Progress Report
Slurry Wall Construction
Lena Road Landfill
August 19, 1989 through September 22, 1989

Ardaman & Associates, Inc.

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Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

October 10, 1989
File Number 86-115A

Manatee County Public Works Department
315 75th Street West
Bradenton, Florida 34209

Attention: Mr. Tom Zink

Subject: Progress Report for Slurry Wall Construction Lena Road Landfill within Manatee County, Florida August 19 through September 22, 1989

Gentlemen:

This report summarizes the field and laboratory quality control program for the slurry wall construction at the Lena Road Landfill between August 19 and September 22, 1989. The Stage III slurry wall system exclusive of the cap was completed during this period. During the subject time period, construction of the slurry wall progressed from the southwest corner of the Stage III landfill area (Station 60+40) to the northeast corner of the Stage III area Station 20+00 and then progressed from Station 60+40 to the southeast corner (Station 79+00), as depicted on Figure 1. The stationing is unique for each stage of construction but is not unique for the entire project, therefore, a station number can be the same in Stage II as for Stage III. Thus the stage number needs to be a part of the Stationing number. The two previous progress reports on this construction program are limited to only Stage II daa. The Table 1 data in this report summarizes all data collected for both Stage II and Stage III.

Field Observation and Monitoring

A field representative from Ardaman and Associates, Inc. was present at the site to provide continuous on-site observation and monitoring of the slurry wall installation during the construction period. The tasks of our field inspectors are as follows:

(1) to inspect the installation of the slurry wall to document that it conforms to the specification requirements;
(2) to perform field tests at the site;
(3) to collect samples for laboratory testing;
(4) to document the field activities and test data on a daily basis.

According to the specifications, the slurry wall should be at least 30 inches wide and should be keyed 36 inches into an underlying clayey stratum of low permeability. The bentonite slurry

viscosity, as determined by a Marsh Funnel, should be no less than 40 Marsh-seconds. The slump of the backfill after mixing with the bentonite slurry should have a slump cone value of 4 to 6 inches prior to placement. The density of the slurry should be at least 64 pcf.

Daily Field Reports prepared by our field inspector for the project between August 19 and September 22, 1989 are included in Appendix 1. The Slurry Wall Field Data Sheets are included in Appendix 2.

As indicated on the field data sheets, the slurry wall was embedded a minimum of 3 feet into the clayey confining layer. The typical depths of the confining layer during the subject time period are as follows:

Station Number	Typical Depth to Top of Confining Layer (feet)
20+00 to 40+20	17 to 21
40+40 to 43+80	22 to 25
44+00 to 60+40	26 to 28
60+60 to 66+00	19 to 25
66+20 to 69+40	24 to 27
69+60 to 79+00	18 to 23

The slurry viscosity obtained at the mix plant varied from 35 to 55 Marsh-seconds, with an average viscosity of 40 Marsh-seconds. The slump of the backfill after mixing with the bentonite slurry was typically 4.0 to 6.0 inches, with an average slump of 4.8 inches. The unit weight of the bentonite slurry in the trench ranged from 67 to 102 pcf with an average unit weight of 77 pcf.

Based on our field observations and monitoring, it is our opinion that the procedures and materials used for the installation of the slurry trench over the subject time period met the intent of the specifications.

Laboratory Testing

In accordance with the specifications, the backfill sampling frequency for laboratory permeability testing was a minimum of one sample per day or one sample for each 200 feet of installed slurry wall. In addition, a minimum of one sample of backfill per day or one sample for each 100 feet of installed slurry wall was obtained for grain size testing.

Index Testing

The bentonite product used for the slurry wall construction was sampled by our field inspector on September 13. Atterberg limits tests conducted on this sample yielded a liquid limit of 415 percent

and a plasticity index of 376 percent. The moisture content of this sample was 9.0 percent. These results are within the expected values for the specified type of bentonite.

In order to show compliance with the grain size requirements set forth in the specifications, the soil-bentonite mixture must have at least 12.5 percent of materials by dry weight passing the U.S. No. 200 sieve size (fines content) and at least 80 percent of materials by dry weight passing the U.S. No. 20 sieve size.

The fines content of the 62 samples retrieved for the subject time period ranges from 14 to 28 percent with an average fines content of 19.5 percent. The percent soil by dry weight that passes through the U.S. No. 20 sieve ranges from 91 to 98 percent with an average of 94 percent. Therefore, in our opinion, the backfill samples met the gradation requirements in the specifications.

Permeability Testing

According to the specifications, a backfill coefficient of permeability up to $5x10^{-7}$ cm/sec is allowed for determining compliance with the permeability requirement, provided no more than 20 percent of the tested specimens for each 2000-foot section of the slurry wall display a coefficient of permeability greater than $1x10^{-7}$ cm/sec.

Two types of tests have been used by Ardaman & Associates, Inc. to assess the coefficient of permeability of the backfill samples. The principal test consisted of determining the permeability in an 8-cm high, rigid wall, steel mold after the samples were properly placed and tamped in the mold. A typical head difference of approximately 60 to 120 cm was used in performing these tests. The other method involved triaxial cell testing in which the "consolidated" samples from the steel mold were transferred to a triaxial cell and a 2.5 psi effective consolidation stress was applied to the samples prior to permeability testing. Hydraulic gradients for both types of tests ranged between 7 and 15.

As anticipated, the tests performed in the steel molds yielded higher values of permeability than identical specimens tested in the triaxial cell. In our opinion, the triaxial permeability with an effective consolidation stress of 2.5 psi approximates the in-situ condition at mid-depth of the slurry wall and is used as the permeability for determining compliance with the specifications. The ratio of steel-mold permeability to triaxial permeability for 7 specimens tested with both procedures averaged 2.8 and varied from 1.4 to 4.3. To check compliance with the specifications, a factor of 2.8 was applied to the steel-mold permeability values to obtain equivalent triaxial permeability values.

The laboratory test data for the backfill samples recovered for the subject time period are summarized in Table 1. The permeability values presented represent the 2.5 psi effective stress permeability values (i.e., the "steel-mold" permeability divided by 2.8). The maximum documented coefficient of permeability for Stage III is $1.0x10^{-7}$ cm/sec at Station 55+00. The average coefficient

of permeability of the backfill samples recovered for Stage III was computed to be $4.3x10^{-8}$ cm/sec, based on 31 test samples. The average coefficient of permeability of all the backfill samples recovered for Stage II and III (71 samples) was computed to be $7.3x10^{-8}$ cm/sec. In our opinion, the slurry wall installed during the subject time period meets the intent of the project specifications and the entire slurry wall installed at Stage II and Stage III meets the intent of the specifications.

Conclusions

As discussed in the previous sections, it is our opinion that the slurry wall constructed within the subject time period and for the project has been constructed in accordance with the project specifications.

If you should have any questions or need further assistance, please do not hesitate to contact us.

Very truly yours,
ARDAMAN & ASSOCIATES, INC.

