

Report Of Hydraulic Conductivity Test

Client: Ayres Associates

Project: Adams County Landfill & Recycling Center

Date: 12/15/2015

Project No.: 0095433

Test Sample Data

Sample Source: Boring B-102 at 27-29'

Material Description:

Sample ID: B-102

Reference Standards: ASTM D698, D2487/88, D422, D2216, D4318

QA/QC Data

Sample Date: 11/23/2015

Sampled By: PSI

Test Date: 12/14/2015

Tested By: AW

Reviewed By:

Material Properties

Natural Moisture: -

Specific Gravity: 2.7

Max. Dry Density: -

Optimum Moisture: -

Percent Finer No. 200: -

Percent Finer .005 mm: -

Liquid Limit: -

Plasticity Index: -

Sample Characteristics

Height, cm: 4.83

Diameter, cm: 7.19

Moisture, %: 29.4

Dry Density, pcf: 95.4

Test Parameters

B Parameter: 95

Hydraulic Gradient: 29

Max. Eff. Consol., psi: 4

Min. Eff. Consol., psi: 2

Test Data (ASTM D5084, method C)

Run No.	Time t (sec)	Head Loss, cm		Inflow/ Outflow	Coeff. of Permeability (cm/sec)
		h _o	h _i		
1	1080	178.40	170.90	0.97	2.4E-06
2	420	170.90	168.10	1.00	2.3E-06
3	540	168.10	165.30	1.00	1.8E-06
4	900	165.30	159.80	1.04	2.2E-06
5	1080	159.80	153.60	1.00	2.2E-06
AVERAGE STEADY HYDRAULIC CONDUCTIVITY					K= 2.2E-06 cm/sec

Report Of Hydraulic Conductivity Test

Client: Ayres Associates

Project: Adams County Landfill & Recycling Center

Date: 12/15/2015

Project No.: 0095433

Test Sample Data

Sample Source: Boring B-105 at 35-37'
Material Description:
Sample ID: B-105

Reference Standards: ASTM D698, D2487/88, D422, D2216, D4318

QA/QC Data

Sample Date: 11/20/2015
Sampled By: PSI
Test Date: 12/14/2015
Tested By: AW
Reviewed By:

Material Properties

Natural Moisture: -
Specific Gravity: 2.7
Max. Dry Density: -
Optimum Moisture: -

Percent Finer No. 200: -
Percent Finer .005 mm: -
Liquid Limit: -
Plasticity Index: -

Sample Characteristics

Height, cm: 5.38
Diameter, cm: 7.16
Moisture, %: 30.7
Dry Density, pcf: 95.0

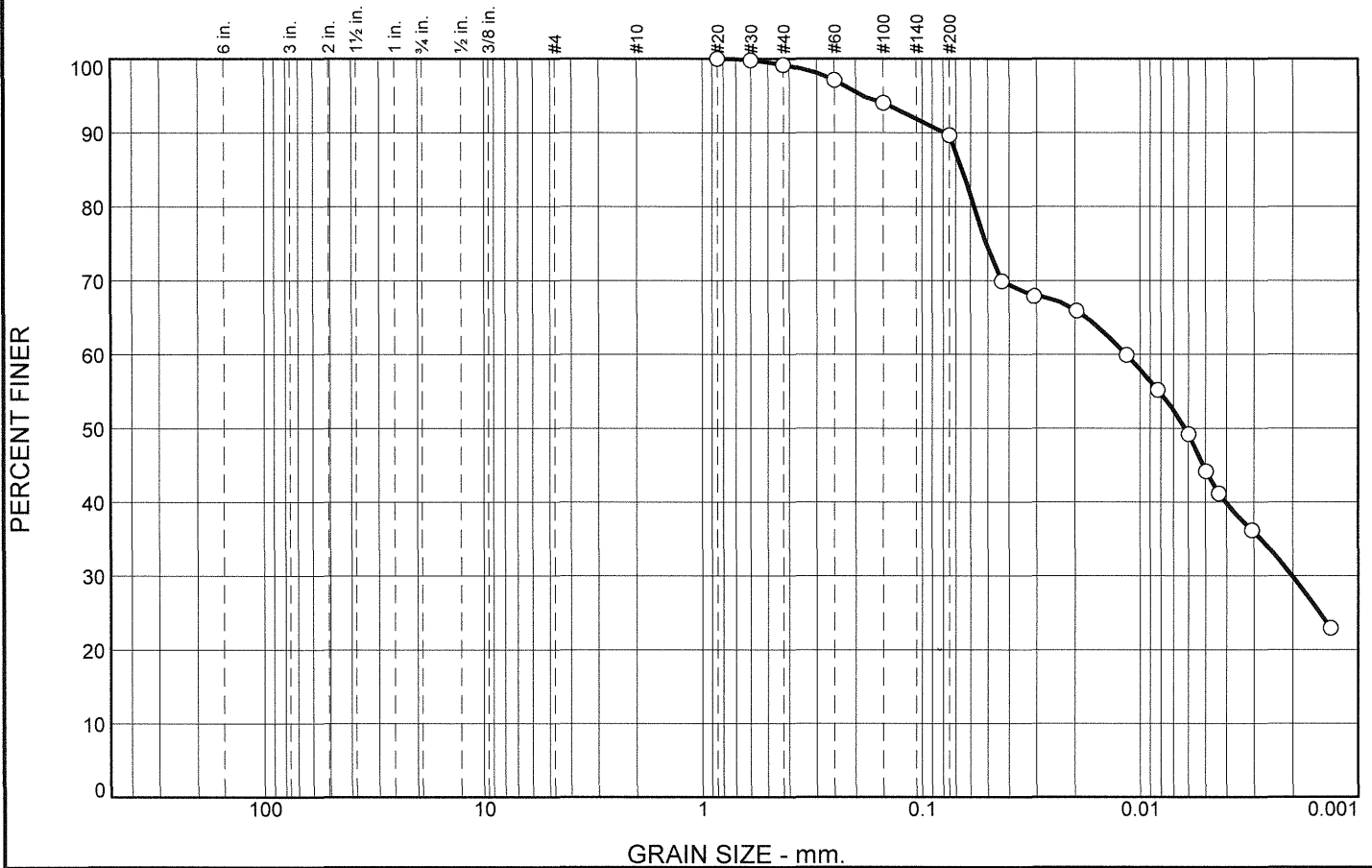
Test Parameters

B Parameter: 95
Hydraulic Gradient: 26
Max. Eff. Consol., psi: 4
Min. Eff. Consol., psi: 2

Test Data (ASTM D5084, method C)

Run No.	Time t (sec)	Head Loss, cm		Inflow/ Outflow	Coeff. of Permeability (cm/sec)
		h _o	h _i		
1	1080	179.00	172.80	0.88	2.2E-06
2	360	172.80	170.60	1.00	2.4E-06
3	540	170.60	167.80	1.00	2.0E-06
4	900	167.80	163.10	0.96	2.1E-06
5	1080	163.10	157.50	1.00	2.2E-06
AVERAGE STEADY HYDRAULIC CONDUCTIVITY					K= 2.2E-06 cm/sec

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.9	9.4	45.4	44.3

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#20	100.0		
#30	99.8		
#40	99.1		
#60	97.1		
#100	94.0		
#200	89.7		

* (no specification provided)

<u>Material Description</u>		
lean clay		
<u>Atterberg Limits</u>		
PL= 17	LL= 34	PI= 17
<u>Coefficients</u>		
D ₈₅ = 0.0654	D ₆₀ = 0.0116	D ₅₀ = 0.0062
D ₃₀ = 0.0020	D ₁₅ =	D ₁₀ =
C _u =	C _c =	
<u>Classification</u>		
USCS= CL	AASHTO= A-6(15)	
<u>Remarks</u>		

Sample Number: CL-1
Source of Sample: Soil Borings

Date: 01-13-2016

Midwest Engineering Services

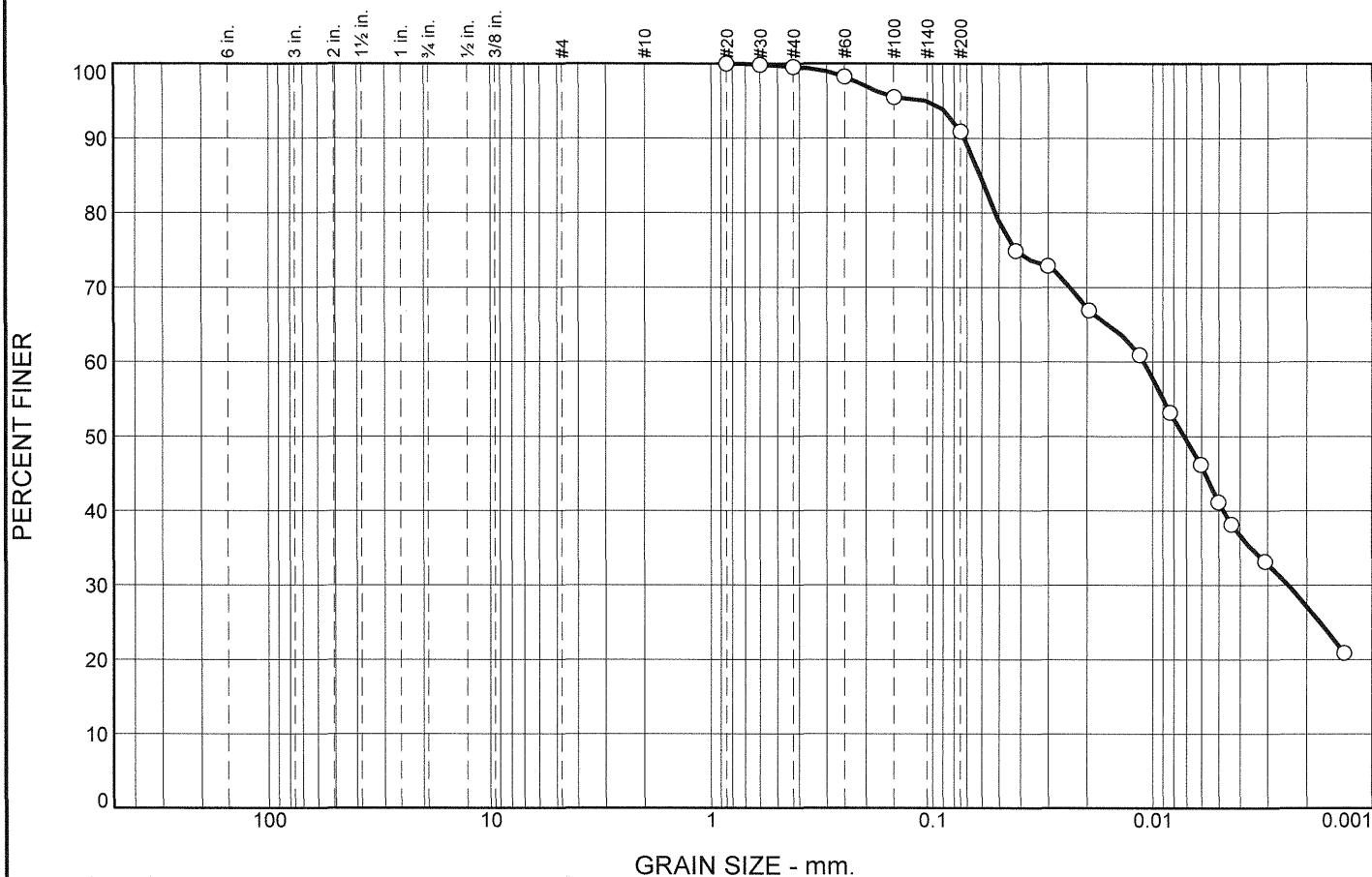
Client: Ayres Associates
Project: Adams County Landfill

Waukesha, Wisconsin

Project No: 0095433

Figure 1

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.5	8.6	49.8	41.1

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#20	100.0		
#30	99.8		
#40	99.5		
#60	98.2		
#100	95.5		
#200	90.9		

* (no specification provided)

<u>Material Description</u>		
lean clay		
<u>Atterberg Limits</u>		
PL= 17	LL= 31	PI= 14
<u>Coefficients</u>		
D ₈₅ = 0.0610	D ₆₀ = 0.0110	D ₅₀ = 0.0072
D ₃₀ = 0.0024	D ₁₅ =	D ₁₀ =
C _u =	C _c =	
<u>Classification</u>		
USCS= CL	AASHTO= A-6(12)	
<u>Remarks</u>		

Sample Number: CL-2
Source of Sample: Soil Borings

Date: 01-13-2016

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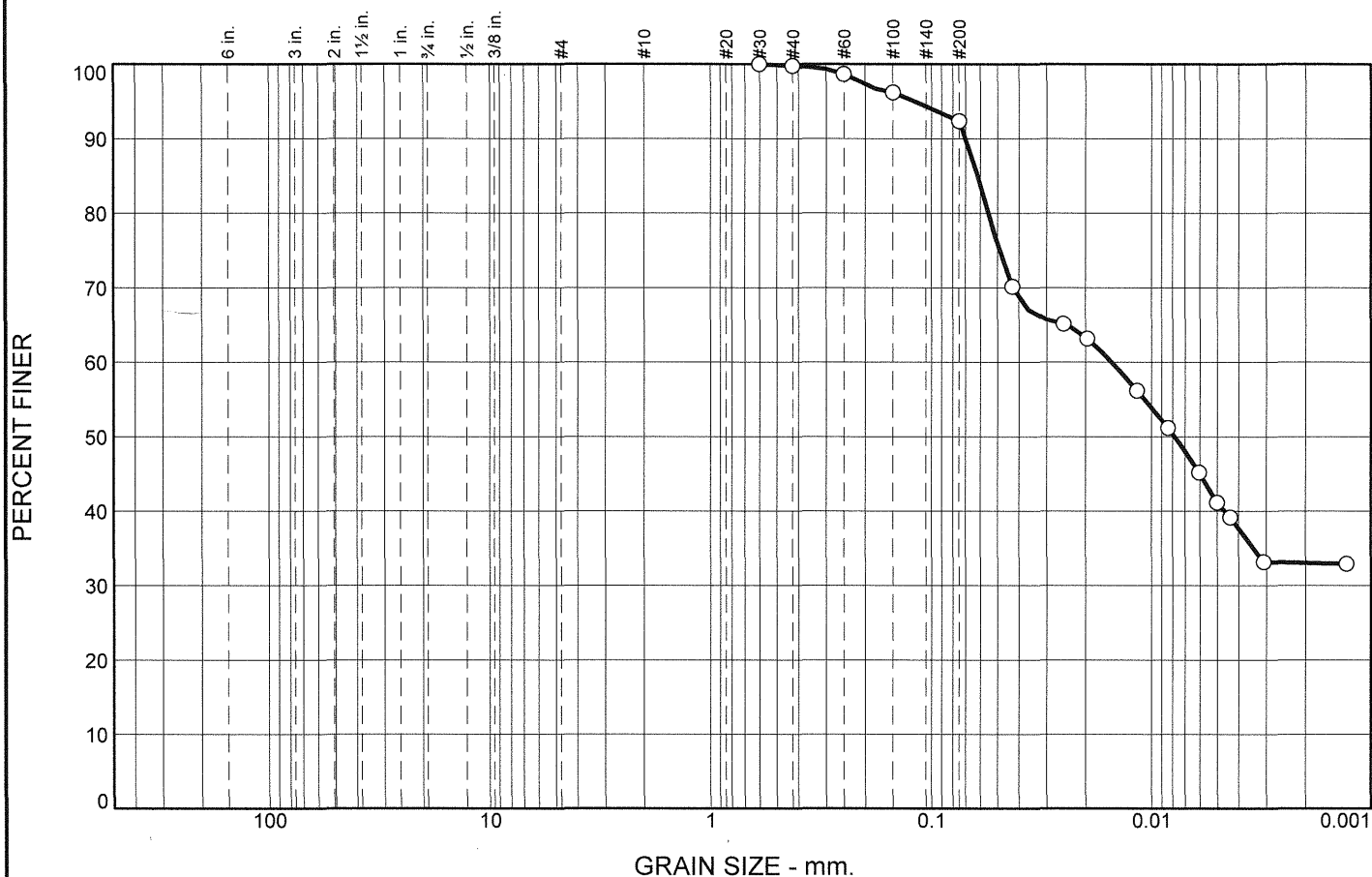
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Project: Adams County Landfill

Waukesha, Wisconsin

Project No: 0095433

Figure 2

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.3	7.3	51.3	41.1

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#30	100.0		
#40	99.7		
#60	98.7		
#100	96.2		
#200	92.4		

* (no specification provided)

<u>Material Description</u>		
lean clay		
<u>Atterberg Limits</u>		
PL= 20	LL= 31	PI= 11
<u>Coefficients</u>		
D ₈₅ = 0.0617	D ₆₀ = 0.0152	D ₅₀ = 0.0078
D ₃₀ =	D ₁₅ =	D ₁₀ =
C _u =	C _c =	
<u>Classification</u>		
USCS= CL	AASHTO= A-6(10)	
<u>Remarks</u>		

Sample Number: CL-3
Source of Sample: Soil Borings

Date: 01-13-2016

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Client: Ayres Associates

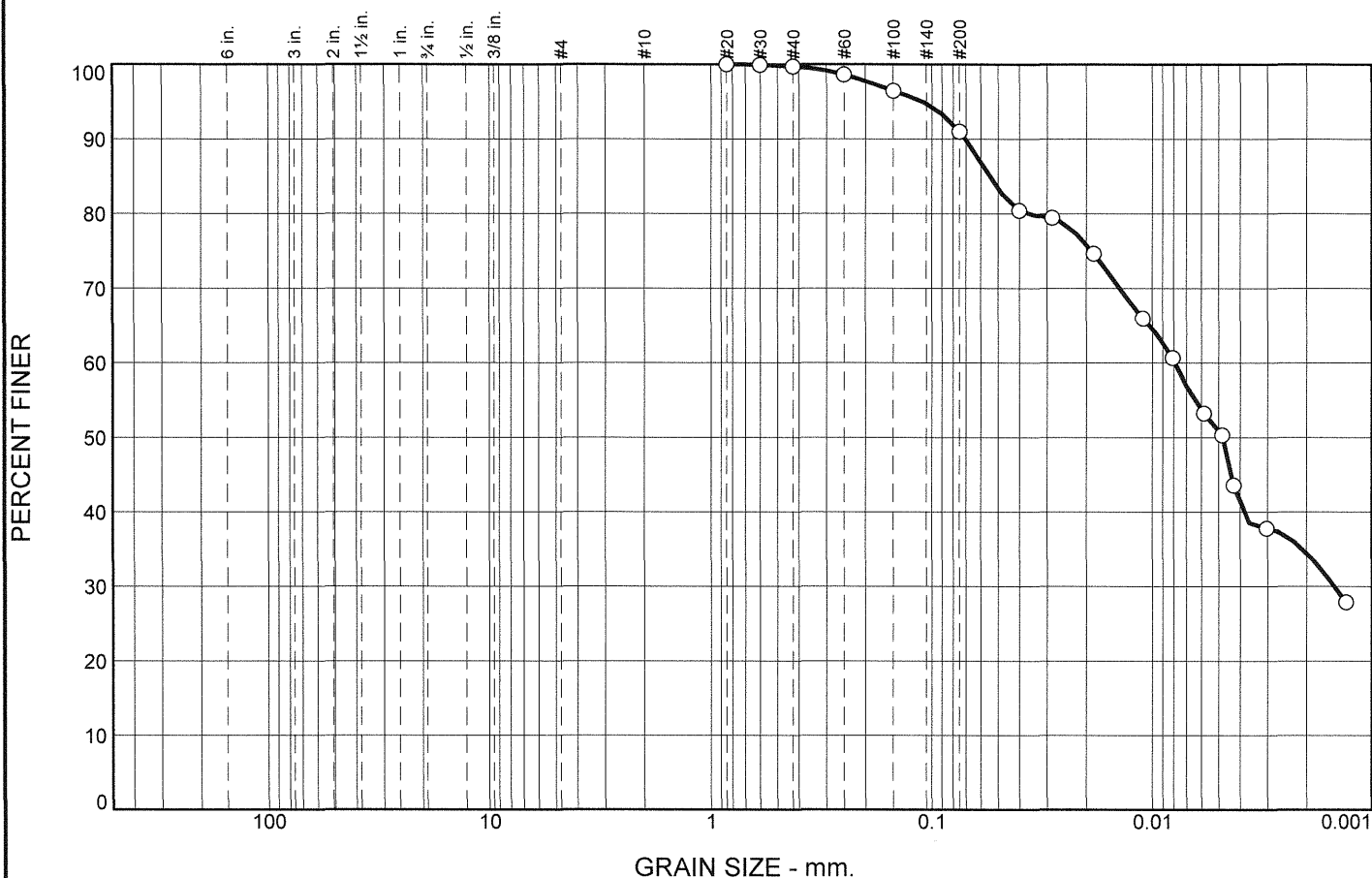
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Project No: 0095433

Figure 3

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.3	8.7	39.5	51.5

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#20	100.0		
#30	99.9		
#40	99.7		
#60	98.6		
#100	96.5		
#200	91.0		

* (no specification provided)

<u>Material Description</u>		
lean clay		
<u>Atterberg Limits</u>		
PL= 19	LL= 39	PI= 20
<u>Coefficients</u>		
D ₈₅ = 0.0547	D ₆₀ = 0.0079	D ₅₀ = 0.0048
D ₃₀ = 0.0015	D ₁₅ =	D ₁₀ =
C _u =	C _c =	
<u>Classification</u>		
USCS= CL	AASHTO= A-6(19)	
<u>Remarks</u>		

Sample Number: CL-4
Source of Sample: Soil Borings

Date: 01-13-2016

Midwest Engineering Services

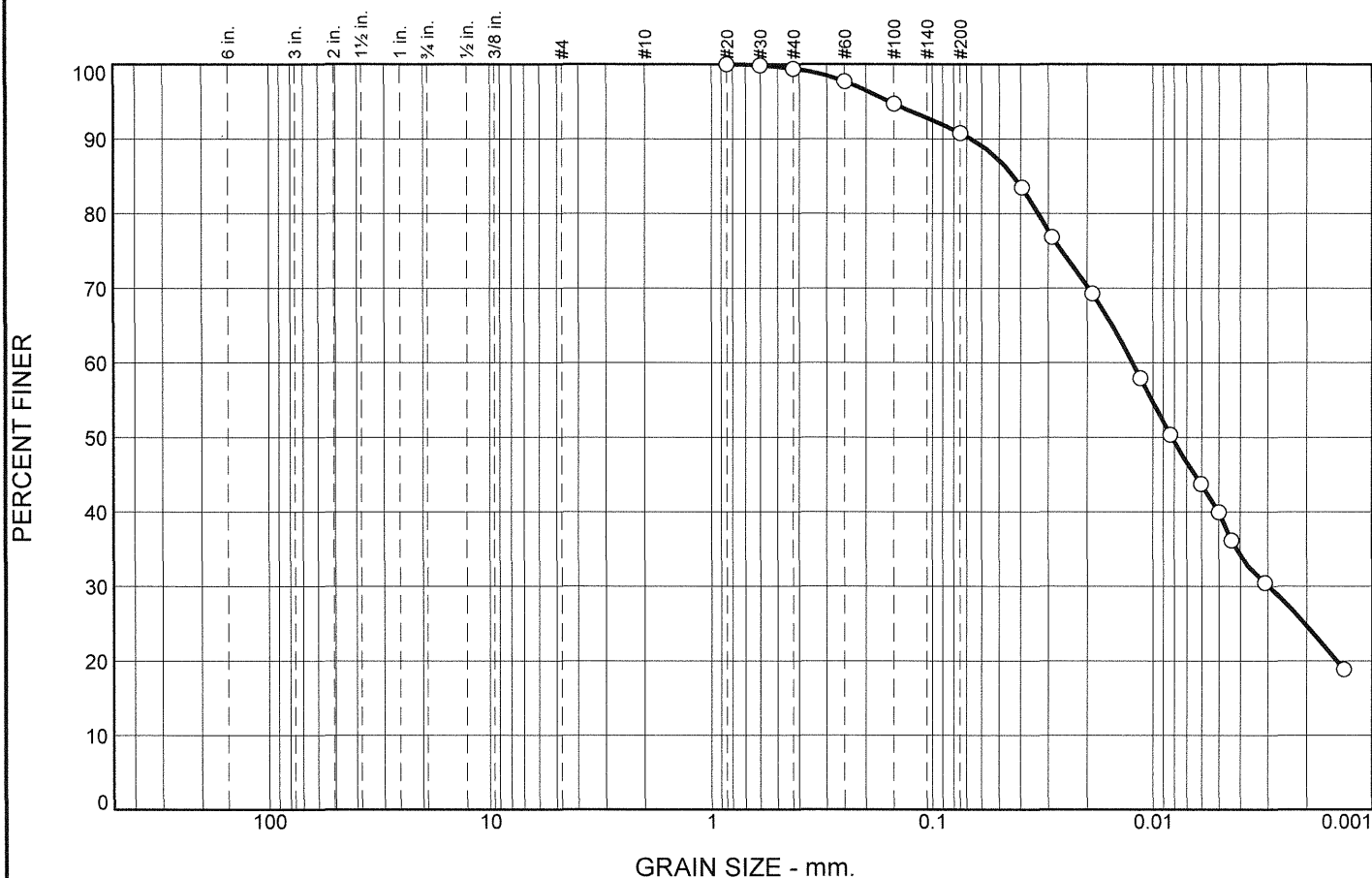
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Figure 4

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.6	8.6	50.9	39.9

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#20	100.0		
#30	99.8		
#40	99.4		
#60	97.7		
#100	94.7		
#200	90.8		

* (no specification provided)

<u>Material Description</u>		
lean clay		
<u>Atterberg Limits</u>		
PL= 17	LL= 31	PI= 14
<u>Coefficients</u>		
D ₈₅ = 0.0430	D ₆₀ = 0.0125	D ₅₀ = 0.0082
D ₃₀ = 0.0030	D ₁₅ =	D ₁₀ =
C _u =	C _c =	
<u>Classification</u>		
USCS= CL	AASHTO= A-6(12)	
<u>Remarks</u>		

Sample Number: CL-5
Source of Sample: Soil Borings

Date: 01-13-2016

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Client: Ayres Associates

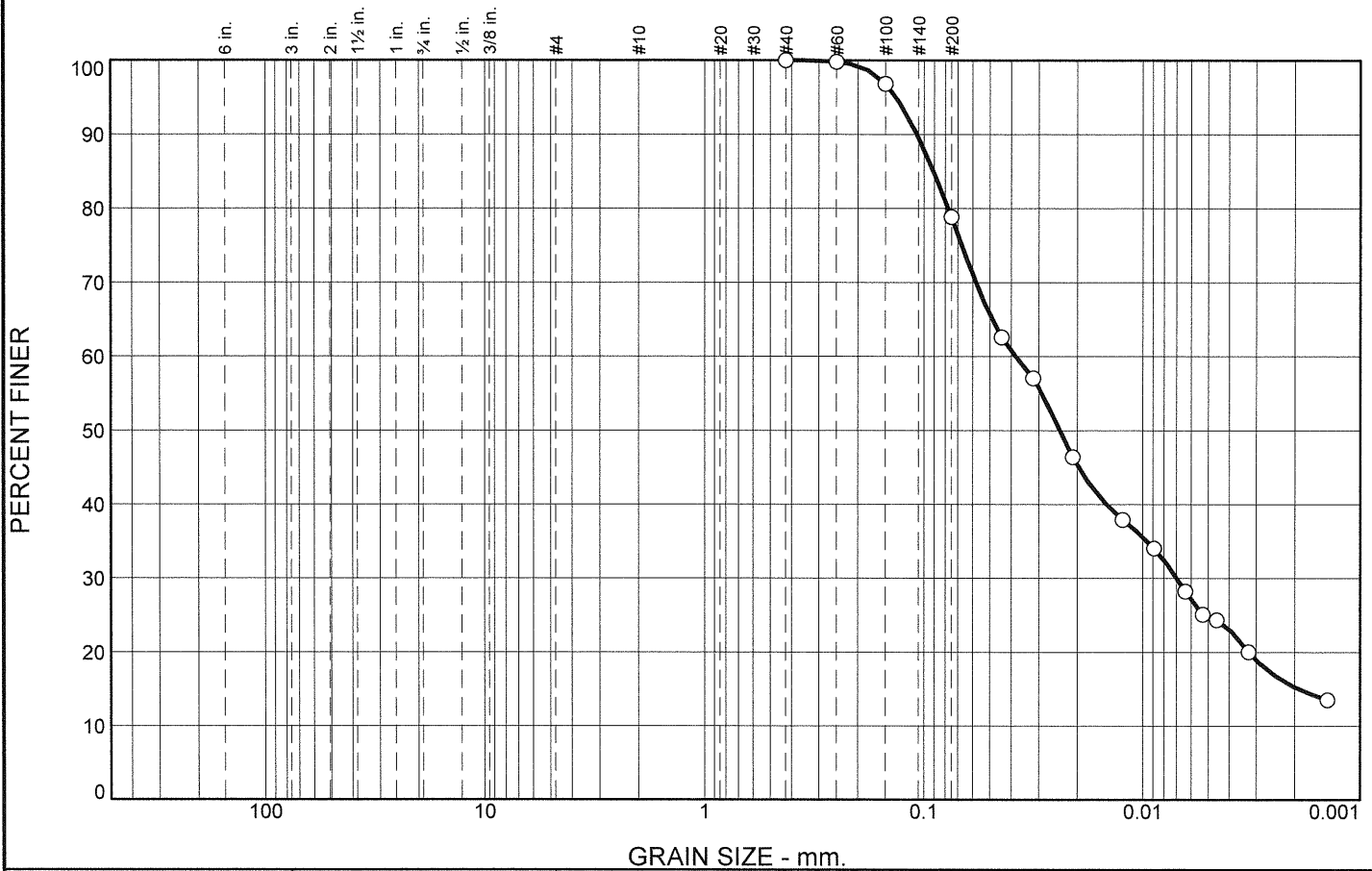
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Project No: 0095433

Figure 5

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.0	21.2	54.1	24.7

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#40	100.0		
#60	99.8		
#100	96.8		
#200	78.8		

* (no specification provided)

Material Description
silt with sand and clay

Atterberg Limits
PL= LL= PI=

Coefficients
D₈₅= 0.0905 D₆₀= 0.0381 D₅₀= 0.0241
D₃₀= 0.0070 D₁₅= 0.0019 D₁₀=
C_u= C_c=

Classification
USCS= ML AASHTO= A-4(0)

