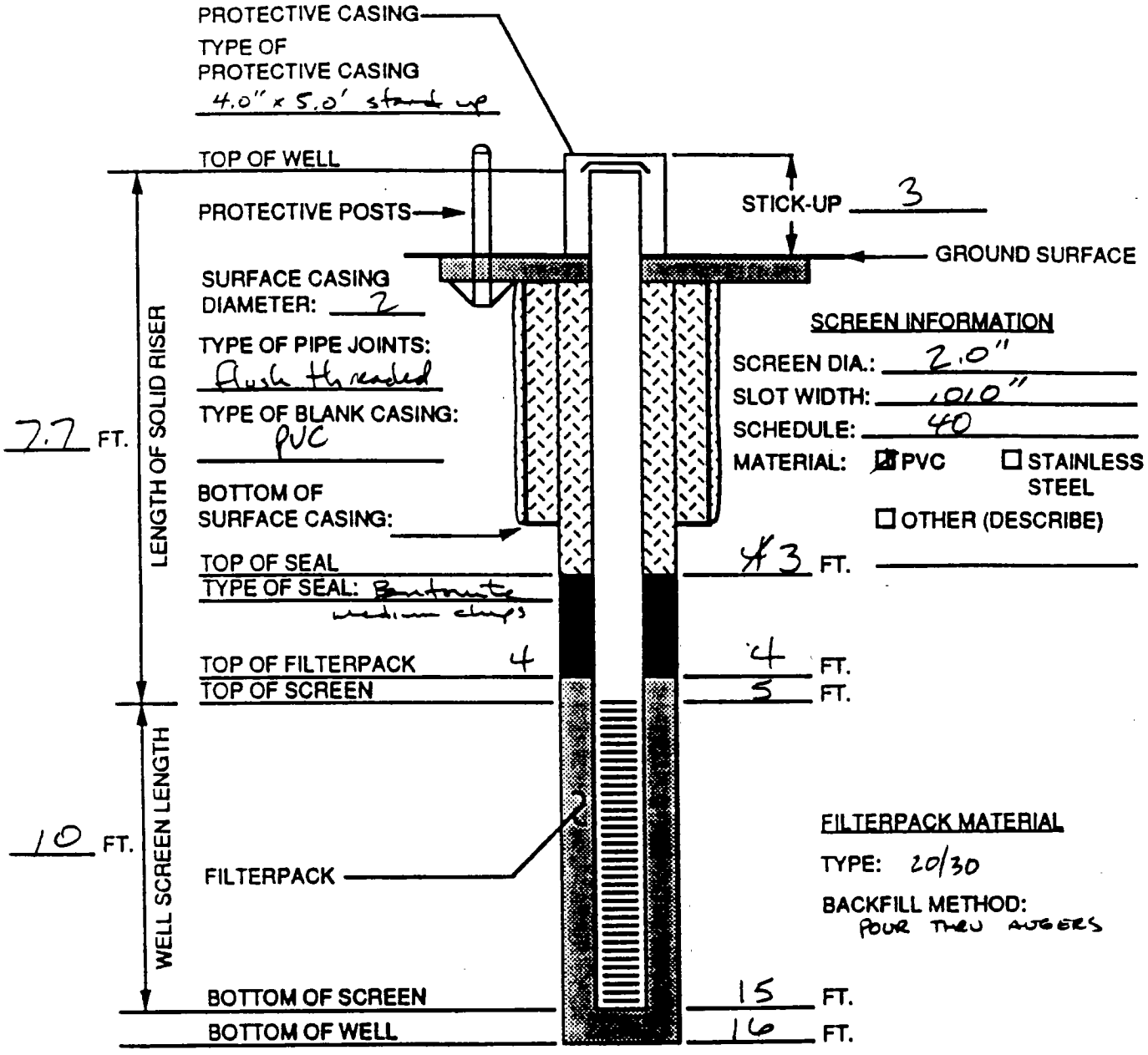
TEMP. 88.0 F Ph. 5.40

COND. 68.7 NTU 5.73

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ELEVATION GROUNDWATER			PROJECT: Ceci Field RI OUs 1,2,7
DATE INSTALLED: 8/9/93	STARTED: 8/9/93	COMPLETED: 8/9/93	LOCATION (Coordinates or Station): Background
ELEVATION TOP OF HOLE			SIGNATURE OF INSPECTOR: [signature]
TOTAL DEPTH OF HOLE: 16.0' bls			HOLE NO. (As shown on drawing title and file number): CEF-BB-8S CEF-BK-8S

DOUBLE-CASED MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: Centrifugal Pump

TIME SPENT DEVELOPMENT: 26 min / 5.5 HRS

VOLUME OF WATER REMOVED: 48 gal / 175 GAL

VOLUME OF WATER ADDED: —

DESCRIPTION OF PREDEVELOPMENT WATER: cloudy dark brown

DESCRIPTION OF POST DEVELOPMENT WATER: clear, sediment free

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 8/10/93 0820 hrs

5.21' bls

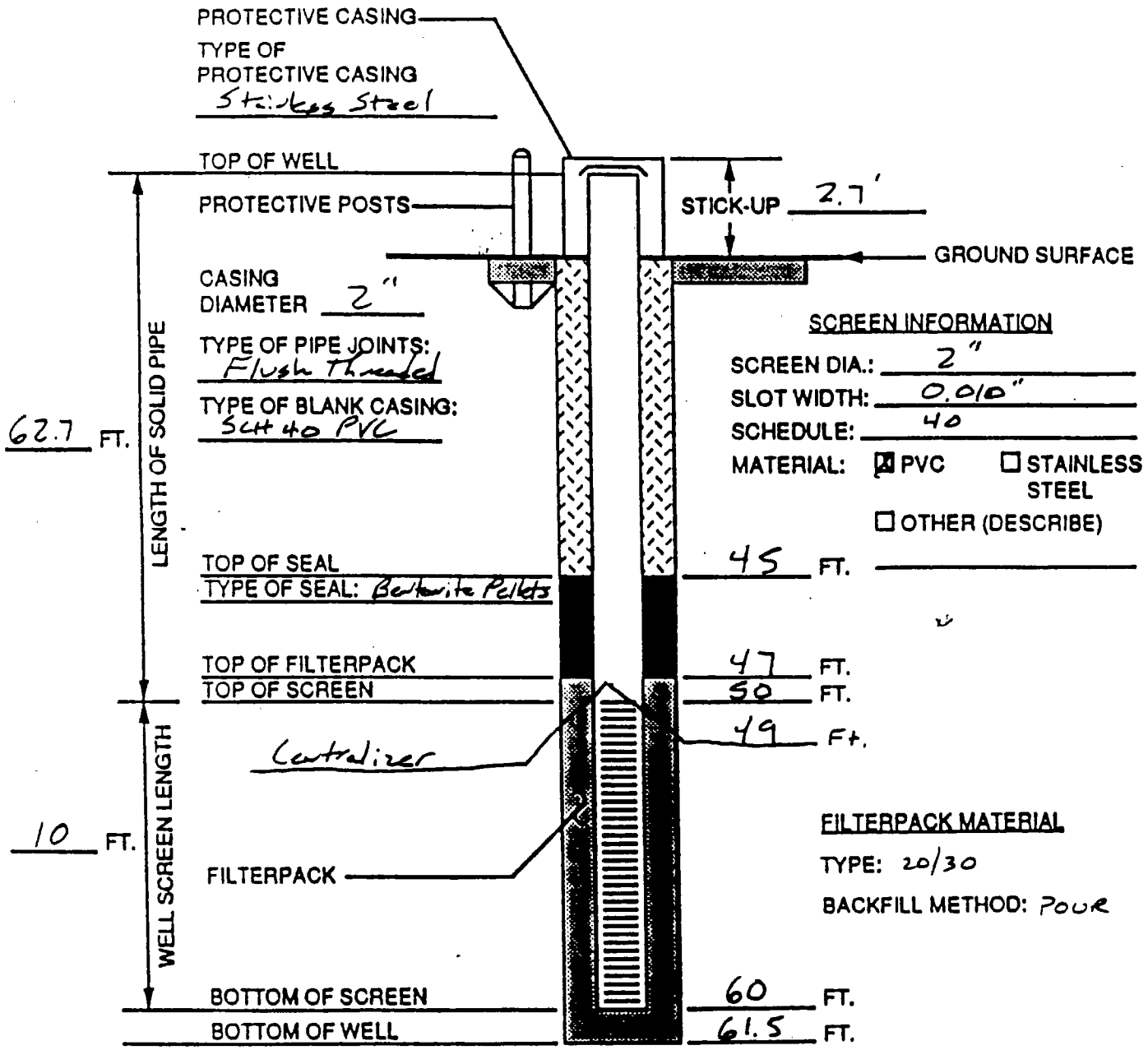
Temp 83.1°F pH 5.24

Cond 42.8 NTU 0.02

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

ATION GROUNDWATER			PROJECT R1 OUS 1,2,7
E INSTALLED 8/17/93	STARTED 8/16/93	COMPLETED 8/17/93	LOCATION (Coordinates or Station) Background
TOP OF HOLE			SIGNATURE OF INSPECTOR [illegible]
AL DEPTH OF HOLE ≈61.5'			HOLE NO. (As shown on drawing title and file number) CEF-BB-90 CEF-BK-9D

ABOVE GROUND MONITORING WELL CONSTRUCTION DIAGRAM



WELL DEVELOPMENT

METHOD: Centrifugal Pump

TIME SPENT DEVELOPMENT: 1 Hour / 5 HRS.

VOLUME OF WATER REMOVED: ≈ 720 gal / 850 gal.

VOLUME OF WATER ADDED: ≈ 120 gal

DESCRIPTION OF PREDEVELOPMENT WATER: Very Cloudy

DESCRIPTION OF POST DEVELOPMENT WATER: Slightly Cloudy

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL

Temp	87.2°F	PH	5.68
Cond	69.0	NTU	76.6

DEPTH FROM TOP CASING AFTER DEVELOPMENT:

APPENDIX J-3

COMPLETE BACKGROUND CHEMICAL ANALYTICAL DATA SET

CECIL FIELD -- GROUNDWATER -- BACKGROUND
VALIDATED DATA -- TENTATIVELY IDENTIFIED COMPOUNDS

Lab Sample Number:	CFBK2S				CFBK3I				CFBK9I			
Site	CECIL				CECIL				CECIL			
Locator	CFBK2S				CFBK3I				CFBK9I			
Collect Date:	12-SEP-93				12-SEP-93				09-SEP-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
TENTATIVELY IDENTIFIED CMPNDS.												
(13.90) Benzamide,N,N-Diethyl-	10	J	ug/l									
(13.80) Benzamide,N,N-Diethyl-					14	J	ug/l					
(13.93) Benzamide,N,N-Diethyl-									4	J	ug/l	

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- GROUNDWATER -- BACKGROUND
VALIDATED DATA -- METALS AND CYANIDE

Lab Sample Number:	CFBK9I				CFBK9IF			
Site	CECIL				CECIL			
Locator	CFBK9I				CFBK9IF			
Collect Date:	09-SEP-93				09-SEP-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP METALS AND CYANIDE								
Aluminum	2700	J	ug/l	200	123	U	ug/l	200
Antimony	15	UJ	ug/l	60	15	U	ug/l	60
Arsenic	27.3	J	ug/l	10	21.3		ug/l	10
Barium	37.1	J	ug/l	200	37.1	J	ug/l	200
Beryllium	1	U	ug/l	5	1	U	ug/l	5
Cadmium	4	U	ug/l	5	4	U	ug/l	5
Calcium	2280	J	ug/l	5000	2660	J	ug/l	5000
Chromium	8	UJ	ug/l	10	8	U	ug/l	10
Cobalt	59.9		ug/l	50	56.3		ug/l	50
Copper	4.6	U	ug/l	25	2	U	ug/l	25
Iron	7830	J	ug/l	100	6110	J	ug/l	100
Lead	4.5	J	ug/l	5	1.3	J	ug/l	5
Magnesium	774	J	ug/l	5000	735	J	ug/l	5000
Manganese	8.4	U	ug/l	15	10.1	J	ug/l	15
Mercury	.1	U	ug/l	.2	.1	U	ug/l	.2
Nickel	115		ug/l	40	110		ug/l	40
Potassium	1110	J	ug/l	5000	1130	J	ug/l	5000
Selenium	1	UJ	ug/l	5	1	UJ	ug/l	5
Silver	4	U	ug/l	10	4	U	ug/l	10
Sodium	3000	J	ug/l	5000	3240	J	ug/l	5000
Thallium	1	U	ug/l	10	1	U	ug/l	10
Vanadium	6.9	J	ug/l	50	4	U	ug/l	50
Zinc	42.6		ug/l	20	72.7	U	ug/l	20
Cyanide	5	UJ	ug/l	10	-			

U = NOT DETECTED J = ESTIMATED VALUE
U 'PORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
I JLT IS REJECTED AND UNUSABLE

CECIL FIELD -- GROUNDWATER -- BACKGROUND
VALIDATED DATA -- METALS AND CYANIDE

Lab Sample Number:	CFBK7S				CFBK7SF				CFBK8S				CFBK8SF			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBK7S				CFBK7SF				CFBK8S				CFBK8SF			
Collect Date:	09-SEP-93				09-SEP-93				09-SEP-93				09-SEP-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP METALS AND CYANIDE																
Aluminum	173000	J	ug/l	200	461	J	ug/l	200	493000	J	ug/l	200	5810	J	ug/l	200
Antimony	15	UJ	ug/l	60	15	U	ug/l	60	15	UJ	ug/l	60	15	U	ug/l	60
Arsenic	4.5	J	ug/l	10	2.2	J	ug/l	10	8	UJ	ug/l	10	2.1	J	ug/l	10
Barium	121	J	ug/l	200	17.4	J	ug/l	200	241		ug/l	200	15	U	ug/l	200
Beryllium	2.6	U	ug/l	5	1	U	ug/l	5	3.7	U	ug/l	5	1	U	ug/l	5
Cadmium	6.5	U	ug/l	5	4	U	ug/l	5	12	U	ug/l	5	4	U	ug/l	5
Calcium	2740	J	ug/l	5000	1030	J	ug/l	5000	3340	J	ug/l	5000	2820	J	ug/l	5000
Chromium	160	J	ug/l	10	8	U	ug/l	10	489	J	ug/l	10	12.2		ug/l	10
Cobalt	10.7	J	ug/l	50	6	U	ug/l	50	48.6	J	ug/l	50	6	U	ug/l	50
Copper	55.1		ug/l	25	2.2	U	ug/l	25	129		ug/l	25	5.3	U	ug/l	25
Iron	13200	J	ug/l	100	3010	J	ug/l	100	34400	J	ug/l	100	1100	J	ug/l	100
Lead	150	J	ug/l	5	1.8	J	ug/l	5	115	J	ug/l	5	4.4	J	ug/l	5
Magnesium	3290	J	ug/l	5000	1290	J	ug/l	5000	8290		ug/l	5000	695	J	ug/l	5000
Manganese	28.7		ug/l	15	8.7	U	ug/l	15	57.6		ug/l	15	7.7	U	ug/l	15
Mercury	1.1		ug/l	.2	.12	J	ug/l	.2	2.3		ug/l	.2	.1	U	ug/l	.2
Nickel	46.2		ug/l	40	7	U	ug/l	40	131		ug/l	40	8.7	J	ug/l	40
Potassium	1710	J	ug/l	5000	158	J	ug/l	5000	5450		ug/l	5000	278	U	ug/l	5000
Selenium	4.6	J	ug/l	5	1	UJ	ug/l	5	13	J	ug/l	5	1	U	ug/l	5
Silver	4	U	ug/l	10	4	U	ug/l	10	6.5	U	ug/l	10	6.9	U	ug/l	10
Sodium	9990		ug/l	5000	8290		ug/l	5000	3090	J	ug/l	5000	2510	J	ug/l	5000
Thallium	1	U	ug/l	10	1	U	ug/l	10	1	UJ	ug/l	10	1	U	ug/l	10
Vanadium	167		ug/l	50	7.1	J	ug/l	50	226		ug/l	50	5.2	J	ug/l	50
Zinc	28.8	U	ug/l	20	11.5	U	ug/l	20	62.3	U	ug/l	20	24.3	U	ug/l	20
Cyanide	5	UJ	ug/l	10	-				5	UJ	ug/l	10	-			

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- GROUNDWATER -- BACKGROUND
VALIDATED DATA -- METALS AND CYANIDE

Lab Sample Number:	CFBK5S				CFBK5SF				CFBK6I				CFBK6IF			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBK5S				CFBK5SF				CFBK6I				CFBK6IF			
Collect Date:	09-SEP-93				09-SEP-93				09-SEP-93				09-SEP-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
LP METALS AND CYANIDE																
Aluminum	163000	J	ug/l	200	573	J	ug/l	200	475	J	ug/l	200	70.3	U	ug/l	200
Antimony	15	UJ	ug/l	60	15	U	ug/l	60	15	UJ	ug/l	60	15	U	ug/l	60
Arsenic	2	UJ	ug/l	10	2	U	ug/l	10	2	UJ	ug/l	10	2	U	ug/l	10
Barium	126	J	ug/l	200	5.8	U	ug/l	200	13	U	ug/l	200	9.8	U	ug/l	200
Beryllium	1.7	U	ug/l	5	1	U	ug/l	5	1	U	ug/l	5	1	U	ug/l	5
Cadmium	6.3	U	ug/l	5	4	U	ug/l	5	4	U	ug/l	5	4	U	ug/l	5
Calcium	2080	J	ug/l	5000	692	U	ug/l	5000	595	U	ug/l	5000	621	U	ug/l	5000
Chromium	119	J	ug/l	10	8	U	ug/l	10	8	UJ	ug/l	10	8	U	ug/l	10
Cobalt	13.7	J	ug/l	50	6	U	ug/l	50	6	U	ug/l	50	6	U	ug/l	50
Copper	24.2	J	ug/l	25	2	U	ug/l	25	6	U	ug/l	25	3.7	U	ug/l	25
Iron	21400	J	ug/l	100	94.5	U	ug/l	100	264	J	ug/l	100	78.6	U	ug/l	100
Lead	59.2	J	ug/l	5	1.7	J	ug/l	5	1.7	J	ug/l	5	1.5	J	ug/l	5
Magnesium	4310	J	ug/l	5000	391	J	ug/l	5000	514	J	ug/l	5000	522	J	ug/l	5000
Manganese	42.2		ug/l	15	8.1	U	ug/l	15	3.7	U	ug/l	15	4.9	U	ug/l	15
Mercury	.33		ug/l	.2	.1	U	ug/l	.2	.1	U	ug/l	.2	.1	U	ug/l	.2
Nickel	52.7		ug/l	40	7	U	ug/l	40	7	U	ug/l	40	7	U	ug/l	40
Potassium	3890	J	ug/l	5000	232	U	ug/l	5000	673	J	ug/l	5000	583	J	ug/l	5000
Selenium	5	UJ	ug/l	5	1	U	ug/l	5	1	U	ug/l	5	1	U	ug/l	5
Silver	4	U	ug/l	10	4	U	ug/l	10	4	U	ug/l	10	4	U	ug/l	10
Sodium	6890		ug/l	5000	5290		ug/l	5000	4410	J	ug/l	5000	4520	J	ug/l	5000
Thallium	1	U	ug/l	10	1	U	ug/l	10	1	U	ug/l	10	1	U	ug/l	10
Vanadium	118		ug/l	50	5.3	J	ug/l	50	4	U	ug/l	50	4	U	ug/l	50
Zinc	48.7	U	ug/l	20	45.7	U	ug/l	20	29.2	U	ug/l	20	60.5	U	ug/l	20
Cyanide	5	UJ	ug/l	10	-				5	U	ug/l	1	-			

U = NOT DETECTED J = ESTIMATED VALUE
U REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- GROUNDWATER -- BACKGROUND
VALIDATED DATA -- METALS AND CYANIDE

Lab Sample Number:	CFBK3I				CFBK3IF				CFBK4S				CFBK4SF			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBK3I				CFBK3IF				CFBK4S				CFBK4SF			
Collect Date:	12-SEP-93				12-SEP-93				09-SEP-93				09-SEP-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP METALS AND CYANIDE																
Aluminum	1810	J	ug/l	200	259	J	ug/l	200	313000	J	ug/l	200	233	J	ug/l	200
Antimony	15	UJ	ug/l	60	15	U	ug/l	60	15	UJ	ug/l	60	15	U	ug/l	60
Arsenic	12.5	J	ug/l	10	9	J	ug/l	10	7.1	J	ug/l	10	2	U	ug/l	10
Barium	35	J	ug/l	200	29.7	J	ug/l	200	193	J	ug/l	200	8.9	U	ug/l	200
Beryllium	1	U	ug/l	5	1	U	ug/l	5	2.3	U	ug/l	5	1	U	ug/l	5
Cadmium	4	U	ug/l	5	4	U	ug/l	5	6.7	U	ug/l	5	4.1	U	ug/l	5
Calcium	1720	J	ug/l	5000	1210	J	ug/l	5000	2730	J	ug/l	5000	1170	J	ug/l	5000
Chromium	8	UJ	ug/l	10	8	U	ug/l	10	218	J	ug/l	10	8	U	ug/l	10
Cobalt	6	U	ug/l	50	6	U	ug/l	50	17.8	J	ug/l	50	6	U	ug/l	50
Copper	5.8	U	ug/l	25	2	U	ug/l	25	31.1		ug/l	25	2	U	ug/l	25
Iron	1320	J	ug/l	100	948	J	ug/l	100	24400	J	ug/l	100	189	J	ug/l	100
Lead	3.5	J	ug/l	5	2.2	J	ug/l	5	72.5	J	ug/l	5	1.3	J	ug/l	5
Magnesium	1000	J	ug/l	5000	1020	J	ug/l	5000	7100		ug/l	5000	776	J	ug/l	5000
Manganese	10.4	J	ug/l	15	8.7	U	ug/l	15	42		ug/l	15	6	U	ug/l	15
Mercury	.1	U	ug/l	.2	.1	U	ug/l	.2	.49		ug/l	.2	.1	U	ug/l	.2
Nickel	11.1	J	ug/l	40	7	U	ug/l	40	84.1		ug/l	40	7	U	ug/l	40
Potassium	1030	J	ug/l	5000	1280	J	ug/l	5000	5900		ug/l	5000	146	U	ug/l	5000
Selenium	1.8	J	ug/l	5	1	U	ug/l	5	5	UJ	ug/l	5	1	U	ug/l	5
Silver	7.4	U	ug/l	10	4	U	ug/l	10	4	U	ug/l	10	4	U	ug/l	10
Sodium	5680		ug/l	5000	6310		ug/l	5000	7120		ug/l	5000	5280		ug/l	5000
Thallium	1	U	ug/l	10	1	U	ug/l	10	1	UJ	ug/l	10	1	U	ug/l	10
Vanadium	6.9	J	ug/l	50	4	U	ug/l	50	162		ug/l	50	4.2	J	ug/l	50
Zinc	45.2	U	ug/l	20	38.5	U	ug/l	20	86.4	U	ug/l	20	15.5	U	ug/l	20
Cyanide	5	UJ	ug/l	1	-				5	UJ	ug/l	10	-			

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- GROUNDWATER -- BACKGROUND
VALIDATED DATA -- METALS AND CYANIDE

Lab Sample Number:	CFBK1S				CFBK1SF				CFBK2S				CFBK2SF			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBK1S				CFBK1SF				CFBK2S				CFBK2SF			
Collect Date:	12-SEP-93				12-SEP-93				12-SEP-93				12-SEP-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
LP METALS AND CYANIDE																
Aluminum	168000	J	ug/l	200	1030	J	ug/l	200	275000	J	ug/l	200	207	U	ug/l	200
Antimony	15	UJ	ug/l	60	15	U	ug/l	60	15	UJ	ug/l	60	15	U	ug/l	60
Arsenic	5.1	J	ug/l	10	2	UJ	ug/l	10	3.4	J	ug/l	10	2	U	ug/l	10
Barium	81.4	J	ug/l	200	9.8	U	ug/l	200	177	J	ug/l	200	9.5	U	ug/l	200
Beryllium	1	U	ug/l	5	1	U	ug/l	5	1.8	U	ug/l	5	1	U	ug/l	5
Cadmium	7	U	ug/l	5	4	U	ug/l	5	5.5	U	ug/l	5	4	U	ug/l	5
Calcium	1300	J	ug/l	5000	447	U	ug/l	5000	2730	J	ug/l	5000	942	J	ug/l	5000
Chromium	137	J	ug/l	10	8	U	ug/l	10	230	J	ug/l	10	8	U	ug/l	10
Cobalt	9.5	J	ug/l	50	6	U	ug/l	50	22.4	J	ug/l	50	6	U	ug/l	50
Copper	21.1	J	ug/l	25	2	U	ug/l	25	33.8		ug/l	25	2	U	ug/l	25
Iron	33600	J	ug/l	100	2460		ug/l	100	58200	J	ug/l	100	102	U	ug/l	100
Lead	26.2	J	ug/l	5	1.6	J	ug/l	5	42	J	ug/l	5	3.5	J	ug/l	5
Magnesium	2740	J	ug/l	5000	717	J	ug/l	5000	6630		ug/l	5000	741	J	ug/l	5000
Manganese	35.3		ug/l	15	7.3	U	ug/l	15	70		ug/l	15	11.5	J	ug/l	15
Mercury	.14	J	ug/l	.2	.1	U	ug/l	.2	.35		ug/l	.2	.1	U	ug/l	.2
Nickel	42.1		ug/l	40	7	U	ug/l	40	103		ug/l	40	7	U	ug/l	40
Potassium	2240	J	ug/l	5000	206	U	ug/l	5000	3690	J	ug/l	5000	191	U	ug/l	5000
Selenium	5	U	ug/l	5	1	U	ug/l	5	5	UJ	ug/l	5	1	U	ug/l	5
Silver	4	U	ug/l	10	4	U	ug/l	10	4	U	ug/l	10	4	U	ug/l	10
Sodium	7400		ug/l	5000	6350		ug/l	5000	5300		ug/l	5000	3670	J	ug/l	5000
Thallium	1	U	ug/l	10	1	U	ug/l	10	1	U	ug/l	10	1	U	ug/l	10
Vanadium	130		ug/l	50	4	U	ug/l	50	243		ug/l	50	4	U	ug/l	50
Zinc	54.7	U	ug/l	20	21.1	U	ug/l	20	114		ug/l	20	45.1	U	ug/l	20
Cyanide	5	UJ	ug/l	10	-				5	UJ	ug/l	10	-			

U = NOT DETECTED J = ESTIMATED VALUE
U [illegible] PORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R [illegible] ULT IS REJECTED AND UNUSABLE

CECIL FIELD -- GROUNDWATER -- BACKGROUND
VALIDATED DATA -- PESTICIDES AND PCBS

Lab Sample Number:	CFBK7S				CFBK7SR				CFBK8S				CFBK9I			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBK7S				CFBK7SR				CFBK8S				CFBK9I			
Collect Date:	09-SEP-93				09-SEP-93				09-SEP-93				09-SEP-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP PESTICIDES/PCBS 90-SOW																
alpha-BHC	.05	UJ	ug/l	.05	.05	U	ug/l	.05	.05	UJ	ug/l	.05	.05	U	ug/l	.05
beta-BHC	.05	UJ	ug/l	.05	.05	U	ug/l	.05	.05	UJ	ug/l	.05	.05	U	ug/l	.05
delta-BHC	.05	UJ	ug/l	.05	.05	U	ug/l	.05	.05	UJ	ug/l	.05	.05	U	ug/l	.05
gamma-BHC (Lindane)	.05	UJ	ug/l	.05	.05	U	ug/l	.05	.05	UJ	ug/l	.05	.05	U	ug/l	.05
Heptachlor	.05	UJ	ug/l	.05	.05	U	ug/l	.05	.05	UJ	ug/l	.05	.05	U	ug/l	.05
Aldrin	.05	UJ	ug/l	.05	.05	U	ug/l	.05	.05	UJ	ug/l	.05	.05	U	ug/l	.05
Heptachlor epoxide	.05	UJ	ug/l	.05	.05	U	ug/l	.05	.05	UJ	ug/l	.05	.05	U	ug/l	.05
Endosulfan I	.05	UJ	ug/l	.05	.05	U	ug/l	.05	.05	UJ	ug/l	.05	.05	U	ug/l	.05
Dieldrin	.1	UJ	ug/l	.1	.1	U	ug/l	.1	.1	UJ	ug/l	.1	.1	U	ug/l	.1
4,4-DDE	.1	UJ	ug/l	.1	.1	U	ug/l	.1	.1	UJ	ug/l	.1	.1	U	ug/l	.1
Endrin	.1	UJ	ug/l	.1	.1	U	ug/l	.1	.1	UJ	ug/l	.1	.1	U	ug/l	.1
Endosulfan II	.1	UJ	ug/l	.1	.1	U	ug/l	.1	.1	UJ	ug/l	.1	.1	U	ug/l	.1
4,4-DDD	.1	UJ	ug/l	.1	.1	U	ug/l	.1	.1	UJ	ug/l	.1	.1	U	ug/l	.1
Endosulfan sulfate	.1	UJ	ug/l	.1	.1	U	ug/l	.1	.1	UJ	ug/l	.1	.1	U	ug/l	.1
4,4-DDT	.1	UJ	ug/l	.1	.1	U	ug/l	.1	.1	UJ	ug/l	.1	.1	U	ug/l	.1
Methoxychlor	.5	UJ	ug/l	.5	.5	U	ug/l	.5	.5	UJ	ug/l	.5	.5	U	ug/l	.5
Endrin ketone	.1	UJ	ug/l	.1	.1	U	ug/l	.1	.1	UJ	ug/l	.1	.1	U	ug/l	.1
Endrin aldehyde	.1	UJ	ug/l	.1	.1	U	ug/l	.1	.1	UJ	ug/l	.1	.1	U	ug/l	.1
alpha-Chlordane	.05	UJ	ug/l	.05	.05	U	ug/l	.05	.05	UJ	ug/l	.05	.05	U	ug/l	.05
gamma-Chlordane	.05	UJ	ug/l	.05	.05	U	ug/l	.05	.05	UJ	ug/l	.05	.05	U	ug/l	.05
Toxaphene	5	UJ	ug/l	5	5	U	ug/l	5	5	UJ	ug/l	5	5	U	ug/l	5
Aroclor-1016	1	UJ	ug/l	1	1	U	ug/l	1	1	UJ	ug/l	1	1	U	ug/l	1
Aroclor-1221	2	UJ	ug/l	2	2	U	ug/l	2	2	UJ	ug/l	2	2	U	ug/l	2
Aroclor-1232	1	UJ	ug/l	1	1	U	ug/l	1	1	UJ	ug/l	1	1	U	ug/l	1
Aroclor-1242	1	UJ	ug/l	1	1	U	ug/l	1	1	UJ	ug/l	1	1	U	ug/l	1
Aroclor-1248	1	UJ	ug/l	1	1	U	ug/l	1	1	UJ	ug/l	1	1	U	ug/l	1
Aroclor-1254	1	UJ	ug/l	1	1	U	ug/l	1	1	UJ	ug/l	1	1	U	ug/l	1
Aroclor-1260	1	UJ	ug/l	1	1	U	ug/l	1	1	UJ	ug/l	1	1	U	ug/l	1

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- GROUNDWATER -- BACKGROUND
VALIDATED DATA -- PESTICIDES AND PCBS

Lab Sample Number:	CFBK3I				CFBK4S				CFBK5S				CFBK6I			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBK3I				CFBK4S				CFBK5S				CFBK6I			
Collect Date:	12-SEP-93				09-SEP-93				09-SEP-93				09-SEP-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP PESTICIDES/PCBS 90-SOW																
alpha-BHC	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05
beta-BHC	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05
delta-BHC	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05
gamma-BHC (Lindane)	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05
Heptachlor	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05
Aldrin	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05
Heptachlor epoxide	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05
Endosulfan I	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05
Dieldrin	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1
4,4-DDE	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1
Endrin	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1
Endosulfan II	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1
4,4-DDD	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1
Endosulfan sulfate	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1
4,4-DDT	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1
Methoxychlor	.5	UJ	ug/l	.5	.5	UJ	ug/l	.5	.5	UJ	ug/l	.5	.5	UJ	ug/l	.5
Endrin ketone	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1
Endrin aldehyde	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1	.1	UJ	ug/l	.1
alpha-Chlordane	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05
gamma-Chlordane	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05	.05	UJ	ug/l	.05
Toxaphene	5	UJ	ug/l	5	5	UJ	ug/l	5	5	UJ	ug/l	5	5	UJ	ug/l	5
Aroclor-1016	1	UJ	ug/l	1	1	UJ	ug/l	1	1	UJ	ug/l	1	1	UJ	ug/l	1
Aroclor-1221	2	UJ	ug/l	2	2	UJ	ug/l	2	2	UJ	ug/l	2	2	UJ	ug/l	2
Aroclor-1232	1	UJ	ug/l	1	1	UJ	ug/l	1	1	UJ	ug/l	1	1	UJ	ug/l	1
Aroclor-1242	1	UJ	ug/l	1	1	UJ	ug/l	1	1	UJ	ug/l	1	1	UJ	ug/l	1
Aroclor-1248	1	UJ	ug/l	1	1	UJ	ug/l	1	1	UJ	ug/l	1	1	UJ	ug/l	1
Aroclor-1254	1	UJ	ug/l	1	1	UJ	ug/l	1	1	UJ	ug/l	1	1	UJ	ug/l	1
Aroclor-1260	1	UJ	ug/l	1	1	UJ	ug/l	1	1	UJ	ug/l	1	1	UJ	ug/l	1

U = NOT DETECTED J = ESTIMATED VALUE
REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
ESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- GROUNDWATER -- BACKGROUND
VALIDATED DATA -- PESTICIDES AND PCBS

Lab Sample Number:	CFBK1S				CFBK1SMS				CFBK1SMSD				CFBK2S			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBK1S				CFBK1SMS				CFBK1SMSD				CFBK2S			
Collect Date:	12-SEP-93				12-SEP-93				12-SEP-93				12-SEP-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP PESTICIDES/PCBS 90-SOW																
alpha-BHC	.05	UJ	ug/l	.05	.05	U	ug/l	.05	.05	U	ug/l	.05	.05	UJ	ug/l	.05
beta-BHC	.05	UJ	ug/l	.05	.05	U	ug/l	.05	.05	U	ug/l	.05	.05	UJ	ug/l	.05
delta-BHC	.05	UJ	ug/l	.05	.05	U	ug/l	.05	.05	U	ug/l	.05	.05	UJ	ug/l	.05
gamma-BHC (Lindane)	.05	UJ	ug/l	.05	.54		ug/l	.05	.48		ug/l	.05	.05	UJ	ug/l	.05
Heptachlor	.05	UJ	ug/l	.05	.42		ug/l	.05	.34		ug/l	.05	.05	UJ	ug/l	.05
Aldrin	.05	UJ	ug/l	.05	.41		ug/l	.05	.33		ug/l	.05	.05	UJ	ug/l	.05
Heptachlor epoxide	.05	UJ	ug/l	.05	.05	U	ug/l	.05	.05	U	ug/l	.05	.05	UJ	ug/l	.05
Endosulfan I	.05	UJ	ug/l	.05	.05	U	ug/l	.05	.05	U	ug/l	.05	.05	UJ	ug/l	.05
Dieldrin	.1	UJ	ug/l	.1	1		ug/l	.1	.96		ug/l	.1	.1	UJ	ug/l	.1
4,4-DDE	.1	UJ	ug/l	.1	.1	U	ug/l	.1	.1	U	ug/l	.1	.1	UJ	ug/l	.1
Endrin	.1	UJ	ug/l	.1	1		ug/l	.1	.97		ug/l	.1	.1	UJ	ug/l	.1
Endosulfan II	.1	UJ	ug/l	.1	.1	U	ug/l	.1	.1	U	ug/l	.1	.1	UJ	ug/l	.1
4,4-DDD	.1	UJ	ug/l	.1	.1	U	ug/l	.1	.1	U	ug/l	.1	.1	UJ	ug/l	.1
Endosulfan sulfate	.1	UJ	ug/l	.1	.1	U	ug/l	.1	.1	U	ug/l	.1	.1	UJ	ug/l	.1
4,4-DDT	.1	UJ	ug/l	.1	.83		ug/l	.1	.65		ug/l	.1	.1	UJ	ug/l	.1
Methoxychlor	.5	UJ	ug/l	.5	.5	U	ug/l	.5	.5	U	ug/l	.5	.5	UJ	ug/l	.5
Endrin ketone	.1	UJ	ug/l	.1	.022	J	ug/l	.1	.018	J	ug/l	.1	.1	UJ	ug/l	.1
Endrin aldehyde	.1	UJ	ug/l	.1	.1	U	ug/l	.1	.1	U	ug/l	.1	.1	UJ	ug/l	.1
alpha-Chlordane	.05	UJ	ug/l	.05	.05	U	ug/l	.05	.05	U	ug/l	.05	.05	UJ	ug/l	.05
gamma-Chlordane	.05	UJ	ug/l	.05	.05	U	ug/l	.05	.05	U	ug/l	.05	.05	UJ	ug/l	.05
Toxaphene	5	UJ	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	UJ	ug/l	5
Aroclor-1016	1	UJ	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	UJ	ug/l	1
Aroclor-1221	2	UJ	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	UJ	ug/l	2
Aroclor-1232	1	UJ	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	UJ	ug/l	1
Aroclor-1242	1	UJ	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	UJ	ug/l	1
Aroclor-1248	1	UJ	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	UJ	ug/l	1
Aroclor-1254	1	UJ	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	UJ	ug/l	1
Aroclor-1260	1	UJ	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	UJ	ug/l	1

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- GROUNDWATER -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CFBK7S				CFBK7SR				CFBK8S				CFBK91			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBK7S				CFBK7SR				CFBK8S				CFBK91			
Collect Date:	09-SEP-93				09-SEP-93				09-SEP-93				09-SEP-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Butylbenzylphthalate	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
3,3-Dichlorobenzidine	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Benzo (a) anthracene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Chrysene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
bis(2-Ethylhexyl) phthalate	10	U	ug/l	10	10	U	ug/l	10	.6	J	ug/l	10	3	J	ug/l	10
Di-n-octylphthalate	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Benzo (b) fluoranthene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Benzo (k) fluoranthene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Benzo (a) pyrene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Indeno (1,2,3-cd) pyrene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Dibenz (a,h) anthracene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Benzo (g,h,i) perylene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10

U = NOT DETECTED J = ESTIMATED VALUE
UJ - REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R - RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CEFBSS01				CEFBSS01R				CEFBSS02				CEFBSS02D			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CEFBSS01				CEFBSS01R				CEFBSS02				CEFBSS02D			
Collect Date:	19-JUL-93				19-JUL-93				19-JUL-93				19-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP SEMIVOLATILES 90-SOW																
Phenol	52	J	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
bis(2-Chloroethyl) ether	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
2-Chlorophenol	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
1,3-Dichlorobenzene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
1,4-Dichlorobenzene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
1,2-Dichlorobenzene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
2-Methylphenol	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
2,2-oxybis(1-Chloropropane)	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
4-Methylphenol	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
N-Nitroso-di-n-propylamine	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Hexachloroethane	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Nitrobenzene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Isophorone	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
2-Nitrophenol	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
2,4-Dimethylphenol	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
bis(2-Chloroethoxy) methane	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
2,4-Dichlorophenol	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
1,2,4-Trichlorobenzene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Naphthalene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
4-Chloroaniline	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Hexachlorobutadiene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
4-Chloro-3-methylphenol	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
2-Methylnaphthalene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Hexachlorocyclopentadiene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
2,4,6-Trichlorophenol	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
2,4,5-Trichlorophenol	870	U	ug/kg	870	25	U	ug/l	25	890	U	ug/kg	890	990	U	ug/kg	990
2-Chloronaphthalene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
2-Nitroaniline	870	U	ug/kg	870	25	U	ug/l	25	890	U	ug/kg	890	990	U	ug/kg	990
Dimethylphthalate	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Acenaphthylene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
2,6-Dinitrotoluene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
3-Nitroaniline	870	U	ug/kg	870	25	U	ug/l	25	890	U	ug/kg	890	990	U	ug/kg	990
Acenaphthene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
2,4-Dinitrophenol	870	U	ug/kg	870	25	U	ug/l	25	890	U	ug/kg	890	990	U	ug/kg	990
4-Nitrophenol	870	U	ug/kg	870	25	U	ug/l	25	890	U	ug/kg	890	990	U	ug/kg	990
Dibenzofuran	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
2,4-Dinitrotoluene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Diethylphthalate	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
4-Chlorophenyl-phenylether	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Fluorene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
4-Nitroaniline	870	U	ug/kg	870	25	U	ug/l	25	890	U	ug/kg	890	990	U	ug/kg	990
4,6-Dinitro-2-methylphenol	870	U	ug/kg	870	25	U	ug/l	25	890	U	ug/kg	890	990	U	ug/kg	990
N-Nitrosodiphenylamine (1)	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
4-Bromophenyl-phenylether	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Hexachlorobenzene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Pentachlorophenol	870	U	ug/kg	870	25	U	ug/l	25	890	U	ug/kg	890	990	U	ug/kg	990
Phenanthrene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Anthracene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Carbazole	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Di-n-butylphthalate	34	J	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Fluoranthene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Pyrene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Butylbenzyl[illegible]ate	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CEFBSS01				CEFBSS01R				CEFBSS02				CEFBSS02D			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CEFBSS01				CEFBSS01R				CEFBSS02				CEFBSS02D			
Collect Date:	19-JUL-93				19-JUL-93				19-JUL-93				19-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
3,3-Dichlorobenzidine	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Benzo (a) anthracene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Chrysene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
bis(2-Ethylhexyl) phthalate	48	J	ug/kg	360	10	U	ug/l	10	51	J	ug/kg	370	42	J	ug/kg	410
Di-n-octylphthalate	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Benzo (b) fluoranthene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Benzo (k) fluoranthene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Benzo (a) pyrene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Indeno (1,2,3-cd) pyrene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Dibenz (a,h) anthracene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410
Benzo (g,h,i) perylene	360	U	ug/kg	360	10	U	ug/l	10	370	U	ug/kg	370	410	U	ug/kg	410

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R ESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CEFBSS02R			CEFBSS03			CEFBSS04			CEFBSS05		
Site	CECIL			CECIL			CECIL			CECIL		
Locator	CEFBSS02R			CEFBSS03			CEFBSS04			CEFBSS05		
Collect Date:	20-JUL-93			19-JUL-93			19-JUL-93			20-JUL-93		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL
CLP SEMIVOLATILES 90-SOM												
Phenol	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
bis(2-Chloroethyl) ether	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
2-Chlorophenol	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
1,3-Dichlorobenzene	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
1,4-Dichlorobenzene	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
1,2-Dichlorobenzene	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
2-Methylphenol	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
2,2-oxybis(1-Chloropropane)	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
4-Methylphenol	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
N-Nitroso-di-n-propylamine	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
Hexachloroethane	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
Nitrobenzene	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
Isophorone	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
2-Nitrophenol	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
2,4-Dimethylphenol	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
bis(2-Chloroethoxy) methane	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
2,4-Dichlorophenol	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
1,2,4-Trichlorobenzene	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
Naphthalene	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
4-Chloroaniline	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
Hexachlorobutadiene	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
4-Chloro-3-methylphenol	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
2-Methylnaphthalene	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
Hexachlorocyclopentadiene	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
2,4,6-Trichlorophenol	25 U	ug/l	25	930 U	ug/kg	930	860 U	ug/kg	860	860 U	ug/kg	860
2,4,5-Trichlorophenol	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
2-Chloronaphthalene	25 U	ug/l	25	930 U	ug/kg	930	860 U	ug/kg	860	860 U	ug/kg	860
2-Nitroaniline	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
Dimethylphthalate	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
Acenaphthylene	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
2,6-Dinitrotoluene	25 U	ug/l	25	930 U	ug/kg	930	860 U	ug/kg	860	860 U	ug/kg	860
3-Nitroaniline	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
Acenaphthene	25 U	ug/l	25	930 U	ug/kg	930	860 U	ug/kg	860	860 U	ug/kg	860
2,4-Dinitrophenol	25 U	ug/l	25	930 U	ug/kg	930	860 U	ug/kg	860	860 U	ug/kg	860
4-Nitrophenol	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
Dibenzofuran	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
2,4-Dinitrotoluene	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
Diethylphthalate	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
4-Chlorophenyl-phenylether	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
Fluorene	25 U	ug/l	25	930 U	ug/kg	930	860 U	ug/kg	860	860 U	ug/kg	860
4-Nitroaniline	25 U	ug/l	25	930 U	ug/kg	930	860 U	ug/kg	860	860 U	ug/kg	860
4,6-Dinitro-2-methylphenol	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
N-Nitrosodiphenylamine (1)	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
4-Bromophenyl-phenylether	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
Hexachlorobenzene	25 U	ug/l	25	930 U	ug/kg	930	860 U	ug/kg	860	860 U	ug/kg	860
Pentachlorophenol	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
Phenanthrene	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
Anthracene	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
Carbazole	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
Di-n-butylphthalate	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
Fluoranthene	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350
Pyrene	10 U	ug/l	10	380 U	ug/kg	380	350 U	ug/kg	350	350 U	ug/kg	350