Herbert G. Stangland, Jr., P.E.
Senior Water Resources Engineer
Florida Registration No. 16713

John E. Garlanger, Ph.D., P.E.
Principal

HGS/JEG/js

Enclosure

cc: G.I.T. (w/encl.)
800 Office Plaza Blvd.
Suite 402
Kissimmee, Florida 32743

HSLENA2.rpt3

TABLE 1

LABORATORY TEST RESULTS

Sample Number	Sampling Date	Station Number	Initial Moisture Content (%)	Initial Dry Density (PCF)	Coefficient of Permeability (cm/sec)	Percent Passing By Dry Weight (%) -20	-200
STAGE II							
1	6-20-89	14+50	34.7	85.6	6.5×10^{-8} **	91	17
2	6-20-89	14+80	29.3	90.0	1.0×10^{-7}	95	14
3	6-20-89	15+80				--	19
4	6-21-89	16+80	30.6	88.3	1.4×10^{-7} **	98	24
5	6-22-89	17+80				--	20
6	6-23-89	18+80	29.4	95.3	7.2×10^{-8} **	97	15
7	6-23-89	19+80				--	18
8	6-23-89	20+80	27.1	92.7	1.5×10^{-7} **	97	10
9	6-27-89	21+90				--	14
10	6-27-89	22+80	26.7	93.8	6.5×10^{-8} **	96	11
11	6-27-89	23+80				--	15
12	6-28-89	24+80	29.4	90.0	4.6×10^{-8}	96	14
13	6-28-89	25+80				97	15
14	6-28-89	26+80	29.2	91.2	8.2×10^{-8}	96	13
15	6-28-89	27+70				94	15
16	6-29-89	28+80	28.4	92.4	4.3×10^{-8}	95	13
17	6-29-89	29+80				98	15
18	6-29-89	30+80	29.0	91.7	8.2×10^{-8}	94	12
19	6-30-89	31+80				94	14
20	6-30-89	32+80	27.8	92.6	8.9×10^{-8}	93	13
21	7-05-89	33+80				94	21
22	7-05-89	34+80	30.3	88.8	7.9×10^{-8}	94	17
23	7-05-89	35+80				93	24
24	7-06-89	36+80	28.7	92.0	6.1×10^{-8}	94	18
25	7-06-89	37+80				94	14
26	7-06-89	38+80	26.6	95.0	5.7×10^{-8}	95	11
27	7-06-89	39+80				94	12
28	7-10-89	40+80	25.4	96.4	6.8×10^{-8}	98	8
29	7-10-89	41+80				93	12
30	7-11-89	42+80	25.4	97.4	8.9×10^{-8}	97	9
31	7-16-89	43+00				86	14
32	7-16-89	44+00	26.5	93.7	1.2×10^{-7}	94	14
33	7-17-89	45+00				88	13
34	7-17-89	46+00	30.1	89.6	8.6×10^{-8}	92	16
35	7-19-89	47+00				92	18
36	7-19-89	48+00	29.9	91.7	6.8×10^{-8}	93	15
37	7-20-89	49+00				92	15
38	7-20-89	50+00	29.2	91.3	1.8×10^{-7} **	95	15
39	7-20-89	51+00				93	17

**Results from triaxial cell testing

TABLE 1 (continued)

LABORATORY TEST RESULTS

Sample Number	Sampling Date	Station Number	Initial Moisture Content (%)	Initial Dry Density (PCF)	Coefficient of Permeability (cm/sec)	Percent Passing By Dry Weight (%) -20	-200
STAGE II							
40	7-20-89	52+00	29.2	93.3	$1.7x10^{-7}$ **	91	14
41	7-24-89	53+00				95	16
42	7-24-89	54+00	28.9	93.0	$2.5x10^{-7}$	96	13
43	7-24-89	55+00				97	16
44	7-24-89	56+00	27.6	94.3	$8.2x10^{-8}$	96	19
45	7-28-89	57+00				96	16
46	7-28-89	58+00	24.7	98.4	$2.7x10^{-8}$	95	14
47	7-29-89	59+00				96	14
48	7-29-89	60+00	26.7	95.1	$9.6x10^{-8}$	95	12
49	7-31-89	61+00				95	13
50	7-31-89	62+00	27.4	94.1	$3.4x10^{-8}$	95	16
51	8-01-89	63+00				95	19
52	8-01-89	64+00	27.6	94.2	$3.1x10^{-8}$	96	19
53	8-01-89	65+00				95	17
54	8-02-89	66+00	28.5	94.3	$2.9x10^{-8}$	95	13
55	8-02-89	67+00				93	14
56	8-02-89	68+00	26.4	96.4	$1.1x10^{-7}$	95	13
57	8-02-89	69+00				96	18
58	8-02-89	70+00	30.5	88.5	$8.9x10^{-8}$	96	15
59	8-03-89	71+00				95	14
60	8-03-89	72+00	29.8	88.9	$1.1x10^{-7}$	97	13
61	8-04-89	73+00				97	13
62	8-05-89	74+00	27.6	92.1	$1.6x10^{-7}$	96	11
63	8-05-89	75+00				96	17
64	8-07-89	76+00	34.4	84.7	$1.6x10^{-7}$	93	15
65	8-07-89	77+00				96	18
66	8-08-89	78+00	33.4	86.7	$1.5x10^{-7}$	96	19
67	8-08-89	79+00				92	18
68	8-08-89	80+00	29.1	91.1	$1.8x10^{-7}$ **	96	14
69	8-09-89	81+00				93	16
70	8-09-89	82+00	27.3	94.2	$5.7x10^{-8}$	92	14
71	8-10-89	83+00				92	15
72	8-10-89	84+00	25.3	94.9	$1.7x10^{-7}$ **	96	15
73	8-15-89	85+00				93	16
74	8-15-89	86+00	26.6	95.0	$6.8x10^{-8}$	91	14
75	8-15-89	87+00				94	14
76	8-15-89	88+00	26.8	94.3	$7.9x10^{-8}$	96	13
77	8-16-89	89+00				92	16
78	8-16-89	90+00	27.3	94.1	$2.2x10^{-8}$	91	14

**Results from triaxial cell testing

TABLE 1 (continued)