Remarks

Sample Number: ML-1
Source of Sample: Soil Borings

Date: 01-13-2016

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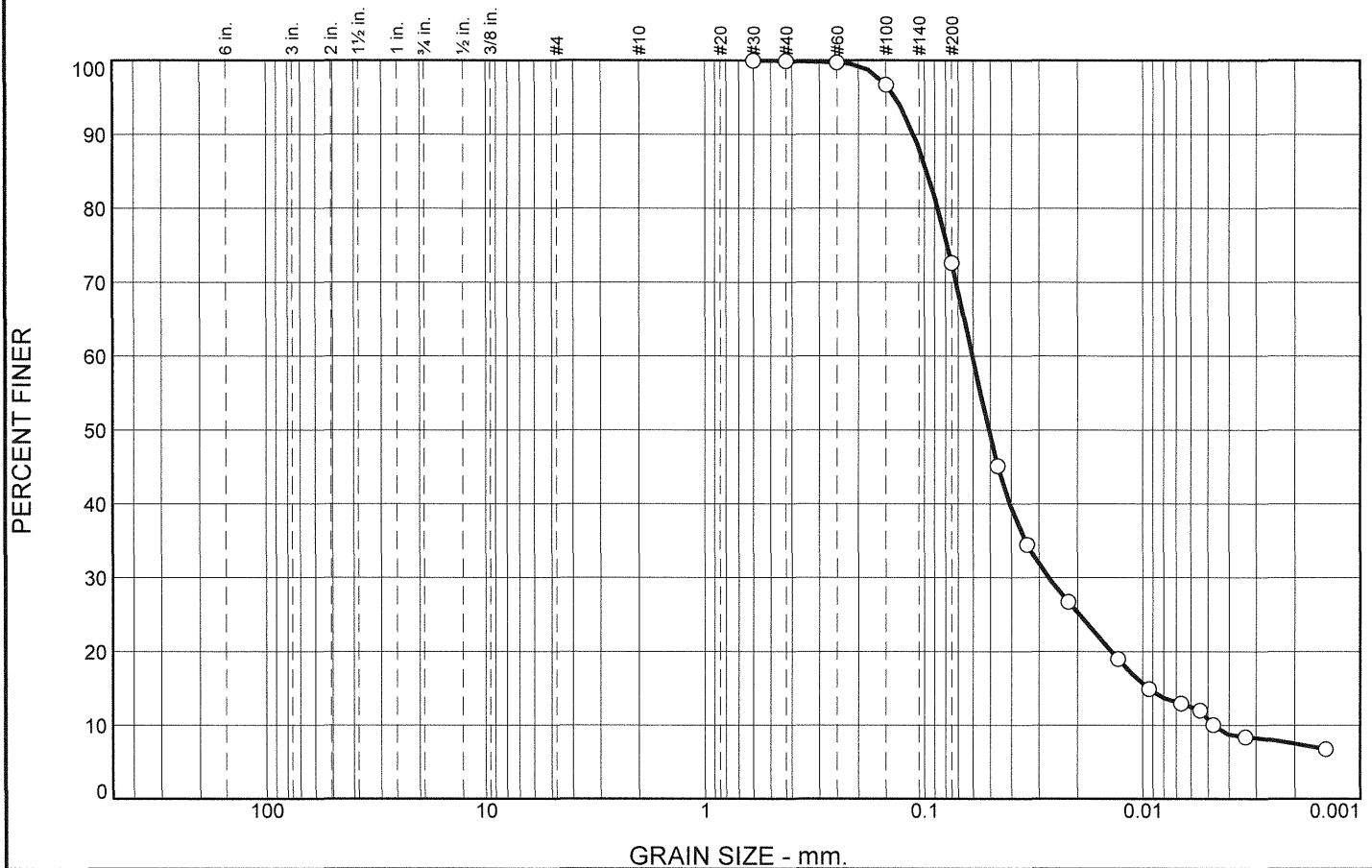
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Project No: 0095433

Figure 6

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
					27.3	61.8	10.8

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#30	100.0		
#40	99.9		
#60	99.7		
#100	96.7		
#200	72.6		

* (no specification provided)

Material Description
silt with sand and little clay

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₈₅= 0.0975 D₆₀= 0.0605 D₅₀= 0.0510
 D₃₀= 0.0272 D₁₅= 0.0095 D₁₀= 0.0047
 C_u= 12.82 C_c= 2.59

Classification
 USCS= ML AASHTO= A-4

Remarks

Sample Number: ML-2
Source of Sample: Soil Borings

Date: 01-13-2016

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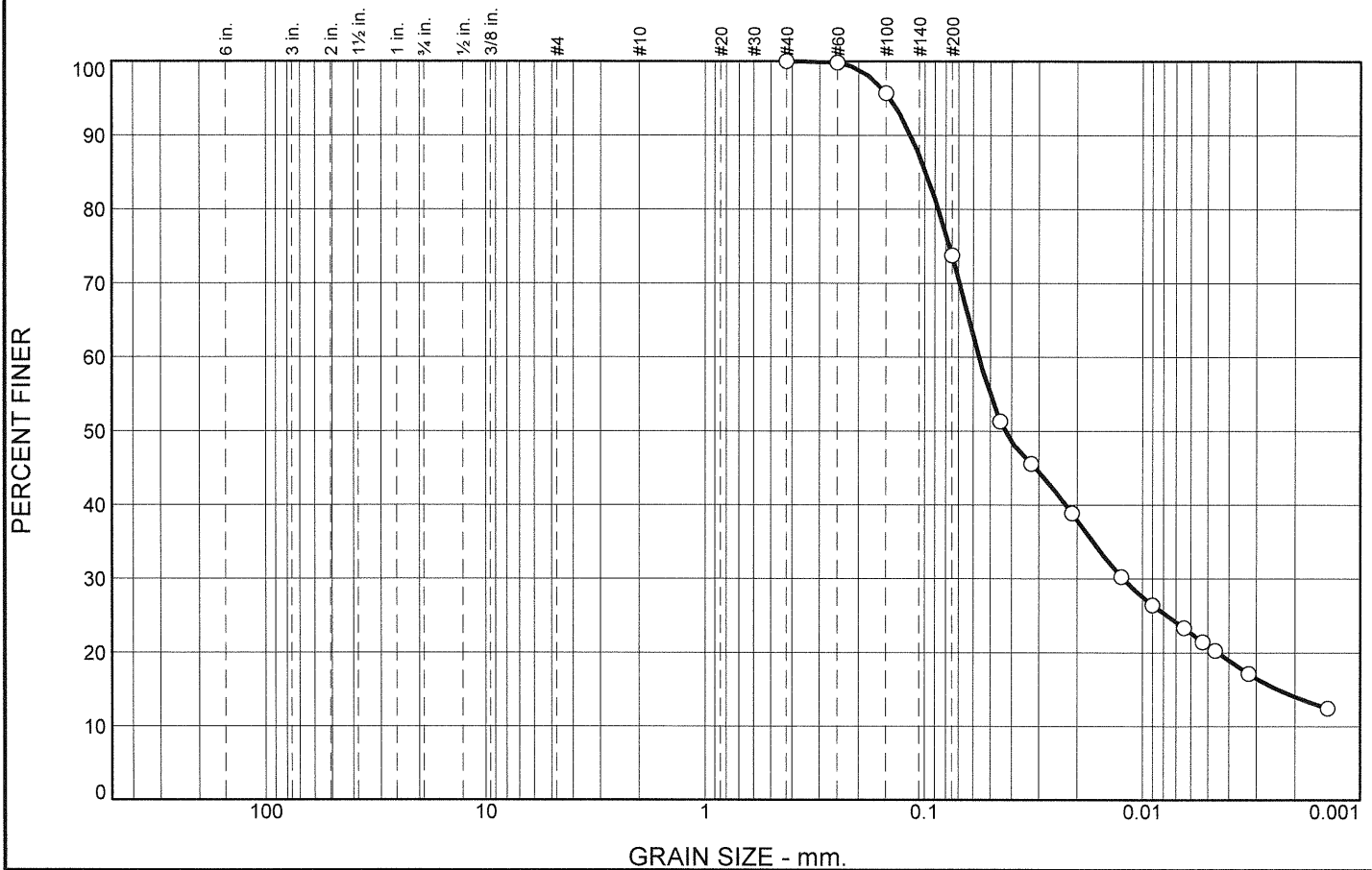
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Figure 7

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.0	26.2	52.9	20.9

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#40	100.0		
#60	99.8		
#100	95.7		
#200	73.8		

* (no specification provided)

Material Description
silt with sand and clay

Atterberg Limits
PL= LL= PI=

Coefficients
D₈₅= 0.0989 D₆₀= 0.0564 D₅₀= 0.0429
D₃₀= 0.0123 D₁₅= 0.0024 D₁₀=
C_u= C_c=

Classification
USCS= ML AASHTO= A-4(0)

Remarks

Sample Number: ML-3
Source of Sample: Soil Borings

Date: 01-13-2016

Midwest Engineering Services

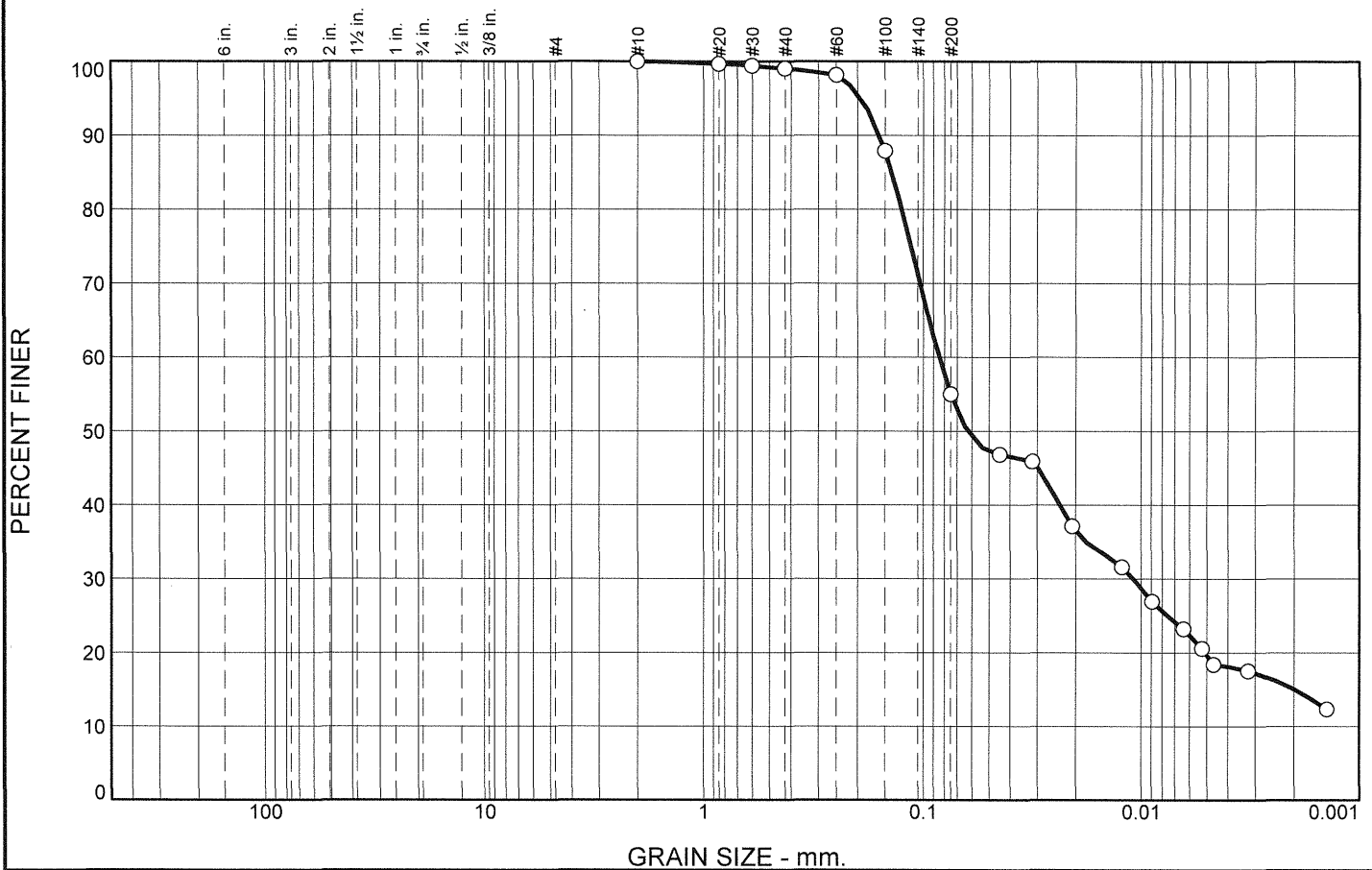
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Project No: 0095433

Figure 8

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	1.0	44.0	35.4	19.6

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#20	99.7		
#30	99.4		
#40	99.0		
#60	98.1		
#100	87.9		
#200	55.0		

* (no specification provided)

<u>Material Description</u>		
sandy, clayey silt		
<u>Atterberg Limits</u>		
PL= 16	LL= 21	PI= 5
<u>Coefficients</u>		
D ₈₅ = 0.1396	D ₆₀ = 0.0847	D ₅₀ = 0.0625
D ₃₀ = 0.0109	D ₁₅ = 0.0020	D ₁₀ =
C _u =	C _c =	
<u>Classification</u>		
USCS= CL-ML	AASHTO= A-4(0)	
<u>Remarks</u>		

Sample Number: ML-4
Source of Sample: Soil Borings

Date: 01-13-2016

Midwest Engineering Services

Client: Ayres Associates

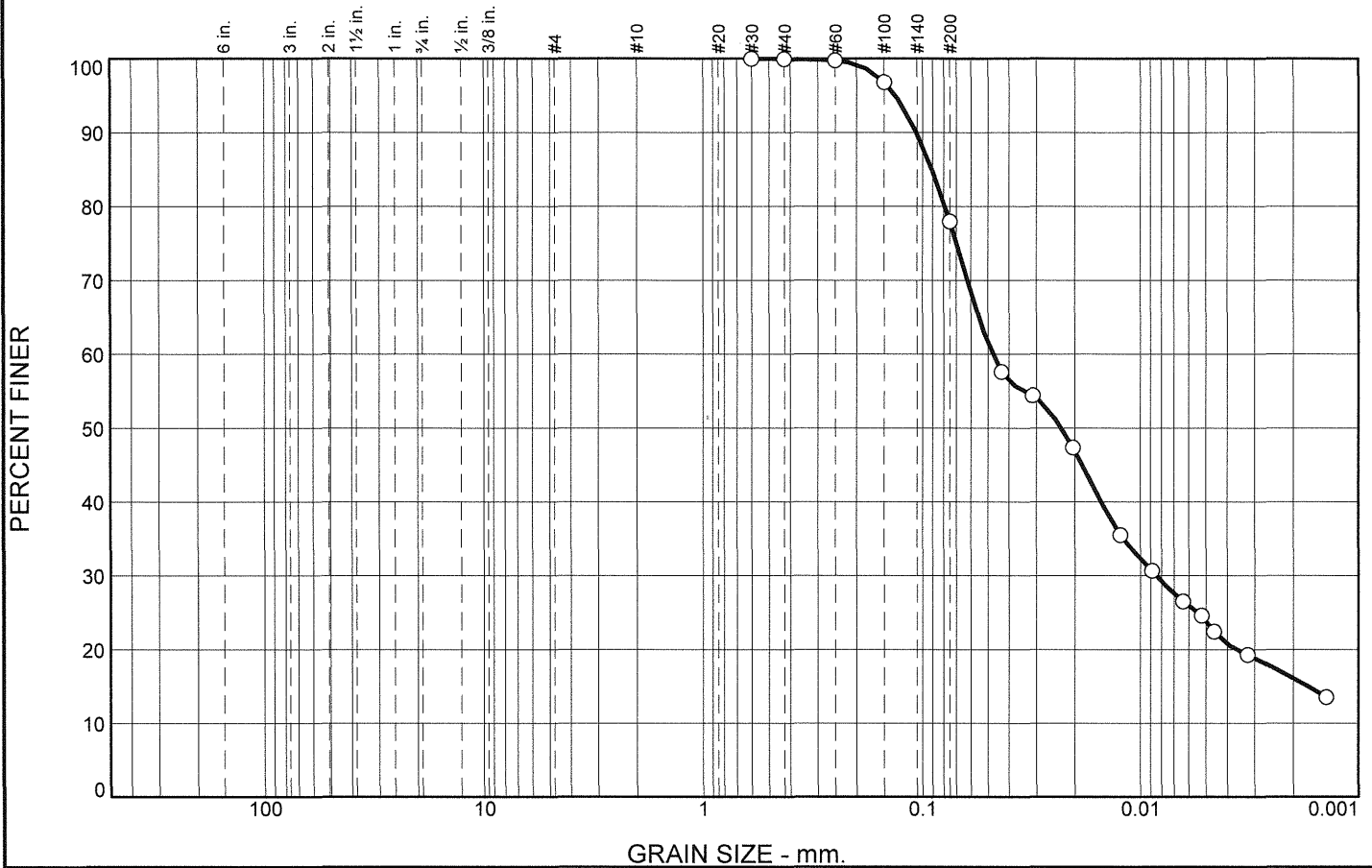
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Waukesha, Wisconsin

Project No: 0095433

Figure 9

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
					21.9	54.2	23.8

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#30	100.0		
#40	99.9		
#60	99.7		
#100	96.8		
#200	78.0		

* (no specification provided)

Material Description
sandy, clayey silt

Atterberg Limits
PL= LL= PI=

Coefficients
D₈₅= 0.0906 D₆₀= 0.0478 D₅₀= 0.0230
D₃₀= 0.0084 D₁₅= 0.0017 D₁₀=
C_u= C_c=

Classification
USCS= CL-ML AASHTO= A-4

Remarks

Sample Number: ML-5
Source of Sample: Soil Borings

Date: 01-13-2016

Midwest Engineering Services

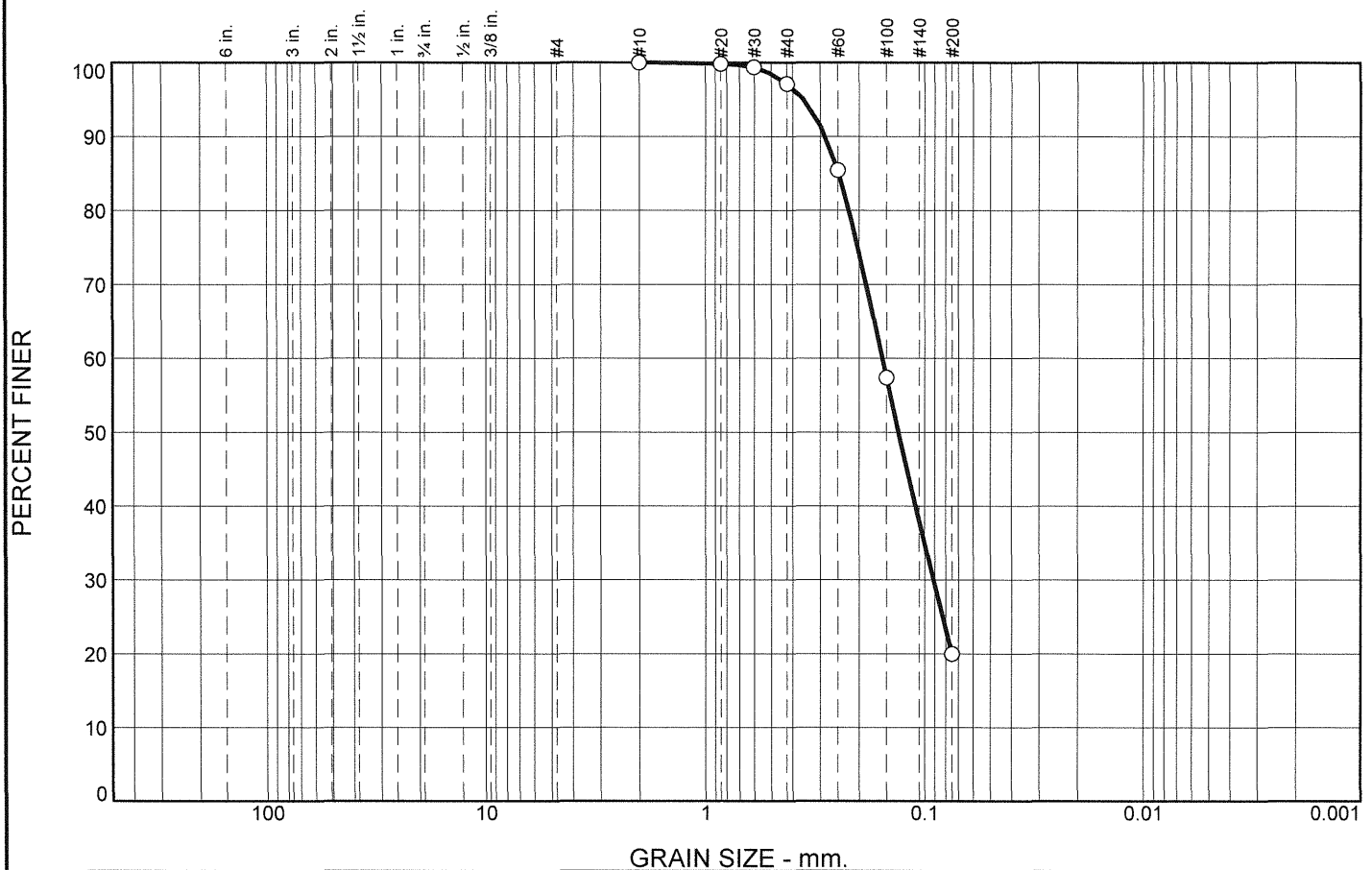
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Waukesha, Wisconsin

Project No: 0095433

Figure 10

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	2.9	77.1	20.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#20	99.8		
#30	99.3		
#40	97.1		
#60	85.5		
#100	57.4		
#200	20.0		

* (no specification provided)

Material Description
silty sand

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₈₅= 0.2472 D₆₀= 0.1567 D₅₀= 0.1320
 D₃₀= 0.0911 D₁₅= D₁₀=
 C_u= C_c=

Classification
 USCS= SM AASHTO= A-2-4(0)

Remarks

Sample Number: SM-1
Source of Sample: Soil Borings

Date: 01-13-2016

Midwest Engineering Services

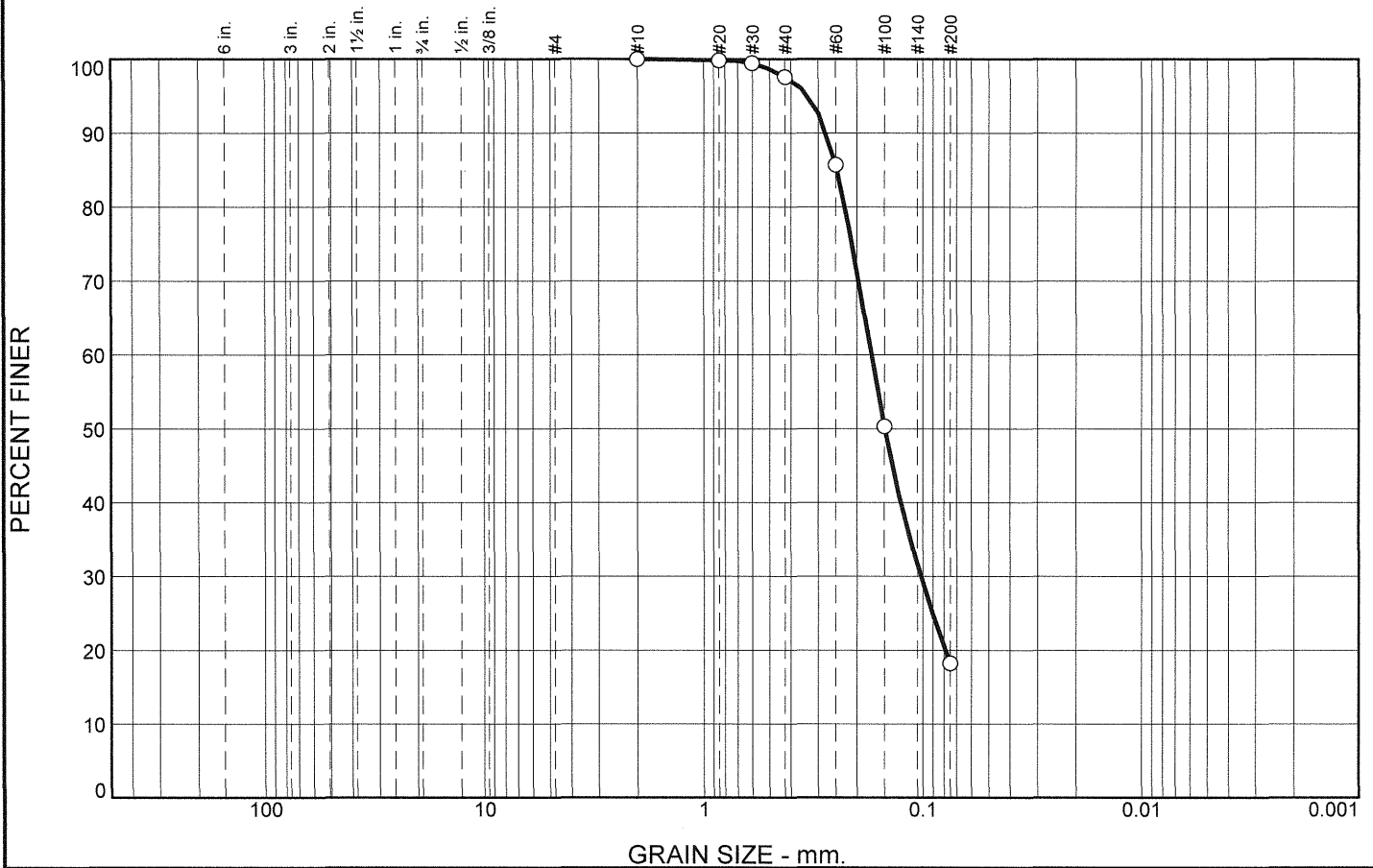
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Project No: 0095433

Figure 11

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	2.4	79.4	18.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#20	99.8		
#30	99.4		
#40	97.6		
#60	85.7		
#100	50.3		
#200	18.2		

* (no specification provided)

Material Description

silty sand

Atterberg Limits

PL= LL= PI=

Coefficients

D₈₅= 0.2465 D₆₀= 0.1716 D₅₀= 0.1493
D₃₀= 0.1023 D₁₅= D₁₀=
C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

Sample Number: SM-2
Source of Sample: Soil Borings

Date: 01-13-2016

Midwest Engineering Services

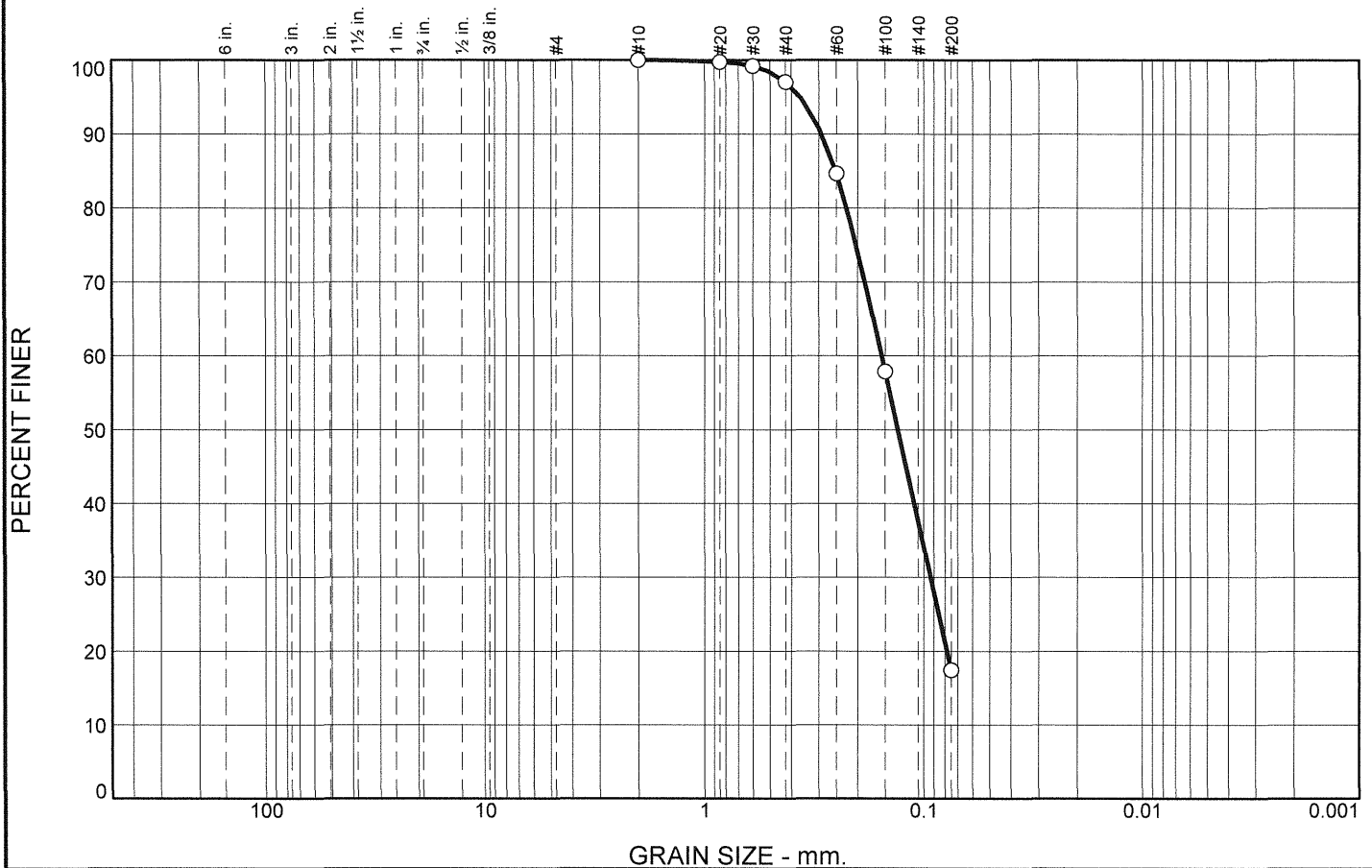
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Waukesha, Wisconsin

Project No: 0095433

Figure 12

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	3.0	79.5	17.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#20	99.7		
#30	99.2		
#40	97.0		
#60	84.7		
#100	57.9		
#200	17.5		

* (no specification provided)

Material Description

silty sand

Atterberg Limits

PL= LL= PI=

Coefficients

D₈₅= 0.2520 D₆₀= 0.1555 D₅₀= 0.1311
D₃₀= 0.0930 D₁₅= D₁₀=
C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

