

06.07-10/26/95-01736

**TABLES**

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**TABLE 1**  
**COMPARISON OF GROUNDWATER ANALYTICAL RESULTS**  
**VOLATILE COMPOUNDS**  
**SITE 1**  
**LONG-TERM MONITORING CTO-0333**  
**MCB, CAMP LEJEUNE, NORTH CAROLINA**

Monitoring Well/ Volatile Compound	Round 1 Results <sup>(1)</sup> (May, 1994)	Round 2 Results <sup>(2)</sup> (December, 1994)	Round 3 Results <sup>(3)</sup> (August, 1995)
1-GW01	ND	ND	ND
1-GW02	ND	ND	ND
1-GW03	ND	ND	ND
1-GW10			
Vinyl Chloride	2	4	ND
1,2-Dichloroethene(Total)	10	21	23
1,1-Dichloroethene (Total)	ND	2	ND
Trichloroethene	4	8	4
1-GW11			
Trichloroethene	1	ND	ND
1-GW12			
Toluene	ND	ND	4
Ethylbenzene	ND	ND	4
Xylenes	3	9	150
1-GW15	ND	ND	Not Sampled
1-GW17			
1,2-Dichloroethene (Total)	1	ND	ND
Trichloroethene	27	18	ND
1-GW17DW	ND	ND	ND
1-GW18	Not Sampled	Not Sampled	ND
1-HP-638	ND	ND	ND

Notes:

- (1) Round 1 samples collected using a Teflon bailer
- (2) Round 2 samples collected using an environmental submersible pump
- (3) Round 3 samples collected using a peristaltic pump

ND Not detected

All results are shown in ug/l

**TABLE 2**  
**COMPARISON OF GROUNDWATER ANALYTICAL RESULTS**  
**TAL METALS**  
**SITE 1**  
**LONG-TERM MONITORING CTO-0333**  
**MCB, CAMP LEJEUNE, NORTH CAROLINA**

Detected Contaminants	Round 1 Results <sup>(1)</sup> (May, 1994)	Round 2 Results <sup>(2)</sup> (December, 1994)	Round 3 Results <sup>(3)</sup> (August, 1995)
Aluminum	457,000	1,510	569
Antimony	88.6	ND	ND
Arsenic	330	15.2	16
Barium	2,740	76.6	89.2
Beryllium	99.1	ND	ND
Cadmium	43.1	ND	ND
Calcium	720,000	137,000	149,000
Chromium	800	ND	6.7
Cobalt	306	30	30
Copper	105	ND	21.2
Iron	417,000	29,200	37,700
Lead	163	2.4	4.7
Magnesium	30,900	7,090	14,100
Manganese	2,250	1,200	1,220
Mercury	0.87	0.14	ND
Nickel	866	ND	13.2
Potassium	21,600	5,180	5,560
Selenium	22.6	ND	8.9
Silver	19.9	ND	ND
Sodium	13,800	19,200	16,700
Thallium	4.7	ND	ND
Vanadium	811	11.4	9.3
Zinc	9.2	ND	24

Notes:

- <sup>(1)</sup> Round 1 samples collected using a teflon bailer
- <sup>(2)</sup> Round 2 samples collected using an environmental submersible pump
- <sup>(3)</sup> Round 3 samples collected using a peristaltic pump

ND - Not detected

All results are shown in ug/l

**TABLE 3**  
**COMPARISON OF GROUNDWATER ANALYTICAL RESULTS**  
**TAL METALS**  
**SITE 28**  
**LONG-TERM MONITORING CTO-0333**  
**MCB, CAMP LEJEUNE, NORTH CAROLINA**

Detected Contaminants	Round 1 Results <sup>(1)</sup> (May, 1994)	Round 2 Results <sup>(2)</sup> (December, 1994)	Round 3 Results <sup>(3)</sup> (August, 1995)
Aluminum	100,000	1,670	376
Antimony	5,340	ND	ND
Arsenic	76.7	4.7	8.1
Barium	1,980	759	733
Beryllium	9.6	ND	0.49
Cadmium	35.4	ND	10.7
Calcium	245,000	183,000	209,000
Chromium	308	ND	9.7
Cobalt	30.4	ND	4.5
Copper	2,250	44	16.8
Iron	245,000	40,600	50,100
Lead	4,810	126	4.7
Magnesium	52,900	35,400	30,700
Manganese	3,330	1,450	454
Mercury	2	0.58	ND
Nickel	165	13.5	6.2
Potassium	63,500	84,700	65,700
Selenium	5.6	ND	ND
Silver	37.9	ND	ND
Sodium	744,000	803,000	833,000
Thallium	6.9	ND	ND
Vanadium	190	6.9	3
Zinc	9,220	331	14

Notes:

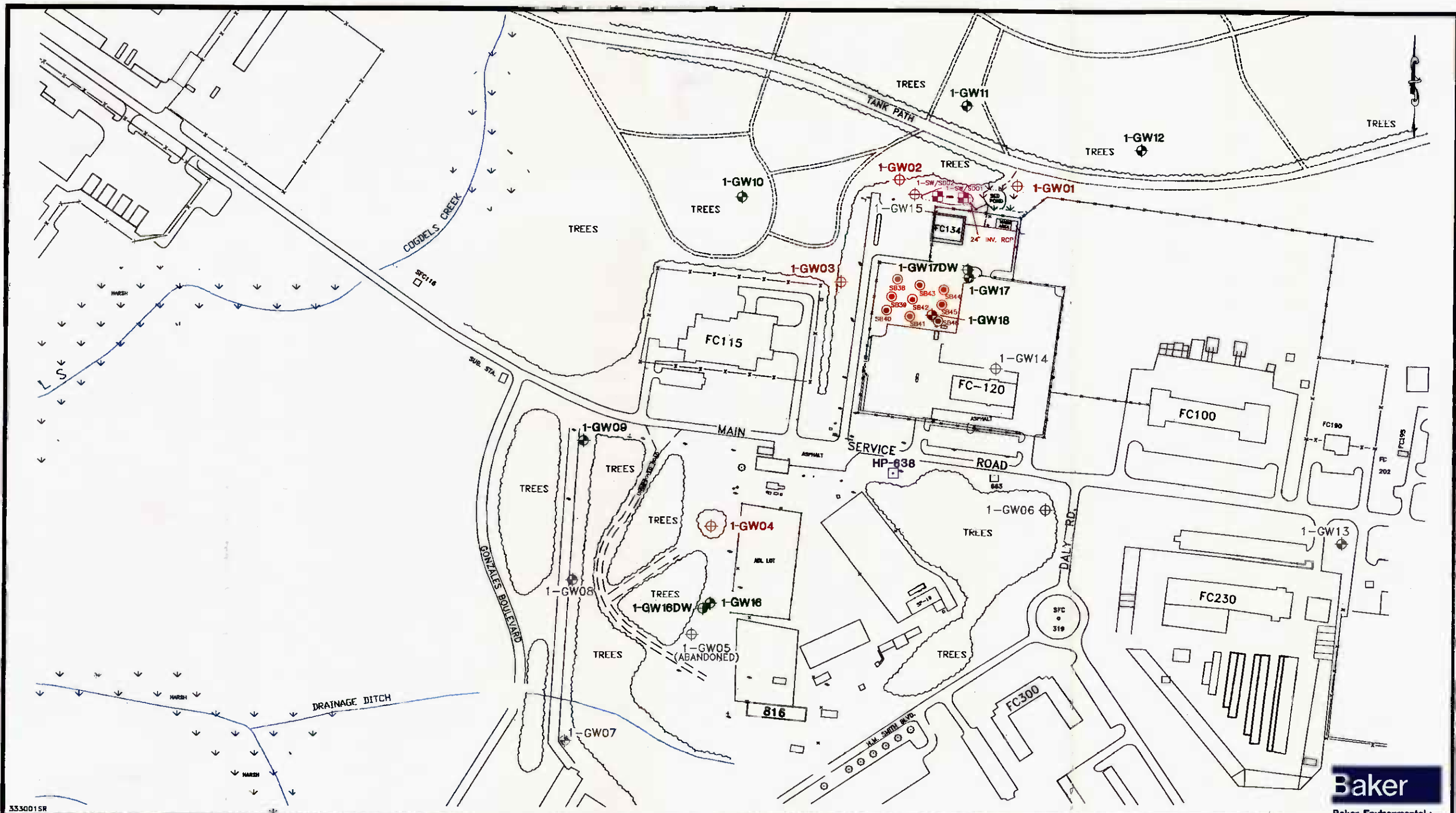
- (1) Round 1 samples collected using a teflon bailer
- (2) Round 2 samples collected using an environmental submersible pump
- (3) Round 3 samples collected using a peristaltic pump

ND - Not detected

All results are shown in ug/l

**FIGURES**

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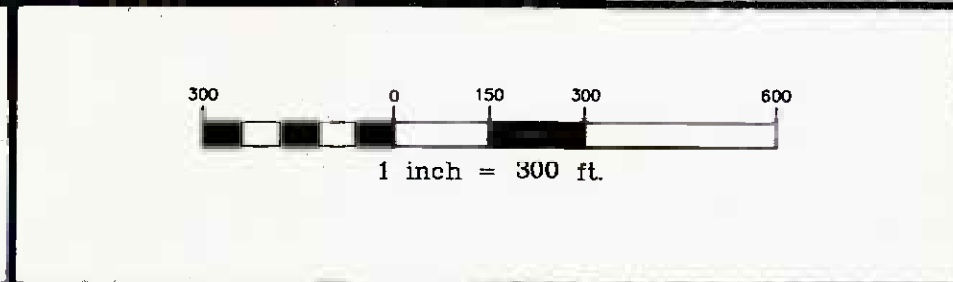
**Baker**  
Baker Environmental, Inc.

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**LEGEND**

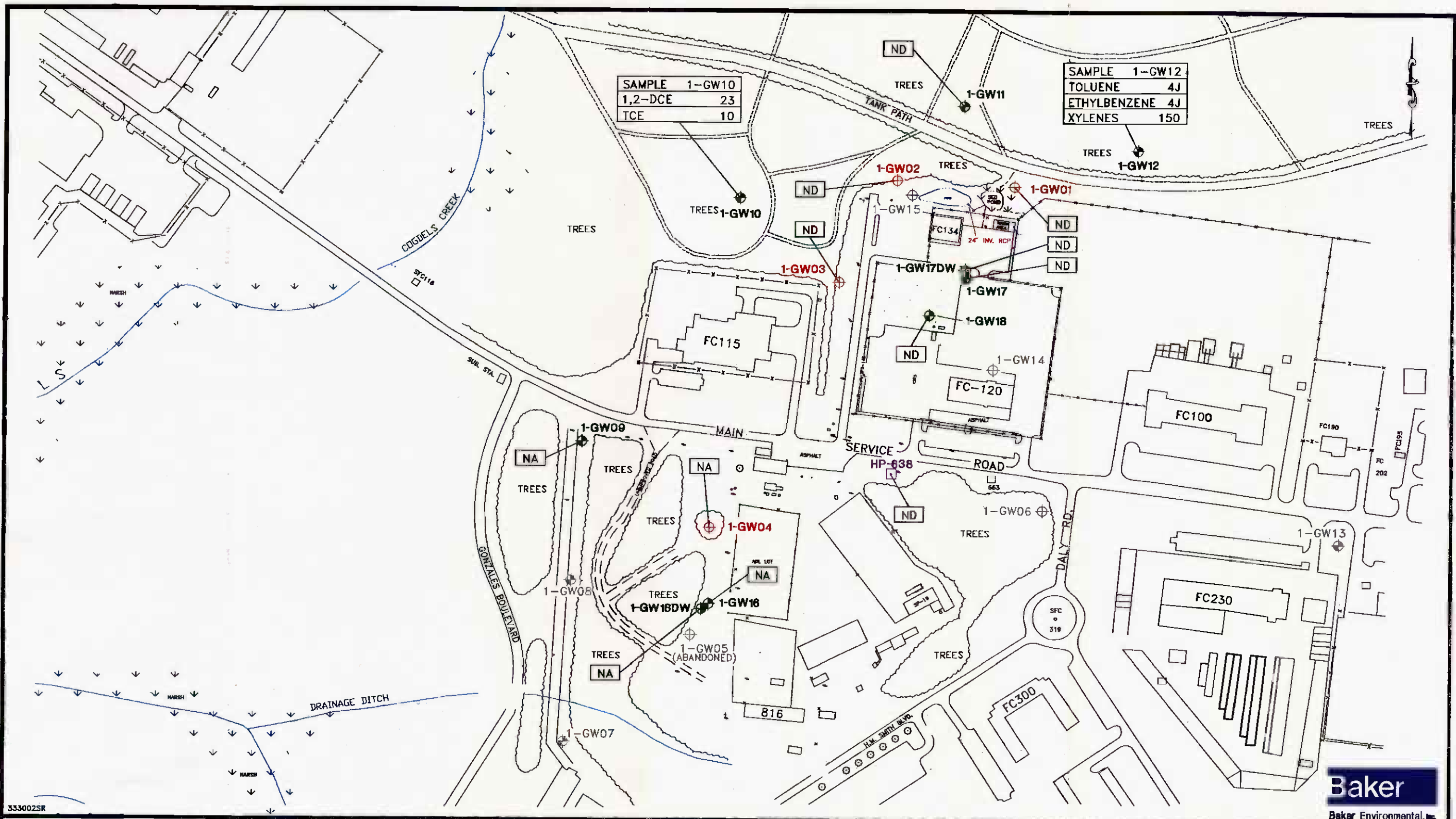
- 1-GW01 SHALLOW MONITORING WELL (ESE, 1984)
- 1-GW07 SHALLOW MONITORING WELL (BAKER, 1994/1995)
- 1-GW18DW DEEP MONITORING WELL (BAKER, 1994)
- HP-638 EXISTING WATER SUPPLY WELL
- SB38 SOIL BORING (BAKER, 1995)
- 1-SW/SD02 SURFACE WATER/SEDIMENT STATION (BAKER, 1995)

SOURCE: LANTDM, FEBRUARY 1992 AND W.K. DICKSON & ASSOC., JUNE 1994



**FIGURE 1**  
**SAMPLING LOCATIONS**  
**SITE 1 - FRENCH CREEK LIQUIDS DISPOSAL AREA**  
**LONG-TERM MONITORING CTO-0333**  
**MARINE CORPS BASE, CAMP LEJEUNE**  
**NORTH CAROLINA**

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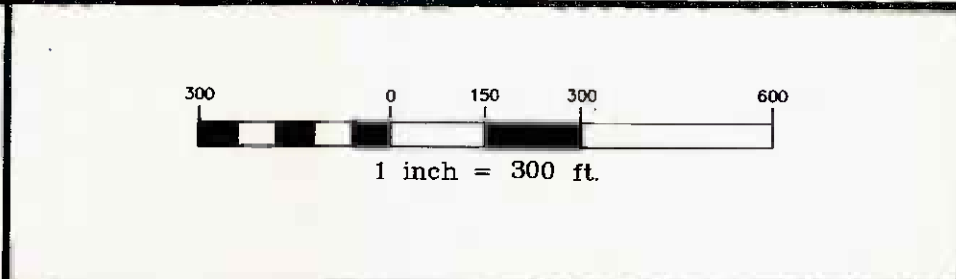


**Baker**  
Baker Environmental, Inc.

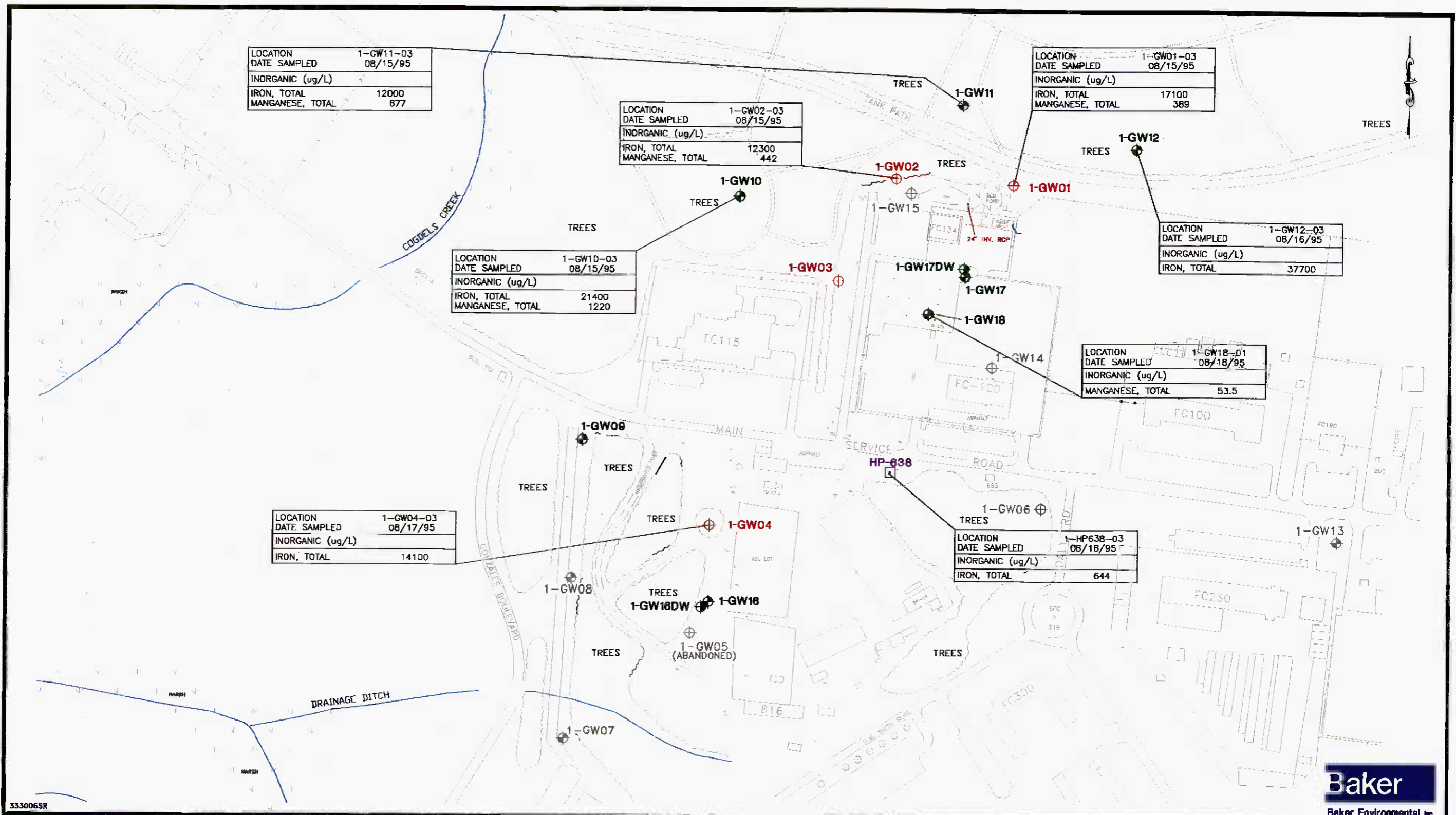
**LEGEND**

- 1-GW01 SHALLOW MONITORING WELL (ESE, 1984)
- 1-GW07 SHALLOW MONITORING WELL (BAKER, 1994/1995)
- 1-GW18DW DEEP MONITORING WELL (BAKER, 1994)
- HP-638 EXISTING WATER SUPPLY WELL
- ND NOT DETECTED
- NA NOT ANALYZED