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CEFBSS02R				CEFBSS03				CEFBSS04				CEFBSS05			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CEFBSS02R				CEFBSS03				CEFBSS04				CEFBSS05			
Collect Date:	20-JUL-93				19-JUL-93				19-JUL-93				20-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Butylbenzylphthalate	10	U	ug/l	10	380	U	ug/kg	380	350	U	ug/kg	350	350	U	ug/kg	350
3,3-Dichlorobenzidine	10	U	ug/l	10	380	U	ug/kg	380	350	U	ug/kg	350	350	U	ug/kg	350
Benzo (a) anthracene	10	U	ug/l	10	380	U	ug/kg	380	350	U	ug/kg	350	350	U	ug/kg	350
Chrysene	10	U	ug/l	10	380	U	ug/kg	380	350	U	ug/kg	350	350	U	ug/kg	350
bis(2-Ethylhexyl) phthalate	10	U	ug/l	10	380	U	ug/kg	380	350	U	ug/kg	350	350	U	ug/kg	350
Di-n-octylphthalate	10	U	ug/l	10	380	U	ug/kg	380	350	U	ug/kg	350	350	U	ug/kg	350
Benzo (b) fluoranthene	10	U	ug/l	10	380	U	ug/kg	380	350	U	ug/kg	350	350	U	ug/kg	350
Benzo (k) fluoranthene	10	U	ug/l	10	380	U	ug/kg	380	350	U	ug/kg	350	350	U	ug/kg	350
Benzo (a) pyrene	10	U	ug/l	10	380	U	ug/kg	380	350	U	ug/kg	350	350	U	ug/kg	350
Indeno (1,2,3-cd) pyrene	10	U	ug/l	10	380	U	ug/kg	380	350	U	ug/kg	350	350	U	ug/kg	350
Dibenz (a,h) anthracene	10	U	ug/l	10	380	U	ug/kg	380	350	U	ug/kg	350	350	U	ug/kg	350
Benzo (g,h,i) perylene	10	U	ug/l	10	380	U	ug/kg	380	350	U	ug/kg	350	350	U	ug/kg	350

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CEFBSS06			CEFBSS07			CEFBSS08			CEFBSS09		
Site	CECIL			CECIL			CECIL			CECIL		
Locator	CEFBSS06			CEFBSS07			CEFBSS08			CEFBSS09		
Collect Date:	20-JUL-93			20-JUL-93			20-JUL-93			20-JUL-93		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL
CLP SEMIVOLATILES 90-SOW												
Phenol	190 J	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	22 J	ug/kg	370
bis(2-Chloroethyl) ether	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
2-Chlorophenol	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
1,3-Dichlorobenzene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
1,4-Dichlorobenzene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
1,2-Dichlorobenzene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
2-Methylphenol	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
2,2-oxybis(1-Chloropropane)	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
4-Methylphenol	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
N-Nitroso-di-n-propylamine	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
Hexachloroethane	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
Nitrobenzene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
Isophorone	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
2-Nitrophenol	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
2,4-Dimethylphenol	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
bis(2-Chloroethoxy) methane	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
2,4-Dichlorophenol	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
1,2,4-Trichlorobenzene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
Naphthalene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
4-Chloroaniline	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
Hexachlorobutadiene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
4-Chloro-3-methylphenol	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
2-Methylnaphthalene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
Hexachlorocyclopentadiene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
2,4,6-Trichlorophenol	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
2,4,5-Trichlorophenol	860 U	ug/kg	860	870 U	ug/kg	870	870 U	ug/kg	870	900 U	ug/kg	900
2-Chloronaphthalene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
2-Nitroaniline	860 U	ug/kg	860	870 U	ug/kg	870	870 U	ug/kg	870	900 U	ug/kg	900
Dimethylphthalate	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
Acenaphthylene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
2,6-Dinitrotoluene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
3-Nitroaniline	860 U	ug/kg	860	870 U	ug/kg	870	870 U	ug/kg	870	900 U	ug/kg	900
Acenaphthene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
2,4-Dinitrophenol	860 U	ug/kg	860	870 U	ug/kg	870	870 U	ug/kg	870	900 U	ug/kg	900
4-Nitrophenol	860 U	ug/kg	860	870 U	ug/kg	870	870 U	ug/kg	870	900 U	ug/kg	900
Dibenzofuran	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
2,4-Dinitrotoluene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
Diethylphthalate	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
4-Chlorophenyl-phenylether	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
Fluorene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
4-Nitroaniline	860 U	ug/kg	860	870 U	ug/kg	870	870 U	ug/kg	870	900 U	ug/kg	900
4,6-Dinitro-2-methylphenol	860 U	ug/kg	860	870 U	ug/kg	870	870 U	ug/kg	870	900 U	ug/kg	900
N-Nitrosodiphenylamine (1)	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
4-Bromophenyl-phenylether	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
Hexachlorobenzene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
Pentachlorophenol	860 U	ug/kg	860	870 U	ug/kg	870	870 U	ug/kg	870	900 U	ug/kg	900
Phenanthrene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
Anthracene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
Carbazole	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
Di-n-butylphthalate	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
Fluoranthene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370
Pyrene	350 U	ug/kg	350	360 U	ug/kg	360	360 U	ug/kg	360	370 U	ug/kg	370

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CEFBSS06				CEFBSS07				CEFBSS08				CEFBSS09			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CEFBSS06				CEFBSS07				CEFBSS08				CEFBSS09			
Collect Date:	20-JUL-93				20-JUL-93				20-JUL-93				20-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Butylbenzylphthalate	350	U	ug/kg	350	360	U	ug/kg	360	360	U	ug/kg	360	370	U	ug/kg	370
3,3-Dichlorobenzidine	350	U	ug/kg	350	360	U	ug/kg	360	360	U	ug/kg	360	370	U	ug/kg	370
Benzo (a) anthracene	350	U	ug/kg	350	360	U	ug/kg	360	360	U	ug/kg	360	370	U	ug/kg	370
Chrysene	350	U	ug/kg	350	360	U	ug/kg	360	360	U	ug/kg	360	370	U	ug/kg	370
bis(2-Ethylhexyl) phthalate	350	U	ug/kg	350	48	J	ug/kg	360	52	J	ug/kg	360	370	U	ug/kg	370
Di-n-octylphthalate	350	U	ug/kg	350	360	U	ug/kg	360	360	U	ug/kg	360	370	U	ug/kg	370
Benzo (b) fluoranthene	350	U	ug/kg	350	360	U	ug/kg	360	360	U	ug/kg	360	370	U	ug/kg	370
Benzo (k) fluoranthene	350	U	ug/kg	350	360	U	ug/kg	360	360	U	ug/kg	360	370	U	ug/kg	370
Benzo (a) pyrene	350	U	ug/kg	350	360	U	ug/kg	360	360	U	ug/kg	360	370	U	ug/kg	370
Indeno (1,2,3-cd) pyrene	350	U	ug/kg	350	360	U	ug/kg	360	360	U	ug/kg	360	370	U	ug/kg	370
Dibenz (a,h) anthracene	350	U	ug/kg	350	360	U	ug/kg	360	360	U	ug/kg	360	370	U	ug/kg	370
Benzo (g,h,i) perylene	350	U	ug/kg	350	360	U	ug/kg	360	360	U	ug/kg	360	370	U	ug/kg	370

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CEFBSS09D			CEFBSS09MS			CEFBSS09MS			CEFBSS10		
Site	CECIL			CECIL			CECIL			CECIL		
Locator	CEFBSS09D			CEFBSS09MS			CEFBSS09MSD			CEFBSS10		
Collect Date:	20-JUL-93			20-JUL-93			20-JUL-93			20-JUL-93		
	VALUE QUAL	UNITS	DL	VALUE QUAL	UNITS	DL	VALUE QUAL	UNITS	DL	VALUE QUAL	UNITS	DL
CLP SEMIVOLATILES 90-SOW												
Phenol	21 J	ug/kg	380	2000	ug/kg	370	1800	ug/kg	370	360 UJ	ug/kg	360
bis(2-Chloroethyl) ether	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
2-Chlorophenol	380 U	ug/kg	380	1800	ug/kg	370	1700	ug/kg	370	360 UJ	ug/kg	360
1,3-Dichlorobenzene	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
1,4-Dichlorobenzene	380 U	ug/kg	380	920	ug/kg	370	820	ug/kg	370	360 UJ	ug/kg	360
1,2-Dichlorobenzene	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
2-Methylphenol	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
2,2-oxybis(1-Chloropropane)	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
4-Methylphenol	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
N-Nitroso-di-n-propylamine	380 U	ug/kg	380	1100	ug/kg	370	1100	ug/kg	370	360 UJ	ug/kg	360
Hexachloroethane	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
Nitrobenzene	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
Isophorone	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
2-Nitrophenol	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
2,4-Dimethylphenol	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
bis(2-Chloroethoxy) methane	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
2,4-Dichlorophenol	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
1,2,4-Trichlorobenzene	380 U	ug/kg	380	1000	ug/kg	370	1000	ug/kg	370	360 UJ	ug/kg	360
Naphthalene	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
4-Chloroaniline	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
Hexachlorobutadiene	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
4-Chloro-3-methylphenol	380 U	ug/kg	380	2000	ug/kg	370	2000	ug/kg	370	360 UJ	ug/kg	360
2-Methylnaphthalene	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
Hexachlorocyclopentadiene	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
2,4,6-Trichlorophenol	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
2,4,5-Trichlorophenol	920 U	ug/kg	920	900 U	ug/kg	900	900 U	ug/kg	900	870 UJ	ug/kg	870
2-Chloronaphthalene	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
2-Nitroaniline	920 U	ug/kg	920	900 U	ug/kg	900	900 U	ug/kg	900	870 UJ	ug/kg	870
Dimethylphthalate	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
Acenaphthylene	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
2,6-Dinitrotoluene	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
3-Nitroaniline	920 U	ug/kg	920	900 U	ug/kg	900	900 U	ug/kg	900	870 UJ	ug/kg	870
Acenaphthene	380 U	ug/kg	380	1400	ug/kg	370	1400	ug/kg	370	360 UJ	ug/kg	360
2,4-Dinitrophenol	920 U	ug/kg	920	900 U	ug/kg	900	900 U	ug/kg	900	870 UJ	ug/kg	870
4-Nitrophenol	920 U	ug/kg	920	1400	ug/kg	900	1300	ug/kg	900	870 UJ	ug/kg	870
Dibenzofuran	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
2,4-Dinitrotoluene	380 U	ug/kg	380	1400	ug/kg	370	1300	ug/kg	370	360 UJ	ug/kg	360
Diethylphthalate	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
4-Chlorophenyl-phenylether	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
Fluorene	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
4-Nitroaniline	920 U	ug/kg	920	900 U	ug/kg	900	900 U	ug/kg	900	870 UJ	ug/kg	870
4,6-Dinitro-2-methylphenol	920 U	ug/kg	920	900 U	ug/kg	900	900 U	ug/kg	900	870 UJ	ug/kg	870
N-Nitrosodiphenylamine (1)	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
4-Bromophenyl-phenylether	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
Hexachlorobenzene	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
Pentachlorophenol	920 U	ug/kg	920	2200	ug/kg	900	2200	ug/kg	900	870 UJ	ug/kg	870
Phenanthrene	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
Anthracene	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
Carbazole	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
Di-n-butylphthalate	380 U	ug/kg	380	28 J	ug/kg	370	30 J	ug/kg	370	360 UJ	ug/kg	360
Fluoranthene	380 U	ug/kg	380	370 U	ug/kg	370	370 U	ug/kg	370	360 UJ	ug/kg	360
Pyrene	380 U	ug/kg	380	1500	ug/kg	370	1300	ug/kg	370	360 UJ	ug/kg	360

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CEFBSS09D				CEFBSS09MS				CEFBSS09MS				CEFBSS10			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CEFBSS09D				CEFBSS09MS				CEFBSS09MSD				CEFBSS10			
Collect Date:	20-JUL-93				20-JUL-93				20-JUL-93				20-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Butylbenzylphthalate	380	U	ug/kg	380	370	U	ug/kg	370	370	U	ug/kg	370	360	UJ	ug/kg	360
3,3-Dichlorobenzidine	380	U	ug/kg	380	370	U	ug/kg	370	370	U	ug/kg	370	360	UJ	ug/kg	360
Benzo (a) anthracene	380	U	ug/kg	380	370	U	ug/kg	370	370	U	ug/kg	370	360	UJ	ug/kg	360
Chrysene	380	U	ug/kg	380	370	U	ug/kg	370	370	U	ug/kg	370	360	UJ	ug/kg	360
bis(2-Ethylhexyl) phthalate	380	U	ug/kg	380	23	J	ug/kg	370	51	J	ug/kg	370	360	UJ	ug/kg	360
Di-n-octylphthalate	380	U	ug/kg	380	370	U	ug/kg	370	370	U	ug/kg	370	360	UJ	ug/kg	360
Benzo (b) fluoranthene	380	U	ug/kg	380	370	U	ug/kg	370	370	U	ug/kg	370	360	UJ	ug/kg	360
Benzo (k) fluoranthene	380	U	ug/kg	380	370	U	ug/kg	370	370	U	ug/kg	370	360	UJ	ug/kg	360
Benzo (a) pyrene	380	U	ug/kg	380	370	U	ug/kg	370	370	U	ug/kg	370	360	UJ	ug/kg	360
Indeno (1,2,3-cd) pyrene	380	U	ug/kg	380	370	U	ug/kg	370	370	U	ug/kg	370	360	UJ	ug/kg	360
Dibenz (a,h) anthracene	380	U	ug/kg	380	370	U	ug/kg	370	370	U	ug/kg	370	360	UJ	ug/kg	360
Benzo (g,h,i) perylene	380	U	ug/kg	380	370	U	ug/kg	370	370	U	ug/kg	370	360	UJ	ug/kg	360

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CEFBSS11				CEFBSS12				CEFBSS13				CEFBSS14			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CEFBSS11				CEFBSS12				CEFBSS13				CEFBSS14			
Collect Date:	20-JUL-93				20-JUL-93				20-JUL-93				20-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP SEMIVOLATILES 90-SOW																
Phenol	350	U	ug/kg	350	350	U	ug/kg	350	23	J	ug/kg	360	350	U	ug/kg	350
bis(2-Chloroethyl) ether	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
2-Chlorophenol	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
1,3-Dichlorobenzene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
1,4-Dichlorobenzene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
1,2-Dichlorobenzene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
2-Methylphenol	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
2,2-oxybis(1-Chloropropane)	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
4-Methylphenol	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
N-Nitroso-di-n-propylamine	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Hexachloroethane	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Nitrobenzene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Isophorone	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
2-Nitrophenol	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
2,4-Dimethylphenol	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
bis(2-Chloroethoxy) methane	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
2,4-Dichlorophenol	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
1,2,4-Trichlorobenzene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Naphthalene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
4-Chloroaniline	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Hexachlorobutadiene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
4-Chloro-3-methylphenol	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
2-Methylnaphthalene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Hexachlorocyclopentadiene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
2,4,6-Trichlorophenol	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
2,4,5-Trichlorophenol	860	U	ug/kg	860	840	U	ug/kg	840	880	U	ug/kg	880	840	U	ug/kg	840
2-Chloronaphthalene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
2-Nitroaniline	860	U	ug/kg	860	840	U	ug/kg	840	880	U	ug/kg	880	840	U	ug/kg	840
Dimethylphthalate	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Acenaphthylene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
2,6-Dinitrotoluene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
3-Nitroaniline	860	U	ug/kg	860	840	U	ug/kg	840	880	U	ug/kg	880	840	U	ug/kg	840
Acenaphthene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
2,4-Dinitrophenol	860	U	ug/kg	860	840	U	ug/kg	840	880	U	ug/kg	880	840	U	ug/kg	840
4-Nitrophenol	860	U	ug/kg	860	840	U	ug/kg	840	880	U	ug/kg	880	840	U	ug/kg	840
Dibenzofuran	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
2,4-Dinitrotoluene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Diethylphthalate	19	J	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
4-Chlorophenyl-phenylether	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Fluorene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
4-Nitroaniline	860	U	ug/kg	860	840	U	ug/kg	840	880	U	ug/kg	880	840	U	ug/kg	840
4,6-Dinitro-2-methylphenol	860	U	ug/kg	860	840	U	ug/kg	840	880	U	ug/kg	880	840	U	ug/kg	840
N-Nitrosodiphenylamine (1)	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
4-Bromophenyl-phenylether	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Hexachlorobenzene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Pentachlorophenol	860	U	ug/kg	860	840	U	ug/kg	840	880	U	ug/kg	880	840	U	ug/kg	840
Phenanthrene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Anthracene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Carbazole	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Di-n-butylphthalate	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Fluoranthene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Pyrene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CEFBSS11				CEFBSS12				CEFBSS13				CEFBSS14			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CEFBSS11				CEFBSS12				CEFBSS13				CEFBSS14			
Collect Date:	20-JUL-93				20-JUL-93				20-JUL-93				20-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Butylbenzylphthalate	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
3,3-Dichlorobenzidine	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Benzo (a) anthracene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Chrysene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
bis(2-Ethylhexyl) phthalate	350	U	ug/kg	350	17	J	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Di-n-octylphthalate	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Benzo (b) fluoranthene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Benzo (k) fluoranthene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Benzo (a) pyrene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Indeno (1,2,3-cd) pyrene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Dibenz (a,h) anthracene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350
Benzo (g,h,i) perylene	350	U	ug/kg	350	350	U	ug/kg	350	360	U	ug/kg	360	350	U	ug/kg	350

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CEFBSS15			
Site	CECIL			
Locator	CEFBSS15			
Collect Date:	20-JUL-93			
	VALUE	QUAL	UNITS	DL
LP SEMIVOLATILES 90-SOW				
Phenol	370	U	ug/kg	370
bis(2-Chloroethyl) ether	370	U	ug/kg	370
2-Chlorophenol	370	U	ug/kg	370
1,3-Dichlorobenzene	370	U	ug/kg	370
1,4-Dichlorobenzene	370	U	ug/kg	370
1,2-Dichlorobenzene	370	U	ug/kg	370
2-Methylphenol	370	U	ug/kg	370
2,2-oxybis(1-Chloropropane)	370	U	ug/kg	370
4-Methylphenol	370	U	ug/kg	370
N-Nitroso-di-n-propylamine	370	U	ug/kg	370
Hexachloroethane	370	U	ug/kg	370
Nitrobenzene	370	U	ug/kg	370
Isophorone	370	U	ug/kg	370
2-Nitrophenol	370	U	ug/kg	370
2,4-Dimethylphenol	370	U	ug/kg	370
bis(2-Chloroethoxy) methane	370	U	ug/kg	370
2,4-Dichlorophenol	370	U	ug/kg	370
1,2,4-Trichlorobenzene	370	U	ug/kg	370
Naphthalene	370	U	ug/kg	370
4-Chloroaniline	370	U	ug/kg	370
Hexachlorobutadiene	370	U	ug/kg	370
4-Chloro-3-methylphenol	370	U	ug/kg	370
2-Methylnaphthalene	370	U	ug/kg	370
Hexachlorocyclopentadiene	370	U	ug/kg	370
2,4,6-Trichlorophenol	900	U	ug/kg	900
2,4,5-Trichlorophenol	370	U	ug/kg	370
2-Chloronaphthalene	900	U	ug/kg	900
2-Nitroaniline	370	U	ug/kg	370
Dimethylphthalate	370	U	ug/kg	370
Acenaphthylene	370	U	ug/kg	370
2,6-Dinitrotoluene	900	U	ug/kg	900
3-Nitroaniline	370	U	ug/kg	370
Acenaphthene	900	U	ug/kg	900
2,4-Dinitrophenol	900	U	ug/kg	900
4-Nitrophenol	370	U	ug/kg	370
Dibenzofuran	370	U	ug/kg	370
2,4-Dinitrotoluene	370	U	ug/kg	370
Diethylphthalate	370	U	ug/kg	370
4-Chlorophenyl-phenylether	370	U	ug/kg	370
Fluorene	900	U	ug/kg	900
4-Nitroaniline	900	U	ug/kg	900
4,6-Dinitro-2-methylphenol	370	U	ug/kg	370
N-Nitrosodiphenylamine (1)	370	U	ug/kg	370
4-Bromophenyl-phenylether	370	U	ug/kg	370
Hexachlorobenzene	900	U	ug/kg	900
Pentachlorophenol	370	U	ug/kg	370
Phenanthrene	370	U	ug/kg	370
Anthracene	370	U	ug/kg	370
Carbazole	370	U	ug/kg	370
Di-n-butylphthalate	370	U	ug/kg	370
Fluoranthene	370	U	ug/kg	370
Pyrene				

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CEFBSS15			
Site	CECIL			
Locator	CEFBSS15			
Collect Date:	20-JUL-93			
	VALUE	QUAL	UNITS	DL
Butylbenzylphthalate	370	U	ug/kg	370
3,3-Dichlorobenzidine	370	U	ug/kg	370
Benzo (a) anthracene	370	U	ug/kg	370
Chrysene	370	U	ug/kg	370
bis(2-Ethylhexyl) phthalate	370	U	ug/kg	370
Di-n-octylphthalate	370	U	ug/kg	370
Benzo (b) fluoranthene	370	U	ug/kg	370
Benzo (k) fluoranthene	370	U	ug/kg	370
Benzo (a) pyrene	370	U	ug/kg	370
Indeno (1,2,3-cd) pyrene	370	U	ug/kg	370
Dibenz (a,h) anthracene	370	U	ug/kg	370
Benzo (g,h,i) perylene	370	U	ug/kg	370

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- PESTICIDES AND PCBS

Lab Sample Number:	CEFBSS01				CEFBSS01R				CEFBSS02				CEFBSS02D			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CEFBSS01				CEFBSS01R				CEFBSS02				CEFBSS02D			
Collect Date:	19-JUL-93				19-JUL-93				19-JUL-93				19-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP PESTICIDES/PCBS 90-SOW																
alpha-BHC	1.8	U	ug/kg	1.8	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	2.1	U	ug/kg	2.1
beta-BHC	1.8	U	ug/kg	1.8	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	2.1	U	ug/kg	2.1
delta-BHC	1.8	U	ug/kg	1.8	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	2.1	U	ug/kg	2.1
gamma-BHC (Lindane)	1.8	U	ug/kg	1.8	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	2.1	U	ug/kg	2.1
Heptachlor	1.8	U	ug/kg	1.8	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	2.1	U	ug/kg	2.1
Aldrin	1.8	U	ug/kg	1.8	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	2.1	U	ug/kg	2.1
Heptachlor epoxide	1.8	U	ug/kg	1.8	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	2.1	U	ug/kg	2.1
Endosulfan I	1.8	U	ug/kg	1.8	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	2.1	U	ug/kg	2.1
Dieldrin	3.6	U	ug/kg	3.6	.1	U	ug/l	.1	3.7	U	ug/kg	3.7	4.1	U	ug/kg	4.1
4,4-DDE	3.6	U	ug/kg	3.6	.1	U	ug/l	.1	3.7	U	ug/kg	3.7	4.1	U	ug/kg	4.1
Endrin	3.6	U	ug/kg	3.6	.1	U	ug/l	.1	3.7	U	ug/kg	3.7	.32	J	ug/kg	4
Endosulfan II	3.6	U	ug/kg	3.6	.1	U	ug/l	.1	3.7	U	ug/kg	3.7	4.1	U	ug/kg	4.1
4,4-DDD	3.6	U	ug/kg	3.6	.1	U	ug/l	.1	3.7	U	ug/kg	3.7	4.1	U	ug/kg	4.1
Endosulfan sulfate	3.6	U	ug/kg	3.6	.1	U	ug/l	.1	3.7	U	ug/kg	3.7	4.1	U	ug/kg	4.1
4,4-DDT	3.6	U	ug/kg	3.6	.1	U	ug/l	.1	3.7	U	ug/kg	3.7	4.1	U	ug/kg	4.1
Methoxychlor	18	U	ug/kg	18	.5	U	ug/l	.5	1	U	ug/kg	1	21	U	ug/kg	21
Endrin ketone	3.6	U	ug/kg	3.6	.1	U	ug/l	.1	3.7	U	ug/kg	3.7	4.1	U	ug/kg	4.1
Endrin aldehyde	3.6	U	ug/kg	3.6	.1	U	ug/l	.1	3.7	U	ug/kg	3.7	4.1	U	ug/kg	4.1
alpha-Chlordane	1.8	U	ug/kg	1.8	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	2.1	U	ug/kg	2.1
gamma-Chlordane	1.8	U	ug/kg	1.8	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	2.1	U	ug/kg	2.1
Toxaphene	180	U	ug/kg	180	5	U	ug/l	5	190	U	ug/kg	190	210	U	ug/kg	210
Aroclor-1016	36	U	ug/kg	36	1	U	ug/l	1	37	U	ug/kg	37	41	U	ug/kg	41
Aroclor-1221	72	U	ug/kg	72	2	U	ug/l	2	74	U	ug/kg	74	82	U	ug/kg	82
Aroclor-1232	36	U	ug/kg	36	1	U	ug/l	1	37	U	ug/kg	37	41	U	ug/kg	41
Aroclor-1242	36	U	ug/kg	36	1	U	ug/l	1	37	U	ug/kg	37	41	U	ug/kg	41
Aroclor-1248	36	U	ug/kg	36	1	U	ug/l	1	37	U	ug/kg	37	41	U	ug/kg	41
Aroclor-1254	36	U	ug/kg	36	1	U	ug/l	1	37	U	ug/kg	37	41	U	ug/kg	41
Aroclor-1260	36	U	ug/kg	36	1	U	ug/l	1	37	U	ug/kg	37	41	U	ug/kg	41

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- PESTICIDES AND PCBS

Lab Sample Number:	CEFBSS02R				CEFBSS03				CEFBSS04				CEFBSS05			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CEFBSS02R				CEFBSS03				CEFBSS04				CEFBSS05			
Collect Date:	20-JUL-93				19-JUL-93				19-JUL-93				20-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP PESTICIDES/PCBS 90-SOW																
alpha-BHC	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
beta-BHC	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
delta-BHC	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
gamma-BHC (Lindane)	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
Heptachlor	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
Aldrin	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
Heptachlor epoxide	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
Endosulfan I	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
Dieldrin	.1	U	ug/l	.1	3.9	U	ug/kg	3.9	3.6	U	ug/kg	3.6	3.6	U	ug/kg	3.6
4,4-DDE	.1	U	ug/l	.1	3.9	U	ug/kg	3.9	3.6	U	ug/kg	3.6	3.6	U	ug/kg	3.6
Endrin	.1	U	ug/l	.1	.7	U	ug/kg	.7	3.6	U	ug/kg	3.6	3.6	U	ug/kg	3.6
Endosulfan II	.1	U	ug/l	.1	3.9	U	ug/kg	3.9	3.6	U	ug/kg	3.6	3.6	U	ug/kg	3.6
4,4-DDD	.1	U	ug/l	.1	3.9	U	ug/kg	3.9	3.6	U	ug/kg	3.6	3.6	U	ug/kg	3.6
Endosulfan sulfate	.1	U	ug/l	.1	3.9	U	ug/kg	3.9	3.6	U	ug/kg	3.6	3.6	U	ug/kg	3.6
4,4-DDT	.1	U	ug/l	.1	3.9	U	ug/kg	3.9	3.6	U	ug/kg	3.6	3.6	U	ug/kg	3.6
Methoxychlor	.5	U	ug/l	.5	19	U	ug/kg	19	2	U	ug/kg	2	18	U	ug/kg	18
Endrin ketone	.1	U	ug/l	.1	3.9	U	ug/kg	3.9	3.6	U	ug/kg	3.6	3.6	U	ug/kg	3.6
Endrin aldehyde	.1	U	ug/l	.1	.45		ug/kg	4	3.6	U	ug/kg	3.6	3.6	U	ug/kg	3.6
alpha-Chlordane	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
gamma-Chlordane	.05	U	ug/l	.05	1.9	U	ug/kg	1.9	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
Toxaphene	5	U	ug/l	5	190	U	ug/kg	190	180	U	ug/kg	180	180	U	ug/kg	180
Aroclor-1016	1	U	ug/l	1	39	U	ug/kg	39	36	U	ug/kg	36	36	U	ug/kg	36
Aroclor-1221	2	U	ug/l	2	78	U	ug/kg	78	72	U	ug/kg	72	72	U	ug/kg	72
Aroclor-1232	1	U	ug/l	1	39	U	ug/kg	39	36	U	ug/kg	36	36	U	ug/kg	36
Aroclor-1242	1	U	ug/l	1	39	U	ug/kg	39	36	U	ug/kg	36	36	U	ug/kg	36
Aroclor-1248	1	U	ug/l	1	39	U	ug/kg	39	36	U	ug/kg	36	36	U	ug/kg	36
Aroclor-1254	1	U	ug/l	1	39	U	ug/kg	39	36	U	ug/kg	36	36	U	ug/kg	36
Aroclor-1260	1	U	ug/l	1	39	U	ug/kg	39	36	U	ug/kg	36	36	U	ug/kg	36

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- PESTICIDES AND PCBS

Lab Sample Number:	CEFBSS06			CEFBSS07			CEFBSS08			CEFBSS09		
Site	CECIL			CECIL			CECIL			CECIL		
Locator	CEFBSS06			CEFBSS07			CEFBSS08			CEFBSS09		
Collect Date:	20-JUL-93			20-JUL-93			20-JUL-93			20-JUL-93		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL
CLP PESTICIDES/PCBS 90-SOW												
alpha-BHC	1.8	U ug/kg	1.8	1.8	U ug/kg	1.8	1.8	U ug/kg	1.8	1.9	UJ ug/kg	1.9
beta-BHC	1.8	U ug/kg	1.8	1.8	U ug/kg	1.8	1.8	U ug/kg	1.8	1.9	UJ ug/kg	1.9
delta-BHC	1.8	U ug/kg	1.8	1.8	U ug/kg	1.8	1.8	U ug/kg	1.8	1.9	UJ ug/kg	1.9
gamma-BHC (Lindane)	1.8	U ug/kg	1.8	1.8	U ug/kg	1.8	1.8	U ug/kg	1.8	1.9	UJ ug/kg	1.9
Heptachlor	1.8	U ug/kg	1.8	1.8	U ug/kg	1.8	1.8	U ug/kg	1.8	1.9	UJ ug/kg	1.9
Aldrin	1.8	U ug/kg	1.8	1.8	U ug/kg	1.8	1.8	U ug/kg	1.8	1.9	UJ ug/kg	1.9
Heptachlor epoxide	1.8	U ug/kg	1.8	1.8	U ug/kg	1.8	1.8	U ug/kg	1.8	1.9	UJ ug/kg	1.9
Endosulfan I	3.6	U ug/kg	3.6	3.6	U ug/kg	3.6	3.6	U ug/kg	3.6	3.7	UJ ug/kg	3.7
Dieldrin	3.6	U ug/kg	3.6	3.6	U ug/kg	3.6	3.6	U ug/kg	3.6	3.7	UJ ug/kg	3.7
4,4-DDE	3.6	U ug/kg	3.6	3.6	U ug/kg	3.6	3.6	U ug/kg	3.6	.97	J ug/kg	4
Endrin	3.6	U ug/kg	3.6	3.6	U ug/kg	3.6	3.6	U ug/kg	3.6	3.7	UJ ug/kg	3.7
Endosulfan II	3.6	U ug/kg	3.6	3.6	U ug/kg	3.6	3.6	U ug/kg	3.6	3.7	UJ ug/kg	3.7
4,4-DDD	3.6	U ug/kg	3.6	3.6	U ug/kg	3.6	3.6	U ug/kg	3.6	3.7	UJ ug/kg	3.7
Endosulfan sulfate	3.6	U ug/kg	3.6	3.6	U ug/kg	3.6	3.6	U ug/kg	3.6	3.7	UJ ug/kg	3.7
4,4-DDT	18	U ug/kg	18	18	U ug/kg	18	18	U ug/kg	18	19	UJ ug/kg	19
Methoxychlor	3.6	U ug/kg	3.6	3.6	U ug/kg	3.6	3.6	U ug/kg	3.6	3.7	UJ ug/kg	3.7
Endrin ketone	.3	U ug/kg	.3	.4	U ug/kg	.4	3.6	U ug/kg	3.6	3.7	UJ ug/kg	3.7
Endrin aldehyde	1.8	U ug/kg	1.8	1.8	U ug/kg	1.8	1.8	U ug/kg	1.8	1.9	UJ ug/kg	1.9
alpha-Chlordane	1.8	U ug/kg	1.8	1.8	U ug/kg	1.8	1.8	U ug/kg	1.8	1.9	UJ ug/kg	1.9
gamma-Chlordane	180	U ug/kg	180	180	U ug/kg	180	180	U ug/kg	180	190	UJ ug/kg	190
Toxaphene	36	U ug/kg	36	36	U ug/kg	36	36	U ug/kg	36	37	UJ ug/kg	37
Aroclor-1016	72	U ug/kg	72	72	U ug/kg	72	72	U ug/kg	72	75	UJ ug/kg	75
Aroclor-1221	36	U ug/kg	36	36	U ug/kg	36	36	U ug/kg	36	37	UJ ug/kg	37
Aroclor-1232	36	U ug/kg	36	36	U ug/kg	36	36	U ug/kg	36	37	UJ ug/kg	37
Aroclor-1242	36	U ug/kg	36	36	U ug/kg	36	36	U ug/kg	36	37	UJ ug/kg	37
Aroclor-1248	36	U ug/kg	36	36	U ug/kg	36	36	U ug/kg	36	37	UJ ug/kg	37
Aroclor-1254	36	U ug/kg	36	36	U ug/kg	36	36	U ug/kg	36	37	UJ ug/kg	37
Aroclor-1260	36	U ug/kg	36	36	U ug/kg	36	36	U ug/kg	36	37	UJ ug/kg	37

U = NOT DETECTED J = ESTIMATED VALUE
UJ = [illegible]ORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R [illegible]LT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- PESTICIDES AND PCBS

Lab Sample Number:	CEFBSS09D			CEFBSS09MS			CEFBSS09MS			CEFBSS10		
Site	CECIL			CECIL			CECIL			CECIL		
Locator	CEFBSS09D			CEFBSS09MS			CEFBSS09MSD			CEFBSS10		
Collect Date:	20-JUL-93			20-JUL-93			20-JUL-93			20-JUL-93		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL
CLP PESTICIDES/PCBS 90-SOW												
alpha-BHC	1.9	U ug/kg	1.9	1.9	U ug/kg	1.9	1.9	U ug/kg	1.9	1.8	U ug/kg	1.8
beta-BHC	1.9	U ug/kg	1.9	1.9	U ug/kg	1.9	1.9	U ug/kg	1.9	1.8	U ug/kg	1.8
delta-BHC	1.9	U ug/kg	1.9	1.9	U ug/kg	1.9	1.9	U ug/kg	1.9	1.8	U ug/kg	1.8
gamma-BHC (Lindane)	1.9	U ug/kg	1.9	18	ug/kg	2	18	ug/kg	2	1.8	U ug/kg	1.8
Heptachlor	1.9	U ug/kg	1.9	15	ug/kg	2	13	ug/kg	2	1.8	U ug/kg	1.8
Aldrin	1.9	U ug/kg	1.9	17	ug/kg	2	17	ug/kg	2	1.8	U ug/kg	1.8
Heptachlor epoxide	1.9	U ug/kg	1.9	1.9	U ug/kg	1.9	1.9	U ug/kg	1.9	1.8	U ug/kg	1.8
Endosulfan I	1.9	U ug/kg	1.9	1.9	U ug/kg	1.9	1.9	U ug/kg	1.9	1.8	U ug/kg	1.8
Dieldrin	3.8	U ug/kg	3.8	34	ug/kg	4	35	ug/kg	4	3.6	U ug/kg	3.6
4,4-DDE	3.8	U ug/kg	3.8	3.7	U ug/kg	3.7	3.7	U ug/kg	3.7	.51	ug/kg	4
Endrin	3.8	U ug/kg	3.8	33	ug/kg	4	34	ug/kg	4	3.6	U ug/kg	3.6
Endosulfan II	3.8	U ug/kg	3.8	3.7	U ug/kg	3.7	3.7	U ug/kg	3.7	3.6	U ug/kg	3.6
4,4-DDD	3.8	U ug/kg	3.8	.74	ug/kg	4	.59	ug/kg	4	3.6	U ug/kg	3.6
Endosulfan sulfate	3.8	U ug/kg	3.8	3.7	U ug/kg	3.7	3.7	U ug/kg	3.7	3.6	U ug/kg	3.6
4,4-DDT	3.8	U ug/kg	3.8	30	ug/kg	4	31	ug/kg	4	3.6	U ug/kg	3.6
Methoxychlor	19	U ug/kg	19	19	U ug/kg	19	19	U ug/kg	19	18	U ug/kg	18
Endrin ketone	3.8	U ug/kg	3.8	3.7	U ug/kg	3.7	3.7	U ug/kg	3.7	3.6	U ug/kg	3.6
Endrin aldehyde	3.8	U ug/kg	3.8	3.7	U ug/kg	3.7	3.7	U ug/kg	3.7	3.6	U ug/kg	3.6
alpha-Chlordane	1.9	U ug/kg	1.9	1.9	U ug/kg	1.9	1.9	U ug/kg	1.9	1.8	U ug/kg	1.8
gamma-Chlordane	1.9	U ug/kg	1.9	1.9	U ug/kg	1.9	1.9	U ug/kg	1.9	1.8	U ug/kg	1.8
Toxaphene	190	U ug/kg	190	190	U ug/kg	190	190	U ug/kg	190	180	U ug/kg	180
Aroclor-1016	38	U ug/kg	38	37	U ug/kg	37	37	U ug/kg	37	36	U ug/kg	36
Aroclor-1221	77	U ug/kg	77	75	U ug/kg	75	75	U ug/kg	75	72	U ug/kg	72
Aroclor-1232	38	U ug/kg	38	37	U ug/kg	37	37	U ug/kg	37	36	U ug/kg	36
Aroclor-1242	38	U ug/kg	38	37	U ug/kg	37	37	U ug/kg	37	36	U ug/kg	36
Aroclor-1248	38	U ug/kg	38	37	U ug/kg	37	37	U ug/kg	37	36	U ug/kg	36
Aroclor-1254	38	U ug/kg	38	37	U ug/kg	37	37	U ug/kg	37	36	U ug/kg	36
Aroclor-1260	38	U ug/kg	38	37	U ug/kg	37	37	U ug/kg	37	36	U ug/kg	36

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- PESTICIDES AND PCBS

Lab Sample Number:	CEFBSS11				CEFBSS12				CEFBSS13				CEFBSS14			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CEFBSS11				CEFBSS12				CEFBSS13				CEFBSS14			
Collect Date:	20-JUL-93				20-JUL-93				20-JUL-93				20-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP PESTICIDES/PCBS 90-SOW																
alpha-BHC	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
beta-BHC	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
delta-BHC	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
gamma-BHC (Lindane)	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
Heptachlor	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
Aldrin	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
Heptachlor epoxide	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
Endosulfan I	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
Dieldrin	3.6	U	ug/kg	3.6	3.5	U	ug/kg	3.5	3.7	U	ug/kg	3.7	3.5	U	ug/kg	3.5
4,4-DDE	.21	J	ug/kg	4	3.5	U	ug/kg	3.5	3.7	U	ug/kg	3.7	.26	J	ug/kg	3
Endrin	3.6	U	ug/kg	3.6	3.5	U	ug/kg	3.5	3.7	U	ug/kg	3.7	3.5	U	ug/kg	3.5
Endosulfan II	3.6	U	ug/kg	3.6	3.5	U	ug/kg	3.5	3.7	U	ug/kg	3.7	3.5	U	ug/kg	3.5
4,4-DDD	3.6	U	ug/kg	3.6	3.5	U	ug/kg	3.5	3.7	U	ug/kg	3.7	3.5	U	ug/kg	3.5
Endosulfan sulfate	3.6	U	ug/kg	3.6	3.5	U	ug/kg	3.5	3.7	U	ug/kg	3.7	3.5	U	ug/kg	3.5
4,4-DDT	3.6	U	ug/kg	3.6	3.5	U	ug/kg	3.5	3.7	U	ug/kg	3.7	3.5	U	ug/kg	3.5
Methoxychlor	18	U	ug/kg	18	18	U	ug/kg	18	18	U	ug/kg	18	18	U	ug/kg	18
Endrin ketone	3.6	U	ug/kg	3.6	3.5	U	ug/kg	3.5	3.7	U	ug/kg	3.7	3.5	U	ug/kg	3.5
Endrin aldehyde	.6	U	ug/kg	.6	3.5	U	ug/kg	3.5	.7	U	ug/kg	.7	3.5	U	ug/kg	3.5
alpha-Chlordane	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
gamma-Chlordane	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
Toxaphene	180	U	ug/kg	180	180	U	ug/kg	180	180	U	ug/kg	180	180	U	ug/kg	180
Aroclor-1016	36	U	ug/kg	36	35	U	ug/kg	35	37	U	ug/kg	37	35	U	ug/kg	35
Aroclor-1221	72	U	ug/kg	72	70	U	ug/kg	70	73	U	ug/kg	73	70	U	ug/kg	70
Aroclor-1232	36	U	ug/kg	36	35	U	ug/kg	35	37	U	ug/kg	37	35	U	ug/kg	35
Aroclor-1242	36	U	ug/kg	36	35	U	ug/kg	35	37	U	ug/kg	37	35	U	ug/kg	35
Aroclor-1248	36	U	ug/kg	36	35	U	ug/kg	35	37	U	ug/kg	37	35	U	ug/kg	35
Aroclor-1254	36	U	ug/kg	36	35	U	ug/kg	35	37	U	ug/kg	37	35	U	ug/kg	35
Aroclor-1260	36	U	ug/kg	36	35	U	ug/kg	35	37	U	ug/kg	37	35	U	ug/kg	35

U = NOT DETECTED J = ESTIMATED VALUE
U PORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R ULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- PESTICIDES AND PCBS

Lab Sample Number:		CEFBSS15		
Site		CECIL		
Locator		CEFBSS15		
Collect Date:		20-JUL-93		
	VALUE	QUAL	UNITS	DL
CLP PESTICIDES/PCBS 90-SOW				
alpha-BHC	1.9	U	ug/kg	1.9
beta-BHC	1.9	U	ug/kg	1.9
delta-BHC	1.9	U	ug/kg	1.9
gamma-BHC (Lindane)	1.9	U	ug/kg	1.9
Heptachlor	1.9	U	ug/kg	1.9
Aldrin	1.9	U	ug/kg	1.9
Heptachlor epoxide	1.9	U	ug/kg	1.9
Endosulfan I	1.9	U	ug/kg	1.9
Dieldrin	3.7	U	ug/kg	3.7
4,4-DDE	3.7	U	ug/kg	3.7
Endrin	3.7	U	ug/kg	3.7
Endosulfan II	.33	J	ug/kg	4
4,4-DDD	3.7	U	ug/kg	3.7
Endosulfan sulfate	3.7	U	ug/kg	3.7
4,4-DDT	3.7	U	ug/kg	3.7
Methoxychlor	19	U	ug/kg	19
Endrin ketone	3.7	U	ug/kg	3.7
Endrin aldehyde	3.7	U	ug/kg	3.7
alpha-Chlordane	1.9	U	ug/kg	1.9
gamma-Chlordane	1.9	U	ug/kg	1.9
Toxaphene	190	U	ug/kg	190
Aroclor-1016	37	U	ug/kg	37
Aroclor-1221	75	U	ug/kg	75
Aroclor-1232	37	U	ug/kg	37
Aroclor-1242	37	U	ug/kg	37
Aroclor-1248	37	U	ug/kg	37
Aroclor-1254	37	U	ug/kg	37
Aroclor-1260	37	U	ug/kg	37

