

Appendix B
Geotechnical Lab Data

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

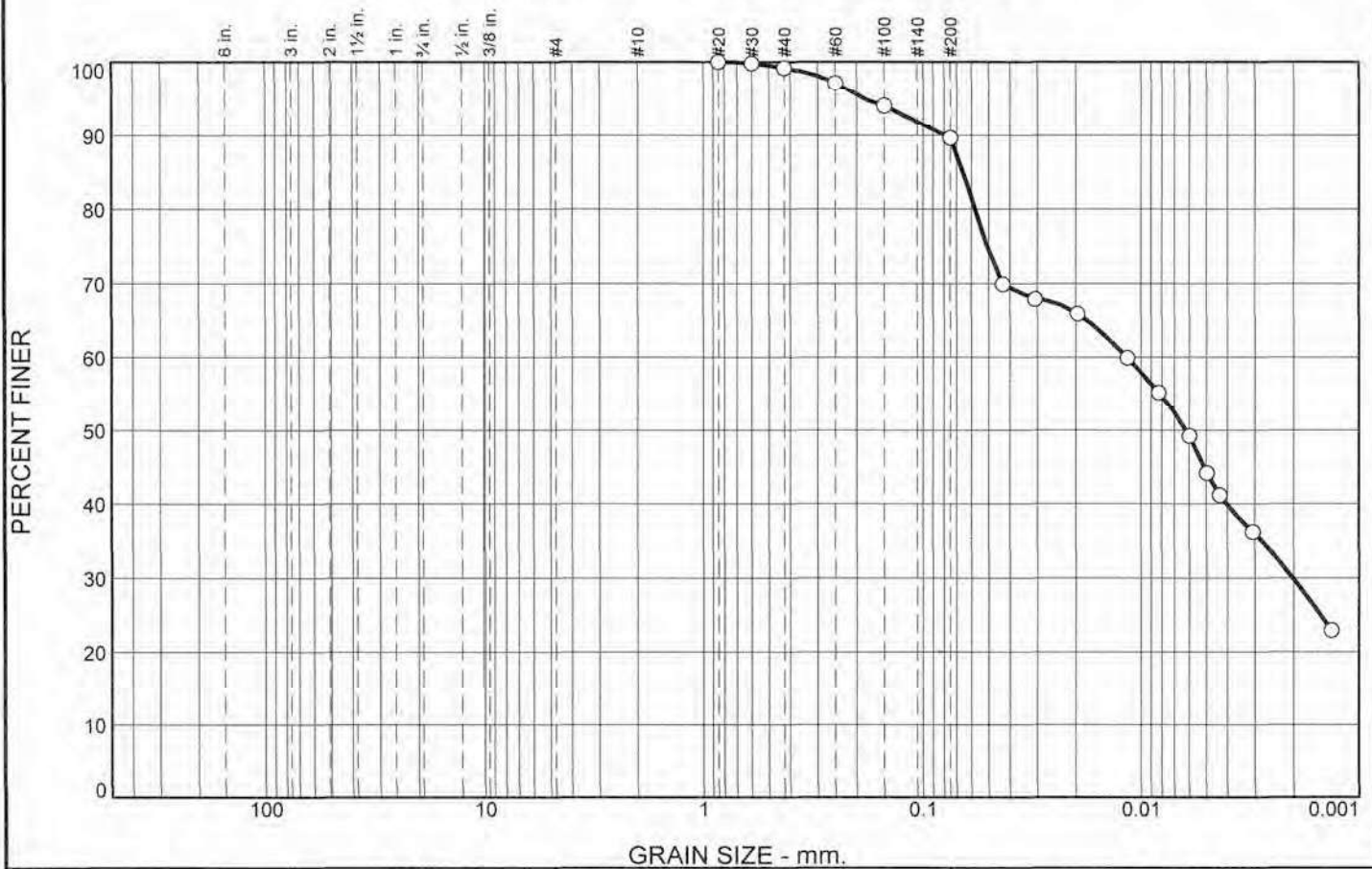
Max. Eff. Consol., psi: 4

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

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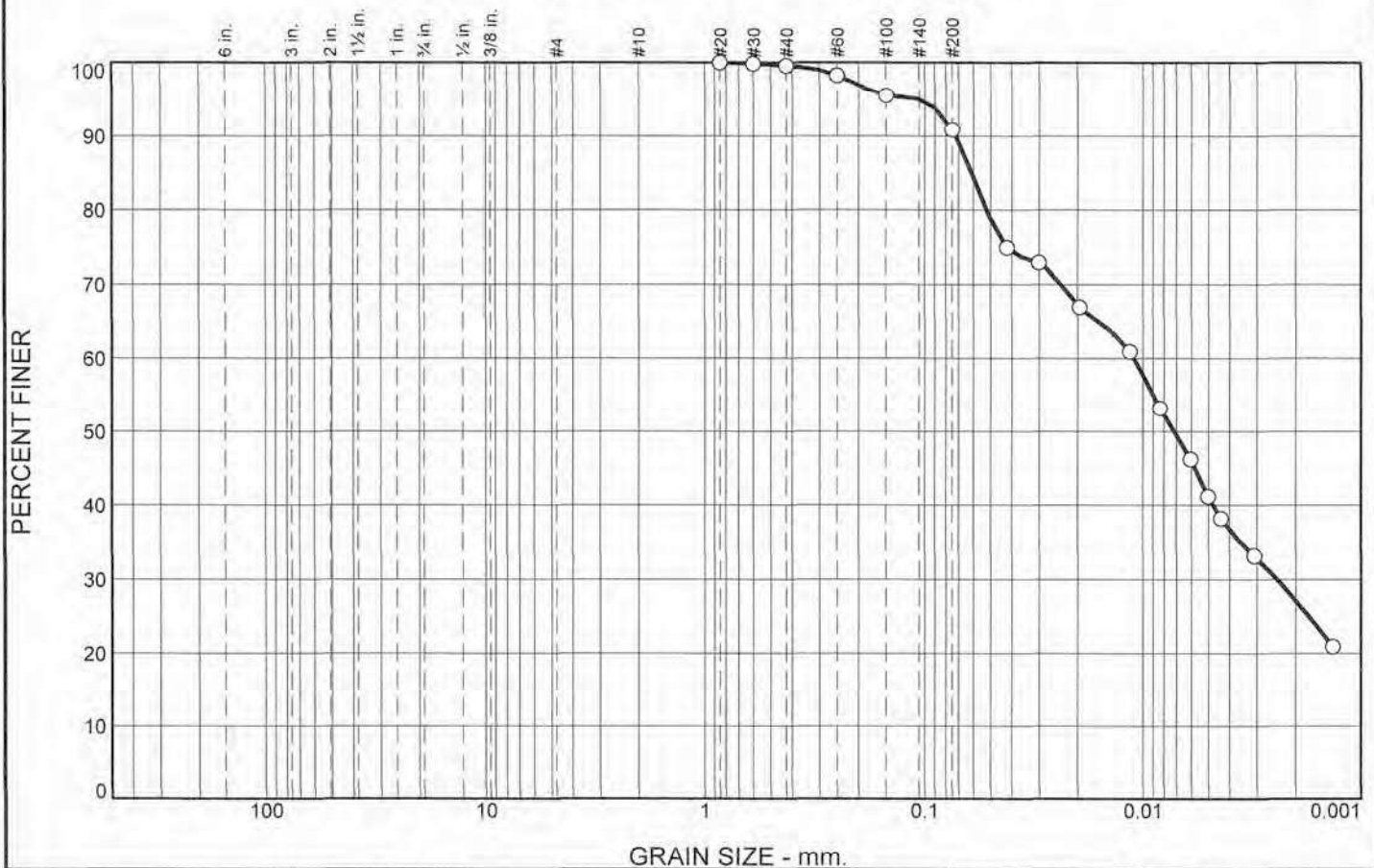
Client: Ayres Associates
Project: Adams County Landfill

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)

Material Description		
lean clay		
Atterberg Limits PL= 17 LL= 31 PI= 14 Coefficients D₈₅= 0.0610 D₆₀= 0.0110 D₅₀= 0.0072 D₃₀= 0.0024 D₁₅= D₁₀= C_u= C_c=		
Classification USCS= CL AASHTO= A-6(12)		
Remarks		

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

Date: 01-13-2016

Midwest Engineering Services

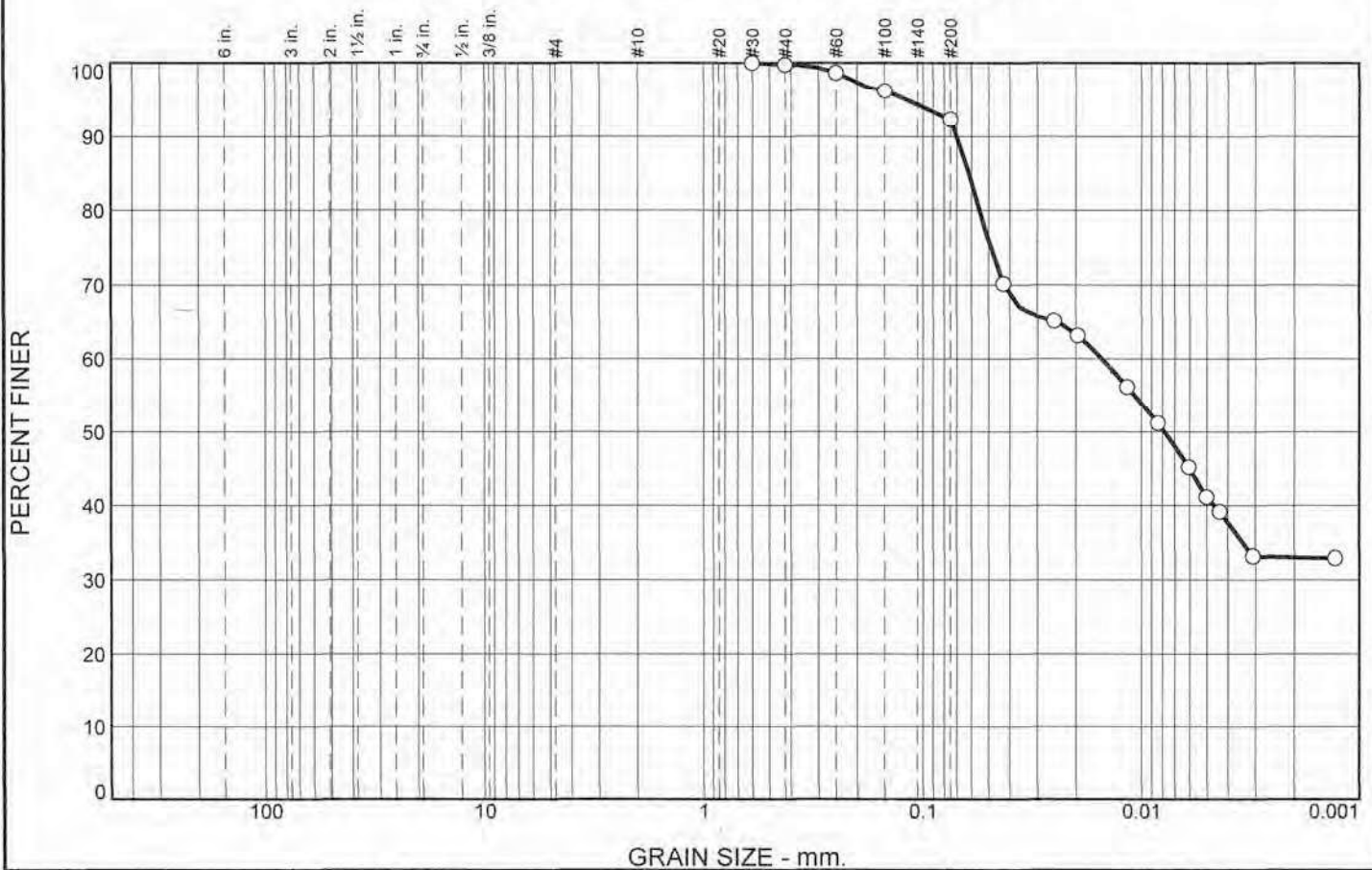
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Project No: 0095433

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

Midwest Engineering Services

Client: Ayres Associates

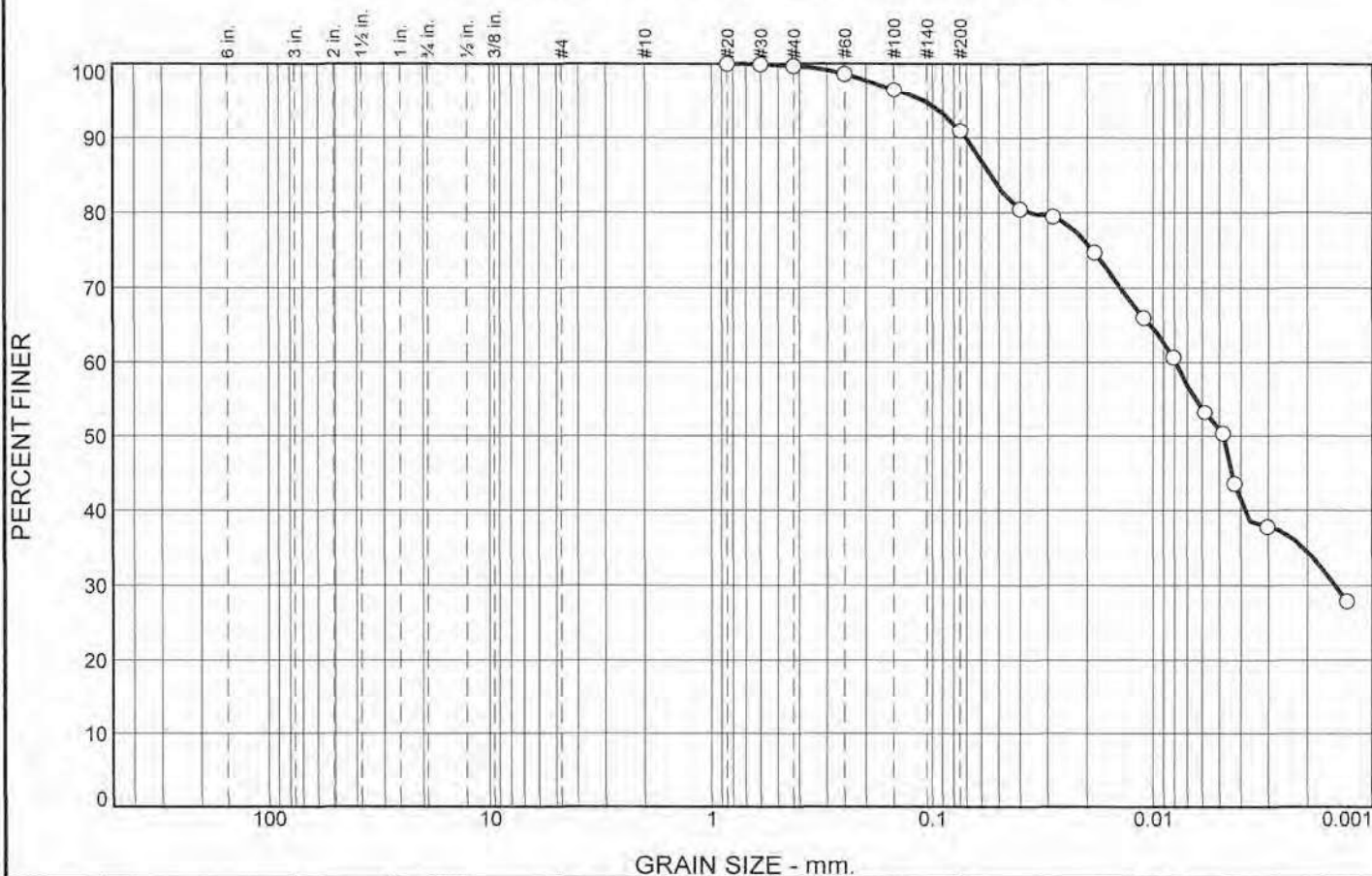
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Project No: 0095433

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

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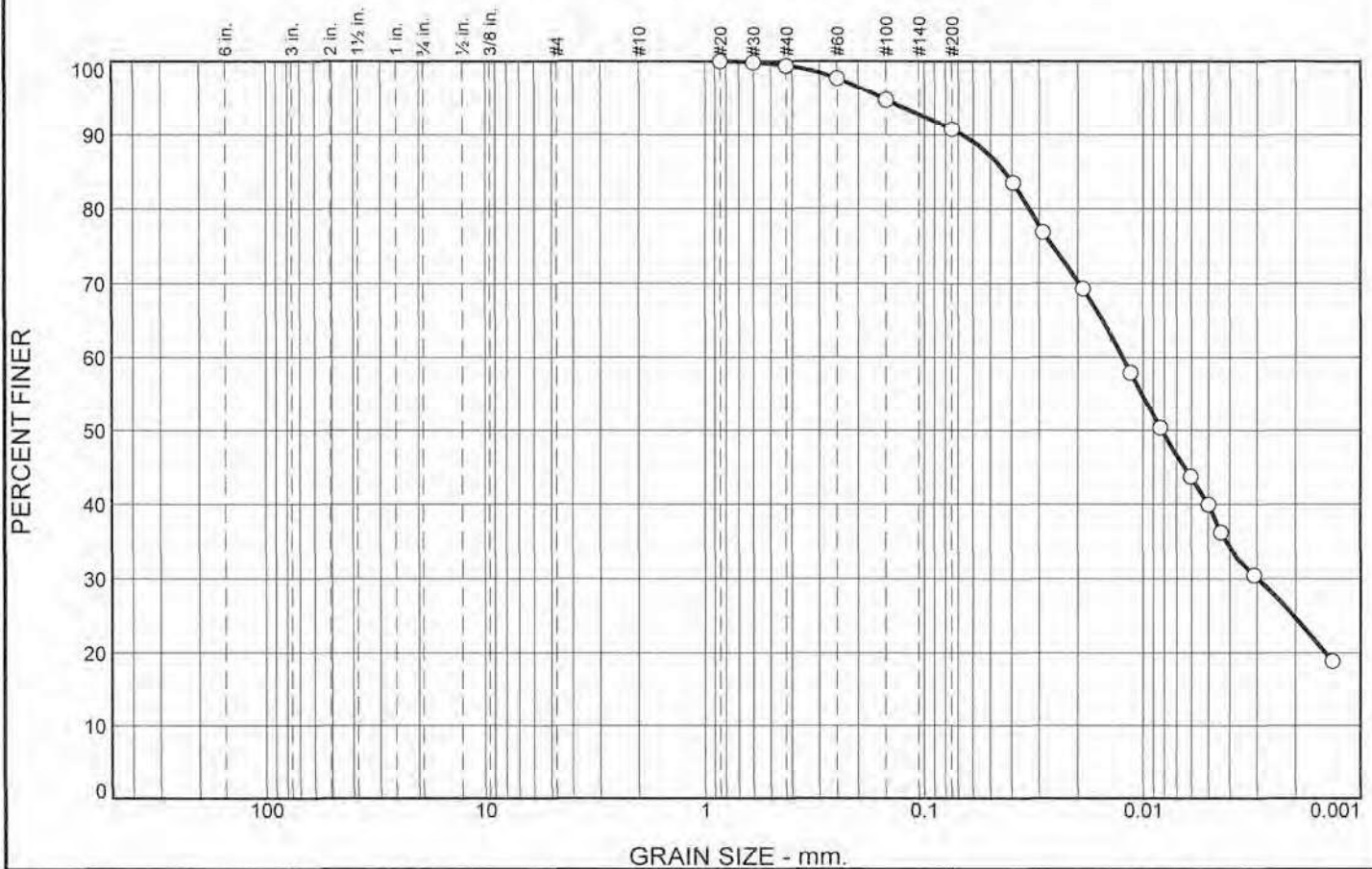
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Figure 4

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)

Material Description
lean clay

Atterberg Limits
PL= 17 LL= 31 PI= 14

Coefficients
D₈₅= 0.0430 D₆₀= 0.0125 D₅₀= 0.0082
D₃₀= 0.0030 D₁₅= D₁₀=
C_u= C_c=

Classification
USCS= CL AASHTO= A-6(12)

Remarks

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

Date: 01-13-2016

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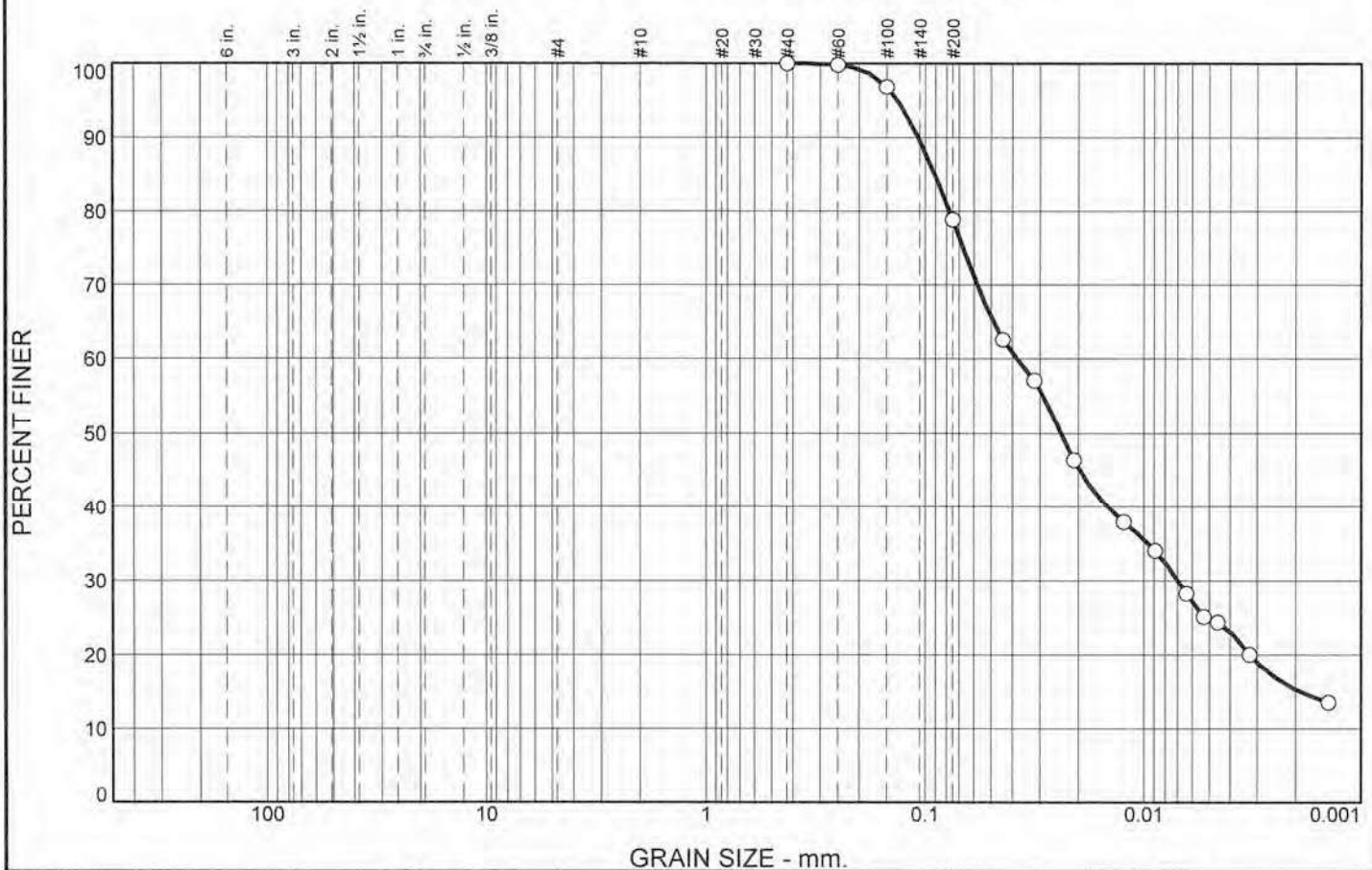
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Project No: 0095433

