
APPENDIX C

GEOLOGIC LOGS OF TEST PITS

Facility/Project Name Vernon Co. Balefill			License/Permit/Monitoring Number		Boring Number TP-1
Boring Drilled By (Firm name and name of crew chief) Rory Kjome Excavating Rory Kjome			Date Drilling Started 12-3-04	Date Drilling Completed 12-3-04	Drilling Method Backhoe
DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level Feet MSL	Surface Elevation Feet MSL	Borehole Diameter inches
Boring Location State Plane N, E NE 1/4, NW 1/4, Sec.22, T13N, R4W			Lat Long	Local Grid Location (if applicable) Feet S Feet W	
County Vernon			DNR County Code 63	Civil Town/City/ or Village Viroqua	

Sample Number and Type	Length Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Munsell	Soil Properties					RGD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
			1	(Topsoil)										
S-1			2	Light brown clayey SILT, little sand, trace gravel	CL			10YR 5/6		25.6	47.2	23.2	90.2	
			3											
S-2			4	Light brown silty CLAY, trace sand & gravel	CH			10YR 4/6		28.7	87.5	55.1	95.0	
			5											
			6	E.O.B.@ 5'										
			7											
			8											
			9											
			10											
			11											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm Central Wisconsin Engineers and Architects
-----------	--

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Page 1 of 1

Facility/Project Name Vernon Co. Balefill			License/Permit/Monitoring Number 03268		Boring Number TP-2	
Boring Drilled By: Name of crew chief (first, last) and Firm First Name Rory Last Name Kjome Firm Rory Kjome Excavating			Date Drilling Started 12-3-04		Date Drilling Completed 12-3-04	
WI Unique Well No.		DNR Well ID No.	Well Name	Final Static Water Level Feet	Surface Elevation Feet MSL	Borehole Diameter inches
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐			Local Grid Location			
State Plane NE 1/4 of NW 1/4 of Section 22 , T 13N N, R 4W			Lat _____ Long _____			
			Feet ☐ N _____ Feet ☐ E _____ Feet ☐ S _____ Feet ☐ W _____			

Facility ID	County Vernon	County Code 63	Civil Town/City/or Village Viroqua
-------------	-------------------------	--------------------------	--

Sample		Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length All. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	
S-1			0	(Topsoil)						20	33	20	91	
			2.5	Dark yellowbrown clayey SILT, little sand	CL									
S-2				Yellowbrown silty sandy CLAY, little gravel	CH					25	62	38	74	
			5	END OF BORING AT 4.4'										
			7.5											
			10											
			12.5											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm CWE, Inc 5707 Schofield Ave. Weston, WI 54476
-----------	--

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route To:
☐ Solid Waste
☐ Emergency Response
☐ Wastewater
☐ Superfund
☐ Haz. Waste
☐ Underground Tanks
☐ Water Resources
☐ Other:

Facility/Project Name Vernon Co. Balefill				License/Permit/Monitoring Number		Boring Number TP-3	
Boring Drilled By (Firm name and name of crew chief) Rory Kjome Excavating Rory Kjome				Date Drilling Started 12-3-04		Date Drilling Completed 12-3-04	
DNR Facility Well No.		WI Unique Well No.		Common Well Name		Final Static Water Level Feet MSL	
						Surface Elevation Feet MSL	
						Borehole Diameter inches	
Boring Location State Plane N, E NE 1/4, NW 1/4, Sec.22, T13N, R4W				Lat Long		Local Grid Location (if applicable) Feet S Feet W	
County Vernon				DNR County Code 63		Civil Town/City/ or Village Viroqua	

Sample Number and Type	Length Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RdD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
			1	(Topsoil)										
S-1			2	Lightbrown clayey SILT, trace sand	CL			10YR 6/4		22.9	40.3	18.3	99.0	
S-2			3	Light Brown clayey sandy SILT, trace gravel	CL			10YR 6/4		16.3	30.9	16.2	80.7	
S-3			4	Brown clayey SAND, little silt trace gravel	SC			7.5YR 5/6		13.9	29.7	13.0	32.2	
			5											
			6											
			7											
			8	E.O.B.@ 8'										
			9											
			10											
			11											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm

Central Wisconsin Engineers and Architects

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

Route to: ☐ Watershed/Wastewater ☐ Waste Management
☐ Remediation/Redevelopment ☐ Other

Page 1 of 1

Facility/Project Name Vernon Co. Balefill			License/Permit/Monitoring Number 03268		Boring Number TP-4	
Boring Drilled By: Name of crew chief (first, last) and Firm First Name Rory Last Name Kjome Firm Rory Kjome Excavating			Date Drilling Started 12-3-04		Date Drilling Completed 12-3-04	
WI Unique Well No.		DNR Well ID No.	Well Name	Final Static Water Level Feet	Surface Elevation Feet MSL	Borehole Diameter inches
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐			Local Grid Location			
State Plane ☐ N, ☐ E ☐ S ☐ C ☐ N ☐			Lat		☐ N ☐ E	
NE 1/4 of NW 1/4 of Section 22 , T 13N N.R. 4W			Long		☐ S ☐ W	
Facility ID		County Vernon	County Code 63	Civil Town/City/or Village Viroqua		

Sample		Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length All. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	
S-1			0	(Topsoil)										
			2.5	Yellowish brown clayey SILT, trace sand	CL									
S-2			5	Yellowish brown clayey SILT, trace sand	CL									
			7.5											
			10	END OF BORING AT 9.1'										
			12.5											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm

CWE, Inc.
5707 Schofield Ave.
Weston, WI 54476

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route to: ☐ Watershed/Wastewater ☐ Waste Management
Remediation/Redevelopment ☐ Other ☐

Page 1 of 1

Facility/Project Name Vernon Co. Balefill			License/Permit/Monitoring Number 03268		Boring Number TP-5
Boring Drilled By: Name of crew chief (first, last) and Firm First Name Rory Last Name Kjome Firm Rory Kjome Excavating			Date Drilling Started 12-3-04	Date Drilling Completed 12-3-04	Drilling Method Backhoe
WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level _____ Feet	Surface Elevation _____ Feet MSL	Borehole Diameter _____ inches
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane _____ N, _____ E S ☐ / C ☐ / N ☐ NE 1/4 of NW 1/4 of Section 22 , T 13N N,R 4W			Local Grid Location _____ Feet ☐ N _____ Feet ☐ E _____ Feet ☐ S _____ Feet ☐ W		

Facility ID			County		County Code		Civil Town/City/or Village								
			Vernon		63		Viroqua								
Sample		Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments	
Number and Type	Length All. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200		
S-1			0	(Topsoil)											
				Yellowish brown clayey SILT, trace sand	CL										
S-2			2.5												
				Yellowbrown clayey SILT, little sand, trace gravel	CL-ML										
			5												
			7.5												
				END OF BORING AT 7.6'											
			10												
			12.5												

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm **CWE, Inc.**
5707 Schofield Ave.
Weston, WI 54476

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Facility/Project Name Vernon Co. Balefill			License/Permit/Monitoring Number		Boring Number TP-6
Boring Drilled By (Firm name and name of crew chief) Rory Kjome Excavating Rory Kjome			Date Drilling Started 12-3-04	Date Drilling Completed 12-3-04	Drilling Method Backhoe
DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level Feet MSL	Surface Elevation Feet MSL	Borehole Diameter inches
Boring Location State Plane N, E NE 1/4, NW 1/4, Sec.22, T13N, R4W			Lat Long	Local Grid Location (If applicable) Feet S Feet W	
County Vernon			DNR County Code 63	Civil Town/City/ or Village Viroqua	

Sample Number and Type	Length Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Munsell	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
			1	(Topsoil)										
S-1			2	Yellowbrown clayey SILT, trace sand & gravel	CL			10YR 5/6		21.5	42.9	21.1	96.2	
S-2			3	Yellowbrown silty Clay, little sand	CH			10YR 5/6		23.6	74.9	46.8	89.7	
			4											
			5	E.O.B.@ 4.6'										
			6											
			7											
			8											
			9											
			10											
			11											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm Central Wisconsin Engineers and Architects
-----------	--

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Page 1 of 1

Facility/Project Name Vernon Co. Balefill			License/Permit/Monitoring Number 03268		Boring Number TP-7	
Boring Drilled By: Name of crew chief (first, last) and Firm First Name Rory Last Name Kjome Firm Rory Kjome Excavating			Date Drilling Started 12-3-04		Date Drilling Completed 12-3-04	
WI Unique Well No.		DNR Well ID No.	Well Name		Drilling Method Backhoe	
			Final Static Water Level _____ Feet		Surface Elevation _____ Feet MSL	
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane _____ N, _____ E S ☐ / C ☐ / N ☐			Local Grid Location _____ Feet ☐ N _____ Feet ☐ E _____ Feet ☐ S _____ Feet ☐ W			
NE 1/4 of NW 1/4 of Section 22 , T 13N N, R 4W		Lat _____ Long _____				
Facility ID		County Vernon		County Code 63		Civil Town/City/or Village Viroqua

Sample		Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length All. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	
S-1 S-2			0	(Topsoil)										
				Yellowbrown clayey SILT, trace sand & gravel	CL					22	44	24	96	
			2.5	Brown silty CLAY, little sand & gravel	MH					29	78	39	95	
				END OF BORING AT 2.5'										
			5											
			7.5											
			10											
			12.5											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm

CWE, Inc.
5707 Schofield Ave.
Weston, WI 54476

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Page 1 of 1

Facility/Project Name Vernon Co. Balefill			License/Permit/Monitoring Number 03268		Boring Number TP-8	
Boring Drilled By: Name of crew chief (first, last) and Firm First Name Rory Last Name Kjome Firm Rory Kjome Excavating			Date Drilling Started 12-3-04		Date Drilling Completed 12-3-04	
WI Unique Well No.		DNR Well ID No.	Well Name	Final Static Water Level Feet	Surface Elevation Feet MSL	Borehole Diameter inches
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane _____ N, _____ E S ☐ / C ☐ / N ☐ NE 1/4 of NW 1/4 of Section 22 , T 13N , R 4W			Lat _____ Long _____		Local Grid Location ☐ N ☐ E ☐ S ☐ W	
Facility ID		County Vernon	County Code 63	Civil Town/City/or Village Viroqua		

Sample		Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length All. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	
S-1			0	(Topsoil)										
				Yellowbrown clayey SILT, trace sand	ML					23	31	8	99	
S-2			2.5											
			5											
			7.5	Yellow-brown clayey sandy SILT, trace gravel	MH					27	61	30	77	
			10											
			12.5	END OF BORING AT 7'										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm CWE, Inc. 5707 Schofield Ave. Weston, WI 54476
-----------	--

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Page 1 of 1

Facility/Project Name Vernon Co. Balefill			License/Permit/Monitoring Number 03268		Boring Number TP-9	
Boring Drilled By: Name of crew chief (first, last) and Firm First Name Rory Last Name Kjome Firm Rory Kjome Excavating			Date Drilling Started 12-3-04		Date Drilling Completed 12-3-04	
WI Unique Well No.		DNR Well ID No.	Well Name	Final Static Water Level Feet	Surface Elevation Feet MSL	Borehole Diameter inches
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐			Local Grid Location			
State Plane NE 1/4 of NW 1/4 of Section 22 , T 13N N,R 4W			Lat _____ Long _____			
Facility ID		County Vernon	County Code 63	Civil Town/City/or Village Viroqua		

Sample Number and Type	Length All. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	
S-1			0	(Topsoil)										
			2.5	Dark yellowbrown clayey SILT, trace sand	CL					22	37	14	100	
S-2			7.5	Dark yellowbrown clayey SILT, trace sand	CL					21	32	9	100	
			10	END OF BORING AT 8.5'										
			12.5											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

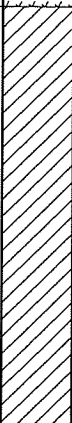
Firm **CWE, Inc.**
5707 Schofield Ave.
Weston, WI 54476

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Page 1 of 1

Facility/Project Name Vernon Co. Balefill			License/Permit/Monitoring Number 03268		Boring Number TP-10	
Boring Drilled By: Name of crew chief (first, last) and Firm First Name Rory Last Name Kjome Firm Rory Kjome Excavating			Date Drilling Started 12-3-04	Date Drilling Completed 12-4-04	Drilling Method Backhoe	
WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level _____ Feet	Surface Elevation _____ Feet MSL	Borehole Diameter _____ inches	
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane _____ N, _____ E S ☐ / C ☐ / N ☐ NE 1/4 of NW 1/4 of Section 22 , T 13N N, R 4W			Lat _____ Long _____		Local Grid Location _____ Feet ☐ N _____ Feet ☐ E _____ Feet ☐ S _____ Feet ☐ W	
Facility ID		County Vernon	County Code 63	Civil Town/City/or Village Viroqua		

Sample		Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length All. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	
S-1			0	(Topsoil)										
			2.5	Yellowbrown clayey SILT, trace sand	CL					25	34	14	99	
S-2			7.5	Yellowbrown clayey SILT, trace sand	CL					28	33	12	99	
			10	END OF BORING AT 9.5'										
			12.5											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm CWE, Inc. 5707 Schofield Ave. Weston, WI 54476
-----------	--

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Page 1 of 1

Facility/Project Name Vernon Co. Balefill			License/Permit/Monitoring Number 03268		Boring Number TP-11	
Boring Drilled By: Name of crew chief (first, last) and Firm First Name Rory Last Name Kjome Firm Rory Kjome Excavating			Date Drilling Started 12-3-04		Date Drilling Completed 12-3-04	
WI Unique Well No.		DNR Well ID No.	Well Name	Final Static Water Level Feet	Surface Elevation Feet MSL	Borehole Diameter inches
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane NE 1/4 of NW 1/4 of Section 22 , T 13N N,R 4W			Lat		Local Grid Location ☐ N ☐ E ☐ S ☐ W	

Facility ID	County Vernon	County Code 63	Civil Town/City/or Village Viroqua
-------------	-------------------------	--------------------------	--

Sample		Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length All. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	
S-1			0	(Topsoil)										
			2.5	Dark yellowbrown clayey SILT, trace sand	CL									
S-2			5	Dark yellowbrown silty CLAY, little sand, trace gravel	CH									
			7.5	END OF BORING AT 6.8'										
			10											
			12.5											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm CWE, Inc. 5707 Schofield Ave. Weston, WI 54476
-----------	--

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Page 1 of 1

Facility/Project Name Vernon Co. Balefill			License/Permit/Monitoring Number 03268		Boring Number TP-12	
Boring Drilled By: Name of crew chief (first, last) and Firm First Name Rory Last Name Kjome Firm Rory Kjome Excavating			Date Drilling Started 12-3-04		Date Drilling Completed 12-3-04	
Drilling Method Backhoe		WI Unique Well No.		DNR Well ID No.		
Well Name		Final Static Water Level Feet		Surface Elevation Feet MSL		
Borehole Diameter inches		Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐		Local Grid Location		
State Plane NE 1/4 of NW 1/4 of Section 22 , T 13N N,R 4W		Lat		Long		
Facility ID		County Vernon		County Code 63		
Civil Town/City/or Village Viroqua						

Sample Number and Type	Length All. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	
S-1			0											
			2.5	Dark yellowishbrown clayey SILT, trace sand	CL					23	35	16	98	
			5	END OF BORING AT 5'										
			7.5											
			10											
			12.5											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm CWE, Inc. 5707 Schofield Ave. Weston, WI 54476
-----------	--

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Page 1 of 1

Facility/Project Name Vernon Co. Balefill			License/Permit/Monitoring Number 03268		Boring Number TP-13	
Boring Drilled By: Name of crew chief (first, last) and Firm First Name Rory Last Name Kjome Firm Rory Kjome Excavating			Date Drilling Started 12-3-04		Date Drilling Completed 12-3-04	
WI Unique Well No.		DNR Well ID No.	Well Name	Final Static Water Level Feet	Surface Elevation Feet MSL	Borehole Diameter inches
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane ☐ N, ☐ E ☐ S ☐ C ☐ N ☐ Lat ☐ N ☐ E NE 1/4 of NW 1/4 of Section 22 , T 13N N, R 4W Long ☐ S ☐ W			Local Grid Location Feet ☐ S ☐ W			
Facility ID		County Vernon	County Code 63	Civil Town/City/or Village Viroqua		

Sample Number and Type	Length All. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	
S-1			0	(Topsoil)										
				Dark yellowbrown clayey SILT, trace sand	CL					21	37	18	99	
S-2			2.5											
				Yellowish brown silty sandy CLAY, trace gravel	CL					21	32	14	62	
			5	END OF BORING AT 5'										
			7.5											
			10											
			12.5											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm

CWE, Inc.
5707 Schofield Ave.
Weston, WI 54476

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route to: ☐ Watershed/Wastewater
☐ Remediation/Redevelopment ☐ Waste Management
☐ Other

Page 1 of 1

Facility/Project Name Vernon Co. Balefill			License/Permit/Monitoring Number 03268		Boring Number TP-14	
Boring Drilled By: Name of crew chief (first, last) and Firm First Name Rory Last Name Kjome Firm Rory Kjome Excavating			Date Drilling Started 12-3-04		Date Drilling Completed 12-3-04	
WI Unique Well No.		DNR Well ID No.	Well Name	Final Static Water Level Feet	Surface Elevation Feet MSL	Borehole Diameter inches
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐			Lat		Local Grid Location	
State Plane NE 1/4 of NW 1/4 of Section 22 , T 13N N,R 4W			Long		☐ N ☐ E ☐ S ☐ W	
Facility ID		County Vernon	County Code 63	Civil Town/City/or Village Viroqua		

Sample		Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length All. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	
S-1			0	(Topsoil)										
			2.5	Dark yellowbrown clayey SILT, trace sand	CL					22	28	8	99	
S-2			7.5	Dark yellowbrown clayey SILT, trace sand	ML					21	32	8	100	
			7.5	END OF BORING AT 7.5'										
			10											
			12.5											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm

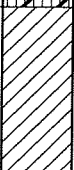
CWE, Inc.
5707 Schofield Ave.
Weston, WI 54476

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route to: ☐ Watershed/Wastewater
☐ Remediation/Redevelopment ☐ Waste Management
☐ Other

Page 1 of 1

Facility/Project Name Vernon Co. Balefill			License/Permit/Monitoring Number 03268		Boring Number TP-15	
Boring Drilled By: Name of crew chief (first, last) and Firm First Name Rory Last Name Kjome Firm Rory Kjome Excavating			Date Drilling Started 12-3-04		Date Drilling Completed 12-3-04	
WI Unique Well No.		DNR Well ID No.	Well Name		Drilling Method Backhoe	
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐			Final Static Water Level _____ Feet		Surface Elevation _____ Feet MSL	
State Plane _____ N, _____ E S ☐ / C ☐ / N ☐			Lat _____		Borehole Diameter _____ inches	
NE 1/4 of NW 1/4 of Section 22 , T 13N N, R 4W			Long _____		Local Grid Location _____ Feet ☐ N _____ Feet ☐ E _____ Feet ☐ S _____ Feet ☐ W	
Facility ID		County Vernon		County Code 63	Civil Town/City/or Village Viroqua	

Sample Number and Type	Length All. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	
S-1			0	(Topsoil)										
			2.5	Dark yellowbrown clayey SILT, trace sand	CL-ML					25	28	6	100	
S-2			5											
			7.5	Dark yellowbrown clayey SILT, trace sand	CL					23	32	10	99	
			10	END OF BORING AT 9.2'										
			12.5											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm

CWE, Inc.
5707 Schofield Ave.
Weston, WI 54476

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

APPENDIX D

SUMMARY OF FINAL TEST INFORMATION

FINAL TEST INFORMATION

Project:

Vernon Co. Clay Test Pit

Job No: 946 02 000

Date: 4/28/2005

By: MJB

Boring No.	Sample		%		Gradation - % Passing										LL	PI	USCS	W %	OPT. M %	Max. DD	k -(CM/S)
	No.	Location	Clay	Silt	200	100	#40	#10	#4	3/8"	3/4"	1"	2"								
TP-1	S-1	1.5'-3.5'	34.1	56.1	90.2	91.4	95.7	97.9	98.9	99.7	100.0	100.0	100.0	47.2	23.2	CL	25.6				
TP-1	S-2	3.5'-5.0'	67.6	27.4	95.0	96.0	98.9	99.8	99.9	100.0	100.0	100.0	100.0	87.5	55.1	CH	28.7				
TP-2	S-1	1.4'-3'	25.3	65.8	91.1	92.6	96.8	99.5	100.0	100.0	100.0	100.0	100.0	33.1	19.5	CL	20.1				
TP-2	S-2	3'-4.4'	48.2	26.2	74.4	76.8	84.7	91.2	93.9	98.2	100.0	100.0	100.0	62.4	37.5	CH	25.1				
TP-3	S-1	1.2'-3'	23.2	75.8	99.0	99.3	99.7	100.0	100.0	100.0	100.0	100.0	100.0	40.3	18.3	CL	22.9	14.8	112.6		
TP-3	S-2	3'-5'	31.2	49.5	80.7	82.7	92.2	98.0	98.8	99.6	100.0	100.0	100.0	30.9	16.2	CL	16.3				
TP-3	S-3	5'-8'	20.6	11.6	32.2	37.1	78.2	97.8	98.6	99.7	100.0	100.0	100.0	29.7	13.0	SC	13.9				
TP-4	S-1	1.1'-5'	23.2	75.9	99.1	99.4	99.9	100.0	100.0	100.0	100.0	100.0	100.0	40.2	18.4	CL	21.9				
TP-4	S-2	8'-9.1'	18.9	80.1	98.9	99.2	99.8	100.0	100.0	100.0	100.0	100.0	100.0	29.7	7.4	CL	22.2				
TP-5	S-1	1'-3'	22.7	76.7	99.4	99.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	37.6	17.7	CL	20.6				
TP-5	S-2	6'-7.6'	18.1	70.8	88.9	90.1	94.2	98.1	99.8	99.9	100.0	100.0	100.0	25.1	4.5	CL-ML	16.5				
TP-6	S-1	1.0'-2.5'	28.1	68.1	96.2	96.8	98.1	98.9	99.5	100.0	100.0	100.0	100.0	42.9	21.1	CL	21.5				
TP-6	S-2	2.5'-4.6'	59.4	30.3	89.7	92.3	99.3	100.0	100.0	100.0	100.0	100.0	100.0	74.9	46.8	CH	23.6				
TP-7	S-1	1'-2'	30.3	65.2	95.5	96.1	97.4	98.5	99.1	99.7	100.0	100.0	100.0	43.9	23.9	CL	22.2	18.8	104.4		
TP-7	S-2	2'-2.5'	72.4	22.2	94.7	95.7	98.5	99.7	99.9	100.0	100.0	100.0	100.0	78.3	39.3	MH	29.3				
TP-8	S-1	1'-3'	22.9	76.3	99.2	99.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	30.7	7.6	ML	23.1				
TP-8	S-2	6'-7'	51.1	25.8	76.9	80.1	91.2	97.0	99.2	100.0	100.0	100.0	100.0	61.3	29.9	MH	26.6				
TP-9	S-1	1'-2.5'	26.1	73.5	99.6	99.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	36.6	14.2	CL	21.9				
TP-9	S-2	7'-8.5'	17.5	82.0	99.5	99.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	31.6	9.1	CL	21.4				
TP-10	S-1	1.5'-3.5'	29.1	70.0	99.1	99.6	100.0	100.0	100.0	100.0	100.0	100.0	100.0	34.2	14.2	CL	25.1				
TP-10	S-2	7'-9.5'	30.6	68.6	99.2	99.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	33.4	12.4	CL	27.5	17.7	104.2		
TP-11	S-1	1.2'-4.2'	34.4	63.0	97.4	98.0	99.4	100.0	100.0	100.0	100.0	100.0	100.0	37.7	19.7	CL	23.7				
TP-11	S-2	4.2'-6.8'	58.9	29.3	88.2	91.0	96.4	99.1	99.8	100.0	100.0	100.0	100.0	60.2	31.7	CH	34.7				
TP-12	S-1	1'-3.2'	30.3	67.5	97.8	98.3	99.4	100.0	100.0	100.0	100.0	100.0	100.0	35.2	15.8	CL	23.7				
TP-13	S-1	1'-4'	27.7	71.0	98.7	99.0	99.7	100.0	100.0	100.0	100.0	100.0	100.0	36.5	17.6	CL	21.4				
TP-13	S-2	4'-5'	39.4	22.8	62.2	67.5	87.9	98.0	99.1	100.0	100.0	100.0	100.0	32.4	14.1	CL	20.9				
TP-14	S-1	1'-3'	25.7	73.3	99.0	99.4	99.9	100.0	100.0	100.0	100.0	100.0	100.0	28.1	7.7	CL	22.2				

Project: Vernon Co. Clay Test Pit Job No: 946 02 000 Date: 4/28/2005
By: MTB

[illegible]

APPENDIX E

WATER CONTENT DETERMINATION DATA

WATER CONTENT DETERMINATION

Project Vernon Co. Clay Test Pit Job No. 946 02 000

Location of Project Vernon Co.