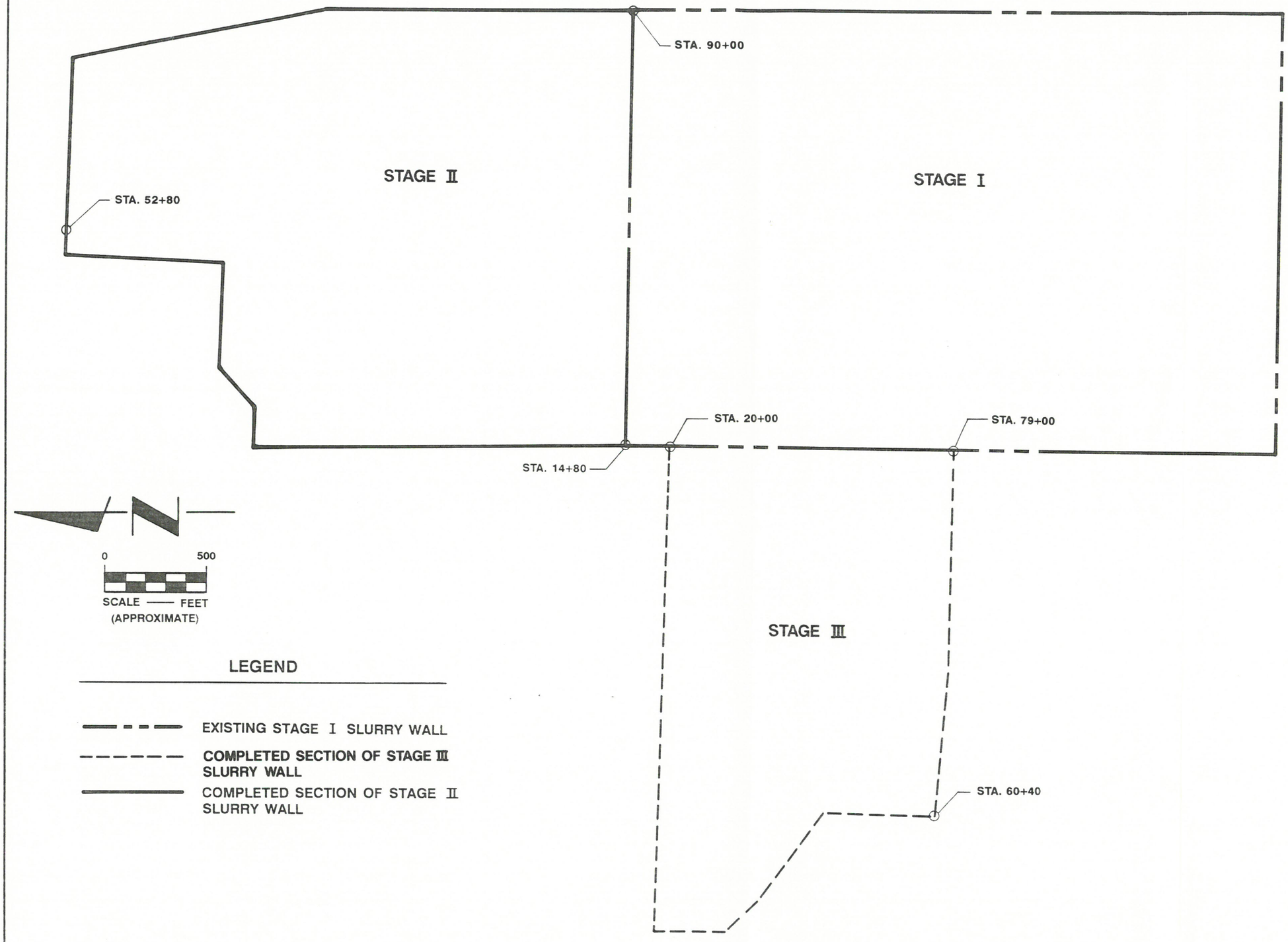
LABORATORY TEST RESULTS

Sample Number	Sampling Date	Station Number	Initial Moisture Content (%)	Initial Dry Density (PCF)	Coefficient of Permeability (cm/sec)	Percent Passing By Dry Weight (%) -20	-200
STAGE III							
79	8-20-89	60+40	36.0	80.8	$3.6x10^{-8}$	96	17
80	8-20-89	60+00				95	27
81	8-21-89	59+00	35.8	79.9	$5.0x10^{-8}$	96	22
82	8-21-89	58+00				94	24
83	8-21-89	57+00	39.2	77.6	$3.6x10^{-8}$	95	28
84	8-21-89	56+00				92	27
85	8-22-89	55+00	37.5	82.0	$1.0x10^{-7}$	92	21
86	8-22-89	54+00				94	23
87	8-22-89	53+00	37.4	82.7	$9.6x10^{-8}$	92	19
88	8-24-89	52+00				96	22
89	8-24-89	51+00	32.9	86.4	$5.0x10^{-8}$	96	21
90	8-24-89	50+00				95	17
91	8-27-89	49+00	35.6	82.5	$6.4x10^{-8}$	95	21
92	8-27-89	48+00				97	21
93	8-27-89	47+00	34.8	83.2	$5.4x10^{-8}$	93	17
94	8-27-89	46+00				97	19
95	8-30-89	45+00	36.3	82.2	$5.7x10^{-8}$	96	19
96	8-31-89	44+00				97	19
97	8-31-89	43+00	33.1	86.3	$4.6x10^{-8}$	97	15
98	8-31-89	42+00				96	18
99	8-31-89	41+00	30.6	90.2	$3.2x10^{-8}$	96	16
100	9-01-89	40+00				96	21
101	9-01-89	39+00	30.4	90.0	$2.6x10^{-8}$	96	19
102	9-01-89	38+00				96	21
103	9-02-89	37+00	29.7	91.5	$5.7x10^{-8}$	95	16
104	9-02-89	36+00				96	20
105	9-02-89	35+00	32.6	86.6	$2.5x10^{-8}$	98	18
106	9-02-89	34+00				96	19
107	9-02-89	33+00	32.4	87.7	$2.6x10^{-8}$	93	17
108	9-02-89	32+00				94	21
109	9-03-89	31+00	30.2	90.5	$2.4x10^{-8}$	94	15
110	9-03-89	30+00				93	21
111	9-03-89	29+00	29.2	91.7	$4.6x10^{-8}$	94	16
112	9-03-89	28+00				93	17
113	9-03-89	27+00	28.8	93.4	$2.8x10^{-8}$	95	15
114	9-04-89	26+00				94	19
115	9-04-89	25+00	28.5	92.4	$2.0x10^{-8}$	94	17
116	9-04-89	24+00				92	23
117	9-05-89	23+00	33.3	87.3	$2.4x10^{-8}$	92	19
118	9-05-89	22+00				93	21
119	9-05-89	21+00	29.2	89.7	$1.5x10^{-8}$	94	17
120	9-05-89	20+00				94	16

TABLE 1 (continued)

LABORATORY TEST RESULTS

Sample Number	Sampling Date	Station Number	Initial Moisture Content (%)	Initial Dry Density (PCF)	Coefficient of Permeability (cm/sec)	Percent Passing By Dry Weight (%) -20	-200
STAGE III							
121	9-12-89	60+40	32.1	85.4	$1.8x10^{-8}$	94	21
122	9-12-89	61+00				95	26
123	9-13-89	62+00	30.0	89.5	$1.7x10^{-8}$	96	22
124	9-13-89	63+00				96	18
125	9-14-89	64+00	25.2	96.5	$1.5x10^{-8}$	93	15
126	9-15-89	65+00				95	19
127	9-15-89	66+00	29.0	91.5	$2.6x10^{-8}$	92	18
128	9-15-89	67+00				93	23
129	9-18-89	68+00	30.6	88.3	$3.9x10^{-8}$	93	17
130	9-18-89	69+00				94	18
131	9-18-89	70+00	31.3	88.3	$8.2x10^{-8}$	94	14
132	9-18-89	71+00				92	21
133	9-19-89	72+00	33.8	85.5	$8.2x10^{-8}$	91	16
134	9-19-89	73+00				92	19
135	9-20-89	74+00	33.8	86.3	$5.0x10^{-8}$	94	19
136	9-20-89	75+00				95	18
137	9-21-89	76+00	31.5	88.1	$4.6x10^{-8}$	96	19
138	9-21-89	77+00				95	18
139	9-21-89	78+00	28.5	92.5	$5.4x10^{-8}$	95	15
140	9-21-89	78+80				96	20



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SCALE —— FEET
(APPROXIMATE)

LEGEND

- EXISTING STAGE I SLURRY WALL
- **COMPLETED SECTION OF STAGE III SLURRY WALL**
- COMPLETED SECTION OF STAGE II SLURRY WALL

SLURRY WALL CONSTRUCTION THROUGH SEPT. 22, 1989

Ardaman & Associates, Inc.
Consulting Engineers in Soils, Hydrogeology, Foundations, and Materials Testing

SLURRY WALL CONSTRUCTION
LENA ROAD LANDFILL
MANATEE COUNTY, FLORIDA

DRAWN BY: RBE	CHECKED BY: HGS	DATE: 8/16/89
FILE NO: 86-115A	APPROVED BY: H.G. Stenglund	

N24568

APPENDIX 2

SLURRY WALL FIELD DATA SHEETS

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT Lenox Rd Landfill Slurry wall FILE NO. 3[illegible]

CLIENT [illegible] WEATHER Sunny - 60 DATE 8-19-88

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
60+00	27	30	58+00	29	31			
60+20	27	30	58+20	29	31			
60+00	27	30						
59+80	27	30						
59+60	27	30						
59+40	27	30						
59+20	27	30						
59+00	27	30						

COMMENT

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
9:15	60+00	35	70		
11:00	60+00	42	72		
1:30	59+00	39	73		
3:30	58+80	38	9		

COMMENT

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		
2:30	60+00	4	—	—	—		
						3:1	30

COMMENT

NOTE:

INSPECTOR: [signature]

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT Lenox Rd Landfill slurry wall FILE NO. 3457P

CLIENT Martin WEATHER Overcast DATE 3-20-99

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
58+00	28	31	57+00	27	30			
58+20	29	31	56+80	27	30			
58+40	27	30	56+60	27	30			
58+60	27	30	56+40	27	30			
58+80	27	30	56+20	27	30			
59+00	27							
57+40	27	30						
57+20	27	30						

COMMENT

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
7:25	58+00	42	71		
9:04	58+00	40	69		
12:00	57+20	39	72		
2:10	56+60	—	69		Not Pumping

COMMENT

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		
7:45	60+40	4.5	79		✓		
12:00	60+00	4.5	80	✓			
						2:1	40'

COMMENT

NOTE:

INSPECTOR: Curtis Jr

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT Lena Rd Land fill slurry wall FILE NO. 36105A