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- METALS AND CYANIDE

Lab Sample Number:	E6969				E6967				E6970				E6971			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFEBSS01				CFEBSS01R				CFEBSS02				CFEBSS02D			
Collect Date:	19-JUL-93				19-JUL-93				19-JUL-93				19-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP METALS AND CYANIDE																
Aluminum	4720		mg/kg	40	63.1	U	ug/l	200	18500		mg/kg	40	23600		mg/kg	40
Antimony	3.2	U	mg/kg	12	15	U	ug/l	60	3.3	U	mg/kg	12	3.7	U	mg/kg	12
Arsenic	.22	UJ	mg/kg	2	1	UJ	ug/l	10	1.4	J	mg/kg	2	.25	UJ	mg/kg	2
Barium	5.4	J	mg/kg	40	2.9	U	ug/l	200	13.4	J	mg/kg	40	19.3	J	mg/kg	40
Beryllium	.21	U	mg/kg	1	1.4	U	ug/l	5	.22	U	mg/kg	1	.25	U	mg/kg	1
Cadmium	.86	U	mg/kg	1	4	U	ug/l	5	.89	U	mg/kg	1	.99	U	mg/kg	1
Calcium	119	U	mg/kg	1000	357	U	ug/l	5000	167	U	mg/kg	1000	111	U	mg/kg	1000
Chromium	5.9		mg/kg	2	8	U	ug/l	10	18.4		mg/kg	2	23.6		mg/kg	2
Cobalt	1.3	U	mg/kg	10	6	U	ug/l	50	1.3	U	mg/kg	10	1.5	U	mg/kg	10
Copper	.93	U	mg/kg	5	5	U	ug/l	25	.76	U	mg/kg	5	.95	U	mg/kg	5
Iron	716		mg/kg	20	31.3	U	ug/l	100	6090		mg/kg	20	7440		mg/kg	20
Lead	4.8		mg/kg	1	3.5	U	ug/l	5	10.3		mg/kg	1	10.6		mg/kg	1
Magnesium	123	J	mg/kg	1000	83.9	U	ug/l	5000	326	J	mg/kg	1000	425	J	mg/kg	1000
Manganese	8.8		mg/kg	3	4.1	U	ug/l	15	9		mg/kg	3	10.1		mg/kg	3
Mercury	.11	U	mg/kg	.1	.2	U	ug/l	.2	.12	U	mg/kg	.1	.13	U	mg/kg	.1
Nickel	2	J	mg/kg	8	7	U	ug/l	40	5.2	J	mg/kg	8	6.1	J	mg/kg	8
Potassium	69.7	J	mg/kg	1000	125	U	ug/l	5000	199	J	mg/kg	1000	255	J	mg/kg	1000
Selenium	.22	U	mg/kg	1	1	U	ug/l	5	.22	U	mg/kg	1	.25	U	mg/kg	1
Silver	.86	U	mg/kg	2	4	U	ug/l	10	.89	U	mg/kg	2	.99	U	mg/kg	2
Sodium	159	U	mg/kg	1000	913	U	ug/l	5000	241	U	mg/kg	1000	219	U	mg/kg	1000
Thallium	.44	U	mg/kg	2	2	U	ug/l	10	.43	U	mg/kg	2	.5	U	mg/kg	2
Vanadium	4.9	J	mg/kg	10	4.1	J	ug/l	50	20.2		mg/kg	10	23.8		mg/kg	10
Zinc	4.9	U	mg/kg	4	38.4	U	ug/l	20	20.2	U	mg/kg	4	10.1	U	mg/kg	4
Cyanide	.54	U	mg/kg	1	5	U	ug/l	10	.49	U	mg/kg	1	.6	U	mg/kg	1

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- METALS AND CYANIDE

Lab Sample Number:	CEFBSS02R				E6972				E6973				E7214			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CEFBSS02R				CFEBSS03				CFEBSS04				CFEBSS05			
Collect Date:	20-JUL-93				19-JUL-93				19-JUL-93				20-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP METALS AND CYANIDE																
Aluminum	116	U	ug/l	200	24000		mg/kg	40	8400		mg/kg	40	680		mg/kg	40
Antimony	15	U	ug/l	60	3.4	U	mg/kg	12	3.2	U	mg/kg	12	3.2	U	mg/kg	12
Arsenic	1	U	ug/l	10	2.2	J	mg/kg	2	.86	UJ	mg/kg	2	.31	UJ	mg/kg	2
Barium	1	U	ug/l	200	13.4	J	mg/kg	40	6.8	J	mg/kg	40	2.4	J	mg/kg	40
Beryllium	1	U	ug/l	5	.23	U	mg/kg	1	.22	U	mg/kg	1	.21	U	mg/kg	1
Cadmium	4	U	ug/l	5	.91	U	mg/kg	1	.86	U	mg/kg	1	.86	U	mg/kg	1
Calcium	136	U	ug/l	5000	88.4	U	mg/kg	1000	67.7	U	mg/kg	1000	93.5	U	mg/kg	1000
Chromium	8	U	ug/l	10	24.9		mg/kg	2	10.6		mg/kg	2	1.7	U	mg/kg	2
Cobalt	6	U	ug/l	50	1.4	U	mg/kg	10	1.3	U	mg/kg	10	1.3	U	mg/kg	10
Copper	2	U	ug/l	25	.5	U	mg/kg	5	.43	U	mg/kg	5	.43	U	mg/kg	5
Iron	44	U	ug/l	100	7140		mg/kg	20	1500		mg/kg	20	252		mg/kg	20
Lead	1	U	ug/l	5	8.3		mg/kg	1	7.6		mg/kg	1	2.4		mg/kg	1
Magnesium	55.9	U	ug/l	5000	319	J	mg/kg	1000	129	J	mg/kg	1000	24.4	J	mg/kg	1000
Manganese	2	U	ug/l	15	10.9		mg/kg	3	4.8		mg/kg	3	4.1		mg/kg	3
Mercury	.2	U	ug/l	.2	.12	U	mg/kg	.1	.11	U	mg/kg	.1	.11	U	mg/kg	.1
Nickel	7	U	ug/l	40	5.4	J	mg/kg	8	1.5	J	mg/kg	8	1.5	U	mg/kg	8
Potassium	169	U	ug/l	5000	236	J	mg/kg	1000	87.5	J	mg/kg	1000	19.4	U	mg/kg	1000
Selenium	1	U	ug/l	5	.24	U	mg/kg	1	.22	U	mg/kg	1	.22	U	mg/kg	1
Silver	4	U	ug/l	10	.91	U	mg/kg	2	.86	U	mg/kg	2	.86	U	mg/kg	2
Sodium	251	U	ug/l	5000	162	U	mg/kg	1000	182	U	mg/kg	1000	210	U	mg/kg	1000
Thallium	2	U	ug/l	10	.47	U	mg/kg	2	.43	U	mg/kg	2	.44	U	mg/kg	2
Vanadium	4	U	ug/l	50	30.7		mg/kg	10	10.9		mg/kg	10	1.9	J	mg/kg	10
Zinc	10.5	J	ug/l	20	8.5	U	mg/kg	4	4.4	U	mg/kg	4	2.7	U	mg/kg	4
Cyanide	5	U	ug/l	10	.56	U	mg/kg	1	.51	U	mg/kg	1	.5	U	mg/kg	1

U = NOT DETECTED J = ESTIMATED VALUE
U' = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- METALS AND CYANIDE

Lab Sample Number:	E7216				E7217				E7218				E7219			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFEBSS06				CFEBSS07				CFEBSS08				CFEBSS09			
Collect Date:	20-JUL-93				20-JUL-93				20-JUL-93				20-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP METALS AND CYANIDE																
Aluminum	344		mg/kg	40	284		mg/kg	40	2130		mg/kg	40	442		mg/kg	40
Antimony	3.3	U	mg/kg	12	3.3	U	mg/kg	12	3.4	U	mg/kg	12	3.5	U	mg/kg	12
Arsenic	.24	UJ	mg/kg	2	.22	U	mg/kg	2	.33	UJ	mg/kg	2	.23	U	mg/kg	2
Barium	1.2	U	mg/kg	40	1.7	U	mg/kg	40	2.9	J	mg/kg	40	2	U	mg/kg	40
Beryllium	.22	U	mg/kg	1	.22	U	mg/kg	1	.23	U	mg/kg	1	.23	U	mg/kg	1
Cadmium	.87	U	mg/kg	1	.88	U	mg/kg	1	.9	U	mg/kg	1	.92	U	mg/kg	1
Calcium	104	U	mg/kg	1000	119	U	mg/kg	1000	94.7	U	mg/kg	1000	69.5	U	mg/kg	1000
Chromium	1.7	U	mg/kg	2	1.8	U	mg/kg	2	1.8	U	mg/kg	2	1.8	U	mg/kg	2
Cobalt	1.3	U	mg/kg	10	1.3	U	mg/kg	10	1.4	U	mg/kg	10	1.4	U	mg/kg	10
Copper	.85	U	mg/kg	5	2.3	U	mg/kg	5	.59	U	mg/kg	5	.46	U	mg/kg	5
Iron	194		mg/kg	20	136		mg/kg	20	454		mg/kg	20	119		mg/kg	20
Lead	2.7		mg/kg	1	2.1	U	mg/kg	1	3.6		mg/kg	1	2	U	mg/kg	1
Magnesium	18.8	U	mg/kg	1000	17.2	U	mg/kg	1000	55.7	J	mg/kg	1000	12.6	U	mg/kg	1000
Manganese	4.1		mg/kg	3	3.6		mg/kg	3	3.7		mg/kg	3	.69	U	mg/kg	3
Mercury	.1	U	mg/kg	.1	.1	U	mg/kg	.1	.12	U	mg/kg	.1	.12	U	mg/kg	.1
Nickel	1.5	U	mg/kg	8	1.5	U	mg/kg	8	1.6	U	mg/kg	8	1.6	U	mg/kg	8
Potassium	17.8	U	mg/kg	1000	13.8	U	mg/kg	1000	28.8	U	mg/kg	1000	14	U	mg/kg	1000
Selenium	.22	U	mg/kg	1	.22	U	mg/kg	1	.25	U	mg/kg	1	.23	U	mg/kg	1
Silver	.87	U	mg/kg	2	.88	U	mg/kg	2	.9	U	mg/kg	2	.92	U	mg/kg	2
Sodium	238	U	mg/kg	1000	209	U	mg/kg	1000	203	U	mg/kg	1000	164	U	mg/kg	1000
Thallium	.43	U	mg/kg	2	.44	U	mg/kg	2	.45	U	mg/kg	2	.46	U	mg/kg	2
Vanadium	1.6	J	mg/kg	10	1.3	J	mg/kg	10	3	J	mg/kg	10	1.3	J	mg/kg	10
Zinc	3.6	U	mg/kg	4	3.6	U	mg/kg	4	3.6	U	mg/kg	4	2.4	U	mg/kg	4
Cyanide	.53	U	mg/kg	1	.53	U	mg/kg	1	.54	U	mg/kg	1	.55	U	mg/kg	1

U = NOT DETECTED J = ESTIMATED VALUE
UJ [illegible]PORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R [illegible]ULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- METALS AND CYANIDE

Lab Sample Number:	E7220			E7221			E7222			E7223		
Site	CECIL			CECIL			CECIL			CECIL		
Locator	CFEBSS09D			CFEBSS10			CFEBSS11			CFEBSS12		
Collect Date:	20-JUL-93			20-JUL-93			20-JUL-93			20-JUL-93		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL
CLP METALS AND CYANIDE												
Aluminum	557	mg/kg	40	183	mg/kg	40	195	mg/kg	40	2350	mg/kg	40
Antimony	3.4 U	mg/kg	12	3.3 U	mg/kg	12	3.3 U	mg/kg	12	3.2 U	mg/kg	12
Arsenic	.26 UJ	mg/kg	2	.22 UJ	mg/kg	2	.22 UJ	mg/kg	2	.39 UJ	mg/kg	2
Barium	2.4 J	mg/kg	40	2.1 J	mg/kg	40	2.6 J	mg/kg	40	3.7 J	mg/kg	40
Beryllium	.23 U	mg/kg	1	.22 U	mg/kg	1	.22 U	mg/kg	1	.21 U	mg/kg	1
Cadmium	.9 U	mg/kg	1	.88 U	mg/kg	1	.88 U	mg/kg	1	.84 U	mg/kg	1
Calcium	77.9 U	mg/kg	1000	269 J	mg/kg	1000	211 J	mg/kg	1000	198 U	mg/kg	1000
Chromium	1.8 U	mg/kg	2	1.8 U	mg/kg	2	1.8 U	mg/kg	2	1.7 U	mg/kg	2
Cobalt	1.4 U	mg/kg	10	1.3 U	mg/kg	10	1.3 U	mg/kg	10	1.3 U	mg/kg	10
10 Copper	.46 U	mg/kg	5	.49 U	mg/kg	5	.83 U	mg/kg	5	.65 U	mg/kg	5
Iron	154	mg/kg	20	102	mg/kg	20	69.6	mg/kg	20	480	mg/kg	20
Lead	4	mg/kg	1	2.3	mg/kg	1	2.5	mg/kg	1	3.5	mg/kg	1
Magnesium	17.5 U	mg/kg	1000	50.4 J	mg/kg	1000	36.1 J	mg/kg	1000	69.8 J	mg/kg	1000
Manganese	1.2 U	mg/kg	3	5.2	mg/kg	3	2.5 J	mg/kg	3	5.5	mg/kg	3
15 Mercury	.12 U	mg/kg	.1	.11 U	mg/kg	.1	.11 U	mg/kg	.1	.1 U	mg/kg	.1
Nickel	1.6 U	mg/kg	8	1.5 U	mg/kg	8	1.5 U	mg/kg	8	1.5 U	mg/kg	8
Potassium	14.3 U	mg/kg	1000	33.9 U	mg/kg	1000	17.7 U	mg/kg	1000	35.4 U	mg/kg	1000
Selenium	.23 U	mg/kg	1	.22 U	mg/kg	1	.22 U	mg/kg	1	.21 U	mg/kg	1
Silver	.9 U	mg/kg	2	.88 U	mg/kg	2	.88 U	mg/kg	2	.84 U	mg/kg	2
20 Sodium	149 U	mg/kg	1000	186 U	mg/kg	1000	156 U	mg/kg	1000	171 U	mg/kg	1000
Thallium	.47 UJ	mg/kg	2	.44 U	mg/kg	2	.43 U	mg/kg	2	.41 UJ	mg/kg	2
Vanadium	1.4 J	mg/kg	10	1.5 J	mg/kg	10	1.3 J	mg/kg	10	3.3 J	mg/kg	10
Zinc	2.5 U	mg/kg	4	3.1 U	mg/kg	4	11.9 U	mg/kg	4	4 U	mg/kg	4
Cyanide	.57 U	mg/kg	1	.51 U	mg/kg	1	.48 U	mg/kg	1	.5 U	mg/kg	1

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- METALS AND CYANIDE

Lab Sample Number:	E7224				E7225				E7226			
Site	CECIL				CECIL				CECIL			
Locator	CFEBSS13				CFEBSS14				CFEBSS15			
Collect Date:	20-JUL-93				20-JUL-93				20-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP METALS AND CYANIDE												
Aluminum	2770		mg/kg	40	2170		mg/kg	40	1430		mg/kg	40
Antimony	3.3	U	mg/kg	12	3.2	U	mg/kg	12	3.3	U	mg/kg	12
Arsenic	.4	UJ	mg/kg	2	.21	UJ	mg/kg	2	.22	UJB	mg/kg	2
Barium	4.1	J	mg/kg	40	4.8	J	mg/kg	40	6.8	JB	mg/kg	40
Beryllium	.22	U	mg/kg	1	.21	U	mg/kg	1	.22	U	mg/kg	1
Cadmium	.88	U	mg/kg	1	.84	U	mg/kg	1	.88	U	mg/kg	1
Calcium	220	J	mg/kg	1000	141	U	mg/kg	1000	217	J	mg/kg	1000
Chromium	1.8	U	mg/kg	2	2.3		mg/kg	2	1.8	U	mg/kg	2
Cobalt	1.3	U	mg/kg	10	1.3	U	mg/kg	10	1.3	U	mg/kg	10
Copper	.82	U	mg/kg	5	.7	U	mg/kg	5	1.4	U	mg/kg	5
Iron	734		mg/kg	20	636		mg/kg	20	367		mg/kg	20
Lead	5.1		mg/kg	1	3.7		mg/kg	1	3.5		mg/kg	1
Magnesium	69.1	J	mg/kg	1000	75.9	J	mg/kg	1000	50	J	mg/kg	1000
Manganese	5		mg/kg	3	5.9		mg/kg	3	3.8		mg/kg	3
Mercury	.11	U	mg/kg	.1	.1	U	mg/kg	.1	.12	U	mg/kg	.1
Nickel	1.5	U	mg/kg	8	1.5	U	mg/kg	8	1.5	U	mg/kg	8
Potassium	34.5	U	mg/kg	1000	39.9	U	mg/kg	1000	30.7	U	mg/kg	1000
Selenium	.22	U	mg/kg	1	.21	U	mg/kg	1	.22	U	mg/kg	1
Silver	.88	U	mg/kg	2	.84	U	mg/kg	2	.88	U	mg/kg	2
Sodium	154	U	mg/kg	1000	171	U	mg/kg	1000	222	U	mg/kg	1000
Thallium	.45	UJ	mg/kg	2	.43	UJ	mg/kg	2	.44	U	mg/kg	2
Vanadium	3.9	J	mg/kg	10	3.3	J	mg/kg	10	2.6	J	mg/kg	10
Zinc	4.7	U	mg/kg	4	7.2	U	mg/kg	4	4.1	U	mg/kg	4
Cyanide	.53	U	mg/kg	1	.53	U	mg/kg	1	.51	U	mg/kg	1

U = NOT DETECTED J = ESTIMATED VALUE
UJ PORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R JLT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- TENTATIVELY IDENTIFIED COMPOUNDS

Lab Sample Number:	CEFBSS01			CEFBSS02			CEFBSS02D			CEFBSS02R		
Site	CECIL			CECIL			CECIL			CECIL		
Locator	CEFBSS01			CEFBSS02			CEFBSS02D			CEFBSS02R		
Collect Date:	19-JUL-93			19-JUL-93			19-JUL-93			20-JUL-93		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL
TENTATIVELY IDENTIFIED CMPNDS.												
(3.45) Aldolcondensationproduc	1200	J ug/kg										
(3.88) Aldolcondensationproduc	28000	J ug/kg										
(4.87) Aldolcondensationproduc	1000	J ug/kg										
(15.58) 3-Carene				14	J ug/kg							
(3.45) Aldolcondensationproduc				1300	J ug/kg							
(3.88) Aldolcondensationproduc				28000	J ug/kg							
(4.87) Aldolcondensationproduc				1000	J ug/kg							
(6.17) Ethanol,2-(2-Ethoxyetho				120	U ug/kg							
(15.59) 3-Carene							9	J ug/kg				
(3.45) Aldolcondensationproduc							1200	J ug/kg				
(3.88) Aldolcondensationproduc							26000	J ug/kg				
(4.88) Aldolcondensationproduc							1000	J ug/kg				
(6.25) Ethanol,2-(2-Ethoxyetho										2	U ug/l	

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R ESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- TENTATIVELY IDENTIFIED COMPOUNDS

Lab Sample Number:	CEFBSS03			CEFBSS04			CEFBSS05			CEFBSS06		
Site	CECIL			CECIL			CECIL			CECIL		
Locator	CEFBSS03			CEFBSS04			CEFBSS05			CEFBSS06		
Collect Date:	19-JUL-93			19-JUL-93			20-JUL-93			20-JUL-93		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL
ENTATIVELY IDENTIFIED CMPNDS.												
(3.50) Aldolcondensationproduc	1500	J ug/kg										
(3.92) Aldolcondensationproduc	34000	J ug/kg										
(4.90) Aldolcondensationproduc	1300	J ug/kg										
(6.18) Ethanol,2-(2-Ethoxyetho	100	U ug/kg										
(15.59) 3-Carene				26	J ug/kg							
(3.48) Aldolcondensationproduc				1100	J ug/kg							
(3.90) Aldolcondensationproduc				24000	J ug/kg							
(4.90) Aldolcondensationproduc				980	J ug/kg							
(3.42) Aldolcondensationproduc							480	J ug/kg				
(3.85) Aldolcondensationproduc							11000	J ug/kg				
(4.88) Aldolcondensationproduc							400	J ug/kg				
(6.18) Ethanol,2-(2-Ethoxyetho							86	J ug/kg				
(3.82) Aldolcondensationproduc										19000	J ug/kg	

U = NOT DETECTED J = ESTIMATED VALUE
UJ = [illegible]ORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = [illegible]T IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- TENTATIVELY IDENTIFIED COMPOUNDS

Lab Sample Number:	CEFBSS07				CEFBSS08				CEFBSS09				CEFBSS09D			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CEFBSS07				CEFBSS08				CEFBSS09				CEFBSS09D			
Collect Date:	20-JUL-93				20-JUL-93				20-JUL-93				20-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
TENTATIVELY IDENTIFIED CMPNDS.																
(3.45) Aldolcondensationproduc	620	J	ug/kg													
(3.87) Aldolcondensationproduc	24000	J	ug/kg													
(4.87) Aldolcondensationproduc	940	J	ug/kg													
(3.38) Aldolcondensationproduc	520	J	ug/kg													
(15.59) 3-Carene					15	J	ug/kg									
(3.47) Aldolcondensationproduc					1400	J	ug/kg									
(3.90) Aldolcondensationproduc					30000	J	ug/kg									
(4.87) Aldolcondensationproduc					1200	J	ug/kg									
(3.48) Aldolcondensationproduc									1600	J	ug/kg					
(3.90) Aldolcondensationproduc									36000	J	ug/kg					
(4.87) Aldolcondensationproduc									1400	J	ug/kg					
(3.45) Aldolcondensationproduc													1200	J	ug/kg	
(3.88) Aldolcondensationproduc													28000	J	ug/kg	
(4.87) Aldolcondensationproduc													1100	J	ug/kg	

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CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- TENTATIVELY IDENTIFIED COMPOUNDS

Lab Sample Number:	CEFBSS10			CEFBSS11			CEFBSS12			CEFBSS13		
Site	CECIL			CECIL			CECIL			CECIL		
Locator	CEFBSS10			CEFBSS11			CEFBSS12			CEFBSS13		
Collect Date:	20-JUL-93			20-JUL-93			20-JUL-93			20-JUL-93		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL
ENTATIVELY IDENTIFIED CMPNDS.												
(3.37) Aldolcondensationproduc	400	J ug/kg										
(4.83) Aldolcondensationproduc	480	J ug/kg										
(3.78) Aldolcondensationproduc	11000	J ug/kg										
(3.43) Aldolcondensationproduc				1100	J ug/kg							
(3.87) Aldolcondensationproduc				26000	J ug/kg							
(4.87) Aldolcondensationproduc				1000	J ug/kg							
(15.61) 3-Carene							12	J ug/kg				
(3.37) Aldolcondensationproduc							820	J ug/kg				
(3.83) Aldolcondensationproduc							19000	J ug/kg				
(4.85) Aldolcondensationproduc							740	J ug/kg				
(3.40) Aldolcondensationproduc										1000	J ug/kg	
(3.85) Aldolcondensationproduc										22000	J ug/kg	
(4.85) Aldolcondensationproduc										900	J ug/kg	

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UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- TENTATIVELY IDENTIFIED COMPOUNDS

Lab Sample Number:	CEFBSS14				CEFBSS15			
Site	CECIL				CECIL			
Locator	CEFBSS14				CEFBSS15			
Collect Date:	20-JUL-93				20-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
TENTATIVELY IDENTIFIED CMPNDS.								
(15.41) 3-Carene	15	J	ug/kg					
(12.10) Ethanone,1-(2-Hydroxy-	680	U	ug/kg					
(3.43) Aldolcondensationproduc	1300	J	ug/kg					
(4.87) Aldolcondensationproduc	1200	J	ug/kg					
(3.88) Aldolcondensationproduc	30000	J	ug/kg					
(3.45) Aldolcondensationproduc					1200	J	ug/kg	
(3.88) Aldolcondensationproduc					26000	J	ug/kg	
(4.87) Aldolcondensationproduc					1000	J	ug/kg	

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R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- VOLATILES

Lab Sample Number:	CFBBMS1S0				CFBBMS1S0M				CFBBMS1S0M				CFBBMS1S6			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS1S0				CFBBMS1S0MS				CFBBMS1S0MSD				CFBBMS1S6			
Collect Date:	05-AUG-93				05-AUG-93				05-AUG-93				05-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
LP VOLATILES 90-SOW																
Chloromethane	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	12	U	ug/kg	12
Bromomethane	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	12	U	ug/kg	12
Vinyl chloride	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	12	U	ug/kg	12
Chloroethane	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	12	U	ug/kg	12
Methylene chloride	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Acetone	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	12	U	ug/kg	12
Carbon disulfide	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
1,1-Dichloroethene	6	U	ug/kg	6	56		ug/kg	11	60		ug/kg	11	6	U	ug/kg	6
1,1-Dichloroethane	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
1,2-Dichloroethene (total)	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Chloroform	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
1,2-Dichloroethane	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
2-Butanone	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	12	U	ug/kg	12
1,1,1-Trichloroethane	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Carbon tetrachloride	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Bromodichloromethane	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
1,2-Dichloropropane	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
cis-1,3-Dichloropropene	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Trichloroethene	6	U	ug/kg	6	57		ug/kg	11	54		ug/kg	11	6	U	ug/kg	6
Dibromochloromethane	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
1,1,2-Trichloroethane	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Benzene	6	U	ug/kg	6	51		ug/kg	11	53		ug/kg	11	6	U	ug/kg	6
trans-1,3-Dichloropropene	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Bromoform	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
4-Methyl-2-pentanone	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	12	U	ug/kg	12
2-Hexanone	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	12	U	ug/kg	12
Tetrachloroethene	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Toluene	6	U	ug/kg	6	58		ug/kg	11	60		ug/kg	11	6	U	ug/kg	6
1,1,2,2-Tetrachloroethane	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Chlorobenzene	6	U	ug/kg	6	60		ug/kg	11	60		ug/kg	11	6	U	ug/kg	6
Ethylbenzene	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Styrene	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Xylenes (total)	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6

U = NOT DETECTED J = ESTIMATED VALUE
U/ EPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R BULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURF... SOIL -- BACKGROUND
VALIDATED DATA -- VOLATILES

Lab Sample Number:	CFBBMS2S2				CFBBMS2S6				CFBBMS2SR				CFBBMS312			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS2S2				CFBBMS2S6				CFBBMS2SR				CFBBMS312			
Collect Date:	06-AUG-93				06-AUG-93				06-AUG-93				09-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP VOLATILES 90-SOW																
Chloromethane	11	U	ug/kg	11	12	U	ug/kg	12	2	U	ug/l	2	11	U	ug/kg	11
Bromomethane	11	U	ug/kg	11	12	U	ug/kg	12	2	U	ug/l	2	11	U	ug/kg	11
Vinyl chloride	11	U	ug/kg	11	12	U	ug/kg	12	2	U	ug/l	2	11	U	ug/kg	11
Chloroethane	11	U	ug/kg	11	12	U	ug/kg	12	2	U	ug/l	2	11	U	ug/kg	11
Methylene chloride	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
Acetone	11	U	ug/kg	11	12	U	ug/kg	12	2	U	ug/l	2	11	U	ug/kg	11
Carbon disulfide	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
1,1-Dichloroethene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
1,1-Dichloroethane	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
1,2-Dichloroethene (total)	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
Chloroform	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
1,2-Dichloroethane	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
2-Butanone	11	U	ug/kg	11	12	U	ug/kg	12	2	U	ug/l	2	11	U	ug/kg	11
1,1,1-Trichloroethane	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
Carbon tetrachloride	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
Bromodichloromethane	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
1,2-Dichloropropane	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
cis-1,3-Dichloropropene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
Trichloroethene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
Dibromochloromethane	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
1,1,2-Trichloroethane	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
Benzene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
trans-1,3-Dichloropropene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
Bromoform	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
4-Methyl-2-pentanone	11	U	ug/kg	11	12	U	ug/kg	12	2	U	ug/l	2	11	U	ug/kg	11
2-Hexanone	11	U	ug/kg	11	12	U	ug/kg	12	2	R	ug/l	2	11	U	ug/kg	11
Tetrachloroethene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
Toluene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
1,1,2,2-Tetrachloroethane	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
Chlorobenzene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
Ethylbenzene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
Styrene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6
Xylenes (total)	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	6	U	ug/kg	6

U = NOT DETECTED J = ESTIMATED VALUE
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R SULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- VOLATILES

Lab Sample Number:	CFBBMS316				CFBBMS4S2				CFBBMS4S4				CFBBMS5S2			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS316				CFBBMS4S2				CFBBMS4S4				CFBBMS5S2			
Collect Date:	09-AUG-93				08-AUG-93				08-AUG-93				08-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP VOLATILES 90-SOW																
Chloromethane	12	U	ug/kg	12	11	U	ug/kg	11	12	U	ug/kg	12	10	U	ug/kg	10
Bromomethane	12	U	ug/kg	12	11	U	ug/kg	11	12	U	ug/kg	12	10	U	ug/kg	10
Vinyl chloride	12	U	ug/kg	12	11	U	ug/kg	11	12	U	ug/kg	12	10	U	ug/kg	10
Chloroethane	12	U	ug/kg	12	11	U	ug/kg	11	12	U	ug/kg	12	10	U	ug/kg	10
Methylene chloride	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
Acetone	15	U	ug/kg	15	11	U	ug/kg	11	12	U	ug/kg	12	10	U	ug/kg	10
Carbon disulfide	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
1,1-Dichloroethene	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
1,1-Dichloroethane	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
1,2-Dichloroethene (total)	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
Chloroform	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
1,2-Dichloroethane	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
2-Butanone	12	U	ug/kg	12	11	U	ug/kg	11	12	U	ug/kg	12	10	U	ug/kg	10
1,1,1-Trichloroethane	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
Carbon tetrachloride	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
Bromodichloromethane	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
1,2-Dichloropropane	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
cis-1,3-Dichloropropene	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
Trichloroethene	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
Dibromochloromethane	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
1,1,2-Trichloroethane	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
Benzene	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
trans-1,3-Dichloropropene	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
Bromoform	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
4-Methyl-2-pentanone	12	U	ug/kg	12	11	U	ug/kg	11	12	U	ug/kg	12	10	U	ug/kg	10
2-Hexanone	12	U	ug/kg	12	11	U	ug/kg	11	12	U	ug/kg	12	10	U	ug/kg	10
Tetrachloroethene	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
Toluene	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
1,1,2,2-Tetrachloroethane	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
Chlorobenzene	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
Ethylbenzene	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
Styrene	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5
Xylenes (total)	6	U	ug/kg	6	5	U	ug/kg	5	6	U	ug/kg	6	5	U	ug/kg	5

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UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
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CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- VOLATILES

Lab Sample Number:	CFBBMS5S6				F2068103				F2069103				CFBBMS7S0			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS5S6				CFBBMS610				CFBBMS616				CFBBMS7S0			
Collect Date:	08-AUG-93				10-AUG-93				10-AUG-93				09-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP VOLATILES 90-SOW																
Chloromethane	11	U	ug/kg	11	10	U	ug/kg	10	12	U	ug/kg	12	11	U	ug/kg	11
Bromomethane	11	U	ug/kg	11	10	U	ug/kg	10	12	U	ug/kg	12	11	U	ug/kg	11
Vinyl chloride	11	U	ug/kg	11	10	U	ug/kg	10	12	U	ug/kg	12	11	U	ug/kg	11
Chloroethane	11	U	ug/kg	11	10	U	ug/kg	10	12	U	ug/kg	12	11	U	ug/kg	11
Methylene chloride	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
Acetone	11	U	ug/kg	11	10	UJ	ug/kg	10	24	UJ	ug/kg	24	11	U	ug/kg	11
Carbon disulfide	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
1,1-Dichloroethene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
1,1-Dichloroethane	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
1,2-Dichloroethene (total)	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
Chloroform	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
1,2-Dichloroethane	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
2-Butanone	11	U	ug/kg	11	10	U	ug/kg	10	12	U	ug/kg	12	11	U	ug/kg	11
1,1,1-Trichloroethane	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
Carbon tetrachloride	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
Bromodichloromethane	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
1,2-Dichloropropane	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
cis-1,3-Dichloropropene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
Trichloroethene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
Dibromochloromethane	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
1,1,2-Trichloroethane	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
Benzene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
trans-1,3-Dichloropropene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
Bromoform	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
4-Methyl-2-pentanone	11	U	ug/kg	11	10	U	ug/kg	10	12	U	ug/kg	12	11	U	ug/kg	11
2-Hexanone	11	U	ug/kg	11	10	U	ug/kg	10	12	U	ug/kg	12	11	U	ug/kg	11
Tetrachloroethene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
Toluene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
1,1,2,2-Tetrachloroethane	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
Chlorobenzene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
Ethylbenzene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
Styrene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6
Xylenes (total)	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6	6	U	ug/kg	6

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- VOLATILES

Lab Sample Number:	CFBBMS7S0D				CFBBMS7S4				CFBBMS7SR				CFBBMS8S2			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS7S0D				CFBBMS7S4				CFBBMS7SR				CFBBMS8S2			
Collect Date:	09-AUG-93				09-AUG-93				09-AUG-93				09-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP VOLATILES 90-SOW																
Chloromethane	11	U	ug/kg	11	12	U	ug/kg	12	2	U	ug/l	2	10	U	ug/kg	10
Bromomethane	11	U	ug/kg	11	12	U	ug/kg	12	2	U	ug/l	2	10	U	ug/kg	10
Vinyl chloride	11	U	ug/kg	11	12	U	ug/kg	12	2	U	ug/l	2	10	U	ug/kg	10
Chloroethane	11	U	ug/kg	11	12	U	ug/kg	12	2	U	ug/l	2	10	U	ug/kg	10
Methylene chloride	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
Acetone	11	U	ug/kg	11	12	U	ug/kg	12	1	J	ug/l	1	10	U	ug/kg	10
Carbon disulfide	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
1,1-Dichloroethene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
1,1-Dichloroethane	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
1,2-Dichloroethene (total)	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
Chloroform	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
1,2-Dichloroethane	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
2-Butanone	11	U	ug/kg	11	12	U	ug/kg	12	2	U	ug/l	2	10	U	ug/kg	10
1,1,1-Trichloroethane	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
Carbon tetrachloride	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
Bromodichloromethane	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
1,2-Dichloropropane	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
cis-1,3-Dichloropropene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
Trichloroethene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
Dibromochloromethane	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
1,1,2-Trichloroethane	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
Benzene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
trans-1,3-Dichloropropene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
Bromoform	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
4-Methyl-2-pentanone	11	U	ug/kg	11	12	U	ug/kg	12	2	U	ug/l	2	10	U	ug/kg	10
2-Hexanone	11	U	ug/kg	11	12	U	ug/kg	12	2	U	ug/l	2	10	U	ug/kg	10
Tetrachloroethene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
Toluene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
1,1,2,2-Tetrachloroethane	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
Chlorobenzene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
Ethylbenzene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
Styrene	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5
Xylenes (total)	6	U	ug/kg	6	6	U	ug/kg	6	1	U	ug/l	1	5	U	ug/kg	5

U = NOT DETECTED J = ESTIMATED VALUE
UJ PORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R LT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- VOLATILES

Lab Sample Number:	CFBBMS8S6				F3341103				F3341103MS				F3341103MS			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS8S6				CFBBMS910				CFBBMS910MS				CFBBMS910MSD			
Collect Date:	09-AUG-93				16-AUG-93				16-AUG-93				16-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP VOLATILES 90-SOW																
Chloromethane	12	U	ug/kg	12	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
Bromomethane	12	U	ug/kg	12	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
Vinyl chloride	12	U	ug/kg	12	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
Chloroethane	12	U	ug/kg	12	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
Methylene chloride	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Acetone	12	U	ug/kg	12	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
Carbon disulfide	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
1,1-Dichloroethene	6	U	ug/kg	6	5	U	ug/kg	5	62		ug/kg	11	60		ug/kg	11
1,1-Dichloroethane	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
1,2-Dichloroethane (total)	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Chloroform	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
1,2-Dichloroethane	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
2-Butanone	12	U	ug/kg	12	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
1,1,1-Trichloroethane	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Carbon tetrachloride	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Bromodichloromethane	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
1,2-Dichloropropane	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
cis-1,3-Dichloropropene	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Trichloroethene	6	U	ug/kg	6	5	U	ug/kg	5	55		ug/kg	11	56		ug/kg	11
Dibromochloromethane	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
1,1,2-Trichloroethane	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Benzene	6	U	ug/kg	6	5	U	ug/kg	5	53		ug/kg	11	55		ug/kg	11
trans-1,3-Dichloropropene	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Bromoform	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
4-Methyl-2-pentanone	12	U	ug/kg	12	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
2-Hexanone	12	U	ug/kg	12	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
Tetrachloroethene	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Toluene	6	U	ug/kg	6	5	U	ug/kg	5	57		ug/kg	11	60		ug/kg	11
1,1,2,2-Tetrachloroethane	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Chlorobenzene	6	U	ug/kg	6	5	U	ug/kg	5	56		ug/kg	11	58		ug/kg	11
Ethylbenzene	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Styrene	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Xylenes (total)	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R ^SULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- VOLATILES

Lab Sample Number:	F3346103
Site	CECIL
Locator	CFBBMS916
Collect Date:	16-AUG-93

	VALUE	QUAL	UNITS	DL
CLP VOLATILES 90-30M				
Chloromethane	11	U	ug/kg	11
Bromomethane	11	U	ug/kg	11
Vinyl chloride	11	U	ug/kg	11
Chloroethane	11	U	ug/kg	11
Methylene chloride	6	U	ug/kg	6
Acetone	32	U	ug/kg	32
Carbon disulfide	6	U	ug/kg	6
1,1-Dichloroethene	6	U	ug/kg	6
1,1-Dichloroethane	6	U	ug/kg	6
1,2-Dichloroethene (total)	6	U	ug/kg	6
Chloroform	6	U	ug/kg	6
1,2-Dichloroethane	6	U	ug/kg	6
2-Butanone	11	U	ug/kg	11
1,1,1-Trichloroethane	6	U	ug/kg	6
Carbon tetrachloride	6	U	ug/kg	6
Bromodichloromethane	6	U	ug/kg	6
1,2-Dichloropropane	6	U	ug/kg	6
cis-1,3-Dichloropropene	6	U	ug/kg	6
Trichloroethene	6	U	ug/kg	6
Dibromochloromethane	6	U	ug/kg	6
1,1,2-Trichloroethane	6	U	ug/kg	6
Benzene	6	U	ug/kg	6
trans-1,3-Dichloropropene	6	U	ug/kg	6
Bromoform	6	U	ug/kg	6
4-Methyl-2-pentanone	11	U	ug/kg	11
2-Hexanone	11	U	ug/kg	11
Tetrachloroethene	6	U	ug/kg	6
Toluene	6	U	ug/kg	6
1,1,2,2-Tetrachloroethane	6	U	ug/kg	6
Chlorobenzene	6	U	ug/kg	6
Ethylbenzene	6	U	ug/kg	6
Styrene	6	U	ug/kg	6
Xylenes (total)	6	U	ug/kg	6

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CFBBMS1S0				CFBBMS1S6				CFBBMS2S2R				CFBBMS2S6			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS1S0				CFBBMS1S6				CFBBMS2S2RE				CFBBMS2S6			
Collect Date:	05-AUG-93				05-AUG-93				06-AUG-93				06-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP SEMIVOLATILES 90-SOW																
Phenol	380	UJ	ug/kg	380	390	UJ	ug/kg	390	370	UJ	ug/kg	370	380	UJ	ug/kg	380
bis(2-Chloroethyl) ether	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
2-Chlorophenol	380	UJ	ug/kg	380	390	UJ	ug/kg	390	370	UJ	ug/kg	370	380	UJ	ug/kg	380
1,3-Dichlorobenzene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
1,4-Dichlorobenzene	380	UJ	ug/kg	380	390	UJ	ug/kg	390	370	UJ	ug/kg	370	380	UJ	ug/kg	380
1,2-Dichlorobenzene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
2-Methylphenol	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
2,2-oxybis(1-Chloropropane)	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
4-Methylphenol	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
N-Nitroso-di-n-propylamine	380	UJ	ug/kg	380	390	UJ	ug/kg	390	370	UJ	ug/kg	370	380	UJ	ug/kg	380
Hexachloroethane	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Nitrobenzene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Isophorone	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
2-Nitrophenol	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
2,4-Dimethylphenol	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
bis(2-Chloroethoxy) methane	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
2,4-Dichlorophenol	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
1,2,4-Trichlorobenzene	380	UJ	ug/kg	380	390	UJ	ug/kg	390	370	UJ	ug/kg	370	380	UJ	ug/kg	380
Naphthalene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
4-Chloroaniline	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Hexachlorobutadiene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
4-Chloro-3-methylphenol	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
2-Methylnaphthalene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Hexachlorocyclopentadiene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
2,4,6-Trichlorophenol	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
2,4,5-Trichlorophenol	920	U	ug/kg	920	940	U	ug/kg	940	900	UJ	ug/kg	900	930	U	ug/kg	930
2-Chloronaphthalene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
2-Nitroaniline	920	U	ug/kg	920	940	U	ug/kg	940	900	UJ	ug/kg	900	930	U	ug/kg	930
Dimethylphthalate	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Acenaphthylene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
2,6-Dinitrotoluene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
3-Nitroaniline	920	U	ug/kg	920	940	U	ug/kg	940	900	UJ	ug/kg	900	930	U	ug/kg	930
Acenaphthene	380	UJ	ug/kg	380	390	UJ	ug/kg	390	370	UJ	ug/kg	370	380	UJ	ug/kg	380
2,4-Dinitrophenol	920	U	ug/kg	920	940	U	ug/kg	940	900	UJ	ug/kg	900	930	U	ug/kg	930
4-Nitrophenol	920	U	ug/kg	920	940	U	ug/kg	940	900	UJ	ug/kg	900	930	U	ug/kg	930
Dibenzofuran	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
2,4-Dinitrotoluene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Diethylphthalate	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
4-Chlorophenyl-phenylether	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Fluorene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
4-Nitroaniline	920	U	ug/kg	920	940	U	ug/kg	940	900	UJ	ug/kg	900	930	U	ug/kg	930
4,6-Dinitro-2-methylphenol	920	U	ug/kg	920	940	U	ug/kg	940	900	UJ	ug/kg	900	930	U	ug/kg	930
N-Nitrosodiphenylamine (1)	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
4-Bromophenyl-phenylether	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Hexachlorobenzene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Pentachlorophenol	920	UJ	ug/kg	920	420	J	ug/kg	940	900	UJ	ug/kg	900	180	J	ug/kg	930
Phenanthrene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Anthracene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Carbazole	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Di-n-butylphthalate	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Fluoranthene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Pyrene	380	UJ	ug/kg	380	390	UJ	ug/kg	390	370	UJ	ug/kg	370	380	UJ	ug/kg	380
Butylbenzylph[illegible]late	380	U	ug/kg	380	390	U	[illegible]g/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CFBBMS1S0				CFBBMS1S6				CFBBMS2S2R				CFBBMS2S6			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS1S0				CFBBMS1S6				CFBBMS2S2RE				CFBBMS2S6			
Collect Date:	05-AUG-93				05-AUG-93				06-AUG-93				06-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
3,3-Dichlorobenzidine	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Benzo (a) anthracene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Chrysene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
bis(2-Ethylhexyl) phthalate	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Di-n-octylphthalate	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Benzo (b) fluoranthene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Benzo (k) fluoranthene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Benzo (a) pyrene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Indeno (1,2,3-cd) pyrene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Dibenz (a,h) anthracene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380
Benzo (g,h,i) perylene	380	U	ug/kg	380	390	U	ug/kg	390	370	UJ	ug/kg	370	380	U	ug/kg	380

