

DEWATERING DATA

DATE	PRESS DAILY CYCLES	FILTER CAKE PRODUCED (CU FT)	CAKE SOLIDS (%)	CAKE DENSITY (LB/CF)	NOTE	FILT. CAKE PRODUCED (TONS)	DRY SOLIDS PRODUCED (TONS)	FILT. SOLIDS (%)	NOTE	FILT. SOLIDS (TYP)	NOTE	BY MATERIAL BALANCE *		
												SLUDGE TO PRESS (TONS)	SLUDGE TO PRESS (CU YDS)	FILTRATE FLOW (TONS)
04/28/94	1	95	38.4%	(2)	88.1	4.18	1.6	60%	(1)	2000	(1)	27.56	31.41	23.38
04/29/94	2	190	25.0%	(1)	75.0	7.13	1.8	60%	(1)	2000	(1)	30.47	34.72	23.34
04/30/94	11	1045	15.2%	(2)	71.9	37.57	5.9	60%	(1)	2000	(1)	100.40	114.41	62.83
05/01/94	11	1045	23.2%	(2)	71.4	37.31	8.6	60%	(1)	2000	(1)	147.72	168.34	110.41
05/02/94	12	1140	25.0%	(1)	75.0	42.75	10.7	60%	(1)	2000	(1)	182.79	208.31	140.04
05/03/94	14	1330	26.2%	(2)	79.3	52.73	13.8	60%	(1)	2000	(1)	236.40	269.40	183.66
05/04/94	14	1330	32.0%	(2)	75.0	49.88	16.0	6.2%	(2)	2000	(2)	264.34	301.24	214.46
05/05/94	15	1425	33.0%	(2)	75.0	53.44	17.6	6.0%	(2)	1800	(2)	301.34	343.41	247.91
05/06/94	8	760	30.0%	(2)	75.0	28.50	8.6	6.8%	(2)	2000	(2)	128.68	146.65	100.18
05/07/94	9	855	25.0%	(1)	75.0	32.06	8.0	6.0%	(1)	2000	(1)	137.09	156.23	105.03
05/08/94	11	1045	25.0%	(1)	75.0	39.19	9.8	6.0%	(1)	2000	(1)	167.56	190.95	128.37
05/09/94	9	855	25.0%	(2)	75.0	32.06	8.0	3.1%	(2)	1570	(2)	275.33	313.77	243.27
05/10/94	15	1425	27.1%	(2)	75.0	53.44	14.5	4.3%	(2)	2230	(2)	350.56	399.50	297.12
05/11/94	12	1140	25.0%	(1)	75.0	42.75	10.7	6.0%	(1)	2000	(1)	182.79	208.31	140.04
05/12/94	13	1235	27.0%	(2)	73.9	45.66	16.9	3.0%	(2)	2000	(1)	600.11	683.88	554.45
05/13/94	9	855	25.0%	(1)	75.0	32.06	8.0	6.0%	(1)	2000	(1)	137.09	156.23	105.03
05/14/94	15	1425	20.9%	(2)	73.0	52.01	10.9	12.6%	(2)	2000	(1)	86.90	99.03	34.88
05/15/94	15	1425	25.0%	(1)	75.0	53.44	13.4	6.0%	(1)	2000	(1)	228.49	260.39	175.05
05/16/94	15	1425	29.2%	(2)	75.0	53.44	15.6	2.8%	(2)	2000	(1)	774.39	882.49	720.95
05/17/94	7	665	26.0%	(2)	75.0	24.94	6.5	5.4%	(2)	2000	(1)	123.73	141.00	98.79
05/18/94	12	1140	20.8%	(2)	75.0	42.75	8.9	3.4%	(2)	2000	(1)	275.65	314.13	232.90
05/19/94	13	1235	22.2%	(2)	75.0	46.31	10.3	2.5%	(2)	2000	(1)	444.07	506.06	397.76
05/20/94	11	1045	22.4%	(2)	73.5	38.80	8.6	3.3%	(2)	2000	(1)	276.29	314.86	237.89
05/21/94	6	570	25.0%	(1)	75.0	21.54	5.3	2.5%	(2)	2000	(1)	230.81	263.03	209.43
05/22/94	16	1520	22.1%	(2)	73.7	56.01	12.4	2.5%	(2)	2000	(1)	534.05	608.61	478.04
05/23/94	14	1330	25.0%	(1)	73.6	48.92	12.2	2.5%	(2)	2000	(1)	528.26	602.00	479.34
05/24/94	20	1900	25.0%	(1)	75.0	71.25	17.8	2.5%	(2)	2000	(1)	769.36	876.76	698.11
05/25/94	18	1710	25.0%	(1)	71.8	61.35	15.3	2.5%	(2)	2000	(1)	662.51	755.00	601.16
05/26/94	17	1615	25.0%	(1)	75.5	60.88	15.2	2.5%	(2)	2000	(1)	658.32	750.22	597.35
TOTALS	350	3775.0	25.61%			1222.8	312.9	4.1%				8863.0	10100.3	7641.2

(1) ESTIMATE BASED ON PREVIOUS DATA

(2) SAMPLE ANALYSIS (LABORATORY OR FIELD)

* SLUDGE = FILTRATE SOLIDS CONC. - FILTRATE SOLIDS CONC. (SLUDGE SOLIDS CONC. - FILTRATE SOLIDS CONC.)

AND FILTRATE = SLUDGE - FILTER CAKE

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8863

T CYS

Date:
Shift:

Date:
Shift:

Time	Operator
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Filtrate Sample:

Cake Sample:

Date:
Shift:

Date:
Shift:

Time	Operator
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Filtrate Sample:

Cake Sample:

TOTAL SOLIDS ANALYSIS

#11

SAMPLE NAME: CakeDATE SAMPLED: 10-31-94METHOD SUMMARY: A PORTION OF A WELL MIXED SAMPLE IS WEIGHED, DRIED AT 103 C
- 105 C, AND REWEIGHED.

	BEFORE DRYING	AFTER DRYING	FURTHER DRYING
DATE ANALYZED:	<u>11-1-94</u>	<u>11-3-94</u>	
BY:	<u>Lee H.</u>	<u>Lee H.</u>	
TIME:	<u>10:55</u>	<u>1:50</u>	
WT. OF DISH & SAMPLE:	<u>51.1</u>	<u>16.5</u>	
PAN OR DISH WT.:	<u>1.6</u>	<u>1.6</u>	
NET SAMPLE WT	(A) _____	(B) _____	(C) _____

PERCENT SOLIDS = $\frac{\text{LOWEST READING, (B) OR (C)}}{(A)} \times 100\%$

TOTAL SOLIDS ANALYSIS

#12

SAMPLE NAME: SludgeDATE SAMPLED: 11-1-94METHOD SUMMARY: A PORTION OF A WELL MIXED SAMPLE IS WEIGHED, DRIED AT 103 C
- 105 C, AND REWEIGHED.

	BEFORE DRYING	AFTER DRYING	FURTHER DRYING
DATE ANALYZED:	<u>11-3-94</u>	<u>11-17-94</u>	
BY:	<u>Lee H.</u>	<u>Jyeus</u>	
TIME:	<u>2:15</u>	<u>11:20</u>	
WT. OF DISH & SAMPLE:	<u>42.5</u>	<u>6.3</u>	
PAN OR DISH WT.:	<u>1.5</u>	<u>1.5</u>	
NET SAMPLE WT	(A) _____	(B) _____	(C) _____

PERCENT SOLIDS = $\frac{\text{LOWEST READING, (B) OR (C)}}{(A)} \times 100\%$

TOTAL SOLIDS ANALYSIS

#6

SAMPLE NAME: CakeDATE SAMPLED: 11-1-94METHOD SUMMARY: A PORTION OF A WELL MIXED SAMPLE IS WEIGHED, DRIED AT 103 C
- 105 C, AND REWEIGHED.

	BEFORE DRYING	AFTER DRYING	FURTHER DRYING
DATE ANALYZED:	<u>11-3-94</u>	<u>11-17-94</u>	
BY:	<u>Lee H.</u>	<u>Jyeus</u>	
TIME:	<u>2:15</u>	<u>11:20</u>	
WT. OF DISH & SAMPLE:	<u>47.4</u>	<u>2.5</u>	
PAN OR DISH WT.:	<u>1.6</u>	<u>1.6</u>	
NET SAMPLE WT	(A) _____	(B) _____	(C) _____

PERCENT SOLIDS = $\frac{\text{LOWEST READING, (B) OR (C)}}{(A)} \times 100\%$

DEWATERING DATA

DATE	PRESS DAILY CYCLES	FILTER CAKE SOLIDS (KG/MT)	CAKE SOLIDS (%)	CAKE DENSITY (G/CC)	NOTE	FILT. CAKE				FILT. SOLIDS (T/MT)	FILT. (%)	BY MATERIAL BALANCE				CUMULATIVE	
						PRODUCED	NOT	PRODUCED	NOT			SLUDGE TO PRESS (T/MT)	SLUDGE TO PRESS (G/MT)	FLOW (T/MT)	PRODUCED (T/MT)	DRY SOLIDS (T/MT)	SLUDGE REMOVED (G/MT)
04/28/94	1	95	38.4%	(2)	88.1	4.18	(2)	1.6	(1)	1500	(1)	4158	4738	3739		1.6	474
04/29/94	2	190	25.0%	(1)	75.0	7.13	(1)	1.8	(1)	1000	(1)	4549	5184	3837		3.4	992
04/30/94	11	106	15.7%	(2)	71.9	3757	(1)	5.9	(1)	1000	(1)	15027	17125	11270		9.3	2705
05/01/94	11	106	22.1%	(2)	71.4	3731	(2)	8.3	(1)	1000	(1)	21045	23983	17314		175	5103
05/02/94	12	1140	25.0%	(1)	75.0	4275	(1)	10.7	(1)	1000	(1)	27294	31106	23019		282	8213
05/03/94	14	1330	26.2%	(2)	79.3	5273	(2)	13.8	(1)	1000	(1)	35292	40218	30018		420	12215
05/04/94	14	1330	25.0%	(1)	75.0	4988	(2)	12.5	(1)	1000	(1)	31843	36289	26856		545	1586.4
05/05/94	15	1425	25.0%	(1)	75.0	5344	(2)	13.4	(1)	1000	(1)	34118	38881	28774		679	1975.2
05/06/94	8	760	25.0%	(1)	75.0	2850	(2)	2.1	(1)	1000	(1)	18196	20236	15346		750	2182.6
05/07/94	9	855	25.0%	(1)	75.0	3906	(2)	8.0	(1)	1000	(1)	20471	23128	17264		830	2415.9
05/08/94	11	106	25.0%	(1)	75.0	3919	(2)	9.8	(1)	1000	(1)	25020	28512	21101		928	2711.0
05/09/94	9	855	25.0%	(1)	75.0	3206	(2)	8.0	(1)	1000	(1)	20471	23128	17264		1008	2934.3
05/10/94	15	1425	30.1%	(2)	75.0	5344	(2)	16.1	(2)	1000	(1)	21045	23983	15700		1169	3174.1
05/11/94	12	1140	25.0%	(1)	75.0	4275	(2)	10.7	(1)	1000	(1)	27294	31106	23019		1276	3485.1
05/12/94																	
05/13/94																	
05/14/94	15	1425	25.0%	(1)	75.0	5344	(2)	13.4	(1)	1000	(1)	34118	38881	28774		134	3888
05/15/94	15	1425	25.0%	(1)	75.0	5344	(2)	13.4	(1)	1000	(1)	34118	38881	28774		267	7726
05/16/94																	
05/17/94																	
05/18/94																	
05/19/94																	
05/20/94																	
05/21/94																	
05/22/94																	

(1) ESTIMATE BASED ON PREVIOUS DATA

(2) SAMPLE ANALYSIS (LABORATORY OR FIELD)

* SLUDGE = FILT. CAKE x (FILT. CAKE SOLIDS CONC. - FILTRATE SOLIDS CONC.)
(SLUDGE SOLIDS CONC. - FILTRATE SOLIDS CONC.)

AND FILTRATE = SLUDGE - FILTER CAKE

DEWATERING DATA

BY MATERIAL BALANCE *															
DATE	PRESS DAILY CYCLES	FILTER CAKE PRODUCED (CU FT)	CAKE SOLIDS (%)	NOTE	CAKE DENSITY (LB/CF)	NOTE	FILT. CAKE PRODUCED (TONS)	DRY SOLIDS PRODUCED (TONS)	FEED SOLIDS (%)	NOTE	FILTRATE SOLIDS (PPM)	NOTE	SLUDGE TOPRESS (TONS)	SLUDGE TOPRESS (CU YDS)	FILTRATE FLOW (TONS)
04/28/04	1	95	38.4%	(2)	88.1	(2)	4.18	1.6	6.0%	(1)	2000	(1)	2756	314.1	2338
04/29/04	2	190	25.0%	(1)	75.0	(1)	7.13	1.8	6.0%	(1)	2000	(1)	3047	34.72	2334
04/30/04	11	1045	15.7%	(2)	71.9	(2)	3757	5.9	6.0%	(1)	2000	(1)	100.40	114.41	6283
05/01/04	11	1045	23.2%	(2)	71.4	(2)	3731	8.6	6.0%	(1)	2000	(1)	147.72	168.34	140.41
05/02/04	12	1140	25.0%	(1)	75.0	(1)	4275	10.7	6.0%	(1)	2000	(1)	182.79	208.31	140.04
05/03/04	14	1330	26.2%	(2)	79.9	(2)	5279	138	6.0%	(1)	2000	(1)	236.40	269.40	183.65
05/04/04	14	1330	32.0%	(2)	75.0	(1)	4988	160	6.2%	(2)	2000	(2)	264.34	301.24	214.46
05/05/04	15	1425	33.0%	(2)	75.0	(1)	5344	176	6.0%	(2)	1800	(2)	301.34	343.41	247.91
05/06/04	8	760	30.0%	(2)	75.0	(1)	2850	8.6	6.8%	(2)	2000	(2)	128.08	146.65	100.38
05/07/04	9	855	25.0%	(1)	75.0	(1)	3206	8.0	6.0%	(1)	2000	(1)	137.09	156.23	105.03
05/08/04	11	1045	25.0%	(1)	75.0	(1)	3919	9.8	6.0%	(1)	2000	(1)	167.56	190.95	128.57
05/09/04	9	855	25.0%	(2)	75.0	(1)	9206	8.0	3.1%	(2)	1570	(2)	275.33	319.77	243.27
05/10/04	15	1425	27.1%	(2)	75.0	(1)	5344	145	4.3%	(2)	2230	(2)	350.56	399.50	297.12
05/11/04	12	1140	25.0%	(1)	75.0	(1)	4275	10.7	6.0%	(1)	2000	(1)	182.79	208.31	140.04
05/12/04	13	1235	37.0%	(2)	73.9	(2)	4566	169	9.0%	(2)	2000	(1)	600.11	683.88	554.45
05/13/04	9	855	25.0%	(1)	75.0	(1)	3206	8.0	6.0%	(1)	2000	(1)	137.09	156.23	105.03
05/14/04	15	1425	20.9%	(2)	73.0	(2)	5201	109	12.6%	(2)	2000	(1)	8690	9903	3488
05/15/04	15	1425	25.0%	(1)	75.0	(1)	5344	134	6.0%	(1)	2000	(1)	228.40	260.39	176.05
05/16/04	15	1425	29.2%	(2)	75.0	(1)	5344	156	2.2%	(2)	2000	(1)	774.39	882.49	720.95
05/17/04	7	605	26.0%	(2)	75.0	(1)	2494	65	5.4%	(2)	2000	(1)	123.73	141.00	98.79
05/18/04	12	1140	20.8%	(2)	75.0	(1)	4275	8.9	9.4%	(2)	2000	(1)	275.65	314.13	232.90
05/19/04	13	1235	22.2%	(2)	75.0	(1)	4631	103	2.5%	(2)	2000	(1)	444.07	506.06	397.76
05/20/04	11	1045	22.4%	(2)	73.5	(2)	3840	8.6	3.3%	(2)	2000	(1)	276.29	314.85	237.80
05/21/04	6	570	22.0%	(1)	75.0	(1)	2138	4.7	9.9%	(2)	2000	(1)	124.12	141.45	102.75
05/22/04	16	1520	22.1%	(2)	73.7	(2)	5601	124	2.5%	(2)	2000	(1)	534.06	608.61	478.04
05/23/04	14	1330	26.2%	(2)	73.6	(2)	4892	128	5.3%	(2)	2000	(1)	247.63	282.20	198.71
05/24/04	20	1900	27.1%	(2)	75.0	(1)	7125	193	4.6%	(2)	2000	(1)	431.75	492.02	360.50
05/25/04	18	1710	26.6%	(1)	71.8	(2)	6135	163	4.1%	(2)	2000	(1)	409.92	467.14	348.56
05/26/04	17	1615	25.1%	(2)	73.5	(2)	6097	153	5.1%	(2)	2000	(1)	312.40	356.02	251.44
05/27/04	17	1615	41.8%	(1)	75.0	(1)	6056	253	3.9%	(2)	2000	(1)	681.15	776.25	620.59
05/28/04	14	1330	27.2%	(1)	75.0	(1)	4988	136	5.5%	(2)	2000	(1)	255.34	290.99	206.47
05/29/04	0	0	-	-	75.0	(1)	0.00	0.0	-	-	2000	(1)	0.00	0.00	0.00
05/30/04	0	0	-	-	75.0	(1)	0.00	0.0	-	-	2000	(1)	0.00	0.00	0.00
05/31/04	19	1805	30.7%	(2)	75.0	(1)	6769	208	5.7%	(2)	2000	(1)	376.56	429.13	308.88

DEWATERING DATA

DATE	PRESS DAILY CYCLES	FILTRATE PRODUCED (CU FT)	CAKE SOLIDS (%)	CAKE DENSITY (LB/CF)	NOTE	FILTRATE PRODUCED (TONS)	FILTRATE SOLIDS (%)	NOTE	FILTRATE SOLIDS (PPM)	NOTE	SLUDGE TO PRESS (TONS)	SLUDGE TO PRESS (CU YDS)	FILTRATE FLOW (TONS)
06/01/84	18	1710	90.6%	75.0	(2)	64.13	19.6	(2)	2000	(1)	450.92	513.87	388.80
06/02/84	19	1805	94.8%	75.0	(2)	67.69	23.6	(2)	2000	(1)	342.56	390.38	274.87
06/03/84	20	1900	92.2%	75.0	(2)	71.25	23.0	(2)	2000	(1)	525.22	596.26	451.97
06/04/84	17	1615	27.9%	75.0	(2)	60.56	16.9	(2)	2000	(1)	288.32	328.57	227.76
06/05/84	12	1140	25.9%	75.0	(2)	42.75	11.1	(2)	2000	(1)	334.83	381.57	292.08
06/06/84	16	1320	26.6%	75.0	(2)	57.00	15.2	(2)	2000	(1)	438.97	523.04	401.97
06/07/84	16	1320	35.4%	75.0	(2)	57.00	20.2	(2)	2000	(1)	323.00	369.12	266.00
06/08/84	11	1045	41.2%	75.0	(2)	99.19	16.1	(2)	2000	(1)	218.90	249.46	179.71
06/09/84	3	285	25.0%	75.0	(1)	10.69	2.7	(1)	2000	(1)	69.75	79.49	59.06
06/10/84	7	605	26.6%	75.0	(2)	24.94	6.6	(2)	2000	(1)	232.07	264.47	207.13
06/11/84	9	835	24.0%	75.0	(2)	32.06	7.7	(2)	2000	(1)	152.21	173.46	120.15
06/12/84	11	1045	30.1%	75.0	(2)	99.19	11.8	(2)	2000	(1)	375.16	427.41	336.85
06/13/84	5	475	24.2%	75.0	(2)	17.81	4.3	(2)	2000	(1)	118.56	136.11	100.74
06/14/84	3	285	27.1%	75.0	(2)	10.69	2.9	(2)	2000	(1)	10.69	12.18	0.00
06/15/84	8	760	24.9%	75.0	(2)	28.50	7.1	(2)	2000	(1)	297.38	338.80	268.88
06/16/84	11	1045	25.9%	75.0	(2)	99.19	10.1	(2)	2000	(1)	277.14	315.83	237.95
06/17/84	13	1235	25.1%	75.0	(2)	46.31	11.6	(2)	2000	(1)	252.78	288.07	203.47
06/18/84	12	1140	25.2%	75.0	(2)	42.75	10.8	(2)	2000	(1)	555.84	639.43	513.09
06/19/84	0	0	25.0%	75.0	(1)	0.00	0.0	(1)	2000	(1)	0.00	0.00	0.00
06/20/84	12	1140	25.0%	75.0	(1)	42.75	10.7	(1)	2000	(1)	279.00	317.96	236.25
06/21/84	15	1425	32.9%	75.0	(2)	53.44	17.6	(1)	2000	(1)	460.11	524.36	406.08
06/22/84	8	760	30.5%	75.0	(2)	28.50	8.7	(2)	2000	(1)	324.28	369.55	295.78
06/23/84	10	930	25.0%	75.0	(1)	31.63	8.9	(1)	2000	(1)	232.50	264.96	196.88
06/24/84	9	835	25.0%	75.0	(1)	32.06	8.0	(1)	2000	(1)	200.25	238.46	177.19
06/25/84	8	760	25.0%	75.0	(1)	28.50	7.1	(1)	2000	(1)	186.00	211.97	137.50
06/26/84	9	835	25.0%	75.0	(1)	32.06	8.0	(1)	2000	(1)	209.25	238.46	177.19
TOTALS	677.0	64515.0	27.67%			2404.6	605.9				16035.2	18274.8	13631.5

(1) ESTIMATE BASED ON PREVIOUS DATA

(2) SAMPLE ANALYSIS (LABORATORY OR FIELD)

* SLUDGE = FILTRATE x (FILTRATE SOLIDS CONC. - FILTRATE SOLIDS CONC.)

(SLUDGE SOLIDS CONC. - FILTRATE SOLIDS CONC.)

COPPER/ZINC RESULTS

(PP6)

DATE	LAB	PAINTLINE CLARIFIER						ZINC/COPPER TREATMENT					
		COPPER (2202)	COPPER (2202)	ZINC (200.7)	ZINC (200.7)	ZINC (289.1)	ZINC (289.1)	COPPER (2202)	COPPER (2202)	ZINC (200.7)	ZINC (200.7)	ZINC (289.1)	ZINC (289.1)
		UNDIG.*	UNDIG.*	UNDIG.*	UNDIG.*	UNDIG.*	UNDIG.*	UNDIG.*	UNDIG.*	UNDIG.*	UNDIG.*	UNDIG.*	UNDIG.*
04/20/94	ASI	10	<10	40	<20	<20	<20	10	<10	100	120		
04/21/94	ASI	<10	<10	100	80	90		<10	<10	60	90		
04/22/94	ASI	<10	<10	30	<20	<20		<10	<10	60	50		
04/23/94	ASI	<10	<10	<20	50	70		<10	<10	70	70		
04/24/94	ASI	<10	<10	<20	<20	80		<10	<10	90	80		
04/25/94	ASI	19	<10	20	<20	130		23	12	130	130		
04/26/94	ASI	<10	<10	20	<20	110		10	<10	100	110		
04/27/94	ASI	12	<10	40	<20	130		25	21	140	130		
04/28/94	ASI	<10	<10	**30	<20	**90	<20	<10	<10	**160	<20	**190	100
04/30/94	ASI	<10	<10	<20	<20	<20	<20	<10	<10	70	***<20	90	80
05/01/94	ASI	12	<10	<20	<20	<20	<20	<10	<10	80	***<20	130	112
05/02/94	ASI	<10	<10	70	<20	80	<20	<10	<10	70	***<20	100	108
05/03/94	ASI	<10	17	70	90	145	126	<10	<10	<20	30	20	<20
05/04/94	ASI	7	<10	<20	<20	56	<20	7	<10	80	70	102	91
05/05/94	ASI	13	<10	<20	<20	35		60	12	150	<20	300	
05/06/94	ASI	<10	<10	40	<20	40		26	<10	240	***<20	400	
05/12/94	ASI	10	<10	<20	<20	30	<20	19	18	<20	<20	180	
05/12/94	ES	<5			<10	<10		15				130	
05/19/94	ASI	<10	<10	50	70	70		28	23	150	170		
05/26/94	ASI	<10	<10	<20	<20	50	<20	22	19	<20	140	220	190
06/02/94	ASI	11						*11					
06/02/94	ES	<5						*5.3					
06/09/94	ES	<5						<5					
06/09/94	ASI	<10						14					
06/16/94	ES	<5						<5					
06/16/94	ASI	<10						<10					

*** NEGATIVE SPECTRAL INTERFERENCE

** ANALYSIS PERFORMED ON SAME DIGESTATE

COPPER/ZINC RESULTS

LAB	MAIN CLARIFIER						WELL WATER					
	COPPER	COPPER	ZINC	ZINC	ZINC	ZINC	COPPER	COPPER	ZINC	ZINC	ZINC	ZINC
	(2202)	(2202)	(200.7)	(200.7)	(289.1)	(289.1)	(2202)	(2202)	(200.7)	(200.7)	(289.1)	(289.1)
ASI	<10	<10	<20	<20	<20	UNDIG.*	UNDIG.*	<10	<20	<20	UNDIG.*	UNDIG.*
ES	5.5				<10			<5			16	20
ASI	<10	<10	30		<20			11	<10	40	90	
ASI	18	<10	<20	<20	<20	<20		<10	<10	<20	30	<20
ASI	15							<10				
ES	<5							<5				
ASI	* <10							<5				
ES	91							14				
ASI	41							<5				
ES	<5							10				
ASI	*10											

LAB	POND WATER						OUTFALL 001					
	COPPER	COPPER	ZINC	ZINC	ZINC	ZINC	COPPER	COPPER	ZINC	ZINC	ZINC	ZINC
	(2202)	(2202)	(200.7)	(200.7)	(289.1)	(289.1)	(2202)	(2202)	(200.7)	(200.7)	(289.1)	(289.1)
ASI	<10	10	<20	<20	<20	UNDIG.*	UNDIG.*	<10	<20	<20	UNDIG.*	UNDIG.*
ES	<5				<10			42			128	
ASI	<10	<10	40		70			105	131			
ASI	<10	<10	<20	<20	100	<20		15				
ES								<10				
ASI	* 10							<5				
ES	<5							<5				
ASI	*20							16				
ES								<5				
ASI								10				

OUTFALL WALL (5/26/94): 5 & <2 PPM
 ER (6/10/94)(EPA 220.2): <10 PPBCU

* CONTINUOUS COMPOSITE

Pond Dewatering Log Sheet

Date: 5-6-94

Shift: DAY

[illegible]

Time

Operator

Feed Sample:

Filtrate Sample:

Cake Sample:

Date: 5-6-94

Shift: Night[illegible]

Time

Operator

Feed Sample:

Filtrate Sample:

Cake Sample:

Date	5-2-94			
Proj. #	Start	End	Instrals	
1	8:45	9:25	JY	
2	10:30	11:25	JY	
		1:55	JY	
4	2:30	3:20	RLH	
5	4:00	5:05	ak	
Nitesh #6	6:15pm	7:15pm	DAO	
#7	7:50pm	8:45pm	DAO	
#8	9:15pm	10:15pm	DAO	
#9	10:35pm	11:30pm	DAO	
#10	11:55pm	1:00 AM	DAO	
Press DOWN #11	2:15 AM	5:05 AM	DAO	
2:40 #12	5:35 AM	6:30 AM	DAO	

~~XXXXXXXXXXXXXXXXXXXX~~
~~XXXXXXXXXXXX~~

Date: 5/1/94
Shift: N + E

[illegible]

Cake Sample:

Date: 5/1/94
Shift: day

Date: 5/1/94
Shift: day

[illegible]

Cake Sample:

* #3 drop at 2:55 sludge line
was sent down at 3:05 it was
extended

h2

Date: 7/29/94 Law

[illegible]

Feed Sample:
Filtrate Sample:
Cake Sample:

Time	Operator
------	----------

Date: 4/30/94
Shift: day

[illegible]

Feed Sample:
Filtrate Sample:
Cake Sample:

Time	Operator
------	----------

TOTAL SOLIDS ANALYSIS

SAMPLE NAME: _____ DATE SAMPLED: _____

METHOD SUMMARY: A PORTION OF A WELL MIXED SAMPLE IS WEIGHED, DRIED AT 103 C
- 105 C, AND REWEIGHED.

	BEFORE DRYING	AFTER DRYING	FURTHER DRYING
DATE ANALYZED:	_____	_____	_____
BY:	_____	_____	_____
TIME:	_____	_____	_____
WT. OF DISH & SAMPLE:	_____	_____	_____
PAN OR DISH WT.:	_____	_____	_____
NET SAMPLE WT	(A) _____	(B) _____	(C) _____

PERCENT SOLIDS = $\frac{\text{LOWEST READING, (B) OR (C)}}{(A)} \times 100\%$

TOTAL SOLIDS ANALYSIS

SAMPLE NAME: _____ DATE SAMPLED: _____

METHOD SUMMARY: A PORTION OF A WELL MIXED SAMPLE IS WEIGHED, DRIED AT 103 C
- 105 C, AND REWEIGHED.

	BEFORE DRYING	AFTER DRYING	FURTHER DRYING
DATE ANALYZED:	_____	_____	_____
BY:	_____	_____	_____
TIME:	_____	_____	_____
WT. OF DISH & SAMPLE:	_____	_____	_____
PAN OR DISH WT.:	_____	_____	_____
NET SAMPLE WT	(A) _____	(B) _____	(C) _____

PERCENT SOLIDS = $\frac{\text{LOWEST READING, (B) OR (C)}}{(A)} \times 100\%$

FIELD ANALYSIS: FILTER CAKE DENSITY

SAMPLE: FILTER CAKE COMPOSITE

DATE SAMPLED: _____

DATE ANALYZED: _____ BY: _____

METHOD: WATER DISPLACEMENT

WEIGH A SAMPLE AND IMMERSE IN WATER, MEASURING DISPLACEMENT IMMEDIATELY.

SAMPLE WEIGHT: _____ GM

INITIAL WATER LEVEL: _____ ML

FINAL WATER LEVEL: _____ ML

DISPLACEMENT: _____ ML (FINAL - INITIAL)

DENSITY: _____ GM/ML (SAMPLE WT/DISPLACEMENT)

OR _____ LB/FT³ (GM/ML x 62.4)

FIELD ANALYSIS: FILTER CAKE DENSITY

SAMPLE: FILTER CAKE COMPOSITE

DATE SAMPLED: _____

DATE ANALYZED: _____ BY: _____

METHOD: WATER DISPLACEMENT

WEIGH A SAMPLE AND IMMERSE IN WATER, MEASURING DISPLACEMENT IMMEDIATELY.

SAMPLE WEIGHT: _____ GM

INITIAL WATER LEVEL: _____ ML

FINAL WATER LEVEL: _____ ML

DISPLACEMENT: _____ ML (FINAL - INITIAL)

DENSITY: _____ GM/ML (SAMPLE WT/DISPLACEMENT)

OR _____ LB/FT³ (GM/ML x 62.4)

FIELD ANALYSIS: FILTER CAKE DENSITY

SAMPLE: FILTER CAKE COMPOSITE

DATE SAMPLED: _____

DATE ANALYZED: _____ BY: _____

METHOD: WATER DISPLACEMENT

WEIGH A SAMPLE AND IMMERSE IN WATER, MEASURING DISPLACEMENT IMMEDIATELY.

SAMPLE WEIGHT: _____ GM

INITIAL WATER LEVEL: _____ ML

FINAL WATER LEVEL: _____ ML

DISPLACEMENT: _____ ML (FINAL - INITIAL)

DENSITY: _____ GM/ML (SAMPLE WT/DISPLACEMENT)

OR _____ LB/FT³ (GM/ML x 62.4)

5/2/94

LTM

Cake dryness - assume 30% assume 75%¹⁵/CF
 Feed solids " 4%

24 drops (Friday 5pm - Mon⁵ 8:00am)

$$24^D (95\text{-CF/D}) (75\text{-}^{15}\text{/CF}) = 171,000^{15} \text{ CAKE}$$

85.5 Tons

$$\text{Feed: } 171,000^{15} (.3) \left(\frac{1.5 \text{ Feed}}{0.4^{15}} \right) \left(\frac{\text{GAK}}{8.5^{15}} \right) =$$

150,882 CA
747 CY

over 63 hrs ~ 40 gpm

$$\text{cycles: } 63 \text{ hr} / 24 \text{ drops} = 2.6$$

106

15
20
30
40
50
60
70
80
90
100

DEWATERING DATA

DATE	FEED'S DAILY CYCLES	FILTER CAKE PRODUCED (G/PS)	CLAR. SOLIDS (%)	CLAR. DENSITY (G/CM ³)	FILT. CAKE PRODUCED (G/PS)	FILT. CAKE SOLIDS (G/PS)	FILT. SOLIDS (%)	FILT. DENSITY (G/CM ³)	FILT. NOTE	BY MATERIAL BALANCE			COMBINATION				
										WATER TO FEED (G/PS)	WATER TO FEED (G/PS)	WATER TO FEED (G/PS)	WATER TO FEED (G/PS)	WATER TO FEED (G/PS)			
04/28/84	1	85	52.4%	(2)	58.1	(2)	4.15	1.9	4.0%	(1)	1500	(1)	41.58	47.58	57.59	1.61	47.4
04/29/84	2	190	25.0%	(1)	75.0	(1)	7.15	1.8	4.0%	(1)	1000	(1)	45.49	51.84	58.57	5.4	49.3
04/30/84	11	1045	15.7%	(2)	71.9	(1)	57.57	5.9	4.0%	(1)	1000	(1)	150.27	171.25	111.70	9.5	270.5
05/01/84	11	1045	22.1%	(2)	71.4	(2)	57.51	8.2	4.0%	(1)	1000	(1)	210.45	259.85	175.14	17.5	510.5
05/02/84	12	1140	25.0%	(1)	75.0	(1)	42.75	10.7	4.0%	(1)	1000	(1)	272.84	511.05	250.19	28.2	831.3
05/05/84	14	1550	28.2%	(2)	79.5	(2)	52.75	15.8	4.0%	(1)	1000	(1)	252.82	402.15	500.13	42.0	1225.5
05/06/84	14	1550	25.0%	(1)	75.0	(2)	40.53	12.5	4.0%	(1)	1000	(1)	518.45	542.89	268.59	24.5	1524.4
05/08/84	15	1425	25.0%	(1)	75.0	(2)	55.44	15.4	4.0%	(1)	1000	(1)	541.15	588.81	287.74	29.9	1975.2
05/09/84	8	790	25.0%	(1)	75.0	(2)	28.50	7.1	4.0%	(1)	1000	(1)	181.90	207.50	155.40	75.0	2132.8
05/07/84	9	855	25.0%	(1)	75.0	(2)	52.09	8.0	4.0%	(1)	1000	(1)	204.71	255.28	172.84	85.0	3415.9
05/08/84	11	1045	25.0%	(1)	75.0	(2)	59.19	9.2	4.0%	(1)	1000	(1)	250.20	285.13	211.01	92.5	2701.0
05/09/84	8	855	25.0%	(1)	75.0	(2)	52.09	8.0	4.0%	(1)	1000	(1)	204.71	255.28	172.84	100.8	2954.5
05/10/84	15	1425	50.1%	(2)	75.0	(2)	55.44	16.1	2.7%	(2)	1000	(1)	210.45	259.85	177.01	116.9	5174.1
05/11/84	12	1140	25.0%	(1)	75.0	(2)	42.75	10.7	4.0%	(1)	1000	(1)	272.84	511.05	250.19	127.8	5485.1
05/12/84																	
05/13/84																	
05/14/84	15	1425	25.0%	(1)	75.0	(2)	55.44	15.4	4.0%	(1)	1000	(1)	541.15	588.81	287.74	15.4	588.3
05/15/84	15	1425	25.0%	(1)	75.0	(2)	55.44	15.4	4.0%	(1)	1000	(1)	541.15	588.81	287.74	24.7	777.8
05/16/84																	
05/17/84																	
05/18/84																	
05/19/84																	
05/20/84																	
05/21/84																	
05/22/84																	

(1) ESTIMATE BASED ON PREVIOUS DATA

(2) SAMPLE ANALYSIS (LABORATORY OR FIELD)

WATER = FILT. CAKE - (FILT. CAKE SOLIDS CONC. - FILTRATE SOLIDS CONC.)
 (SLUDGE SOLIDS CONC. - FILTRATE SOLIDS CONC.)

AND FILTRATE = SLUDGE - FILT. CAKE

DEWATERING DATA

DATE	PRESS DAILY CYCLES	FILTER CAKE PRODUCED (CUYD)	CAKE SOLIDS (%)	CAKE DENSITY (LB/CF)	FILTER CAKE PRODUCED (TONS)	DRY SOLIDS PRODUCED (TONS)	REHD SOLIDS (%)	FILTRATE SOLIDS (PPM)	BY MATERIAL BALANCE *			CUMULATIVE				
									S. UDGER TO PRESS (TONS)	S. UDGER TO PRESS (CUYD)	FILTRATE FLOW (TONS)	DRY SOLIDS PRODUCED (TONS)	S. UDGER REMOVED (CUYD)			
04/28/94	1	95	40.0%	(1)	75 (1)	3.56	1.4	4.0%	(1)	1000	(1)	35.45	41.54	32.88	1.4	41.5
04/29/94	2	190	25.0%	(1)	75 (1)	7.13	1.8	4.0%	(1)	300	(1)	44.81	51.07	37.69	3.2	92.6
04/30/94	11	1045	30.0%	(1)	75 (1)	39.19	11.8	4.0%	(1)	300	(1)	295.83	337.13	256.64	15.0	429.7
05/01/94	11	1045	30.0%	(1)	75 (1)	39.19	11.8	4.0%	(1)	300	(1)	295.83	337.13	256.64	26.7	766.9
05/02/94	12	1140	30.0%	(1)	75 (1)	42.75	12.8	4.0%	(1)	300	(1)	322.72	367.78	279.97	39.5	1134.6

(1) ASSUMED
SLUDGE

$$= \text{FIL. CAKE} \times (\text{FIL. CAKE SOLIDS CONC.} - \text{FILTRATE SOLIDS CONC.})$$

$$(\text{SLUDGE SOLIDS CONC.} - \text{FILTRATE SOLIDS CONC.})$$

$$\text{AND FILTRATE} = \text{SLUDGE} - \text{FILTRATE CAKE}$$

Pond Dewatering Log Sheet

Date: 5-8-94

Shift: Day[illegible]

Time	Operator
------	----------

Feed Sample:

Filtrate Sample:

Cake Sample:

Date:

Shift: Night

[illegible]

Time	Operator
------	----------

Feed Sample:

Filtrate Sample:

Cake Sample:

Time	Operator
------	----------

**CERTIFICATION
OF
SURFACE IMPOUNDMENT CLOSURE**

The William L. Bonnell Company, Inc.
P.O. Box 428
Newnan, Georgia 30264

March 1996
Revised August 1996

VOLUME 2

Prepared by
EMCON
1560 Oakbrook Drive, Suite 100
Norcross, Georgia 30093

EMCON Project Number 72040.006.092

APPENDIX C

PERCENT SOLIDS LABORATORY TEST RESULTS



ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144
FAX (404) 892-2740 • Federal I.D. #58-1625655

LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

October 7, 1994

P.O. No. 205562-OP

Attention: Mr. Loren McCune

Report No. 56010-1

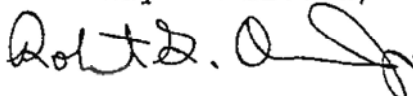
Sample: Filter Cake, composite, Pond Dewatering, May, 9/29/94, 8:00,
received 10/3/94

RESULTS

	<u>Result</u>	<u>Detection Limit</u>
Total Aluminum (Al) (%) (EPA 6010).....	11.5	0.001
Total Calcium (Ca) (%) (EPA 6010).....	7.2	0.005
Total Solids (%) (EPA 160.3).....	26.8	0.06

Note: Results reported on dry-weight basis

Respectfully submitted,

By: 

cc: Mr. Terry Snell



ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144
FAX (404) 892-2740 • Federal I.D. #58-1625655

LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

October 7, 1994

P.O. No. 205562-OP

Attention: Mr. Loren McCune

Report No. 56010-2

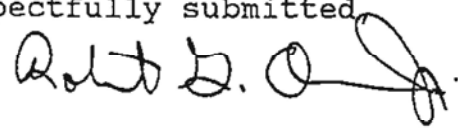
Sample: Filter Cake, composite, Pond Dewatering, Sept, 9/29/94, 8:00,
received 10/3/94

RESULTS

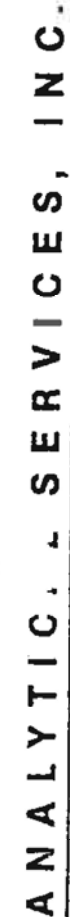
	<u>Result</u>	<u>Detection Limit</u>
Total Aluminum (Al) (%) (EPA 6010)	10.7	0.001
Total Calcium (Ca) (%) (EPA 6010)	3.5	0.005
Total Solids (%) (EPA 160.3)	30.4	0.03

Note: Results reported on dry-weight basis

Respectfully submitted

By: 

cc: Mr. Terry Snell



ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS

CHAIN OF CUSTODY RECORD

390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144

FAX (404) 892-2740 • Federal I.D. # 58-1625655

PROJECT NUMBER 205562-OP		PROJECT NAME Pond decontaminy		CLIENT NAME William L. Bynell		PROJECT MANAGER Loren McCune		REQUESTED COMP. DATE 3 DAYS		DATE		TIME		STA NO.		DATE		TIME		STA NO.	



ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144
FAX (404) 892-2740 • Federal I.D. #58-1625655

LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

February 9, 1994

P.O. No. 37614-OP

Attention: Mr. Loren McCune

Report No. 48841

Sample: Filter Cake, composite, Surface Impoundment Closure, Project
#1.2026.35, FCA-12694 (Four Seasons), 1/26/94, received 1/27/94

RESULTS

	<u>Result</u>	<u>Detection Limit</u>
Water Content (Karl Fisher) (%) (ASTM E203)	46.0	0.1
Total Solids (%) (EPA 160.3)	46.4	0.01

ICP Scan - Full

Total Silver (Ag) (mg/kg) (EPA 6010)	BDL	1.0
Total Aluminum (Al) (mg/kg) (EPA 6010)	30000	10
Total Arsenic (As) (mg/kg) (EPA 6010)	BDL	5.0
Total Boron (B) (mg/kg) (EPA 6010)	31	4.0
Total Barium (Ba) (mg/kg) (EPA 6010)	110	1.0
Total Beryllium (Be) (mg/kg) (EPA 6010)	BDL	1.0
Total Calcium (Ca) (mg/kg) (EPA 6010)	96000	50
Total Cadmium (Cd) (mg/kg) (EPA 6010)	BDL	1.0
Total Cobalt (Co) (mg/kg) (EPA 6010)	BDL	4.0
Total Chromium (Cr) (mg/kg) (EPA 6010)	53	1.0

BDL - Below Detection Limit

RESULTS

	<u>Result</u>	<u>Detection Limit</u>
Total Copper (Cu) (mg/kg) (EPA 6010).....	120	2.0
Total Iron (Fe) (mg/kg) (EPA 6010).....	2610	4.0
Total Potassium (K) (mg/kg) (EPA 6010).....	2200	2.0
Total Magnesium (Mg) (mg/kg) (EPA 6010).....	4810	5.0
Total Manganese (Mn) (mg/kg) (EPA 6010).....	60	4.0
Total Molybdenum (Mo) (mg/kg) (EPA 6010).....	2.8	2.0
Total Sodium (Na) (mg/kg) (EPA 6010).....	1600	5.0
Total Nickel (Ni) (mg/kg) (EPA 6010).....	110	2.0
Total Phosphorus (P) (mg/kg) (EPA 6010).....	8100	2.0
Total Lead (Pb) (mg/kg) (EPA 6010).....	8.6	2.5
Total Antimony (Sb) (mg/kg) (EPA 6010).....	BDL	5.0
Total Selenium (Se) (mg/kg) (EPA 6010).....	-	-
Acid Soluble Silica (SiO ₂) (mg/kg) (EPA 6010).....	10000	4.0
Total Strontium (Sr) (mg/kg) (EPA 6010).....	31	1.0
Total Thallium (Tl) (mg/kg) (EPA 6010).....	-	-
Total Titanium (Ti) (mg/kg) (EPA 6010).....	-	-
Total Vanadium (V) (mg/kg) (EPA 6010).....	120	2.0
Total Zinc (Zn) (mg/kg) (EPA 6010).....	41	2.0

BDL - Below Detection Limit

Respectfully submitted,

By:

Denise A. Deier

cc: Mr. David Buchalter
EMCON - Atlanta



ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144
FAX (404)892-2740 • Federal I.D. #58-1625655

LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

February 10, 1994

P.O. No. 37614-OP

Attention: Mr. Loren McCune

Report No. 48841AT1

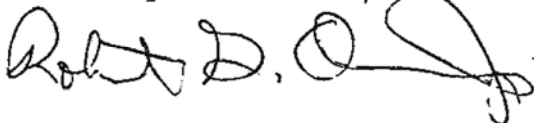
Sample: Filter Cake, composite, Surface Impoundment Closure, Project
#1.2026.35, FCA-12694 (Four Seasons), 1/26/94, received 1/27/94

RESULTS

	<u>Result</u>	<u>Detection Limit</u>
Total Calcium (Ca) (mg/kg) (EPA 7140).....	81000	1.0
Total Aluminum (Al) (mg/kg) (EPA 7020).....	25000	1
Total Magnesium (Mg) (mg/kg) (EPA 7450).....	9100	0.1

BDL - Below Detection Limit

Respectfully submitted,

By: 

cc: Mr. David Buchalter
EMCON - Atlanta



ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS

CHAIN OF CUSTODY RECORD

390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144

FAX (404) 892-2740 • Federal I.D. # 58-1625655

[illegible]



ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144
FAX (404) 892-2740 • Federal I.D. #58-1625655

LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

January 21, 1994

P.O. No. 37370-OP

Attention: Mr. Terry Snell

Report No. 48642-4

Sample: Four Seasons Filter Cake, Surface Impoundment Closure, Project
#1.2026.35, Composite of FC-11494A-I, 1/14/94, received 1/18/94

RESULTS

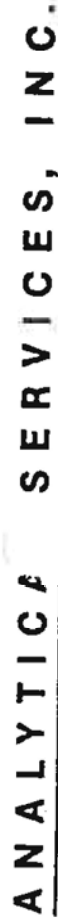
	<u>Result</u>	<u>Detection Limit</u>
Total Aluminum (Al) (mg/kg) (EPA 6010).....	28000	10
Total Calcium (Ca) (mg/kg) (EPA 6010).....	56000	50
Total Solids (%) (EPA 160.3).....	46	0.01

Respectfully submitted,

By:

Denise A. Oliver

cc: Mr. David Buchalter
EMCON



ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS

CHAIN OF CUSTODY RECORD

390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144

FAX (404) 892-2740 • Federal I.D. # 58-1625655

PROJECT NUMBER	PROJECT NAME	CLIENT ADDRESS AND PHONE NUMBER	FOR LAB USE ONLY
1, 2026, 35	W.C. Imp. Closure	P.O. Box 488 Newman, Ga. 30264	LAB Composite: 418642
CLIENT NAME	PROJECT MANAGER	PROJECT NO.	LAB #
William C. Bonnell Co.	T.D. Sweet	ASAP next to D. Sweet	418645
PROJECT MANAGER	COPY TO:	ACK	VERIFIED
T.D. Sweet	D. Bonnell Enron S.E.		
REQUESTED COMP. DATE	SAMPLING REQUIREMENTS	QUOTE #	BS
ASAP next to D. Sweet	SDWA NPDES RCRA OTHER	NO. OF SAMP	PG
	☐ ☐ ☐ ☒	OF	2
STA NO.	DATE	TIME	REMARKS
11494-A	1-14	13:30	ONE SEASON'S FIBER PAPER EFFLUENT
11494-B	1-14	14:30	"
11494-C	1-14	15:30	"
11494-D	1-14	16:30	"
11494-E	1-14	17:30	"
11494-F	1-14	18:00	"
11494-G	1-14	19:00	"
11494-H	1-14	20:00	"
11494-I	1-14	21:00	"
11494-J	1-14	22:00	"
11494-K	1-14	23:00	"
11494-L	1-14	24:00	"
11494-M	1-14	25:00	"
11494-N	1-14	26:00	"
11494-O	1-14	27:00	"
11494-P	1-14	28:00	"
11494-Q	1-14	29:00	"
11494-R	1-14	30:00	"
11494-S	1-14	31:00	"
11494-T	1-14	32:00	"
11494-U	1-14	33:00	"
11494-V	1-14	34:00	"
11494-W	1-14	35:00	"
11494-X	1-14	36:00	"
11494-Y	1-14	37:00	"
11494-Z	1-14	38:00	"
11494-AA	1-14	39:00	"
11494-AB	1-14	40:00	"
11494-AC	1-14	41:00	"
11494-AD	1-14	42:00	"
11494-AE	1-14	43:00	"
11494-AF	1-14	44:00	"
11494-AG	1-14	45:00	"
11494-AH	1-14	46:00	"
11494-AI	1-14	47:00	"
11494-AJ	1-14	48:00	"
11494-AL	1-14	49:00	"
11494-AM	1-14	50:00	"
11494-AN	1-14	51:00	"
11494-AO	1-14	52:00	"
11494-AP	1-14	53:00	"
11494-AQ	1-14	54:00	"
11494-AR	1-14	55:00	"
11494-AS	1-14	56:00	"
11494-AT	1-14	57:00	"
11494-AU	1-14	58:00	"
11494-AV	1-14	59:00	"
11494-AW	1-14	60:00	"
11494-AX	1-14	61:00	"
11494-AY	1-14	62:00	"
11494-AZ	1-14	63:00	"
11494-BA	1-14	64:00	"
11494-BB	1-14	65:00	"
11494-BC	1-14	66:00	"
11494-BD	1-14	67:00	"
11494-BE	1-14	68:00	"
11494-BF	1-14	69:00	"
11494-BG	1-14	70:00	"
11494-BH	1-14	71:00	"
11494-BI	1-14	72:00	"
11494-BJ	1-14	73:00	"
11494-BK	1-14	74:00	"
11494-BL	1-14	75:00	"
11494-BM	1-14	76:00	"
11494-BN	1-14	77:00	"
11494-BO	1-14	78:00	"
11494-BP	1-14	79:00	"
11494-BQ	1-14	80:00	"
11494-BR	1-14	81:00	"
11494-BS	1-14	82:00	"
11494-BT	1-14	83:00	"
11494-BU	1-14	84:00	"
11494-BV	1-14	85:00	"
11494-BW	1-14	86:00	"
11494-BX	1-14	87:00	"
11494-BY	1-14	88:00	"
11494-BZ</			



ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS

390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144

FAX (404) 892-2740 • Federal I.D. # 58-1625655

CHAIN OF CUSTODY RECORD

PROJECT NUMBER A-2024-35		PROJECT NAME Suff. Imp. Closure	
CLIENT NAME William L. Barner Co		CLIENT ADDRESS AND PHONE NUMBER P.O. Box 428 Newman, GA 30264	
PROJECT MANAGER T.O. SWEEL		COPY TO: D. Buxantrex Encon S.E.	
REQUESTED COMP. DATE ASAP per T.O. SWEEL		SAMPLING REQUIREMENTS SDWA ☐ NPDES ☐ RCRA ☐ OTHER ☒	
STA NO.	DATE	TIME	SAMPLE DESCRIPTIONS
MS-11494-A	1-14	15:05	FOUR SENSORS SHAKER LOW SURGE
MS-11494-B	1-14	15:31	"
MS-11494-C	1-14	16:57	"
FC-11494-A	1-14	14:25	FOUR SENSORS FLUX-CAGE
FC-11494-B	1-14	16:00	"
FC-11494-C	1-14	17:50	"
FC-11494-D	1-14	14:45	"
FC-11494-E	1-14	16:10	"
FC-11494-F	1-14	18:00	"
FC-11494-G	1-14	14:50	"
FC-11494-H	1-14	16:20	"
FC-11494-I	1-14	18:10	"
SAMPLING BY AND TITLE Joe Lewis - Tech			
DATE/TIME 1/18/94 16:15			
RECEIVED BY: Adonina Chappell			
DATE/TIME 1/18/94 16:15			
RECEIVED BY: E. Martinez			
DATE/TIME 1/18/94 6:04			
RECEIVED BY: G. DOMIN			
DATE/TIME 1/19/94 10:20			
REMARKS P.O. # 373 P-OP per T.O. SWEEL 1-18-94			
SAMPLE SHIPPED VIA UPS ☒ BUS ☐ FED-EX ☐ OTHER ☐			
AIR BILL #			
RELINQUISHED BY: Joe Lewis - Tech			
DATE/TIME 1-18-94 16:15			
RELINQUISHED BY: Adonina Chappell			
DATE/TIME 1/18/94 18:01			
RELINQUISHED BY:			
DATE/TIME			
SAMPLE COND. GOOD			
HAZWRAP/NEESA Y N			
QC LEVEL 2 3			
COC ☒ ICE ☐			
ANA REQ ☐ TEMP ☐			
CUST SEAL ☐ PH ☐			
LAB# Composite: 48642			
LAB# Regular: 48645			
PROJECT# Film Dust: 48647			
ACK VERIFIED			
QUOTE# BS			
NO. OF SAMP PG 2 OF 2			
REMARKS 3rd report per RGO can composite of shaker sensors ledge for 75 105, 75 185 Aish and mix with kiln dust per RGO's calculations for same tests, standard T.T., 1/17/94 J.F.			



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ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
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LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

January 12, 1994

P.O. No. 36644-OP

Attention: Mr. Terry Snell

Report No. 48382-1

Sample: Four Season's Filter Cake, grab, Surface Impoundment Closure,
Project #1.2026.35, FPC 1594-1A, 1/5/94, 14:05, received 1/7/94

RESULTS

	<u>Result</u>	<u>Detection Limit</u>
Total Solids (%) (EPA 160.3)	50	0.01
Total Solids (%) (EPA 160.3) (at 185°F)	51	0.01
Ash (%) (EPA 160.4)	47.1	0.01
Specific Gravity (SM 213-E)	1.51	-

Respectfully submitted,

By:

Denise L. Dean

cc: Mr. Dave Buchalter
EMCON SE



ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144
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LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

January 12, 1994

P.O. No. 36644-OP

Attention: Mr. Terry Snell

Report No. 48382-2

Sample: Four Season's Filter Cake, grab, Surface Impoundment Closure,
Project #1.2026.35, FPC 1594-1B, 1/5/94, 15:30, received 1/7/94

RESULTS

HOLD UNTIL FURTHER NOTICE

Respectfully submitted,

By:

Denise S. Deier

cc: Mr. Dave Buchalter
EMCON SE



ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144
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LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

January 12, 1994

P.O. No. 36644-OP

Attention: Mr. Terry Snell

Report No. 48382-3

Sample: Four Season's Filter Cake, grab, Surface Impoundment Closure,
Project #1.2026.35, FPC 1594-1C, 1/5/94, 22:00, received 1/7/94

RESULTS

HOLD UNTIL FURTHER NOTICE

Respectfully submitted,

By:

Denise A. Decker

cc: Mr. Dave Buchalter
EMCON SE



ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144
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LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

January 12, 1994

P.O. No. 36644-OP

Attention: Mr. Terry Snell

Report No. 48382-4

Sample: Four Season's Filter Cake, grab, Surface Impoundment Closure,
Project #1.2026.35, FPC 1694-1D, 1/6/94, 1:10, received 1/7/94

RESULTS

HOLD UNTIL FURTHER NOTICE

Respectfully submitted,

By:

A handwritten signature in cursive script, reading "Denise A. Deier", is written over the "By:" line.

cc: Mr. Dave Buchalter
EMCON SE



ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
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FAX (404)892-2740 • Federal I.D. #58-1625655

LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

January 12, 1994

P.O. No. 36644-OP

Attention: Mr. Terry Snell

Report No. 48382-5

Sample: Four Season's Filter Cake, grab, Surface Impoundment Closure,
Project #1.2026.35, FPC 1594-2A, 1/5/94, 14:15, received 1/7/94

RESULTS

	<u>Result</u>	<u>Detection Limit</u>
Total Solids (%) (EPA 160.3).....	50	0.01
Total Solids (%) (EPA 160.3) (at 185°F).....	50	0.01
Ash (%) (EPA 160.4).....	46.3	0.01
Specific Gravity (SM 213-E).....	1.47	-

Respectfully submitted,

By: *Denise A. Dier*

cc: Mr. Dave Buchalter
EMCON SE



ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
390 TRABERT AVENUE • ATLANTA, GEORGIA 30309- • (404) 892-8144
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LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

January 12, 1994

P.O. No. 36644-OP

Attention: Mr. Terry Snell

Report No. 48382-6

Sample: Four Season's Filter Cake, grab, Surface Impoundment Closure,
Project #1.2026.35, FPC 1594-2B, 1/5/94, 15:40, received 1/7/94

RESULTS

HOLD UNTIL FURTHER NOTICE

Respectfully submitted,

By:

A handwritten signature in cursive script, reading "Denise A. Deier", is written over the "By:" line.

cc: Mr. Dave Buchalter
EMCON SE



ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
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FAX (404)892-2740 ● Federal I.D. #58-1625655

LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

January 12, 1994

P.O. No. 36644-OP

Attention: Mr. Terry Snell

Report No. 48382-7

Sample: Four Season's Filter Cake, grab, Surface Impoundment Closure,
Project #1.2026.35, FPC 1594-2C, 1/5/94, 19:15, received 1/7/94

RESULTS

HOLD UNTIL FURTHER NOTICE

Respectfully submitted,

By:

Denise A. Deier

cc: Mr. Dave Buchalter
EMCON SE

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ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
390 TRABERT AVENUE ● ATLANTA, GEORGIA 30309 ● (404) 892-8144
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LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

January 12, 1994

P.O. No. 36644-OP

Attention: Mr. Terry Snell

Report No. 48382-8

Sample: Four Season's Filter Cake, grab, Surface Impoundment Closure,
Project #1.2026.35, FPC 1694-2D, 1/6/94, 1:00, received 1/7/94

RESULTS

HOLD UNTIL FURTHER NOTICE

Respectfully submitted,

By: *Denise S. Dier*

cc: Mr. Dave Buchalter
EMCON SE



ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144
FAX (404) 892-2740 • Federal I.D. #58-1625655

LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

January 12, 1994

P.O. No. 36644-OP

Attention: Mr. Terry Snell

Report No. 48382-9

Sample: Four Season's Filter Cake, grab, Surface Impoundment Closure,
Project #1.2026.35, FPC 1594-3A, 1/5/94, 14:50, received 1/7/94

RESULTS

	<u>Result</u>	<u>Detection Limit</u>
Total Solids (%) (EPA 160.3).....	47	0.01
Total Solids (%) (EPA 160.3) (at 185°F).....	44	0.01
Ash (%) (EPA 160.4).....	40.2	0.01
Specific Gravity (SM 213-E).....	1.42	-

Respectfully submitted,

By: *Denise A. Oliver*

cc: Mr. Dave Buchalter
EMCON SE

ASI

ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
390 TRABERT AVENUE ● ATLANTA, GEORGIA 30309- ● (404) 892-8144
FAX (404) 892-2740 ● Federal I.D. #58-1625655

LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

January 12, 1994

P.O. No. 36644-OP

Attention: Mr. Terry Snell

Report No. 48382-10

Sample: Four Season's Filter Cake, grab, Surface Impoundment Closure,
Project #1.2026.35, FPC 1594-3B, 1/5/94, 17:55, received 1/7/94

RESULTS

HOLD UNTIL FURTHER NOTICE

Respectfully submitted,

By:

Denise A. Oliver

cc: Mr. Dave Buchalter
EMCON SE



ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144
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LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

January 12, 1994

P.O. No. 36644-OP

Attention: Mr. Terry Snell

Report No. 48382-11

Sample: Four Season's Filter Cake, grab, Surface Impoundment Closure,
Project #1.2026.35, FPC 1594-3C, 1/5/94, 21:40, received 1/7/94

RESULTS

HOLD UNTIL FURTHER NOTICE

Respectfully submitted,

By:

Denise S. Deier

cc: Mr. Dave Buchalter
EMCON SE



ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144
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LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

January 12, 1994

P.O. No. 36644-OP

Attention: Mr. Terry Snell

Report No. 48382-12

Sample: Four Season's Filter Cake, grab, Surface Impoundment Closure,
Project #1.2026.35, FPC 1694-3D, 1/6/94, 00:50, received 1/7/94

RESULTS

HOLD UNTIL FURTHER NOTICE

Respectfully submitted,

By:

A handwritten signature in cursive script, reading "Denise A. Oliver".

cc: Mr. Dave Buchalter
EMCON SE



ANALYTICA SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS

390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144

FAX (404) 892-2740 • Federal I.D. # 58-1625655

CHAIN OF CUSTODY RECORD

PROJECT NUMBER 1.2026-35		PROJECT NAME Surf. Twp. Closure		CLIENT ADDRESS AND PHONE NUMBER		FOR LAB USE ONLY					
CLIENT NAME William L. Bonnell Co.		PROJECT MANAGER TERRY D. SNELL		PROJECT NO.		LAB # 48382					
REQUESTED COMP. DATE HOLD (SEE REMARKS)		COPY TO: D. Buchalter B. Delahaye B. Delahaye		ACK		VERIFIED					
SAMPLING REQUIREMENTS SOWA NPDES RCRA OTHER		SAMPLING REQUIREMENTS SOWA NPDES RCRA OTHER		QUOTE #		BS					
SAMPLING REQUIREMENTS SOWA NPDES RCRA OTHER		SAMPLING REQUIREMENTS SOWA NPDES RCRA OTHER		NO. OF SAMP		PG					
SAMPLING REQUIREMENTS SOWA NPDES RCRA OTHER		SAMPLING REQUIREMENTS SOWA NPDES RCRA OTHER		OF		OF					
STA NO.	DATE	TIME	SAMPLE DESCRIPTIONS	ANALYSES REQUESTED				REMARKS			
FPC 1594-1A	1/5/94	14:05	FOUR SEASONS FILTER CAKE	IS @ 105				* HOLD UNTIL GIVEN			
FPC 1594-1B	1/5/94	15:30		LOT = 4.5				GO-AHEAD FROM			
FPC 1594-1C	1/5/94	22:00		SPECIFIC GRAVITY				TERRY SNELL			
FPC 1594-1D	1/6/94	1:10		TOTAL SOLIDS				(BRUNNELL)			
FPC 1594-2A	1/5/94	14:15		per RGO							
FPC 1594-2B	1/5/94	15:40		TS 185, Ash							
FPC 1594-2C	1/5/94	19:15		Spec Grav on							
FPC 1594-2D	1/6/94	1:00		FPC 1594-1A							
FPC 1594-3A	1/5/94	14:50		FPC 1594-2A							
FPC 1594-3B	1/5/94	17:55		FPC 1594-3A							
FPC 1594-3C	1/5/94	21:40		Held other							
FPC 1594-3D	1/6/94	00:50		samples							
				1/7/94 JEM							
SAMPLED BY AND TITLE JOE LEWIS / TECH				DATE/TIME 1-6-94 18:55				HAZWAP/NEESA Y N			
RECEIVED BY Buckley				DATE/TIME 1/6/94 18:00				COC LEVEL 1 2 3			
RECEIVED BY				DATE/TIME				COC			
RECEIVED BY				DATE/TIME				ANA REQ			
RECEIVED BY				DATE/TIME				CUST SEAL			
RECEIVED BY				DATE/TIME				PH			
RECEIVED BY				DATE/TIME				SAMPLE COND			
RECEIVED BY				DATE/TIME				AIR BILL #			
RECEIVED BY				DATE/TIME				ENTERED INTO LIMS			
RECEIVED BY				DATE/TIME				COC REVIEW			

ASI**ANALYTICAL SERVICES, INC.**

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144
FAX (404) 892-2740 • Federal I.D. #58-1625655

LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

January 14, 1994

P.O. No. ~~13371-OP~~ 36444-c

Attention: Mr. Terry Snell

Report No. 48331

Sample: Four Season's Filter Cake, grab, Surface Impoundment Closure,
Project #1.2026.35, FC-101, 1/4/94, received 1/5/94

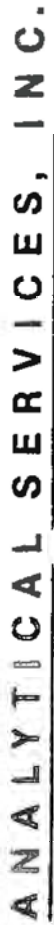
RESULTS

	<u>Result</u>	<u>Detection Limit</u>
Total Solids (%) (EPA 160.3)	51	5
Specific Gravity (SM 213-E)	1.46	-

Respectfully submitted,

By: *Denise A. Oliver*

cc: Mr. Dave Buchalter
EMCON SE



DRUG & LABORATORY ANALYSIS

390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144

FAX (404) 892-2740 • Federal I.D. # 58-1625655

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ASI**ANALYTICAL SERVICES, INC.**

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
390 TRABERT AVENUE • ATLANTA, GEORGIA 30309. • (404) 892-8144
FAX (404) 892-2740 • Federal I.D. #58-1625655

LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

January 14, 1994

P.O. No. 36644-OP

Attention: Mr. Terry D. Snell

Report No. 48248

Sample: Four Season's Filter Cake, grab, Surface Impoundment Closure,
Project #1.2026.35, FC-95, 12/29/93, received 12/30/93

RESULTS

	<u>Result</u>	<u>Detection Limit</u>
Total Solids (%) (EPA 160.3).....	45	5
Specific Gravity (SM 213-E).....	1.40	-

Respectfully submitted,

By:

Denise A. Oliver

cc: Mr. Dave Buchalter
EMCON SE



ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS

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FAX (404) 892-2740 • Federal I.D. # 58-1625655

CHAIN OF CUSTODY RECORD

[illegible]

ASI**ANALYTICAL SERVICES, INC.**

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144
FAX (404)892-2740 • Federal I.D. #58-1625655

LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

January 3, 1994

P.O. No. 36391-OP

Attention: Mr. Terry Snell

Report No. 48074

Sample: Four Season's Filter Cake, grab, Surface Impoundment Closure,
Project #1.2026.35, FC-89, 12/19/93, received 12/21/93

RESULTS

	<u>Result</u>	<u>Detection Limit</u>
Total Solids (mg/kg) (EPA 160.3).....	450000	110
Specific Gravity (SM 213-E).....	1.37	-

Respectfully submitted,

By: *Denise A. Deier*

cc: Mr. Dave Buchalter
EMCON SE



ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS

CHAIN OF CUSTODY RECORD

390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144

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[illegible]



ANALYTICAL SERVICES, INC.

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LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

January 3, 1994

P.O. No. 13371-OP

Attention: Mr. Terry Snell

Report No. 47774

Sample: Four Season's Filter Cake, grab, Surface Impoundment Closure,
Project #1.2026.35, FC-37, 10/23/93, received 12/10/93

RESULTS

	<u>Result</u>	<u>Detection Limit</u>
Total Solids (mg/kg) (EPA 160.3).....	430000	128
Specific Gravity (SM 213-E).....	1.31	-

Respectfully submitted,

By: *Denise L. Dele*

cc: Mr. Dave Buchalter
EMCON SE



ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS

390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144

FAX (404) 892-2740 • Federal I.D. # 58-1625655

PROJECT NUMBER	PROJECT NAME	CLIENT NAME	PROJECT MANAGER	REQUESTED COMP. DATE	STA NO.	DATE	TIME	C O M P	G R A I	S O I L	SAMPLE DESCRIPTIONS	# OF CONTAINERS	ANALYSES REQUESTED	CLIENT ADDRESS AND PHONE NUMBER	FOR LAB USE ONLY
1.2026.35	Swales Imp. Co.	William C. Swales Co.	T.O. Swale	None	FE-39	12/13	~	X	X	X	Four Sensors Filled Cans	1	TEMP SENS FRESHING CLEANS	P.O. Box 428 Akron, OH 44304 444-253-2020	LAB# 47774 LAB# PROJECT NO. ACK VERIFIED QUOTE# BS NO. OF SAMP PG OF REMARKS
RECEIVED BY: <i>Joe Lewis</i> DATE/TIME: <i>12/10/93</i> 1650 RECEIVED BY: <i>Joe Lewis</i> DATE/TIME: <i>12/10/93</i> 4:49 RECEIVED BY: <i>Joe Lewis</i> DATE/TIME: <i>12/10/93</i> 5:52 REMARKS: <i>ASI 1-b 1 container</i>															



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FAX (404) 892-2740 • Federal I.D. #58-1625655

LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

May 12, 1994

P.O. No. 200933-OP

Attention: Mr. Darold Wiggins

Report No. 51723-2

Sample: Filter Cake, composite, Pond Dewatering, 5/6/94, received 5/9/94

RESULTS

	<u>Result</u>	<u>Detection Limit</u>
Total Solids (mg/kg) (EPA 160.3).....	300000	83

Respectfully submitted,

By: *Denise L. Dier*

cc: Mr. Loren McCune



ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
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FAX (404) 892-2740 • Federal I.D. #58-1625655

LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

May 12, 1994

P.O. No. 2009330P

Attention: Mr. Darold Wiggins

Report No. 51661-1

Sample: Filter Cake, composite, Pond Dewatering, 5/5/94, received 5/6/94

RESULTS

	<u>Result</u>	<u>Detection Limit</u>
Total Solids (mg/kg) (EPA 160.3)	330000	113

Respectfully submitted,

By: *Denise A. Dier*

cc: Mr. Loren McCune



ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS
390 TRABERT AVENUE • ATLANTA, GEORGIA 30309 • (404) 892-8144
FAX (404) 892-2740 • Federal I.D. #58-1625655

LABORATORY REPORT

William L. Bonnell Co. Inc.
PO Box 428
Newnan, GA 30264

May 11, 1994

P.O. No. 200933-OP

Attention: Mr. Darold Wiggins

Report No. 51643-2

Sample: Filter Cake, composite, Pond Dewatering, 5/4/94, received 5/5/94

RESULTS

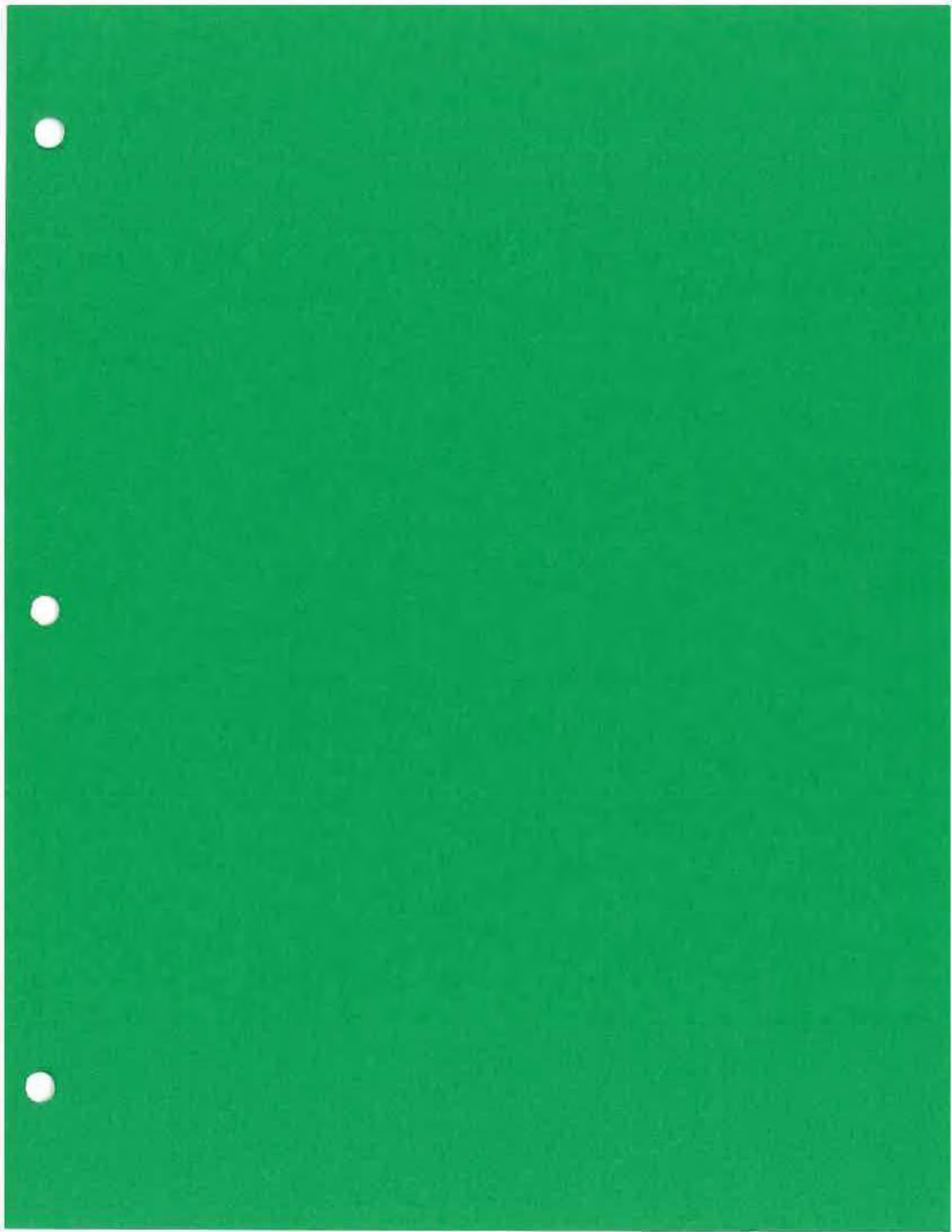
	<u>Result</u>	<u>Detection Limit</u>
Total Solids (mg/kg) (EPA 160.3)	320000	83

Respectfully submitted,

By:

Denise A. Oliver

cc: Mr. Loren McCune



APPENDIX D

RESULTS OF PROCTOR DENSITY TEST

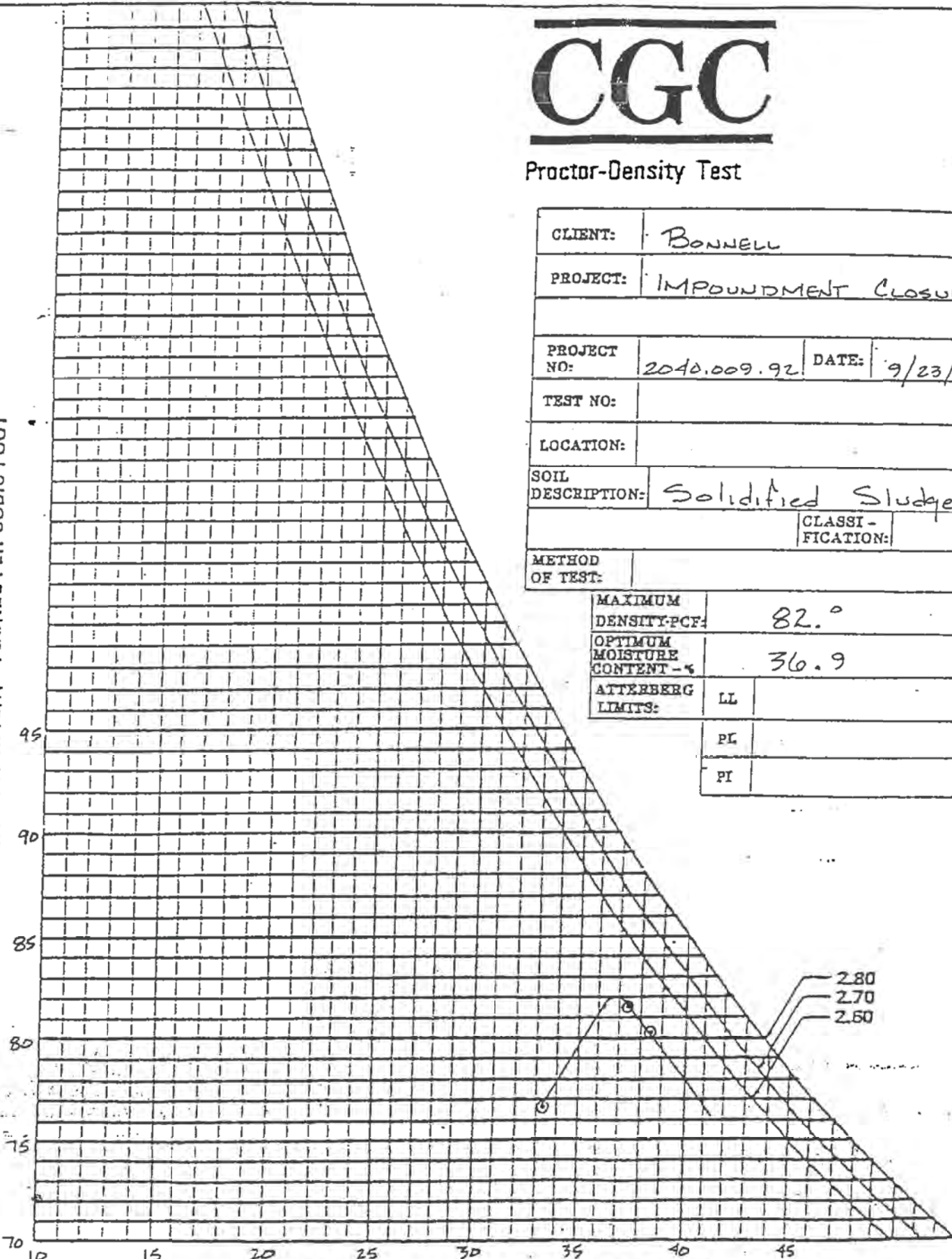
CGC

Proctor-Density Test

CLIENT:	BONNELL		
PROJECT:	IMPOUNDMENT CLOSURE		
PROJECT NO:	2040.009.92	DATE:	9/23/93
TEST NO:			
LOCATION:			
SOIL DESCRIPTION:	Solidified Sludge		
METHOD OF TEST:		CLASSIFICATION:	

MAXIMUM DENSITY-PCF:	82.0
OPTIMUM MOISTURE CONTENT-%	36.9
ATTERBERG LIMITS:	LL
	PL
	PI

DRY UNIT WEIGHT - POUNDS PER CUBIC FOOT



WATER CONTENT - PER CENT OF DRY WEIGHT

CGC

Proctor-Density Test

CLIENT:	BONNELL		
PROJECT:	IMPOUNDMENT CLOSURE		
PROJECT NO:	2040.009.92	DATE:	10/13/93
TEST NO:			
LOCATION:			
SOIL DESCRIPTION:	Solidified Sludge		
with a 20% Portland	CLASSI- FICATION:	N/A	
METHOD OF TEST:			
MAXIMUM DENSITY-PCF:	87.9		
OPTIMUM MOISTURE CONTENT-%	33.8		
ATTERBERG LIMITS:	LL		
	PL		
	PI		

DRY UNIT WEIGHT - POUNDS PER CUBIC FOOT

95

90

85

80

75

70

10

15

20

25

30

35

40

45

WATER CONTENT - PER CENT OF DRY WEIGHT

2.80

2.70

2.60



Proctor-Density Test

CLIENT:	Bennell		
PROJECT:	Impoundment Closures		
PROJECT NO:	2040.009.92	DATE:	10/28/93
TEST NO:			
LOCATION:			
SOIL DESCRIPTION:	FILLER CANKS		
WITH 30% Lime Kiln:	CLASSIFICATION:	N/A	
METHOD OF TEST:			

MAXIMUM DENSITY-PCF:	57.2
OPTIMUM MOISTURE CONTENT-%	53.0
ATTERBERG LIMITS:	LL
	PL
	PI

DRY UNIT WEIGHT - POUNDS PER CUBIC FOOT

35
40
45
50
55
60

0 20 40 60 80 100 120 140
WATER CONTENT - PER CENT OF DRY WEIGHT

2.80
2.70
2.60

CGC

Proctor-Density Test

DRY UNIT WEIGHT - POUNDS PER CUBIC FOOT

75
70
65
60
55
50
45
40
35
30
25
20

20 40 60 80 100 120 140 160 180

WATER CONTENT - PER CENT OF DRY WEIGHT

CLIENT:	Bennell		
PROJECT:	Impoundment Closures		
PROJECT NO:	2040.009.92	DATE:	10/28/93
TEST NO:			
LOCATION:			
SOIL DESCRIPTION:	Filter Cake		
With 10% Petroleum	CLASSIFICATION:	N/A	
METHOD OF TEST:			
MAXIMUM DENSITY-PCF:	54.0		
OPTIMUM MOISTURE CONTENT-%	68.0		
ATTERBERG LIMITS:	LL		
	PL		
	PI		

2.80
2.70
2.60

CGC

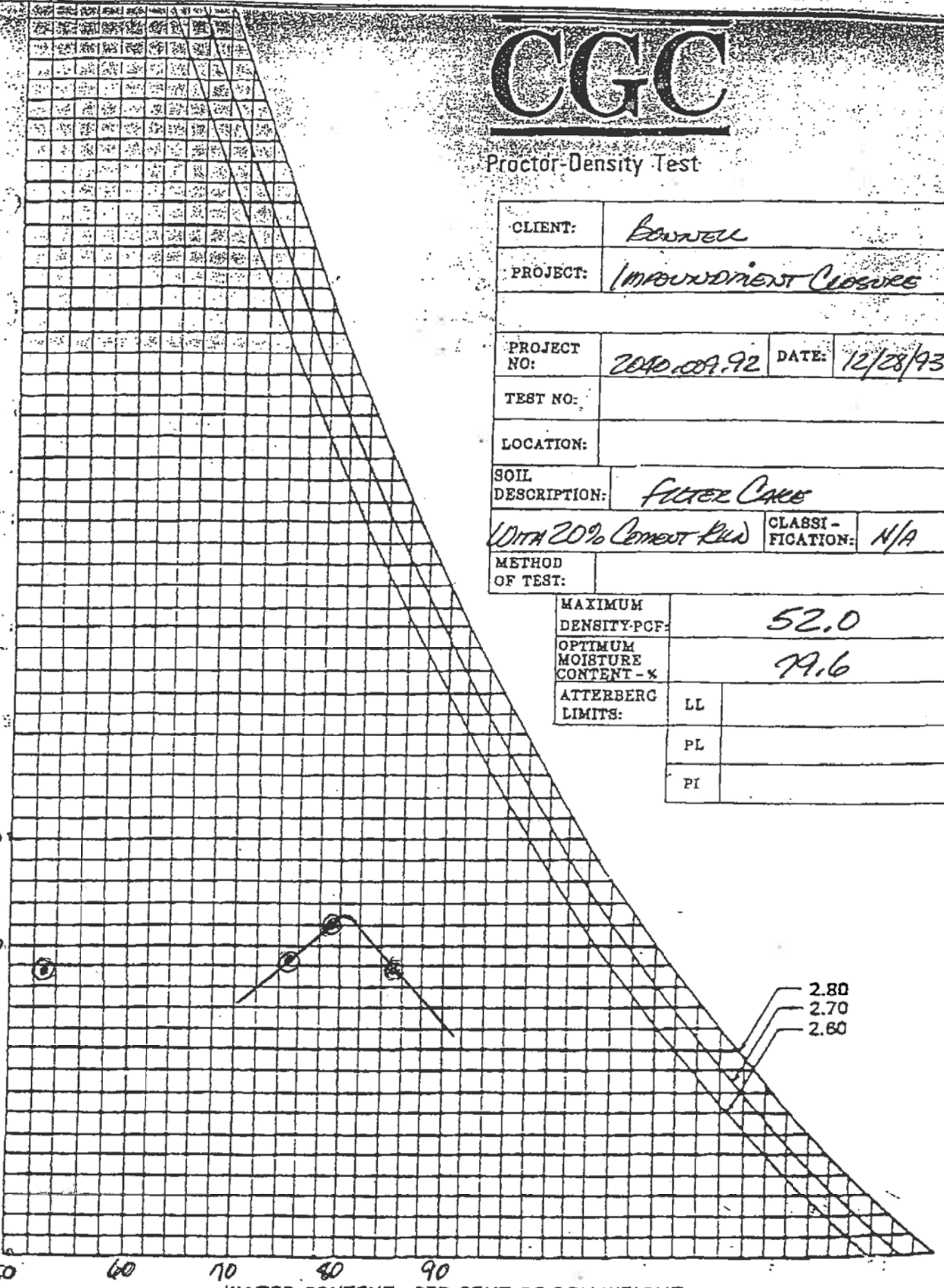
Proctor-Density Test

CLIENT:	Barnwell		
PROJECT:	Impoundment Closure		
PROJECT NO:	2040-009.92	DATE:	12/28/93
TEST NO:			
LOCATION:			
SOIL DESCRIPTION:	Filter Cake		
WITH 20% Cement Run	CLASSIFICATION:	N/A	
METHOD OF TEST:			

MAXIMUM DENSITY-PCF:	52.0		
OPTIMUM MOISTURE CONTENT - %	79.6		
ATTERBERG LIMITS:	LL		
	PL		
	PI		

DRY UNIT WEIGHT - POUNDS PER CUBIC FOOT

20
30
40
50
60



WATER CONTENT - PER CENT OF DRY WEIGHT

2.80
2.70
2.60



Proctor-Density Test

CLIENT:	Bonwell		
PROJECT:	Improvement Closure		
PROJECT NO:	2040.009.92	DATE:	12/29/93
TEST NO:			
LOCATION:			
SOIL DESCRIPTION:	FACTOR CAKE		
	WITH 30% Cement Kiln	CLASSIFICATION:	N/A
METHOD OF TEST:			