Description of Soil Lean Clay w/ sand

Tested By M. Krause Date of Testing 1/20/2005

Date of Weighing 1/24/2005

Sample No.	TP-1/S-1	TP-1/S-2	TP-2/S-1	TP-2/S-2	TP-3/S-1	TP-3/S-2	TP-3/S-3	TP-4/S-1
Container No.	D-10	D-16	D-17	D-26	D-28	D-29	D-31	D-33
Wt. of cup + wet soil	1066	988	1167	1072	1209	1462	1166	1184
Wt. of cup + dry soil	852	771	974	860	986	1259	1025	974
Wt. of cup	14.6	14.3	14.3	14.5	14.3	14.2	14.2	14.5
Wt. of dry soil	837.4	756.7	959.7	845.5	971.7	1244.8	1010.8	959.5
Wt. of Water	214.0	217.0	193.0	212.0	223.0	203.0	141.0	210.0
Water Content, w%	25.6	28.7	20.1	25.1	22.9	16.3	13.9	21.9

Sample No.	TP-4/S-2	TP-5/S-1	TP-5/S-2	TP-6/S-1	TP-6/S-2	TP-7/S-1	TP-7/S-2	TP-8/S-1
Container No.	D-35	D-36	D-37	D-42	D-43	D-45	D-46	D-47
Wt. of cup + wet soil	1539	1286	1473	1199	1120	1117	1134	1119
Wt. of cup + dry soil	1262	1069	1266	989	909	917	880	912
Wt. of cup	14	14.6	14.2	14.4	14.5	14.4	14.3	14.4
Wt. of dry soil	1248	1054.4	1251.8	974.6	894.5	902.6	865.7	897.6
Wt. of Water	277	217	207	210	211	200	254	207
Water Content, w%	22.2	20.6	16.5	21.5	23.6	22.2	29.3	23.1

REMARKS:

WATER CONTENT DETERMINATION

Project Vernon Co. Clay Test Pit Job No. 946 02 000

Location of Project Vernon Co.

Description of Soil Lean Clay w/. sand

Tested By M. Krause Date of Testing 1/21/2005

Date of Weighing 1/24/2005

Sample No.	TP-8/S-2	TP-9/S-1	TP-9/S-2	TP-10/S-1	TP-10/S-2	TP-11/S-1	TP-11/S-2	TP-12/S-1
Container No.	D-48	D-49	D-50	D-52	D-53	D-54	D-55	D-58
Wt. of cup + wet soil	1241	1110	1167	1145	1478	1204	1027	1184
Wt. of cup + dry soil	983	913	964	912	1162	976	766	960
Wt. of cup	14.2	14.4	14.1	14	13.9	13.9	14.2	14
Wt. of dry soil	968.8	898.6	949.9	898	1148.1	962.1	751.8	946
Wt. of Water	258.0	197.0	203.0	233.0	316.0	228.0	261	224.0
Water Content, w%	26.6	21.9	21.4	25.1	27.5	23.7	34.7	23.7

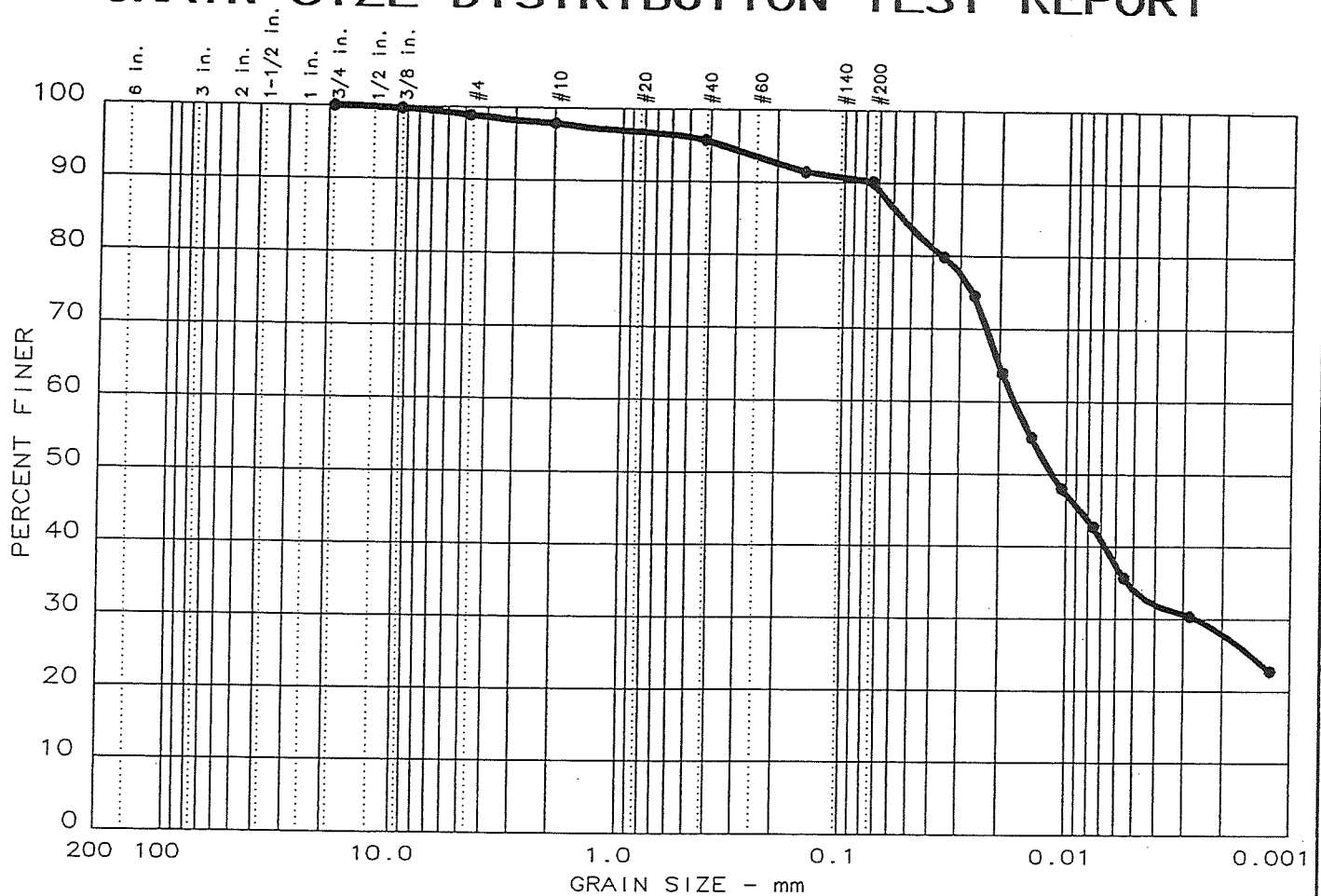
Sample No.	TP-13/S-1	TP-13/S-2	TP-14/S-1	TP-14/S-2	TP-15/S-1	TP-15/S-2		
Container No.	D-59	D-71	D-72	D-73	D-74	D-89		
Wt. of cup + wet soil	1212	1160	1127	1254	1058	1110		
Wt. of cup + dry soil	1001	962	925	1039	848	907		
Wt. of cup	13.9	14	13.9	13.7	13.6	13.9		
Wt. of dry soil	987.1	948	911.1	1025.3	834.4	893.1		
Wt. of Water	211	198	202	215	210	203		
Water Content, w%	21.4	20.9	22.2	21	25.2	22.7		

REMARKS:

APPENDIX F

GRAIN SIZE ANALYSIS - MECHANICAL AND HYDROMETER

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	1.1	8.7	56.1	34.1

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
47.2	23.2			0.0115	0.0026				

MATERIAL DESCRIPTION	USCS	AASHTO
● Lt. Brown clayey SILT, Lt sand, trace gravel	CL	

Project No.: 946 02 000
 Project: Vernon Co. Clay test pit
 ● Location: TP-1/S-1

Date: 2/7/05

GRAIN SIZE DISTRIBUTION TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Clay cover

Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 1

Date: 2/7/05
 Project No.: 946 02 000
 Project: Vernon Co. Clay test pit

Sample Data

Location of Sample: TP-1/S-1
 Sample Description: Lt. Brown clayey SILT, Lt sand, trace gravel
 SCS Class: CL Liquid limit: 47.2
 AASHTO Class: Plasticity index: 23.2

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash
Wet sample and tare=	624.00	201.80
Tare =	154.90	155.10
Wet sample weight =	469.10	46.70
Percent #200 from wash=	90.0 %	

Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	1.30	0.00	99.7
# 4	4.00	0.00	98.9
# 10	4.70	0.00	97.9
# 40	10.00	0.00	95.7
# 100	20.30	0.00	91.4
# 200	5.90	0.00	90.2

Hydrometer Analysis Data

Separation sieve is number 200
 Percent -#200 based on complete sample= 90.2
 Weight of hydrometer sample: 50
 Calculated biased weight= 55.46
 Automatic temperature correction
 Composite correction at 20 deg C = -6.5
 Meniscus correction only= 1
 Specific gravity of solids= 2.74
 Specific gravity correction factor= 0.980
 Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	23.0	51.0	45.2	0.0128	52.0	7.8	0.0357	79.8
2.0	23.0	48.0	42.2	0.0128	49.0	8.3	0.0260	74.5
4.0	23.0	42.0	36.2	0.0128	43.0	9.2	0.0195	63.9
8.0	23.0	37.0	31.2	0.0128	38.0	10.1	0.0144	55.1
16.0	23.0	33.0	27.2	0.0128	34.0	10.7	0.0105	48.0
32.0	23.0	30.0	24.2	0.0128	31.0	11.2	0.0076	42.7
64.0	23.0	26.0	20.2	0.0128	27.0	11.9	0.0055	35.6
256.0	23.0	23.0	17.2	0.0128	24.0	12.4	0.0028	30.3
1440.0	22.0	19.0	12.9	0.0130	20.0	13.0	0.0012	22.8

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

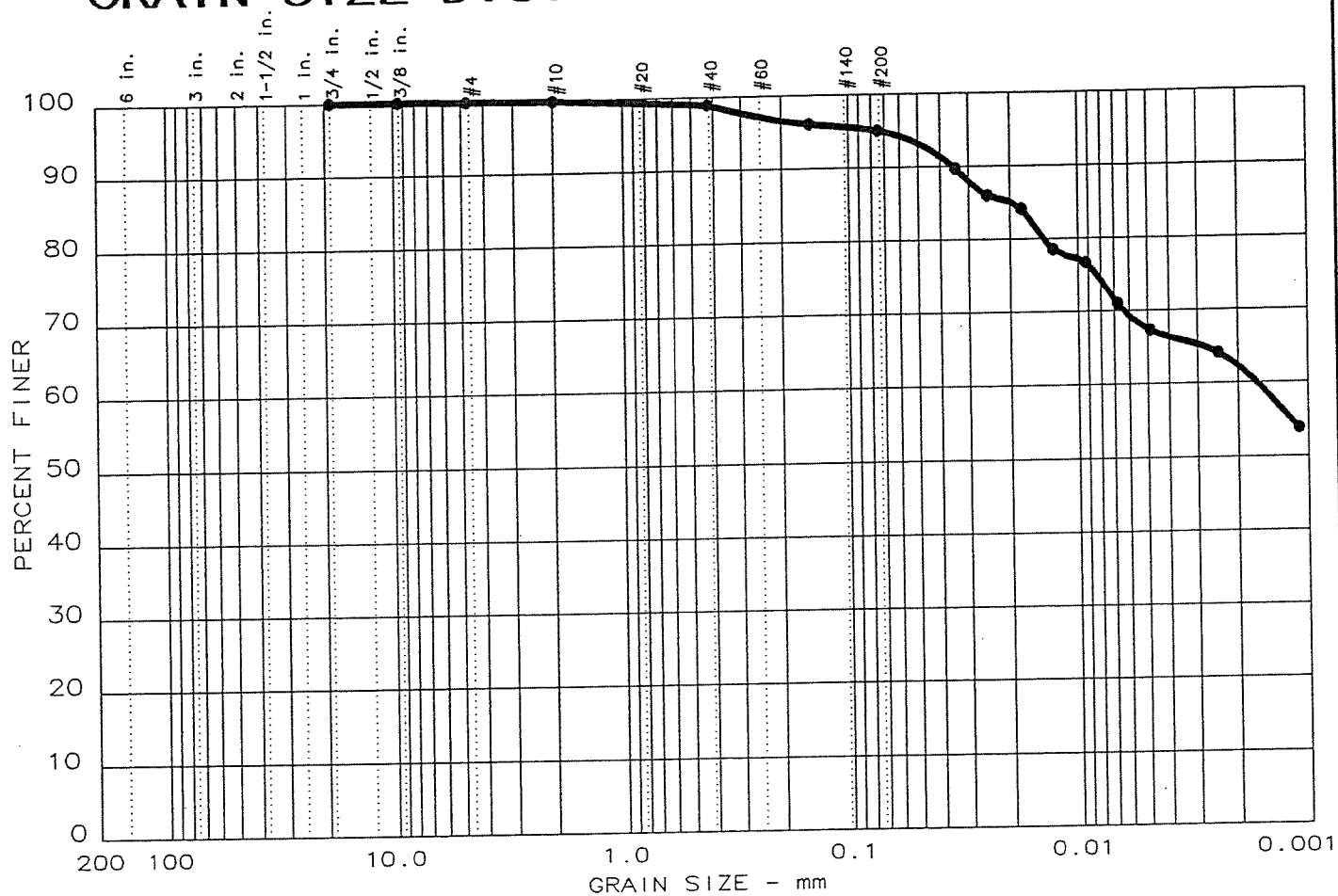
% + 3 in. = 0.0 % GRAVEL = 1.1 % SAND = 8.7

% SILT = 56.1 % CLAY = 34.1

D85= 0.05 D60= 0.017 D50= 0.011

D30= 0.0026

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.1	4.9	27.4	67.6

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
87.5	55.1								

MATERIAL DESCRIPTION	USCS	AASHTO
• Lt. Brown silty CLAY, trace sand & gravel	CH	

Project No.: 946-02-000 Project: Vernon Co. Clay test pit. • Location: TP-1/S-2 Date: 2/7/05	Remarks: Clay cover
GRAIN SIZE DISTRIBUTION TEST REPORT CENTRAL WISCONSIN ENGINEERS, INC.	Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 2

Date: 2/7/05

Project No.: 946-02-000

Project: Vernon Co. Clay test pit

Sample Data

Location of Sample: TP-1/S-2

Sample Description: Lt. Brown silty CLAY, trace sand & gravel

USCS Class: CH

Liquid limit: 87.5

AASHTO Class:

Plasticity index: 55.1

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash
Dry sample and tare=	563.00	178.60
Tare =	157.10	157.20
Dry sample weight =	405.90	21.40
Minus #200 from wash=	94.7 %	

Sieve tare method

Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.40	0.00	99.9
# 10	0.40	0.00	99.8
# 40	3.60	0.00	98.9
# 100	11.70	0.00	96.0
# 200	4.30	0.00	95.0

Hydrometer Analysis Data

Separation sieve is number 200

Percent -#200 based on complete sample= 95.0

Weight of hydrometer sample: 50

Calculated biased weight= 52.65

Automatic temperature correction

Composite correction at 20 deg C = -6.5

Meniscus correction only= 1

Specific gravity of solids= 2.74

Specific gravity correction factor= 0.980

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	23.0	54.0	48.2	0.0128	55.0	7.3	0.0345	89.7
2.0	23.0	52.0	46.2	0.0128	53.0	7.6	0.0250	86.0
4.0	23.0	51.0	45.2	0.0128	52.0	7.8	0.0178	84.1
8.0	23.0	48.0	42.2	0.0128	49.0	8.3	0.0130	78.5
16.0	23.0	47.0	41.2	0.0128	48.0	8.4	0.0093	76.7
32.0	23.0	44.0	38.2	0.0128	45.0	8.9	0.0068	71.1
64.0	23.0	42.0	36.2	0.0128	43.0	9.2	0.0049	67.4
256.0	24.0	40.0	34.5	0.0127	41.0	9.6	0.0024	64.2
1440.0	22.0	35.0	28.9	0.0130	36.0	10.4	0.0011	53.8

Fractional Components

Gravel/Sand based on #4 sieve

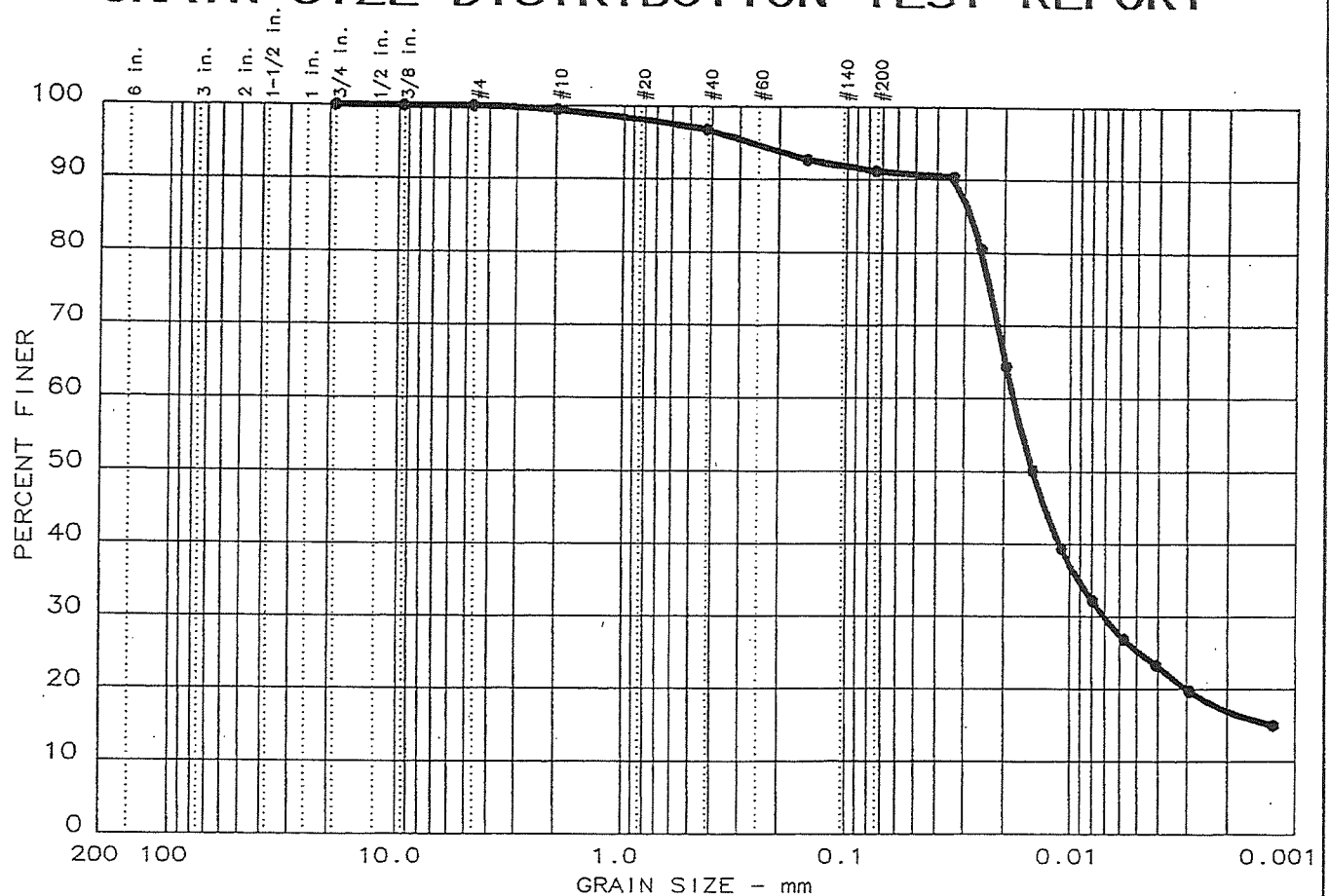
Sand/Fines based on #200 sieve

+ 3 in. = 0.0 % GRAVEL = 0.1 % SAND = 4.9

SILT = 27.4 % CLAY = 67.6

D₅ = 0.02 D₆₀ = 0.002

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	8.9	65.8	25.3

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
33.1	19.5			0.0148	0.0070				

MATERIAL DESCRIPTION	USCS	AASHTO
• Dark yellow-brown clayey SILT, little sand	CL	

Project No.: 946-02-000 Project: Vernon Co. Clay test pit • Location: TP-2/S-1 Date: 2/15/05	Remarks: Clay cover Figure No. 1
GRAIN SIZE DISTRIBUTION TEST REPORT CENTRAL WISCONSIN ENGINEERS, INC.	