Sample Number: SM-3
Source of Sample: Soil Borings

Date: 01-13-2016

Midwest Engineering Services

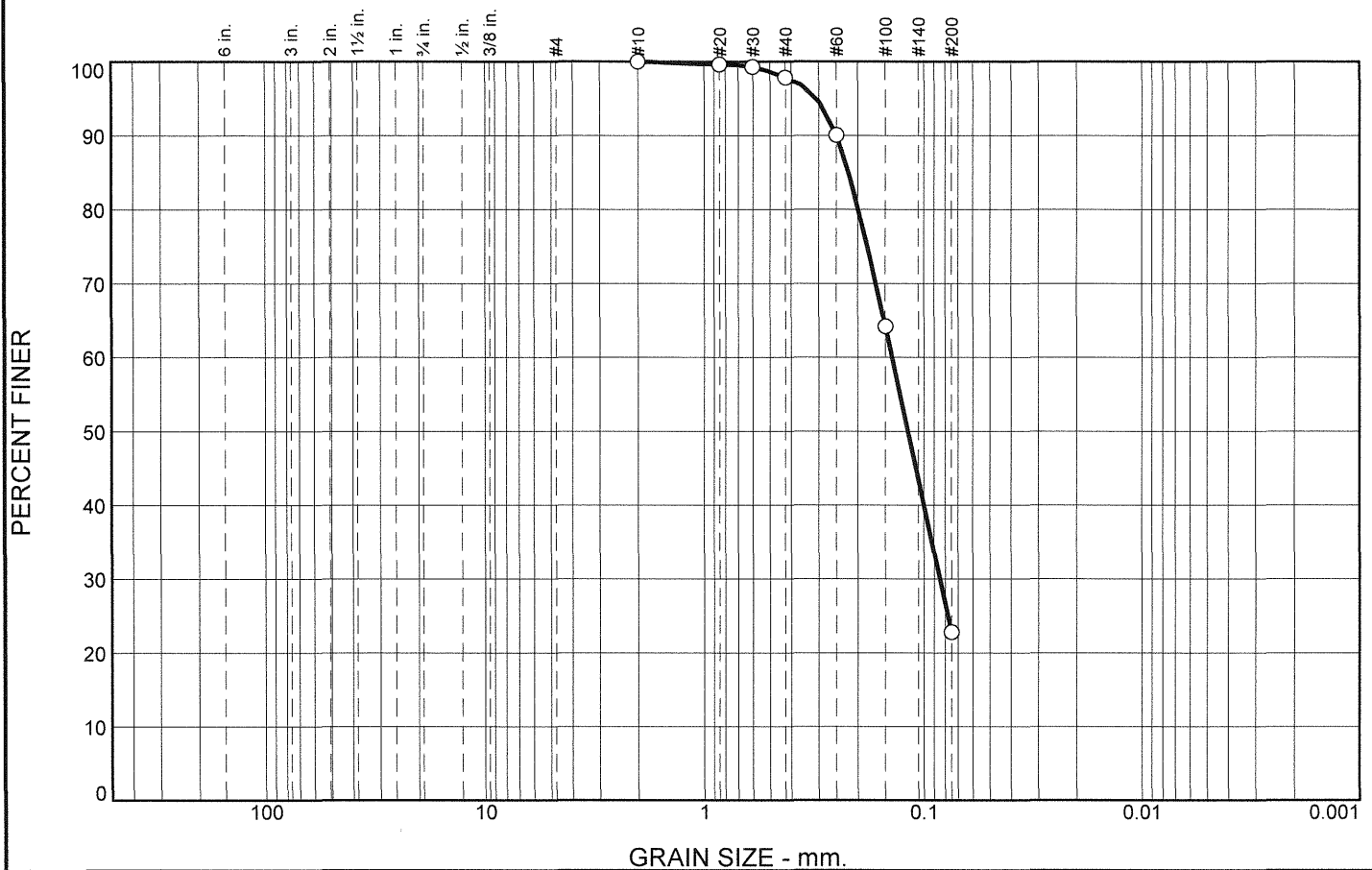
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Project No: 0095433

Figure 13

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	2.2	75.0	22.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#20	99.6		
#30	99.3		
#40	97.8		
#60	90.1		
#100	64.2		
#200	22.8		

* (no specification provided)

Material Description

silty sand

Atterberg Limits

PL= LL= PI=

Coefficients

D₈₅= 0.2196 D₆₀= 0.1398 D₅₀= 0.1182
D₃₀= 0.0846 D₁₅= D₁₀=
C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

Sample Number: SM-4
Source of Sample: Soil Borings

Date: 01-13-2016

Midwest Engineering Services

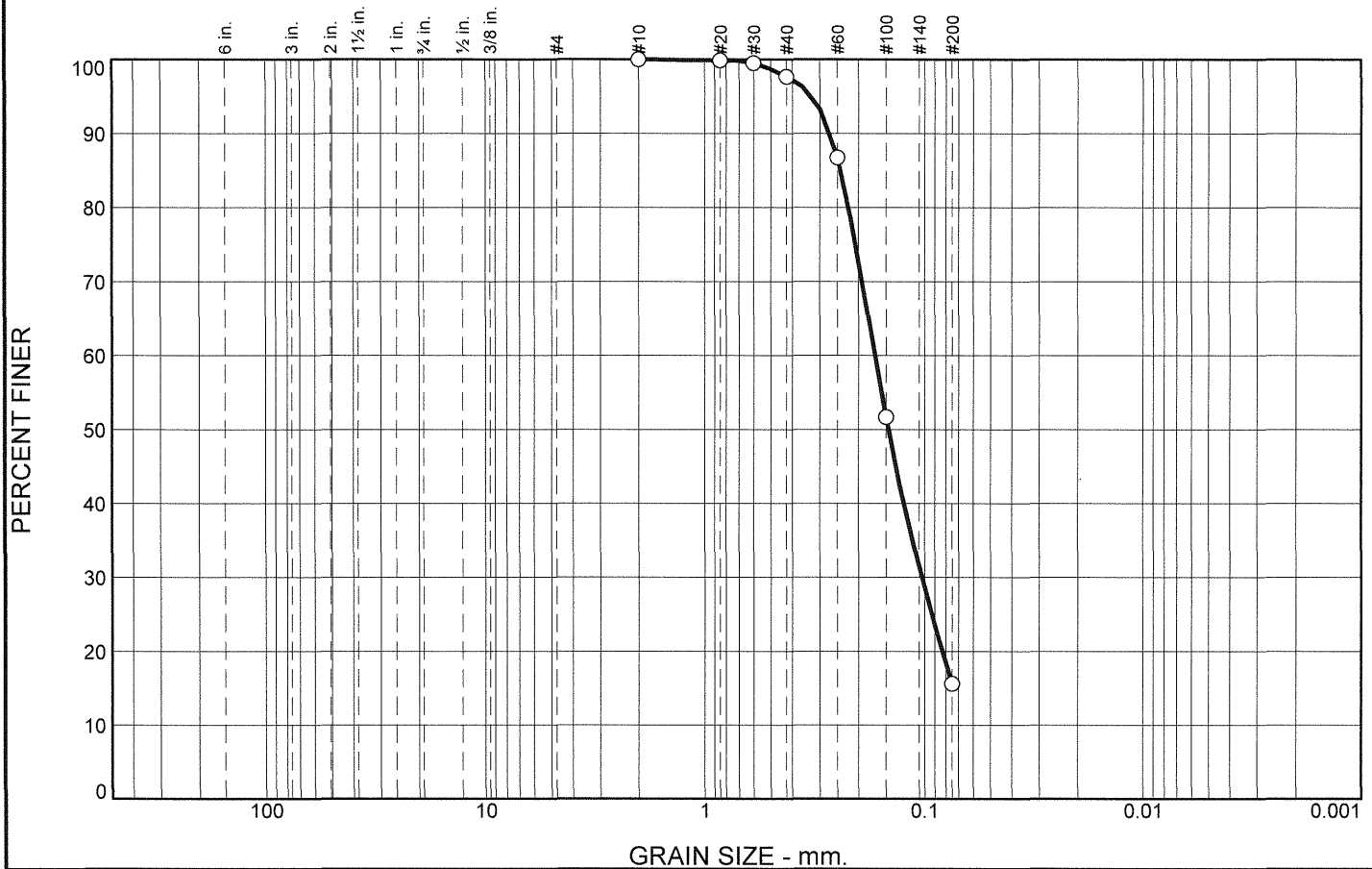
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Waukesha, Wisconsin

Project No: 0095433

Figure 14

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	2.4	82.0	15.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#20	99.9		
#30	99.5		
#40	97.6		
#60	86.8		
#100	51.7		
#200	15.6		

* (no specification provided)

Material Description
silty sand

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₈₅= 0.2415 D₆₀= 0.1682 D₅₀= 0.1463
 D₃₀= 0.1031 D₁₅= D₁₀=
 C_u= C_c=

Classification
 USCS= SM AASHTO= A-2-4(0)

Remarks

Sample Number: SM-5
Source of Sample: Soil Borings

Date: 01-13-2016

Midwest Engineering Services

Client: Ayres Associates

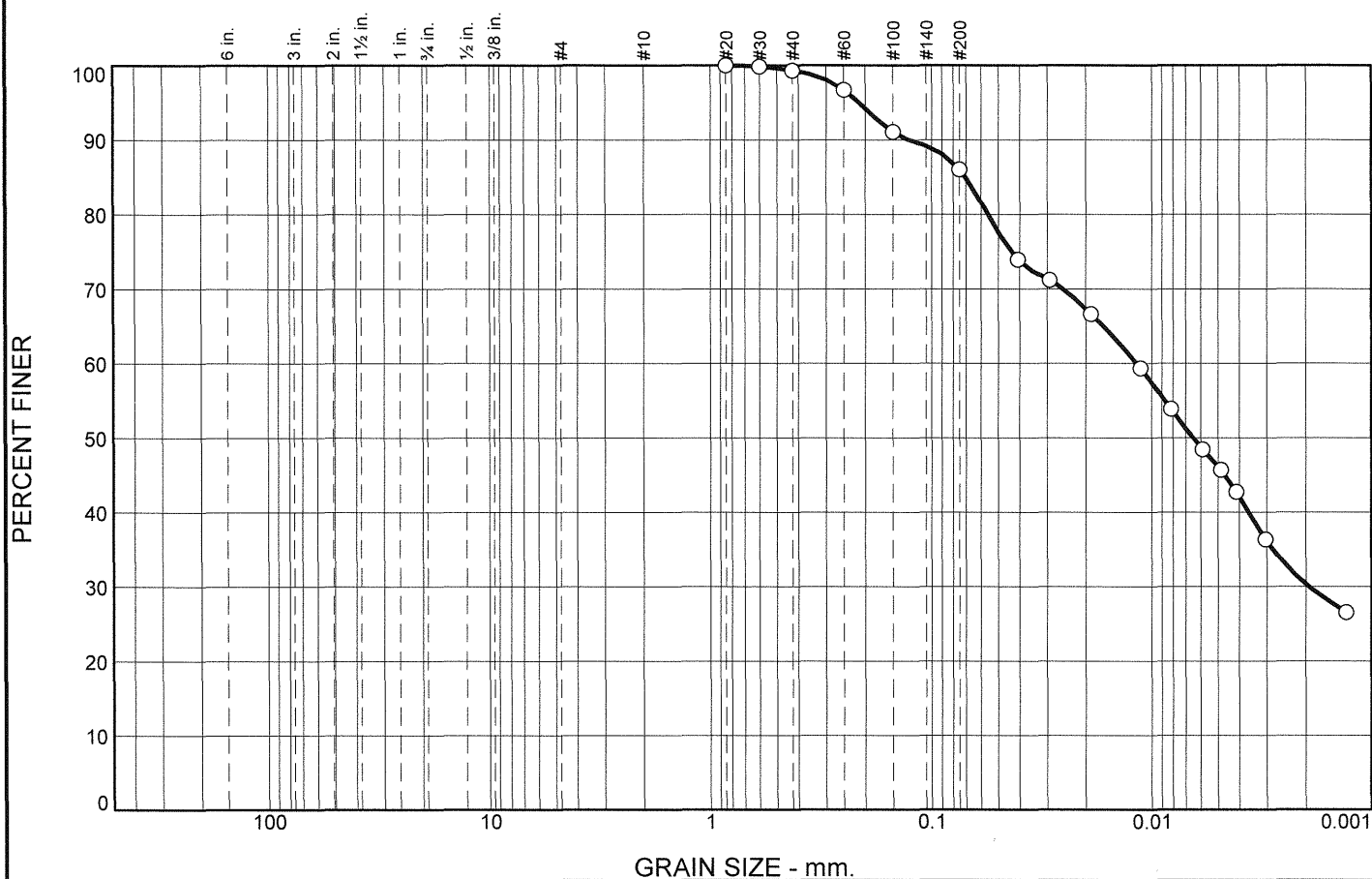
Project: Adams County Landfill

Waukesha, Wisconsin

Project No: 0095433

Figure 15

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.7	13.3	39.9	46.1

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#20	100.0		
#30	99.8		
#40	99.3		
#60	96.7		
#100	91.1		
#200	86.0		

* (no specification provided)

<u>Material Description</u>		
lean clay		
<u>Atterberg Limits</u>		
PL= 17	LL= 30	PI= 13
<u>Coefficients</u>		
D ₈₅ = 0.0705	D ₆₀ = 0.0117	D ₅₀ = 0.0065
D ₃₀ = 0.0019	D ₁₅ =	D ₁₀ =
C _u =	C _c =	
<u>Classification</u>		
USCS= CL	AASHTO= A-6(10)	
<u>Remarks</u>		

Sample Number: MW-29
Source of Sample: Soil Borings

Depth: 22'-37'

Date: 01-13-2016

Midwest Engineering Services

Client: Ayres Associates

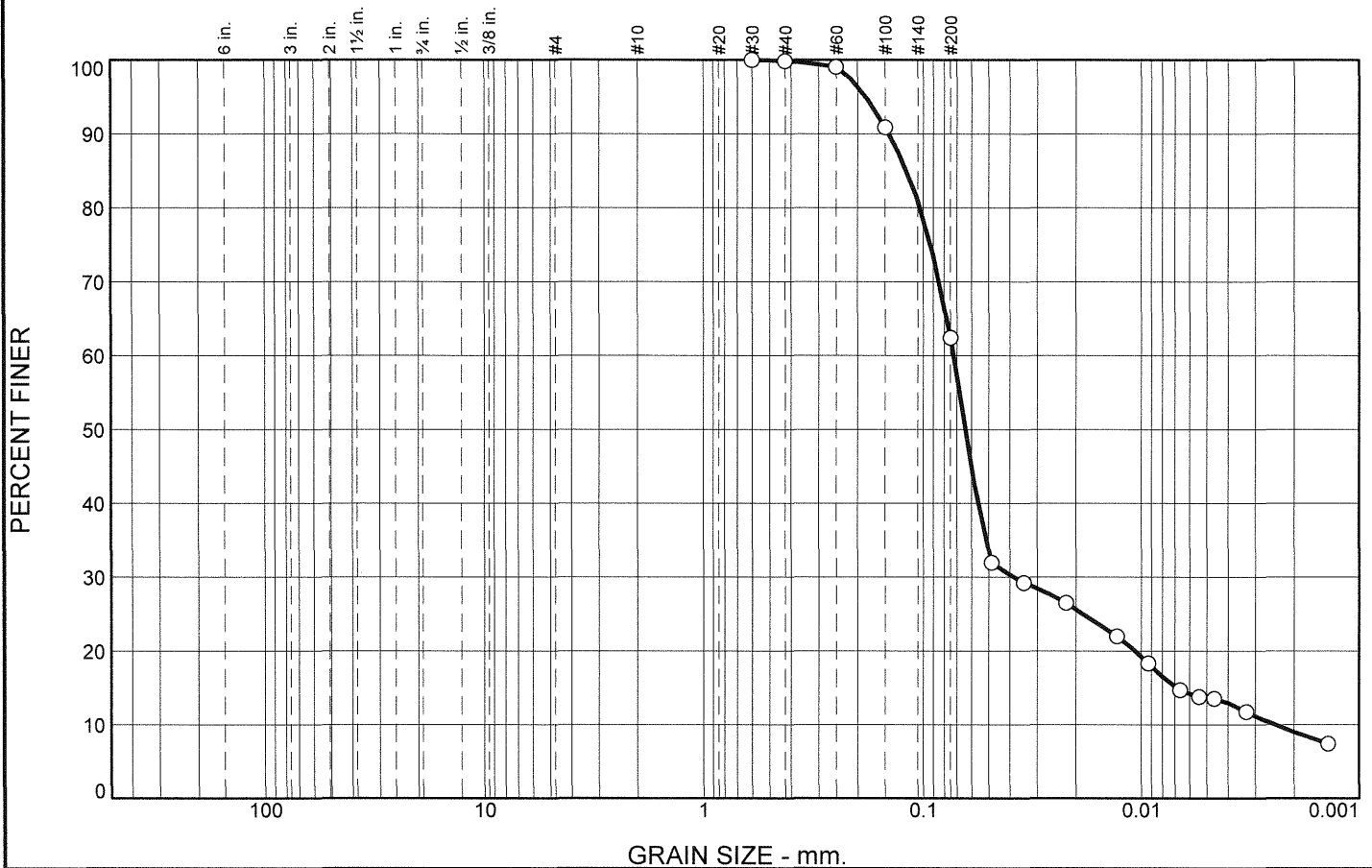
Project: Adams County Landfill

Waukesha, Wisconsin

Project No: 0095433

Figure 16

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.2	37.4	48.7	13.7

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#30	100.0		
#40	99.8		
#60	99.0		
#100	90.9		
#200	62.4		

* (no specification provided)

Material Description		
sandy silt		
Atterberg Limits		
PL=	LL=	PI=
Coefficients		
D ₈₅ = 0.1194	D ₆₀ = 0.0726	D ₅₀ = 0.0640
D ₃₀ = 0.0384	D ₁₅ = 0.0069	D ₁₀ = 0.0024
C _u = 29.72	C _c = 8.31	
Classification		
USCS= ML	AASHTO= A-4(0)	
Remarks		

Sample Number: MW-30
Source of Sample: Soil Borings

Depth: 32'-47'

Date: 01-13-2016

Midwest Engineering Services

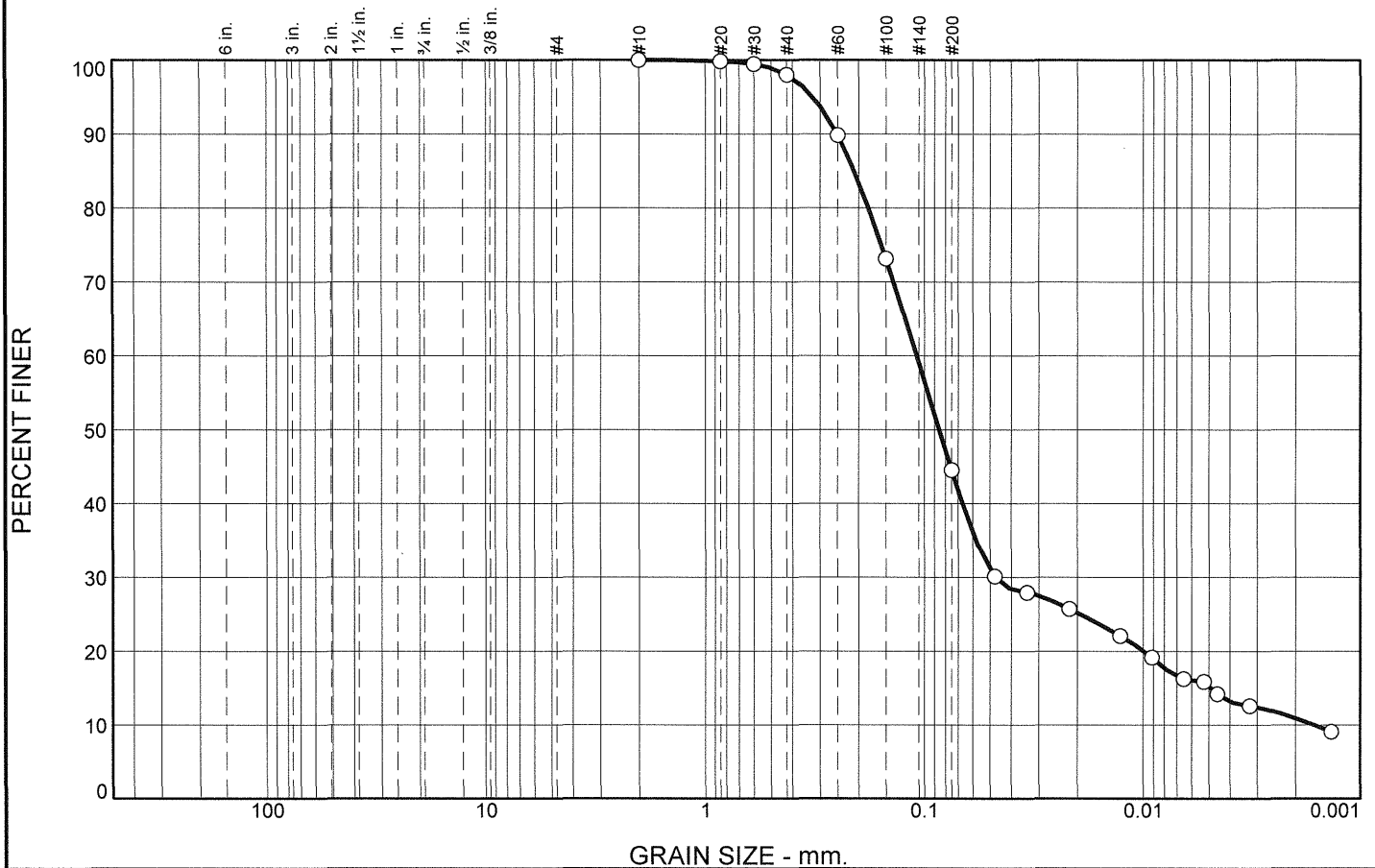
Waukesha, Wisconsin

Client: Ayres Associates
Project: Adams County Landfill

Project No: 0095433

Figure 17

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	2.0	53.4	29.3	15.3

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#20	99.8		
#30	99.4		
#40	98.0		
#60	89.8		
#100	73.2		
#200	44.6		

* (no specification provided)

<u>Material Description</u>		
silty sand		
<u>Atterberg Limits</u>		
PL= 13	LL= 16	PI= 3
<u>Coefficients</u>		
D ₈₅ = 0.2100	D ₆₀ = 0.1086	D ₅₀ = 0.0856
D ₃₀ = 0.0472	D ₁₅ = 0.0049	D ₁₀ = 0.0016
C _u = 66.20	C _c = 12.53	
<u>Classification</u>		
USCS= SM	AASHTO= A-4(0)	
<u>Remarks</u>		

Sample Number: MW-30 P
Source of Sample: Soil Borings

Depth: 70'-75'

Date: 01-13-2016

Midwest Engineering Services

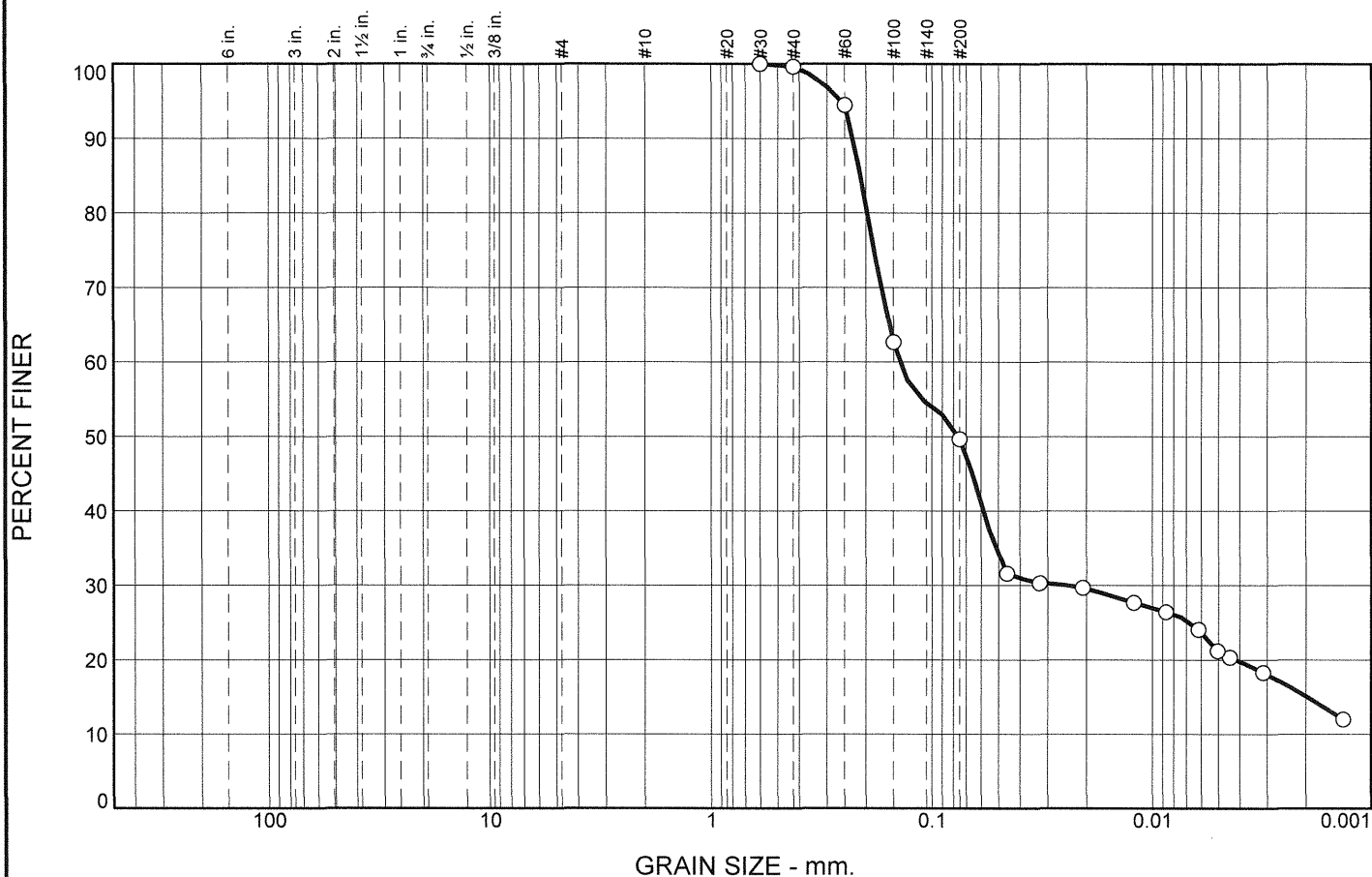
Waukesha, Wisconsin

Client: Ayres Associates
Project: Adams County Landfill

Project No: 0095433

Figure 18

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.4	50.0	28.5	21.1

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#30	100.0		
#40	99.6		
#60	94.5		
#100	62.7		
#200	49.6		

* (no specification provided)

<u>Material Description</u>		
silty, clayey sand		
<u>Atterberg Limits</u>		
PL=	LL=	PI=
<u>Coefficients</u>		
D ₈₅ = 0.2117	D ₆₀ = 0.1407	D ₅₀ = 0.0760
D ₃₀ = 0.0239	D ₁₅ = 0.0020	D ₁₀ =
C _u =	C _c =	
<u>Classification</u>		
USCS= SM	AASHTO= A-4(0)	
<u>Remarks</u>		

Sample Number: MW-31
Source of Sample: Soil Borings

Depth: 27'-42'

Date: 01-13-2016

Midwest Engineering Services

Waukesha, Wisconsin

Client: Ayres Associates
Project: Adams County Landfill

Project No: 0095433

Figure 19

CLIENT Adams County
 PROJECT Feasibility Study
 PROJECT NO. 86A22

SOIL TESTING SUMMARY

Proposed Landfill - Jensen Property

Foth & Van Dyke
 Waste/Energy Division

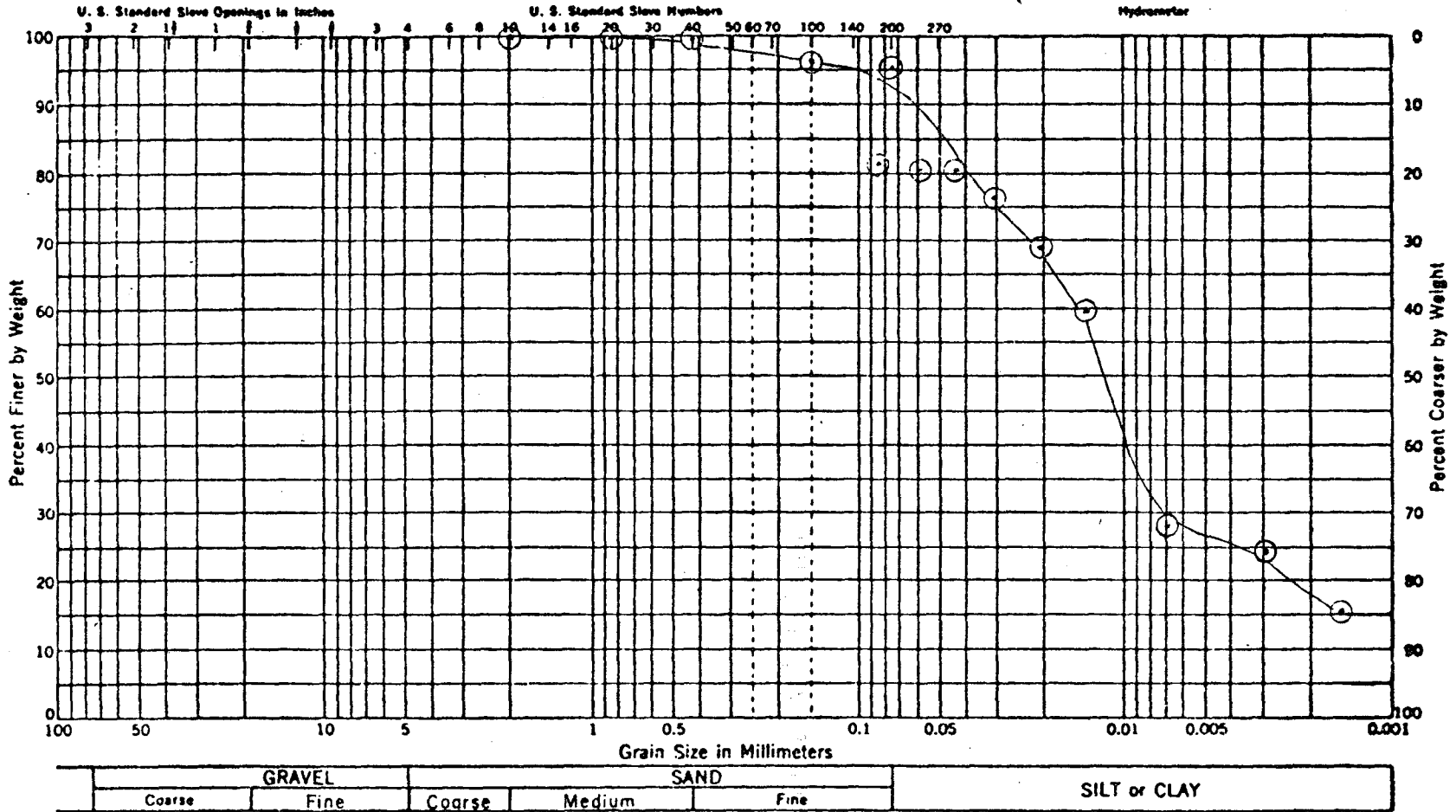
BORING / TEST PIT	SAMPLE NO./ DEPTH	SOIL TYPE (U.S.C.S.)	PERMEABILITY			ATTERBERG LIMITS	GRAIN SIZE ANALYSIS ¹					C.E.C
			SHELBY	RE-MOLDED	MODIFIED PROCTOR DENSITY		GRAVEL	SAND	D - 200			
									TOTAL	.005	.002	
MW-1	5/25'-26'	CL-ML					0	5	95	27	18	
MW-2	2/10'-11'	SP-SM					0	89	11			
MW-3P	2/50'-51'	SP-SM					0	92	8			
B-4	4/20'-21'	SP					0	98	2			
B-5	6/30'-31'	SM					0	59	41			
MW-6	10/45'-46'	CL					0	13	87	58	18	
MW-6P	7/85'-86'	SP					0	96	4			
MW-7/MW-7P	4/55'-56'	SP					0	96	4			
MW-8	8/40'	SP					0	58	42			
	10/50'-51'	CL					0	6	94	60	57	
	Bulk/ 50'-55'	CL		3.0×10^{-8}			0	38	62			
MW-9	Bulk/ 10'-12'	SP		8.27×10^{-3}			0	98	2			
	7/35' upper	CL					0	13	87	56	43	
	7A/35' lower	SP					0	96	4			
B-10	4/15'	SM					0	59	41			
	5/20'-21'	CL-ML					0	11	89	31	16	
	6/25'-26'	CL-ML					0	6	94	35	14	
	7/30'-33'	CL-ML	2.00×10^{-7}									
B-11	10'-15'	SP		1.04×10^{-2}			0	100	0			
	8/35'-36'	SM					0	66	34			
	9/40'-41'	CL					0	1	99	44	25	
B-12	Bulk/ 15'-10'	SM		6.60×10^{-4}			0	87	13			
	SE/ 30'-31'	CL	2.00×10^{-7}			31/18/13	0	8	92	40	21	
B-13	Bulk/ 10'-13'	SP		7.37×10^{-3}			0	99	1			
	2/10'-11'	SP					0	98	2			
	7/30'-31'	CL					0	12	88	24	15	
B-14	6/30'-31'	CL					0	3	97	25	20	