MAXIMUM DENSITY-PCF:	50.4	
OPTIMUM MOISTURE CONTENT - %	59.4	
ATTERBERG LIMITS:	LL	
	PL	
	PI	

DRY UNIT WEIGHT - POUNDS PER CUBIC FOOT

55
50
45
40
35

0 20 40 60 80 100

WATER CONTENT - PER CENT OF DRY WEIGHT

2.80
2.70
2.60

CGC

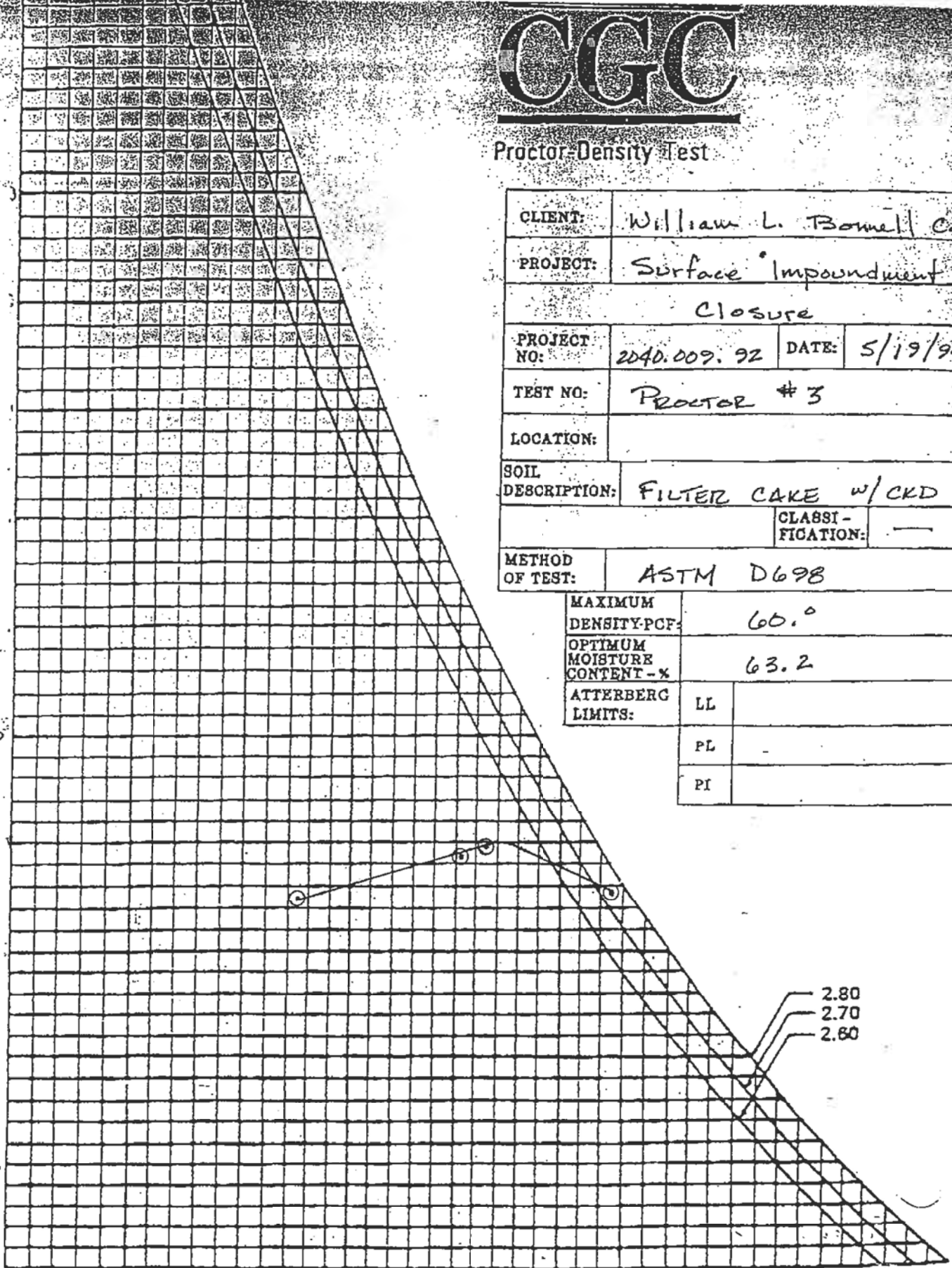
Proctor-Density Test

CLIENT:	William L. Bonnell Co.		
PROJECT:	Surface Impoundment Closure		
PROJECT NO:	2040.009.92	DATE:	5/19/94
TEST NO:	PROCTOR #3		
LOCATION:			
SOIL DESCRIPTION:	FILTER CAKE w/CKD		
	CLASSIFICATION:	—	
METHOD OF TEST:	ASTM D698		

MAXIMUM DENSITY-PCF:	60.0		
OPTIMUM MOISTURE CONTENT-%	63.2		
ATTERBERG LIMITS:	LL		
	PL		
	PI		

DRY UNIT WEIGHT - POUNDS PER CUBIC FOOT

70
60
50
40
30



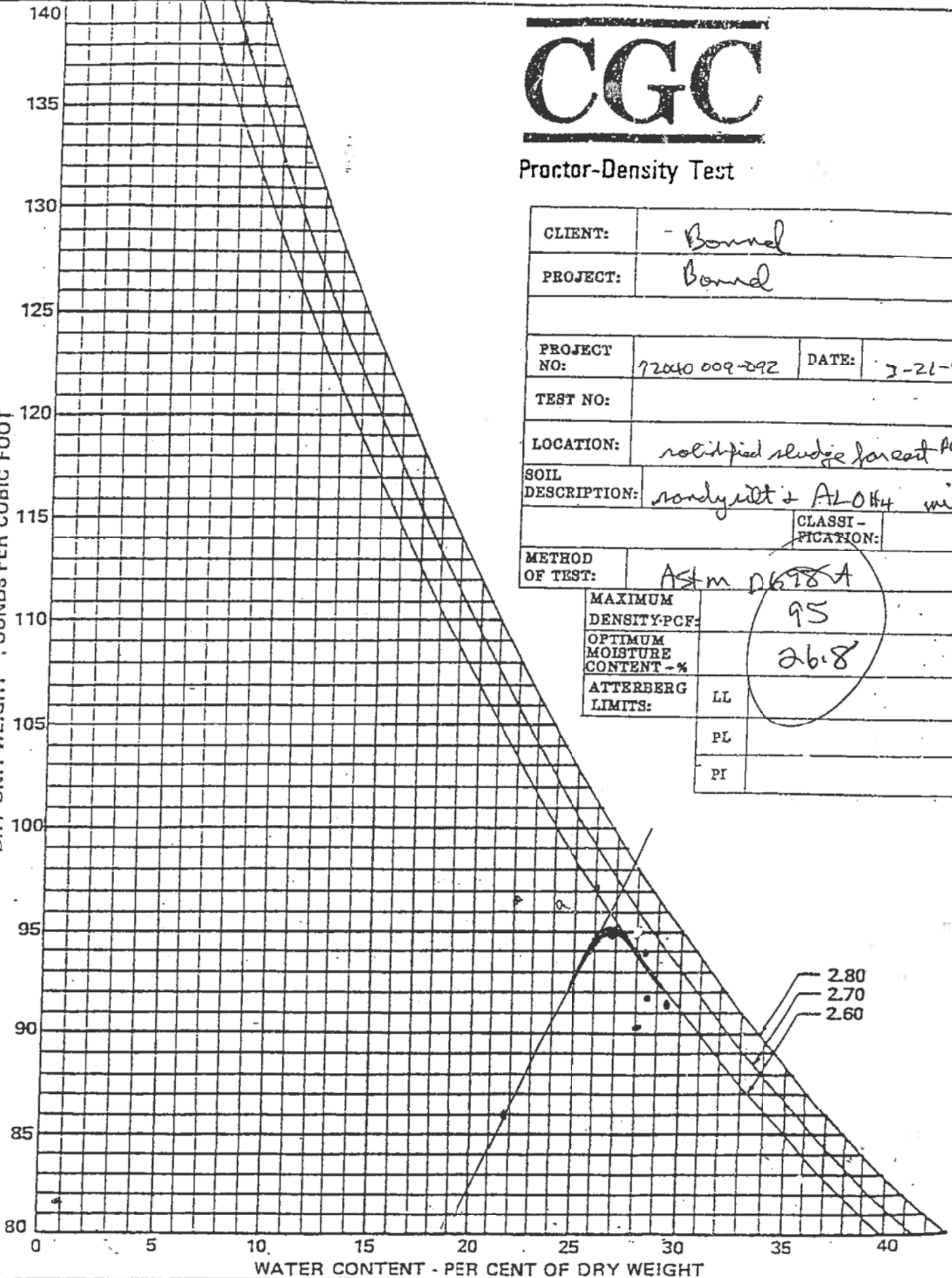
WATER CONTENT - PER CENT OF DRY WEIGHT

CGC

Proctor-Density Test

CLIENT:	- Bonnel		
PROJECT:	Bonnel		
PROJECT NO:	72040 009-092	DATE:	3-21-95
TEST NO:			
LOCATION:	solidified sludge forecast solidify port		
SOIL DESCRIPTION:	sandy silt & AL2O3 mix		
METHOD OF TEST:	ASTM D698A		
	MAXIMUM DENSITY-PCF:	95	
	OPTIMUM MOISTURE CONTENT-%	26.8	
ATTERBERG LIMITS:	LL		
	PL		
	PI		

DRY UNIT WEIGHT - POUNDS PER CUBIC FOOT



CGC

Proctor-Density Test

CLIENT:	BONNELL		
PROJECT:	IMPOUNDMENT CLOSURE		
PROJECT NO:	2040.009.92	DATE:	4/7/92
TEST NO:			
LOCATION:	center grid A+50		
SOIL DESCRIPTION:	Solidified Sludge		
with		CLASSIFICATION:	N/A
METHOD OF TEST:	Astm D 698A		
MAXIMUM DENSITY-PCF:	85.5		
OPTIMUM MOISTURE CONTENT-%	34%		
ATTERBERG LIMITS:	LL		
	PL		
	PI		

DRY UNIT WEIGHT - POUNDS PER CUBIC FOOT

95

90

85

80

75

70

10

15

20

25

30

35

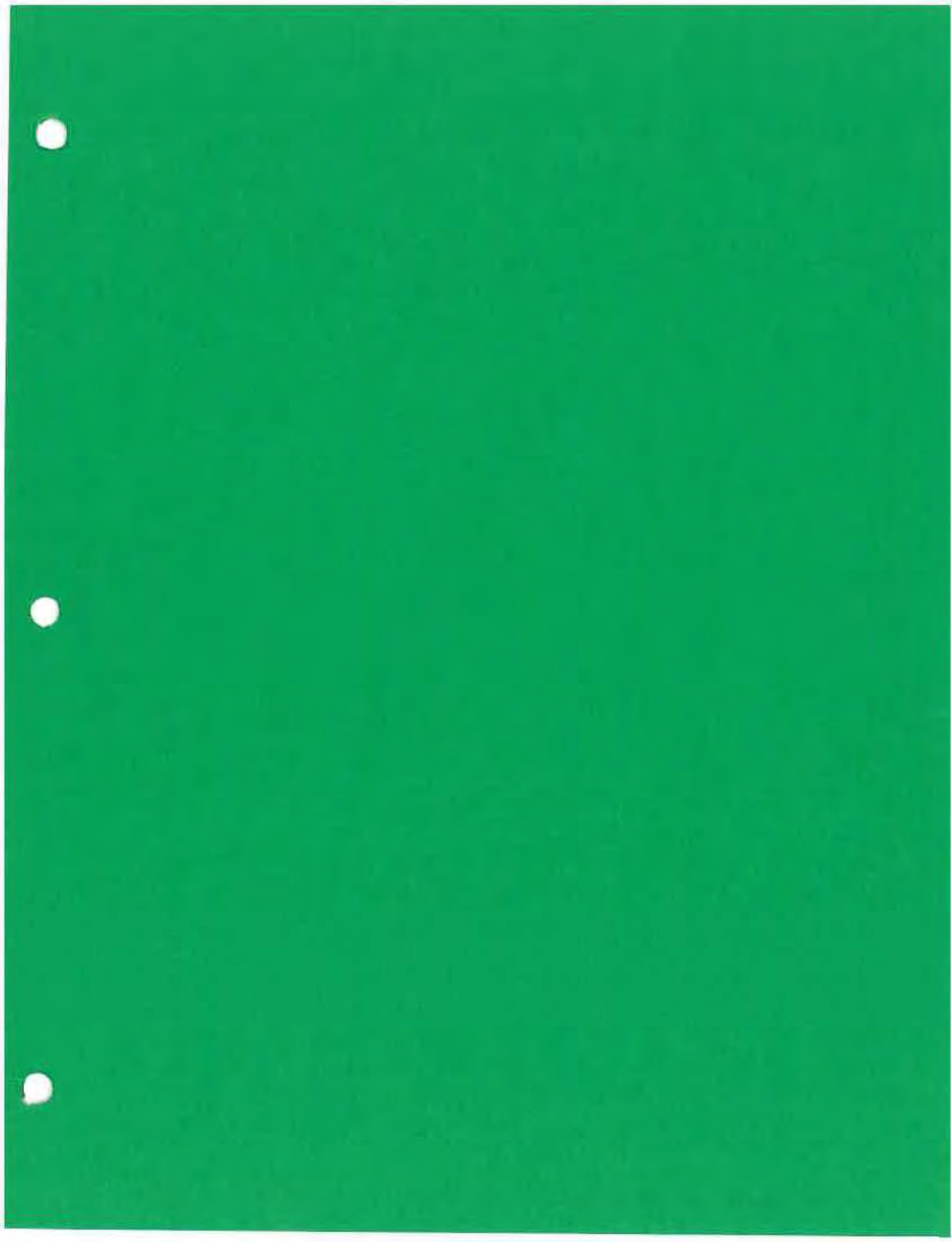
40

45

WATER CONTENT - PER CENT OF DRY WEIGHT

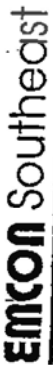
most recent
proctor

2.80
2.70
2.60



APPENDIX E

RESULTS OF COMPACTION TESTS



1575 Northside Drive • Suite 435 • Atlanta, GA 30318-4211
(404) 355-5600 • Fax (404) 355-3217

9/10/93

Bonnell Impoundment Closure

B.D./J.L.

PROJECT NO.:

2040.009.92

FIELD NUCLEAR MOISTURE/DENSITY TEST

PROJECT SPECIFICATION: 9290

PROJECT SPECIFICATION:

GAUGE TYPE/SERIAL NUMBER: CPN/

PROCTOR TEST METHOD: ASTM D698A

[illegible]

REPORT #

PAGE 11



Emcon Southeast

435 Atlanta Technology Center • 1575 Northside Drive • Atlanta, GA 30318-4211 • (404) 355-5600 • Fax (404) 355-3217

PROJECT: BONNELL IMPOUNDMENT CLOSURE
PRCJ. #: 2040.009.92

DRIVE RING COMPACTION TEST

(Clay Bottom)

TEST NUMBER	D-1	D-2				
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	5.02	4.83				
B. WT. OF MOLD (POUNDS)	1.26	1.26				
C. WT. OF SOIL = A-B (POUNDS)	3.76	3.57				
D. WET DENSITY = C/.033 (PCF)	113.9	108.2				
<u>MOISTURE CONTENT</u>						
TARE NUMBER	#41	#28				
E. WT. OF TARE (GRAMS)	31.8	32.3				
F. WT. OF WET SOIL & TARE (GRAMS)	95.0	98.6				
G. WT. OF DRY SOIL & TARE (GRAMS)	87.1	89.1				
H. WT. OF MOISTURE = F-G (GRAMS)	7.9	9.5				
I. WT. OF DRY SOIL = G-E (GRAMS)	55.3	56.8				
J. MOISTURE CONTENT = (H/I) x 100 (%)	14.3	16.7				
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	99.7	92.7				
L. PROCTOR MAX. DRY DENSITY (PCF)	96.3	96.3				
M. PERCENT COMPACTION = K/L (%)	103.5	96.3				

TECHNICIAN: Joe Lewis

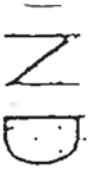
DATE: 9-23-93



1

9-23-92

BASELINE





Emcon Southeast

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PROJECT: BONNELL IMPOUNDMENT CLOSURE
PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST

(SOLIDIFIED MATERIAL)

TEST NUMBER	D-5	D-6	D-7			
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	5.23	5.15	5.03			
B. WT. OF MOLD (POUNDS)	1.32	1.32	1.26			
C. WT. OF SOIL= A-B (POUNDS)	3.91	3.83	3.77			
D. WET DENSITY= C/.033 (PCF)	118.5	116.1	114.2			
<u>MOISTURE CONTENT</u>						
TARE NUMBER	#2	#18	#28			
E. WT. OF TARE (GRAMS)	31.8	31.7	32.3			
F. WT. OF WET SOIL & TARE (GRAMS)	95.3	95.3	95.3			
G. WT. OF DRY SOIL & TARE (GRAMS)	79.9	78.9	80.2			
H. WT. OF MOISTURE= F-G (GRAMS)	15.4	16.4	15.1			
I. WT. OF DRY SOIL= G-E (GRAMS)	48.1	47.2	47.9			
J. MOISTURE CONTENT= (H/I) x 100 (%)	32.0	34.7	31.5			
<u>COMPACTION</u>						
K. DRY DENSITY= D/[1 + (J/100)] (PCF)	89.8	86.2	86.8			
L. PROCTOR MAX. DRY DENSITY (PCF)	87.9	87.9	87.9			
M. PERCENT COMPACTION= K/L (%)	102.2	98.1	98.7			

TECHNICIAN: Joe Lewis

DATE: 9-24-93

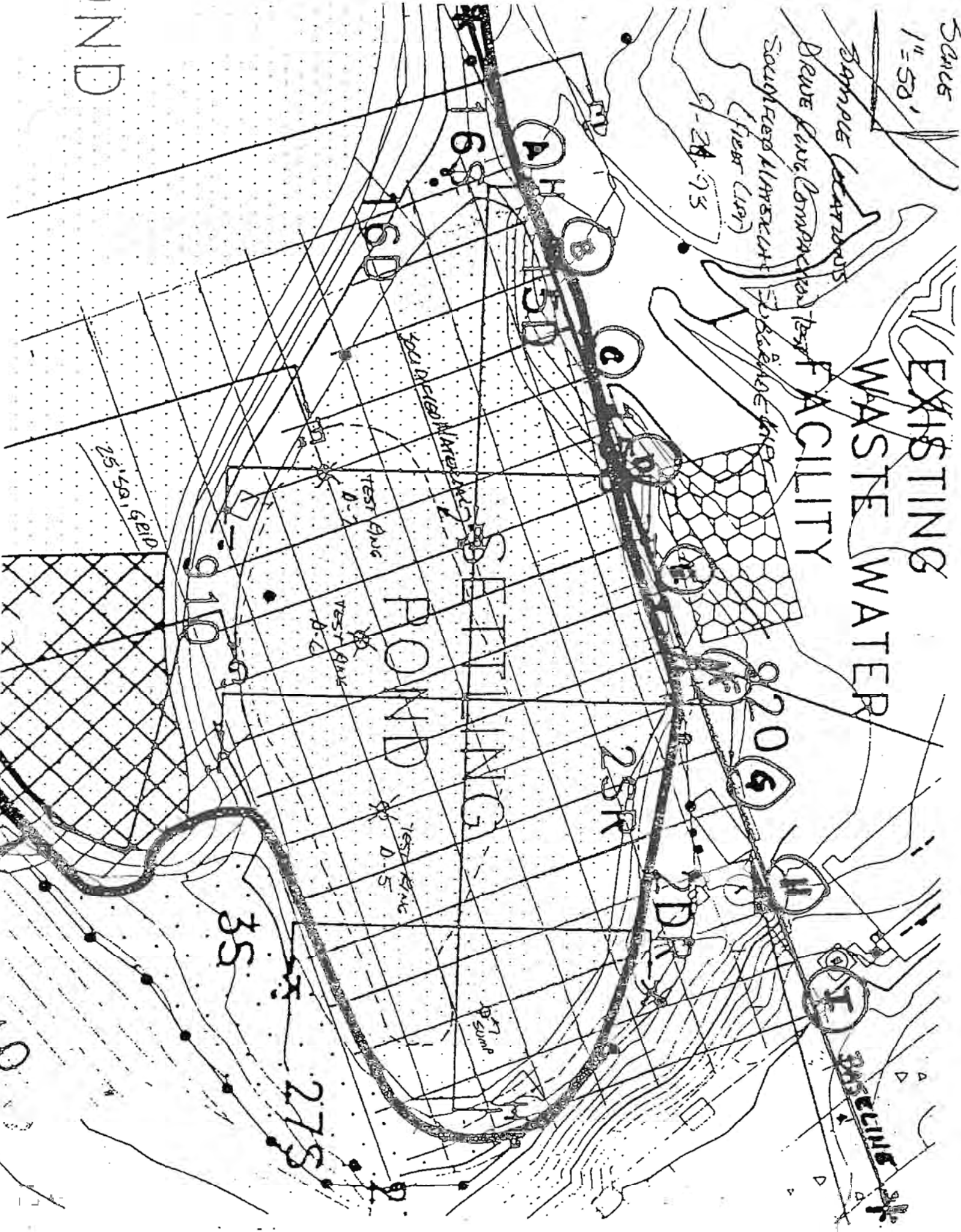


Scale
1" = 50'

Sample locations
Drum King Compressor Test Facility
Saturated Material
(near 100)

9-28-93

EXISTING WASTE WATER FACILITY



IND



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PROJECT: BONNELL IMPOUNDMENT CLOSURE
 PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST

(CLAY BOTTOM)

TEST NUMBER	0-3	0-4				
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	5.14	5.28				
B. WT. OF MOLD (POUNDS)	1.30	1.30				
C. WT. OF SOIL = A-B (POUNDS)	3.84	3.98				
D. WET DENSITY = C/.033 (PCF)	116.3	120.6				
<u>MOISTURE CONTENT</u>						
TARE NUMBER	#18	#2				
E. WT. OF TARE (GRAMS)	31.6	31.8				
F. WT. OF WET SOIL & TARE (GRAMS)	89.2	92.0				
G. WT. OF DRY SOIL & TARE (GRAMS)	81.4	83.6				
H. WT. OF MOISTURE = F-G (GRAMS)	7.8	8.4				
I. WT. OF DRY SOIL = G-E (GRAMS)	49.8	51.8				
J. MOISTURE CONTENT = (H/I) x 100 (%)	15.7	16.2				
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	100.5	103.8				
L. PROCTOR MAX. DRY DENSITY (PCF)	96.3	96.3				
M. PERCENT COMPACTION = K/L (%)	104.4	107.8				

TECHNICIAN: Joe Celos

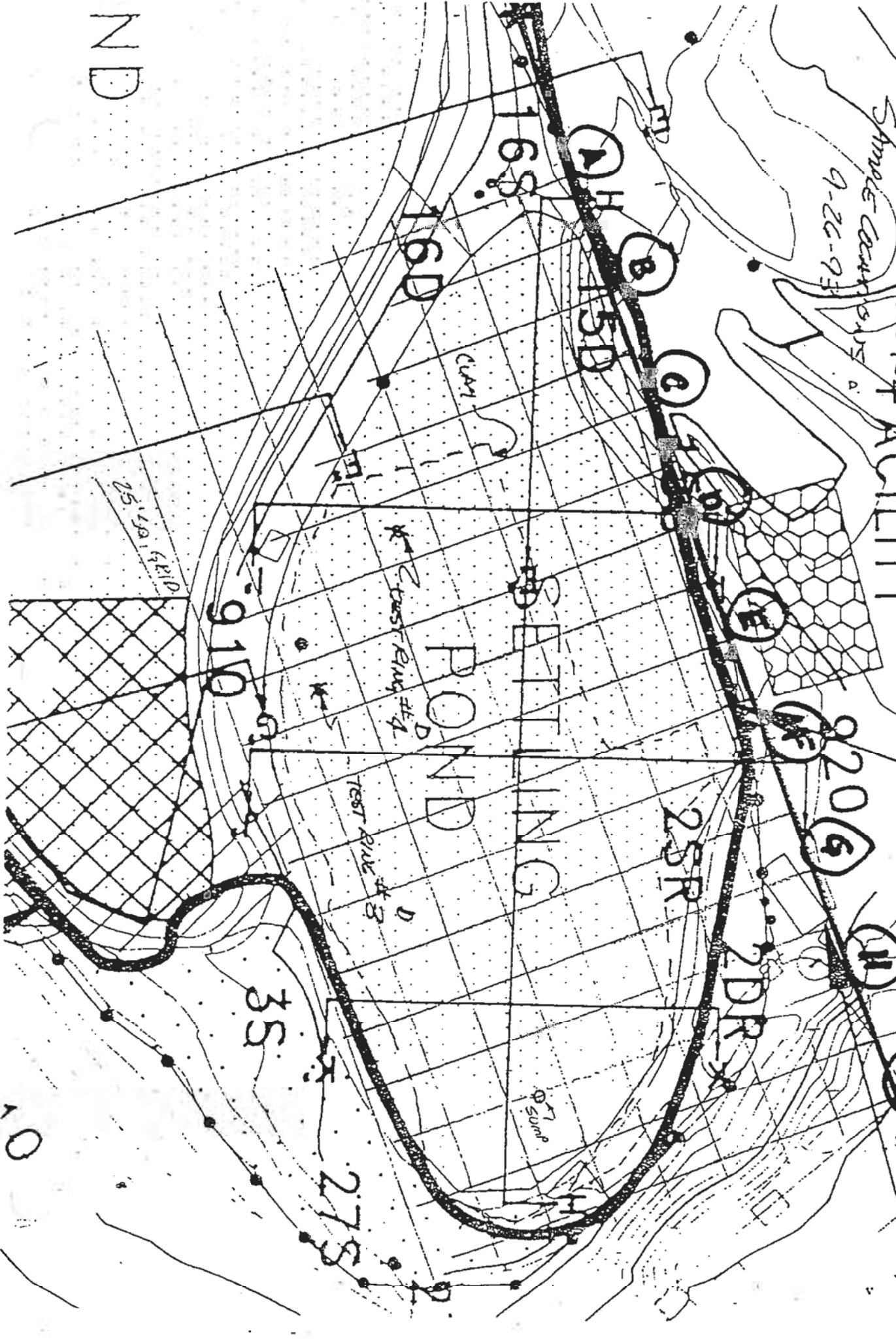
DATE: 9-26-93



Sheet 14 50'

(Clay)
Sludge Pond on Area 73F FACILITY
Sample Location 9-26-93

EXISTING WASTE WATER



ND

Base Line *



EMCON Southeast

435 Atlanta Technology Center • 1575 Northside Drive • Atlanta, GA 30318-4211 • (404) 355-5600 • Fax (404) 355-3217

PROJECT: BONNELL IMPOUNDMENT CLOSURE
PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST (Filter Cake)

TEST NUMBER	D-8	D-9	D-10	D-11	D-12	
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.40	4.30	4.34	4.12	4.26	
B. WT. OF MOLD (POUNDS)	1.30	1.30	1.30	1.30	1.30	
C. WT. OF SOIL = A-B (POUNDS)	3.10	3.00	3.04	2.82	2.96	
D. WET DENSITY = C/.033 (PCF)	93.9	90.9	92.1	85.5	89.7	
<u>MOISTURE CONTENT</u>						
TARE NUMBER	#1	#16	#28	#41	#18	
E. WT. OF TARE (GRAMS)	33.2	32.4	32.2	31.8	31.7	
F. WT. OF WET SOIL & TARE (GRAMS)	110.9	108.4	132.9	113.8	123.8	
G. WT. OF DRY SOIL & TARE (GRAMS)	76.2	69.8	83.2	81.0	86.3	
H. WT. OF MOISTURE = F-G (GRAMS)	34.7	38.6	49.7	32.8	37.5	
I. WT. OF DRY SOIL = G-E (GRAMS)	43.0	37.4	51.0	49.2	54.6	
J. MOISTURE CONTENT = (H/I) x 100 (%)	80.7	103.2	97.5	66.7	68.7	
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	52.2	45.5	48.5	50.3	52.8	
L. PROCTOR MAX. DRY DENSITY (PCF)	54.0	54.0	54.0	54.0	54.0	
M. PERCENT COMPACTION = K/L (%)	96.7	84.3	89.8	93.1	97.8	

TECHNICIAN: BEAN D.

DATE: 9-30-93





Emcon Southeast

425 Atlanta Technology Center • 1575 Northside Drive • Atlanta, GA 30318-4211 • (404) 355-5600 • Fax (404) 355-3217

PROJECT: BONNELL IMPOUNDMENT CLOSURE
PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST

(Filter Case)

TEST NUMBER	D-13	D-14	D-15	D-16	D-17	
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.29	4.21	4.15	4.35	4.27	
B. WT. OF MOLD (POUNDS)	1.26	1.32	1.30	1.32	1.32	
C. WT. OF SOIL = A-B (POUNDS)	3.03	2.89	2.85	3.03	2.95	
D. WET DENSITY = C/.033 (PCF)	91.8	87.6	86.4	91.8	89.4	
<u>MOISTURE CONTENT</u>						
TARE NUMBER	#28	#16	#1	#41	#18	
E. WT. OF TARE (GRAMS)	32.4	32.4	33.1	31.7	31.6	
F. WT. OF WET SOIL & TARE (GRAMS)	92.1	92.7	94.1	97.2	92.2	
G. WT. OF DRY SOIL & TARE (GRAMS)	63.7	61.3	65.2	66.4	62.4	
H. WT. OF MOISTURE = F-G (GRAMS)	28.4	31.4	28.9	30.8	29.8	
I. WT. OF DRY SOIL = G-E (GRAMS)	31.3	28.9	32.1	34.7	30.8	
J. MOISTURE CONTENT = (H/I) x 100 (%)	90.7	108.7	90.0	88.8	96.8	
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	48.31	41.7	45.5	48.3	44.7	
L. PROCTOR MAX. DRY DENSITY (PCF)	54.0	54.0	54.0	54.0	54.0	
M. PERCENT COMPACTION = K/L (%)	89.5	77.2	84.3	89.4	82.8	

TECHNICIAN:

JOE LEWIS

DATE:

10-3-93

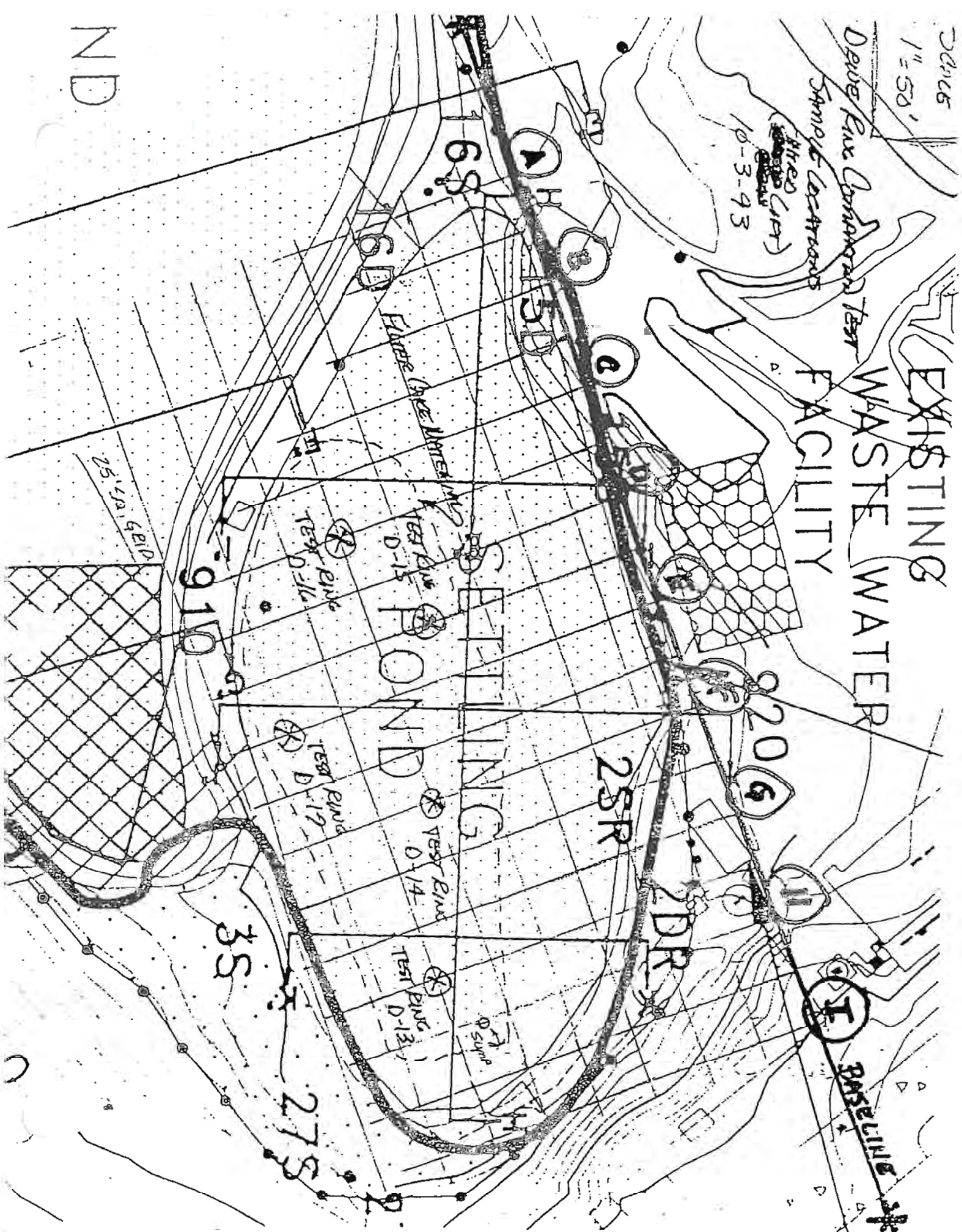


1" = 50'

Shred (10/10/10)

10-3-93

BASELINE





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PROJECT: BONNELL IMPOUNDMENT CLOSURE
PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST (SOLIDIFIED MATERIAL)

TEST NUMBER	D-18	D-19	D-20	D-21	D-22	
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.82	5.05	4.97	4.96	5.15	
B. WT. OF MOLD (POUNDS)	1.32	1.32	1.26	1.30	1.32	
C. WT. OF SOIL = A-B (POUNDS)	3.50	3.73	3.71	3.66	3.83	
D. WET DENSITY = C/.033 (PCF)	106.1	113.0	112.4	110.9	116.1	
<u>MOISTURE CONTENT</u>						
TARE NUMBER	#1	#28	#41	#18	#16	
E. WT. OF TARE (GRAMS)	33.1	32.4	31.8	31.7	32.4	
F. WT. OF WET SOIL & TARE (GRAMS)	103.0	103.3	103.1	103.0	103.5	
G. WT. OF DRY SOIL & TARE (GRAMS)	83.2	84.3	83.5	85.0	84.9	
H. WT. OF MOISTURE = F-G (GRAMS)	19.8	19.0	19.6	18.0	18.6	
I. WT. OF DRY SOIL = G-E (GRAMS)	50.1	51.9	51.7	53.3	52.5	
J. MOISTURE CONTENT = (H/I) x 100 (%)	39.5	36.6	37.9	33.8	35.4	
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	75.8	80.7	80.3	85.3	82.9	
L. PROCTOR MAX. DRY DENSITY (PCF)	82.0	85.0	85.0	87.9	85.0	
M. PERCENT COMPACTION = K/L (%)	92.4	94.9	94.5	97.0	97.5	

TECHNICIAN: JOE LEWIS

DATE: 10-5-93



$$1'' = 50'$$

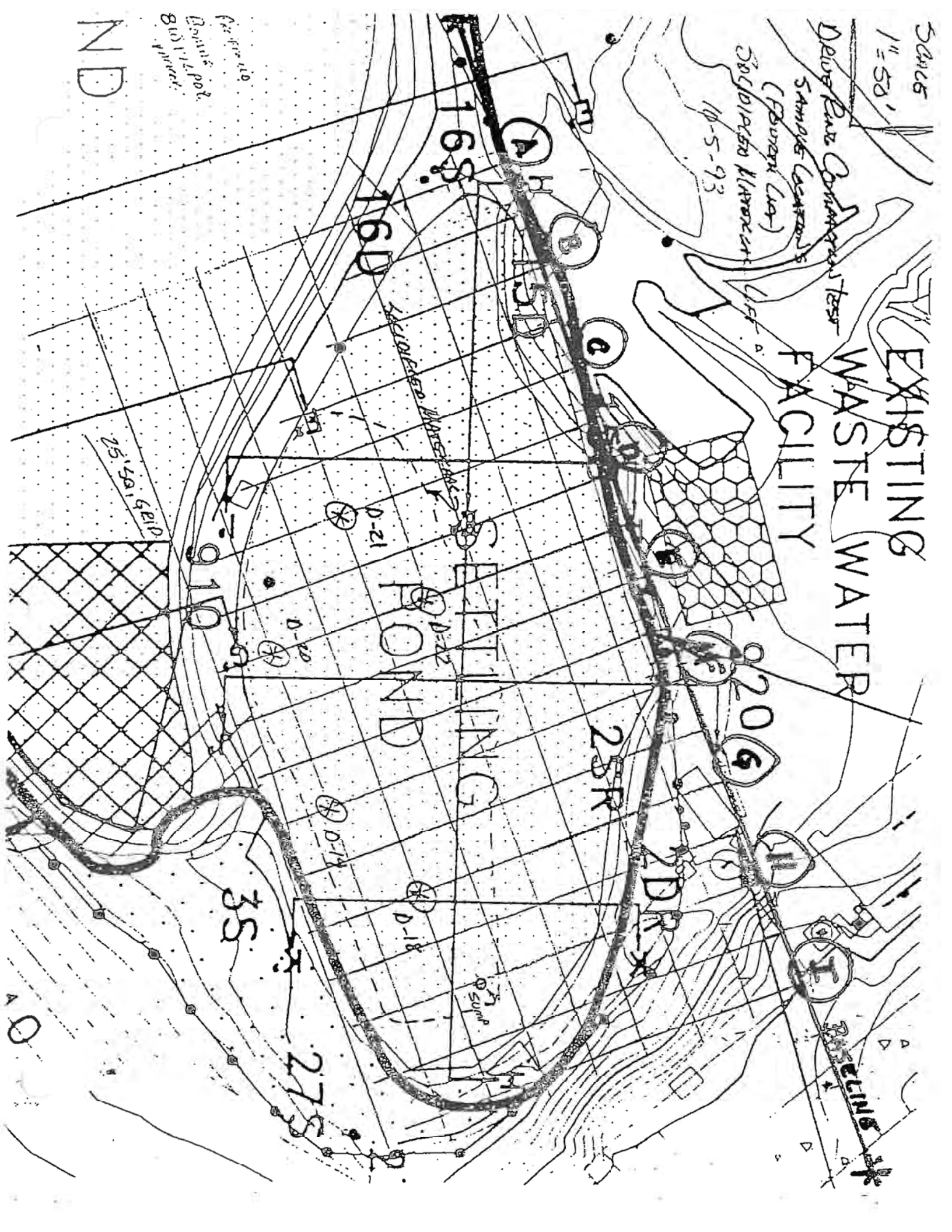
~~Sample Locations~~
(Fourier Law)

205/01250 Kloroxin

14-5-93

EXISTING
WASTE WATER
FACILITY

62-114687-10



13. 11. 1902.
 14. 11. 1902.