U = NOT DETECTED J = ESTIMATED VALUE
U EPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
I SULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CFBBMS2SR				CFBBMS312R				CFBBMS316				CFBBMS4S2R			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS2SR				CFBBMS312RE				CFBBMS316				CFBBMS4S2RE			
Collect Date:	06-AUG-93				09-AUG-93				09-AUG-93				08-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP SEMIVOLATILES 90-SOW																
Phenol	10	UJ	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
bis(2-Chloroethyl) ether	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
2-Chlorophenol	10	UJ	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
1,3-Dichlorobenzene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
1,4-Dichlorobenzene	10	UJ	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
1,2-Dichlorobenzene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
2-Methylphenol	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
2,2-oxybis(1-Chloropropane)	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
4-Methylphenol	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
N-Nitroso-di-n-propylamine	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Hexachloroethane	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Nitrobenzene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Isophorone	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
2-Nitrophenol	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
2,4-Dimethylphenol	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
bis(2-Chloroethoxy) methane	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
2,4-Dichlorophenol	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
1,2,4-Trichlorobenzene	10	UJ	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Naphthalene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
4-Chloroaniline	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Hexachlorobutadiene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
4-Chloro-3-methylphenol	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
2-Methylnaphthalene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Hexachlorocyclopentadiene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
2,4,6-Trichlorophenol	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
2,4,5-Trichlorophenol	25	U	ug/l	25	920	UJ	ug/kg	920	940	U	ug/kg	940	850	UJ	ug/kg	850
2-Chloronaphthalene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
2-Nitroaniline	25	U	ug/l	25	920	UJ	ug/kg	920	940	U	ug/kg	940	850	UJ	ug/kg	850
Dimethylphthalate	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Acenaphthylene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
2,6-Dinitrotoluene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
3-Nitroaniline	25	U	ug/l	25	920	UJ	ug/kg	920	940	U	ug/kg	940	850	UJ	ug/kg	850
Acenaphthene	10	UJ	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
2,4-Dinitrophenol	25	U	ug/l	25	920	UJ	ug/kg	920	940	U	ug/kg	940	850	UJ	ug/kg	850
4-Nitrophenol	25	UJ	ug/l	25	920	UJ	ug/kg	920	940	U	ug/kg	940	850	UJ	ug/kg	850
Dibenzofuran	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
2,4-Dinitrotoluene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Diethylphthalate	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
4-Chlorophenyl-phenylether	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Fluorene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
4-Nitroaniline	25	U	ug/l	25	920	UJ	ug/kg	920	940	U	ug/kg	940	850	UJ	ug/kg	850
4,6-Dinitro-2-methylphenol	25	U	ug/l	25	920	UJ	ug/kg	920	940	U	ug/kg	940	850	UJ	ug/kg	850
N-Nitrosodiphenylamine (1)	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
4-Bromophenyl-phenylether	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Hexachlorobenzene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Pentachlorophenol	25	U	ug/l	25	920	UJ	ug/kg	920	940	U	ug/kg	940	850	UJ	ug/kg	850
Phenanthrene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Anthracene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Carbazole	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Di-n-butylphthalate	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Fluoranthene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Pyrene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CFBBMS2SR				CFBBMS312R				CFBBMS316				CFBBMS4S2R			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS2SR				CFBBMS312RE				CFBBMS316				CFBBMS4S2RE			
Collect Date:	06-AUG-93				09-AUG-93				09-AUG-93				08-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Butylbenzylphthalate	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
3,3-Dichlorobenzidine	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Benzo (a) anthracene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Chrysene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
bis(2-Ethylhexyl) phthalate	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Di-n-octylphthalate	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Benzo (b) fluoranthene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Benzo (k) fluoranthene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Benzo (a) pyrene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Indeno (1,2,3-cd) pyrene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Dibenz (a,h) anthracene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350
Benzo (g,h,i) perylene	10	U	ug/l	10	380	UJ	ug/kg	380	390	U	ug/kg	390	350	UJ	ug/kg	350

U = NOT DETECTED J = ESTIMATED VALUE
U REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CFBBMS4S4R				CFBBMS5S2R				CFBBMS5S6				F2068101			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS4S4RE				CFBBMS5S2RE				CFBBMS5S6				CFBBMS610			
Collect Date:	08-AUG-93				08-AUG-93				08-AUG-93				10-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP SEMIVOLATILES 90-SOW																
Phenol	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
bis(2-Chloroethyl) ether	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
2-Chlorophenol	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
1,3-Dichlorobenzene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
1,4-Dichlorobenzene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
1,2-Dichlorobenzene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
2-Methylphenol	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
2,2-oxybis(1-Chloropropane)	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
4-Methylphenol	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
N-Nitroso-di-n-propylamine	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Hexachloroethane	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Nitrobenzene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Isophorone	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
2-Nitrophenol	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
2,4-Dimethylphenol	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
bis(2-Chloroethoxy) methane	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
2,4-Dichlorophenol	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
1,2,4-Trichlorobenzene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Naphthalene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
4-Chloroaniline	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Hexachlorobutadiene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
4-Chloro-3-methylphenol	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
2-Methylnaphthalene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Hexachlorocyclopentadiene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
2,4,6-Trichlorophenol	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
2,4,5-Trichlorophenol	940	UJ	ug/kg	940	830	UJ	ug/kg	830	870	U	ug/kg	870	820	U	ug/kg	820
2-Chloronaphthalene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
2-Nitroaniline	940	UJ	ug/kg	940	830	UJ	ug/kg	830	870	U	ug/kg	870	820	U	ug/kg	820
Dimethylphthalate	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Acenaphthylene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
2,6-Dinitrotoluene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
3-Nitroaniline	940	UJ	ug/kg	940	830	UJ	ug/kg	830	870	U	ug/kg	870	820	U	ug/kg	820
Acenaphthene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
2,4-Dinitrophenol	940	UJ	ug/kg	940	830	UJ	ug/kg	830	870	U	ug/kg	870	820	U	ug/kg	820
4-Nitrophenol	940	UJ	ug/kg	940	830	UJ	ug/kg	830	870	U	ug/kg	870	820	U	ug/kg	820
Dibenzofuran	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
2,4-Dinitrotoluene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Diethylphthalate	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
4-Chlorophenyl-phenylether	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Fluorene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
4-Nitroaniline	940	UJ	ug/kg	940	830	UJ	ug/kg	830	870	U	ug/kg	870	820	U	ug/kg	820
4,6-Dinitro-2-methylphenol	940	UJ	ug/kg	940	830	UJ	ug/kg	830	870	U	ug/kg	870	820	U	ug/kg	820
N-Nitrosodiphenylamine (1)	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
4-Bromophenyl-phenylether	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Hexachlorobenzene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Pentachlorophenol	940	UJ	ug/kg	940	830	UJ	ug/kg	830	870	U	ug/kg	870	820	U	ug/kg	820
Phenanthrene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Anthracene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Carbazole	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Di-n-butylphthalate	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Fluoranthene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Pyrene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CFBBMS4S4R				CFBBMS5S2R				CFBBMS5S6				F2068101			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS4S4RE				CFBBMS5S2RE				CFBBMS5S6				CFBBMS610			
Collect Date:	08-AUG-93				08-AUG-93				08-AUG-93				10-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Butylbenzylphthalate	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
3,3-Dichlorobenzidine	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Benzo (a) anthracene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Chrysene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
bis(2-Ethylhexyl) phthalate	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Di-n-octylphthalate	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Benzo (b) fluoranthene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Benzo (k) fluoranthene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Benzo (a) pyrene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Indeno (1,2,3-cd) pyrene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Dibenz (a,h) anthracene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340
Benzo (g,h,i) perylene	390	UJ	ug/kg	390	340	UJ	ug/kg	340	360	U	ug/kg	360	340	U	ug/kg	340

U = NOT DETECTED J = ESTIMATED VALUE
U EPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
[SULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	F2069101			CFBBMS7S0			CFBBMS7S0D			CFBBMS7S4		
Site	CECIL			CECIL			CECIL			CECIL		
Locator	CFBBMS616			CFBBMS7S0			CFBBMS7S0D			CFBBMS7S4		
Collect Date:	10-AUG-93			09-AUG-93			09-AUG-93			09-AUG-93		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL
CLP SEMIVOLATILES 90-SOW												
Phenol	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
bis(2-Chloroethyl) ether	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
2-Chlorophenol	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
1,3-Dichlorobenzene	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
1,4-Dichlorobenzene	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
1,2-Dichlorobenzene	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
2-Methylphenol	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
2,2-oxybis(1-Chloropropane)	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
4-Methylphenol	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
N-Nitroso-di-n-propylamine	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
Hexachloroethane	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
Nitrobenzene	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
Isophorone	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
2-Nitrophenol	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
2,4-Dimethylphenol	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
bis(2-Chloroethoxy) methane	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
2,4-Dichlorophenol	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
1,2,4-Trichlorobenzene	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
Naphthalene	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
4-Chloroaniline	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
Hexachlorobutadiene	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
4-Chloro-3-methylphenol	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
2-Methylnaphthalene	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
Hexachlorocyclopentadiene	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
2,4,6-Trichlorophenol	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
2,4,5-Trichlorophenol	-			890 U	ug/kg	890	900 R	ug/kg	900	-		
2-Chloronaphthalene	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
2-Nitroaniline	-			890 U	ug/kg	890	900 R	ug/kg	900	-		
Dimethylphthalate	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
Acenaphthylene	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
2,6-Dinitrotoluene	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
3-Nitroaniline	-			890 U	ug/kg	890	900 R	ug/kg	900	-		
Acenaphthene	-			370 U	ug/kg	370	370 R	ug/kg	370	-		
2,4-Dinitrophenol	950 U	ug/kg	950	890 U	ug/kg	890	900 R	ug/kg	900	950 U	ug/kg	950
4-Nitrophenol	950 U	ug/kg	950	890 U	ug/kg	890	900 R	ug/kg	900	950 U	ug/kg	950
Dibenzofuran	390 U	ug/kg	390	370 U	ug/kg	370	370 R	ug/kg	370	390 U	ug/kg	390
2,4-Dinitrotoluene	390 U	ug/kg	390	370 U	ug/kg	370	370 R	ug/kg	370	390 U	ug/kg	390
Diethylphthalate	390 U	ug/kg	390	370 U	ug/kg	370	370 R	ug/kg	370	390 U	ug/kg	390
4-Chlorophenyl-phenylether	390 U	ug/kg	390	370 U	ug/kg	370	370 R	ug/kg	370	390 U	ug/kg	390
Fluorene	390 U	ug/kg	390	370 U	ug/kg	370	370 R	ug/kg	370	390 U	ug/kg	390
4-Nitroaniline	950 U	ug/kg	950	890 U	ug/kg	890	900 R	ug/kg	900	950 U	ug/kg	950
4,6-Dinitro-2-methylphenol	950 U	ug/kg	950	890 U	ug/kg	890	900 R	ug/kg	900	950 U	ug/kg	950
N-Nitrosodiphenylamine (1)	390 U	ug/kg	390	370 U	ug/kg	370	370 R	ug/kg	370	390 U	ug/kg	390
4-Bromophenyl-phenylether	390 U	ug/kg	390	370 U	ug/kg	370	370 R	ug/kg	370	390 U	ug/kg	390
Hexachlorobenzene	390 U	ug/kg	390	370 U	ug/kg	370	370 R	ug/kg	370	390 U	ug/kg	390
Pentachlorophenol	950 U	ug/kg	950	890 U	ug/kg	890	900 R	ug/kg	900	950 U	ug/kg	950
Phenanthrene	390 U	ug/kg	390	370 U	ug/kg	370	370 R	ug/kg	370	390 U	ug/kg	390
Anthracene	390 U	ug/kg	390	370 U	ug/kg	370	370 R	ug/kg	370	390 U	ug/kg	390
Carbazole	390 U	ug/kg	390	370 U	ug/kg	370	370 R	ug/kg	370	390 U	ug/kg	390
Di-n-butylphthalate	390 U	ug/kg	390	370 U	ug/kg	370	370 R	ug/kg	370	390 U	ug/kg	390
Fluoranthene	390 U	ug/kg	390	370 U	ug/kg	370	370 R	ug/kg	370	390 U	ug/kg	390
Pyrene	390 U	ug/kg	390	370 U	ug/kg	370	370 R	ug/kg	370	390 U	ug/kg	390

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	F2069101				CFBBMS7S0				CFBBMS7S0D				CFBBMS7S4			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS616				CFBBMS7S0				CFBBMS7S0D				CFBBMS7S4			
Collect Date:	10-AUG-93				09-AUG-93				09-AUG-93				09-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Butylbenzylphthalate	390	U	ug/kg	390	370	U	ug/kg	370	370	R	ug/kg	370	390	U	ug/kg	390
3,3-Dichlorobenzidine	390	U	ug/kg	390	370	U	ug/kg	370	370	R	ug/kg	370	390	U	ug/kg	390
Benzo (a) anthracene	390	U	ug/kg	390	370	U	ug/kg	370	370	R	ug/kg	370	390	U	ug/kg	390
Chrysene	390	U	ug/kg	390	370	U	ug/kg	370	370	R	ug/kg	370	390	U	ug/kg	390
bis(2-Ethylhexyl) phthalate	390	U	ug/kg	390	370	U	ug/kg	370	370	R	ug/kg	370	390	U	ug/kg	390
Di-n-octylphthalate	390	U	ug/kg	390	370	U	ug/kg	370	370	R	ug/kg	370	390	U	ug/kg	390
Benzo (b) fluoranthene	390	U	ug/kg	390	370	U	ug/kg	370	370	R	ug/kg	370	390	U	ug/kg	390
Benzo (k) fluoranthene	390	U	ug/kg	390	370	U	ug/kg	370	370	R	ug/kg	370	390	U	ug/kg	390
Benzo (a) pyrene	390	U	ug/kg	390	370	U	ug/kg	370	370	R	ug/kg	370	390	U	ug/kg	390
Indeno (1,2,3-cd) pyrene	390	U	ug/kg	390	370	U	ug/kg	370	370	R	ug/kg	370	390	U	ug/kg	390
Dibenz (a,h) anthracene	390	U	ug/kg	390	370	U	ug/kg	370	370	R	ug/kg	370	390	U	ug/kg	390
Benzo (g,h,i) perylene	390	U	ug/kg	390	370	U	ug/kg	370	370	R	ug/kg	370	390	U	ug/kg	390

U = NOT DETECTED J = ESTIMATED VALUE
UJ PORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R JLT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CFBBMS7SR				CFBBMS8S2				CFBBMS8S6				F3341101			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS7SR				CFBBMS8S2				CFBBMS8S6				CFBBMS910			
Collect Date:	09-AUG-93				09-AUG-93				09-AUG-93				16-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP SEMIVOLATILES 90-SOW																
Phenol	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
bis(2-Chloroethyl) ether	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
2-Chlorophenol	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
1,3-Dichlorobenzene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
1,4-Dichlorobenzene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
1,2-Dichlorobenzene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
2-Methylphenol	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
2,2-oxybis(1-Chloropropane)	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
4-Methylphenol	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
N-Nitroso-di-n-propylamine	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Hexachloroethane	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Nitrobenzene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Isophorone	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
2-Nitrophenol	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
2,4-Dimethylphenol	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
bis(2-Chloroethoxy) methane	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
2,4-Dichlorophenol	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
1,2,4-Trichlorobenzene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Naphthalene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
4-Chloroaniline	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Hexachlorobutadiene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
4-Chloro-3-methylphenol	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
2-Methylnaphthalene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Hexachlorocyclopentadiene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
2,4,6-Trichlorophenol	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
2,4,5-Trichlorophenol	25	U	ug/l	25	840	U	ug/kg	840	930	R	ug/kg	930	860	U	ug/kg	860
2-Chloronaphthalene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
2-Nitroaniline	25	U	ug/l	25	840	U	ug/kg	840	930	R	ug/kg	930	860	U	ug/kg	860
Dimethylphthalate	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Acenaphthylene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
2,6-Dinitrotoluene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
3-Nitroaniline	25	U	ug/l	25	840	U	ug/kg	840	930	R	ug/kg	930	860	U	ug/kg	860
Acenaphthene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
2,4-Dinitrophenol	25	U	ug/l	25	840	U	ug/kg	840	930	R	ug/kg	930	860	U	ug/kg	860
4-Nitrophenol	25	U	ug/l	25	840	U	ug/kg	840	930	R	ug/kg	930	860	U	ug/kg	860
Dibenzofuran	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
2,4-Dinitrotoluene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Diethylphthalate	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
4-Chlorophenyl-phenylether	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Fluorene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
4-Nitroaniline	25	U	ug/l	25	840	U	ug/kg	840	930	R	ug/kg	930	860	U	ug/kg	860
4,6-Dinitro-2-methylphenol	25	U	ug/l	25	840	U	ug/kg	840	930	R	ug/kg	930	860	U	ug/kg	860
N-Nitrosodiphenylamine (1)	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
4-Bromophenyl-phenylether	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Hexachlorobenzene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Pentachlorophenol	25	U	ug/l	25	840	U	ug/kg	840	930	R	ug/kg	930	860	U	ug/kg	860
Phenanthrene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Anthracene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Carbazole	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Di-n-butylphthalate	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Fluoranthene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Pyrene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CFBBMS7SR				CFBBMS8S2				CFBBMS8S6				F3341101			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS7SR				CFBBMS8S2				CFBBMS8S6				CFBBMS910			
Collect Date:	09-AUG-93				09-AUG-93				09-AUG-93				16-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Butylbenzylphthalate	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
3,3-Dichlorobenzidine	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Benzo (a) anthracene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Chrysene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
bis(2-Ethylhexyl) phthalat	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Di-n-octylphthalate	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Benzo (b) fluoranthene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Benzo (k) fluoranthene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Benzo (a) pyrene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Indeno (1,2,3-cd) pyrene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Dibenz (a,h) anthracene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350
Benzo (g,h,i) perylene	10	U	ug/l	10	350	U	ug/kg	350	380	R	ug/kg	380	350	U	ug/kg	350

U = NOT DETECTED J = ESTIMATED VALUE
UJ [illegible]PORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R [illegible]ULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	F3341101MS				F3341101MS				F3346101			
Site	CECIL				CECIL				CECIL			
Locator	CFBBMS910MS				CFBBMS910MSD				CFBBMS916			
Collect Date:	16-AUG-93				16-AUG-93				16-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP SEMIVOLATILES 90-SOW												
Phenol	1300		ug/kg	350	990		ug/kg	350	380	U	ug/kg	380
bis(2-Chloroethyl) ether	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
2-Chlorophenol	1300		ug/kg	350	950		ug/kg	350	380	U	ug/kg	380
1,3-Dichlorobenzene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
1,4-Dichlorobenzene	730		ug/kg	350	560		ug/kg	350	380	U	ug/kg	380
1,2-Dichlorobenzene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
2-Methylphenol	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
2,2-oxybis(1-Chloropropane)	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
4-Methylphenol	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
N-Nitroso-di-n-propylamine	720	J	ug/kg	350	570	J	ug/kg	350	380	U	ug/kg	380
Hexachloroethane	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Nitrobenzene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Isophorone	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
2-Nitrophenol	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
2,4-Dimethylphenol	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
bis(2-Chloroethoxy) methane	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
2,4-Dichlorophenol	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
1,2,4-Trichlorobenzene	760	J	ug/kg	350	590	J	ug/kg	350	380	U	ug/kg	380
Naphthalene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
4-Chloroaniline	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Hexachlorobutadiene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
4-Chloro-3-methylphenol	1100		ug/kg	350	910		ug/kg	350	380	U	ug/kg	380
2-Methylnaphthalene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Hexachlorocyclopentadiene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
2,4,6-Trichlorophenol	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
2,4,5-Trichlorophenol	860	U	ug/kg	860	860	U	ug/kg	860	910	U	ug/kg	910
2-Chloronaphthalene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
2-Nitroaniline	860	U	ug/kg	860	860	U	ug/kg	860	910	U	ug/kg	910
Dimethylphthalate	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Acenaphthylene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
2,6-Dinitrotoluene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
3-Nitroaniline	860	U	ug/kg	860	860	U	ug/kg	860	910	U	ug/kg	910
Acenaphthene	790	J	ug/kg	350	610	J	ug/kg	350	380	U	ug/kg	380
2,4-Dinitrophenol	860	U	ug/kg	860	860	U	ug/kg	860	910	U	ug/kg	910
4-Nitrophenol	810	J	ug/kg	860	760	J	ug/kg	860	910	U	ug/kg	910
Dibenzofuran	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
2,4-Dinitrotoluene	790		ug/kg	350	580		ug/kg	350	380	U	ug/kg	380
Diethylphthalate	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
4-Chlorophenyl-phenylether	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Fluorene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
4-Nitroaniline	860	U	ug/kg	860	860	U	ug/kg	860	910	U	ug/kg	910
4,6-Dinitro-2-methylphenol	860	U	ug/kg	860	860	U	ug/kg	860	910	U	ug/kg	910
N-Nitrosodiphenylamine (1)	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
4-Bromophenyl-phenylether	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Hexachlorobenzene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Pentachlorophenol	1400		ug/kg	860	1200		ug/kg	860	910	U	ug/kg	910
Phenanthrene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Anthracene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Carbazole	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Di-n-butylphthalate	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Fluoranthene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Pyrene	930		ug/kg	350	760	J	ug/kg	350	380	U	ug/kg	380

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	F3341101MS				F3341101MS				F3346101			
Site	CECIL				CECIL				CECIL			
Locator	CFBBMS910MS				CFBBMS910MSD				CFBBMS916			
Collect Date:	16-AUG-93				16-AUG-93				16-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Butylbenzylphthalate	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
3,3-Dichlorobenzidine	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Benzo (a) anthracene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Chrysene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
bis(2-Ethylhexyl) phthalate	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Di-n-octylphthalate	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Benzo (b) fluoranthene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Benzo (k) fluoranthene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Benzo (a) pyrene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Indeno (1,2,3-cd) pyrene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Dibenz (a,h) anthracene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380
Benzo (g,h,i) perylene	350	U	ug/kg	350	350	U	ug/kg	350	380	U	ug/kg	380

U = NOT DETECTED J = ESTIMATED VALUE
U \EPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
I .SULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- PESTICIDES AND PCBS

Lab Sample Number:	CFBBMS1S0				CFBBMS1S6				CFBBMS2S2				CFBBMS2S6			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS1S0				CFBBMS1S6				CFBBMS2S2				CFBBMS2S6			
Collect Date:	05-AUG-93				05-AUG-93				06-AUG-93				06-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP PESTICIDES/PCBS 90-80M																
alpha-BHC	2	UJ	ug/kg	2	2	UJ	ug/kg	2	1.9	UJ	ug/kg	1.9	2	UJ	ug/kg	2
beta-BHC	2	UJ	ug/kg	2	2	UJ	ug/kg	2	1.9	UJ	ug/kg	1.9	2	UJ	ug/kg	2
delta-BHC	2	UJ	ug/kg	2	2	UJ	ug/kg	2	1.9	UJ	ug/kg	1.9	2	UJ	ug/kg	2
gamma-BHC (Lindane)	2	UJ	ug/kg	2	2	UJ	ug/kg	2	1.9	UJ	ug/kg	1.9	2	UJ	ug/kg	2
Heptachlor	2	UJ	ug/kg	2	2	UJ	ug/kg	2	1.9	UJ	ug/kg	1.9	2	UJ	ug/kg	2
Aldrin	2	UJ	ug/kg	2	2	UJ	ug/kg	2	1.9	UJ	ug/kg	1.9	2	UJ	ug/kg	2
Heptachlor epoxide	2	UJ	ug/kg	2	2	UJ	ug/kg	2	1.9	UJ	ug/kg	1.9	2	UJ	ug/kg	2
Endosulfan I	2	UJ	ug/kg	2	2	UJ	ug/kg	2	1.9	UJ	ug/kg	1.9	2	UJ	ug/kg	2
Dieldrin	3.8	UJ	ug/kg	3.8	3.9	UJ	ug/kg	3.9	3.7	UJ	ug/kg	3.7	3.8	UJ	ug/kg	3.8
4,4-DDE	3.8	UJ	ug/kg	3.8	3.9	UJ	ug/kg	3.9	3.7	UJ	ug/kg	3.7	3.8	UJ	ug/kg	3.8
Endrin	3.8	UJ	ug/kg	3.8	3.9	UJ	ug/kg	3.9	3.7	UJ	ug/kg	3.7	3.8	UJ	ug/kg	3.8
Endosulfan II	3.8	UJ	ug/kg	3.8	3.9	UJ	ug/kg	3.9	3.7	UJ	ug/kg	3.7	3.8	UJ	ug/kg	3.8
4,4-DDD	.68	J	ug/kg	4	3.9	UJ	ug/kg	3.9	3.7	UJ	ug/kg	3.7	3.8	UJ	ug/kg	3.8
Endosulfan sulfate	3.8	UJ	ug/kg	3.8	3.9	UJ	ug/kg	3.9	3.7	UJ	ug/kg	3.7	3.8	UJ	ug/kg	3.8
4,4-DDT	.73	J	ug/kg	4	3.9	UJ	ug/kg	3.9	3.7	UJ	ug/kg	3.7	3.8	UJ	ug/kg	3.8
Methoxychlor	20	UJ	ug/kg	20	20	UJ	ug/kg	20	19	UJ	ug/kg	19	20	UJ	ug/kg	20
Endrin ketone	3.8	UJ	ug/kg	3.8	3.9	UJ	ug/kg	3.9	3.7	UJ	ug/kg	3.7	3.8	UJ	ug/kg	3.8
Endrin aldehyde	3.8	UJ	ug/kg	3.8	3.9	UJ	ug/kg	3.9	3.7	UJ	ug/kg	3.7	3.8	UJ	ug/kg	3.8
alpha-Chlordane	2	UJ	ug/kg	2	2	UJ	ug/kg	2	1.9	UJ	ug/kg	1.9	2	UJ	ug/kg	2
gamma-Chlordane	2	UJ	ug/kg	2	2	UJ	ug/kg	2	1.9	UJ	ug/kg	1.9	2	UJ	ug/kg	2
Toxaphene	200	UJ	ug/kg	200	200	UJ	ug/kg	200	190	UJ	ug/kg	190	200	UJ	ug/kg	200
Aroclor-1016	38	UJ	ug/kg	38	39	UJ	ug/kg	39	37	UJ	ug/kg	37	38	UJ	ug/kg	38
Aroclor-1221	77	UJ	ug/kg	77	79	UJ	ug/kg	79	75	UJ	ug/kg	75	78	UJ	ug/kg	78
Aroclor-1232	38	UJ	ug/kg	38	39	UJ	ug/kg	39	37	UJ	ug/kg	37	38	UJ	ug/kg	38
Aroclor-1242	38	UJ	ug/kg	38	39	UJ	ug/kg	39	37	UJ	ug/kg	37	38	UJ	ug/kg	38
Aroclor-1248	38	UJ	ug/kg	38	39	UJ	ug/kg	39	37	UJ	ug/kg	37	38	UJ	ug/kg	38
Aroclor-1254	38	UJ	ug/kg	38	39	UJ	ug/kg	39	37	UJ	ug/kg	37	38	UJ	ug/kg	38
Aroclor-1260	38	UJ	ug/kg	38	39	UJ	ug/kg	39	9.7	J	ug/kg	37	38	UJ	ug/kg	38

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- PESTICIDES AND PCBS

Lab Sample Number:	CFBBMS2SR				CFBBMS312				CFBBMS316				CFBBMS4S2			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS2SR				CFBBMS312				CFBBMS316				CFBBMS4S2			
Collect Date:	06-AUG-93				09-AUG-93				09-AUG-93				08-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP PESTICIDES/PCBS 90-SOW																
alpha-BHC	.05	UJ	ug/l	.05	2	U	ug/kg	2	2	U	ug/kg	2	1.8	UJ	ug/kg	1.8
beta-BHC	.05	UJ	ug/l	.05	2	U	ug/kg	2	2	U	ug/kg	2	1.8	UJ	ug/kg	1.8
delta-BHC	.05	UJ	ug/l	.05	2	U	ug/kg	2	2	U	ug/kg	2	1.8	UJ	ug/kg	1.8
gamma-BHC (Lindane)	.05	UJ	ug/l	.05	2	U	ug/kg	2	2	U	ug/kg	2	1.8	UJ	ug/kg	1.8
Heptachlor	.05	UJ	ug/l	.05	2	U	ug/kg	2	2	U	ug/kg	2	1.8	UJ	ug/kg	1.8
Aldrin	.05	UJ	ug/l	.05	2	U	ug/kg	2	2	U	ug/kg	2	1.8	UJ	ug/kg	1.8
Heptachlor epoxide	.05	UJ	ug/l	.05	2	U	ug/kg	2	2	U	ug/kg	2	1.8	UJ	ug/kg	1.8
Endosulfan I	.05	UJ	ug/l	.05	2	U	ug/kg	2	2	U	ug/kg	2	1.8	UJ	ug/kg	1.8
Dieldrin	.1	UJ	ug/l	.1	3.8	U	ug/kg	3.8	3.9	U	ug/kg	3.9	3.5	UJ	ug/kg	3.5
4,4-DDE	.1	UJ	ug/l	.1	3.8	U	ug/kg	3.8	3.9	U	ug/kg	3.9	3.5	UJ	ug/kg	3.5
Endrin	.1	UJ	ug/l	.1	3.8	U	ug/kg	3.8	3.9	U	ug/kg	3.9	3.5	UJ	ug/kg	3.5
Endosulfan II	.1	UJ	ug/l	.1	3.8	U	ug/kg	3.8	3.9	U	ug/kg	3.9	3.5	UJ	ug/kg	3.5
4,4-DDD	.1	UJ	ug/l	.1	3.8	U	ug/kg	3.8	3.9	U	ug/kg	3.9	3.5	UJ	ug/kg	3.5
Endosulfan sulfate	.1	UJ	ug/l	.1	3.8	U	ug/kg	3.8	3.9	U	ug/kg	3.9	3.5	UJ	ug/kg	3.5
4,4-DDT	.1	UJ	ug/l	.1	3.8	U	ug/kg	3.8	3.9	U	ug/kg	3.9	3.5	UJ	ug/kg	3.5
Methoxychlor	.5	UJ	ug/l	.5	20	U	ug/kg	20	20	U	ug/kg	20	18	UJ	ug/kg	18
Endrin ketone	.1	UJ	ug/l	.1	3.8	U	ug/kg	3.8	3.9	U	ug/kg	3.9	3.5	UJ	ug/kg	3.5
Endrin aldehyde	-				3.8	U	ug/kg	3.8	3.9	U	ug/kg	3.9	3.5	UJ	ug/kg	3.5
alpha-Chlordane	.05	UJ	ug/l	.05	2	U	ug/kg	2	2	U	ug/kg	2	1.8	UJ	ug/kg	1.8
gamma-Chlordane	.05	UJ	ug/l	.05	2	U	ug/kg	2	2	U	ug/kg	2	1.8	UJ	ug/kg	1.8
Toxaphene	5	UJ	ug/l	5	200	U	ug/kg	200	200	U	ug/kg	200	180	UJ	ug/kg	180
Aroclor-1016	1	UJ	ug/l	1	38	U	ug/kg	38	39	U	ug/kg	39	35	UJ	ug/kg	35
Aroclor-1221	2	UJ	ug/l	2	77	U	ug/kg	77	79	U	ug/kg	79	71	UJ	ug/kg	71
Aroclor-1232	1	UJ	ug/l	1	38	U	ug/kg	38	39	U	ug/kg	39	35	UJ	ug/kg	35
Aroclor-1242	1	UJ	ug/l	1	38	U	ug/kg	38	39	U	ug/kg	39	35	UJ	ug/kg	35
Aroclor-1248	.46	J	ug/l	1	38	U	ug/kg	38	39	U	ug/kg	39	35	UJ	ug/kg	35
Aroclor-1254	1	UJ	ug/l	1	38	U	ug/kg	38	39	U	ug/kg	39	35	UJ	ug/kg	35
Aroclor-1260	1	UJ	ug/l	1	38	U	ug/kg	38	39	U	ug/kg	39	35	UJ	ug/kg	35

U = NOT DETECTED J = ESTIMATED VALUE
REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
SULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- PESTICIDES AND PCBS

Lab Sample Number:	CFBBMS4S4				CFBBMS5S2				CFBBMS5S6				F2068102			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS4S4				CFBBMS5S2				CFBBMS5S6				CFBBMS610			
Collect Date:	08-AUG-93				08-AUG-93				08-AUG-93				10-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP PESTICIDES/PCBS 90-SOW																
alpha-BHC	2	UJ	ug/kg	2	1.8	UJ	ug/kg	1.8	1.8	UJ	ug/kg	1.8	1.7	UJ	ug/kg	1.7
beta-BHC	2	UJ	ug/kg	2	1.8	UJ	ug/kg	1.8	1.8	UJ	ug/kg	1.8	1.7	UJ	ug/kg	1.7
delta-BHC	2	UJ	ug/kg	2	1.8	UJ	ug/kg	1.8	1.8	UJ	ug/kg	1.8	1.7	UJ	ug/kg	1.7
gamma-BHC (Lindane)	2	UJ	ug/kg	2	1.8	UJ	ug/kg	1.8	1.8	UJ	ug/kg	1.8	1.7	UJ	ug/kg	1.7
Heptachlor	2	UJ	ug/kg	2	1.8	UJ	ug/kg	1.8	1.8	UJ	ug/kg	1.8	1.7	UJ	ug/kg	1.7
Aldrin	2	UJ	ug/kg	2	1.8	UJ	ug/kg	1.8	1.8	UJ	ug/kg	1.8	1.7	UJ	ug/kg	1.7
Heptachlor epoxide	2	UJ	ug/kg	2	1.8	UJ	ug/kg	1.8	1.8	UJ	ug/kg	1.8	1.7	UJ	ug/kg	1.7
Endosulfan I	2	UJ	ug/kg	2	1.8	UJ	ug/kg	1.8	1.8	UJ	ug/kg	1.8	1.7	UJ	ug/kg	1.7
Dieldrin	3.9	UJ	ug/kg	3.9	3.4	UJ	ug/kg	3.4	3.6	UJ	ug/kg	3.6	3.4	UJ	ug/kg	3.4
4,4-DDE	3.9	UJ	ug/kg	3.9	3.4	UJ	ug/kg	3.4	3.6	UJ	ug/kg	3.6	3.4	UJ	ug/kg	3.4
Endrin	3.9	UJ	ug/kg	3.9	3.4	UJ	ug/kg	3.4	3.6	UJ	ug/kg	3.6	3.4	UJ	ug/kg	3.4
Endosulfan II	3.9	UJ	ug/kg	3.9	3.4	UJ	ug/kg	3.4	3.6	UJ	ug/kg	3.6	3.4	UJ	ug/kg	3.4
4,4-DDD	3.9	UJ	ug/kg	3.9	3.4	UJ	ug/kg	3.4	3.6	UJ	ug/kg	3.6	3.4	UJ	ug/kg	3.4
Endosulfan sulfate	3.9	UJ	ug/kg	3.9	3.4	UJ	ug/kg	3.4	3.6	UJ	ug/kg	3.6	3.4	UJ	ug/kg	3.4
4,4-DDT	3.9	UJ	ug/kg	3.9	3.4	UJ	ug/kg	3.4	3.6	UJ	ug/kg	3.6	3.4	UJ	ug/kg	3.4
Methoxychlor	20	UJ	ug/kg	20	18	UJ	ug/kg	18	18	UJ	ug/kg	18	17	UJ	ug/kg	17
Endrin ketone	3.9	UJ	ug/kg	3.9	3.4	UJ	ug/kg	3.4	3.6	UJ	ug/kg	3.6	3.4	UJ	ug/kg	3.4
Endrin aldehyde	3.9	UJ	ug/kg	3.9	3.4	UJ	ug/kg	3.4	3.6	UJ	ug/kg	3.6	3.4	UJ	ug/kg	3.4
alpha-Chlordane	2	UJ	ug/kg	2	1.8	UJ	ug/kg	1.8	1.8	UJ	ug/kg	1.8	1.7	UJ	ug/kg	1.7
gamma-Chlordane	2	UJ	ug/kg	2	1.8	UJ	ug/kg	1.8	1.8	UJ	ug/kg	1.8	1.7	UJ	ug/kg	1.7
Toxaphene	200	UJ	ug/kg	200	180	UJ	ug/kg	180	180	UJ	ug/kg	180	170	UJ	ug/kg	170
Aroclor-1016	39	UJ	ug/kg	39	34	UJ	ug/kg	34	36	UJ	ug/kg	36	34	UJ	ug/kg	34
Aroclor-1221	79	UJ	ug/kg	79	70	UJ	ug/kg	70	73	UJ	ug/kg	73	68	UJ	ug/kg	68
Aroclor-1232	39	UJ	ug/kg	39	34	UJ	ug/kg	34	36	UJ	ug/kg	36	34	UJ	ug/kg	34
Aroclor-1242	39	UJ	ug/kg	39	34	UJ	ug/kg	34	36	UJ	ug/kg	36	34	UJ	ug/kg	34
Aroclor-1248	39	UJ	ug/kg	39	34	UJ	ug/kg	34	36	UJ	ug/kg	36	34	UJ	ug/kg	34
Aroclor-1254	39	UJ	ug/kg	39	34	UJ	ug/kg	34	36	UJ	ug/kg	36	34	UJ	ug/kg	34
Aroclor-1260	39	UJ	ug/kg	39	34	UJ	ug/kg	34	36	UJ	ug/kg	36	34	UJ	ug/kg	34

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- PESTICIDES AND PCBS

Lab Sample Number:	F2069102			CFBBMS7S0			CFBBMS7S0D			CFBBMS7S4		
Site	CECIL			CECIL			CECIL			CECIL		
Locator	CFBBMS616			CFBBMS7S0			CFBBMS7S0D			CFBBMS7S4		
Collect Date:	10-AUG-93			09-AUG-93			09-AUG-93			09-AUG-93		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL
CLP PESTICIDES/PCBS 90-SOW												
alpha-BHC	2	U ug/kg	2	1.9	U ug/kg	1.9	1.9	UJ ug/kg	1.9	2	UJ ug/kg	2
beta-BHC	2	U ug/kg	2	1.9	U ug/kg	1.9	1.9	UJ ug/kg	1.9	2	UJ ug/kg	2
delta-BHC	2	U ug/kg	2	1.9	U ug/kg	1.9	1.9	UJ ug/kg	1.9	2	UJ ug/kg	2
gamma-BHC (Lindane)	2	U ug/kg	2	1.9	U ug/kg	1.9	1.9	UJ ug/kg	1.9	2	UJ ug/kg	2
Heptachlor	2	U ug/kg	2	1.9	U ug/kg	1.9	1.9	UJ ug/kg	1.9	2	UJ ug/kg	2
Aldrin	2	U ug/kg	2	1.9	U ug/kg	1.9	1.9	UJ ug/kg	1.9	2	UJ ug/kg	2
Heptachlor epoxide	2	U ug/kg	2	1.9	U ug/kg	1.9	1.9	UJ ug/kg	1.9	2	UJ ug/kg	2
Endosulfan I	2	U ug/kg	2	1.9	U ug/kg	1.9	1.9	UJ ug/kg	1.9	2	UJ ug/kg	2
Dieldrin	4	U ug/kg	4	3.7	U ug/kg	3.7	3.7	UJ ug/kg	3.7	3.9	UJ ug/kg	3.9
4,4-DDE	4	U ug/kg	4	3.7	U ug/kg	3.7	.3	U ug/kg	.3	3.9	UJ ug/kg	3.9
Endrin	4	U ug/kg	4	3.7	U ug/kg	3.7	3.7	UJ ug/kg	3.7	3.9	UJ ug/kg	3.9
Endosulfan II	4	U ug/kg	4	3.7	U ug/kg	3.7	3.7	UJ ug/kg	3.7	3.9	UJ ug/kg	3.9
4,4-DDD	4	U ug/kg	4	3.7	U ug/kg	3.7	3.7	UJ ug/kg	3.7	3.9	UJ ug/kg	3.9
Endosulfan sulfate	4	U ug/kg	4	3.7	U ug/kg	3.7	3.7	UJ ug/kg	3.7	3.9	UJ ug/kg	3.9
4,4-DDT	4	U ug/kg	4	.5	U ug/kg	.5	3.7	UJ ug/kg	3.7	3.9	UJ ug/kg	3.9
Methoxychlor	20	U ug/kg	20	19	U ug/kg	19	19	UJ ug/kg	19	20	UJ ug/kg	20
Endrin ketone	4	U ug/kg	4	3.7	U ug/kg	3.7	3.7	UJ ug/kg	3.7	3.9	UJ ug/kg	3.9
Endrin aldehyde	4	U ug/kg	4	3.7	U ug/kg	3.7	3.7	UJ ug/kg	3.7	3.9	UJ ug/kg	3.9
alpha-Chlordane	2	U ug/kg	2	1.9	U ug/kg	1.9	1.9	UJ ug/kg	1.9	2	UJ ug/kg	2
gamma-Chlordane	2	U ug/kg	2	1.9	U ug/kg	1.9	1.9	UJ ug/kg	1.9	2	UJ ug/kg	2
Toxaphene	200	U ug/kg	200	190	U ug/kg	190	190	UJ ug/kg	190	200	UJ ug/kg	200
Aroclor-1016	40	U ug/kg	40	37	U ug/kg	37	37	UJ ug/kg	37	39	UJ ug/kg	39
Aroclor-1221	79	U ug/kg	79	74	U ug/kg	74	75	UJ ug/kg	75	79	UJ ug/kg	79
Aroclor-1232	40	U ug/kg	40	37	U ug/kg	37	37	UJ ug/kg	37	39	UJ ug/kg	39
Aroclor-1242	40	U ug/kg	40	37	U ug/kg	37	37	UJ ug/kg	37	39	UJ ug/kg	39
Aroclor-1248	40	U ug/kg	40	37	U ug/kg	37	37	UJ ug/kg	37	39	UJ ug/kg	39
Aroclor-1254	40	U ug/kg	40	37	U ug/kg	37	37	UJ ug/kg	37	39	UJ ug/kg	39
Aroclor-1260	40	U ug/kg	40	37	U ug/kg	37	37	UJ ug/kg	37	39	UJ ug/kg	39

U = NOT DETECTED J = ESTIMATED VALUE
U [illegible] PORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R [illegible] ULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- PESTICIDES AND PCBS

Lab Sample Number:	CFBBMS7SR				CFBBMS8S2				CFBBMS8S6				F3341102			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS7SR				CFBBMS8S2				CFBBMS8S6				CFBBMS9I0			
Collect Date:	09-AUG-93				09-AUG-93				09-AUG-93				16-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP PESTICIDES/PCBS 90-SOW																
alpha-BHC	.05	UJ	ug/l	.05	1.8	U	ug/kg	1.8	2	UJ	ug/kg	2	1.8	U	ug/kg	1.8
beta-BHC	.05	UJ	ug/l	.05	1.8	U	ug/kg	1.8	2	UJ	ug/kg	2	1.8	U	ug/kg	1.8
delta-BHC	.05	UJ	ug/l	.05	1.8	U	ug/kg	1.8	2	UJ	ug/kg	2	1.8	U	ug/kg	1.8
gamma-BHC (Lindane)	.05	UJ	ug/l	.05	1.8	U	ug/kg	1.8	2	UJ	ug/kg	2	1.8	U	ug/kg	1.8
Heptachlor	.05	UJ	ug/l	.05	1.8	U	ug/kg	1.8	2	UJ	ug/kg	2	1.8	U	ug/kg	1.8
Aldrin	.05	UJ	ug/l	.05	1.8	U	ug/kg	1.8	2	UJ	ug/kg	2	1.8	U	ug/kg	1.8
Heptachlor epoxide	.05	UJ	ug/l	.05	1.8	U	ug/kg	1.8	2	UJ	ug/kg	2	1.8	U	ug/kg	1.8
Endosulfan I	.05	UJ	ug/l	.05	1.8	U	ug/kg	1.8	2	UJ	ug/kg	2	1.8	U	ug/kg	1.8
Dieldrin	.1	UJ	ug/l	.1	3.4	U	ug/kg	3.4	3.8	UJ	ug/kg	3.8	3.5	U	ug/kg	3.5
4,4-DDE	.1	UJ	ug/l	.1	3.4	U	ug/kg	3.4	3.8	UJ	ug/kg	3.8	3.5	U	ug/kg	3.5
Endrin	.1	UJ	ug/l	.1	3.4	U	ug/kg	3.4	3.8	UJ	ug/kg	3.8	3.5	U	ug/kg	3.5
Endosulfan II	.1	UJ	ug/l	.1	3.4	U	ug/kg	3.4	3.8	UJ	ug/kg	3.8	3.5	U	ug/kg	3.5
4,4-DDD	.1	UJ	ug/l	.1	3.4	U	ug/kg	3.4	3.8	UJ	ug/kg	3.8	3.5	U	ug/kg	3.5
Endosulfan sulfate	.1	UJ	ug/l	.1	3.4	U	ug/kg	3.4	3.8	UJ	ug/kg	3.8	3.5	U	ug/kg	3.5
4,4-DDT	.1	UJ	ug/l	.1	3.4	U	ug/kg	3.4	3.8	UJ	ug/kg	3.8	3.5	U	ug/kg	3.5
Methoxychlor	.5	UJ	ug/l	.5	18	U	ug/kg	18	20	UJ	ug/kg	20	18	U	ug/kg	18
Endrin ketone	.1	UJ	ug/l	.1	3.4	U	ug/kg	3.4	3.8	UJ	ug/kg	3.8	3.5	U	ug/kg	3.5
Endrin aldehyde	-				3.4	U	ug/kg	3.4	3.8	UJ	ug/kg	3.8	3.5	U	ug/kg	3.5
alpha-Chlordane	.05	UJ	ug/l	.05	1.8	U	ug/kg	1.8	2	UJ	ug/kg	2	1.8	U	ug/kg	1.8
gamma-Chlordane	.05	UJ	ug/l	.05	1.8	U	ug/kg	1.8	2	UJ	ug/kg	2	1.8	U	ug/kg	1.8
Toxaphene	5	UJ	ug/l	5	180	U	ug/kg	180	200	UJ	ug/kg	200	180	U	ug/kg	180
Aroclor-1016	1	UJ	ug/l	1	34	U	ug/kg	34	38	UJ	ug/kg	38	35	U	ug/kg	35
Aroclor-1221	2	UJ	ug/l	2	69	U	ug/kg	69	78	UJ	ug/kg	78	72	U	ug/kg	72
Aroclor-1232	1	UJ	ug/l	1	34	U	ug/kg	34	38	UJ	ug/kg	38	35	U	ug/kg	35
Aroclor-1242	1	UJ	ug/l	1	34	U	ug/kg	34	38	UJ	ug/kg	38	35	U	ug/kg	35
Aroclor-1248	1	UJ	ug/l	1	34	U	ug/kg	34	38	UJ	ug/kg	38	35	U	ug/kg	35
Aroclor-1254	1	UJ	ug/l	1	34	U	ug/kg	34	38	UJ	ug/kg	38	35	U	ug/kg	35
Aroclor-1260	1	UJ	ug/l	1	34	U	ug/kg	34	38	UJ	ug/kg	38	35	U	ug/kg	35