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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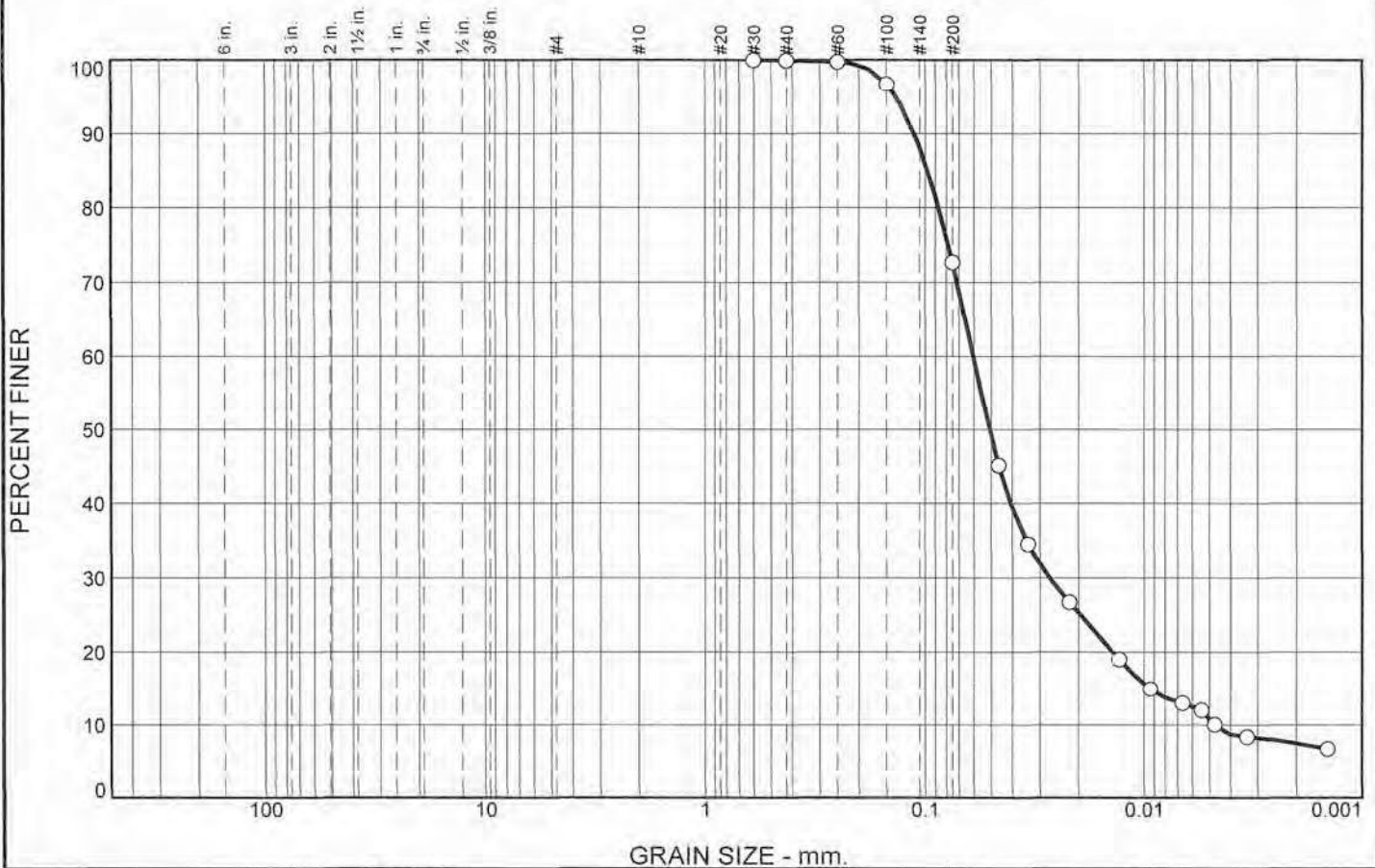
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Figure 6

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

Midwest Engineering Services

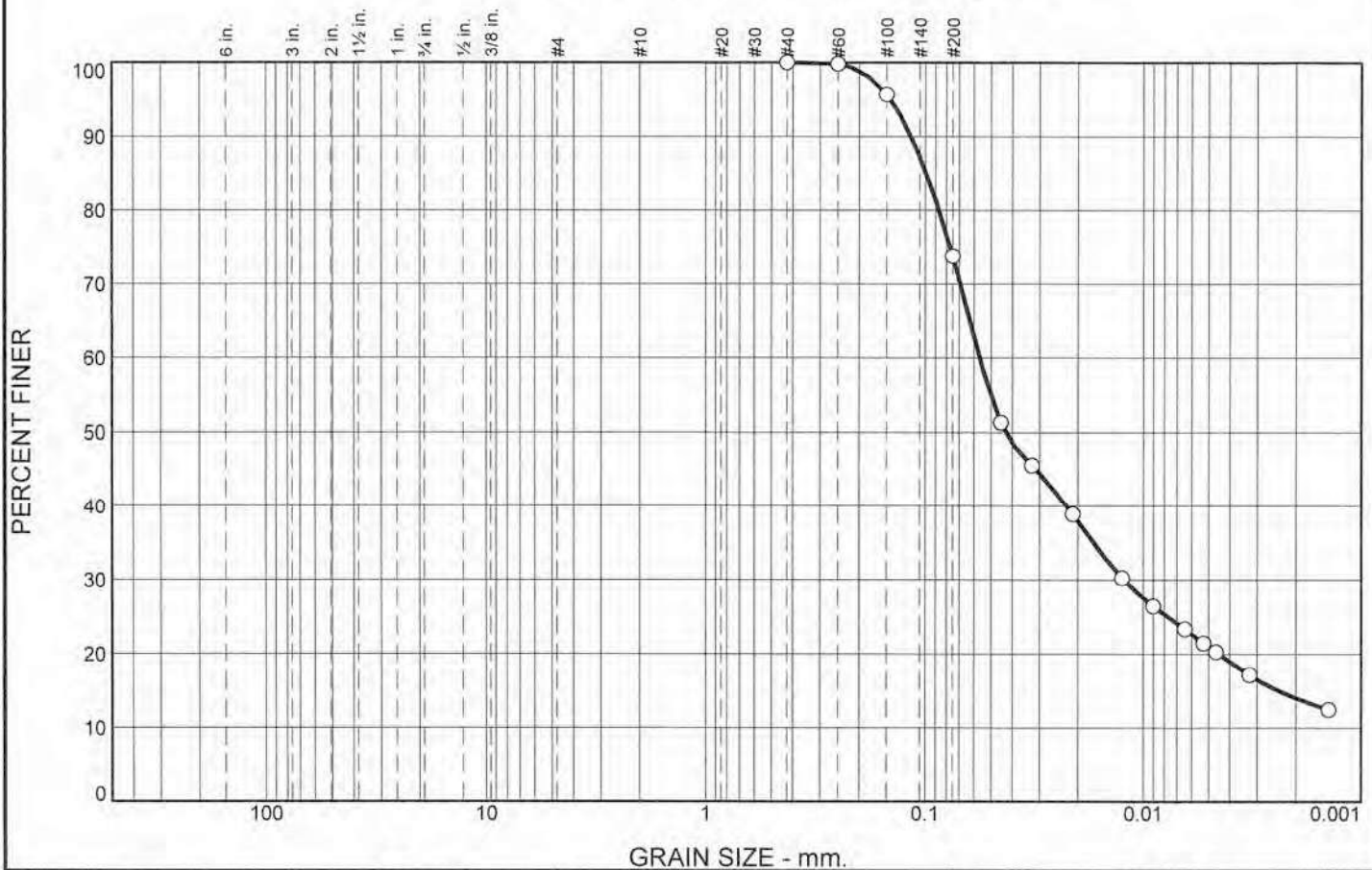
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Waukesha, Wisconsin

Project No: 0095433

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

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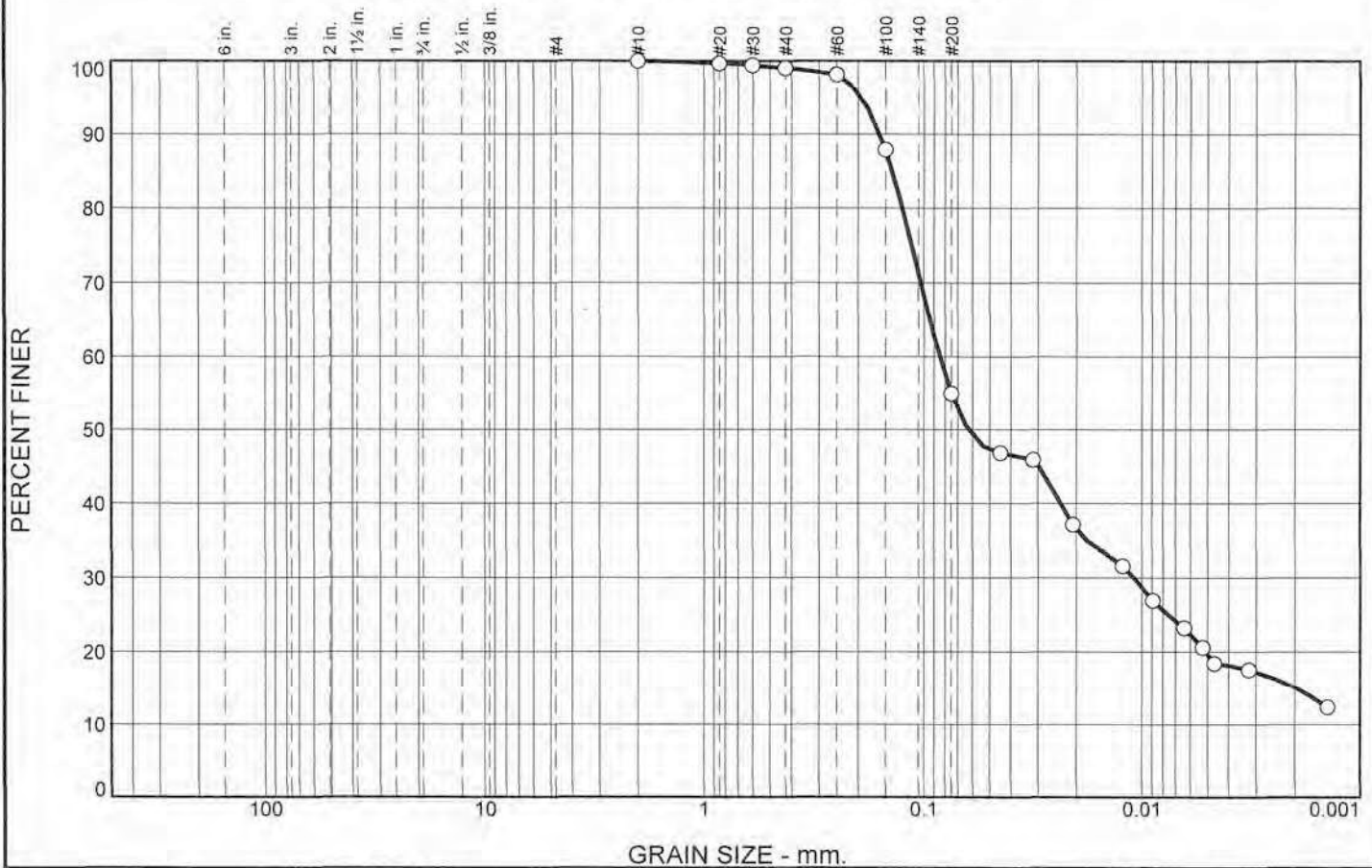
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Project No: 0095433

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

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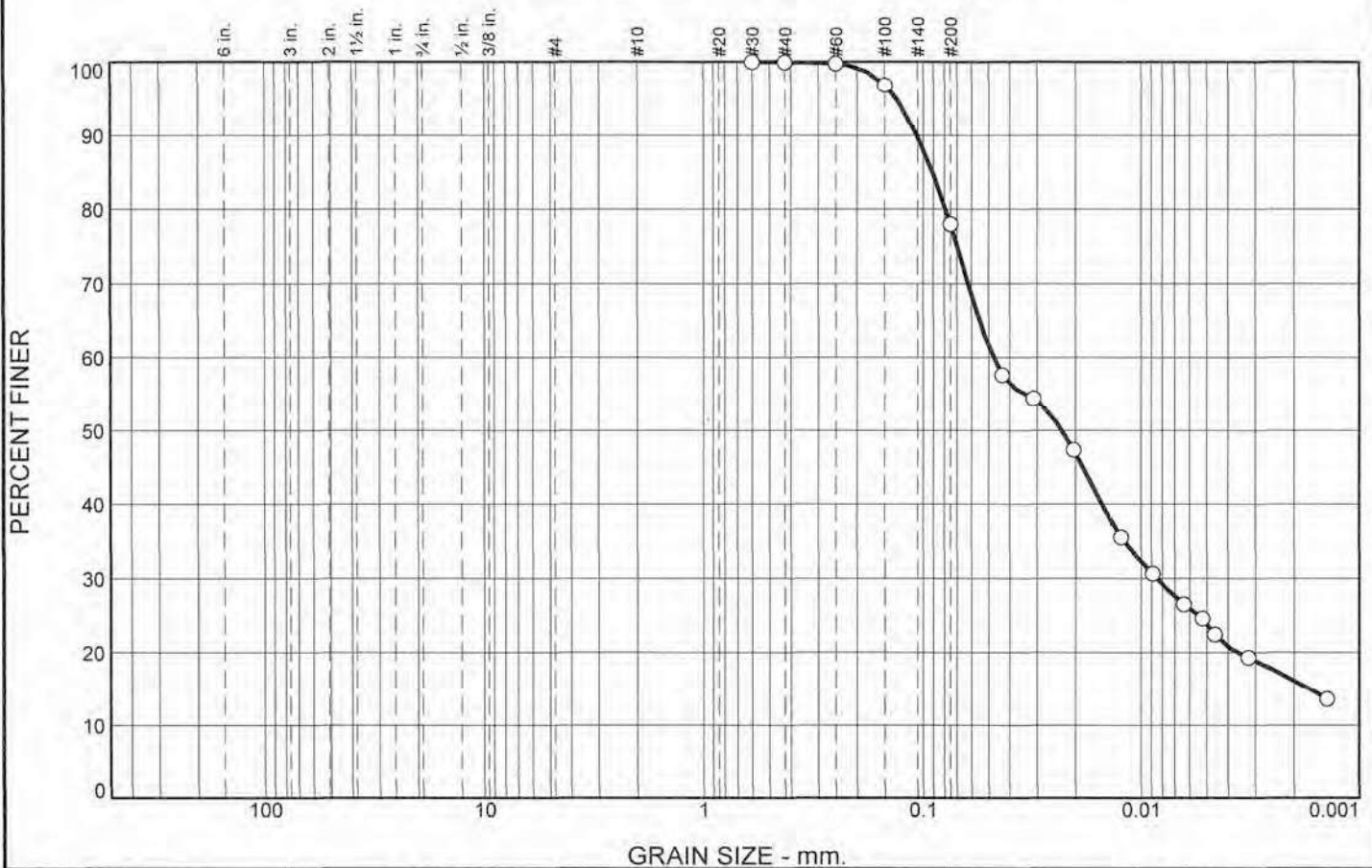
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Project No: 0095433

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

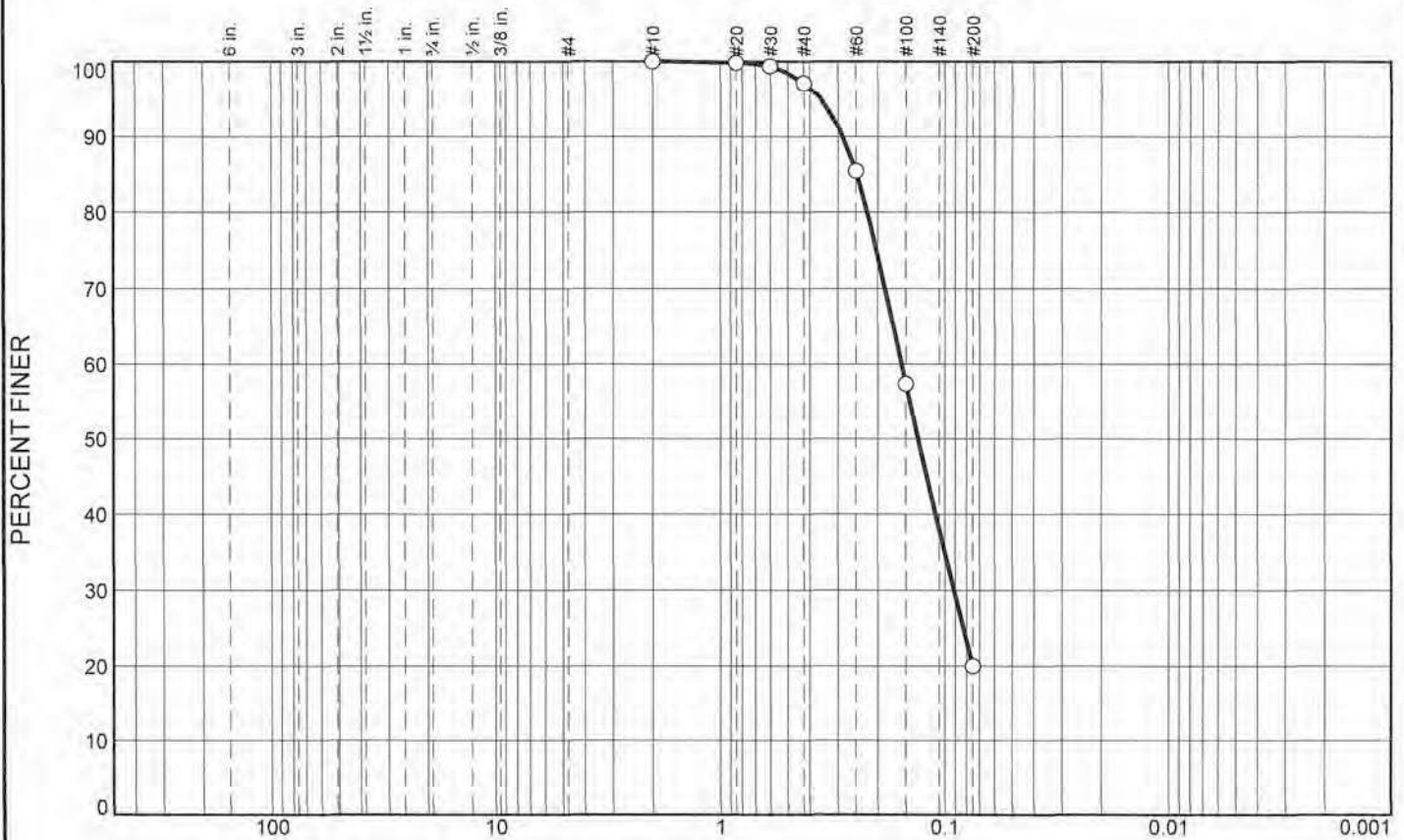
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Project: Adams County Landfill

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

Client: Ayres Associates

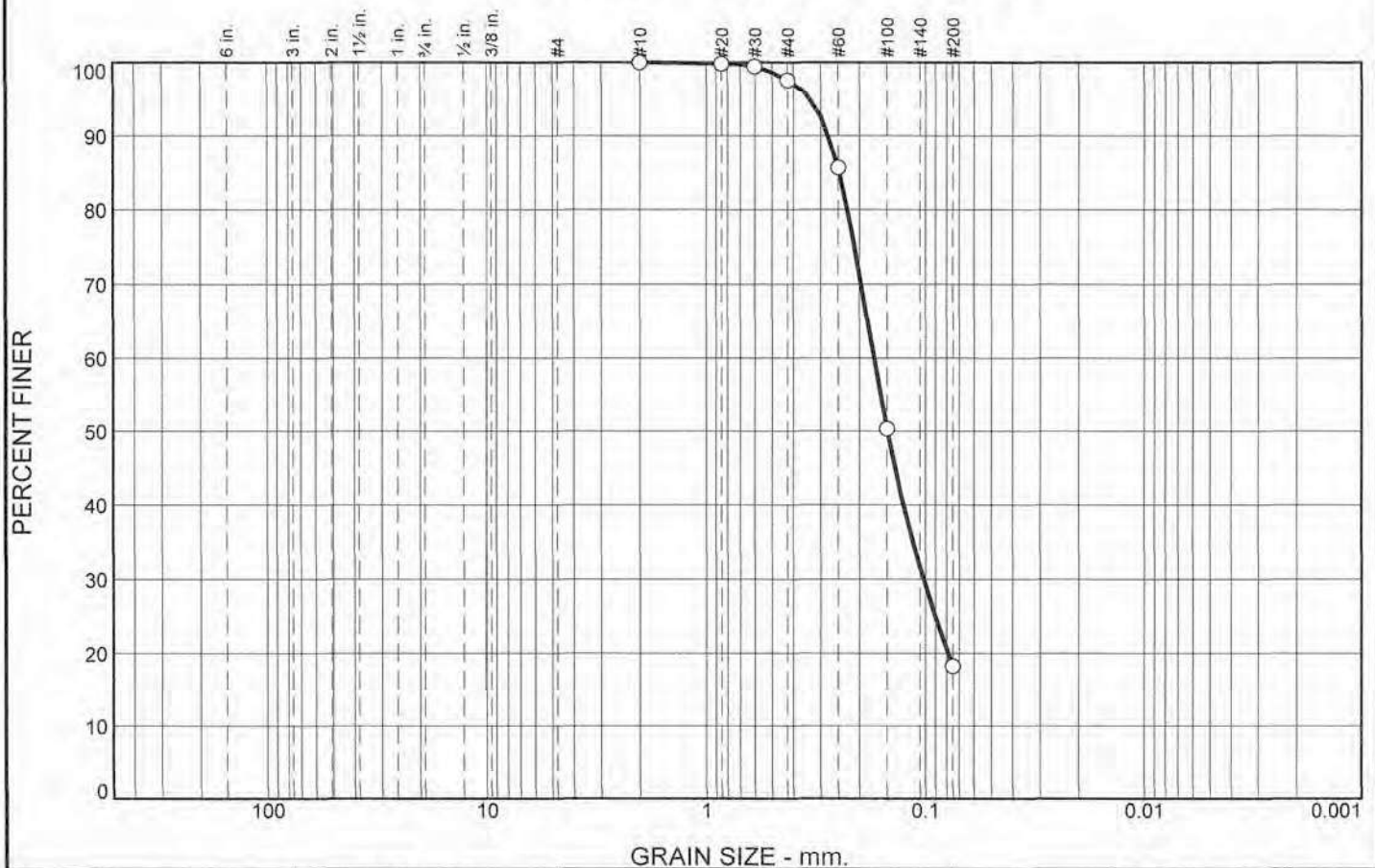
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Waukesha, Wisconsin

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

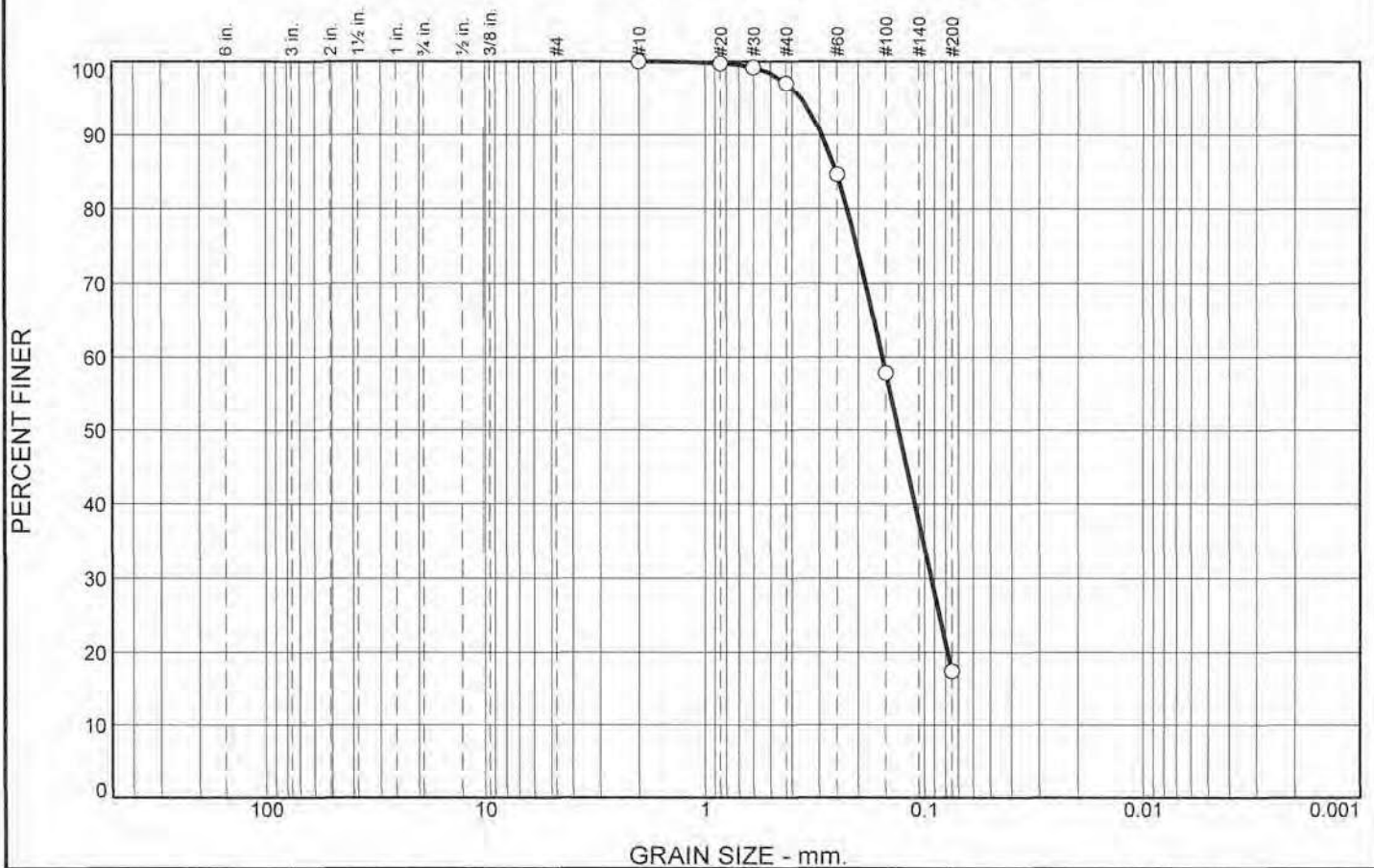
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Waukesha, Wisconsin