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PROJECT: BONNELL IMPOUNDMENT CLOSURE
 PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST

(*SOLIDIFIED MATERIAL*)

TEST NUMBER	D-28					
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	5.08					
B. WT. OF MOLD (POUNDS)	1.32					
C. WT. OF SOIL = A-B (POUNDS)	3.76					
D. WET DENSITY = C/.033 (PCF)	113.9					
<u>MOISTURE CONTENT</u>						
TARE NUMBER	#1					
E. WT. OF TARE (GRAMS)	33.1					
F. WT. OF WET SOIL & TARE (GRAMS)	113.0					
G. WT. OF DRY SOIL & TARE (GRAMS)	93.7					
H. WT. OF MOISTURE = F-G (GRAMS)	19.3					
I. WT. OF DRY SOIL = G-E (GRAMS)	60.6					
J. MOISTURE CONTENT = (H/I) x 100 (%)	31.8					
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	86.3					
L. PROCTOR MAX. DRY DENSITY (PCF)	87.9					
M. PERCENT COMPACTION = K/L (%)	98.2					

TECHNICIAN: JOE LEWIS

DATE: 10-7-93



1"=50'

DECEMBER 1965
PACIFIC COASTAL TEST
FACILITY

10-7-93

GREEN TISSUE SYMBOLS LOCATIONS
EXTRACTED (EXTRACTED) (EXTRACTED) SECTION
(FOURTH (ART

EXISTING
WASTE WATER

I

BASELINE

2SR

2DR

SETTLING
POND

16D

16S

15D

910

35

27S

ND

25-1501 GEPD

D 28
GT-100R3

D 28
GT-100R3



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PROJECT: BONNEL IMPOUNDMENT CLOSURE
PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST (Solidified Material)

TEST NUMBER	A-23	A-24	D-25	D-26	D-27	
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.88	4.99	4.98	4.79	4.69	
B. WT. OF MOLD (POUNDS)	1.32	1.32	1.26	1.30	1.32	
C. WT. OF SOIL = A-B (POUNDS)	3.56	3.67	3.72	3.49	3.37	
D. WET DENSITY = C/.033 (PCF)	107.9	111.2	112.7	105.8	102.1	
<u>MOISTURE CONTENT</u>						
TARE NUMBER	16	24	15	28	41	
E. WT. OF TARE (GRAMS)	32.4	31.5	32.7	32.3	31.7	
F. WT. OF WET SOIL & TARE (GRAMS)	101.7	106.1	104.4	110.8	110.8	
G. WT. OF DRY SOIL & TARE (GRAMS)	84.9	83.3	86.2	94.2	94.2	
H. WT. OF MOISTURE = F-G (GRAMS)	16.8	22.8	18.2	16.6	16.6	
I. WT. OF DRY SOIL = G-E (GRAMS)	52.5	51.8	53.5	61.9	62.5	
J. MOISTURE CONTENT = (H/I) x 100 (%)	32	44	34	26.8	26.6	
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	81.7	77.2	84.1	84.0	80.4	
L. PROCTOR MAX. DRY DENSITY (PCF)	85.0	82.0	87.9	87.9	85.0	
M. PERCENT COMPACTION = K/L (%)	96.1	94.1	95.7	95.6	94.6	

TECHNICIAN: Joe Lewis

DATE: 10-11-93

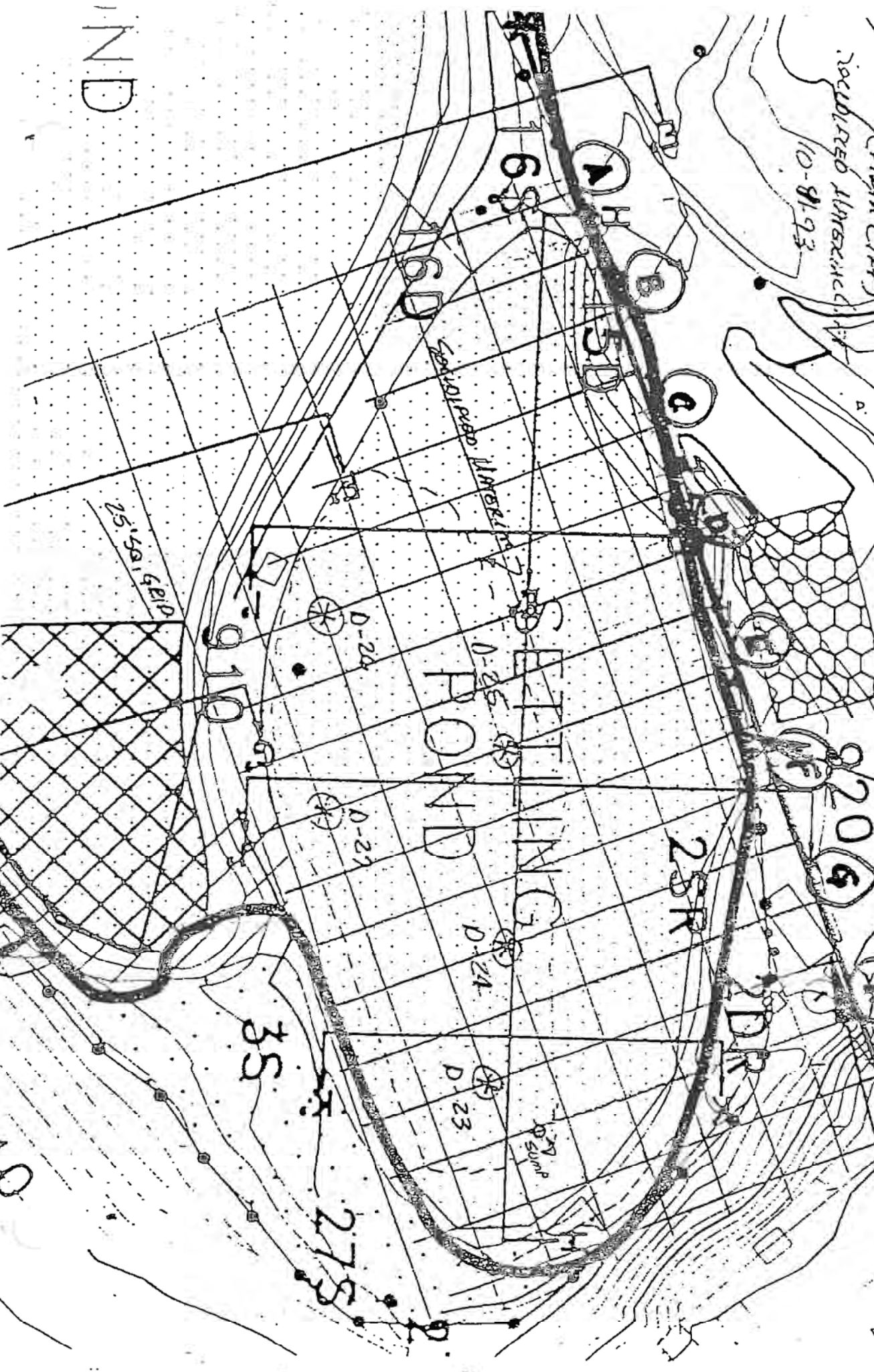


Scale
1" = 50'

DESIGNER'S COMMENTS
SAME COMMENTS
(FROM CIV)
LOCATED ALTERNATE

EXISTING WASTE WATER FACILITY

ENGINEER'S
STAMP





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PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST (*Solidified Material*)

TEST NUMBER	D-29	D-30	D-31	D-32		
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	5.05	4.97	4.80	4.97		
B. WT. OF MOLD (POUNDS)	1.30	1.26	1.32	1.32		
C. WT. OF SOIL= A-B (POUNDS)	3.75	3.71	3.48	3.65		
D. WET DENSITY= C/.033 (PCF)	113.6	112.4	105.5	110.6		
<u>MOISTURE CONTENT</u>						
TARE NUMBER	#2	#8	#40	#16		
E. WT. OF TARE (GRAMS)	31.7	32.1	31.3	32.3		
F. WT. OF WET SOIL & TARE (GRAMS)	87.2	89.4	96.2	95.8		
G. WT. OF DRY SOIL & TARE (GRAMS)	73.6	73.5	80.3	78.5		
H. WT. OF MOISTURE= F-G (GRAMS)	13.6	15.9	15.9	17.3		
I. WT. OF DRY SOIL= G-E (GRAMS)	41.9	41.4	49.0	46.2		
J. MOISTURE CONTENT= (H/I) x 100 (%)	32.5	38.4	32.4	37.4		
<u>COMPACTION</u>						
K. DRY DENSITY= D/[1 + (J/100)] (PCF)	87.4	80.3	81.2	79.0		
L. PROCTOR MAX. DRY DENSITY (PCF)	87.9	82.0	87.9	82.0		
M. PERCENT COMPACTION= K/L (%)	99.4	98.0	92.4	96.3		

TECHNICIAN: JOE LEWIS

DATE: OCT. 12, 1993



1" = 50'

(Sixth Cir)
Solidified America

I
PROSECUTOR



0206



90

GA

Securified

910

QD-D-39

D-31

20-32

22 D-29

54

275



25.5016210

9



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PROJECT: BONNEL IMPOUNDMENT CLOSURE
PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST (CLAY)

TEST NUMBER	D-33	D-34				
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	5.15	5.27				
B. WT. OF MOLD (POUNDS)	1.26	1.32				
C. WT. OF SOIL = A-B (POUNDS)	3.89	3.95				
D. WET DENSITY = C/.033 (PCF)	117.9	119.7				
<u>MOISTURE CONTENT</u>						
TARE NUMBER	—	—				
E. WT. OF TARE (GRAMS)	124.7	124.7				
F. WT. OF WET SOIL & TARE (GRAMS)	308.4	292.8				
G. WT. OF DRY SOIL & TARE (GRAMS)	275.8	263.5				
H. WT. OF MOISTURE = F-G (GRAMS)	32.6	29.3				
I. WT. OF DRY SOIL = G-E (GRAMS)	151.1	138.8				
J. MOISTURE CONTENT = (H/I) x 100 (%)	21.6	21.1				
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	96.6	98.9				
L. PROCTOR MAX. DRY DENSITY (PCF)	96.3	96.3				
M. PERCENT COMPACTION = K/L (%)	100.3	102.6				

TECHNICIAN: Joe Lewis

DATE: 10-17-93



9



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PROJECT: BONNELL IMPOUNDMENT CLOSURE

PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST

(SOLIDIFIED MATERIAL)

TEST NUMBER	D-35	D-36				
DENSITY						
A. WT. OF MOLD & SOIL (POUNDS)	4.95	4.86				
B. WT. OF MOLD (POUNDS)	1.26	1.32				
C. WT. OF SOIL = A-B (POUNDS)	3.69	3.54				
D. WET DENSITY = C/.033 (PCF)	111.8	107.3				
MOISTURE CONTENT						
TARE NUMBER	—	—				
E. WT. OF TARE (GRAMS)	124.0	124.0				
F. WT. OF WET SOIL & TARE (GRAMS)	241.5	239.5				
G. WT. OF DRY SOIL & TARE (GRAMS)	208.6	211.2				
H. WT. OF MOISTURE = F-G (GRAMS)	32.9	28.3				
I. WT. OF DRY SOIL = G-E (GRAMS)	84.6	87.2				
J. MOISTURE CONTENT = (H/I) x 100 (%)	38.9	32.5				
COMPACTION						
K. DRY DENSITY = D/(1 + (J/100)) (PCF)	79.6	82.5				
L. PROCTOR MAX. DRY DENSITY (PCF)	82.0	87.9				
M. PERCENT COMPACTION = K/L (%)	97.1	93.9				

TECHNICIAN: Joe Lewis

DATE: 10/18/93



1.4
1.3

Scale

1" = 50'

Design Line Construction Test

Sample Location

Specified Maximum

(Feet dia) 11"

10-18-93

EXISTING
WASTE WATER
FACILITY

9206

11

12

BRIDGE

2SR

2DR

Ø 136'

Ø 135'

Ø 137'

SETTLING
POND

16D

16S

15D

910

35

27S

ND

15' 50' 6" ID

10



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PROJECT: BONNELL IMPOUNDMENT CLOSURE

PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST

(Solidified Material)

TEST NUMBER	D-37	D-38				
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.96	5.04				
B. WT. OF MOLD (POUNDS)	1.26	1.32				
C. WT. OF SOIL = A-B (POUNDS)	3.70	3.72				
D. WET DENSITY = C/.033 (PCF)	112.1	112.7				
<u>MOISTURE CONTENT</u>						
TARE NUMBER						
E. WT. OF TARE (GRAMS)	124.5	124.5				
F. WT. OF WET SOIL & TARE (GRAMS)	215.8	246.4				
G. WT. OF DRY SOIL & TARE (GRAMS)	191.0	215.5				
H. WT. OF MOISTURE = F-G (GRAMS)	24.8	30.9				
I. WT. OF DRY SOIL = G-E (GRAMS)	66.5	91.0				
J. MOISTURE CONTENT = (H/I) x 100 (%)	37.3	34.0				
<u>COMPACTION</u>						
K. DRY DENSITY = D/(1 + (J/100)) (PCF)	80.07	86.7				
L. PROCTOR MAX. DRY DENSITY (PCF)	82.0	85.0				
M. PERCENT COMPACTION = K/L (%)	97.7	102.0				

TECHNICIAN: J. LEVINS

DATE: 10/19/93



1.4
1.3



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PROJECT: BONNELL IMPOUNDMENT CLOSURE

PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST

(Solidified Material)

TEST NUMBER	P-39	P-40				
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.95	4.82				
B. WT. OF MOLD (POUNDS)	1.26	1.32				
C. WT. OF SOIL = A-B (POUNDS)	3.69	3.50				
D. WET DENSITY = C/.033 (PCF)	111.8	106.1				
<u>MOISTURE CONTENT</u>						
TARE NUMBER	—	—				
E. WT. OF TARE (GRAMS)	126.5	126.5				
F. WT. OF WET SOIL & TARE (GRAMS)	210.65	244.5				
G. WT. OF DRY SOIL & TARE (GRAMS)	181.5	200.80				
H. WT. OF MOISTURE = F-G (GRAMS)	23.2	43.7				
I. WT. OF DRY SOIL = G-E (GRAMS)	61.0	74.3				
J. MOISTURE CONTENT = (H/I) x 100 (%)	38.0	58.8				
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	79.8	66.3				
L. PROCTOR MAX. DRY DENSITY (PCF)	82.0	82.0				
M. PERCENT COMPACTION = K/L (%)	97.3	81				

TECHNICIAN: Joe Lewis

DATE: 10-20-93

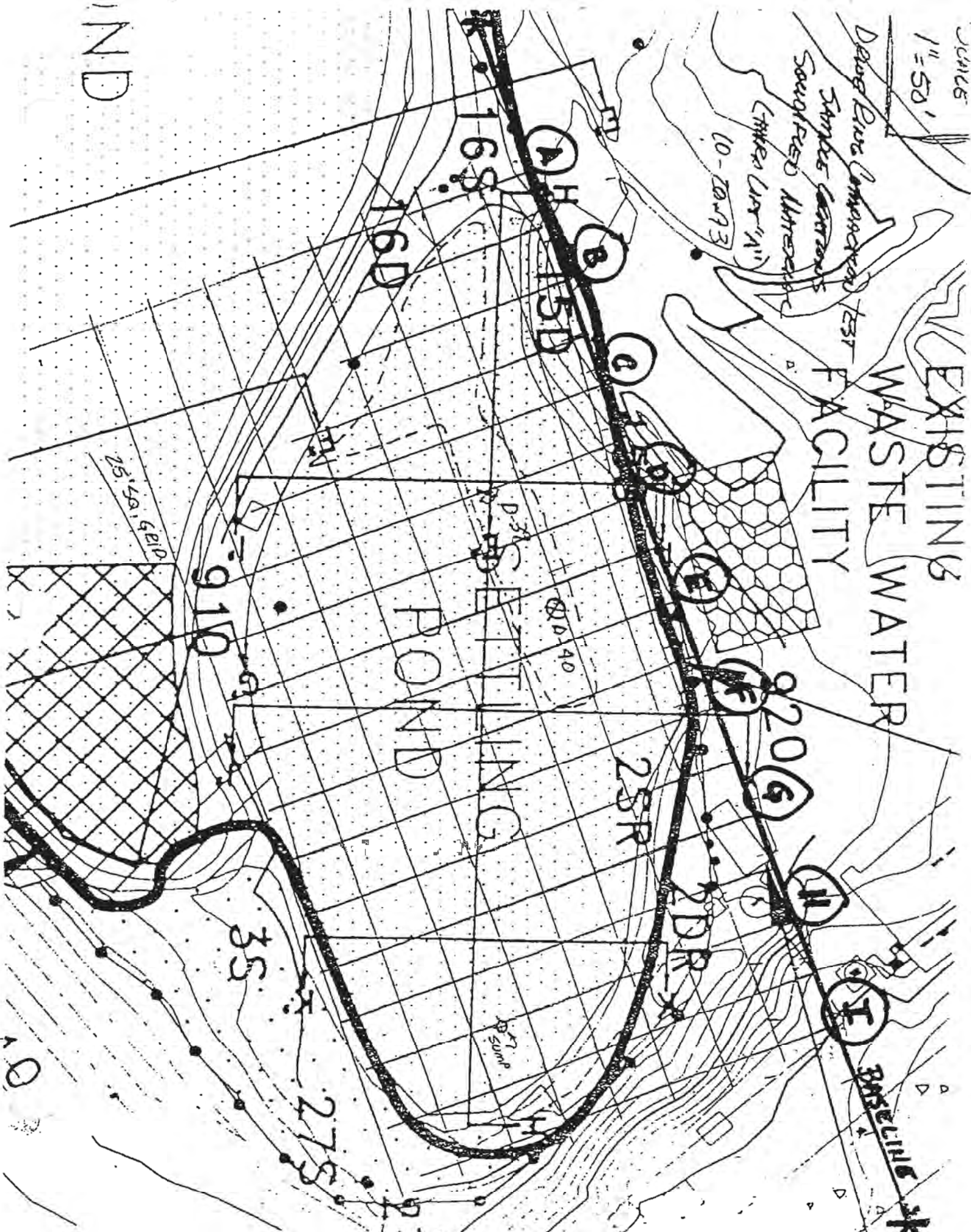


1" = 50'

~~Sample Sentences~~
~~Sacrificed~~ ~~Abandoned~~

10-2073

~~EXISTING
WASTE WATER
FACILITY~~



0



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PROJECT: BONNELL IMPOUNDMENT CLOSURE

PRJ. #: 2040.009.92

DRIVE RING COMPACTION TEST (SOLIDIFIED MATERIAL)

TEST NUMBER	0.41					
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	5.0					
B. WT. OF MOLD (POUNDS)	1.30					
C. WT. OF SOIL= A-B (POUNDS)	3.70					
D. WET DENSITY= C/.033 (PCF)	112.1					
<u>MOISTURE CONTENT</u>						
TARE NUMBER	—					
E. WT. OF TARE (GRAMS)	126.5					
F. WT. OF WET SOIL & TARE (GRAMS)	229.0					
G. WT. OF DRY SOIL & TARE (GRAMS)	199.5					
H. WT. OF MOISTURE= F-G (GRAMS)	29.5					
I. WT. OF DRY SOIL= G-E (GRAMS)	73.0					
J. MOISTURE CONTENT= (H/I) x 100 (%)	40.4					
<u>COMPACTION</u>						
K. DRY DENSITY= D/(1 + (J/100)) (PCF)	80.1					
L. PROCTOR MAX. DRY DENSITY (PCF)	82.0					
M. PERCENT COMPACTION= K/L (%)	98					

TECHNICIAN: Joe Lewis

DATE: 10-20-93

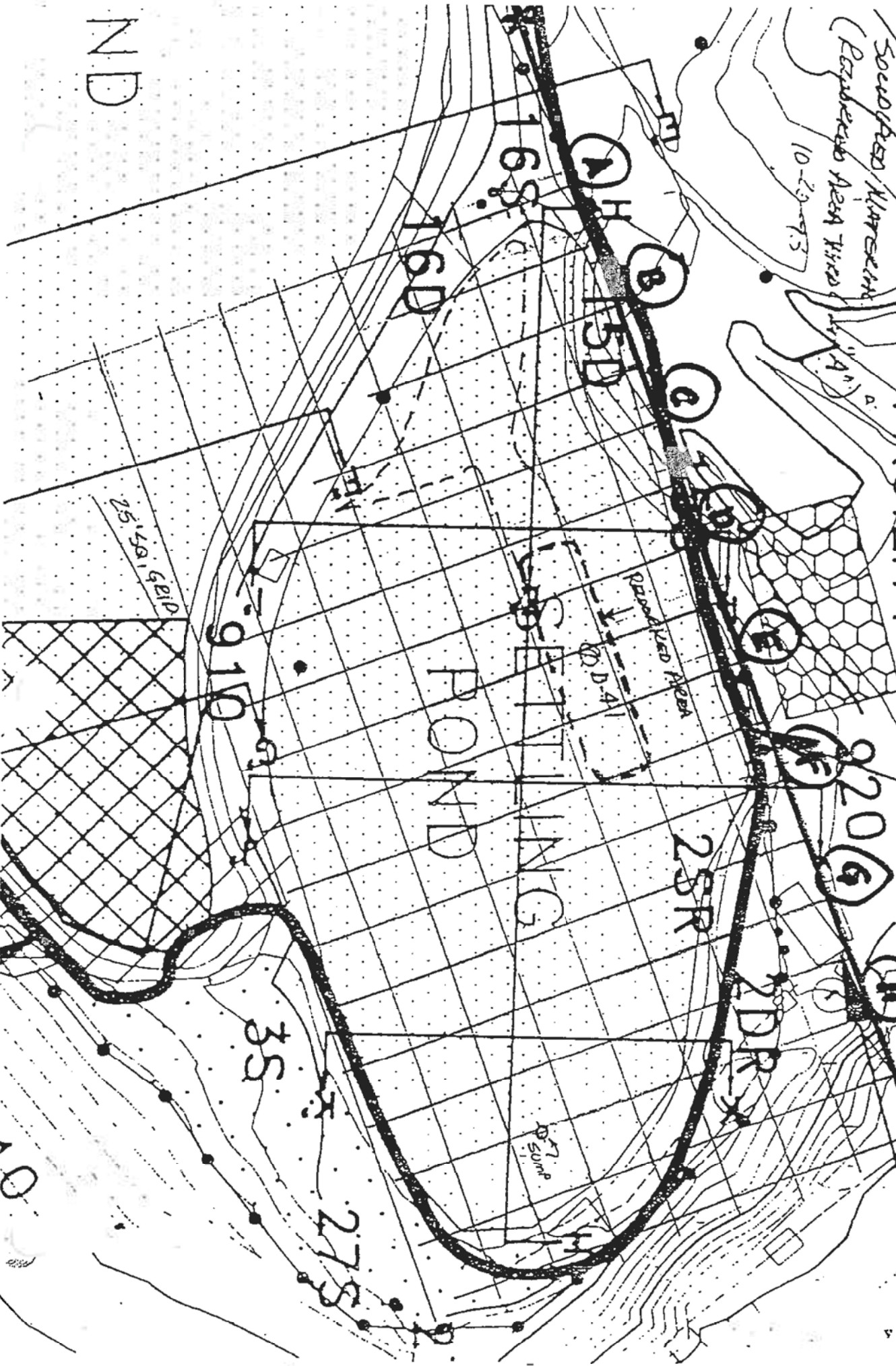


SCALE
1" = 50'

DEDE LINE COMPARED
SAME LOCATION
SOLIDIFIED WASTE
RESIDUAL AREA FILL

10-23-93

EXISTING WASTE WATER FACILITY



ND



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PROJECT: BONNEILLIMPOUNDMENT CLOSURE

PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST

(Solidified Material)

TEST NUMBER	D-42	D-43				
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.88	4.89				
B. WT. OF MOLD (POUNDS)	1.26	1.32				
C. WT. OF SOIL = A-B (POUNDS)	3.62	3.57				
D. WET DENSITY = C/.033 (PCF)	110.0	108.2				
<u>MOISTURE CONTENT</u>						
TARE NUMBER	—	—				
E. WT. OF TARE (GRAMS)	125.5	125.5				
F. WT. OF WET SOIL & TARE (GRAMS)	246.0	234.0				
G. WT. OF DRY SOIL & TARE (GRAMS)	215.5	204.5				
H. WT. OF MOISTURE = F-G (GRAMS)	30.5	29.5				
I. WT. OF DRY SOIL = G-E (GRAMS)	90.0	79.0				
J. MOISTURE CONTENT = $(H/I) \times 100$ (%)	33.9	37.3				
<u>COMPACTION</u>						
K. DRY DENSITY = $D/(1 + (J/100))$ (PCF)	84.6	77.3				
L. PROCTOR MAX. DRY DENSITY (PCF)	85.0	82.0				
M. PERCENT COMPACTION = K/L (%)	99.5	94.3				

TECHNICIAN: Jeff Lewis

DATE: 10/22/93



1.3
1.4

Scale
1" = 50'

Drive Line Location

Sample Location

Feather Line "A"

Seawater Marsh

(D-4200-1)

EXISTING
WASTE WATER
FACILITY

SETTLING
POND

I

Base Line

2SR

2DR

A

B

C

D

E

F

G

H

I

16S

15D

14D

13D

12D

11D

10D

9D

8D

7D

16D

910

35

275

IND

25' 50" 621D

Sum



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PROJECT: BONNEILL IMPOUNDMENT CLOSURE
PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST *(Solidification Material)*

TEST NUMBER	D-14	D-15				
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.96	4.87				
B. WT. OF MOLD (POUNDS)	1.26	1.32				
C. WT. OF SOIL = A-B (POUNDS)	3.70	3.55				
D. WET DENSITY = C/.033 (PCF)	112.1	107.6				
<u>MOISTURE CONTENT</u>						
TARE NUMBER	—	—				
E. WT. OF TARE (GRAMS)	126.5	126.5				
F. WT. OF WET SOIL & TARE (GRAMS)	202.0	222.2				
G. WT. OF DRY SOIL & TARE (GRAMS)	177.0	196.5				
H. WT. OF MOISTURE = F-G (GRAMS)	25.0	25.7				
I. WT. OF DRY SOIL = G-E (GRAMS)	50.5	70.0				
J. MOISTURE CONTENT = (H/I) x 100 (%)	49.5	36.7				
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	75.0	76.7				
L. PROCTOR MAX. DRY DENSITY (PCF)	82.0	82.0				
M. PERCENT COMPACTION = K/L (%)	92.0	93.5				

TECHNICIAN: JOE LEZOL

DATE: 10/24/93



1.5
1.4

Scale

1" = 50'

Device Line Comparison Test

Sample Location

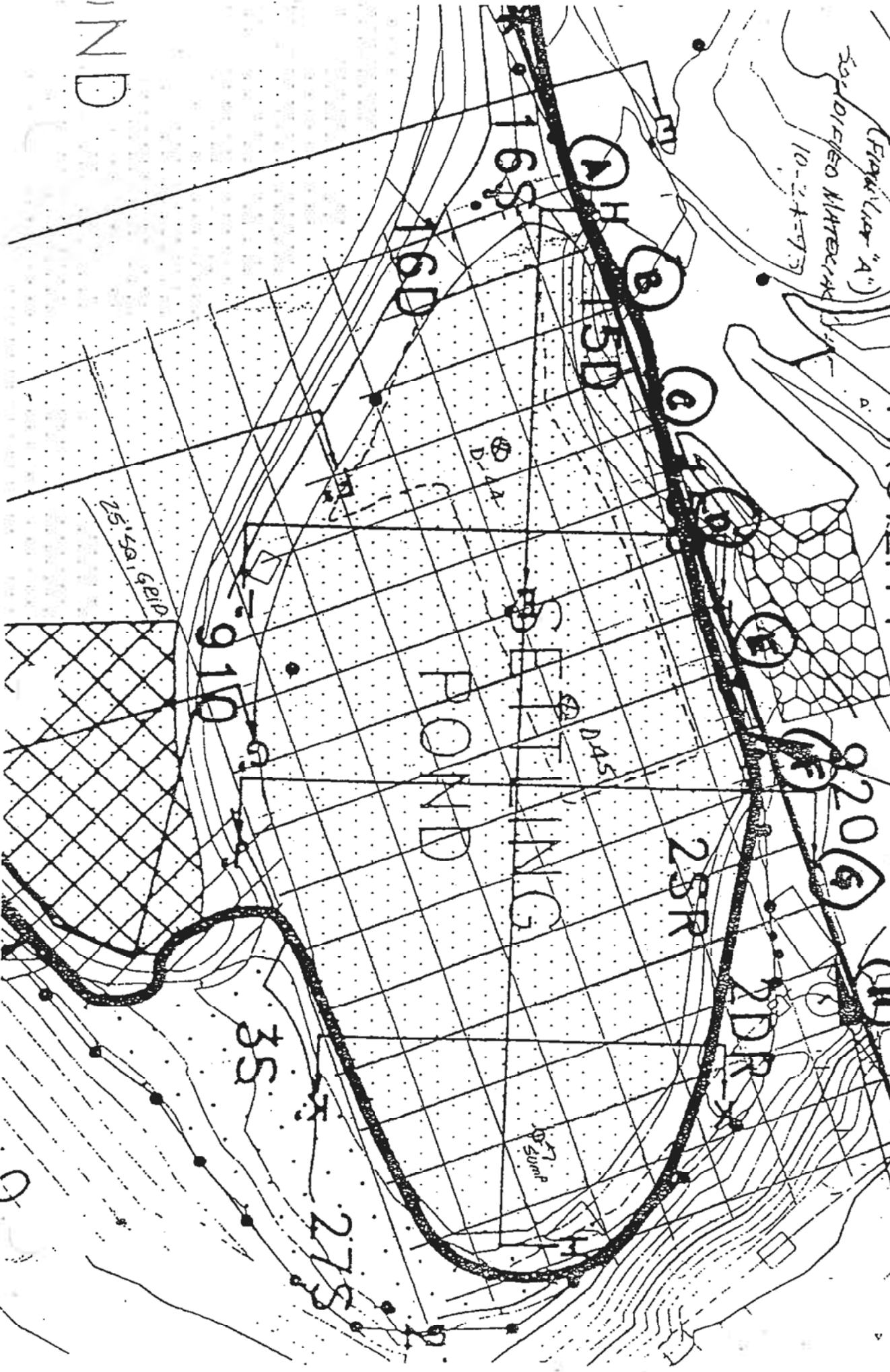
(Flow Line "A")

20' DIAMETER MATERIAL

10-24-77

EXISTING
WASTE WATER
FACILITY

EXISTING



IND



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PROJECT: BONNELL IMPOUNDMENT CLOSURE

PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST (Factor Check)

TEST NUMBER	D-46	D-47				
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.28	4.34				
B. WT. OF MOLD (POUNDS)	1.26	1.32				
C. WT. OF SOIL = A-B (POUNDS)	3.02	3.02				
D. WET DENSITY = C/0.33 (PCF)	91.5	91.5				
<u>MOISTURE CONTENT</u>						
TARE NUMBER	—	—				
E. WT. OF TARE (GRAMS)	125.5	125.5				
F. WT. OF WET SOIL & TARE (GRAMS)	213.5	225.0				
G. WT. OF DRY SOIL & TARE (GRAMS)	171.5	174.5				
H. WT. OF MOISTURE = F-G (GRAMS)	42.0	50.5				
I. WT. OF DRY SOIL = G-E (GRAMS)	96.0	99.0				
J. MOISTURE CONTENT = (H/I) x 100 (%)	43.75	51.0				
<u>COMPACTION</u>						
K. DRY DENSITY = D/(1 + (J/100)) (PCF)	65.4	61.0				
L. PROCTOR MAX. DRY DENSITY (PCF)	54.0	54.0				
M. PERCENT COMPACTION = K/L (%)	121.0	113.0				

TECHNICIAN: Joe Lewis

DATE: 10-31-93



1.7



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FILTER CASE
8th LAY

PROJECT: BONNELL IMPOUNDMENT CLOSURE
PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST

TEST NUMBER	D-48	D-49	D-50	D-51	D-52	
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.38	4.40	4.35	4.25	4.33	
B. WT. OF MOLD (POUNDS)	1.26	1.31	1.32	1.30	1.30	
C. WT. OF SOIL = A-B (POUNDS)	3.12	3.09	3.03	2.95	3.03	
D. WET DENSITY = C/.033 (PCF)	94.5	93.6	91.8	89.4	91.8	
<u>MOISTURE CONTENT</u>						
TARE NUMBER	—	—	—	—	—	
E. WT. OF TARE (GRAMS)	125.0	125.0	125.0	125.0	125.0	
F. WT. OF WET SOIL & TARE (GRAMS)	204.0	219.5	209.2	223.0	221.3	
G. WT. OF DRY SOIL & TARE (GRAMS)	172.5	179.5	169.0	166.2	178.5	
H. WT. OF MOISTURE = F-G (GRAMS)	31.5	40.0	40.2	56.8	42.8	
I. WT. OF DRY SOIL = G-E (GRAMS)	47.5	54.5	44.0	41.2	53.5	
J. MOISTURE CONTENT = (H/I) x 100 (%)	66.3	73.4	91.4	137.9	80.0	
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	55.6	55.1	48.3	37.3	51.0	
L. PROCTOR MAX. DRY DENSITY (PCF)	54.0	54.0	54.0	54.0	54.0	
M. PERCENT COMPACTION = K/L (%)	103.0	102.0	89.0	69.0	94.4	

TECHNICIAN: J. GEORGE

DATE: 11/4/93

1.7 2.4
1.7 1.8
1.9

Sheet

1"=50'

Deer Run Damaged West

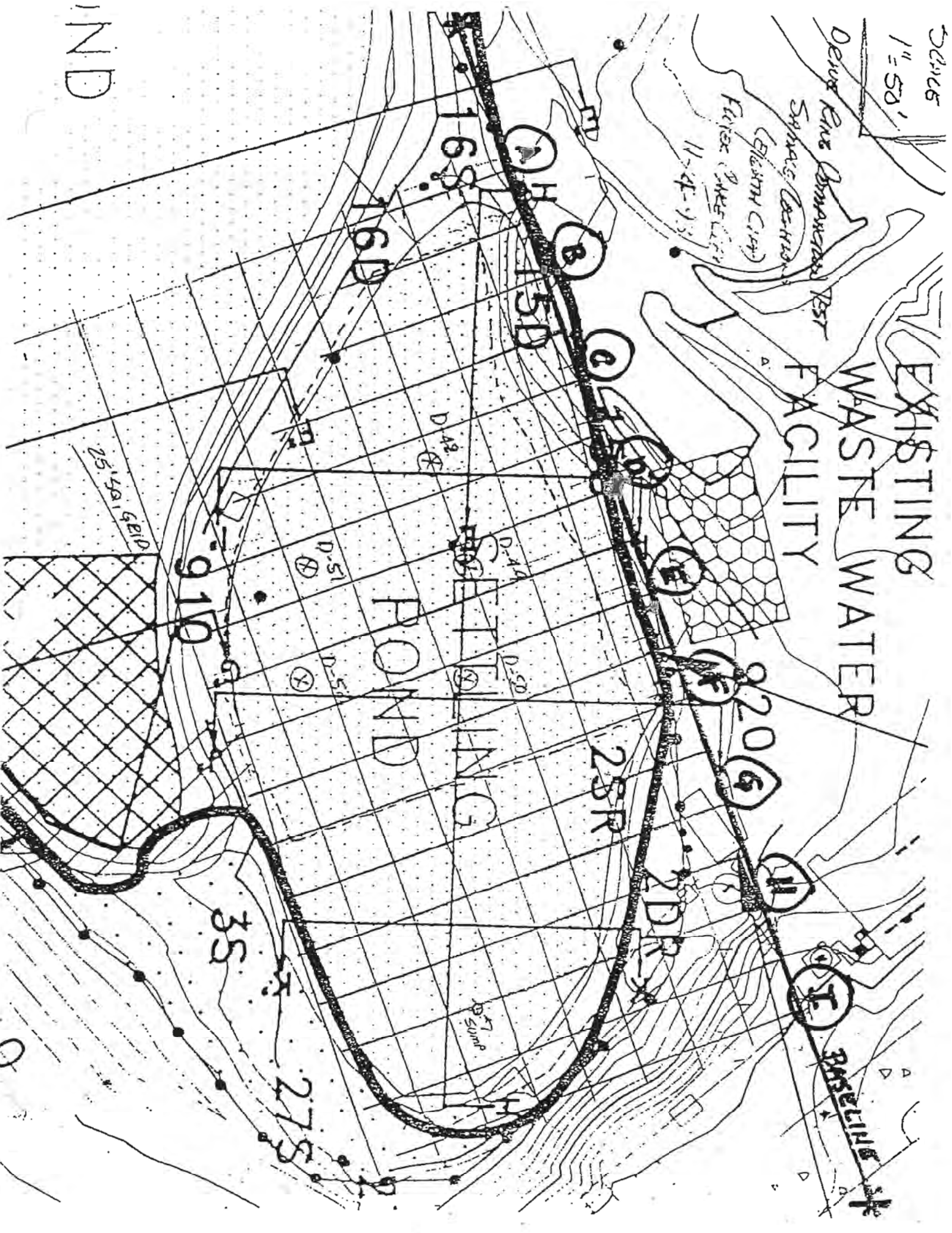
Spence (Lashin)

(Elashin City)

Filter (Spence)

11-4-13

EXISTING WASTE WATER FACILITY



IND



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Filter Case
0-51

PROJECT: BONNELL IMPOUNDMENT CLOSURE
PRCJ. #: 2040.009.92

DRIVE RING COMPACTION TEST

TEST NUMBER	0-51	0-52	0-53	0-54	0-55	0-56
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.27	4.11	4.04	4.28	4.14	4.10
B. WT. OF MOLD (POUNDS)	1.32	1.24	1.31	1.32	1.30	1.30
C. WT. OF SOIL = A-B (POUNDS)	2.95	2.85	2.73	2.96	2.84	2.80
D. WET DENSITY = C/.033 (PCF)	89.4	86.4	82.7	89.7	86.1	84.8
<u>MOISTURE CONTENT</u>						
TARE NUMBER	—	—	—	—	—	—
E. WT. OF TARE (GRAMS)	125.5	125.5	125.5	125.5	125.5	125.5
F. WT. OF WET SOIL & TARE (GRAMS)	214.5	215.5	211.7	210.5	217.5	214.7
G. WT. OF DRY SOIL & TARE (GRAMS)	173.0	178.0	170.7	173.0	171.3	176.5
H. WT. OF MOISTURE = F-G (GRAMS)	41.5	37.5	41.0	37.5	46.2	38.2
I. WT. OF DRY SOIL = G-E (GRAMS)	47.5	52.5	45.2	47.5	45.8	51.0
J. MOISTURE CONTENT = (H/I) x 100 (%)	87.4	71.4	90.7	78.9	100.9	74.9
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	47.1	50.8	43.5	49.8	43.1	49.9
L. PROCTOR MAX. DRY DENSITY (PCF)	54.0	54.0	54.0	54.0	54.0	54.0
M. * PERCENT COMPACTION = K/L (%)	87.2	94.1	80.6	92.2	79.8	92.4

TECHNICIAN: Joe Lewis

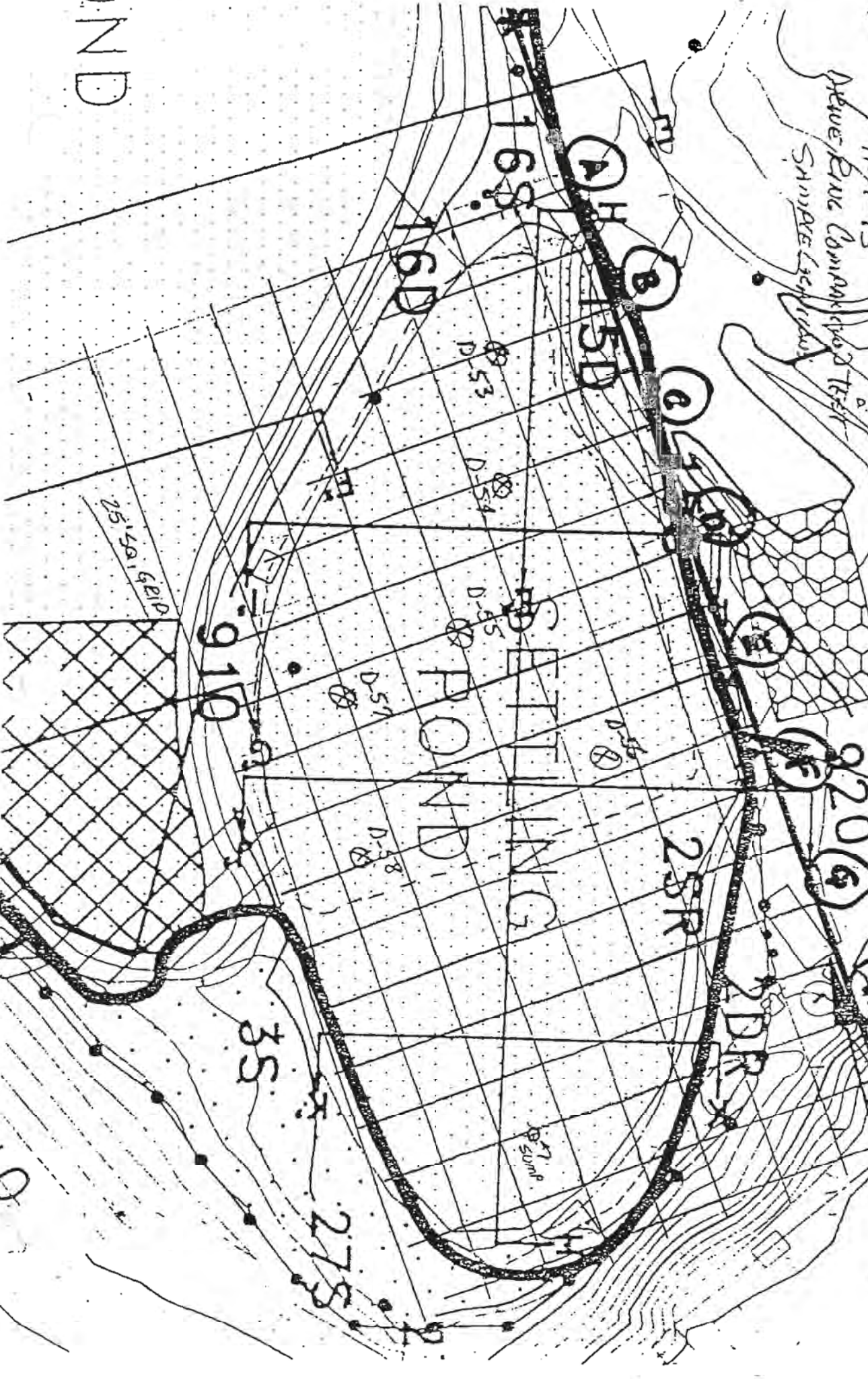
DATE: Nov. 9, 1993



Scale
1" = 50'

Figure C-10
11-9-93
11-9-93
Active/Passive Command and Control
Sample Location

EXISTING WASTE WATER FACILITY



IND



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PROJECT: BONNELL IMPOUNDMENT CLOSURE

PROJ. #: 2040.009.92-

Filter Cake

Filter Cake - Tenth Layer

DRIVE RING COMPACTION TEST

TEST NUMBER	D-59	D-60	D-61	D-62	D-63	D-64
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.04	4.18	4.28	4.12	4.34	4.34
B. WT. OF MOLD (POUNDS)	1.26	1.31	1.32	1.30	1.30	1.32
C. WT. OF SOIL = A-B (POUNDS)	2.78	2.87	2.96	2.82	3.04	3.02
D. WET DENSITY = C/.033 (PCF)	84.2	87.0	89.7	85.5	92.1	91.5
<u>MOISTURE CONTENT</u>						
TARE NUMBER	—	—	—	—	—	—
E. WT. OF TARE (GRAMS)	123.5	123.5	123.5	123.5	123.5	123.5
F. WT. OF WET SOIL & TARE (GRAMS)	213.5	207.5	204.5	203.3	206.0	203.8
G. WT. OF DRY SOIL & TARE (GRAMS)	177.0	175.0	170.0	175.0	172.0	170.5
H. WT. OF MOISTURE = F-G (GRAMS)	36.5	32.5	34.5	28.3	34.0	33.3
I. WT. OF DRY SOIL = G-E (GRAMS)	53.4	51.5	46.5	51.5	48.5	47.0
J. MOISTURE CONTENT = (H/I) x 100 (%)	68.4	63.1	74.2	55.0	70.1	70.9
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	49.5	54.4	52.8	53.4	54.2	53.8
L. PROCTOR MAX. DRY DENSITY (PCF)	54.0	54.0	54.0	54.0	54.0	54.0
M. PERCENT COMPACTION = K/L (%)	92.0	100.7	97.8	98.9	100.4	99.6

TECHNICIAN: Joe Lewis

DATE: 11-12-93

1.7 -
1.6 -
1.7 -
1.6 -
1.7
1.7





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PROJECT: BONNELL IMPOUNDMENT CLOSURE
PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST FILTER-CAKE - ELEVENTH LIFT

TEST NUMBER	D-65	D-66	D-67	D-68	D-69	D-70
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.20	4.31	4.20	4.11	4.27	4.27
B. WT. OF MOLD (POUNDS)	1.26	1.31	1.32	1.30	1.30	1.32
C. WT. OF SOIL = A-B (POUNDS)	2.94	3.0	2.88	2.81	2.97	2.95
D. WET DENSITY = C/0.033 (PCF)	89.1	90.9	87.3	85.2	90.0	89.4
<u>MOISTURE CONTENT</u>						
TARE NUMBER	#31	#24	#14	#28	#40	#15
E. WT. OF TARE (GRAMS)	31.8	31.5	31.9	32.3	31.4	32.8
F. WT. OF WET SOIL & TARE (GRAMS)	102.5	97.8	117.5	95.7	105.2	109.7
G. WT. OF DRY SOIL & TARE (GRAMS)	71.0	69.4	76.9	73.0	70.6	78.7
H. WT. OF MOISTURE = F-G (GRAMS)	31.5	28.4	40.6	22.7	34.6	31.0
I. WT. OF DRY SOIL = G-E (GRAMS)	39.2	37.9	45.0	40.7	39.2	45.9
J. MOISTURE CONTENT = (H/I) x 100 (%)	80.4	74.9	90.2	55.8	88.3	67.5
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	49.5	53.5	45.9	53.3	47.4	52.6
L. PROCTOR MAX. DRY DENSITY (PCF)	54.0	54.0	54.0	54.0	54.0	54.0
M. PERCENT COMPACTION = K/L (%)	92.0	99.1	85.0	98.7	88.0	97.4

TECHNICIAN: BRIAN DAUNITE
SAE LEWIS

DATE: 11/16/93

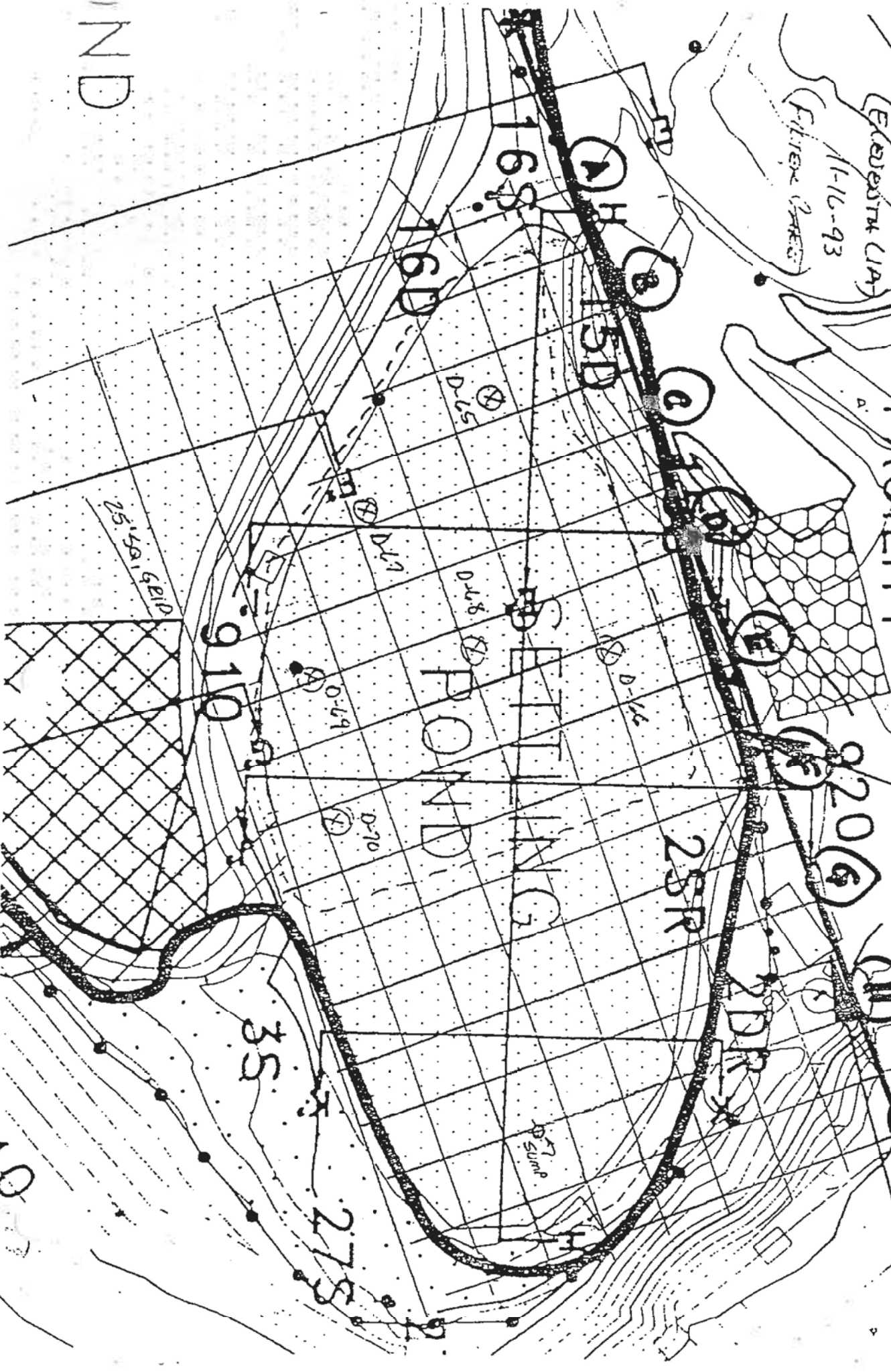
1.8
1.7
1.9
1.6
1.9
1.7



Scale
1" = 50'