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 15

Date: 2/15/05

Project No.: 946-02-000

Project: Vernon Co. Clay test pit

Sample Data

Location of Sample: TP-2/S-1

Sample Description: Dark yellow-brown clayey SILT, little sand

USCS Class: CL

Liquid limit: 33.1

AASHTO Class:

Plasticity index: 19.5

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash
Dry sample and tare=	685.40	202.50
Tare =	155.40	155.40
Dry sample weight =	530.00	47.10
Minus #200 from wash=	91.1 %	

Sieve tare method

Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.00	0.00	100.0
# 10	2.90	0.00	99.5
# 40	14.00	0.00	96.8
# 100	22.10	0.00	92.6
# 200	8.10	0.00	91.1

Hydrometer Analysis Data

Separation sieve is number 200

Percent -#200 based on complete sample= 91.1

Weight of hydrometer sample: 50

Calculated biased weight= 54.88

Automatic temperature correction

Composite correction at 20 deg C = -6.5

Meniscus correction only= 1

Specific gravity of solids= 2.74

Specific gravity correction factor= 0.980

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	22.5	56.5	50.5	0.0129	57.5	6.9	0.0338	90.3
2.0	22.5	51.0	45.0	0.0129	52.0	7.8	0.0254	80.5
4.0	22.5	42.0	36.0	0.0129	43.0	9.2	0.0196	64.4
8.0	22.5	34.0	28.0	0.0129	35.0	10.6	0.0148	50.1
16.0	22.5	28.0	22.0	0.0129	29.0	11.5	0.0109	39.4
32.0	22.5	24.0	18.0	0.0129	25.0	12.2	0.0080	32.2
64.0	22.5	21.0	15.0	0.0129	22.0	12.7	0.0057	26.9
128.0	22.5	19.0	13.0	0.0129	20.0	13.0	0.0041	23.3
256.0	22.5	17.0	11.0	0.0129	18.0	13.3	0.0029	19.7
1440.0	22.0	14.5	8.4	0.0130	15.5	13.8	0.0013	15.0

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

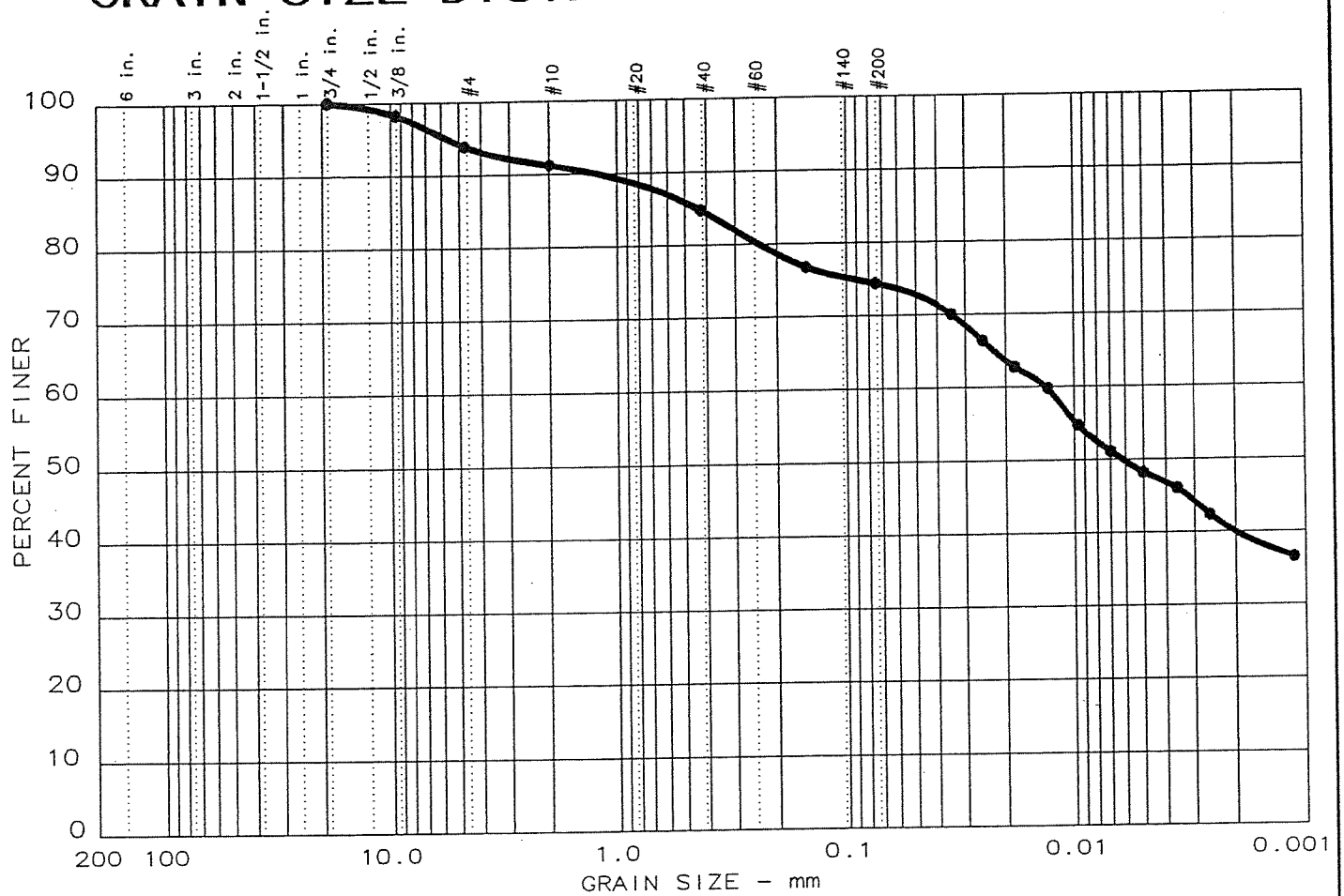
% + 3 in. = 0.0 % GRAVEL = 0.0 % SAND = 8.9

% SILT = 65.8 % CLAY = 25.3

D85= 0.03 D60= 0.018 D50= 0.015

D30= 0.0070

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	6.1	19.5	26.2	48.2

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
62.4	37.5	0.437		0.0062					

MATERIAL DESCRIPTION	USCS	AASHTO
● Yellow-brown silty sandy CLAY, little gravel	CH	

Project No.: 946-02-000
 Project: Vernon Co. Clay test pit
 ● Location: TP-2/S-2

Date: 2/15/05

GRAIN SIZE DISTRIBUTION TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Clay cover

Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 3

Date: 2/15/05

Project No.: 946-02-000

Project: Vernon Co. Clay test pit

Sample Data

Location of Sample: TP-2/S-2

Sample Description: Yellow-brown silty sandy CLAY, little gravel

USCS Class: CH

Liquid limit: 62.4

AASHTO Class:

Plasticity index: 37.5

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash
Dry sample and tare=	617.00	275.30
Tare =	156.30	156.40
Dry sample weight =	460.70	118.90
Minus #200 from wash=	74.2 %	

Sieve tare method

Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	8.30	0.00	98.2
# 4	19.70	0.00	93.9
# 10	12.50	0.00	91.2
# 40	29.80	0.00	84.7
# 100	36.80	0.00	76.8
# 200	10.90	0.00	74.4

Hydrometer Analysis Data

Separation sieve is number 200

Percent -#200 based on complete sample= 74.4

Weight of hydrometer sample: 50

Calculated biased weight= 67.22

Automatic temperature correction

Composite correction at 20 deg C = -6.5

Meniscus correction only= 1

Specific gravity of solids= 2.74

Specific gravity correction factor= 0.980

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	22.5	54.0	48.0	0.0129	55.0	7.3	0.0348	70.1
2.0	22.5	51.5	45.5	0.0129	52.5	7.7	0.0253	66.4
4.0	22.5	49.0	43.0	0.0129	50.0	8.1	0.0183	62.8
8.0	22.5	47.0	41.0	0.0129	48.0	8.4	0.0132	59.9
16.0	22.5	43.5	37.5	0.0129	44.5	9.0	0.0097	54.7
32.0	22.5	41.0	35.0	0.0129	42.0	9.4	0.0070	51.1
64.0	22.5	39.0	33.0	0.0129	40.0	9.7	0.0050	48.2
128.0	22.5	37.5	31.5	0.0129	38.5	10.0	0.0036	46.0
256.0	22.5	35.0	29.0	0.0129	36.0	10.4	0.0026	42.4
1440.0	22.5	31.0	25.0	0.0129	32.0	11.0	0.0011	36.5

Fractional Components

avel/Sand based on #4 sieve

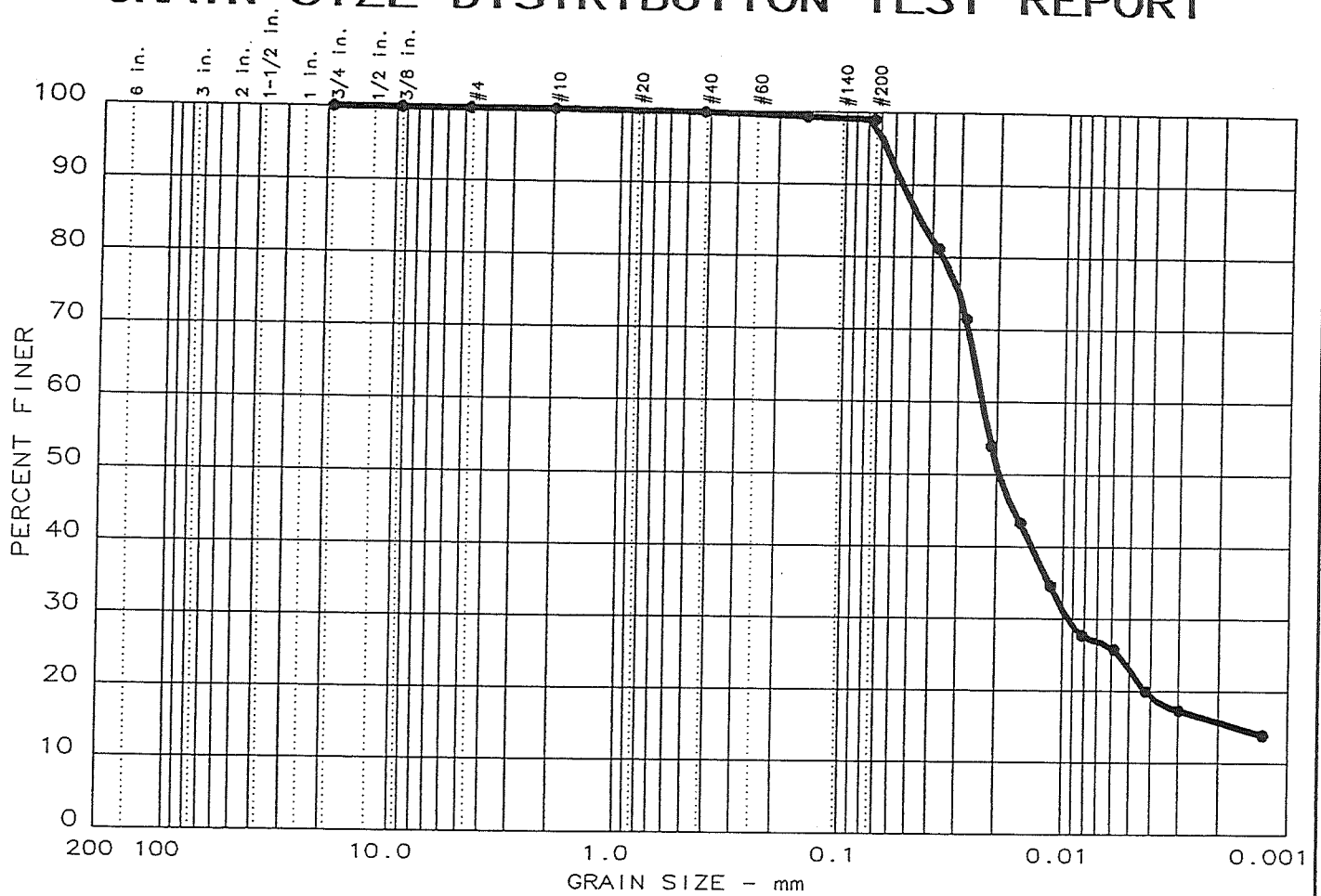
nd/Fines based on #200 sieve

+ 3 in. = 0.0 % GRAVEL = 6.1 % SAND = 19.5

SILT = 26.2 % CLAY = 48.2

5= 0.44 D60= 0.013 D50= 0.006

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	1.0	75.8	23.2

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
40.3	18.3			0.0195	0.0094	0.0017			

MATERIAL DESCRIPTION	USCS	AASHTO
• Lt. Brown clayey SILT, trace sand	CL	

Project No.: 946-02-000
 Project: Vernon Co. Clay test pit
 • Location: TP-3/S-1

Date: 2/22/05

GRAIN SIZE DISTRIBUTION TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Clay cover

Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 4

te: 2/22/05
 oject No.: 946-02-000
 oject: Vernon Co. Clay test pit

Sample Data

cation of Sample: TP-3/S-1
 mple Description: Lt. Brown clayey SILT, trace sand
 CS Class: CL Liquid limit: 40.3
 SHTO Class: Plasticity index: 18.3

Notes

marks: Clay cover

g. No.: 1

Mechanical Analysis Data

	Initial	After wash
y sample and tare=	727.00	161.60
re =	156.10	156.00
y sample weight =	570.90	5.60
nus #200 from wash=	99.0 %	

Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.00	0.00	100.0
# 10	0.10	0.00	100.0
# 40	1.40	0.00	99.7
# 100	2.60	0.00	99.3
# 200	1.80	0.00	99.0

Hydrometer Analysis Data

paration sieve is number 200
 rcent -#200 based on complete sample= 99.0
 ight of hydrometer sample: 50
 lculated biased weight= 50.52
 tomatic temperature correction
 Composite correction at 20 deg C =-6.5

niscus correction only= 1
 ecific gravity of solids= 2.74
 ecific gravity correction factor= 0.980
 drometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	21.5	48.0	41.8	0.0130	49.0	8.3	0.0375	81.1
2.0	21.5	43.0	36.8	0.0130	44.0	9.1	0.0278	71.4
4.0	21.5	34.0	27.8	0.0130	35.0	10.6	0.0212	53.9
8.0	21.5	28.5	22.3	0.0130	29.5	11.5	0.0156	43.3
16.0	21.5	24.0	17.8	0.0130	25.0	12.2	0.0114	34.5
32.0	21.5	20.5	14.3	0.0130	21.5	12.8	0.0082	27.7
64.0	21.5	19.5	13.3	0.0130	20.5	12.9	0.0059	25.8
128.0	21.5	16.5	10.3	0.0130	17.5	13.4	0.0042	20.0
256.0	22.0	15.0	8.9	0.0130	16.0	13.7	0.0030	17.3
1440.0	21.0	13.5	7.2	0.0131	14.5	13.9	0.0013	13.9

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

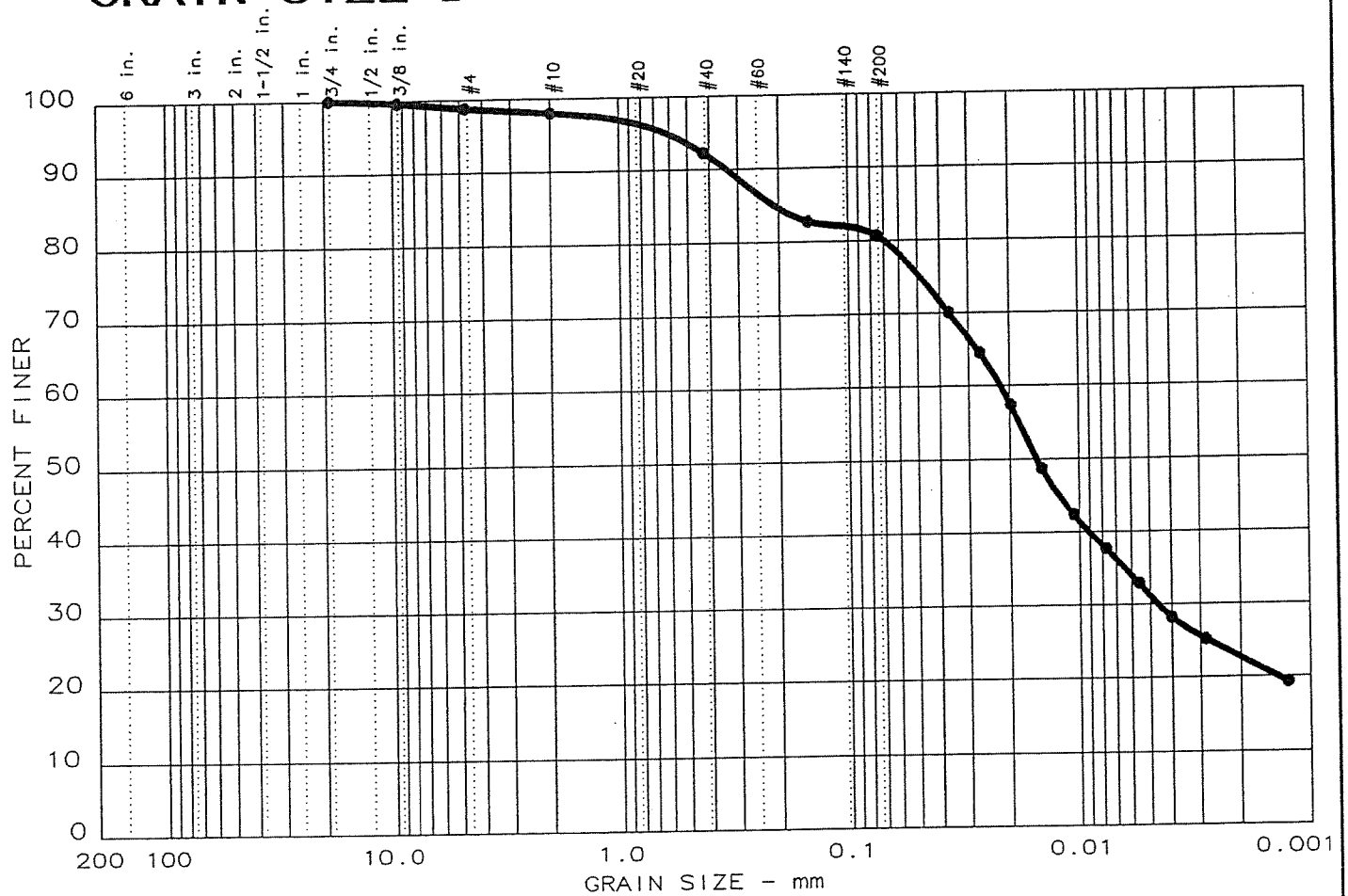
+ 3 in. = 0.0 % GRAVEL = 0.0 % SAND = 1.0

SILT = 75.8 % CLAY = 23.2

D85= 0.05 D60= 0.023 D50= 0.019

D30= 0.0094 D15= 0.00168

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	1.2	18.1	49.5	31.2

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
30.9	16.2	0.209		0.0153	0.0046				

MATERIAL DESCRIPTION	USCS	AASHTO
• Lt. Brown clayey sandy SILT, trace gravel	CL	

Project No.: 946-02-000
 Project: Vernon Co. Clay test pit
 • Location: TP-3/S-2

Date: 2/22/05

GRAIN SIZE DISTRIBUTION TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Clay cover

Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 5

Date: 2/22/05

Project No.: 946-02-000

Project: Vernon Co. Clay test pit

Sample Data

Location of Sample: TP-3/S-2

Sample Description: Lt. Brown clayey sandy SILT, trace gravel

USCS Class: CL

Liquid limit: 30.9

AASHTO Class:

Plasticity index: 16.2

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash	
Wet sample and tare=	784.00	279.30	
Wet tare =	156.00	155.90	
Dry sample weight =	628.00	123.40	
Minus #200 from wash=	80.4 %		
Sieve tare method			
Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	2.60	0.00	99.6
# 4	5.20	0.00	98.8
# 10	4.90	0.00	98.0
# 40	36.00	0.00	92.2
# 100	59.80	0.00	82.7
# 200	12.70	0.00	80.7

Hydrometer Analysis Data

Separation sieve is number 200

Percent -#200 based on complete sample= 80.7

Weight of hydrometer sample: 50

Calculated biased weight= 61.96

Automatic temperature correction

Composite correction at 20 deg C = -6.5

Meniscus correction only= 1

Specific gravity of solids= 2.74

Specific gravity correction factor= 0.980

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	21.5	50.5	44.3	0.0130	51.5	7.8	0.0365	70.1
2.0	21.5	47.0	40.8	0.0130	48.0	8.4	0.0268	64.6
4.0	21.5	42.5	36.3	0.0130	43.5	9.2	0.0197	57.4
8.0	21.5	37.0	30.8	0.0130	38.0	10.1	0.0146	48.7
16.0	21.5	33.0	26.8	0.0130	34.0	10.7	0.0107	42.4
32.0	21.5	30.0	23.8	0.0130	31.0	11.2	0.0077	37.6
64.0	21.5	27.0	20.8	0.0130	28.0	11.7	0.0056	32.9
128.0	21.5	24.0	17.8	0.0130	25.0	12.2	0.0040	28.2
256.0	22.0	22.0	15.9	0.0130	23.0	12.5	0.0029	25.2
1440.0	21.0	18.5	12.2	0.0131	19.5	13.1	0.0013	19.3