Proposed Landfill - Jensen Property

Foth & Van Dyke
Waste/Energy Division

¹ Refer to Appendices D and G for Grain Size Analyses (MW-1, MW-2, B-4, B-5 are in Appendix D)

UNIFIED CLASSIFICATION SYSTEM

[illegible]

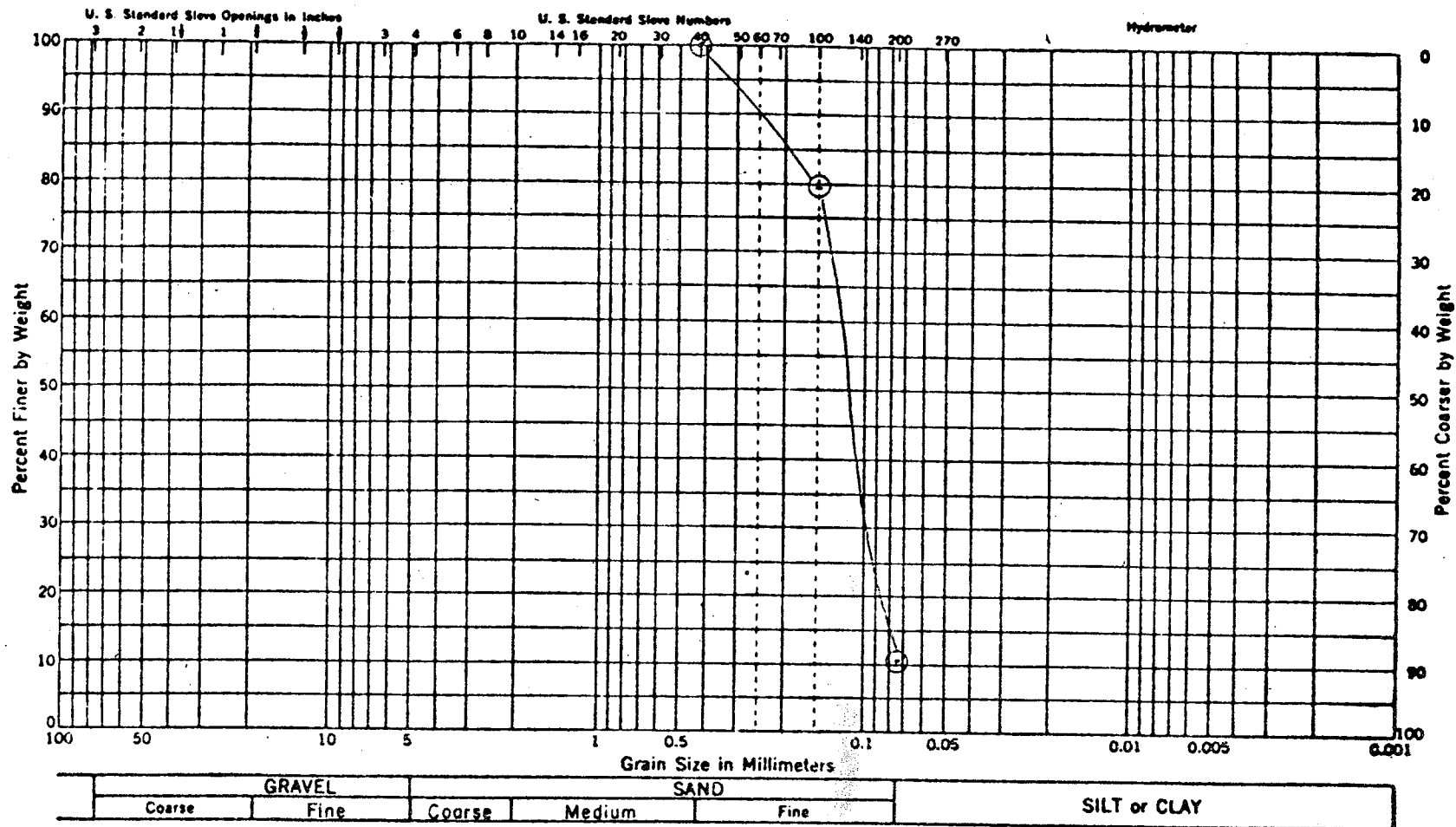
ADAMS COUNTY LANDFILL
GRAIN SIZE ANALYSIS
ADAMS COUNTY, WISCONSIN

STS Consultants Ltd.

540 LAMBEAU STREET
GREEN BAY, WIS. 54303

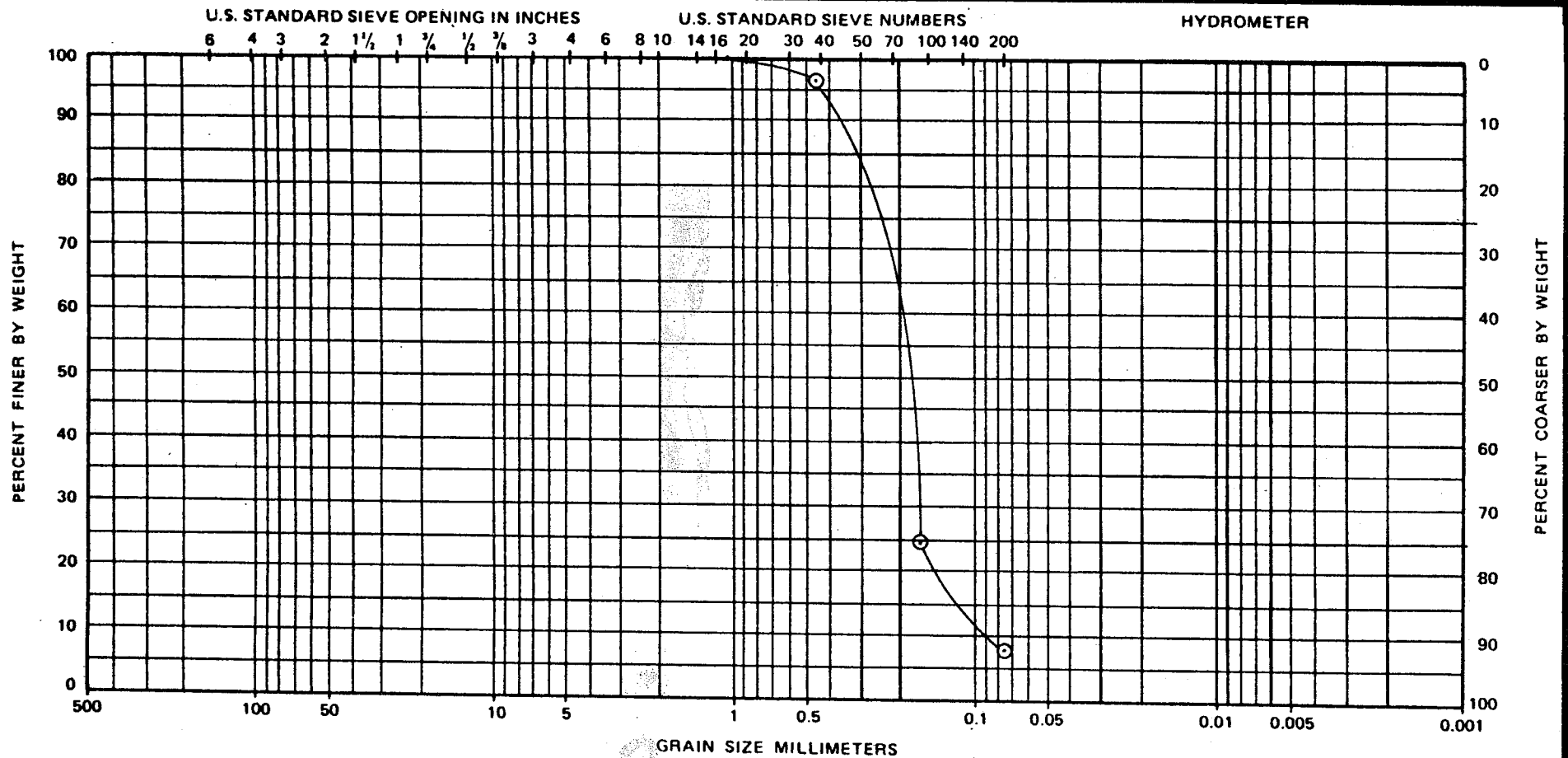
DRAWN	APPROVED	DATE	JOB No.
SMD	GMT	6-28-84	13218

UNITED CLASSIFICATION SYSTEM



SAMPLE NO.	W.C.	LL	PL	PI	CLASSIFICATION	ADAMS COUNTY LANDFILL GRAIN SIZE ANALYSIS ADAMS COUNTY, WISCONSIN			
MW-2					Fine sand (SP-SM)-trace of silt				
S-2						STS Consultants Ltd. 540 LAMBEAU STREET GREEN BAY, WIS. 54303			
10'									
						DRAWN	APPROVED	DATE	JOB No.
						SMD	GMT	6-28-84	13218

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT Adams County Feasibility Study	
MW-3P		SAND w/SILT, fine	17.5					
S-2	50.0'	grained, light brown					DATE: 8/15/86	PROJECT NO: 86A22
		(SP-SM)						
DRAWN BY: RRR	APPROVED BY:	NOTES:					Foth & Van Dyke Industrial Inc. Waste/Energy Division	

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road
P. O. Box 19012
Green Bay, Wisconsin 54307-9012
414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: July 10 to 12, 1986

REPORT NO.: FR-1

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Report SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifications
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4				
No. 8				
No. 10	0	0	100	
No. 16				
No. 20				
No. 30				
No. 40	4.1	3.3	96.7	
No. 50				
No. 80				
No. 100	89.3	72.0	24.7	
No. 200	20.6	16.6	8.1	
Pan	9.2	10.1	8.1	
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 124.1 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED FROM: from Boring MW-3P

IDENTIFICATION: Sample #2 @ 50.0'

DATE SAMPLED: June 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

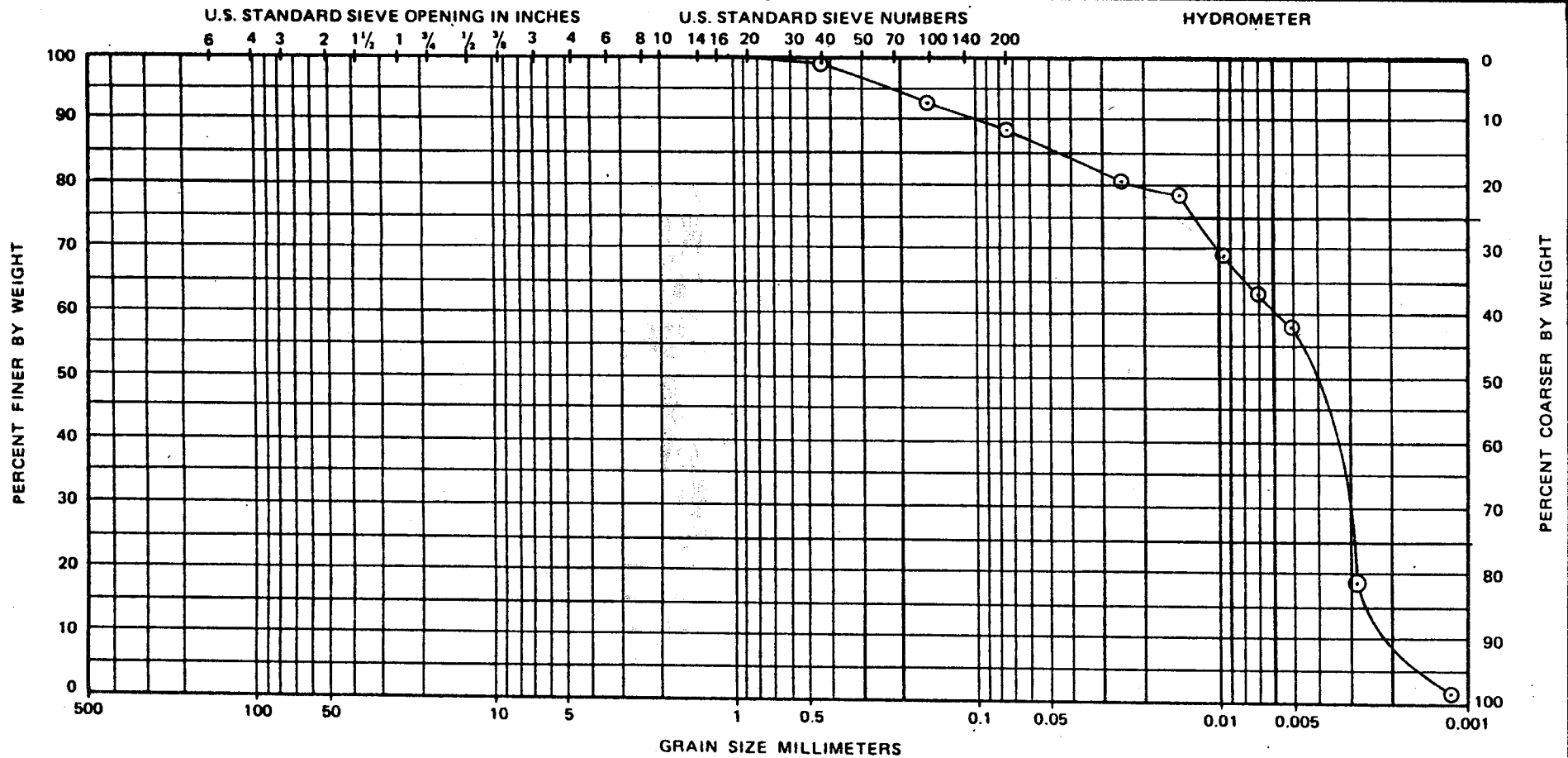
DRY RODDED WGT: _____

WASHED GRADATION: yes

PERCENT PASSING NO. 200 SIEVE 8.1 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road
P. O. Box 19012
Green Bay, Wisconsin 54307-9012
414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: July 10 to 12, 1986

REPORT NO.: FR-4

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifi-cations
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4				
No. 8				
No. 10	0	0	100	
No. 16				
No. 20				
No. 30				
No. 40	13	14	99.6	
No. 50				
No. 80				
No. 100	5.5	6.8	92.8	
No. 200	3.6	4.5	88.3	
Pan	70.6	71.0	88.3	
Fineness Modulus				

RECEIVED AT LABORATORY: Junr 23, 1986

QUANTITY REPRESENTED: 80.4 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED ~~FORM~~ from Boring #MW-6

IDENTIFICATION: Sample #10 @ 45'

DATE SAMPLED: June 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

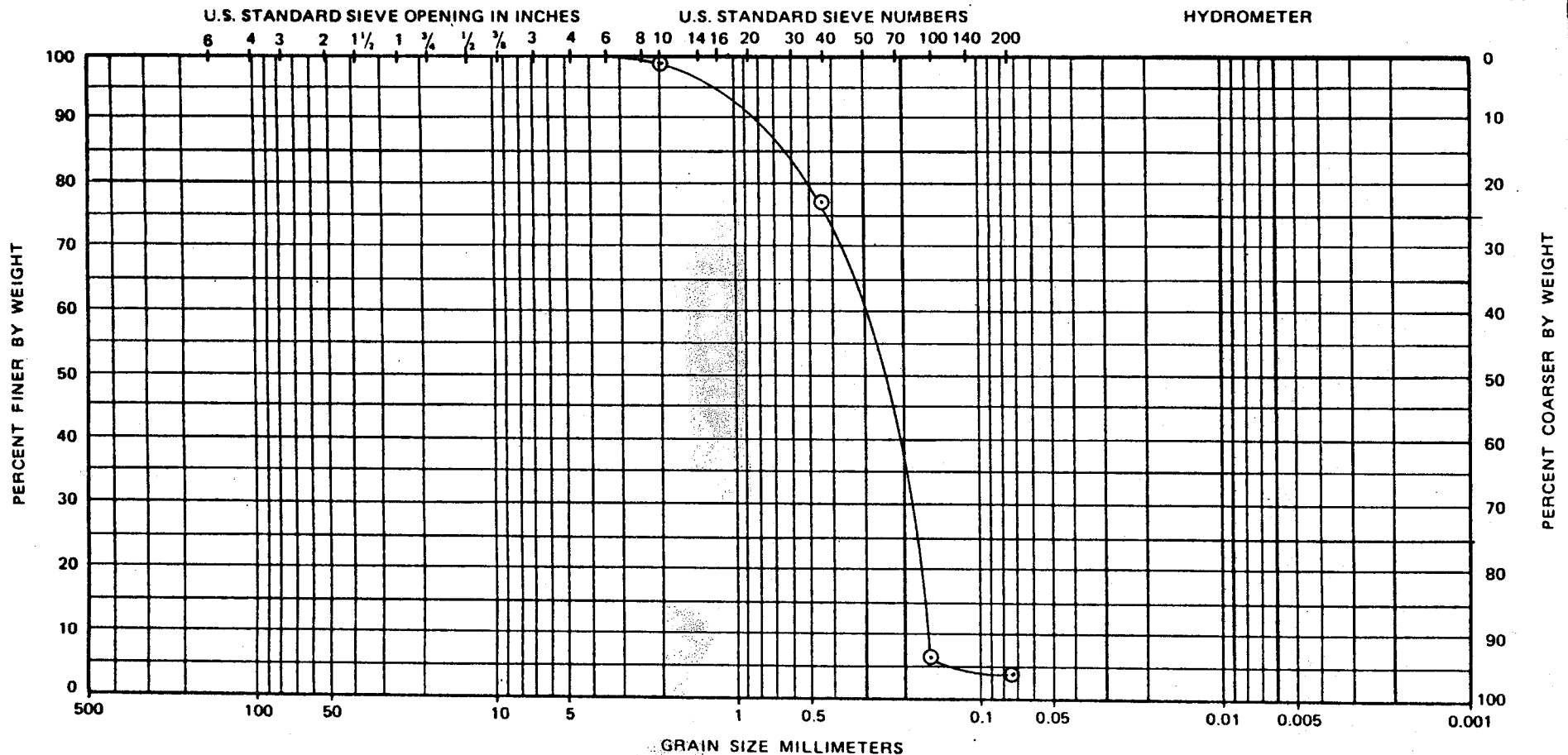
DRY RODDED WGT: _____

WASHED GRADATION: yes

PERCENT PASSING NO. 200 SIEVE 88.3 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT
MW-6P		SAND, fine to medium	19.7				Adams County Feasibility
S-7	85'	grained, brown					Study
		(SP)					DATE: 8/15/86 PROJECT NO: 86A22
DRAWN BY: RRR	APPROVED BY:	NOTES:	Foth & Van Dyke Industrial Inc. Waste/Energy Division				

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road
P. O. Box 19012
Green Bay, Wisconsin 54307-9012
414/497-2500

PROJECT NO.: _____

JOB NO.: _____ 86A22

DATE: _____ July 10 to 12, 1986

REPORT NO.: _____ FR-2

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifi-cations
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4	0	0	100	
No. 8				
No. 10	1.2	.8	99.2	
No. 16				
No. 20				
No. 30				
No. 40	33.3	22.4	76.8	
No. 50				
No. 80				
No. 100	104.4	70.2	6.6	
No. 200	3.3	2.2	4.4	
Pan	6.6	4.4		
Fineness Modulus				

RECEIVED AT LABORATORY: _____ June 23, 1986

QUANTITY REPRESENTED: _____ 148.7 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED FROM: from Boring MW-6P

IDENTIFICATION: Sample #7 @ 85'

DATE SAMPLED: June 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

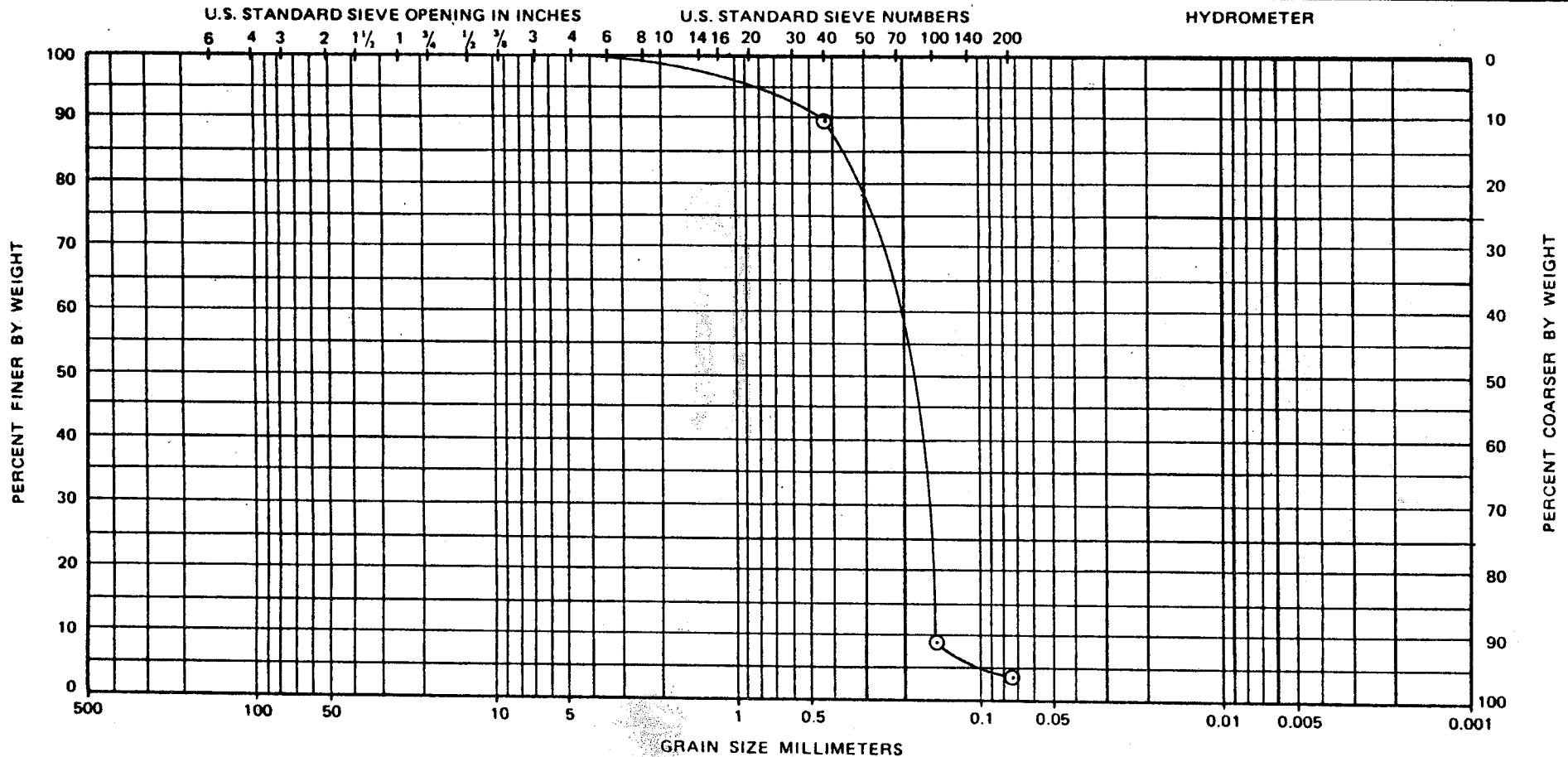
DRY RODDED WGT: _____

WASHED GRADATION: yes

PERCENT PASSING NO. 200 SIEVE 4.4 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road
P. O. Box 19012
Green Bay, Wisconsin 54307-9012
414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: July 10 to 12, 1986

REPORT NO.: FR-3

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifi-cations
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4	0	0	100	
No. 8				
No. 10	.1	.1	99.9	
No. 16				
No. 20				
No. 30				
No. 40	15.2	10.5	89.4	
No. 50				
No. 80				
No. 100	116.0	80.3	9.1	
No. 200	7.4	5.1	4.0	
Pan 5.5	5.7	3.9		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 144.3 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED FROM: from Boring MW-7P

IDENTIFICATION: Sample #4 @ 55.0'

DATE SAMPLED: June 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

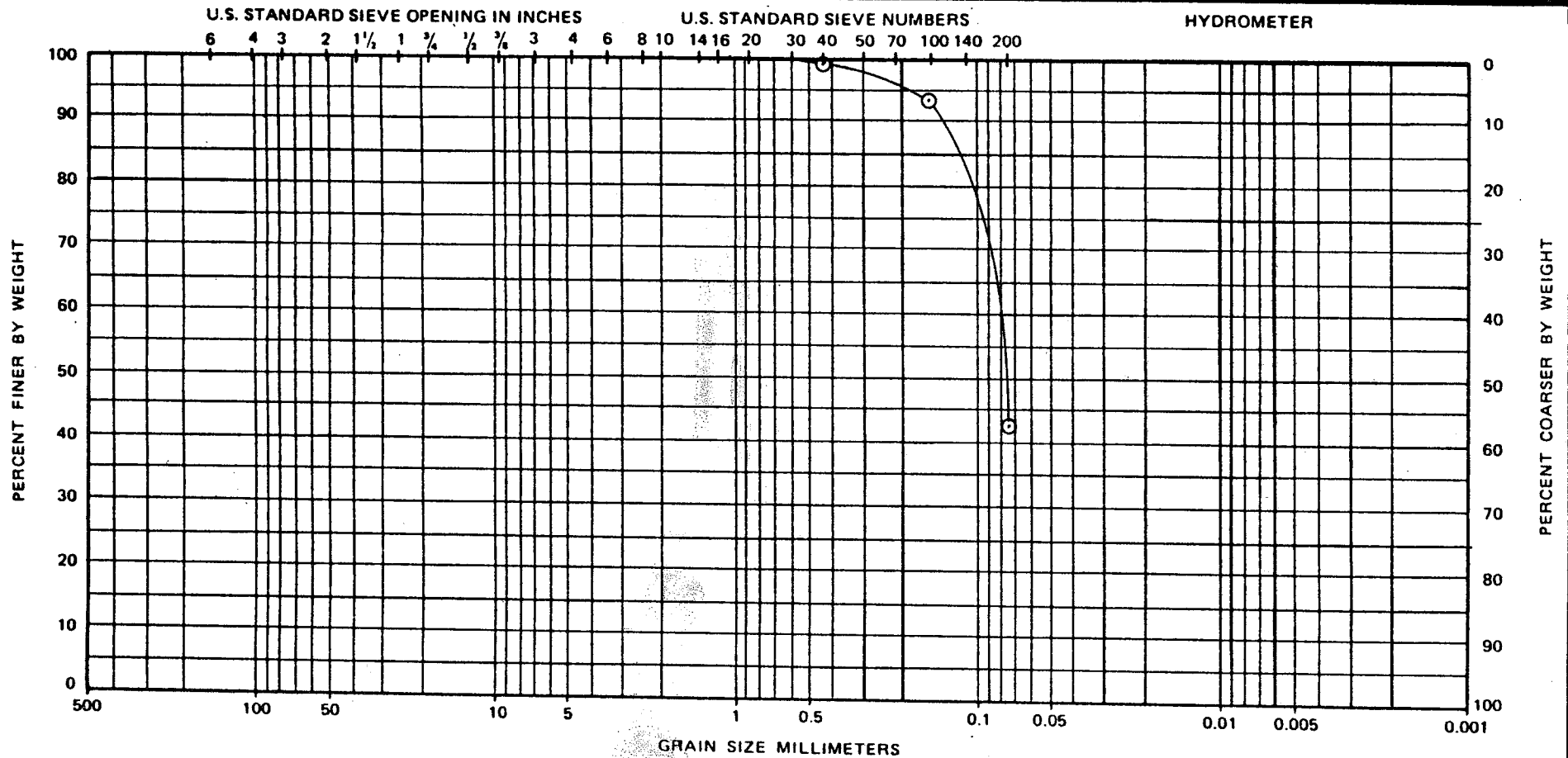
DRY RODDED WGT: _____

WASHED GRADATION: yes

PERCENT PASSING NO. 200 SIEVE 4.0 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT
MW-8		SILTY SAND, fine	15.8				Adams County Feasibility Study
S-8	40.0'	grained, light brown					DATE: 8/15/86 PROJECT NO: 86A22
		(SM)					
DRAWN BY: RRR	APPROVED BY:	NOTES:	Foth & Van Dyke Industrial Inc. Waste/Energy Division				

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road
P. O. Box 19012
Green Bay, Wisconsin 54307-9012
414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: July 10 & 11, 1986

REPORT NO.: FR-5

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifications
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4				
No. 8				
No. 10	0	0	100	
No. 16				
No. 20				
No. 30				
No. 40	.1	.1	99.9	
No. 50				
No. 80				
No. 100	7.8	6.3	93.6	
No. 200	63.2	51.1	42.5	
12.2 Pan 40.5	52.7	42.5		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 123.8 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED FROM: from Boring MW-8

IDENTIFICATION: Sample #8 @ 40.0'