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		
D ₈₅ = 0.2520	D ₆₀ = 0.1555	D ₅₀ = 0.1311
D ₃₀ = 0.0930	D ₁₅ =	D ₁₀ =
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

Client: Ayres Associates

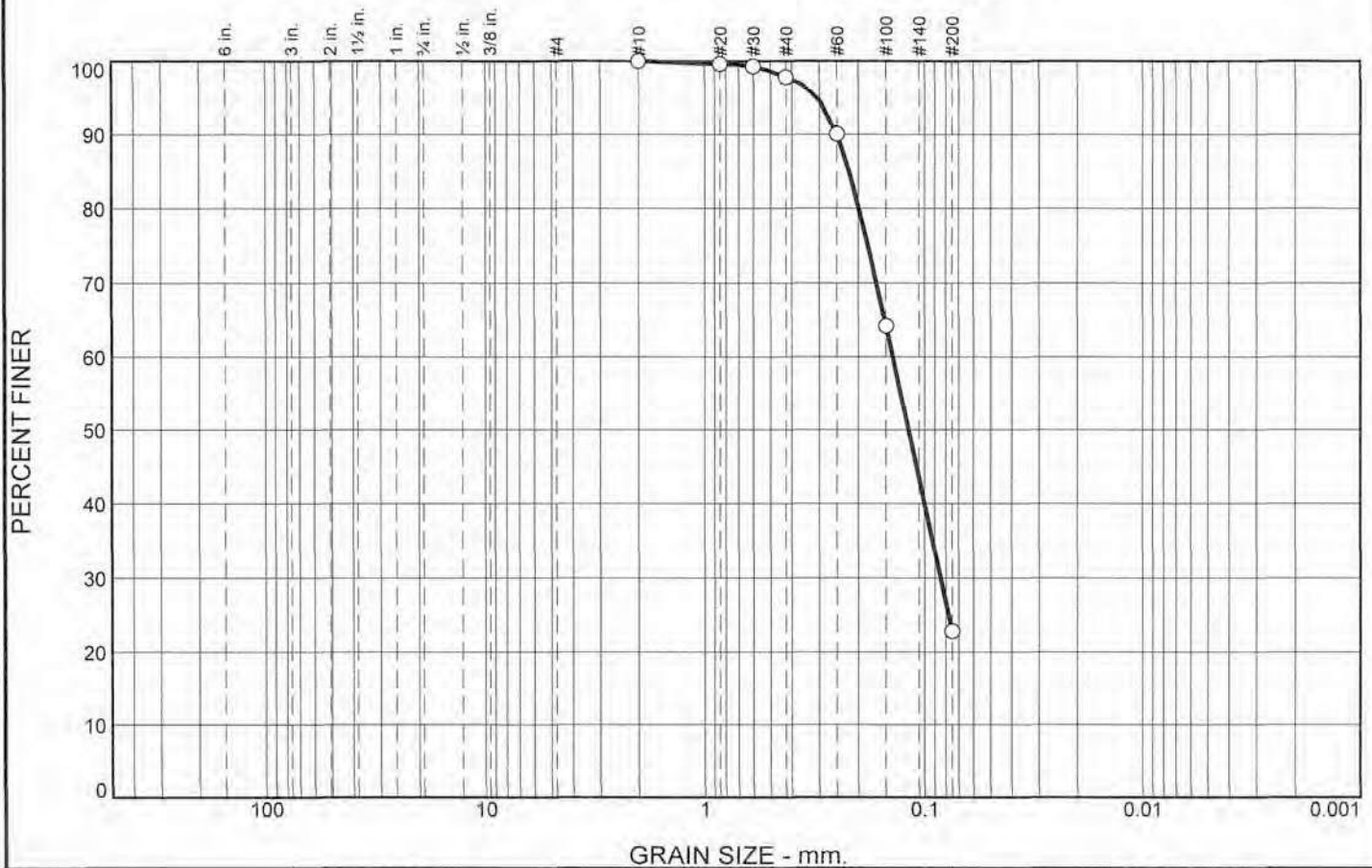
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Figure 13

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

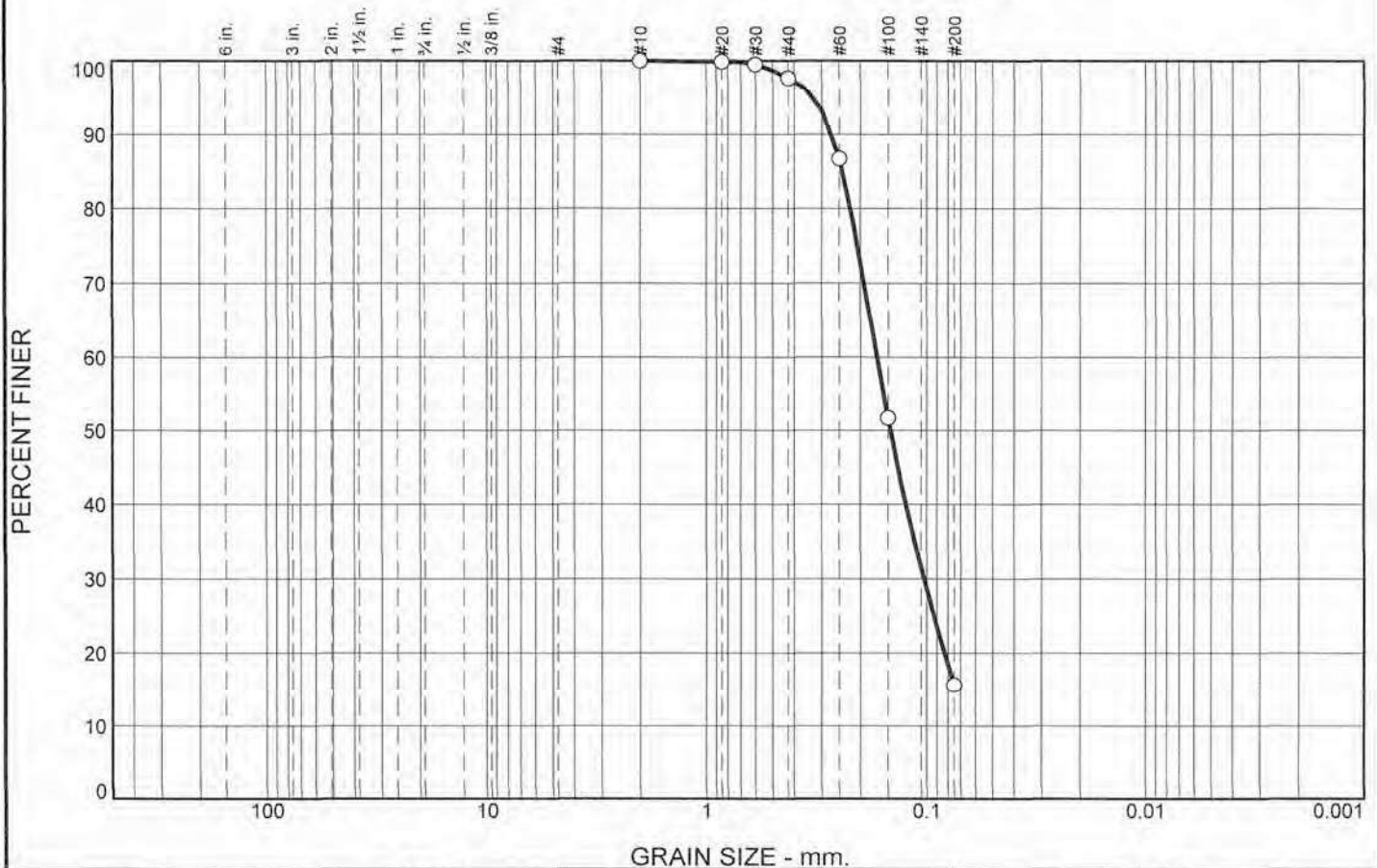
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Project: Adams County Landfill

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

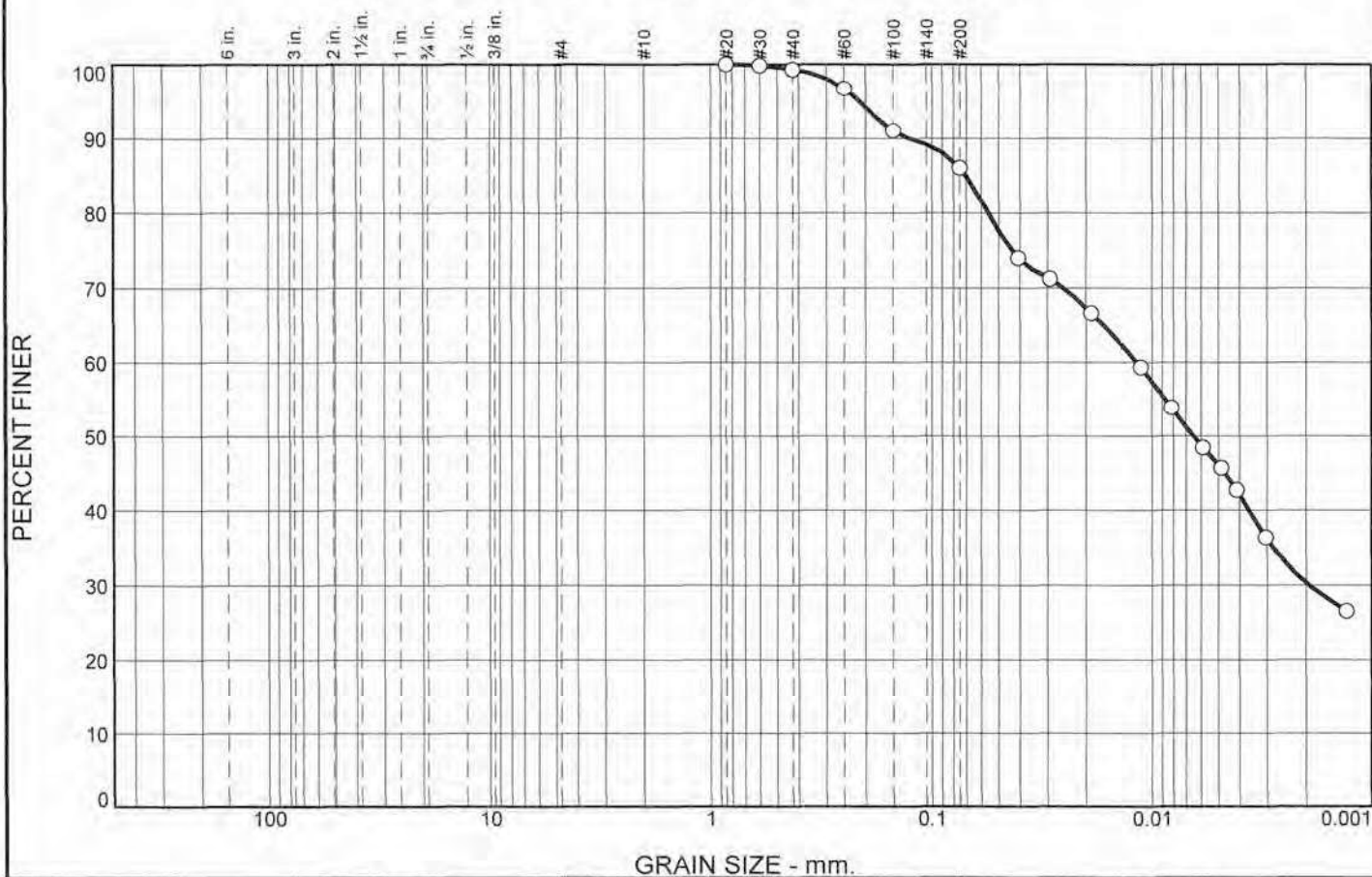
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Project: Adams County Landfill

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)

Material Description

lean clay

Atterberg Limits

PL= 17 LL= 30 PI= 13

Coefficients

D₈₅= 0.0705 D₆₀= 0.0117 D₅₀= 0.0065
D₃₀= 0.0019 D₁₅= D₁₀=
C_u= C_c=

Classification

USCS= CL AASHTO= A-6(10)

Remarks

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

Depth: 22'-37'

Date: 01-13-2016

Midwest Engineering Services

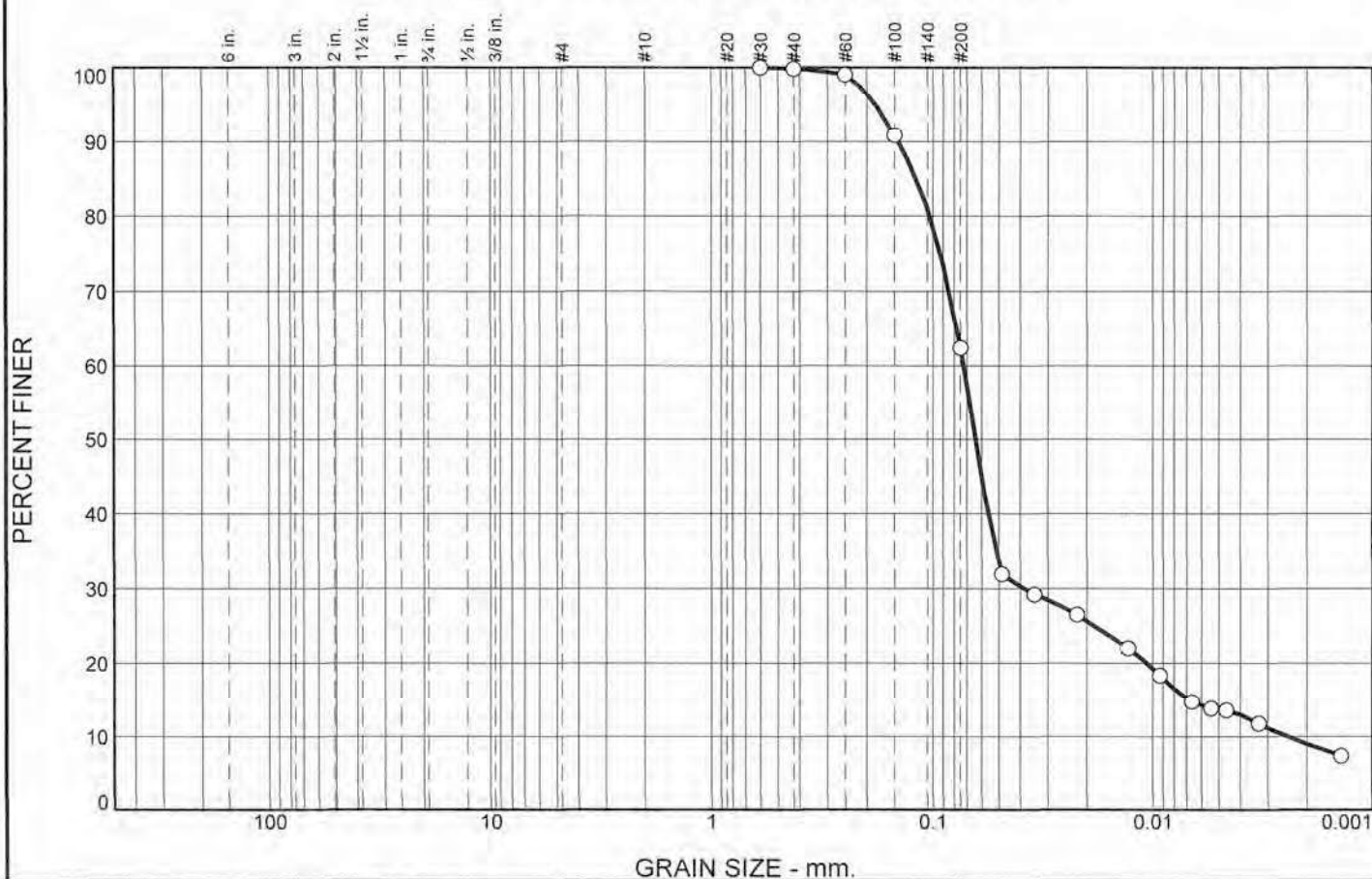
Waukesha, Wisconsin

Client: Ayres Associates
Project: Adams County Landfill

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
 D₈₅= 0.1194 D₆₀= 0.0726 D₅₀= 0.0640
 D₃₀= 0.0384 D₁₅= 0.0069 D₁₀= 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

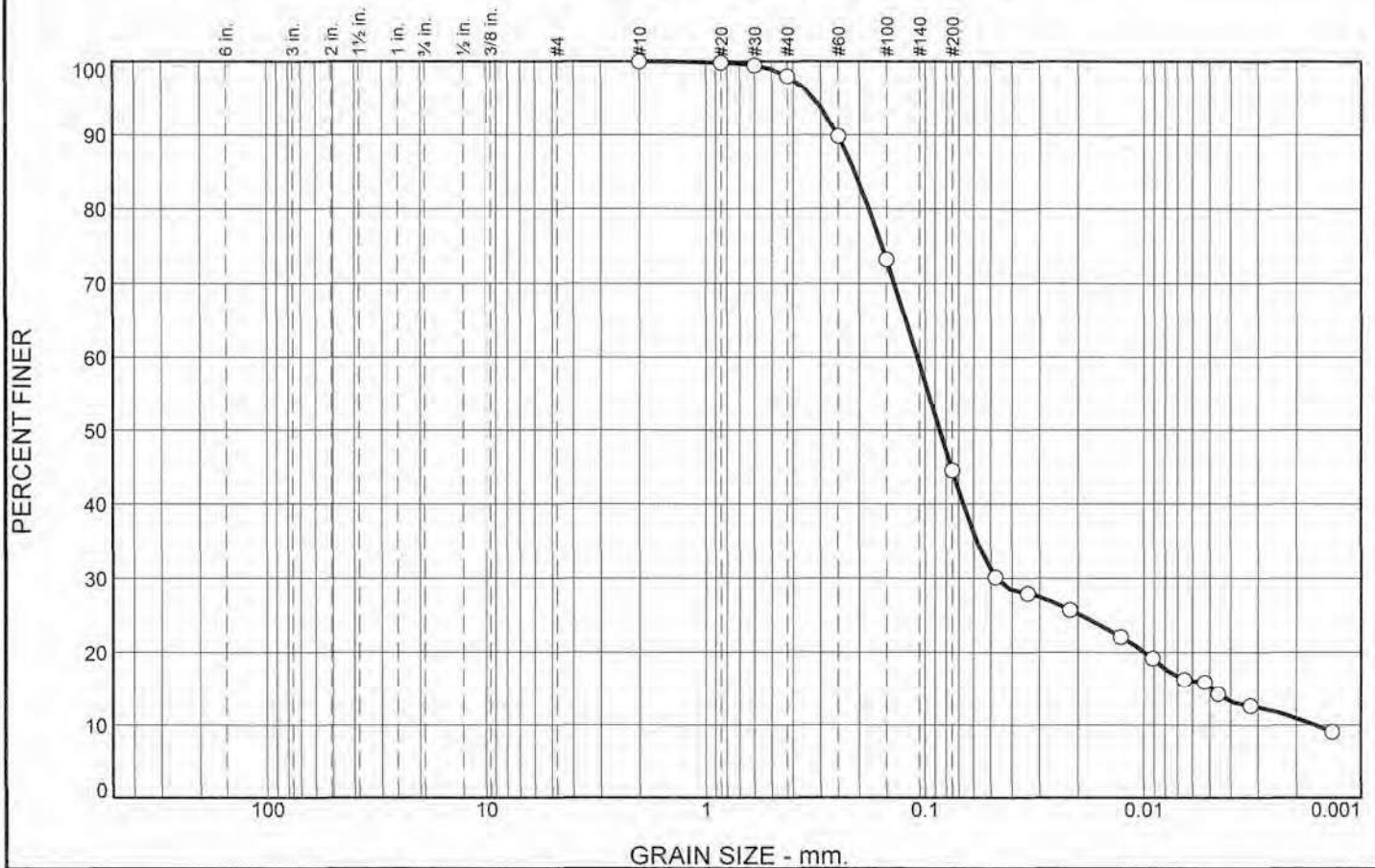
Waukesha, Wisconsin

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

Client: Ayres Associates

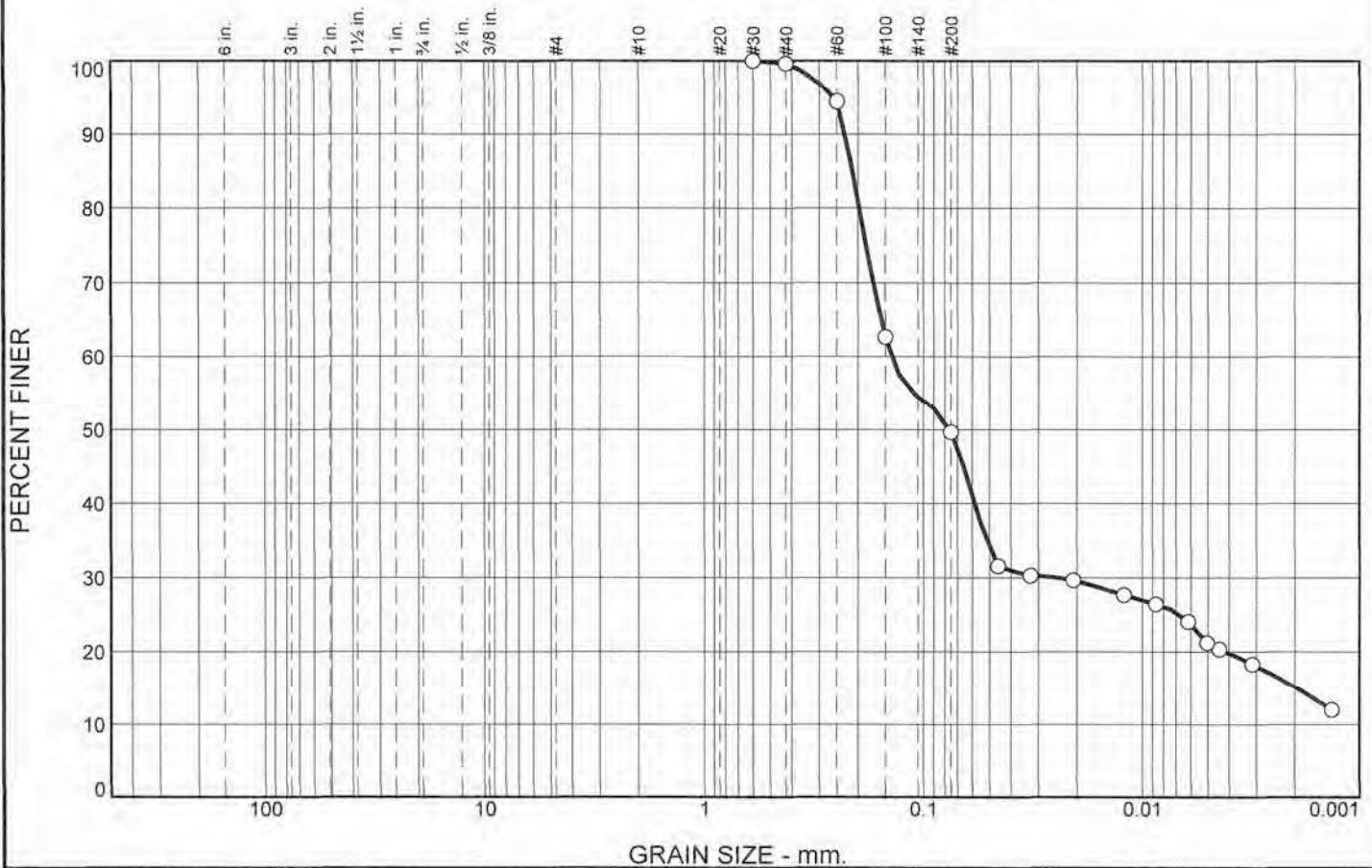
Project: Adams County Landfill

Waukesha, Wisconsin

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)