Fractional Components

avel/Sand based on #4 sieve

nd/Fines based on #200 sieve

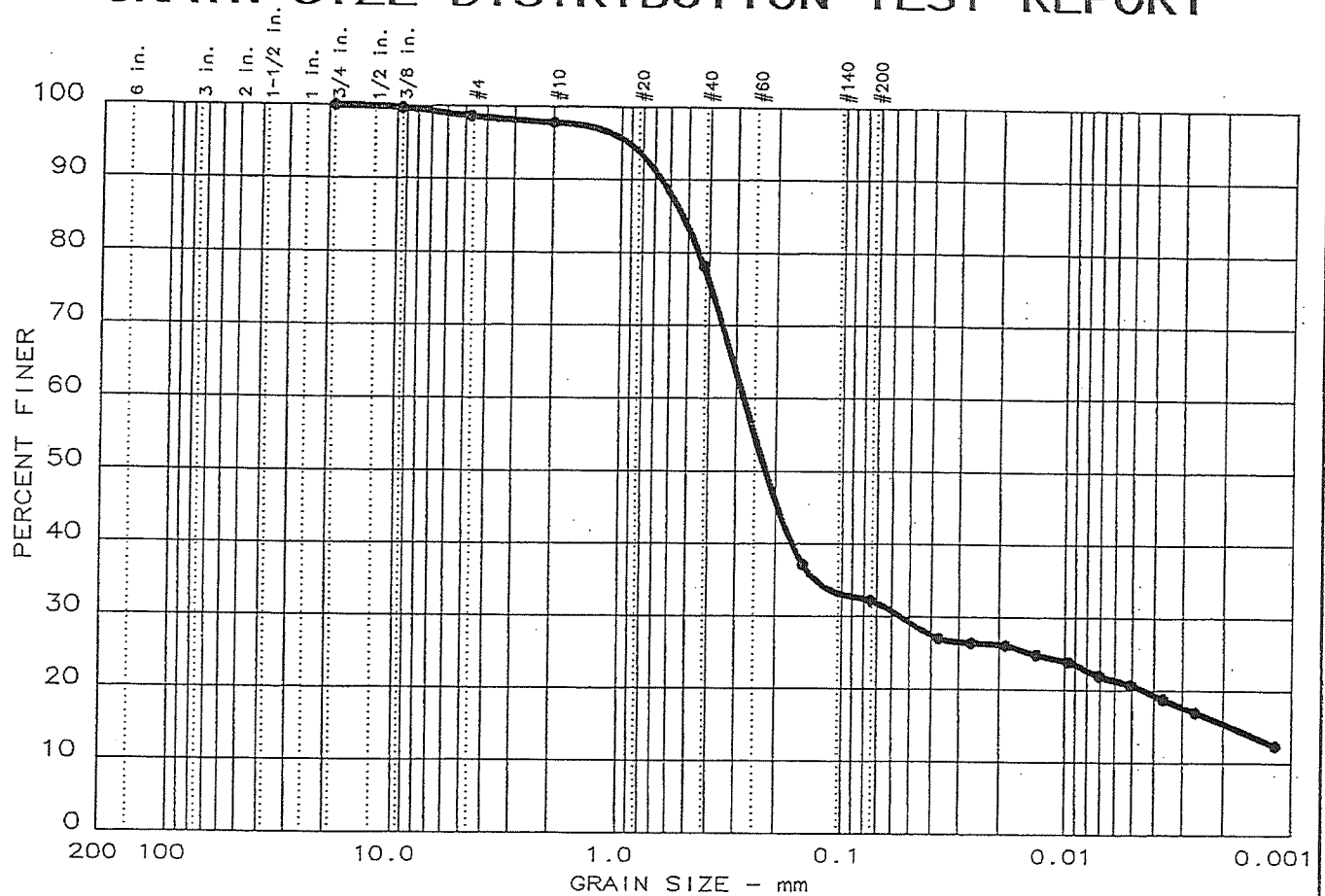
+ 3 in. = 0.0 % GRAVEL = 1.2 % SAND = 18.1

SILT = 49.5 % CLAY = 31.2

5= 0.21 D60= 0.022 D50= 0.015

0= 0.0046

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	1.4	66.4	11.6	20.6

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
29.7	13.0	0.525	0.277	0.221	0.0543	0.0018			

MATERIAL DESCRIPTION	USCS	AASHTO
• Brown clayey SAND, little silt, trace gravel	SC	

Project No.: 946-02-000 Project: Vernon Co. Clay test pit • Location: TP-3/S-3 Date: 2/23/05	Remarks: Clay cover
GRAIN SIZE DISTRIBUTION TEST REPORT CENTRAL WISCONSIN ENGINEERS, INC.	Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 6

ate: 2/23/05

roject No.: 946-02-000

roject: Vernon Co. Clay test pit

Sample Data

ocation of Sample: TP-3/S-3

ample Description: Brown clayey SAND, little silt, trace gravel

SCS Class: SC

Liquid limit: 29.7

ASHTO Class:

Plasticity index: 13.0

Notes

emarks: Clay cover

ig. No.: 1

Mechanical Analysis Data

	Initial	After wash
ry sample and tare=	616.00	471.60
are =	156.00	155.90
ry sample weight =	460.00	315.70
minus #200 from wash=	31.4 %	

ieve tare method

Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	1.50	0.00	99.7
# 4	4.80	0.00	98.6
# 10	3.90	0.00	97.8
# 40	90.00	0.00	78.2
# 100	189.10	0.00	37.1
# 200	22.60	0.00	32.2

Hydrometer Analysis Data

eparation sieve is number 200

ercent -#200 based on complete sample= 32.2

eight of hydrometer sample: 50

alculated biased weight= 155.30

automatic temperature correction

Composite correction at 20 deg C =-6.5

leniscus correction only= 1

pecific gravity of solids= 2.74

pecific gravity correction factor= 0.980

ydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, Actual deg C reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	21.5 49.0	42.8	0.0130	50.0	8.1	0.0371	27.0
2.0	21.5 48.0	41.8	0.0130	49.0	8.3	0.0265	26.4
4.0	21.5 47.5	41.3	0.0130	48.5	8.3	0.0188	26.1
8.0	21.5 45.5	39.3	0.0130	46.5	8.7	0.0136	24.8
16.0	21.5 44.0	37.8	0.0130	45.0	8.9	0.0097	23.9
32.0	21.5 41.0	34.8	0.0130	42.0	9.4	0.0071	22.0
64.0	21.5 39.0	32.8	0.0130	40.0	9.7	0.0051	20.7
128.0	21.5 36.0	29.8	0.0130	37.0	10.2	0.0037	18.8
256.0	22.0 33.0	26.9	0.0130	34.0	10.7	0.0027	17.0
1440.0	21.0 26.0	19.7	0.0131	27.0	11.9	0.0012	12.4

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

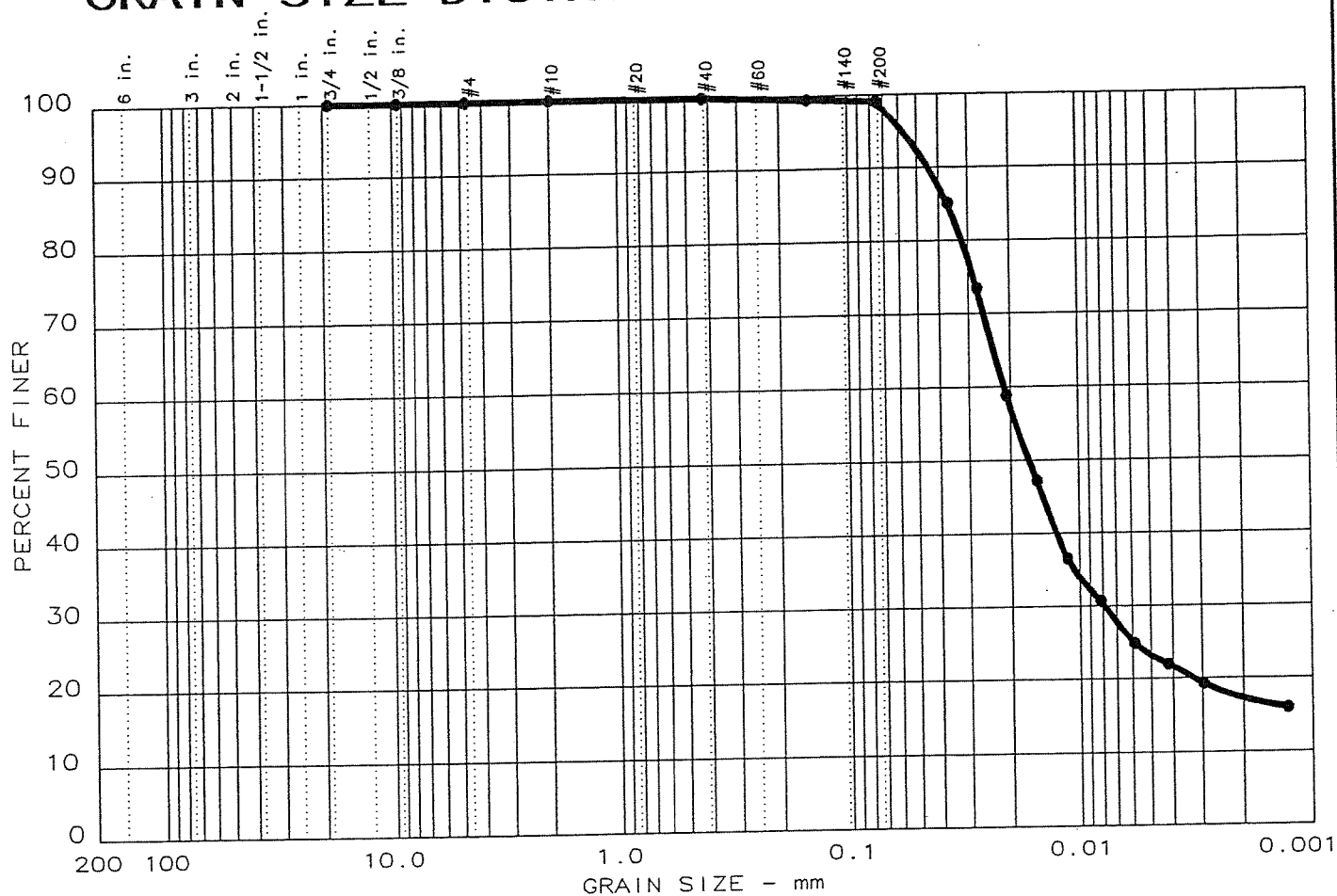
+ 3 in. = 0.0 % GRAVEL = 1.4 % SAND = 66.4

SILT = 11.6 % CLAY = 20.6

D85= 0.52 D60= 0.277 D50= 0.221

30= 0.0543 D15= 0.00184

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	0.9	75.9	23.2

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
40.2	18.4			0.0166	0.0078				

MATERIAL DESCRIPTION	USCS	AASHTO
• yellowish brown clayey SILT, trace sand	CL	

Project No.: 946-02-000
 Project: Vernon Co. Clay test pit
 • Location: TP-4/S-1

Date: 2/23/05

GRAIN SIZE DISTRIBUTION TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Clay cover

Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 7

Date: 2/23/05

Project No.: 946-02-000

Project: Vernon Co. Clay test pit

Sample Data

Location of Sample: TP-4/S-1

Sample Description: yellowish brown clayey SILT, trace sand

USCS Class: CL

Liquid limit: 40.2

AASHTO Class:

Plasticity index: 18.4

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash	
Dry sample and tare=	817.00	162.70	
Tare =	156.40	156.40	
Dry sample weight =	660.60	6.30	
Minus #200 from wash=	99.0 %		
Sieve tare method			
Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.00	0.00	100.0
# 10	0.00	0.00	100.0
# 40	0.70	0.00	99.9
# 100	3.20	0.00	99.4
# 200	2.10	0.00	99.1

Hydrometer Analysis Data

Separation sieve is number 200
 Percent -#200 based on complete sample= 99.1
 Weight of hydrometer sample: 50
 Calculated biased weight= 50.46
 Automatic temperature correction
 Composite correction at 20 deg C = -6.5

Meniscus correction only= 1
 Specific gravity of solids= 2.74
 Specific gravity correction factor= 0.980
 Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	21.5	50.0	43.8	0.0130	51.0	7.9	0.0367	85.1
2.0	21.5	44.0	37.8	0.0130	45.0	8.9	0.0275	73.4
4.0	21.5	36.5	30.3	0.0130	37.5	10.1	0.0208	58.9
8.0	21.5	30.5	24.3	0.0130	31.5	11.1	0.0154	47.2
16.0	21.5	25.0	18.8	0.0130	26.0	12.0	0.0113	36.5
32.0	21.5	22.0	15.8	0.0130	23.0	12.5	0.0082	30.7
64.0	21.5	19.0	12.8	0.0130	20.0	13.0	0.0059	24.9
128.0	21.5	17.5	11.3	0.0130	18.5	13.3	0.0042	21.9
256.0	22.0	16.0	9.9	0.0130	17.0	13.5	0.0030	19.3
1440.0	21.0	14.5	8.2	0.0131	15.5	13.8	0.0013	15.9

Fractional Components

avel/Sand based on #4 sieve

nd/Fines based on #200 sieve

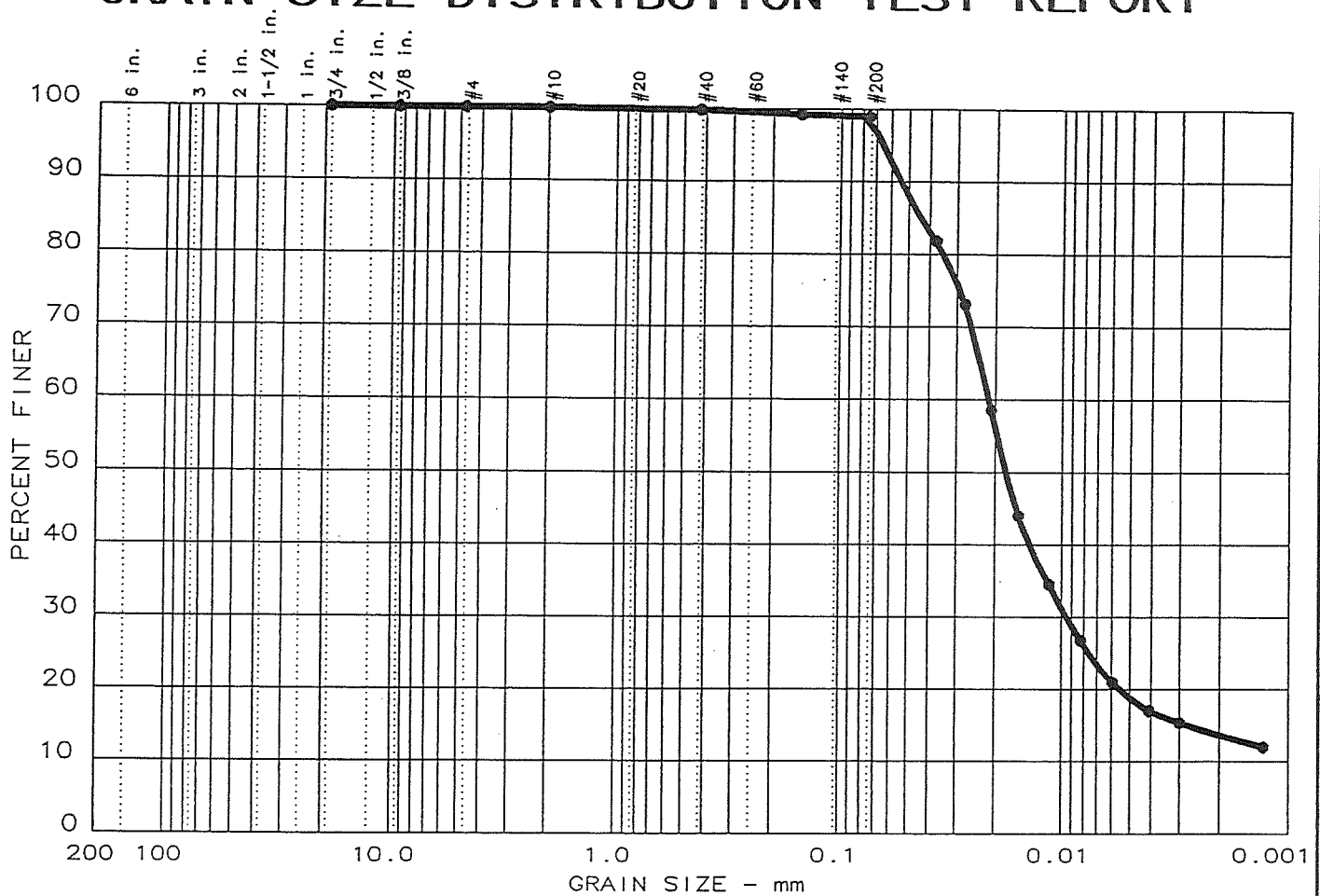
+ 3 in. = 0.0 % GRAVEL = 0.0 % SAND = 0.9

SILT = 75.9 % CLAY = 23.2

5= 0.04 D60= 0.021 D50= 0.017

0= 0.0078

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	1.0	80.1	18.9

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
29.7	7.4			0.0178	0.0094	0.0028			

MATERIAL DESCRIPTION	USCS	AASHTO
Yellowish brown clayey SILT, trace of sand	CL	

Project No.: 946-02-000 Project: Vernon Co. Clay test pit Location: TP-4/S-2 Date: 3/01/05	Remarks: Clay cover
GRAIN SIZE DISTRIBUTION TEST REPORT CENTRAL WISCONSIN ENGINEERS, INC.	Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 8

te: 3/01/05
 oject No.: 946-02-000
 oject: Vernon Co. Clay test pit

Sample Data

cation of Sample: TP-4/S-2
 mple Description: Yellowish brown clayey SILT, trace of sand
 CS Class: CL
 SHTO Class: Liquid limit: 29.7
 Plasticity index: 7.4

Notes

marks: Clay cover

g. No.: 1

Mechanical Analysis Data

	Initial	After wash	
y sample and tare=	806.00	163.30	
re =	156.10	156.00	
y sample weight =	649.90	7.30	
nus #200 from wash=	98.9 %		
eve tare method			

Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.10	0.00	100.0
# 10	0.10	0.00	100.0
# 40	1.20	0.00	99.8
# 100	3.70	0.00	99.2
# 200	1.80	0.00	98.9

Hydrometer Analysis Data

paration sieve is number 200
 rcent -#200 based on complete sample= 98.9
 ight of hydrometer sample: 50
 lculated biased weight= 50.54
 tomatic temperature correction
 Composite correction at 20 deg C =-6.5

niscus correction only= 1
 ecific gravity of solids= 2.74
 ecific gravity correction factor= 0.980
 drometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	21.0	48.5	42.2	0.0131	49.5	8.2	0.0375	81.8
2.0	21.0	44.0	37.7	0.0131	45.0	8.9	0.0277	73.1
4.0	21.0	36.5	30.2	0.0131	37.5	10.1	0.0209	58.5
8.0	21.0	29.0	22.7	0.0131	30.0	11.4	0.0156	44.0
16.0	21.5	24.0	17.8	0.0130	25.0	12.2	0.0114	34.5
32.0	21.5	20.0	13.8	0.0130	21.0	12.9	0.0083	26.8
64.0	21.5	17.0	10.8	0.0130	18.0	13.3	0.0060	20.9
138.0	21.5	15.0	8.8	0.0130	16.0	13.7	0.0041	17.1
256.0	22.0	14.0	7.9	0.0130	15.0	13.8	0.0030	15.3
1440.0	21.0	12.5	6.2	0.0131	13.5	14.1	0.0013	12.0

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

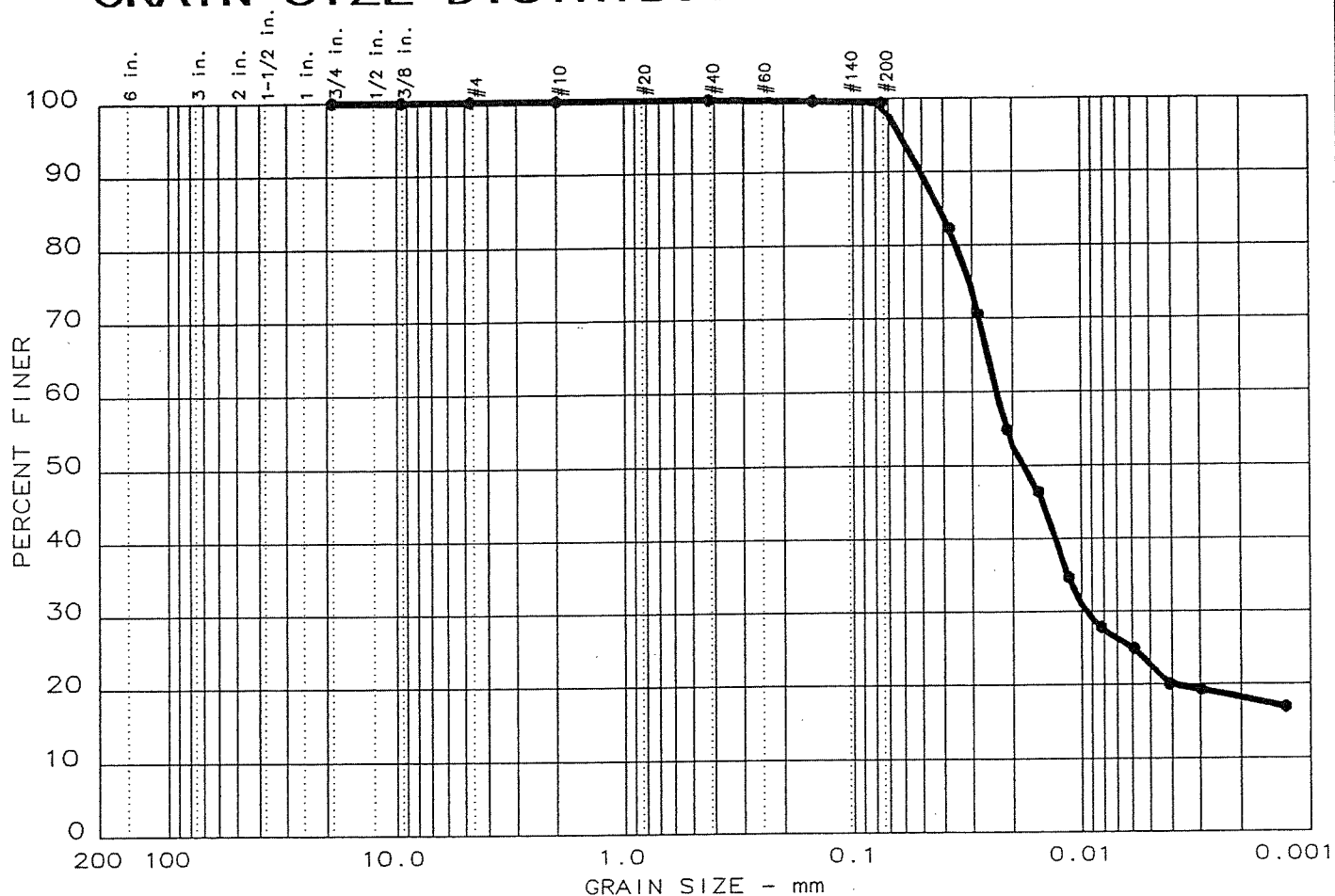
% + 3 in. = 0.0 % GRAVEL = 0.0 % SAND = 1.0

% SILT = 80.1 % CLAY = 18.9

D85= 0.04 D60= 0.021 D50= 0.018

D30= 0.0094 D15= 0.00279

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	0.6	76.7	22.7

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
37.6	14.7			0.0180	0.0095				

MATERIAL DESCRIPTION	USCS	AASHTO
● Yellowish brown clayey SILT, trace of sand	CL	

Project No.: 946-02-000
 Project: Vernon Co. Clay test pit
 ● Location: TP-5/S-1

Date: 3/01/05

GRAIN SIZE DISTRIBUTION TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Clay cover

Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 9

Date: 3/01/05

Project No.: 946-02-000

Project: Vernon Co. Clay test pit

Sample Data

Location of Sample: TP-5/S-1

Sample Description: Yellowish brown clayey SILT, trace of sand

USCS Class: CL

Liquid limit: 37.6

AASHTO Class:

Plasticity index: 14.7

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash
Dry sample and tare=	803.00	160.20
Tare =	156.00	156.00
Dry sample weight =	647.00	4.20
Minus #200 from wash=	99.4 %	

Sieve tare method

Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.00	0.00	100.0
# 10	0.00	0.00	100.0
# 40	0.20	0.00	100.0
# 100	1.90	0.00	99.7
# 200	1.80	0.00	99.4

Hydrometer Analysis Data

Separation sieve is number 200

Percent -#200 based on complete sample= 99.4

Weight of hydrometer sample: 50

Calculated biased weight= 50.30

Automatic temperature correction

Composite correction at 20 deg C = -6.5

Meniscus correction only= 1

Specific gravity of solids= 2.74

Specific gravity correction factor= 0.980

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	21.0	48.5	42.2	0.0131	49.5	8.2	0.0375	82.2
2.0	21.0	42.5	36.2	0.0131	43.5	9.2	0.0281	70.5
4.0	21.0	34.5	28.2	0.0131	35.5	10.5	0.0212	54.9
8.0	21.5	30.0	23.8	0.0130	31.0	11.2	0.0154	46.4
16.0	21.5	24.0	17.8	0.0130	25.0	12.2	0.0114	34.7
32.0	21.5	20.5	14.3	0.0130	21.5	12.8	0.0082	27.9
64.0	21.5	19.0	12.8	0.0130	20.0	13.0	0.0059	24.9
134.0	21.5	16.5	10.3	0.0130	17.5	13.4	0.0041	20.1
256.0	22.0	16.0	9.9	0.0130	17.0	13.5	0.0030	19.3
1440.0	21.0	15.0	8.7	0.0131	16.0	13.7	0.0013	16.9

Fractional Components

avel/Sand based on #4 sieve

nd/Fines based on #200 sieve

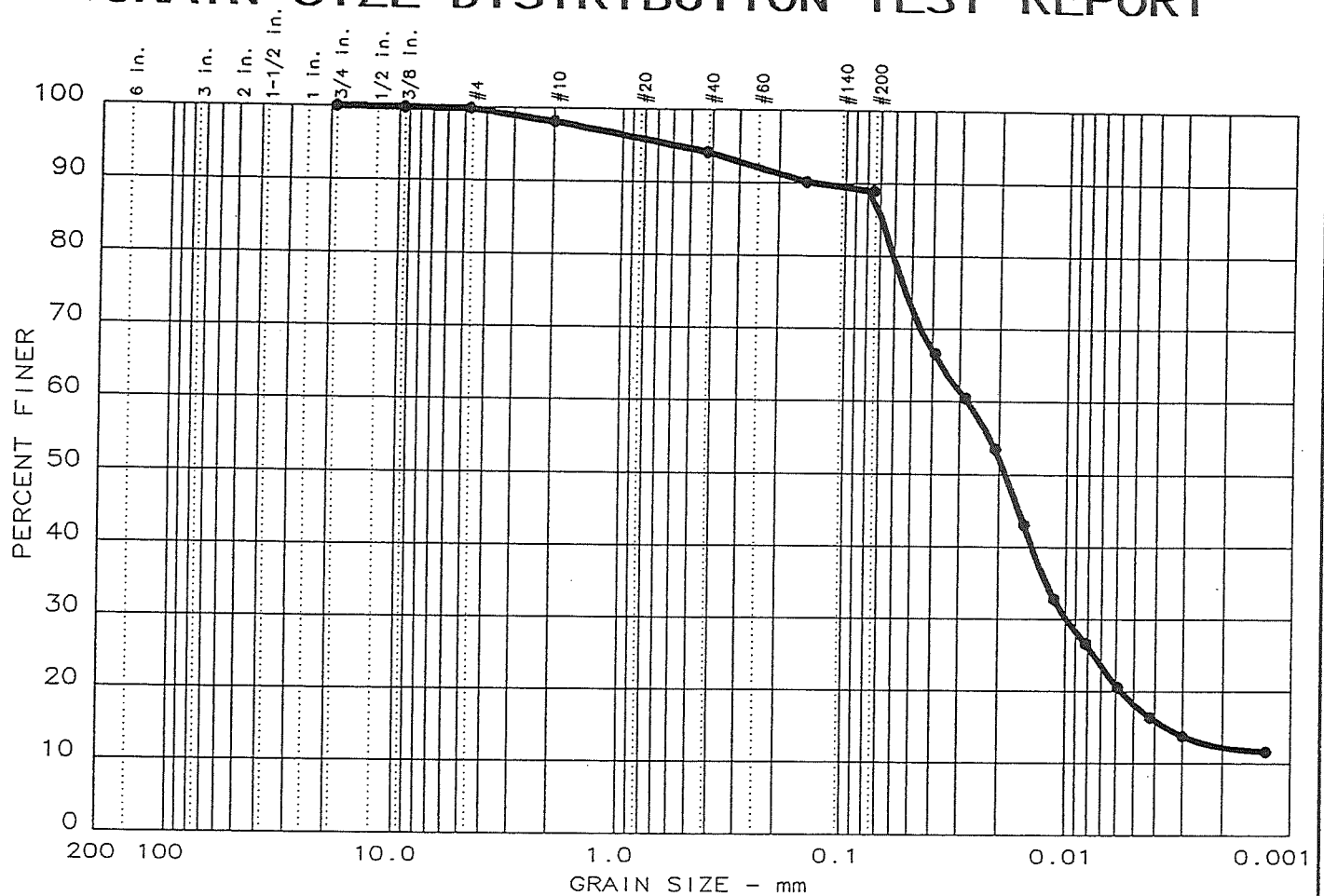
+ 3 in. = 0.0 % GRAVEL = 0.0 % SAND = 0.6

SILT = 76.7 % CLAY = 22.7

5= 0.04 D60= 0.023 D50= 0.018

0= 0.0095

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.2	10.9	70.8	18.1

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
25.1	4.5			0.0186	0.0099	0.0036			

MATERIAL DESCRIPTION	USCS	AASHTO
Yellowbrown clayey SILT, Lt sand, trace gravel	CL-ML	

Project No.: 946-02-000
 Project: Vernon Co. Clay test pit
 Location: TP-5/S-2

 Date: 3/02/05

GRAIN SIZE DISTRIBUTION TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Clay cover

 Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 10

Date: 3/02/05

Project No.: 946-02-000

Project: Vernon Co. Clay test pit

Sample Data

Location of Sample: TP-5/S-2

Sample Description: Yellowbrown clayey SILT, Lt sand, trace gravel

SCS Class: CL-ML

Liquid limit: 25.1

ASHTO Class:

Plasticity index: 4.5

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash	
dry sample and tare=	807.00	203.30	
tare =	156.10	156.00	
dry sample weight =	650.90	47.30	
minus #200 from wash=	92.7 %		
Leve tare method			
Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.80	0.00	99.9
# 4	0.40	0.00	99.8
# 10	10.90	0.00	98.1
# 40	25.90	0.00	94.2
# 100	26.20	0.00	90.1
# 200	7.80	0.00	88.9

Hydrometer Analysis Data

Separation sieve is number 200

Percent -#200 based on complete sample= 88.9

Height of hydrometer sample: 50

Calculated biased weight= 56.22

Automatic temperature correction

Composite correction at 20 deg C = -6.5

Meniscus correction only= 1

Specific gravity of solids= 2.74

Specific gravity correction factor= 0.980

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	21.0	44.5	38.2	0.0131	45.5	8.8	0.0390	66.6
2.0	21.0	41.0	34.7	0.0131	42.0	9.4	0.0285	60.5
4.0	21.0	37.0	30.7	0.0131	38.0	10.1	0.0208	53.5
8.0	21.0	31.0	24.7	0.0131	32.0	11.0	0.0154	43.0
16.0	21.5	25.0	18.8	0.0130	26.0	12.0	0.0113	32.8
32.0	21.5	21.5	15.3	0.0130	22.5	12.6	0.0082	26.7
64.0	21.5	18.0	11.8	0.0130	19.0	13.2	0.0059	20.6
128.0	22.0	15.5	9.4	0.0130	16.5	13.6	0.0042	16.4
256.0	22.0	14.0	7.9	0.0130	15.0	13.8	0.0030	13.8
1440.0	21.0	13.0	6.7	0.0131	14.0	14.0	0.0013	11.6

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

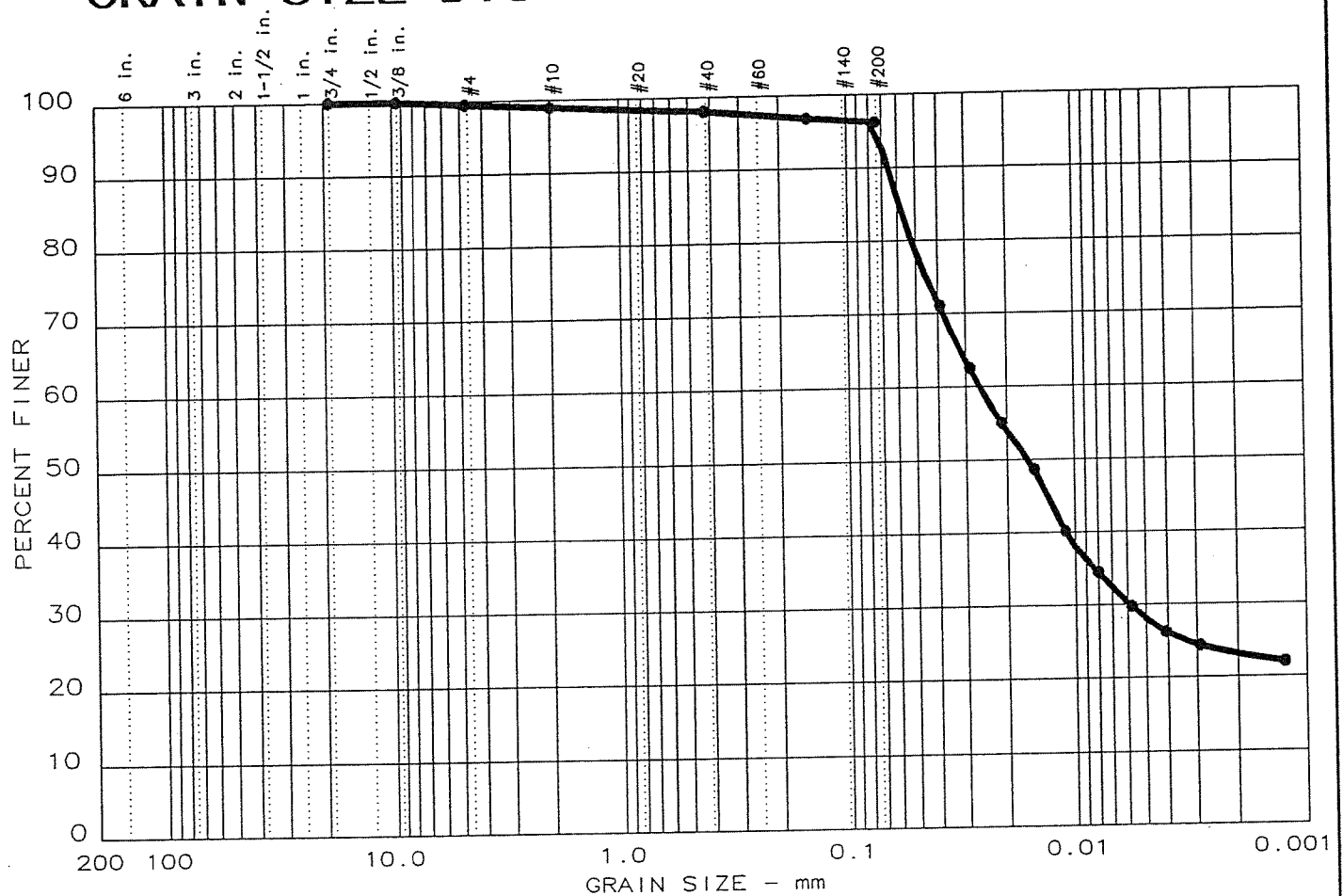
+ 3 in. = 0.0 % GRAVEL = 0.2 % SAND = 10.9

SILT = 70.8 % CLAY = 18.1

D85= 0.07 D60= 0.028 D50= 0.019

D30= 0.0099 D15= 0.00359

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.5	3.3	68.1	28.1

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
42.9	21.1			0.0161	0.0059				

MATERIAL DESCRIPTION	USCS	AASHTO
● Yellowbrown clayey SILT, trace sand & gravel	CL	

Project No.: 946-02-000
 Project: Vernon Co. Clay test pit
 ● Location: TP-6/S-1

Date: 3/02/05

GRAIN SIZE DISTRIBUTION TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Clay cover

Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 11

Date: 3/02/05

Project No.: 946-02-000

Project: Vernon Co. Clay test pit

Sample Data

Location of Sample: TP-6/S-1

Sample Description: Yellowbrown clayey SILT, trace sand & gravel

USCS Class: CL

Liquid limit: 42.9

AASHTO Class:

Plasticity index: 21.1

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash	
Dry sample and tare=	808.00	180.00	
Tare	= 154.70	154.60	
Dry sample weight =	653.30	25.40	
Minus #200 from wash=	96.1 %		
Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	3.40	0.00	99.5
# 10	3.70	0.00	98.9
# 40	5.50	0.00	98.1
# 100	8.40	0.00	96.8
# 200	4.00	0.00	96.2

Hydrometer Analysis Data

Separation sieve is number 200

Percent -#200 based on complete sample= 96.2

Weight of hydrometer sample: 50

Calculated biased weight= 51.99

Automatic temperature correction

Composite correction at 20 deg C = -6.5

Meniscus correction only= 1

Specific gravity of solids= 2.74

Specific gravity correction factor= 0.980

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	21.0	44.0	37.7	0.0131	45.0	8.9	0.0392	71.1
2.0	21.0	39.5	33.2	0.0131	40.5	9.7	0.0288	62.6
4.0	21.0	35.5	29.2	0.0131	36.5	10.3	0.0211	55.0
8.0	21.5	32.0	25.8	0.0130	33.0	10.9	0.0152	48.6
16.0	21.5	27.5	21.3	0.0130	28.5	11.6	0.0111	40.2
32.0	21.5	24.5	18.3	0.0130	25.5	12.1	0.0080	34.5
64.0	21.5	22.0	15.8	0.0130	23.0	12.5	0.0058	29.8
128.0	22.0	20.0	13.9	0.0130	21.0	12.9	0.0041	26.2
256.0	22.0	19.0	12.9	0.0130	20.0	13.0	0.0029	24.3
1440.0	21.0	18.0	11.7	0.0131	19.0	13.2	0.0013	22.0

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

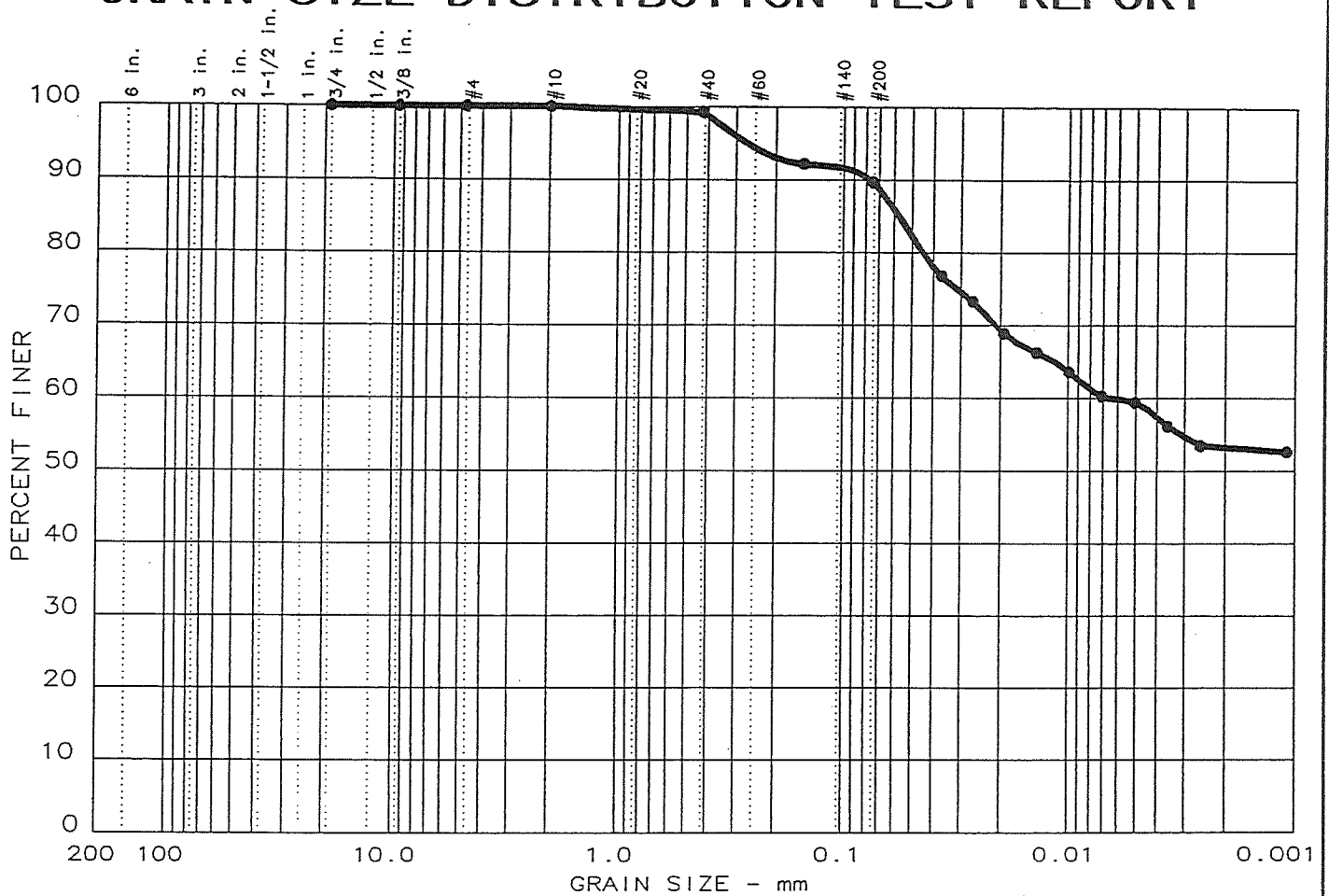
+ 3 in. = 0.0 % GRAVEL = 0.5 % SAND = 3.3

SILT = 68.1 % CLAY = 28.1

5= 0.06 D60= 0.026 D50= 0.016

0= 0.0059

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	10.3	30.3	59.4

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
74.9	46.8								

MATERIAL DESCRIPTION	USCS	AASHTO
● Yellowbrown silty CLAY, little sand	CH	

Project No.: 946-02-000
 Project: Vernon Co. Clay test pit
 ● Location: TP-6/S-2

Date: 3/03/05

GRAIN SIZE DISTRIBUTION TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Clay cover

Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 12

Date: 3/03/05
 Project No.: 946-02-000
 Project: Vernon Co. Clay test pit

Sample Data

Location of Sample: TP-6/S-2
 Sample Description: Yellowbrown silty CLAY, little sand
 UCS Class: CH Liquid limit: 74.9
 AASHTO Class: Plasticity index: 46.8

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash
dry sample and tare=	800.00	221.90
tare =	154.40	154.50
dry sample weight =	645.60	67.40
minus #200 from wash=	89.6 %	

Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.00	0.00	100.0
# 10	0.10	0.00	100.0
# 40	4.60	0.00	99.3
# 100	45.30	0.00	92.3
# 200	16.30	0.00	89.7

Hydrometer Analysis Data

Separation sieve is number 200
 Percent -#200 based on complete sample= 89.7
 Weight of hydrometer sample: 50
 Calculated biased weight= 55.72
 Automatic temperature correction
 Composite correction at 20 deg C = -6.5
 Meniscus correction only= 1
 Specific gravity of solids= 2.74
 Specific gravity correction factor= 0.980
 Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	21.0	50.0	43.7	0.0131	51.0	7.9	0.0370	76.9
2.0	21.0	48.0	41.7	0.0131	49.0	8.3	0.0267	73.3
4.0	21.0	45.5	39.2	0.0131	46.5	8.7	0.0193	68.9
8.0	21.0	44.0	37.7	0.0131	45.0	8.9	0.0139	66.3
16.0	21.0	42.5	36.2	0.0131	43.5	9.2	0.0099	63.7
32.0	21.5	40.5	34.3	0.0130	41.5	9.5	0.0071	60.3
64.0	21.5	40.0	33.8	0.0130	41.0	9.6	0.0050	59.5
128.0	22.0	38.0	31.9	0.0130	39.0	9.9	0.0036	56.1
256.0	22.0	36.5	30.4	0.0130	37.5	10.1	0.0026	53.5
1440.0	22.0	36.0	29.9	0.0130	37.0	10.2	0.0011	52.6

Fractional Components

Gravel/Sand based on #4 sieve

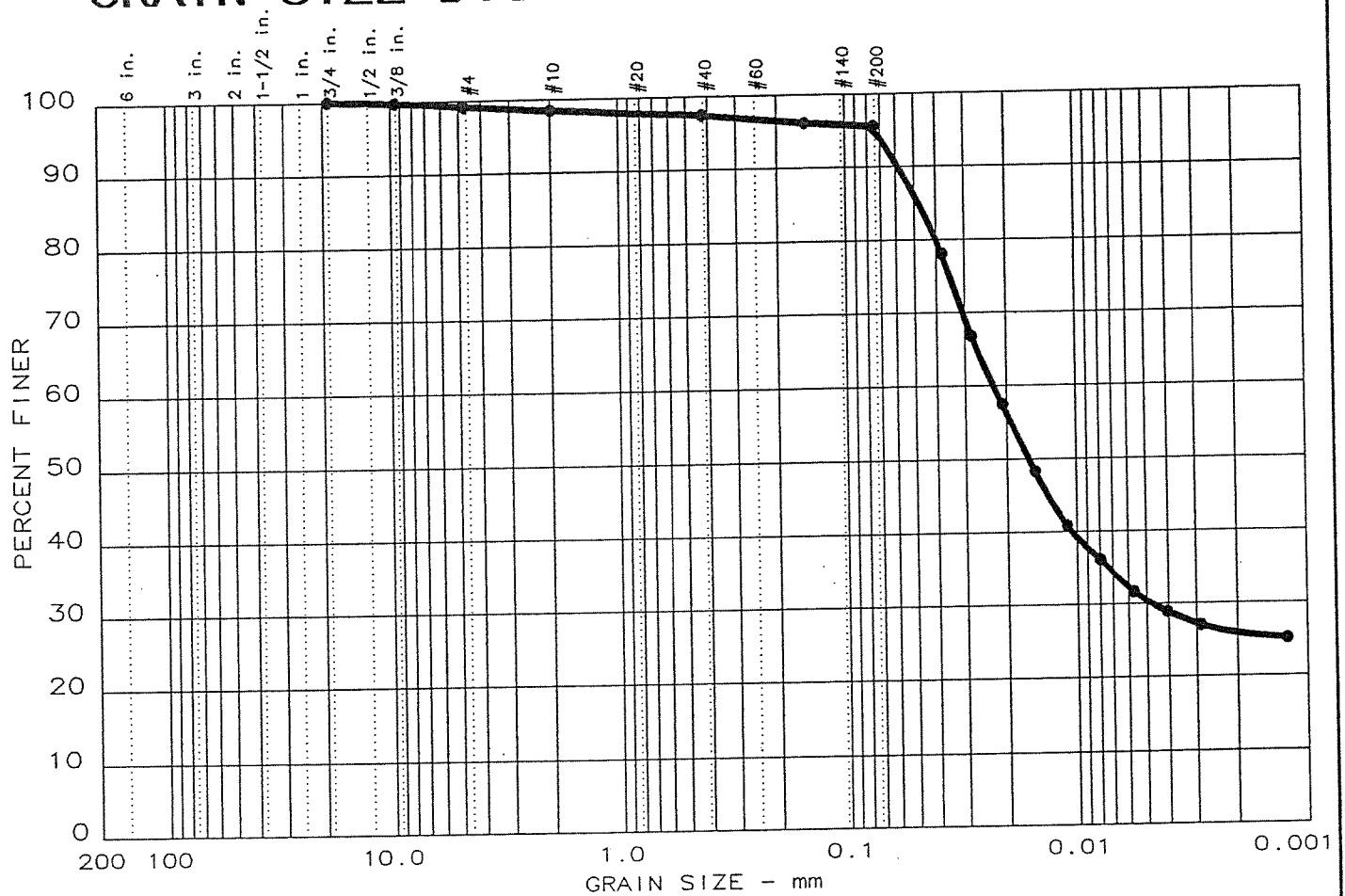
Sand/Fines based on #200 sieve

+ 3 in. = 0.0 % GRAVEL = 0.0 % SAND = 10.3

SILT = 30.3 % CLAY = 59.4

D85= 0.06 D60= 0.006

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.9	3.6	65.2	30.3

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
43.9	23.9			0.0161	0.0048				

MATERIAL DESCRIPTION	USCS	AASHTO
● Yellowbrown clayey SILT, trace sand & gravel	CL	

Project No.: 946-02-000 Project: Vernon Co. Clay test pit ● Location: TP-7/S-1 Date: 3/03/05	Remarks: Clay cover Figure No. 1
GRAIN SIZE DISTRIBUTION TEST REPORT CENTRAL WISCONSIN ENGINEERS, INC.	