Draw/Plot Construction
Shirley Carpenter
(Elevation 114)
11-16-93
(Filter Bank)

EXISTING WASTE WATER FACILITY



IND



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PROJECT: BONNELL IMPOUNDMENT CLOSURE

PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST *FILTER CASE - TWEED CUP*

TEST NUMBER	D-71	D-72	D-73	D-74	D-75	D-76
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.14	4.26	4.23	4.31	4.16	4.13
B. WT. OF MOLD (POUNDS)	1.26	1.31	1.32	1.30	1.30	1.32
C. WT. OF SOIL = A-B (POUNDS)	2.88	2.95	2.91	3.01	2.86	2.81
D. WET DENSITY = C/.033 (PCF)	87.3	89.4	88.2	91.2	86.7	85.2
<u>MOISTURE CONTENT</u>						
TARE NUMBER	—	—	—	—	—	—
E. WT. OF TARE (GRAMS)	123.5	123.5	123.5	123.5	123.5	123.5
F. WT. OF WET SOIL & TARE (GRAMS)	214.3	206.0	206.5	205.5	206.0	212.0
G. WT. OF DRY SOIL & TARE (GRAMS)	177.0	167.5	168.0	165.5	170.0	172.0
H. WT. OF MOISTURE = F-G (GRAMS)	37.3	38.5	38.5	40.0	36.0	40.0
I. WT. OF DRY SOIL = G-E (GRAMS)	53.5	44.0	44.5	42.0	46.5	48.5
J. MOISTURE CONTENT = (H/I) x 100 (%)	69.7	87.5	86.5	95.2	77.4	82.4
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	51.4	47.1	46.4	45.6	48.2	47.3
L. PROCTOR MAX. DRY DENSITY (PCF)	54.0	54.0	54.0	54.0	54.0	54.0
M. PERCENT COMPACTION = K/L (%)	95.2	87.2	86.0	84.4	89.3	87.6

TECHNICIAN: Joe Lewis

DATE: 11-19-93



1.7
1.9
1.9
2.0
1.8
1.5

Scale
1" = 50'

Deer Run Comstock Test

Sample Locations

(Tributary Creek)

Filter Lake

11-19-73

EXISTING WASTE WATER FACILITY

9200

11

I

BRIDGE

2SR

2DR

SETTLING
POND

15D

8

6

10

9

11

12

13

14

15

16

16S

16D

910

35

275

7

10

11

12

13

14

15

16

17

IND



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PROJECT: BONNELL IMPOUNDMENT CLOSURE

PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST

Filter Case Tamper with Cap

TEST NUMBER	D-77	D-78	D-79	D-80	D-81	D-82
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.22	4.29	4.34	4.37	4.21	4.21
B. WT. OF MOLD (POUNDS)	1.26	1.31	1.32	1.30	1.30	1.32
C. WT. OF SOIL = A-B (POUNDS)	2.96	2.98	3.02	3.07	2.91	2.89
D. WET DENSITY = C/.033 (PCF)	89.7	90.3	91.5	93.0	88.2	87.6
<u>MOISTURE CONTENT</u>						
TARE NUMBER	—	—	—	—	—	—
E. WT. OF TARE (GRAMS)	127.6	127.6	127.6	127.6	127.6	127.6
F. WT. OF WET SOIL & TARE (GRAMS)	210.7	215.6	211.8	211.2	208.6	209.7
G. WT. OF DRY SOIL & TARE (GRAMS)	172.4	173.1	173.4	177.2	171.1	170.8
H. WT. OF MOISTURE = F-G (GRAMS)	38.3	42.5	38.4	34.0	37.5	38.9
I. WT. OF DRY SOIL = G-E (GRAMS)	44.8	45.5	45.8	49.6	43.5	43.2
J. MOISTURE CONTENT = (H/I) x 100 (%)	85.5	93.4	83.8	68.5	86.2	90.0
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	47.2	47.5	50.8	54.7	46.4	46.1
L. PROCTOR MAX. DRY DENSITY (PCF)	54.0	54.0	54.0	54.0	54.0	54.0
M. PERCENT COMPACTION = K/L (%)	87.4	88.0	94.1	101.3	86.0	85.4

TECHNICIAN: J. L. Lewis

DATE: 11-29-93

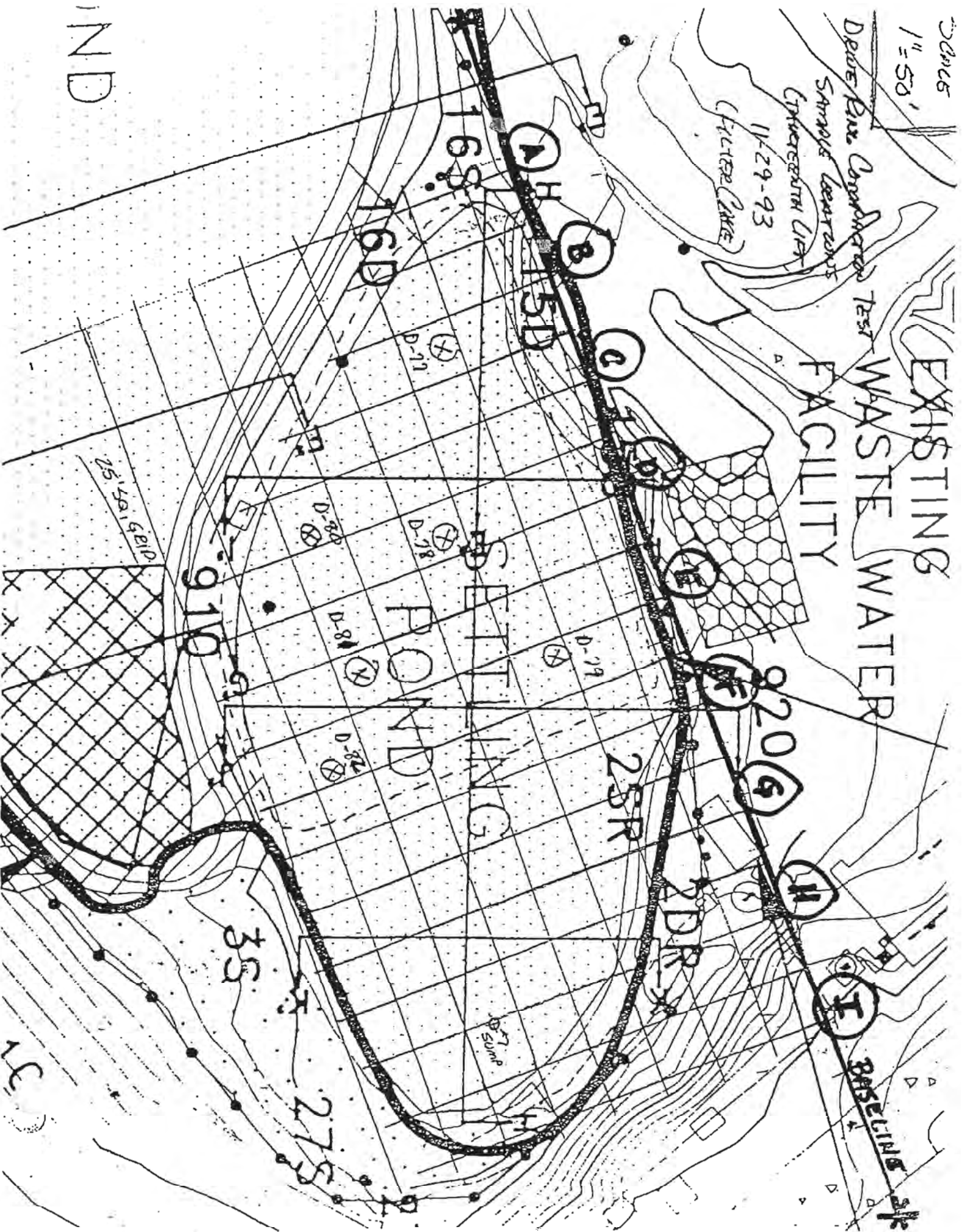


1.9
1.9
1.8
1.7
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1.9

2/26/65
1"=50'

DEVELOP/PAVE CONCRETE TEST WASTE WATER
FACILITY
SAMPLE LOCATIONS
CONCRETE LIFT
11-29-93
(FILTER PANE)

EXISTING
WASTE WATER
FACILITY



IND



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PROJECT: BONNELL IMPOUNDMENT CLOSURE
PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST *FILTER CASE - FOURTEENTH LIFT*

TEST NUMBER	D-83	D-84	D-85	D-86	D-87	D-88
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.21	4.32	4.27	4.23	4.27	4.28
B. WT. OF MOLD (POUNDS)	1.26	1.31	1.32	1.30	1.30	1.32
C. WT. OF SOIL = A-B (POUNDS)	2.95	3.01	2.95	2.93	2.97	2.96
D. WET DENSITY = C/.033 (PCF)	89.4	91.2	89.4	88.8	90.0	89.7
<u>MOISTURE CONTENT</u>						
TARE NUMBER	—	—	—	—	—	—
E. WT. OF TARE (GRAMS)	127.7	127.7	127.7	127.7	127.7	127.7
F. WT. OF WET SOIL & TARE (GRAMS)	209.7	201.9	203.8	204.8	201.6	203.4
G. WT. OF DRY SOIL & TARE (GRAMS)	168.6	168.6	169.2	172.5	167.4	175.5
H. WT. OF MOISTURE = F-G (GRAMS)	38.8	33.3	34.6	32.3	34.2	27.9
I. WT. OF DRY SOIL = G-E (GRAMS)	40.9	40.9	41.5	44.8	39.7	47.8
J. MOISTURE CONTENT = (H/I) x 100 (%)	94.9	81.4	83.4	72.1	86.1	58.4
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	47.1	50.7	49.7	52.2	50.0	56.1
L. PROCTOR MAX. DRY DENSITY (PCF)	54.0	54.0	54.0	54.0	54.0	54.0
M. PERCENT COMPACTION = K/L (%)	87.2	93.8	92.0	96.7	92.6	103.9

TECHNICIAN: J. Lewis

DATE: 12-3-93

1.4
1.8
1.8
1.7
1.8
1.6

UCP 6
1" = 50'

EXISTING
WASTE WATER
FACILITY

Base Line Comparison Test
Samples Collected
(FOURTEENTH C-17)

12-3-93

(FIVE C-17)

220
25R
2DR

BASELINE

SETTLING
POND

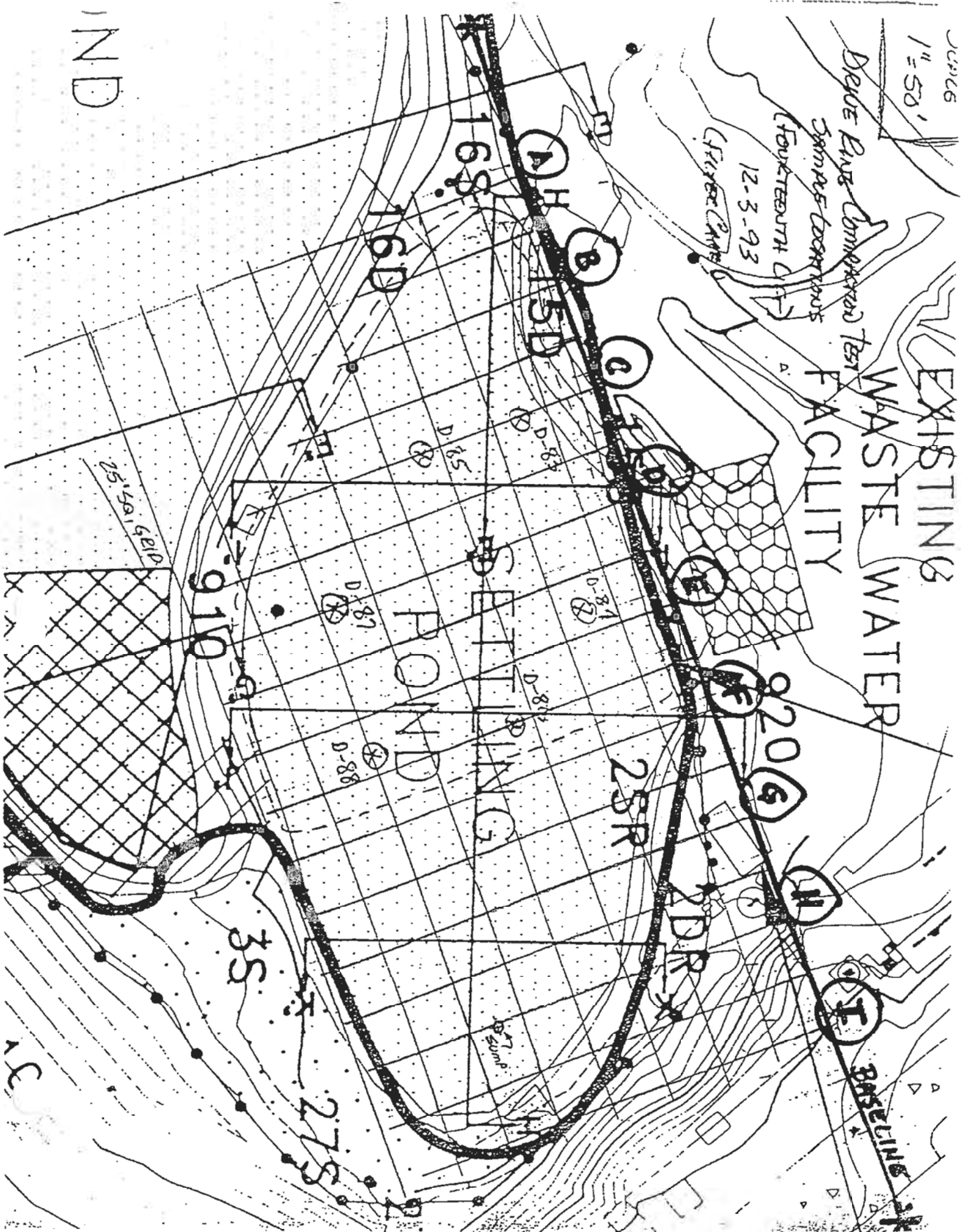
168
16D

910

35

275

IND





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PROJECT: BONNEL IMPOUNDMENT CLOSURE
PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST *Filter Case - CAPT. 2B*

TEST NUMBER	D-89	D-90	D-91	D-92	.	
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.23	4.24	4.52	4.18		
B. WT. OF MOLD (POUNDS)	1.26	1.31	1.32	1.30		
C. WT. OF SOIL = A-B (POUNDS)	2.97	2.93	3.20	2.88		
D. WET DENSITY = C/0.33 (PCF)	90.0	86.8	97.0	87.3		
<u>MOISTURE CONTENT</u>						
TARE NUMBER	—	—	—	—		
E. WT. OF TARE (GRAMS)	127.8	127.8	127.8	127.8		
F. WT. OF WET SOIL & TARE (GRAMS)	206.0	203.4	201.6	203.0		
G. WT. OF DRY SOIL & TARE (GRAMS)	180.2	176.8	171.7	180.5		
H. WT. OF MOISTURE = F-G (GRAMS)	25.8	26.6	29.9	22.5		
I. WT. OF DRY SOIL = G-E (GRAMS)	52.4	49.0	43.9	52.7		
J. MOISTURE CONTENT = (H/I) x 100 (%)	49.2	54.3	68.1	42.7		
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (W/100)] (PCF)	60.0	57.9	57.1	62.4		
L. PROCTOR MAX. DRY DENSITY (PCF)	54.0	54.0	54.0	54.0		
M. PERCENT COMPACTION = K/L (%)	111.1	107.2	105.7	115.6		

TECHNICIAN: Joe Lewis

DATE: 12-16-93



1.5
1.5
1.7
1.4

June 1"=50'

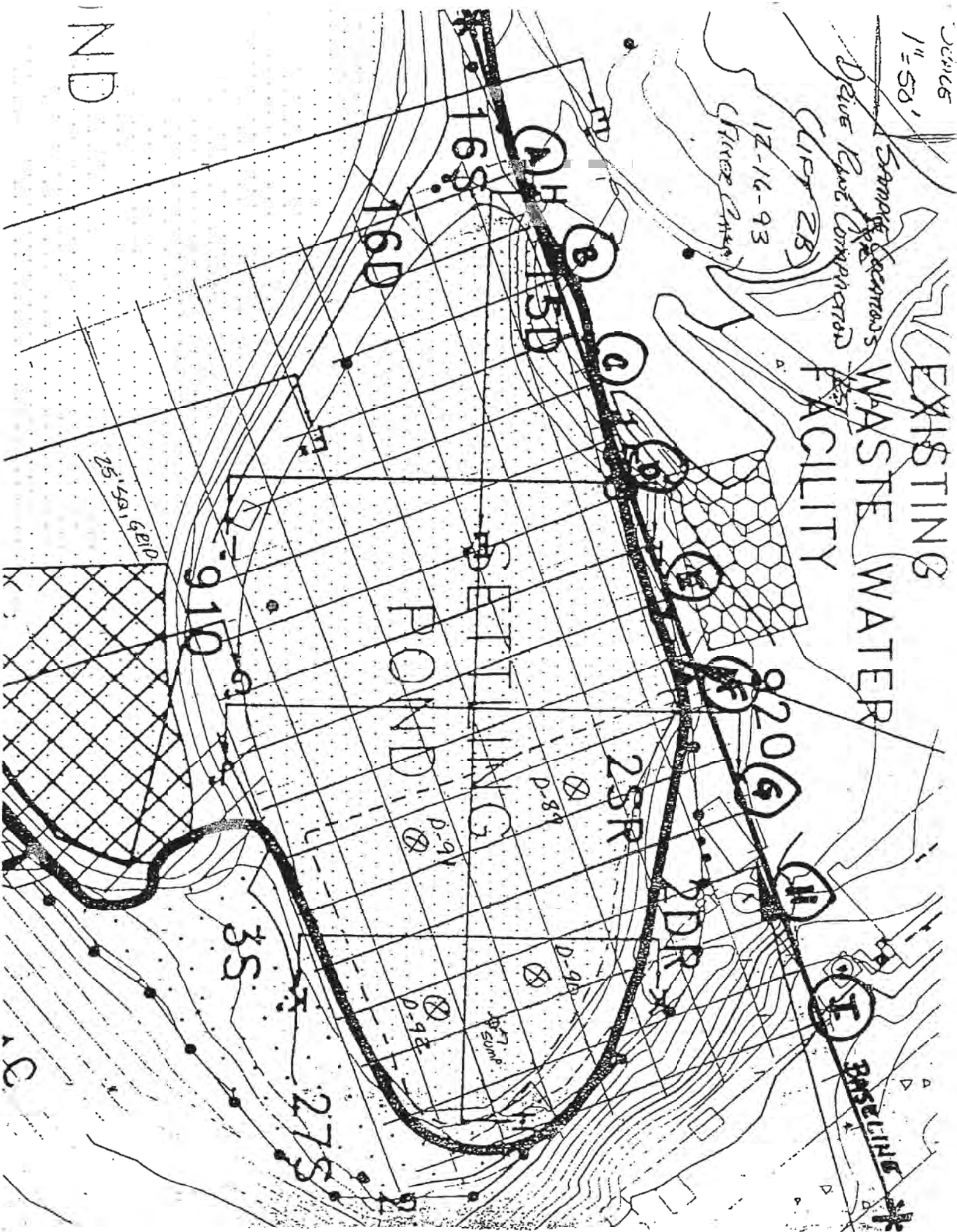
San Jose Gasworks
Drive Plant Comparison

CLIP 28

12-16-93

Chavez Canyon

EXISTING WASTE WATER FACILITY





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PROJECT: BONNELL IMPOUNDMENT CLOSURE
PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST *Filter Lake - Lix 3B*

TEST NUMBER	0-93	0-94	0-95	0-96		
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.14	4.25	4.18	4.36		
B. WT. OF MOLD (POUNDS)	1.26	1.31	1.32	1.30		
C. WT. OF SOIL = A-B (POUNDS)	2.88	2.94	2.86	3.06		
D. WET DENSITY = C/.033 (PCF)	87.3	89.1	86.7	92.7		
<u>MOISTURE CONTENT</u>						
TARE NUMBER	—	—	—	—		
E. WT. OF TARE (GRAMS)	127.7	127.7	127.7	127.7		
F. WT. OF WET SOIL & TARE (GRAMS)	206.6	203.2	205.4	202.3		
G. WT. OF DRY SOIL & TARE (GRAMS)	172.3	172.0	172.6	169.6		
H. WT. OF MOISTURE = F-G (GRAMS)	34.3	31.2	32.8	32.7		
I. WT. OF DRY SOIL = G-E (GRAMS)	44.6	44.3	44.9	41.9		
J. MOISTURE CONTENT = (H/I) x 100 (%)	76.9	70.4	73.1	78.0		
<u>COMPACTION</u>						
K. DRY DENSITY = D/(1 + (J/100)) (PCF)	48.5	52.4	51.0	51.5		
L. PROCTOR MAX. DRY DENSITY (PCF)	54.0	54.0	54.0	54.0		
M. PERCENT COMPACTION = K/L (%)	90.0	97.0	94.4	95.4		

TECHNICIAN: *J. Lewis*

DATE: *12-18-93*

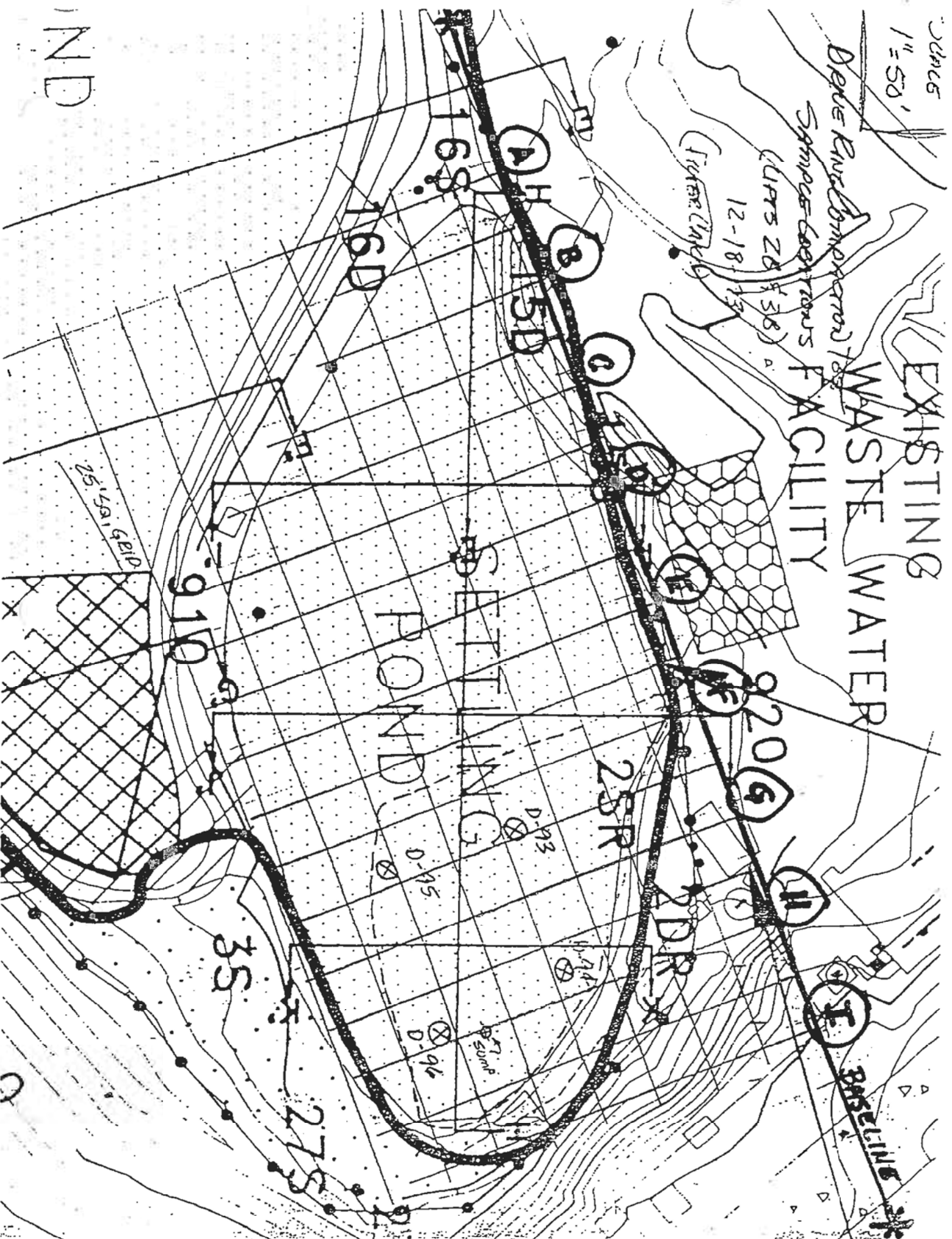
1.8
1.7
1.7
1.8

Scale
1" = 50'

EXISTING WASTE WATER TREATMENT FACILITY

Sample Locations
(LPTS 28 & 38)
12-18-73

(Treated Water)



IND



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PROJECT: BONNEL IMPOUNDMENT CLOSURE
PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST *Filter Cake - LPT 4B*

TEST NUMBER	0-97	0-98	0-99	0-100	.	
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.29	4.13	4.31	4.20		
B. WT. OF MOLD (POUNDS)	1.26	1.31	1.32	1.30		
C. WT. OF SOIL = A-B (POUNDS)	3.03	2.82	3.05	2.90		
D. WET DENSITY = C/0.033 (PCF)	91.8	85.5	92.4	87.9		
<u>MOISTURE CONTENT</u>						
TARE NUMBER	—	—	—	—		
E. WT. OF TARE (GRAMS)	127.7	127.7	127.7	127.7		
F. WT. OF WET SOIL & TARE (GRAMS)	204.4	201.8	201.2	203.3		
G. WT. OF DRY SOIL & TARE (GRAMS)	172.4	174.2	169.5	172.4		
H. WT. OF MOISTURE = F-G (GRAMS)	32.0	27.6	31.7	30.9		
I. WT. OF DRY SOIL = G-E (GRAMS)	44.7	46.5	41.8	44.7		
J. MOISTURE CONTENT = (H/I) x 100 (%)	71.6	59.4	75.8	69.1		
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	54.0	53.4	51.3	51.7		
L. PROCTOR MAX. DRY DENSITY (PCF)	54.0	54.0	54.0	54.0		
M. PERCENT COMPACTION = K/L (%)	100.0	98.9	95.0	95.7		

TECHNICIAN: Joe Lewis

DATE: 12-22-93

1.7
1.6
1.8
⊗ 1.7

Scale

1" = 50'

Drainage Line Observation Test
Sample Locations

(List 48)

Figure 1000

12-22-93

EXISTING
WASTE WATER
FACILITY

ENCLOSURE

910

35

275

SETTLING
POND

25R

2DR

168

16D

15D

D-97

D-99

D-98

D-100

D-101

D-102

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D-397



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PROJECT: BONNELL IMPOUNDMENT CLOSURE
PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST *Fillet Lake - Lift 58*

TEST NUMBER	D-101	D-102	D-103	D-104	.	
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.03	4.09	4.11	4.04		
B. WT. OF MOLD (POUNDS)	1.26	1.31	1.32	1.30		
C. WT. OF SOIL= A-B (POUNDS)	2.77	2.78	2.79	2.74		
D. WET DENSITY= C/.033 (PCF)	83.9	84.2	84.5	83.0		
<u>MOISTURE CONTENT</u>						
TARE NUMBER	—	—	—	—		
E. WT. OF TARE (GRAMS)	122.7	122.7	122.7	122.7		
F. WT. OF WET SOIL & TARE (GRAMS)	201.3	204.4	205.1	205.4		
G. WT. OF DRY SOIL & TARE (GRAMS)	177.7	175.2	173.5	171.5		
H. WT. OF MOISTURE= F-G (GRAMS)	23.6	29.2	31.6	33.9		
I. WT. OF DRY SOIL= G-E (GRAMS)	50.0	47.5	45.8	43.8		
J. MOISTURE CONTENT= (H/I) x 100 (%)	47.2	61.5	69.0	77.4		
<u>COMPACTION</u>						
K. DRY DENSITY= D/[1 + (J/100)] (PCF)	55.9	52.6	49.7	46.1		
L. PROCTOR MAX. DRY DENSITY (PCF)	54.0	54.0	54.0	54.0		
M. PERCENT COMPACTION= K/L (%)	103.5	97.4	92.0	85.4		

TECHNICIAN: Joe Lewis

DATE: 1-1-94



1.5
1.6
1.7
1.8

June 5
1"=50'

Draw Pipe Construction Test

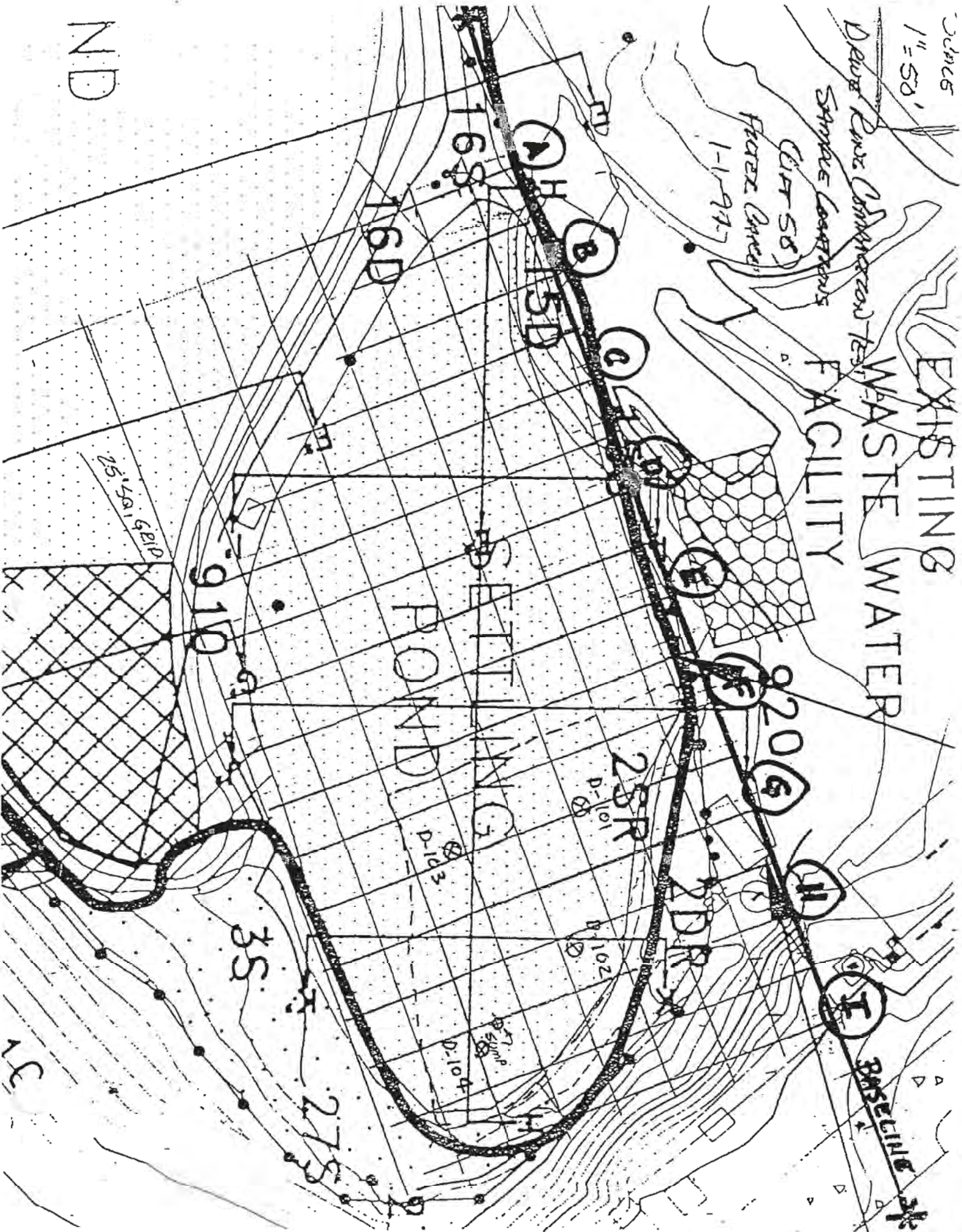
Sample Locations

Clear 50'

Fracture Zone

1-1-97

EXISTING
WASTE WATER
FACILITY



ND



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PROJECT: BONNELL IMPOUNDMENT CLOSURE

PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST *Final Core-Lift 6B*

TEST NUMBER	D-105	D-106	D-107	D-108	.	
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.37	4.46	4.38	4.29		
B. WT. OF MOLD (POUNDS)	1.26	1.31	1.32	1.30		
C. WT. OF SOIL = A-B (POUNDS)	3.11	3.15	3.06	2.99		
D. WET DENSITY = C/.033 (PCF)	94.2	95.5	92.7	90.6		
<u>MOISTURE CONTENT</u>						
TARE NUMBER	—	—	—	—		
E. WT. OF TARE (GRAMS)	127.7	127.7	127.7	127.7		
F. WT. OF WET SOIL & TARE (GRAMS)	203.7	200.6	202.0	202.4		
G. WT. OF DRY SOIL & TARE (GRAMS)	171.6	174.6	(168.0) 168.0	(172.1) 171.9		
H. WT. OF MOISTURE = F-G (GRAMS)	32.1	26.0	34.0	30.5		
I. WT. OF DRY SOIL = G-E (GRAMS)	43.9	46.9	40.3	44.2		
J. MOISTURE CONTENT = (H/I) x 100 (%)	73.1	55.4	84.4	69.0		
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	55.4	59.7	51.5	53.3		
L. PROCTOR MAX. DRY DENSITY (PCF)	54.0	54.0	54.0	54.0		
M. PERCENT COMPACTION = K/L (%)	102.6	110.6	95.4	98.7		

TECHNICIAN: J. Lewis

DATE: 1-8-94



1.7
1.6
1.8
1.7

Driver's License (copy)

Samples: Caracaras

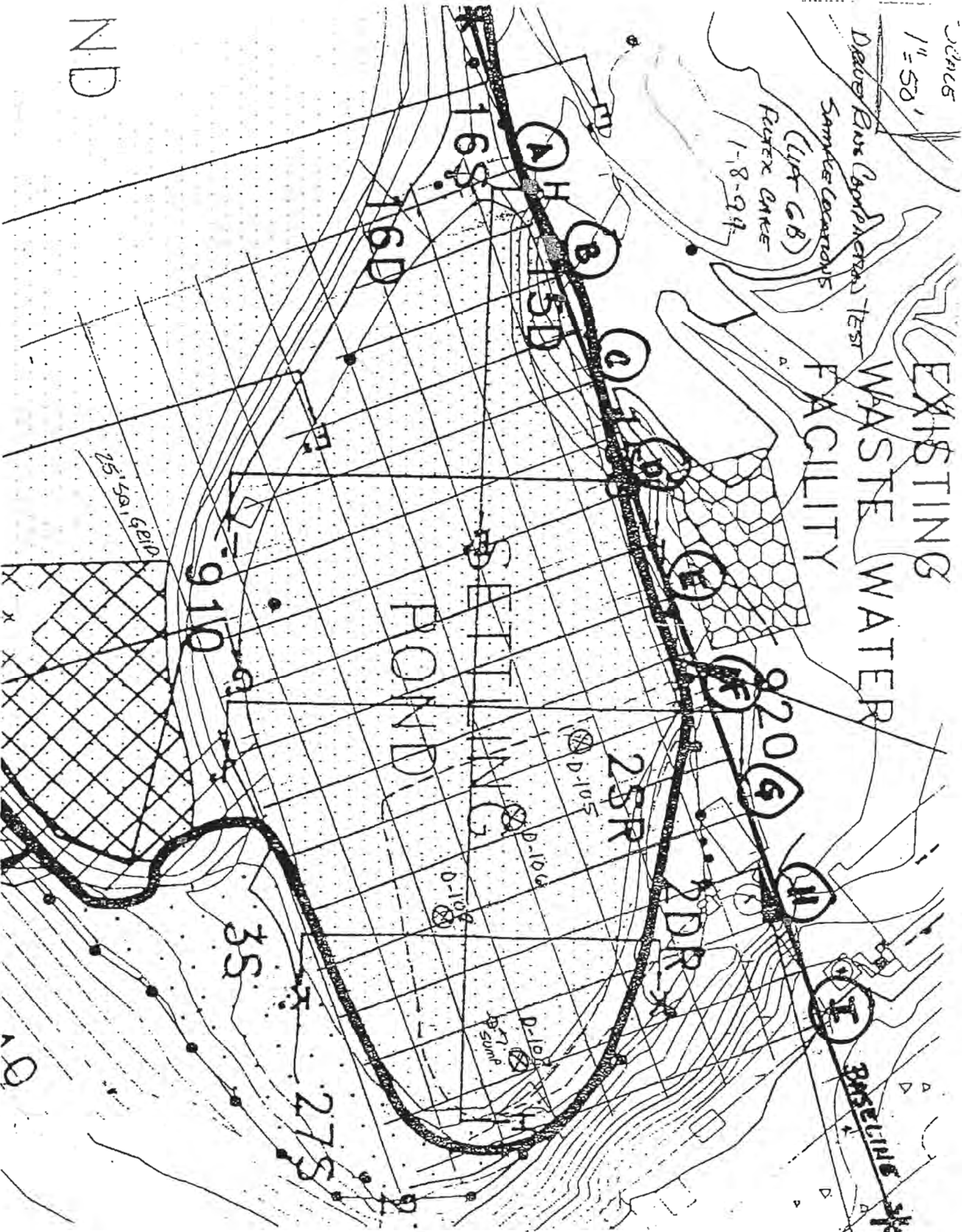
(1966-68)

FIFTY CENTS

1-8-99

EXISTING
WASTE WATER
FACILITY

RECEIVED





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PROJECT: BONNELL IMPOUNDMENT CLOSURE

PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST *Filter Case - Lift 7B*

TEST NUMBER	D-109	D-110	D-111	D-112		
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.42	4.26	4.35	4.40		
B. WT. OF MOLD (POUNDS)	1.26	1.31	1.32	1.30		
C. WT. OF SOIL = A-B (POUNDS)	3.16	2.95	3.03	3.10		
D. WET DENSITY = C/.033 (PCF)	95.8	89.4	91.8	93.9		
<u>MOISTURE CONTENT</u>						
TARE NUMBER	—	—	—	—		
E. WT. OF TARE (GRAMS)	127.7	127.7	127.7	127.7		
F. WT. OF WET SOIL & TARE (GRAMS)	200.4	200.0	202.0	200.3		
G. WT. OF DRY SOIL & TARE (GRAMS)	171.3	172.6	172.7	170.7		
H. WT. OF MOISTURE = F-G (GRAMS)	29.1	27.4	29.3	29.6		
I. WT. OF DRY SOIL = G-E (GRAMS)	43.6	44.9	45.0	43.0		
J. MOISTURE CONTENT = (H/I) x 100 (%)	66.7	61.0	65.1	68.8		
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	56.4	55.9	54.0	55.2		
L. PROCTOR MAX. DRY DENSITY (PCF)	54.0	54.0	54.0	54.0		
M. PERCENT COMPACTION = K/L (%)	104.4	103.5	100.0	102.2		

TECHNICIAN: JOE LEWIS

DATE: JAN. 21, 1994

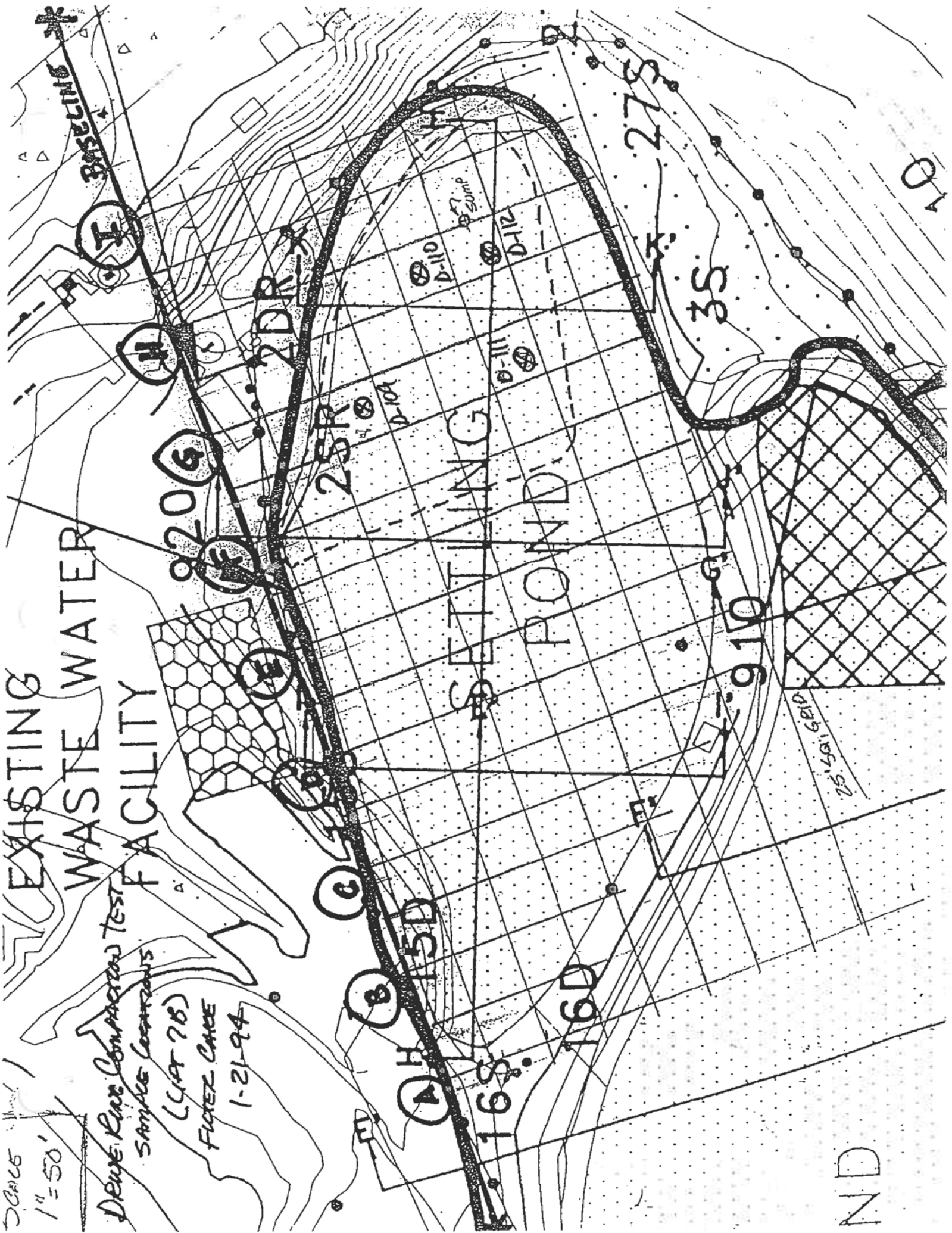


1.7
1.6
1.7
1.7

SCALE
1"=50'

EXISTING WASTE WATER FACILITY

DEVELOPER'S CONSTRUCTION TEST
SAMPLE LOCATIONS
(LAT 78)
FUTURE CANAL
1-21-94



ND



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PROJECT: BONNELL IMPOUNDMENT CLOSURE
PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST

FILTER CAKE - FINAL FOUR SEASONS UNIT

TEST NUMBER	D-113	D-114	D-115	D-116	D-117	D-118
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.16	4.07	4.34	4.30	4.13	4.28
B. WT. OF MOLD (POUNDS)	1.26	1.31	1.32	1.30	1.30	1.32
C. WT. OF SOIL = A-B (POUNDS)	2.90	2.76	3.02	3.00	2.83	2.96
D. WET DENSITY = C/.033 (PCF)	87.9	83.6	91.5	90.9	85.8	89.7
<u>MOISTURE CONTENT</u>						
TARE NUMBER	—	—	—	—	—	—
E. WT. OF TARE (GRAMS)	128.0	128.0	128.0	128.0	128.0	128.0
F. WT. OF WET SOIL & TARE (GRAMS)	209.0	207.8	206.0	206.7	207.5	210.0
G. WT. OF DRY SOIL & TARE (GRAMS)	167.0	168.0	168.5	168.0	167.0	174.3
H. WT. OF MOISTURE = F-G (GRAMS)	42.0	39.8	37.5	38.7	40.5	35.7
I. WT. OF DRY SOIL = G-E (GRAMS)	39.0	40.0	40.5	40.0	39.0	46.3
J. MOISTURE CONTENT = (H/I) x 100 (%)	107.7	99.5	92.6	96.8	103.8	77.1
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	41.9	41.8	48.2	45.5	42.9	49.8
L. PROCTOR MAX. DRY DENSITY (PCF)	54.0	54.0	54.0	54.0	54.0	54.0
M. PERCENT COMPACTION = K/L (%)	77.6	77.4	89.3	84.3	79.4	92.2

TECHNICIAN: J. C. GIBBS

DATE: 2-21-94

* DRY DENSITY TAKEN SAMPLE AFTER HEAVY MOISTURE RAIN.