NOTES: ALL CONCENTRATIONS EXPRESSED IN ug/l  
 SAMPLES COLLECTED FROM AUGUST 15-18, 1995  
 SOURCE: LANTDIV, FEBRUARY 1992 AND W.K. DICKSON & ASSOC., JUNE 1994



**FIGURE 2**  
**VOLATILE COMPOUNDS IN GROUNDWATER**  
**ABOVE FEDERAL AND/OR STATE STANDARDS**  
**SITE 1 - FRENCH CREEK LIQUIDS DISPOSAL AREA**  
**LONG-TERM MONITORING CTO-0333**  
**MARINE CORPS BASE, CAMP LEJEUNE**  
**NORTH CAROLINA**

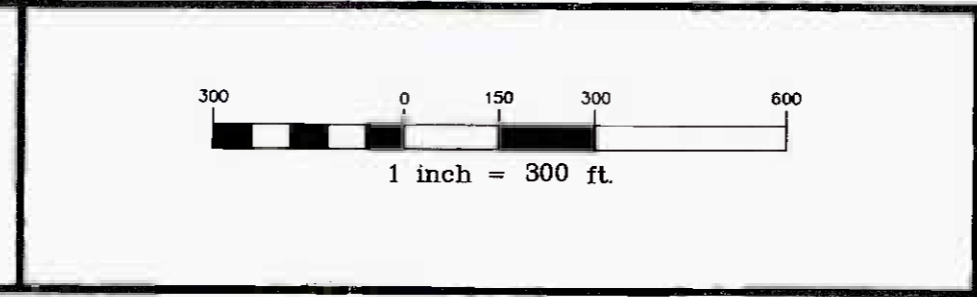


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**LEGEND**

- 1-GW01 SHALLOW MONITORING WELL (ESE, 1984)
- 1-GW07 SHALLOW MONITORING WELL (BAKER, 1994/1995)
- 1-GW16DW DEEP MONITORING WELL (BAKER, 1994)
- HP-638 EXISTING WATER SUPPLY WELL

SOURCE: LANTDIV, FEBRUARY 1992 AND W.K. DICKSON & ASSOC., JUNE 1994



**FIGURE 3**

**METALS IN GROUNDWATER**

**ABOVE FEDERAL AND/OR STATE STANDARDS**

**SITE 1 - FRENCH CREEK LIQUIDS DISPOSAL AREA**

**LONG-TERM MONITORING CTO-0333**

**MARINE CORPS BASE, CAMP LEJEUNE**

**NORTH CAROLINA**

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LOCATION	1-N-SB38-05
DATE SAMPLED	08/15/95
DEPTH	10' - 12'
PESTICIDE/PCBS (ug/kg)	
DIELDRIN	1.9 J
ENDRIN	2.3 J
4,4'-DDT	3.9

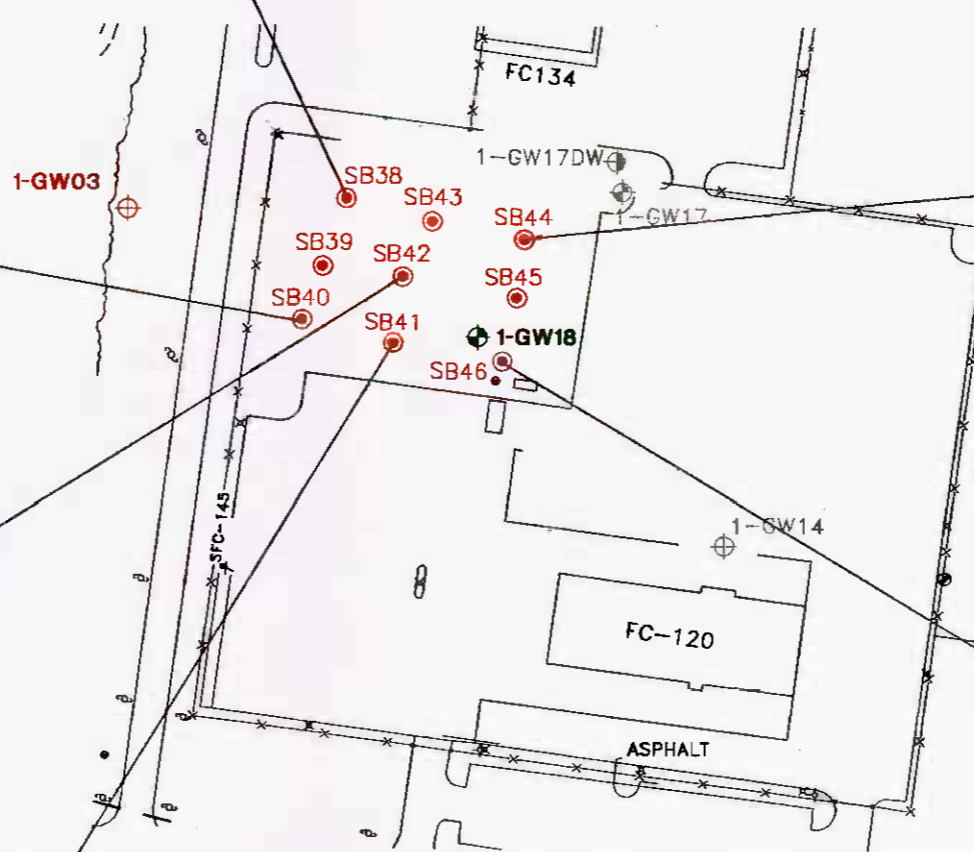
LOCATION	1-N-SB40-05
DATE SAMPLED	08/15/95
DEPTH	10' - 12'
PESTICIDE/PCBS (ug/kg)	
DIELDRIN	7 J
4,4'-DDE	5.2 J
4,4'-DDD	2.6 J
4,4'-DDT	2.2 J

LOCATION	1-N-SB42-05
DATE SAMPLED	08/15/95
DEPTH	10' - 12'
PESTICIDE/PCBS (ug/kg)	
DIELDRIN	4
4,4'-DDE	3.2 J
4,4'-DDT	13
ALPHA-CHLORDANE	1.8
GAMMA-CHLORDANE	1.8

LOCATION	1-N-SB41-05
DATE SAMPLED	08/15/95
DEPTH	10' - 12'
PESTICIDE/PCBS (ug/kg)	
DIELDRIN	4.2
4,4'-DDE	9.5 J
4,4'-DDD	1.9 J
ALPHA-CHLORDANE	1.1 J
GAMMA-CHLORDANE	1.1 J

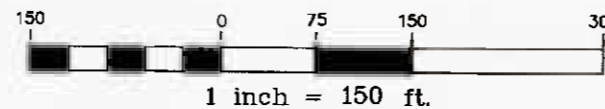
LOCATION	1-N-SB44-05
DATE SAMPLED	08/15/95
DEPTH	10' - 12'
PESTICIDE/PCBS (ug/kg)	
4,4'-DDT	2.5 J

LOCATION	1-N-SB46-05
DATE SAMPLED	08/15/95
DEPTH	10' - 12'
PESTICIDE/PCBS (ug/kg)	
4,4'-DDT	2.2 J



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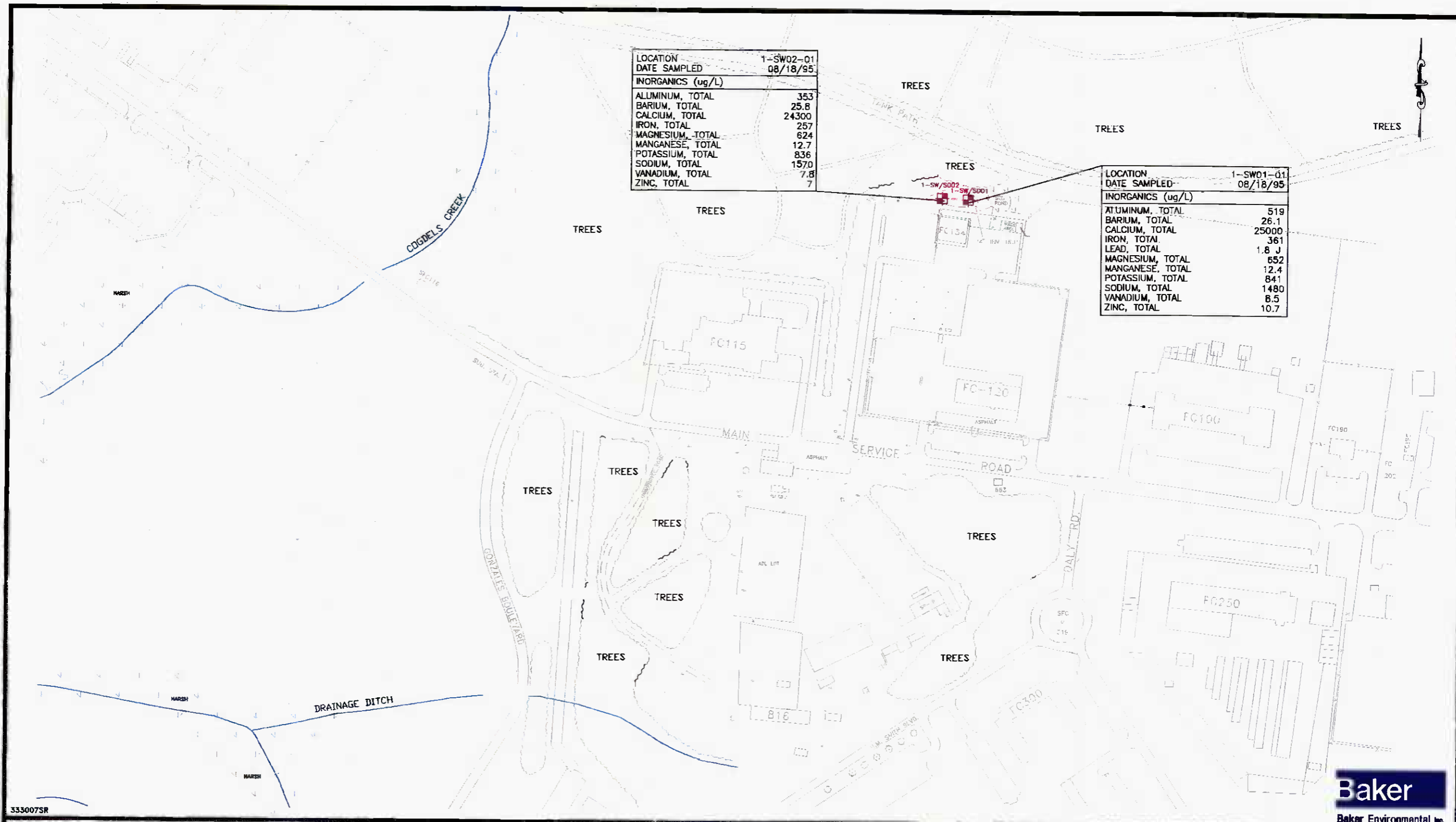
- LEGEND**
- 1-GW01 SHALLOW MONITORING WELL (ESE, 1984)
  - 1-GW07 SHALLOW MONITORING WELL (BAKER, 1994/1995)
  - SB38 SOIL BORING (BAKER, 1995)



SOURCE: LANTDIV, FEBRUARY 1992 AND W.K. DICKSON & ASSOC., JUNE 1994



**FIGURE 4**  
**PESTICIDE COMPOUNDS IN SOIL**  
**SITE 1 - FRENCH CREEK LIQUIDS DISPOSAL AREA**  
**LONG-TERM MONITORING CTO-0333**  
**MARINE CORPS BASE, CAMP LEJEUNE**  
**NORTH CAROLINA**

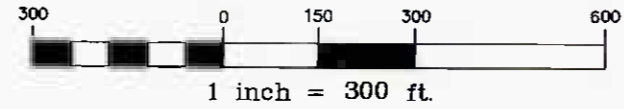


LOCATION	1-SW02-01
DATE SAMPLED	08/18/95
INORGANICS (ug/L)	
ALUMINUM, TOTAL	353
BARIIUM, TOTAL	25.8
CALCIUM, TOTAL	24300
IRON, TOTAL	257
MAGNESIUM, TOTAL	624
MANGANESE, TOTAL	12.7
POTASSIUM, TOTAL	836
SODIUM, TOTAL	1570
VANADIUM, TOTAL	7.8
ZINC, TOTAL	7

LOCATION	1-SW01-01
DATE SAMPLED	08/18/95
INORGANICS (ug/L)	
ALUMINUM, TOTAL	519
BARIIUM, TOTAL	26.1
CALCIUM, TOTAL	25000
IRON, TOTAL	361
LEAD, TOTAL	1.8 J
MAGNESIUM, TOTAL	652
MANGANESE, TOTAL	12.4
POTASSIUM, TOTAL	841
SODIUM, TOTAL	1480
VANADIUM, TOTAL	6.5
ZINC, TOTAL	10.7

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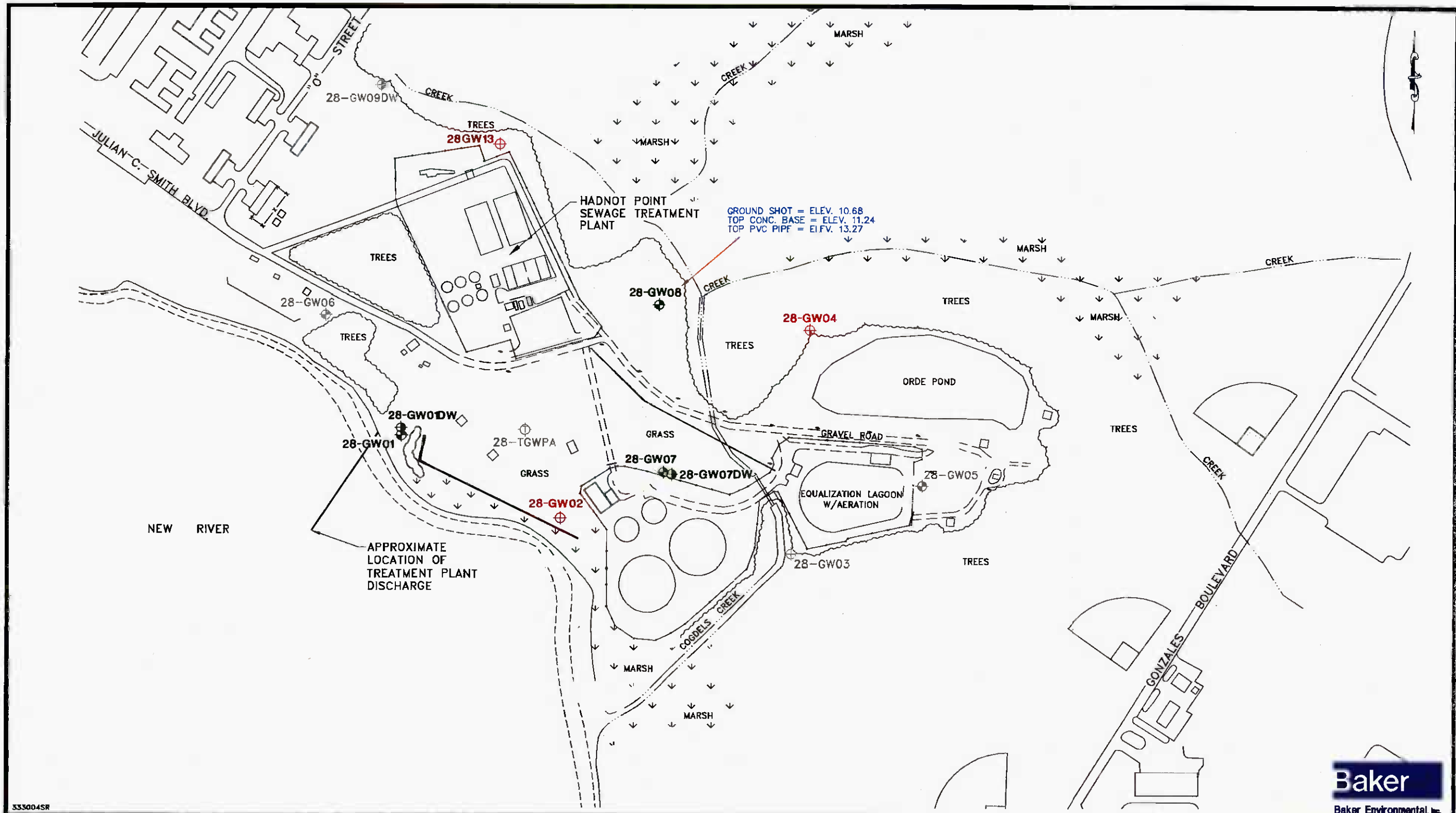
**LEGEND**  
 1-SW/S002 SURFACE WATER/SEDIMENT STATION (BAKER, 1995)



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**FIGURE 5**  
**METALS IN SURFACE WATER**  
**SITE 1 - FRENCH CREEK LIQUIDS DISPOSAL AREA**  
**LONG-TERM MONITORING CTO-0333**  
**MARINE CORPS BASE, CAMP LEJEUNE**  
**NORTH CAROLINA**

