

**UNIVERSAL****ENGINEERING SCIENCES**

Consultants In: Geotechnical Engineering • Environmental Sciences

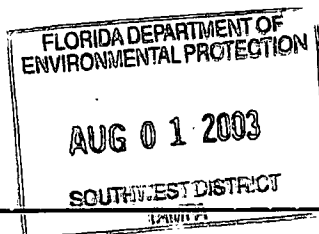
Construction Materials Testing • Threshold Inspections

FACSIMILE TRANSMISSION INFORMATION COVER SHEET

Date: 7/31/03 Time: 3:45pm
Subject: ENTERPRISE ROAD LANDFILL - 10 MORE GRADATIONS
No. of Pages (including cover sheet): 14

SEND TO:

Company: HARTMAN AND ASSOCIATES
To the Attention of: MIGUEL GARCIA
Facsimile Phone No.: (407)839-2066

FROM:Name: GREG KEMP

Remarks: _____

GK269
 PROJ# 99-033-000

ANGELO'S AGGREGATE MATERIALS, LTD.
 ENTERPRISE ROAD LANDFILL
 DADE CITY, FL

R-729105
 C.7/313:45pm

Sample ID	Description	Location	Elevation (ft)	Analysis	# of Containers
AS-1	Clay	Cell 1	~83	Std. Sieve Grain Size	1
AS-2	Clay/Silty-Sandy-Clay	Cell 1	~83	Std. Sieve Grain Size	1
AS-3a	Clay/Clayey-Sand/Silty-Clay	Cell 1 (0'-2') BLS	~83	Std. Sieve Grain Size	1
AS-3b	Clay/Clayey-Sand/Silty-Clay	Cell 1 (2'-4') BLS	~84	Std. Sieve Grain Size	1
AS-4	Sandy-Clay/Sand/Silty-Sand	Cell 1	~82.75	Std. Sieve Grain Size	1
AS-5	Silty-Clay/Clayey-Silty-Sand	Cell 1	~82.75	Std. Sieve Grain Size	1
AS-6	Clayey-Silty-Sand	Cell 1	~82.75	Std. Sieve Grain Size	1
AS-7	Sandy-Clay	Cell 1	~82.5	Std. Sieve Grain Size	1
AS-8	Clayey-Sand/Silty-Clayey-Sand	Cell 1	~82.5	Std. Sieve Grain Size	1
AS-9	Silty-Clay	Cell 1	~82.5	Std. Sieve Grain Size	1
AS-10	Sand	Cell 1	~82.25	Std. Sieve Grain Size	1
AS-11	Sandy-Clay	Cell 1	~82.25	Std. Sieve Grain Size	1
AS-12	Clayey-Silty-Sand	Cell 1	~82.25	Std. Sieve Grain Size	1
AS-13	Sandy-Clay	Cell 1	~83	Std. Sieve Grain Size	1
AS-14	Silty-Clayey-Sand	Cell 1	~83	Std. Sieve Grain Size	1
AS-15	Silty-Clayey-Sand	Cell 1	~83	Std. Sieve Grain Size	1
AS-16	Silty-Clayey-Sand	Cell 1	~82.75	Std. Sieve Grain Size	1
AS-17	Silty-Clayey-Sand	Cell 1	~82.75	Std. Sieve Grain Size	1
AS-18	Silty-Clayey-Sand	Cell 1	~82.75	Std. Sieve Grain Size	1
AS-19	Clayey-Sand/Silty-Sandy-Clay	Cell 1	~82.5	Std. Sieve Grain Size	1
AS-20	Silty-Clay/Clayey-Silt	Cell 1	~82.5	Std. Sieve Grain Size	1
AS-21	Silty-Clay/Clay/Silty-Sandy-Clay	Cell 1	~82.5	Std. Sieve Grain Size	1
AS-22	Sandy-Clay	Cell 1	~82	Std. Sieve Grain Size	1
AS-23	Sandy-Clay/Silty-Clayey-Sand	Cell 1	~82	Std. Sieve Grain Size	1
AS-24	Sandy-Clay	Cell 1	~82	Std. Sieve Grain Size	1
AS-25	Clay	Cell 1	~82.25	Std. Sieve Grain Size	1
AS-26	Clayey-Sand	Eastern Slope	~99	Std. Sieve Grain Size	1
AS-27	Clayey-Silty-Sand	Eastern Slope	~96	Std. Sieve Grain Size	1
AS-28	Clayey-Sand	Eastern Slope	~93	Std. Sieve Grain Size	1
AS-29	Silty-Clayey-Sand	Eastern Slope	~85	Std. Sieve Grain Size	1
AS-30	Clayey-Sand/Silty-Clayey-Sand	Eastern Slope	~84	Std. Sieve Grain Size	1
AS-31	Sand	Eastern Slope	~83	Std. Sieve Grain Size	1
AS-32	Sandy-Clay/Clay	Cell 1 (South end)	~84	Std. Sieve Grain Size	1
AS-33	Silty-Clayey-Sand/Sandy-Clay	Cell 1 (South end)	~83	Std. Sieve Grain Size	1
AS-34	Silty-Clayey-Sand/Sandy-Clay	Cell 1 (South end)	~83	Std. Sieve Grain Size	1
AS-35	Clay/Silty-Sandy-Clay	Cell 1 (South end)	~84	Std. Sieve Grain Size	1

Project: ENTERPRISE ROAD LANDFILL	Job Number: 99-0331-007/GK269	Sheet 1 of 2
Manager: MIGUEL GARCIA Client: HARTMAN & ASSOCIATES Project Description: _____		
Location: FL _____		
Elevation Datum: _____		

Borehole Depth Elev.	Specimen Description				Water Content	Organic Content	ASTM Class	K ft/day	Sieve Analysis				
	LL	PL	PI	No 200					No 4	No 10	No 40	No 60	No 100
AS-1 2.0				68.1	43.7				100.0	100.0	99.7	97.3	83.0
AS-10 2.0				16.4	17.5				100.0	100.0	97.4	82.8	41.5
AS-11 2.0				60.9	52.6				100.0	100.0	99.7	98.1	91.1
AS-12 2.0				52.6	35.9				100.0	100.0	99.7	96.1	74.1
AS-13 2.0				72.6	40.1				100.0	99.9	99.6	97.4	85.4
AS-14 2.0				49.3	24.8				94.6	92.0	89.7	86.2	67.8
AS-15 2.0				54.9	30.7				100.0	99.9	99.4	96.2	76.3
AS-16 2.0				62.7	32.2				99.8	99.7	99.4	97.2	82.0
AS-17 2.0				64.0	34.7				100.0	99.7	99.1	96.3	80.4
AS-18 2.0				48.9	27.5				100.0	100.0	99.8	95.8	75.4
AS-19 2.0				34.9	19.5				100.0	100.0	99.7	94.6	63.5
AS-2 2.0				56.5	38.1				100.0	99.9	99.4	96.1	75.9
AS-20 2.0				47.0	28.5				99.5	99.5	99.1	97.4	87.7
AS-21 2.0				57.1	28.9				100.0	99.9	99.4	95.4	75.5
AS-22 2.0				67.8	36.1				100.0	99.9	97.6	83.5	82.3
AS-23 2.0				53.9	32.6				100.0	99.9	99.2	95.5	75.9
AS-24 2.0				62.2	39.7				100.0	99.9	99.4	96.2	79.8
AS-25 2.0				79.8	43.4				99.9	99.9	99.7	97.4	87.2
AS-26 2.0				29.8	17.0				90.9	87.2	84.0	76.4	50.2

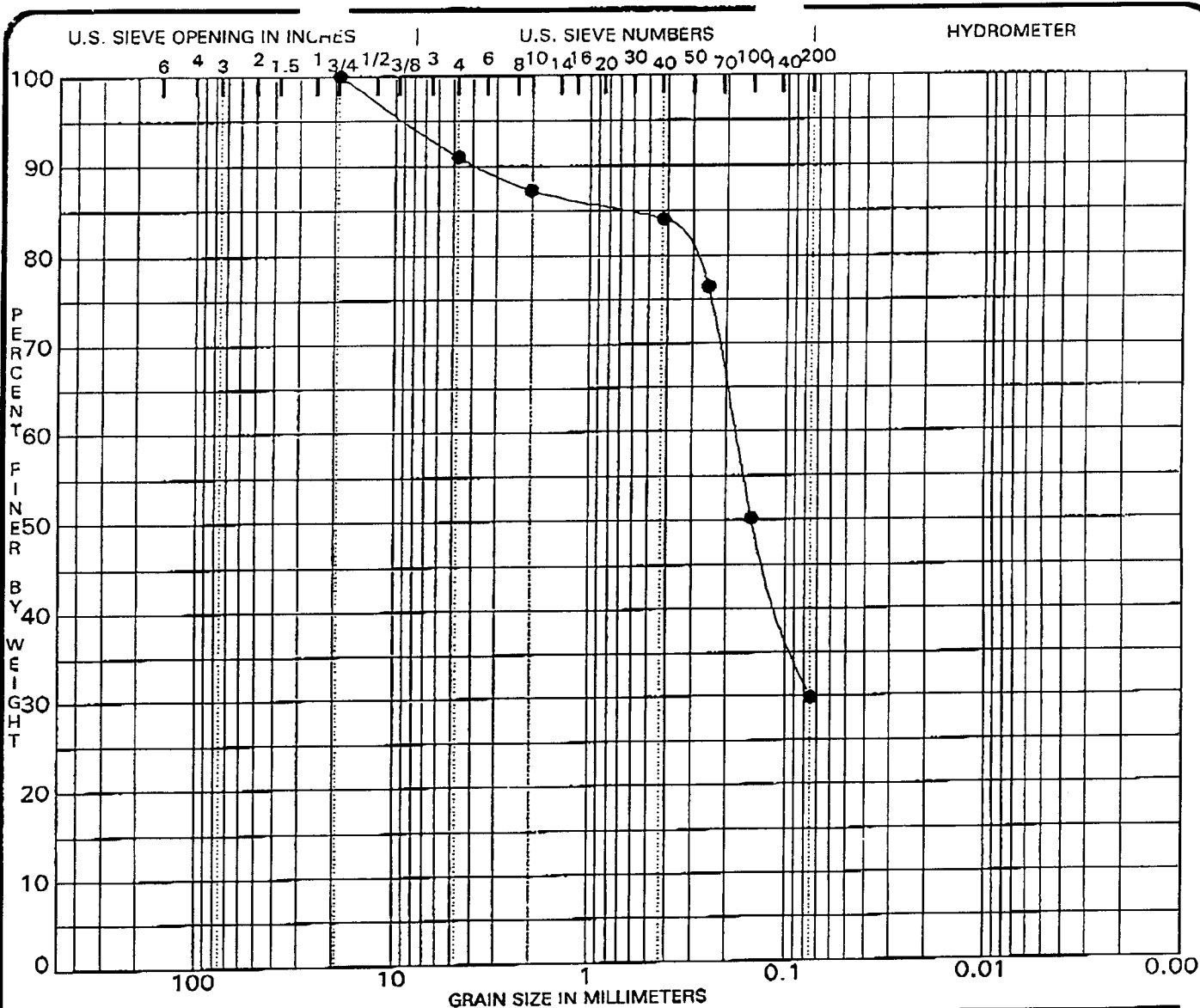
UNIVERSAL ENGINEERING SCIENCES	Summary of Material Properties	Space for logo (!fXXXX)
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Project: ENTERPRISE ROAD LANDFILL					Job Number: 99-0331-007/GK269 Sheet 2 of 2									
Borehole Depth Elev.	Specimen Description				Water Content	Organic Content	ASTM Class	K ft/day	Sieve Analysis					
	LL	PL	PI	No 200					No 4	No 10	No 40	No 60	No 100	
AS-27 2.0				25.0	17.2				99.2	98.9	96.7	84.5	47.9	
AS-28 2.0				37.5	19.0				97.8	97.7	96.8	91.3	63.1	
AS-29 2.0				47.2	23.1				99.7	99.4	99.1	95.5	70.1	
AS-3 2.0				59.8	34.2				100.0	100.0	99.9	97.1	78.5	
AS-3 4.0				56.6	43.0				100.0	100.0	99.9	96.9	76.8	
AS-30 2.0				42.6	22.3				100.0	100.0	99.7	95.8	71.1	
AS-31 2.0				25.2	10.0				100.0	100.0	95.4	31.6	39.2	
AS-32 2.0				80.4	43.1				100.0	100.0	99.8	98.3	90.4	
AS-33 2.0				55.8	29.2				99.5	99.5	97.6	94.9	77.6	
AS-34 2.0				55.0	34.2				100.0	99.9	99.0	95.6	75.1	
AS-35 2.0				74.3	40.3				100.0	100.0	100.0	98.4	87.5	
AS-4 2.0				41.0	35.4				99.8	99.4	90.6	74.6	53.8	
AS-5 2.0				52.5	30.5				100.0	99.9	99.2	98.0	92.2	
AS-6 2.0				31.7	19.8				100.0	100.0	99.9	95.1	60.7	
AS-7 2.0				56.7	34.3				99.7	99.6	99.3	96.6	78.0	
AS-8 2.0				44.0	26.0				100.0	100.0	99.3	93.8	66.8	
AS-9 2.0				60.7	36.8				100.0	100.0	99.7	96.6	78.9	

UNIVERSAL
ENGINEERING
SCIENCES

Summary of Material Properties

Space for logo (If XXXX)