DATE SAMPLED: June 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

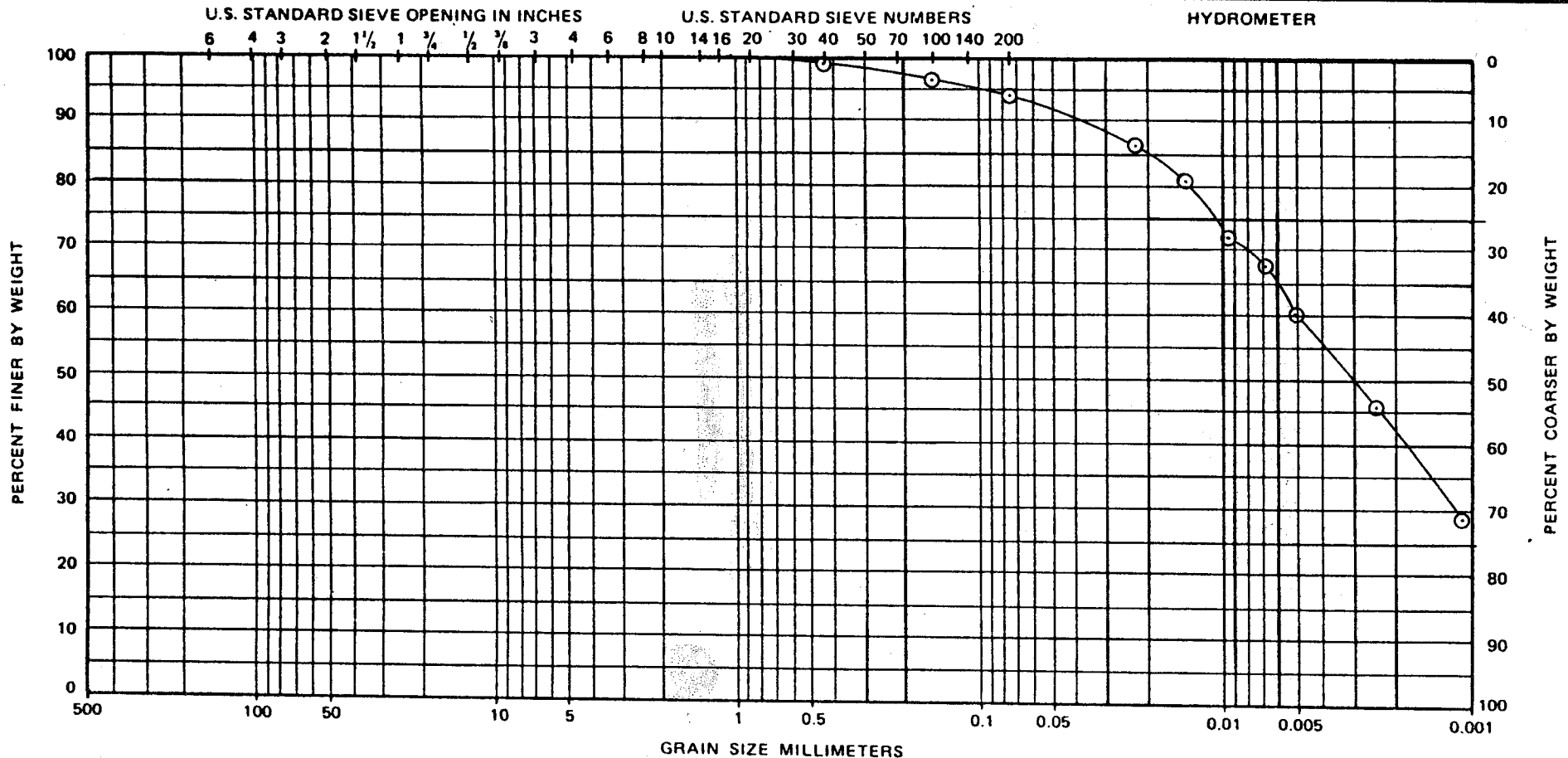
DRY RODDED WGT: _____

WASHED GRADATION: yes

PERCENT PASSING NO. 200 SIEVE 42.5 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT Adams County Feasibility Study	
MW-8		LEAN CLAY, reddish	31.1					
S-10	50'	brown					DATE: 8/15/86	PROJECT NO: 86A22
		(CL)						
DRAWN BY: RRR	APPROVED BY:	NOTES:					Foth & Van Dyke Industrial Inc. Waste/Energy Division	

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road

P. O. Box 19012

Green Bay, Wisconsin 54307-9012

414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: July 17 to 21, 1986

REPORT NO.: FR-9

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Material for Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifi-cations
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4				
No. 8				
No. 10	---	---	100	
No. 16				
No. 20				
No. 30				
No. 40	.3	.4	99.6	
No. 50				
No. 80				
No. 100	2.2	3.2	96.4	
No. 200	1.5	2.2	94.2	
Pan	64.2	94.1		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 68.2 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED ~~FORM~~ XXXX from Boring #MW-8

IDENTIFICATION: Sample #10 @ 50'

DATE SAMPLED: _____

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

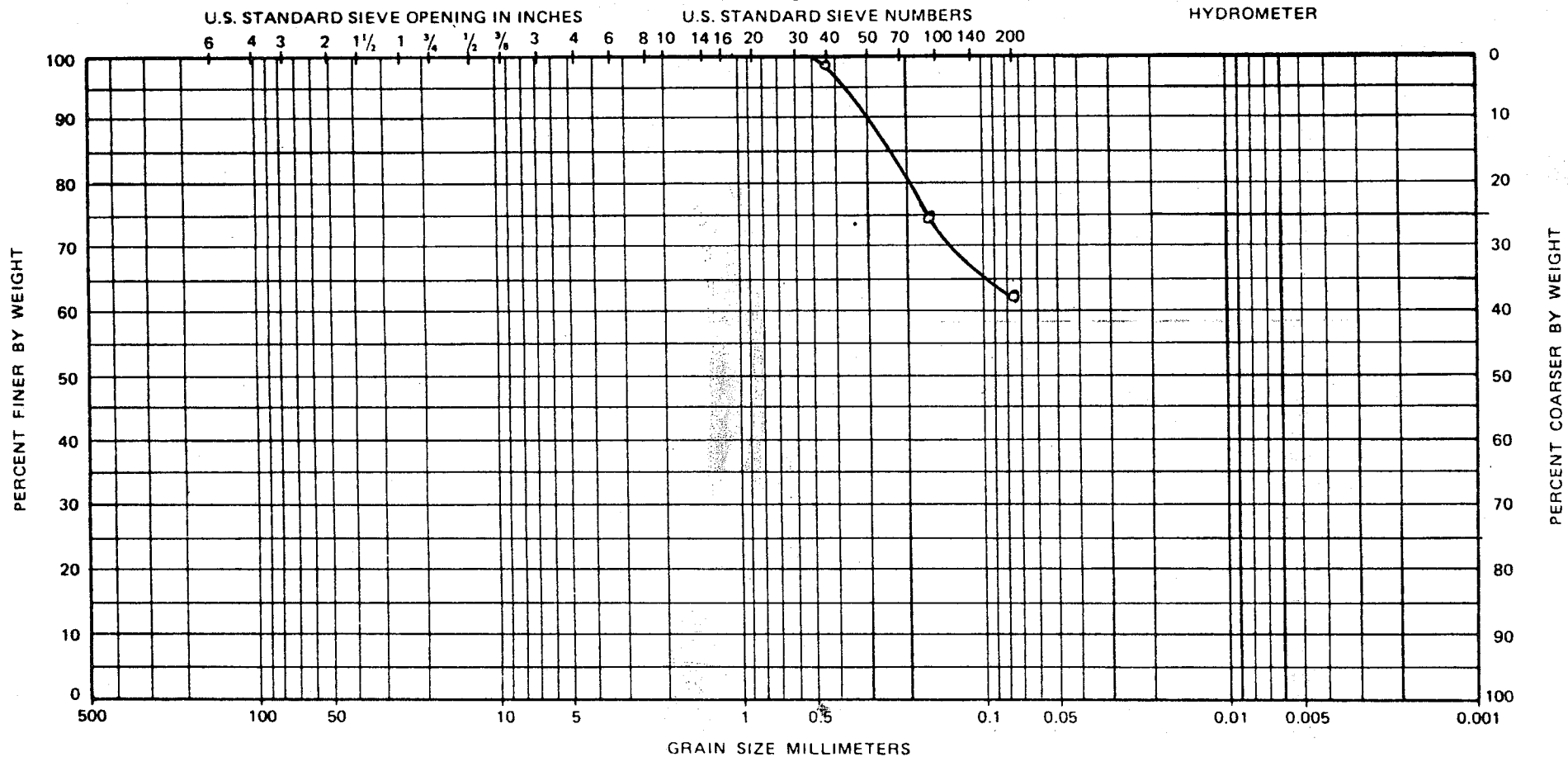
DRY RODDED WGT: _____

WASHED GRADATION: yes

PERCENT PASSING NO. 200 SIEVE 94.2 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT
Boring MW-8	50-55'	SANDY LEAN CLAY, brown					Adams County Feasibility Study
		(CL)					DATE: 9/19/86 PROJECT NO: 86A22
DRAWN BY: RRR	APPROVED BY:	NOTES:	Foth & Van Dyke Waste/Energy Division				

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road
P. O. Box 19012
Green Bay, Wisconsin 54307-9012
414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: September 12-16, 1986

REPORT NO.: FR-18

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifications
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4				
No. 8				
No. 10	0	0	100	
No. 16				
No. 20				
No. 30				
No. 40	3.6	1.1	98.9	
No. 50				
No. 80				
No. 100	79.0	24.6	74.3	
No. 200	38.4	12.0	62.3	
Pan ^{200.0} _{.3}	200.3	62.3		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 321.3 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED ^{From}~~XXXX~~ Boring MW-8

IDENTIFICATION: Depth 50-55'

DATE SAMPLED: June 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

DRY RODDED WGT: _____

WASHED GRADATION: Yes

PERCENT PASSING NO. 200 SIEVE 62.3 %

CHECKED BY: _____

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road P. O. Box 19012 Green Bay, Wisconsin 54307-9012 414/497-2500

COMPACTION CONTROL REPORT

DATE: 9/19/86 JOB NAME: Adams County Feasibility Study SCOPE I.D. #: 86A22

1. LABORATORY COMPACTION TEST DATA

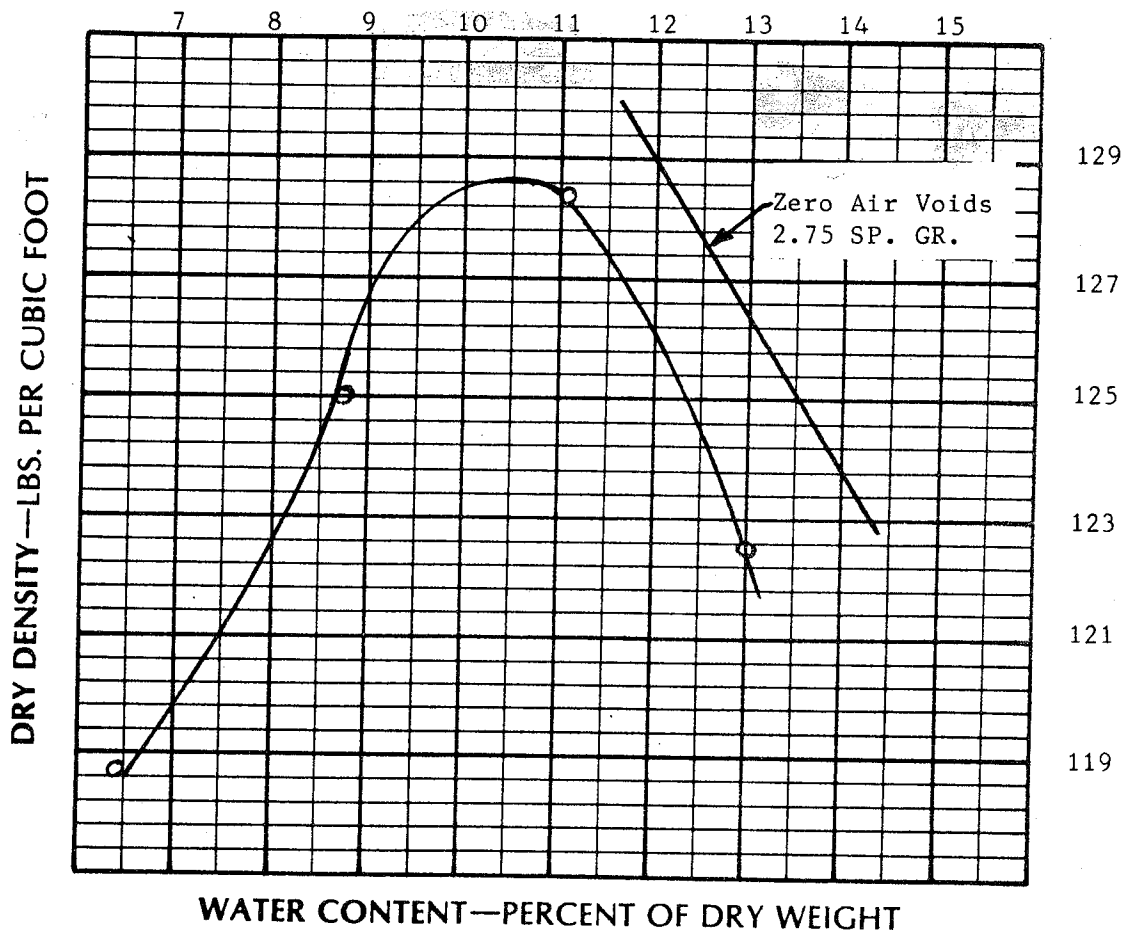
A. DESCRIPTION OF SOIL: SANDY LEAN CLAY, brown (CL)

MATERIAL MARK FR-18 CLASSIFICATION AASHO
SOURCE OF MATERIAL Boring MW-8 Depth 50-55' BPR

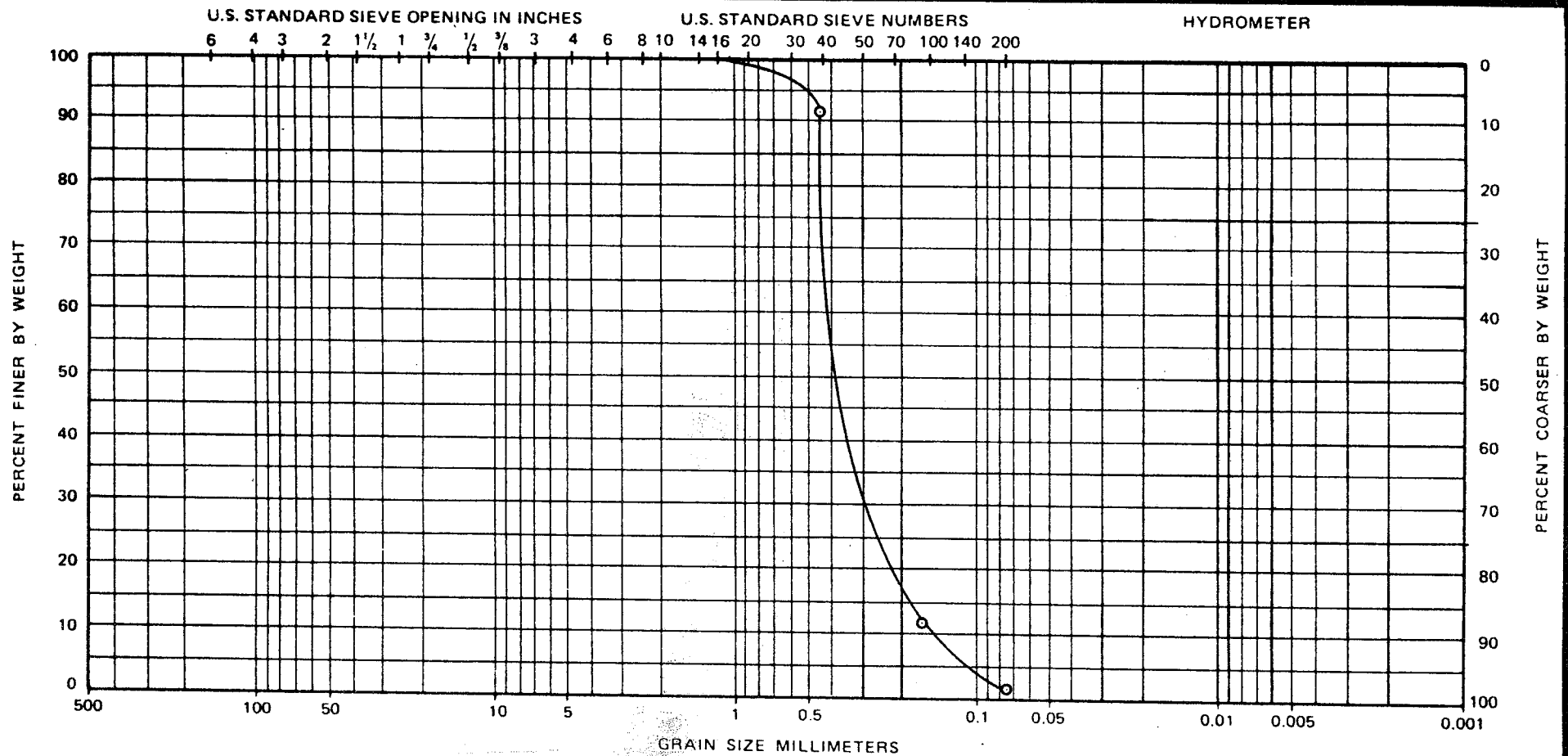
NATURAL WATER CONTENT % NATURAL DRY DENSITY PCF SPECIFIC GRAVITY
LIQUID LIMIT % PLASTIC LIMIT % PLASTICITY INDEX

B. TEST PROCEDURE USED: ASTM D1557 Method "A"

C. TEST RESULTS: OPTIMUM WATER CONTENT 10.5 %
MAXIMUM DRY DENSITY 128.8 PCF (AT A WET DENSITY OF 142.3 PCF)



GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT
Boring MW-9	10'	SAND, fine grained, brown (SP)					Adams County Feasibility Study
							DATE: 9-12-86 PROJECT NO: 86A22
DRAWN BY: RRR	APPROVED BY:	NOTES:	Foth & Van Dyke Waste/Energy Division				

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road

P. O. Box 19012

Green Bay, Wisconsin 54307-9012

414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: September 10 to 11, 1986

REPORT NO.: FR-19

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifi-cations
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4				
No. 8				
No. 10	0	0	100	
No. 16				
No. 20				
No. 30				
No. 40	36.1	8.5	91.5	
No. 50				
No. 80				
No. 100	337.8	80.0	11.5	
No. 200	41.7	9.9	1.6	
Pan	6.7	1.6		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 422.3 grams

SUBMITTED BY: Janis Schallhorn of Foth & Van Dyke

FROM: Boring MW-9
SAMPLED ~~FROM~~

IDENTIFICATION: Depth 10'

DATE SAMPLED: June, 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

DRY RODDED WGT: _____

WASHED GRADATION: Yes

PERCENT PASSING NO. 200 SIEVE 1.6 %

CHECKED BY: _____

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road

P. O. Box 19012

Green Bay, Wisconsin 54307-9012

414/497-2500

COMPACTION CONTROL REPORT

DATE: 9-11-86 JOB NAME: Adams County SCOPE I.D. #: 86A22FR

1. LABORATORY COMPACTION TEST DATA

A. DESCRIPTION OF SOIL: SAND, fine grained, brown (SP)

MATERIAL MARK Boring MW-9

CLASSIFICATION _____

AASH
BPR

SOURCE OF MATERIAL _____

NATURAL WATER CONTENT _____ % NATURAL DRY DENSITY _____ PCF SPECIFIC GRAVITY _____

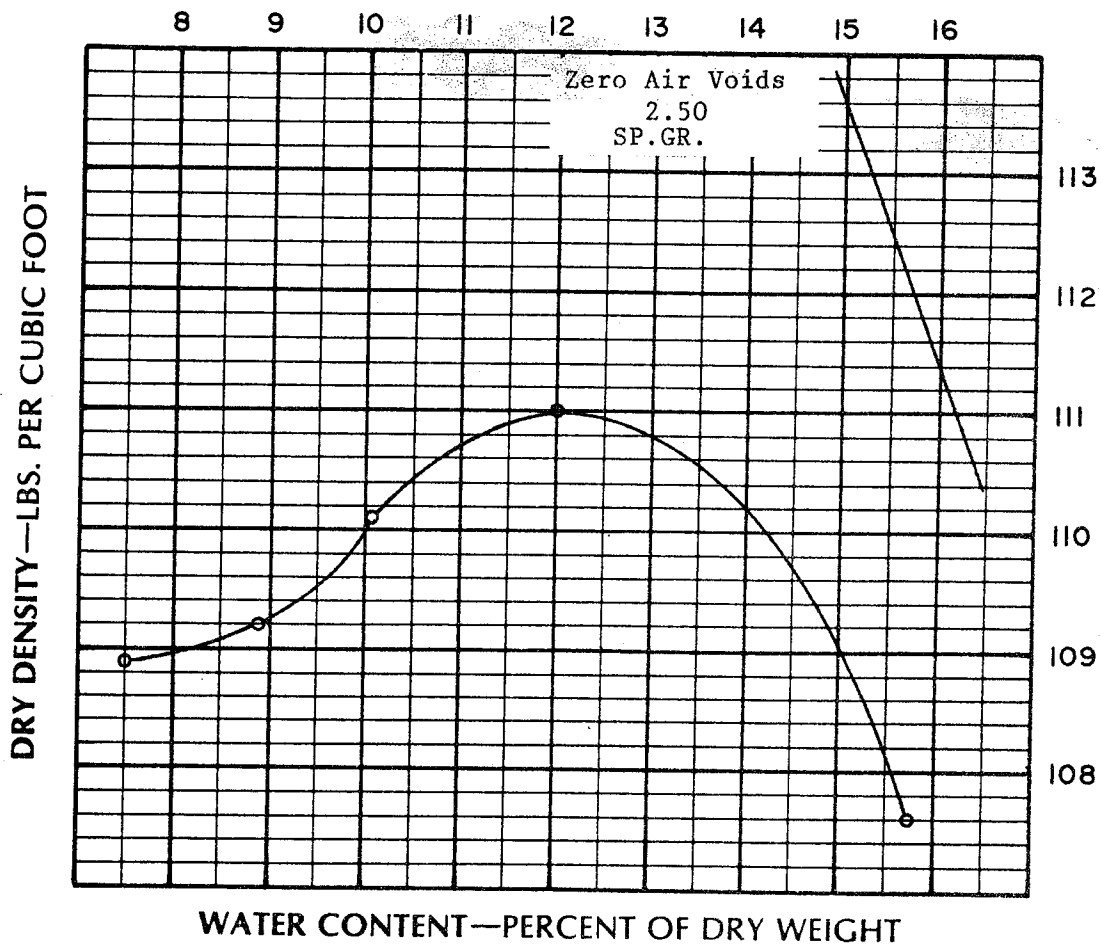
LIQUID LIMIT _____ % PLASTIC LIMIT _____ % PLASTICITY INDEX _____

B. TEST PROCEDURE USED: ASTM D 1557-78 Method "A"

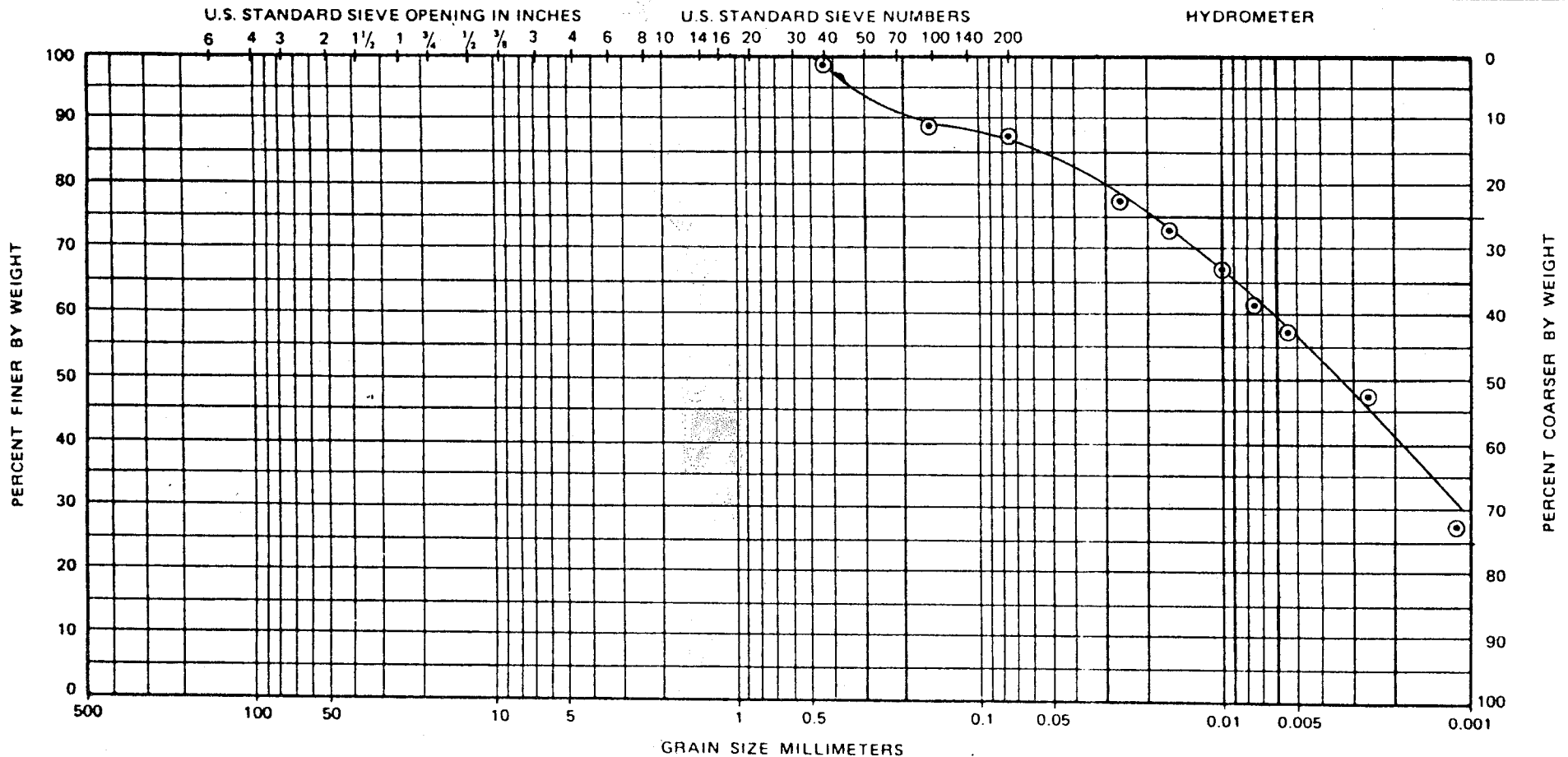
C. TEST RESULTS:

OPTIMUM WATER CONTENT 13.0 %

MAXIMUM DRY DENSITY 111.0 PCF (AT A WET DENSITY OF 125.4 PCF)



GRAIN SIZE ANALYSIS



Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road

P. O. Box 19012

Green Bay, Wisconsin 54307-9012

414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: August 1986

REPORT NO.: FR15

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifications
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4				
No. 8				
No. 10	0	0	100	
No. 16				
No. 20				
No. 30				
No. 40	.7	1.2	98.8	
No. 50				
No. 80				
No. 100	5.4	9.6	89.2	
No. 200	1.0	1.8	87.4	
Pan	49.2	87.4		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 56.3 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED FROM: Boring MW 9

IDENTIFICATION: Sample #7 (upper) @ 35'

DATE SAMPLED: June 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

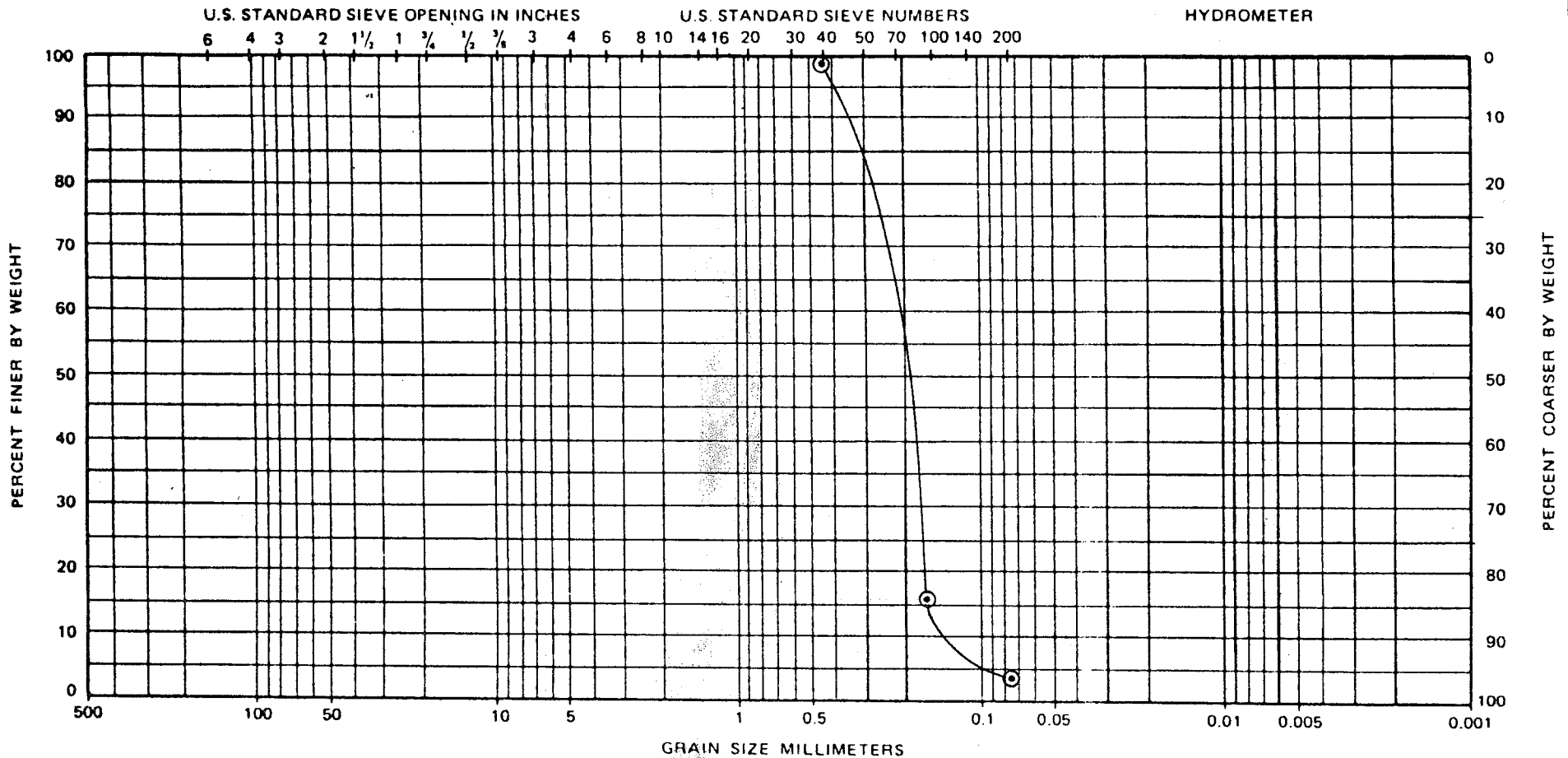
DRY RODDED WGT: _____

WASHED GRADATION: Yes

PERCENT PASSING NO. 200 SIEVE 87.4%

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT
Boring MW-9		SAND, fine grained	3.3				Adams County Feasibility Study
7-A	35'	light brown					DATE: 8/25/86 PROJECT NO: 86A22
		(SP)					
DRAWN BY: RRR	APPROVED BY:	NOTES:					Foth & Van Dyke Waste/Energy Division