SOURCE: LANTDIV, FEBRUARY 1992 AND W.K. DICKSON & ASSOC., JUNE 1994



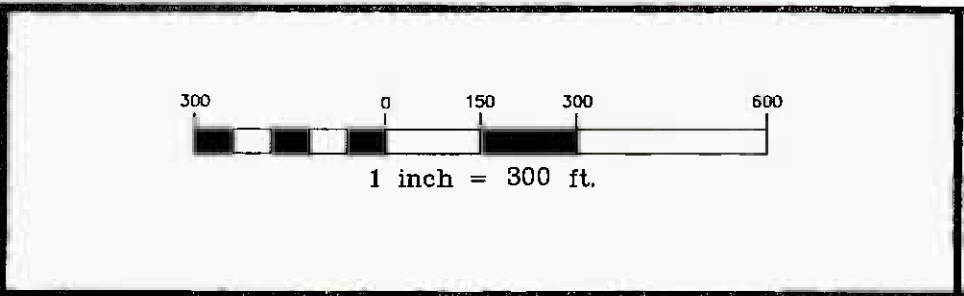
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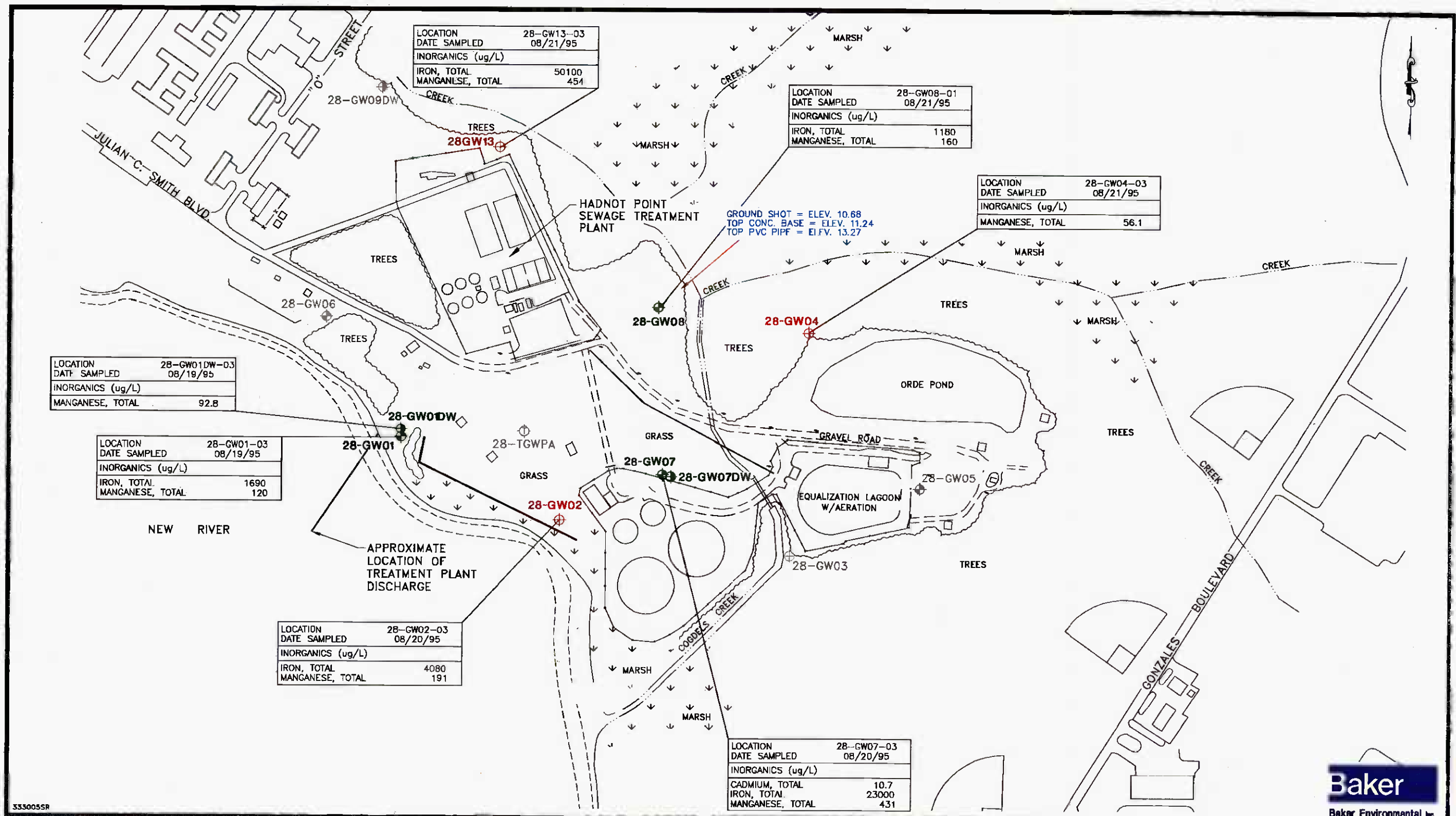
**LEGEND**

28-GW02	SHALLOW MONITORING WELL (ESE, 1984/1986)
28-GW01	SHALLOW MONITORING WELL (BAKER, 1994/1995)
28-GW01DW	DEEP MONITORING WELL (BAKER, 1994)
28-TGWPA	TEMPORARY MONITORING WELL (BAKER, 1994)

SOURCE: LANTDIV, FEBRUARY 1992 AND W.K. DICKSON, JUNE 1994



**FIGURE 6**  
**SAMPLING LOCATIONS**  
**SITE 28 -- HADNOT POINT BURN DUMP**  
**LONG-TERM MONITORING CTO-0333**  
 MARINE CORPS BASE, CAMP LEJEUNE  
 NORTH CAROLINA



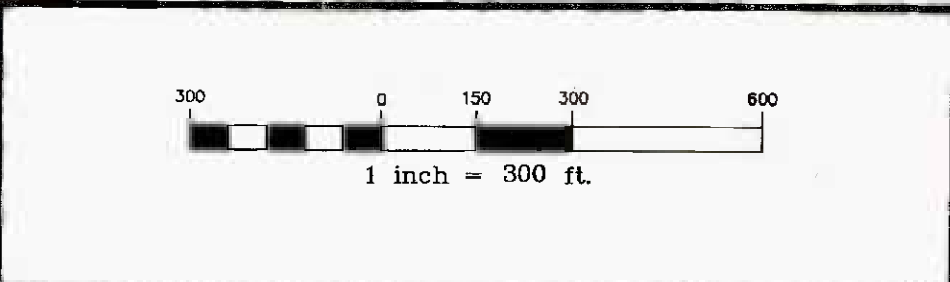
333005SR



**LEGEND**

- 28-GW02 SHALLOW MONITORING WELL (ESE, 1984/1986)
- 28-GW01 SHALLOW MONITORING WELL (BAKER, 1994/1995)
- 28-GW01DW DEEP MONITORING WELL (BAKER, 1994)
- 28-TGWPA TEMPORARY MONITORING WELL (BAKER, 1994)

SOURCE: LANTDIV, FEBRUARY 1992 AND W.K. DICKSON, JUNE 1994



**FIGURE 7**  
 METALS IN GROUNDWATER  
 ABOVE FEDERAL AND/OR STATE STANDARDS  
 SITE 28 - HADNOT POINT BURN DUMP  
 LONG-TERM MONITORING CTO-0333  
 MARINE CORPS BASE, CAMP LEJEUNE  
 NORTH CAROLINA

**ATTACHMENT A**  
**FIELD DATA**

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**SUMMARY OF GROUNDWATER FIELD PARAMETERS  
SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
LONG-TERM MONITORING, CTO-0333  
MCB, CAMP LEJEUNE, NORTH CAROLINA**

Well No.	Depth of Well (ft.) <sup>(1)</sup>	Purge Volume (gals.)	Field Parameters					
Date of Measurement			Well Volume	Specific Conductance at 25°C (micromhos/cm)	Temperature (°C)	pH <sup>(2)</sup> (S.U.)	Turbidity <sup>(3)</sup> (T.U.)	Dissolved Oxygen (mg/L)
1-GW01	24.2	10	0	574	25.7	6.75	80.5	1.54
8/15/95			1	585	22.2	6.95	77.1	1.50
			2	577	21.7	7.10	20.2	1.52
			3	529	22.0	7.15	8.7	1.25
			4	519	22.4	7.15	9.2	1.25
1-GW02	23.7	6	0	624	23.8	6.55	41.1	1.00
8/15/95			1	612	22.7	6.66	10.7	1.20
			2	585	23.3	6.62	9.7	1.05
			3	573	23.2	6.79	6.0	1.05
			1-GW03	26.9	8	0	174	29.4
	1	161	24.4			5.50	29.5	4.00
	2	156	25.6			5.47	15.5	4.50
	3	154	25.6			5.47	3.3	4.55
	4	152	25.9			5.66	2.5	5.00
1-GW04	31.1	10	0	149	21.1	5.00	72.1	4.50
8/17/95			1	143	20.6	4.65	>200	2.00
			2	143	20.4	4.68	>200	2.50
			3	142	20.3	4.73	143.7	2.70
			4	144	20.3	4.87	79.2	2.80
			5	150	20.5	5.05	61.7	2.50
1-GW08	27.6	6	0	245	21.4	6.31	4.2	6.50
8/17/95			1	272	20.2	6.04	2.3	5.80
			2	267	20.5	6.02	0.9	5.45
			3	266	20.3	6.08	2.5	5.85
1-GW09	23.5	6	0	61	18.3	5.62	2.3	9.20
8/17/95			1	134	21.3	6.18	3.2	6.50
			2	133	21.1	6.29	1.6	7.00
			3	136	21.4	6.42	2.9	6.80
1-GW10	27.9	8	0	629	24.0	7.09	97	2.00
8/15/95			1	624	21.9	7.13	27.8	1.90
			2	634	22.2	7.27	5.4	2.25
			3	624	22.3	7.20	2.3	1.85
			4	618	22.0	7.17	8.5	1.75

**SUMMARY OF GROUNDWATER FIELD PARAMETERS  
SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
LONG-TERM MONITORING, CTO-0333  
MCB, CAMP LEJEUNE, NORTH CAROLINA**

Well No.	Depth of Well (ft.) <sup>(1)</sup>	Purge Volume (gals.)	Field Parameters					
Date of Measurement			Well Volume	Specific Conductance at 25°C (micromhos/cm)	Temperature (°C)	pH <sup>(2)</sup> (S.U.)	Turbidity <sup>(3)</sup> (T.U.)	Dissolved Oxygen (mg/L)
1-GW11	19.7	7	0	474	22.1	6.88	150.5	2.25
8/15/95			1	490	21.3	6.95	20.7	2.10
			2	491	21.3	6.99	7.0	2.00
			3	496	20.7	6.97	3.6	1.65
			4	491	20.6	6.94	3.1	1.80
1-GW12	20.9	8	0	195	21.2	5.81	15.8	4.00
8/16/95			1	193	20.0	5.76	9.0	1.80
			2	204	20.2	5.73	8.9	1.95
			3	207	20.0	5.91	5.6	1.95
			4	202	19.9	5.89	4.6	1.85
1-GW16	29.7	10	0	355	23.4	5.32	5.6	5.00
8/16/95			1	328	22.0	5.34	4.4	4.35
			2	300	21.3	5.24	14.0	3.90
			3	297	21.3	5.27	9.6	3.70
			4	285	22.1	5.47	9.8	3.70
			5	278	22.2	5.46	6.2	3.80
1-GW16DW	122	55	0	204	22.5	7.25	2.7	4.60
			0.5	203	21.5	7.95	1.8	2.85
			1	210	21.8	8.21	4.9	2.10
			1.5	214	21.9	8.27	4.4	2.10
			2	212	21.7	8.51	3.0	1.95
			2.5	214	21.5	8.39	3.5	2.20
			3	215	21.3	8.48	2.1	2.10
1-GW17	27.7	10	0	596	26.1	6.58	7.7	3.60
8/18/95			1	595	24.6	6.89	6.6	2.50
			2	582	25.2	6.82	8.1	2.00
			3	604	24.8	6.84	2.8	2.00
			4	608	24.4	6.90	2.4	2.00

**SUMMARY OF GROUNDWATER FIELD PARAMETERS  
SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
LONG-TERM MONITORING, CTO-0333  
MCB, CAMP LEJEUNE, NORTH CAROLINA**

Well No.	Depth of Well (ft.) <sup>(1)</sup>	Purge Volume (gals.)	Field Parameters					
Date of Measurement			Well Volume	Specific Conductance at 25°C (micromhos/cm)	Temperature (°C)	pH <sup>(2)</sup> (S.U.)	Turbidity <sup>(3)</sup> (T.U.)	Dissolved Oxygen (mg/L)
1-GW17DW	125	54	0	157	24.3	7.42	1.0	7.50
8/18/95			0.3	159	22.9	8.20	1.0	2.60
			0.6	160	23.4	8.19	3.4	2.50
			1	203	23.5	8.43	1.1	1.80
			1.3	201	23.8	8.45	2.6	2.60
			1.6	199	24.3	8.68	1.3	2.20
			2	202	23.8	8.61	1.6	3.00
			2.5	203	24.0	8.77	1.4	2.20
			3	207	23.9	8.56	1.2	2.20
1-GW18	24.5	8	0	828	25.4	5.99	67.9	4.05
8/18/95			1	895	24.2	6.11	40.2	3.65
			2	898	24.0	6.13	20.9	3.60
			3	902	23.9	6.18	3.1	3.40
			4	892	23.5	6.13	1.3	3.50
1-HP638	196	--	--	201	20.5	7.55	81.9	2.20
8/18/95			--	249	20.1	7.83	3.1	2.70
			--	252	20.2	7.69	1.4	2.40
			--	254	19.7	7.78	1.5	1.50

- Notes: <sup>(1)</sup> Well depth taken from top of casing (TOC)  
<sup>(2)</sup> S.U. - Standard Units  
<sup>(3)</sup> T.U. - Turbidity Units



**SUMMARY OF GROUNDWATER FIELD PARAMETERS  
SITE 28, HADNOT POINT BURN DUMP  
LONG-TERM MONITORING, CTO-0333  
MCB, CAMP LEJEUNE, NORTH CAROLINA**

Well No.	Depth of Well (ft.) <sup>(1)</sup>	Purge Volume (gals.)	Field Parameters					
			Well Volume	Specific Conductance at 25°C (micromhos/cm)	Temperature (°C)	pH <sup>(2)</sup> (S.U.)	Turbidity <sup>(3)</sup> (T.U.)	Dissolved Oxygen (mg/L)
28-GW01	19.4	10	0	729	25.9	7.49	10.4	1.85
8/19/95			1	705	23.3	7.51	0.3	1.75
			2	701	22.6	7.60	0.5	1.75
			3	698	22.7	7.63	0.7	1.65
			4	702	22.1	7.65	0.6	1.65
			5	701	22.1	7.61	0.5	1.65
28-GW01DW	134.2	65	0	475	23.4	7.83	4.4	5.40
8/19/95			0.5	471	20.7	7.82	1.0	4.50
			1	485	20.9	7.99	0.5	2.50
			1.5	486	20.8	7.99	1.0	2.45
			2	483	20.8	8.01	0.2	2.50
			2.5	477	21.7	8.02	0.2	2.40
			3	468	22.6	8.03	0.6	2.45
			3.2	468	21.8	8.03	0.8	2.45
28-GW02	21.7	9	0	965	26.6	7.86	12.4	1.80
8/20/95			1	985	24.6	7.86	2.3	1.75
			2	967	24.4	7.88	3.6	1.65
			3	981	24.3	7.86	0.7	1.65
28-GW04	29.0	12	0	416	20.9	7.15	4.2	2.05
8/21/95			1	413	20.1	7.31	1.0	2.35
			2	415	20.0	7.28	1.1	2.10
			3	416	20.0	7.27	0.8	2.10
28-GW07	19.2	12	0	169	24.1	7.06	26.3	1.75
8/20/95			1	170	24.6	6.98	7.8	1.45
			2	170	24.3	6.95	5.5	1.55
			3	172	24.1	6.97	8.8	1.50
			4	175	24.2	6.98	1.5	1.55
28-GW07DW	129	65	0	192	26.5	9.60	4.9	6.50
8/20/95			0.5	243	20.4	10.73	0.8	5.80
			1	235	20.5	10.46	0.3	2.30
			1.5	217	21.1	10.21	0.5	2.30
			2	214	21.4	10.22	0.6	2.30
			2.5	214	20.9	10.03	0.6	2.35
			3	214	21.1	9.89	1.0	2.25
			3.2	212	20.6	9.95	0.6	2.40

**ATTACHMENT B**  
**CHAIN-OF-CUSTODIES**

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# Custody Transfer Record/Lab Work Request

Client <u>BAKER Environmental</u>	Refrigerator #																		
Est. Final Proj. Sampling Date	#/Type Container	Liquid																	
Work Order #	Volume	Solid																	
Project Contact/Phone # <u>L Johnson / 412-269-6000</u>	Preservatives	Liquid																	
AD Project Manager <u>Denise Waltman</u>		Solid																	
GC _____ Del _____ TAT _____	ANALYSES REQUESTED →	ORGANIC					INORG												
Date Rec'd _____ Date Due _____		VOA	BNA	Pest/PCB	Herb	Metal	CN												
Account # _____																			

MATRIX CODES: S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids L - EP/TCLP Leachate WI - Wipe X - Other F - Fish	Lab ID	Client ID/Description	Matrix QC Chosen (✓)		Matrix	Date Collected	Time Collected	WESTON Analytics Use Only															
			MS	MSD				VOA	BNA	Pest/PCB	Herb	Metal	CN										
			# of BOTTLES																				
					S	8/15	1112	X	X	X				X					2	Routine			
					S	8/15	1204	X	X	X				X					2	Routine			
					S	8/15	1225	X	X	X				X					2	Routine			
					S	8/15	1530	X	X	X				X					2	Routine			
					S	8/15	1618	X	X	X				X					2	Routine			
					S	8/15	1633	X	X	X				X					2	Routine			
					S	8/15	1633	X	X	X				X					2	Routine			
					W	8/16	1030	X						X					3	Routine			
					W	8/16	1140							X					1	Routine			
					W	8/16	1700							X					1	Routine			

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:  
 - See last column for turn around times  
 - 1-GWTB02-03: WESTON Prepared TRIP Blank  
 FED-EX AIRBILL # 4076227772

DATE/REVISIONS:

1. \_\_\_\_\_  
 2. \_\_\_\_\_  
 3. \_\_\_\_\_  
 4. \_\_\_\_\_  
 5. \_\_\_\_\_  
 6. \_\_\_\_\_

WESTON Analytics Use Only

Samples were: \_\_\_\_\_ COC Tape was: \_\_\_\_\_

1) Shipped \_\_\_\_\_ or \_\_\_\_\_  
 Hand Delivered \_\_\_\_\_  
 Airbill # \_\_\_\_\_

2) Ambient or Chilled \_\_\_\_\_  
 3) Received in Good Condition Y or N \_\_\_\_\_  
 4) Labels Indicate Properly Preserved Y or N \_\_\_\_\_

1) Present on Outer Package Y or N \_\_\_\_\_  
 2) Unbroken on Outer Package Y or N \_\_\_\_\_  
 3) Present on Sample Y or N \_\_\_\_\_  
 4) Unbroken on Sample Y or N \_\_\_\_\_  
 5) Received Within Holding Times Y or N \_\_\_\_\_

COC Record Present Upon Sample Rec'd Y or N \_\_\_\_\_

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
<i>[Signature]</i>	Fedexp	8/17	1900				

Discrepancies Between Samples Labels and COC Record? Y or N \_\_\_\_\_

NOTES:



WESTON Analytics Use Only

# Custody Transfer Record/Lab Work Request

Client <u>Edgar Construction</u>	Refrigerator # _____
Est. Final Proj. Sampling Date _____	#/Type Container <input type="checkbox"/> Liquid <input type="checkbox"/> Solid
Work Order # _____	Volume <input type="checkbox"/> Liquid <input type="checkbox"/> Solid
Project Contact/Phone # <u>L. Johnson / 412-269-6000</u>	Preservatives _____
AD Project Manager <u>Denise Waltman</u>	
QC <u>Del</u> TAT _____	
Date Rec'd _____ Date Due _____	
Account # _____	

MATRIX CODES: S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids L - EP/TCLP Leachate WI - Wipe X - Other F - Fish	Lab ID	Client ID/Description	Matrix QC Chosen (✓)		Matrix	Date Collected	Time Collected	WESTON Analytics Use Only												
			MS	MSD				ORGANIC					INORG		# of Bottles	Turned In				
			VOA	BNA				Pest/PCB	Herb	Metal	CN									
						1995														
		1-GW17DW-03			W	8/17	1515	X											2	Routine
		1-GW1ER02-03			W	8/17	1545	X											2	Routine
		1-GWTB03-03			W			X											2	Routine
		1-SW01-01			W	8/18	0930	X	X	X				X					7	Routine
		1-SW01-01	X	X	W	8/18	0930	X	X	X				X					7	Routine
		1-SW01D-01			W	8/18	0930	X	X	X				X					7	Routine
		1-SDD1-06-01			S	8/18	0940	X	X	X				X					2	Routine
		1-SDD1-06-01	X	X	S	8/18	0940	X	X	X				X					2	Routine
		1-SDD1D-06-01			S	8/18	0940	X	X	X				X					2	Routine
		1-SW02-01			W	8/19	1030	X	X	X				X					7	Routine

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:  
 - See 1st column for Turn Around Times  
 - Sample 1-GWTB03-03 is a Weston prepared trip blank  
 - Follow Airbill # 4076227750