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

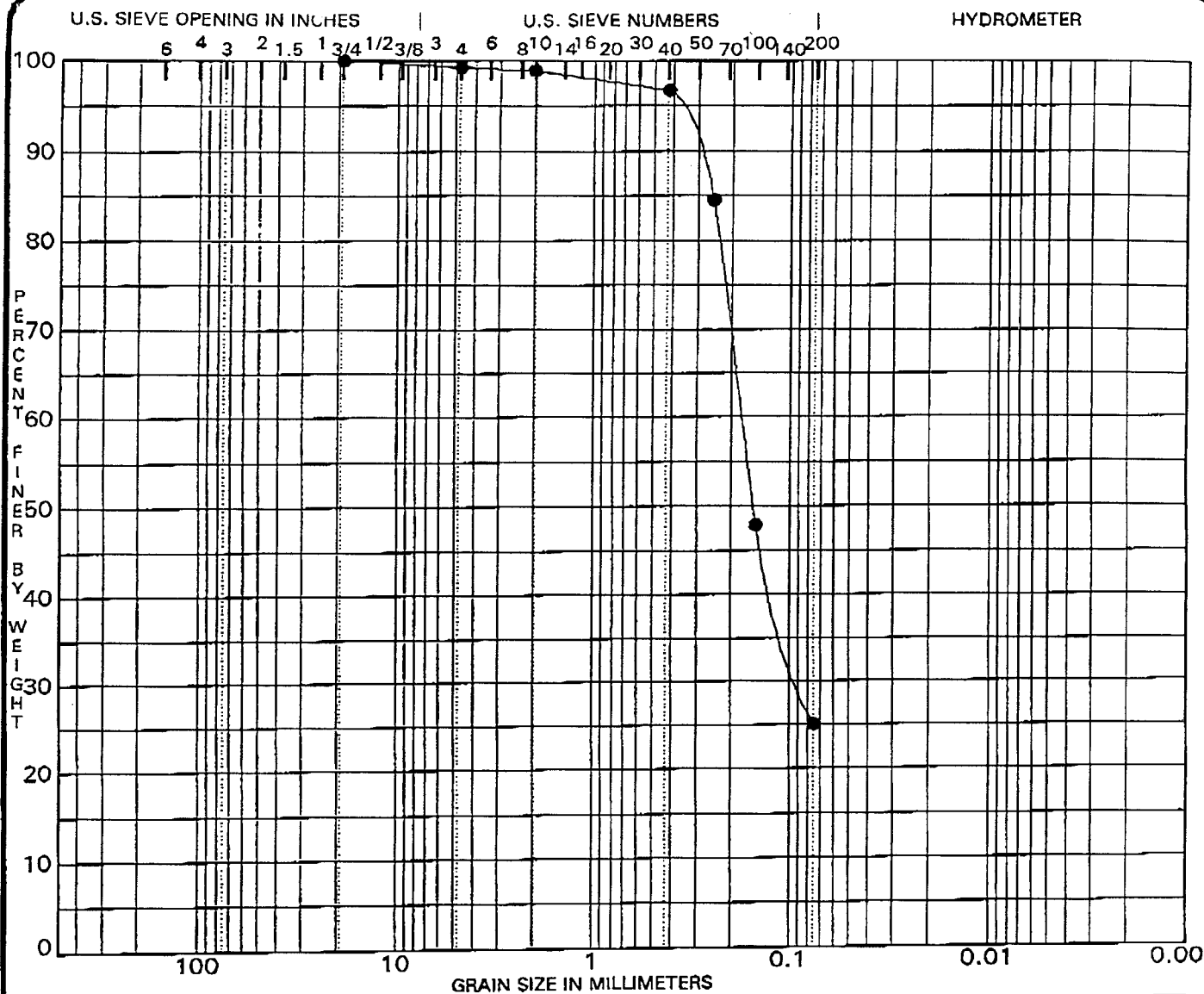
Specimen Identification	Classification				MC%	LL	PL	PI	Cc	Cu
● AS-26 2.0					17					

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● AS-26 2.0	19.00	0.18	0.076		9.1	61.1	29.8	

PROJECT ENTERPRISE ROAD LANDFILL - FL

JOB NO. 99-0331-007/GK269
DATE 7/31/03

GRADATION CURVES
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COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

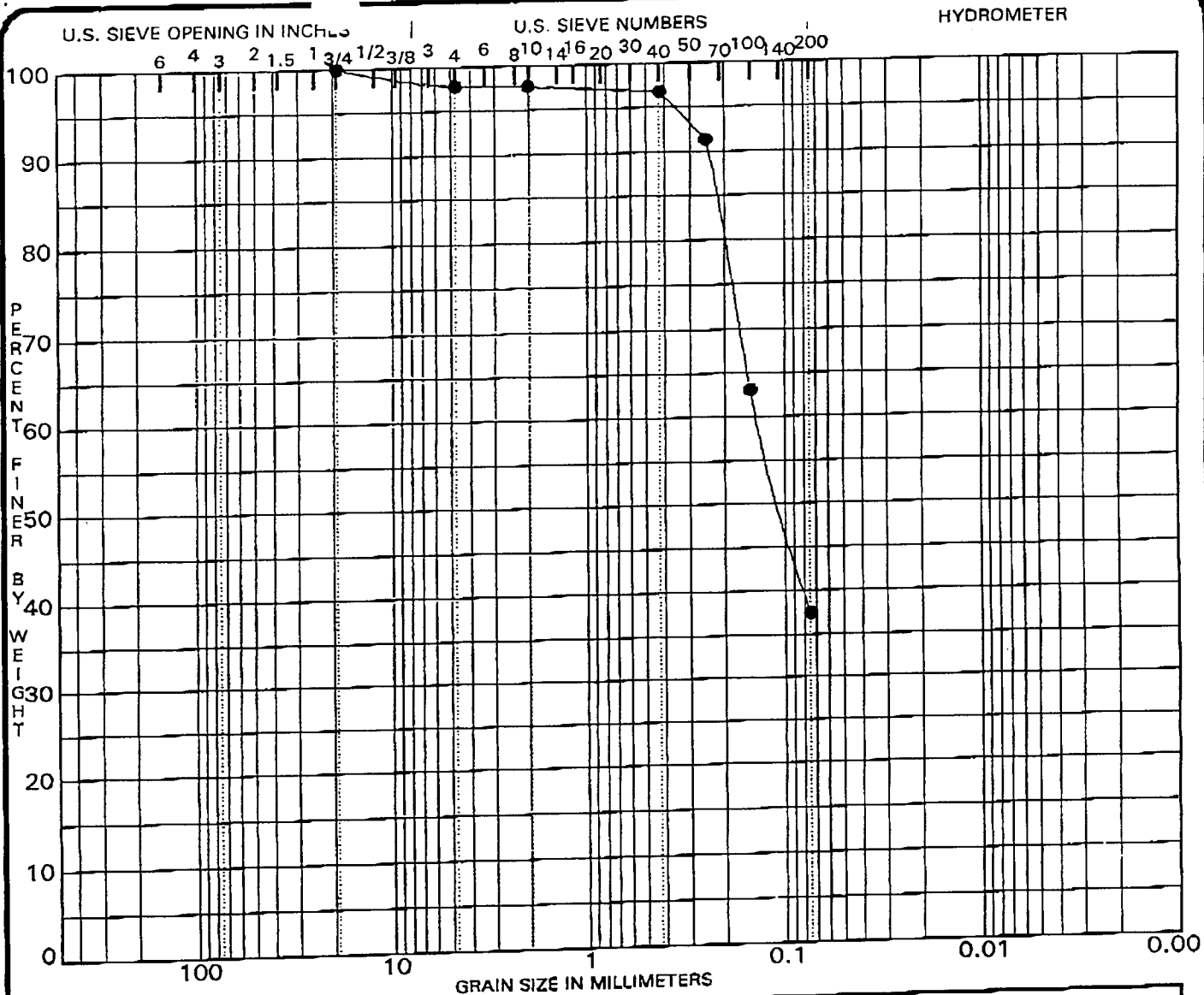
Specimen Identification	Classification	MC%	LL	PL	PI	Cc	Cu
● AS-27 2.0		17					

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● AS-27 2.0	19.00	0.18	0.087		0.8	74.2	25.0	

PROJECT ENTERPRISE ROAD LANDFILL - FL

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DATE 7/31/03

GRADATION CURVES
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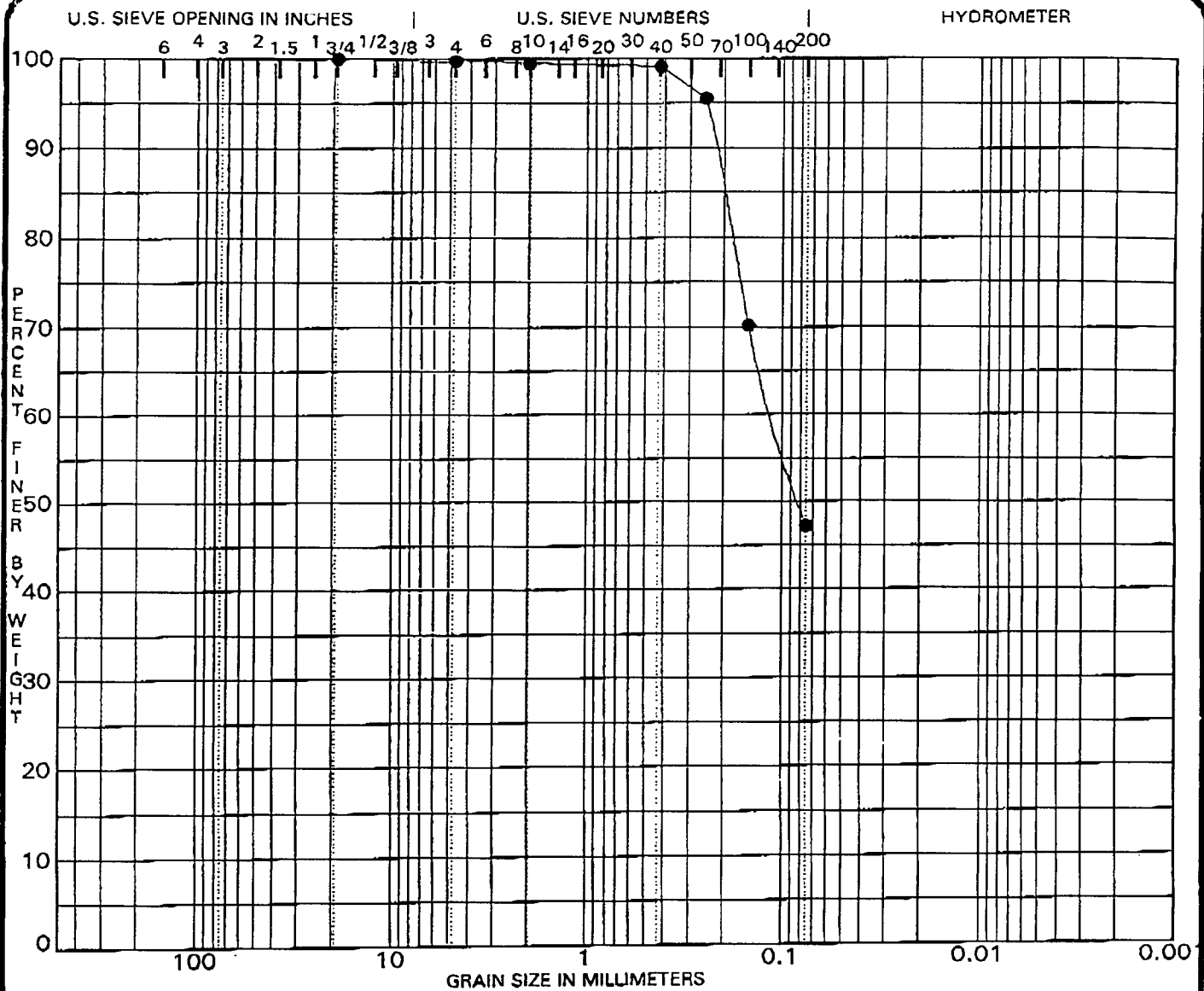


COBBLES		GRAVEL		SAND			SILT OR CLAY					
		coarse	fine	coarse	medium	fine						
Specimen Identification		Classification					MC%	LL	PL	PI	Cc	Cu
●	AS-28 2.0						19					
Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt		%Clay		
●	AS-28 2.0	19.00	0.14			2.2	60.3	37.5				