CLIENT Waste Mg WEATHER PM Rain DATE 8-21

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
56+20	27	30	54+60	27	30			
56+00	27	30	54+40	27	30			
55+80	27	30	54+20	27	30			
55+60	27	30	54+00	27	30			
55+40	27	30	53+80	27	30			
55+20	27	30	53+60	27	30			
55+00	27	30	53+40	27	30			
54+80	27	30	53+20	27	30			

COMMENT

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
7:45	56+00	28	68		
9:40	55+60	28	74		
11:30	55+20	40	70		
2:00	54+80	—	71		Not Pumping
4:30	54+00	29	70		
6:10	53+00	—	75		Not Pumping

COMMENT

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		
3:25	59+00	4.0	81		✓		
12:10	58+00	4.5	82	✓			
2:45	57+00	4.0	83		✓		
6:30	56+00	6.0	84	✓			
						5:1	140'

COMMENT

NOTE:

INSPECTOR: Peter W. Engelke

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT Lena Rd Land F[illegible] [illegible] FILE NO. [illegible]

CLIENT [illegible] WEATHER [illegible] DATE [illegible]

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	31	53+00	28	31
[illegible]	[illegible]	[illegible]	[illegible]	28	31			
[illegible]	27	[illegible]	[illegible]	28	31			
[illegible]	27	28	[illegible]	28	31			
[illegible]	28	31	51+80	28	31			
[illegible]	28	31	52+00	28	31			
	28	31	[illegible]	28	[illegible]			
[illegible]	28	31	[illegible]	28	[illegible]			

COMMENT

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
[illegible]	[illegible]	[illegible]	[illegible]		
[illegible]	[illegible]	—	70		[illegible]
[illegible]	51+80	38	81		
[illegible]	[illegible]	—	[illegible]		[illegible]
[illegible]	50+[illegible]	40	84		

COMMENT

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓) SA	TEST REQUIRED (✓) K+SA	SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
9:55	[illegible]	5.0	35		✓		
3:10	[illegible]	5.5	36	✓			
4:45	[illegible]	6.0	37		✓		
						7:1	60'

COMMENT

NOTE:

INSPECTOR: Peter W[illegible]

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT Lena Rd Land Fill slurry wall FILE NO. 86115A

CLIENT Manatee Co WEATHER Sunny DATE 8-23

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
50+00	28	31						
49+80	28	31						
49+60	28	31						
49+40	28	31						
49+20	28	31						
49+00	28	31						
48+80	28	31						

COMMENT

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
7:20	49+80	38	74		
9:35	49+00	40	78		

COMMENT

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		
						3:1	50'

COMMENT

NOTE:

INSPECTOR: Peter Ingalls

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT Lena Rd LA-d Fill slurry wall FILE NO. 86-105P

CLIENT Martin Co WEATHER Sunny DATE 8-24

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)

COMMENT _____

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
		40			

COMMENT _____

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		

COMMENT _____

NOTE: _____

INSPECTOR: _____

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT Levee #1 ... Slurry Wall FILE NO. 30 [illegible]A

CLIENT [illegible] Co WEATHER Sunny PM Rain DATE 3-27-90

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
46+60	-3	2	45+20	[illegible]	[illegible]	45+60	25	-3
46+60	-3	21	45+00	27	29			
46+40	25	21	44+80	27	30			
46+20	23	21	44+60	27	30			
46+00	23	21	44+40	27	30			
45+80	23	21	44+20	26	29			
45+60	-23	21	44+00	26	29			
[illegible]	25	21	43+80	25	29			

COMMENT

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
AM	46+80	—	69		Not Pumping
	Power	To Locate	water & Telephone Lines		
1:00	46+20	39	70		
2:10	45+40	—	102		Not Pumping
5:20	44+40	—	101		"
6:50	43+80	—	99		"

COMMENT

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		
7:50	49+00	4.0	91		✓		
1:15	48+00	4.5	92	✓			
4:50	47+00	5.0	93		✓		
5:55	46+00	4.5	94	✓			
						6:1	20'

COMMENT

NOTE:

INSPECTOR: Pete Ingalls

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT Lena Rd Landfill slurry wall FILE NO. 89-150

CLIENT Manatee Co WEATHER sunny DATE 8-30-89

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
[illegible]	25	28	42+25	22	25			
43+00	24	27	41+80	22	25			
[illegible]	24	27	41+60	22	25			
[illegible]	24	27	41+40	22	25			
42+80	22	25	41+20	22	25			
42+60	22	25	41+00	22	25			
42+40	22	25						
[illegible]	22	25						

COMMENT

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
[illegible]	43+45	38	71		
10:05	43+00	40	69		
5:00	42+85	39	69		
4:50	41+00	—	70		Not Pumping

COMMENT Down From 11:30 until 4:00

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		
4:50	45+00	4.5	35		✓		
						8:1	100'

COMMENT

NOTE:

INSPECTOR: Peter W Ingalls

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT Lee Rd Landfill Slurry wall FILE NO. 25 [illegible]R

CLIENT [illegible] WEATHER Sunny DATE 8-21

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
41+00	22	25	39+40	3	21	37+80	18	21
40+60	22	25	39+20	18	21	37+60	18	21
40+40	22	25	39+00	12	21	37+40	18	21
40+20	22	25	38+80	18	21	37+20	18	21
40+00	21	24	38+60	16	21	37+00	18	21
39+80	20	22	38+40	15	21	36+80	17	20
39+60	19	21	38+20	13	21	36+60	17	20
39+40	19	21	38+00	12	21	36+40	17	20
						36+20	17	20

COMMENT

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
7:45	40+20	51	67		
10:20	40+00	37	60		
1:50	38+80	—	[illegible]		Not Pumping
3:55	37+60	39	70		
5:35	36+40	40	68		

COMMENT Down from 8:00 AM until 9:30 AM mechanical problems

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		
9:10	44+00	4.5	96	✓			
11:40	42+80	5.5	97		✓		
2:55	42+00	4.5	95	✓			
4:10	41+00	4.0	99		✓		
						The slope and toe could not be determined due to caving in on the trench walls.	

COMMENT

NOTE:

INSPECTOR: Peter W. Ardaman

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT Lone Rd [illegible] Slurry wall FILE NO. 86-15P

CLIENT Master Const WEATHER Pm Rain DATE 9-1

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
[illegible]	17	[illegible]	[illegible]	17	20			
[illegible]	17	20	[illegible]	17	20			
[illegible]	17	20	34+20	17	20			
[illegible]	17	20						
[illegible]	17	20						
[illegible]	17	20						
[illegible]	17	[illegible]						
	17	20						

COMMENT

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
[illegible]	[illegible]	[illegible]	67		
[illegible]	[illegible]	—	71		Not Pumping
2:25	29+60	—	69		Not Pumping
5:10	24+20	—	69		Not Pumping

COMMENT

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		
11:15	20+00	5.5	10	✓			
1:50	29+00	5.0	12		✓		
4:45	23+00	4.0	93	✓			
						3:1	150'

COMMENT

NOTE:

INSPECTOR: Pete Ryan

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT [illegible] Slurry wall FILE NO. [illegible]

CLIENT [illegible] WEATHER Partly cloudy DATE 2-2-90

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
[illegible]	[illegible]	-0	[illegible]	[illegible]	22	21+00	17	-0
[illegible]	[illegible]	21	[illegible]	19	22	[illegible]	17	-0
[illegible]	[illegible]	21	[illegible]	19	22	[illegible]	17	-0
[illegible]	[illegible]	21	[illegible]	19	22	[illegible]	17	-0
[illegible]	[illegible]	21	[illegible]	19	22	23+20	17	-0
[illegible]	[illegible]	21	[illegible]	19	22	30+00	17	-0
[illegible]	[illegible]	22	[illegible]	17	20	[illegible]	17	-0
[illegible]	19	[illegible]	[illegible]	17	20	[illegible]	17	-0
						[illegible]	17	-0