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- PESTICIDES AND PCBS

Lab Sample Number:	F3341102S				F3341102D				F3346102			
Site	CECIL				CECIL				CECIL			
Locator	CFBBMS910MS				CFBBMS910MSD				CFBBMS916			
Collect Date:	16-AUG-93				16-AUG-93				16-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
LP PESTICIDES/PCBS 90-SOW												
alpha-BHC	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.9	U	ug/kg	1.9
beta-BHC	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.9	U	ug/kg	1.9
delta-BHC	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.9	U	ug/kg	1.9
gamma-BHC (Lindane)	16		ug/kg	2	16		ug/kg	2	1.9	U	ug/kg	1.9
Heptachlor	14		ug/kg	2	15		ug/kg	2	1.9	U	ug/kg	1.9
Aldrin	8	U	ug/kg	8	5	U	ug/kg	5	1.9	U	ug/kg	1.9
Heptachlor epoxide	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.9	U	ug/kg	1.9
Endosulfan I	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.9	U	ug/kg	1.9
Dieldrin	30		ug/kg	4	32		ug/kg	4	3.8	U	ug/kg	3.8
4,4-DDE	3.5	U	ug/kg	3.5	3.5	U	ug/kg	3.5	3.8	U	ug/kg	3.8
Endrin	30		ug/kg	4	32		ug/kg	4	3.8	U	ug/kg	3.8
Endosulfan II	3.5	U	ug/kg	3.5	3.5	U	ug/kg	3.5	3.8	U	ug/kg	3.8
4,4-DDD	.66	J	ug/kg	4	.63	J	ug/kg	4	3.8	U	ug/kg	3.8
Endosulfan sulfate	3.5	U	ug/kg	3.5	3.5	U	ug/kg	3.5	3.8	U	ug/kg	3.8
4,4-DDT	29		ug/kg	4	31		ug/kg	4	3.8	U	ug/kg	3.8
Methoxychlor	18	U	ug/kg	18	18	U	ug/kg	18	19	U	ug/kg	19
Endrin ketone	3.5	U	ug/kg	3.5	3.5	U	ug/kg	3.5	3.8	U	ug/kg	3.8
Endrin aldehyde	3.5	U	ug/kg	3.5	3.5	U	ug/kg	3.5	3.8	U	ug/kg	3.8
alpha-Chlordane	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.9	U	ug/kg	1.9
gamma-Chlordane	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8	1.9	U	ug/kg	1.9
Toxaphene	180	U	ug/kg	180	180	U	ug/kg	180	190	U	ug/kg	190
Aroclor-1016	35	U	ug/kg	35	35	U	ug/kg	35	38	U	ug/kg	38
Aroclor-1221	72	U	ug/kg	72	72	U	ug/kg	72	76	U	ug/kg	76
Aroclor-1232	35	U	ug/kg	35	35	U	ug/kg	35	38	U	ug/kg	38
Aroclor-1242	35	U	ug/kg	35	35	U	ug/kg	35	38	U	ug/kg	38
Aroclor-1248	35	U	ug/kg	35	35	U	ug/kg	35	38	U	ug/kg	38
Aroclor-1254	35	U	ug/kg	35	35	U	ug/kg	35	38	U	ug/kg	38
Aroclor-1260	35	U	ug/kg	35	35	U	ug/kg	35	38	U	ug/kg	38

U = NOT DETECTED J = ESTIMATED VALUE
UJ [illegible]RTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R [illegible]T IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- METALS AND CYANIDE

Lab Sample Number:	CFBBMS1S0				CFBBMS1S6				CFBBMS2S2				CFBBMS2S6			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS1S0				CFBBMS1S6				CFBBMS2S2				CFBBMS2S6			
Collect Date:	05-AUG-93				05-AUG-93				06-AUG-93				06-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP METALS AND CYANIDE																
Aluminum	5920		mg/kg	40	7040		mg/kg	40	877		mg/kg	40	9630		mg/kg	40
Antimony	3.5	UJ	mg/kg	12	3.6	UJ	mg/kg	12	3.3	UJ	mg/kg	12	3.4	UJ	mg/kg	12
Arsenic	.65	J	mg/kg	2	.47	UJ	mg/kg	2	.44	UJ	mg/kg	2	.98	J	mg/kg	2
Barium	7.8	J	mg/kg	40	4.7	J	mg/kg	40	1.5	U	mg/kg	40	6.8	J	mg/kg	40
Beryllium	.23	U	mg/kg	1	.24	U	mg/kg	1	.22	U	mg/kg	1	.23	U	mg/kg	1
Cadmium	.92	U	mg/kg	1	.95	U	mg/kg	1	.89	U	mg/kg	1	.91	U	mg/kg	1
Calcium	127	J	mg/kg	1000	102	J	mg/kg	1000	103	J	mg/kg	1000	109	J	mg/kg	1000
Chromium	9.4	U	mg/kg	2	9.4	U	mg/kg	2	2.6	U	mg/kg	2	12.2		mg/kg	2
Cobalt	1.4	U	mg/kg	10	1.4	U	mg/kg	10	1.3	U	mg/kg	10	1.4	U	mg/kg	10
Copper	1.8	U	mg/kg	5	1.3	U	mg/kg	5	.95	U	mg/kg	5	1.3	U	mg/kg	5
Iron	4360		mg/kg	20	2100		mg/kg	20	208		mg/kg	20	4270		mg/kg	20
Lead	6.8	J	mg/kg	1	3.6	J	mg/kg	1	1.6	J	mg/kg	1	5.4	J	mg/kg	1
Magnesium	79.6	J	mg/kg	1000	80.2	J	mg/kg	1000	18.2	UJ	mg/kg	1000	76.8	J	mg/kg	1000
Manganese	4.5		mg/kg	3	4.3		mg/kg	3	2	U	mg/kg	3	2.6	U	mg/kg	3
Mercury	.05	U	mg/kg	.1	.06	U	mg/kg	.1	.05	U	mg/kg	.1	.05	U	mg/kg	.1
Nickel	1.6	U	mg/kg	8	1.7	U	mg/kg	8	1.6	U	mg/kg	8	2.1	U	mg/kg	8
Potassium	54.1	J	mg/kg	1000	64.9	J	mg/kg	1000	16.7	U	mg/kg	1000	50.6	J	mg/kg	1000
Selenium	.23	U	mg/kg	1	.24	U	mg/kg	1	.22	U	mg/kg	1	.22	U	mg/kg	1
Silver	.92	U	mg/kg	2	.95	U	mg/kg	2	.89	U	mg/kg	2	.91	U	mg/kg	2
Sodium	138	J	mg/kg	1000	142	J	mg/kg	1000	117	J	mg/kg	1000	136	J	mg/kg	1000
Thallium	.23	U	mg/kg	2	.24	U	mg/kg	2	.22	U	mg/kg	2	.22	U	mg/kg	2
Vanadium	10.5	J	mg/kg	10	6.4	J	mg/kg	10	1.4	J	mg/kg	10	14		mg/kg	10
Zinc	6.8	U	mg/kg	4	7.2	U	mg/kg	4	4.3	U	mg/kg	4	5.7	U	mg/kg	4
Cyanide	.57	U	mg/kg	1	.57	U	mg/kg	1	.53	U	mg/kg	1	.54	U	mg/kg	1

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- METALS AND CYANIDE

Lab Sample Number:	CFBBMS2SR				CFBBMS312				CFBBMS316				CFBBMS4S2			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS2SR				CFBBMS312				CFBBMS316				CFBBMS4S2			
Collect Date:	06-AUG-93				09-AUG-93				09-AUG-93				08-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP METALS AND CYANIDE																
Aluminum	45.1	U	ug/l	200	934	J	mg/kg	40	15600	J	mg/kg	40	1360	J	mg/kg	40
Antimony	15	UJ	ug/l	60	3.4	U	mg/kg	12	3.5	U	mg/kg	12	3.2	U	mg/kg	12
Arsenic	2	R	ug/l	10	.45	U	mg/kg	2	1.8	U	mg/kg	2	.43	U	mg/kg	2
Barium	1	U	ug/l	200	1.9	U	mg/kg	40	7.7		mg/kg	40	2.6	U	mg/kg	40
Beryllium	1	U	ug/l	5	.23	U	mg/kg	1	.23	U	mg/kg	1	.21	U	mg/kg	1
Cadmium	4	U	ug/l	5	.91	U	mg/kg	1	.93	U	mg/kg	1	.85	U	mg/kg	1
Calcium	25.4	U	ug/l	5000	75.2	UJ	mg/kg	1000	94.9	U	mg/kg	1000	76.3	U	mg/kg	1000
Chromium	8	U	ug/l	10	2.5		mg/kg	2	15.1		mg/kg	2	2.7		mg/kg	2
Cobalt	6	U	ug/l	50	1.4	U	mg/kg	10	1.4	U	mg/kg	10	1.3	U	mg/kg	10
Copper	2	U	ug/l	25	.71	U	mg/kg	5	1.1	U	mg/kg	5	.7	U	mg/kg	5
Iron	9.8	U	ug/l	100	206	J	mg/kg	20	5660	J	mg/kg	20	418	J	mg/kg	20
Lead	1.1	J	ug/l	5	1.5	U	mg/kg	1	18.8		mg/kg	1	2.8		mg/kg	1
Magnesium	14	U	ug/l	5000	22.9	U	mg/kg	1000	185		mg/kg	1000	35.9	U	mg/kg	1000
Manganese	2	U	ug/l	15	1.1	U	mg/kg	3	2	U	mg/kg	3	1.3	U	mg/kg	3
Mercury	.1	U	ug/l	.2	.11	UJ	mg/kg	.1	.12	UJ	mg/kg	.1	.11	UJ	mg/kg	.1
Nickel	7	U	ug/l	40	1.6	U	mg/kg	8	2.6	J	mg/kg	8	1.5	U	mg/kg	8
Potassium	39.9	U	ug/l	5000	17	J	mg/kg	1000	130		mg/kg	1000	21.3	U	mg/kg	1000
Selenium	1.3	U	ug/l	5	.23	UJ	mg/kg	1	.23	UJ	mg/kg	1	.47	UJ	mg/kg	1
Silver	4	U	ug/l	10	.91	U	mg/kg	2	.93	U	mg/kg	2	.85	U	mg/kg	2
Sodium	95.9	U	ug/l	5000	110	U	mg/kg	1000	52	U	mg/kg	1000	121	U	mg/kg	1000
Thallium	1	U	ug/l	10	.23	UJ	mg/kg	2	.23	UJ	mg/kg	2	.22	UJ	mg/kg	2
Vanadium	4	U	ug/l	50	1.1	U	mg/kg	10	15.1		mg/kg	10	1.7	U	mg/kg	10
Zinc	10.8	U	ug/l	20	2.9	U	mg/kg	4	3.4	U	mg/kg	4	3.1	U	mg/kg	4
Cyanide	5	U	ug/l	10	.57	U	mg/kg	1	.59	U	mg/kg	1	.53	U	mg/kg	1

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- METALS AND CYANIDE

Lab Sample Number:	CFBBMS4S4				CFBBMS5S2				CFBBMS5S6				F2068			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS4S4				CFBBMS5S2				CFBBMS5S6				CFBBMS610			
Collect Date:	08-AUG-93				08-AUG-93				08-AUG-93				10-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP METALS AND CYANIDE																
Aluminum	7770	J	mg/kg	40	1160	J	mg/kg	40	10000	J	mg/kg	40	1910		mg/kg	40
Antimony	3.6	U	mg/kg	12	3.2	U	mg/kg	12	3.3	U	mg/kg	12	3.1	U	mg/kg	12
Arsenic	.47	U	mg/kg	2	.41	U	mg/kg	2	.57	U	mg/kg	2	.41	U	mg/kg	2
Barium	10.6	J	mg/kg	40	2.5	U	mg/kg	40	6.8	J	mg/kg	40	2.2	J	mg/kg	40
Beryllium	.24	U	mg/kg	1	.21	U	mg/kg	1	.22	U	mg/kg	1	.21	U	mg/kg	1
Cadmium	.95	U	mg/kg	1	.85	U	mg/kg	1	.87	U	mg/kg	1	.84	U	mg/kg	1
Calcium	105	U	mg/kg	1000	104	U	mg/kg	1000	106	U	mg/kg	1000	162	J	mg/kg	1000
Chromium	11.1		mg/kg	2	2.5		mg/kg	2	10.4		mg/kg	2	1.7	U	mg/kg	2
Cobalt	1.4	U	mg/kg	10	1.3	U	mg/kg	10	1.3	U	mg/kg	10	1.3	U	mg/kg	10
Copper	1.3	U	mg/kg	5	.71	U	mg/kg	5	.84	U	mg/kg	5	.42	U	mg/kg	5
Iron	1080	J	mg/kg	20	293	J	mg/kg	20	2640	J	mg/kg	20	449		mg/kg	20
Lead	11.6		mg/kg	1	1.2	U	mg/kg	1	8.3		mg/kg	1	3		mg/kg	1
Magnesium	123	J	mg/kg	1000	27.5	U	mg/kg	1000	153	J	mg/kg	1000	41.1	U	mg/kg	1000
Manganese	4.1		mg/kg	3	1.7	U	mg/kg	3	2.1	U	mg/kg	3	3.6		mg/kg	3
Mercury	.12	UJ	mg/kg	.1	.1	UJ	mg/kg	.1	.1	UJ	mg/kg	.1	.05	U	mg/kg	.1
Nickel	1.9	J	mg/kg	8	1.5	U	mg/kg	8	1.8	J	mg/kg	8	1.5	U	mg/kg	8
Potassium	72.9	J	mg/kg	1000	31.9	U	mg/kg	1000	129	J	mg/kg	1000	17.1	J	mg/kg	1000
Selenium	.4	UJ	mg/kg	1	.47	UJ	mg/kg	1	.35	UJ	mg/kg	1	.21	U	mg/kg	1
Silver	.95	U	mg/kg	2	.85	U	mg/kg	2	.87	U	mg/kg	2	.84	U	mg/kg	2
Sodium	136	U	mg/kg	1000	129	U	mg/kg	1000	132	U	mg/kg	1000	121	U	mg/kg	1000
Thallium	.23	UJ	mg/kg	2	.2	UJ	mg/kg	2	.22	UJ	mg/kg	2	.21	U	mg/kg	2
Vanadium	5.1	U	mg/kg	10	1.5	U	mg/kg	10	6.6	J	mg/kg	10	2	U	mg/kg	10
Zinc	5.9	U	mg/kg	4	2.8	U	mg/kg	4	4.1	U	mg/kg	4	3.4	U	mg/kg	4
Cyanide	.55	U	mg/kg	1	.51	U	mg/kg	1	.52	U	mg/kg	1	.51	UJ	mg/kg	1

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CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- METALS AND CYANIDE

Lab Sample Number:	F2069			CFBBMS7S0			CFBBMS7S0D			CFBBMS7S4		
Site	CECIL			CECIL			CECIL			CECIL		
Locator	CFBBMS616			CFBBMS7S0			CFBBMS7S0D			CFBBMS7S4		
Collect Date:	10-AUG-93			09-AUG-93			09-AUG-93			09-AUG-93		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL
CLP METALS AND CYANIDE												
Aluminum	15500	mg/kg	40	710 J	mg/kg	40	547 J	mg/kg	40	3620 J	mg/kg	40
Antimony	3.5 U	mg/kg	12	3.4 U	mg/kg	12	3.4 U	mg/kg	12	3.6 U	mg/kg	12
Arsenic	1.7 U	mg/kg	2	.45 U	mg/kg	2	.46 U	mg/kg	2	.47 U	mg/kg	2
Barium	9.8 J	mg/kg	40	4.4 J	mg/kg	40	2.5 U	mg/kg	40	3.1 U	mg/kg	40
Beryllium	.23 U	mg/kg	1	.23 U	mg/kg	1	.23 U	mg/kg	1	.24 U	mg/kg	1
Cadmium	.94 U	mg/kg	1	.91 U	mg/kg	1	.91 U	mg/kg	1	.97 U	mg/kg	1
Calcium	133 J	mg/kg	1000	312 J	mg/kg	1000	216 J	mg/kg	1000	103 U	mg/kg	1000
Chromium	17.4	mg/kg	2	2.2 J	mg/kg	2	1.8 U	mg/kg	2	6	mg/kg	2
Cobalt	1.4 U	mg/kg	10	1.4 U	mg/kg	10	1.4 U	mg/kg	10	1.5 U	mg/kg	10
Copper	.58 J	mg/kg	5	.84 U	mg/kg	5	.61 U	mg/kg	5	2.4 U	mg/kg	5
Iron	1940	mg/kg	20	195 J	mg/kg	20	116 J	mg/kg	20	104 J	mg/kg	20
Lead	9.2	mg/kg	1	3.6	mg/kg	1	2.1 U	mg/kg	1	3.8	mg/kg	1
Magnesium	239 J	mg/kg	1000	11.5 J	mg/kg	1000	11 UJ	mg/kg	1000	13.7 U	mg/kg	1000
Manganese	3.2 J	mg/kg	3	.66 U	mg/kg	3	.81 U	mg/kg	3	.76 U	mg/kg	3
Mercury	.06 U	mg/kg	.1	.11 UJ	mg/kg	.1	.11 UJ	mg/kg	.1	.13 UJ	mg/kg	.1
Nickel	3.3 J	mg/kg	8	1.6 U	mg/kg	8	1.6 U	mg/kg	8	1.7 U	mg/kg	8
Potassium	158 J	mg/kg	1000	14.2 U	mg/kg	1000	16.3 U	mg/kg	1000	15.1 U	mg/kg	1000
Selenium	.23 U	mg/kg	1	.63 UJ	mg/kg	1	.23 UJ	mg/kg	1	.61 UJ	mg/kg	1
Silver	.94 U	mg/kg	2	.91 U	mg/kg	2	.91 U	mg/kg	2	.97 U	mg/kg	2
Sodium	179 J	mg/kg	1000	130 U	mg/kg	1000	139 U	mg/kg	1000	225 J	mg/kg	1000
Thallium	.23 U	mg/kg	2	.22 U	mg/kg	2	.23 UJ	mg/kg	2	.24 UJ	mg/kg	2
Vanadium	11 J	mg/kg	10	1.1 U	mg/kg	10	.91 U	mg/kg	10	3.1 U	mg/kg	10
Zinc	4.6 U	mg/kg	4	1.6 U	mg/kg	4	3 U	mg/kg	4	2.3 U	mg/kg	4
Cyanide	.6 UJ	mg/kg	1	.55 U	mg/kg	1	.56 U	mg/kg	1	.59 U	mg/kg	1

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R ULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- METALS AND CYANIDE

Lab Sample Number:	CFBBMS7SR				CFBBMS8S2				CFBBMS8S6				F3341			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBBMS7SR				CFBBMS8S2				CFBBMS8S6				CFBBMS910			
Collect Date:	09-AUG-93				09-AUG-93				09-AUG-93				16-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP METALS AND CYANIDE																
Aluminum	45.1	U	ug/l	200	1590	J	mg/kg	40	9720	J	mg/kg	40	2130		mg/kg	40
Antimony	15	U	ug/l	60	3.1	U	mg/kg	12	3.6	U	mg/kg	12	3.4	U	mg/kg	12
Arsenic	2	U	ug/l	10	.42	U	mg/kg	2	.48	U	mg/kg	2	.43	U	mg/kg	2
Barium	2.5	U	ug/l	200	1.7	U	mg/kg	40	10.3	J	mg/kg	40	2.9	U	mg/kg	40
Beryllium	1	U	ug/l	5	.21	U	mg/kg	1	.24	U	mg/kg	1	.22	U	mg/kg	1
Cadmium	4	U	ug/l	5	.84	U	mg/kg	1	.95	U	mg/kg	1	.87	U	mg/kg	1
Calcium	119	U	ug/l	5000	74.2	U	mg/kg	1000	103	U	mg/kg	1000	277	J	mg/kg	1000
Chromium	8	U	ug/l	10	2.2		mg/kg	2	12		mg/kg	2	2.7		mg/kg	2
Cobalt	6	U	ug/l	50	1.3	U	mg/kg	10	1.4	U	mg/kg	10	1.3	U	mg/kg	10
Copper	2	U	ug/l	25	.53	U	mg/kg	5	1.6	U	mg/kg	5	1	U	mg/kg	5
Iron	19.8	U	ug/l	100	191	J	mg/kg	20	598	J	mg/kg	20	207	J	mg/kg	20
Lead	1	U	ug/l	5	1.7	U	mg/kg	1	13		mg/kg	1	3	J	mg/kg	1
Magnesium	90.2	U	ug/l	5000	23	U	mg/kg	1000	90.5	J	mg/kg	1000	30.9	U	mg/kg	1000
Manganese	2	U	ug/l	15	1	U	mg/kg	3	1.4	U	mg/kg	3	2.6	U	mg/kg	3
Mercury	.2	U	ug/l	.2	.11	UJ	mg/kg	.1	.12	UJ	mg/kg	.1	.05	UJ	mg/kg	.1
Nickel	7	UJ	ug/l	40	1.5	UJ	mg/kg	8	3.9	J	mg/kg	8	1.8	U	mg/kg	8
Potassium	48.3	U	ug/l	5000	21.9	U	mg/kg	1000	70.4	J	mg/kg	1000	28.1	U	mg/kg	1000
Selenium	1	UJ	ug/l	5	.4	UJ	mg/kg	1	.5	UJ	mg/kg	1	.56	U	mg/kg	1
Silver	4	U	ug/l	10	.84	U	mg/kg	2	.95	U	mg/kg	2	.87	U	mg/kg	2
Sodium	117	U	ug/l	5000	107	U	mg/kg	1000	135	U	mg/kg	1000	136	U	mg/kg	1000
Thallium	1	UJ	ug/l	10	.21	UJ	mg/kg	2	.24	UJ	mg/kg	2	.21	U	mg/kg	2
Vanadium	4	U	ug/l	50	1.6	U	mg/kg	10	6.2	J	mg/kg	10	1.7	J	mg/kg	10
Zinc	4.2	UJ	ug/l	20	.98	U	mg/kg	4	3.7	U	mg/kg	4	4.3	U	mg/kg	4
Cyanide	5	U	ug/l	10	.52	U	mg/kg	1	.58	U	mg/kg	1	.56	U	mg/kg	1

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R SULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- METALS AND CYANIDE

Lab Sample Number:	CFBBMS910S				F3346				CFBBMS916			
Site	CECIL				CECIL				CECIL			
Locator	CFBBMS910S				CFBBMS916				CFBBMS916			
Collect Date:	21-SEP-93				16-AUG-93				21-SEP-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP METALS AND CYANIDE												
Aluminum	-				5680		mg/kg	40	-			
Antimony	-				3.4	U	mg/kg	12	-			
Arsenic	-				.45	U	mg/kg	2	-			
Barium	-				5.5	J	mg/kg	40	-			
Beryllium	-				.23	U	mg/kg	1	-			
Cadmium	-				.92	U	mg/kg	1	-			
Calcium	-				107	U	mg/kg	1000	-			
Chromium	-				6.7		mg/kg	2	-			
Cobalt	-				1.4	U	mg/kg	10	-			
Copper	-				.92	U	mg/kg	5	-			
Iron	-				671	J	mg/kg	20	-			
Lead	-				6.7	J	mg/kg	1	-			
Magnesium	-				60.1	J	mg/kg	1000	-			
Manganese	-				2	U	mg/kg	3	-			
Mercury	.12	R	mg/kg	.1	.55	J	mg/kg	.1	.12	R	mg/kg	.1
Nickel	-				2.5	U	mg/kg	8	-			
Potassium	-				49.5	U	mg/kg	1000	-			
Selenium	-				.22	U	mg/kg	1	-			
Silver	-				.92	U	mg/kg	2	-			
Sodium	-				136	U	mg/kg	1000	-			
Thallium	-				.22	U	mg/kg	2	-			
Vanadium	-				4	J	mg/kg	10	-			
Zinc	-				4	U	mg/kg	4	-			
Cyanide	-				.58	U	mg/kg	1	-			

U = [illegible] DETECTED J = ESTIMATED VALUE
U[illegible]ORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R [illegible]LT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- TENTATIVELY IDENTIFIED COMPOUNDS

Lab Sample Number:	CFBBMS1S0			CFBBMS1S6			CFBBMS2S2			CFBBMS2S6		
Site	CECIL			CECIL			CECIL			CECIL		
Locator	CFBBMS1S0			CFBBMS1S6			CFBBMS2S2			CFBBMS2S6		
Collect Date:	05-AUG-93			05-AUG-93			06-AUG-93			06-AUG-93		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL
TENTATIVELY IDENTIFIED CMPNDS.												
(3.97) Aldolcondensationproduc	160	U ug/kg										
(4.43) Aldolcondensationproduc	12000	U ug/kg										
(5.50) Aldolcondensationproduc	120	U ug/kg										
(4.45) Aldolcondensationproduc				13000	U ug/kg							
(3.98) Aldolcondensationproduc				200	U ug/kg							
(5.50) Aldolcondensationproduc				140	U ug/kg							
(6.82) Ethanol,2-(2-Ethoxyetho				79	J ug/kg							
(3.97) Aldolcondensationproduc							160	U ug/kg				
(4.42) Aldolcondensationproduc							12000	U ug/kg				
(3.97) Aldolcondensationproduc										170	U ug/kg	
(4.43) Aldolcondensationproduc										13000	U ug/kg	
(6.82) Ethanol,2-(2-Ethoxyetho										79	J ug/kg	

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CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- TENTATIVELY IDENTIFIED COMPOUNDS

Lab Sample Number:	CFBBMS2SR				CFBBMS312				CFBBMS316				CFBBMS4S2		
Site	CECIL				CECIL				CECIL				CECIL		
Locator	CFBBMS2SR				CFBBMS312				CFBBMS316				CFBBMS4S2		
Collect Date:	06-AUG-93				09-AUG-93				09-AUG-93				08-AUG-93		
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
TENTATIVELY IDENTIFIED CMPNDS.																
(4.37) Aldolcondensationproduc	2	U	ug/l													
(6.87) Ethanol,2-(2-Ethoxyetho	2	J	ug/l													
(4.02) Aldolcondensationproduc					150	J	ug/kg									
(4.48) Aldolcondensationproduc					15000	J	ug/kg									
(4.05) Aldolcondensationproduc									250	J	ug/kg					
(4.53) Aldolcondensationproduc									28000	J	ug/kg					
(3.72) 2-Propanol(Acn)									14	J	ug/kg					
(4.03) Aldolcondensationproduc													200	J	ug/kg	
(5.55) Aldolcondensationproduc													160	J	ug/kg	
(4.52) Aldolcondensationproduc													21000	J	ug/kg	

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U' = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- TENTATIVELY IDENTIFIED COMPOUNDS

Lab Sample Number:	CFBBMS4S4			CFBBMS5S2			CFBBMS5S6			F2068101		
Site	CECIL			CECIL			CECIL			CECIL		
Locator	CFBBMS4S4			CFBBMS5S2			CFBBMS5S6			CFBBMS6I0		
Collect Date:	08-AUG-93			08-AUG-93			08-AUG-93			10-AUG-93		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL
TENTATIVELY IDENTIFIED CMPNDS.												
(4.48) Aldolcondensationproduc	15000	J ug/kg										
(4.00) Aldolcondensationproduc	160	J ug/kg										
(6.53) Aldolcondensationproduc				24000	J ug/kg							
(4.07) Aldolcondensationproduc							290	J ug/kg				
(4.53) Aldolcondensationproduc							30000	J ug/kg				
(6.87) Ethanol,2-(2-Ethoxyetho							83	J ug/kg				
(5.55) Aldolcondensationproduc							260	J ug/kg				
(3.72) 2-Propanol(Acn)							6	J ug/kg				
(3.87) Aldolcondensationproduc										250	J ug/kg	
(4.35) Aldolcondensationproduc										18000	J ug/kg	
(5.35) Aldolcondensationproduc										300	J ug/kg	

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CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- TENTATIVELY IDENTIFIED COMPOUNDS

Lab Sample Number:	F2069101			CFBBMS7S0			CFBBMS7S0D			CFBBMS7S4		
Site	CECIL			CECIL			CECIL			CECIL		
Locator	CFBBMS616			CFBBMS7S0			CFBBMS7S0D			CFBBMS7S4		
Collect Date:	10-AUG-93			09-AUG-93			09-AUG-93			09-AUG-93		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL
TENTATIVELY IDENTIFIED CMPNDS.												
(5.37) Aldolcondensationproduc	550	J ug/kg										
(6.68) Ethanol,2-(2-Ethoxyetho	110	J ug/kg										
(5.87) Aldolcondensationproduc	490	J ug/kg										
(4.33) Aldolcondensationproduc	16000	J ug/kg										
(3.53) Aldolcondensationproduc				580	J ug/kg							
(3.78) Aldolcondensationproduc				180	J ug/kg							
(3.92) Aldolcondensationproduc				310	J ug/kg							
(4.40) Aldolcondensationproduc				30000	J ug/kg							
(5.42) Aldolcondensationproduc				280	J ug/kg							
(3.87) Aldolcondensationproduc							240	J ug/kg				
(4.50) Aldolcondensationproduc							64000	J ug/kg				
(4.05) Aldolcondensationproduc							160	J ug/kg				
(3.73) 2-Propanol(Acn)							7	J ug/kg				
(4.47) Aldolcondensationproduc										63000	J ug/kg	
(6.72) Ethanol,2-(2-Ethoxyetho										140	J ug/kg	
(3.68) 2-Propanol(Acn)										540	J ug/kg	

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REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- TENTATIVELY IDENTIFIED COMPOUNDS

Lab Sample Number:	CFBBMS7SR			CFBBMS8S2			CFBBMS8S6			F3341101		
Site	CECIL			CECIL			CECIL			CECIL		
Locator	CFBBMS7SR			CFBBMS8S2			CFBBMS8S6			CFBBMS910		
Collect Date:	09-AUG-93			09-AUG-93			09-AUG-93			16-AUG-93		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL
TENTATIVELY IDENTIFIED CMPNDS.												
(6.58) Ethanol,2-(2-Ethoxyetho	4	U ug/l										
(3.87) Aldolcondensationproduc				260	J ug/kg							
(4.35) Aldolcondensationproduc				18000	J ug/kg							
(6.72) Ethanol,2-(2-Ethoxyetho				98	J ug/kg							
(3.87) Aldolcondensationproduc							150	J ug/kg				
(4.32) Aldolcondensationproduc							10000	J ug/kg				
(3.67) Aldolcondensationproduc										96	U ug/kg	
(3.87) Aldolcondensationproduc										450	U ug/kg	
(4.53) Aldolcondensationproduc										26000	U ug/kg	
(5.52) Aldolcondensationproduc										370	J ug/kg	
(6.13) Aldolcondensationproduc										72	J ug/kg	

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CECIL FIELD -- SUBSURFACE SOIL -- BACKGROUND
VALIDATED DATA -- TENTATIVELY IDENTIFIED COMPOUNDS

Lab Sample Number:	F3346101				F3346103			
Site	CECIL				CECIL			
Locator	CFBBMS916				CFBBMS916			
Collect Date:	16-AUG-93				16-AUG-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
TENTATIVELY IDENTIFIED CMPNDS.								
(3.88) Aldolcondensationproduc	740	U	ug/kg					
(4.52) Aldolcondensationproduc	23000	U	ug/kg					
(6.83) Ethanol,2-(2-Ethoxyetho	160	J	ug/kg					
(3.72) 2-Propanol(Acn)					52	J	ug/kg	

U = NOT DETECTED J = ESTIMATED VALUE
U' SPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
(ULT IS REJECTED AND UNUSABLE

CECIL FIELD -- GROUNDWATER -- BACKGROUND
VALIDATED DATA -- VOLATILES

Lab Sample Number:	CFBK1S				CFBK1SMS				CFBK1SMSD				CFBK2S			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBK1S				CFBK1SMS				CFBK1SMSD				CFBK2S			
Collect Date:	13-SEP-93				13-SEP-93				13-SEP-93				13-SEP-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP VOLATILES 90-SOW																
Chloromethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Bromomethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Vinyl chloride	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Chloroethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Methylene chloride	1	U	ug/l	1	1		ug/l	2	1		ug/l	2	1	U	ug/l	1
Acetone	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Carbon disulfide	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1-Dichloroethene	1	U	ug/l	1	9		ug/l	2	9		ug/l	2	1	U	ug/l	1
1,1-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloroethene (total)	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chloroform	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
2-Butanone	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
1,1,1-Trichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Carbon tetrachloride	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Bromodichloromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloropropane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
cis-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Trichloroethene	1	U	ug/l	1	11		ug/l	2	10		ug/l	2	1	U	ug/l	1
Dibromochloromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,2-Trichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Benzene	1	U	ug/l	1	11		ug/l	2	11		ug/l	2	1	U	ug/l	1
trans-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Bromoform	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
4-Methyl-2-pentanone	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
2-Hexanone	2	R	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	R	ug/l	2
Tetrachloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Toluene	1	U	ug/l	1	10		ug/l	2	10		ug/l	2	1	U	ug/l	1
1,1,2,2-Tetrachloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chlorobenzene	1	U	ug/l	1	10		ug/l	2	10		ug/l	2	1	U	ug/l	1
Ethylbenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Styrene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Xylenes (total)	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- GROUNDWATER -- BACKGROUND
VALIDATED DATA -- VOLATILES

Lab Sample Number:	CFBK3I				CFBK4S				CFBK5S				CFBK6I			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBK3I				CFBK4S				CFBK5S				CFBK6I			
Collect Date:	13-SEP-93				09-SEP-93				09-SEP-93				09-SEP-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP VOLATILES 90-SOW																
Chloromethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Bromomethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Vinyl chloride	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Chloroethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Methylene chloride	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Acetone	23	J	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Carbon disulfide	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1-Dichloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloroethene (total)	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chloroform	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
2-Butanone	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
1,1,1-Trichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Carbon tetrachloride	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Bromodichloromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloropropane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
cis-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Trichloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Dibromochloromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,2-Trichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Benzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
trans-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Bromoform	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
4-Methyl-2-pentanone	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
2-Hexanone	2	R	ug/l	2	2	R	ug/l	2	2	R	ug/l	2	2	R	ug/l	2
Tetrachloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Toluene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,2,2-Tetrachloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chlorobenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Ethylbenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Styrene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Xylenes (total)	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1

U = NOT DETECTED J = ESTIMATED VALUE
U EPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R ULT IS REJECTED AND UNUSABLE

CECIL FIELD -- GROUNDWATER -- BACKGROUND
VALIDATED DATA -- VOLATILES

Lab Sample Number:	CFBK7S				CFBK7SR				CFBK7ST				CFBK8S			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBK7S				CFBK7SR				CFBK7ST				CFBK8S			
Collect Date:	09-SEP-93				09-SEP-93				09-SEP-93				09-SEP-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP VOLATILES 90-SOW																
Chloromethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Bromomethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Vinyl chloride	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Chloroethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Methylene chloride	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Acetone	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Carbon disulfide	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1-Dichloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloroethene (total)	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chloroform	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
2-Butanone	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
1,1,1-Trichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Carbon tetrachloride	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Bromodichloromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloropropane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
cis-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Trichloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Dibromochloromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,2-Trichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Benzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
trans-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Bromoform	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
4-Methyl-2-pentanone	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
2-Hexanone	2	R	ug/l	2	2	R	ug/l	2	2	R	ug/l	2	2	R	ug/l	2
Tetrachloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Toluene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,2,2-Tetrachloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chlorobenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Ethylbenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Styrene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Xylenes (total)	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- GROUNDWATER -- BACKGROUND
VALIDATED DATA -- VOLATILES

Lab Sample Number:	CFBK9I			
Site	CECIL			
Locator	CFBK9I			
Collect Date:	09-SEP-93			
	VALUE	QUAL	UNITS	DL
CLP VOLATILES 90-80W				
Chloromethane	2	U	ug/l	2
Bromomethane	2	U	ug/l	2
Vinyl chloride	2	U	ug/l	2
Chloroethane	2	U	ug/l	2
Methylene chloride	1	U	ug/l	1
Acetone	2	U	ug/l	2
Carbon disulfide	1		ug/l	
1,1-Dichloroethene	1	U	ug/l	1
1,1-Dichloroethane	1	U	ug/l	1
1,2-Dichloroethane (total)	1	U	ug/l	1
Chloroform	1	U	ug/l	1
1,2-Dichloroethane	1	U	ug/l	1
2-Butanone	2	U	ug/l	2
1,1,1-Trichloroethane	1	U	ug/l	1
Carbon tetrachloride	1	U	ug/l	1
Bromodichloromethane	1	U	ug/l	1
1,2-Dichloropropane	1	U	ug/l	1
cis-1,3-Dichloropropene	1	U	ug/l	1
Trichloroethene	1	U	ug/l	1
Dibromochloromethane	1	U	ug/l	1
1,1,2-Trichloroethane	1	U	ug/l	1
Benzene	1	U	ug/l	1
trans-1,3-Dichloropropene	1	U	ug/l	1
Bromoform	1	U	ug/l	1
4-Methyl-2-pentanone	2	U	ug/l	2
2-Hexanone	2	R	ug/l	2
Tetrachloroethene	1	U	ug/l	1
Toluene	2		ug/l	2
1,1,2,2-Tetrachloroethane	1	U	ug/l	1
Chlorobenzene	1	U	ug/l	1
Ethylbenzene	1	U	ug/l	1
Styrene	1	U	ug/l	1
Xylenes (total)	2		ug/l	2

U = NOT DETECTED J = ESTIMATED VALUE
U REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
SULT IS REJECTED AND UNUSABLE

CECIL FIELD -- GROUNDWATER -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CFBK1S				CFBK1SMS				CFBK1SMSD				CFBK2S			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBK1S				CFBK1SMS				CFBK1SMSD				CFBK2S			
Collect Date:	12-SEP-93				12-SEP-93				12-SEP-93				12-SEP-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP SEMIVOLATILES 90-SOW																
Phenol	10	U	ug/l	10	45		ug/l	10	43		ug/l	10	10	U	ug/l	10
bis(2-Chloroethyl) ether	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2-Chlorophenol	10	U	ug/l	10	46		ug/l	10	44		ug/l	10	10	U	ug/l	10
1,3-Dichlorobenzene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
1,4-Dichlorobenzene	10	U	ug/l	10	26		ug/l	10	23		ug/l	10	10	U	ug/l	10
1,2-Dichlorobenzene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2-Methylphenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,2-oxybis(1-Chloropropane)	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
4-Methylphenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
N-Nitroso-di-n-propylamine	10	U	ug/l	10	30		ug/l	10	29		ug/l	10	10	U	ug/l	10
Hexachloroethane	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Nitrobenzene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Isophorone	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2-Nitrophenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4-Dimethylphenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
bis(2-Chloroethoxy) methane	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4-Dichlorophenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
1,2,4-Trichlorobenzene	10	U	ug/l	10	27		ug/l	10	25		ug/l	10	10	U	ug/l	10
Naphthalene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
4-Chloroaniline	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Hexachlorobutadiene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
4-Chloro-3-methylphenol	10	U	ug/l	10	50		ug/l	10	48		ug/l	10	10	U	ug/l	10
2-Methylnaphthalene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Hexachlorocyclopentadiene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4,6-Trichlorophenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4,5-Trichlorophenol	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
2-Chloronaphthalene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2-Nitroaniline	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
Dimethylphthalate	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Acenaphthylene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,6-Dinitrotoluene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
3-Nitroaniline	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
Acenaphthene	10	U	ug/l	10	31		ug/l	10	31		ug/l	10	10	U	ug/l	10
2,4-Dinitrophenol	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
4-Nitrophenol	25	U	ug/l	25	47		ug/l	25	48		ug/l	25	25	U	ug/l	25
Dibenzofuran	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4-Dinitrotoluene	10	U	ug/l	10	36		ug/l	10	35		ug/l	10	10	U	ug/l	10
Diethylphthalate	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
4-Chlorophenyl-phenylether	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Fluorene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
4-Nitroaniline	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
4,6-Dinitro-2-methylphenol	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
N-Nitrosodiphenylamine (1)	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
4-Bromophenyl-phenylether	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Hexachlorobenzene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Pentachlorophenol	25	U	ug/l	25	73		ug/l	25	71		ug/l	25	25	U	ug/l	25
Phenanthrene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Anthracene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Carbazole	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Di-n-butylphthalate	10	U	ug/l	10	10	U	ug/l	10	1	J	ug/l	10	10	U	ug/l	10
Fluoranthene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Pyrene	10	U	ug/l	10	38		ug/l	10	35		ug/l	10	10	U	ug/l	10
Butylbenzylphthalate	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10

CECIL FIELD -- GROUNDWATER -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CFBK1S				CFBK1SMS				CFBK1SMSD				CFBK2S			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBK1S				CFBK1SMS				CFBK1SMSD				CFBK2S			
Collect Date:	12-SEP-93				12-SEP-93				12-SEP-93				12-SEP-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
3,3-Dichlorobenzidine	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Benzo (a) anthracene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Chrysene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
bis(2-Ethylhexyl) phthalate	.4	J	ug/l	10	.8	J	ug/l	10	.8	J	ug/l	10	2	J	ug/l	10
Di-n-octylphthalate	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Benzo (b) fluoranthene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Benzo (k) fluoranthene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Benzo (a) pyrene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Indeno (1,2,3-cd) pyrene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Dibenz (a,h) anthracene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Benzo (g,h,i) perylene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10

U = NOT DETECTED J = ESTIMATED VALUE
U EPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R SULT IS REJECTED AND UNUSABLE

CECIL FIELD -- GROUNDWATER -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CFBK3I				CFBK4S				CFBK5S				CFBK6I			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBK3I				CFBK4S				CFBK5S				CFBK6I			
Collect Date:	12-SEP-93				09-SEP-93				09-SEP-93				09-SEP-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP SEMIVOLATILES 90-BOW																
Phenol	4	J	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
bis(2-Chloroethyl) ether	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2-Chlorophenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
1,3-Dichlorobenzene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
1,4-Dichlorobenzene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
1,2-Dichlorobenzene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2-Methylphenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,2-oxybis(1-Chloropropane)	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
4-Methylphenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
N-Nitroso-di-n-propylamine	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Hexachloroethane	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Nitrobenzene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Isophorone	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2-Nitrophenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4-Dimethylphenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
bis(2-Chloroethoxy) methane	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4-Dichlorophenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
1,2,4-Trichlorobenzene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Naphthalene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
4-Chloroaniline	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Hexachlorobutadiene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
4-Chloro-3-methylphenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2-Methylnaphthalene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Hexachlorocyclopentadiene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4,6-Trichlorophenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4,5-Trichlorophenol	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
2-Chloronaphthalene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2-Nitroaniline	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
Dimethylphthalate	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Acenaphthylene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,6-Dinitrotoluene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
3-Nitroaniline	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
Acenaphthene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4-Dinitrophenol	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
4-Nitrophenol	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
Dibenzofuran	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4-Dinitrotoluene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Diethylphthalate	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
4-Chlorophenyl-phenylether	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Fluorene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
4-Nitroaniline	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
4,6-Dinitro-2-methylphenol	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
N-Nitrosodiphenylamine (1)	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
4-Bromophenyl-phenylether	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Hexachlorobenzene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Pentachlorophenol	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
Phenanthrene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Anthracene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Carbazole	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Di-n-butylphthalate	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Fluoranthene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Pyrene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10

CECIL FIELD -- GROUNDWATER -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CFBK3I				CFBK4S				CFBK5S				CFBK6I			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBK3I				CFBK4S				CFBK5S				CFBK6I			
Collect Date:	12-SEP-93				09-SEP-93				09-SEP-93				09-SEP-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Butylbenzylphthalate	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
3,3-Dichlorobenzidine	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Benzo (a) anthracene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Chrysene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Bis(2-Ethylhexyl) phthalate	1	J	ug/l	10	2	J	ug/l	10	2	J	ug/l	10	2	J	ug/l	10
Di-n-octylphthalate	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Benzo (b) fluoranthene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Benzo (k) fluoranthene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Benzo (a) pyrene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Indeno (1,2,3-cd) pyrene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Dibenz (a,h) anthracene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Benzo (g,h,i) perylene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10

U = NOT DETECTED J = ESTIMATED VALUE
U EPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
[ULT IS REJECTED AND UNUSABLE