PROJECT ENTERPRISE ROAD LANDFILL - FL

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DATE 7/31/03

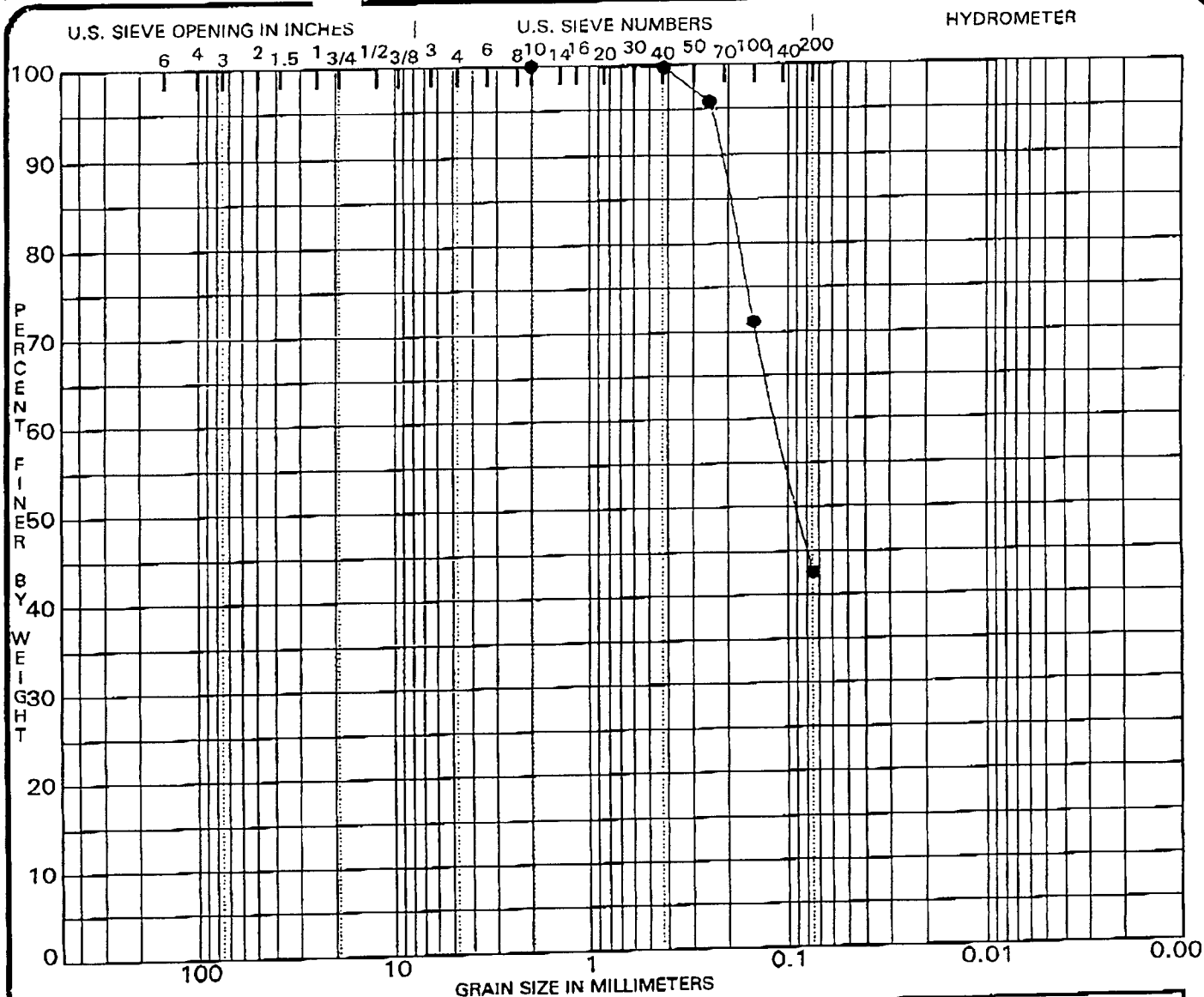
GRADATION CURVES
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 ORLANDO, FLORIDA



COBBLES	GRAVEL		SAND			SILT OR CLAY					
	coarse	fine	coarse	medium	fine						
Specimen Identification		Classification				MC%	LL	PL	PI	Cc	Cu
●	AS-29	2.0					23				
Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay		
●	AS-29	2.0	19.00	0.11		0.3	52.5	47.2			

PROJECT ENTERPRISE ROAD LANDFILL - FL

JOB NO. 99-0331-007/GK269
DATE 7/31/03



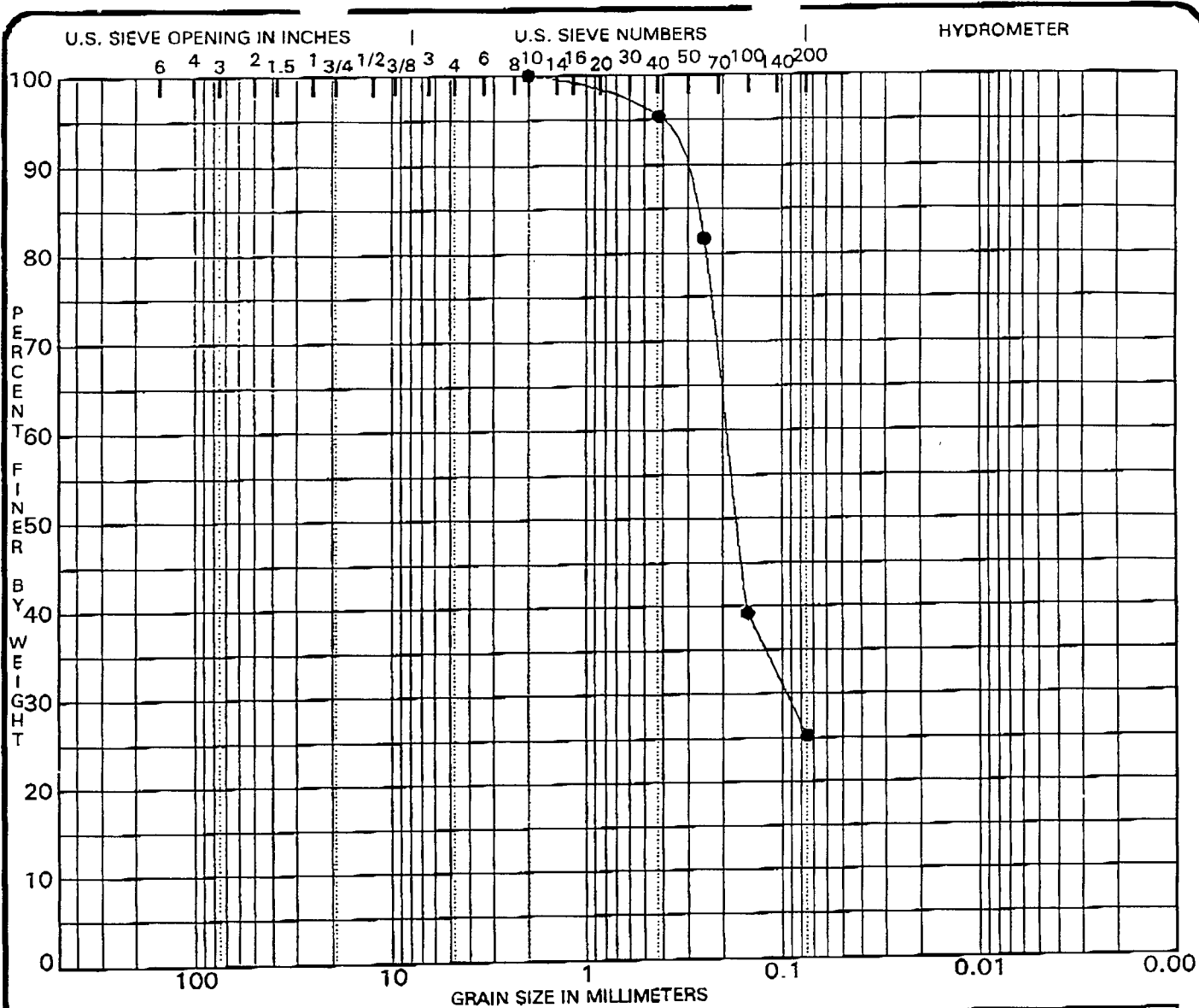
COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification		Classification				MC%	LL	PL	PI	Cc	Cu
●	AS-30	2.0				22					
Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt		%Clay	
●	AS-30	2.0	2.00	0.11		0.0	57.4	42.6			

PROJECT ENTERPRISE ROAD LANDFILL - FL

JOB NO. 99-0331-007/GK269
DATE 7/31/03

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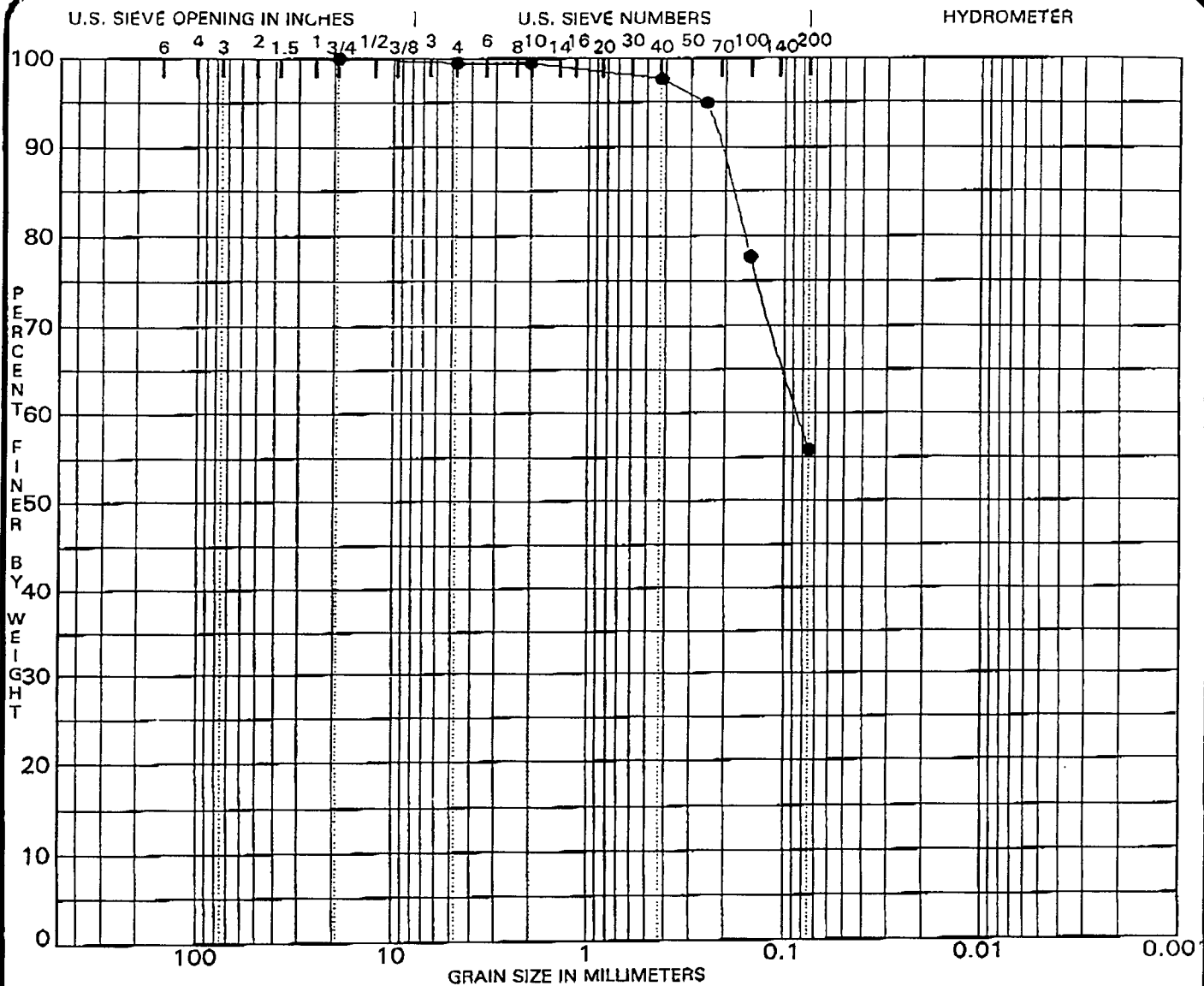


GRAIN SIZE IN MILLIMETERS											
COBBLES	GRAVEL		SAND			SILT OR CLAY					
	coarse	fine	coarse	medium	fine						
Specimen Identification			Classification			MC%	LL	PL	PI	Cc	Cu
●	AS-31	2.0				10					
Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay	
●	AS-31	2.0	2.00	0.19	0.095		0.0	74.8	25.2		
PROJECT ENTERPRISE ROAD LANDFILL - FL						JOB NO. 99-0331-007/GK269					
						DATE 7/31/03					