DATE/REVISIONS:

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

**WESTON Analytics Use Only**

Samples were:  
 1) Shipped  or Hand Delivered   
 Airbill # \_\_\_\_\_

COC Tape was:  
 1) Present on Outer Package Y or N  
 2) Unbroken on Outer Package Y or N  
 3) Present on Sample Y or N  
 4) Unbroken on Sample Y or N  
 5) Received Within Holding Times Y or N

Discrepancies Between Samples Labels and COC Record? Y or N

NOTES:

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
		7/18	1930				







# Custody Transfer Record/Lab Work Request

Client: <u>BAKER ENVIRONMENTAL</u>	Refrigerator #																
Est. Final Proj. Sampling Date: <u>9/15</u>	#/Type Container	Liquid															
Work Order #	Solid																
Project Contact/Phone # <u>L. Johnson / 412-229-6000</u>	Volume	Liquid															
AD Project Manager <u>JENISE WALKER</u>	Solid																
QC Del TAT	Preservatives																
Date Rec'd	ANALYSES REQUESTED →	ORGANIC					INORG										
Date Due		VOA	BNA	Pest/PCB	Herb	Metal	CN										
Account #																	

MATRIX CODES: S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids L - EP/TCLP Leachate WI - Wipe X - Other F - Fish	Lab ID	Client ID/Description	Matrix QC Chosen (✓)		Matrix	Date Collected	Time Collected	WESTON Analytics Use Only													
			MS	MSD																	
		<u>28-6W08-01</u>			<u>W</u>	<u>8/21</u>	<u>1025</u>												<u>X (see note)</u>	<u>3</u>	<u>Routine</u>
		<u>28-6W13-03</u>			<u>W</u>	<u>8/21</u>	<u>1120</u>												<u>X (see note)</u>	<u>3</u>	<u>Routine</u>
		<u>28-6WERO2-03</u>			<u>W</u>	<u>8/21</u>	<u>1600</u>												<u>X (see note)</u>	<u>3</u>	<u>Routine</u>
		<u>1-TNK-03</u>			<u>W</u>	<u>7/21</u>	<u>1630</u>												<u>X (see note)</u>	<u>3</u>	<u>14 days</u>
		<u>2B-TNK-03</u>			<u>W</u>	<u>7/21</u>	<u>1715</u>												<u>X (see note)</u>	<u>3</u>	<u>14 days</u>

<b>FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS</b>				<b>DATE/REVISIONS:</b>				<b>WESTON Analytics Use Only</b>			
Special Instructions: - See last column for form re work times - Matrix sample 28-6W08-01 and 28-6W13-03 are contained in 2 liter Amber bottles preserved with HNO3. - Metal sample 28-6WERO2-03 is contained in 2 liter Amber bottle unpreserved. - Metal sample 1-TNK-03 and 2B-TNK-03 are contained in 2 liter plastic bottles unpreserved.				1.					Samples were: 1) Shipped ___ or Hand Delivered ___ Airbill # _____ 2) Ambient or Chilled 3) Received in Good Condition Y or N 4) Labels Indicate Properly Preserved Y or N 5) Received Within Holding Times Y or N	COC Tape was: 1) Present on Outer Package Y or N 2) Unbroken on Outer Package Y or N 3) Present on Sample Y or N 4) Unbroken on Sample Y or N COC Record Present Upon Sample Rec't Y or N	
				2.							
				3.							
				4.							
				5.							
				6.							
Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time	Discrepancies Between Samples Labels and COC Record? Y or N NOTES:			

**ATTACHMENT C**  
**POSITIVE DETECTION SUMMARY**

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**GROUNDWATER - POSITIVE DETECTION SUMMARY  
 SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
 LONG-TERM MONITORING CTO - 0333  
 MCB, CAMP LEJEUNE, NORTH CAROLINA  
 TCL VOLATILES**

LOCATION	1-GW01-03	1-GW02-03	1-GW03-03	1-GW10-03	1-GW11-03	1-GW12-03
LAB ID	9508G578-002	9508G578-003	9508G578-004	9508G578-005	9508G578-006	9508G642-005
DATE SAMPLED	08/15/95	08/15/95	08/15/95	08/15/95	08/15/95	08/16/95
DEPTH	N/A	N/A	N/A	N/A	N/A	N/A
<b>VOLATILES (ug/L)</b>						
1,2-DICHLOROETHENE (TOTAL)	10 U	10 U	10 U	23	10 U	10 U
TRICHLOROETHENE	10 U	10 U	10 U	4 J	10 U	10 U
TOLUENE	10 U	10 U	10 U	10 U	10 U	4 J
ETHYLBENZENE	10 U	10 U	10 U	10 U	10 U	4 J
XYLENE (TOTAL)	10 U	10 U	10 U	10 U	10 U	150

UG/L - micrograms per liter  
 J - estimated  
 N/A - not applicable  
 U - not detected

**GROUNDWATER - POSITIVE DETECTION SUMMARY  
 SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
 LONG-TERM MONITORING CTO - 0333  
 MCB, CAMP LEJEUNE, NORTH CAROLINA  
 TCL VOLATILES**

LOCATION	1-GW17-03	1-GW17DW-03	1-GW18-01	1-HP638-03	MINIMUM	MAXIMUM
LAB ID	9508G653-002	9508G642-012	9508G653-004	9508G653-005	NONDETECTED	NONDETECTED
DATE SAMPLED	08/18/95	08/17/95	08/18/95	08/18/95		
DEPTH	N/A	N/A	N/A	N/A		
<b>VOLATILES (ug/L)</b>						
1,2-DICHLOROETHENE (TOTAL)	10 U	10 U	10 U	10 U	10 U	10 U
TRICHLOROETHENE	10 U	10 U	10 U	10 U	10 U	10 U
TOLUENE	10 U	10 U	10 U	10 U	10 U	10 U
ETHYLBENZENE	10 U	10 U	10 U	10 U	10 U	10 U
XYLENE (TOTAL)	10 U	10 U	10 U	10 U	10 U	10 U

UG/L - micrograms per liter  
 J - estimated  
 N/A - not applicable  
 U - not detected

**GROUNDWATER - POSITIVE DETECTION SUMMAR  
 SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
 LONG-TERM MONITORING CTO - 0333  
 MCB, CAMP LEJEUNE, NORTH CAROLINA  
 TCL VOLATILES**

LOCATION LAB ID DATE SAMPLED DEPTH	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<b>VOLATILES (ug/L)</b>				
1,2-DICHLOROETHENE (TOTAL)	23	23	1-GW10-03	1/10
TRICHLOROETHENE	4 J	4 J	1-GW10-03	1/10
TOLUENE	4 J	4 J	1-GW12-03	1/10
ETHYLBENZENE	4 J	4 J	1-GW12-03	1/10
XYLENE (TOTAL)	150	150	1-GW12-03	1/10

UG/L - micrograms per liter  
 J - estimated  
 N/A - not applicable  
 U - not detected

**GROUNDWATER - POSITIVE DETECTION SUMMARY  
 SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
 LONG-TERM MONITORING CTO - 0333  
 MCB, CAMP LEJEUNE, NORTH CAROLINA  
 TAL METALS**

LOCATION	1-GW01-03	1-GW02-03	1-GW03-03	1-GW04-03	1-GW08-03	1-GW09-03
LAB ID	9508G578-002	9508G578-003	9508G578-004	9508G642-010	9508G642-009	9508G642-008
DATE SAMPLED	08/15/95	08/15/95	08/15/95	08/17/95	08/17/95	08/17/95
DEPTH	N/A	N/A	N/A	N/A	N/A	N/A
<b>INORGANIC (ug/L)</b>						
ALUMINUM, TOTAL	182	17.8	54.6	596	24.6	33.7
ARSENIC, TOTAL	10.1	8.3	1.8 U	3.1	1.8 U	1.8 U
BARIUM, TOTAL	28.1	24.6	36.2	49.9	10.3	27.4
CALCIUM, TOTAL	80800	103000	14400	6730	35200	22700
CHROMIUM, TOTAL	3.8 U	3.8 U	3.8 U	6.5	3.8 U	3.8 U
COBALT, TOTAL	1.4	1.3	1.6	1.1 U	1.1 U	1.1 U
COPPER, TOTAL	19	18.7	6.4	2.3 U	2.3 U	2.3 U
IRON, TOTAL	17100	12300	14.6	14100	5.7 U	25.8 U
LEAD, TOTAL	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
MAGNESIUM, TOTAL	2340	2630	4460	5540	7380	1290
MANGANESE, TOTAL	389	442	8.1	9	2.8	0.7 U
NICKEL, TOTAL	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U
POTASSIUM, TOTAL	1790	666	1310	996	464	226
SELENIUM, TOTAL	1.6 U	1.6 U	3.3	1.7	4.7	1.6 U
SODIUM, TOTAL	13300	5230	2730	8850	3150	1890
VANADIUM, TOTAL	1.5 U	1.5 U	1.5 U	7.3	1.5 U	1.5 U
ZINC, TOTAL	5.3	5.6	4.3	3.5	2.5 U	2.5 U

UG/L - micrograms per liter  
 J - estimated  
 N/A - not applicable  
 U - not detected

**GROUNDWATER - POSITIVE DETECTION SUMMARY  
 SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
 LONG-TERM MONITORING CTO - 0333  
 MCB, CAMP LEJEUNE, NORTH CAROLINA  
 TAL METALS**

LOCATION	1-GW10-03	1-GW11-03	1-GW12-03	1-GW16-03	1-GW16DW-03	1-GW17-03
LAB ID	9508G578-005	9508G578-006	9508G642-005	9508G642-006	9508G642-007	9508G653-002
DATE SAMPLED	08/15/95	08/15/95	08/16/95	08/16/95	08/16/95	08/18/95
DEPTH	N/A	N/A	N/A	N/A	N/A	N/A
<b>INORGANIC (ug/L)</b>						
ALUMINUM, TOTAL	30.5	54.8	186	336	12.5 U	37.6 U
ARSENIC, TOTAL	16	5.7	15.4	1.8 U	1.8 U	2.9
BARIUM, TOTAL	44	31.7	10.2	59.8	41	89.2
CALCIUM, TOTAL	112000	86500	1570	16300	36100	124000
CHROMIUM, TOTAL	3.8 U	3.8 U	6	3.8 U	3.8 U	6.7 U
COBALT, TOTAL	30	11.7	4.5	1.8	1.1 U	1.4 U
COPPER, TOTAL	21.1	21.2	2.3 U	2.3 U	2.3 U	11.2 U
IRON, TOTAL	21400	12000	37700	31 U	41.4 U	25 U
LEAD, TOTAL	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	2.4
MAGNESIUM, TOTAL	3880	2890	2400	9010	919	4780
MANGANESE, TOTAL	1220	877	12.4	9	8.3	37.3
NICKEL, TOTAL	13.2	5.6	4.8 U	4.8 U	4.8 U	4.8 U
POTASSIUM, TOTAL	1030	832	585	928	926	5560
SELENIUM, TOTAL	1.6 U	1.6 U	1.6 U	1.8	1.6 U	8.9 J
SODIUM, TOTAL	6270	6050	9900	16700	4850	7360
VANADIUM, TOTAL	1.5 U	1.5 U	5.9	2.5	1.5 U	9.3 U
ZINC, TOTAL	24	5.4	2.6	2.5 U	2.5 U	3.1 U

UG/L - micrograms per liter  
 J - estimated  
 N/A - not applicable  
 U - not detected



**GROUNDWATER - POSITIVE DETECTION SUMMARY  
 SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
 LONG-TERM MONITORING CTO - 0333  
 MCB, CAMP LEJEUNE, NORTH CAROLINA  
 TAL METALS**

LOCATION	1-GW17DW-03	1-GW18-01	1-HP638-03	MINIMUM	MAXIMUM	MINIMUM
LAB ID	9508G642-012	9508G653-004	9508G653-005	NONDETECTED	NONDETECTED	DETECTED
DATE SAMPLED	08/17/95	08/18/95	08/18/95			
DEPTH	N/A	N/A	N/A			
<b>INORGANIC (ug/L)</b>						
ALUMINUM, TOTAL	12.5 U	96.3	12.5 U	12.5 U	37.6 U	17.8
ARSENIC, TOTAL	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	2.9
BARIUM, TOTAL	23.5	114	8.8	NA	NA	8.8
CALCIUM, TOTAL	35200	149000	43600	NA	NA	1570
CHROMIUM, TOTAL	3.8 U	3.8 U	3.8 U	3.8 U	6.7 U	6
COBALT, TOTAL	1.1 U	2.1 U	1.1 U	1.1 U	2.1 U	1.3
COPPER, TOTAL	2.3 U	8.5 U	2.3 U	2.3 U	11.2 U	6.4
IRON, TOTAL	10.3 U	71.4	644	5.7 U	41.4 U	14.6
LEAD, TOTAL	4.7	1.7 J	1.4 U	1.4 U	1.4 U	1.7 J
MAGNESIUM, TOTAL	820	14100	1030	NA	NA	820
MANGANESE, TOTAL	5.6	53.5	12.2	0.7 U	0.7 U	2.8
NICKEL, TOTAL	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	5.6
POTASSIUM, TOTAL	846	1510	1080	NA	NA	226
SELENIUM, TOTAL	1.6 U	1.6 UJ	1.6 UJ	1.6 U	1.6 U	1.7
SODIUM, TOTAL	3840	5960	5810	NA	NA	1890
VANADIUM, TOTAL	1.5 U	3.1 U	1.5 U	1.5 U	9.3 U	2.5
ZINC, TOTAL	2.5 U	4.7 U	6.1 U	2.5 U	6.1 U	2.6

UG/L - micrograms per liter  
 J - estimated  
 N/A - not applicable  
 U - not detected

**GROUNDWATER - POSITIVE DETECTION SUMMARY  
 SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
 LONG-TERM MONITORING CTO - 0333  
 MCB, CAMP LEJEUNE, NORTH CAROLINA  
 TAL METALS**

LOCATION LAB ID DATE SAMPLED DEPTH	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<b>INORGANIC (ug/L)</b>			
ALUMINUM, TOTAL	596	1-GW04-03	11/15
ARSENIC, TOTAL	16	1-GW10-03	7/15
BARIUM, TOTAL	114	1-GW18-01	15/15
CALCIUM, TOTAL	149000	1-GW18-01	15/15
CHROMIUM, TOTAL	6.5	1-GW04-03	2/15
COBALT, TOTAL	30	1-GW10-03	7/15
COPPER, TOTAL	21.2	1-GW11-03	5/15
IRON, TOTAL	37700	1-GW12-03	9/15
LEAD, TOTAL	4.7	1-GW17DW-03	3/15
MAGNESIUM, TOTAL	14100	1-GW18-01	15/15
MANGANESE, TOTAL	1220	1-GW10-03	14/15
NICKEL, TOTAL	13.2	1-GW10-03	2/15
POTASSIUM, TOTAL	5560	1-GW17-03	15/15
SELENIUM, TOTAL	8.9 J	1-GW17-03	5/15
SODIUM, TOTAL	16700	1-GW16-03	15/15
VANADIUM, TOTAL	7.3	1-GW04-03	3/15
ZINC, TOTAL	24	1-GW10-03	7/15

UG/L - micrograms per liter  
 J - estimated  
 N/A - not applicable  
 U - not detected

**SOIL - POSITIVE DETECTION SUMMARY  
 SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
 LONG-TERM MONITORING CTO - 0333  
 MCB, CAMP LEJEUNE, NORTH CAROLINA  
 TCL ORGANICS**

LOCATION	1-GWSB18-05	1-N-SB38-05	1-N-SB38-05D	1-N-SB39-05	1-N-SB40-05	1-N-SB41-05
LAB ID	9508G641-001	9508G641-002	9508G641-003	9508G641-004	9508G641-005	9508G641-006
DATE SAMPLED	08/15/95	08/15/95	08/15/95	08/15/95	08/15/95	08/15/95
DEPTH	10' - 12'	10' - 12'	10' - 12'	10' - 12'	10' - 12'	10' - 12'
<b>PESTICIDE/PCBS (ug/kg)</b>						
DIELDRIN	3.6 U	1.9 J	3.8 U	3.5 U	7 J	4.2
4,4'-DDE	3.6 UJ	3.9 UJ	3.8 UJ	3.5 UJ	5.2 J	9.5 J
ENDRIN	3.6 U	2.3 J	3.8 U	3.5 U	3.7 U	3.8 U
4,4'-DDD	3.6 U	3.9 U	3.8 U	3.5 U	2.6 J	1.9 J
4,4'-DDT	3.6 U	3.9	3.8 U	3.5 U	2.2 J	3.8 U
ALPHA-CHLORDANE	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U	1.1 J
GAMMA-CHLORDANE	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U	1.1 J

UG/KG - micrograms per kilograms  
 J - estimated  
 U - not detected

**SOIL - POSITIVE DETECTION SUMMARY  
 SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
 LONG-TERM MONITORING CTO - 0333  
 MCB, CAMP LEJEUNE, NORTH CAROLINA  
 TCL ORGANICS**

LOCATION	1-N-SB42-05	1-N-SB43-05	1-N-SB44-05	1-N-SB45-05	1-N-SB46-05	1-N-SB46-05D
LAB ID	9508G641-007	9508G641-008	9508G641-009	9508G641-010	9508G641-011	9508G641-012
DATE SAMPLED	08/15/95	08/15/95	08/15/95	08/15/95	08/15/95	08/15/95
DEPTH	10' - 12'	10' - 12'	10' - 12'	10' - 12'	10' - 12'	10' - 12'
<b>PESTICIDE/PCBS (ug/kg)</b>						
DIELDRIN	4	3.7 U	3.6 U	3.6 U	3.6 U	3.6 U
4,4'-DDE	3.2 J	3.7 UJ	3.6 UJ	3.6 UJ	3.6 UJ	3.6 UJ
ENDRIN	3.6 U	3.7 U	3.6 U	3.6 U	3.6 U	3.6 U
4,4'-DDD	3.6 U	3.7 U	3.6 U	3.6 U	3.6 U	3.6 U
4,4'-DDT	13	3.7 U	2.5 J	3.6 U	2.2 J	3.6 U
ALPHA-CHLORDANE	1.8	1.9 U	1.8 U	1.8 U	1.8 U	1.8 U
GAMMA-CHLORDANE	1.8	1.9 U	1.8 U	1.8 U	1.8 U	1.8 U

UG/KG - micrograms per kilograms

J - estimated

U - not detected

**SOIL - POSITIVE DETECTION SUMMARY**  
**SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA**  
**LONG-TERM MONITORING CTO - 0333**  
**MCB, CAMP LEJEUNE, NORTH CAROLINA**  
**TCL ORGANICS**

LOCATION LAB ID DATE SAMPLED DEPTH PESTICIDE/PCBS (ug/kg)	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
DIELDRIN	3.5 U	3.8 U	1.9 J	7 J	1-N-SB40-05	4/12
4,4'-DDE	3.5 UJ	3.9 UJ	3.2 J	9.5 J	1-N-SB41-05	3/12
ENDRIN	3.5 U	3.8 U	2.3 J	2.3 J	1-N-SB38-05	1/12
4,4'-DDD	3.5 U	3.9 U	1.9 J	2.6 J	1-N-SB40-05	2/12
4,4'-DDT	3.5 U	3.8 U	2.2 J	13	1-N-SB42-05	5/12
ALPHA-CHLORDANE	1.8 U	1.9 U	1.1 J	1.8	1-N-SB42-05	2/12
GAMMA-CHLORDANE	1.8 U	1.9 U	1.1 J	1.8	1-N-SB42-05	2/12