2.1
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1.9
2.0
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1.8

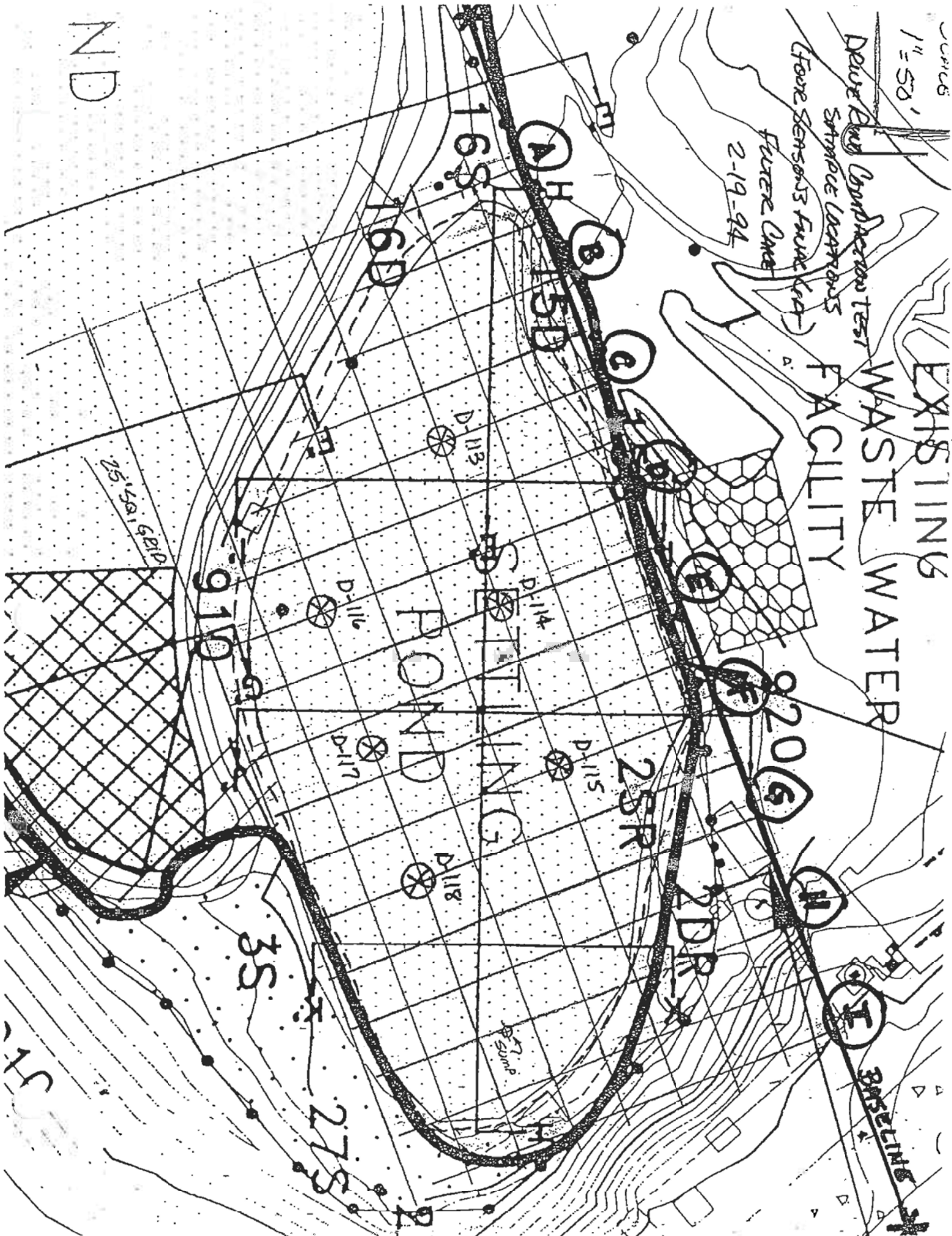
1" = 50'

Deuce Bay Construction Test
Sediment Locations
(Fore Sensors Future Core)

Future Core
2-19-94

EXISTING
WASTE WATER
FACILITY

EXISTING





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PROJECT: BONNELL IMPOUNDMENT CLOSURE
PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST FILTER CAKE LIFT #P-1

TEST NUMBER	D-119	D-120	D-121			
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.68	4.58	4.66			
B. WT. OF MOLD (POUNDS)	1.33	1.27	1.32			
C. WT. OF SOIL = A-B (POUNDS)	3.35	3.31	3.34			
D. WET DENSITY = C/.033 (PCF)	101.5	100.3	101.2			
<u>MOISTURE CONTENT</u>						
TARE NUMBER						
E. WT. OF TARE (GRAMS)						
F. WT. OF WET SOIL & TARE (GRAMS)	120	120	120			
G. WT. OF DRY SOIL & TARE (GRAMS)	79.5	80.4	69.8			
H. WT. OF MOISTURE = F-G (GRAMS)	40.5	39.6	50.2			
I. WT. OF DRY SOIL = G-E (GRAMS)						
GRID LOCATION	A-150	H-100	G-150			
J. MOISTURE CONTENT = (H/I) x 100 (%)	50.9%	49.3%	71.9%			
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	67.3	67.2	58.9			
L. PROCTOR MAX. DRY DENSITY (PCF)	60.°	60.°	60.°			
M. PERCENT COMPACTION = K/L (%)	112.2%	112.°%	98.2%			

TECHNICIAN: CASS CANNON

DATE: 5/12/94



1" = 50'

EXHIBITING
WASTE WATER
FACILITY

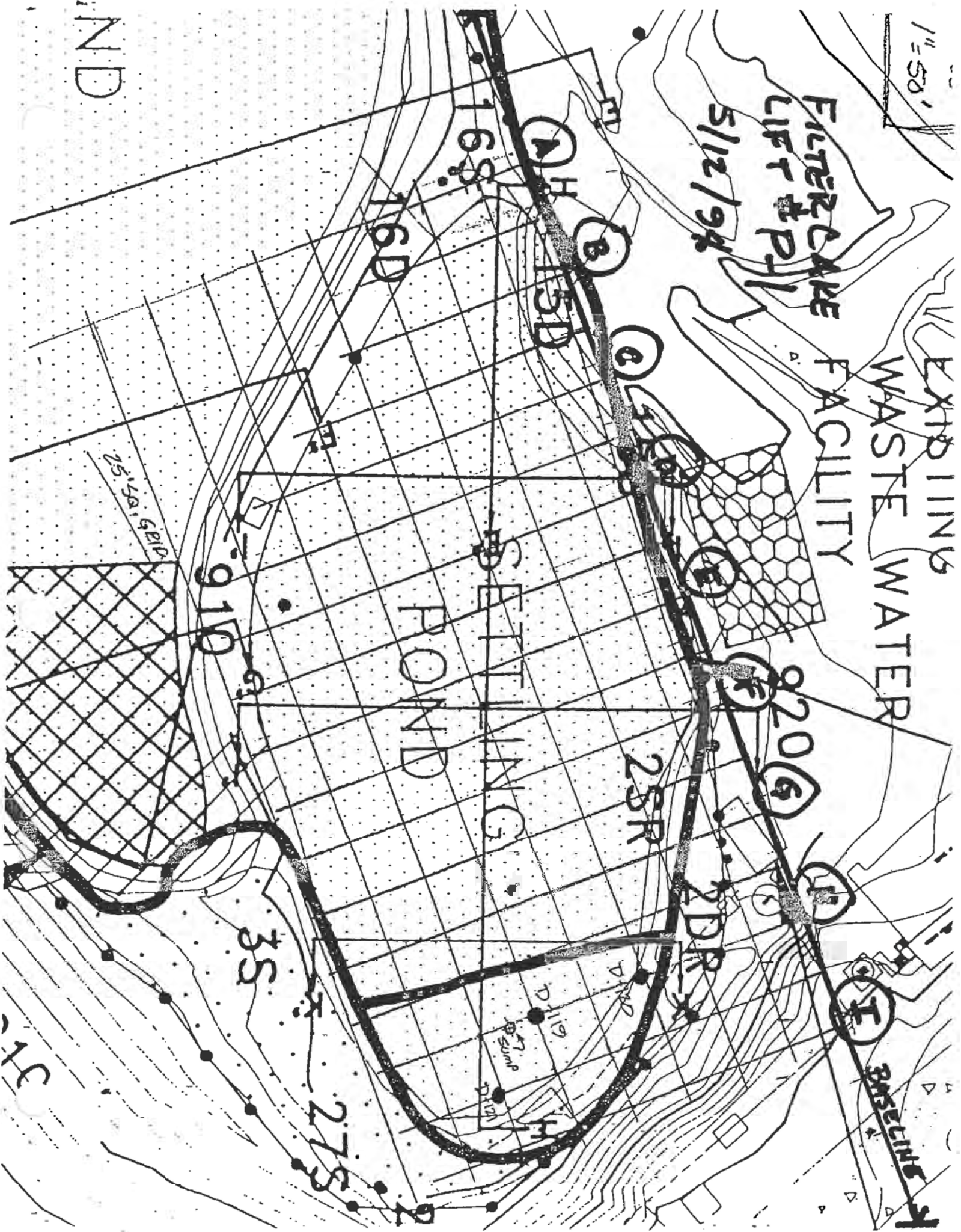
FILTER CAKE
LIFT #P11

5/12/94

SECURITY

SETTLING
POND

IND





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PROJECT: BONNELL IMPOUNDMENT CLOSURE

PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST FILTER CAKE LIFT #P-2

TEST NUMBER	D-122					
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)	4.44					
B. WT. OF MOLD (POUNDS)	1.34	-				
C. WT. OF SOIL = A-B (POUNDS)	3.1					
D. WET DENSITY = C/.033 (PCF)	93.9					
<u>MOISTURE CONTENT</u>						
TARE NUMBER						
E. WT. OF TARE (GRAMS)	150					
F. WT. OF WET SOIL & TARE (GRAMS)	150					
G. WT. OF DRY SOIL & TARE (GRAMS)	80.4					
H. WT. OF MOISTURE = F-G (GRAMS)	69.6					
I. WT. OF DRY SOIL = G-E (GRAMS) GRID LOCATION	H-110					
J. MOISTURE CONTENT = (H/I) x 100 (%)	86.6					
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	50.3					
L. PROCTOR MAX. DRY DENSITY (PCF)	54.0					
M. PERCENT COMPACTION = K/L (%)	93.2%					

TECHNICIAN: CASS CANNON

DATE: 5/20/94



1"=50'

EXHIBITING
WASTE WATER
FACILITY

FILTER CASE

LIFT # P-2

5/20/94

FACILITY

9206

11

I

3/25/94

25R

2DR

16S

15D

16D

910

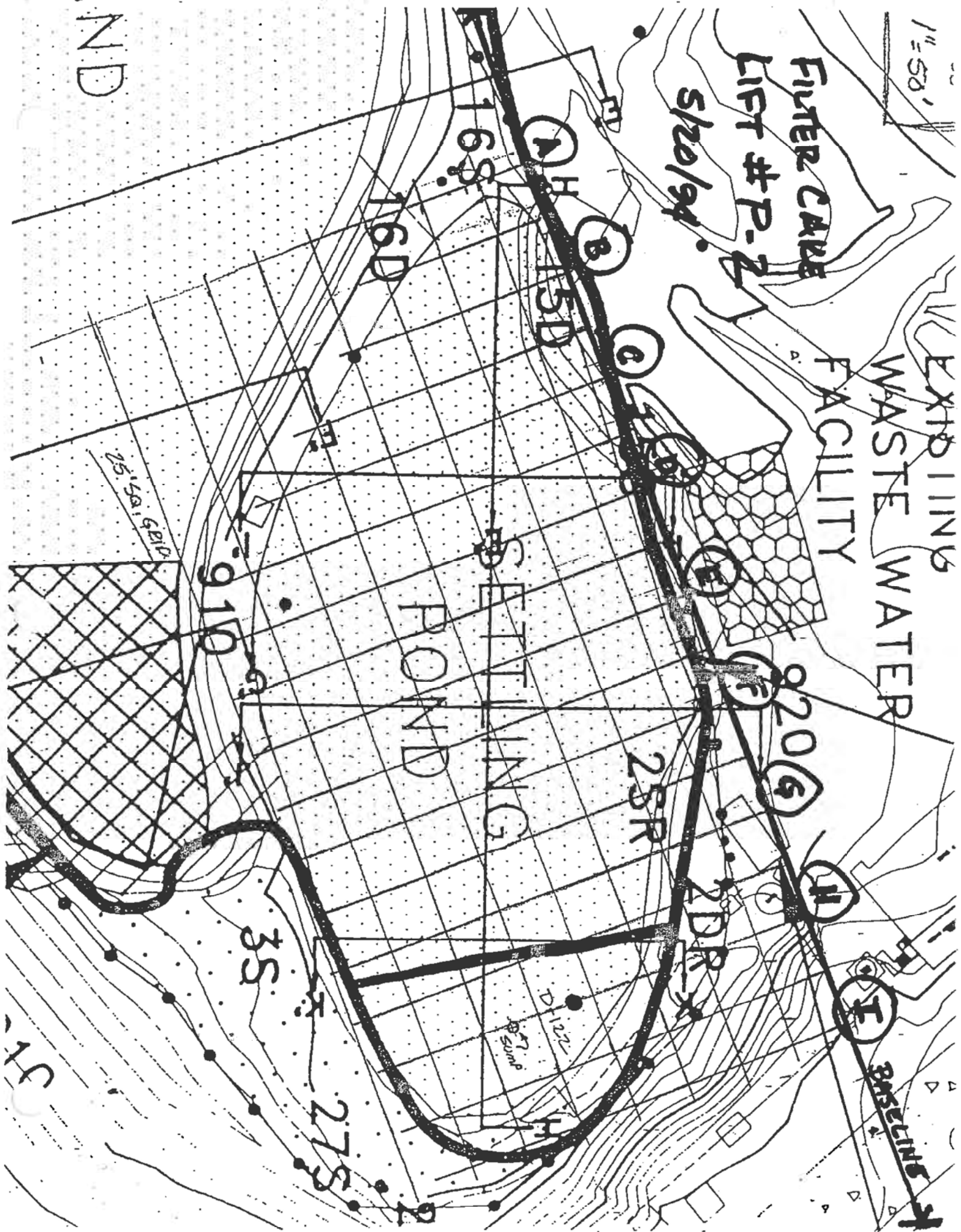
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27S

SETTLING
POND

D1122
PUMP

ND





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PROJECT: BONNELL IMPOUNDMENT CLOSURE
PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST

FILTER CASE LIFT #P-3

TEST NUMBER	D-123					
<u>DENSITY</u>	Nuclear Density Gauge					
A. WT. OF MOLD & SOIL (POUNDS)						
B. WT. OF MOLD (POUNDS)						
C. WT. OF SOIL = A-B (POUNDS)						
D. WET DENSITY = C/.033 (PCF)	97.0					
<u>MOISTURE CONTENT</u>						
TARE NUMBER						
E. WT. OF TARE (GRAMS)						
F. WT. OF WET SOIL & TARE (GRAMS)						
G. WT. OF DRY SOIL & TARE (GRAMS)						
H. WT. OF MOISTURE = F-G (GRAMS)						
I. WT. OF DRY SOIL = G-E (GRAMS)						
J. MOISTURE CONTENT = (H/I) x 100 (%)	76.4					
<u>COMPACTION</u>						
K. DRY DENSITY = D/[1 + (W/100)] (PCF)	55.0					
L. PROCTOR MAX. DRY DENSITY (PCF)	54					
M. PERCENT COMPACTION = K/L (%)	101.9					

TECHNICIAN: CASS CANNON

DATE: 5/26/94



1"=50'

FILTER CAKE
LIFT # P-3
5/26/94

EXHAILING
WASTE WATER
FACILITY

206

2SR

2DR

SETTLING
POND

16S

16D

15D

910

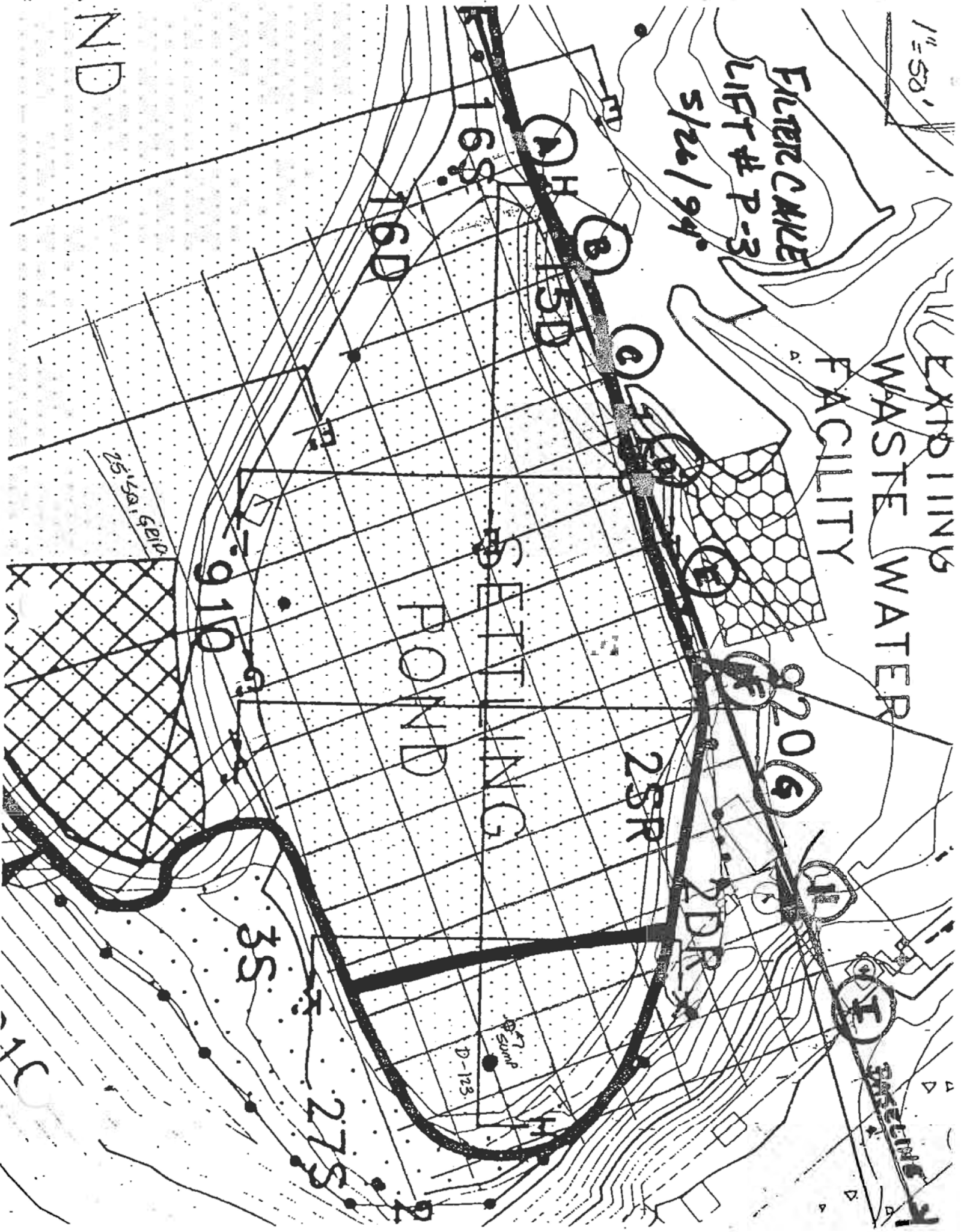
35

27S

D-123

sump

ND





Emcon Southeast

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PROJECT: BONNELL IMPOUNDMENT CLOSURE

PROJ. #: 2040.009.92

DRIVE RING COMPACTION TEST FILTER CAKE LIFT #P-4

TEST NUMBER	D-124	D-125	D-126
<u>DENSITY</u>		RE-TESTS OF D-124 6/2/94	
A. WT. OF MOLD & SOIL (POUNDS)	4.4		
B. WT. OF MOLD (POUNDS)	1.3	NUCLEAR DENSITY GAUGE	
C. WT. OF SOIL = A-B (POUNDS)	3.1	↓	↓
D. WET DENSITY = C/.033 (PCF)	93.9	89.8	89.7
<u>MOISTURE CONTENT</u>			
TARE NUMBER			
E. WT. OF TARE (GRAMS)	126.36		
F. WT. OF WET SOIL & TARE (GRAMS)	331.54		
G. WT. OF DRY SOIL & TARE (GRAMS)	228.36		
H. WT. OF MOISTURE = F-G (GRAMS)	103.18		
I. WT. OF DRY SOIL = G-E (GRAMS)	102.0		
J. MOISTURE CONTENT = (H/I) x 100 (%)	101.16	62.1%	70.0%
<u>COMPACTION</u>			
K. DRY DENSITY = D/[1 + (J/100)] (PCF)	46.7	55.4	52.7
L. PROCTOR MAX. DRY DENSITY (PCF)	54.0	54.0	54.0
M. PERCENT COMPACTION = K/L (%)	86.5%	102.3	97.6

TECHNICIAN: BRIAN DOLHITE/
CASS CANNON

DATE: 6/1/94





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PROJECT: BONNELL IMPOUNDMENT CLOSURE

PROJ. #: 2040.009.92

Nuclear Density gauge DRIVE RING COMPACTION TEST

Filter cake lift # P-5

TEST NUMBER	D-127	D-128				
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)						
B. WT. OF MOLD (POUNDS)						
C. WT. OF SOIL= A-B (POUNDS)						
D. WET DENSITY= C/.033 (PCF)	97.6 89.8	96.3 8				
<u>MOISTURE CONTENT</u>						
TARE NUMBER						
E. WT. OF TARE (GRAMS)						
F. WT. OF WET SOIL & TARE (GRAMS)		5th Lift				
G. WT. OF DRY SOIL & TARE (GRAMS)	Location G- H					
H. WT. OF MOISTURE= F-G (GRAMS)	+125	+150				
I. WT. OF DRY SOIL= G-E (GRAMS)						
J. MOISTURE CONTENT= (H/I) x 100 (%)	56%	53.6%				
<u>COMPACTION</u>						
K. DRY DENSITY= D/[1 + (J/100)] (PCF)	62.5	62.7				
L. PROCTOR MAX. DRY DENSITY (PCF)	#3 60 63.2%	#3 60 63.2%				
M. PERCENT COMPACTION= K/L (%)	104.2	104.5				

TECHNICIAN: C. CANNON

DATE: 6-3-94



~~EXPLODING
WASTE WATER~~

LIFT # P-11

6/3/91

FILTER CASE

~~FACILITY~~

SETTLING POUND

150

10

A black and white micrograph showing a cross-section of a plant stem. The central vascular cylinder is prominent, surrounded by a ring of large, thin-walled cells. The outer layers of the stem are also visible.



010

54

275



Handwritten letters Z and U.

25. 621P



Emcon Southeast

435 Atlanta Technology Center • 1575 Northside Drive • Atlanta, GA 30318-4211 • (404) 355-5600 • Fax (404) 355-3217

PROJECT: BONNELL IMPOUNDMENT CLOSURE

PROJ. #: 2040.009.92

NUCLEAR DENSITY

DRIVE-RING COMPACTION TEST

FILTER CASE LIFT #P-6

TEST NUMBER	D-129	D-130				
<u>DENSITY</u>						
A. WT. OF MOLD & SOIL (POUNDS)						
B. WT. OF MOLD (POUNDS)						
C. WT. OF SOIL= A-B (POUNDS)						
D. WET DENSITY= C/.033 (PCF)	91.0	91.0				
<u>MOISTURE CONTENT</u>						
TARE NUMBER						
E. WT. OF TARE (GRAMS)						
F. WT. OF WET SOIL & TARE (GRAMS)						
G. WT. OF DRY SOIL & TARE (GRAMS)						
H. WT. OF MOISTURE= F-G (GRAMS)						
I. WT. OF DRY SOIL= G-E (GRAMS)						
J. MOISTURE CONTENT= (H/I) x 100 (%)	61.7%	56.9%				
<u>COMPACTION</u>						
K. DRY DENSITY= D/[1 + (J/100)] (PCF)	56.25	58.0				
L. PROCTOR MAX. DRY DENSITY (PCF)	60.0	60.0				
M. PERCENT COMPACTION= K/L (%)	93.8	96.7				

TECHNICIAN: B. DOLHITE

DATE: 6/13/94



1" = 50'

FILTER CAKE
LIFT # P-6

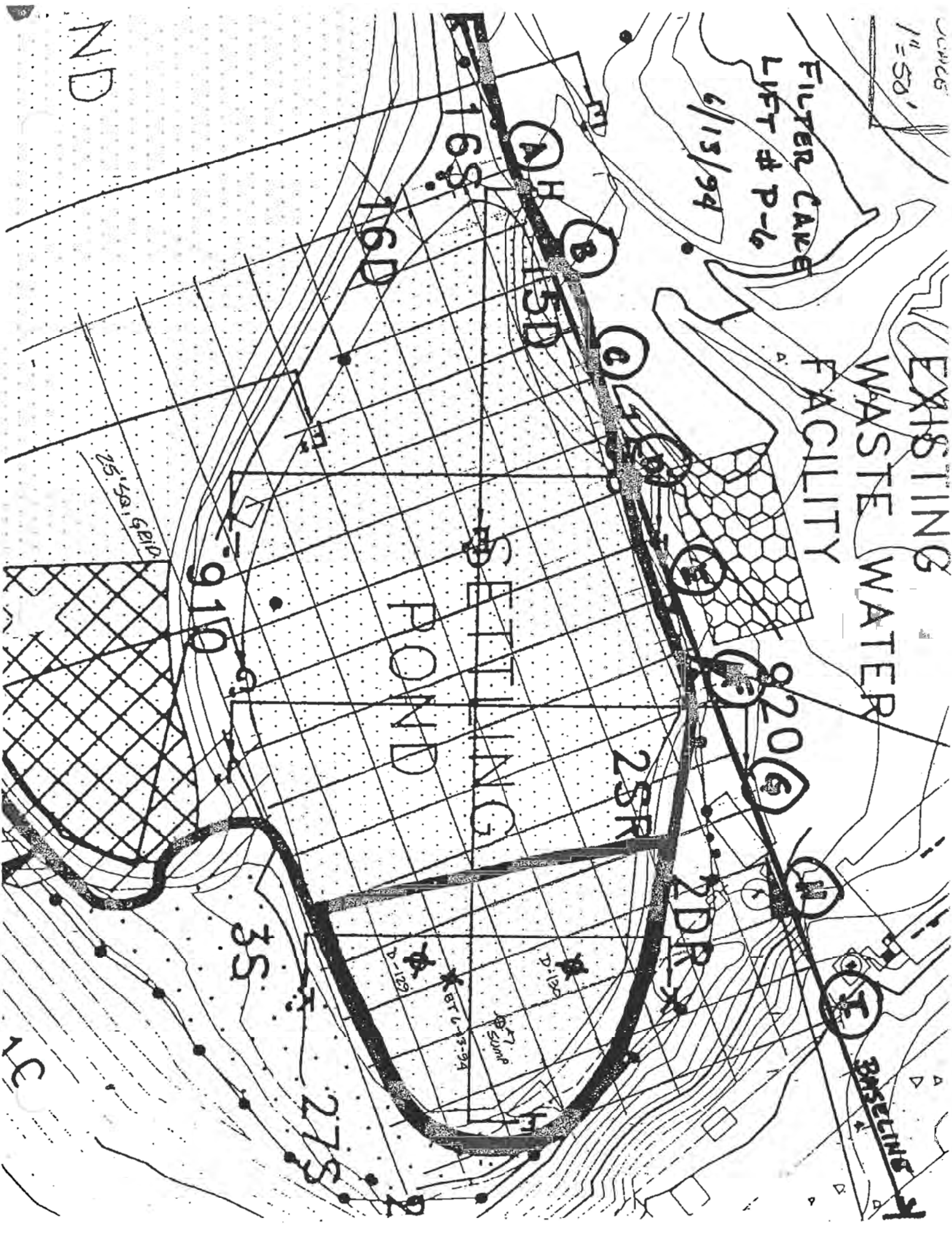
6/13/94

EXISTING
WASTE WATER
FACILITY

SETTLING
POND

BASELINE

ND





EMCON Southeast

DAILY REPORT

Report #: No 161

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Date: 7-29, 19 94

Contract Day _____ of _____

Time Enter Site 10:30 + 2 1/2 hr

Time Leave Site 5:30 drive time
+ 1 hr BK
supplies

Project Name: Bannel

Project #: 2040-009-92

Weather: sunny to partly cloudy

Mean Temp. 92°

Working Conditions: good

Location: palishing pond AtoF 1st Lift retent Bannel/Neuman

Prime Contractor's Personnel: payton & Larry Jones about metal

Subcontractors on the Site: _____

Visitors: _____

Hours On Site: Contractor _____ EMCON _____ Other _____

Progress: _____

re-probed & retent area tested on 7-11-94.

re-probed lift #1 with a sheepsfoot compactor. No pumping
performed nuclear density tests

Extracted 9 Shelby tubes Test area 1 D 1/2 +15'
2 D 1/2 +6.5'
3 D 1/2 +8.5'

Density results:

Test area 1 96.9 WD - 00 60.5 min 100+ ^{Comp}

Test area 2 102.6 WD - 00 66.2 - min 54.9 - 100+

Test area 3 95.1 WD - 00 59.5 - min 59.9 - 99.2

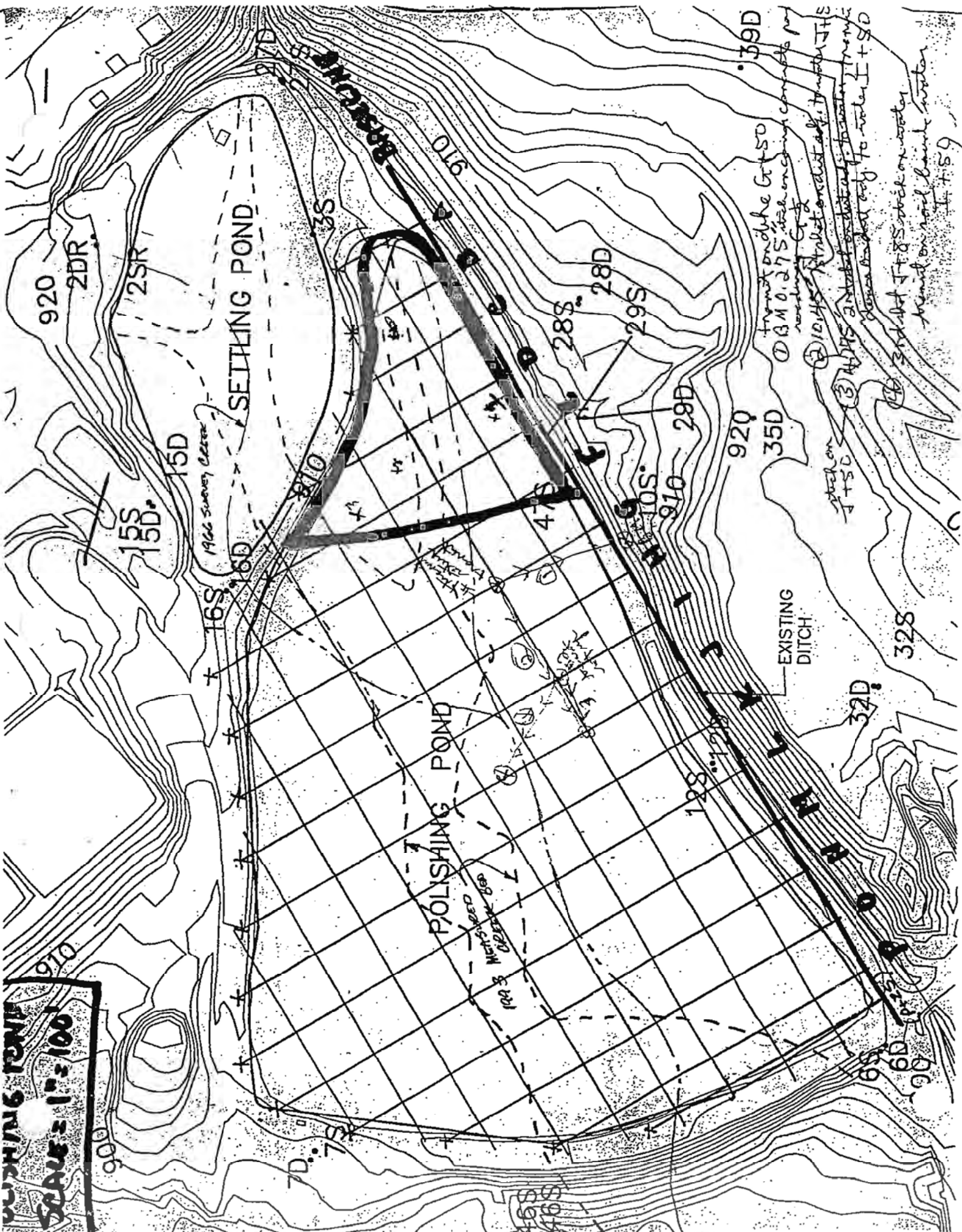
+ trip to Bannel 1/2 hr

Can Cannon

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast

POLISHING POND
SCALE = 1" = 100'



1. 10.45 PM 1st cut at 1st station from the
 2. 10.45 PM 1st cut at 1st station from the
 3. 10.45 PM 1st cut at 1st station from the
 4. 10.45 PM 1st cut at 1st station from the
 5. 10.45 PM 1st cut at 1st station from the
 6. 10.45 PM 1st cut at 1st station from the
 7. 10.45 PM 1st cut at 1st station from the
 8. 10.45 PM 1st cut at 1st station from the
 9. 10.45 PM 1st cut at 1st station from the
 10. 10.45 PM 1st cut at 1st station from the

1. 10.45 PM 1st cut at 1st station from the
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 8. 10.45 PM 1st cut at 1st station from the
 9. 10.45 PM 1st cut at 1st station from the
 10. 10.45 PM 1st cut at 1st station from the



EMCON Southeast

DAILY REPORT

Report #: No 163

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Date: 8-18, 19 94

Contract Day _____ of _____

Time Enter Site 8:30

Time Leave Site 2:30 + 2 1/2 hrs driving

Project Name: Bonnel

Project #: _____

Weather: sunny to pty, cloudy

Mean Temp. _____

Working Conditions: good

Location: polishing pond A to D 2nd lift

Prime Contractor's Personnel: Payton & Sons, Jones & Hart Metal

Subcontractors on the Site: _____

Visitors: _____

Hours On Site: Contractor _____ EMCON _____ Other _____

Progress: prepacked OK test areas using nuclear density
gauge
① C - +20' WD 94.3 main 60% PD 58.9 98.2 comp.
② C - +50' WD 97.8 main 65% PD 59.3 98.8 comp.
③ B +25' WD 95.2 main 64% PD 58.0 96.7 comp.

3 tubing tubes each location transported to our lab

- ① as above density test for testing
- ② locations 3, 7, and 14 day breaks
- ③

Jones SM continued work on filter press & sludge operation
dewatering sludge to produce filter cake.

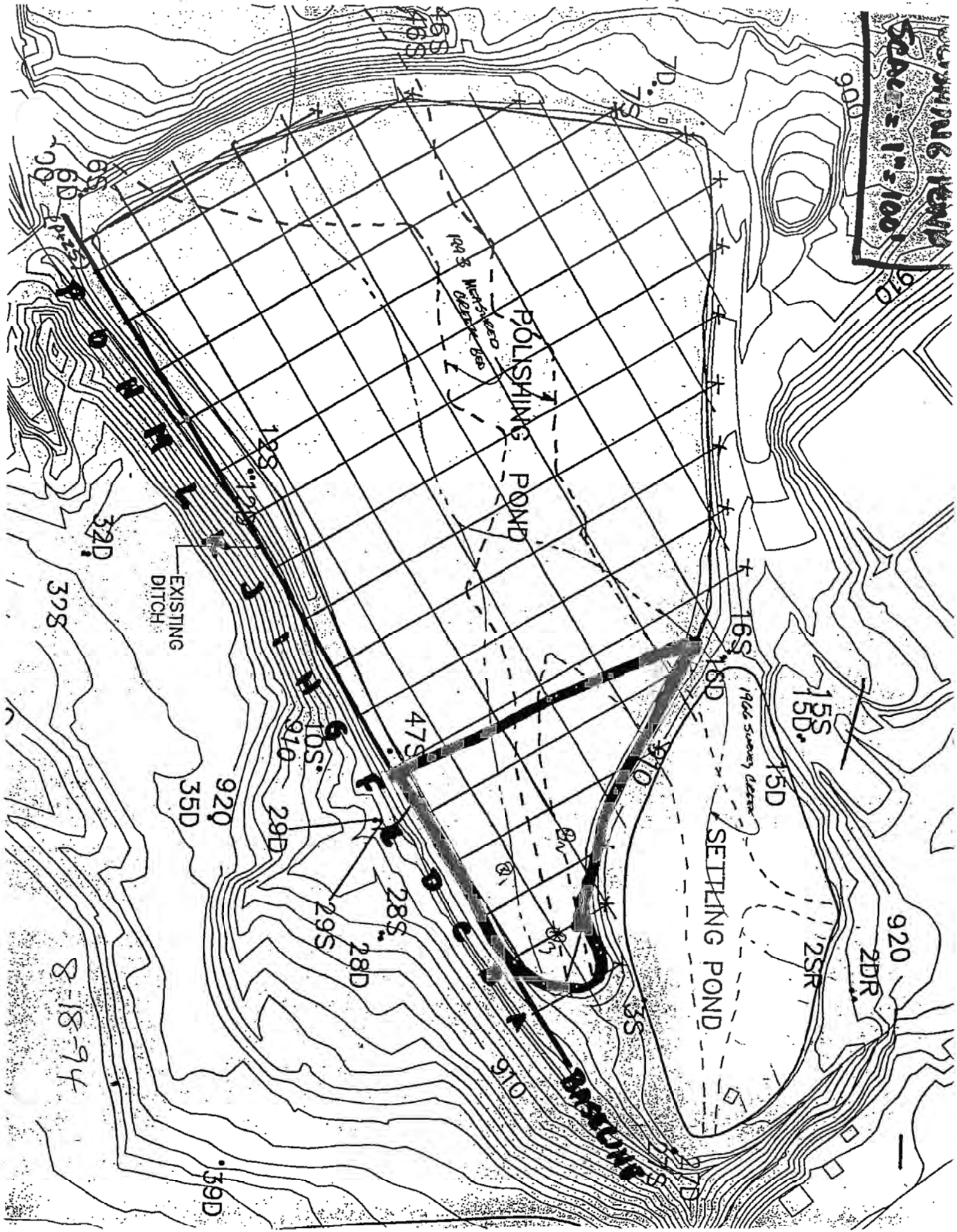
Payton and sons will continue with lift placement and
compaction over the West half of the pad line D to F.