GRADATION CURVES

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ORLANDO, FLORIDA

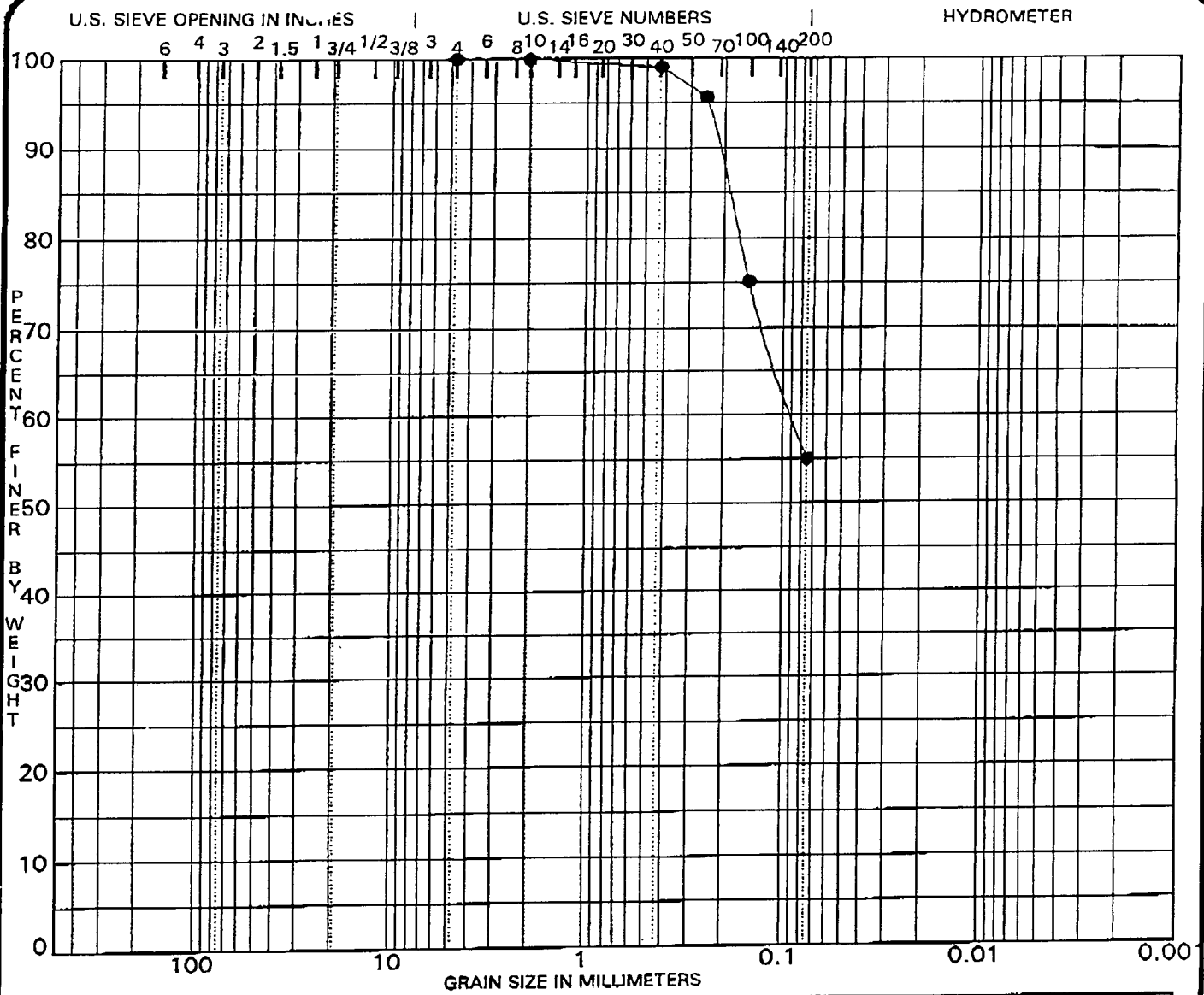


Specimen Identification	GRAVEL					SAND			SILT OR CLAY			
	coarse		fine			coarse		medium	fine			
AS-33 2.0												
Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay				
AS-33 2.0	19.00	0.09			0.5	43.7		55.8				

PROJECT ENTERPRISE ROAD LANDFILL - FL

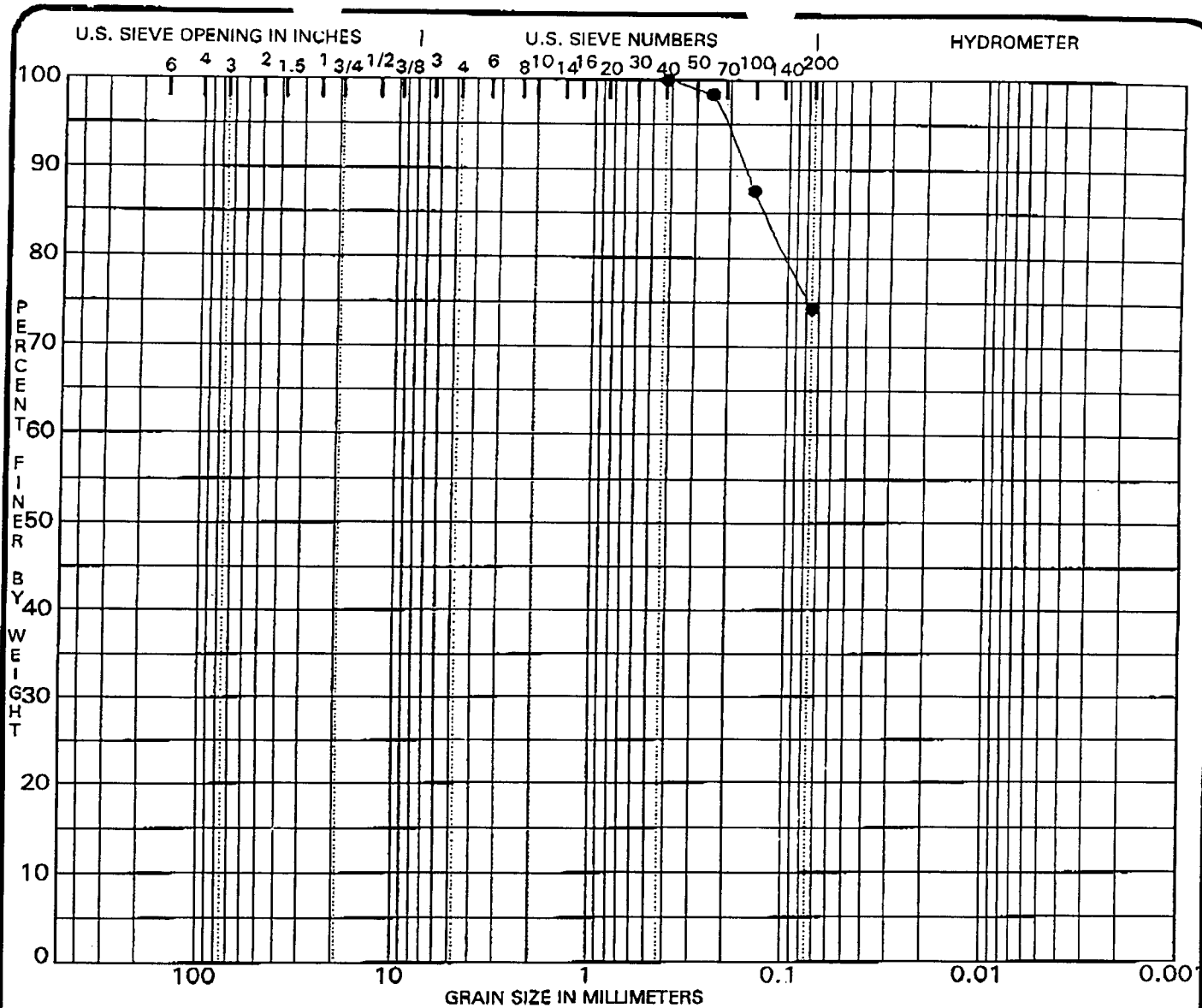
JOB NO. 99-0331-007/GK269
DATE 7/31/03

GRADATION CURVES
 UNIVERSAL ENGINEERING SCIENCES
 ORLANDO, FLORIDA



COBBLES	GRAVEL		SAND			SILT OR CLAY					
	coarse	fine	coarse	medium	fine						
Specimen Identification		Classification				MC%	LL	PL	PI	Cc	Cu
●	AS-34	2.0					34				
Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay		
●	AS-34	2.0	4.75	0.09		0.0	45.0	55.0			
PROJECT ENTERPRISE ROAD LANDFILL - FL						JOB NO. 99-0331-007/GK269					
						DATE 7/31/03					

GRADATION CURVES
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 ORLANDO, FLORIDA



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification			Classification				MC%	LL	PL	PI	Cc	Cu
●	AS-35	2.0					40					
Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt		%Clay	
●	AS-35	2.0	0.43				0.0	25.7	74.3			

PROJECT ENTERPRISE ROAD LANDFILL - FL

JOB NO. 99-0331-007/GK269
DATE 7/31/03

GRADATION CURVES
 UNIVERSAL ENGINEERING SCIENCES
 ORLANDO, FLORIDA

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

AUG 01 2003

SOUTHWEST DISTRICT
Tallahassee



HARTMAN & ASSOCIATES, INC.

engineers, hydrogeologists, surveyors & management consultants

FIELD BORING LOG

MCAICIA

SJA-2

1 of 1

DEPTH (FT)	SAMPLE			BLOWS PER 6'	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO./TYPE	SYMBOL	% REC.						
5							Silty-clay, lt gray + lt tan, semi firm to firm. TDS @ 4'		WEATHERED LIE CORROSIVE + Boulders (up to 8") FROM 0-4'
0									
5									
0									
5									
0									
5									
0									

PROJECT MCAICIA

NUMBER: 910331.007

NAME: ENTERPRISE

ROAD LANDFILL

CLIENT: ANGELO'S RM.

LOCATION: DADE CITY, FL

BORING

GR. ELEV.: ~82.5

DA-TYPE: 3" - SS

DEPTH: 4'

DATE STARTED: 7-30-03

DATE ENDED: 7-30-03

GROUNDWATER

DEPTH:

TIME:

DATE:

REMARKS:

DRILLING

RIG TYPE:

CREW:

SUPERVISOR:

PIEZ/WELL

CASING DIAM.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISER HEIGHT ALS:

T.O.C. ELEV.:

REMARKS



HARTMAN & ASSOCIATES, INC.

engineers, hydrogeologists, surveyors & management consultants

FIELD BORING LOG

Mbtrncit

SSA-3

1 of 1

DEPTH (FT)	SAMPLE			BLOWS PER 6'	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO./TYPE	SYMBOL	% REC.						
5							SANDY-CLAY, THU-BLOWN, SOFT TO SEMI FIRM 0'-7'		WEATHERED LR 0 SURFACE TO 18' BLS
10							SANDY-CLAY, LT. GRAY, V. SOFT w/ BROKEN & BRITTLE LS. 7'-18'		
15									
20							END @ 18'		
25									
30									

PROJECT INFO

NUMBER: 910331.007

NAME: ENTERPRISE

ROAD LANDFILL

CLIENT: ANGELO'S RM.

LOCATION: DADE CITY, FL

BORING

GR. ELEV.: ~82.5'

DIAM-TYPE: 3" - SSA

DEPTH: 18'

DATE STARTED: 7-30-03

DATE ENDED: 7-30-03

GROUNDWATER

DEPTH:

TIME:

DATE:

REMARKS:

DRILLING

RIG TYPE:

CREW:

SUPERVISOR:

PIEZ/WELL

CASING DIAM.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISE HEIGHT ALS:

T.O.C. ELEV.:

REMARKS



HARTMAN & ASSOCIATES, INC.

engineers, hydrogeologists, surveyors & management consultants

FIELD BORING LOG

SSA-4

1 of 1

DEPTH (FT)	SAMPLE			BLOWS PER 6"	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO./TYPE	SYMBOL	% REC.						
5							STRTY-CLAY, DK TAN + LT GRAY + ORANGE CLUSTERS FROM TO V. FIRM 0-7'		WEATH - LA @ SURFACE TO 7' SMALL AMT. LARGER AMT. FROM 7'-15'
10							STRTY CLAY, TAN + LT GRAY SOFT FIRM / SOFT, 7'-15'		
15							↓ LOS @ 15'		
20									
25									
30									
35									
40									
45									
50									

PROJECT TASK

NUMBER: 910331.007

NAME: ENTERPRISE

ROAD LANDFILL

CLIENT: ANGELO'S RM.

LOCATION: DADE CITY, FL

BORING

GR. ELEV.: ~82.5'

DIAM-TYPE: 3" - SSA

DEPTH: 15'

DATE STARTED: 7-30-83

DATE ENDED: 7-30-83

GROUNDWATER

DEPTH:

TIME:

DATE:

REMARKS:

DRILLING

RIG TYPE:

CREW:

SUPERVISOR:

PIEZ/WELL

CASING DIAM.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISE HEIGHT ALS:

T.O.C. ELEV.:

REMARKS



HARTMAN & ASSOCIATES, INC.

engineers, hydrogeologists, surveyors & management consultants

FIELD BORING LOG

MBANCA

SSA-5

1 of 1

DEPTH (FT)	SAMPLE			BLOWS PER 6"	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO. TYPE	SYMBOL	% REC.						
5							SILTY-CLAY, TAN-BROWN, SOFT TO SEMI FIRM TO FIRM, 0-7		WEATHERED LS @ SURFACE TO 1' ONIONICS FROM 4-7'
10							7-15'		LS FINE FROM 7-15'
15							LOG @ 15'		
20									
25									
30									
35									
40									
45									
50									

PROJECT INFO

NUMBER: 990331-007

NAME: ENTERPRISE

ROAD LANDFILL

CLIENT: ANGELO'S RM.

LOCATION: DADE CITY, FL

BORING

GR. ELEV.: -93.0'

DA-TYPE: 3"-SSA

DEPTH: 15'

DATE STARTED: 7-30-03

DATE ENDED: 7-30-03

GROUNDWATER

DEPTH: _____

TIME: _____

DATE: _____

REMARKS: _____

DRILLING

RIG TYPE: _____

CREW: _____

SUPERVISOR: _____

PIEZ/WELL

CASING DIAM.: _____

CASING TYPE: _____

CASING DEPTH: _____

SCREEN DEPTH: _____

SCREEN LENGTH: _____

FILTER PACK: _____

RISER HEIGHT ALS: _____

T.O.C. ELEV.: _____

REMARKS



(of (

DEPTH (FT)	SAMPLE			BLOWS PER 6"	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO/TYPE	SYMBOL	% REC.						
5							SILTY-SANDY-CLAY, ORANGE TAN, FIRM TO S. FIRM. 0-7'		Ls @ 7' WEATHERED + BRITTLE
10							CLAYEY-LS-MARK LT. TAN, LS. FRAG. HARD + SOFT, SOFT SAND. 7-14'		SOFT SAND 8-14
15							EOB @ 14'		
20									
25									
30									
35									
40									

PROJECT TASK

NUMBER: 910331.007

NAME: ENTERPRISE

ROAD LANDFILL

CLIENT: ANGELO'S RM.