UG/KG - micrograms per kilograms  
 J - estimated  
 U - not detected

**SOIL - POSITIVE DETECTION SUMMARY  
 SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
 LONG-TERM MONITORING CTO - 0333  
 MCB, CAMP LEJEUNE, NORTH CAROLINA  
 TAL METALS**

LOCATION	1-GWSB18-05	1-N-SB38-05	1-N-SB38-05D	1-N-SB39-05	1-N-SB40-05	1-N-SB41-05
LAB_ID	9508G641-001	9508G641-002	9508G641-003	9508G641-004	9508G641-005	9508G641-006
DATE SAMPLED	08/15/95	08/15/95	08/15/95	08/15/95	08/15/95	08/15/95
DEPTH	10' - 12'	10' - 12'	10' - 12'	10' - 12'	10' - 12'	10' - 12'
<b>INORGANIC (mg/kg)</b>						
ALUMINUM, TOTAL	4050	4760	3550	2310	3490	5480
ARSENIC, TOTAL	0.42	0.4 U	0.39	0.37	1	0.73
BARIUM, TOTAL	6.2	7.2	5.6	5.4	5.5	12
CALCIUM, TOTAL	136	232	576	9380	895	5230
CHROMIUM, TOTAL	3.4	4.7	4.1	3.4	4.3	6.1
COPPER, TOTAL	0.81	0.93	0.65	1	1	1.8
IRON, TOTAL	675 J	731 J	805 J	1070 J	1020 J	1350 J
LEAD, TOTAL	3.2	3.5	3.3	5.1	5.4	5.5
MAGNESIUM, TOTAL	63.5	94.3	90.2	211	111	207
MANGANESE, TOTAL	2.6	2.6	3.2	4.7	3.9	6.7
POTASSIUM, TOTAL	90 U	217	88.2 U	102 U	102 U	172
SODIUM, TOTAL	12.6 U	18.9 U	15.7 U	40.1 U	19.5 U	27.9 U
VANADIUM, TOTAL	4	7.3	7.5	5	5.1	7.1
ZINC, TOTAL	1.4	1.2	1.3	2.1	2.8	4.1

MG/KG - milligrams per kilogram  
 J - estimated  
 U - not detected

**SOIL - POSITIVE DETECTION SUMMARY  
SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
LONG-TERM MONITORING CTO - 0333  
MCB, CAMP LEJEUNE, NORTH CAROLINA  
TAL METALS**

LOCATION	1-N-SB42-05	1-N-SB43-05	1-N-SB44-05	1-N-SB45-05	1-N-SB46-05	1-N-SB46-05D
LAB_ID	9508G641-007	9508G641-008	9508G641-009	9508G641-010	9508G641-011	9508G641-012
DATE SAMPLED	08/15/95	08/15/95	08/15/95	08/15/95	08/15/95	08/15/95
DEPTH	10' - 12'	10' - 12'	10' - 12'	10' - 12'	10' - 12'	10' - 12'
<b>INORGANIC (mg/kg)</b>						
ALUMINUM, TOTAL	2680	4040	1720	2090	4390	3400
ARSENIC, TOTAL	0.53	0.45	0.38 U	0.35 U	0.39 U	0.33 U
BARIUM, TOTAL	5.8	8.8	9	2.4	7.4	6.2
CALCIUM, TOTAL	43400	488	151	86.7	384	565
CHROMIUM, TOTAL	5.5	4	2.6 U	3.1	3.6	3.3
COPPER, TOTAL	1.2	0.87	1.2	0.56	0.46	0.63
IRON, TOTAL	1770 J	670 J	786 J	507 J	585 J	669 J
LEAD, TOTAL	6.4	3.7	2.1	3.4	2.9	3.2
MAGNESIUM, TOTAL	737	94.4	78.4	30.3	63	61.5
MANGANESE, TOTAL	9.8	3.1	4.1	0.98	3.2	3.7
POTASSIUM, TOTAL	110	99.8 U	113 U	109 U	107 U	161
SODIUM, TOTAL	92.2	16.8 U	16.5 U	16.2 U	29 U	24.1 U
VANADIUM, TOTAL	6.4	3.7	4	4.2	4	3.4
ZINC, TOTAL	5.4	1.4	1.4	0.63 U	0.67	0.68

MG/KG - milligrams per kilogram  
J - estimated  
U - not detected

**SOIL - POSITIVE DETECTION SUMMARY  
 SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
 LONG-TERM MONITORING CTO - 0333  
 MCB, CAMP LEJEUNE, NORTH CAROLINA  
 TAL METALS**

LOCATION LAB_ID DATE SAMPLED DEPTH	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<b>INORGANIC (mg/kg)</b>						
ALUMINUM, TOTAL	NA	NA	1720	5480	1-N-SB41-05	12/12
ARSENIC, TOTAL	0.33 U	0.4 U	0.37	1	1-N-SB40-05	7/12
BARIUM, TOTAL	NA	NA	2.4	12	1-N-SB41-05	12/12
CALCIUM, TOTAL	NA	NA	86.7	43400	1-N-SB42-05	12/12
CHROMIUM, TOTAL	2.6 U	2.6 U	3.1	6.1	1-N-SB41-05	11/12
COPPER, TOTAL	NA	NA	0.46	1.8	1-N-SB41-05	12/12
IRON, TOTAL	NA	NA	507 J	1770 J	1-N-SB42-05	12/12
LEAD, TOTAL	NA	NA	2.1	6.4	1-N-SB42-05	12/12
MAGNESIUM, TOTAL	NA	NA	30.3	737	1-N-SB42-05	12/12
MANGANESE, TOTAL	NA	NA	0.98	9.8	1-N-SB42-05	12/12
POTASSIUM, TOTAL	88.2 U	113 U	110	217	1-N-SB38-05	4/12
SODIUM, TOTAL	12.6 U	40.1 U	92.2	92.2	1-N-SB42-05	1/12
VANADIUM, TOTAL	NA	NA	3.4	7.5	1-N-SB38-05D	12/12
ZINC, TOTAL	0.63 U	0.63 U	0.67	5.4	1-N-SB42-05	11/12

MG/KG - milligrams per kilogram  
 J - estimated  
 U - not detected



**SURFACE WATER - POSITIVE DETECTION SUMMARY**  
**SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA**  
**LONG-TERM MONITORING CTO - 0333**  
**MCB, CAMP LEJEUNE, NORTH CAROLINA**  
**TCL ORGANICS**

LOCATION	1-SW01-01	1-SW02-01	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
LAB ID	9508G642-016	9508G642-018	NONDETECTED	NONDETECTED	DETECTED	DETECTED
DATE SAMPLED	08/18/95	08/18/95				
DEPTH	N/A	N/A				
PESTICIDE/PCBS (ug/L)						
4,4-DDT	0.12 J	0.096 J	NA	NA	0.096 J	0.12 J

UG/L - micrograms per liter  
 J - estimated  
 N/A - not applicable

**SURFACE WATER - POSITIVE DETECTION SUMMARY  
SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
LONG-TERM MONITORING CTO - 0333  
MCB, CAMP LEJEUNE, NORTH CAROLINA  
TCL ORGANICS**

<b>LOCATION LAB ID DATE SAMPLED DEPTH</b>	<b>LOCATION OF MAXIMUM DETECTED</b>	<b>FREQUENCY OF DETECTION</b>
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<b>PESTICIDE/PCBS (ug/L) 4,4-DDT</b>	<b>1-SW01-01</b>	<b>2/2</b>
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UG/L - micrograms per liter  
J - estimated  
N/A - not applicable

**SURFACE WATER - POSITIVE DETECTION SUMMARY  
 SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
 LONG-TERM MONITORING CTO - 0333  
 MCB, CAMP LEJEUNE, NORTH CAROLINA  
 TAL METALS**

LOCATION	1-SW01-01	1-SW02-01	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
LAB_ID	9508G642-016	9508G642-018	NONDETECTED	NONDETECTED	DETECTED	DETECTED
DATE_SAMP	08/18/95	08/18/95				
DEPTH	N/A	N/A				
<b>INORGANICS (ug/L)</b>						
ALUMINUM, TOTAL	519	353	NA	NA	353	519
BARIUM, TOTAL	26.1	25.8	NA	NA	25.8	26.1
CALCIUM, TOTAL	25000	24300	NA	NA	24300	25000
IRON, TOTAL	361	257	NA	NA	257	361
LEAD, TOTAL	1.8 J	1.4 U	1.4 U	1.4 U	1.8 J	1.8 J
MAGNESIUM, TOTAL	652	624	NA	NA	624	652
MANGANESE, TOTAL	12.4	12.7	NA	NA	12.4	12.7
POTASSIUM, TOTAL	841	836	NA	NA	836	841
SODIUM, TOTAL	1480	1570	NA	NA	1480	1570
VANADIUM, TOTAL	8.5	7.8	NA	NA	7.8	8.5
ZINC, TOTAL	10.7	7	NA	NA	7	10.7

UG/L - micrograms per liter  
 U - not detected  
 J - estimated  
 N/A - not applicable

**SURFACE WATER - POSITIVE DETECTION SUMMARY**  
**SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA**  
**LONG-TERM MONITORING CTO - 0333**  
**MCB, CAMP LEJEUNE, NORTH CAROLINA**  
**TAL METALS**

LOCATION LAB_ID DATE_SAMP DEPTH	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<b>INORGANICS (ug/L)</b>		
ALUMINUM, TOTAL	1-SW01-01	2/2
BARIUM, TOTAL	1-SW01-01	2/2
CALCIUM, TOTAL	1-SW01-01	2/2
IRON, TOTAL	1-SW01-01	2/2
LEAD, TOTAL	1-SW01-01	1/2
MAGNESIUM, TOTAL	1-SW01-01	2/2
MANGANESE, TOTAL	1-SW02-01	2/2
POTASSIUM, TOTAL	1-SW01-01	2/2
SODIUM, TOTAL	1-SW02-01	2/2
VANADIUM, TOTAL	1-SW01-01	2/2
ZINC, TOTAL	1-SW01-01	2/2

UG/L - micrograms per liter  
 U - not detected  
 J - estimated  
 N/A - not applicable

**SEDIMENT - POSITIVE DETECTION SUMMARY  
 SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
 LONG-TERM MONITORING CTO - 0333  
 MCB, CAMP LEJEUNE, NORTH CAROLINA  
 TCL ORGANICS**

LOCATION	1-SD01-06-01	1-SD02-06-01	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED
LAB_ID	9508G641-013	9508G641-015				
DATE_SAMP	08/18/95	08/18/95				
DEPTH	0 - 6"	0 - 6"				
<b>SEMIVOLATILES (ug/kg)</b>						
FLUORANTHENE	50 J	390 U	390 U	390 U	50 J	50 J
PYRENE	45 J	390 U	390 U	390 U	45 J	45 J
CHRYSENE	56 J	390 U	390 U	390 U	56 J	56 J
BENZO(A)PYRENE	440 U	46 J	440 U	440 U	46 J	46 J
INDENO(1,2,3-CD)PYRENE	50 J	390 U	390 U	390 U	50 J	50 J
BENZO(G,H,I)PERYLENE	46 J	390 U	390 U	390 U	46 J	46 J

UG/KG - micrograms per kilogram  
 U - not detected  
 J - estimated

**SEDIMENT - POSITIVE DETECTION SUMMARY  
SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
LONG-TERM MONITORING CTO - 0333  
MCB, CAMP LEJEUNE, NORTH CAROLINA  
TCL ORGANICS**

<b>LOCATION LAB_ID DATE_SAMP DEPTH</b>	<b>LOCATION OF MAXIMUM DETECTED</b>	<b>FREQUENCY OF DETECTION</b>
<b>SEMIVOLATILES (ug/kg)</b>		
FLUORANTHENE	1-SD01-06-01	1/2
PYRENE	1-SD01-06-01	1/2
CHRYSENE	1-SD01-06-01	1/2
BENZO(A)PYRENE	1-SD02-06-01	1/2
INDENO(1,2,3-CD)PYRENE	1-SD01-06-01	1/2
BENZO(G,H,I)PERYLENE	1-SD01-06-01	1/2

UG/KG - micrograms per kilogram  
U - not detected  
J - estimated

**SEDIMENT - POSITIVE DETECTION SUMMARY  
 SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
 LONG-TERM MONITORING CTO - 0333  
 MCB, CAMP LEJEUNE, NORTH CAROLINA  
 TAL METALS**

LOCATION	1-SD01-06-01	1-SD02-06-01	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
LAB_ID	9508G641-013	9508G641-015	NONDETECTED	NONDETECTED	DETECTED	DETECTED
DATE_SAMP	08/18/95	08/18/95				
DEPTH	0 - 6"	0 - 6"				
<b>INORGANIC (mg/kg)</b>						
ALUMINUM, TOTAL	2810	1810	NA	NA	1810	2810
BARIUM, TOTAL	15.9	12.8	NA	NA	12.8	15.9
CALCIUM, TOTAL	7290	6000	NA	NA	6000	7290
CHROMIUM, TOTAL	5.2	4	NA	NA	4	5.2
COPPER, TOTAL	2.5	0.84	NA	NA	0.84	2.5
IRON, TOTAL	1570 J	886 J	NA	NA	886 J	1570 J
LEAD, TOTAL	7	4.8	NA	NA	4.8	7
MAGNESIUM, TOTAL	189	141	NA	NA	141	189
MANGANESE, TOTAL	6.1	5	NA	NA	5	6.1
VANADIUM, TOTAL	7.5	3.9	NA	NA	3.9	7.5
ZINC, TOTAL	16.4	3.2	NA	NA	3.2	16.4

MG/KG - milligrams per kilogram  
 J - estimated

**SEDIMENT - POSITIVE DETECTION SUMMARY  
SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
LONG-TERM MONITORING CTO - 0333  
MCB, CAMP LEJEUNE, NORTH CAROLINA  
TAL METALS**

<b>LOCATION LAB_ID DATE_SAMP DEPTH</b>	<b>LOCATION OF MAXIMUM DETECTED</b>	<b>FREQUENCY OF DETECTION</b>
<b>INORGANIC (mg/kg)</b>		
ALUMINUM, TOTAL	1-SD01-06-01	2/2
BARIUM, TOTAL	1-SD01-06-01	2/2
CALCIUM, TOTAL	1-SD01-06-01	2/2
CHROMIUM, TOTAL	1-SD01-06-01	2/2
COPPER, TOTAL	1-SD01-06-01	2/2
IRON, TOTAL	1-SD01-06-01	2/2
LEAD, TOTAL	1-SD01-06-01	2/2
MAGNESIUM, TOTAL	1-SD01-06-01	2/2
MANGANESE, TOTAL	1-SD01-06-01	2/2
VANADIUM, TOTAL	1-SD01-06-01	2/2
ZINC, TOTAL	1-SD01-06-01	2/2

MG/KG - milligrams per kilogram  
J - estimated



**QA/QC - POSITIVE DETECTION SUMMARY  
 SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
 LONG-TERM MONITORING CTO - 0333  
 MCB, CAMP LEJEUNE, NORTH CAROLINA  
 TCL ORGANICS**

LOCATION	1-FB01-03	1-FB02-03	1-GWER01-03	1-GWTB01-03	1-GWTB02-03	1-GWTB03-03
LAB ID	9508G642-003	9508G642-004	9508G578-001	9508G578-007	9508G642-002	9508G642-015
DATE SAMPLED	08/16/95	08/16/95	08/15/95	08/15/95	08/16/95	08/17/95
<b>VOLATILES (ug/L)</b>						
CHLOROFORM	10 U	30	10 U	10 U	10 U	10 U
BROMODICHLOROMETHANE	10 U	8 J	10 U	10 U	10 U	10 U
TRICHLOROETHENE	10 U	10 U	10 U	10 U	10 U	10 U
<b>SEMIVOLATILES (ug/L)</b>						
BIS(2-ETHYLHEXYL)PHTHALATE	10 U	1 J	NA	NA	NA	NA

UG/L - micrograms per liter  
 U - not detected  
 J - estimated  
 NA - not analyzed  
 FB - field blank  
 GWER - groundwater equipment rinsate  
 GWTB - groundwater trip blank  
 SDER - sediment equipment rinsate  
 SIER - soil equipment rinsate

**QA/QC - POSITIVE DETECTION SUMMARY**  
**SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA**  
**LONG-TERM MONITORING CTO - 0333**  
**MCB, CAMP LEJEUNE, NORTH CAROLINA**  
**TCL ORGANICS**

LOCATION LAB ID DATE SAMPLED	1-SDER01-03 9508G653-001 08/18/95	1-SIER01-03 9508G642-001 08/16/95	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED
<b>VOLATILES (ug/L)</b>						
CHLOROFORM	10 U	10 U	10 U	10 U	30	30
BROMODICHLOROMETHANE	10 U	10 U	10 U	10 U	8 J	8 J
TRICHLOROETHENE	10 U	1 J	10 U	10 U	1 J	1 J
<b>SEMIVOLATILES (ug/L)</b>						
BIS(2-ETHYLHEXYL)PHTHALATE	10 UJ	9 U	9 U	10 U	1 J	1 J

UG/L - micrograms per liter  
 U - not detected  
 J - estimated  
 NA - not analyzed  
 FB - field blank  
 GWER - groundwater equipment rinsate  
 GWTB - groundwater trip blank  
 SDER - sediment equipment rinsate  
 SIER - soil equipment rinsate

**QA/QC - POSITIVE DETECTION SUMMARY**  
**SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA**  
**LONG-TERM MONITORING CTO - 0333**  
**MCB, CAMP LEJEUNE, NORTH CAROLINA**  
**TCL ORGANICS**

LOCATION LAB ID DATE SAMPLED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<b>VOLATILES (ug/L)</b>		
CHLOROFORM	1-FB02-03	1/8
BROMODICHLOROMETHANE	1-FB02-03	1/8
TRICHLOROETHENE	1-SIER01-03	1/8
<b>SEMIVOLATILES (ug/L)</b>		
BIS(2-ETHYLHEXYL)PHTHALATE	1-FB02-03	1/4

UG/L - micrograms per liter

U - not detected

J - estimated

NA - not analyzed

FB - field blank

GWER - groundwater equipment rinsate

GWTB - groundwater trip blank

SDER - sediment equipment rinsate

SIER - soil equipment rinsate

**QA/QC - POSITIVE DETECTION SUMMARY  
 SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
 LONG-TERM MONITORING CTO - 0333  
 MCB, CAMP LEJEUNE, NORTH CAROLINA  
 TAL METALS**