Material Description
 silty, clayey sand

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₈₅= 0.2117 D₆₀= 0.1407 D₅₀= 0.0760
 D₃₀= 0.0239 D₁₅= 0.0020 D₁₀=
 C_u= C_c=

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

Remarks

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

Depth: 27'-42'

Date: 01-13-2016

Midwest Engineering Services

Client: Ayres Associates

Project: Adams County Landfill

Waukesha, Wisconsin

Project No: 0095433

Figure 19

TABLE NO. 6-4

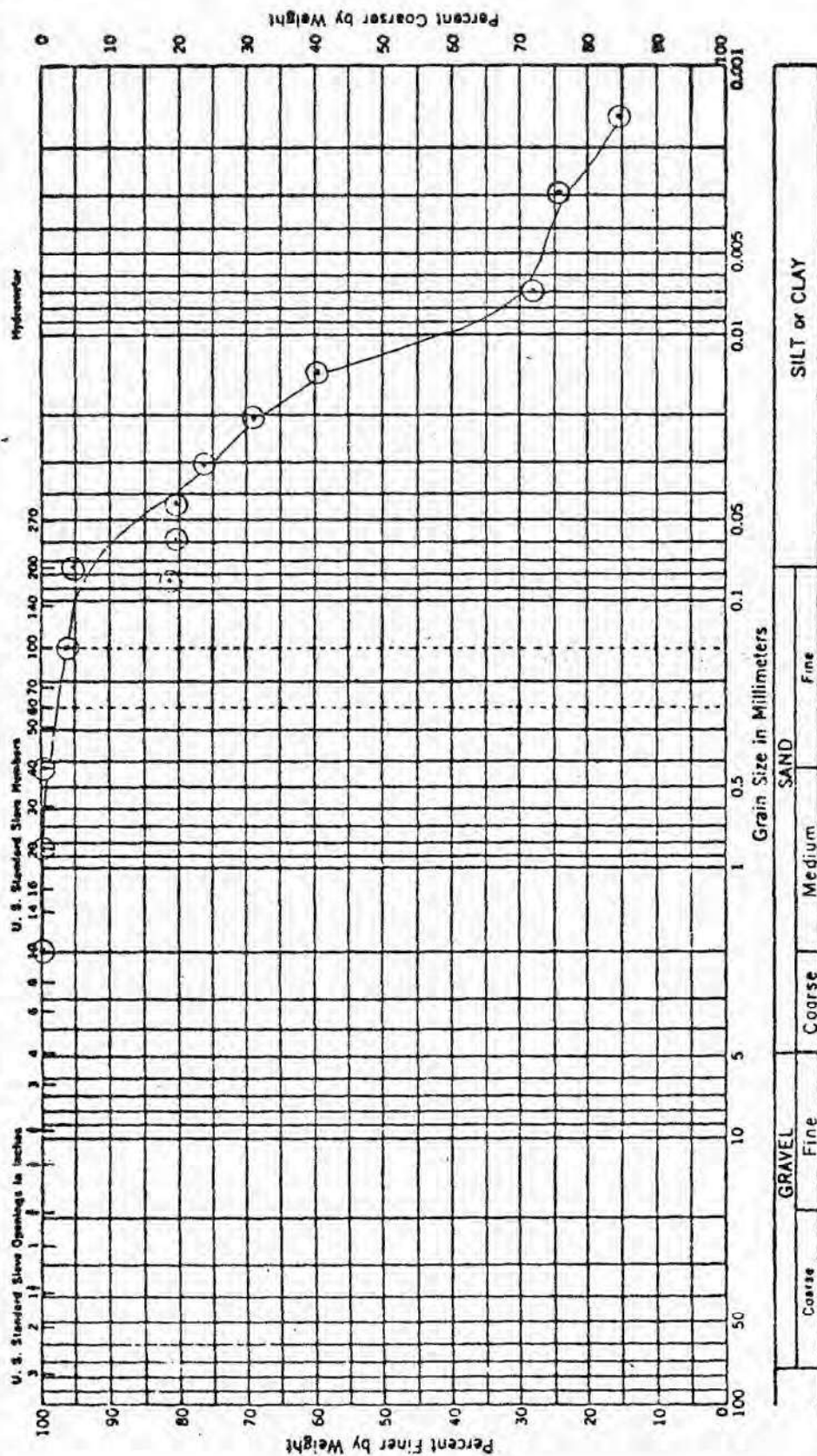
CLIENT Adams County			SOIL TESTING SUMMARY				Foth & Van Dyke Waste/Energy Division					
PROJECT Feasibility Study			Proposed Landfill - Jensen Property									
PROJECT NO. 86A22												
BORING / TEST PIT	SAMPLE NO / DEPTH	SOIL TYPE (USCS)	PERMEABILITY		ATTERBERG LIMITS	GRAIN SIZE ANALYSIS 1			C.E.C			
			SHELBY	RE-MOLDED		MODIFIED PROCTOR DENSITY	LL/PL/PI	GRAVEL		SAND	TOTAL	0-200 005
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					0	38	62			
MW-9	Bulk/ 10'-12'	SP					0	98	2			
	7/35' upper CL	CL					0	13	87	56	43	
	7A/35' lower SP	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										
B-11	10'-15'	SP					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					0	87	13			
	6/27'-31'	CL					0	8	92	40	21	
B-13	Bulk/ 10'-13'	SP					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	

31

[illegible]

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

UNIFIED CLASSIFICATION SYSTEM

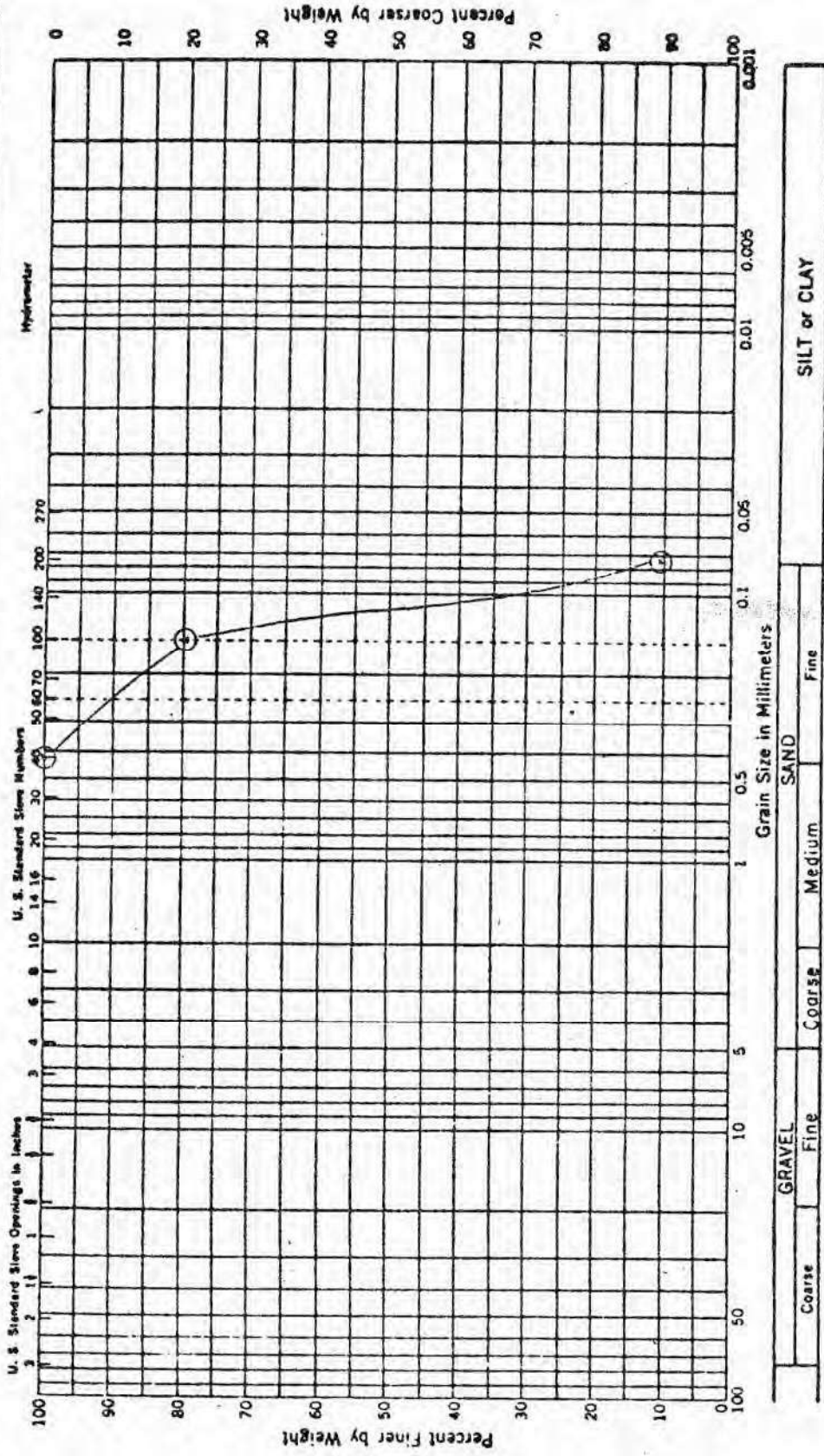
[illegible]

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

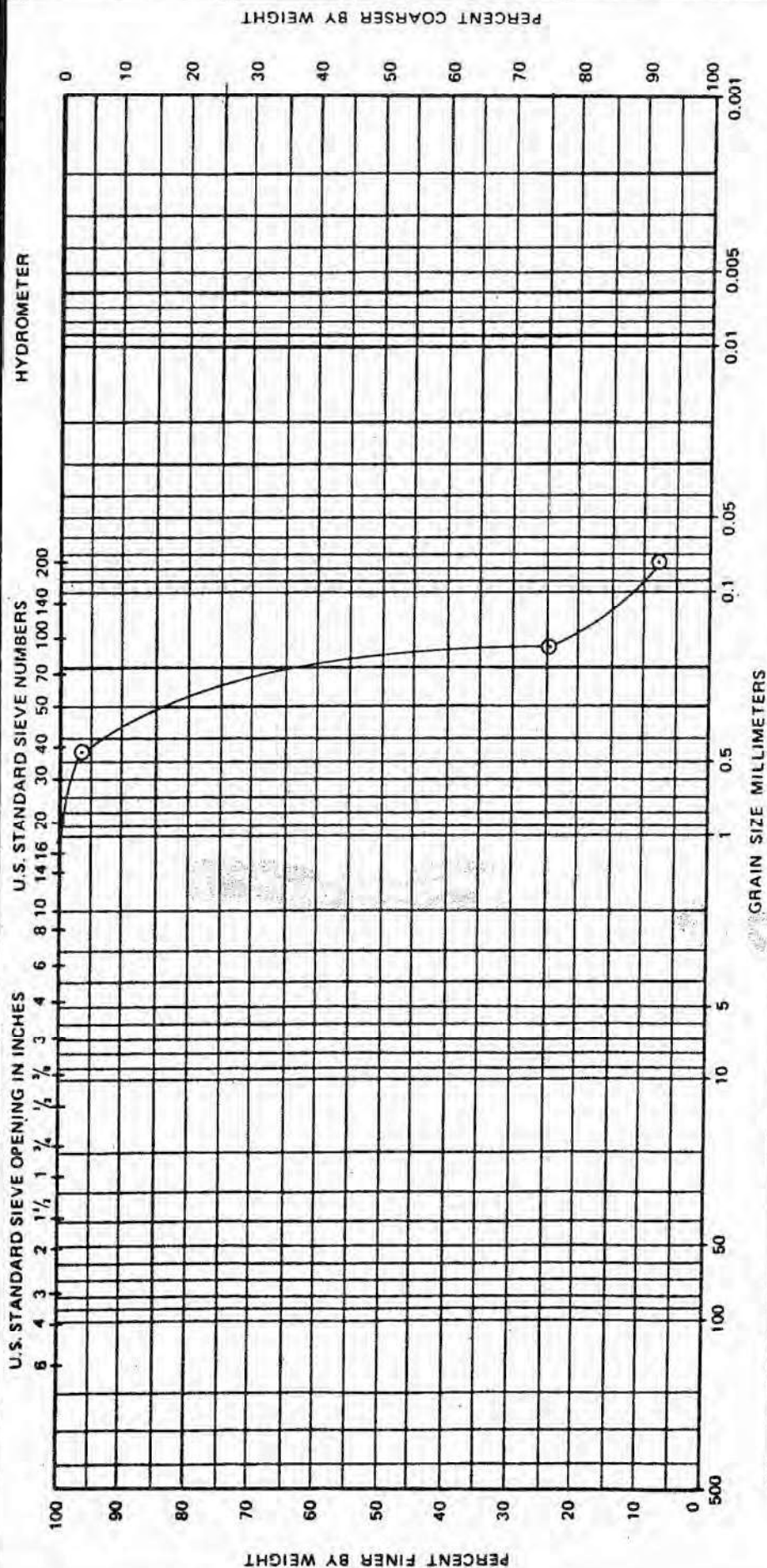
ULM IEL CLASSIFICATION SYSTEM



SAMPLE NO.	W.C.	LL	PL	PI	CLASSIFICATION
MW-2					Fine sand (SP-SM)-trace of silt
S-2					
10'					

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	

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY	
	COARSE	FINE	COARSE	MEDIUM	FINE		

SAMPLE NO.	MW-3P	ELEV. OR DEPTH	50.0'	CLASSIFICATION	SAND w/SILT, fine grained, light brown	NAT W%	17.5	LL		PL		PI		PROJECT	Adams County Feasibility Study
DRAWN BY:	RRR	APPROVED BY:		NOTES:	(SP-SM)									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 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: _____

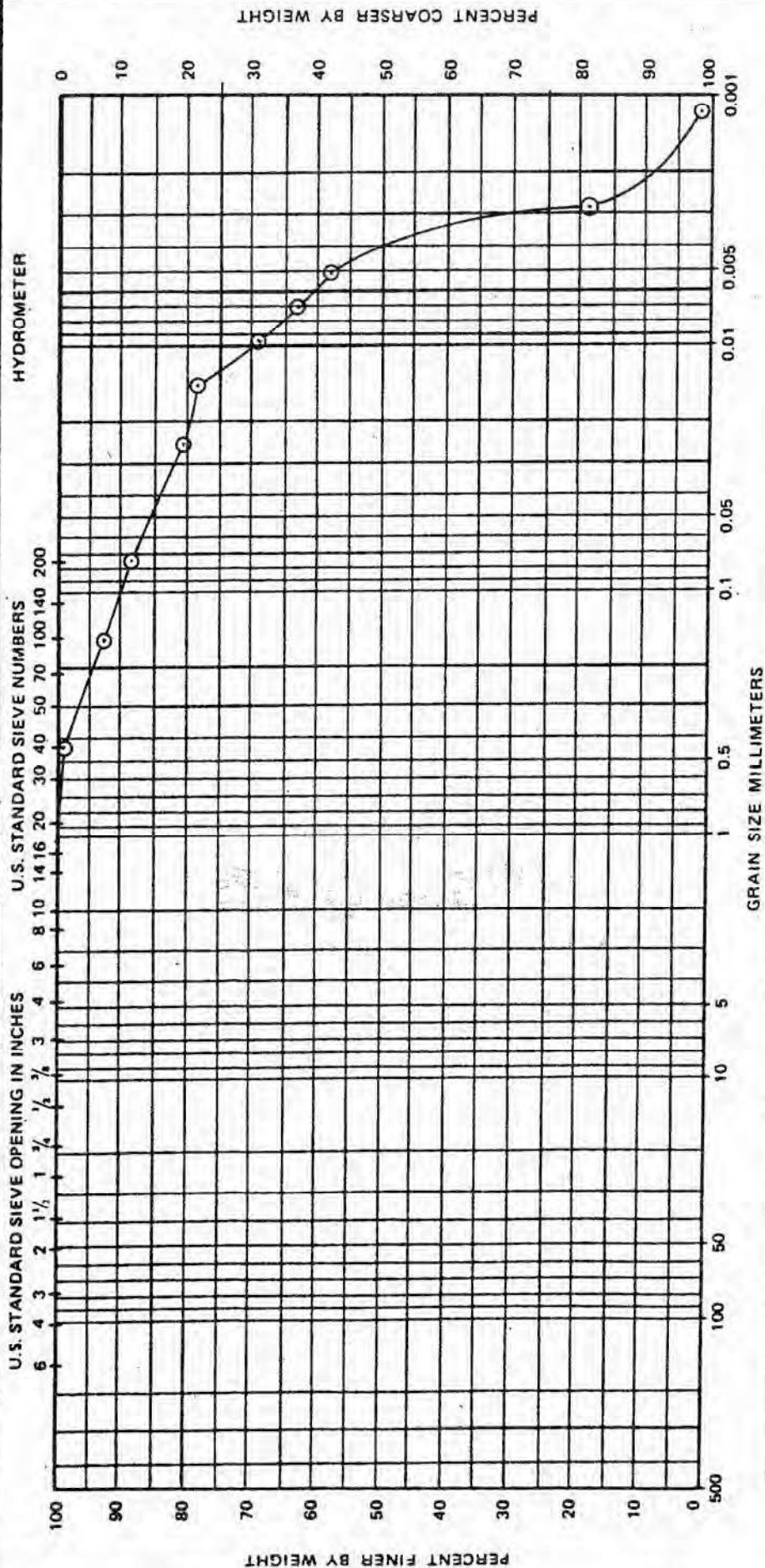
DRY RODDED WGT: _____

WASHED GRADATION: yes

PERCENT PASSING NO. 200 SIEVE 8.1 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY	
	COARSE	FINE	COARSE	MEDIUM	FINE		

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NATW%	LL	PL	PI	PROJECT	ADAMS COUNTY FEASIBILITY STUDY
MW-6		LEAN CLAY, reddish	25.4				DATE: 8/15/86	PROJECT NO: 86A22
S-10	45'	brown						
		(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 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	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	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 FROM: 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: _____

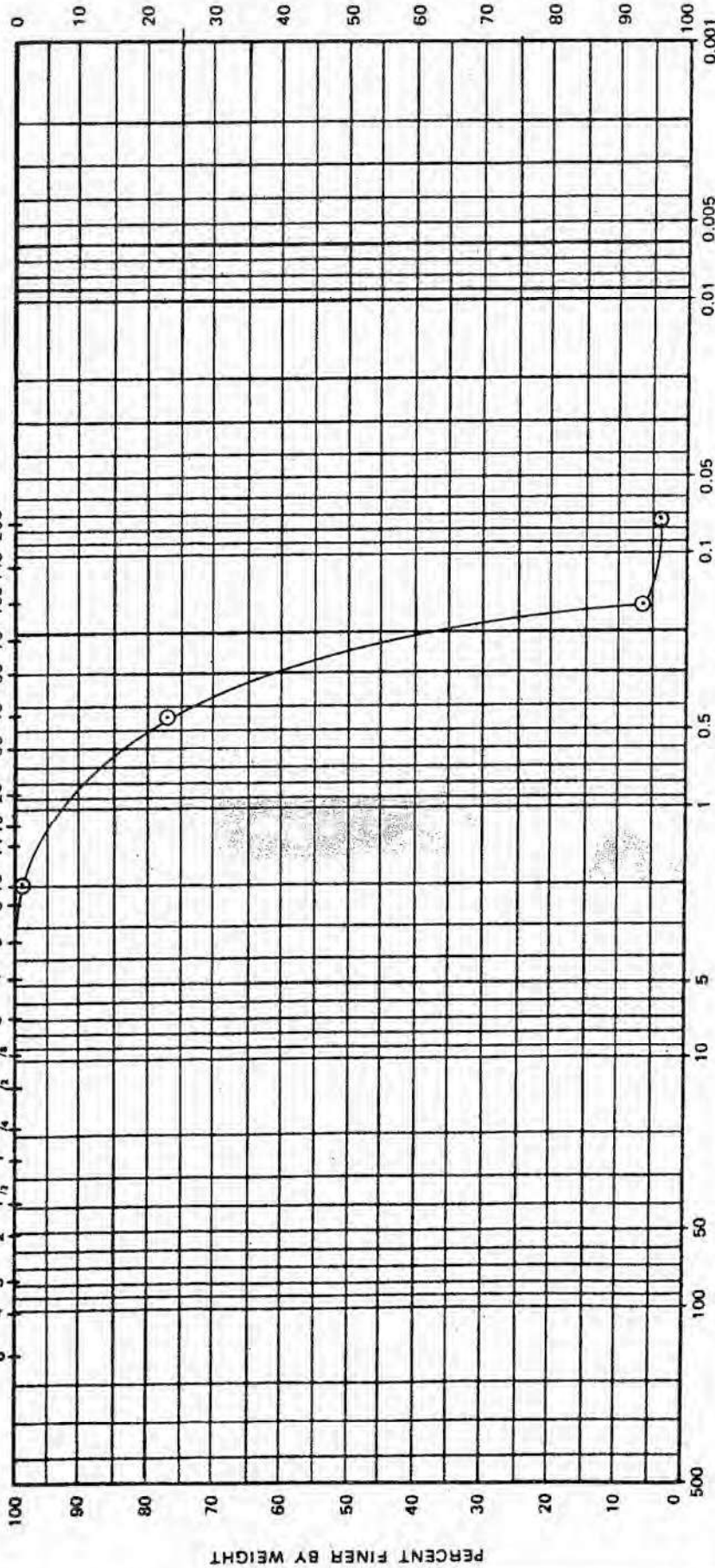
DRY RODDED WGT: _____

WASHED GRADATION: yes

PERCENT PASSING NO. 200 SIEVE 88.3 %

CHECKED BY: _____

HYDROMETER



GRAIN SIZE MILLIMETERS

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
MW-6P		SAND, fine to medium	19.7					
S-7	85'	grained, brown					DATE: 8/15/86	PROJECT NO: 86A22
		(SP)						
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	6.4	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: Sampl y #7 @ 85'

DATE SAMPLED: June 1986

INTENDED USE: _____

REMARKS:

ORGANIC MATTER, COLORIMETRIC: _____

COAL AND LIGNITE: _____

CLAY LUMPS: _____

CHERT: _____

SOFT PARTICLES: _____

PERCENT ABSORPTION: _____

SPECIFIC GRAVITY: _____

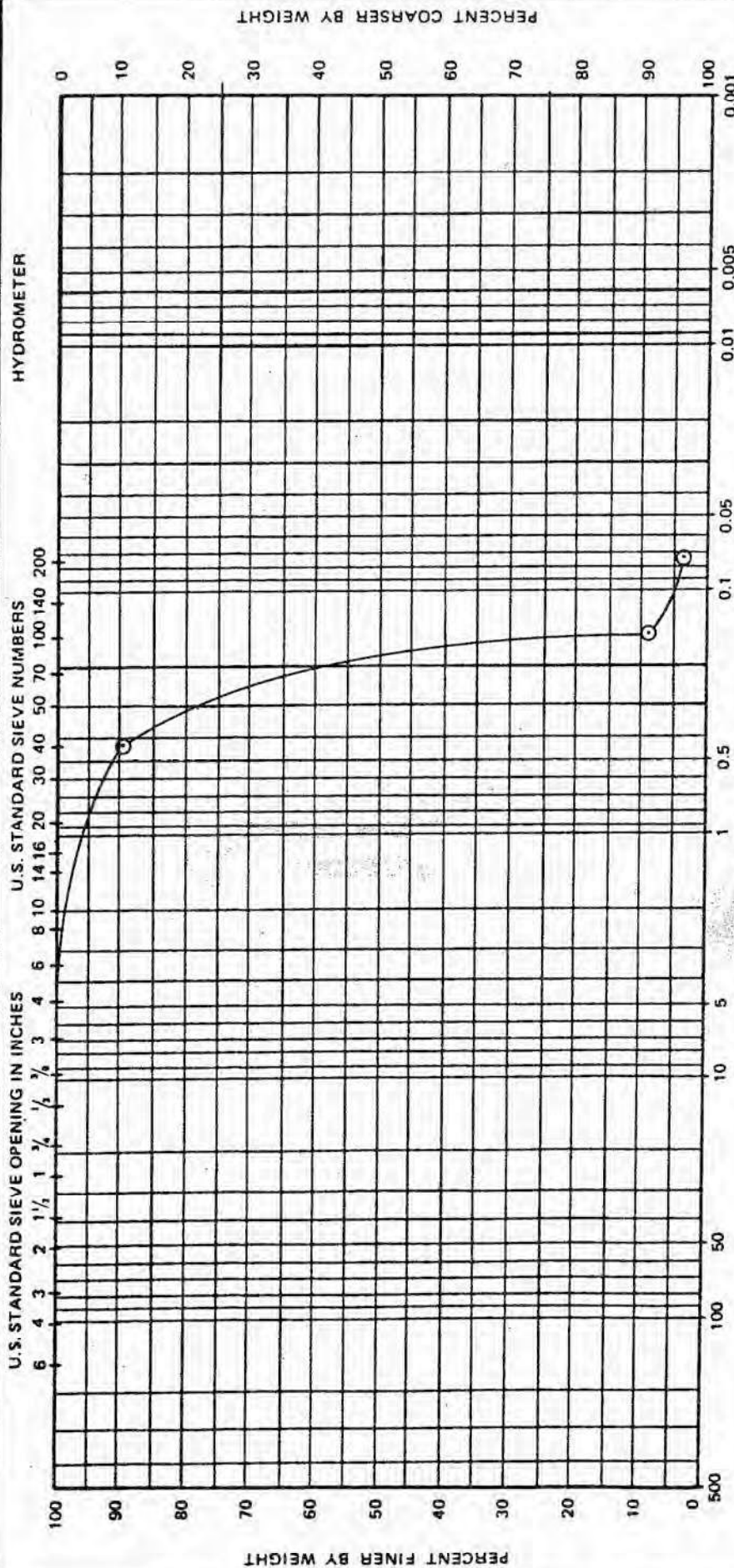
DRY RODDED WGT: _____

WASHED GRADATION: yes

PERCENT PASSING NO. 200 SIEVE 4.4 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND			SILT OR CLAY	
	COARSE	FINE	COARSE	MEDIUM	FINE		

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI	PROJECT
MW-7P		SAND, fine grained	17.9				Adams County Feasibility Study
S-4	55'	light brown					DATE: 8/15/86 PROJECT NO: 86A22
		(SP)					
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-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: _____

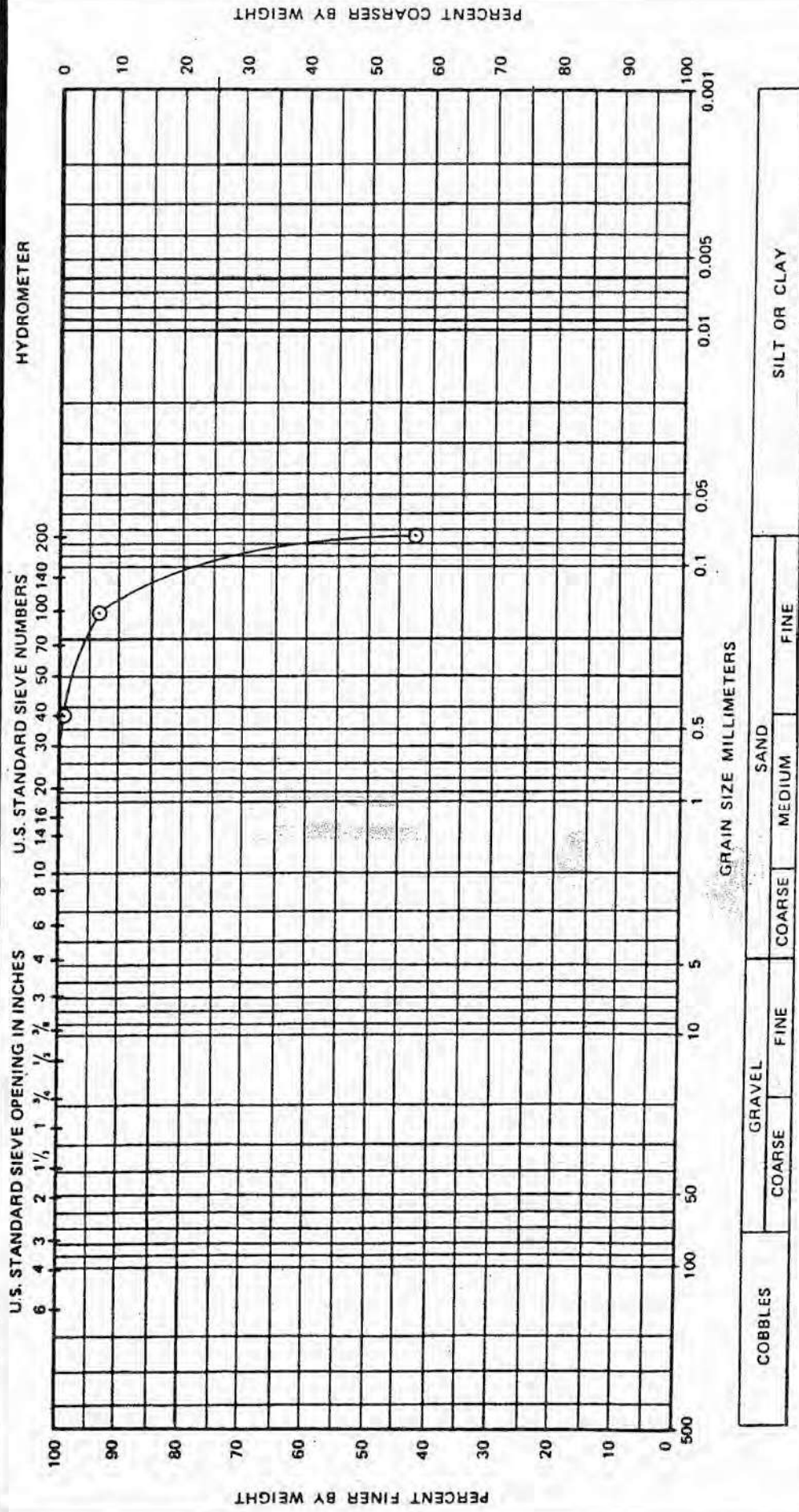
DRY RODDED WGT: _____

WASHED GRADATION: yes

PERCENT PASSING NO. 200 SIEVE 4.0

CHECKED BY: _____

GRAIN SIZE ANALYSIS



SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NATW%	LL	PL	PI	PROJECT	ADAMS COUNTY FEASIBILITY STUDY
MW-8		SILTY SAND, fine	15.8				DATE: 8/15/86	PROJECT NO: 86A22
S-8	40.0'	grained, light brown (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: _____

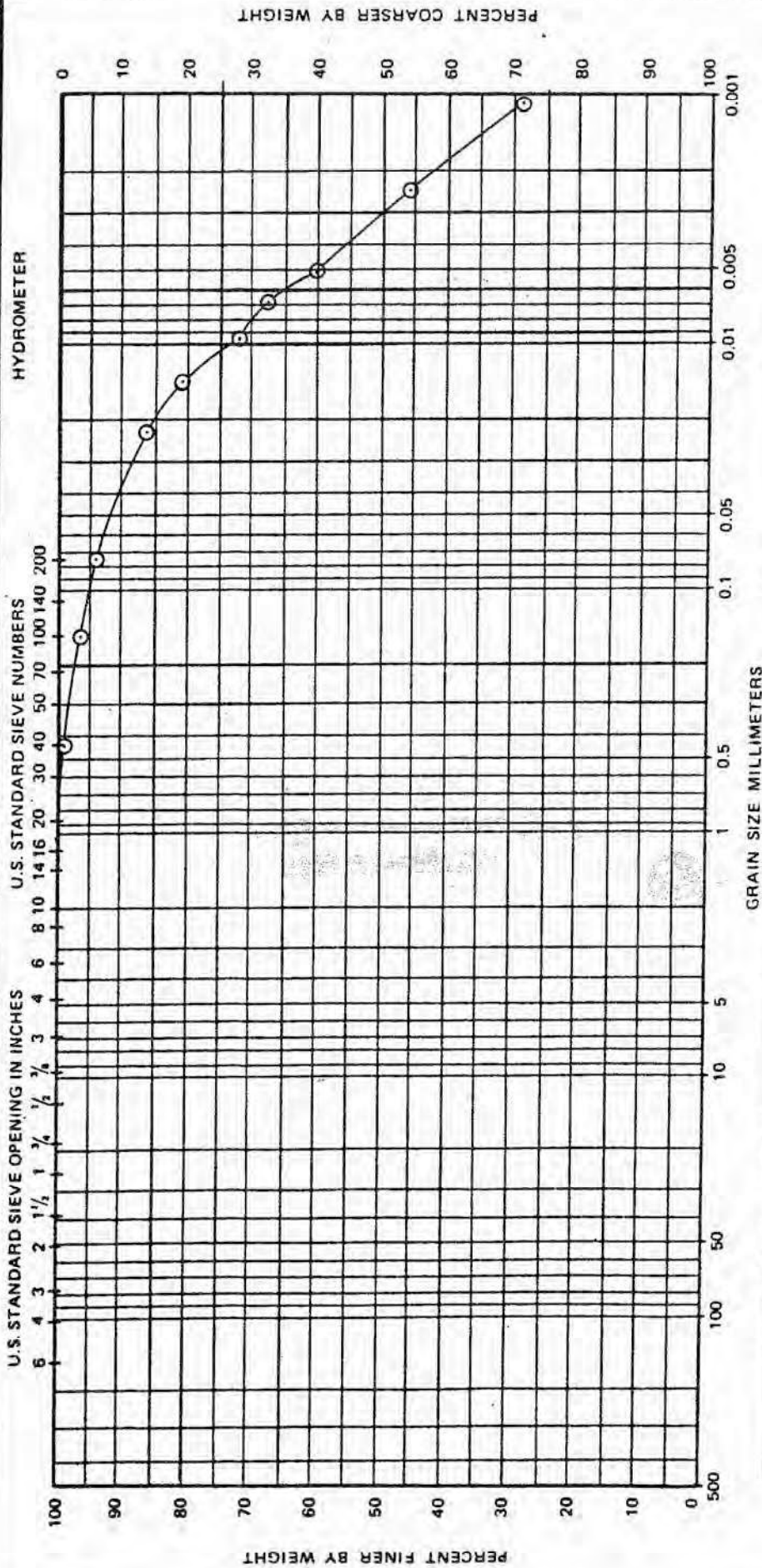
DRY RODDED WGT: _____

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
MW-8		LEAN CLAY, reddish	31.1				Adams County Feasibility Study
S-10	50'	brown					DATE: 8/15/86 PROJECT NO: 86A22
DRAWN BY:	APPROVED BY:	NOTES:	Foth & Van Dyke Industrial Inc. 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: 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: _____

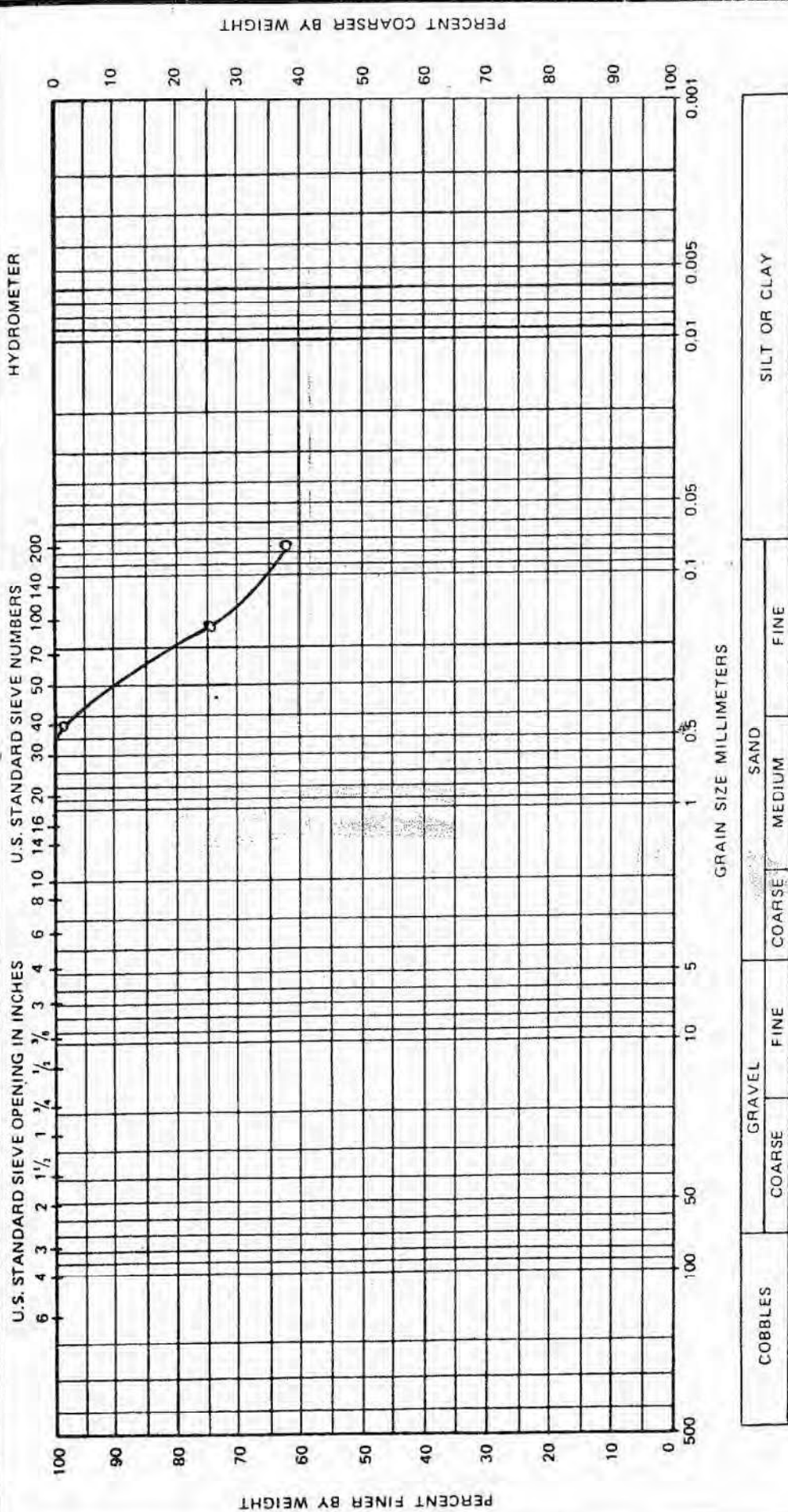
DRY RODDED WGT: _____

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
Boring MW-8	50-55'	SANDY LEAN CLAY, brown					
		(CL)					
DRAWN BY:	APPROVED BY:	NOTES:					
RRR							
PROJECT Adams County Feasibility Study				DATE: 9/19/86 PROJECT NO: 86A22			
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}~~FORM~~ 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

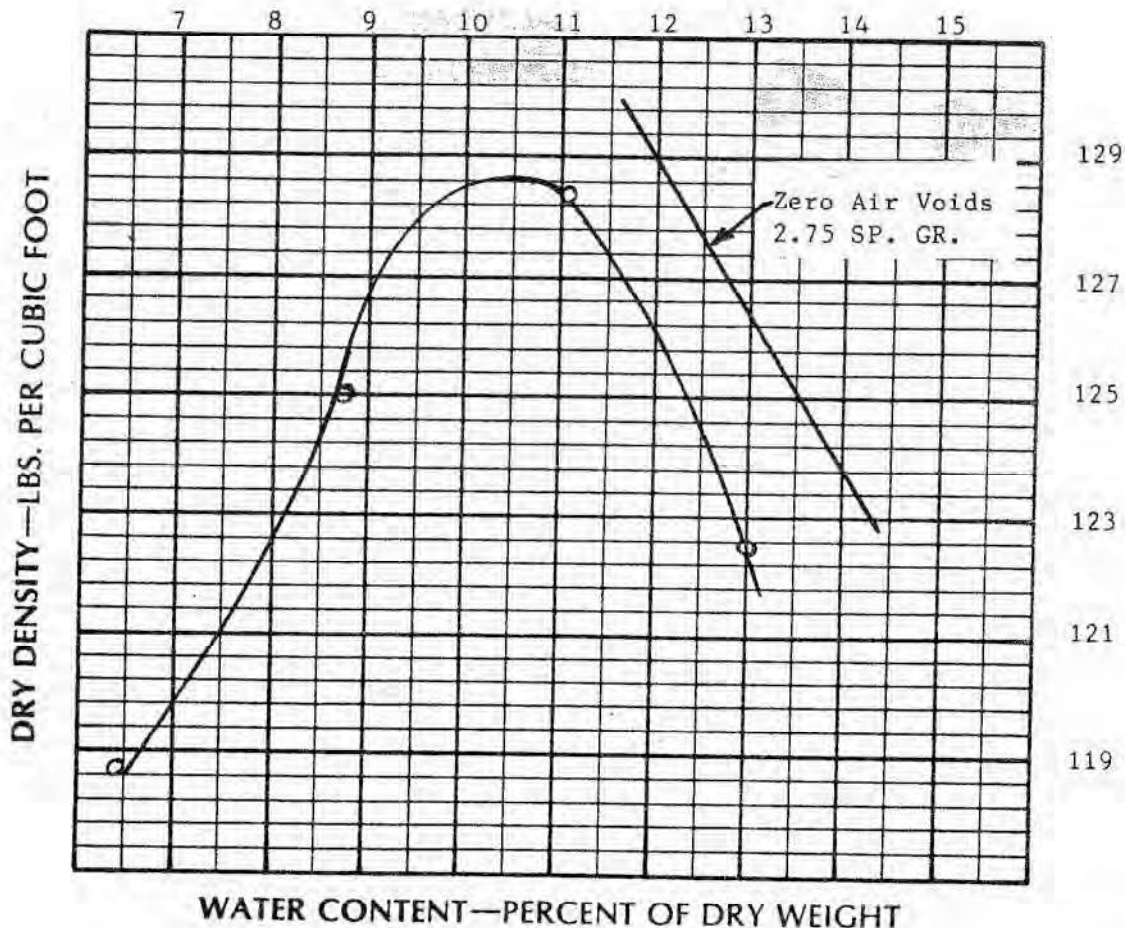
A. DESCRIPTION OF SOIL: SANDY LEAN CLAY, brown (CL)

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

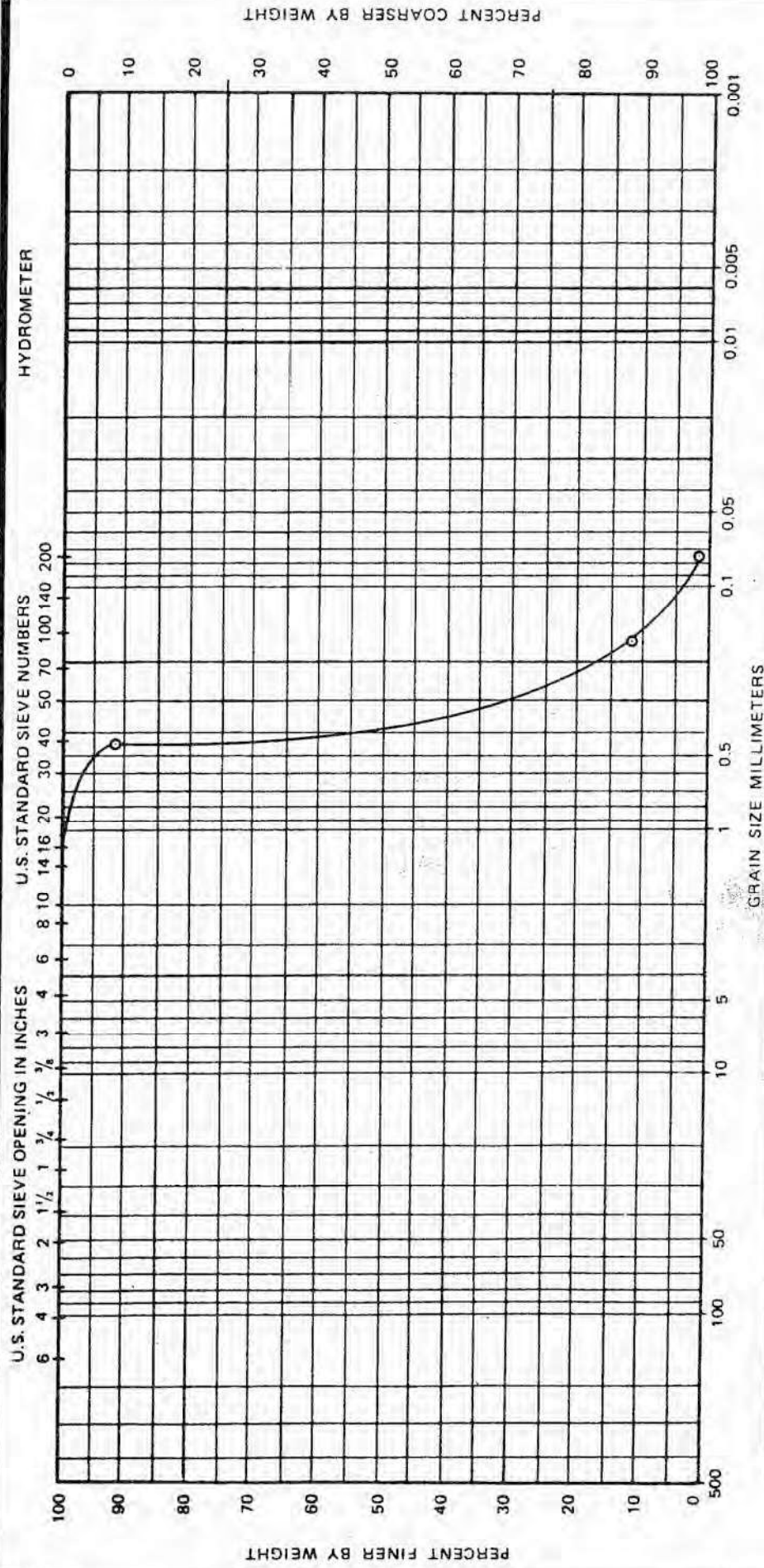
NATURAL WATER CONTENT % NATURAL DRY DENSITY PCF SPECIFIC GRAVITY
LIQUID LIMIT % PLASTIC LIMIT % PLASTICITY INDEX

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
Boring MW-9	10'	SAND, fine grained, brown (SP)				
DRAWN BY: RRR	APPROVED BY:	NOTES:				
PROJECT		Adams County Feasibility Study				
DATE:		9-12-86		PROJECT NO: 86A22		
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	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	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 ~~XXXX~~