COMMENT

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
[illegible]	[illegible]	—	74		Not Pumping
[illegible]	[illegible]	55	84		
[illegible]	[illegible]	37	66		
[illegible]	[illegible]	45	[illegible]		
[illegible]	[illegible]	—	70		Not Pumping

COMMENT

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		
[illegible]	[illegible]	5.0	102		✓		
[illegible]	[illegible]	5.0	104	✓			
[illegible]	[illegible]	7.0	105		✓		
[illegible]	[illegible]	4.0	106	✓			
[illegible]	[illegible]	4.5	107		✓		
[illegible]	[illegible]	5.0	108	✓			
						7:1	120'

COMMENT

NOTE:

INSPECTOR: [illegible]

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT Lemon Rd Land Fill slurry wall FILE NO. 86115A

CLIENT [illegible] WEATHER Cool Rain DATE 9-2-94

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
24+00	17	20	27+80	17	20	26+00	18	21
24+20	17	20	27+60	18	21	26+20	18	21
24+40	18	20	27+40	19	21	26+40	18	21
24+60	17	20	27+20	19	21	26+60	19	21
24+80	17	20	27+00	19	21	26+80	19	21
25+00	18	20	26+80	18	21	27+00	19	21
25+20	18	20	26+60	18	21	27+20	18	21
25+40	17	20	26+40	17	21	27+40	19	22

COMMENT

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
9:00	24+00	39	90		
11:05	28+20	41	92		
2:10	26+80	—	91		Not Pumping
4:10	25+65	—	91		"
5:50	24+52	—	90		"

COMMENT

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		
9:[illegible]	31+00	5.5	109		✓		
10:[illegible]	[illegible]	4.0	110	✓			
1:45	29+00	5.5	111		✓		
4:[illegible]	25+00	5.0	112	✓			
6:45	27+00	5.0	113		✓		
						2:1	120'

COMMENT

NOTE:

INSPECTOR: [signature]

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT _____ FILE NO. _____

CLIENT _____ WEATHER _____ DATE _____

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)

COMMENT _____

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS

COMMENT _____

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		

COMMENT _____

NOTE: _____

INSPECTOR: _____

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT Lena Rd Land Fill slurry wall [illegible] FILE NO. [illegible]

CLIENT [illegible] WEATHER [illegible] DATE 9-4-[illegible]

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
[illegible]	20	27	22+40	21	24	20+30	18	20
[illegible]	21	24	22+20	20	23			
[illegible]	21	24	22+00	19	22			
[illegible]	21	24	21+80	19	22			
23+20	21	24	21+60	19	22			
[illegible]	21	24	21+40	18	20			
22+80	21	24	21+20	18	20			
22+60	21	24	21+00	18	20			

COMMENT

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
7:30	24+00	~	[illegible]		[illegible] Pumping
9:25	23+60	—	[illegible]		
[illegible]	23+[illegible]	[illegible]	[illegible]		
[illegible]	22+[illegible]	37	[illegible]		
[illegible]	21+[illegible]	—	[illegible]		
					[illegible] Pumping

COMMENT

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓) SA	TEST REQUIRED (✓) K+SA	SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
9:35	[illegible]	4.5	[illegible]	✓			
11:[illegible]	[illegible]	6.0	[illegible]5		✓		
[illegible]	[illegible]+00	5.0	1[illegible]	✓			
						3:1	100'

COMMENT

NOTE:

INSPECTOR: [illegible signature]

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT Lena Rd Land Fill slurry wall FILE NO. 86115A

CLIENT Impactor Co WEATHER Sunny DATE 9-5-89

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
[illegible]	[illegible]	20						
[illegible]	[illegible]	20						
20+40	17	20						
20+20	17	20						
20+00	17	20						

COMMENT T.C. on 2nd N Side of Stage III To Stage I

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
7:25	20+00	—	69		Not Pumping
9:15	20+20	—	70		"

COMMENT

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		
7:35	23+00	6	117		✓		
9:40	22+00	4"	118	✓			
11:45	21+00	5.5	119		✓		
2:30pm	20+00	4"	120	✓			
						No Slope	Top out

COMMENT

NOTE:

INSPECTOR: [signature]

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT _____ FILE NO. _____

CLIENT _____ WEATHER _____ DATE _____

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
			62+00		24			
			62+20		24			
			62+40		24			
			62+60		24			
			62+80		24			
			63+00		24			
			63+20					

COMMENT _____

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
			67		
			69		
			75		
			34		
			37		

COMMENT _____

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		
2:30	60+00	5.5	121		✓		
	60+00	4.0	122	✓			
						7:1	50'

COMMENT _____

NOTE: _____

INSPECTOR: Peter W. Teal

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT Lena Rd Land Fill FILE NO. 86115A

CLIENT Manatee Co WEATHER Sunny DATE 2-13-89

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
63+20	21	24	64+80	23	26	66+40	27	30
63+40	20	23	65+00	23	26			
63+60	19	22	65+20	23	26			
63+80	19	22	65+40	23	26			
64+00	21	24	65+60	23	26			
64+20	23	26	65+80	24	27			
64+40	23	26	66+00	25	28			
64+60	23	26	66+20	26	29			

COMMENT 40' Rock Layer encountered STA 64+00 Trash 4-5' Layer STA 66+00

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
7:30	63+20	39	68		
9:40	63+80	37	70		
11:45	64+80	39	74		
2:30	66+00	43	72		
4:20	66+20	—	73		NOT Pumping

COMMENT

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		
9:45	62+00	4.0	123		✓		
2:40	63+00	5.0	124	✓			
						7.7:1	80'

COMMENT

NOTE:

INSPECTOR: Peter W Bass

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT Lena Rd Land Fill FILE NO. 86-115A

CLIENT Waste Co WEATHER sunny DATE 9-14-87

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
66+40	27	30						
66+60	27	30						
66+80	27	30						
67+00	27	30						
67+20	27	30						
67+40	26	29						
67+60	26	29						
67+80	26	29						

COMMENT

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
7:25	66+40	42	70		
9:45	67+00	39	72		

COMMENT Back Hoe broke down 11:00 Am

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		
9:00	64+00	4.5	125		✓		
						3:1	120'

COMMENT

NOTE:

INSPECTOR: Peter W. Gale

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT _____ FILE NO. _____

CLIENT _____ WEATHER _____ DATE _____

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)

COMMENT _____

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS

COMMENT _____

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		

COMMENT _____

NOTE: _____

INSPECTOR: _____

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT Lena Rd Land Fill FILE NO. 86115A

CLIENT Monitor Co WEATHER P/C DATE 9-18

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
71+00	22	25	72+60	19	21			
71+20	21	24	72+80	18	21			
71+40	20	22	73+00	18	21			
71+60	20	22	73+20	19	21			
71+80	20	22	73+40	19	21			
72+00	20	22	73+60	18	21			
72+20	19	22	73+80	18	21			
72+40	19	21	74+00	19	21			

COMMENT

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
9:00	71+20	-	67		Not Pumping
10:55	71+80	-	66		Not Pumping
1:25	72+60	40	72		
2:45	72+60	39	75		

COMMENT

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		
10:00	68+00	5.0	129		✓		
1:05	69+00	4.5	130	✓			
3:05	70+00	4.5	131		✓		
4:55	71+00	5.0	132	✓			
						9:1	80'

COMMENT

NOTE:

INSPECTOR: Peter Gale

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT Lena Rd Land Fill FILE NO. 20 34

CLIENT Manatee Co WEATHER Sunny DATE 2-19-20

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
74+00	8	21	75+00	8	21			
74+20	18	21						
74+40	18	21						
74+60	18	21						
74+80	8	21						
75+00	18	21						
75+20	18	21						
75+40	8	21						

COMMENT Down from 2:30 until 2:55 Trash stopped at STA = 75+30

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
2:20	74+20		69		Not Pumping
3:00	75+00	41	78		
2:40	75+60		86		Not Pumping

COMMENT

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		
2:35	72+00	5.5	122		✓		
2:45	73+00	6.0	124	✓			
						3.5:1	30'

COMMENT

NOTE:

INSPECTOR: Pete Wyatt

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT Lena Rd Landfill Slurry wall FILE NO. 86115A
CLIENT Manatee Co WEATHER Sunny DATE 9-20

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
75+60	18	21	77+20	18	21			
75+80	18	21	77+40	18	21			
76+00	18	21	77+60	18	21			
76+20	18	21	77+80	18	21			
76+40	18	21	78+00	18	21			
76+60	18	21						
76+80	18	21						
77+00	18	21						

COMMENT

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
7:30	75+80	—	79		Not Pumping
9:30	76+40	—	84		Not Pumping
11:40	77+00	42	89		
2:35	77+80	—	89		Not Pumping

COMMENT Work Stopped To Construct Bridge Crossing To Sewer Treatment Plant

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		
9:15	74+00	5.0	135		✓		
2:45	75+00	4.0	136	✓			
						8:1	70'

COMMENT

NOTE:

INSPECTOR: Peter W. Ferr

ARDAMAN & ASSOCIATES, INC.