LOCATION: DADE CITY, FL

BORING

GR. ELEV.: ~82.5'

DA-TYPE: 3" - SSA

DEPTH: 14'

DATE STARTED: 7-30-03

DATE ENDED: 7-30-03

GROUNDWATER

DEPTH: ~9'

TITLE:

DATE:

REMARKS:

DRILLING

RIG TYPE:

CREW:

SUPERVISOR:

PIEZ/WELL

CASING DIA.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISE HEIGHT ALS:

T.O.C. ELEV.:

REMARKS



REMARKS



REMARKS



1 of 1

DEPTH (FT)	SAMPLE			BLOWS PER 6'	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO/TYPE	SYMBOL	% REC.						
0							SILTY-SANDY-CLAY, LT GRAY, VERY FIRM TO V. FIRM, 0-14'		SMALL FRAG. OF SOFT + HARD WEATHERED LS. Small ~ 1 1/2" LS LENS 0-9'
5									
10									
15							END @ 14'		
20									
25									
30									
35									
40									
45									
50									
55									
60									
65									
70									
75									
80									
85									
90									
95									
100									

PROJECT TASK

NUMBER: 990331.007

NAME: ENTERPRISE

WARD LANDFILL

CLIENT: ANGELO'S RM.

LOCATION: DADE CITY, FL

BORING

GR. ELEV.: 483'

DA-TYPE: 3"-SSA

DEPTH: 14'

DATE STARTED: 7-31-03

DATE ENDED: 7-31-03

GROUNDWATER

DEPTH: ~~14'~~

TIME:

DATE:

REMARKS:

DRILLING

RIG TYPE:

CREW:

SUPERVISOR:

PIEZ/WELL

CASING DIA.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISE HEIGHT ALS:

T.O.C. ELEV.:

REMARKS

1



HARTMAN & ASSOCIATES, INC.

engineers, hydrogeologists, surveyors & management consultants

FIELD BORING LOG

SSA-10 1 of 1

DEPTH (FT)	SAMPLE			BLOWS PER 6"	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO./TYPE	SYMBOL	% REC.						
5							VERY-SANDY-CLAY, LT GRAY & ORANGE, FIRM TO V. FIRM, 0'-11'		WEATHERED LS @ SURFACE TO 14' (6" TO 1cm) SS
10							↓		
15							CLAYEY - LS - MARE, LT GRAY, SOFT (WET) TO MOD. AMT. OF CLAY, 11-14' EXPS @ 14'		
20									
25									
30									
35									
40									
45									
50									

PROJECT TASKS

NUMBER: 910331.007

NAME: ENTERPRISE

ROAD LANDFILL

CLIENT: ANGELO'S RM.

LOCATION: DADE CITY, FL

BORING

GR. ELEV.: 82.5'

DIAM-TYPE: 3" - SSA

DEPTH: 14'

DATE STARTED: 7-31-03

DATE ENDED: 7-31-03

GROUNDWATER

DEPTH:

TIME:

DATE:

REMARKS:

DRILLING

RIG TYPE:

CREW:

SUPERVISOR:

PIEZ/WELL

CASING DIA.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISE HEIGHT ALS:

T.O.C. ELEV.:

REMARKS



1 of 1

DEPTH (FT)	SAMPLE			BLOWS PER 6'	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO/TYPE	SYMBOL	% REC.						
5							SANDY-CLAY, LT GRAY + ORANGE (MOTTLED) V. FIRM, 0-6 ↓		WEATHERED LS @ SURFACE TO 14'
10							SELTY-CLAY, BROWN SOME FIRM TO FIRM 6-9' ↓ SELTY-SANDY-CLAY, TAN-ORANGE, V. FIRM TO FIRM, 9-11		CREATURES FROM 6-9'
15							CLAYEY-LS - MALL, LT ORANGE-TAN, SOFT (WET) CLAY MIXED w/ LS FRAG (SOFT + HARD) 11-14		SOFT DRILLING FROM 9-14'
20							END @ 14'		
25									
30									
35									
40									
45									
50									

PROJECT TASK

NUMBER: 990331.007

NAME: ENTERPRISE

ROAD LANDFILL

CLIENT: ANGELO'S RM.

LOCATION: DADE CITY, FL

BORING

GR. ELEV.: 28

DA-TYPE: 3" - 55A

DEPTH: 14'

DATE STARTED: 7-31-03

DATE ENDED: 7-31-03

GROUNDWATER

DEPTH: 6' 6"

TIME:

DATE:

REMARKS:

DRILLING

RIG TYPE:

CREW:

SUPERVISOR:

PIEZ/WELL

CASING DIAM.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

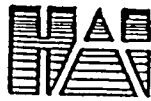
FILTER PACK:

RISE HEIGHT ALS:

T.O.C. ELEV.:

REMARKS

1



HARTMAN & ASSOCIATES, INC.

engineers, hydrogeologists, surveyors & management consultants

FIELD BORING LOG

SSA-12 1 of 1

DEPTH (FT)	SAMPLE			BLOWS PER 6"	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO/TYPE	SYMBOL	% REC.						
5							Silty - clayey - sand, tan - orange, vitric 0-9'		WEATHERED LA MAG FROM SURFACE TO 14' SOFT TO HARD
10							clay, lt gray + green, extremely firm 9-14		
15							Box @ 14'		
20									
25									
30									
35									
40									
45									
50									
55									
60									
65									
70									
75									
80									
85									
90									
95									
100									

PROJECT TASKS

NUMBER: 910331.007

NAME: ENTERPRISE

ROAD LANDFILL

CLIENT: ANGELO'S RM.

LOCATION: DADE CITY, FL

BORING

GR. ELEV.: ~82

DIAM-TYPE: 3" SSA

DEPTH: 14'

DATE STARTED: 7-31-03

DATE ENDED: 7-31-03

GROUNDWATER

DEPTH:

TIME:

DATE:

REMARKS:

DRILLING

RIG TYPE:

CREW:

SUPERVISOR:

PIEZ/WELL

CASING DIAM.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISER HEIGHT ALS:

T.O.C. ELEV.:

REMARKS



HARTMAN & ASSOCIATES, INC.

engineers, hydrogeologists, surveyors & management consultants

FIELD BORING LOG

SSA-13

1 of 1

PROJECT INFORMATION

NUMBER: 910331.007

NAME: ENTERPRISE

LAND LANDFILL

CLIENT: ANGELO'S RM.

LOCATION: DADE CITY, FL

BORING

GR. ELEV.: ~95'

DIA-TYPE: 3" - SSA

DEPTH: 24'

DATE STARTED: 7-31-03

DATE ENDED: 7-31-03

GROUNDWATER

DEPTH:

TIME:

DATE:

REMARKS:

DRILLING

RIG TYPE:

CREW:

SUPERVISOR:

PIEZ/WELL

CASING DIAM.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISER HEIGHT ALS:

T.O.C. ELEV.:

REMARKS

DEPTH (FT)	SAMPLE			BLOWS PER 6"	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO/TYPE	SYMBOL	% REC.						
5							CLAYEY-SAND, LT. ORANGE-TAN, MOD. AMT. OF CLAY, SOME FIRM, TO V-FIRM 0'-14'		
10									
15							CLAYEY-SAND, LT. TAN, FINE TO M-FINE GRAIN, MOD. SOFT TO V-SOFT, MOD. TO V-SMALL AMT. OF CLAY		
20								DECREASE CLAY CONTENT w/ DEPTH	
25									
30									

END @ 24'



HARTMAN & ASSOCIATES, INC.

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FIELD BORING LOG

SSA-14

1 of 1

DEPTH (FT)	SAMPLE			BLOWS PER 6"	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO./TYPE	SYMBOL	% REC.						
5							STLN-CLAYEY-SAND, LT BROWN, FINE TO STLT, SOME FIRM, TO FIRM 0-10		
10							SAME AS ABOVE FIRM TO V. FIRM 10'-19'		
15									
20							STLN-STNDY-CLAY, GRAY, MOD. AMT. OF FEWE GRAIN SAND, STLN FIRM TO SOFT 19'-24'	LS FRAG MEXED IN W/ SED.	
25							CLAYEY LS-MAXL, LT THIN & LT. GRAY CLAY W/ LS POSSIBLE, GRAVEL + FRACTURED FRAGMENTS. 24'-29'	INCREASE IN LS, SOFT SED.	
30									

PROJECT TASK

NUMBER: 910331.007

NAME: ENTERPRISE

ROAD LANDFILL

CLIENT: ANGELO'S RM.

LOCATION: DADE CITY, FL

BORING

GR. ELEV.: ~95'

DIA-TYPE: 3" - SSA

DEPTH: 29'

DATE STARTED: 7-31-03

DATE ENDED: 7-31-03

GROUNDWATER

DEPTH: ~21 (BLS)

TIME:

DATE:

REMARKS:

DRILLING

RIG TYPE:

CREW:

SUPERVISOR:

PIEZ/WELL

CASING DIAM.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISER HEIGHT ALS:

T.O.C. ELEV.:

REMARKS



1 of 1

DEPTH (FT)	SAMPLE			BLOWS PER 6"	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO/TYPE	SYMBOL	% REC.						
5							Silty clayey - sand, lt tan orange, med - amt. of clay, firm TOV: firm 0'-22'		Very small amt. of weathered ls from 5'-24'
10									
15									
20									
25							Silty sand Silty-sandy clay, lt. green - gray, some firm. to v. firm, 22'-24'		
30							FS - @ 24'		

PROJECT TASK

NUMBER: 910331.007

NAME: ENTERPRISE

ROAD LANDFILL

CLIENT: ANGELO'S RM.

LOCATION: DADE CITY, FL

BORING

GR. ELEV.: ~95'

DA-TYPE: 3"-SSA

DEPTH: 24'

DATE STARTED: 7-31-03

DATE ENDED: 7-31-03

GROUNDWATER

DEPTH:

TIME:

DATE:

REMARKS:

DRILLING

RIG TYPE:

CREW:

SUPERVISOR:

PIEZ/WELL

CASING DIAM.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISE HEIGHT ALS:

T.O.C. ELEV.:

REMARKS

1

2

3

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27

28

29

30



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FIELD BORING LOG

SSA-16

1 of 1

DEPTH (FT)	SAMPLE			BLOWS PER 6"	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO. TYPE	SYMBOL	% REC.						
1							CLAYEY-SANDS, TAN-ORANGE, FINE TO SILT, V. FIRM, 0' 2' 6"		
5							↓		
10							SILT-SANDY-CLAY LT TAN + ORANGE (MOTTLED), FINE TO SILT, V. FIRM, 6' 20"		
15							↓		
20									
25							SELT-CLAY, GRAY-GREEN, SMALL AMT. OF SANDS, EXTREMELY FIRM, 20-24		
30							FEELS 0-24		

PROJECT INFO

NUMBER: 910331.007

NAME: ENTERPRISE

WARD LANDFILL

CLIENT: ANGELO'S RM.

LOCATION: DADE CITY, FL

BORING

GR. ELEV.: ~96'

DIAM-TYPE: 3"-SSA

DEPTH: 24'

DATE STARTED: 7-31-93

DATE ENDED: 7-31-93

GROUNDWATER

DEPTH:

TIME:

DATE:

REMARKS:

DRILLING

RIG TYPE:

CREW:

SUPERVISOR:

PIEZ/WELL

CASING DIAM.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISER HEIGHT ALS:

T.O.C. ELEV.:

REMARKS



HARTMAN & ASSOCIATES, INC.

engineers, hydrogeologists, surveyors & management consultants

FIELD BORING LOG

SSA-17

1 of 1

PROJECT TASK

NUMBER: 910331.007

NAME: ENTERPRISE

WAD LANDFILL

CLIENT: ANGELO'S RM.

LOCATION: DADE CITY, FL

BORING #2

GR. ELEV.: ~101

DA-TYPE: 3" - SSA

DEPTH: 29'

DATE STARTED: 7-31-03

DATE ENDED: 7-31-03

GROUNDWATER

DEPTH:

TIME:

DATE:

REMARKS:

DRILLING

RIG TYPE:

CREW:

SUPERVISOR:

PIEZ/WELL

CASING DIAM.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISE HEIGHT ALS:

T.O.C. ELEV.:

REMARKS

DEPTH (FT)

SAMPLE

NO./TYPE

SYMBOL

% REC.

BLOWS PER 6"

N-VALUE

BORING LOG

MATERIAL DESCRIPTION
CLASSIFICATION

WELL

REMARKS

SAND, TAN-ORANGE
MED TO V. FINE
GRAIN, SOFT, V.
SMALL AMT OF CLAY,
0-10

↓

CLAYEY-SAND, GRAY-
ORANGE, FINE TO
SILT, ~~SOFT~~ SOFT TO
SEMI FIRM,
10-25'

↓

SMALL AMT
OF LS
FRAG
25-29

CLAYEY-SAND, GRAY,
FINE TO SILT,
MOD. AMT OF CLAY,
SOFT TO SEMI FIRM,
25-29'

END @ 29'



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FIELD BORING LOG

SSA-18

1 of 1

DEPTH (FT)	SAMPLE			BLOWS PER 6"	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO/TPE	SYMBOL	% REC.						
5							CLAYEY-SAND, TAN- ORANGE, FINE TO V. FINE GRN, SOFT, MOD. TO SMTLY AMT. OF SAND 0-10		
10							↓ SANDY-SILT (CLAY) LT TAN - LT ORANGE, V. FINE TO SFT, V. FINE 10"		
15							↓		
20									
25							STAY-CLAY, LT TAN LT ORANGE, V. FINE, 2-4-24		
30							2-5-24		

PROJECT TASKS

NUMBER: 910331.007

NAME: ENTERPRISE

ROAD LANDFILL

CLIENT: ANGELO'S RM.