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

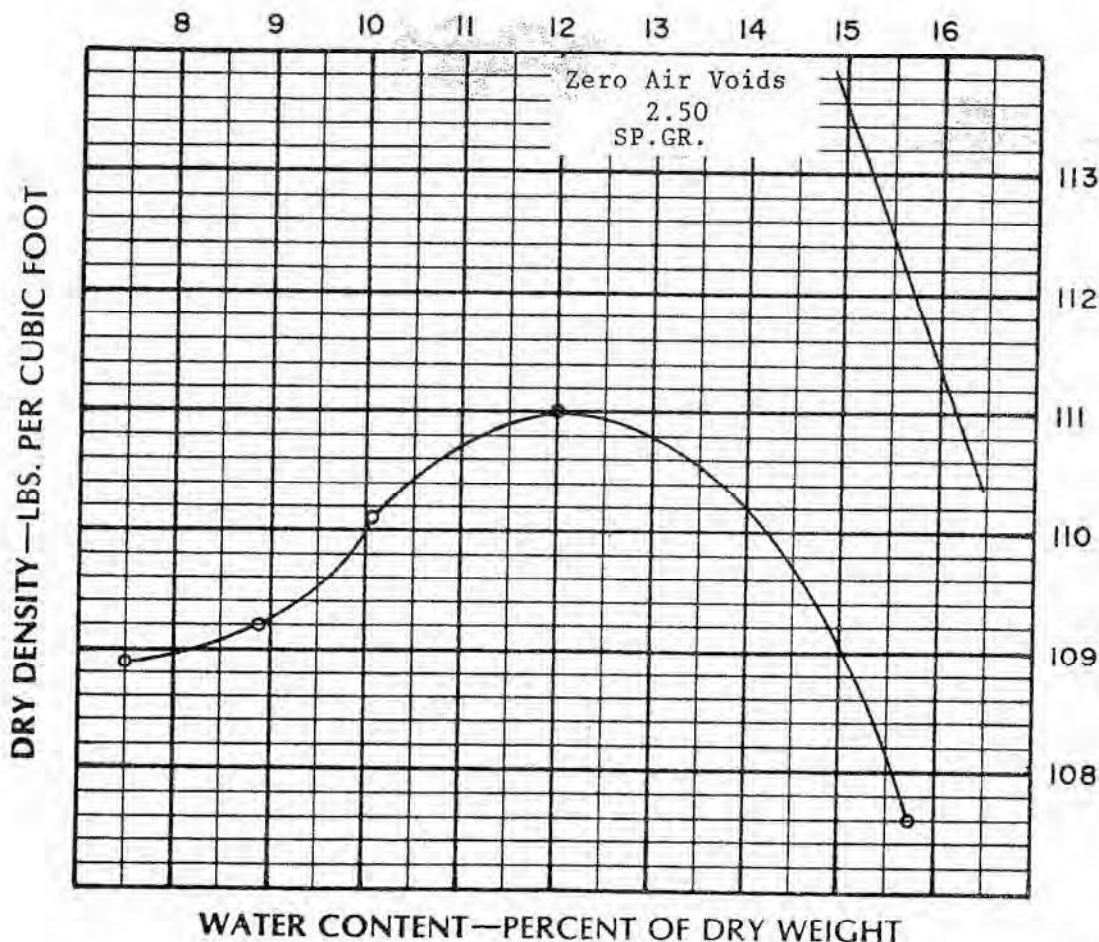
A. DESCRIPTION OF SOIL: SAND, fine grained, brown (SP)

MATERIAL MARK Boring MW-9 CLASSIFICATION _____ AASH
SOURCE OF MATERIAL _____ BPR

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)



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: _____

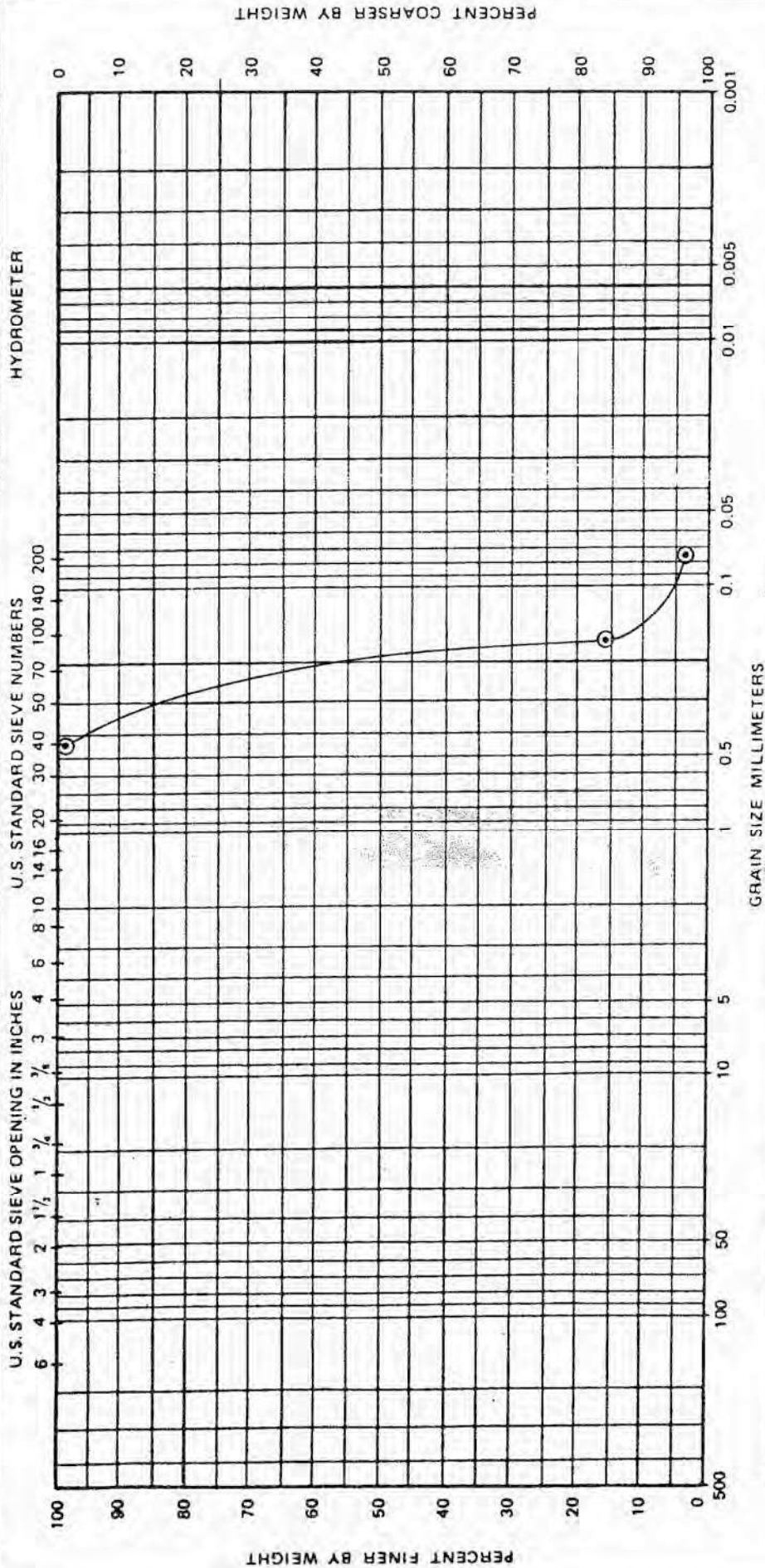
DRY RODDED WGT: _____

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	NATW%	LL	PL	PI
Boring MW-9		SAND, fine grained	3.3			
7-A	35'	light brown				
		(SP)				
DRAWN BY:	APPROVED BY:	NOTES:				
RRR						

PROJECT	Adams County Feasibility Study
DATE:	8/25/86
PROJECT NO:	86A22

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	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	.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: _____

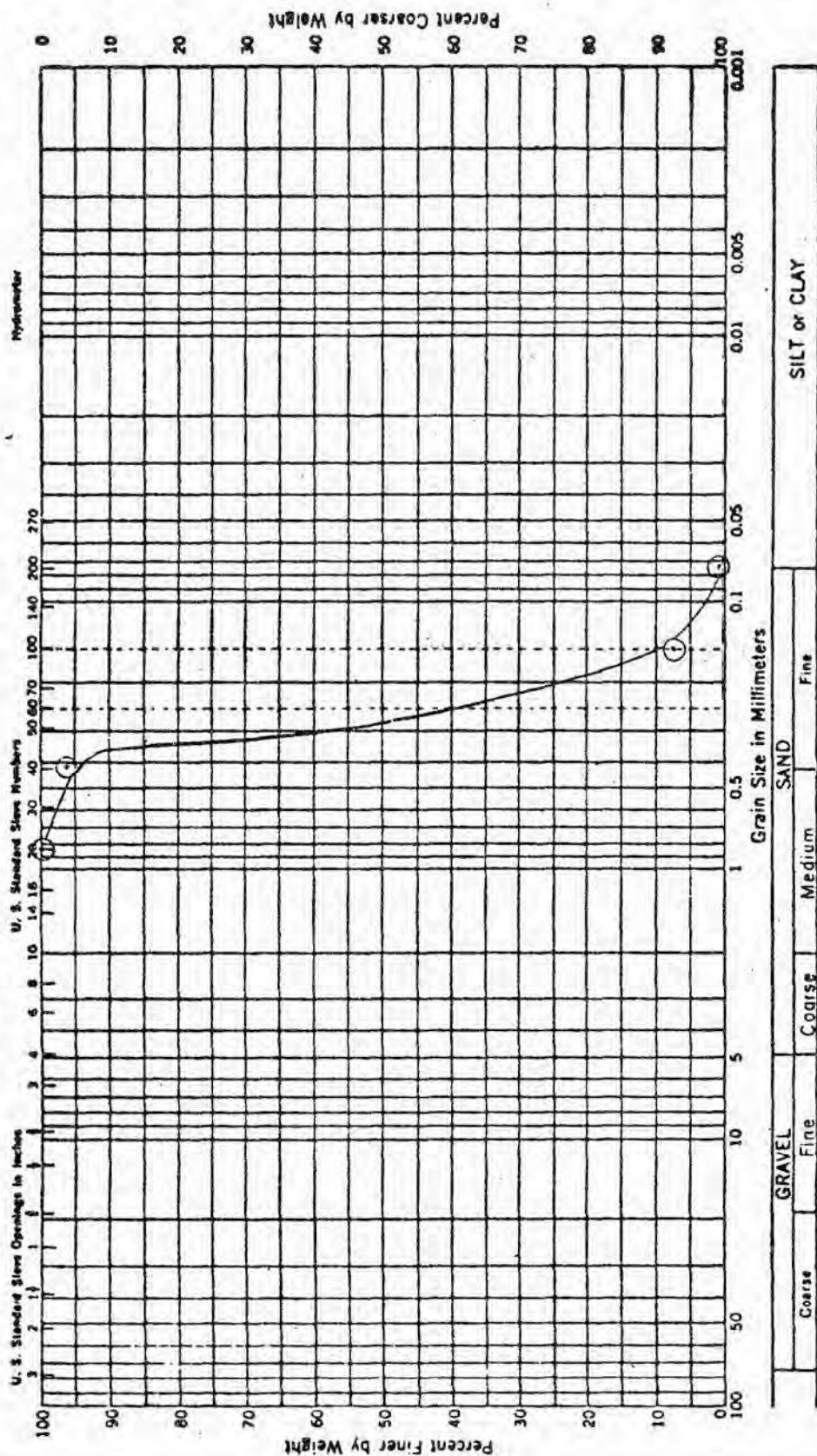
DRY RODDED WGT: _____

WASHED GRADATION: Yes

PERCENT PASSING NO. 200 SIEVE 3.7

CHECKED BY: _____

UNIFIED CLASSIFICATION SYSTEM

[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

was 0.332

U.S. Standard Slieve Openings in inches

U.S. Standard Sieve Numbers

Grain Size in Millimeters

Percent Finer by Weight

Percent Coarser by Weight

GRAVEL: Coarse, Fine

SAND: Medium, Coarse, Fine

SILT or CLAY

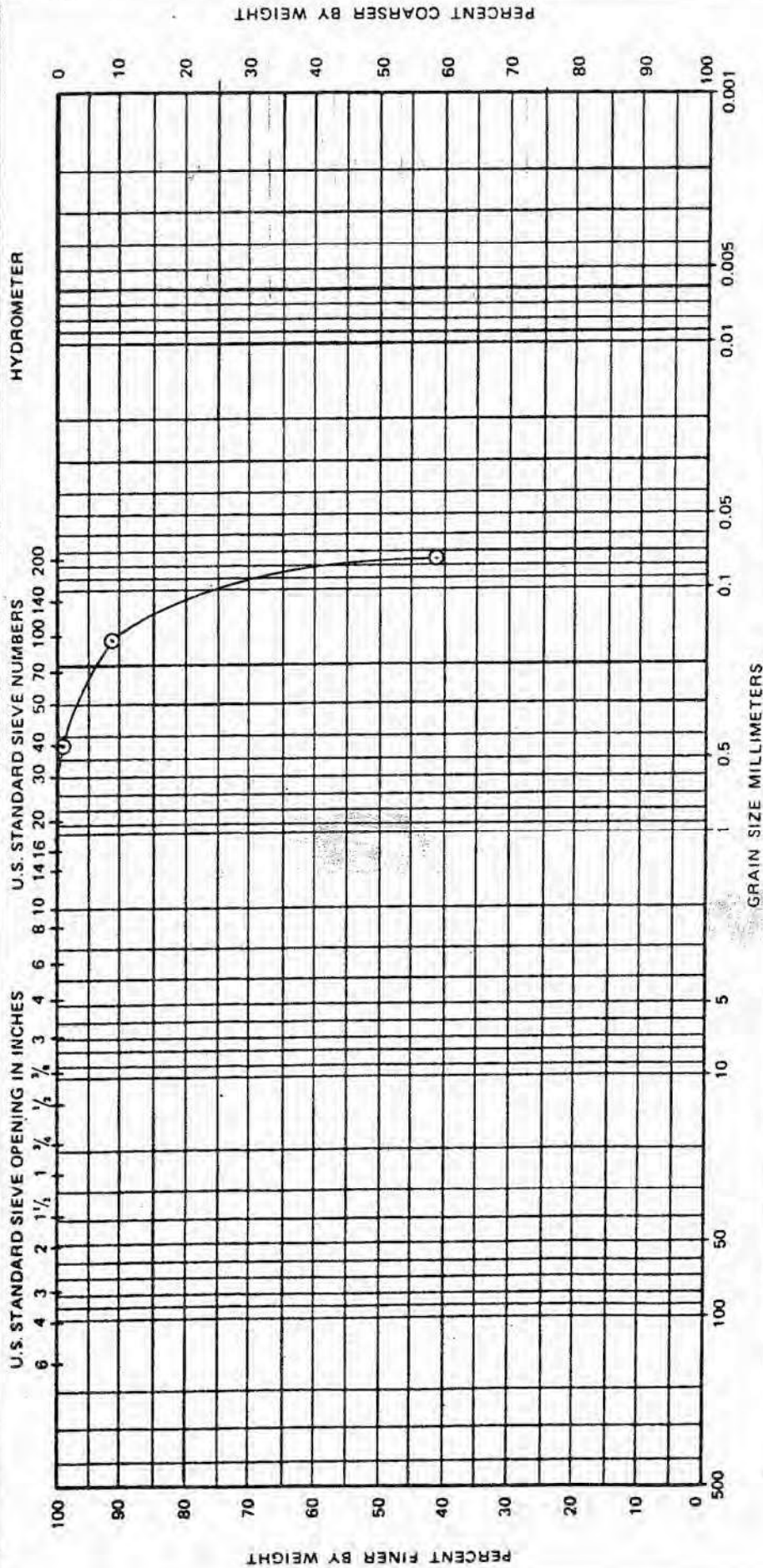
Grain Size (mm)	U.S. Standard Sieve Number	U.S. Standard Slieve Opening (in)	Percent Finer (%)	Percent Coarser (%)
0.075	20	0.003	100	0
0.15	100	0.006	100	0
0.3	60	0.012	100	0
0.425	40	0.017	100	0
0.6	30	0.024	100	0
0.85	20	0.035	~40	~60

[illegible]

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	NATW%	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:	APPROVED BY:	NOTES:	Foth & Van Dyke Industrial Inc.				
RRR			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: _____

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: _____

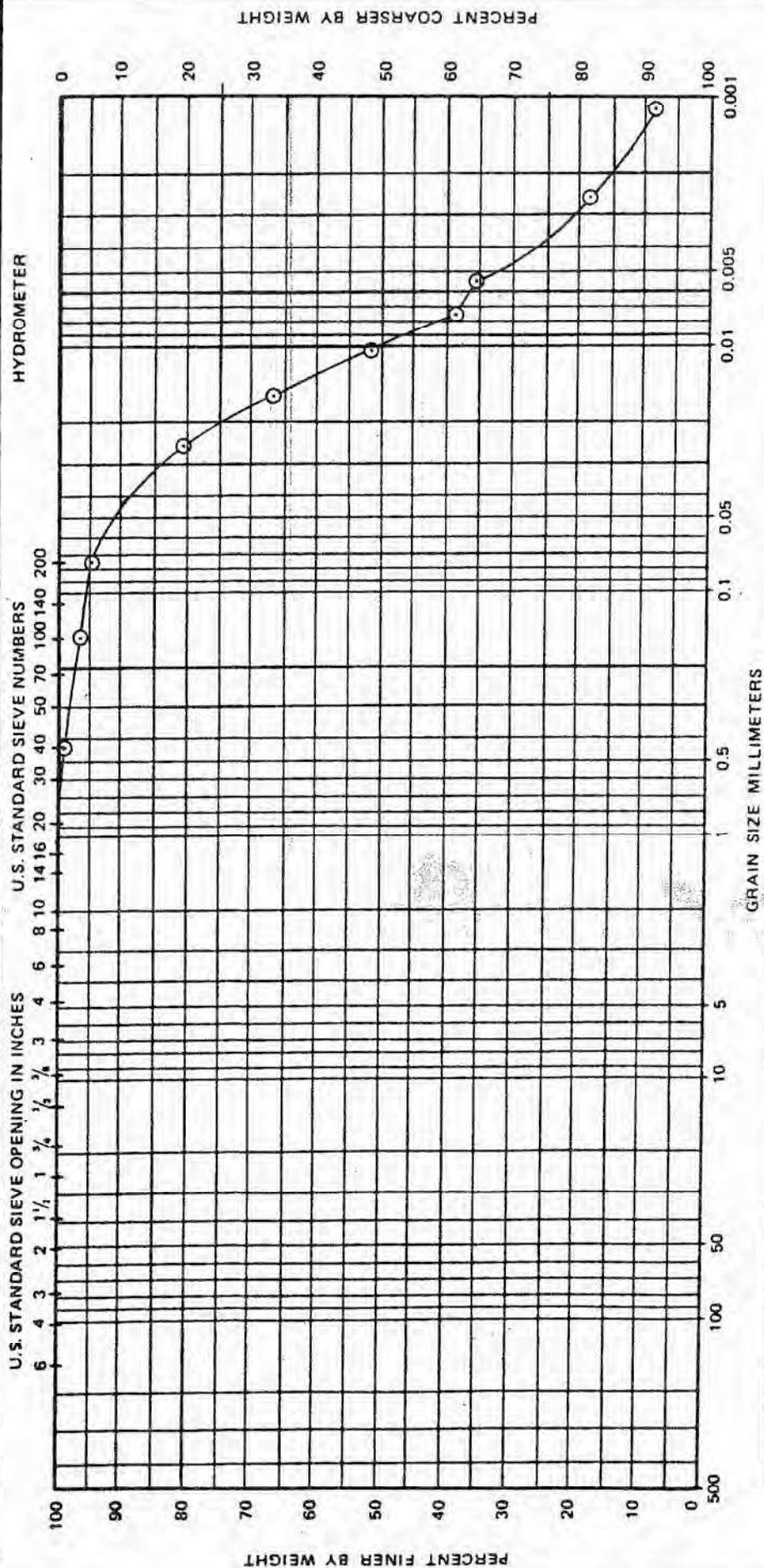
DRY RODDED WGT: _____

WASHED GRADATION: yes

PERCENT PASSING NO. 200 SIEVE 91.0

CHECKED BY: _____

GRAIN SIZE ANALYSIS



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: _____

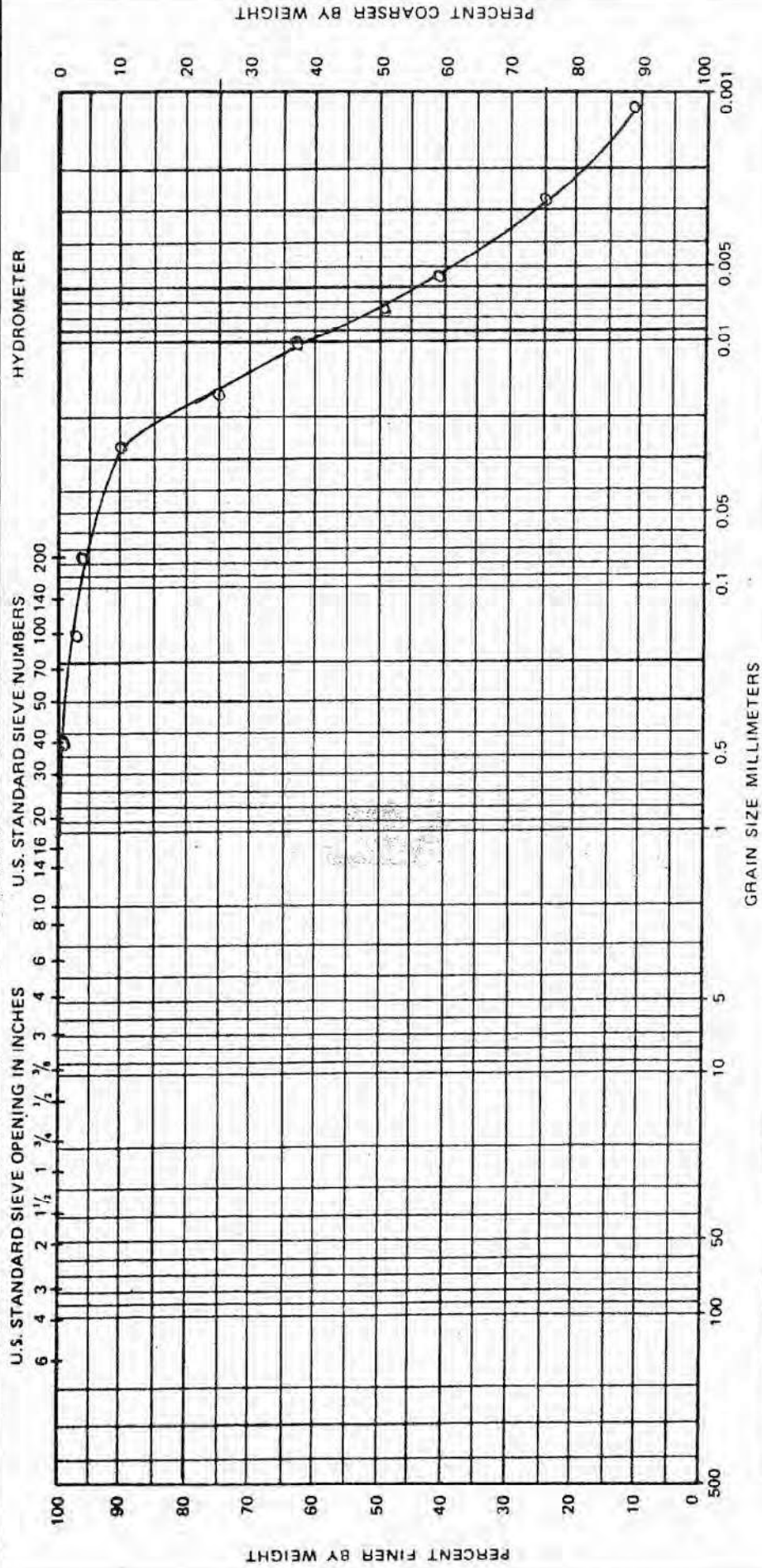
DRY RODDED WGT: _____

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	NATW%	LL	PL	PI	PROJECT
Boring 10		LEAN CLAY, brown to reddish brown					Adams County Feasibility Study
FR-17	30-33'	(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	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	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} _{.1}	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} ~~FROM~~ 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: _____