SLURRY WALL INSPECTION FIELD DATA REPORT

PROJECT Lenn Rd Land Fill slurry wall FILE NO. 86115A

CLIENT Maretta GA WEATHER Sunny DATE 9-21-86

EXCAVATION DATA

STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)	STATION	DEPTH TO CLAY (FT)	DEPTH OF TRENCH (FT)
78+00	18	21						
78+20	18	21						
78+40	18	21						
78+60	18	21						
78+80	18	21						
79+00	18	21						

COMMENT

SLURRY DATA

TIME	STATION	VISCOSITY (SECS)	UNIT WEIGHT (PCF)	FILTRATE LOSS (CC)	REMARKS
7:45	78+20	—	84		Not Reading
9:20	79+00	—	89		"

COMMENT

BACKFILL DATA

TIME	STATION	SLUMP (INCHES)	SAMPLE NO.	TEST REQUIRED (✓)		SLOPE OF BACKFILL (H:V)	DISTANCE BETWEEN TOES OF BACKFILL AND EXCAVATION (FT)
				SA	K+SA		
8:45	76+00	4.5	127		✓		
11:20	77+60	4.5	128	✓			
2:05	78+00	5.0	129		✓		
6:10	78+60	4.0	140	✓			
						Nozzle	The stage III Trench
							Tied into stage I

COMMENT

NOTE:

INSPECTOR: Curtis W. Ingle

APPENDIX 1

DAILY FIELD REPORTS

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

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ORLANDO, FLORIDA
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32809-3003

DAILY FIELD REPORTS

Project Lena Rd Land Fill slurry wall File No. 96115A Time _____

Client Manatee County Weather Sunny AM overcast Date 8-19

The excavation and construction of the slurry wall around stage I of the above referenced project started AT STA 60+40 at the S W corner of the Gun club site and proceded TO STA 58+60 AT an average depth ranging from 30' TO 31'. The Key material is a green clay. The TOTAL production For Today was 5430 FT².

The backFill was mixed, Tested and placed in the Trench but NO Top out was achieved. The slope was Calculated To 8:1 and one slump Test was Taken. The Contractor is Adding 4 bags of dry bentonite (AT 40.00 Lbs/bag) To each 100' of Trench backFilled.

The sewer main patch is still Not Leaking And NO other problems have been encountered with That. No Trash has been seen in the excavated material AT This point but is expected.

Time on The project 11.0 hrs

Clients' Rep. _____

Ardaman & Associates Peter W Jones

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

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DAILY FIELD REPORTS

Project Lena Rd Land Fill Slurry wall File No. 86115A Time _____

Client Manatee County Weather overcast Date 8-20

The excavation continued Today from STA ≈ 58+60 To STA ≈ 56+20 AT A depth ranging From 30' To 31' And A TOTAL production OF 7220 FT². The Key is A Green CLAY And A sample OF That was Taken. The contractor STARTED hitting Trash Today at STA ≈ 58+00 And continued Throughout The day. The Trash is located About 0-2 Feet under The surface And will be As deep As 8-12 Feet. This material is placed on The opposite side OF The Trench From The mix side To keep IT outOF The back Fill.

The back fill was mixed, Tested, And placed in The Trench From STA ≈ 66+40 To STA 59+10. There were 2 samples Taken To send To The Lab For Further Testing. All onsite Tests were recorded on The daily data sheet. The dry Addition is 46 BAGS AT 4000 Lbs/bag For each 100' OF Trench back Filled.

Time on The project 9.0 hrs

Clients' Rep. _____

Ardaman & Associates Pete Lynch

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

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DAILY FIELD REPORTS

Project Lena Rd Landfill Slurry wall File No. 86115A Time _____

Client Manatee County Weather PM Rain Date 8-21-89

The excavation of the slurry wall Trench continued Today From STA# 56+20 To STA# 53+20 AT A depth of 30 FT AND A TOTA- OF 9000 FT². Due To the Trash and the unstable ground I have moved the slurry wall To 12 FT off the Leachate pipe. This relocation From the proposed 10' offset To 12' offset will remain where it is possible but is NOT To go closer Than the proposed 10'.

The backfill was mixed, Tested, and placed in the Trench From STA# 59+10 To STA# 56+00 And 4 samples were Taken and set To the Orlando Lab. The contractor is adding 1 bag of 4000 Lbs To each 25' of Trench backfilled.

Herb Stanghind was on site For a short visit Today.

The Trash is still From 0-2' down To 10' To 12' And is being separated As it is removed From the ground To insure NO contamination in the back Fill.

Time on The project 12.5 hrs

Clients' Rep. _____

Ardaman & Associates Peter W. Gaskin

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

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DAILY FIELD REPORTS

Project Lena Rd Landfill Slurry Wall File No. 96154 Time _____

Client Manatee County Weather Sunny Date 5-22

The contractor continued to excavate for the slurry wall from STA = 53+20 to STA = 50+00 at a depth ranging from 28' to 31'. Completed a total production of 9850 FT². The key is a Gray to Green Clay with a trace of sand.

The backfill was mixed, tested and placed in the trench from STA = 56+00 to STA = 52+60. There were 3 samples taken and one to be sent to the Lab for further testing. The contractor is adding 1 bag at 400 lbs of dry cement to the slurry mix.

Tom Zinn visited the site today.

There was trash excavated all day from 2'-3' below grade down to 8-12 in depth. The trash has been kept out of the backfill as much as possible.

Time on the project 12.0 hrs

Clients' Rep. _____

Ardaman & Associates Peter W. Lyon

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

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DAILY FIELD REPORTS

Project Lena Rd Land Fill slurry wall File No. 86115A Time _____

Client Manatee County Weather Sunny Date 8-23

The contractor continued the excavation from STA = 50+00 To STA = 48+80 For A TOTAL of 3720 FT and AT A depth of 31 FT. The operation was Then stopped because The backhoe hit and broke The city of Bradenton sewer force main. This happened AT 9:45 Am and All OF The proper people were notified and repair crews came To the site. The Trench excavation was unable To resume Today.

The backfill was mixed and placed in The Trench From STA = 52+60 To STA = 52+20. There were N/O samples Taken.

There was No Trash encountered Today STARTING AT STA = 50+00.

Time on The project 9.0 hrs

Clients' Rep. _____

Ardaman & Associates Peter W. Lee

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

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DAILY FIELD REPORTS

Project Lena Rd Land Fill slurry wall File No. 86115A Time _____

Client Manatee County Weather Sunny Date 8-24

The contractor continued to excavate the slurry wall trench from STA = 48+80 to STA = 46+80 at a depth of 31 FT and a total production of 6200 FT². The key material is a brown clay with fine sand.

The back fill was mixed, tested, and placed in the trench from STA = 52+20 to STA = 49+20. There were 2 samples taken and delivered to the lab for further testing.

The second sewer main break was checked for leaks and back filled when no leaks were found. The operation stopped at the road crossing and will resume 5:00 PM 8-26-89.