LOCATION: DADE CITY, FL

BORING

GR. ELEV.: ~100

DIAM-TYPE: 3" - SSA

DEPTH: 29

DATE STARTED: 7-31-03

DATE ENDED: 7-31-03

GROUNDWATER

DEPTH:

TIME:

DATE:

REMARKS:

DRILLING

RIG TYPE:

CREW:

SUPERVISOR:

PIEZ/WELL

CASING DIAM.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISER HEIGHT ALS:

T.O.C. ELEV.:

REMARKS

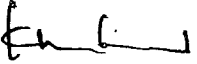
FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

AUG 01 2003

SOUTHWEST DISTRICT
TAMPA

Florida Department of
Environmental Protection

Memorandum

To: Susan Pelz
From: Kim Ford 
Date: August 1, 2003
Subject: Enterprise CIII Site Visit On Friday August 1, 2003

On Friday August 1, 2003 John Morris and Kim Ford met others at the Enterprise CIII landfill. Others at the site:

Angelo (left early)

Craig Bryan

Jennifer Deal, Miguel Garcia, Dale (Hartman & Assoc.)
a contractor's representative

The site visit went as follows:

- 1) We observed the Cell 1. DEP explained that only part of Cell 1 could be included in the certification because the side slope areas on the south and west are not excavated and only the bottom part of Cell 1 can be included.
- 2) We observed standing water in ruts on the north half of Cell 1.
- 3) We went down into the Cell 1 and observed 12 areas of concern- 9 test pits excavated 3'-4' deep exposing limestone and one test pit exposing sand, and two areas not excavated. (see digital photos).
- 4) We observed one location with exposed limestone at the surface on the west side slope not yet excavated. While walking from one test pit to another, a small area of what appeared to be exposed limestone at the surface was observed. (see digital photos).
- 5) Most of the boring locations and test pits were not identified by identification stakes.
- 6) We went to the top and met to discuss several items as follows:
 - a) The surface water ditch along the east side of Cell 1 was not constructed. After review of the sequence of filling in the operations plan we agreed that the east ditch was not needed until Cell # 3 is excavated because all filling will be below grade until then.
 - b) Daily rainfall and daily staff gauge (in the temporary stormwater pond) measurements were requested.
 - c) Weekly water elevations in each installed well and each piezometer were requested.
 - d) The accuracy of the location for each boring was discussed.
 - e) All borings logs and test results were requested.
 - f) Sampling of the temporary stormwater pond was suggested as a requirement until demonstrated that there is no connection to the Floridan aquifer.
 - g) The reason why the temporary stormwater pond is not filling up after rainfall was requested. Is it draining out to the Floridan aquifer, or out the sides and evaporating?
 - h) The depth of borings was questioned because the permitted design requires a "continuous" 3 feet of clay at 10-6 cm/sec. Why are the borings only 3' deep when limestone is hit in the boring?

g) DEP requested to examine each 3 feet core for each permeability. DEP requested most permeabilities in the "worst case locations". DEP discussed and suggested updating the geologic cross-sections across the cells connecting the permeabilities and borings. DEP requested a contour map showing the top and bottom of the "continuous" 3 feet of clay at 10-6 cm/sec, and the limestone.

h) DEP advised that SC#5 requires a "plan of action" for the repairs, and SC#9.c. addresses the design requirement for the "continuous" 3 feet of clay at 10-6 cm/sec and that there have been no requested changes to the design.

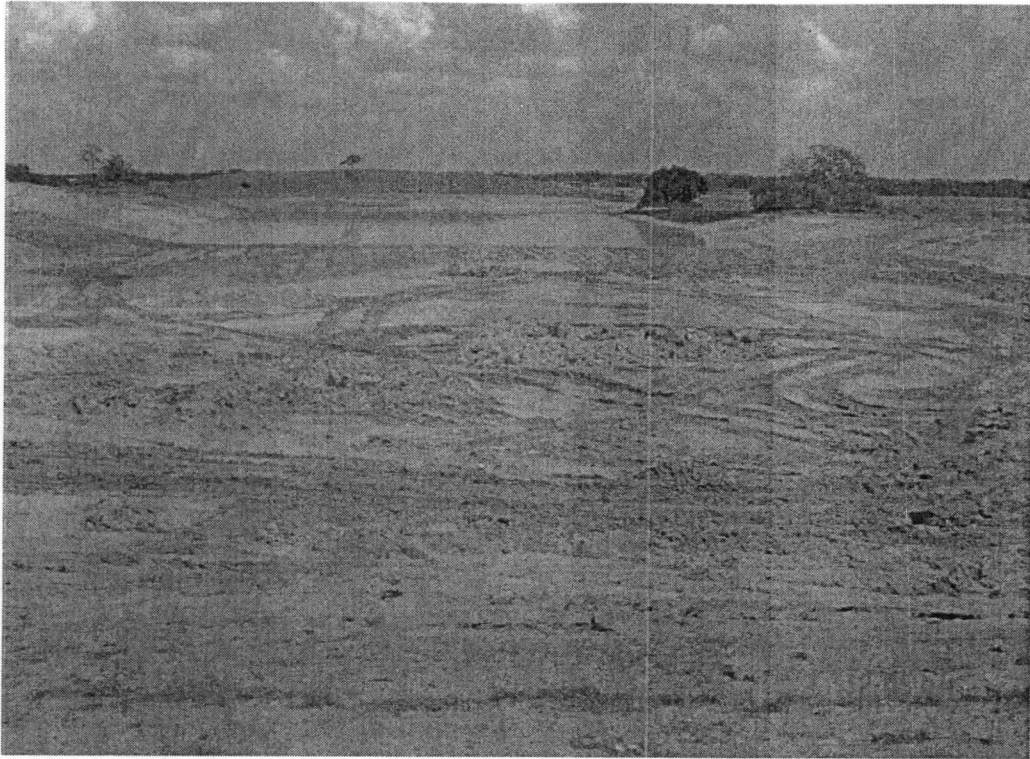
i) DEP provided comments on the July 25th progress report #3 as follows:

1. more CQA already done without DEP agreement
 2. "worst case" information has not been provided, such as 4 out of the 5 permeability tests appear to have been taken in the best locations not the worst.
 3. some descriptions area too vague, such as "and does not appear to be competent limestone connected to the aquifer" and "clay has been encountered below the limestone in most areas".
 4. more borings have been completed at locations not agreed on by DEP.
 5. borings continue to be only 3 feet deep with limestone fragments and sand without showing the continuous 3' of clay.
 6. permeability test results still not provided after 3 weeks.
 7. the previously requested survey locations for all borings and all questionable areas not kept up-to-date and not provided.
 8. some descriptions are incomplete and misleading, such as "Two (2) of the original 12 boring locations encountered limestone.", however the previous paragraph says 25 borings have been completed.
 9. the description of the temporary stormwater pond is inadequate and does not include a description of test results for thickness and permeability, and indicates the observation "of a few small limestone boulders and cobbles" without further investigation and without test results.
- j) We discussed the certification of the temporary stormwater pond (Cells 15 and 16). DEP indicated that the variability in the lithology encountered during excavation of Cell 1 has placed additional emphasis on demonstrating that 3 feet of continuous clay is present below the temporary pond as it will be receiving leachate from Cell 1 when disposal begins.

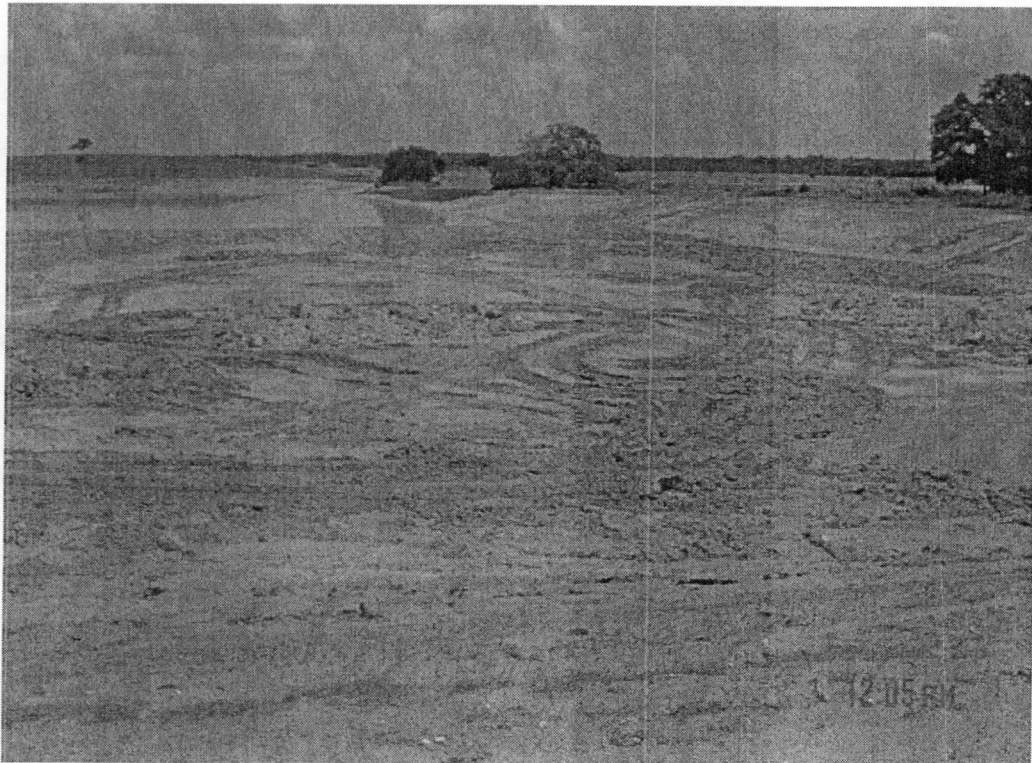
7) We observed the clay stockpile and discussed the location of backfill clay material to be used to repair the excavated areas. We agreed that the clay used for the backfill repairs would have no limestone fragments larger than thumbsize.

KBF

Attachments - selected photos (12 pages)



#020 – looking from south to north across Cell 1 and test pits
(temporary stormwater pond –Cells 15 and 16 in the background)



#022 – looking from south to north across Cell 1 and test pits
(temporary stormwater pond –Cells 15 and 16 in the background)



#026 – Test Pit at location #1 southeast part of Cell 1



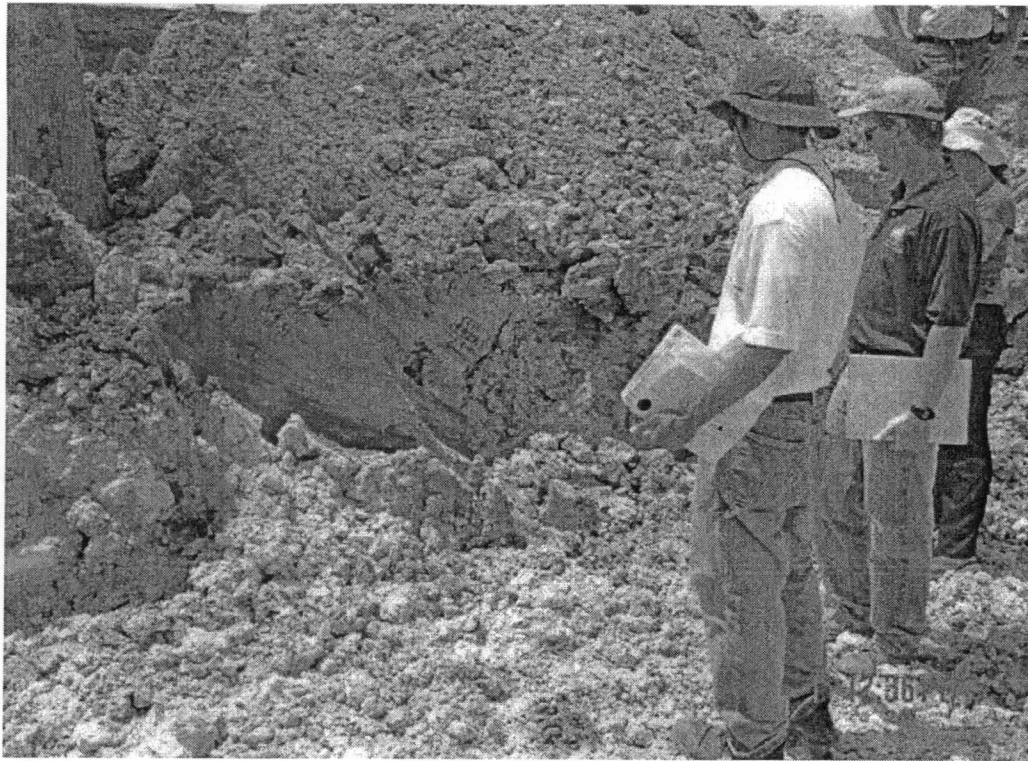
#027 – Test Pit at location #1



#028 – Test Pit at location #1 (big limestone 18" boulders)



#030 – Test Pit at location #1 (big limestone 18" boulders and hole)