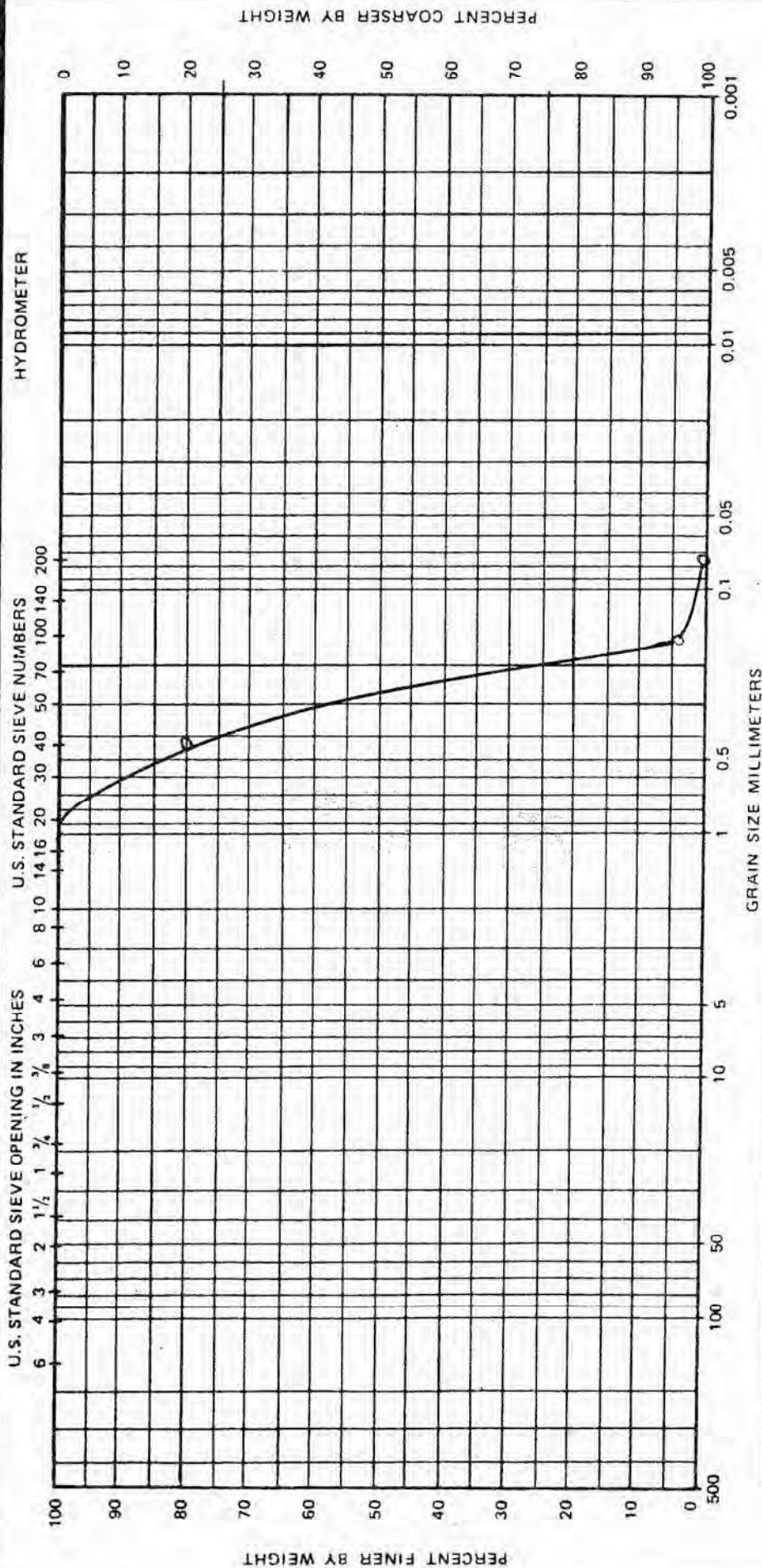
DRY RODDED WGT: _____

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
Boring 11	10-15'	SAND, fine to medium							
		grained, light brown (SP)							
DRAWN BY:	APPROVED BY:	NOTES:							
RRR									
		PROJECT		Adams County Feasibility Study		DATE: 9/19/86			PROJECT NO: 86A22
		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, 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: _____

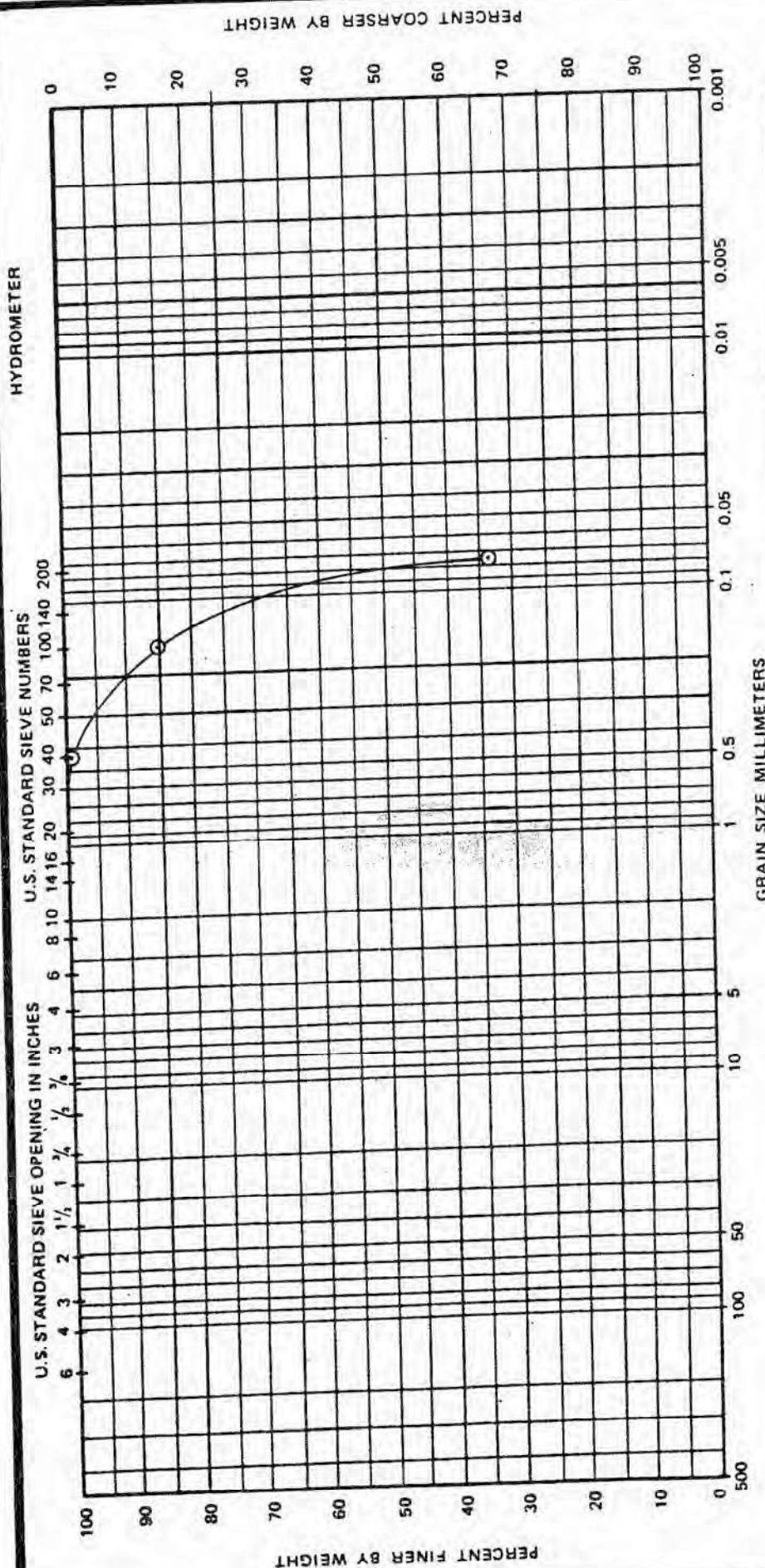
DRY RODDED WGT: _____

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 Adams County Feasibility Study
Boring 11		SILTY SAND, fine	21.7				
S-8	35'	grained, light brown					DATE: 8/15/86 PROJECT NO: 86A22
		(SM)					Foth & Van Dyke Industrial Inc.
DRAWN BY: RRR	APPROVED BY:	NOTES:					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	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	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: _____

GRAVEL		SAND		SILT OR CLAY
COARSE	FINE	COARSE	FINE	
COBBLES				

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

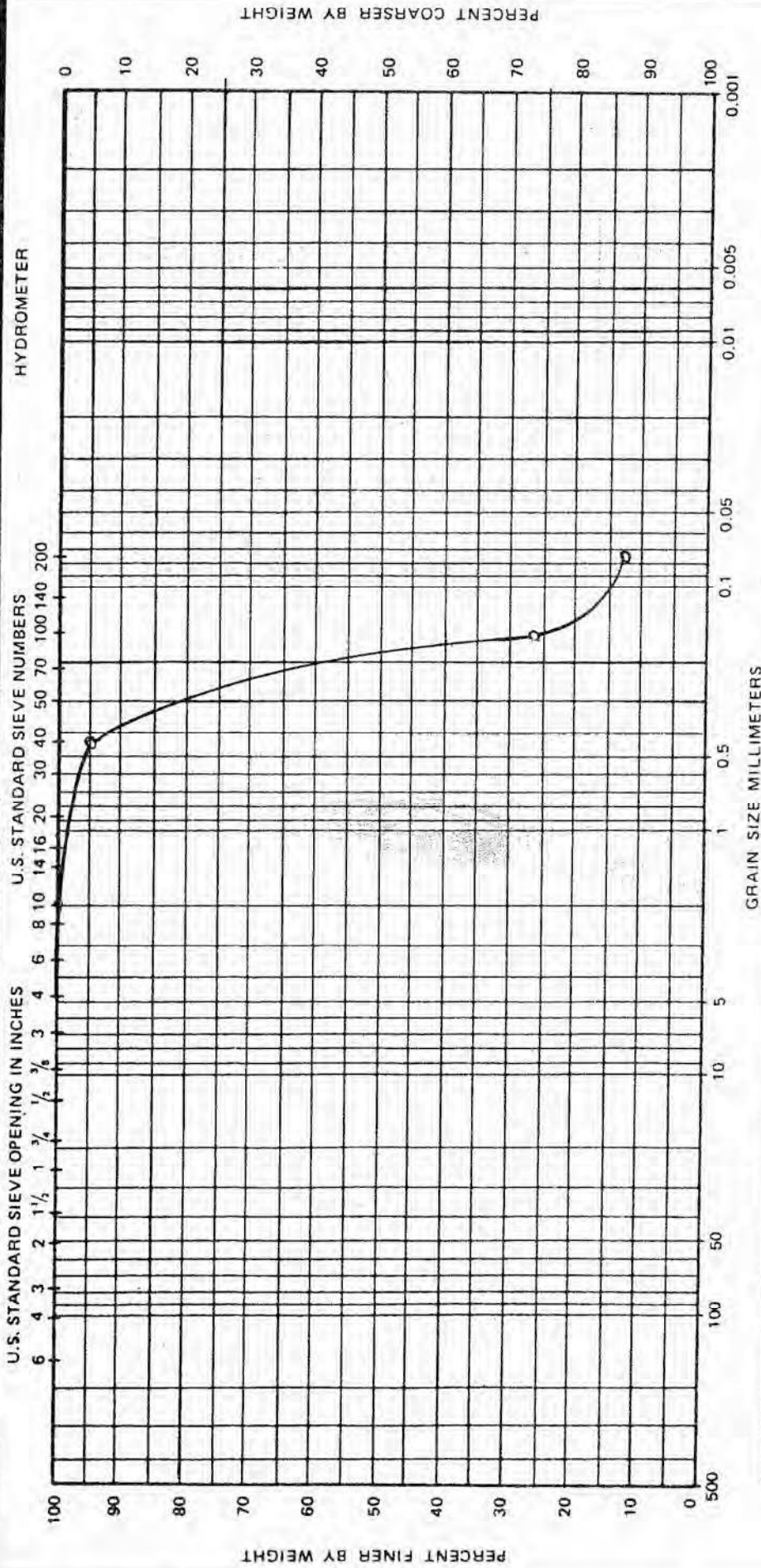
DRY RODDED WGT: _____

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					Adams County Feasibility Study
							DATE: 9/19/86 PROJECT NO: 86A22
DRAWN BY:	APPROVED BY:	NOTES:					
RRR							
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

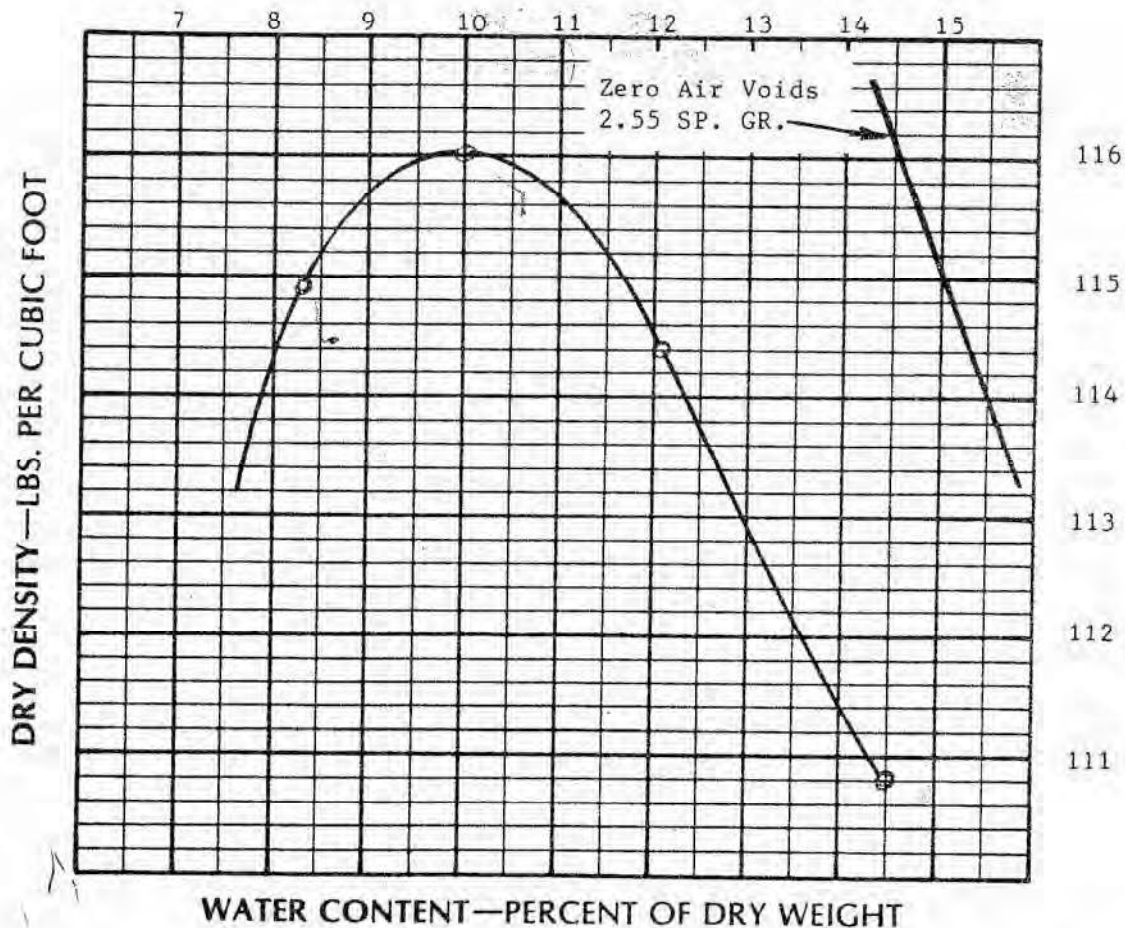
A. DESCRIPTION OF SOIL: SILTY SAND, fine grained, light brown (SM)

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

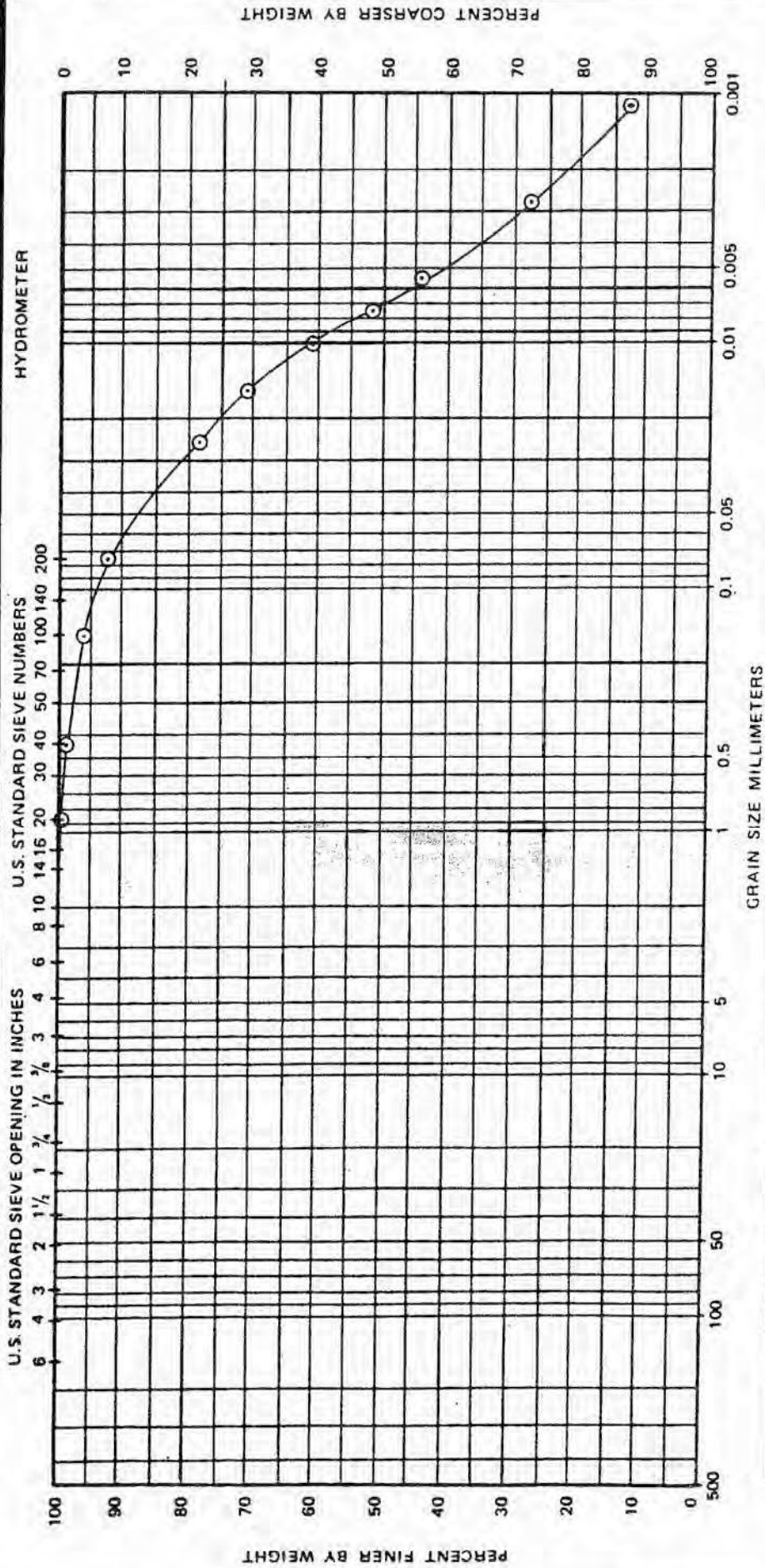
NATURAL WATER CONTENT: % NATURAL DRY DENSITY: PCF SPECIFIC GRAVITY:
LIQUID LIMIT: % PLASTIC LIMIT: % PLASTICITY INDEX:

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



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 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				
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	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 FROM: XXXX 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: _____

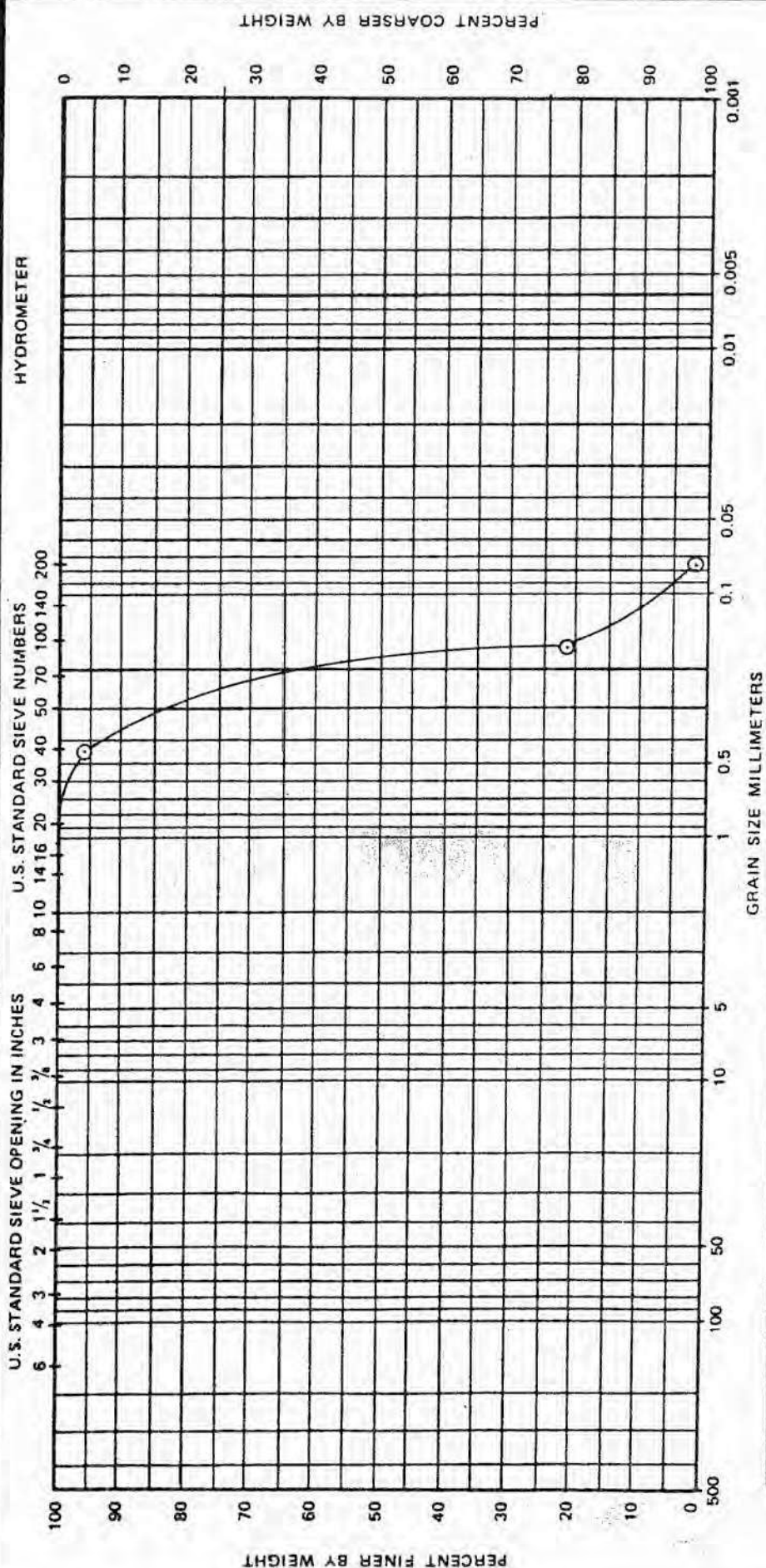
DRY RODDED WGT: _____

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
Boring 13		SAND, fine grained	3.9				Adams County Feasibility Study
S-3	10.0'	brown					DATE: 8/15/86 PROJECT NO: 86A22
		(SP)					
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	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	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 FROM: XXXX 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: _____