Tie on the project 11.0

Clients' Rep. _____

Ardaman & Associates Peter W. Lyttle

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

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DAILY FIELD REPORTS

Project Lena Rd Land Fill slurry wall File No. 86115A Time _____

Client Manatee County Weather sunny Date 8-26

There was no production Today As planned due To The Time involved in The road crossing preparation. The Asphalt was cut And The base material had To be removed. The Telephon And water Lines were Located. There was one cut STARTed but NOT completed before dark so This production was NOT recorded.

Tim on The project 4.5

Clients' Rep. _____

Ardaman & Associates Peter W. Jones

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

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DAILY FIELD REPORTS

Project Lena Rd Land Fill Slurry wall File No. 86115A Time _____

Client Manatee County Weather sunny PM RAin Date 8-27

. The excavation continued Today from STA = 46+80 To STA = 43+60 AT A depth ranging From 31 FT To 28 FT And A TOTAL production of 9650 FT² For The day. The Key is A Gray To Green CLAY with A Trace of SAnd And A SAmple WAS TAKen.

The BACK Fill WAS mixed, TesTed, And placed in The Trench From STA = 49+20 To STA = 45+60. There were 4 SAmples TAKen To be sent TO The LAB For FurTher TesTing.

AFTer The BACK Fill had come Through The road crossing There were 5 ConcreTe SLABs placed over The wall And shell road base maTerial on The SLABs For A bridge To The Land Fill.

There WAS 2 Telephone Lines cut while excavating The Slurry wall Trench Today and The people AT GTE phone Company were NoTified And on siTe To make The repair.

The TrASh LAyer sTopped AT The center of The Road crossing.

Time on The project 17.0 hrs

Clients' Rep. _____

Ardaman & Associates Rob W. Jones

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

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DAILY FIELD REPORTS

Project Lena Rd Land Fill Slurry wall File No. 86115A Time _____

Client Manatee County Weather sunny Date 8-30

The contractor started excavation on the slurry wall at 9:00 from STA # 42+60 to STA #41+00 at a depth ranging from 28 FT to 25 FT and a total production of 6650 FT². The key is a green to gray sandy clay with lenses at the top of the layer of yellow clay.

The backfill was mixed, tested, and placed in the trench from STA #45+60 to STA #44+20. There was 4 bag of dry bentonite added to each 100 FT of trench backfilled at 4000 Lbs/bag. All of the on site testing was recorded on the daily data sheet.

Due to mechanical problems with the backhoe the operation was stopped at 11:30 AM and resumed at 4:00 pm after the equipment was repaired.

Time on the Project 12.5 hrs

Clients' Rep. _____

Ardaman & Associates Pat W. Gale

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

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DAILY FIELD REPORTS

Project Lena Rd Landfill slurry wall File No. 86115A Time _____

Client Manatee County Weather Sunny Date 8-31

The excavation for the slurry wall continued today from STA # 41+20 to STA # 36+20 at an average depth of 25' to 20' and a total of 1,300 FT². The key is a gray to green sandy clay with lens of yellow sandy clay at the top of the confining layer.

The backfill was mixed, tested, and placed in the trench from STA # 44+20 to STA # 40+80. There were 4 samples taken to be sent to the Lab for further testing.

The unit wt is only at 70 pcf and the contractor has encountered problems with the trench cracking and caving in so the operation has been stopped to redig and check the amount of caved in material and remove it before proceding.

The backhoe was down to replace a hose from 8:00 A.m. until 9:30 A.m.

Time on the project 11.5 hrs

Clients' Rep. _____

Ardaman & Associates Robert W. Gaw

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

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DAILY FIELD REPORTS

Project: Lena Rd Landfill Slurry wall File No. [illegible] Time:

Client: Manatee County Weather: PM Rain Date: 7-1-89

The Trench walls and [illegible] from STA # 45+40 to STA # [illegible] The contractor worked on cleaning this area from 7:00 am until [illegible] am. The excavation started at STA # 36+00 and continued to STA # 34+00 at a depth of 20 FT for a total production of 4000 FT² for the day. The key is a gray to brown sandy clay and a sample was taken of this material.

The backfill was mixed, tested and placed in the Trench from STA # 40+80 to STA # 37+30. There were [illegible] taken to be sent to the lab for permeability testing. All on site tests were recorded in the daily data sheet.

Time on the project 12.0 hrs

Clients' Rep.

Ardaman & Associates [signature]

ARD-16 (1/89)

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Consultants in Soils, Hydrogeology,
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DAILY FIELD REPORTS

Project Lena Rd Landfill slurry wall File No. 96115A Time

Client Manatee County Weather P/c Date 9-2

The contractor continued to excavate the trench for the slurry wall placement from STA# 34+20 to STA# 39+40 at a depth ranging from 20' to 22'. The key is a gray to green sandy clay with a yellow to brown sandy clay at the top of the confining layer.

The backfill was mixed, tested, and placed in the trench from STA# 37+10 to STA# 32+00. There were 6 samples taken to be sent to the lab for further testing.

No problems were encountered today on this project.

Time on the project 11.5 hrs

Clients' Rep.

Ardaman & Associates Peter W. Hyatt

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

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DAILY FIELD REPORTS

Project Lena Rd Landfill slurry wall File No. 86115A Time _____

Client Hillsborough County Weather PM RAIN Date 9-3

The excavation of the slurry wall continued today from STA = 25+46 to STA 24+00 at an average depth from 20' to 22' and a total of 11290 FT² production for the day. The clay mate... is a dirty fine sandy clay and a sample was taken.

The soil-bentonite was mixed, tested, and placed in the trench from STA = 32+00 to STA 27+60 and 5 samples were taken to be sent to the Lab for further testing. All on site test results were recorded on the daily data sheet. The contractor is adding 3 bags of Bentonite (dry) to each 100 FT of trench backfilled. These bags are 450 Lb each.

RAIN started at about 1:15 PM and caused the cessation in unit weight of the trench slurry.

Time on the project 13.0 hrs

Clients' Rep. _____

Ardaman & Associates Robert W. Lyle

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

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DAILY FIELD REPORTS

Project: Lena Rd Landfill File No. 36115A Time: ______

Client: Manatee County Weather: PM Rain Date: 9-4-89

The excavation of the slurry wall trench continued today from STA # 24+00 to STA # 20+90. The depth ranged from 20' to 24' and the total footage was 725 FT. The key is a gray to green clay with a trace of fine sand and a [illegible] material.

The [illegible] was mixed, tested and placed in the trench from STA # 27+00 to STA # 23+60 and [illegible] samples were taken to be sent to the lab for further testing. All of the on site test results were recorded on the daily data sheet.

Time on the project 12.0 hrs

Clients' Rep. ______

Ardaman & Associates: [signature]

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

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DAILY FIELD REPORTS

Project Lena Rd Landfill slurry wall File No. 86115A Time _____

Client Manatee County Weather sunny Date 9-5

The contractor continued today on the excavation of the slurry wall trench from STA 20+80 to STA 20+00. The depths was at 20 Feet and the total was 1600 FT.²

The existing wall was tied into with a cross slot 5' (at the bottom) in the confining Layer. The 30' tie was waved due to the existing leachate collection system in stage I.

Back fill was mixed tested, and placed in the trench from STA 23+60 to STA 20100, There were three samples taken and delivered to the Lab for further testing.

There were 2 unpaved roads crossed in the process of this tieing and concrete slabs were placed over the wall at each of these Roads and covered with soil to prevent vehicals from driving into the slurry wall.

Time on the project 4.5 ~~8.0~~ hrs

Clients' Rep. _____

Ardaman & Associates Peter W. Lee

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

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DAILY FIELD REPORTS

Project Lena Rd Landfill slurry wall File No. 86115A Time _____

Client Manatee County Weather sunny Date 9-11

The Contractor started the Leading Trench today and the 30 FT Tie-in but due to the problems encountered. That is all that was done on this date. Production is scheduled for 9-12 at 7:00 Am.

There is no data sheet for this day. The average viscosity was 43 seconds on the marsh Funnel and the unit wt at the end of the day was 72 PCF.