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 13

Date: 3/03/05

Project No.: 946-02-000

Project: Vernon Co. Clay test pit

Sample Data

Location of Sample: TP-7/S-1

Sample Description: Yellowbrown clayey SILT, trace sand & gravel

USCS Class: CL

Liquid limit: 43.9

AASHTO Class:

Plasticity index: 23.9

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash
Wet sample and tare=	803.00	185.80
Tare =	156.20	156.10
Dry sample weight =	646.80	29.70
Minus #200 from wash=	95.4 %	

Sieve tare method

Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	1.80	0.00	99.7
# 4	3.70	0.00	99.1
# 10	4.50	0.00	98.5
# 40	6.70	0.00	97.4
# 100	8.30	0.00	96.1
# 200	3.80	0.00	95.5

Hydrometer Analysis Data

Separation sieve is number 200

Percent -#200 based on complete sample= 95.5

Weight of hydrometer sample: 50

Calculated biased weight= 52.33

Automatic temperature correction

Composite correction at 20 deg C = -6.5

Meniscus correction only= 1

Specific gravity of solids= 2.74

Specific gravity correction factor= 0.980

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	21.0	48.0	41.7	0.0131	49.0	8.3	0.0377	78.1
2.0	21.0	42.0	35.7	0.0131	43.0	9.2	0.0282	66.8
4.0	21.0	37.0	30.7	0.0131	38.0	10.1	0.0208	57.5
8.0	21.5	32.0	25.8	0.0130	33.0	10.9	0.0152	48.3
16.0	21.5	28.0	21.8	0.0130	29.0	11.5	0.0111	40.8
32.0	21.5	25.5	19.3	0.0130	26.5	11.9	0.0080	36.1
64.0	22.0	23.0	16.9	0.0130	24.0	12.4	0.0057	31.7
128.0	22.0	21.5	15.4	0.0130	22.5	12.6	0.0041	28.9
256.0	22.0	20.5	14.4	0.0130	21.5	12.8	0.0029	27.0
1440.0	22.0	19.5	13.4	0.0130	20.5	12.9	0.0012	25.1

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

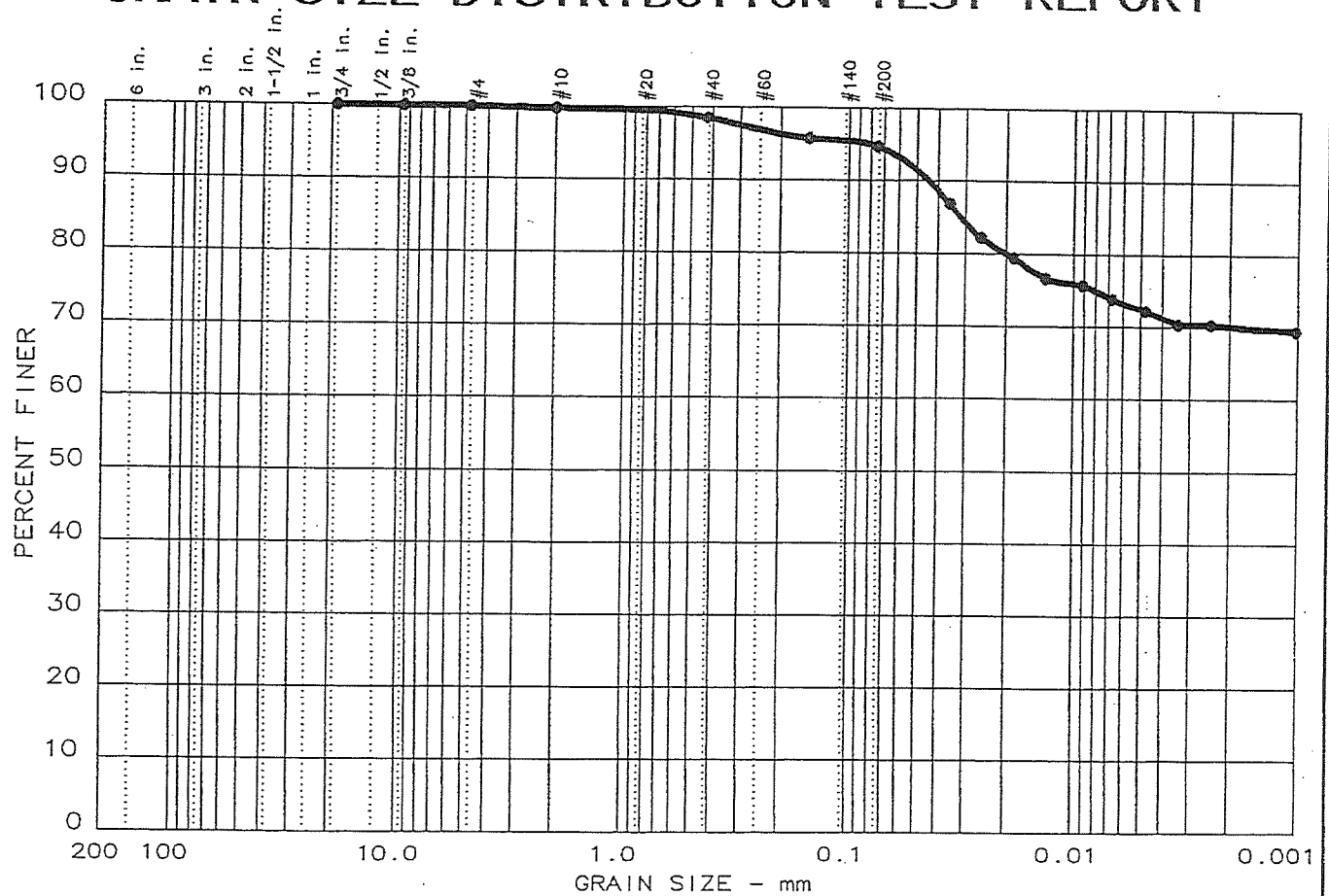
+ 3 in. = 0.0 % GRAVEL = 0.9 % SAND = 3.6

SILT = 65.2 % CLAY = 30.3

D₁₅ = 0.05 D₆₀ = 0.023 D₅₀ = 0.016

D₁₀ = 0.0048

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.1	5.3	22.2	72.4

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
78.3	39.3								

MATERIAL DESCRIPTION	USCS	AASHTO
• Brown silty CLAY, little sand & gravel	MH	

Project No.: 946-02-000
 Project: Vernon Co. Clay test pit
 • Location: TP-7/S-2

 Date: 3/03/05

 GRAIN SIZE DISTRIBUTION TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Clay cover

 Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 14

Date: 3/03/05

Project No.: 946-02-000

Project: Vernon Co. Clay test pit

Sample Data

Location of Sample: TP-7/S-2

Sample Description: Brown silty CLAY, little sand & gravel

USCS Class: MH

Liquid limit: 78.3

AASHTO Class:

Plasticity index: 39.3

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash
Dry sample and tare=	802.00	190.90
Tare =	155.60	155.40
Dry sample weight =	646.40	35.50
Minus #200 from wash=	94.5 %	

Sieve tare method

Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.40	0.00	99.9
# 10	1.50	0.00	99.7
# 40	7.80	0.00	98.5
# 100	17.90	0.00	95.7
# 200	6.90	0.00	94.7

Hydrometer Analysis Data

Separation sieve is number 200

Percent -#200 based on complete sample= 94.7

Weight of hydrometer sample: 50

Calculated biased weight= 52.82

Automatic temperature correction

Composite correction at 20 deg C = -6.5

Meniscus correction only= 1

Specific gravity of solids= 2.74

Specific gravity correction factor= 0.980

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	21.5	53.0	46.8	0.0130	54.0	7.4	0.0356	86.9
2.0	21.5	50.5	44.3	0.0130	51.5	7.8	0.0258	82.2
4.0	21.5	49.0	42.8	0.0130	50.0	8.1	0.0186	79.4
8.0	21.5	47.5	41.3	0.0130	48.5	8.3	0.0133	76.6
17.0	21.5	47.0	40.8	0.0130	48.0	8.4	0.0092	75.7
32.0	21.5	46.0	39.8	0.0130	47.0	8.6	0.0068	73.9
64.0	22.0	45.0	38.9	0.0130	46.0	8.8	0.0048	72.2
128.0	22.0	44.0	37.9	0.0130	45.0	8.9	0.0034	70.4
256.0	22.0	44.0	37.9	0.0130	45.0	8.9	0.0024	70.4
1440.0	22.0	43.5	37.4	0.0130	44.5	9.0	0.0010	69.4

Fractional Components

Gravel/Sand based on #4 sieve

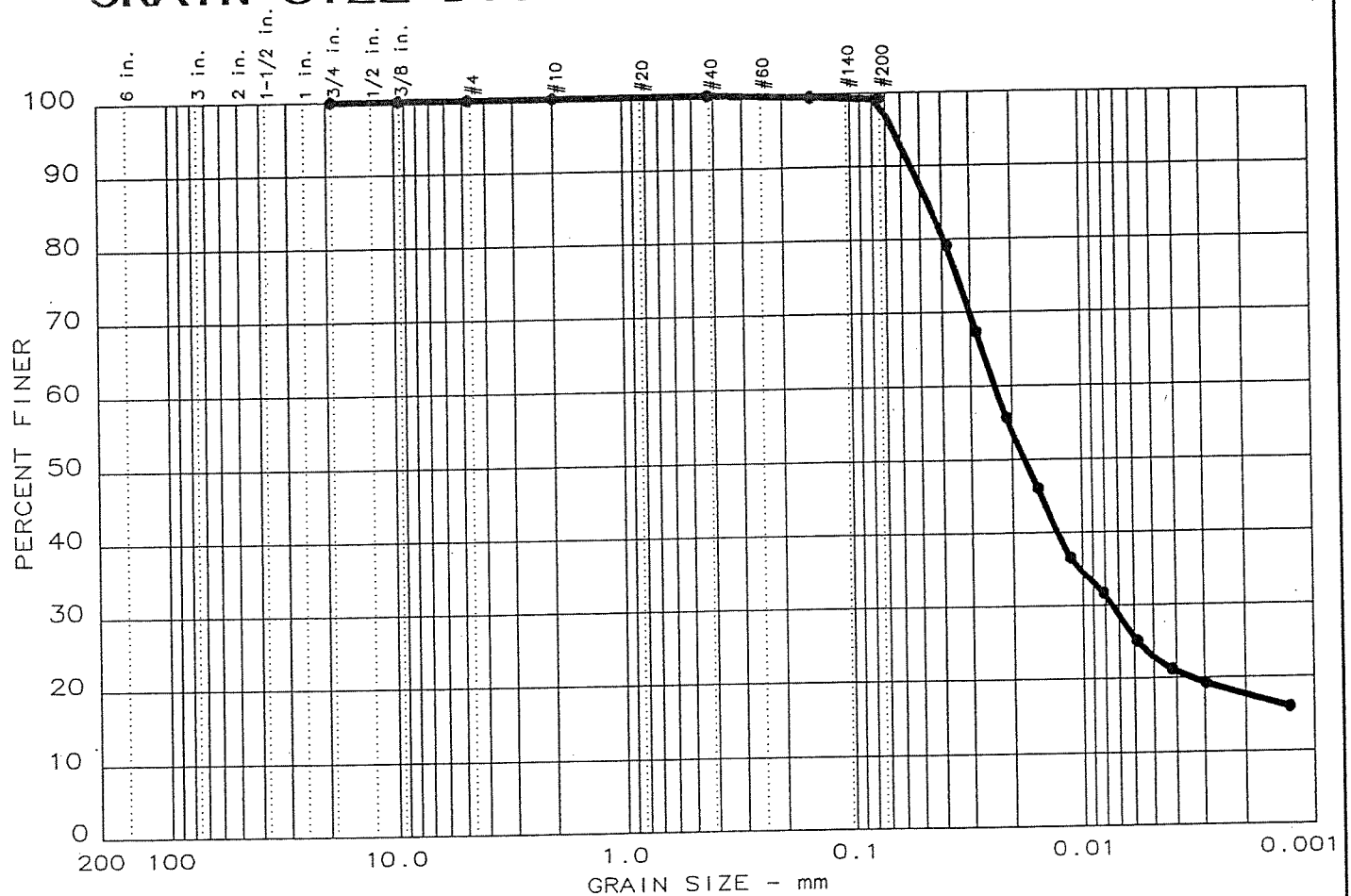
Sand/Fines based on #200 sieve

+ 3 in. = 0.0 % GRAVEL = 0.1 % SAND = 5.3

SILT = 22.2 % CLAY = 72.4

D85= 0.03

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	0.8	76.3	22.9

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
30.7	7.6			0.0177	0.0074				

MATERIAL DESCRIPTION	USCS	AASHTO
● yellow-brown clayey SILT, trace of sand	ML	

Project No.: 946-02-000 Project: Vernon Co. Clay test pit ● Location: TP-8/S-1 Date: 3/8/05	Remarks: Clay cover
GRAIN SIZE DISTRIBUTION TEST REPORT CENTRAL WISCONSIN ENGINEERS, INC.	Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 16

Date: 3/8/05

Project No.: 946-02-000

Project: Vernon Co. Clay test pit

Sample Data

Location of Sample: TP-8/S-1

Sample Description: yellow-brown clayey SILT, trace of sand

USCS Class: ML

Liquid limit: 30.7

AASHTO Class:

Plasticity index: 7.6

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash
Dry sample and tare=	668.40	160.60
Tare =	155.60	155.60
Dry sample weight =	512.80	5.00
Minus #200 from wash=	99.0 %	

Sieve tare method

Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.00	0.00	100.0
# 10	0.00	0.00	100.0
# 40	0.20	0.00	100.0
# 100	2.30	0.00	99.5
# 200	1.80	0.00	99.2

Hydrometer Analysis Data

Preparation sieve is number 200

Percent -#200 based on complete sample= 99.2

Weight of hydrometer sample: 50

Calculated biased weight= 50.42

Automatic temperature correction

Composite correction at 20 deg C = -6.5

Meniscus correction only= 1

Specific gravity of solids= 2.74

Specific gravity correction factor= 0.980

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	21.0	47.0	40.7	0.0131	48.0	8.4	0.0381	79.1
2.0	21.0	41.0	34.7	0.0131	42.0	9.4	0.0285	67.4
4.0	21.0	35.0	28.7	0.0131	36.0	10.4	0.0212	55.8
8.0	21.0	30.0	23.7	0.0131	31.0	11.2	0.0155	46.0
16.0	21.5	25.0	18.8	0.0130	26.0	12.0	0.0113	36.5
32.0	21.5	22.5	16.3	0.0130	23.5	12.4	0.0081	31.7
64.0	22.0	19.0	12.9	0.0130	20.0	13.0	0.0058	25.1
128.0	22.0	17.0	10.9	0.0130	18.0	13.3	0.0042	21.2
256.0	22.0	16.0	9.9	0.0130	17.0	13.5	0.0030	19.3
1440.0	21.0	14.5	8.2	0.0131	15.5	13.8	0.0013	15.9

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

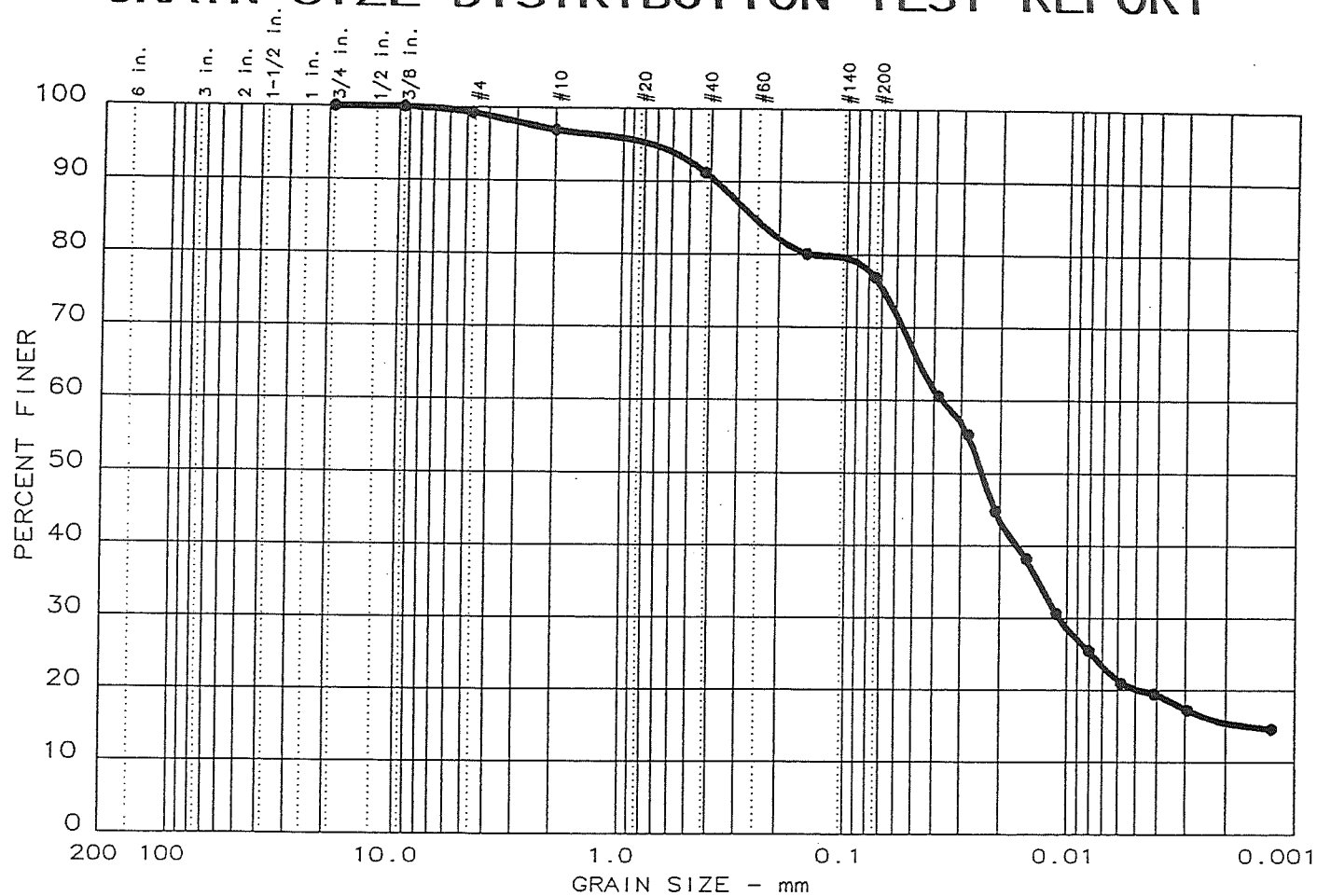
+ 3 in. = 0.0 % GRAVEL = 0.0 % SAND = 0.8

SILT = 76.3 % CLAY = 22.9

35= 0.05 D60= 0.024 D50= 0.018

30= 0.0074

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.8	22.3	56.8	20.1

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
61.3	29.9	0.257		0.0241	0.0108	0.0017			

MATERIAL DESCRIPTION	USCS	AASHTO
● yellow-brown clayey sandy SILT, trace of gravel	MH	

Project No.: 946-02-000 Project: Vernon Co. Clay test pit ● Location: TP-8/S-2 Date: 3/8/05	Remarks: Clay cover
GRAIN SIZE DISTRIBUTION TEST REPORT CENTRAL WISCONSIN ENGINEERS, INC.	Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 17

te: 3/8/05
 oject No.: 946-02-000
 oject: Vernon Co. Clay test pit

Sample Data

cation of Sample: TP-8/S-2
 mple Description: yellow-brown clayey sandy SILT, trace of gravel
 CS Class: MH Liquid limit: 61.3
 SHTO Class: Plasticity index: 29.9