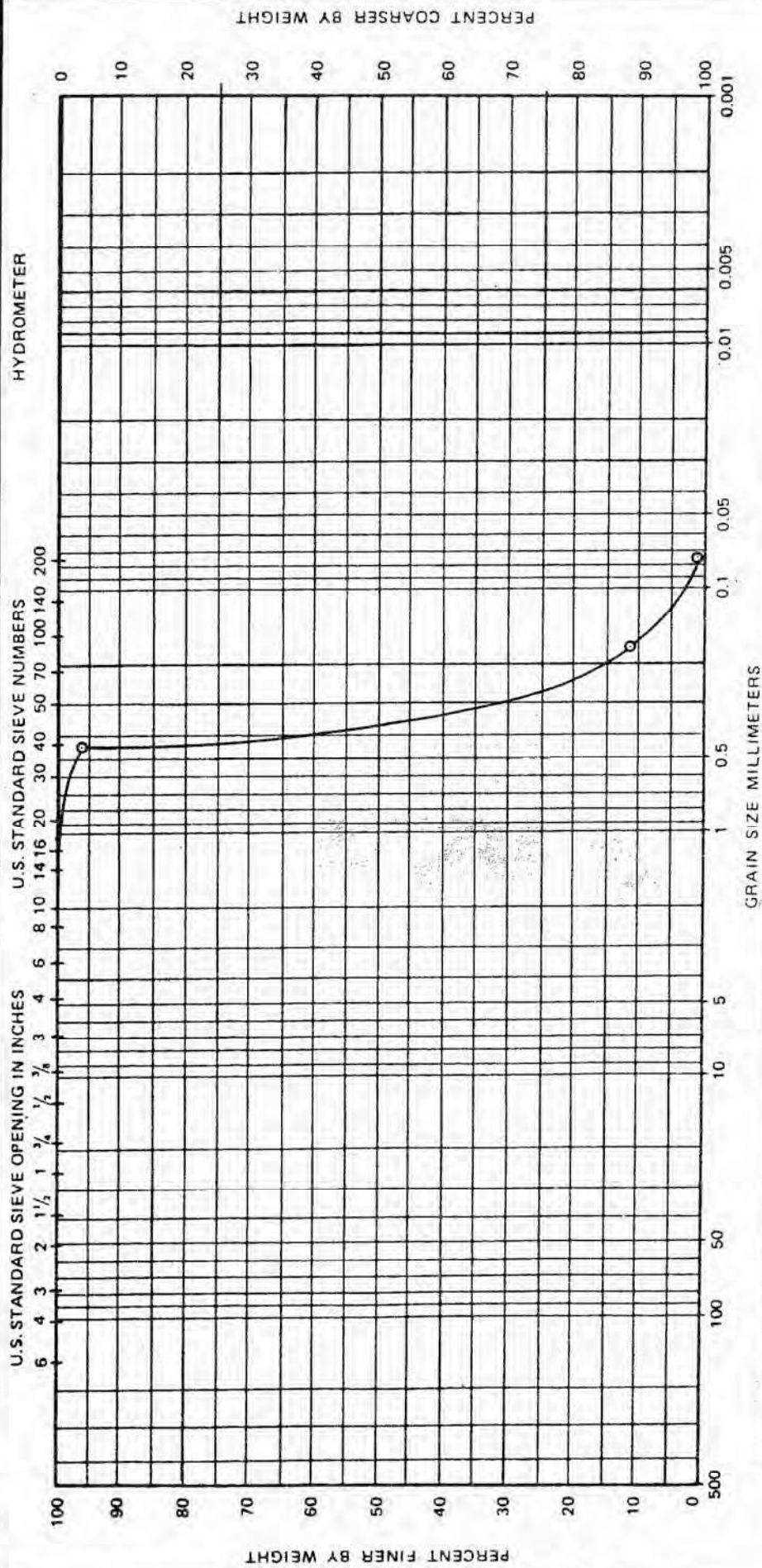
DRY RODDED WGT: _____

WASHED GRADATION: yes

PERCENT PASSING NO. 200 SIEVE 2.1 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES		GRAVEL		SAND		SILT OR CLAY	
COARSE	FINE	COARSE	FINE	MEDIUM	FINE		

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
Boring 13	10-13'	SAND, fine grained, brown (SP)				
DRAWN BY: RRR	APPROVED BY:	NOTES:	PROJECT Adams County Feasibility Study			
			DATE: 9-12-86 PROJECT NO: 86A22			
			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	Specifications
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: _____
SAMPLED ~~KORXX~~ 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: _____

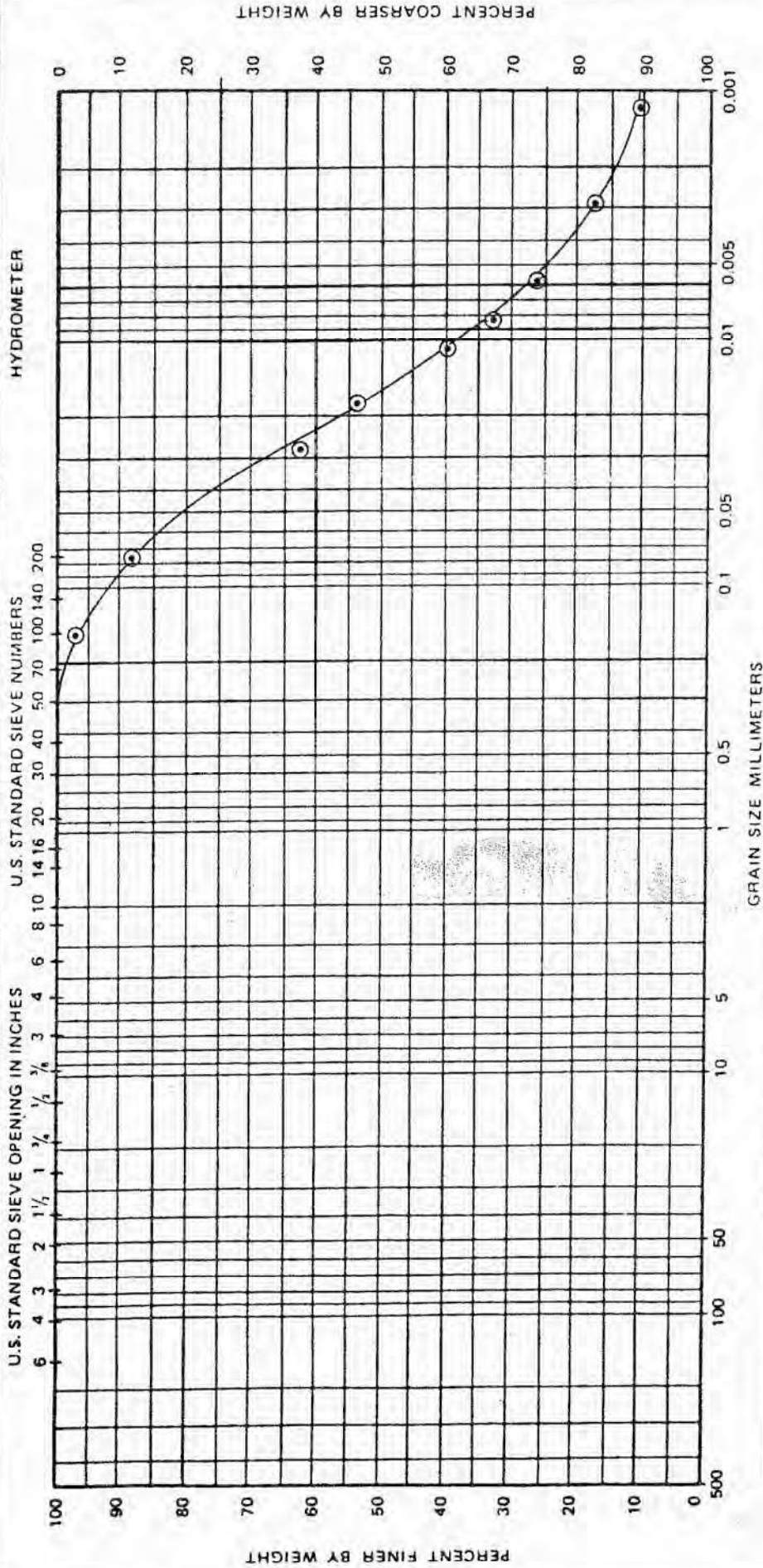
DRY RODDED WGT: _____

WASHED GRADATION: Yes

PERCENT PASSING NO. 200 SIEVE 0.8

CHECKED BY: _____

GRAIN SIZE ANALYSIS



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
B-13		LEAN CLAY, reddish	20.8					
S-7	30'	brown					DATE:	8/25/86
		(CL)					PROJECT NO:	86A22
DRAWN BY:	APPROVED BY:	NOTES:						
RRR								

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.: 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: _____

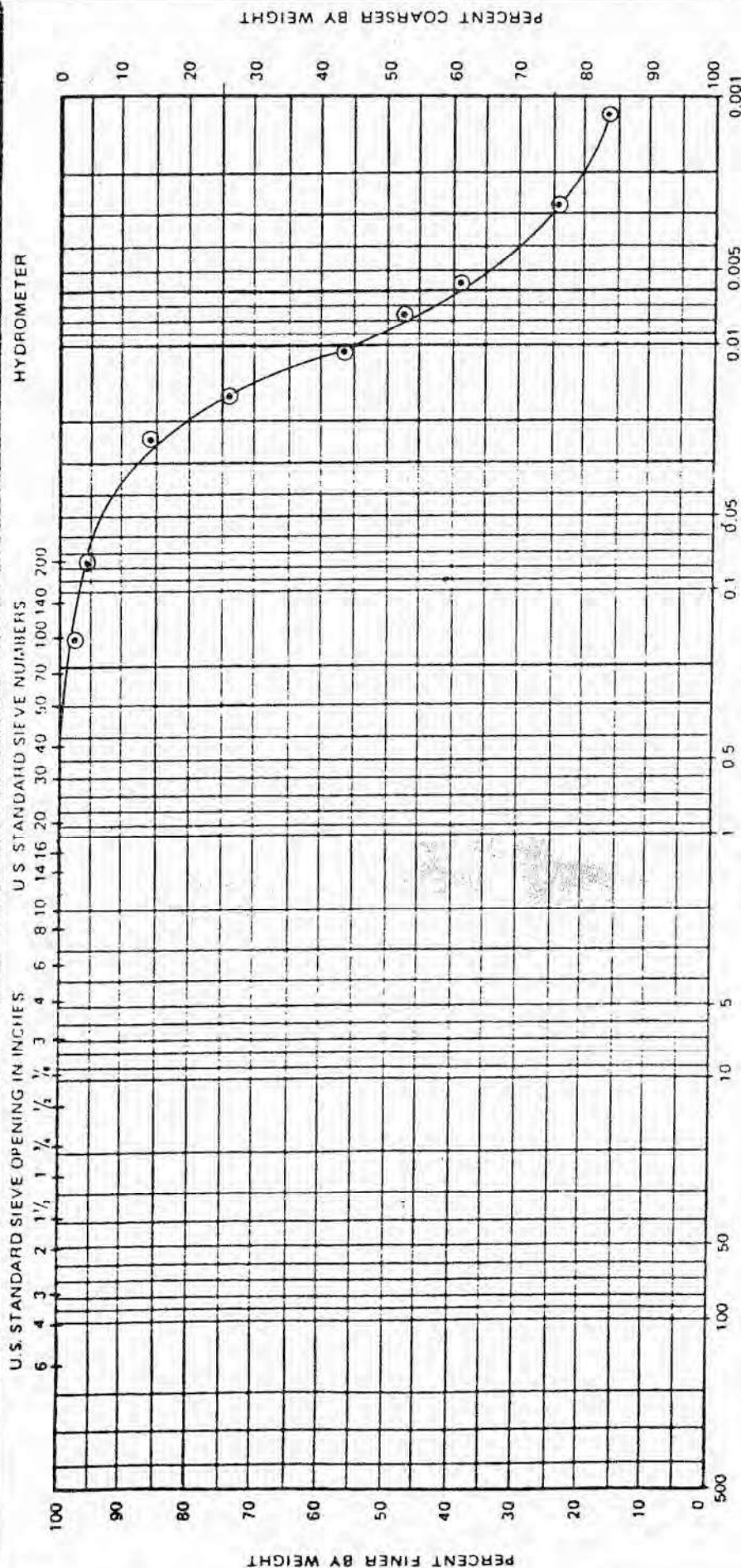
DRY RODDED WGT: _____

WASHED GRADATION: Yes

PERCENT PASSING NO. 200 SIEVE 88.0 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



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
B-14		LEAN CLAY, reddish brown	24-1				DATE:	8/25/86
S-6	30'						PROJECT NO:	86A22
DRAWN BY:	APPROVED BY:	NOTES:	Loth & 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: 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	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	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: _____

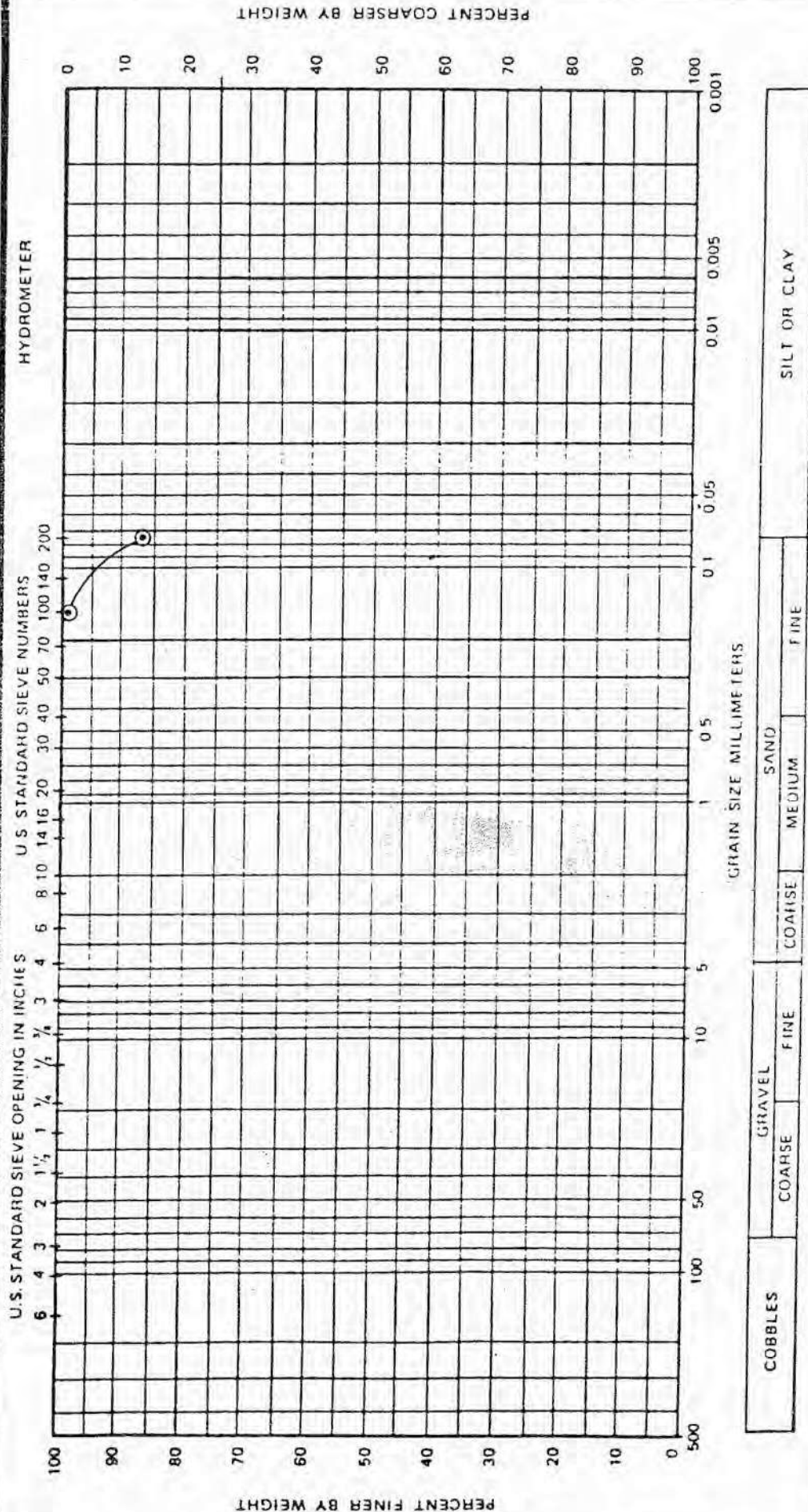
DRY RODDED WGT: _____

WASHED GRADATION: Yes

PERCENT PASSING NO. 200 SIEVE 96.6 %

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES		GRAVEL		SAND		SILT OR CLAY	
COARSE		FINE		COARSE		FINE	
SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION		NAT W%	LL	PL	PI
Boring MW-16		SILT, grayish brown		21.9			
S-3	15' to 16.5'						
		(ML)					
DRAWN BY: RRR	APPROVED BY:	NOTES:					
PROJECT: Adams County Feasibility Study		DATE: 8/27/86		PROJECT NO: 86A22			
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: _____

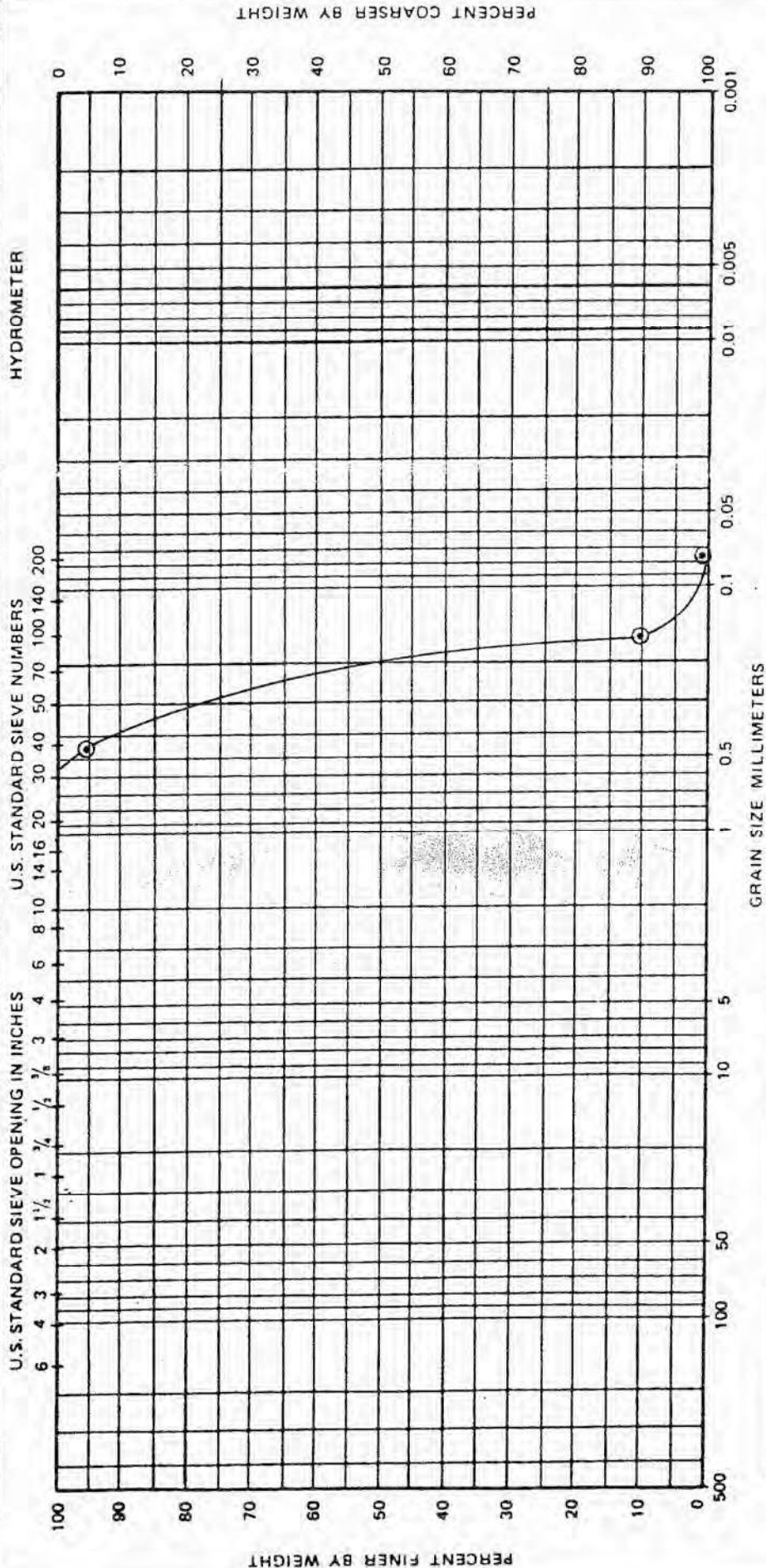
WASHED GRADATION: Yes

PERCENT PASSING NO. 200 SIEVE 87.2 %

Moisture Content of Sample = 21.9%

CHECKED BY: _____

GRAIN SIZE ANALYSIS



COBBLES	GRAVEL		SAND		SILT OR CLAY	
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NATW%	LL	PL	PI	PROJECT	Adams County Feasibility Study
Boring MW-17		SAND, fine grained, light brown					DATE: 8/27/86	PROJECT NO: 86A22
S-4	20' to 21.5'	(SP)					Foth & Van Dyke Waste/Energy Division	
DRAWN BY: RRR	APPROVED BY:	NOTES:						

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: _____

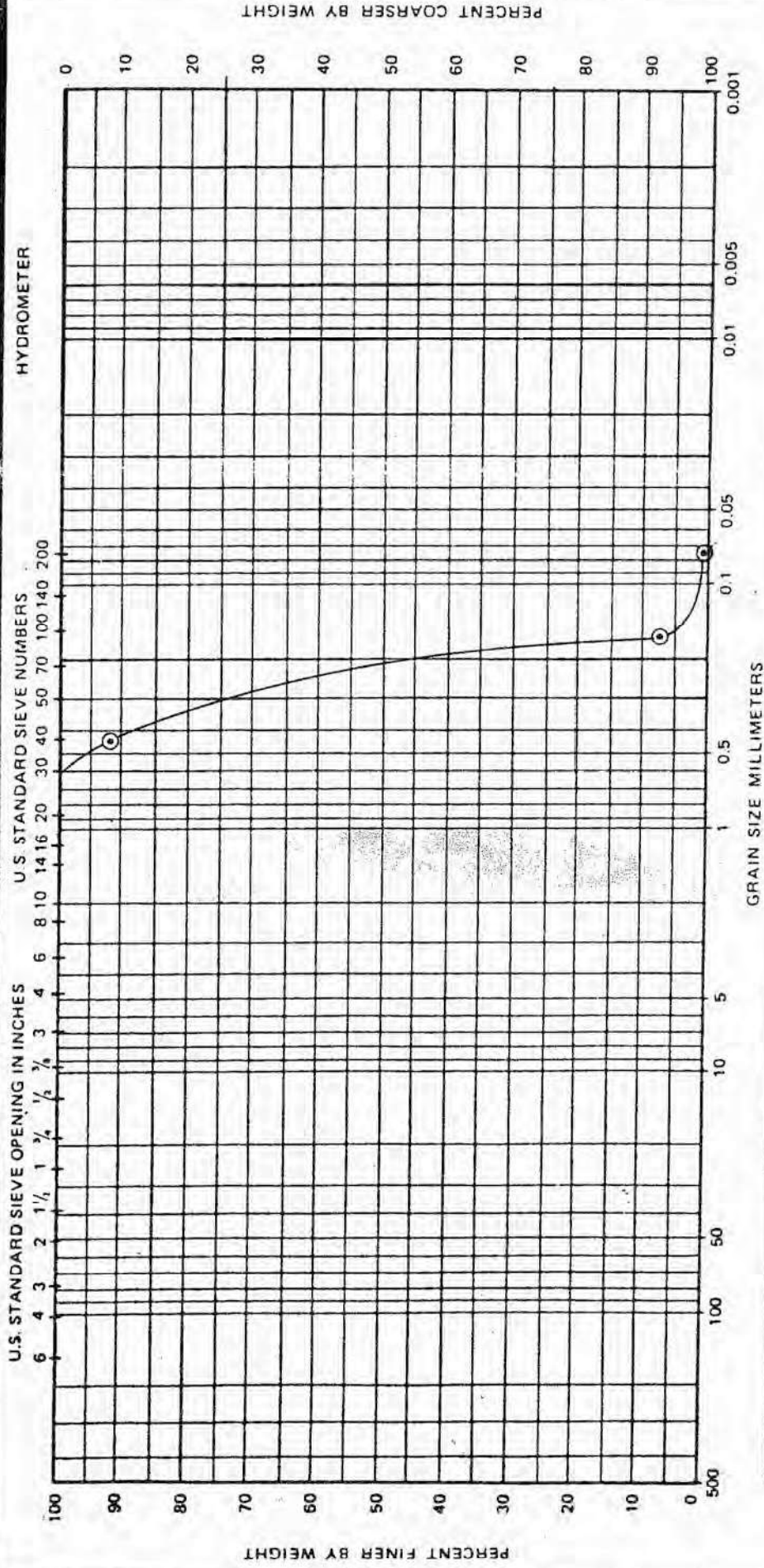
DRY RODDED WGT: _____

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	NATW%	LL	PL	PI
Boring MW-18		SAND, fine grained				
S-1	5.0' to 6.5'	light brown				
		(SP)				
DRAWN BY: RRR	APPROVED BY:	NOTES:				
PROJECT: Adams County Feasibility Study DATE: 8/26/86 PROJECT NO: 86A22 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	Specifications
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: _____