LOCATION	1-FB01-03	1-FB02-03	1-GWER01-03	1-GWER02-03	1-SDER01-03	1-SIER01-03
LAB ID	9508G642-003	9508G642-004	9508G578-001	9508G642-013	9508G653-001	9508G642-001
DATE SAMPLED	08/16/95	08/16/95	08/15/95	08/17/95	08/18/95	08/16/95
DEPTH	N/A	N/A	N/A	N/A	N/A	N/A
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
<b>INORGANIC (ug/L)</b>						
ALUMINUM, TOTAL	12.5 U	197	12.5 U	570	12.5 U	18
BARIUM, TOTAL	1 U	6.2	0.9 U	50.9	0.9 U	1.3 U
CALCIUM, TOTAL	19 U	26300	90	7300	90.8 U	57.7 U
CHROMIUM, TOTAL	3.8 U	3.8 U	3.8 U	4.2	4 U	3.8 U
COBALT, TOTAL	1.1 U	1.1 U	1.1 U	3.1	1.1 U	1.1 U
IRON, TOTAL	4.6 U	477	4.6 U	13600	4.6 U	10.7 U
MAGNESIUM, TOTAL	31.5 U	1980	31.5 U	5800	31.5 U	31.5 U
MANGANESE, TOTAL	0.7 U	4.4	0.7 U	8.8	0.7 U	0.7 U
POTASSIUM, TOTAL	83.2 U	1380	83.2 U	997	83.2 U	83.2 U
SODIUM, TOTAL	104 U	7150	161	9090	196 U	148 U
VANADIUM, TOTAL	1.5 U	2.1	1.5 U	5.8	1.5 U	1.5 U
ZINC, TOTAL	2.5 U	5.2	3.6	2.5 U	2.5 U	2.5 U

UG/L - micrograms per liter  
 U - not detected  
 J - estimated  
 NA - not analyzed  
 FB - field blank  
 GWER - groundwater equipment rinsate  
 GWTB - groundwater trip blank  
 SDER - sediment equipment rinsate  
 SIER - soil equipment rinsate

**QA/QC - POSITIVE DETECTION SUMMARY  
 SITE 1, FRENCH CREEK LIQUIDS DISPOSAL AREA  
 LONG-TERM MONITORING CTO - 0333  
 MCB, CAMP LEJEUNE, NORTH CAROLINA  
 TAL METALS**

LOCATION LAB ID DATE SAMPLED DEPTH UNITS	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<b>INORGANIC (ug/L)</b>						
ALUMINUM, TOTAL	12.5 U	12.5 U	18	570	1-GWER02-03	3/6
BARIUM, TOTAL	0.9 U	1.3 U	6.2	50.9	1-GWER02-03	2/6
CALCIUM, TOTAL	19 U	90.8 U	90	26300	1-FB02-03	3/6
CHROMIUM, TOTAL	3.8 U	4 U	4.2	4.2	1-GWER02-03	1/6
COBALT, TOTAL	1.1 U	1.1 U	3.1	3.1	1-GWER02-03	1/6
IRON, TOTAL	4.6 U	10.7 U	477	13600	1-GWER02-03	2/6
MAGNESIUM, TOTAL	31.5 U	31.5 U	1980	5800	1-GWER02-03	2/6
MANGANESE, TOTAL	0.7 U	0.7 U	4.4	8.8	1-GWER02-03	2/6
POTASSIUM, TOTAL	83.2 U	83.2 U	997	1380	1-FB02-03	2/6
SODIUM, TOTAL	104 U	196 U	161	9090	1-GWER02-03	3/6
VANADIUM, TOTAL	1.5 U	1.5 U	2.1	5.8	1-GWER02-03	2/6
ZINC, TOTAL	2.5 U	2.5 U	3.6	5.2	1-FB02-03	2/6

UG/L - micrograms per liter

U - not detected

J - estimated

NA - not analyzed

FB - field blank

GWER - groundwater equipment rinsate

GWTB - groundwater trip blank

SDER - sediment equipment rinsate

SIER - soil equipment rinsate

**GROUNDWATER - POSITIVE DETECTION SUMMARY  
 SITE 28, HADNOT POINT BURN POND  
 LONG-TERM MONITORING CTO - 0333  
 MCB, CAMP LEJEUNE, NORTH CAROLINA  
 TAL METALS**

LOCATION	28-GW01-03	28-GW01DW-03	28-GW02-03	28-GW04-03	28-GW07-03	28-GW07DW-03
LAB ID	9508G653-008	9508G653-006	9508G653-013	9508G653-014	9508G653-012	9508G653-011
DATE SAMPLED	08/19/95	08/19/95	08/20/95	08/21/95	08/20/95	08/20/95
<b>INORGANICS (ug/L)</b>						
ALUMINUM, TOTAL	37.5 U	13 U	12.8 U	20.6 U	64.8 U	35.2 U
ARSENIC, TOTAL	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
BARIUM, TOTAL	127	21.7	733	11	489	12.3
CADMIUM, TOTAL	3.7 U	3.7 U	3.7 U	3.7 U	10.7	3.7 U
CALCIUM, TOTAL	94800	99800	54500	79900	103000	35700
IRON, TOTAL	1690	213	4080	162	23000	9.2 U
LEAD, TOTAL	1.4 U	1.4 U	1.4 U	1.4 U	3.2	1.4 U
MAGNESIUM, TOTAL	17200	20300	26200	2130	23400	294 U
MANGANESE, TOTAL	120	92.8	191	56.1	431	1.5
NICKEL, TOTAL	4.8 U	4.8 U	4.8 U	4.8 U	5.4	6.2
POTASSIUM, TOTAL	15000	18900	51900	1100	42100	1750
SODIUM, TOTAL	17200	833000	85300	5110	158000	6960
ZINC, TOTAL	5.3 U	3.9 U	4.5 U	2.5 U	11.5 U	2.5 U

UG/L - micrograms per liter  
 J - estimated  
 U - not detected

**GROUNDWATER - POSITIVE DETECTION SUMMARY**  
**SITE 28, HADNOT POINT BURN POND**  
**LONG-TERM MONITORING CTO - 0333**  
**MCB, CAMP LEJEUNE, NORTH CAROLINA**  
**TAL METALS**

LOCATION LAB ID DATE SAMPLED	28-GW08-01 9508G653-015 08/21/95	28-GW13-03 9508G653-016 08/21/95	MINIMUM NONDETECTED	MAXIMUM NONDETECTED	MINIMUM DETECTED	MAXIMUM DETECTED
<b>INORGANICS (ug/L)</b>						
ALUMINUM, TOTAL	16.3 U	376	12.8 U	64.8 U	376	376
ARSENIC, TOTAL	1.8 U	8.1	1.8 U	1.8 U	8.1	8.1
BARIUM, TOTAL	484	118	NA	NA	11	733
CADMIUM, TOTAL	3.7 U	3.7 U	3.7 U	3.7 U	10.7	10.7
CALCIUM, TOTAL	48100	209000	NA	NA	35700	209000
IRON, TOTAL	1180	50100	9.2 U	9.2 U	162	50100
LEAD, TOTAL	4.7	1.4 U	1.4 U	1.4 U	3.2	4.7
MAGNESIUM, TOTAL	30700	12700	294 U	294 U	2130	30700
MANGANESE, TOTAL	160	454	NA	NA	1.5	454
NICKEL, TOTAL	4.8 U	4.8 U	4.8 U	4.8 U	5.4	6.2
POTASSIUM, TOTAL	65700	6950	NA	NA	1100	65700
SODIUM, TOTAL	111000	37500	NA	NA	5110	833000
ZINC, TOTAL	14	3 U	2.5 U	11.5 U	14	14

UG/L - micrograms per liter  
 J - estimated  
 U - not detected

**GROUNDWATER - POSITIVE DETECTION SUMMARY  
 SITE 28, HADNOT POINT BURN POND  
 LONG-TERM MONITORING CTO - 0333  
 MCB, CAMP LEJEUNE, NORTH CAROLINA  
 TAL METALS**

LOCATION LAB ID DATE SAMPLED	LOCATION OF MAXIMUM DETECTED	FREQUENCY OF DETECTION
<b>INORGANICS (ug/L)</b>		
ALUMINUM, TOTAL	28-GW13-03	1/8
ARSENIC, TOTAL	28-GW13-03	1/8
BARIUM, TOTAL	28-GW02-03	8/8
CADMIUM, TOTAL	28-GW07-03	1/8
CALCIUM, TOTAL	28-GW13-03	8/8
IRON, TOTAL	28-GW13-03	7/8
LEAD, TOTAL	28-GW08-01	2/8
MAGNESIUM, TOTAL	28-GW08-01	7/8
MANGANESE, TOTAL	28-GW13-03	8/8
NICKEL, TOTAL	28-GW07DW-03	2/8
POTASSIUM, TOTAL	28-GW08-01	8/8
SODIUM, TOTAL	28-GW01DW-03	8/8
ZINC, TOTAL	28-GW08-01	1/8

UG/L - micrograms per liter  
 J - estimated  
 U - not detected



**ATTACHMENT D**  
**WELL CONSTRUCTION LOG**

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## TEST BORING AND WELL CONSTRUCTION RECORD

PROJECT: Long-term Monitoring  
 CTO NO.: 62470-333 BORING NO.: 1-GW18  
 COORDINATES: EAST: \_\_\_\_\_ NORTH: \_\_\_\_\_  
 ELEVATION: SURFACE: \_\_\_\_\_ TOP OF PVC CASING: \_\_\_\_\_

RIG: <u>Rig # 109</u>					DATE	PROGRESS (FT.)	WEATHER	WATER DEPTH (FT.)	TIME
SPLIT SPOON	CASING	AUGERS	CORE BARREL						
SIZE (DIAM.)			<u>6 1/4" ID</u>		<u>8-15-95</u>	<u>0-25.0'</u>	<u>Hazy, hot, humid (90's)</u>	<u>12.0'</u>	
LENGTH			<u>5.0'</u>						
TYPE			<u>HSA</u>						
HAMMER WT.									
FALL									
STICK UP									

REMARKS: Environment sample collected from 10' to 12' (bgs) interval

SAMPLE TYPE		Well Information	Diam.	Type	Top Depth (ft.)	Bottom Depth (ft.)
S = Split Spoon	A = Auger	Riser	2"	Schedule 40 PVC pipe	0.5' (bgs)	10.0' (bgs)
T = Shelby Tube	W = Wash	Screen	2"	10 slot screen	10.0' (bgs)	25.0' (bgs)
R = Air Rotary	C = Core					
D = Denison	P = Piston					
N = No Sample						

Depth (ft.)	Samp. Type and No.	Samp. Rec. (ft. & %)	SPT or RQD	Lab Class. or Pen. Rate	PID (ppm)	Visual Description	Well Installation Detail	Elevation (ft. MSL)
1						No lithologic descriptions were compiled above or below the 10' to 12' (bgs) interval. A flush mount well was installed at this location.		
2								
3								
4								
5								
6								
7								
8								
9								
10								


Match to Sheet 2

DRILLING CO.: Perratt-Wolff BAKER REP.: J.E. Zimmerman  
 DRILLER: C. LeFever BORING NO.: 1-GW18 SHEET 1 OF 2

**TEST BORING AND WELL CONSTRUCTION RECORD**

PROJECT: Long-term Monitoring  
CTO NO.: 62470-333

BORING NO.: 1-GW18

SAMPLE TYPE						DEFINITIONS		
S = Split Spoon		A = Auger		SPT = Standard Penetration Test (ASTM D-1586)(Blows/0.5')				
T = Shelby Tube		W = Wash		RQD = Rock Quality Designation (%)				
R = Air Rotary		C = Core		Lab. Class. = USCS (ASTM D-2487) or AASHTO (ASTM D-3282)				
D = Denison		P = Piston		Lab. Moist. = Moisture Content (ASTM D-2216) Dry Weight Basis				
N = No Sample								
Depth (ft.)	Samp. Type and No.	Samp. Rec. (ft. & %)	SPT or RQD	Lab Class. or Pen. Rate	PID (ppm)	Visual Description	Well Installation Detail	Elevation (ft. MSL)
11	S-1	2.0	90006		.4	Continued from Sheet 1 SAND, fine grained w/ trace silt. Oxidation (orange) staining light brown, damp/wet		▲
12		12.0						
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

DRILLING CO.: Parrott-Wolff

BAKER REP.: J. E. Zimmerman

DRILLER: C. LeFever

BORING NO.: 1-GW18

## TEST BORING AND WELL CONSTRUCTION RECORD

PROJECT: Long-term Monitoring  
 CTO NO.: 62470-333 BORING NO.: 28-GW08  
 COORDINATES: EAST: \_\_\_\_\_ NORTH: \_\_\_\_\_  
 ELEVATION: SURFACE: \_\_\_\_\_ TOP OF PVC CASING: \_\_\_\_\_

RIG: <u>Rig #109</u>					DATE	PROGRESS (FT.)	WEATHER	WATER DEPTH (FT.)	TIME
	SPLIT SPOON	CASING	AUGERS	CORE BARREL					
SIZE (DIAM.)			<u>6 1/4" ID</u>		<u>8-14-95</u>	<u>0-25.0</u>	<u>Hot, humid (80s)</u>		
LENGTH			<u>5.0'</u>						
TYPE			<u>HSA</u>						
HAMMER WT.									
FALL									
STICK UP									

REMARKS: No sampling was completed

SAMPLE TYPE		Well Information	Diam.	Type	Top Depth (ft.)	Bottom Depth (ft.)
S = Split Spoon	A = Auger	Riser	2"	Schedule 40 PVC pipe	+2 1/2'	10.0' (bgs)
T = Shelby Tube	W = Wash					
R = Air Rotary	C = Core	Screen	2"	10 slot screen	10.0' (bgs)	25.0' (bgs)
D = Denison	P = Piston					
N = No Sample						

Depth (ft.)	Samp. Type and No.	Samp. Rec. (ft. & %)	SPT or RQD	Lab Class. or Pen. Rate	PID (ppm)	Visual Description	Well Installation Detail	Elevation (ft. MSL)
1						No lithologic descriptions were compiled. Well abandonment procedure was completed. A new monitoring well was installed to improve long-term monitoring capabilities at this location.		
2								
3								
4								
5								
6								
7								
8								
9								
10								

DRILLING CO.: Parrott-Wolff BAKER REP.: J. E. Zimmerman  
 DRILLER: C. LeFever BORING NO.: 28-GW08 SHEET 1 OF 2



# TEST BORING AND WELL CONSTRUCTION RECORD

PROJECT: Long-term Monitoring  
 CTO NO.: 62470-333 BORING NO.: 28-GW08

SAMPLE TYPE						DEFINITIONS		
S = Split Spoon		A = Auger		SPT = Standard Penetration Test (ASTM D-1586)(Blows/0.5') RQD = Rock Quality Designation (%) Lab. Class. = USCS (ASTM D-2487) or AASHTO (ASTM D-3282) Lab. Moist. = Moisture Content (ASTM D-2216) Dry Weight Basis			Well Installation Detail	
T = Shelby Tube		W = Wash						
R = Air Rotary		C = Core						
D = Denison		P = Piston						
N = No Sample								
Depth (ft.)	Samp. Type and No.	Samp. Rec. (ft. & %)	SPT or RQD	Lab Class. or Pen. Rate	PID (ppm)	Visual Description		Elevation (ft. MSL)
Continued from Sheet 1								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

DRILLING CO.: Parrett-Wolff BAKER REP.: J. E. Zimmerman  
 DRILLER: C. LeFever BORING NO.: 28-GW08 SHEET 2 OF 2

**ATTACHMENT E**  
**WELL DEVELOPMENT LOGS**

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## FIELD WELL DEVELOPMENT RECORD

PROJECT: Long-term Monitoring

CTO NO.: 62470-333

WELL NO.: 2-GW18

DATE: 8-17-95

GEOLOGIST/ENGINEER: J. E. Zimmerman

TIME START	DEVELOPMENT DATA						
0953							
TIME FINISH	TIME	CUMULATIVE VOLUME (gallons)	pH	TEMP (°C)	SPEC. COND. (µmhos/cm)	TEMP (°C)	COLOR AND TURBIDITY
1115							
INITIAL WATER LEVEL (FT) 14.20'	0955	0 gal	5.94	23.3	975	23.3	Brown/ Very Silty
TOTAL WELL DEPTH (TD) 25.0'	1005	15.0 gal	5.82	23.5	888	23.5	Light Brown/ Silty
WELL DIAMETER (INCHES) 2.0"	1015	25.0 gal	5.62	23.7	862	23.7	Light Brown/ Silty
CALCULATED WELL VOLUME —	1025	35.0 gal	5.58	23.7	829	23.7	Light Brown/ Silty
BOREHOLE DIAMETER (INCHES) 8.0"	1035	45.0 gal	5.50	23.6	798	23.6	Clearing/ little silty
BOREHOLE VOLUME 28.19 gal (1)	1045	55.0 gal	5.38	24.6	566	24.6	clear/ tr. silt
AMOUNT OF WATER ADDED DURING DRILLING 10 gallons	1055	65.0 gal	5.38	24.7	484	24.7	clear/ tr. silt
DEVELOPMENT METHOD Surging	1105	75.0 gal	5.35	24.7	481	24.7	clear/ tr. silt
PUMP TYPE Bladder	1115	85.0 gal	5.33	24.7	475	24.7	clear/ tr. silty
TOTAL TIME (A) 1 hr. 22 min							
AVERAGE FLOW (GPM)(B) 1.03 gallons/min							
TOTAL ESTIMATED WITHDRAWAL AxB= 85 gallons	Satisfied criteria for well development (pH, conductivity, and temperature). No elevated H <sub>2</sub> O <sub>2</sub> readings occurred. Point source (PS) was drummed water.						
H <sub>2</sub> O <sub>2</sub> /O <sub>2</sub> A READING BG = .4 ppm well = .3 ppm							

**Baker**

Baker Environmental, Inc.

**FIELD WELL DEVELOPMENT RECORD**PROJECT: Long-term MonitoringCTO NO.: 62470-333WELL NO.: 28-GW08DATE: 8-17-95GEOLOGIST/ENGINEER: J.E. Zimmerman

TIME START 0805	DEVELOPMENT DATA						
	TIME	CUMULATIVE VOLUME (gallons)	pH	TEMP (°C)	SPEC. COND. (µmhos/cm)	TEMP (°C)	COLOR AND TURBIDITY
TIME FINISH 0905							
INITIAL WATER LEVEL (FT) 12.60'	0808	0 gal	7.42	23.1	1381	23.1	Dark Brown / Very Silty
TOTAL WELL DEPTH (TD) 25.70'	0815	15.0 gal	7.31	20.0	1150	20.0	Dark Brown / Very Silty
WELL DIAMETER (INCHES) 2.0"	0818	25.0 gal	7.57	22.2	1336	22.2	Dark Brown / Very Silty
CALCULATED WELL VOLUME —	0821	35.0 gal	7.63	23.0	1262	23.0	Brown / Silty
BOREHOLE DIAMETER (INCHES) 8.0"	0824	45.0 gal	7.69	22.4	1222	22.4	Light Brown / little Silty
BOREHOLE VOLUME 34.20 gal. (1)	0827	55.0 gal	7.70	23.0	1210	23.0	Light Brown / little Silty
AMOUNT OF WATER ADDED DURING DRILLING 25 gallons	0830	65.0 gal	7.76	23.3	1233	23.3	clearing / little Silty
DEVELOPMENT METHOD Surging	0835	75.0 gal	7.78	23.3	1230	23.3	clearing / little Silty
PUMP TYPE Bladder	0840	85.0 gal	7.65	23.4	1203	23.4	clearing / little Silty
TOTAL TIME (A) 1 hr	0845	95.0 gal	7.50	23.7	1180	23.7	clearing / little Silty
AVERAGE FLOW (GPM)(B) 2 gallons / min	0850	105.0 gal	7.49	23.6	1236	23.6	clearing / little Silty
TOTAL ESTIMATED WITHDRAWAL AxB= 120 gallons	0855	110.0 gal	7.48	23.6	1232	23.6	light Brown / Silty
HNU/OVA READING BG = .4 ppm well = .2 ppm	0905	120.0 gal	7.47	23.6	1227	23.6	light Brown / Silty
Satisfied criteria for well development (pH, conductivity, and temperature). No elevated HNu readings occurred. Point source (PS) was drummed water.							