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road
P. O. Box 19012
Green Bay, Wisconsin 54307-9012
414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: August 19 to 22, 1986

REPORT NO.: FR15-A

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifi-cations
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4				
No. 8				
No. 10				
No. 16				
No. 20				
No. 30				
No. 40	.7	.9	99.1	
No. 50				
No. 80				
No. 100	62.8	82.8	16.3	
No. 200	9.5	12.5	3.8	
Pan	2.8	3.7		
Fineness Modulus				

RECEIVED AT LABORATORY: _____

QUANTITY REPRESENTED: 75.8 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED FROM: Boring MW-9

IDENTIFICATION: Sample 7A (lower) @ 35'

DATE SAMPLED: June 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

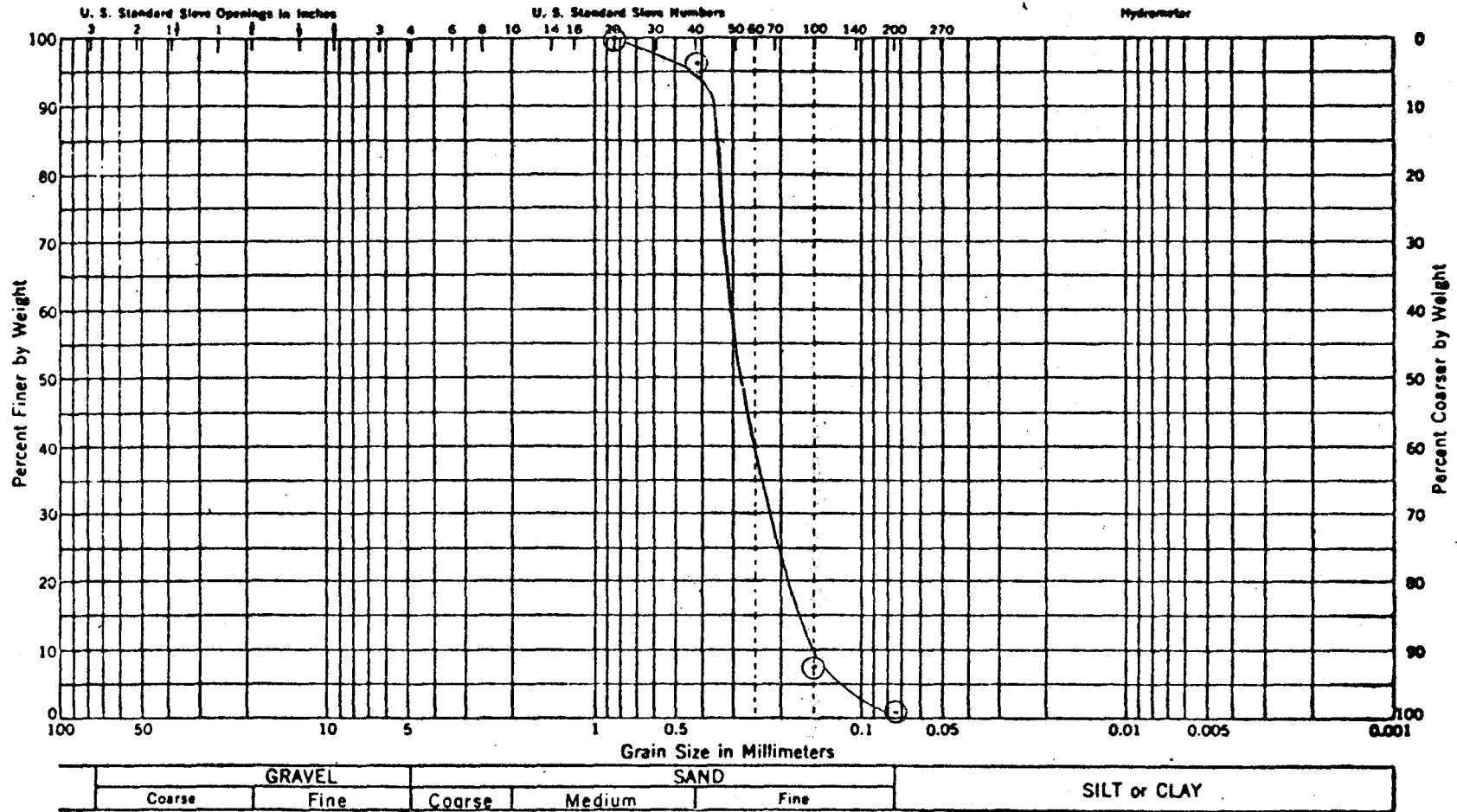
DRY RODDED WGT: _____

WASHED GRADATION: Yes

PERCENT PASSING NO. 200 SIEVE 3.7

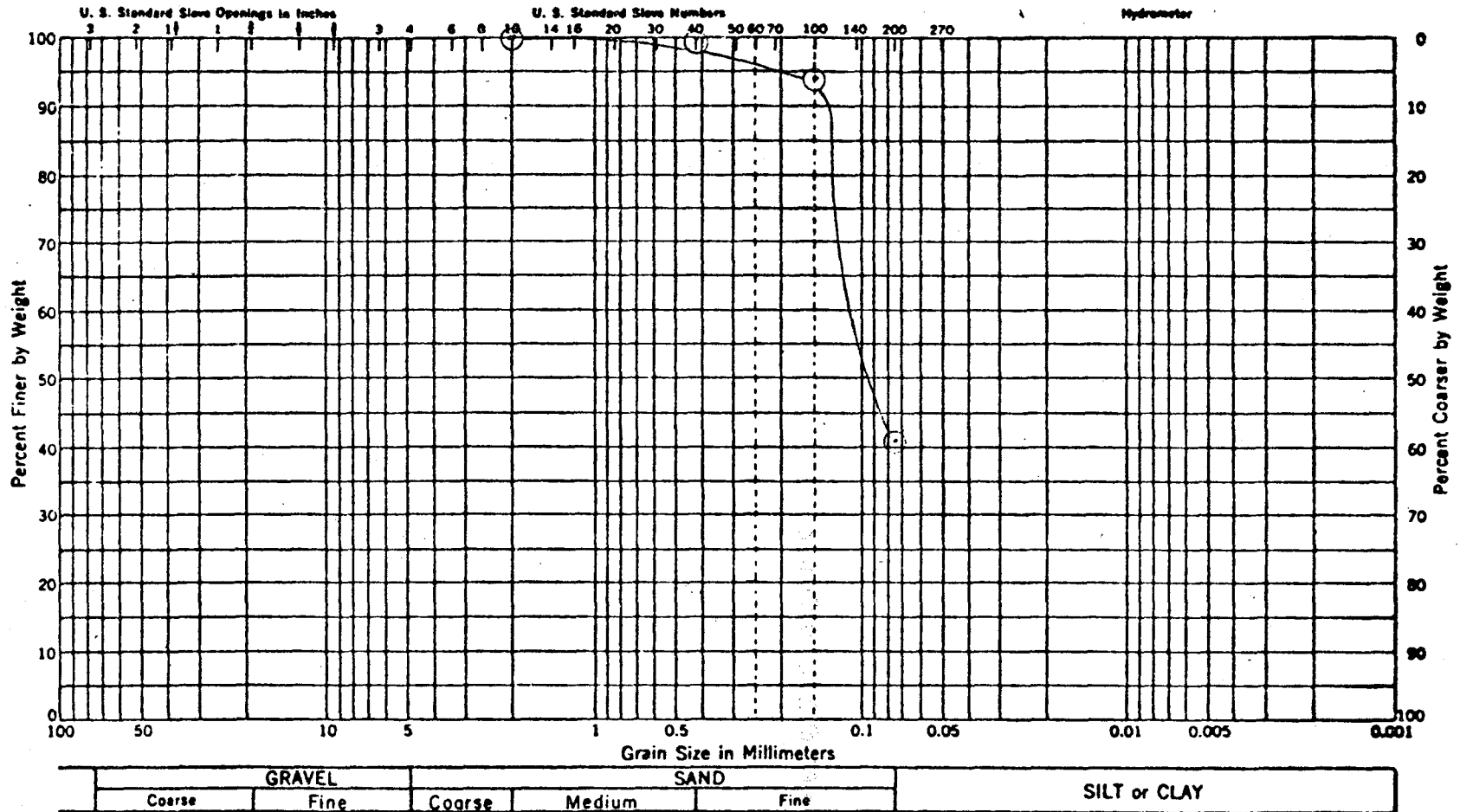
CHECKED BY: _____

UNIFIED CLASSIFICATION SYSTEM



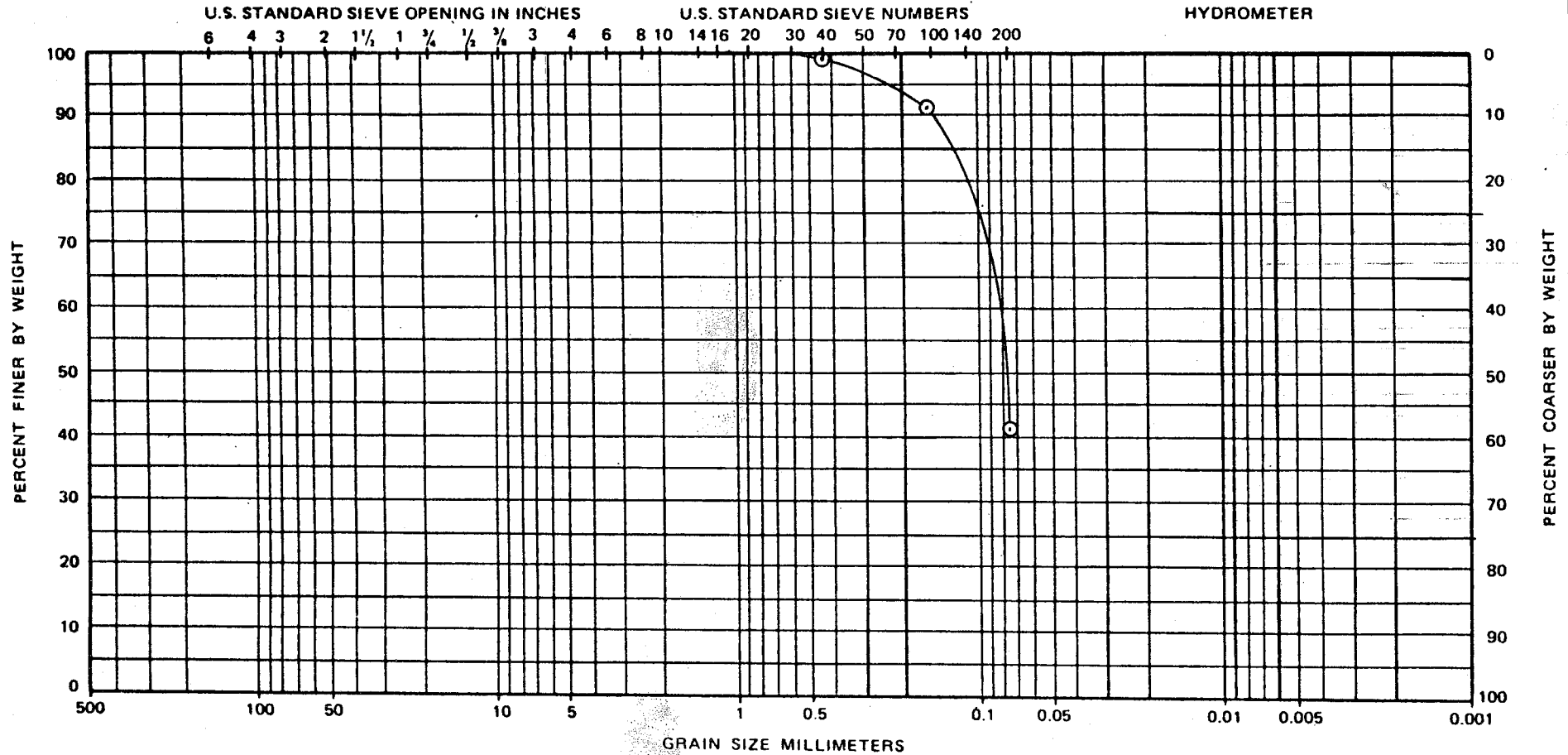
SAMPLE NO.	W.C.	LL	PL	PI	CLASSIFICATION	ADAMS COUNTY LANDFILL GRAIN SIZE ANALYSIS ADAMS COUNTY, WISCONSIN STS Consultants Ltd. 540 LAMBEAU STREET GREEN BAY, WIS. 54303			
B-4					Fine sand (SP)-trace of medium sand				
S-4									
20'									
						DRAWN APPROVED DATE JOB No.			
						SMD	GMT	6-28-84	13218

UNIFIED CLASSIFICATION SYSTEM



SAMPLE NO.	W.C.	LL	PL	PI	CLASSIFICATION	ADAMS COUNTY LANDFILL GRAIN SIZE ANALYSIS ADAMS COUNTY, WISCONSIN			
B-5					Very silty fine sand (SM)-trace of clay				
S-6									
30'									
						STS Consultants Ltd. 540 LAMBEAU STREET GREEN BAY, WIS. 54303			
						DRAWN	APPROVED	DATE	JOB No.
						SMD	GMT	6-28-84	13218

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT
Boring 10		SILTY SAND, fine grained	18.5				Adams County Feasibility
S-4	15'	light brown					Study
		(SM)					DATE: 8/15/86 PROJECT NO: 86A22
DRAWN BY: RRR	APPROVED BY:	NOTES:					
							Foth & Van Dyke Industrial Inc. Waste/Energy Division

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road

P. O. Box 19012

Green Bay, Wisconsin 54307-9012

414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: July 11 to 15, 1986

REPORT NO.: FR-6

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifications
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4				
No. 8				
No. 10				
No. 16				
No. 20				
No. 30				
No. 40	.1	.1	99.9	
No. 50				
No. 80				
No. 100	12.1	8.4	91.5	
No. 200	72.2	50.3	41.2	
11.2 Pan 47.8	59.1	41.2		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 143.6 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED FROM: from Boring #10

IDENTIFICATION: Sample #4 @ 15'

DATE SAMPLED: June 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

DRY RODDED WGT: _____

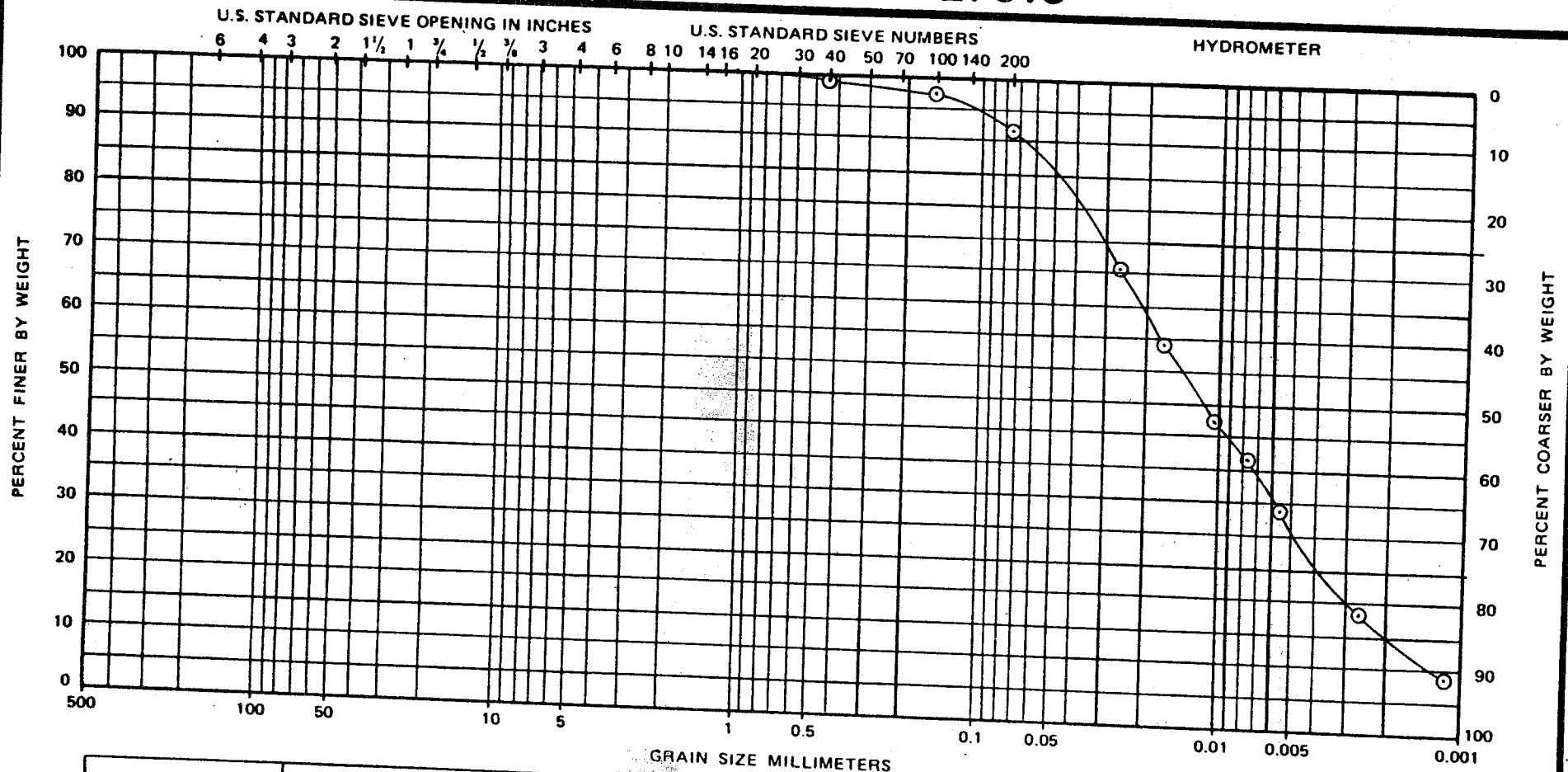
WASHED GRADATION: yes

PERCENT PASSING NO. 200 SIEVE 41.2 %

Moisture content on sample: 18.5%

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT
Boring 10 S-5	20'	Clayey SILT, pale brown (CL-ML)	24.9				Adams County Feasibility Study
DRAWN BY: RRR	APPROVED BY:	NOTES:					DATE: 8/15/86 PROJECT NO: 86A22
							Foth & Van Dyke Industrial Inc. Waste/Energy Division

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road
P. O. Box 19012
Green Bay, Wisconsin 54307-9012
414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: July 17 to 21, 1986

REPORT NO.: FR-10

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Material for Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifi-cations
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4				
No. 8				
No. 10	---	---	100	
No. 16				
No. 20				
No. 30				
No. 40	.4	.4	99.6	
No. 50				
No. 80				
No. 100	2.7	2.6	97.0	
No. 200	6.2	6.0	91.0	
Pan	94.4	91.0		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 103.7

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED FROM: from Boring #10

IDENTIFICATION: Sample #5 @ 20.0'

DATE SAMPLED: _____

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

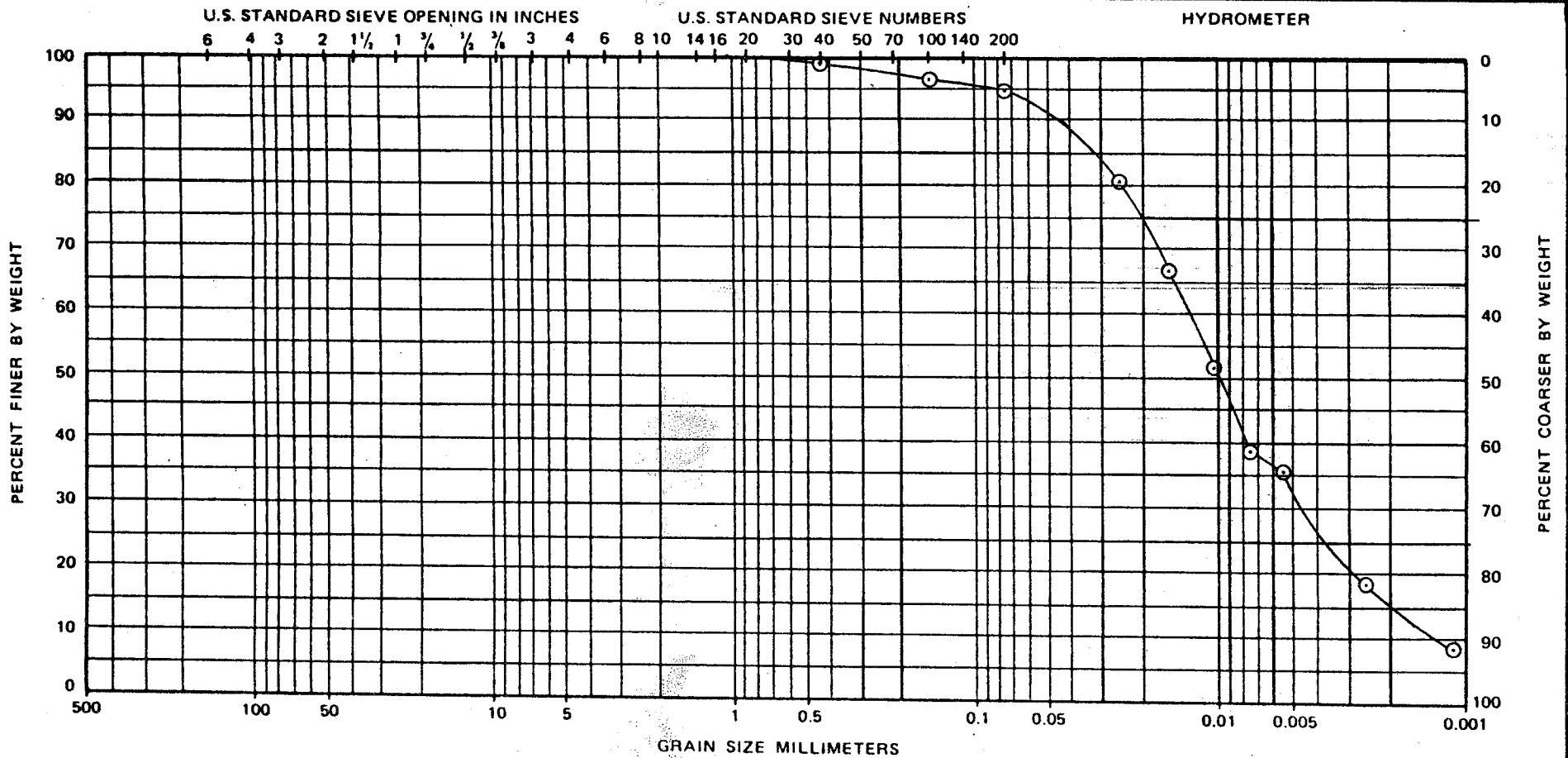
DRY RODDED WGT: _____

WASHED GRADATION: yes

PERCENT PASSING NO. 200 SIEVE 91.0 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT Adams County Feasibility Study	
Boring 10 S-6	25'	Clayey SILT; gray brown, (CL-ML)	28.4				DATE: 8/15/86	PROJECT NO: 86A22
DRAWN BY: RRR	APPROVED BY:	NOTES:	Foth & Van Dyke Industrial Inc. Waste/Energy Division					

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road
P. O. Box 19012
Green Bay, Wisconsin 54307-9012
414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: July 23 to 25, 1986

REPORT NO.: FR-11

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams county Clay Investigation SOURCE: _____

REPORT OF TESTS OF: Proposed Materials for Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifications
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4				
No. 8				
No. 10	---	---	100	
No. 16				
No. 20				
No. 30				
No. 40	.7	.7	99.3	
No. 50				
No. 80				
No. 100	3.5	3.3	96.0	
No. 200	1.6	1.5	94.5	
Pan	100.2	94.5		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 106.0 grams

SUBMITTED BY: Janis Schallhorn or F&VD

SAMPLED FROM: from Boring #10

IDENTIFICATION: Sample #6 @ 25'

DATE SAMPLED: _____

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

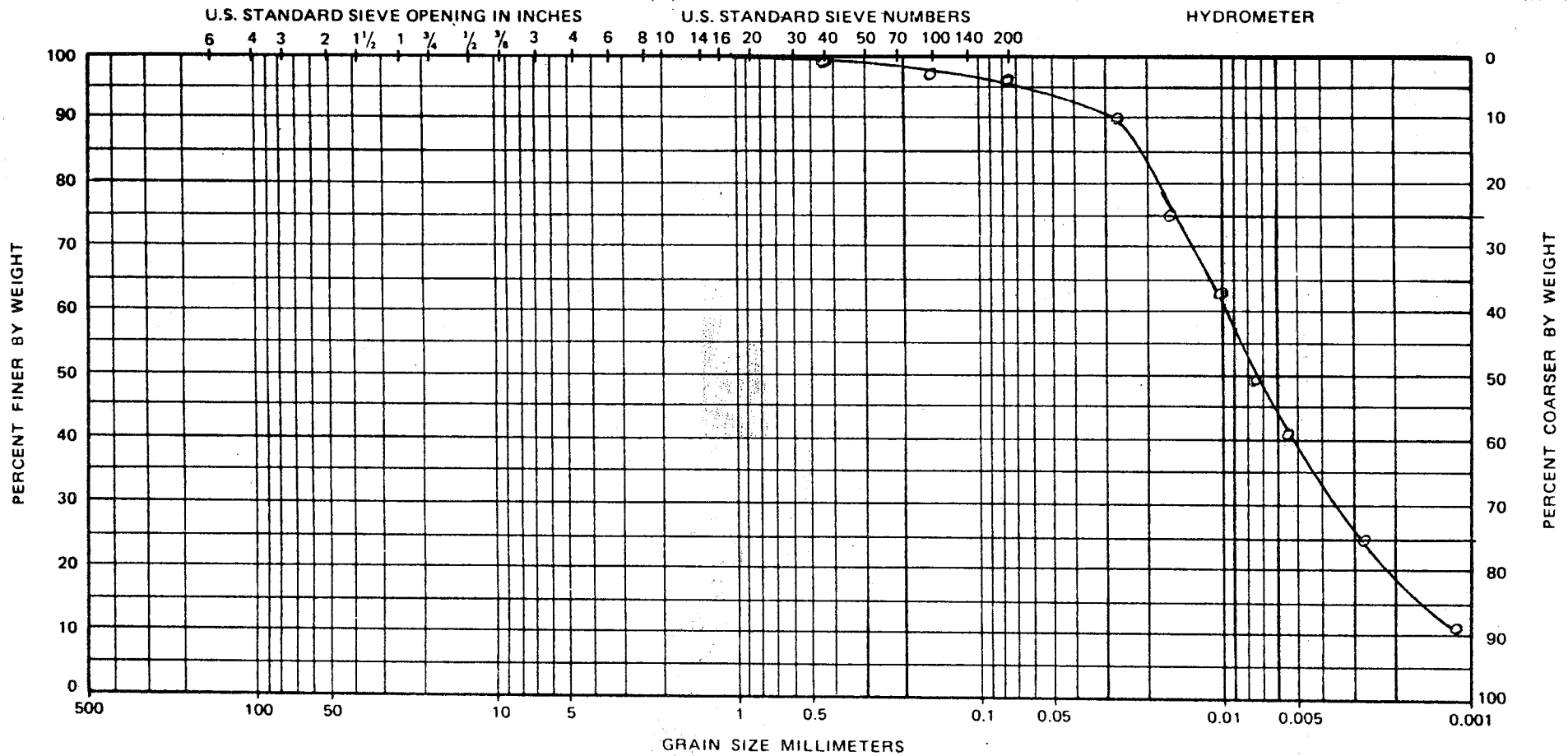
DRY RODDED WGT: _____

WASHED GRADATION: yes

PERCENT PASSING NO. 200 SIEVE 94.5 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT
Boring 10		LEAN CLAY, brown to					Adams County Feasibility
FR-17	30-33'	reddish brown					Study
		(CL)					DATE: 9/26/86 PROJECT NO: 86A22
DRAWN BY: RRR	APPROVED BY:	NOTES:	Foth & Van Dyke Waste/Energy Division				

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road
P. O. Box 19012
Green Bay, Wisconsin 54307-9012
414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: September 26, 1986

REPORT NO.: FR-17

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Material for Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifi-cations
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4				
No. 8				
No. 10				
No. 16				
No. 20	0	0	100	
No. 30				
No. 40	.6	.4	99.6	
No. 50				
No. 80				
No. 100	3.0	2.0	97.6	
No. 200	1.3	.9	96.7	
Pan ^{143.4} 143.5	143.5	96.7		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 148.4 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED ^{From} ~~XXXX~~ Boring #10

IDENTIFICATION: Depth 32'