Notes

marks: Clay cover

g. No.: 1

Mechanical Analysis Data

	Initial	After wash
y sample and tare=	719.80	286.30
re =	155.90	155.90
y sample weight =	563.90	130.40
nus #200 from wash=	76.9 %	

eve tare method

Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	4.30	0.00	99.2
# 10	12.80	0.00	97.0
# 40	32.40	0.00	91.2
# 100	62.60	0.00	80.1
# 200	17.90	0.00	76.9

Hydrometer Analysis Data

paration sieve is number 200
 rcent -#200 based on complete sample= 76.9
 ight of hydrometer sample: 50
 lculated biased weight= 64.98
 tomatic temperature correction
 Composite correction at 20 deg C =-6.5

niscus correction only= 1
 ecific gravity of solids= 2.74
 ecific gravity correction factor= 0.980
 drometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, Actual deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	21.0	46.5	40.2	0.0131	47.5	8.5	0.0383	60.6
2.0	21.0	43.0	36.7	0.0131	44.0	9.1	0.0280	55.3
4.0	21.0	36.0	29.7	0.0131	37.0	10.2	0.0210	44.8
8.0	21.5	31.5	25.3	0.0130	32.5	11.0	0.0153	38.2
16.0	21.5	26.5	20.3	0.0130	27.5	11.8	0.0112	30.6
32.0	22.0	23.0	16.9	0.0130	24.0	12.4	0.0081	25.5
64.0	22.0	20.0	13.9	0.0130	21.0	12.9	0.0058	21.0
128.0	22.0	19.0	12.9	0.0130	20.0	13.0	0.0041	19.5
256.0	22.0	17.5	11.4	0.0130	18.5	13.3	0.0030	17.2
1440.0	21.0	16.0	9.7	0.0131	17.0	13.5	0.0013	14.6

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

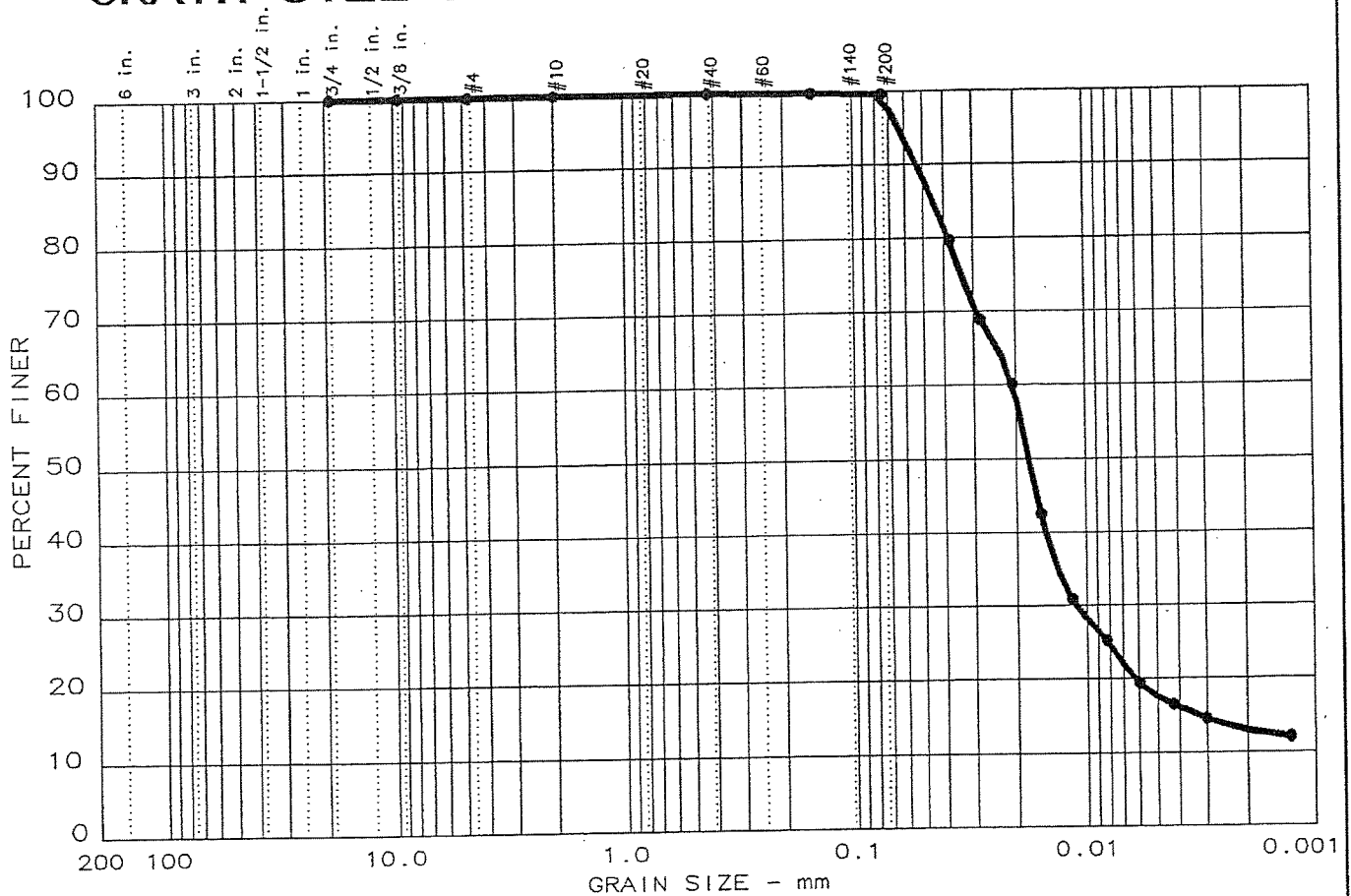
% + 3 in. = 0.0 % GRAVEL = 0.8 % SAND = 22.3

% SILT = 56.8 % CLAY = 20.1

D85= 0.26 D60= 0.036 D50= 0.024

D30= 0.0108 D15= 0.00165

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	0.4	82.1	17.5

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
36.6	14.2			0.0176	0.0111	0.0033			

MATERIAL DESCRIPTION	USCS	AASHTO
• Dark yellowbrown clayey SILT, trace sand	CL	

Project No.: 946-02-000
 Project: Vernon Co. Clay test pit
 • Location: TP-9/S-1

Date: 3/8/05

GRAIN SIZE DISTRIBUTION TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Clay cover

Figure No. 1

=====

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 18

Date: 3/8/05

Project No.: 946-02-000

Project: Vernon Co. Clay test pit

=====

Sample Data

Location of Sample: TP-9/S-1

Sample Description: Dark yellowbrown clayey SILT, trace sand

USCS Class: CL

Liquid limit: 36.6

AASHTO Class:

Plasticity index: 14.2

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash
Dry sample and tare=	674.30	157.00
Tare =	154.60	154.60
Dry sample weight =	519.70	2.40
Minus #200 from wash=	99.5 %	

Sieve tare method

Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.00	0.00	100.0
# 10	0.00	0.00	100.0
# 40	0.00	0.00	100.0
# 100	1.20	0.00	99.8
# 200	1.10	0.00	99.6

Hydrometer Analysis Data

Separation sieve is number 200

Percent -#200 based on complete sample= 99.6

Weight of hydrometer sample: 50

Calculated biased weight= 50.22

Automatic temperature correction

Composite correction at 20 deg C = -6.5

Meniscus correction only= 1

Specific gravity of solids= 2.74

Specific gravity correction factor= 0.980

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	21.5	47.0	40.8	0.0130	48.0	8.4	0.0379	79.6
2.0	21.5	41.5	35.3	0.0130	42.5	9.3	0.0282	68.9
4.0	21.5	37.0	30.8	0.0130	38.0	10.1	0.0207	60.1
8.0	21.5	28.0	21.8	0.0130	29.0	11.5	0.0157	42.5
16.0	21.5	22.0	15.8	0.0130	23.0	12.5	0.0115	30.8
32.0	22.0	19.0	12.9	0.0130	20.0	13.0	0.0083	25.2
64.0	22.0	16.0	9.9	0.0130	17.0	13.5	0.0060	19.3
128.0	22.0	14.5	8.4	0.0130	15.5	13.8	0.0042	16.4
256.0	22.0	13.5	7.4	0.0130	14.5	13.9	0.0030	14.5
1440.0	21.0	12.5	6.2	0.0131	13.5	14.1	0.0013	12.1

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

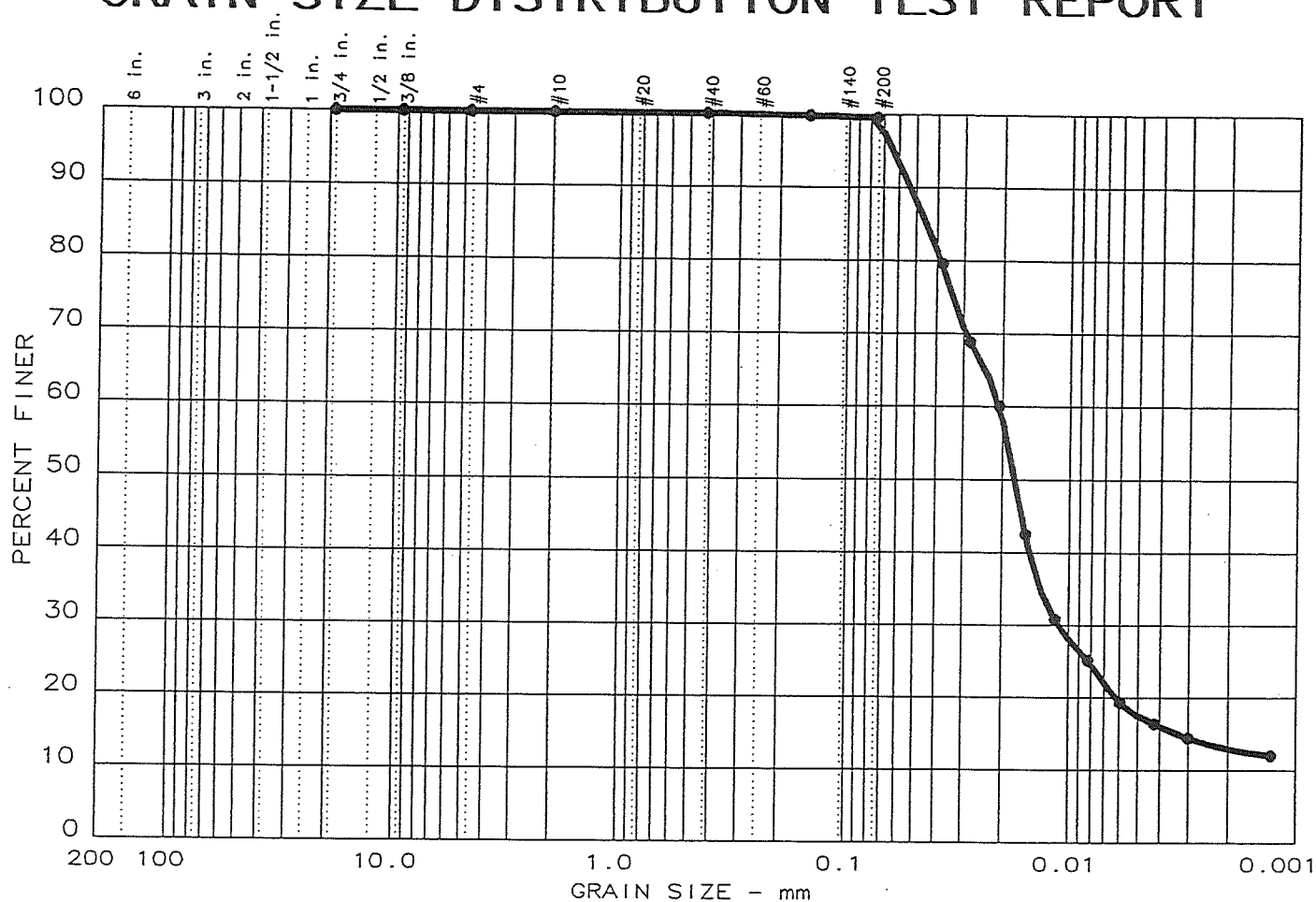
+ 3 in. = 0.0 % GRAVEL = 0.0 % SAND = 0.4

SILT = 82.1 % CLAY = 17.5

D₅ = 0.04 D₆₀ = 0.021 D₅₀ = 0.018

D₁₀ = 0.0111 D₁₅ = 0.0033

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 15	0.0	0.0	0.5	82.0	17.5

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• 36.6	14.2			0.0176	0.0111	0.0033			

MATERIAL DESCRIPTION	USCS	AASHTO
• Dark Yellowbrown clayey SILT, trace sand	CL	

Project No.: 946 02 000 Project: Vernon Co. Clay Test Pit • Location: TP-9/S-2 Date: 3-8-05	Remarks: Clay Cover
GRAIN SIZE DISTRIBUTION TEST REPORT CENTRAL WISCONSIN ENGINEERS, INC.	Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 15

te: 3-8-05
 oject No.: 946 02 000
 oject: Vernon Co. Clay Test Pit

Sample Data

cation of Sample: TP-9/S-2
 mple Description: Dark Yellowbrown clayey SILT, trace sand
 CS Class: CL Liquid limit: 36.6
 SHTO Class: Plasticity index: 14.2

Notes

marks: Clay Cover

g. No.: 1

Mechanical Analysis Data

	Initial	After wash
y sample and tare=	675.10	157.00
re =	154.50	154.50
y sample weight =	520.60	2.50
nus #200 from wash=	99.5 %	

eve tare method

Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.00	0.00	100.0
# 10	0.00	0.00	100.0
# 40	0.00	0.00	100.0
# 100	1.10	0.00	99.8
# 200	1.40	0.00	99.5

Hydrometer Analysis Data

paration sieve is number 200
 rcent -#200 based on complete sample= 99.5
 ight of hydrometer sample: 50
 lculated biased weight= 50.24
 tomatic temperature correction
 Composite correction at 20 deg C =-6.5

niscus correction only= 1
 ecific gravity of solids= 2.74
 ecific gravity correction factor= 0.980
 drometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, Actual deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	21.5	47.0	40.8	0.0130	48.0	8.4	0.0379	79.6
2.0	21.5	41.5	35.3	0.0130	42.5	9.3	0.0282	68.9
4.0	21.5	37.0	30.8	0.0130	38.0	10.1	0.0207	60.1
8.0	21.5	28.0	21.8	0.0130	29.0	11.5	0.0157	42.5
16.0	21.5	22.0	15.8	0.0130	23.0	12.5	0.0115	30.8
32.0	22.0	19.0	12.9	0.0130	20.0	13.0	0.0083	25.2
64.0	22.0	16.0	9.9	0.0130	17.0	13.5	0.0060	19.3
128.0	22.0	14.5	8.4	0.0130	15.5	13.8	0.0042	16.4
256.0	22.0	13.5	7.4	0.0130	14.5	13.9	0.0030	14.5
1440.0	21.0	12.5	6.2	0.0131	13.5	14.1	0.0013	12.1

Fractional Components

ravel/Sand based on #4 sieve

sand/Fines based on #200 sieve

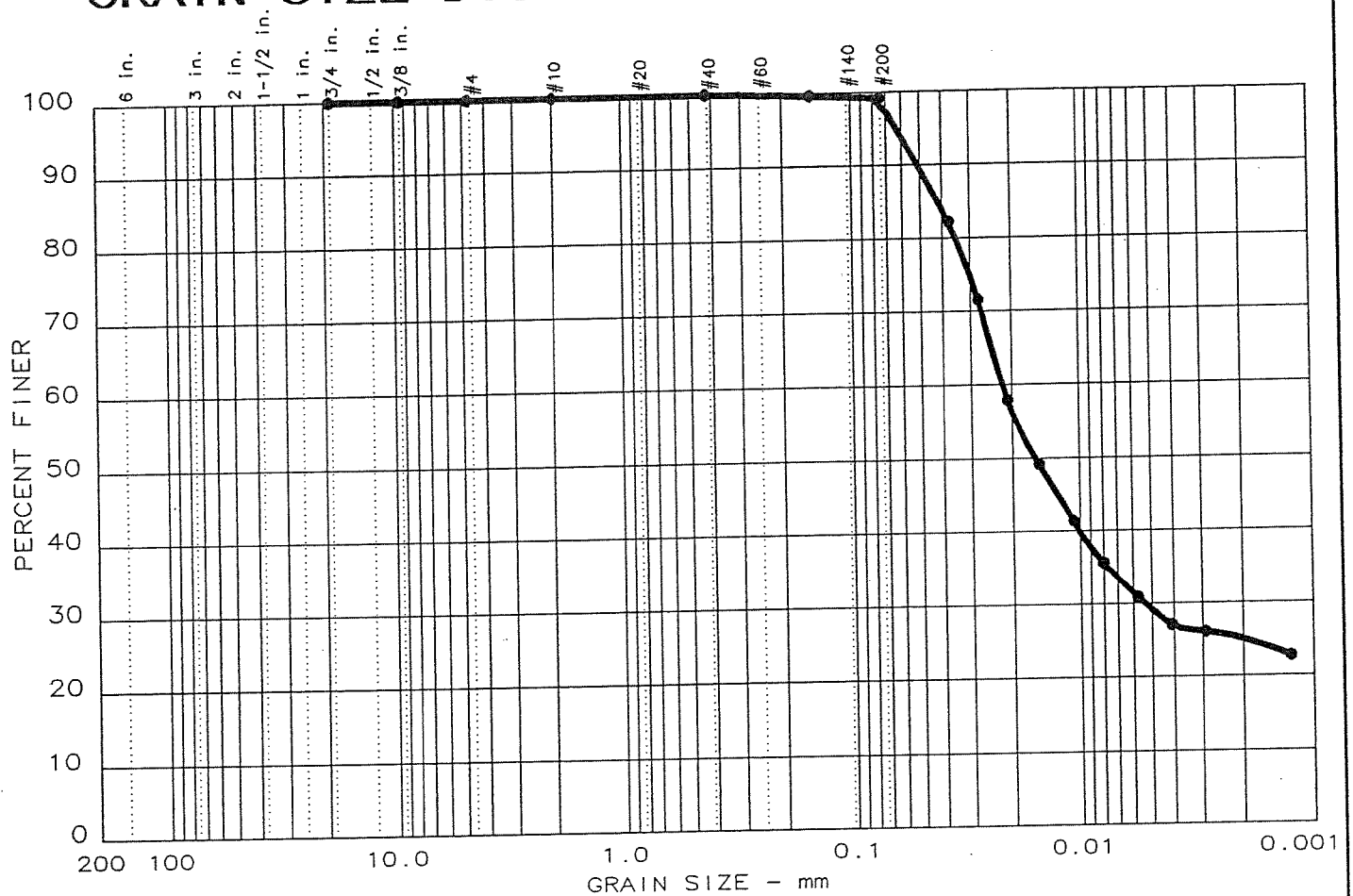
% + 3 in. = 0.0 % GRAVEL = 0.0 % SAND = 0.5

SILT = 82.0 % CLAY = 17.5

D85= 0.04 D60= 0.021 D50= 0.018

D30= 0.0111 D15= 0.00335

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
● 16	0.0	0.0	0.9	70.0	29.1

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
● 34.2	14.2			0.0158	0.0053				

MATERIAL DESCRIPTION	USCS	AASHTO
● Yellowbrown clayey SILT, trace sand	CL	

Project No.: 946 02 000
 Project: Vernon Co. Clay Test Pit
 ● Location: TP-10/S-1

Date: 3-15-05

GRAIN SIZE DISTRIBUTION TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Clay cover

Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 16

Date: 3-15-05

Project No.: 946 02 000

Project: Vernon Co. Clay Test Pit

Sample Data

Location of Sample: TP-10/S-1

Sample Description: Yellowbrown clayey SILT, trace sand

SCS Class: CL

Liquid limit: 34.2

AASHTO Class:

Plasticity index: 14.2

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash	
Dry sample and tare=	663.80	161.10	
Tare	= 155.50	155.50	
Dry sample weight =	508.30	5.60	
Minus #200 from wash=	98.9 %		
Sieve tare method			
Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.00	0.00	100.0
# 10	0.00	0.00	100.0
# 40	0.00	0.00	100.0
# 100	2.20	0.00	99.6
# 200	2.30	0.00	99.1

Hydrometer Analysis Data

Separation sieve is number 200

Percent -#200 based on complete sample= 99.1

Weight of hydrometer sample: 50

Calculated biased weight= 50.45

Automatic temperature correction

Composite correction at 20 deg C = -6.5

Meniscus correction only= 1

Specific gravity of solids= 2.74

Specific gravity correction factor= 0.980

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	21.5	48.5	42.3	0.0130	49.5	8.2	0.0373	82.2
2.0	21.5	43.0	36.8	0.0130	44.0	9.1	0.0278	71.5
4.0	21.5	36.0	29.8	0.0130	37.0	10.2	0.0209	57.9
8.0	21.5	31.5	25.3	0.0130	32.5	11.0	0.0153	49.2
17.0	21.5	27.5	21.3	0.0130	28.5	11.6	0.0108	41.4
32.0	21.5	24.5	18.3	0.0130	25.5	12.1	0.0080	35.5
64.0	22.0	22.0	15.9	0.0130	23.0	12.5	0.0057	30.9
128.0	22.0	20.0	13.9	0.0130	21.0	12.9	0.0041	27.0
256.0	22.0	19.5	13.4	0.0130	20.5	12.9	0.0029	26.1
1440.0	21.0	18.0	11.7	0.0131	19.0	13.2	0.0013	22.7