CECIL FIELD -- GROUNDWATER -- BACKGROUND
VALIDATED DATA -- SEMIVOLATILES

Lab Sample Number:	CFBK7S				CFBK7SR				CFBK8S				CFBK9I			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CFBK7S				CFBK7SR				CFBK8S				CFBK9I			
Collect Date:	09-SEP-93				09-SEP-93				09-SEP-93				09-SEP-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP SEMIVOLATILES 90-SOW																
Phenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	3	J	ug/l	10
bis(2-Chloroethyl) ether	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2-Chlorophenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
1,3-Dichlorobenzene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
1,4-Dichlorobenzene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
1,2-Dichlorobenzene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2-Methylphenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,2-oxybis(1-Chloropropane)	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
4-Methylphenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
N-Nitroso-di-n-propylamine	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Hexachloroethane	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Nitrobenzene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Isophorone	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2-Nitrophenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4-Dimethylphenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
bis(2-Chloroethoxy) methane	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4-Dichlorophenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
1,2,4-Trichlorobenzene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Naphthalene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	.5	J	ug/l	10
4-Chloroaniline	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Hexachlorobutadiene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
4-Chloro-3-methylphenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2-Methylnaphthalene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	.5	J	ug/l	10
Hexachlorocyclopentadiene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4,6-Trichlorophenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4,5-Trichlorophenol	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
2-Chloronaphthalene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2-Nitroaniline	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
Dimethylphthalate	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Acenaphthylene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,6-Dinitrotoluene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
3-Nitroaniline	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
Acenaphthene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4-Dinitrophenol	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
4-Nitrophenol	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
Dibenzofuran	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4-Dinitrotoluene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Diethylphthalate	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
4-Chlorophenyl-phenylether	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Fluorene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
4-Nitroaniline	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
4,6-Dinitro-2-methylphenol	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
N-Nitrosodiphenylamine (1)	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
4-Bromophenyl-phenylether	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Hexachlorobenzene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Pentachlorophenol	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25	25	U	ug/l	25
Phenanthrene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Anthracene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Carbazole	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Di-n-butylphthalate	10	U	ug/l	10	1	J	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Fluoranthene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Pyrene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- VOLATILES

Lab Sample Number:	CEFBSS13				CEFBSS14				CEFBSS15			
Site	CECIL				CECIL				CECIL			
Locator	CEFBSS13				CEFBSS14				CEFBSS15			
Collect Date:	20-JUL-93				20-JUL-93				20-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP VOLATILES 90-SOW												
Chloromethane	11	U	ug/kg	11	10	U	ug/kg	10	11	U	ug/kg	11
Bromomethane	11	U	ug/kg	11	10	U	ug/kg	10	11	U	ug/kg	11
Vinyl chloride	11	U	ug/kg	11	10	U	ug/kg	10	11	U	ug/kg	11
Chloroethane	11	U	ug/kg	11	10	U	ug/kg	10	11	U	ug/kg	11
Methylene chloride	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
Acetone	11	U	ug/kg	11	5	U	ug/kg	5	6	U	ug/kg	6
Carbon disulfide	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
1,1-Dichloroethene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
1,1-Dichloroethane	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
1,2-Dichloroethene (total)	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
Chloroform	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
1,2-Dichloroethane	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
2-Butanone	11	U	ug/kg	11	10	U	ug/kg	10	11	U	ug/kg	11
1,1,1-Trichloroethane	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
Carbon tetrachloride	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
Bromodichloromethane	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
1,2-Dichloropropane	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
cis-1,3-Dichloropropene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
Trichloroethene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
Dibromochloromethane	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
1,1,2-Trichloroethane	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
Benzene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
trans-1,3-Dichloropropene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
Bromoform	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
4-Methyl-2-pentanone	11	U	ug/kg	11	10	U	ug/kg	10	11	U	ug/kg	11
2-Hexanone	11	U	ug/kg	11	10	U	ug/kg	10	11	U	ug/kg	11
Tetrachloroethene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
Toluene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
1,1,2,2-Tetrachloroethane	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
Chlorobenzene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
Ethylbenzene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
Styrene	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6
Xylenes (total)	5	U	ug/kg	5	5	U	ug/kg	5	6	U	ug/kg	6

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- VOLATILES

Lab Sample Number:	CEFBSS09MS				CEFBSS10				CEFBSS11				CEFBSS12			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CEFBSS09MSD				CEFBSS10				CEFBSS11				CEFBSS12			
Collect Date:	20-JUL-93				20-JUL-93				20-JUL-93				20-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP VOLATILES 90-SOW																
Chloromethane	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	10	U	ug/kg	10
Bromomethane	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	10	U	ug/kg	10
Vinyl chloride	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	10	U	ug/kg	10
Chloroethane	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	10	U	ug/kg	10
Methylene chloride	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Acetone	4	J	ug/kg	11	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Carbon disulfide	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
1,1-Dichloroethene	61		ug/kg	11	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
1,1-Dichloroethane	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
1,2-Dichloroethene (total)	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Chloroform	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
1,2-Dichloroethane	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
2-Butanone	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	10	U	ug/kg	10
1,1,1-Trichloroethane	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Carbon tetrachloride	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Bromodichloromethane	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
1,2-Dichloropropane	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
cis-1,3-Dichloropropene	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Trichloroethene	60		ug/kg	11	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Dibromochloromethane	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
1,1,2-Trichloroethane	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Benzene	55		ug/kg	11	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
trans-1,3-Dichloropropene	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Bromoform	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
4-Methyl-2-pentanone	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	10	U	ug/kg	10
2-Hexanone	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	10	U	ug/kg	10
Tetrachloroethene	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Toluene	63		ug/kg	11	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
1,1,2,2-Tetrachloroethane	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Chlorobenzene	58		ug/kg	11	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Ethylbenzene	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Styrene	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Xylenes (total)	6	U	ug/kg	6	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5

U - NOT DETECTED J = ESTIMATED VALUE
REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
ESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- VOLATILES

Lab Sample Number:	CEFBSS08				CEFBSS09				CEFBSS09D				CEFBSS09MS			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CEFBSS08				CEFBSS09				CEFBSS09D				CEFBSS09MS			
Collect Date:	20-JUL-93				20-JUL-93				20-JUL-93				20-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP VOLATILES 90-SOW																
Chloromethane	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
Bromomethane	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
Vinyl chloride	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
Chloroethane	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
Methylene chloride	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Acetone	10	U	ug/kg	10	11	U	ug/kg	11	13	U	ug/kg	13	5	J	ug/kg	11
Carbon disulfide	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
1,1-Dichloroethene	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	61		ug/kg	11
1,1-Dichloroethane	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
1,2-Dichloroethene (total)	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Chloroform	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
1,2-Dichloroethane	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
2-Butanone	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
1,1,1-Trichloroethane	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Carbon tetrachloride	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Bromodichloromethane	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
1,2-Dichloropropane	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
cis-1,3-Dichloropropene	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Trichloroethene	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	58		ug/kg	11
Dibromochloromethane	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
1,1,2-Trichloroethane	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Benzene	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	54		ug/kg	11
trans-1,3-Dichloropropene	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Bromoform	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
4-Methyl-2-pentanone	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
2-Hexanone	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
Tetrachloroethene	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Toluene	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	60		ug/kg	11
1,1,2,2-Tetrachloroethane	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Chlorobenzene	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	56		ug/kg	11
Ethylbenzene	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Styrene	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6
Xylenes (total)	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6	6	U	ug/kg	6

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R ESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- VOLATILES

Lab Sample Number:	CEFBSS04				CEFBSS05				CEFBSS06				CEFBSS07			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CEFBSS04				CEFBSS05				CEFBSS06				CEFBSS07			
Collect Date:	19-JUL-93				20-JUL-93				20-JUL-93				20-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP VOLATILES 90-SOW																
Chloromethane	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
Bromomethane	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
Vinyl chloride	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
Chloroethane	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
Methylene chloride	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Acetone	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Carbon disulfide	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
1,1-Dichloroethene	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
1,1-Dichloroethane	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
1,2-Dichloroethane (total)	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Chloroform	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
1,2-Dichloroethane	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
2-Butanone	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
1,1,1-Trichloroethane	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Carbon tetrachloride	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Bromodichloromethane	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
1,2-Dichloropropane	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
cis-1,3-Dichloropropene	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Trichloroethene	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Dibromochloromethane	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
1,1,2-Trichloroethane	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Benzene	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
trans-1,3-Dichloropropene	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Bromoform	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
4-Methyl-2-pentanone	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
2-Hexanone	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11	11	U	ug/kg	11
Tetrachloroethene	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Toluene	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
1,1,2,2-Tetrachloroethane	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Chlorobenzene	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Ethylbenzene	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Styrene	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5
Xylenes (total)	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/kg	5

U = NOT DETECTED J = ESTIMATED VALUE
REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
ESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- VOLATILES

Lab Sample Number:	CEFBSS02D				CEFBSS02R				CEFBSS02T				CEFBSS03			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CEFBSS02D				CEFBSS02R				CEFBSS02T				CEFBSS03			
Collect Date:	19-JUL-93				20-JUL-93				20-JUL-93				19-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP VOLATILES 90-SOW																
Chloromethane	12	U	ug/kg	12	10	U	ug/l	10	10	U	ug/l	10	12	U	ug/kg	12
Bromomethane	12	U	ug/kg	12	10	U	ug/l	10	10	U	ug/l	10	12	U	ug/kg	12
Vinyl chloride	12	U	ug/kg	12	10	U	ug/l	10	10	U	ug/l	10	12	U	ug/kg	12
Chloroethane	12	U	ug/kg	12	10	U	ug/l	10	10	U	ug/l	10	12	U	ug/kg	12
Methylene chloride	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Acetone	6	U	ug/kg	6	10	U	ug/l	10	10	U	ug/l	10	6	U	ug/kg	6
Carbon disulfide	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
1,1-Dichloroethene	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
1,1-Dichloroethane	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
1,2-Dichloroethene (total)	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Chloroform	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
1,2-Dichloroethane	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
2-Butanone	12	U	ug/kg	12	10	U	ug/l	10	10	U	ug/l	10	12	U	ug/kg	12
1,1,1-Trichloroethane	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Carbon tetrachloride	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Bromodichloromethane	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
1,2-Dichloropropane	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
cis-1,3-Dichloropropene	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Trichloroethene	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Dibromochloromethane	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
1,1,2-Trichloroethane	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Benzene	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
trans-1,3-Dichloropropene	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Bromoform	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
4-Methyl-2-pentanone	12	U	ug/kg	12	10	U	ug/l	10	10	U	ug/l	10	12	U	ug/kg	12
2-Hexanone	12	U	ug/kg	12	10	U	ug/l	10	10	U	ug/l	10	12	U	ug/kg	12
Tetrachloroethene	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Toluene	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
1,1,2,2-Tetrachloroethane	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Chlorobenzene	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Ethylbenzene	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Styrene	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Xylenes (total)	6	U	ug/kg	6	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

CECIL FIELD -- SURFACE SOIL -- BACKGROUND
VALIDATED DATA -- VOLATILES

Lab Sample Number:	CEFBSS01				CEFBSS01R				CEFBSS01T				CEFBSS02			
Site	CECIL				CECIL				CECIL				CECIL			
Locator	CEFBSS01				CEFBSS01R				CEFBSS01T				CEFBSS02			
Collect Date:	19-JUL-93				19-JUL-93				19-JUL-93				19-JUL-93			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP VOLATILES 90-SOW																
Chloromethane	11	U	ug/kg	11	10	U	ug/l	10	10	U	ug/l	10	11	U	ug/kg	11
Bromomethane	11	U	ug/kg	11	10	U	ug/l	10	10	U	ug/l	10	11	U	ug/kg	11
Vinyl chloride	11	U	ug/kg	11	10	U	ug/l	10	10	U	ug/l	10	11	U	ug/kg	11
Chloroethane	11	U	ug/kg	11	10	U	ug/l	10	10	U	ug/l	10	11	U	ug/kg	11
Methylene chloride	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Acetone	5	U	ug/kg	5	10	U	ug/l	10	10	U	ug/l	10	6	U	ug/kg	6
Carbon disulfide	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
1,1-Dichloroethene	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
1,1-Dichloroethane	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
1,2-Dichloroethene (total)	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Chloroform	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
1,2-Dichloroethane	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
2-Butanone	11	U	ug/kg	11	10	U	ug/l	10	10	U	ug/l	10	11	U	ug/kg	11
1,1,1-Trichloroethane	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Carbon tetrachloride	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Bromodichloromethane	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
1,2-Dichloropropane	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
cis-1,3-Dichloropropene	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Trichloroethene	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Dibromochloromethane	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
1,1,2-Trichloroethane	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Benzene	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
trans-1,3-Dichloropropene	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Bromoform	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
4-Methyl-2-pentanone	11	U	ug/kg	11	10	U	ug/l	10	10	U	ug/l	10	11	U	ug/kg	11
2-Hexanone	11	U	ug/kg	11	10	U	ug/l	10	10	U	ug/l	10	11	U	ug/kg	11
Tetrachloroethene	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Toluene	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
1,1,2,2-Tetrachloroethane	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Chlorobenzene	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Ethylbenzene	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Styrene	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6
Xylenes (total)	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5	6	U	ug/kg	6

U = NOT DETECTED J = ESTIMATED VALUE
REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
SULT IS REJECTED AND UNUSABLE

APPENDIX J-4

PRECISION, ACCURACY, REPRESENTATIVENESS, COMPLETENESS, AND COMPARABILITY (PARCC) SUMMARY REPORT FOR BACKGROUND SAMPLES

PARCC SUMMARY REPORT
BACKGROUND SAMPLE SURVEY
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

FINAL REPORT

MARCH 1994

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PARCC SUMMARY REPORT
BACKGROUND SAMPLE SURVEY
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

1.0 INTRODUCTION

The Background Sample Survey was conducted as part of the NAS Cecil Field Remedial Investigation (RI) project. This portion of the project included the collection and analysis of 24 environmental and quality control samples. The analytical data were evaluated for Quality Assurance/Quality Control (QA/QC) based on the following United States Environmental Protection Agency (USEPA) guidance documents: *National Functional Guidelines for Organic Data Review, June 1991* and the *Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, July 1988*. The report summarizes the QA/QC evaluation of the data according to precision, accuracy, representativeness, completeness and comparability (PARCC) relative to the project Data Quality Objectives (DQO's). This report provides a quantitative and qualitative assessment of the data and identifies potential sources of error, uncertainty and bias that may effect the overall usability.

Wadsworth/Alert Laboratories performed 3436 water, soil/sediment and quality control chemical analyses. The samples were grouped into sample delivery groups (SDGs) within a project of up to twenty field samples received by the laboratory over a period of up to 14 calendar days. Each SDG contains QA/QC analyses used to document the data quality of the entire SDG or a sub-group of samples within the SDG. The environmental samples are associated with the QC samples analyzed for that SDG or sub-group. Table 1 represents the Laboratory Analyses Correlation.

Quality Control of Environmental Data

Environmental data quality depends on sample collection procedures, analytical methods and instrumentation, and sample matrix properties. Both sampling procedures and laboratory analysis contain potential sources of uncertainty, error or bias that affect the overall quality of a measurement. Sample errors may result from incomplete equipment decontamination, inappropriate sampling technique, homogenization or non-homogenization of samples, improper filtering, and improper preservation. The accuracy of analytical results is dependent on selection of appropriate analytical method, use of quality equipment, maintaining equipment properly, and selection of effective laboratory software. The sample matrix also is an important factor in the ability to obtain precise and accurate results.

Environmental and laboratory QC samples assess the effects of sampling procedures and evaluate laboratory derived contaminations, laboratory performance, and matrix effects. QC samples include: trip blanks, equipment/rinsate blanks, method blanks, laboratory control

samples (LCSs), surrogate spikes, matrix spike/matrix spike duplicates (MS/MSDs), laboratory duplicates, and field duplicates.

Before conducting the PARCC evaluation, the analytical data was validated according to the functional guidelines for organic and inorganic data review (USEPA, 1991 and 1988 respectively). Samples not meeting functional guideline acceptance criteria were qualified with a flag, an abbreviation indicating a problem with the data. Flags used in data validation are the following:

J — Estimated The associated numerical value is an estimated quantity. The analyte was detected but the reported value may not be accurate or precise. The "J" qualification indicates the data fell outside QC limits, but the exceedance was not sufficient to cause rejection of the data. The "J" qualifier is also applied to sample results that are above the method detection limit (MDL), but are less than the contract required quantitation limit (CRQL) for organic compounds. It also designates imprecision in low-level inorganics results.

R — Rejected The data are unusable (the compound/analyte may or may not be present). Use of the "R" qualifier indicates a significant variance from functional guideline acceptance criteria. Either resampling or reanalysis is necessary to determine the presence or absence of the rejected analyte.

U — Undetected The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit for organic compound analyses and the contract required detection limit (CRDL) for inorganic analytes. The "U" designation is also applied to suspected blank contaminations. The"U" flag is used to qualify any result detected in an environmental sample at a concentration less than 10 times the value of the concentration in any associated blank for common laboratory contaminants and less than 5 times the concentration in any associated blank for all other analytes.

UJ — Estimated/Undetected The compound/analyte was analyzed for, but not detected and the sample quantitation limit is an estimated quantity due to poor accuracy or precision. This qualification is also used to flag the possible false negative results in the case where low bias in the analytical system is indicated by low surrogate, internal standard or other spike recoveries.

Once the data were reviewed and qualified according to the functional guidelines, the data set is then evaluated using PARCC criteria. PARCC criteria provide an evaluation of overall data useability. The following is a discussion of PARCC criteria as related to the project DQOs.

Precision is a measure of the agreement or reproducibility of analytical results under a given set of conditions. It is a quantity that can not be measured directly, but is calculated from

percent recovery data. Precision is expressed as the relative percent difference (RPD):

$$RPD = ((/D1-D2/)/(1/2 (D1+D2))) X 100$$

Where D1 and D2 are the reported concentrations for sample and duplicate analyses. Precision is primarily assessed by calculating an RPD from the percent recoveries of the spiked compounds for each sample in the MS/MSD pair. In the absence of an MS/MSD pair, two Laboratory Controlled Samples (LCSs) are spiked and analyzed in each analytical SDG as an alternative means for assessing precision. An additional measure of sampling precision was obtained by collecting and analyzing field duplicate samples, which were compared using RPD calculations and other precision evaluation criteria.

MS and MSD samples, consisting of split samples usually collected in separate containers during the field sampling event, are spiked by the laboratory with target analytes prior to preparation and analysis. These samples measure the overall efficiency of the analytical method in recovering target analytes from an environmental matrix. An LCS is similar to an MS/MSD sample in that the LCS is spiked with the same target analytes prior to preparation and analysis. However, the LCS is prepared using a controlled interference-free matrix instead of a field sample aliquot. Laboratory reagent water is used to prepare aqueous LCS. Non-aqueous LCS are prepared using standard sand approved by the American Society for Testing Materials (ASTM) for its homogeneity. The LCS measures laboratory efficiency in recovering target analytes from either a solid or aqueous matrix in the absence of matrix interferences.

In inorganics analysis, one matrix spike sample is analyzed accompanied by an unspiked laboratory duplicate. The data reviewer compares the reported results of the original analysis and the laboratory duplicate, calculating RPD's, which are used to assess laboratory precision.

Laboratory and field sampling precision are further evaluated by calculating RPD's for field sample duplicate pairs. The sampler collects two field samples at the same location and under identically controlled conditions. The laboratory then analyzes the samples under identical conditions. With the exception of VOC samples, field duplicate sample pairs are homogenized before being placed in separate sample containers. VOC field duplicate sample pairs are discrete samples collected at the same time.

Possible causes of poor precision include sample heterogeneity, improper sample collection or handling, inconsistent sample preparation, and improper instrument use. RPDs are evaluated only when a compound is detected above the CRQL or CRDL; resulting in fewer RPD data pairs available for evaluation as compared to LCS or MS/MSD. The information obtained from field duplicate samples is of substantial value because the samples may not be effected by bias occurring in the analytical system due to problems associated with the spiking of a sample matrix (particularly solid matrices).

An RPD above the numerical QC limit in either MS/MSD samples or LCS/LCSD indicates

imprecision. Imprecision is a variance in the consistency with which the laboratory arrives at a particular reported result. Thus, the actual analyte concentration may be higher or lower than the reported result.

Accuracy is a measure of the agreement of an experimental determination and the true value of the parameter being measured. It is used to identify bias in a given measurement system. Accuracy is assessed through the analysis of MS/MSD, LCS and samples containing surrogate spikes. Surrogate spikes are either isotopically labeled compounds or compounds that are not typically detected in the samples. Surrogate spikes are added to every blank, environmental sample, MS/MSD, and standard, for VOC, SVOC, and pesticide/ PCB analyses. Accuracy of inorganic analyses is determined using the percent recoveries of MS and LCS analyses only.

Percent recovery is calculated using the equation:

$$\%R = ((A-B)/C) \times 100$$

where: A = measured concentration in the spiked sample
B = measured concentration of the spike compound in the unspiked sample
C = concentration of the spike

The percent recovery of each analyte spiked in MS/MSD samples, LCS samples, and surrogate compounds added to field samples is compared with the acceptance criteria specified by the functional guidelines (USEPA, 1991 and 1988 respectively). Spike recoveries outside the acceptable QC accuracy limits provide an indication of bias, where the reported data may overestimate or underestimate the actual concentration of compounds detected or quantitation limits reported for field samples. Recoveries outside acceptable QC limits may be caused by factors such as instrumentation, analyst error, or matrix interference.

Representativeness is a qualitative parameter that expresses the degree to which the sample data are characteristic of a population. It is evaluated by reviewing the QC results of blank samples. Positive detections of compounds in the blank samples identify compounds that may have been introduced into the samples during sample collection, transport or analysis.

For organic analysis method blanks, equipment/rinsate blanks, and trip blanks are collected and analyzed. A method blank sample is a laboratory grade water or solid matrix that contains the method reagents and has undergone the same steps as the environmental samples. The method blank provides a measure of the combined contamination derived from the laboratory source water, glassware, instruments, reagents and sample preparation steps. Method blanks are prepared for each sample of a similar matrix extracted by a similar method at a similar concentration level.

Equipment/rinsate blanks consist of analyte-free water poured over or through the sample collection equipment. The water is collected in a sample container for laboratory analysis. These blanks are collected after the sampling equipment is decontaminated and measure

efficiency of the decontamination procedure. Equipment/rinsate blanks were collected and analyzed for all target analytes.

Trip blanks are volatile organics blanks used to identify possible sample contamination introduced during sample transport. A trip blank is a sample bottle filled in the laboratory with reagent-grade water, preserved to a pH less than 2 with hydrochloric acid. It is transported to the site, stored with the sample containers, and returned unopened to the laboratory for analysis. Trip blanks were included in each cooler containing VOC samples.

In inorganics analysis, equipment/rinsate blanks, preparation blanks, and initial and continuing calibration blanks measure analyte artifacts and baseline shift. A preparation blank is a laboratory grade water or solid matrix that contains all the reagents and is carried through the sample preparation process. Preparation blanks are prepared and analyzed with each inorganic preparation SDG to assess contamination from laboratory reagents, glassware, source water and preparation procedures.

Initial and continuing calibration blanks consist of acidified laboratory grade water that is injected at the beginning and at a regular frequency during each 12 hour sample analysis run. These blanks estimate residual contaminants from the previous sample or standards analysis and measure baseline shifts that commonly occur in emission and absorption spectroscopies.

Comparability is a qualitative expression of the confidence with which one data set may be compared to another. It provides an assessment of the analytical results' equivalence to data obtained from other analyses. It is important that data sets be comparable if they are used in conjunction with other data sets. The factors affecting comparability include the following: sample collection and handling techniques, matrix type, and analytical method. Comparability is dependent upon other PARCC criteria because only when precision, accuracy and representativeness are known can data sets be compared with confidence.

Completeness is defined as the percentage of acceptable measurements compared to the total number of measurements made. It is evaluated to determine if an acceptable amount of useable data was obtained so that a valid scientific site assessment can be completed. Completeness equals the total number of analytes for each matrix minus the total number of rejected analytes divided by the total number of analytes multiplied by 100. As specified in the project DQO's, the goal for completeness for all target analytes is 96 percent.

The following sections present a review of QC data for each analytical method.

2.0 VOLATILE ORGANIC COMPOUNDS

A total of 24 water and soil/sediment samples were analyzed for volatile organic compounds. The samples were divided into 2 separate sample delivery groups (SDGs). This section discusses the QC supporting documentation as defined by the PARCC criteria and evaluated based on the DQO's.

2.1 Precision

MS/MSD and field duplicate samples were used to assess precision. MS/MSD samples were analyzed in SDGs BSS01 and BSS02. BSS01 and BSS02 each contained two field sample duplicate pairs, which provided an additional measure of precision.

2.1.1 MS/MSD Samples

The functional guidelines establishes RPD QC limits for MS/MSD samples as follows:

Compound	Soil RPD	Water RPD
1,1-dicholoroethene	22	14
trichloroethene	24	14
benzene	21	11
toluene	21	13
chlorobenzene	21	13

No RPD exceeded the QC criteria in SDGs BSS01or BSS02.

2.1.2 Duplicate Samples

Duplicate sample pairs were analyzed with SDG BSS01. All samples consisted entirely of non-detects.

2.1.3 Conclusion

The MS/MSD analytical results, which were compliant with functional guidelines QC criteria, indicate an acceptable level of sample collection and analytical precision was attained. The information provided by the field duplicate samples is limited because no calculable RPDs were available for the field duplicates. If a precision problem exists, it is confined to the concentration range at or below the instrument detection limit (IDL), which is generally below the concentration range of concern to the data user.

2.2 Accuracy

The percent recovery results of MS/MSDs and surrogate spikes are used to assess accuracy. As previously stated, SDGs BSS01 and BSS02 included MS/MSD samples for the soil/sediment matrices only. Assessment of accuracy was made by calculating the percent recoveries of the five spiking compounds: 1,1-dichloroethene, trichloroethene, benzene, toluene, and chlorobenzene.

2.2.1 MS/MSD Samples

All Percent Recoveries (%R's) met the functional guidelines recovery criteria.

2.2.2 Surrogate Spikes

Three surrogate compounds were added by the laboratory to each environmental QC sample submitted for VOC analysis. The VOC surrogate spike compounds were bromofluorobenzene, 1,2-dichloroethane-d4, and toluene-d8. Bromofluorobenzene is not a target compound and 1,2-dichloroethane-d4 and toluene-d8 are isotopically labeled target compounds. The use of these compounds as surrogates enables the laboratory to separate the surrogates from compounds of interest and to accurately calculate recoveries. Surrogate spike recoveries for VOC analyses were compared to the QC criteria in the USEPA Functional Guidelines (USEPA, 1991), as follows:

Surrogate	Solid Matrix	Aqueous Matrix
toluene-d8	84-138 %	88-110 %
bromofluorobenzene	59-113 %	86-115 %
1,2-dichloroethane-d4	70-121 %	76-114 %

Of the 72 surrogate percent recoveries evaluated, none were outside the QC limits.

2.2.3 Initial and Continuing Calibration

Initial and continuing calibration results provide another means to evaluate accuracy within a particular SDG. Relative response factor (RRF), percent relative standard deviation (%RSD) and percent difference (%D) are the three major parameters used to measure the effectiveness of instrument calibration. RRF is a measure of the relative spectral response of an analyte compared to its internal standard. %RSD is an expression of the linearity of instrument response. %D is a comparison of a continuing calibration instrumental response with its initial response. The most critical of the three calibration parameters, RRF, has the potential to effect data accuracy across an SDG when it is outside acceptable QC limits. %RSD and %D exceedances suggest more routine instrumental anomalies which typically affect only samples with positive results for the compounds with exceeded %RSDs or %Ds and were run within the particular analytical window in which the exceedances occurred.

There were no RRF exceedances in either SDGs BSS01 or BSS02. There were %RSDs and %Ds outside functional guidelines QC criteria in both SDGs. The %RSD and %D QC exceedances and the samples and target analytes affected by these exceedances are given in Table 2-A. The exceedances may create a bias in the data relative to the other calibration information generated, but it is not evident that an absolute quantifiable bias exists in the data. The data user should for this reason regard the qualified results imprecise rather than inaccurate. The %RSDs and %Ds which exceeded the QC criteria do not suggest any systematic analytical problems with either accuracy or precision.

2.2.4 Conclusion

The QC data from both the MS/MSD results and surrogate spike recoveries suggest a high level of accuracy was attained in the analyses. The surrogate recovery data suggest that matrix interferences had no appreciable effect on accuracy. Interferences were not observed.

2.3 Representativeness

Method blanks, equipment rinsate blanks and trip blanks were collected and analyzed for VOCs to evaluate representativeness. The results of the QC blank analyses are presented in Table 3. Methylene chloride and acetone were detected in the various QC blanks. The highest detected concentration for an individual target analyte in any of the three QC blanks was used for data qualification.

If contaminants were detected in a blank, corrective actions were made for the chemical analytical data during data validation. The corrective action consisted of amending the laboratory reported results for organic analytes based on the following criteria. The validation qualifier codes utilized in the blank summary tables are described below.

> CRQL Validation Qualifier. If a sample result for the blank contaminant was less than the CRQL and less than 5 times the blank value for regular target compounds or 10 times the blank value for common laboratory contaminants (the blank action level), the sample result was rejected and amended as non-detected at the CRQL for the target compound.
>
> U Validation Qualifier. If a sample result for the blank contaminant was greater than the sample CRQL and less than the blank action level, the sample result for the blank contaminant was amended as a non-detect at the concentration reported in the sample results.
>
> No Action (NA). If a sample result for the blank contaminant was greater than the blank action level, the result was not amended.

The following presents a description of VOCs detected in method blanks, equipment rinsate blanks and trip blanks. Corrective actions made for target analytes detected in the environ-

mental samples are described in Table 3.

2.3.1 Method Blanks

Method blank samples were analyzed with each SDG that was analyzed for VOCs to identify target compounds which may have been introduced through the analytical instrumentation or sample preparation. Acetone was detected in method blanks for SDG BSS01at a concentration range between 2 and 3 ug/L and methylene chloride was detected in one method blank at 2 ug/L (Table 3).

2.3.2 Equipment/Rinsate Blanks

Equipment rinsate blank samples are used to evaluate target analytes that may have been introduced by the sampling equipment or laboratory handling of the samples. Methylene chloride was detected in the equipment rinsate blank for BSS01 at 2 ug/L.

2.3.3 Trip Blanks

Trip blanks were placed in each cooler containing field VOC water or soil/sediment samples. Trip blanks are QC samples used to identify possible sampling artifacts originating from storage, shipping, or site conditions. There were no detections in the trip blanks associated with the samples.

2.3.4 Overall Assessment

The target analytes detected in the QC blanks routinely occur at comparable concentrations in laboratory analysis. The analytical results are considered to be representative. The application of the blank qualification rules has implications on the completeness of the analytical data, however, which are discussed below.

2.4 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the method detection limits attained were below the contract required quantitation limits. The comparability of the data is regarded as acceptable. Some samples were qualified due to low-level blank contamination (as discussed in section 2.3), which raised the effective detection limits for the suspected blank contaminants in those samples.

2.5 Completeness

The completeness level attained for project volatile organic field samples was 100 percent. This percentage was calculated as the total number of accepted data points divided by the total number of samples collected multiplied by 100. There were no data points rejected due to QC exceedances although some were qualified as "estimated" for various reasons.

Another type of data qualification affecting data completeness is the application of functional guidelines blank validation rules. When samples are qualified due to contamination in an associated blank a "5X" or "10X" action limit is set such that sample results below the action limit are flagged as "undetected" for the particular compound in question. This flagging procedure effectively rejects the concentration range between zero and the initial reported result, which becomes the new detection limit. It is possible that the levels of blank contamination detected could eliminate data in a necessary concentration range in some instances. In these cases, more data is needed to verify the existence of the compound in question at the site below the revised detection limit.

3.0 SEMIVOLATILE ORGANIC COMPOUNDS

A total of 22 water and soil/sediment samples were analyzed for semivolatile organic compounds (SVOCs). The samples were divided into two separate sample delivery groups (SDGs). This section discusses the QC supporting documentation as defined by the PARCC criteria and evaluated based on the DQOs.

3.1 Precision

MS/MSD and field duplicate samples were used to assess precision. One MS/MSD sample was analyzed in both SDGs BSS01 and BSS02.

Assessment of precision was made by calculating the relative percent differences (%RPDs) of eleven spiking compounds: phenol, 2-chlorophenol, 1,4-dichlorobenzene, n-nitroso-di-n-propylamine, 1,2,4-trichlorobenzene, 4-chloro-3-methylphenol, acenaphtene, 4-nitrophenol, 2,4-dinitrotoluene, pentachlorophenol and pyrene. SDGs BSS01 and BSS02 each contained two duplicate sample pairs to provide an additional measure of precision.

3.1.1 MS/MSD Samples

The functional guidelines establishes RPD QC criteria for MS/MSD samples as follows:

Compound	Soil RPD	Water RPD
phenol	35	42
2-chlorophenol	50	40
1,4-dichlorobenzene	27	28
n-nitroso-di-n-propylamine	38	38
1,2,4-trichlorobenzene	23	28
4-chloro-3-methylphenol	33	42
acenaphthene	19	31
4-nitrophenol	50	50
2,4-dinitrotoluene	47	38
pentachlorophenol	47	50
pyrene	36	31

All RPD's met QC criteria for both SDG's.

3.1.2 Duplicate Samples Pairs

Two duplicate sample pairs were analyzed in both SDGs BSS01 and BSS02 for the soil/sediment matrix. The following gives the single compound detected in the duplicate

sample pairs:

SDG No	Duplicate Nos.	Compound	Units	RPD
BSS01	CEF-BSS-02/ CEF-BSS-02DF	bis(2-ethylhexyl)phthalate	ug/kg	19

The RPD for this compound met the 60 percent QC criterion. The consistency observed in the non-detect sample results suggests that any lack of precision is less than the instrument detection limit (IDL) in the absence of a low bias.

3.1.3 Overall Assessment

The MS/MSD analytical results were compliant with functional guidelines QC criteria, suggesting acceptable analytical precision was obtained. The information provided by the field duplicate sample pairs is limited in the sense that only one calculable RPD was available. The low number of detections in the background survey suggest precision problems are largely confined to the concentration range at or below the instrument detection limit (IDL), which is generally below the concentration range of concern to the data user. It is essential in the case of non-detects to carefully evaluate accuracy, particularly low biases, which could cause target analytes which are actually present to be reported as false negatives.

3.2 Accuracy

The percent recovery results of MS/MSDs and surrogate spikes are used to assess accuracy. Assessment of accuracy was made by calculating the percent recoveries of the eleven spiking compounds listed in section 3.1.1.

3.2.1 MS/MSD Samples

All MS/MSD %R values were within the functional guidelines recovery criteria.

3.2.2 Surrogate Spikes

Eight surrogate compounds were added by the laboratory to each environmental and QC sample submitted for SVOC analysis. Surrogate spike recoveries for SVOC analyses were compared to the QC criteria in the USEPA Functional Guidelines (USEPA, 1991), as follows:

Surrogate	Solid Matrix	Aqueous Matrix
nitrobenzene-d5	23 - 120 %	35 - 114 %
2-fluorobiphenyl	30 - 115 %	43 - 116 %
terphenyl-d14	18 - 137 %	33 - 141 %

Surrogate	Solid Matrix	Aqueous Matrix
phenol-d6	24 - 113 %	10 - 94 %
2-fluorophenol	25 - 121 %	21 - 100 %
2,4,6-tribromophenol	19 - 122 %	10 - 123 %
2-chlorophenol-d4	20 - 130 %	33 - 110 %
1,2-dichlorobenzene-d4	20 - 130 %	16 - 110 %

2-Fluorobiphenyl, terphenyl-d14, 2-fluorophenol and 2,4,6-tribromophenol are not target compounds; nitrobenzene-d5, phenol-d6, 2-chlorophenol-d4 and 1,2-dichlorobenzene-d4 are isotopically labeled target compounds. The use of these compounds as surrogates enables the laboratory to separated the surrogates from compounds of interest and to accurately calculate recoveries. Of the 184 surrogate percent recoveries evaluated, three (1.6 %) were outside QC limits.

3.2.3 Initial and Continuing Calibration

The %RSD and %D QC exceedances and the analytes flagged based on those exceedances are given in Table 2B. There were no RRF exceedances in the two SDGs for any target analyte, however, there were %RSDs and %Ds outside functional guidelines QC criteria. The %RSD and %D QC exceedances create a bias in the data relative to the other calibration information generated. It is not evident that an absolute bias in the data exists. The data user, for this reason, should regard the qualified results imprecise rather than inaccurate. The %RSDs, and %Ds which exceeded the QC criteria do not suggest any systematic analytical problems with either accuracy or precision.

3.2.4 Conclusion

The QC data from both the MS/MSD results, surrogate spike recoveries and initial and continuing calibrations suggest an acceptable level of accuracy was attained.

3.3 Representativeness

Method blanks and equipment rinsate blanks were analyzed for SVOCs to evaluate representativeness. These results are presented in Table 3A. Di-n-butylphthalate and bis(2-ethylhexyl)phthalate were detected at low levels the method blanks. When more than one contaminated blank was associated with a given sample, only the highest detected concentration for an individual target analyte in any of the two QC blanks was used for qualification.

If contaminants were detected in a blank, corrective actions were made for the chemical analytical data during data validation. The corrective action consisted of amending the laboratory reported results for organic analytes based on the following criteria. The validation qualifier codes utilized in the blank summary tables are described below.

CRQL Validation Qualifier. If a sample result for the blank contaminant was less than the CRQL and less than 5 times the blank value for regular target compounds or 10 times the blank value for common laboratory contaminants (the blank action level), the sample result was rejected and amended as non-detected at the CRQL for the target compound.

U Validation Qualifier. If a sample result for the blank contaminant was greater than the sample CRQL and less than the blank action level, the sample result for the blank contaminant was amended as a non-detect at the concentration reported in the sample results.

No Action (NA). If a sample result for the blank contaminant was greater than the blank action level, the result was not amended.

The following presents a description of SVOCs detected in method blanks and equipment rinsate blanks. Corrective actions made for target analytes detected in the environmental samples are described for SDG BSS01 in Table 3A.

3.3.1 Method Blanks

Method blank samples were analyzed with each SDG to identify compounds which may have been introduced through the analytical instrumentation or sample preparation. Di-n-butylphthalate (23 ug/kg) and bis(2-ethylhexyl)phthalate (0.6 ug/L) were detected in method blanks for SDG BSS01 (Table 3).

3.3.2 Equipment/Rinsate Blanks

Equipment rinsate blank samples are used to evaluate target analytes that may have been introduced by the sampling equipment or laboratory handling of the samples. There were no detections in the equipment blanks associated with the samples.

3.3.3 Overall Assessment

The target analytes detected in the QC blanks routinely occur at comparable concentrations in laboratory analysis. The analytical results are considered to be representative. The application of the blank qualification rules effects completeness of the analytical data. This is discussed in section 3.5.

3.4 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the method detection limits attained were below the contract required quantitation limits. The comparability of the data is regarded as acceptable. Some samples were qualified due to low-level blank contamination (as discussed in section 3.5), which raised the effective detection limits for the

suspected blank contaminants in those samples.

3.5 Completeness

The completeness level attained for project semivolatile organic field samples was 100 percent, which met the 96 percent goal for the project. This percentage was calculated as the total number of accepted data points divided by the total number of samples collected multiplied by 100. There were no data points rejected due to QC exceedances, although some data were qualified as "estimated" for various reasons. The remaining data were found to be acceptable.

The application of functional guidelines blank validation rules also affects data completeness. When samples are qualified due to contamination in an associated blank, a "5X" or "10X" action limit is set such that sample results below the action limit are flagged as "undetected" for the particular compound in question. This flagging procedure effectively rejects the concentration range between zero and the initial reported result, which becomes the new detection limit. It is possible that the levels of blank contamination detected could eliminate data in a necessary concentration range in some instances. In these cases, more data is needed to verify the existence of the compound in question at the site below the revised detection limit.

4.0 PESTICIDE/PCB ORGANIC COMPOUNDS

A total of 22 water and soil/sediment samples were analyzed for pesticide/PCB organic compounds. The samples were divided into two separate sample delivery groups (SDGs). This section discusses the QC supporting documentation as defined by the PARCC criteria which are evaluated based on the DQOs.

4.1 Precision

MS/MSDs and duplicate sample pairs were used to assess precision. MS/MSD samples were analyzed in SDGs BSS01 and BSS02. SDGs BSS01 and BSS02 each contained two duplicate sample pairs, which provided an additional measure of precision.

4.1.1 MS/MSD Samples

The functional guidelines RPD QC criteria for MS/MSD samples are as follows:

Compound	Soil RPD	Water RPD
gamma-BHC (lindane)	50	15
heptachlor	31	20
aldrin	43	22
dieldrin	38	18
endrin	45	21
4,4-DDT	50	27

A total of 24 MS/MSD analyses were conducted. There were no RPD QC exceedances.

4.1.2 Duplicate Sample Pairs

Two duplicate sample pairs were analyzed with both SDGs BSS01 and BSS02. The duplicate sample pairs' analytical results consisted entirely of non-detects.

4.1.3 Conclusion

The MS/MSD results were compliant with the functional guidelines QC criteria and suggest an acceptable level of precision was attained. The information provided by the duplicate sample pairs is limited in the sense that few calculable RPDs are available. The low number of detections in the background survey suggest precision problems are largely confined to the concentration range at or below the instrument detection limit (IDL), which is generally below the concentration range of concern to the data user. It is essential in the case of non-detects to evaluate accuracy, particularly low biases, which could result in target analytes which are actually

present being reported as false negatives.

4.2 Accuracy

The percent recovery results of MS/MSDs and surrogate spikes are used to evaluate accuracy. Assessment of accuracy was made by calculating the percent recoveries of the six spiking compounds: alpha-BHC, heptachlor, aldrin, dieldrin, endrin, and 4-4'-DDT. Accuracy measures the ability of the analytical system to recover target compounds from sample matrices.

4.2.1 MS/MSD Samples

Of the 24 MS/MSD analyses run, all met the %R QC criteria.

4.2.2 Surrogate Spikes

Two surrogate compounds were added by the laboratory to each environmental and QC sample submitted for Pesticide/PCB analysis. The surrogate spike compounds were tetrachloro-m-xylene and decachlorobiphenyl. Percent recoveries of these compounds were evaluated on two gas chromatography columns simultaneously as per the CLP 1990 SOW. Surrogate spike recoveries were compared to the QC criteria stipulated in the functional guidelines (USEPA, 1991), which are:

Surrogate	Solid Matrix	Aqueous Matrix
tetrachloro-m-xylene	60-150	60-150
decachlorobiphenyl	60-150	60-150

At the present time, these QC limits are considered by the SOW to be advisory only. For this project, however, data qualification actions were taken based on exceedances of these criteria. Of the 88 surrogates evaluated, 2 were outside QC limits (2.3 percent). These exceedances were of tetrachloro-m-xylene and decachlorobiphenyl in sample CEF-BSS09 (35 and 34%, respectively). The associated data were biased low, and were flagged as estimated. It is believed that the surrogate recovery problems are limited to the individual sample and do not imply a systematic problem with the data overall.

4.2.3 Initial and Continuing Calibration Results

There were no %RSD exceedances in SDGs BSS01 or BSS02. These results suggest that there was not a systematic analytical problem with either accuracy or precision.

4.2.4 Conclusion

The QC data from the MS/MSD, surrogate spike and initial and continuing calibrations were compliant with the functional guidelines QC criteria and suggest acceptable analytical accuracy

was attained.

4.3 Representativeness

Method blanks and equipment rinsate blanks were collected and analyzed for pesticides/PCB's to evaluate representativeness. There were no positive results in the blank analyses. The analytical data are considered fully representative.

4.4 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the method detection limits attained were below the contract required quantitation limits. The comparability of the data is regarded as acceptable.

4.5 Completeness

The completeness level attained for project pesticide/PCB organic field samples was 100 percent. This percentage was calculated as the total number of accepted data points divided by the total number of samples collected multiplied by 100. The 96 percent DQO completeness limit was attained.

5.0 METALS AND CYANIDE

A total of 25 water and soil/sediment samples were analyzed for metals and cyanide. This section discusses the QC supporting documentation as defined by the PARCC criteria which are evaluated based on the project DQOs.

5.1 Precision

Metals and cyanide analyses are different from organics analyses in that no matrix spike duplicate sample is evaluated to measure precision. Instead unspiked laboratory duplicates are analyzed. The two unspiked replicate results are then compared using RPD QC criteria for detections at concentrations at least five times the contract required detection limit (CRDL). The RPD QC criteria for lab duplicate samples are 20 percent for the water matrix and 35 percent for soil/ sediment matrices. The RPD limits for water and soil/sediment field duplicates are 30 percent and 60 percent, respectively. Analytical values less than five times the CRDL are evaluated based on a CRDL standard.