**ATTACHMENT F**  
**FIELD NOTES**

---

8/14/95

weather: scattered humid near 100°  
0700 Pick-up materials @ Hotel &  
materials @ Field trailer @  
MCAS NEW RIVER

Obj. ① Get all supplies - go over each  
sites for sampling w/ REB

② Visit sites one and 28

0900 site one - check in w/ people below  
any of them - Bldg 120 Below  
1st Sgt. Reyes

Lt. Slusher  
? Britton

Bldg. FC 134

Check in w/ Hobbs  
capt. Laughlin  
Sgt. Fitzpatrick

①

8/14/95

Site 1 Laydown yard

Lt. Bartell X 3616 Platoon Cmdr.

CO = Capt. Griffen X 3326

check in w/ Lt. Bartell before working  
in area

1010 Finish going over site and MW locations  
Elec. Guys on-site <sup>They</sup> Explained  
Elec. locations TPT  
of utility poles where John 2. is drilling  
@ site and Elec. Cons pole to pole on  
light posts. No other elec lines in area of  
drilling

1015 site 28 Go over site wells  
Locations, Sampling Plan  
w/ REB & SA

1200 Finish Staging equip &  
sample jars  
Arrange for Fed- & Pick-up  
Susic - Fed - EX

②

8/14/95

Call Hotel for polyethylene tubing

Call Fed-X for Pick-up

Got Fed-X Pick-up arranged

SUSIC will be 2 Trailer between 1530 & 1800 each weekday

Calibrated Equipment

pH meter

Temp "

Diss. Ox. "

Specific Cond "

HNU

Turbidity → Everything OK!

Charged Battery for peristaltic pump

& Batteries of other relevant equip.

listed above. Everything set to

begin sampling

8/14/95

polyethylene

(3)

8/15/95

on site: 0700 weather: clear, hot, Hi ~ 99°

get - equip. Go to site area

Set up on <sup>1st</sup> well. Background HNU Reading

HNU Background = 0.5 ppm

1-6W01 HNU = 0.5 ppm @ well head

TD = 23.94

WL = 9.55 2<sup>nd</sup> well .163 gds/ft

14.39 ft x .163 gal =  $\frac{2.3}{2.3}$  gals

x 5 = 12 gals

12 gals = 5 well vols

SEE Note: Page # (40)

911 (4)

1-GW01  
PH

8/15/95

8/15/95

TEMP ~~6C~~ ~~8C~~ DO TURB. ppt

Vals	Temp °C	pH	DO µm/cm	Turb. °C	ppt mg/L
0	19.8	6.75	574	25.7	1.54

1	19.8	6.95	585	22.2	1.50
---	------	------	-----	------	------

2	19.8	7.10	577	21.7	1.52
---	------	------	-----	------	------

3	19.8	7.15	529	22.0	1.25
---	------	------	-----	------	------

4	19.8	7.15	519	22.4	1.25
---	------	------	-----	------	------

Temp  
on pH  
meter  
Not  
Recorded  
properly  
above  
Readings  
are  
meaningless  
Use other  
Temp Readings

⑤ 4M

1-GW01

TURB	Gals	COMMENTS
80.5	0	0855
77.1	~2.5	0900
20.2	~5.0	0914
8.7	~7.5	0925
9.2	~10	0930
		Sample 2 0930 1-GW01-03 cut lock off Needs Replaced

ppt ⑥

8/15/95

0910 Tom Morris EMD on-site to observe  
sampling, REB introduce JPT; JA give  
Tom Morris my PPT<sup>95</sup> Number

0935 Tom Morris off-site

0940 Rich Bonelli, J. Tapsic, J. Andy  
Clean-up area pick-up Equip.

0945 Set-up for Rinseate Blank

1-GWERO1-03 From Pump  
and Polyethylene Tubing  
Sampled @ 10:00

USING Lab Grade DI Water  
EAGLE Picher

ENVIRONMENTAL SCIENCE & TECHNOLOGY  
DEPT.

200 B.J. TUNNEL BLVD.,  
MIAMI, OK 74354  
1-800-331-7425

LOT K 5128060  
SERIAL M 661372

⑦ JPT

8/15/95

1-GW02

HNU = 0.2 ppm

Well Volumes Calculated @

WL = 11.78

TD = 23.72

$$11.94' \times .163 = 1.95 \text{ gals} \times 5 = 9.73$$

Sample 10 gals

JPT ⑧

8/15/95

1-GW02

Vols	Temp °C	pH	SC4MOT	Temp °C	DO mg/L
0	23.8	6.55	624	27.8	1.0
1	22.7	6.66	612	23.6	1.20
2	23.3	6.62	585	23.6	1.05
3	23.2	6.79	573	23.8	1.05

⑨ JPT

8/15/95

1-GW02

TURB	Gals	Comments
41.1	0	1005
10.7	2	1020
9.71	4	1025
6.03	6	1032

1-GW02-03

Sample 2 1040

JPT ⑩

8/15/95

1055 Finish well 1-GW02

1200 Set-up on 1-GW03

1-GW03

WL = 15.25

TD = 26.90

HNU = 0.3 PPM

$$11.65 \times .163 = 1.89$$

$$1.9 \times 5 = 9.49 \quad \text{Say } 10 \text{ gals}$$

⑪ 4PT

8/15/95

1215 John Zimmerman Drilling Next  
door to Site one. Putting in  
soil borings & soil sampling

Rich Benelli off-site

Jeff Topsis & J. Andy continue  
w/ GW sampling at Site one

4PT ⑫

8/15/95

1- GW03

Vols	Temp °C	pH	SC umpton	Temp °C	DO mg/L
0	19.1	5.37	174.1	29.4	4.50
1	19.0	5.50	161.8	24.4	4.0
2	20.0	5.47	156.0	25.6	4.50
3	19.6	5.47	154.1	25.6	4.55
4	21.3	5.66	152.2	25.9	5.0

② JPT

8/15/95

1- GW03

TURB	Gals	Comments
17.3	0	1225
29.5	2	1235
16.5	4	1243
3.3	6	1255
2.5	8	1310

1- GW03-03  
collected @  
1315

JPT ⑭



8/15/95

1- GW 10

HNU = 0.2 ppm

WL = 13.22

TD = 27.90

$14.68 \times .163 = 2.39$

SAY  $24 \times 5 = 12$  gals

⑮ GPT

8/15/95

Finish 1- GW 10 @ 1500

MOB TO 1- GW 11

CUT-LOCK ON 1- GW 11

TD = 19.7

WL = 7.32

HNU = 0.2 PPM

$12.38 \times .163 = 2.02$  gals

$2.02 \times 5 = 10.10$

GPT ⑯

8/15/95

8/15/95

1-GW10

Vols	Temp °C	pH	SCumulative	Temp °C	DO mg/L
0	15.0	7.09	629	24.0	2.0
1	22.0	7.13	624	21.9	1.9
2	<del>18.0</del> 19.0	7.27	634	22.2	2.25
3	18.0	7.20	624	22.3	1.85
<del>4</del>	17.7	7.17	618	22.0	1.75

⑦ JPT

1-GW10

TURB.	Gals	Comments
97.0	0	13:35
27.8	2.5	14:00
5.4	5	14:25
<del>2.3</del> OPT 2.3	7.5	14:35
8.5	8.0	14:40

1-GW10-03  
Sampled @

1450

JPT ⑩

8/15/95

1-GW11

Volts	Temp °C	pH	SCUMPTON	Temp °C	DO Mg/L
0	19.9	6.88	474.1	22.1	2.25
1	18.8	6.95	490.5	21.3	2.10
2	19.4	6.99	491.4	21.3	2.0
3	<del>20.4</del> 18.9	6.97	496.4	20.7	<del>2.0</del> 1.65
	19.9	6.94	491.3	20.6	1.80

⑤ JPT

8/15/95

1-GW11

TURB	Gals	Comments
150.5	0	1510
20.7	2	1527
7.0	4	1545
3.6	6	1600
3.1	~ 7	1610

CUT Lock

1-GW11-03  
sampled @~~1415 JPT~~

1615

JPT (20)

8/15/95

1700 To Trailer Pack samples

1735 off site to Ship samples

8/15/95

Jeffrey P. Tepin

(21) JPT

8/16/95

0700 on-site

Weather - overcast Slt. Breeze Humid 90's  
HURRICANE FELIX Expected to Hit NC Coast  
Near Hatteras sometime late this evening

Collected Rinsate off split spoon w/ John  
Zimmerman, Collected Field Blank from  
DI Water w/ JEZ, & JEZ collected Field  
Blank from Drillers <sup>of</sup> Water. J. Andy & JPT  
wrapped soil samples from site one;  
filled out COC for soils, Rinsate & Field  
Blank. Put samples on ice left in trailer

Loaded Sampling Equipment.  
Called REB to update - COC Fax arrived <sup>yesterday</sup> office

0930 Mob to Site one

Set-up on HGW12

HNU = 0.2 PPM

WL = 9.22

TD = 20.96

$11.74 \times .163 \text{ gals/ft} = 1.91$

54y 2 gals  $\times$  5 volumes = 10 gals

JPT (22)

8/16/95

1-GW12

VO/S	Temp °C	pH	SC <sub>memos/cm</sub>	Temp °C	DO mg/L
0	21.3	5.81	195.0	21.2 2PT	4.0
1	20.1	5.76	193.5	20.0	1.80
2	20.2	5.73	204.7	20.2	1.95
3	20.0	5.91	207.1	20.0	1.95
4	20.0	5.89	202.8	19.9	1.85

23) 9PT

8/16/95

1-GW12

TUFB	Gals	Comments
15.8	0	<del>0</del> 0954
9.0	2	9PT <del>2</del> 0957
8.9	4	1006
5.6	6	1016
4.6	8	1022

1-GW12-03  
Collected @ 1030

9PT (24)

8/16/95

1-GW16

Vols	Temp °C	pH	SC <sub>max</sub> /km	Temp °C	DO mg/L
0	23.5	5.32	355.7	23.4	5.0
1	21.9	5.34	328.0	22.0	4.35
2	21.2	5.24	300.2	21.3	3.90
3	21.1	5.27	297.4	21.3	3.70
4	21.7	5.47	285.1	22.1	3.70
<del>4</del> 5	21.5	5.46	278.2	22.2	3.80

QPT (27)

8/16/95

1-GW16

TORP	Gals	Comments
5.6	0	1055
4.4	2	1100
14.0	4	1107
9.6	6	1115
9.8	8	1125
6.2	<del>8</del> 10	1133

Sample 1-GW16-03  
 Collected @ 1140  
 Metals only

QPT (28)

8/16/95

1-GW16 DW

Vols	Temp °C	pH	Conduct	Temp °C	D.O. M/L
0	21.3	7.25	204.2	22.5	4.60
~ 1/2	21.2	7.95	203.4	21.5	2.85
~ 1	21.9	8.21	210.3	21.8	2.10
~ 1 1/2	20.1	8.27	214.0	21.9	2.10
2	20.9	8.51	212.1	21.7	1.95
~ 2 1/2	20.5	8.39	214.3	21.5	2.20
3	21.4	8.48	215.7	21.3	2.10

9PT

8/16/95

1-GW16 DW

TURB.	Gals	COMMENTS
2.7	0	1257
1.8	9	1325
4.9	18	1400
4.4	~ 27	1502
3.0	36	1542
3.5	45	1622
2.1	~ 55	1655

9PT  
 1-GW16 B  
 1-GW16 DW-03  
 Collected @ 1700

9PT (30)

8/16/95

1330 Weather scattered HOT mid 90's  
NO winds or PRECIP. yet HURRICANE  
FELIX expected Landfall North of  
where MOB Camp Lijunon is Located.

1340 JEZ on-site to tell us  
Finish sample collection  
Get samples to FedEx & get  
off site orders from  
REB & Matt Bartman

1345 Call REB - Can we finish  
sampling 1-GW16DW? Should  
take rest of today to get  
sample & pack. REB & I decided  
I should call Tom Morris let him  
know our plan to be at base  
rest of today. If problem can  
he drive out to site me to let  
us know if we are to evac.  
Base. We will finish sampling  
today & drive samples to New Bern  
NC then Break for a couple of  
days for clear weather.

③DPT

9/16/95

1400 Talked to Tom Morris. Don't  
know if Base will be closed  
as of yet. We will keep  
working.

1600 JEZ @ Site one - He's done  
moving drums Pete Manday went  
to PITT. Apparently Tom Morris  
(RMD) says so FAR NOT closing  
BASE. COMMITTEE will meet @  
0400 tomorrow (8/17/95) to  
decide if Base is closed.

JEZ took samples that John Andy  
& I packed <sup>back</sup> to Air cond.  
Trailer to keep cool. We are  
still porging 1-GW16DW. Keep  
one cooler here on ice in  
AIR COND. TRUCK.

1630 Call to REB - HE'S IN agreement w/  
John Andy & I that we follow suit  
w/ Base's Decision to close or  
open Base. We'll keep working as  
of ~~now~~ NOW.

7PT

DPT ③



8/16/95

1705 JEZ & JPT to Trailer Pick-up  
Remaining Coders go to New Bern  
to drop off samples @ Fed-Ex  
4 coolers - includes JEZ's soil  
samples from wells & Borings, His  
rinsate & Field Blanks & John  
Andy's & I GW samples, 3  
Monitoring well samples.

1820 Arrive @ Fed-Ex at CRAVEN  
Co. Regional Airport in New  
Bern. Fed-Ex closed. Airplane  
was taxiing onto Runway as  
we walked up to Bldg. Talked  
to Fed-Ex Guy. They just  
closed! Don't know if they  
are running tomorrow or not  
Next closes + Fed-Ex is in  
Greenville ~ 45 mins away  
We are about 15 mins. to late  
to make that office. NO choice!  
Must take samples back to  
Hotel. Bummer! TRY AGAIN TOMORROW!

(33) JPT

Jeff P. Tesini

8/17/95

0700 on site

Weather - Clear Hi in 90's Hurricane Felix  
~ 160 miles off NC Coast moving NW @  
Slow pace. Predicted to affect VA Beach area  
more than us here at MEB Camp Lejeune

0730 mob to site 1 1 - GW09

JEZ developing wells @ site 28  
& site 1 today. Predicted to finish.

1 - GW09

WL = 12.95

TD = 23.5

HNU Background = 0.2 ppm

HNU well head reading

HNU = 0.2 ppm

$$23.5' - 12.95' = 10.55' \times .163^{gal/ft} = 1.72 gals$$

$$1.72 gals \times 5 vels = 8.6 gals$$

Say 10 gals

JPT (34)

8/17/95

1-GW09

Vols	Temp °C	pH	SC. umos/cm	Temp °C	D.O. mg/L
0	18.3	5.62	61.4	22.2	9.2
9 <sup>AT</sup> 2 1	21.3	6.18	134.9	21.4	6.5
2	21.1	6.29	133.2	21.3	7.0
3	21.4	6.42	136.1	21.3	6.8

35/AT

8/17/95

1-GW09

TUBB.	S ds.	Comments
2.3	0	0745
3.2	2	0752
1.6	4	0800
2.9	6	0810

1-GW09-03  
sampled @

0820

TKL Metals

9PT 36

8/17/95

0825 mob to 1- GW08

TD = 27.6

HNU = —

WL = 17.6

HNU malfunction

 $10 \times .163 \text{ gals/ft} = 1.63 \text{ gals} \times 5 = 8.15 \text{ gals}$ Say 2 gals  $\times 5 = 10 \text{ gals}$ 

1- GW08

VOLS	TEMP °C	PH	SEC/min	TEMP °C	DO, mL
0	21.3	6.31	245.0	21.4	6.5
21	20.2	6.04	272.2	20.2	5.80
42	20.2	6.02	267.5	20.5	5.45
3	20.3	6.08	266.7	20.3	5.85

(37) JPT

8/17/95

CUT Lock on this well

1- GW08

TIME	Gals	Comments
4.2	0	0842
2.3	2	0846
0.9	4	0856
2.5	6	0903

CUT Lock

1- GW08-03  
Collected @ 0907  
TAL METALS  
CUT LOCK

.4PT (38)

8/17/95

0915 Mob to 1-GW04

T0 = 31.13

WL = 19.62

HNU = — Malfunction (no reading)

$$11.51' \times .163 \text{ gal/ft} = 1.87 \text{ gal} \times 5 = 9.35$$

$$\text{Say } 2 \text{ gal} \times 5 = 10$$

Vals	1-GW04				
	Temp°C	pH	SCMUS/CA	Temp°C	DO mg/L
0	21.0	5.00	149.0	21.1	4.5
1	20.8	4.65	143.5	20.6	2.0
2	20.6	4.68	143.2	20.4	2.5
3	20.4	4.73	142.9	20.3	2.7
4	20.5	4.87	144.7	20.3	2.8
5	20.5	5.05	150.6	20.5	2.5

③ JPT

8/17/95

Note: we are calculating 5 well volumes for each well but only removing the minimum (3 vols) to reduce I.D.W. wells are sampled after removing 3 well volumes if Field Parameters such as Temp, pH, SE, D.O. Turb... are stable (i.e., within 10%) If Parameters are Stable  $\Rightarrow$  Sample Well

1-GW04		
TURB.	Gals	Comments
72.1	0	0932
>200	2	0937 TURB To High to get reading water is Red color (Rust Color) $\Rightarrow$ 200
>200	4	0943
143.7	6	0950
79.2	8	0957
61.7	10	1005 1-GW04-03 collected @ 1005 Collected Dup and destroyed Sampler 1-GW040-03

JPT ④

8/17/95

1040 mob to 1-GW17DW

TD=125

WL=15.10

HNU malfunction No Reading

$$125 - 15.10 = 109.90 \text{ ft} \times 1.63 \text{ g/gal} = 17.91$$

$$\text{Say } 18 \text{ gals} \times 3 \text{ vols} = 54 \text{ gals}$$

1-GW17DW

Vols	Temp °C	pH	Conduct	Temp °C	D.O. mg/L
0	24.3	7.42	157.8	24.3	7.5
1/3	22.6	8.20	159.1	22.9	2.60
2/3	23.6	8.19	160.0	23.4	2.50
4/3	23.7	8.43	203.0	23.5	1.80
5/3	23.5	8.45	201.3	23.8	2.60
1 1/3	23.7	8.68	199.4	24.3	2.20
2	23.9	8.61	202.2	23.8	3.00
2 1/2	23.7	8.77	203.4	24.0	2.20
3	23.7	8.56	207.1	23.9	2.20

(4) 90T

8/17/95

1100 JFZ on-site Finishing up Development

1140 Delivered us lunch from Hot-Dog Stand! Yeb!  
 Purging continues, water is relatively clear  
 & well continues to produce at low flow  
 pumping rate. Purging Deep wells takes  
 ~ 1/2 day at low flow rate.