DATE SAMPLED: June 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

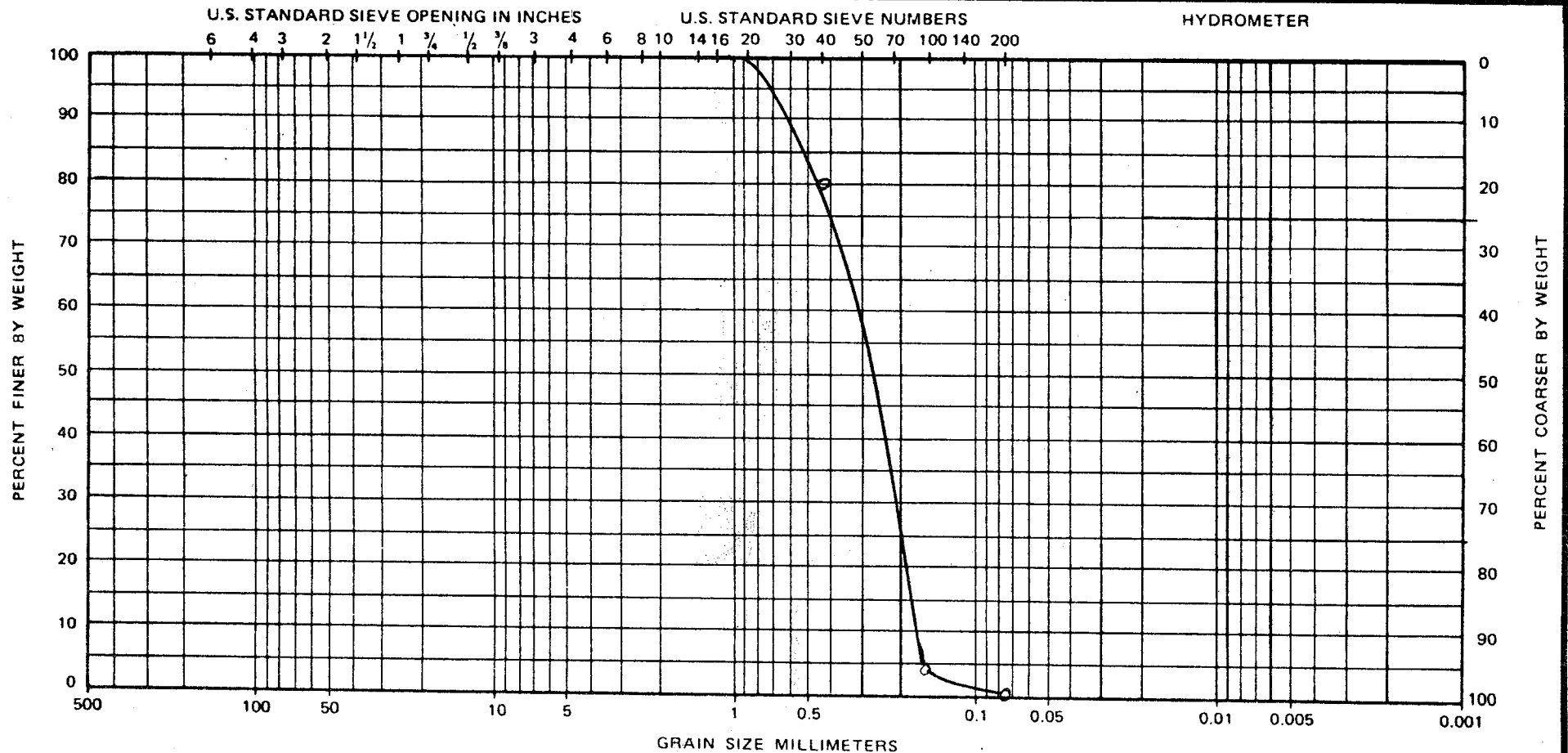
DRY RODDED WGT: _____

WASHED GRADATION: Yes

PERCENT PASSING NO. 200 SIEVE 96.7 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT
Boring 11	10-15'	SAND, fine to medium					Adams County Feasibility Study
		grained, light brown					DATE: 9/19/86
		(SP)					PROJECT NO: 86A22
DRAWN BY:	APPROVED BY:	NOTES:	Foth & Van Dyke Waste/Energy Division				
RRR							

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road
P. O. Box 19012
Green Bay, Wisconsin 54307-9012
414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: September 11, 1986

REPORT NO.: FR-25

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifications
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4				
No. 8				
No. 10	0	0	100	
No. 16				
No. 20				
No. 30				
No. 40	66.5	19.8	80.2	
No. 50				
No. 80				
No. 100	255.2	75.8	4.4	
No. 200	13.1	3.9	0.5	
Pan 1.6 0.3	1.9	0.6		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 336.7 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED ^{From} ~~FORM~~ Boring #11

IDENTIFICATION: Depth 10-15'

DATE SAMPLED: June 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

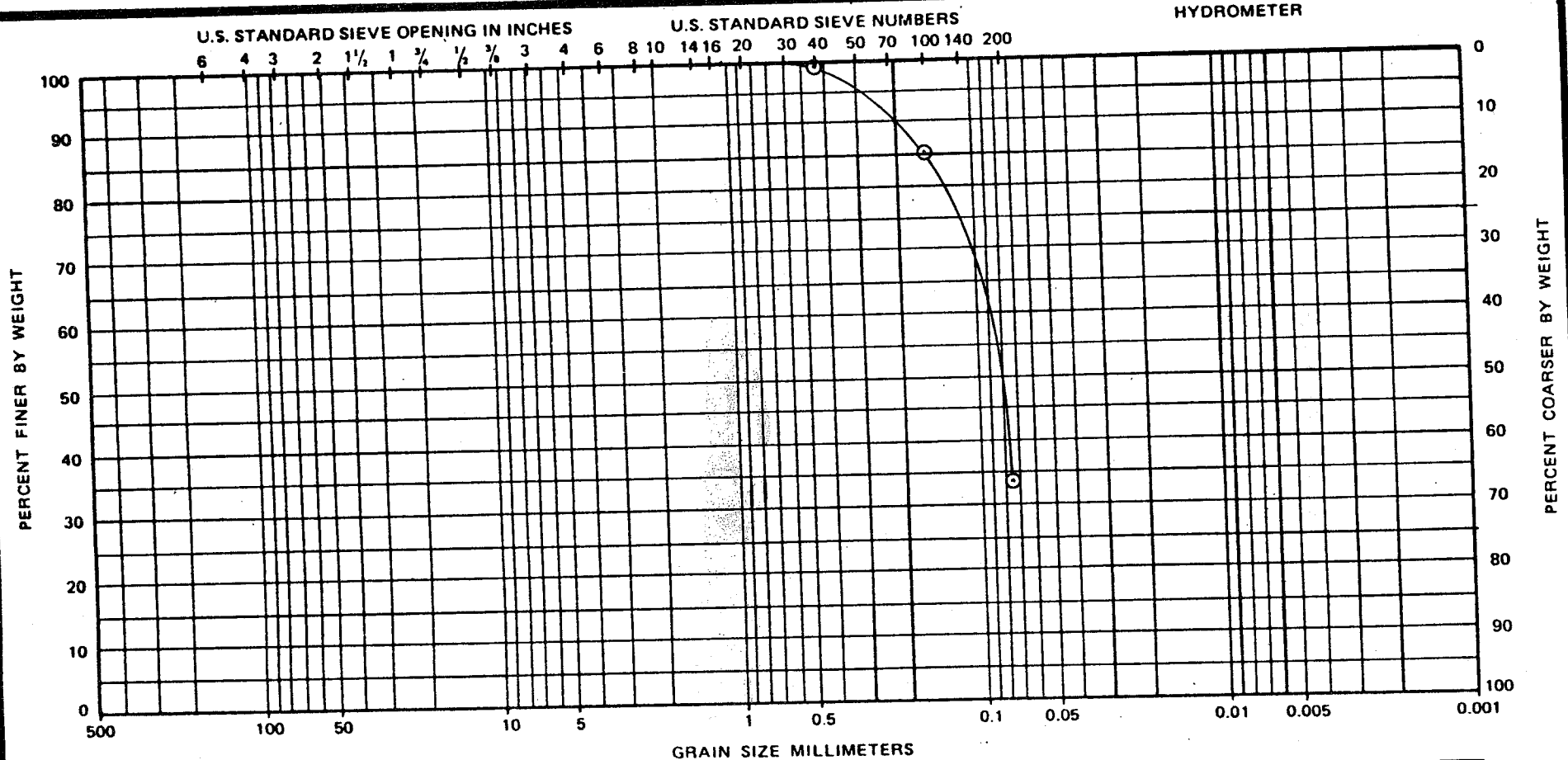
DRY RODDED WGT: _____

WASHED GRADATION: Yes

PERCENT PASSING NO. 200 SIEVE 0.5 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT
Boring 11		SILTY SAND, fine	21.7				Adams County Feasibility
S-8	35'	grained, light brown					Study
		(SM)					DATE: 8/15/86 PROJECT NO: 86A22
DRAWN BY: RRR	APPROVED BY:	NOTES:					

Foth & Van Dyke Industrial Inc.
Waste/Energy Division

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road

P. O. Box 19012

Green Bay, Wisconsin 54307-9012

414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: July 11 to 15, 1986

REPORT NO.: FR-7

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Speci- fications
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4				
No. 8				
No. 10				
No. 16				
No. 20				
No. 30				
No. 40	.1	.1	99.9	
No. 50				
No. 80				
No. 100	18.5	14.8	85.1	
No. 200	63.7	51.1	34.0	
Pan 11.1 31.2	42.3	33.9		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 124.7 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED FROM: from Boring #11

IDENTIFICATION: Sample #8 @ 35.0'

DATE SAMPLED: June 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

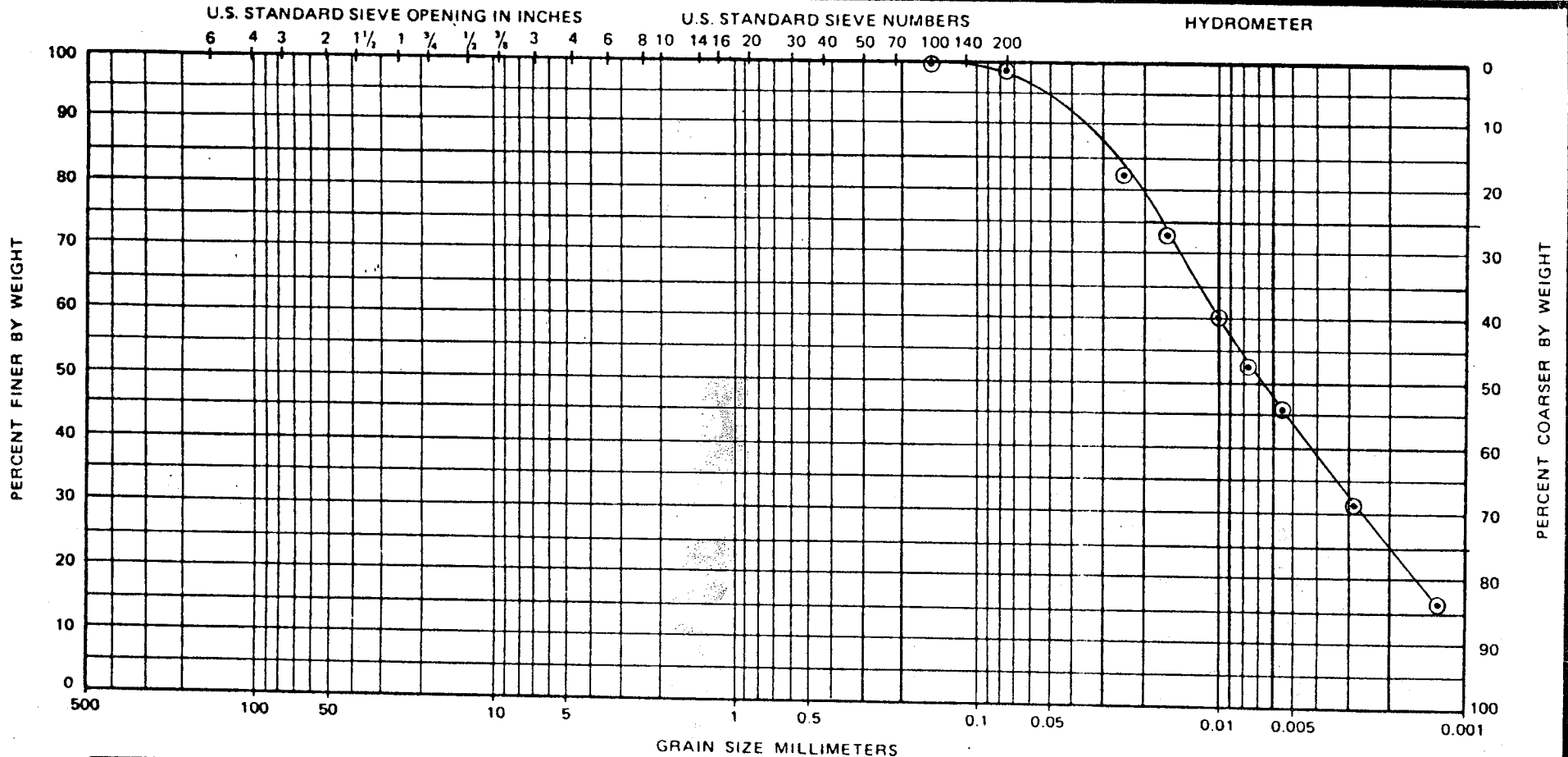
DRY RODDED WGT: _____

WASHED GRADATION: yes

PERCENT PASSING NO. 200 SIEVE 33.9 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT
B-11		LEAN CLAY, grayish	29.3				Adams County Feasibility Study
S-9	40'	brown					DATE: 8/25/86 PROJECT NO: 86A22
		(CL)					
DRAWN BY: RRR	APPROVED BY:	NOTES:	Foth & Van Dyke Waste/Energy Division				

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road

P. O. Box 19012

Green Bay, Wisconsin 54307-9012

414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: August 19 to 22

REPORT NO.: FR12

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifications
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4				
No. 8				
No. 10				
No. 16				
No. 20				
No. 30				
No. 40	0	0	100	
No. 50				
No. 80				
No. 100	.8	.7	99.3	
No. 200	.4	.4	98.9	
Pan	112.1	98.9		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 113.3 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED FROM: Boring #11

IDENTIFICATION: Sample #9 @ 40'

DATE SAMPLED: June 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

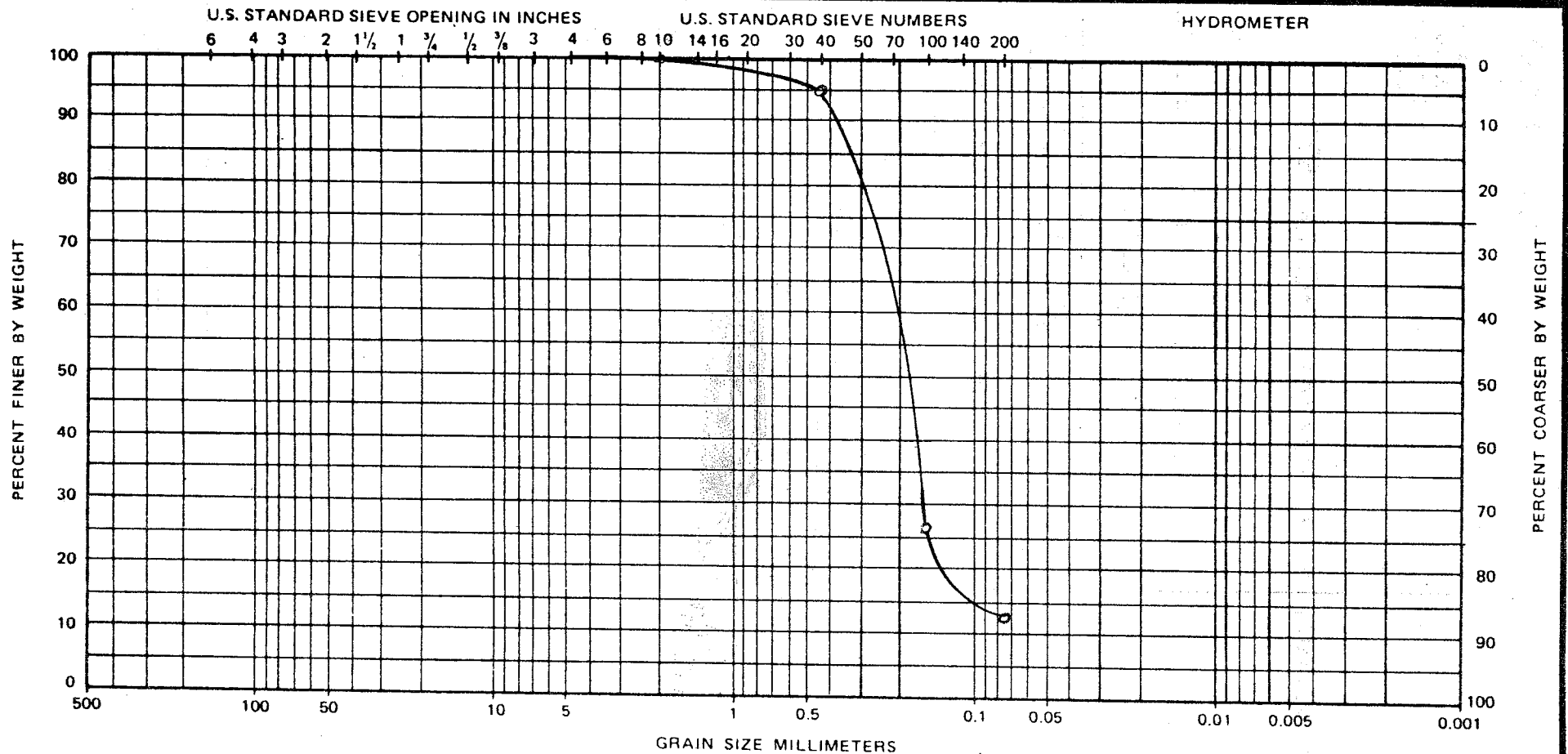
DRY RODDED WGT: _____

WASHED GRADATION: Yes

PERCENT PASSING NO. 200 SIEVE 98.9 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT
Boring 12	5-10'	SILTY SAND, fine grained, light brown (SM)					Adams County Feasibility Study
							DATE: 9/19/86 PROJECT NO: 86A22
DRAWN BY: RRR	APPROVED BY:	NOTES:					Foth & Van Dyke Waste/Energy Division

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road
P. O. Box 19012
Green Bay, Wisconsin 54307-9012
414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: September 11-12, 1986

REPORT NO.: FR-21

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifi-cations
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4	0	0	100	
No. 8				
No. 10	0.5	0.1	99.9	
No. 16				
No. 20				
No. 30				
No. 40	25.0	5.1	94.8	
No. 50				
No. 80				
No. 100	334.6	68.1	26.7	
No. 200	68.1	13.9	12.8	
Pan ^{56.3} _{6.8}	63.1	12.8		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 491.3 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED ^{From} ~~XXXX~~ Boring #12

IDENTIFICATION: Depth 5-10'

DATE SAMPLED: June 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

DRY RODDED WGT: _____

WASHED GRADATION: Yes

PERCENT PASSING NO. 200 SIEVE 12.8 %

CHECKED BY: _____

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road P. O. Box 19012 Green Bay, Wisconsin 54307-9012 414/497-2500

COMPACTION CONTROL REPORT

DATE: 9/18/86 JOB NAME: Adams County Feasibility Study SCOPE I.D. #: 86A22

1. LABORATORY COMPACTION TEST DATA

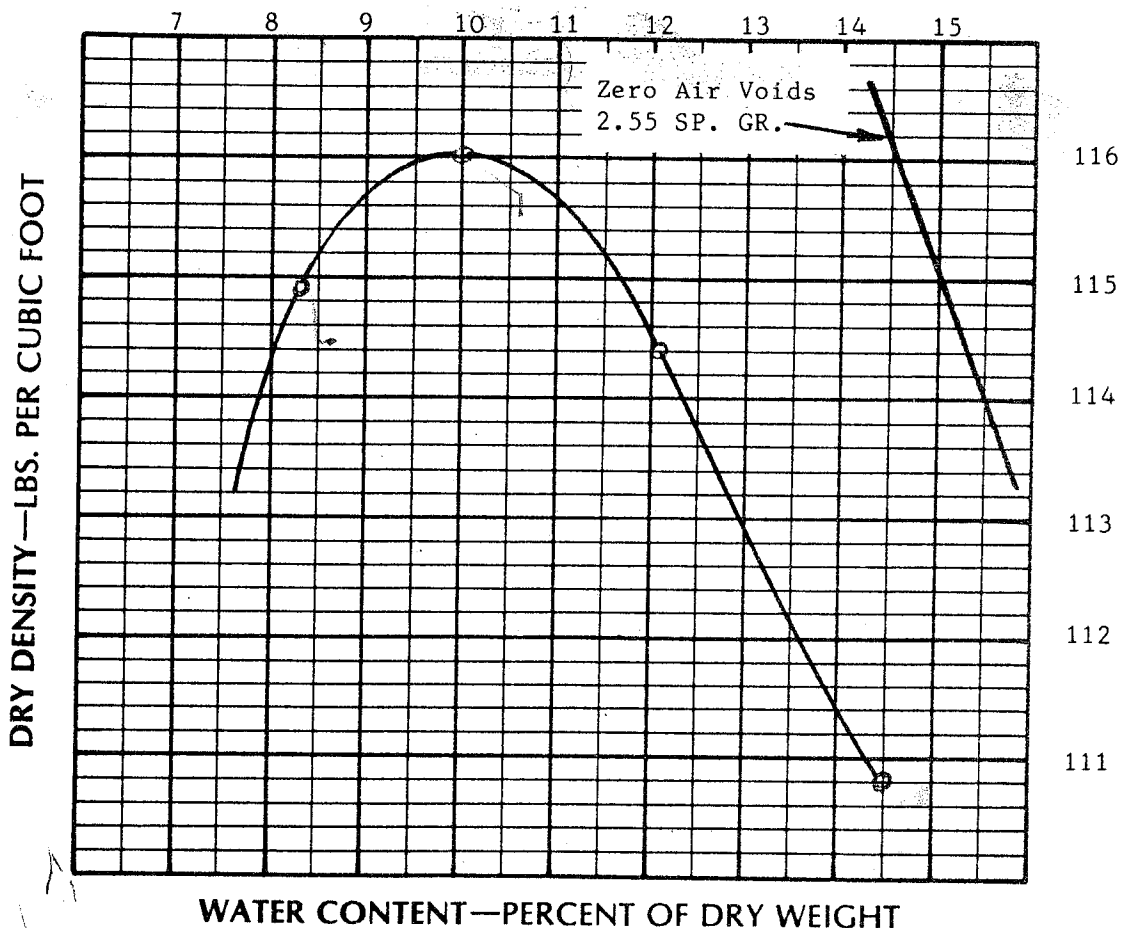
A. DESCRIPTION OF SOIL: SILTY SAND, fine grained, light brown (SM)

MATERIAL MARK FR-21 CLASSIFICATION AASHO
SOURCE OF MATERIAL Boring 12 Depth 5-10' BPR

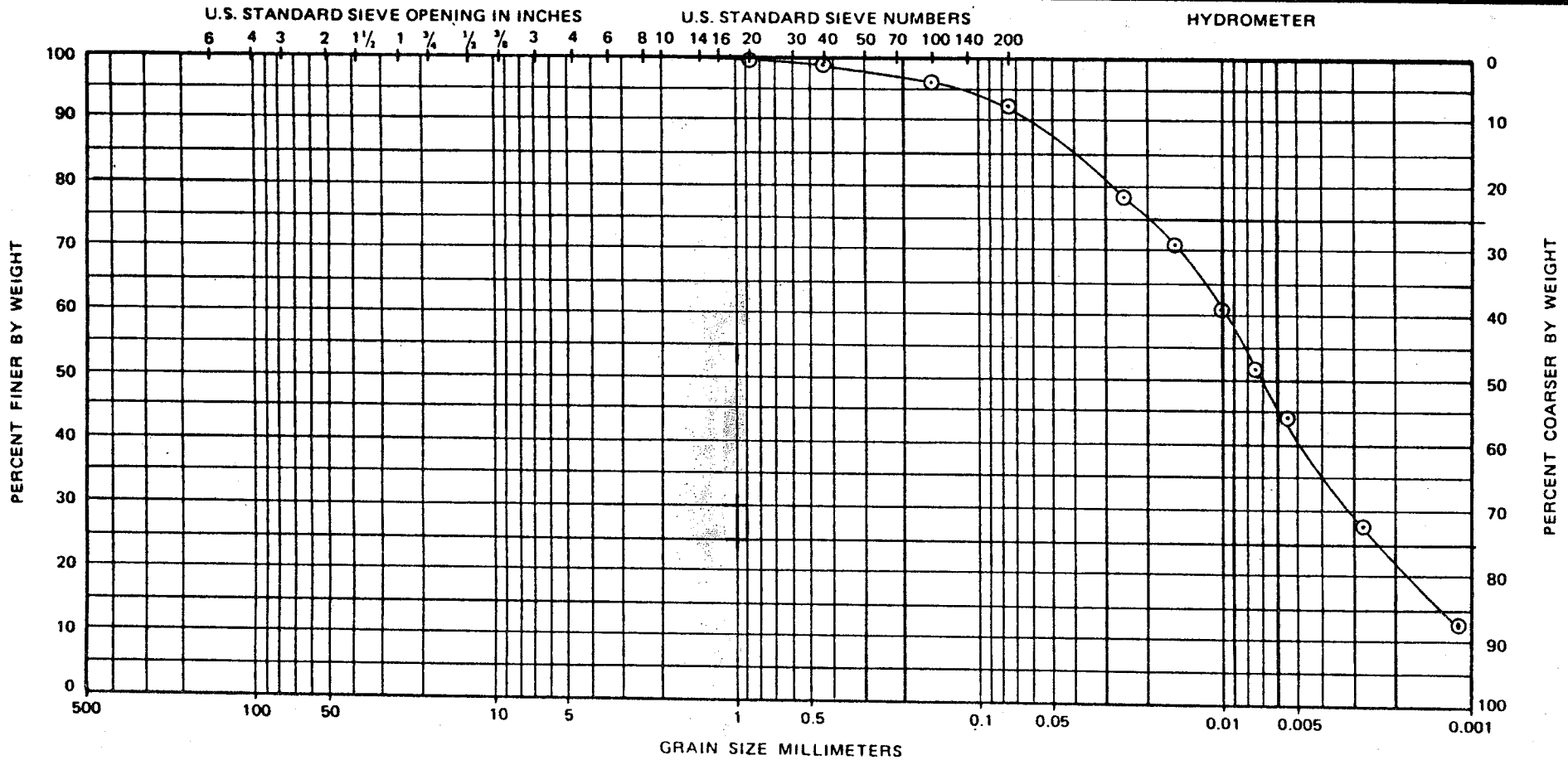
NATURAL WATER CONTENT % NATURAL DRY DENSITY PCF SPECIFIC GRAVITY
LIQUID LIMIT % PLASTIC LIMIT % PLASTICITY INDEX

B. TEST PROCEDURE USED: ASTM D1557 Method "A"

C. TEST RESULTS: OPTIMUM WATER CONTENT 10.0 %
MAXIMUM DRY DENSITY 116.0 PCF (AT A WET DENSITY OF 127.6 PCF)



GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT
Boring 12		LEAN CLAY, reddish	27.7	31	18	13	Adams County Fesibility Study
S-Tube	32'	brown					DATE: 8/15/86 PROJECT NO: 86A22
		(CL)					
DRAWN BY: RRR	APPROVED BY:	NOTES:					

Foth & Van Dyke Industrial Inc.
Waste/Energy Division

Foth & Van Dyke

Engineers/Architects

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P. O. Box 19012
Green Bay, Wisconsin 54307-9012
414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: July 22 to 25, 1986

REPORT NO.: FR-16

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Material for Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifications
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4				
No. 8				
No. 10	---	---	100	
No. 16				
No. 20	.4	.2	99.8	
No. 30				
No. 40	1.5	.8	99.0	
No. 50				
No. 80				
No. 100	5.5	3.0	96.0	
No. 200	6.2	3.4	92.6	
Pan	171.2	92.6		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 184.8 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED FROM: from Boring #12

IDENTIFICATION: Sampled at 30-32'

DATE SAMPLED: _____

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

DRY RODDED WGT: _____

WASHED GRADATION: yes

PERCENT PASSING NO. 200 SIEVE 92.6 %

CHECKED BY: _____

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road
P. O. Box 19012
Green Bay, Wisconsin 54307-9012
414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: July 11 to 15, 1986

REPORT NO.: FR-8

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifications
3-Inch				
2-Inch				
1½-Inch				
1-Inch				
¾-Inch				
½-Inch				
⅜-Inch				
No. 4				
No. 8				
No. 10	0	0	100	
No. 16				
No. 20				
No. 30				
No. 40	6.2	4.6	95.4	
No. 50				
No. 80				
No. 100	100.0	74.3	21.2	
No. 200				
Pan .2 2.6	2.8	2.1		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 134.7 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED ~~FORM~~ from Boring #13

IDENTIFICATION: Sample #3 @ 10.0'

DATE SAMPLED: June 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

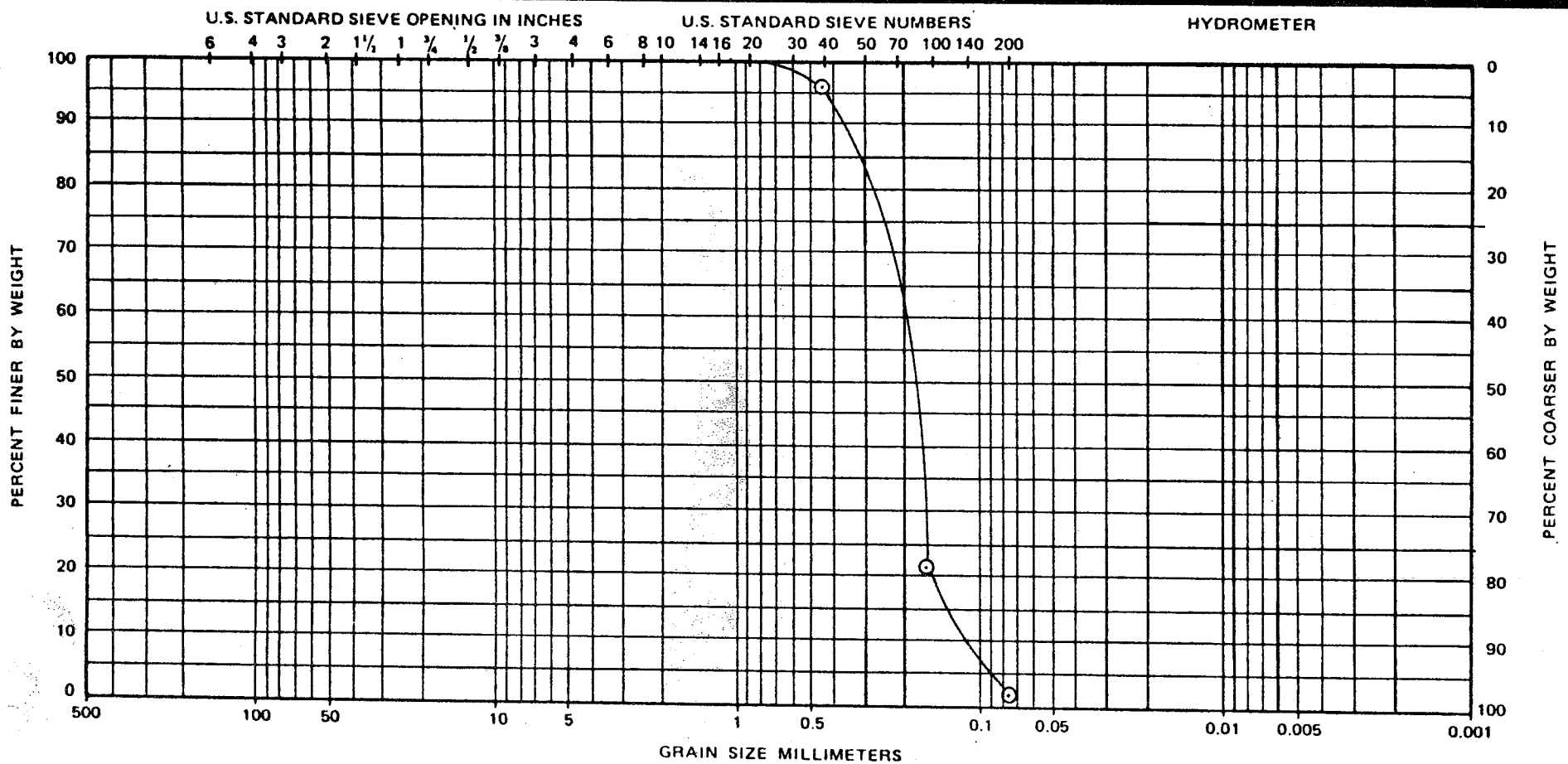
DRY RODDED WGT: _____

WASHED GRADATION: yes

PERCENT PASSING NO. 200 SIEVE 2.1 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT Adams County Feasibility Study	
Boring 13		SAND, fine grained	3.9					
S-3	10.0'	brown						
		(SP)					DATE: 8/15/86	PROJECT NO: 86A22
DRAWN BY: RRR	APPROVED BY:	NOTES:				Foth & Van Dyke Industrial Inc. Waste/Energy Division		