Time on the project 10.5 hrs

Clients' Rep. _____

Ardaman & Associates Pat W Hyatt

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

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DAILY FIELD REPORTS

Project Lena Rd Landfill slurry wall File No. 3611SA Time _____

Client Manatee County Weather sunny Date 9-12

The contractor continued the excavation for the panel of the slurry wall today from sta 60+00 to sta 63+00 at depths ranging from 30 FT to 24 FT and a total of 300 FT. The top material is a yellow to brown layer of clay leading into a gray to green slightly sandy clay with fine sand lenses.

Two bags were mixed tested and placed in the trench from sta 60+00 to sta 61+00. Three were 2 soil samples taken to be sent to the lab for further testing.

There has been a 6" to 10' layer of trash refuse from sta 61+00 to sta 63+20 about 1.5' - 2.5' below the surface. This material is being kept 20' of the slurry wall mix area.

The water price 10.5

Clients' Rep. _____

Ardaman & Associates Peter W. Lynch

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

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DAILY FIELD REPORTS

Project Lena Rd Land Fill slurry wall File No. 86115A Time _____

Client Manatee County Weather sunny Date 9-13

The excavation for the slurry wall continued today from STA# 63+20 to STA# 66+40 at a depth ranging from 22' to 30' and a total of 8208 FT² production for the day. At STA# 64+00 there was a layer of cemented sand about 1.5' thick and at a depth of 28' encountered. This layer was about 40' in length and then turned to a sand loose. The key is a Gray to Green Sandy Clay and a sample of this material was picked up for future reference. Refuge was encountered at STA# 65+80 in a 4' to 5' layer and 2FT below ground surface. This material is being taken to Stage I by dump truck.

The backfill was mixed, tested, and placed in the trench from STA# 61+00 to STA# 62+60 and 2 samples were taken to be sent to the lab for further testing. The contractor is adding 2.5 bags of dry bentonite at 4000#/bag to each 100' of trench backfilled.

Time on the project 11.5 hrs

Clients' Rep. _____

Ardaman & Associates _____

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
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32809-3003

DAILY FIELD REPORTS

Project Lena Rd Land Fill Slurry wall File No. 8611SA Time _____

Client Manatee County Weather Sunny Date 9-14-89

The excavation on the slurry wall Trench continued Today From STA = 66+40 To STA = 67+80 at a depth ranging From 29' To 30' And a Total production OF 4150 FT^2. The Fill is A Gray To Green slightly sandy clay And A sample OF That material was Taken For Future reference.

The back Fill was mixed, Tested, And placed in The Trench From STA = 63+60 To STA = 64+80 And One Sample was Taken To send To The Lab For FurTher TesTing.

The backhoe had an overheating problem at 11:00 Am And was stopped For repairs. The Crew expected To restart After The repairs were made but were unable To. Production is expected To resume 7:00 Am 9-15-89.

Time on The project : 11.0 hrs

Clients' Rep. _____

Ardaman & Associates Peter W Jr

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
Foundations and Materials Testing

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DAILY FIELD REPORTS

Project Lena Rd Landfill slurry wall File No. 86115A Time _____

Client Martin County Weather sunny Date 9-15

The excavation of the slurry wall Trench continued Today from STA #67+80 To STA #71+00 with depths ranging from 19' To 25' And a Total length of 340 FT. The key is A Gray To Green Layer of A Trace of Sand Lenses. About 5' For The Top of Natural ground The is A Trash Layer 4-5' Thick with the is being Taken To The Top of Stage I Landfill.

The backfill was mixed, Tested, and placed in The Trench From STA #64+90 To STA #67+40. There were 3 Samples Taken. All of the Test results are recorded on The daily data sheet.

Time on The project 11.0 hrs

Clients' Rep. _____

Ardaman & Associates _____

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DAILY FIELD REPORTS

Project Lena Rd Land Fill Slurrywall File No. 86115A Time _____

Client Manatee County Weather sunny Date 9-16-99

There was no production Today because The driver for the Dump Truck did not show up at the site. This Truck is used to haul the excavated Rock to the Stage I Land Fill. The work was cancelled AT 1:20 PM. Samples were delivered To the Orlando office.

Time on The project 7.5 hrs

Clients' Rep. _____

Ardaman & Associates Peter W. Lyalls

Ardaman & Associates, Inc.

Consultants in Soils, Hydrogeology,
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DAILY FIELD REPORTS

Project Lena Rd Land Fill Slurry wall File No. 86115A Time _____

Client Manatee County Weather P/C Date 9-18

The excavation for the slurry wall continued today from STA # 71+00 to STA # 74+00 at a depth ranging from 25 FT to 21 FT and a total of 7590 FT² production for the day. The key is a yellow to gray slightly sandy clay and a sample has been taken for future reference. They are still excavating a 5-6 FT layer of refuse and transporting it to the land fill on stage I.

The backfill was mixed, tested, and placed in the trench from STA # 67+40 to STA # 71+40. There were 4 samples taken to be sent to the lab for further testing.

Time on the project 11.5 hrs

Clients' Rep. _____

Ardaman & Associates Peter W. Lee

Ardaman & Associates, Inc.

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DAILY FIELD REPORTS

Project Lena Rd Landfill Slurry wall File No. 86115A Time _____

Client Manatee County Weather Sunny Date 9-19

The excavation of the slurry wall Trench was delayed Today From 9:30 Am until 2:00 PM Due To A surface water drain pipe being broken in the Trench path. The production of the slurry wall STARTed AT STA 74+00 And proceded To STA 75+60 AT A depth of 21 FT For A TOTAL of 3360 FT² For the day. The cut across The entrance road To the Sewer Treatment plant was made but has not been backfilled AT This point in Time. The Trash Layer stopped AT STA 75+30 And No more has been encountered in the excavations.

The backfill was mixed, Tested And placed in the Trench From STA 71+40 To STA 73+00. There were 2 samples Taken To be sent To the Lab For further Testing. The dry addition of bentonite is About 2.5 bags AT 40 lbs/bags To each 100 FT of Trench backfilled. Additional Fill is being hauled in To replace the refuse That is being Taken To the Stage I Landfill.

Time on The project 11.5 hrs

Clients' Rep. _____

Ardaman & Associates Peter Lee

Ardaman & Associates, Inc.

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Foundations and Materials Testing

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DAILY FIELD REPORTS

Project Lena Rd Land Fill Slurry wall File No. 86115A Time

Client Manatee County Weather sunny Date 9-20

The excavation of the slurry wall Trench continued today from STA = 75+60 To STA = 78+00 at a depth of 21 FT And a total of 5040 FT² production. The Key is a yellow To Gray slightly sandy clay and a sample was Taken For Future reference. Production was stopped at about 2:15 PM To construct The wall crossing bridge To The Sewer Treatment plant.

The back Fill was mixed, Tested, And placed in The Trench From STA = 72+00 To STA = 75+60. There were 2 samples Taken To be sent To The Lab For Further Testing.

Time on The project: 11.0 hrs

Clients' Rep.

Ardaman & Associates Peter W Gaffke

Ardaman & Associates, Inc.

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DAILY FIELD REPORTS

Project Lena Rd Landfill Slurry wall File No. 86115A Time

Client Manatee County Weather Sunny Date 9-21

The contractor continued today with the excavation of the slurry wall trench from STA = 75+00 to the tie-in at STA = 79+00. The trench was 21' in depth and the total footage was 2100 FT². The key material is a yellow to gray clay with a trace of sand and a sample was taken for future reference.

The backfill was mixed, tested, and placed in the trench from STA # 75+60 to STA # 79+00. There were 4 samples taken to be sent to the lab for further testing.

The storm water ditch pipe at STA # 14+50 on stage II was set in place and a 30"± area of backfill was placed around it to complete the construction of the wall on stage II.

This will conclude the construction of the slurry walls in both stages II + III with the exception of the cap as explained in the project specifications which has not been scheduled at this point in time.

Time on the project 18.0

Clients' Rep.

Ardaman & Associates Peter W Jr