Check flow meter in 7 inells using quick connect flow
meter #1 not avail, #2 7, #3 7, #4 6, #5 7, #6 9
#7 0 may be dry
Can't redo RW#1 and RW#7 at later date

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast

Scale = 1" = 100'



8-18-94



EMCON Southeast

DAILY REPORT

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Report #: Nº 167

Date: SEPT. 15, 19 94

Contract Day _____ of _____

Time Enter Site 09:15

Time Leave Site 13:15

Project Name: SURFACE IMP. CLOSURE

Project #: 2040.009.92

Weather: P-CLOUDY

Mean Temp. 85°

Working Conditions: GOOD / DRY

Location: BONNELL - NEWJAN PLANT

Prime Contractor's Personnel: _____

Subcontractors on the Site: _____

Visitors: _____

Hours On Site: Contractor _____ EMCON 4.0 Other _____

Progress: Performed in-place nuclear density tests and obtained shelly tube samples for LIFT # 3 completed on 9/14/94. The lift was placed over the entire stabilized area in the polishing pond. The lift was also proofrolled to verify compaction. Density test/shelly tube locations are shown on the attached sketch. Density results were as follows:

TEST LOCATION	WET DENSITY	% MOISTURE	DRY DENSITY	% COMPACTION
B-50	92.5	62.3 62.3	65.0 56.9	100% 94.8%
CC-35	92.5	65.1 53.1	69.5 60.4	100% 100.7%
CC-100	87.0	47.5 57.5	59.0 55.2	80% 92.9%
DD-150	96.0	41.2 61.2	68.0 59.5	100% 99.2%
E-200	100.0	40.8 60.8	71.0 62.2	100% 103.7%
EE-100	95.0	42.3 62.3	64.75 58.5	100% 97.5%
E-50	94.0	40.0 68.0	60.5 55.9	100% 93.2%

DEWATERING & OPERATIONS CONTD. AS WELL AS FILTER CAKE STABILIZATION

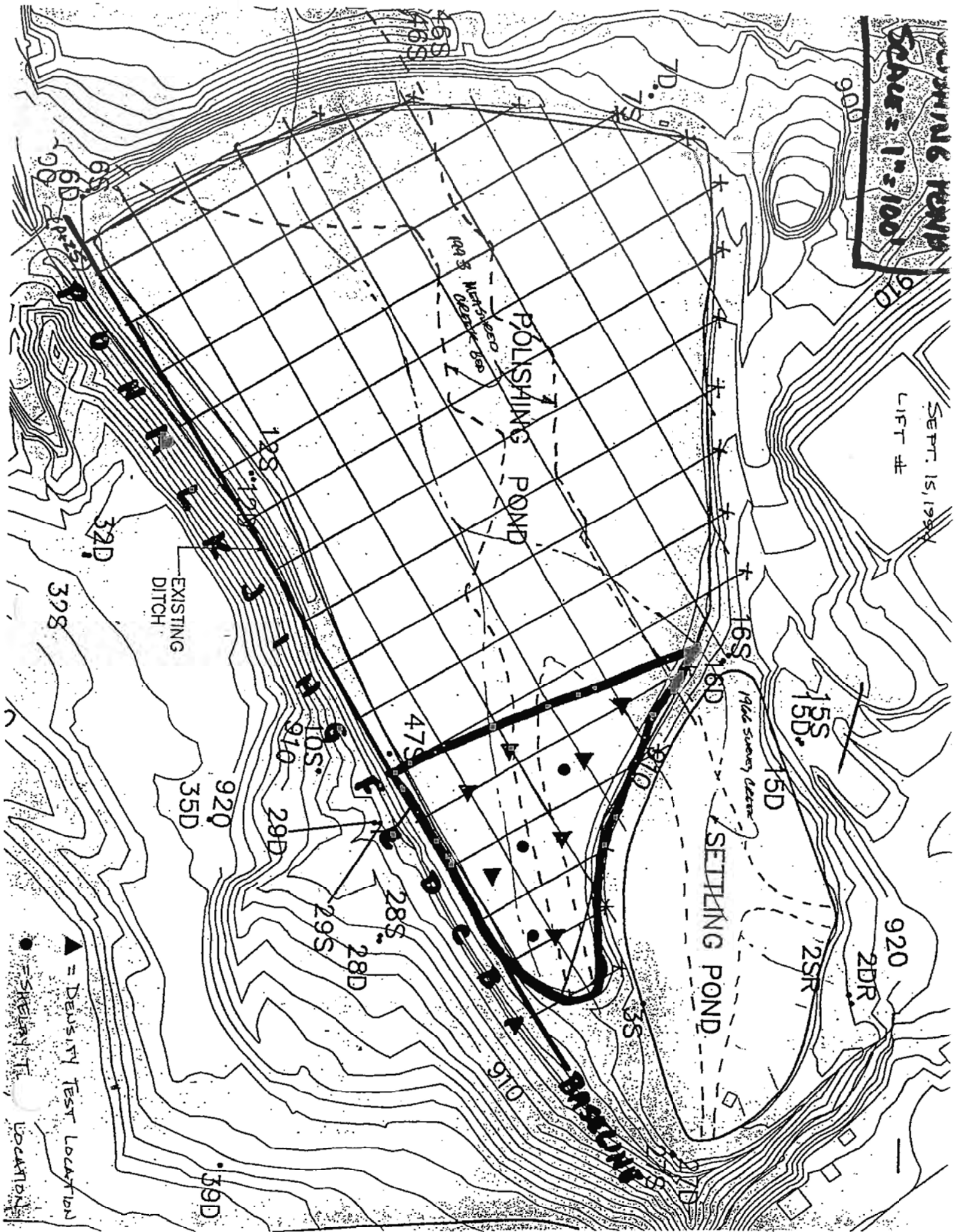
Brown nfohltt

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast

Scale: 1" = 100'

SEPT. 15, 1964
LIFT #



▲ = DENSITY TEST LOCATION
● = SKETCH LOCATION



EMCON Southeast

DAILY REPORT

Report #: No 168
Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink
Date: Nov 14, 19 94
Contract Day _____ of _____
Time Enter Site 08:15
Time Leave Site _____

Project Name: Surface Impoundment Cts. Project #: 2040.009.92
Weather: P-cloudy Mean Temp. 72°
Working Conditions: DRY
Location: BONNELL - NEWMAN PLANT
Prime Contractor's Personnel: _____
Subcontractors on the Site: _____
Visitors: _____
Hours On Site: Contractor _____ EMCON _____ Other _____

Progress: Payton & Sons working on excavating sediments and ~~then~~ deepening the drainage swale on the south side of the polishing pond. Also working on in-place solidification of sludge in the polishing pond.
Performed in-situ nuclear density tests for lift # 4 in the polishing pond. Results are as follows:

TEST LOCATION	WET DENSITY	% MOISTURE	DRY DENSITY	% COMP
BB-50	94.°	60.9	58.4	97.3
D-25	95.7	58.5	60.4	100.6
CC-100	94.9	56.5	60.6	101.°
DD- 100 75	94.6	59.1	59.5	99.2
DD- 200 175	94.°	52.9	61.5	102.5
E-225	96.°	55.4	61.8	103.°
EE-350	100.2	62.7	61.6	102.6

Bruce S. White

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast



EMCON Southeast

DAILY REPORT

Report #: No 169

Date: Jan 5th, 19 95

Contract Day _____ of _____

Time Enter Site _____

Time Leave Site _____

Route To: Master - White (Original)

On-Site - Yellow

Project Manager - Pink

Project Name: Surface Impound Closure

Project #: 2140-009-92

Weather: clear 40°

Mean Temp. 35°

Working Conditions: dry

Location: Bonnel Newman Plant

Prime Contractor's Personnel: _____

Subcontractors on the Site: _____

Visitors: _____

Hours On Site: Contractor _____

EMCON _____

Other _____

Progress: Payton & Jones working on excavating sediments and deepening the drainage swale on the south side of the settling pond.

Performed in place nuclear density tests for lift # 5 in the settling pond (tests include fluid A to G). Results are as follows.

Also collected soil samples of east site stockpiled rock to be tested for volatiles per Jerry Hall. These rocks were removed from the dam outflow area. Samples transported to A&T on Jan 6th 1995

Location	Wet Bone	%moist	Dry Bone	%comp
E+250	95.6	54.9	61.7	102.8
EE+225	95.7	53.4	62.4	104.0
EE+75	94.4	56.6	60.3	100.5
D+75	96.8	56.4	61.9	103.2
BB+50	96.0	57.9	60.8	101.3
C+25	97.0	62.8	59.6	99.3
B+75	96.6	56.8	61.6	102.7

Car Cannon

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast



EMCON Southeast

DAILY REPORT

Report #: No 170

Date: 1-27, 19 95

Contract Day _____ of _____

Time Enter Site 10

Time Leave Site 3:30

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Project Name: William L Bonnel Co-

Project #: 72040-009-292

Weather: cold, cloudy predicted rain

Mean Temp. 50°

Working Conditions: ↑

Location: surface impoundment closure

Prime Contractor's Personnel: _____

Subcontractors on the Site: _____

Visitors: _____

Hours On Site: Contractor _____ EMCON _____ Other _____

Progress: Site was visited on the above date to check in place density of solidified sludge placed and compacted within the surface impoundment closure pond area. Using a nuclear density gauge, 8 tests were performed on grid areas mentioned below. Lift 6

Construction continued marking, spreading and compacting solidified sludge					
FF+250 1	WD 116.6	DD 88.1	32.7	100.7%	shallow tube locations
FF+50 2	115.4	89.5	28.9	101.8%	#1 FF+50
DD+20 3	116.2	87.7	32.5	99.8%	#2 FF+250
ET+50 4	115.5	89.5	29.1	101.8%	#3 C+75
CC+100 5	116.6	88.3	32.0	100.5%	
CC+50 6	115.6	89.8	28.7	102.2%	
BB+50 7	116.6	88.1	32.3	100.2%	
CT+50 8	115.6	89.5	29.2	101.8%	

The VES system was started 12:40 PM initial readings after running 5 minutes. Reading after 1 hour 5. Rain started 1:00. Vacuum 27.5

William L Bonnel Co-

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast



EMCON Southeast

DAILY REPORT

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Report #: Nº 171
Date: 2-6, 19 95
Contract Day _____ of _____
Time Enter Site 9:30
Time Leave Site 1:00

Project Name: Bonnel Project #: 72040-009-092
Weather: cold 25° Mean Temp. 25°
Working Conditions: _____
Location: surface impoundment closure
Prime Contractor's Personnel: _____
Subcontractors on the Site: _____
Visitors: _____
Hours On Site: Contractor _____ EMCON _____ Other _____

Progress: Site was visited on the above date to check in place density of solidified sludge placed and compacted within the surface impoundment closure pond area.

Using a nuclear density gauge, 8 tests were performed on grid areas mentioned below. Lift 7 was tested. *Note surface of closure was frozen at the time of our arrival

Location	WD	DD	moisture	compaction %	shallow test location
F+200	109.0	78.25	36.7	95.4 %	#1 F+75
F+100	113	83.5	32.1	97.3 %	#2 F+200
DD+150	112	83.25	34.5	97.9 %	#3 C+100
F+75	109	82.75	31.7	97.4 %	
C+100	111	83.5	32.9	98.12 %	
C+50	111	86.5	28.3	98.14 %	
BB+75	104.5	78.25	33.5	95.7 %	
C+75	109.5	81.8	33.6	96.2 %	
				96.2 %	

William Paul Cannon geologist

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast



EMCON Southeast

DAILY REPORT

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Report #: Nº
Date: 2/15, 1995
Contract Day _____ of _____
Time Enter Site 10:15
Time Leave Site _____

Project Name: Bonnell-Surface Impoundment

Project #: 72040.009.092

Weather: Cloudy

Mean Temp. 45°F

Working Conditions: _____

Location: _____

Prime Contractor's Personnel: _____

Subcontractors on the Site: _____

Visitors: _____

Hours On Site: Contractor _____ EMCON _____ Other _____

Progress: Site was visited to perform in-place density tests of solidified sludge placed and compacted within the surface impoundment closure area.

Using a nuclear density gauge, eight tests were performed at the locations noted below. In addition three undisturbed samples were collected.

Location	Wet Density	Dry Density	% Moisture	% Compaction
E+75	114.0	90.5	25.9	102.9
E+125	111.0	86.5	28.3	98.4
E+200	111.0	86.75	27.9	98.9
D+175	116.0	90.75	27.8	101.2
D+100	110.5	87.75	25.9	99.8
C+150	109.0	85.5	27.5	97.3
C+50	117.0	93.75	26.1	103.4
B+75	112.5	89.5	25.8	101.8

Prepared By: J. T. S. D. [Signature] EMCON-Southeast

Reviewed By: EMCON Southeast



EMCON Southeast

DAILY REPORT

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Report #: No 172

Date: 2-27, 19 95

Contract Day _____ of _____

Time Enter Site 9 AM

Time Leave Site 12:30 AM

Project Name: Barnet Surface Impoundment

Project #: 72040-009-092

Weather: cloudy rainy light on

Mean Temp. _____

Working Conditions: air-air

Location: pond area Lift 9

Prime Contractor's Personnel: _____

Subcontractors on the Site: Note: follows report 188 by Bill Hegarty

Visitors: _____

Hours On Site: Contractor _____ EMCON 1 1/2 Other _____

Progress: Site was visited on the above date to perform in place density tests of solidified sludge. Sludge was placed and compacted in the surface impoundment closure. The sludge was loaded smooth with a dozer and compacted with a vibratory sheepsfoot drum roller.

Using a nuclear density gauge, the entire pond was tested being represented by 7 specific locations as stated by the grid surveyor map. In addition, 3 sets of 3 each undisturbed Shelby tube samples were collected and transported to Emcon lab for psi compression testing. Specific undisturbed sample locations are listed below opposite density test locations.

	Location	Wet Density	Dry Density	moisture	% compaction
Shelby tubes	1) F+50	111.4	87.2	27.8	99.2%
	2) F+200	110.1	89.2	23.0	101.5%
	3) D+50	111.6	88.6	26.0	100.18%
Shelby tubes	4) D+150	110.7	88.4	25.2	100.6%
Shelby tubes	5) B+25	109.8	87.0	26.2	99.0%
	6) B+75	109.9	87.4	25.7	99.4%
	7) A+25	112.0	89.1	25.7	101.4%

William Carr Cannon geologist

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast



EMCON Southeast

DAILY REPORT

Report #: N^o 173

Date: 3-15-95, 19 95

Contract Day _____ of _____

Time Enter Site 9

Time Leave Site 2

Route To: Master - White (Original)

On-Site - Yellow

Project Manager - Pink

Project #: 72040-009-092

Mean Temp. 72°

Project Name: Bonnell

Weather: ptly cldy

Working Conditions: good

Location: pond area

Prime Contractor's Personnel: Payton Som

Subcontractors on the Site: _____

Visitors: _____

Hours On Site: Contractor _____ EMCON 5 Other _____

Progress: Site was visited to test compaction for lift #10 solidified sludge placed over the east 1/2 of the polishing pond. The sludge was spread with a dozer and compacted with 2 vibratory sheepfoot drum rollers compacting east to west and north to south. Using a nuclear density gauge, 8 specific areas were tested for in place density. Test results and specific locations as well as shelly tube locations are shown below.

Location	Test #	Wet Density	Dry Density	moisture	% compact
shelly <u>tubed</u> B+25	1	117.8	91.3	29.9%	103.9%
shelly <u>tubed</u> E+25	2	116.8	90.4	29.2%	102.8%
F+100	3	116.6	90.35	29.1%	102.8%
J+50	4	113.5	86.9	30.6%	98.9%
J+125	5	117.8	91.8	28.3%	104.4%
M+25	6	114.5	88.5	29.4%	100.2%
shelly <u>tubed</u> M+125	7	113.6	87.6	29.7%	99.7%
M+150	8	114.5	88.8	28.9%	101.0%

Pan Connor - geologist

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast



EMCON Southeast

DAILY REPORT

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Report #: No 174
Date: 3-20-95, 19 95
Contract Day _____ of _____
Time Enter Site 10
Time Leave Site 4

Project Name: Bonnell Project #: _____
Weather: Sunny 70° Mean Temp. _____
Working Conditions: good
Location: pond area
Prime Contractor's Personnel: Payton + Tom
Subcontractors on the Site: _____
Visitors: _____
Hours On Site: Contractor _____ EMCON 6 Other _____

Progress: Site was visited to test compaction for lift #11 identify sludge placed over the east 5 of the polishing pond. The sludge was spread with a dozer and compacted with 2 vibratory sheepfoot drum roller compacting east to west and north to south. Using a nuclear density gauge, 8 specific areas were tested for in place density. Test results will be shown below following new proctor results.

Note: A new water sample was transported to the lab on 3-20-95

Location	Test #	Wet Density	Dry Density	moisture	% compaction
<u>shell</u> <u>fill</u> B+50	1	116.9	93.4	25.2	98.3%
E+25	2	117.6	90.6	29.8	95.4%
<u>shell</u> <u>fill</u> F+75	3	115.2	92.4	24.7	97.3%
I+50	4	113.9	89.1	26.8	93.8%
J+125	5	116.7	94.3	23.8	99.3%
<u>shell</u> <u>fill</u> M+100	6	115.7	92.2	25.5	97.1%
N+125	7	118.2	92.9	27.2	92.8%
M+150	8	117.6	92.85	26.7	97.7%

proctor 95 26.8%

Carl Cannon - geologist
Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast



EMCON Southeast

DAILY REPORT

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Report #: No 175

Date: 3-24, 19 95

Contract Day _____ of _____

Time Enter Site 11

Time Leave Site 5

Project Name: Bonnell

Project #: 72040 009 092

Weather: unny 80°

Mean Temp. _____

Working Conditions: good

Location: pond area

Prime Contractor's Personnel: Payton & Lane

Subcontractors on the Site: _____

Visitors: _____

Hours On Site: Contractor _____ EMCON 6 Other _____

Progress: Site was invited to test composition for lift #12 solidified sludge placed over the east 1/2 of the polishing pond. The sludge was spread with a dozer and composted with 2 vibratory sheepfoot drum roller composting east to west and north to south. The area was then tested for in place density using a nuclear density gauge. 8 specific areas were tested. Test results and specific location are shown below. Note: one specific area along the north and north west pod area exhibited moderate pumping due to loaded tandem axle chumps traveling over and over the same area to dump the sludge on the pod. The area measured approximately 30 x 100 ft. Moisture level in the area was 1% over proctor optimum. Reare noted a leaking pipe in the bank area which will be excavated along with bank soils in the future. We suggested scurfing the pumping area, allowing to dry slightly and then recomposting. The trucks should be rerouted to a different area when dumping.

Location	Lift #	Wet Density	Dry Density	Moisture	% Composition
B+25	1	114.4	90.5	26.4	95.3%
C+20	2	113.6	89.7	26.6	94.4%
E+20	3	114.6	88.9	28.9	93.6%
D+25	4	114.2	88.1	25.7	92.7%
D+100	5	118	93.9	28.4	91.8%
E+50	6	113.4	88.13	24.7	92.9%
H25	7	115.2	92.4	27.8	97.3%
-200	8	118.5	92.7		97.6%

Prepared By: EMCON Southeast

William Carr Cannon

Reviewed By: EMCON Southeast



EMCON Southeast

DAILY REPORT

Report #: No 176

Date: MARCH 31, 19 95

Contract Day _____ of _____

Time Enter Site 14:30

Time Leave Site 17:00

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Project Name: BONNELL - SURF. IMP. CLOSURE

Project #: 72040.009.092

Weather: CLEAR / SUNNY

Mean Temp. 75°

Working Conditions: _____

Location: POLISHING POND

Prime Contractor's Personnel: _____

Subcontractors on the Site: _____

Visitors: _____

Hours On Site: Contractor _____ EMCON _____ Other _____

Progress: ON site to perform lift inspection and nuclear density tests in the area remediated of pumping material. A bridge lift (18") was placed over the affected area underlain with a woven stabilization fabric. Proofrolled area w/ a loaded tandem dump truck. No pumping was observed. Density test results are as follows.

Grid Location	WD	DD	%M	% Compaction
EE-250	113.2	87.0	30.1	98.9
E-200	113.0	86.7	30.3	98.6
D-150	111.2	83.9	32.5	95.5
EE-100	113.0	84.8	33.3	96.5

The material placed in the lift had a higher content of oil & grease sludge than previous lifts and exhibited density and moisture characteristics of the 85 max dry density (pcf) proctor.

James E. Whitfield
Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast



EMCON Southeast

DAILY REPORT

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Report #: Nº 177
Date: 4-3, 19 95
Contract Day _____ of _____
Time Enter Site _____
Time Leave Site _____

Project Name: Bennell
Weather: sunny 80°
Working Conditions: good
Location: pond area
Prime Contractor's Personnel: Poyton & Sons
Subcontractors on the Site: _____
Visitors: _____

Project #: 72040 009 092
Mean Temp. _____

Hours On Site: Contractor _____ EMCON 8 Other _____

Progress: Site was invited to test compaction for lift #13
stabilized sludge placed over the NW canal bridge area of the
pond. The sludge was spread with a dozer and compacted with
a vibratory sheepfoot drum roller. The area was then tested for in place density
utilizing a nuclear density gauge. Test results and specific location are
shown below.

Location	Test #	Wet Density	Dry Density	Moisture	% Compaction
<u>E+200</u>	<u>1</u>	<u>113.7</u>	<u>93.5</u>	<u>21.6</u>	<u>98.4</u>

Note: The remainder of the stabilized NW canal area was matted with
a loaded tandem axle dump. No pumping was observed throughout the
remediated area.

One solid lift was placed over the entire area and compacted utilizing
2 vibratory sheepfoot drum rollers. The site will be revisited on
Tuesday 4-4-95 at 9 AM to perform density tests over the
entire newly prepared pond area as well as drive 3 sets of 3 each
shelly tubes to be transported to our lab for pin strength compression tests

William Can Cannon

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast

4 sets of 2 soil sampler tubes tested for VOC's and TPH were
collected from the creek bank to the north of the complex. These samples
will be transported to our lab on 4-4-95.



EMCON Southeast

DAILY REPORT

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Report #: No 178
Date: 4-4, 19 95
Contract Day _____ of _____
Time Enter Site _____
Time Leave Site _____

Project Name: Bonnell Project #: 72040 009 092
Weather: sunny 65° Mean Temp. _____
Working Conditions: good
Location: pond area
Prime Contractor's Personnel: Payton & Jones
Subcontractors on the Site: _____
Visitors: _____
Hours On Site: Contractor _____ EMCON 6 Other _____

Progress: ¹³ Site was initiated to test compaction for ~~test #14~~ solidified sludge placed over the entire outside retaining pond area from grid line A to F. The sludge was spread with a dozer and compacted with a vibratory sheepfoot drum roller. The area was then tested for in place density utilizing a nuclear density gauge. Test results and specific location are shown below:

Location	test #	Wet Density	Dry Density	moisture	% compaction	proctor max
A slash 25	1	115.5	90.2	28.0	95.0%	95%
B slash 25	2	117.9	91.7	28.5	96.5%	95%
B slash 75	3	120.6	94.0	28.2	98.9%	95%
C slash 25	4	109.7	85.9	27.7	97.7%	87.9%
C slash 100	5	109.2	82.6	32.2	97.2%	85%
D slash 25	6	108	81.75	32.1	96.2%	85%
D slash 125	7	111.8	82.9	34.9	97.5%	85%
E + 200	8	110.2	82.1	34.2	96.6%	85%
E slash 25	9	104.5	76.3	37.0	89.8%	85%
retest # 9	10	110.2	82.0	34.4	96.5%	

Note: Spot area for test #9 was rolled 3 times, test #10 (retest for #9) after rerolling. Note compaction increase by rolling thicker lifts 1 extra time. We feel looking at the results, the optimum compaction can be reached by rolling

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast

H. Turner



EMCON Southeast

DAILY REPORT

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Report #: No 179
Date: April 5, 19 95
Contract Day _____ of _____
Time Enter Site 9:45
Time Leave Site _____

Project Name: Bonnell - Imp. Closure

Project #: 7204D.009.092

Weather: P-Cloudy

Mean Temp. 75°

Working Conditions: _____

Location: Left 14

Prime Contractor's Personnel: _____

Subcontractors on the Site: _____

Visitors: _____

Hours On Site: Contractor _____ EMCON _____ Other _____

Progress: ON site to perform solidified sludge 1.1ft inspection and in-place nuclear density tests. Also obtain comp. strength samples at STA B-50 & STA DD 150. Density test results are as follows:

PROCTORS USED → Max DD of 95 PCF and 87.9 PCF

STA #	WD	DD	90M	90 COMPACTION
A-100/25	108.0	83.3	29.7	94.8
A-50	113.0	90.0	25.6	94.7
C-25	112.2	87.9	27.6	92.5
C-100	112.0	84.6	32.4	96.2
D-50	107.8	83.0	30.0	94.4
D-100	107.8	83.6	29.0	95.1
D-150	115.2	96.1	27.8	94.8
E-250	110.2	84.9	29.8	96.6
EE-150	110.2	81.9	34.6	93.2
E-100	103.8	80.4	29.1	92.0
EE-50	112.2	96.9	23.4	95.7

Bruce C. Whitte

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast



EMCON Southeast

DAILY REPORT

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Report #: No 180
Date: 4-7, 19 95
Contract Day _____ of _____
Time Enter Site 7:30
Time Leave Site 11:30

Project Name: Bonnell
Weather: sunny
Working Conditions: good
Location: polishing pond east side grid A to F
Prime Contractor's Personnel: Payton & Son
Subcontractors on the Site: _____
Visitors: _____
Hours On Site: Contractor _____ EMCON 9 Other _____

Progress: 9 fruit site, test composition for LHA #14 solidified sludge placed over the entire east side polishing pond area from grid line A+100 to F. The sludge was spread by Payton & Son utilizing a dozer and compacted with 2 vibratory sheepfoot drum rollers. The area was then tested for in place density utilizing a nuclear density gauge. Test results & specific grid locations are shown below.

Location	Test #	Wet Density	Dry Density	Moisture %	Composition	Proctor used
A+50+25	1	103.7	77.5	33.8	94.5	82-36.9%
A+25	2	102.3	77.6	31.8	94.6	82-36.9%
A+50	3	102.8	78.7	30.6	96.0	82-36.9%
C+50	4	105.5	79.7	32.0	97.4	82-36.9%
C+100	5	105.7	74.4	42.0	90.7	82-36.9%
E+50	6	110.6	84.7	38.6	96.4	82-36.9%
E+150	7	110.7	86.7	27.7	98.6	87.9-33%
E+250	8	108.0	79.3	36.2	96.7	82-36.9%

Note test # 5 C+150 low density due to high moisture in soil (42%). We suggest scarifying and allow to dry overnight and recompacting on 4-8-95 morning.
We composed nuclear density moisture to cooking the moisture out of the soil in two specific test area locations area 5 (C+150) and area 7 (E+150).
Test area 5 cooked 41.5% gauge read 42%.
Test area 7 cooked 28.2% gauge read 27.7%.

Due to the consistency from both methods, we further utilization of the nuclear density gauge with random moisture checks achieved by cooking the soils.
William Can Canino

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast



EMCON Southeast

DAILY REPORT

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Report #: No 181
Date: 4-10, 19 95
Contract Day _____ of _____
Time Enter Site 9:00
Time Leave Site 12:30

Project Name: Bonnell
Weather: wunny
Working Conditions: good
Location: solubing pond east side grid A to F
Prime Contractor's Personnel: Payton & Jovi
Subcontractors on the Site: _____
Visitors: _____
Hours On Site: Contractor _____ EMCON 4.5 Other _____

Progress: Visit site, test compaction over fabric bridge lift area grid D through F for NW corner of pod. Also retests for grid C-100 which achieved 90.7% compaction on 4-7-95 test date. The contractor scarified this area and retests were performed on 4-10-95. Posting density results following reworking of soils are represented below as tests 1, 2, and 3.
Compaction results for the fabric bridge lift area grid D through F for the NW corner of the pod were marginal due to slightly overly damp soils which were placed on Sunday 4-9-95. Also this area was prodded with a loaded tandem axle dump and slight pumping was observed. As per conversation with Dave Buchalter, Rene Payton, and Darryl Wiggins the area should be re-scarified and allowed to dry before re-compacting and retesting on Tues. 4-11-95. Also cover soils being placed recently contain slightly high moisture which may cause pumping or marginal density results. All parties mentioned above agreed to thin out future lifts and add light amounts of dust.

Location	test #	Wet Density	Dry Density	moisture	% compaction	Proctor
C+100	1	109.5	87.75	24.8%	92.4%	95-26.8%
C+150	2	112.0	84.6	32.4%	96.2%	87.9-33%
C+175	3	113.1	85.1	32.9%	96.8%	87.9-33%
D+175	4	102.8	75.4	36.3%	92.0%	82-36.9%
EE+250	5	107.8	79.1	36.3%	93.1%	85-35%

Prepared By: EMCON Southeast
William Can Cannon

Reviewed By: EMCON Southeast

AT:1.02\Report.day-93\jad:3

Note - 2 soil sampler representing soils being placed at the present were transported to our lab for check and to be re-sampled.



EMCON Southeast

DAILY REPORT

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Report #: No 182
Date: 4-11, 19 95
Contract Day _____ of _____
Time Enter Site 9
Time Leave Site 4:30

Project Name: Bonnell Surf. Imp. Project #: 72040 009 092
Weather: cloudy rain at times Mean Temp. 60°
Working Conditions: aw.
Location: polishing pond & recovery wells, pump station, treatment plant
Prime Contractor's Personnel: Payton Son
Subcontractors on the Site: _____
Visitors: _____

Hours On Site: Contractor _____ EMCON 7.5 Other _____

Progress: initiate rockfall entire pond including reworked NW corner. all well-rolled area looked very good, no observed pumping in specific areas rolled with a 5' loaded tandem axle dump. Using a nuclear density gauge, 8 in place density tests were performed. Results are as follows:

Location	test #	Wet Density	Dry Density	moisture	% compaction	proctor used
ASO+25	1	104.9	80.1	31.9%	94.2%	85-35%
A+25	2	105.9	81.0	32.7%	95.3%	85-35%
A+50	3	107.6	82.4	30.6%	96.9%	85-35%
C+50	4	106.6	81.4	31.0%	95.8%	85-35%
E+100	5	107.8	82.7	30.4%	97.3%	85-35%
E+50	6	112.6	85.4	31.9%	97.2%	87.9-33%
E+150	7	111.8	85.4	30.9%	97.2%	87.9-33%
E+250	8	110.8	83.8	32.2%	95.3%	82.9-33%

Met with Reigh Underwood over weekly operational monitoring report. Collected Recovery well C+W depths, calculated C+W elevations; Pump station read flow totalizer 1st 2-gallons; psi reading at treatment system plant #1 (all 0, not running). Treatment system plant 2 took 3 psi readings at 3 rock fillers. Note no gauges installed as of yet system plant influent and outflow carbon to 1. Reigh Underwood notified of this. To be installed at a later date.

William Carr Cannon

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast



EMCON Southeast

DAILY REPORT

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Report #: No 183
Date: 4-14, 19 95
Contract Day _____ of _____
Time Enter Site _____
Time Leave Site _____

Project Name: Bonnel Surf Imp.

Project #: 7 2040 009 092

Weather: unny

Mean Temp. 80°

Working Conditions: good

Location: solubing pond grid A-100 to F

Prime Contractor's Personnel: Payton & Lane

Subcontractors on the Site: _____

Visitors: _____

Hours On Site: Contractor _____ EMCON 3.0 Other _____
4.0

Progress: unit into profful pond with 1/2 loaded tandem axle dump truck. OK, NO
visible pumping in the specific area proffolled. Using a nuclear density gauge
8 in place density tests were performed. Results are as follows.

Location	Test #	Wet Dens.	Dry Dens.	moisture	Compaction	proctor used
A100+25	1	107.9	82.6	30.6	96.6	85.5 34%
A+25	2	110.0	83.6	31.6	97.8	85.5 34%
A+50	3	109.0	82.9	31.5	97.0	85.5 34%
C+25	4	111.0	86.4	28.5	98.3	87.9 33%
C+100	5	111.0	86.0	29.1	97.8	87.9 33%
E+50	6	110.2	85.45	29.0	97.2	87.9 33%
EE+100	7	110.0	85.40	28.8	97.2	87.9 33%
E+250	8	109.8	85.05	29.1	96.8	87.9 33%

William CanConno
Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast



EMCON Southeast

DAILY REPORT

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Report #: No 189

Date: MAY 8, 19 95

Contract Day _____ of _____

Time Enter Site 10:15

Time Leave Site _____

Project Name: BONNELL - IMP. CLOSURE

Project #: 72040.009.092

Weather: SUNNY - CLEAR

Mean Temp. 78°

Working Conditions: _____

Location: POLISHING POND / SETTLING POND - GRID LINES B - EE

Prime Contractor's Personnel: _____

Subcontractors on the Site: _____

Visitors: _____

Hours On Site: Contractor _____ EMCON _____ Other _____

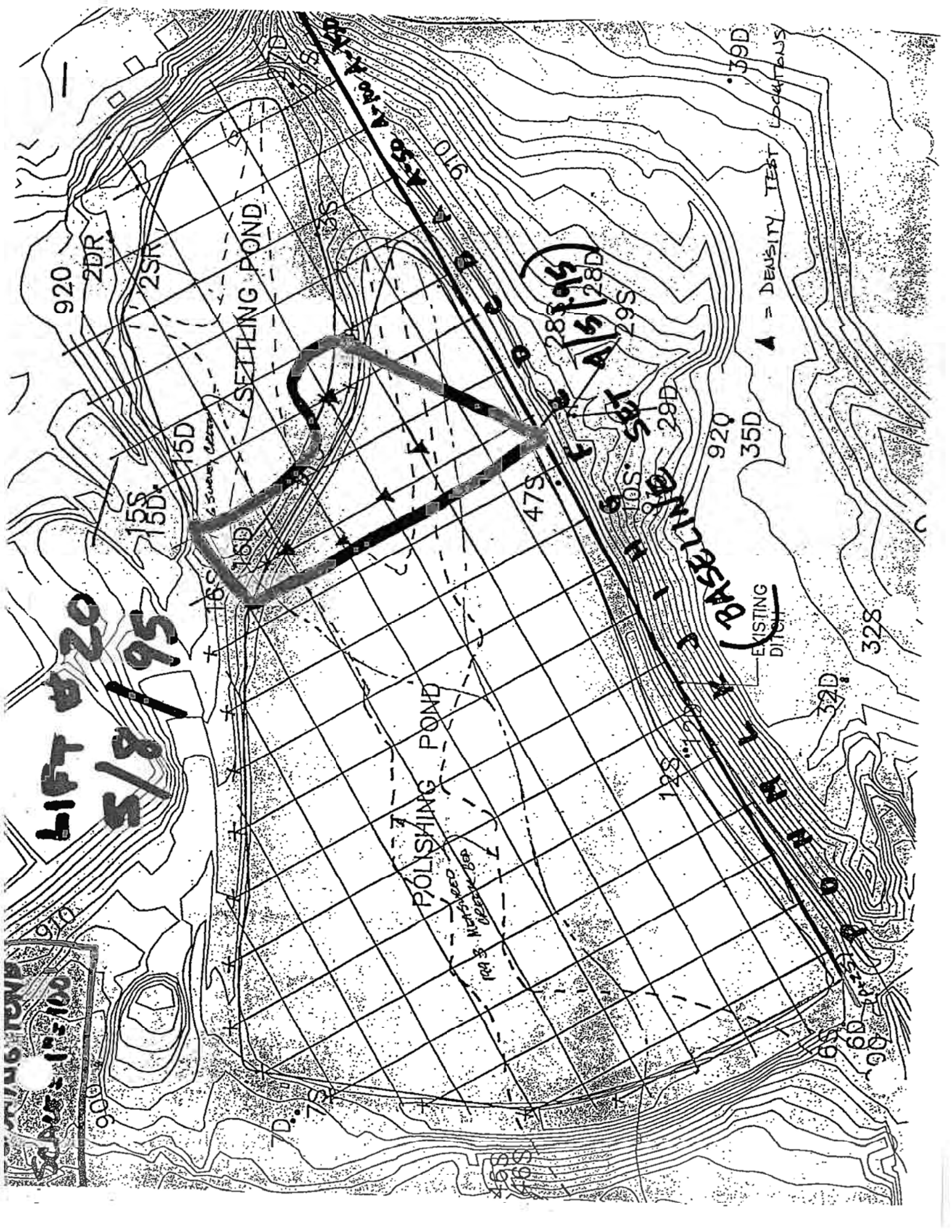
Progress: ARRIVED ON SITE @ 10:15. PROOFROLLED THE LIFT COMPLETED THIS MORNING - #20. NO SOFT OR PUMPING AREAS WERE OBSERVED. PERFORMED FIVE NUCLEAR DENSITY TESTS AND OBTAINED A COMPRESSIVE STRENGTH SAMPLE AT STA. E-150. DENSITY TEST RESULTS ARE AS FOLLOWS:

<u>STA #</u>	<u>WD</u>	<u>DD</u>	<u>% M</u>	<u>% COMPACTION</u>	<u>PROCTOR</u>
<u>C-FO</u>	<u>107.4</u>	<u>85.8</u>	<u>25.2</u>	<u>97.6</u>	<u>87.9 @ 33.0</u>
<u>DD-100</u>	<u>110.1</u>	<u>85.8</u>	<u>28.3</u>	<u>97.6</u>	<u>" "</u>
<u>E-150</u>	<u>113.8</u>	<u>93.5</u>	<u>21.7</u>	<u>98.4</u>	<u>95.0 @ 26.8</u>
<u>EE-200</u>	<u>115.1</u>	<u>94.7</u>	<u>21.5</u>	<u>99.6</u>	<u>✓</u>
<u>E-250</u>	<u>118.5</u>	<u>98.4</u>	<u>20.4</u>	<u>103.5</u>	<u>✓</u>

Brian E. Walcott

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast



LIFT #20
5/8/95

Scale: 1" = 100'

POLISHING POND

SETTLING POND

A16128D

EXISTING DITCH

A = DENSITY TEST LOCATIONS



EMCON Southeast

DAILY REPORT

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Report #: No 190
Date: MAY 15, 19 75
Contract Day _____ of _____
Time Enter Site 12:00
Time Leave Site _____

Project Name: BONNELL - IMP. CLOSURE Project #: 72040.009.092
Weather: P-CLOUDY / HOT Mean Temp. 88° F
Working Conditions: GOOD
Location: POLISHING POND / SETTING POND - GRID LINES A through EE
Prime Contractor's Personnel: _____
Subcontractors on the Site: _____
Visitors: _____
Hours On Site: Contractor _____ EMCON _____ Other _____

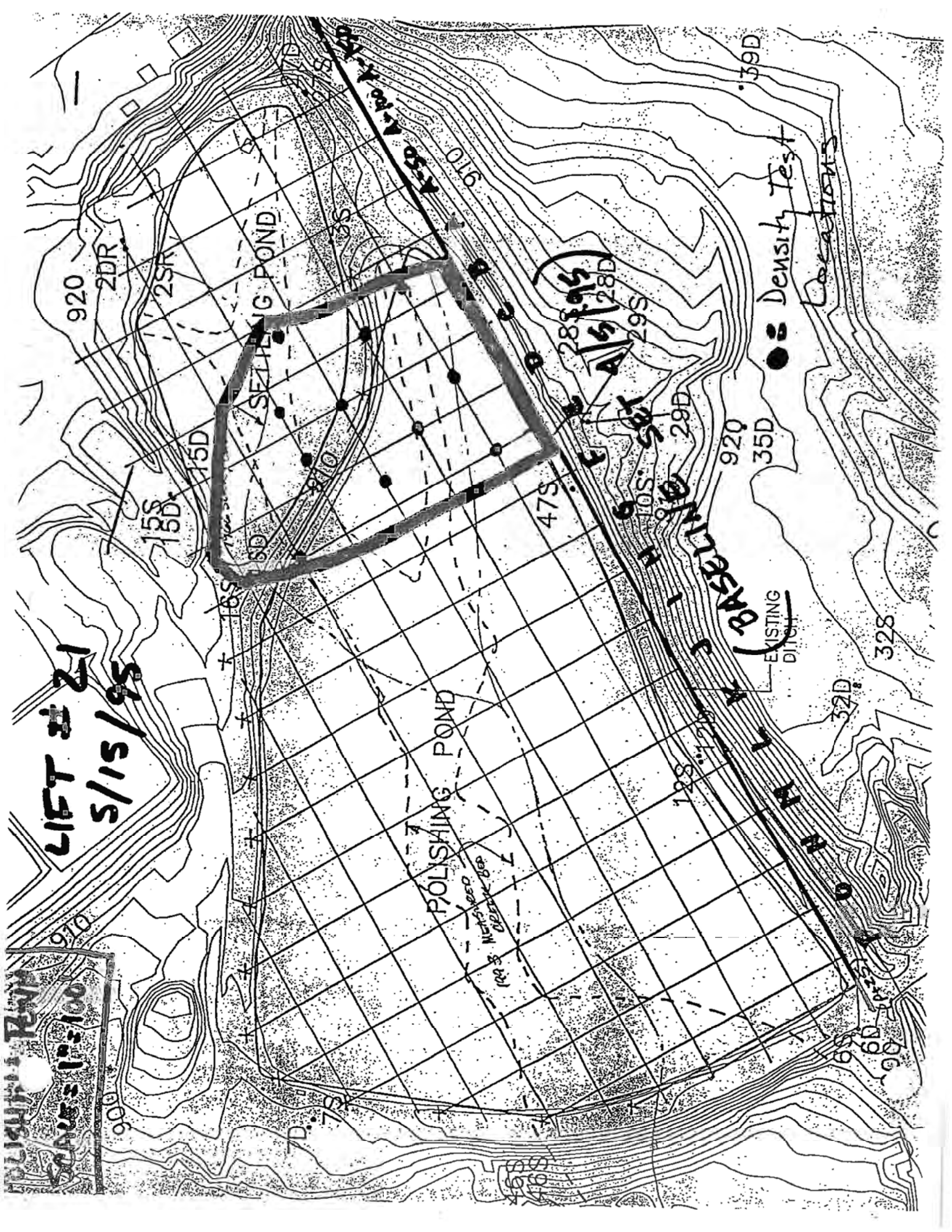
Progress: ON-SITE TO PERFORM DENSITY TESTS AND OBTAIN COMPRESSIVE STRENGTH SAMPLES FOR COMPLETED LIFT #21. Payton & Sons cont'd. to HAUL SOLIDIFIED SLUDGE MTRL. TO THE FILL AREA W/TANDEM DUMP TRUCKS; SPREADING THE MTRL. IN 8"-10" LOOSE LIFTS W/A KOMATSU D-4; COMPACTING THE LIFTS W/A SINGLE DRUM SHEEPSFOOT ROLLER.
COMPRESSIVE STRENGTH SAMPLES TAKEN @ D-100 & BB-200.
DENSITY TEST RESULTS ARE AS FOLLOWS:

STA	WD	DD	%M	% COMPACTION	PROCTOR
E-50	113.5	85.3	33.1	97.0	87.9 @ 33
DB-150	113.8	86.6	32.3	97.8	
E-250	117.8	90.6	32.3	97.5	
CC-200	117.0	90.9	28.7	95.6	95 @ 26.8
B-100	119.8	90.0	32.5	94.7	
CC-50	113.2	93.6	20.9	98.5	
C-150	119.2	93.1	28.0	98.0	
BB-200	115.7	94.1	23.0	99.1	
B-100	117.2	88.9	31.8	93.6	
AA-50	117.1	94.3	24.2	99.2	
A-150	113.3	93.1	21.7	98.0	

Brian E. Wolf

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast





EMCON Southeast

DAILY REPORT

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Report #: No 191
Date: MAY 18, 19 95
Contract Day _____ of _____
Time Enter Site _____
Time Leave Site _____

Project Name: BONNELL - IMP. CLOSURE Project #: 72040.009.092
Weather: P-CLOUDY Mean Temp. 85°
Working Conditions: GOOD
Location: POLISHING POND / SETTLING POND - LIFT #22 LINE A THROUGH EE
Prime Contractor's Personnel: _____
Subcontractors on the Site: _____
Visitors: _____
Hours On Site: Contractor _____ EMCON _____ Other _____

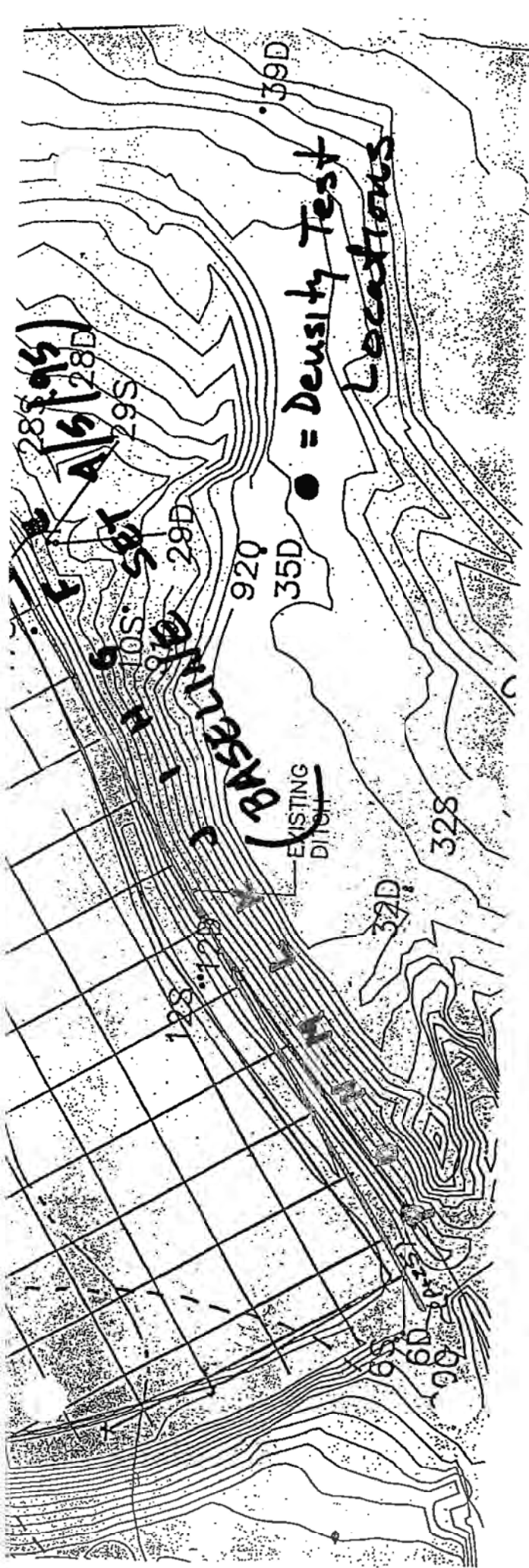
Progress: Payton & Sons contd. - to place & compact solidified sludge material from the ~~settling~~ polishing pond. Utilizing a Komatsu D37P dozer to spread the material and 2 Champion 600P sheepfoot rollers to compact the material in-place. Performed in-place nuclear density tests and obtained compressive strength test samples at STA BB-200 & STA D-100.