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road
P. O. Box 19012
Green Bay, Wisconsin 54307-9012
414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: July 11 to 15, 1986

REPORT NO.: FR-8

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifi-cations
3-Inch				
2-Inch				
1½-Inch				
1-Inch				
¾-Inch				
½-Inch				
⅜-Inch				
No. 4				
No. 8				
No. 10	0	0	100	
No. 16				
No. 20				
No. 30				
No. 40	6.2	4.6	95.4	
No. 50				
No. 80				
No. 100	100.0	74.3	21.2	
No. 200				
Pan .2 2.6	2.8	2.1		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 134.7 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED ~~FORM~~ from Boring #13

IDENTIFICATION: Sample #3 @ 10.0'

DATE SAMPLED: June 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

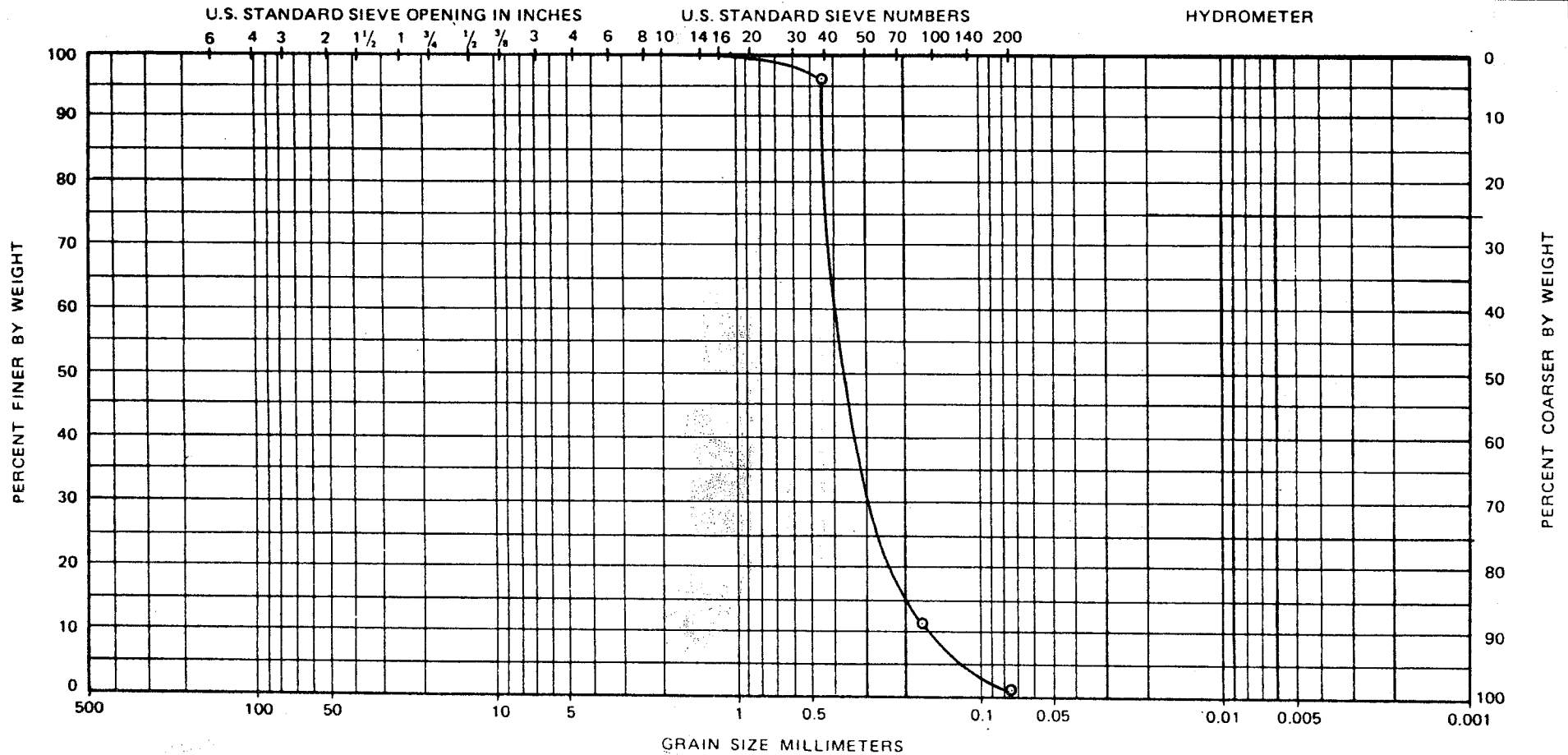
DRY RODDED WGT: _____

WASHED GRADATION: yes

PERCENT PASSING NO. 200 SIEVE 2.1 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT Adams County Feasibility Study	
Boring 13	10-13'	SAND, fine grained, brown (SP)					DATE: 9-12-86	PROJECT NO: 86A22
DRAWN BY: RRR	APPROVED BY:	NOTES:	Foth & Van Dyke Waste/Energy Division					

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road
P. O. Box 19012
Green Bay, Wisconsin 54307-9012
414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22 FR

DATE: September 10 to 11, 1986

REPORT NO.: FR-20

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifi-cations
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch	0	0	100	
No. 4	0	0	100	
No. 8				
No. 10	0	0	100	
No. 16				
No. 20				
No. 30				
No. 40	17.4	4.3	95.7	
No. 50				
No. 80				
No. 100	346.1	84.7	11.0	
No. 200	41.7	10.2	0.8	
Pan	3.4	0.8		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 408.6 grams

SUBMITTED BY: Janis Schallhorn of Foth & Van Dyke

FROM: XXXX Boring 13

IDENTIFICATION: Depth 10' - 13'

DATE SAMPLED: June, 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

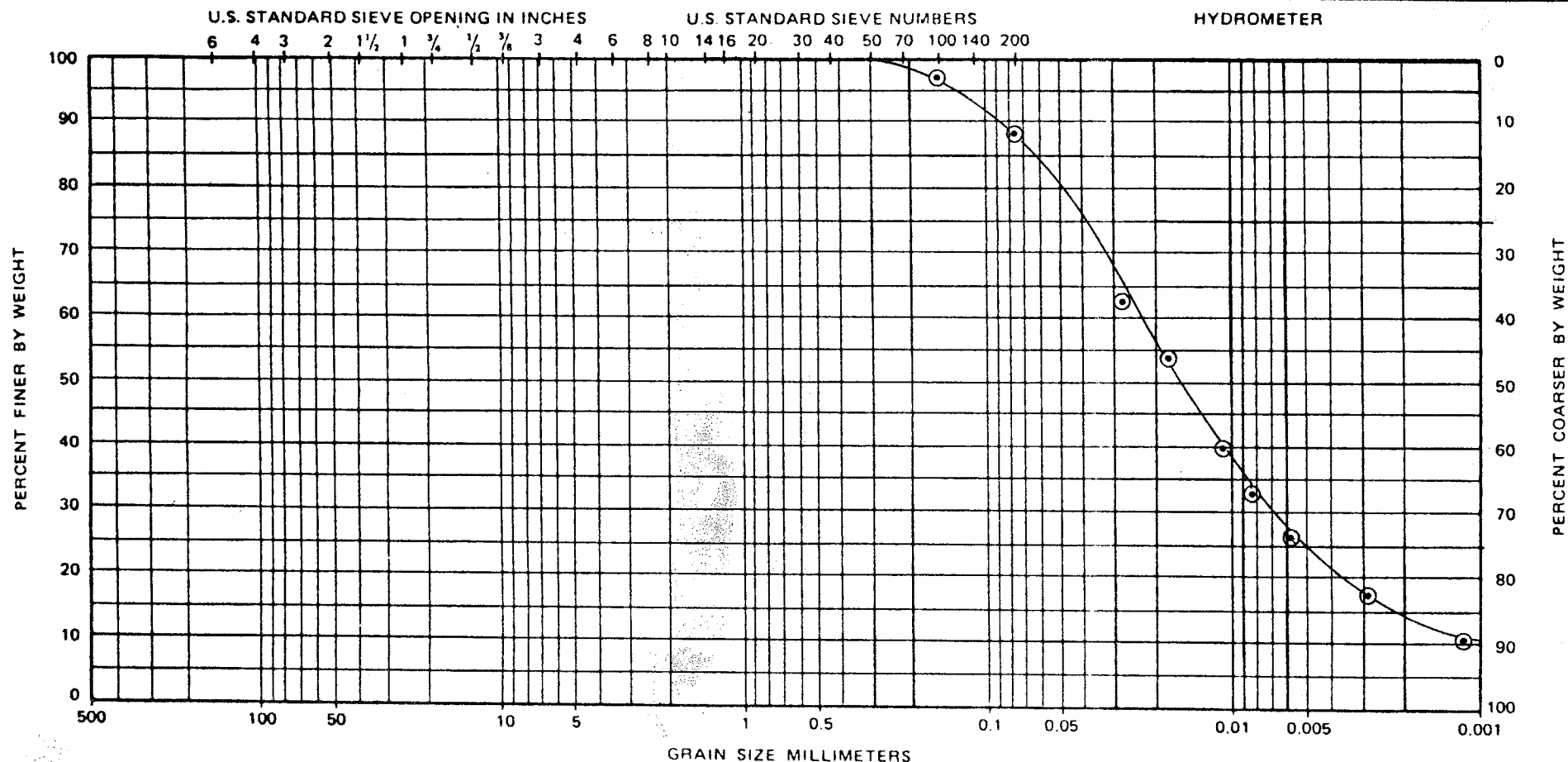
DRY RODDED WGT: _____

WASHED GRADATION: Yes

PERCENT PASSING NO. 200 SIEVE 0.8 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road
P. O. Box 19012
Green Bay, Wisconsin 54307-9012
414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: August 19 to 22

REPORT NO.: FR13

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifi-cations
3-Inch				
2-Inch				
1½-Inch				
1-Inch				
¾-Inch				
½-Inch				
⅜-Inch				
No. 4				
No. 8				
No. 10	0	0	100	
No. 16				
No. 20				
No. 30				
No. 40	0	0	100	
No. 50				
No. 80				
No. 100	3.2	2.8	97.2	
No. 200	10.4	9.2	88.0	
Pan	99.9	88.4		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 113.0 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED FROM: Boring #13

IDENTIFICATION: Sample #7 @ 30'

DATE SAMPLED: June 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

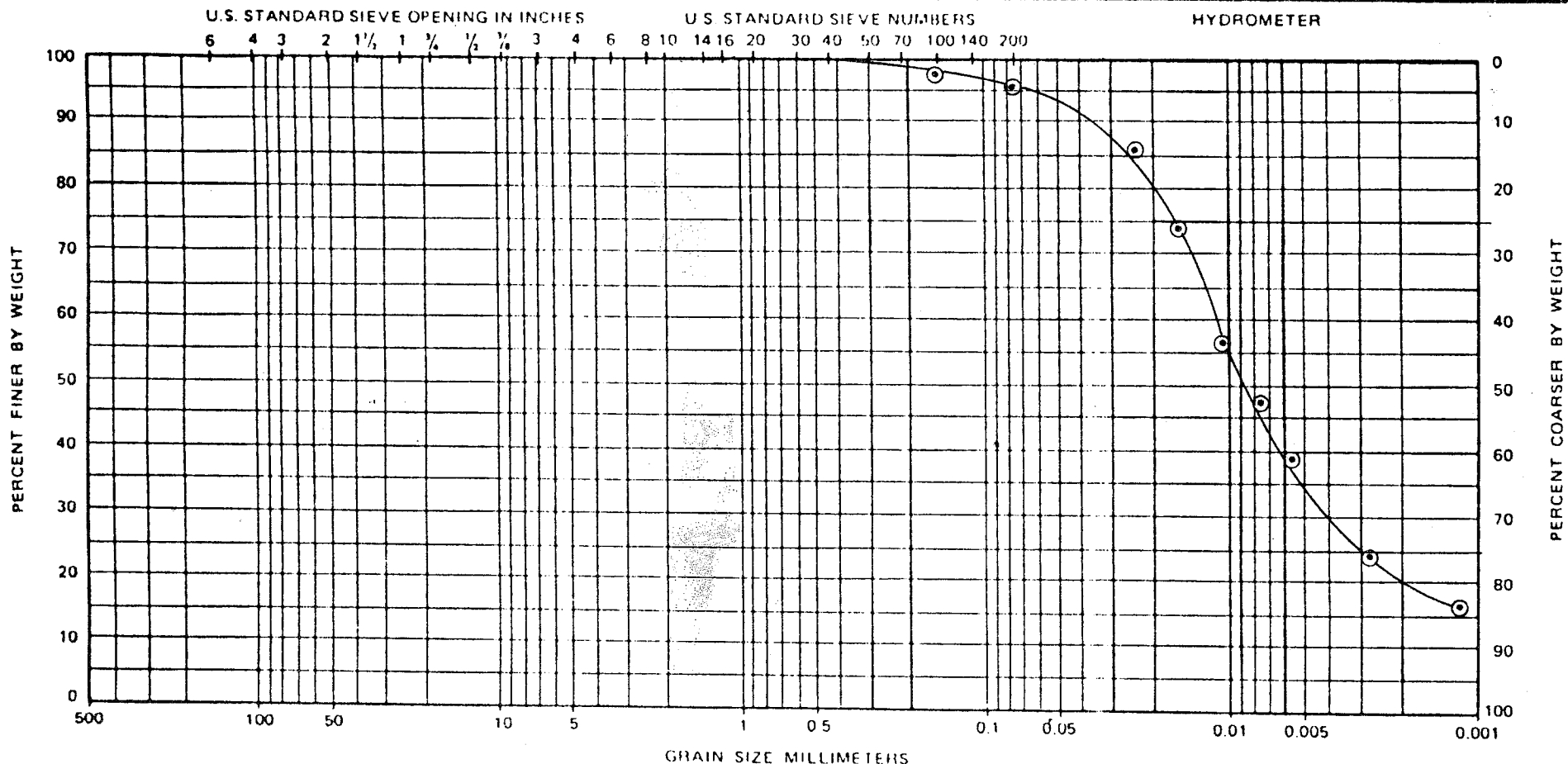
DRY RODDED WGT: _____

WASHED GRADATION: Yes

PERCENT PASSING NO. 200 SIEVE 88.0 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road
P. O. Box 19012
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414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: August 19 to 22, 1986

REPORT NO.: FR14

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifi-cations
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4				
No. 8				
No. 10	0	0	100	
No. 16				
No. 20				
No. 30				
No. 40	0	0	100	
No. 50				
No. 80				
No. 100	2.0	2.0	98	
No. 200	1.3	1.3	96.7	
Pan	94.6	96.6		
Fineness Modulus				

RECEIVED AT LABORATORY: June 23, 1986

QUANTITY REPRESENTED: 97.9 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED FROM: Boring 14

IDENTIFICATION: Sample #6 @ 30'

DATE SAMPLED: June 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

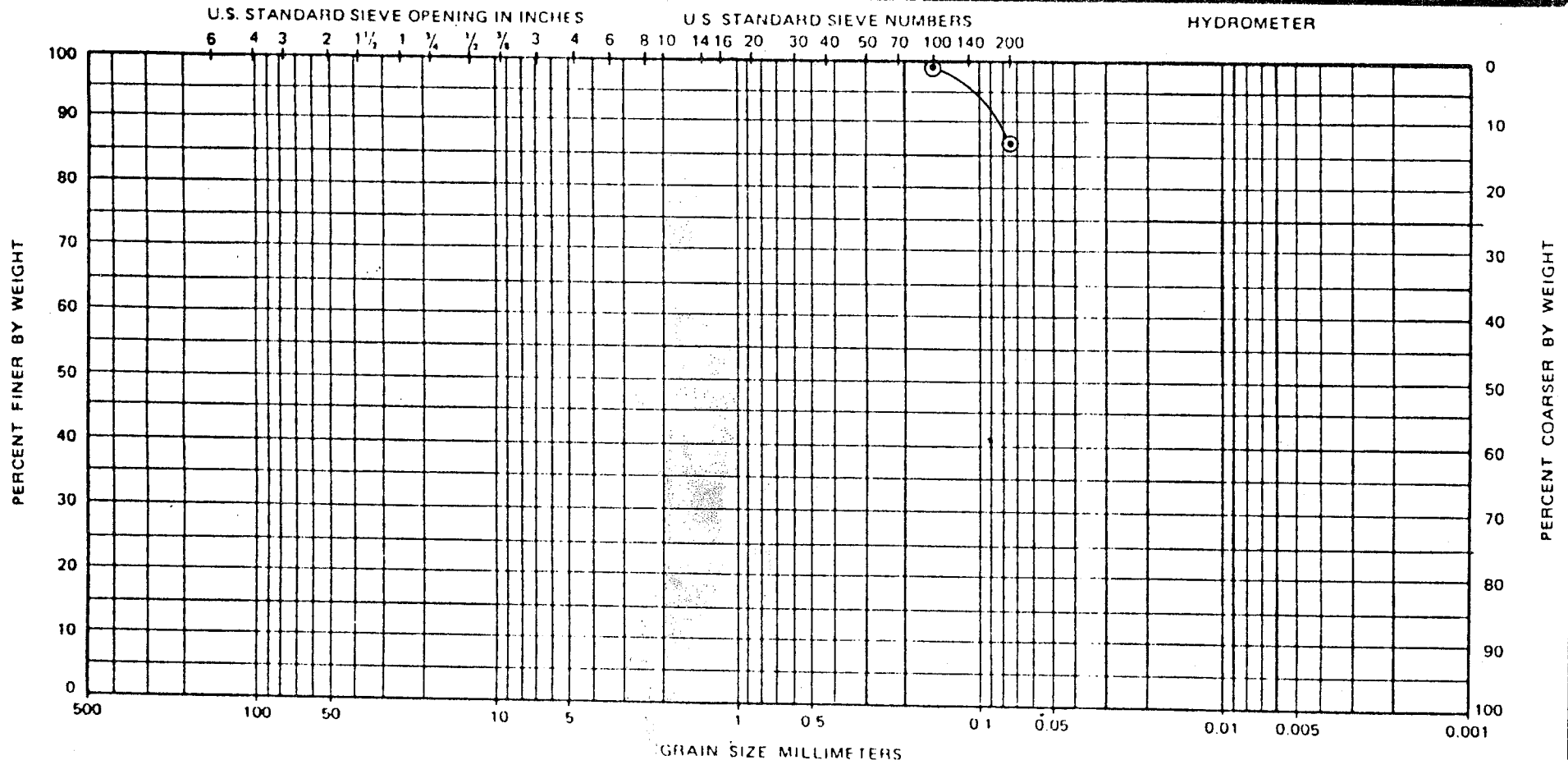
DRY RODDED WGT: _____

WASHED GRADATION: Yes

PERCENT PASSING NO. 200 SIEVE 96.6 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT
Boring MW-16		SILT, grayish brown	21.9				Adams County Feasibility Study
S-3	15' to 16.5'						DATE: 8/27/86 PROJECT NO: 86A22
		(ML)					
DRAWN BY: RRR	APPROVED BY:	NOTES:					
							Foth & Van Dyke Waste/Energy Division

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road
P. O. Box 19012
Green Bay, Wisconsin 54307-9012
414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: August 26 to 27, 1986

REPORT NO.: FR-22

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifi-cations
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4	0	0	100	
No. 8				
No. 10	0	0	100	
No. 16				
No. 20				
No. 30				
No. 40	0	0	100	
No. 50				
No. 80				
No. 100	1.5	1.2	98.8	
No. 200	14.0	11.6	87.2	
Pan	105.7	87.2		
Fineness Modulus				

RECEIVED AT LABORATORY: August 20, 1986

QUANTITY REPRESENTED: 121.2

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED FROM: Boring MW-16

IDENTIFICATION: Sample #3 @ 15' to 16.5'

DATE SAMPLED: August 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

DRY RODDED WGT: _____

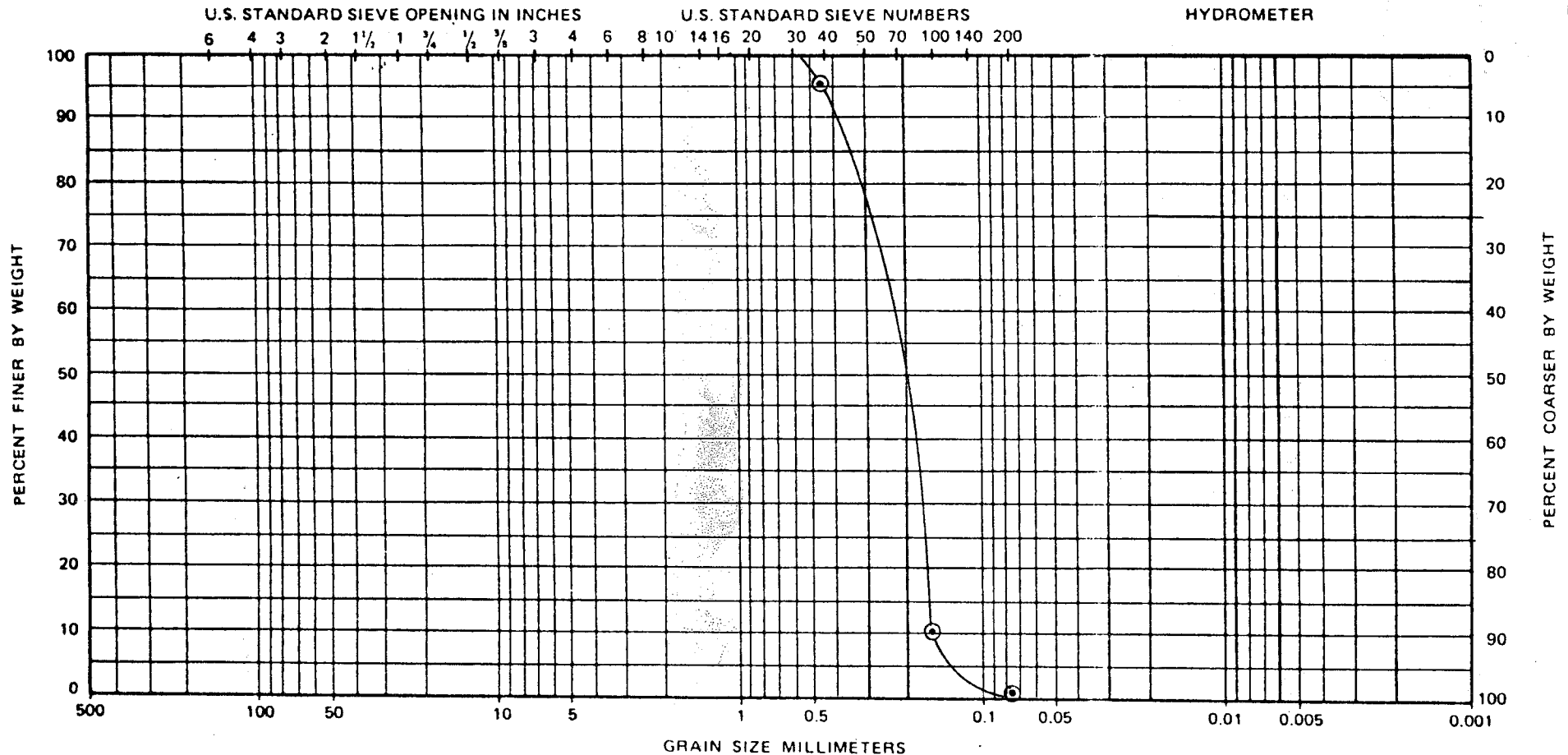
WASHED GRADATION: Yes

PERCENT PASSING NO. 200 SIEVE 87.2 %

Moisture Content of Sample = 21.9%

CHECKED BY: _____

GRAIN SIZE ANALYSIS



Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road
P. O. Box 19012
Green Bay, Wisconsin 54307-9012
414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: August 26 to 27, 1986

REPORT NO.: FR-23

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifi-cations
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4	0	0	100	
No. 8				
No. 10	0	0	100	
No. 16				
No. 20				
No. 30				
No. 40	7.4	4.4	95.6	
No. 50				
No. 80				
No. 100	143.9	85.5	10.1	
No. 200	15.1	9.0	1.1	
Pan	1.5	0.9		
Fineness Modulus				

RECEIVED AT LABORATORY: August 20, 1986

QUANTITY REPRESENTED: 168.3g

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED FROM: Boring MW-17

IDENTIFICATION: Sample #4 @ 20' to 21.5'

DATE SAMPLED: August 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

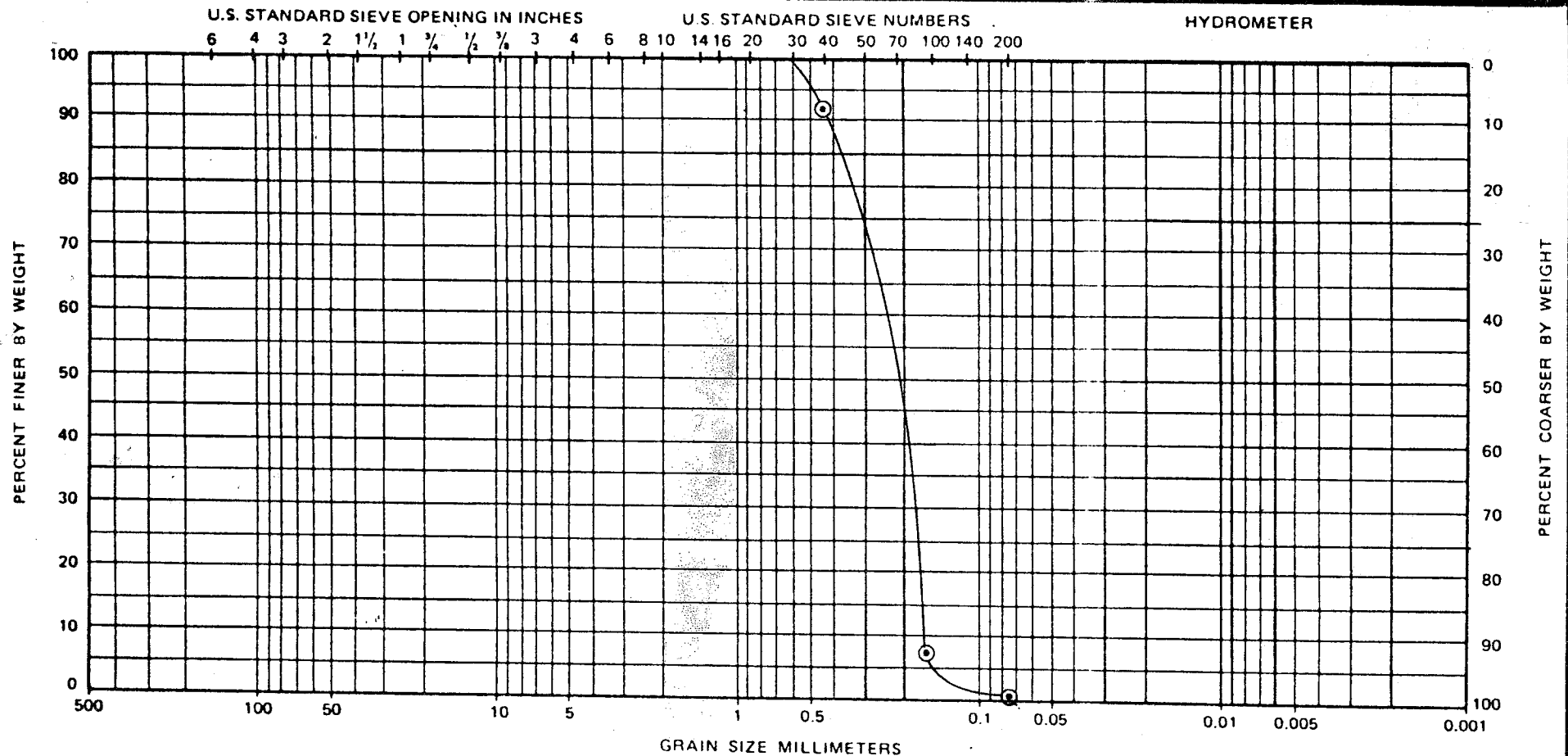
DRY RODDED WGT: _____

WASHED GRADATION: Yes

PERCENT PASSING NO. 200 SIEVE 1.0 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT Adams County Feasibility Study
Boring MW-18 S-1	5.0' to 6.5'	SAND, fine grained light brown					DATE: 8/26/86 PROJECT NO: 86A22
		(SP)					
DRAWN BY: RRR	APPROVED BY:	NOTES:					
							Foth & Van Dyke Waste/Energy Division

Foth & Van Dyke

Engineers/Architects

2737 S. Ridge Road

P. O. Box 19012

Green Bay, Wisconsin 54307-9012

414/497-2500

PROJECT NO.: _____

JOB NO.: 86A22

DATE: August 26 to 27, 1986

REPORT NO.: FR-24

REPORT OF ANALYSIS OF AGGREGATES

ARCHITECT/ENGINEER: Foth & Van Dyke CONTRACTOR: _____

PROJECT: Adams County Feasibility Study SOURCE: _____

REPORT OF TESTS OF: Proposed Landfill

Sieve Size or No.	Weight Retained	% Retained	% Passing	Specifi-cations
3-Inch				
2-Inch				
1 1/2-Inch				
1-Inch				
3/4-Inch				
1/2-Inch				
3/8-Inch				
No. 4	0	0	100	
No. 8				
No. 10	0	0	100	
No. 16				
No. 20				
No. 30				
No. 40	12.5	7.6	92.4	
No. 50				
No. 80				
No. 100	140.4	84.8	7.6	
No. 200	11.7	7.1	0.5	
Pan	0.9	0.5		
Fineness Modulus				

RECEIVED AT LABORATORY: August 20, 1986

QUANTITY REPRESENTED: 165.5 grams

SUBMITTED BY: Janis Schallhorn of F&VD

SAMPLED FROM: Boring MW-18

IDENTIFICATION: Sample #1 @ 5' to 6.5'

DATE SAMPLED: August 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

DRY RODDED WGT: _____

WASHED GRADATION: Yes

PERCENT PASSING NO. 200 SIEVE 0.5 %

CHECKED BY: _____