1-GW17DW

TURD.	Gals	Comments	Gals.
1.0	0	1045	0
1.0	189.6	1114	~ 6
3.4	184.2	1145	~ 12
1.1	36.2718	1215	~ 18
2.6	18.204	1245	~ 24
1.3	54.45	1315	~ 30
1.6	—	1345	~ 36
1.4	—	1425	~ 44
1.2	—	1505	~ 54

1-GW17DW-03  
 Collected @ 1515

90T (4)

8/17/95

at Trailer Re-packed yesterday's  
samples; today's samples  
Faxed C.O.C.'s To Linnea Johnson  
1700 off-site To Texaco Fed-EX

JEZ Stopped by. He will be  
taking water levels all day tomorrow  
for REB. Then departing for DITT

Collected Equip Rinse  
1- GWER02-03 @ 1545  
from sampling peristaltic pump  
using lab grade DI

8/17/95

Jeffrey P. Timm

(13) JPT

8/18/95

on site: 0645

weather: clear Hi Low 90's

- ① Inventory Bottles - Short for EPW sampling
- ② Load Equip. Gave into to REB. He
- ③ Fax time sheets. Will help getting Bottles  
shipped to US.

0815 to site one

0855 get set-up for surf. water/sed  
sampling.

Collect Surf water @ 0930 1-SW01-01

Collect Sediment sample @ 0940 1-SD0106-01  
Dup is

Surface water 1-SW01-01 1-SD0106-02

Turbidity 22.7

PH 8.56 Temp 30.2°C

COND. 120.7 30.9°C

Salinity 0.1 ppt

DO 6.2

Also collected Dup 1-SW01D-01

± NS/MSD

JPT (44)

8/18/95

Surf Water 1-SW02-01

TURB = 52.7

PH = 9.28

Temp °C = 20.3

SC  $\mu\text{mols/cm} = 115.0$

TEMP °C = 31.3

D.O. mg/L = 6.4

Salinity = 0.1 ppt

Collect Surf water 1-SW02-01  
sed. sample 1-SD02-01 7PT  
@ 1030 1-SD02-06-01

(45) 9PT

8/18/95

weather  
is

1045 To Trailer to pack all sed.  
; Surf waters on more ice (very  
hot) ; put in trailer. also collect  
Ringside Blank.

Called Surveyor - Meet Monday @ 1400 @ Trailer

Equip Rinse off of Stainless Steel  
sampling Spoon 1-SDER01-03

collected @ 1130 using lab  
grade DE Lot # 5128060

Serial # 661372

Eagle picker See pg. #9 for  
Further info.

Filled out CBC for samples collected  
thus far.

1300 mob to 1-GW17

TD = 27.71

WL = 16.28

HNU Backgrd = 0.5 ppm

HNU Reading @ well 0.5 ppm

$10.93' \times 1.63 \text{ gals/ft} = 1.78 \text{ gals}$

avg 2 gals  $\times$  5 vols = 10 gals

9PT (46)

8/18/95

1-GW17

Vols	Temp °C	pH	SCPM/dec	Temp °C	R.O ml/l
0	25.5	6.58	596.0	26.1	3.6
9 <sup>PT</sup> / <del>1</del>	24.1	6.89	595.0	24.6	2.5
2	24.8	6.82	582.0	25.2	2.0
34	23.9	6.84	604.0	24.8	2.0
9 <sup>PT</sup> / <del>4</del> 5	23.8	6.90	608.0	24.4	2.0

① 9<sup>PT</sup>

8/18/95

1-GW17

CUT-LOCK

TURB.	Gals	COMMENTS
7.7	0	<u>CUT-LOCK</u> 1320
6.6	2	1327
8.1	4	1335
2.8	68	1355
2.4	10	1405

Sample Collected @  
14151-GW17-03  
TAL Meths, Td Vols  
MS/MSD : Dup  
Dup Is 1-GW17D-039<sup>PT</sup> ①



8-18-95

1420 Mob to 1-GW18

HNU Backgrd 1.0 PPM

Well Hdd 1.0 PPM

WL = 14.2

TD = 24.5

$$10.30' \times .163 \text{ gals/ft} = 1.68 \times 5 = 8.39$$

$$\text{Say } 2 \text{ gals} \times 5 = 10$$

1-GW18

Vols	pH	Temp <sup>c</sup>	SCums/cm	Temp <sup>c</sup>	D.O. Mg/l
0	5.99	25.5	828.0	25.4	4.05
1	6.11	23.9	895.0	24.2	3.65
2	6.13	24.0	898.0	24.0	3.60
3	6.18	23.8	902.0	23.9	3.40
4	6.13	23.2	892.0	23.5	3.50

(49) JMT

8-18-95

1530 Call ZEB to update:

L Johnson to call Weston to tell them that we will be shipping about 5 coolers today for Sat. delivery. We will be sampling @ site 28 on weekends. Have a Good Weekend! Talk to you Mon!

TUEB	Gals	Comments
67.9	0	1429
40.2	2	1439
20.9	4	1446
3.1	6	1453
1.3	8	1500

1-GW18-01

Collected @ 1505

TCL Metals  
TCL Vols

JMT (50)

8/18/95

1540 Set-up M.I.-HP638

Begin PURGING

1-GWHP638

Vol's	Temp °C	pH	SCM/min	Temp °C	D.O. mg/L
?	20.2	7.55	201.4	20.5	2.20
	20.0	7.83	249.1	20.1	2.70
	19.6	7.69	252.5	20.2	2.40
	19.5	7.78	254.5	19.7	1.50

Did not collect vol. info b/c we don't know TD or WL of this well. Just Purge by monitoring time. Purge for ~ 20 mins. & sample field parameters regularly.

⑤ JPT

8/18/95

1-GWHP638

TURB.	TIME
81.9	1550 Initial Reading
3.1	1556
1.4	1602
1.5	1609

JPT  
1-GWHP638-03  
Collect HP638  
@ 1615

JPT ⑤

8/18/95

At Trailer Packed & Shipped  
Samples for sat. delivery  
Fed-Ex dude Picked them up @ trailer  
1800 off-site

Jeffrey P. Tepin

(53)

8/19/95

on site: 0730

weather: clear to partly cloudy Hi mid 90's

Load Equip @ trailer

0815 Set-up on 28-GW010W

TD = 134.2

AMS Background = 0.5 ppm

WL = 5.60

Well Head = 0.5 ppm

$$128.6 \text{ ft} \times .163 \text{ gals/ft} = 20.96$$

$$\text{Say } 21 \text{ gals} \times 3 = 63 \text{ gals}$$

CUT-LOCK ON 28-GW010W

JPT (54)

8/19/95

28-GW01DW

Yols	pH	Temp °C	SCUMSK	Temp °C	D.O. mg/L
0	7.83	23.5	4752	23.4	5.40
~ 1/2	7.82	20.7	4710	20.7	4.50
~ 1	7.99	21.0	4850	20.9	2.50
~ 1 1/2	7.99	20.8	4861	20.8	2.45
~ 2	8.01	21.6	4830	21.8	2.50
~ 2 1/2	8.02	21.4	4779	21.7	2.40
~ 3	8.03	22.2	4684	22.6	2.45
~ 3 1/4	8.03	21.6	4687	21.8	2.45

⑤⑤ QPT

8/19/95

28-GW01DW

Turb.	Gals.	COMMENTS	Salinity
		CNT Lock	
4.4	0	0838	
1.0	10	0922	
0.5	20	1003	
1.0	30	1040	
0.2	40	<del>1135</del> 1135	2.6 ppt
0.0	50	1220	2.6 ppt
0.6	60	1240	2.5 ppt
0.8	65	1258	2.5 ppt

28-GW01DW-03  
collected @ 1300TAL Metals  
TCL VolAs

QPT ⑤⑤

8/19/95

1500 mob to 28-GW01

TD = 19.48

WL = 5.48

Hun = 0.8 ppm

14' x .163 gals/ft = 2.28 gals

2.28 x 5 vols = 11.41 say 12

Vol	Temp °C	pH	SCumden	Temp °C	D.O. mg/L
0	26.1	7.49	729	25.9	1.85
~1	23.0	7.51	705	23.3	1.75
~2	22.2	7.60	701	22.6	1.75
~3	22.6	7.63	698	22.7	1.65
~4	22.2	7.65	702	22.1	1.65
~5	22.2	7.61	701	22.1	1.65

574

8/19/95

28-GW01 gets Dup of MS/MSD

CUT LOCK

Turb.	Gals	Comments	Salinity
10.447.39	0	1505	
0.3	2	1517	
0.5	4	1525	
0.7	6	1532	
0.6	8	1542	0.3 ppt
0.5	10	1550	0.3 ppt
		CUT-LOCK	

Collected 28-GW01-03  
 @ 1550 Also MS/MSD  
 & Dup 28-GW010-03

41 (58)

8/19/95

1630 Back to trailer pack samples  
on ice unload equip. collect  
Rinsate from peristaltic pump  
& polyethylene tubing using  
lab grade DI water  
lot K5128060  
Serial M 661374  
Eagle Picher see pg# ⑦ for  
further info.

28-GW07DW  
Collected @ 1645

⑤9 apt

Jeffrey J. J. 8/19/95

8/20/95

On site 0730 weather: clear Hi - 70°  
Load Equip @ trailer

0800 Mob to site 28

28-GW07DW

HWL Background 0.6 ppm

well head 0.5 ppm

WL = 3.65'

TD = 129'

$$125.35' \times .163 \text{ gals/ft} = 20.43$$

$$20.43 \times 3 = 61.30 \text{ gals}$$

Pump pulls water level down in well

started @ 3.65' @ 0830

8:50 9.5'

12:00 9.5' - stable @ this depth

apt 60

8/20/95

28-GW07DW

Vols	Temp <sup>c</sup>	pH	SCUMOS/cm	Temp <sup>c</sup>	D.O. mg/L
0	26.5	9.60	192.7	26.5	6.50
~1/2	20.3	10.73	243.0	20.4	5.80
~1	20.6	10.46	235.5	20.5	2.30
~1 1/2	21.1	10.21	217.8	21.1	2.30
~2	21.9	10.22	214.8	21.4	2.30
~2 1/2	21.2	10.83	214.6	20.9	2.35
~3	22.0	<del>10.89</del> 9.89	214.0	21.1	2.25
~3 1/4	21.1	9.95	212.6	20.6	2.40

61 9PT

8/20/95

28-GW07DW

TURB.	GALS	COMMENTS	Salinity
4.9	0	0830	0.1 PPT
0.8	10	0915	0.1 PPT
0.3	20	1000	0.1 PPT
0.5	30	1055	0.1 PPT
0.6	40	1130	0.1 PPT
0.6	50	1210	0.1 PPT
1.0	60	<del>1350</del> 1250 <sup>7PT</sup>	0.1 PPT
0.6	65	<del>1310</del>	0.1 PPT

CUT LOCK

28-GW07DW-03 Collected

① 1315

TAL Metals &amp; TCL UoAs

9PT 62

8/20/95

1400 mob to 28-GW07

HNU = 0.6 ppm

TD = 19.25'

WL = 5.19'

$$14.06' \times 1.63 \text{ gals/ft} = 2.29 \text{ gals}$$

$$2.29 \times 5 \text{ vols} = 11.46$$

28-GW07

Vols	Temp'c	PH	SSumaska	Temp'c	D.O. mll
0	24.1	7.06	1696	24.1	1.75
~1	24.5	6.98	1700	24.6	1.45
~2	24.4	6.95	1705	24.3	1.55
~3	24.2	6.97	1724	24.1	1.50
~4	24.0	6.98	1753	24.2	1.55

63 APT

8/20/95

28-GW07

Turb.	Gals	Salinity	Comments
26.3	0	0.9 ppt	1408
7.80	3	0.9 ppt	1420
5.5	6	0.9 ppt	1430
8.8	9	0.9 ppt	1440
1.5	12	0.9 ppt	1453

28-GW07-03 Collected

D 1500

TAL metals

TCL Vols

7A(64)



8/20/95

1510 Mob to 28-GW02

HNU Background = 0.4 ppm

well head = 0.4 ppm

WL = 4.19

TD = 21.74

 $17.55' \times 1.63 \text{ gals/ft} = 2.86 \text{ gals}$  $2.86 \text{ gals} \times 5 = 14.30$ 

28-GW02

Vols	Temp °C	PH	SCM	Temp °C	D.O. mg/L
0	26.6	7.86	965	26.8	1.80
~1	24.6	7.86	985	24.7	1.75
~2	24.4	7.88	967	24.6	1.65
~3	24.3	7.86	981	24.2	1.65
~					

65/4PT

8/20/95

Note: No well cap for this well.

28-GW02

TURB.	Gals	Salinity	Comments
12.4	0	0.5 ppt	1519
2.3	3	0.5 ppt	1528
3.6	6	0.5 ppt	1536
0.7	9	0.5 ppt	1548

28-GW02-03  
collected @ 1555

TAL Metals

TEL VOA<sub>5</sub>

4PT(66)

8/20/95

1620 Back to trailer - Put more ice  
on samples - take to Hotel w/ US  
Unload equip. Inventory bottles

⑦ JPF

8/20/95 Jeffrey P. Jernic

8/21/95

0730 onsite weather: Clear mostly Sunny Hi 85-90°  
Load Equip. Fax Friday's COCs to Linn Johnson  
0800 TO Site 28 TO Continue Sampling

8:20 28-GW04

HNU Backgrnd = 0.5ppm Well head 6.5ppm

TD = 29.02'

WL = 5.80'

$$23.22' \times .163 \text{ gals/ft} = 3.78 \text{ gals}$$

$$3.78 \times 5 \text{ vols} = 18.92 \text{ gals}$$

$$\text{Say } 4 \text{ gals} \times 5 \text{ vols} = 20 \text{ gals}$$

JAT (68)

8/21/95

28 - GW04

Vol's	PH	Temp °C	SCurad/cm	Temp °C	DO. mg/L
0	7.15	21.0	416.3	20.9	2.05
1	7.31	20.3	413.5	20.1	2.35
2	7.28	20.2	415.9	20.0	2.10
3	7.27	20.0	416.2	20.0	2.10

⑥9 JPT

8/21/95

28 - GW04

TURNS	Gals	Salinity <sup>ppt</sup>	Comments
4.2	0	0.2	0833
1.0	4	0.2	0845
1.1	8	0.2	0900
0.8	12	0.2	0915

NO Well Cap

28 - GW04 - 03

collected @ 0920

T.M. Metals  
TCL Vials

JPT ⑩

8/21/95

0930 Mob to 28-GW08 (New Well)

HNU = 0.7 Background = 0.6

WL = 12.34'

TD = 27.54'

 $15.20' \times .163 \text{ gals/ft} = 2.48 \text{ gals}$ Say  $2.5 \times 5 \text{ vols} = 12.5$ 

Vols	pH	Temp °C	Conductivity	Temp °C	D.O. mg/L
0	7.63	22.2	1144	21.9	2.20
1	7.68	20.9	1152	21.0	2.25
2	7.72	21.0	1154	21.1	2.25
3	7.71	20.9	1152	21.3	2.20
4	7.72	21.1	1142	21.2	2.25

① 9PT

8/21/95

28-GW08

TURB.	Gals	Salinity <sup>ppt</sup>	Comments
19.9	0	0.6	0937
7.8	2.5	0.6	0948
7.0	5.0	0.6	1000
5.6	7.5	0.6	1008
5.0	10	0.6	1016

28-GW08-01

~~28-GW08-039PT~~Collected @ 1020  
TAL Metals  
TCL VOA<sub>s</sub>

9PT (TL)

8/21/95

1030 Mob to 28-GW13

HNu Background = 0.1 PPM

Well head = 0.1 PPM

TD = 14.64'

WL = 6.76'

 $7.88' \times 1.63 \text{ gals/ft} = 1.28 \text{ gals}$ Say  $1.5 \times 5 \text{ vols} = 7.5$ 

28 - GW13					
Vols	pH	Temp °C	SCANNER	Temp °C	D.O. mg/L
0	6.81	22.5	1467	23.0	2.50
1.5	6.67	23.5	1369	23.7	2.35
2	6.66	23.3	1398	23.5	2.30
3	6.68	22.0	1406	22.2	2.40

9/19/01

8/21/95

28 - GW13

TURB.	Salinity	Gals	Comments
4.4	0.7 ppt	0	6052
4.7	0.7 ppt	1.5	1057
3.0	0.7 ppt	3.0	1103
2.3	0.7 ppt	4.5	1110

28-GW13-03 collected

1120

TAL metals  
TCL VOA<sub>s</sub>

9/19/01

8/21/95

1400 Met w/ Surveyor Brent Lonier  
showed him locations of soil borings  
surf H<sub>2</sub>O/sed sample & MW location  
② site one. Also went to site  
28 to show him location of  
NW#508. Gave him copy of  
site maps & a copy of SB/MW  
ID's

1600 collected Equip Rinse from  
peristaltic pump & polyethylene  
tubing using lab grade DI

28-GWERO2-03  
collected @ 1600

Lot K S128060  
Serial M 661374  
Egla Picher (see pg # 7)

Packed samples / Filled out COC

9PT

8/21/95

Note: Short in plastic bottles for  
Metals & Preservative HNO<sub>3</sub> So Effects  
Samples 28-GWERO2-03 (Equip Rinse)  
28-TNK-03 (IDW)  
1-TNK-03 (IDW)  
28-GW13-03 (MW)  
28-GW08-03 (MW)

~~for metals were collected in 1 litre  
ambers & marked unpreserved. They  
will be preserved @ the lab~~

Samples were collected by the following:

Equip Rinse 28-GWERO2-03 was  
placed in 1 litre amber for metals  
(unpreserved) & the two IDW  
samples 28-TNK-03 & 1-TNK-03  
were placed in 1 litre plastics unpreserved

The two MW samples 28-GW13-03  
& 28-GW08-03 were placed in  
1 litre ambers, preserved with HNO<sub>3</sub>.

Summary → Metals Analysis

ER02 → 1 litre plastic unpreserved

1-TNK → 1 litre plastic unpreserved

28-TNK → 1 litre plastic unpreserved

GW13 → 1 litre ambers Preserved (HNO<sub>3</sub>)

GW08 → 1 litre amber Preserved (HNO<sub>3</sub>)

9PT 76

8/21/95

1620 mob to Site one to collect IDW  
Sample

I-TNK-03 Collected @ 1630  
VOAs, BNA, Pest/PCB, Metals  
Reactive Cyanide, Reactive Sulfide,  
Flashpoint.

1655 Mob to Site 28 to collect IDW  
Sample

28-TNK-03 collected @ 1715  
VOAs, BNA, Pest/PCB, Metals, Reactive  
Cyanide, Reactive Sulfide, Flashpoint

1730 Back to Trailer Pack Samples  
Go to Fed-Ex.

(77) JPT

8/22/95

On site 0700 weather clear Hi Low 90's

Objective: ① Clean-up trailer areas inside &  
out

✓ ② Ship Equipment back to PTT

✓ ③ Return pump to Rental Co.

✓ ④ Demob

✓ ⑤ Call Lab

Shipped Equip Back to Baker, (D.O.  
SC, PH, HNU, TURB est.)

Shipped Remaining Coolers to Weston

1230 called werton to check on samples  
shipped yesterday. Samples OK. Told  
person that is checking in samples  
about the fact that some samples  
for metals were unpreserved B/C we  
ran out of Nitric. Gave her the  
three sample IDs. She said she  
would check the samples, the CAC  
& Document the fact.

1230 called Tom Morris MCB Camp Lejeune EMD  
told him we were finished. Demobbing  
no problems. Thanks for his help. Told him I  
would get locks replaced on wells which he  
had to cut.

J. H. J. 8/22/95 JPT (78)