STA	WD	DD	7.5M	7.5 Compaction	PROCTER
AA-50	112.3	89.0	26.2	93.7	95.0 @ 26.8
A-100	113.4	90.6	25.2	95.4	
AA-150	113.8	91.1	24.9	95.9	↓
BB-200	113.2	89.6	26.3	94.3	
BB-100	114.9	89.5	28.4	94.2	
C-50	112.3	86.9	30.4	92.0	
CC-150	116.5	90.9	28.2	95.7	
D-250	112.2	89.6	25.2	94.3	
D-100	116.6	91.8	27.0	96.6	
DD-50	113.8	90.0	26.4	94.7	
E-100	116.3	91.5	27.1	96.3	
E-200	113.2	89.0	27.2	93.7	

Brown E. Wale

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast





EMCON Southeast

DAILY REPORT

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Report #: No 192
Date: May 24, 19 95
Contract Day _____ of _____
Time Enter Site 1400
Time Leave Site _____

Project Name: Bonne Project #: _____
Weather: Sunny & Hot Mean Temp. _____
Working Conditions: Good
Location: Polishing Pond - Settling Pond - Grid A-EE
Prime Contractor's Personnel: Dayton & Sons
Subcontractors on the Site: _____
Visitors: _____
Hours On Site: Contractor _____ EMCON _____ Other _____

Progress: On site to perform in-situ density tests and take Shelby tube samples for compressive strength analysis. Eight density tests were taken w/ CPN Nuclear Density gauge.

Placement area represent lift #23

Test #	Station	WD	DD	M.I.	Comp't
1	AA+85	111.4	87.2	27.8	99.2
2	AA+100	111.6	88.6	26.0	100.0
3	C+50	109.8	87.0	26.2	99.0
4	C+25	116.9	93.4	25.2	98.3
5	CC+110	116.7	94.3	23.8	99.3
6	DD+85	117.6	92.8	26.7	97.7
7	DD+150	116.0	90.8	27.0	101.2
8	DD+35	102.5	89.5	25.8	101.8

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast



EMCON Southeast

DAILY REPORT

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Report #: No 193
Date: June 14, 19 95
Contract Day _____ of _____
Time Enter Site 0930
Time Leave Site 1430

Project Name: Bonnet - Impoundment Closure Project #: 72040.009.092
Weather: Sunny & Mild Mean Temp. 78°
Working Conditions: Good
Location: Pokshung Pond / Settling Pond - Grid Line A-BE
Prime Contractor's Personnel: Payton & Sons
Subcontractors on the Site: _____
Visitors: _____
Hours On Site: Contractor _____ EMCON 5 Other _____

NOTE: LIFT #24

Progress: The site was visited on the above date to perform moisture density testing and take corresponding Shelby tube samples for 7 Day and 14 Day compressive shear testing of inside material. Dam arrived and was not yet complete and ready for testing. While waiting for Payton & Sons to complete lift, I was instructed to attempt to locate 2 blue plastic 35 gallon drums. This task was unsuccessful and testing of completed lift was commenced. Eight locations were chosen for density testing with two locations having corresponding Shelby tube samples taken (test #01 & test #04). After density tests were completed the pad was proof-rolled using tandem axle dump truck w/ 1/2 load of soil. No pumping was observed and area was released for next lift to begin.

Test#	WD	M.P.	DD	compaction	Curve	Location
S.T. ①	114.2	29.6	85.1	92.7		A+50
②	113	29.6	86.7	98.6		C+75
③	108	32.1	81.75	96.2		D+25
S.T. ④	110.2	34.6	81.9	93.2		D+100
⑤	102.8	36.3	75.4	92.0		F+125
⑥	109	31.5	82.9	97.0		E+75
⑦	108.6	30.5	83.2	94.7		D+50
⑧	113.6	35.0	70.5	95.3		E+30

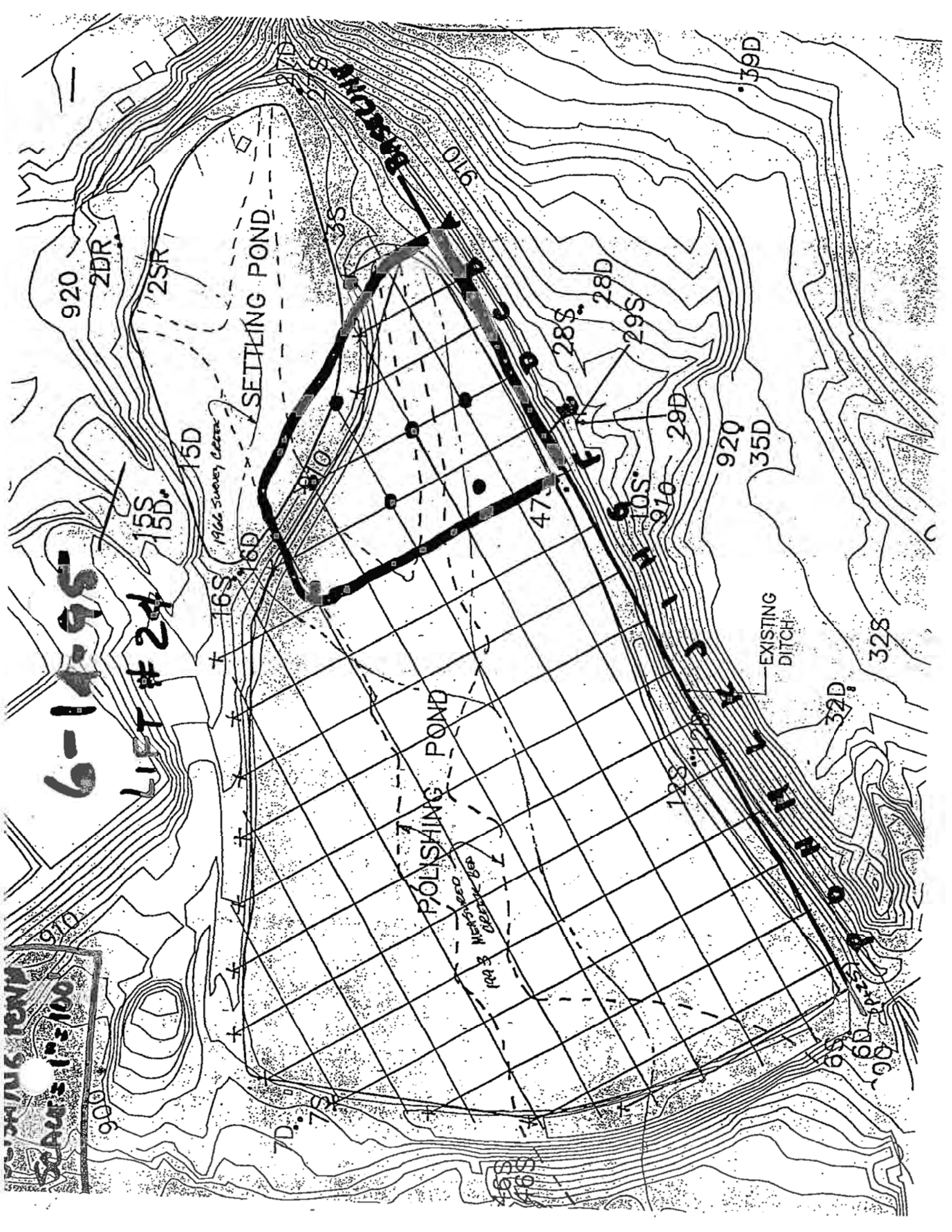
Prepared By: Jeff Flanagan
EMCON Southeast

Reviewed By: EMCON Southeast

SCALE: 1" = 100'

6-14-95

LIFT #24





EMCON Southeast

DAILY REPORT

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Report #: No 194
Date: 6-28-75, 19____
Contract Day _____ of _____
Time Enter Site 0900
Time Leave Site 1300

Project Name: Bonne
Weather: Partly cloudy, hot & humid
Working Conditions: Good & Hot
Location: Road area
Prime Contractor's Personnel: Payton & Sons
Subcontractors on the Site: _____
Visitors: _____
Hours On Site: Contractor _____ EMCON 4 Other _____

Progress: The Site was visited on the above date. Payton & Sons have completed lift #25. This lift does not cover entire closure area. Recall Payton informed me that he is building up the Northern portion of the closure area to reach the specified 5% grade needed for drainage. Soil moisture density tests were taken with 2 shovels pushed @ test location #1 lift #25 passed testing criteria and area was released for lift #25 to go in

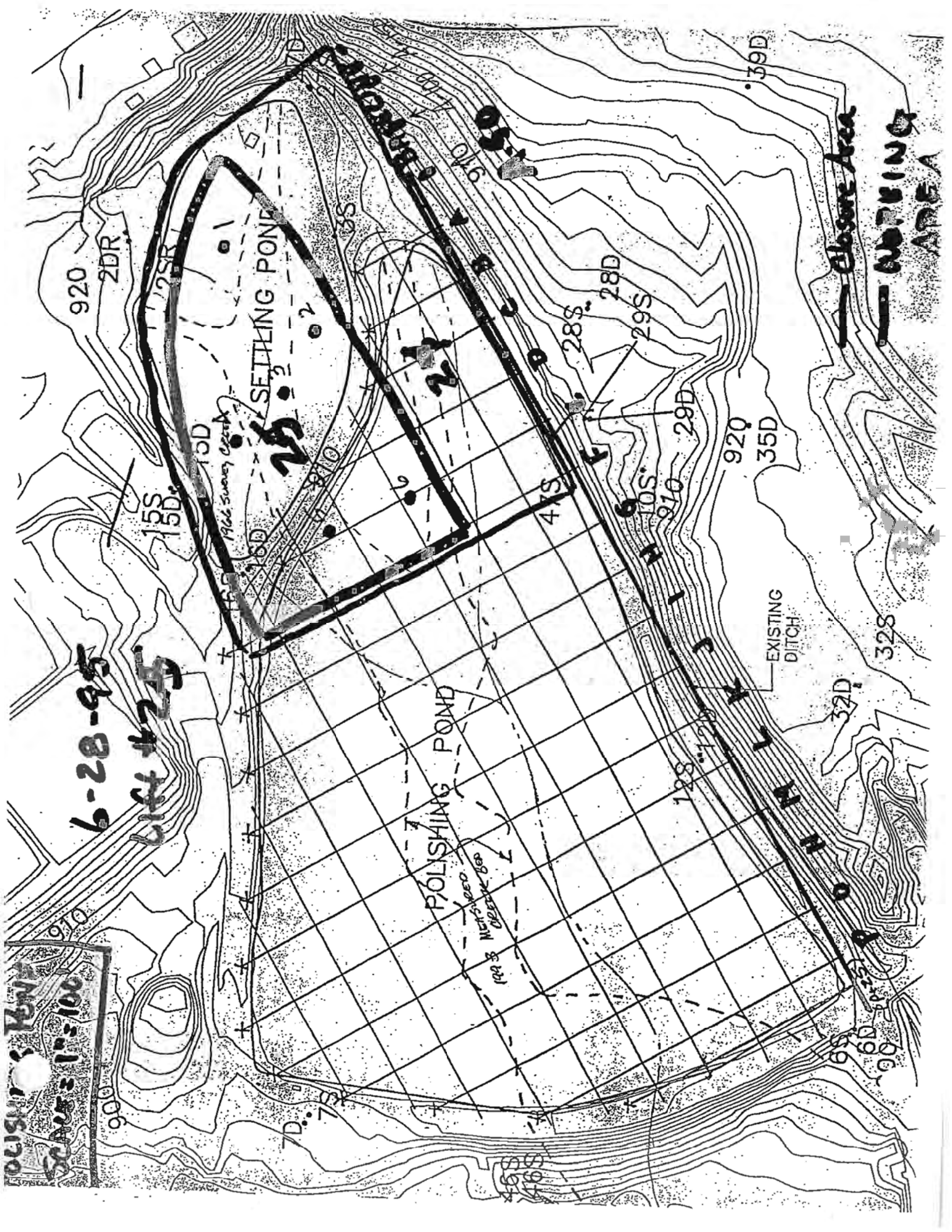
Location	WTD	TD	M-1	Comp.	Cure
① (A-100)+200	104	79.75	30.4	93.3	85.5 @ 34"
② AA+150	103.5	79.5	30.2	93.0	
③ BB+200	103.5	79.0	31.	92.9	
④ C+250	104.5	80.25	30.2	93.9	
⑤ E+220	104	79.5	30.5	93.5	
⑥ E+145	103.5	79.25	30.25	92.5	

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast

ENCLOSURE 3: RENT
Scale: 1" = 100'

6-28-95
Lift #25





EMCON Southeast

DAILY REPORT

Report #: No 195
Date: 7-10-95, 19
Contract Day _____ of _____
Time Enter Site 1000
Time Leave Site _____

Route To: Master - White (Original)
On-Site - Yellow
Project Manager - Pink

Project Name: Bornal Surface Temp Closure Project #: 72540-009-092
Weather: Sunny & hot Mean Temp. 85° - 95°
Working Conditions: Good
Location: Pond area - Lift #24
Prime Contractor's Personnel: Payton & Sons
Subcontractors on the Site: _____
Visitors: _____
Hours On Site: Contractor _____ EMCON _____ Other _____

Progress: The site was visited on the above date to perform compaction / maximum testing and push representative Shelby tubes for compression strength testing.

Location	Test #	WD	DD	% Moisture	% Comp	Proctor
AA+35	#01	103.5	79.5	30.2	93	85.5 @ 34
AA+60	02	104.5	80.5	30.2	93.9	↓ ↓
CT+30	03	110.2	81.9	34.6	94.0	↓ ↓
CT+65	04	109	85.3	27.5	96.2	87.9 @ 33
CT+100	05	107.5	82.5	30.3	94.0	↓ ↓
D+50	06	109	85.25	29.2	96.4	↓ ↓
DD+75	07	110.5	85.5	29.5	93.7	↓ ↓
DD+125	08	110.7	84.5	31.4	96.1	↓ ↓

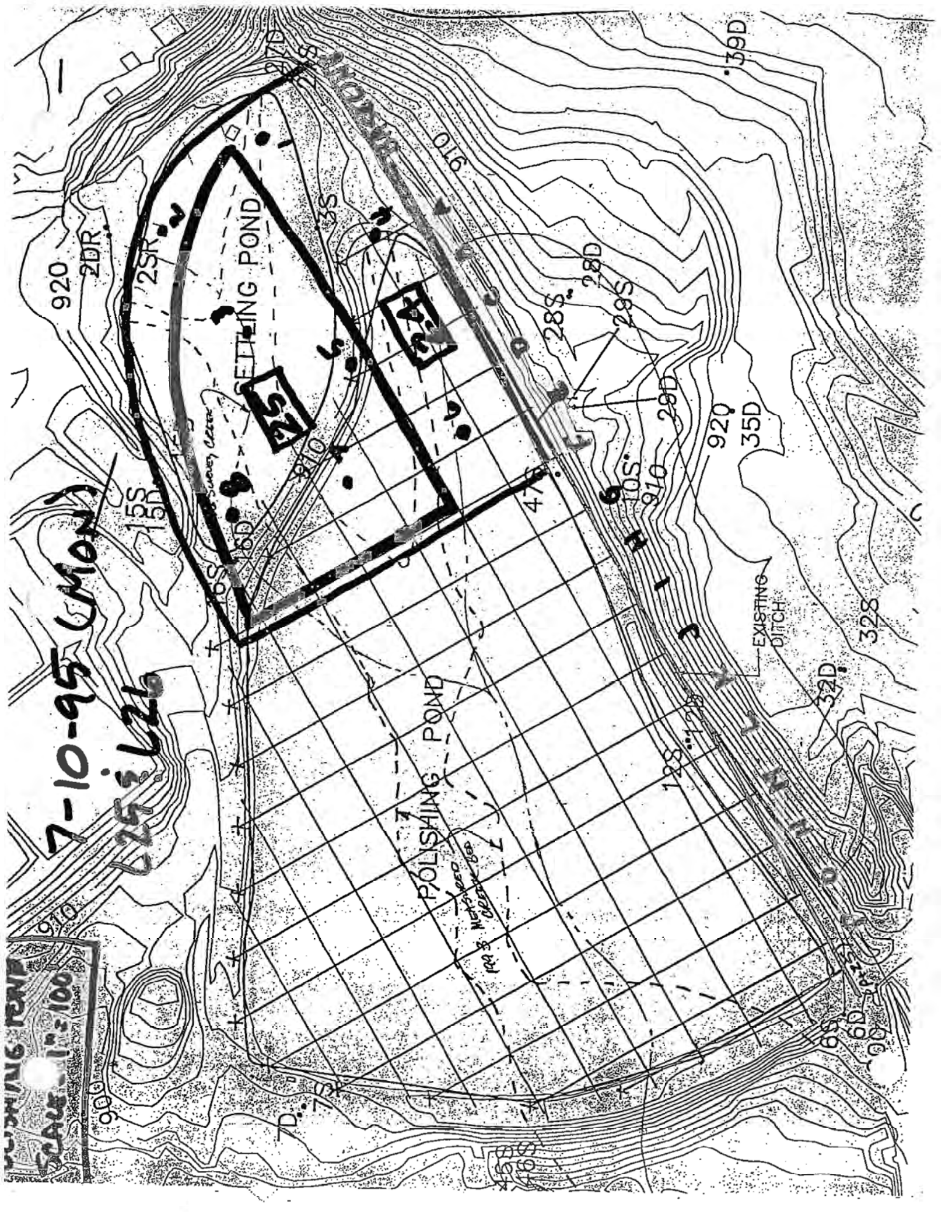
Shellys @ #03 & 07

Prepared By: EMCON Southeast

Reviewed By: EMCON Southeast

SCALE 1"=100'

7-10-95 (MON)
L25 & L26





APPENDIX F

CORRESPONDENCE RELATED TO CLOSURE



THE WILLIAM L BONNELL COMPANY, INC.

AND CAPITOL PRODUCTS CORPORATION

SUBSIDIARIES OF TREDEGAR INDUSTRIES, INC.

25 Bonnell Street • P.O. Box 428 • Newnan, Georgia 30263

Phone 770-253-2020 Fax 770-254-7711

March 11, 1996

Susan Eason
Unit Coordinator
Hazardous Waste Management Program
Environmental Protection Division
Floyd Towers East, Suite 1154
205 Butler Street
Atlanta, GA 30334

Re: Notice of Deficiency, SWMUs Corrective Action Plan
The William L Bonnell Co., Inc.
GAD 003273224
Permit No. HW-087

Dear Susan

The purpose of this letter is to respond to your December 20, 1995, Notice of Deficiency letter for the SWMUs Corrective Action Plan and Bonnell's associated Permit Modification Request.

EPD COMMENT No. 1:

General

Figures 1-4 were omitted from the SWMUs Cap.

BONNELL RESPONSE:

Four copies of Figures 1 through 4 are enclosed. They were inadvertently omitted from the original submittal.

EPD COMMENT No. 2:

Remediation of SWMUs 13, 14, 16, 17, 18, 23, 29, 35, and 50.

Section 4.4 should include figures indicating the locations of confirmation sampling, along with the results of the analyses.

BONNELL RESPONSE:

Four copies of the figures are enclosed. Please insert them in the Appendix ahead of the laboratory reports.

EPD COMMENT No. 3:

Remediation of SWMUs 7 and 46

Section 4.6 states "SWMU 49 is being remediated by an existing vapor extraction system. SWMUs 7 and 46 will be remediated by a similar system. The exact location of the system will be developed by developing a workplan, designing the system, and installing the necessary extraction probes and treatment system for the VOCs. The workplan and design will be submitted to EPD for approval prior to execution."

This paragraph does not provide information, as required for permit modification requests, on how the system will be designed and operated. Bonnell must provide GAEPD with this information prior to approval of the permit modification request. Include a completed design of the vapor extraction system for SWMUs 7 and 46. In areas where further data collection is necessary prior to a final design, state specifically how the results of further field data collection will dictate the final design.

The SWMUs CAP should include monitoring and reporting requirements, inspection schedule and log, cost estimates with demonstrated financial assurance, criteria for terminating the system, and what will be included in a corrective action system installation report.

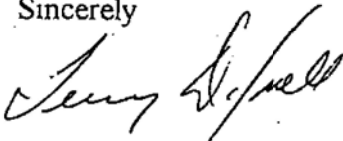
BONNELL RESPONSE:

EPD/Eason/SWMU CAP
March 11, 1996
Page 3

Four copies of the Vapor Extraction System report were previously submitted under separate cover.

If you have any questions, please contact me at 770-254-7690.

Sincerely

A handwritten signature in cursive script, appearing to read "Terry D. Snell".

Terry D. Snell, P.E.
Manager, Environmental

Georgia Department of Natural Resources

205 Butler Street, S.E., Suite 1154, Atlanta, Georgia 30334
Lonice C. Barrett, Commissioner
Environmental Protection Division
Harold F. Reheis, Director
404/656-7802

December 20, 1995

CERTIFIED MAIL

Return Receipt Requested

Mr. Terry Snell
Environmental Manager
William L. Bonnell Co., Inc.
P.O. Box 428
Newnan, Georgia 30264

received 12/22/95

Re: Notice Of Deficiency
SWMUs Corrective Action Plan
Permit Modification Request

Dear Mr. Snell:

The Georgia Environmental Protection Division (GAEPD) has completed its review of the SWMUs Corrective Action Plan (SWMUs CAP) permit modification request for Hazardous Waste Permit HW-087. The following comments address specific deficiencies in the request.

General

Figures 1-4 were omitted from the SWMUs CAP.

Remediation of SWMUs 13, 14, 16, 17, 18, 23, 29, 35, and 50.

Section 4.4 should include figures indicating the locations of confirmation sampling, along with the results of the analyses.

Remediation of SWMUs 7 and 46

Section 4.6 states "SWMU 49 is being remediated by an existing vapor extraction system. SWMUs 7 and 46 will be remediated by a similar system. The exact location of the system will be developed by developing a workplan, designing the system, and installing the necessary extraction probes and treatment system for the VOCs. The workplan and design will be submitted to EPD for approval prior to execution."

This paragraph does not provide information, as required for permit modification requests, on how the system will be designed and operated. Bonnell must provide GAEPD with this information prior to approval of the permit modification request. Include a completed design of the vapor extraction system for SWMUs 7 and 46. In areas where further data collection is necessary prior to a final design, state specifically how the results of further field data collection will dictate the final design.

The SWMUs CAP should include monitoring and reporting requirements, inspection schedule and log, cost estimates with demonstrated financial assurance, criteria for terminating

NOD SWMUs CAP - Bonnell
December 20, 1995
Page 2

the system, and what will be included in a corrective action system installation report.

Please respond to the aforementioned comments by February 15, 1996. If you have any questions please contact Ken Grall at (404) 656-7802.

Sincerely,



Susan Eason
Unit Coordinator

SE:kg
cc: Kent Williams (EPA Region IV)
File: Bonnell (Y)
r:\grall\bonnell\swmuca.nod



THE WILLIAM L BONNELL COMPANY, INC.

AND CAPITOL PRODUCTS CORPORATION

SUBSIDIARIES OF TREDEGAR INDUSTRIES, INC.

25 Bonnell Street • P.O. Box 428 • Newnan, Georgia 30263

Phone 770-253-2020 Fax 770-254-7711

Harold Reheis, P.E.
Director
Environmental Protection Division
Floyd Towers East, Suite 1154
205 Butler Street
Atlanta, GA 30334

Re: Request for Temporary Authorization
The William L Bonnell Co., Inc.
GAD 003273224
Permit No. HW-087

Dear Harold

The purpose of this letter is to request a temporary authorization to install new monitoring wells downgradient of the Surface Impoundment Closure Area that is under the high density polyethylene cap. On October 19, 1995, Bonnell submitted a request for a Class 2 Permit Modification to install three new monitoring wells downgradient of the former surface impoundment closure. Bonnell needs to install the wells in order to comply 40 CFR 264.97, the referenced permit, and the "RCRA Ground-Water Monitoring Technical Enforcement Guidance Document". The temporary authorization is necessary in order to bring Bonnell back into compliance as quickly as possible. We cannot conduct the monitoring program required by the referenced Permit without the wells. We need to install the wells the first week of December in order to conduct October and November monitoring events. We will also go ahead and conduct the January event in December. Terry Snell has discussed this with Bonnell's Compliance Officer, Ken Grall.

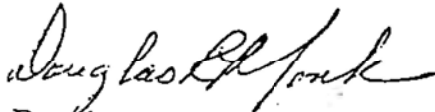
This request is made in accordance with 40 CFR 270.42(e)(3)(ii)(A). As part of this request, Bonnell hereby certifies that our inspection of the former polishing pond area on July 25 and 28, and on subsequent dates, indicates that all sludges have been removed to competent substrate materials. In

Reheis/EPD/TAR
November 13, 1995
Page 2

addition, the analytical results indicate that the remaining substrate materials in the former polishing pond do not contain any constituents above the background levels established by the Surface Impoundment Closure Plan, as amended, approved by EPD. The visual inspection and analytical results demonstrate that the former polishing pond has been clean closed in accordance with the performance standards contained in Section IC, as amended, of Bonnell's RCRA Part B Permit Application for Post Closure Care, and in accordance with the closure performance standards in 40 CFR 264.111, and the closure requirements of 40 CFR 264.228. Documentation in support of this certification was included in the referenced permit modification request.

If you have any questions, please contact Terry Snell at 770/254-7690.

Sincerely

A handwritten signature in cursive script, appearing to read "Douglas R. Monk".

Douglas R. Monk
General Manager

cc: Susan Eason
Ken Grall



THE WILLIAM L BONNELL COMPANY, INC.

AND CAPITOL PRODUCTS CORPORATION

SUBSIDIARIES OF TREDEGAR INDUSTRIES, INC.

25 Bonnell Street • P.O. Box 428 • Newnan, Georgia 30263

Phone 770-253-2020 Fax 770-254-7711

November 28, 1995

Ken Grall
~~Environmental Protection Division~~
Floyd Towers East, Suite 1154
205 Butler Street
Atlanta, GA 30334

Re: Permit Modification Request Dated October 19, 1995
The William L Bonnell Co., Inc.
GAD 003273224
Permit No. HW-087

Dear Ken

The purpose of this letter is to provide additional information relating to Bonnell's October 19, 1995, request for modifications to the referenced Permit to replace certain wells at the facility in order to maintain a groundwater monitoring program consistent with 40CFR264.97. Details of the additional information are included in Attachment A.

Assuming we can get the wells installed, we will be able to conduct quarterly corrective action, semi-annual detection, semi-annual 2SR, and annual VOC sampling the week of December 18. ASI can accomplish this. If we don't get the wells installed, we will not be able to conduct these sampling events or complete the analyses until the latter part of January because we cannot get them scheduled due to other commitments on the part of ASI.

If you have any questions, please contact me at 404/254-7690.

Sincerely

Terry D. Snell, P.E.
Manager Environmental

ATTACHMENT A

SPECIFIC MODIFICATION REQUESTS

The exact requested change to the Permit is as follows:

1. a. Modify Permit Condition III.A.1 as follows:

Replace the following sentence:

"The Permittee shall maintain groundwater monitoring wells MW-1D, MW-1S, MW-2DR, MW-2SR, MW-3S, MW-4SR, MW-6D, MW-6S, MW-7D, MW-7S, MW-8D, MW-8S, MW-9D, MW-9S, MW-12D, MW-12S, MW-13S, MW-15D, MW-15S, MW-16D, MW-16S, MW-17D, MW-17S, MW-19D, MW-19S, MW-21D, MW-21S, MW-23D, MW-23S, MW-24D, MW-26D, MW-26S, MW-27D, MW-27S, MW-28D, MW-28S, MW-29D, MW-29S, MW-31D, MW-36D, MW-36S, MW-37D, MW-37S, MW-39D, MW-40D, MW-42S, MW-43S, MW-44D, MW-44S, MW-45S, MW-46S, MW-47S, OS-1D, OS-1S, OS-2D, OS-2S, OS-4D, OS-4S, OS-5D, OS-5S, OS-6D, OS-7D, OS-8D, BR-1, BR-2, BR-3, BR-5, and BR-6 at the locations on Exhibit E1.1 of the permit application and any additional wells as deemed appropriate by the Director to monitor groundwater conditions within and adjacent to all plumes of contamination."

with the following sentence:

"The Permittee shall maintain groundwater monitoring wells MW-1D, MW-1S, MW-2DR, MW-2SR, MW-4SR, MW-7D, MW-7S, MW-8D, MW-8S, MW-9D, MW-9S, MW-13S, MW-17D, MW-17S, MW-19D, MW-19S, MW-21D, MW-21S, MW-23D, MW-23S, MW-24D, MW-26D, MW-26S, MW-27D, MW-27S, MW-28D, MW-28S, MW-36D, MW-36S, MW-37D, MW-37S, MW-39D, MW-40D, MW-42S, MW-43S, MW-44D, MW-44S, MW-45S, MW-48S, MW-49S, MW-50S, OS-1D, OS-1S, OS-2D, OS-2S, OS-4D, OS-4S, OS-5D, OS-5S, OS-6D, OS-7D, OS-8D, BR-1, BR-2, BR-3, BR-5, and BR-6 at the locations on Exhibit E1.1 of the permit application and any additional wells as deemed appropriate by the Director to monitor groundwater conditions within and adjacent to all plumes of contamination."

- b. Reason: MW-3S, MW-6D, MW-6S, MW-12D, MW-12S, MW-15D, MW-15S, MW-16D, MW-16S, MW-46S, and MW-47S were all dry as a result of removing the head caused by the water and sludge in the Surface

Impoundment, and were destroyed as a result of closure of the Surface Impoundment. Therefore, the only remaining compliance wells are MW-2SR, MW-7D, and MW-7S. MW-7D and MW-7S are too far away from the final closure area to serve as compliance wells. As can be seen from the attached potentiometric surface map, MW-2SR does not monitor either the sand drying beds or the remainder of the hazardous waste management area (CrOH sand drying beds and surface impoundment unit). Therefore, MW-2SR, MW-3S, MW-6S, MW-7D, MW-7S, MW-12S, MW-15S, MW-46S, and MW-47S must be replaced with more appropriate well locations. Wells MW-48S, MW-49S, and MW-50S would replace these wells. See below for the definition of compliance point by wells for the closed Surface Impoundment. The exact location of the wells will be field determined. However, the approximate location is depicted on the attached drawing. The timing of the well installation will be in December after the pond water pumping has been turned off for at least two weeks to allow the groundwater to stabilize. In addition, the quarterly sampling event will be postponed until the new wells are installed.

Monitoring wells 29S and 29D were drilled through a pipe connected to the inactive oil/water separator in SWMU 23. When the pipe was removed during remediation of the SWMU, these wells came out with the pipe and were destroyed.

2. a. Modify Permit Condition III.A.5 as follows:

Replace the following sentence:

"Monitoring wells MW-2SR, MW-3S, MW-6S, MW-7D, MW-7S, MW-12S, MW-15S, MW-46S, and MW-47S shall define the point of compliance for the hazardous waste management area (CrOH sand drying beds and surface impoundment unit)."

with the following sentence:

"Monitoring wells MW-48S, MW-49S, and MW-50S shall define the point of compliance for the hazardous waste management area (CrOH sand drying beds and surface impoundment unit)."

- b. Reason: MW-3S, MW-6D, MW-6S, MW-12D, MW-12S, MW-15D, MW-15S, MW-16D, MW-16S, MW-46S, and MW-47S were all dry as a result of removing the head resulting from the water and sludge in the Surface Impoundment, and were destroyed as a result of closure of the Surface Impoundment. Therefore, the only remaining compliance wells are MW-2SR, MW-7D, and MW-7S. MW-7D and MW-7S are too far away from the final closure area to serve as compliance wells. As can be seen from the attached potentiometric surface map, MW-2SR does not monitor either the sand drying

beds or the remainder of the hazardous waste management area (CrOH sand drying beds and surface impoundment unit). Therefore, MW-2SR, MW-3S, MW-6S, MW-7D, MW-7S, MW-12S, MW-15S, MW-46S, and MW-47S must be replaced with more appropriate well locations. Wells MW-48S, MW-49S, and MW-50S would replace these wells. The exact location of the wells will be field determined. However, the approximate location is depicted on the attached drawing. The three proposed wells adequately provide a groundwater monitoring system consisting of a sufficient number of wells meet the requirements of 40CFR264.97(a). The location and depth, when installed, will provide groundwater samples sufficient to meet the goals of 40CFR264.97(a).

As additional information, the goals of clean closure for the Polishing Pond have been achieved. Those goals were

1. visually remove all sludge and bottom sediments, and
2. demonstrate that all sludge and bottom sediments were removed through a sampling plan providing an adequate number of samples to ensure a representative sampling of the bottom and sides of the pond. The samples were to be analyzed for trichloroethene; toluene; xylenes; ethylbenzene; tetrachloroethene; 1,1-dichloroethene; vinyl chloride; barium; cadmium; chromium; lead; and nickel. Results were to be compared to the background concentration for the site. Clean closure is demonstrated if the analytical results are at or less than the background concentration.

The attached letter from EMCON to Bonnell provides certification that EMCON visually inspected the site and that, in their profession, independent opinion, sludges and bottom sediments were removed to "competent substrate materials."

Table 1 presents the analytical results for all samples by the grid number and location as depicted on the attached map. EMCON, as stated in the attached letter, states "The analytical results indicate that the remaining substrate materials in the former polishing pond do not contain any constituents above the background levels established by the Surface Impoundment Closure Plan, as amended, approved by the Georgia EPD. The visual inspection and analytical results demonstrate that the former polishing pond has been clean-closed in accordance with the performance standards contained in Section IC (as amended) of the RCRA Part B Permit Application for Post Closure Care, and in accordance with the closure performance standards in 40 CFR 264.111, and the closure requirements of 40 CFR 264.228."

In addition to the permit constituents listed above, Bonnell analyzed the samples for total petroleum hydrocarbons (TPH). Bonnell considered that the same cleanup standard applied to the solid waste management units would apply to polishing pond in demonstrating removal of TPH. The standard was 500 mg/kg. If analytical results indicated any of the permit constituents or TPH to be above the established cleanup standard, more material was removed from the grid and the area was resampled. This process was repeated until results were below the established cleanup levels. This process is in accordance with the approved closure plan.

Table 2 presents those grids with constituents that were initially above cleanup levels. Results of subsequent samples are also shown.

3. a. Modify Permit Condition III.D.3.c. as follows:

Replace the following sentence:

"Samples shall be obtained at least annually from all wells within and adjacent to all plumes of contamination and analyzed. Samples from monitoring wells MW-2DR, MW-6D, MW-9D, MW-9S, MW-12D, MW-15D, MW-21D, MW-21S, MW-24D, MW-26D, MW-29D, MW-31D, MW-36D, MW-39D, MW-40D, OS-2D, OS-5D, OS-6D, OS-7D, OS-8D, BR-1, BR-3, and BR-6 shall be analyzed for the VOC constituents listed in Table II."

with the following sentence:

"Samples shall be obtained at least annually from all wells within and adjacent to all plumes of contamination and analyzed. In addition to samples from the Point of Compliance wells, samples from monitoring wells MW-2DR, MW-7D, MW-9D, MW-9S, MW-21D, MW-21S, MW-24D, MW-26D, MW-31D, MW-36D, MW-39D, MW-40D, OS-2D, OS-5D, OS-6D, OS-7D, OS-8D, BR-1, BR-3, and BR-6 shall be analyzed for the VOC constituents listed in Table II."

- b. Reason: This corrects the list of wells to be sampled for VOC in accordance with requests 1 and 2 above. It also allows MW-7D to be in the list of wells to be sampled annually for VOCs since it is in the smaller plume.
4. a. Modify Permit Condition III.D.3 as follows:

Add the following sentence:

"Samples shall be obtained at least semi-annually for three years from MW-2SR and analyzed for chromium. If chromium is not detected

above the Groundwater Protection Standard contained in Table II during this period, the Permittee may cease monitoring MW-2SR.

- b. Reason: Chromium has been detected in MW-2SR in the past, but not recently. Since the well does not monitor groundwater from the former CrOH Sand Drying Beds, since the groundwater has been effectively pumped by RW-2, the groundwater would flow away from the well. A three year period will provide for enough time to ensure there is no contamination in the well.
5. a. Modify Permit Condition III.D.3.e. as follows:
- Replace pages E-64 and E-65 with the attached pages E-64 and E-65.
- b. Reason: The wording on these pages corrects the well sequence for what has occurred in Appendix IX monitoring at the site during the first three years, corrects for proposed wells, and allows Bonnell to have flexibility in case a particular well does not yield enough water to allow Appendix IX analyses.

Secondary VOC Plume

9S, 9D

Samples for these wells will be analyzed for PCE, TCE, ethylbenzene, toluene, and total xylenes.

E-8e(2)(b)(2) Chromium Plumes Wells

In order to assess the extent of the chromium plumes, Bonnell will collect groundwater samples from well 19S semi-annually in addition to those wells in the quarterly sampling program. This well will be analyzed for barium, cadmium, chromium, lead, and nickel.

E-8e(2)(c) Annual Appendix IX Groundwater Sampling

During the corrective action period, Bonnell will monitor groundwater for Appendix IX constituents in the compliance wells for the CrOH landfill as follows:

1. first year: well 19S,
2. second year: well 17D,
3. third year: well 17D,
4. fourth year: well 17S,
5. fifth year: well 4SR, and
6. subsequent years: alternate between first, second, third, fourth, and fifth year wells. If enough water sufficient to provide for Appendix IX analyses cannot be collected from a given well in a given year, Bonnell will switch to the next well in order until a

well is found that will yield a sufficient quantity of water to conduct the Appendix IX analyses.

During the corrective action period, Bonnell will monitor groundwater for Appendix IX constituents in the compliance wells for the surface impoundment/CrOH sand drying beds as follows:

1. first year: 7S, 47S,
2. second year: 2SR, 7D,
3. third year: 2SR,
4. fourth year: 48S, 49S,
5. fifth year: 50S, 48S,
6. sixth year and subsequent years: repeat the sampling sequence one through eight. If enough water sufficient to provide for Appendix IX analyses cannot be collected from a given well in a given year, Bonnell will switch to the next well in order until a well is found that will yield a sufficient quantity of water to conduct the Appendix IX analyses.



THE WILLIAM L BONNELL COMPANY, INC.
AND CAPITOL PRODUCTS CORPORATION
SUBSIDIARIES OF TREDEGAR INDUSTRIES, INC.
25 Bonnell Street • P.O. Box 428 • Newnan, Georgia 30263
Phone 770-254-7690 Fax 770-254-7717

November 13, 1995

Harold Reheis, P.E.
Director
Environmental Protection Division
Floyd Towers East, Suite 1154
205 Butler Street
Atlanta, GA 30334

Re: Request for Temporary Authorization
The William L Bonnell Co., Inc.
GAD 003273224
Permit No. HW-087

Dear Harold

The purpose of this letter is to request a temporary authorization to install new monitoring wells downgradient of the Surface Impoundment Closure Area that is under the high density polyethylene cap. On October 19, 1995, Bonnell submitted a request for a Class 2 Permit Modification to install three new monitoring wells downgradient of the former surface impoundment closure. Bonnell needs to install the wells in order to comply 40 CFR 264.97, the referenced permit, and the "RCRA Ground-Water Monitoring Technical Enforcement Guidance Document". The temporary authorization is necessary in order to bring Bonnell back into compliance as quickly as possible. We cannot conduct the monitoring program required by the referenced Permit without the wells. We need to install the wells the first week of December in order to conduct October and November monitoring events. We will also go ahead and conduct the January event in December. Terry Snell has discussed this with Bonnell's Compliance Officer, Ken Grall.

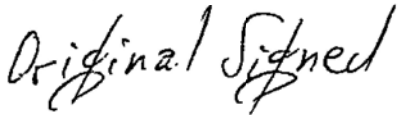
This request is made in accordance with 40 CFR 270.42(e)(3)(ii)(A). As part of this request, Bonnell hereby certifies that our inspection of the former polishing pond area on July 25 and 28, and on subsequent dates, indicates that all sludges have been removed to competent substrate materials. In

Reheis/EPD/TAR
November 13, 1995
Page 2

addition, the analytical results indicate that the remaining substrate materials in the former polishing pond do not contain any constituents above the background levels established by the Surface Impoundment Closure Plan, as amended, approved by EPD. The visual inspection and analytical results demonstrate that the former polishing pond has been clean closed in accordance with the performance standards contained in Section IC, as amended, of Bonnell's RCRA Part B Permit Application for Post Closure Care, and in accordance with the closure performance standards in 40 CFR 264.111, and the closure requirements of 40 CFR 264.228. Documentation in support of this certification was included in the referenced permit modification request.

If you have any questions, please contact Terry Snell at 770/254-7690.

Sincerely

A handwritten signature in cursive script that reads "Original Signed".

Douglas R. Monk
General Manager

cc: Susan Eason
Ken Grall



THE WILLIAM L BONNELL COMPANY, INC.
AND CAPITOL PRODUCTS CORPORATION
SUBSIDIARIES OF TREDEGAR INDUSTRIES, INC.
25 Bonnell Street . P.O. Box 428 . Newnan, Georgia 30263
Phone 770-253-2020 Fax 770-254-7711

October 19, 1995

Harold Reheis, P.E.
Director
Environmental Protection Division
Floyd Towers East, Suite 1154
205 Butler Street
Atlanta, GA 30334

Re: Permit Modification Request
The William L Bonnell Co., Inc.
GAD 003273224
Permit No. HW-087

Dear Harold

The purpose of this letter is to request modifications to the referenced Permit to incorporate the Corrective Action Plan (CAP) for the Solid Waste Management Units requiring remediation as discussed in EPD's June 14, 1995 letter (Susan Eason to Terry Snell). Four copies of the CAP are attached to Ken Grall's copy of this letter. The requested modifications are submitted as Class 3 Permit Modification Requests.

If you have any questions, please contact Terry Snell at 404/254-7690.

Sincerely

Original / Signed

Douglas R. Monk
General Manager

cc: Susan Eason
Ken Grall

I certify under penalty of law that this October 19, 1995, request to modify the Post Closure Care Permit for The William L Bonnell Company, Inc., to incorporate the Corrective Action Plan (CAP) for the Solid Waste Management Units requiring remediation as discussed in EPD's June 14, 1995 letter (Susan Eason to Terry Snell), and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Original Signed
Douglas R. Monk
General Manager

Date: _____