5.1.1 Laboratory and Field Duplicates

Two sets of field duplicate pairs were evaluated by the laboratory in both SDGs BSS01 and BSS02. All RPDs met the 60% QC criteria for soil/sediments. The overall precision of the analytical results was high.

5.2 Accuracy

The percent recovery results of matrix spike samples are used to assess accuracy for the inorganics analyses. MS samples were analyzed for each group of samples of a particular matrix type and for each concentration range within each SDG, as the analytical method requires.

5.2.1 MS Analysis

The matrix spike recovery limits are 75-125 percent. These limits were applied to all analytes because no sample concentrations exceeded the spike concentration by a factor of four or more. All spike recoveries for SDG BSS01 met QC criteria.

5.2.2 Laboratory Control Samples (LCS)

Laboratory Control Samples (LCSs) provide another means to evaluate accuracy within a particular SDG. The LCS serves as a monitor of the overall performance of all steps in the analysis, including the sample preparation. Two LSCs were processed and analyzed for each SDG. Of the 48 percent recoveries evaluated in each SDG, all recoveries met the 80-120% QC criteria (an acceptability percentage of 100%).

5.2.3 Initial and Continuing Calibration Results

All %RSDs and %Ds were within functional guidelines QC limits for each SDG. The %RSD and %D values do not suggest any systematic analytical problems with either accuracy or precision.

5.2.4 Overall Assessment

Overall, the accuracy of the metals results is acceptable.

5.3 Representativeness

Preparation blanks, equipment rinsate blanks and initial and continuing calibration blanks were analyzed for inorganics to evaluate representativeness. Blank analysis results are presented in Table 3B. The highest detected concentration for an individual target analyte in any associated blank was used for data qualification.

If contaminants were detected in a blank, corrective actions were made for the chemical analytical data during data validation. The corrective action consisted of amending the laboratory reported results for inorganic analytes based on the following criteria. The validation qualifier codes utilized in the blank summary tables are described below.

> U Validation Qualifier If a sample result for the blank contaminant was less than five times the blank value, the sample result was amended as non-detected.
>
> UJ Validation Qualifier If a sample result for the blank contaminant was less than the sample IDL when the absolute value of the negative blank value was greater than the IDL, the sample result for the blank contaminant was amended as estimated non-detected.
>
> J Validation Qualifier If a sample result for the blank contaminant was greater than the IDL and less than five times the blank value, when the absolute value of the negative blank value is greater than the IDL the result was amended as estimated at the laboratory reported value.

The following presents a description of analytes detected in the inorganics blanks. Corrective actions made for target analytes detected in the environmental samples are described per SDG in Table 3B.

5.3.1 Preparation Blanks

Preparation blank samples were analyzed with each SDG for inorganics samples to identify target analytes which may have been introduced through the analytical instrumentation or sample preparation. Analytes routinely detected in the preparation blanks are sodium, aluminum, and iron. Preparation blanks are designated "PBW" for water blanks and "PBS" for soil preparation blanks

in Table 3B.

5.3.2 Equipment/Rinsate Blanks

Positive results from the equipment rinsate blank samples identify target analytes that may have been introduced by the sampling equipment or inadequate decontamination procedures. Iron, manganese, sodium, and vanadium were detected in the equipment rinsate blanks. Equipment blanks are designated "EB" in Table 3B.

5.3.3 Initial and Continuing Calibration Blanks

Initial and continuing calibration blanks are used to identify and estimate the effects of carryover contamination and baseline shift. Many analytes were routinely detected in the calibration blanks at low levels including aluminum, antimony, arsenic, barium, beryllium, calcium, copper, iron, lead, magnesium manganese, potassium, selenium, sodium and zinc. These results are displayed in Table 3B under "ICB" for initial calibration blanks and "CCB" for continuing calibration blanks.

5.3.4 Conclusion

Blank contaminations were detected at concentrations commonly observed in inorganic laboratory analysis. The data are considered to be representative. The application of the blank qualification rules does have implications on the completeness of the analytical data, however, which is discussed in section 5.5.

5.4 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the method detection limits attained were below the CRDLs. Some samples were qualified due to blank contamination, which raised the effective detection limits for the suspected blank contaminants in those samples. Otherwise, the comparability of the data is considered acceptable.

5.5 Completeness

The completeness level attained for project metals and cyanide samples was 100 percent. This percentage was calculated as the total number of accepted data points divided by the total number of samples collected multiplied by 100. This completeness percentage met the 96 percent DQO QC level.

Another type of data qualification having an effect on completeness was the application of blank validation qualifiers. When samples are qualified due to contamination in an associated blank a "5X" action limit is set such that sample results below the action limit are flagged as "undetected" for the particular compound in question. This flagging procedure effectively rejects the concentration range between zero and the initial reported result, which becomes the new detection

limit. It is possible that the levels of blank contamination detected could eliminate data in a necessary concentration range in some instances. In these cases, reanalysis is needed to verify the presence of the analyte in question at the site below the revised detection limit.

6.0 Variances in Analytical Performance

The laboratory used standard analytical method for all of the analyses throughout the project. All required spiked sample analyses were performed for organic and inorganic fractions. No systematic variances in analytical performance were noted. The problems encountered are of a type and frequency common to laboratory analyses and resulted in an acceptable amount of data qualifications.

7.0 Summary of PARCC Criteria

Precision

The precision results by analytical fraction were the following:

Analyses	Precision Acceptability Percentage
Volatile Organics	100.0%
Semivolatile Organics	100.0%
Pesticide/PCBs	100.0%
Metals/CN	100.0%
Wet Chemistry	100.0%

The overall precision acceptability was 100.0 percent. This result met the 96 percent DQO goal.

Accuracy

By analytical fraction accuracy was as follows:

Analyses	Accuracy Acceptability Percentage
Volatile Organics	100.0%
Semivolatile Organics	100.0%
Pesticide/PCBs	100.0%
Metals/CN	100.0%
Wet Chemistry	100.0%

The overall accuracy acceptability was 100.0 percent with no percent recovery analyses exceeding the QC limits. This result met the 96 percent DQO goal.

Representativeness

A total of 27 blanks were evaluated for 160 analytes. No blanks exceeded the CRDLs/CRQLs. The representativeness of the project data is considered acceptable after qualification for blank contamination.

Completeness

There were no data rejections within the two SDGs. By analytical fraction:

Type	Total Analyses	No. Rejects	% Completeness
Volatile Organics	792	0	100.0
Semivolatile Organics	1408	0	100.0
Pesticides/PCB	616	0	100.0
Metal/Cyanides	600	0	100.0
Wet Chemistry	20	0	100.0
Total	3436	0	100.0

The completeness percentage based on rejected data met the 96 percent project DQO goal. A less quantifiable loss of data occurred in the application of blank qualifications. The amount and type of data qualifications and the associated data loss are considered reasonable and typical of laboratory analysis.

Comparability

Sampling frequency requirements were met in obtaining duplicates and necessary field blanks. The laboratory used standard analytical methods for their analyses. The analytical results were reported in correct standard units. The overall data comparability is considered acceptable.

Table A

Sample Event PARCC Criteria Summary

SDG	Precision	Accuracy	Representa-tiveness	Complete-ness	Compara-bility
BSS01	Acceptable	Acceptable with Qualifica-tion	Acceptable	Acceptable	Acceptable
BSS02	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable

Table 1
LABORATORY ANALYSIS CORRELATION
BACKGROUND SURVEY
NAS CECIL FIELD JACKSONVILLE, FLORIDA

Laboratory Analysis Correlation Table		
SDG Number	**Laboratory**	**Samples**
BSS01	Enseco-Wadsworth/Alert Laboratories	CEF-BSS01R, CEF-BSS01F, CEF-BSS01T, CEF-BSS01R, CEF-BSS01, CEF-BSS02, CEF-BS02DF, CEF-BSS03, CEF-BSS04, CEF-BSS05, CEF-BSS06D, CEF-BSS-06S, CEF-BSS06D, CEF-BSS07, CEF-BSS08, CEF-BSS09, CEF-BSS09DF, CEF-BSS10, CEF-BSS11, CEF-BSS12, CEF-BSS13, CEF-BSS14, CEF-BSS15, CEF-BSS06D, CEF-BSS06S, CEF-BSS09D, CEF-BSS09S, CEF-BSS09MS, CEF-BSS09MSD
BSS02	Enseco-Wadsworth/Alert Laboratories	CEF-BSS02T, CEF-BSS02R

Table 2-A

INITIAL AND CONTINUING CALIBRATION SUMMARY OF NON-COMPLIANCE
BACKGROUND SURVEY
NAS CECIL FIELD JACKSONVILLE, FLORIDA

INITIAL AND CONTINUING CALIBRATION SUMMARY						
BSS01 PARAMETER	INITIAL 7/15/93	CONTIN-UING 7/22/93 09:58	CONTIN-UING 7/23/93 07:54	CONTIN-UING	CONTIN-UING	CONTIN-UING
	% RSD	% D	% D	% D	% D	% D
VOLATILE ORGANIC COMPOUNDS						
Chloromethane	-	-	-			
Acetone	31.4	56.1	-			
2-Butanone	-	45.8	44.3			
2-Hexanone	-	30.1	34.0			
QUALIFICATION	J (+)	J (+)	J (+)			
SAMPLES AFFECTED	None	None	None			

%RSD = Percent Relative Standard Deviation
%D = Percent Difference
J(+) = Estimate All Positive Results

Table 2-B

INITIAL AND CONTINUING CALIBRATION SUMMARY OF NON-COMPLIANCE
BACKGROUND SURVEY
NAS CECIL FIELD JACKSONVILLE, FLORIDA

INITIAL AND CONTINUING CALIBRATION SUMMARY						
BSS01 PARAMETER	INITIAL	CONTIN-UING 2/27/93 08:31	CONTIN-UING 7/28/93 11:11	CONTIN-UING	CONTIN-UING	CONTIN-UING
	% RSD	% D	% D	% D	% D	% D
SEMIVOLATILE ORGANIC COMPOUNDS						
4-Chloroaniline		28.2	-			
3-Nitroaniline		44.6	-			
4-Nitroaniline		28.2	25.2			
Di-n-octylphthalate		25.4	-			
3,3'-Dichlorobenzidine						
QUALIFICATION		J (+)	J (+)			
SAMPLES AFFECTED		None	None			

%RSD = Percent Relative Standard Deviation
%D = Percent Difference
J(+) = Estimate All Positive Results

Table 3-A
ORGANICS LABORATORY AND FIELD BLANK SUMMARY
BACKGROUND SURVEY
NAS CECIL FIELD JACKSONVILLE, FLORIDA

ORGANICS LABORATORY AND FIELD BLANK DATA QUALIFICATION SUMMARY									
SDG NO.	Blank Conc.	Qualified Samples	Parameter	Blank ID	Units	Reported Conc.	Reported Qual.	Validated Conc.	Validated Qual.
			VOLATILE ORGANICS						
BSS01	4 ug/L	CEF-BSS-01	Acetone	VBLK2	ug/kg	3	JB	11	U
		CEF-BSS-02			ug/kg	3	JB	11	U
		CEF-BSS-02DF			ug/kg	3	JB	12	U
		CEF-BSS-03			ug/kg	3	JB	12	U
		CEF-BSS-04			ug/kg	5	JB	11	U
	3 ug/L	CEF-BSS-05		VBLK3	ug/kg	3	JB	11	U
		CEF-BSS-06			ug/kg	4	JB	11	U
		CEF-BSS-07			ug/kg	4	JB	11	U
		CEF-BSS-08			ug/kg	10	JB	11	U
		CEF-BSS-09DF			ug/kg	13	B	13	U
		CEF-BSS-10			ug/kg	3	JB	11	U
		CEF-BSS-11			ug/kg	5	JB	11	U
					ug/kg				
	3 ug/L	CEF-BSS-12		VBLK4	ug/kg	3	JB	10	U
		CEF-BSS-14			ug/kg	3	JB	10	U
		CEF-BSS-15			ug/kg	2	JB	11	U
	2 ug/L	CEF-BSS-09	Methylene Chloride	VBLK2	ug/kg	6	JB	6	U
			SEMIVOLATILE ORGANICS						
	23 ug/kg	CEF-BSS-01	Di-n-butylphthalate	SBLK2	ug/kg	34	JB	360	U
		CEF-BSS-02			ug/kg	26	JB	370	U
		CEF-BSS-02DF			ug/kg	24	JB	410	U
		CEF-BSS-03			ug/kg	29	JB	380	U
		CEF-BSS-04			ug/kg	28	JB	350	U
		CEF-BSS-07			ug/kg	29	JB	360	U
		CEF-BSS-08			ug/kg	25	JB	360	U
		CEF-BSS-09			ug/kg	31	JB	370	U
		CEF-BSS-09DF			ug/kg	33	JB	360	U
		CEF-BSS-10			ug/kg	30	JB	360	U
		CEF-BSS-11			ug/kg	32	JB	350	U
		CEF-BSS-12			ug/kg	17	JB	350	U
		CEF-BSS-13			ug/kg	19	JB	360	U
		CEF-BSS-15			ug/kg	40	JB	370	U

J = Estimated (Laboratory Flag)
B = Detected in blank (Laboratory Flag)
U = Undetected (Data Validation Flag)

Table 3-B

INORGANICS LABORATORY AND FIELD BLANK DATA QUALIFICATION SUMMARY									
SDG NO.	Blank Conc.	Qualified Samples	Parameter	Blank ID	Units	Reported Conc.	Reported Qual.	Validated Conc.	Validated Qual.
BSS01	54.0 ug/L	CEF-BSS-01R	Aluminum	PBW1	ug/L	63.1	B	63.1	U
		CEF-BSS-01F			ug/L	49.2	B	49.2	U
	-1.05 mg/kg	ALL	Arsenic	CCB2	ug/L	1.0	U	1.0	UJ
					ug/kg	0.21- 2.2	U	0.21- 2.2	UJ
	1.80 ug/L	CEF-BSS-01R	Barium		ug/L	2.9	B	2.9	U
		CEF-BSS-01F			ug/L	1.3	B	1.3	U
		CEF-BSS-06			mg/kg	1.2	B	1.2	U
		CEF-BSS-07			mg/kg	1.7	B	1.7	U
		CEF-BSS-09			mg/kg	2.0	B	2.0	U
	2.00 ug/L	CEF-BSS-01R	Beryllium	CCB1	ug/L	1.4	B	1.4	U
	194 ug/L	CEF-BSS-01R	Calcium	PBS1	ug/L	357	B	357	U
		CEF-BSS-01F			ug/L	422	B	422	U
		CEF-BSS-01			ug/kg	119	B	119	U
		CEF-BSS-02			ug/kg	167	B	167	U
		CEF-BSS-02DF			ug/kg	111	B	111	U
		CEF-BSS-03			ug/kg	88.4	B	88.4	U
		CEF-BSS-04			ug/kg	67.7	B	67.7	U
		CEF-BSS-05			ug/kg	93.5	B	93.5	U
		CEF-BSS-06			ug/kg	104	B	104	U
		CEF-BSS-07			ug/kg	119	B	119	U
		CEF-BSS-08			ug/kg	94.7	B	94.7	U
		CEF-BSS-09			ug/kg	69.5	B	69.5	U
		CEF-BSS-09DF			ug/kg	77.9	B	77.9	U
		CEF-BSS-12			ug/kg	198	B	198	U
		CEF-BSS-14			ug/kg	141	B	141	U
	2.60 ug/L	CEF-BSS-01R	Copper	PBS1	ug/L	5.0	B	5.0	U
		CEF-BSS-01F			ug/L	6.0	B	6.0	U
		CEF-BSS-01			ug/kg	0.93	B	0.93	U
		CEF-BSS-02			ug/kg	0.76	B	0.76	U
		CEF-BSS-02DF			ug/kg	0.95	B	0.95	U
		CEF-BSS-03			ug/kg	0.50	B	0.50	U
		CEF-BSS-06			ug/kg	0.85	B	0.85	U
		CEF-BSS-07			ug/kg	2.3	B	2.3	U
		CEF-BSS-08			ug/kg	0.59	B	0.59	U
		CEF-BSS-09DF			ug/kg	0.46	B	0.46	U
		CEF-BSS-10			ug/kg	0.49	B	0.49	U
		CEF-BSS-11			ug/kg	0.83	B	0.83	U

INORGANICS LABORATORY AND FIELD BLANK DATA QUALIFICATION SUMMARY (CONT'D)

SDG NO.	Blank Conc.	Qualified Samples	Parameter	Blank ID	Units	Reported Conc.	Reported Qual.	Validated Conc.	Validated Qual.
BSS01	2.60	CEF-BSS-12	Copper	PBS1	mg/kg	0.65	B	0.65	U
	ug/L	CEF-BSS-13			mg/kg	0.82	B	0.82	U
		CEF-BSS-14			mg/kg	0.70	B	0.70	U
		CEF-BSS-15			mg/kg	1.4	B	1.4	U
	13.5	CEF-BSS-01R	Iron	PBS1	ug/L	31.3	B	31.3	U
	ug/L	CEF-BSS-01F			ug/L	31.7	B	31.7	U
	2.00	CEF-BSS-01R	Lead	PBW1	ug/L	3.5		3.5	U
	ug/L	CEF-BSS-01F			ug/L	1.2	B	1.2	U
		CEF-BSS07			mg/kg	2.1		2.1	U
		CEF-BSS09			mg/kg	2.0		2.0	U
	27.9	CEF-BSS-01R	Magnesium	PBW1	ug/L	83.9	B	83.9	U
	ug/L	CEF-BSS-01F			ug/L	59.8	B	59.8	U
		CEF-BSS-06			mg/kg	18.8	B	18.8	U
		CEF-BSS-07			mg/kg	17.2	B	17.2	U
		CEF-BSS-09			mg/kg	12.6	B	12.6	U
		CEF-BSS-09Df			mg/kg	17.5	B	17.5	U
							B		U
	3.00	CEF-BSS-01R	Manganese	PBW1	ug/L	4.1	B	4.1	U
	ug/L	CEF-BSS-09			mg/kg	0.69	B	0.69	U
		CEF-BSS-09Df			mg/kg	1.2	B	1.2	U
									U
	44.2	CEF-BSS-01R	Potassium	CCB2	ug/L	125	B	125	U
	ug/L	CEF-BSS-01F			ug/L	71.9	B	71.9	U
		CEF-BSS-05			mg/kg	19.4	B	19.4	U
		CEF-BSS-06			mg/kg	17.8	B	17.8	U
		CEF-BSS-07			mg/kg	13.8	B	13.8	U
		CEF-BSS-08			mg/kg	28.8	B	28.8	U
		CEF-BSS-09			mg/kg	14.0	B	14.0	U
		CEF-BSS-09DF			mg/kg	14.3	B	14.3	U
		CEF-BSS-10			mg/kg	33.9	B	33.9	U
		CEF-BSS-11			mg/kg	17.7	B	17.7	U
		CEF-BSS-12			mg/kg	35.4	B	35.4	U
		CEF-BSS-13			mg/kg	34.5	B	34.5	U
		CEF-BSS-14			mg/kg	39.9	B	39.9	U
		CEF-BSS-15			mg/kg	30.7	B	30.7	U
	1.30	CEF-BSS-08	Selenium	CCB1	mg/kg	0.25	B	0.25	U
	ug/L								
	769	CEF-BSS-01R	Sodium	PBW1	ug/L	913	B	913	U
	ug/L	CEF-BSS-01F			ug/L	1330	B	1330	U
		CEF-BSS-01			mg/kg	159	B	159	U

INORGANICS LABORATORY AND FIELD BLANK DATA QUALIFICATION SUMMARY (CONT'D)

SDG NO.	Blank Conc.	Qualified Samples	Parameter	Blank ID	Units	Reported Conc.	Reported Qual.	Validated Conc.	Validated Qual.
BSS01									
	769 ug/L	CEF-BSS-02	Sodium	PBW1	mg/kg	241	B	241	U
		CEF-BSS-02Df			mg/kg	219	B	219	U
		CEF-BSS-03			mg/kg	162	B	162	U
		CEF-BSS-04			mg/kg	182	B	182	U
		CEF-BSS-05			mg/kg	210	B	210	U
		CEF-BSS-06			mg/kg	238	B	238	U
		CEF-BSS-07			mg/kg	209	B	209	U
		CEF-BSS-08			mg/kg	203	B	203	U
		CEF-BSS-09			mg/kg	164	B	164	U
		CEF-BSS-09DF			mg/kg	149	B	149	U
		CEF-BSS-10			mg/kg	186	B	186	U
		CEF-BSS-11			mg/kg	156	B	156	U
		CEF-BSS-12			mg/kg	171	B	171	U
		CEF-BSS-13			mg/kg	154	B	154	U
		CEF-BSS-14			mg/kg	171	B	171	U
		CEF-BSS-15			mg/kg	222	B	222	U
	18.9 ug/L	CEF-BSS-01R	Zinc	PBW1	ug/L	38.4		38.4	U
		CEF-BSS-01F			ug/L	9.2	B	9.2	U
		CEF-BSS-01			mg/kg	4.9		4.9	U
		CEF-BSS-02			mg/kg	20.2		20.2	U
		CEF-BSS-02DF			mg/kg	10.1		10.1	U
		CEF-BSS-03			mg/kg	8.5		8.5	U
		CEF-BSS-04			mg/kg	4.4		4.4	U
		CEF-BSS-05			mg/kg	2.7	B	2.7	U
		CEF-BSS-06			mg/kg	3.6	B	3.6	U
		CEF-BSS-07			mg/kg	3.6	B	3.6	U
		CEF-BSS-08			mg/kg	3.6	B	3.6	U
		CEF-BSS-09			mg/kg	2.4	B	2.4	U
		CEF-BSS-09DF			mg/kg	2.5	B	2.5	U
		CEF-BSS-10			mg/kg	3.1	B	3.1	U
		CEF-BSS-11			mg/kg	11.9		11.9	U
		CEF-BSS-12			mg/kg	4.0	B	4.0	U
		CEF-BSS-13			mg/kg	4.7		4.7	U
		CEF-BSS-14			mg/kg	7.2		7.2	U
		CEF-BSS-15			mg/kg	4.1	B	4.1	U

B = Detected below the Contract Required Detection Limit (laboratory Flag)
U = Undetected (Data Validation Flag)
J = Estimated (Data Validation Flag)

Table 4
PESTICIDES/PCB COLUMN RESPONSE
BACKGROUND SURVEY
NAS CECIL FIELD JACKSONVILLE, FLORIDA

SDG	SAMPLE #	COMPOUND	C1 (ug/L)	C2 (ug/L)	%D
1SS02T	CEF1SS07	Dieldrin	0.77	0.64	20
	CEF1SS10	Methoxychlor	0.86	1.9	121
		g-chlordane	0.55	0.73	33
	CEF1SS11	Endrin	1.7	0.44	286
		a-chlordane	0.79	0.39	103
	CEF1SS15	4,4' - DDE	0.41	0.34	93
		Endrin	0.79	4.9	1340
	CEF2SS01	4,4' - DDE	0.37	0.34	8.8
		g-chlordane	0.28	0.41	46
	CEF1SS11D	Endrin Ketone	2.4	0.28	147
		a-chlordane	0.97	0.44	57
	CEF2SS02	Endrin	1.1	20	1720
	CEF2SS03	4,4' - DDE	0.61	0.62	1.6
	CEF2SS08	4,4' - DDE	0.33	0.85	158
		Endrin	1.2	0.38	3070
	CEF2SS10	Endrin	0.39	16	4003
	CEF1SS07	Arochlor-1260	8.6	6.8	27
	CEF1SS10	Arochlor-1260	24	27	13
	CEF2SS01	Arochlor-1260	29	22	32
	CEF2SS02	Arochlor-1260	8.8	12	36
	CEF2SS08	Arochlor-1260	13	13	0

C1* = Primary Column Type SPB-S
C1** = Primary Column Type DB-S
C2* = Secondary Column Type RTX-200
C2** = Secondary Coulumn Type DB-1701
%D = Percent Difference
ug/L = Micrograms per Liter

APPENDIX J-5

POPULATION STATISTICS FOR BACKGROUND SURFACE SOIL

Appendix J-5
Comparative Statistic for Surface Soil

Two population analyses are presented in this Sub-Appendix. The first analysis was completed to evaluate the surface soil inorganics data (generated during the background sampling program) with the purpose of identifying significantly different populations in the data set, if present. The second analysis was completed to compare the S1 location (identified as an Arent soil) surface soil samples with subsurface soil samples (collected from background locations) to evaluate if the S1 surface soil represented a significantly different population from the subsurface soil populations.

Surface Soil Comparison The surface soil population analysis consisted of evaluating the surface soil data using the Student T-test with a confidence level of 95 percent. A brief review of the data (without statistical manipulation) showed that, based on the location of detection for several metals, the S1 location might represent a separate population. This was confirmed using the T-test. The surface soil data were then divided into S1 and non-S1 groups. Surface soil data from all other sampling locations (S2, E1, E2, W1, and W2) and all soil units present at those locations (Ridgeland Fine Sand, Wesconnet Fine Sand, and the Albany Fine Sand) were then compared to the non-S1 sub group. This analysis is presented on the following pages, labelled "Surface Soil - 1 to 3". The final conclusion reached during this analysis indicates (1) that inorganics in surface soil from the S1 location represent a significantly different (at a 95 percent confidence level) population from inorganics data at all other background locations sampled, and (2) inorganics data from all non-S1 locations represent a single population.

Surface Soil versus Subsurface Soil Inorganics in surface soil from the S1 location were compared with inorganics data from background subsurface soil samples using the Student T-test at a confidence level of 95 percent. Data from all subsurface soil samples were combined and compared to data from surface soil samples from the S1 location. This comparison showed that only aluminum and manganese represented a significantly different population; all other detected inorganics were representative of a single population. The comparison was also completed for subsurface data from the different depths (below land surface [bls]) sampled. Data collected from the 4 to 6 and 6 to 8 feet bls intervals represented the closest match to the surface soil data from the S1 location. This analysis is presented in the following pages, labelled "SS v. SB - 1". The final conclusions indicated by these analyses are (1) inorganics data from the S1 surface soil sampling location is not significantly different (at a 95 confidence level) from inorganics present in subsurface soil at the other background locations sampled, and (2) the inorganics at the S1 surface sampling locations could be derived by disturbing subsurface soil from NAS Cecil Field.

Surface Soil Population Analysis

1. Input data and checked for keypunch errors.
2. Ran count, min, max, mean, standard dev, and count for each param with analytical value = detect limit for BDLs.
3. Ran count, min, max, mean, standard dev, and count for each param for all non BDLs.
4. Excluded: antimony, beryllium, cadmium, cobalt, copper, mercury, selenium, silver, sodium, and cyanide because all values were below detection limits -- no variation in entire population.
5. Excluded: zinc because only one value was above detection limits -- no variation in entire population.

Consider population of location=S1

6. All detects for: nickel and potassium in main population in Location=S1 group. Indication of separate population.
7. 5 of 6 detects for: chromium in main population in Location=S1 group. Indication of separate population.
8. Following t-scores indicate different populations on *'d metals at 95% confidence level between the entire group and the S1 group.

* ALUMINUM	t= -2.55829549	for	20.00	degrees of freedom
ARSENIC	t= -2.03052974	for	18.00	degrees of freedom
BARIUM	t= -1.98406851	for	17.00	degrees of freedom
CHROMIUM	t= -0.49000704	for	9.00	degrees of freedom (see 6.)
* IRON	t= -2.29529572	for	20.00	degrees of freedom
* LEAD	t= -2.61790967	for	19.00	degrees of freedom
MAGNESIUM	t= -1.96906507	for	16.00	degrees of freedom
* MANGANESE	t= -2.31854892	for	18.00	degrees of freedom
NICKEL	t= 0.00E-01	for	8.00	degrees of freedom (see 7.)
POTASSIUM	t= 0.00E-01	for	8.00	degrees of freedom (see 7.)
* VANADIUM	t= -2.47922182	for	20.00	degrees of freedom

Conclusion: S1 is significantly different (at 95%) from entire group except for: arsenic, barium, and magnesium.
Based on the above, the entire group will be split into S1 and non-S1 sub groups and compared.
Following t-scores indicate different populations on *'d metals at 95% confidence level between the non-S1 group and the S1 group.

* ALUMINUM	t= -6.64185095	for	15.00	degrees of freedom
* ARSENIC	t= -4.72529650	for	13.00	degrees of freedom
* BARIUM	t= 4.64139700	for	12.00	degrees of freedom
CHROME	t= -1.78113973	for	4.00	degrees of freedom
* IRON	t= -5.35501766	for	15.00	degrees of freedom
* LEAD	t= -7.04592705	for	14.00	degrees of freedom
* MAGNESIUM	t= 5.05708694	for	11.00	degrees of freedom
* MANGANESE	t= -5.60943031	for	13.00	degrees of freedom
* VANADIUM	t= -6.21350479	for	15.00	degrees of freedom

Conclusion: S1 is significantly different (at 95%) from non-S1 group for: aluminum, arsenic, barium, probably chromium, iron, lead, magnesium, manganese, nickel, potassium, and vanadium.

****

All other locations will be compared with the non-S1 sub group; consider population of location=S2 and the entire group (excluding S1).
Standard deviations are comparable.

ALUMINUM	t= 0.51818722	for	14.00	degrees of freedom
ARSENIC	t= -0.31383875	for	11.00	degrees of freedom
BARIUM	t= -0.83390892	for	9.00	degrees of freedom
IRON	t= 0.43121222	for	14.00	degrees of freedom
LEAD	t= 0.57339734	for	12.00	degrees of freedom
MAGNESIUM	t= -1.06875312	for	8.00	degrees of freedom
MANGANESE	t= 0.91322494	for	12.00	degrees of freedom
VANADIUM	t= 0.49966303	for	14.00	degrees of freedom

Conclusion: S2 is NOT significantly different (at 95%) from non-S1 group.

```
                    ******************************
Now consider population of location=E1 and the entire group excluding S1.
Standard deviations are comparable for: possibly arsenic, barium, lead,
        and thallium, so:

ALUMINUM t= 0.92038482 for  12.00 degrees of freedom - discarded
ARSENIC  t=-0.27639514 for   9.00 degrees of freedom
BARIUM   t=-0.74951380 for   8.00 degrees of freedom
IRON     t= 1.09814382 for  12.00 degrees of freedom - discarded
LEAD     t= 0.30586675 for  11.00 degrees of freedom
THALLIUM t= 1.20000005 for   3.00 degrees of freedom
VANADIUM t= 1.26560068 for  12.00 degrees of freedom - discarded

Conclusion: E1 is NOT significantly different (at 95%) from
        non-S1 group.
                    ******************************

Now consider population of location=E2 and the entire group excluding S1.
Standard deviations are comparable for: possibly arsenic, possibly barium
        calcium, possibly lead, magnesium, manganese, and possibly
        vanadium, so:

ALUMINUM  t=  1.37538052 for  12.00 degrees of freedom - discarded
ARSENIC   t=  1.18345261 for  10.00 degrees of freedom
BARIUM    t= -1.11712348 for   9.00 degrees of freedom
CALCIUM   t=  0.27342749 for   3.00 degrees of freedom
IRON      t=  1.42259443 for  12.00 degrees of freedom - discarded
LEAD      t=  1.25727248 for  11.00 degrees of freedom
MAGNESIUM t= -0.86188936 for   8.00 degrees of freedom
MANGANESE t=  0.61569971 for  10.00 degrees of freedom
VANADIUM  t=  1.19067252 for  12.00 degrees of freedom

Conclusion: E2 is NOT significantly different (at 95%) from
        non-S1 group.
                    ******************************

Now consider population of location=W1 and the entire group excluding S1.
Standard deviations are comparable for: arsenic, possibly barium
        possibly calcium, possibly iron, lead, possibly magnesium,
        possibly manganese, thallium, and possibly vanadium, so:
Following t-scores indicate different populations on *'d metals at 95%
        confidence level between the non-S1 and non-W1 group and the W1
        group.

 ALUMINUM  t= -2.33365250 for  13.00 degrees of freedom  - discard
 ARSENIC   t= -1.11494684 for  11.00 degrees of freedom
 BARIUM    t=  0.76978749 for  10.00 degrees of freedom
 CALCIUM   t= -0.45306557 for   2.00 degrees of freedom
*IRON      t= -2.38054991 for  13.00 degrees of freedom
 LEAD      t= -1.60525990 for  12.00 degrees of freedom
 MAGNESIUM t=  1.78233516 for   9.00 degrees of freedom
 MANGANESE t= -1.89167178 for  11.00 degrees of freedom
 THALLIUM  t= -0.64926487 for   5.00 degrees of freedom
*VANADIUM  t= -2.36380339 for  13.00 degrees of freedom

Conclusion: W1 is significantly different (at 95%) for: iron
        and vanadium from the non-S1 group.
                    ******************************

Now consider population of location=W2 and the entire group excluding S1.
This requires a special form of the t-test.....

                    ******************************
```

Now consider population of soil=Ridgeland Fine Sand and the entire group excluding S1.
Standard deviations are comparable for: possibly aluminum, arsenic, barium possibly iron, lead, magnesium, possibly manganese, and vanadium, so:

```
ALUMINUM  t=  0.32981721 for 15.00 degrees of freedom
ARSENIC   t=  0.13197067 for 12.00 degrees of freedom
BARIUM    t=  0.48211825 for 10.00 degrees of freedom
IRON      t=  0.26876205 for 15.00 degrees of freedom
LEAD      t=  0.33723235 for 13.00 degrees of freedom
MAGNESIUM t= -0.97920465 for  9.00 degrees of freedom
MANGANESE t=  1.05895972 for 13.00 degrees of freedom
VANADIUM  t=  0.26486364 for 15.00 degrees of freedom
```

Conclusion: Ridgeland fine sand is NOT significantly different (at 95%) from non-S1 group.

****

Now consider population of soil=Wesconnett Fine Sand and the entire group excluding S1.
Standard deviations are comparable for: possibly arsenic, possibly barium lead, and possibly vanadium, so:

```
ALUMINUM t=  0.92038482 for 12.00 degrees of freedom - discard
ARSENIC  t= -0.27639514 for  9.00 degrees of freedom
BARIUM   t= -0.74951380 for  8.00 degrees of freedom
IRON     t=  1.09814382 for 12.00 degrees of freedom - discard
LEAD     t=  0.30586675 for 11.00 degrees of freedom
THALLIUM t=  1.20000005 for  3.00 degrees of freedom - discard
VANADIUM t=  1.26560068 for 12.00 degrees of freedom
```

Conclusion: Wesconnett fine sand is NOT significantly different (at 95%) from non-S1 group.

****

Now consider population of soil=Albany Fine Sand and the entire group excluding S1.
Standard deviations are comparable for: aluminum, arsenic, barium calcium, iron, lead, magnesium, manganese, thallium, and vanadium, so:

```
ALUMINUM   t= -0.77358508 for  15.00 degrees of freedom
ARSENIC    t= -0.19429561 for  13.00 degrees of freedom
BARIUM     t= -0.10097586 for  12.00 degrees of freedom
CALCIUM    t=  0.00000000 for   4.00 degrees of freedom
IRON       t= -0.78274691 for  15.00 degrees of freedom
LEAD       t= -0.42764601 for  14.00 degrees of freedom
MAGNESIUM  t=  0.69797599 for  11.00 degrees of freedom
MANGANESE  t= -0.83024842 for  13.00 degrees of freedom
THALLIUM   t= -0.64926487 for   5.00 degrees of freedom
VANADIUM   t= -0.90366000 for  15.00 degrees of freedom
```

Conclusion: Albany fine sand is NOT significantly different (at 95%) from non-S1 group.

****

Final Conclusion: Location=S1 group is only significantly different (at 95%) group from non-S1 group. Arents and soil samples from other sampling locations are apparently different.

Surface Soil versus Subsurface Soil
Population Analysis

Approximated t-test with unequal variances
two tails, Alpha = 0.95
for
Surface Soil from S1 vs Subsurface Soil from all depths.

ALUMINUM	t=	2.47505999	for	19 degrees of freedom (t>	2.45985031)
BARIUM	t=	1.75120008	for	13 degrees of freedom (t>	2.50344992)
CHROMIUM	t=	2.25387955	for	17 degrees of freedom (t>	2.45374513)
IRON	t=	2.17900324	for	19 degrees of freedom (t>	2.47656322)
LEAD	t=	0.40796077	for	15 degrees of freedom (t>	2.25178766)
MAGNESIUM	t=	2.36166620	for	12 degrees of freedom (t>	2.50494051)
MANGANESE	t=	4.43421173	for	8 degrees of freedom (t>	2.57100010)
NICKEL	t=	1.29824650	for	8 degrees of freedom (t>	2.57100010)
POTASSIUM	t=	2.31432509	for	13 degrees of freedom (t>	2.48233724)
VANADIUM	t=	2.15341473	for	11 degrees of freedom (t>	2.53174162)

****

Approximated t-test with unequal variances
two tails, Alpha = 0.95
for
Surface Soil from S1 vs Subsurface Soil from 0 to 2 bls.

ALUMINUM	t=	3.27108312	for	7 degrees of freedom (t>	2.58624601)
BARIUM	t=	2.28481412	for	6 degrees of freedom (t>	2.69326949)
CHROMIUM	t=	2.11197805	for	5 degrees of freedom (t>	3.04949546)
IRON	t=	1.86350977	for	7 degrees of freedom (t>	2.63050818)
LEAD	t=	2.44028711	for	6 degrees of freedom (t>	2.83439136)
MAGNESIUM	t=	3.19083786	for	5 degrees of freedom (t>	2.77138138)
MANGANESE	t=	4.08380318	for	5 degrees of freedom (t>	2.68910909)
POTASSIUM	t=	3.14887714	for	5 degrees of freedom (t>	2.71907997)

****

Approximated t-test with unequal variances
two tails, Alpha = 0.95
for
Surface Soil from S1 vs Subsurface Soil from 2 to 4 bls.

ALUMINUM	t=	3.68465209	for	7 degrees of freedom (t>	2.57120538)
CHROMIUM	t=	3.85327029	for	7 degrees of freedom (t>	2.57112813)
IRON	t=	2.98580217	for	7 degrees of freedom (t>	2.57121468)
POTASSIUM	t=	3.92124701	for	5 degrees of freedom (t>	2.57318497)

****

Approximated t-test with unequal variances
two tails, Alpha = 0.95
for
Surface Soil from S1 vs Subsurface Soil from 4 to 6 bls.

ALUMINUM	t=	2.27222967	for	5 degrees of freedom (t>	2.74276304)
CHROMIUM	t=	1.81424701	for	5 degrees of freedom (t>	2.84938550)
IRON	t=	2.62226701	for	5 degrees of freedom (t>	2.64714408)
LEAD	t=	0.15352321	for	5 degrees of freedom (t>	4.03742075)

****

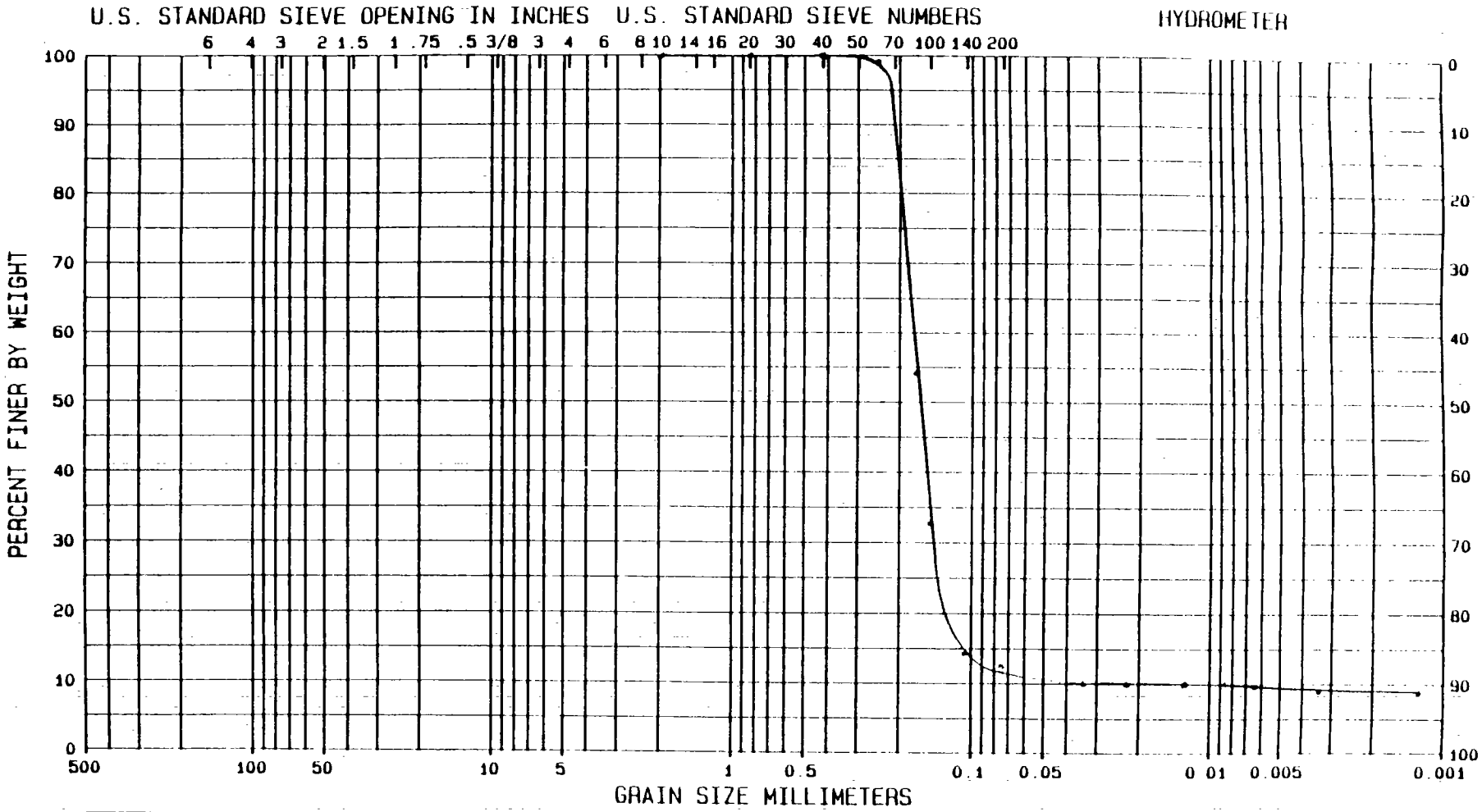
Approximated t-test with unequal variances
two tails, Alpha = 0.95
for
Surface Soil from S1 vs Subsurface Soil from 6 to 8 bls.

ALUMINUM	t=	1.22004306	for	9 degrees of freedom (t>	2.54843116)
BARIUM	t=	1.56137276	for	9 degrees of freedom (t>	2.55387044)
CHROMIUM	t=	1.20748532	for	9 degrees of freedom (t>	2.54831553)
IRON	t=	1.42053437	for	9 degrees of freedom (t>	2.54019356)
LEAD	t=	0.66817278	for	9 degrees of freedom (t>	2.46717024)
MAGNESIUM	t=	1.96695089	for	9 degrees of freedom (t>	2.54437375)
MANGANESE	t=	4.18834448	for	5 degrees of freedom (t>	2.74195075)
NICKEL	t=	1.08326828	for	7 degrees of freedom (t>	2.60255766)
POTASSIUM	t=	1.39108193	for	8 degrees of freedom (t>	2.57100010)
VANADIUM	t=	2.02369738	for	9 degrees of freedom (t>	2.55414891)

APPENDIX J-6

BACKGROUND GEOTECHNICAL TESTING RESULTS

ELLIS & ASSOCIATES, INC.