#033 – Test Pit at location #2 southeast part of Cell 1



#035 – Test Pit at location #2



#036 - Test Pit at location #3 south part of Cell 1



#037 - Test Pit at location #3 south part of Cell 1



#038 – Test Pit at location #4 southwest part of Cell 1



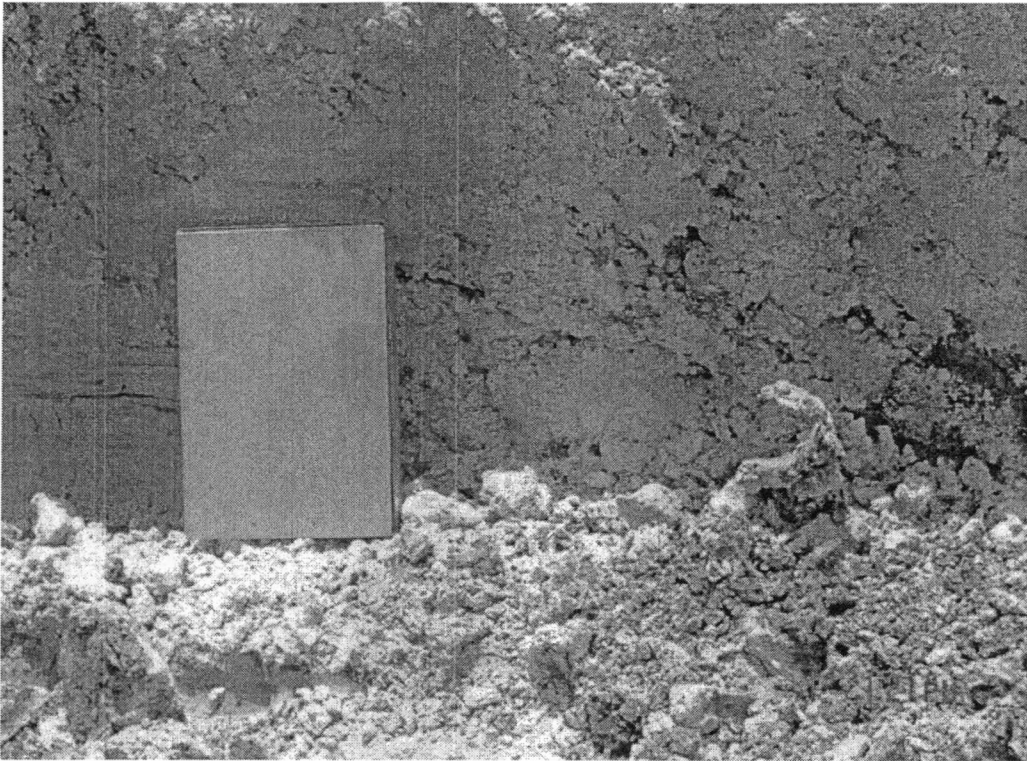
#039 – Test Pit at location #4 (limestone 6"-12" pieces and clay)



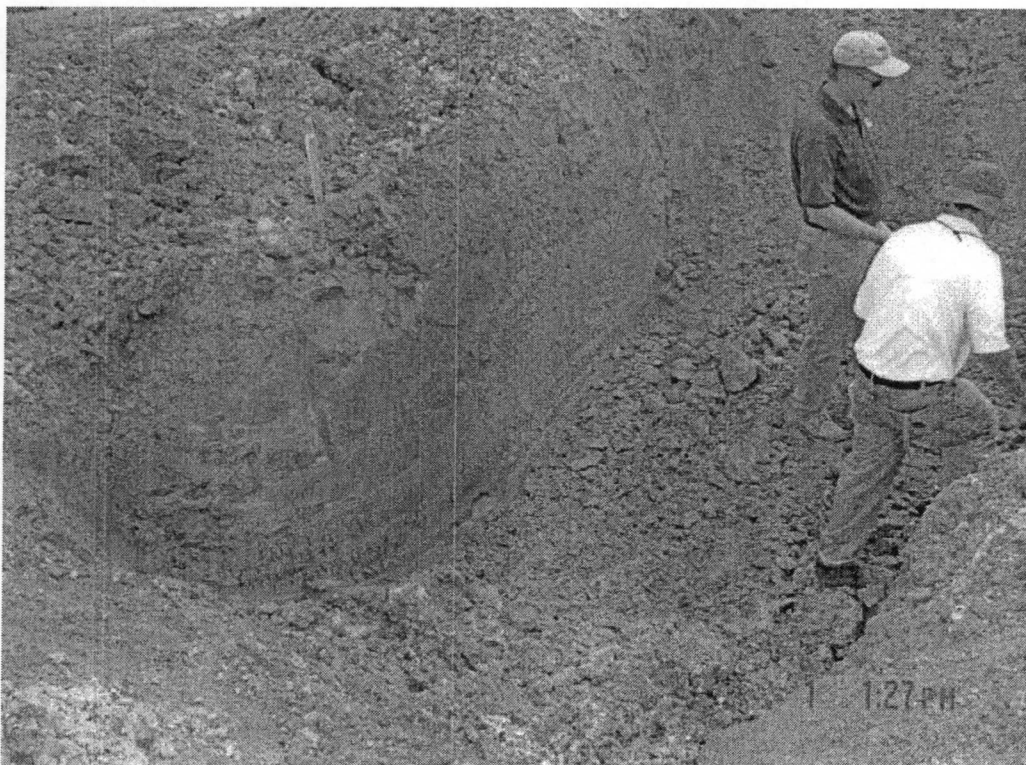
#040 – Test Pit at location #5 southwest part of Cell 1
(limestone pieces mixed in clay)



#041 – Test Pit at location #6 southwest part of Cell 1



#044 – Test Pit at location #6



#046 – Test Pit at location #7 west part of Cell 1
(sandy clay above limestone)



#047 – Test Pit at location #7 (sandy clay and wet in bottom)



#048 - Looking from the west central part of Cell 1 to the northeast across Cell 1
(standing water in ruts)



#053 – Limestone area at location #8 on the west sideslope of Cell 1 not excavated



#054 – Test Pit at location #9 central part of Cell 1



#055 – Test Pit at location #9



#056 – Limestone at surface at unknown location #10 not identified



#057 – Test Pit at location #11 along the east sideslope of Cell 1



#058 – Test Pit at location #12 along the east sideslope of Cell 1

Solid Waste Permit
QA/QC Construction Inspection Form

Facility: Enterprise C III

Inspecting Engineer: Jim Ford

Date Inspected: 8/1/03

Inspection Type:	Permitting	Construction
	☐	QA/QC ☒

Facility Type: C III

Inspection Cell 1 Test pits
AND DISCUSSES RELATED ITEMS
(CONSIDERATIONS DOCUMENTED SEPARATELY)

Fill out the above documenting all inspections of facilities for permitting and/or construction QA/QC purposes. Please place in my basket within 3 days of inspections.

Ford, Kim

From: Ford, Kim

Sent: [REDACTED]

To: Pelz, Susan; Morris, John R.

Subject: conversation with Miguel Garcia about Enterprise CIII

On August 1, 2003 at 10:30am (by cell phone) I spoke with M.G. (Hartman&Assoc.) about Enterprise CIII. **I requested a test pit at each location for each boring where a continuous 36" of 1×10^{-6} cm/sec clay was not indicated by the boring log.** I explained that staff told me that some of the 3 feet borings provided as part of the July 25, 2003 "Progress Report #3" did not have a continuous 3 feet of 1×10^{-6} cm/sec clay.

Kim

8/7/2003

**HARTMAN & ASSOCIATES, INC.**

engineers, hydrogeologists, surveyors & management consultants

201 EAST PINE STREET, SUITE 1000, ORLANDO, FLORIDA 32801

TELEPHONE (407) 839-3955

HYDROGEOLOGY FAX - (407) 839-2066

ADMIN./UTILITY ENGINEERING FAX - (407) 839-3790

CIVIL ENG./SURVEY/FINANCE FAX - (407) 481-8447

Josh

FACSIMILE TRANSMITTAL

TO: Kim Ford FROM: Jennifer Deal
FAX: 813-744-6125 DATE: 8/1/03
RE: Enterprise Landfill PROJECT: HAI # 99.0331.007

We are sending you 11 pages, including this cover sheet. These pages are being transmitted as indicated below:

- ☐ As requested
☒ For your use
☐ For your comments
☐ For your approval

HARD COPY:

- ☐ Will be sent via regular mail
☐ Will be sent via overnight mail
☒ Will be sent via facsimile only
☐ Will be sent via hand delivery

MESSAGE: Kim,

Following are the logs for the additional
borings for the Enterprise Landfill.

IF THERE ARE ANY PROBLEMS WITH THIS TRANSMISSION
PLEASE CALL (407) 839-3955 x168



HARTMAN & ASSOCIATES, INC.

engineers, hydrogeologists, surveyors & management consultants

FIELD BORING LOG

MOBILE

AS-26

1 of 1

DEPTH (FT)	SAMPLE			BLOWS PER 6"	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO./TYPE	SYMBOL	% REC.						
1							CLAYEY-SAND, FINE TO V. FINE GRAIN, WELL SORTED, SOFT		MOD/LARGE AMT. OF SS. GRAVEL
5							CLAYEY-SAND, FINE TO V. FINE GRAIN, INCLUDE IN CLAY, LT. GRAY + ORANGE, SOME FIRM, 2-2.5' INCL. IN CLAY FROM 2.5-3' EOB @ 3'		
10									
15									
20									
25									
30									
35									
40									
45									
50									

PROJECT

NUMBER: 99-0331.007

NAME: ENTERPRISE

ROAD LANDFILL

CLIENT: ANGEL'S RECYCLED

LOCATION: DADE CITY, FL

BORING

GR. ELEV.: 296'

DIAM: 3" - BUCKET AUGER

DEPTH: 3'

DATE STARTED: 7-25-03

DATE ENDED: 7-25-03

GROUNDWATER

DEPTH:

TIME:

DATE:

REMARKS:

DRILLING

RIG TYPE:

CREW:

SUPERVISOR:

PIEZ/WELL

CASING DIAM.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISE HEIGHT ALS:

T.O.C. ELEV.:

REMARKS



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FIELD BORING LOG

MEANES

AS-27

1 of 1

DEPTH (FT)	SAMPLE			BLOWS PER 6"	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO/TYPE	SYMBOL	% REC.						
5							CURRY-SLTY SAND, RUSK-ORANGE; FINE TO SFT, SOFT SED. SMALL-MOD AMT. OF CLAY. 03' EOB @ 3'		FE - HANDBAN FRAGMENTS (NUDDLES)
0									
5									
0									
5									
0									
5									
0									

PROJECT

NUMBER: 71-0331-007

NAME: ENTER PAGE

20 LF

CLIENT: APM

LOCATION: DOD CITY

BORING

GR. ELEV.: ~ 92'

DA-TYPE: 3" = BA

DEPTH: 3'

DATE STARTED: 7-25-03

DATE ENDED: 7-28-03

GROUNDWATER

DEPTH:

TIME:

DATE:

REMARKS:

DRILLING

RIG TYPE:

CREW:

SUPERVISOR:

PIEZ/WELL

CASING DIAM.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISER HEIGHT ALS:

T.O.C. ELEV.:

REMARKS



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FIELD BORING LOG

MGNCEA

AS-28

104

DEPTH (FT)	SAMPLE			BLOWS PER 6'	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO./TYPE	SYMBOL	% REC.						
5							CLAYEY-SAND, MUST-ORANGE, FEIN TO V, FEIN GRAYEN, SOFT SED. SMALL AMT. OF CLAY. 0-1.5'		LARGE AMOUNT OF FE HP NODULES (up to 2")
0							CLAYEY-SAND, LT. GRAY # RUS. ORANGE (MOTTLED) NODULES IN CLAY w/ DEPTH, SOME FROM SED. 1.5'-2.75' FROM SED FROM 2.75-3'		Fe-HP NODULES UP TO 2.5'
5									
0									
5									
0									
5									
0									

PROJECT

NUMBER: PP-0331-007

NAME: ENTERPRISE

RD LF

AGENT: ARM

LOCATION: DUST CITY

BORING

GR. ELEV.: ~ 86'

DIA-TYPE: 3"-BA

DEPTH: 3'

DATE STARTED: 7-25-03

DATE ENDED: 7-25-03

GROUNDWATER

DEPTH:

TIME:

DATE:

REMARKS:

DRILLING

RIG TYPE:

CREW:

SUPERVISOR:

PIEZ/WELL

CASING DIAM.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISER HEIGHT ALS:

T.O.C. ELEV.:

REMARKS



engineers, hydrogeologists, surveyors & management consultants

MEANETS

AS-29

{ of }

DEPTH (FT)	SAMPLE			BLOWS PER 6'	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS	PROJECT	
	NO/TYPE	SYMBOL	% REC.							NUMBER: 99-0331-007	NAME: ENTERPRISE
5							STLY - CLAYEY SAND, LT GRAY, FINE TO SILT, V. FIRM, 0-3' EOD @ 3'		WEATHERED LR FRAG. FRESH 1.5-2 AND 2.5-3'	RD LF.	CIENT: ALM
0											LOCATION: DDE CITY
5											BORING F2
0											GR. ELEV.: ~ 85'
5											DA-TYPE: 3'-BA
0											DEPTH: 3'
5											DATE STARTED: 7-25-93
0											DATE ENDED: 7-25-93
5											GROUNDWATER
0											DEPTH:
5											TIME:
0											DATE:
5											REMARKS:
0											DRILLING
5											RIG TYPE:
0											CREW:
5											SUPERVISOR:
0											PIEZ/WELL
5											CASING DIAM.:
0											CASING TYPE:
5											CASING DEPTH:
0											SCREEN DEPTH:
5											SCREEN LENGTH:
0											FILTER PACK:
5											RISER HEIGHT ALS:
0											T.O.C. ELEV.:
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FIELD BORING LOG

MCALISA

AS-50

1 of 1

DEPTH (FT)	SAMPLE			BLOWS PER 6"	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO./TYPE	SYMBOL	% REC.						
5							CLAYEN-SAND, TAN-ORANGE, FINE TO 8 FT, SOFT TO SOME FIRM, SUTU TO MOD. AMT. OF CLAY @ 1.5' FIRM-CLAYEN-SAND, LT. GRAY, FINE TO 8 FT, FIRM TO V. FIRM, ENCASED CLAY WITH DEPTH 1.5-3' E0303'		
0									
5									
0									
5									
0									
5									
0									