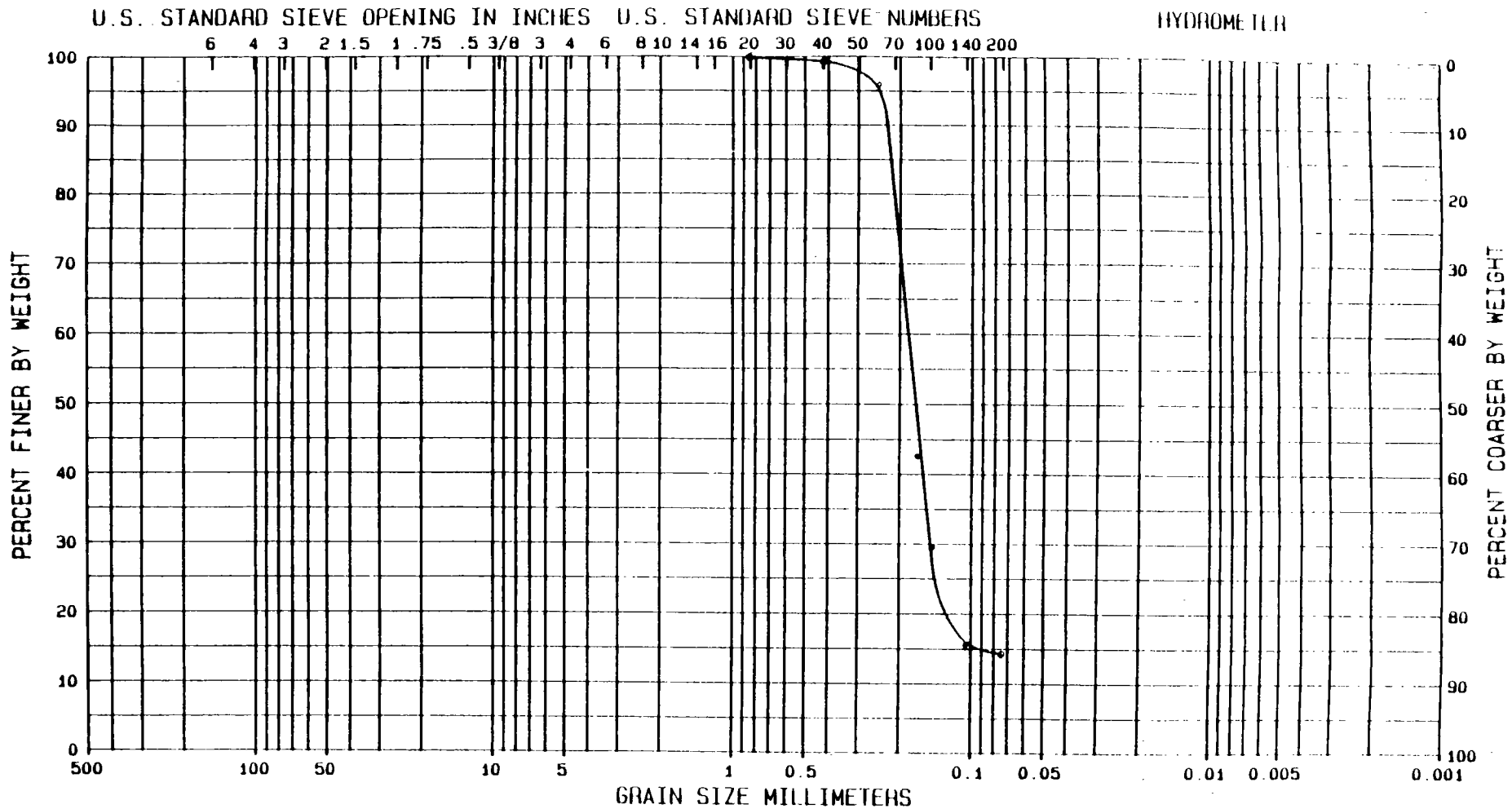
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CFBBMS1S6G						

GRADATION CURVES

Project 08500.07 - NAS
Cecil Field -
Geotechnical Lab Testing
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



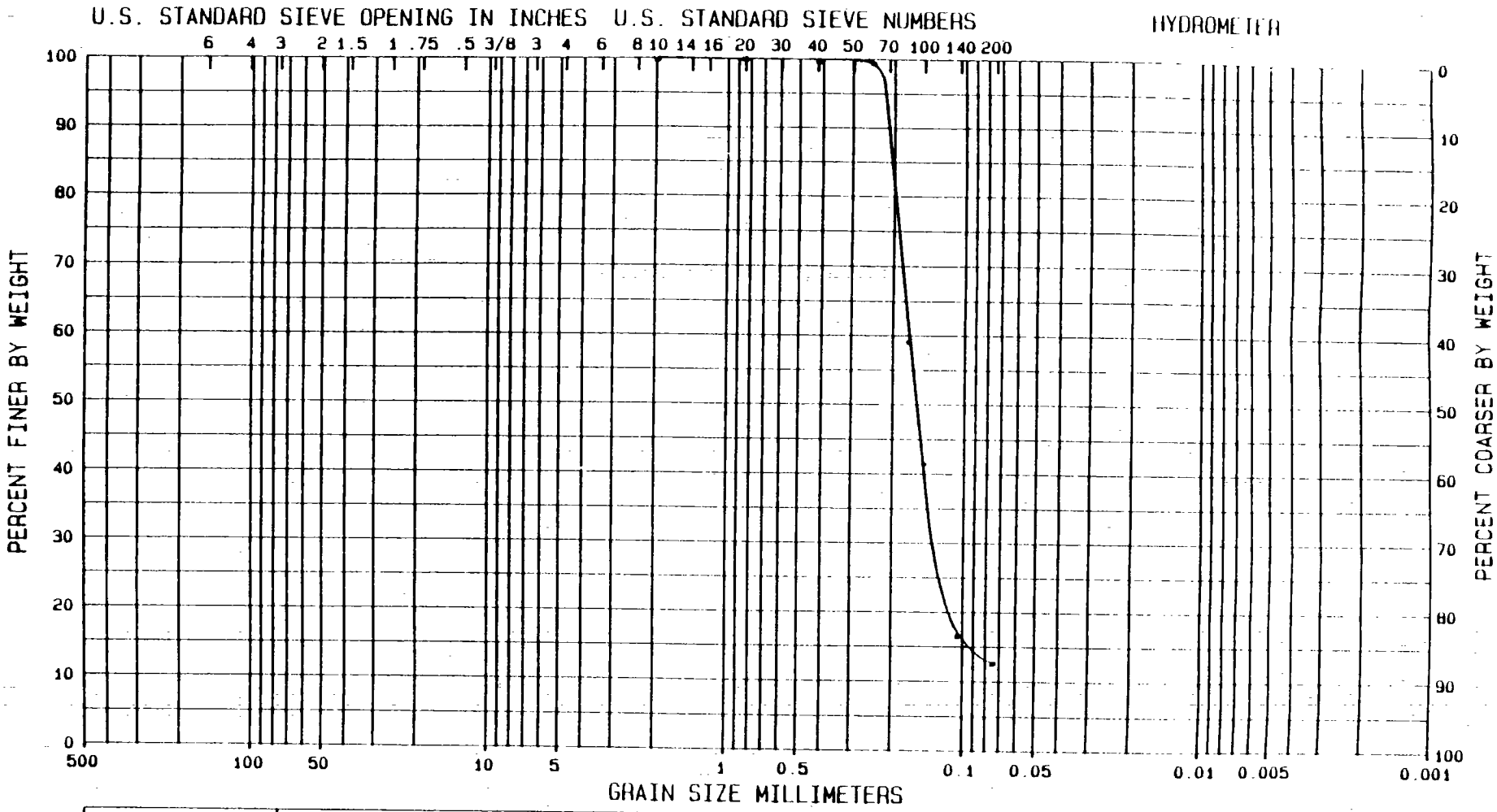
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CFBBMS2S8G						

GRADATION CURVES

Project 08500.07 - NAS
Cecil Field -
Geotechnical Lab Testing
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



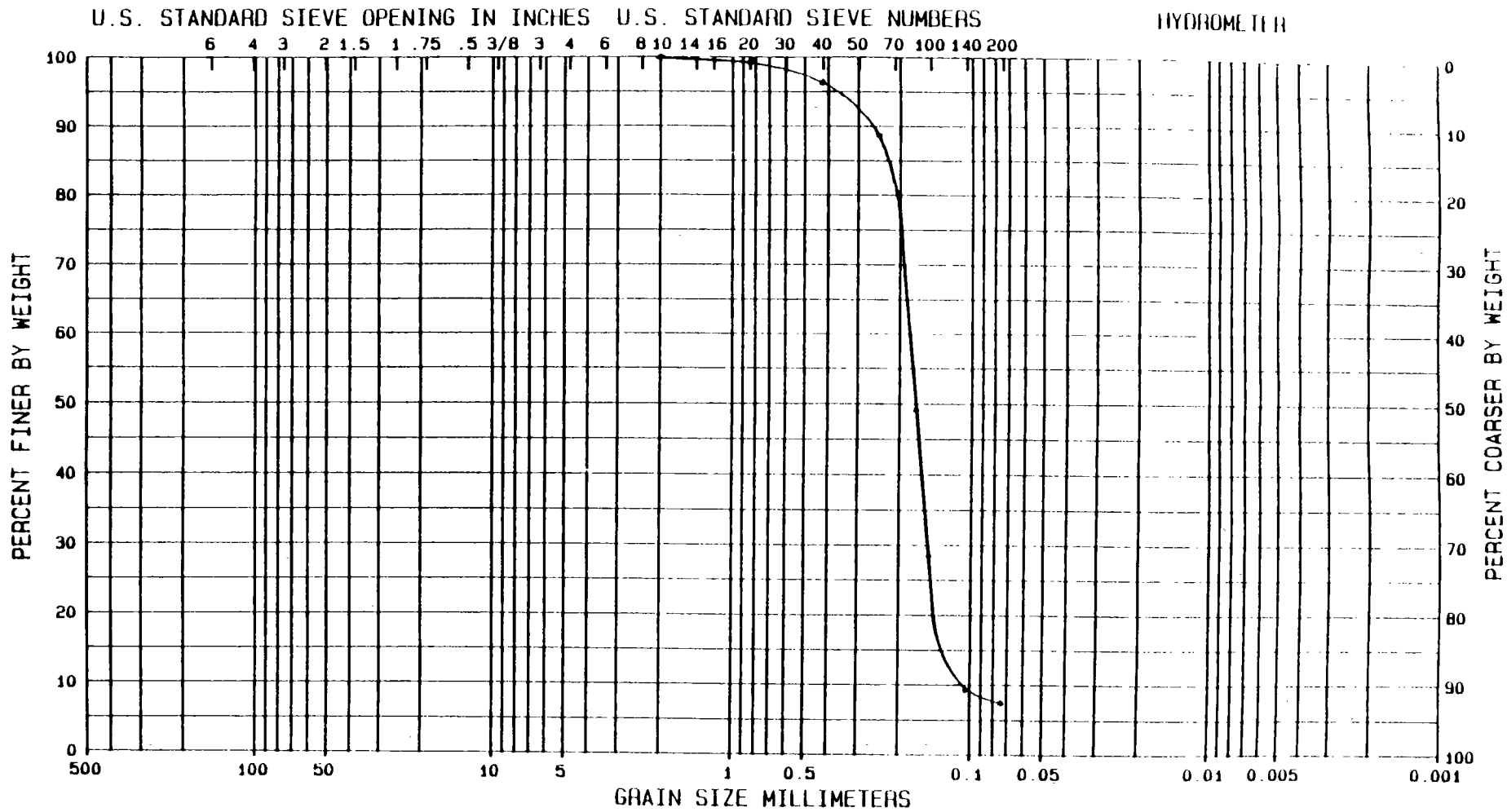
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CFBBMS5S8G						

GRADATION CURVES

Project 08500.07 - NAS
Cecil Field -
Geotechnical Lab Testing
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



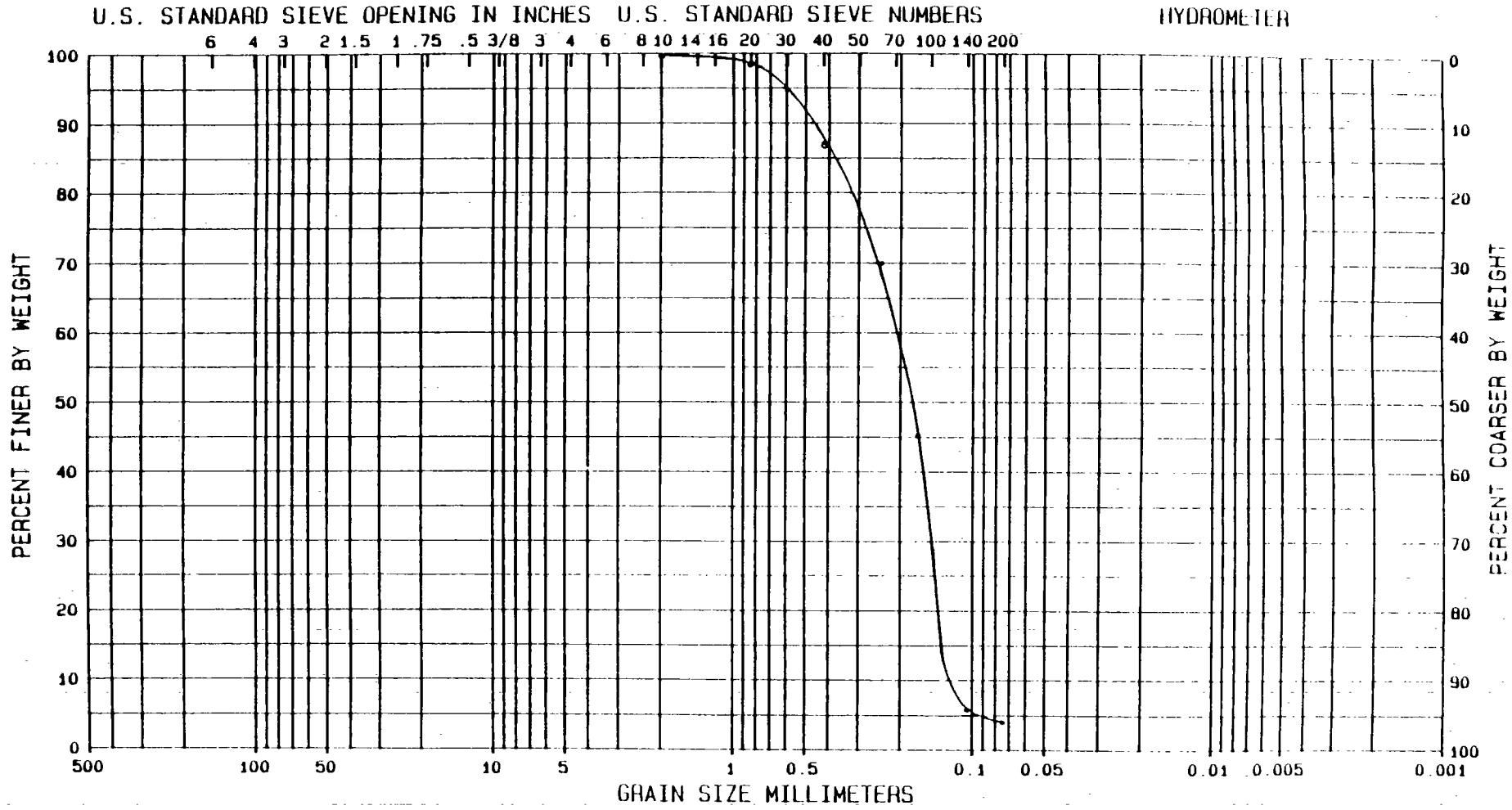
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CFBBMS8S8C						

GRADATION CURVES

Project 08500.07 - NAS
Cecil Field -
Geotechnical Lab Testing
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



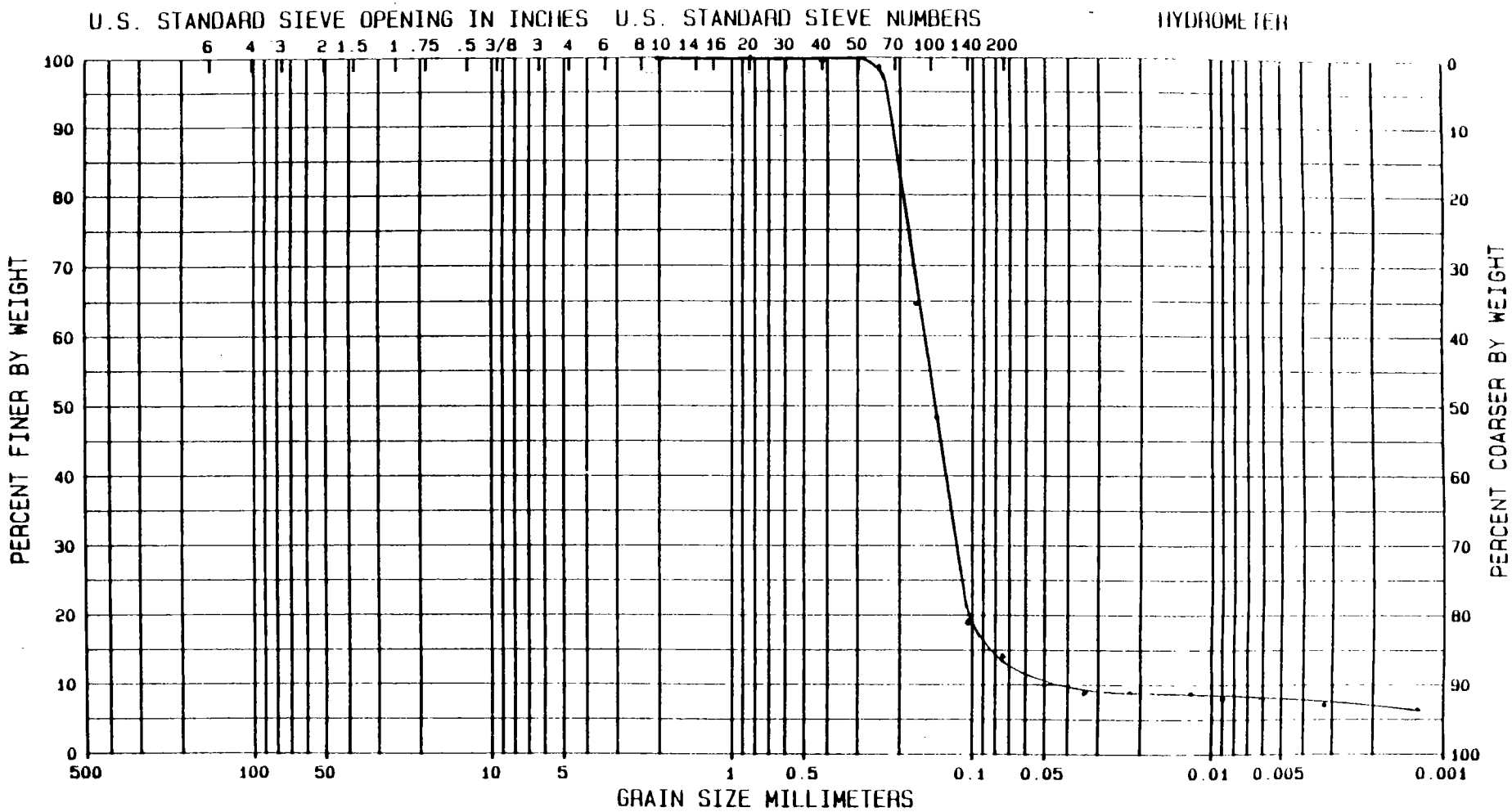
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CFBBMS91S6G						

GRADATION CURVES

Project 08500.07 - NAS
Cecil Field -
Geotechnical Lab Testing
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



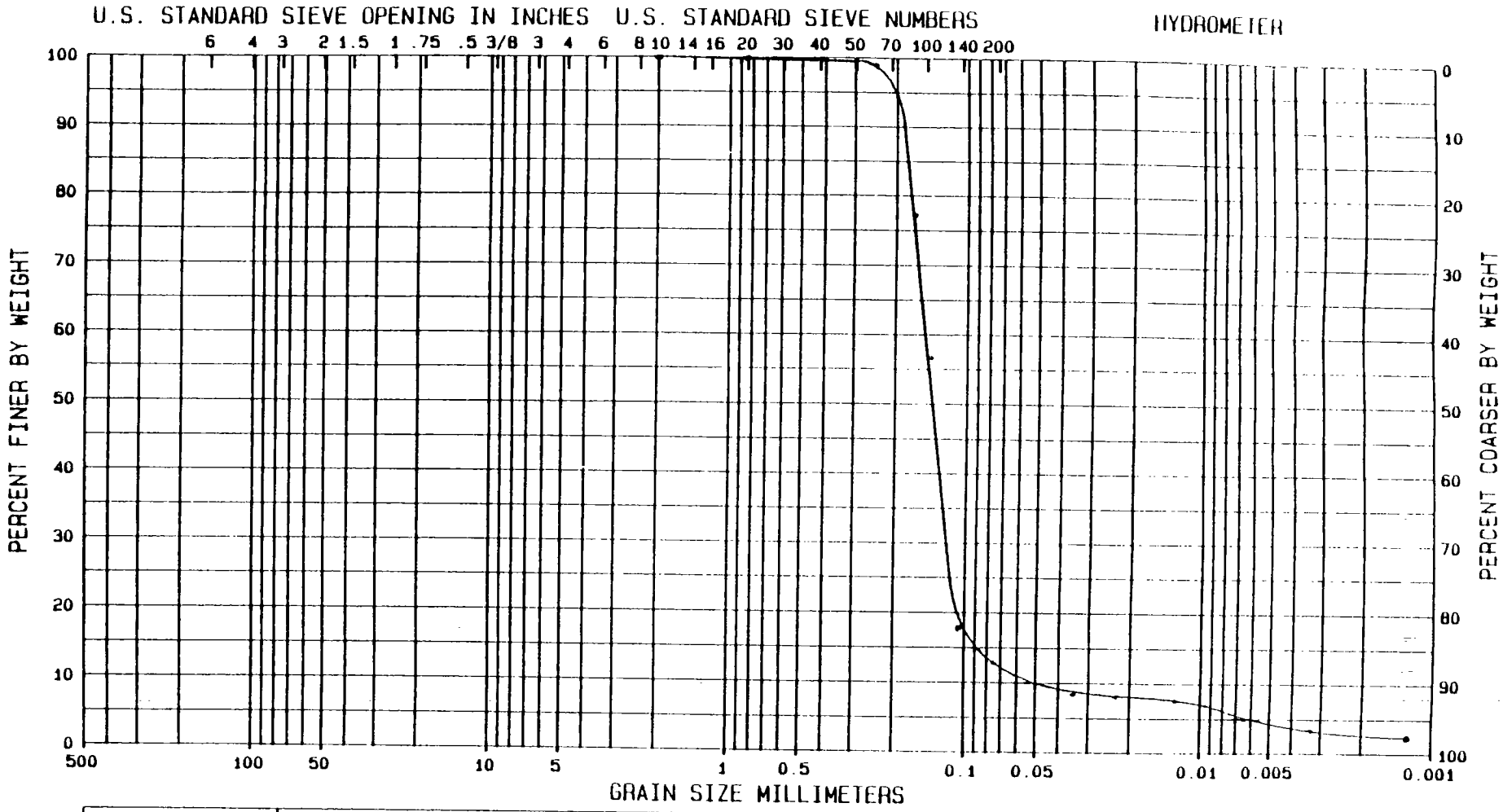
COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CFBBMS4S4G						

GRADATION CURVES

Project 08500.07 - NAS
Cecil Field -
Geotechnical Lab Testing
Jacksonville, Florida
E&A Project No. 93-1361

ELLIS & ASSOCIATES, INC.



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.		CLASSIFICATION	NAT w%	LL	PL	PI
CFBBMS7S4G						

GRADATION CURVES

Project 08500.07 - NAS
Cecil Field -
Geotechnical Lab Testing
Jacksonville, Florida
E&A Project No. 93-1361

APPENDIX J-7

BACKGROUND GROUNDWATER SAMPLING LOGS

GROUNDWA SAMPLING LOG

CLIENT NAS Cecil Field
SITE Background
WELL NUMBER CEF-BK-15
JOB NUMBER 8500.10

TOTAL WELL DEPTH 15.0' bls
WELL DIAMETER 2-inch
BOREHOLE DIAMETER 8 1/4-inch

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14 gal.
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 9.78' bTOC
STANDING WATER COLUMN (FT) 8.02'

AMT ONE WELL VOL (GAL) 1.1
TOTAL GAL TO BE PURGED 5.5

PURGING SYSTEM Bailer
SAMPLING SYSTEM Bailer

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
9/12/93	1830	1	43.4	4.62	80.1	OFFSCALE	0		> 200 NTUs	
	1834	3	45.3	4.64	77.1	OFFSCALE	0			
	1838	5	46.4	4.37	76.0	OFFSCALE	0			
	1842	7	47.6	4.51	76.0	OFFSCALE	0			
	1846	10	47.4	4.47	76.0	OFFSCALE	0			

NOTES:

TURBIDITY:

GROUNDWATL. .MPLING LOG

CLIENT NAS Cecil Field
SITE Background
WELL NUMBER CEF-BK-3D
JOB NUMBER 8500.10

TOTAL WELL DEPTH 47' bls
WELL DIAMETER 2-inch
BOREHOLE DIAMETER 6-inches

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14 gallons
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 6.48' bTOC
STANDING WATER COLUMN (FT) 43.32'

AMT ONE WELL VOL (GAL) 6.1 gallons
TOTAL GAL TO BE PURGED 30.5 gallons

PURGING SYSTEM WATTERRA
SAMPLING SYSTEM Bailer

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
9/12/93	1650	1	52.9	5.05	77.8	OFFSCALE	0		>200 NTUs	
	1655	10	54.9	4.94	77.0	27.4			RATE 2 gpm	
	1700	19	56.4	4.75	76.0	19.4				
	1705	30	54.5	4.77	75.0	17.8				
	1710	41	53.8	4.76	75.0	14.3				
	1714	49	54.2	4.76	75.0	13.8				

NOTES:

TU[illegible]ITY:

GROUNDWATI AMPLING LOG

PAGE 1 O.

CLIENT NAS Cecil Field
SITE Background
WELL NUMBER CEF-BK-5S
JOB NUMBER 8500.10

TOTAL WELL DEPTH 15.0' bls
WELL DIAMETER 2-inch
BOREHOLE DIAMETER 8-1/4 inch

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14 gal
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 8.28' bTOC
STANDING WATER COLUMN (FT) 9.52

AMT ONE WELL VOL (GAL) 1.3 gal
TOTAL GAL TO BE PURGED 6.5 gal

PURGING SYSTEM Bailer
SAMPLING SYSTEM Bailer

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
9/9/93	1225	.5	34.2	4.80	77.6	OFF SCALE	0		> 200 NTUs	
	1230	2.0	34.1	4.81	77.2	OFFSCALE				
	1234	4.0	33.3	4.60	75.6	OFFSCALE				
	1237	5.5	32.7	4.40	75.4	OFFSCALE				
	1241	8.0	33.5	4.48	75.8	OFFSCALE				
	1245	10.0	33.3	4.45	75.6	OFFSCALE				

NOTES:

TURBIDITY:

GROUNDWATER SAMPLING LOG

CLIENT NAS Cecil Field
SITE Background
WELL NUMBER CEF-BK-7S
JOB NUMBER 8500.10

TOTAL WELL DEPTH 15.0' bls
WELL DIAMETER 2-inch
BOREHOLE DIAMETER 8-1/4-inch

MIN NUMBER WELL VOL TO BE PURGED 5
VOL PER VERTICAL FT CASING (GAL) 0.14 gallons
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 12.12' btoc
STANDING WATER COLUMN (FT) 5.68'

AMT ONE WELL VOL (GAL) .80
TOTAL GAL TO BE PURGED 4.0 gallons

PURGING SYSTEM Bailer
SAMPLING SYSTEM Bailer

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
9/10/93	1535	1	134	5.90	80.1	OFFSCALE	0		>200 NTU	
	1539	2	85.4	5.52	80.6	OFFSCALE				
	1543	5	80.6	5.48	81.0	OFFSCALE				
	1547	7	64.6	4.90	80.8	OFFSCALE				
	1551	10	62.9	4.92	80.7	OFFSCALE				

NOTES:

TURBIDITY:

CLIENT NAS Cecil Field
SITE Background
WELL NUMBER CEF-BK-9D
JOB NUMBER 8500.10

TOTAL WELL DEPTH [illegible] bls
WELL DIAMETER 2-inch
BOREHOLE DIAMETER 6-inch

MIN NUMBER WELL VOL TO BE PURGED —
VOL PER VERTICAL FT CASING (GAL) 0.14 gal
VOL PER FT BOREHOLE (LESS CASING)(GAL) —

STATIC WATER LEVEL (FT) 12.02' btoc
STANDING WATER COLUMN (FT) 50.18

AMT ONE WELL VOL (GAL) 7.1
TOTAL GAL TO BE PURGED 35.5

PURGING SYSTEM Waterra
SAMPLING SYSTEM Bailer

DATE	TIME	AMOUNT PURGED (GAL)	FIELD PARAMETERS MEASURED						COMMENTS	SAMPLER
			EC(µmhos)	pH	TEMP(C°)	TURBIDITY(NTU)	PID(ppm)			
9/10/93	1440	1	53.1	5.96	80.4	OFFSCALE >200 NTUs	0		Rate pumping -	
	1445	10	35.6	5.91	76.8	160			2 1/2 gpm	
	1450	19	28.3	5.85	76.6	156				
	1455	30	27.8	5.32	76.4	126				
	1500	40	27.9	5.27	76.2	120				
	1505	49	28.0	5.27	76.2	118				

NOTES:

TURBIDITY:

APPENDIX J-8

WET CHEMISTRY ANALYSES FOR BACKGROUND GROUNDWATER

WET CHEMISTRY DATA - BACKGROUND

SAMPLE ID	ANALYSIS TYPE	VALUE	QUAL
CF BK 1S	Alkalinity, Bicarbonate	5.000	U
CF BK 2S	Alkalinity, Bicarbonate	5.000	U
CF BK 3I	Alkalinity, Bicarbonate	6.000	
CF BK 4S	Alkalinity, Bicarbonate	8.000	
CF BK 5S	Alkalinity, Bicarbonate	5.000	U
CF BK 6I	Alkalinity, Bicarbonate	5.000	U
CF BK 7S	Alkalinity, Bicarbonate	14.000	
CF BK 7SR	Alkalinity, Bicarbonate	5.000	U
CF BK 8S	Alkalinity, Bicarbonate	14.000	
CF BK 9I	Alkalinity, Bicarbonate	5.000	U
CF BK 1S	Alkalinity, Carbonate	0.000	
CF BK 1S	Alkalinity, Carbonate	5.000	U
CF BK 2S	Alkalinity, Carbonate	5.000	U
CF BK 3I	Alkalinity, Carbonate	5.000	U
CF BK 4S	Alkalinity, Carbonate	5.000	U
CF BK 5S	Alkalinity, Carbonate	5.000	U
CF BK 6I	Alkalinity, Carbonate	5.000	U
CF BK 7S	Alkalinity, Carbonate	5.000	U
CF BK 7SR	Alkalinity, Carbonate	5.000	U
CF BK 8S	Alkalinity, Carbonate	5.000	U
CF BK 9I	Alkalinity, Carbonate	5.000	U
CF BK 1S	Alkalinity, Total	20.000	U
CF BK 1S	Alkalinity, Total	100.000	
CF BK 2S	Alkalinity, Total	20.000	U
CF BK 3I	Alkalinity, Total	20.000	U
CF BK 4S	Alkalinity, Total	20.000	U
CF BK 5S	Alkalinity, Total	20.000	U
CF BK 5S	Alkalinity, Total	96.000	
CF BK 5S	Alkalinity, Total	102.000	
CF BK 6I	Alkalinity, Total	20.000	U
CF BK 7S	Alkalinity, Total	20.000	U
CF BK 7SR	Alkalinity, Total	20.000	U
CF BK 8S	Alkalinity, Total	20.000	U
CF BK 9I	Alkalinity, Total	20.000	U
CF BB MS1 S8	Carbon (TOC) in Solids	335.000	
CF BB MS2 S8	Carbon (TOC) in Solids	455.000	
CF BB MS4 S4	Carbon (TOC) in Solids	1300.000	
CF BB MS5 S6	Carbon (TOC) in Solids	535.000	
CF BB MS6 I43	Carbon (TOC) in Solids	1380.000	
CF BB MS7 S6	Carbon (TOC) in Solids	16400.000	
CF BB MS8 S6	Carbon (TOC) in Solids	1020.000	
CF BB MS9 I46	Carbon (TOC) in Solids	868.000	
CF BB MS9 I56	Carbon (TOC) in Solids	191.000	
CF BK 3I	Carbon ,TOC	8.000	
CF BK 4S	Carbon ,TOC	31.000	
CF BK 7S	Carbon ,TOC	160.000	

WET CHEMISTRY DATA - BACKGROUND

SAMPLE ID	ANALYSIS TYPE	VALUE	QUAL
CF BK 7SR	Carbon ,TOC	1.000	U
CF BK 1S	Chloride - Automated	11.000	
CF BK 1S	Chloride - Automated	105.000	
CF BK 2S	Chloride - Automated	7.000	
CF BK 3I	Chloride - Automated	11.000	
CF BK 4S	Chloride - Automated	8.000	
CF BK 5S	Chloride - Automated	5.000	
CF BK 6I	Chloride - Automated	6.000	
CF BK 7S	Chloride - Automated	59.000	
CF BK 7SR	Chloride - Automated	2.000	U
CF BK 8S	Chloride - Automated	3.000	
CF BK 9I	Chloride - Automated	2.000	
CF BK 1S	Chromium	.140	
CF BK 2S	Chromium	.230	
CF BK 3I	Chromium	.020	U
CF BK 4S	Chromium	.220	
CF BK 5S	Chromium	.120	
CF BK 6I	Chromium	.020	U
CF BK 7S	Chromium	.160	
CF BK 7SR	Chromium	.020	U
CF BK 8S	Chromium	.490	
CF BK 9I	Chromium	.020	U
CF BK 1S	Chromium, Hexavalent	.020	UJ
CF BK 2S	Chromium, Hexavalent	.020	UJ
CF BK 3I	Chromium, Hexavalent	.020	UJ
CF BK 3I	Chromium, Hexavalent	84.000	
CF BK 4S	Chromium, Hexavalent	.020	UJ
CF BK 5S	Chromium, Hexavalent	.020	UJ
CF BK 6I	Chromium, Hexavalent	.020	UJ
CF BK 6I	Chromium, Hexavalent	100.000	
CF BK 6I	Chromium, Hexavalent	102.000	
CF BK 7S	Chromium, Hexavalent	.020	U
CF BK 7SR	Chromium, Hexavalent	.020	U
CF BK 8S	Chromium, Hexavalent	.020	U
CF BK 9I	Chromium, Hexavalent	.020	U
CF BK 1S	Hardness	8.000	
CF BK 1S	Hardness	124.000	
CF BK 1S	Hardness	128.000	
CF BK 2S	Hardness	10.000	
CF BK 3I	Hardness	46.000	
CF BK 4S	Hardness	62.500	U
CF BK 5S	Hardness	5.000	U
CF BK 6I	Hardness	5.000	U
CF BK 7S	Hardness	50.000	U
CF BK 7SR	Hardness	5.000	U
CF BK 8S	Hardness	220.000	
CF BK 9I	Hardness	7.000	

WET CHEMISTRY DATA - BACKGROUND

SAMPLE ID	ANALYSIS TYPE	VALUE	QUAL
CF BB MS6 I6	Solids, Total (TS) SOLID MATRIX	82.800	
CF BB MS7 S0	Solids, Total (TS) SOLID MATRIX	90.500	
CF BB MS7 S0D	Solids, Total (TS) SOLID MATRIX	90.700	
CF BB MS7 S4	Solids, Total (TS) SOLID MATRIX	82.600	
CF BB MS7 S6	Solids, Total (TS) SOLID MATRIX	78.800	
CF BB MS8 S2	Solids, Total (TS) SOLID MATRIX	94.100	
CF BB MS8 S6	Solids, Total (TS) SOLID MATRIX	86.100	
CF BB MS9 I46	Solids, Total (TS) SOLID MATRIX	83.800	
CF BB MS9 I56	Solids, Total (TS) SOLID MATRIX	84.400	
CF BB MS9 I6	Solids, Total (TS) SOLID MATRIX	70.500	
CF BB MS9 IOS	Solids, Total (TS) SOLID MATRIX	88.800	
CF BK 1S	Sulfate (Automated)	5.000	U
CF BK 1S	Sulfate (Automated)	100.000	
CF BK 1S	Sulfate (Automated)	103.000	
CF BK 2S	Sulfate (Automated)	5.000	U
CF BK 3I	Sulfate (Automated)	5.000	U
CF BK 4S	Sulfate (Automated)	5.000	U
CF BK 5S	Sulfate (Automated)	11.000	
CF BK 6I	Sulfate (Automated)	5.000	U
CF BK 7S	Sulfate (Automated)	52.000	
CF BK 7SR	Sulfate (Automated)	41.000	
CF BK 8S	Sulfate (Automated)	5.000	U
CF BK 9I	Sulfate (Automated)	16.000	
CF BK 1S	Sulfide (S)	1.000	U
CF BK 1S	Sulfide (S)	108.000	
CF BK 1S	Sulfide (S)	112.000	
CF BK 2S	Sulfide (S)	1.000	
CF BK 3I	Sulfide (S)	2.000	
CF BK 4S	Sulfide (S)	1.000	U
CF BK 5S	Sulfide (S)	1.000	U
CF BK 6I	Sulfide (S)	1.000	U
CF BK 7S	Sulfide (S)	1.000	U
CF BK 7SR	Sulfide (S)	1.000	
CF BK 8S	Sulfide (S)	1.000	U
CF BK 9I	Sulfide (S)	1.000	U

WET CHEMISTRY DATA - BACKGROUND

SAMPLE ID	ANALYSIS TYPE	VALUE	QUAL
CEF BSS 01 F	Petro.Hydrocarbons, Total Rec.	.500	U
CEF BSS 01 R	Petro.Hydrocarbons, Total Rec.	.500	U
CEF BSS 02 R	Petro.Hydrocarbons, Total Rec.	.500	U
CF BB MS2 SR	Petro.Hydrocarbons, Total Rec.	.500	U
CF BB MS7 SR	Petro.Hydrocarbons, Total Rec.	.500	U
CF BK 1S	Petro.Hydrocarbons, Total Rec.	.500	U
CF BK 1S	Petro.Hydrocarbons, Total Rec.	86.000	
CF BK 1S	Petro.Hydrocarbons, Total Rec.	92.000	
CF BK 2S	Petro.Hydrocarbons, Total Rec.	.500	U
CF BK 3I	Petro.Hydrocarbons, Total Rec.	.500	U
CF BK 4S	Petro.Hydrocarbons, Total Rec.	.500	U
CF BK 5S	Petro.Hydrocarbons, Total Rec.	.500	U
CF BK 6I	Petro.Hydrocarbons, Total Rec.	.500	
CF BK 7S	Petro.Hydrocarbons, Total Rec.	.500	U
CF BK 7SR	Petro.Hydrocarbons, Total Rec.	.500	U
CF BK 8S	Petro.Hydrocarbons, Total Rec.	.500	U
CF BK 9I	Petro.Hydrocarbons, Total Rec.	.500	U
CEF BSS 01	Petro.Hydrocarbons, Total Rec.(	10.000	U
CEF BSS 02	Petro.Hydrocarbons, Total Rec.(	10.000	U
CEF BSS 02 D	Petro.Hydrocarbons, Total Rec.(	10.000	U
CEF BSS 03	Petro.Hydrocarbons, Total Rec.(	10.000	U
CEF BSS 04	Petro.Hydrocarbons, Total Rec.(	14.000	
CEF BSS 05	Petro.Hydrocarbons, Total Rec.(	10.000	U
CEF BSS 06	Petro.Hydrocarbons, Total Rec.(	10.000	U
CEF BSS 07	Petro.Hydrocarbons, Total Rec.(	13.000	
CEF BSS 08	Petro.Hydrocarbons, Total Rec.(	23.000	
CEF BSS 09	Petro.Hydrocarbons, Total Rec.(	10.000	U
CEF BSS 09 D	Petro.Hydrocarbons, Total Rec.(	10.000	U
CEF BSS 10	Petro.Hydrocarbons, Total Rec.(	35.000	
CEF BSS 11	Petro.Hydrocarbons, Total Rec.(	18.000	
CEF BSS 12	Petro.Hydrocarbons, Total Rec.(	11.000	
CEF BSS 13	Petro.Hydrocarbons, Total Rec.(	25.000	
CEF BSS 14	Petro.Hydrocarbons, Total Rec.(	58.000	
CEF BSS 15	Petro.Hydrocarbons, Total Rec.(	12.000	
CF BB MS1 S6	Petro.Hydrocarbons, Total Rec.(	10.000	U
CF BB MS1 SO	Petro.Hydrocarbons, Total Rec.(	10.000	U
CF BB MS2 S2	Petro.Hydrocarbons, Total Rec.(	10.000	U
CF BB MS2 S6	Petro.Hydrocarbons, Total Rec.(	10.000	U
CF BB MS3 I2	Petro.Hydrocarbons, Total Rec.(	10.000	U
CF BB MS3 I6	Petro.Hydrocarbons, Total Rec.(	10.000	U
CF BB MS4 S2	Petro.Hydrocarbons, Total Rec.(	10.000	U
CF BB MS4 S4	Petro.Hydrocarbons, Total Rec.(	10.000	U
CF BB MS5 S2	Petro.Hydrocarbons, Total Rec.(	10.000	U
CF BB MS5 S6	Petro.Hydrocarbons, Total Rec.(	10.000	U
CF BB MS6 I0	Petro.Hydrocarbons, Total Rec.(	34.000	
CF BB MS6 I6	Petro.Hydrocarbons, Total Rec.(	10.000	U
CF BB MS7 S0	Petro.Hydrocarbons, Total Rec.(	14.000	

WET CHEMISTRY DATA - BACKGROUND

SAMPLE ID	ANALYSIS TYPE	VALUE	QUAL
CF BB MS7 S0D	Petro.Hydrocarbons, Total Rec.(	10.000	U
CF BB MS7 S4	Petro.Hydrocarbons, Total Rec.(	10.000	U
CF BB MS8 S2	Petro.Hydrocarbons, Total Rec.(	10.000	U
CF BB MS8 S6	Petro.Hydrocarbons, Total Rec.(	10.000	U
CF BB MS9 I6	Petro.Hydrocarbons, Total Rec.(	10.000	U
CF BB MS9 IOS	Petro.Hydrocarbons, Total Rec.(	51.000	
CF BK 1S	Solids, Filterable (TDS)	66.000	
CF BK 2S	Solids, Filterable (TDS)	150.000	
CF BK 3I	Solids, Filterable (TDS)	40.000	
CF BK 4S	Solids, Filterable (TDS)	61.000	
CF BK 5S	Solids, Filterable (TDS)	220.000	
CF BK 6I	Solids, Filterable (TDS)	40.000	
CF BK 7S	Solids, Filterable (TDS)	940.000	
CF BK 7SR	Solids, Filterable (TDS)	10.000	U
CF BK 8S	Solids, Filterable (TDS)	88.000	
CF BK 9I	Solids, Filterable (TDS)	64.000	
CEF BSS 01	Solids, Total (TS) SOLID MATRIX	90.900	
CEF BSS 02	Solids, Total (TS) SOLID MATRIX	88.900	
CEF BSS 02 D	Solids, Total (TS) SOLID MATRIX	86.400	
CEF BSS 03	Solids, Total (TS) SOLID MATRIX	85.900	
CEF BSS 04	Solids, Total (TS) SOLID MATRIX	91.200	
CEF BSS 05	Solids, Total (TS) SOLID MATRIX	93.200	
CEF BSS 06	Solids, Total (TS) SOLID MATRIX	92.800	
CEF BSS 07	Solids, Total (TS) SOLID MATRIX	92.500	
CEF BSS 08	Solids, Total (TS) SOLID MATRIX	91.700	
CEF BSS 09	Solids, Total (TS) SOLID MATRIX	88.500	
CEF BSS 09 D	Solids, Total (TS) SOLID MATRIX	87.700	
CEF BSS 10	Solids, Total (TS) SOLID MATRIX	89.800	
CEF BSS 11	Solids, Total (TS) SOLID MATRIX	89.600	
CEF BSS 12	Solids, Total (TS) SOLID MATRIX	94.500	
CEF BSS 13	Solids, Total (TS) SOLID MATRIX	94.600	
CEF BSS 14	Solids, Total (TS) SOLID MATRIX	94.300	
CEF BSS 15	Solids, Total (TS) SOLID MATRIX	89.700	
CF BB MS1 S6	Solids, Total (TS) SOLID MATRIX	83.800	
CF BB MS1 S8	Solids, Total (TS) SOLID MATRIX	97.900	
CF BB MS1 SO	Solids, Total (TS) SOLID MATRIX	87.300	
CF BB MS2 S2	Solids, Total (TS) SOLID MATRIX	87.800	
CF BB MS2 S6	Solids, Total (TS) SOLID MATRIX	84.100	
CF BB MS2 S8	Solids, Total (TS) SOLID MATRIX	83.600	
CF BB MS3 I2	Solids, Total (TS) SOLID MATRIX	86.000	
CF BB MS3 I6	Solids, Total (TS) SOLID MATRIX	82.500	
CF BB MS4 S2	Solids, Total (TS) SOLID MATRIX	93.300	
CF BB MS4 S4	Solids, Total (TS) SOLID MATRIX	82.400	
CF BB MS5 S2	Solids, Total (TS) SOLID MATRIX	96.800	
CF BB MS5 S6	Solids, Total (TS) SOLID MATRIX	83.600	
CF BB MS6 I0	Solids, Total (TS) SOLID MATRIX	96.500	
CF BB MS6 I43	Solids, Total (TS) SOLID MATRIX	80.900	