PROJECT
 NUMBER: 99.0301-007
 NAME: ENTERPRISE
 RD LF
 CLIENT: AXM
 LOCATION: DDE CTH
 BORING
 GR. ELEV.: ~ 85'
 DIA-TYPE: 3" -BA
 DEPTH: 3'
 DATE STARTED: 7-25-03
 DATE ENDED: 7-25-03
 GROUNDWATER
 DEPTH:
 TIME:
 DATE:
 REMARKS:
 DRILLING
 RIG TYPE:
 CREW:
 SUPERVISOR:
 PIEZ/WELL
 CASING DIA.:
 CASING TYPE:
 CASING DEPTH:
 SCREEN DEPTH:
 SCREEN LENGTH:
 FILTER PACK:
 RISER HEIGHT ALS:
 T.O.C. ELEV.:
 REMARKS



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MIGUEL

AS-31

1 of

DEPTH (FT)	SAMPLE			BLOWS PER 6'	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO. TYPE	SYMBOL	% REC.						
5							SAND, FINE TO SFT, WELL SORTED, V. SOFT SED. 0-3' EOB @ 3'		MOD. AMT. OF FE-HYD NODULES FROM 0-3'
0									
5									
0									
5									
0									
5									
0									

PROJECT
 NUMBER: 99.0331.007
 NAME: ENTERPRISE
 RD LP

CLIENT: ARM
 LOCATION: DOE CTR
 BORING FL

GR. ELEV.: 285'
 DIA-TYPE: 3" - 1/8"

DEPTH: 3'
 DATE STARTED: 7-25-03
 DATE ENDED: 7-25-03

GROUNDWATER

DEPTH: _____
 TIME: _____
 DATE: _____
 REMARKS: _____

DRILLING

RIG TYPE: _____
 CREW: _____
 SUPERVISOR: _____

PIEZ/WELL

CASING DIAM.: _____
 CASING TYPE: _____
 CASING DEPTH: _____
 SCREEN DEPTH: _____
 SCREEN LENGTH: _____
 FILTER PACK: _____
 RISER HEIGHT ALS: _____
 T.O.C. ELEV.: _____

REMARKS



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MAXIMA

AS-32

(of)

DEPTH (FT)	SAMPLE			BLOWS PER 6'	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO. TYPE	SYMBOL	% REC.						
0							SANDY CLAY, LT GRAY + BLACK, V. FIRM SMALL amt. of clay + silt. 0-1.5' CLAY, LT. GRAY ORANGE, BLACK (MOTTLED) EXTREMELY FIRM, SMALL amt. of silt. 1.5-3' EOB @ 3'		ORGANICS
5									
10									
15									
20									
25									
30									
35									
40									
45									
50									
55									
60									
65									
70									
75									
80									
85									
90									
95									
100									

PROJECT
 NUMBER: 01.0331.007
 NAME: ENTERPRISE
 RD LF
 CLIENT: AXM
 LOCATION: DROG CEM
 BORING FL
 GR. ELEV.: ~85'
 DIA-TYPE: 3" -BA
 DEPTH: 3'
 DATE STARTED: 7-25-03
 DATE ENDED: 7-25-03
GROUNDWATER
 DEPTH: _____
 TIME: _____
 DATE: _____
 REMARKS: _____
DRILLING
 RIG TYPE: _____
 CREW: _____
 SUPERVISOR: _____
PIEZ/WELL
 CASING DIA.: _____
 CASING TYPE: _____
 CASING DEPTH: _____
 SCREEN DEPTH: _____
 SCREEN LENGTH: _____
 FILTER PACK: _____
 RISER HEIGHT ALS: _____
 T.O.C. ELEV.: _____
REMARKS



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FIELD BORING LOG

MAGNACIA

AS-33

1 of 1

DEPTH (FT)	SAMPLE			BLOWS PER 6"	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO/TYPE	SYMBOL	% REC.						
5							SILTY-CURRY - SAND, LT GRAY, ORANGE, BLACK, (MODIFIED) SEMI FIRM TO FIRM 0-1' SANDY-CURRY, LT GRAY & ORANGE, V. FIRM. 1-2'.		WEATHERED W. FRAG 0.5-2.0
0							BORING STOPPED B/C OF HARD LS. EOB @ 2'.		
5									
0									
5									
0									

PROJECT

NUMBER: 92.0331.007

NAME: ENTERPRISE

RD LF

CLIENT: ANM

LOCATION: DATE CITY

BORING FL

GR. ELEV.: 2' 83'

DIAM-TYPE: 3" - BA

DEPTH: 2'

DATE STARTED: 7-25-03

DATE ENDED: 7-25-03

GROUNDWATER

DEPTH: _____

TIME: _____

DATE: _____

REMARKS: _____

DRILLING

RIG TYPE: _____

CREW: _____

SUPERVISOR: _____

PIEZ/WELL

CASING DIAM.: _____

CASING TYPE: _____

CASING DEPTH: _____

SCREEN DEPTH: _____

SCREEN LENGTH: _____

FILTER PACK: _____

RISER HEIGHT ALS: _____

T.O.C. ELEV.: _____

REMARKS



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FIELD BORING LOG

MBANZA

AS-34

1 of 1

DEPTH (FT)	SAMPLE			BLOWS PER 6"	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO/TYPE	SYMBOL	% REC.						
5							Silty-clayey-sand, lt. gray + orange mottles, firm to v. firm 0-1.0' sandy-clay lt. gray (orange mottles) v. firm to extremely firm, 1-3'		WEATHERED LS FMBG. 0-3'
0									
5									
0									
5									
0									
5									
0									

PROJECT

NUMBER: 99-0331-007

NAME: INTERPRESE

RD. LF

CLIENT: ARM

LOCATION: DADE CTR

BORING

GR. ELEV.: ~83'

DA-TYPE: 3" - BA

DEPTH: 3'

DATE STARTED: 7-25-03

DATE ENDED: 7-28-03

GROUNDWATER

DEPTH:

TIME:

DATE:

REMARKS:

DRILLING

RIG TYPE:

CREW:

SUPERVISOR:

PIEZ/WELL

CASING DIAM.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISER HEIGHT ALS:

T.O.C. ELEV.:

REMARKS



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FIELD BORING LOG

M BANCIA

AS-35

1 of 1

DEPTH (FT)	SAMPLE			BLOWS PER 6'	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS
	NO./TYPE	SYMBOL	% REC.						
5							CLAY, LT GRAY + LT. ORANGE (MOTTLED), V. FIRM; 0-1.5 SANDY-SANDY-CLAY LT ORANGE + GRAY + BLACK (MOTTLED) FIRM TO EXTREMELY FIRM. 1.5-3'		WEATHERED LS (VERY SOFT + CHALKY) 0.5'-3'
0							EOB @ 3'		
5									
0									
5									
0									
5									
0									

PROJECT

NUMBER: 99-0331-007

NAME: ENTERPRISE

RD LF.

CLIENT: ALM

LOCATION: DATE CITY

BORING

GR. ELEV.: ~85'

DIAM-TYPE: 3" - BA

DEPTH: 3'

DATE STARTED: 7-25-03

DATE ENDED: 7-25-03

GROUNDWATER

DEPTH:

TIME:

DATE:

REMARKS:

DRILLING

RIG TYPE:

CREW:

SUPERVISOR:

PIEZ/WELL

CASING DIAM.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISER HEIGHT ALS:

T.O.C. ELEV.:

REMARKS

Solid Waste Permit
QA/QC Construction Inspection Form

Facility: Enterprise C III

Inspecting Engineer: Jim Ford

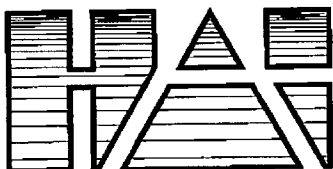
Date Inspected: 8/1/03

Inspection Type:	Permitting	Construction
	☐	QA/QC
		☒

Facility Type: C III

Inspection Cnd 1 Test pits
And discusses related items
(Conversations documented separately)

Fill out the above documenting all inspections of facilities for permitting and/or construction QA/QC purposes. Please place in my basket within 3 days of inspections.

**HARTMAN & ASSOCIATES, INC.**

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201 EAST PINE STREET - SUITE 1000 - ORLANDO, FL 32801
TELEPHONE (407) 839-3955 - FAX (407) 481-8447**FAX**

Job Number: 99.0331.007, Task 4, File 12.0

Date: 07/30/03No. of pages incl. cover page: 2To: Mr. Kim Ford, P.E.FDEP - Southwest DistrictPhone: (813) 744-6100 ext. 382Fax: (813) 744-6125

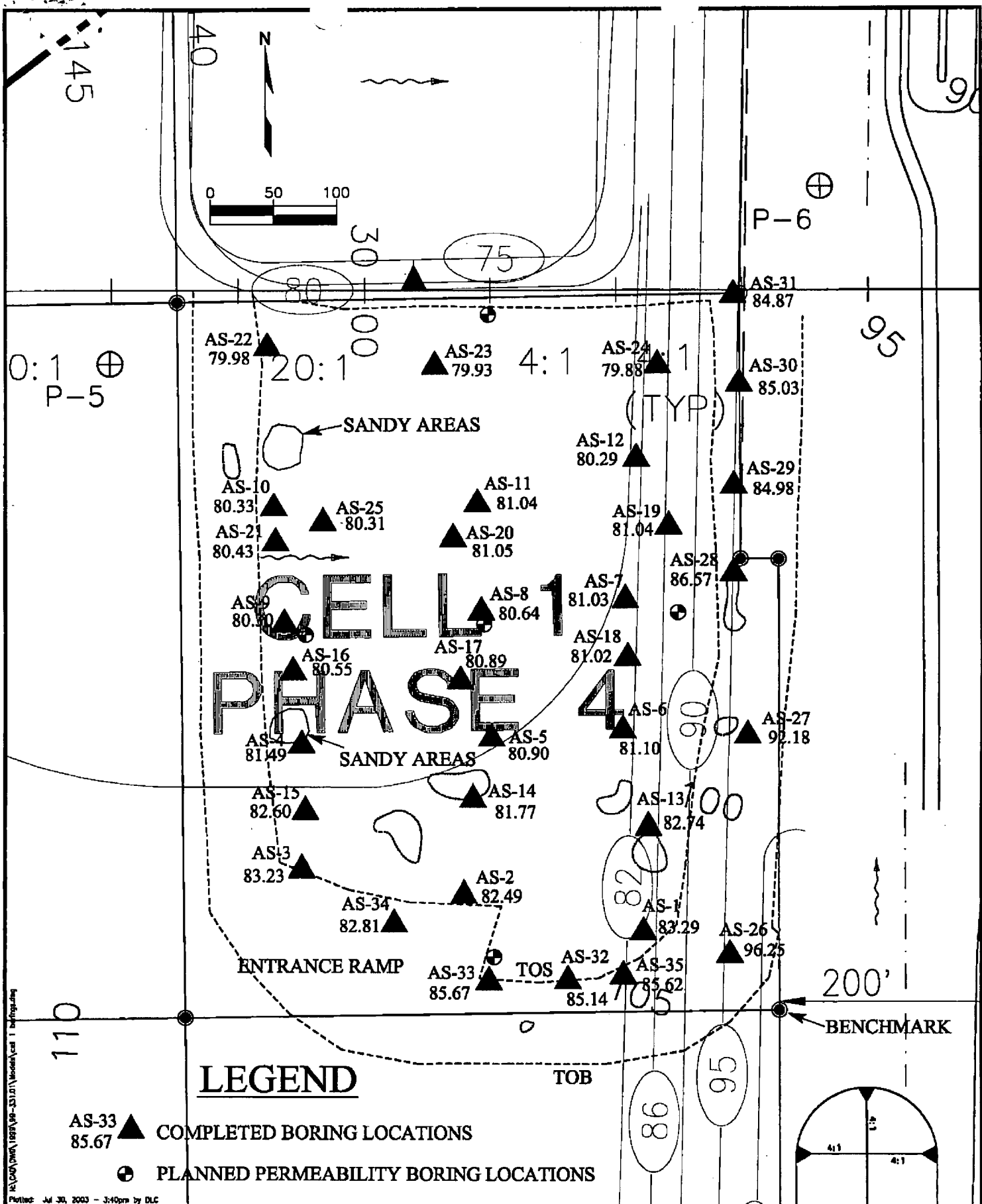
cc: _____

Re: Enterprise LandfillFrom: Jennifer L. Deal, P.E.Hartman & Associates, Inc.Phone: (407) 839-3955 ext. 187Fax: (407) 839-2066**REMARKS:**☐ Urgent☒ For your review☐ As Requested☐ Please comment

Kim,

Following is the "Surveyed Boring Locations" figure, the referenced Figure 3 of our July 25, 2003 submittal. We look forward to meeting with you and John Morris on Friday. Please call me if you need further information prior to your site visit.

Jennifer


 H:\DATA\HAI\1997\99-33\101\HAI\figs\fig3.dwg
 Plotted: Jul 30, 2003 - 3:40pm by DLC


HARTMAN & ASSOCIATES, INC.
 engineers, hydrogeologists, surveyors & management consultants
 201 EAST PINE STREET - SUITE 1000 - ORLANDO, FL 32801
 TELEPHONE (407) 839-3855 - FAX (407) 839-3790

**SURVEYED BORING LOCATIONS
 ENTERPRISE RECYCLING DISPOSAL FACILITY
 DADE CITY, FLORIDA**

**FIGURE
 3**