Fractional Components

avel/Sand based on #4 sieve

nd/Fines based on #200 sieve

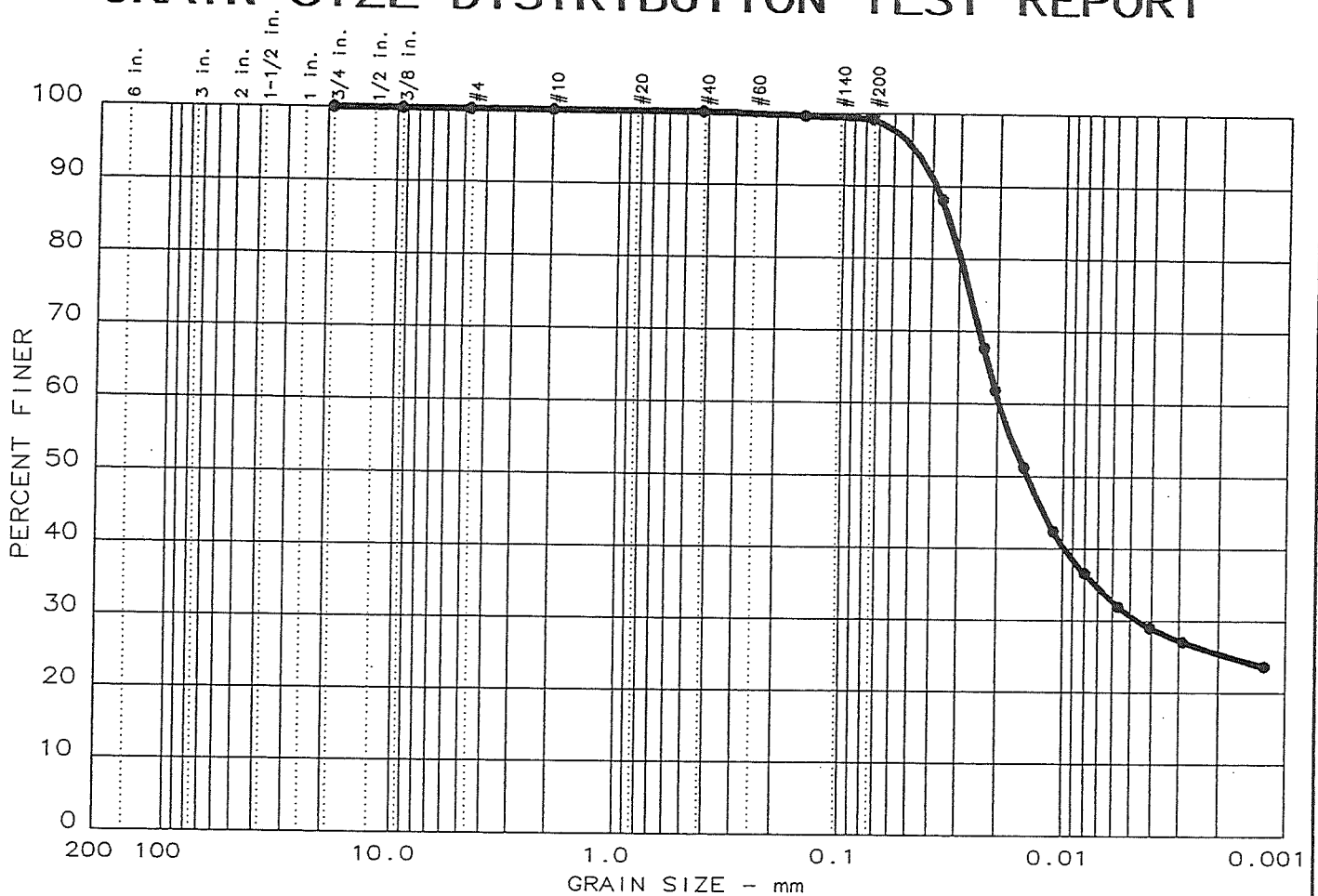
+ 3 in. = 0.0 % GRAVEL = 0.0 % SAND = 0.9

SILT = 70.0 % CLAY = 29.1

5= 0.04 D60= 0.022 D50= 0.016

0= 0.0053

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 17	0.0	0.0	0.8	68.6	30.6

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• 33.4	12.4			0.0146	0.0046				

MATERIAL DESCRIPTION	USCS	AASHTO
• Yellowbrown clayey SILT, trace sand	CL	

Project No.: 946 02 000
 Project: Vernon Co. Clay Test Pit
 • Location: TP-10/S-2

 Date: 3-15-05

 GRAIN SIZE DISTRIBUTION TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Clay cover

Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 17

te: 3-15-05
 oject No.: 946 02 000
 oject: Vernon Co. Clay Test Pit

Sample Data

cation of Sample: TP-10/S-2
 mple Description: Yellowbrown clayey SILT, trace sand
 CS Class: CL Liquid limit: 33.4
 SHTO Class: Plasticity index: 12.4

Notes

marks: Clay cover

g. No.: 1

Mechanical Analysis Data

	Initial	After wash
y sample and tare=	675.50	159.20
re =	154.80	155.00
y sample weight =	520.70	4.20
nus #200 from wash=	99.2 %	

eve tare method

Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.00	0.00	100.0
# 10	0.00	0.00	100.0
# 40	0.00	0.00	100.0
# 100	2.40	0.00	99.5
# 200	1.60	0.00	99.2

Hydrometer Analysis Data

eparation sieve is number 200
 rcent -#200 based on complete sample= 99.2
 ight of hydrometer sample: 50
 lculated biased weight= 50.39
 atomatic temperature correction
 Composite correction at 20 deg C =-6.5
 niscus correction only= 1
 ecific gravity of solids= 2.74
 ecific gravity correction factor= 0.980
 ydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, Actual deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	21.5	51.5	45.3	0.0130	52.5	7.7	0.0362	88.1
3.0	21.5	41.0	34.8	0.0130	42.0	9.4	0.0231	67.7
4.0	21.5	38.0	31.8	0.0130	39.0	9.9	0.0205	61.9
8.0	21.5	32.5	26.3	0.0130	33.5	10.8	0.0152	51.2
16.0	21.5	28.0	21.8	0.0130	29.0	11.5	0.0111	42.4
32.0	21.5	25.0	18.8	0.0130	26.0	12.0	0.0080	36.6
65.0	22.0	22.5	16.4	0.0130	23.5	12.4	0.0057	31.9
128.0	22.0	21.0	14.9	0.0130	22.0	12.7	0.0041	29.0
256.0	22.0	20.0	13.9	0.0130	21.0	12.9	0.0029	27.1
1440.0	21.0	18.5	12.2	0.0131	19.5	13.1	0.0013	23.7

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

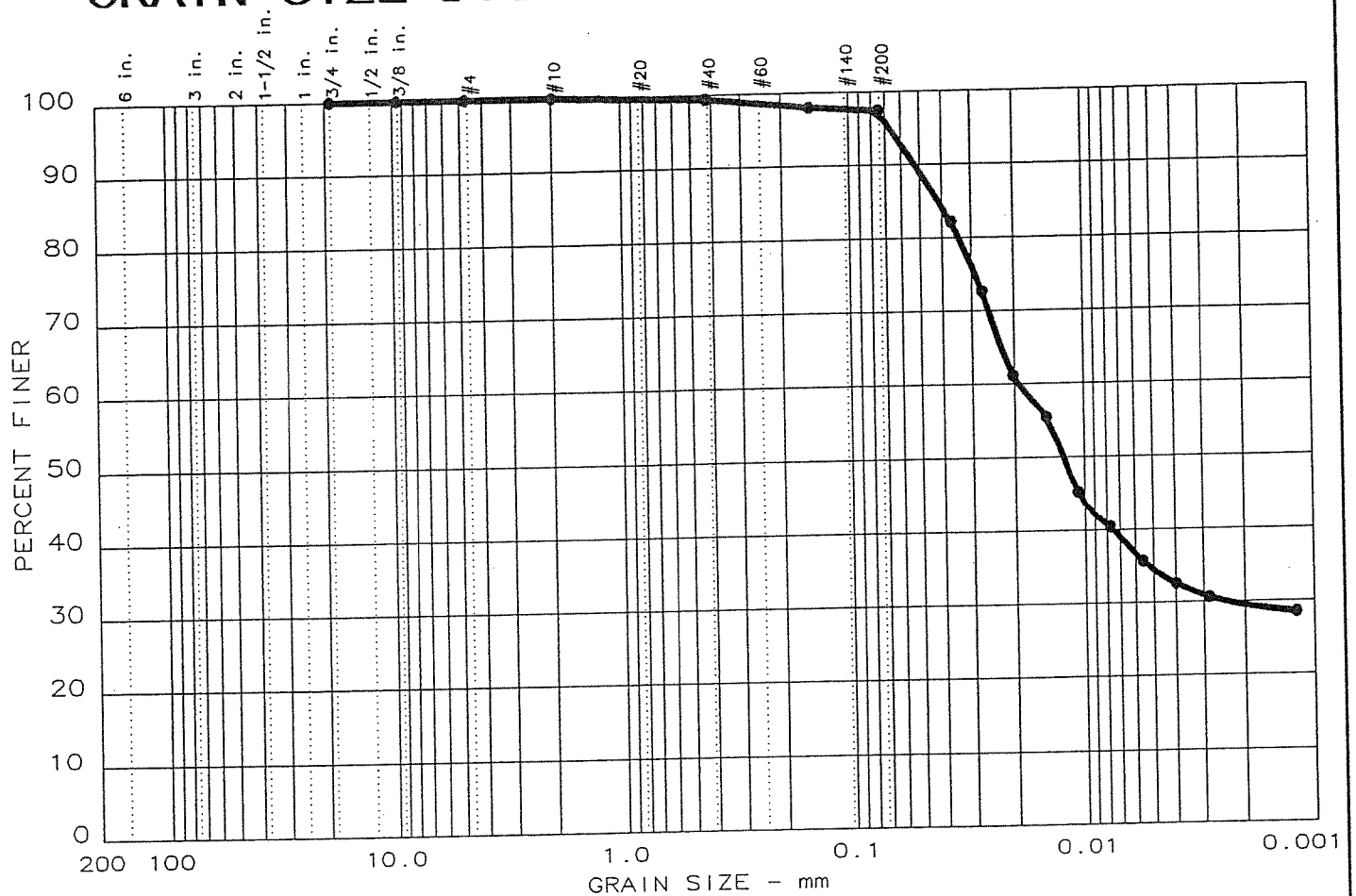
+ 3 in. = 0.0 % GRAVEL = 0.0 % SAND = 0.8

SILT = 68.6 % CLAY = 30.6

D85= 0.03 D60= 0.020 D50= 0.015

30= 0.0046

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
7	0.0	0.0	2.6	63.0	34.4

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
37.7	19.7			0.0124	0.0024				

MATERIAL DESCRIPTION	USCS	AASHTO
Dark yellowbrown clayey SILT, trace sand	CL	

Project No.: 946 02 000
 Project: Vernon Co. Clay Test Pit
 Location: TP-11/S-1

Date: 3/21/05

GRAIN SIZE DISTRIBUTION TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Clay cover

Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 7

Date: 3/21/05

Project No.: 946 02 000

Project: Vernon Co. Clay Test Pit

Sample Data

Location of Sample: TP-11/S-1

Sample Description: Dark yellowbrown clayey SILT, trace sand

USCS Class: CL

Liquid limit: 37.7

AASHTO Class:

Plasticity index: 19.7

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash	
Dry sample and tare=	724.70	172.30	
Tare	= 157.10	157.10	
Dry sample weight =	567.60	15.20	
Minus #200 from wash=	97.3 %		
Sieve tare method			
Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.00	0.00	100.0
# 10	0.20	0.00	100.0
# 40	3.40	0.00	99.4
# 100	7.90	0.00	98.0
# 200	3.30	0.00	97.4

Hydrometer Analysis Data

Preparation sieve is number 200
Percent -#200 based on complete sample= 97.4
Weight of hydrometer sample: 50
Calculated biased weight= 51.34
Automatic temperature correction
Composite correction at 20 deg C = -6.5

Meniscus correction only= 1

Specific gravity of solids= 2.74

Specific gravity correction factor= 0.980

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	22.5	49.0	43.0	0.0129	50.0	8.1	0.0367	82.2
2.0	22.5	44.0	38.0	0.0129	45.0	8.9	0.0272	72.6
4.0	22.5	38.0	32.0	0.0129	39.0	9.9	0.0203	61.2
8.0	22.5	35.0	29.0	0.0129	36.0	10.4	0.0147	55.4
16.0	23.0	29.5	23.7	0.0128	30.5	11.3	0.0108	45.2
32.0	23.0	27.0	21.2	0.0128	28.0	11.7	0.0077	40.4
64.0	23.0	24.5	18.7	0.0128	25.5	12.1	0.0056	35.6
128.0	22.5	23.0	17.0	0.0129	24.0	12.4	0.0040	32.5
256.0	22.5	22.0	16.0	0.0129	23.0	12.5	0.0029	30.6
1477.0	22.0	21.0	14.9	0.0130	22.0	12.7	0.0012	28.5

Fractional Components

avel/Sand based on #4 sieve

nd/Fines based on #200 sieve

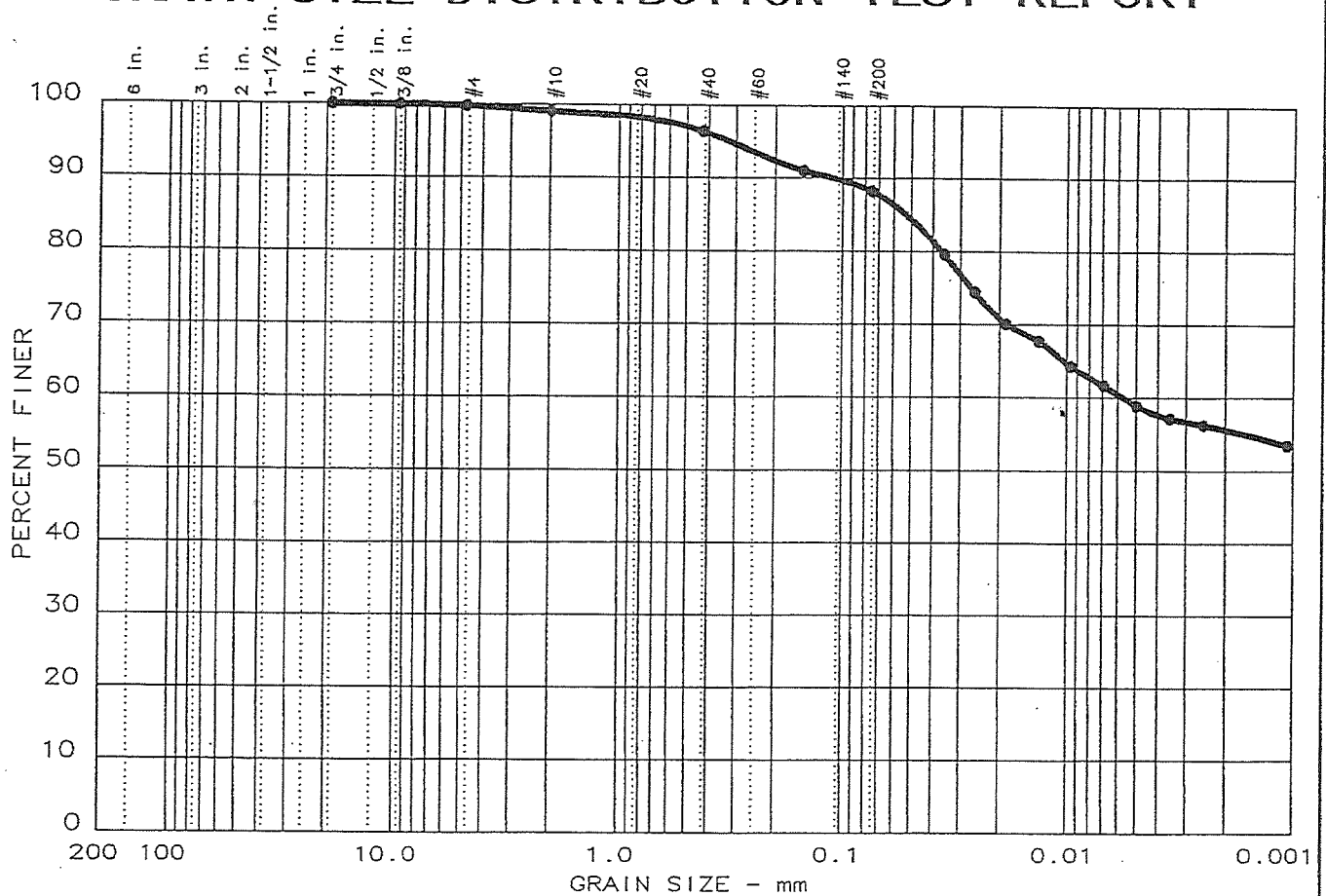
+ 3 in. = 0.0 % GRAVEL = 0.0 % SAND = 2.6

SILT = 63.0 % CLAY = 34.4

5= 0.04 D60= 0.019 D50= 0.012

0= 0.0024

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 8	0.0	0.2	11.6	29.3	58.9

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• 60.2	31.7								

MATERIAL DESCRIPTION	USCS	AASHTO
• Dark yellowbrown silty CLAY, little sand, trace gravel	CH	

Project No.: 946 02 000 Project: Vernon Co. Clay Test Pit • Location: TP-11/S-2 Date: 3/21/05	Remarks: Clay cover Figure No. 1
GRAIN SIZE DISTRIBUTION TEST REPORT CENTRAL WISCONSIN ENGINEERS, INC.	

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 8

ate: 3/21/05

roject No.: 946 02 000

roject: Vernon Co. Clay Test Pit

Sample Data

ocation of Sample: TP-11/S-2

ample Description: Dark yellowbrown silty CLAY, little sand, trace gravel

SCS Class: CH

Liquid limit: 60.2

ASHTO Class:

Plasticity index: 31.7

Notes

emarks: Clay cover

ig. No.: 1

Mechanical Analysis Data

	Initial	After wash
ry sample and tare=	530.70	200.00
are =	155.20	155.60
ry sample weight =	375.50	44.40
linus #200 from wash=	88.2 %	

ieve tare method

Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.90	0.00	99.8
# 10	2.60	0.00	99.1
# 40	10.20	0.00	96.4
# 100	20.20	0.00	91.0
# 200	10.40	0.00	88.2

Hydrometer Analysis Data

eparation sieve is number 200

ercent -#200 based on complete sample= 88.2

eight of hydrometer sample: 50

alculated biased weight= 56.69

automatic temperature correction

Composite correction at 20 deg C =-6.5

eniscus correction only= 1

pecific gravity of solids= 2.74

pecific gravity correction factor= 0.980

ydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	22.5	52.0	46.0	0.0129	53.0	7.6	0.0355	79.6
2.0	22.5	49.0	43.0	0.0129	50.0	8.1	0.0259	74.4
4.0	22.5	46.5	40.5	0.0129	47.5	8.5	0.0188	70.1
8.0	23.0	45.0	39.2	0.0128	46.0	8.8	0.0134	67.7
16.0	23.0	43.0	37.2	0.0128	44.0	9.1	0.0096	64.3
32.0	23.0	41.5	35.7	0.0128	42.5	9.3	0.0069	61.7
64.0	22.5	40.0	34.0	0.0129	41.0	9.6	0.0050	58.9
128.0	22.5	39.0	33.0	0.0129	40.0	9.7	0.0036	57.1
256.0	22.5	38.5	32.5	0.0129	39.5	9.8	0.0025	56.3
1470.0	22.0	37.0	30.9	0.0130	38.0	10.1	0.0011	53.5

Fractional Components

Gravel/Sand based on #4 sieve

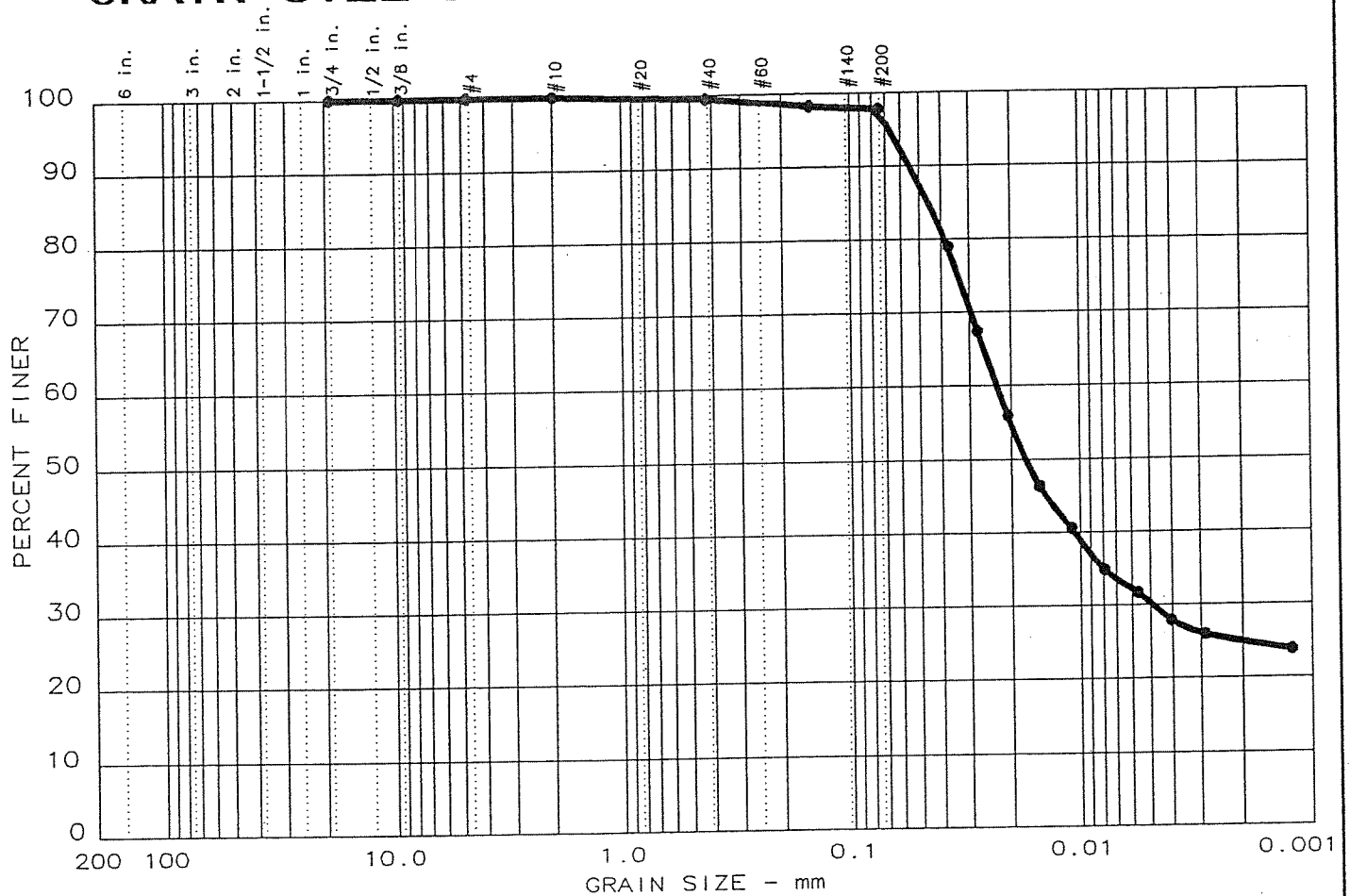
Sand/Fines based on #200 sieve

+ 3 in. = 0.0 % GRAVEL = 0.2 % SAND = 11.6

SILT = 29.3 % CLAY = 58.9

D85= 0.05 D60= 0.006

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
● 9	0.0	0.0	2.2	67.5	30.3

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
● 35.2	15.8			0.0172	0.0049				

MATERIAL DESCRIPTION	USCS	AASHTO
● Dark yellowishbrown clayey SILT, trace sand	CL	

Project No.: 946 02 000
 Project: Vernon Co. Clay Test Pit
 ● Location: TP-12/S-1

Date: 3/21/05

GRAIN SIZE DISTRIBUTION TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Clay cover

Figure No. 1

=====

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 9

Date: 3/21/05

Project No.: 946 02 000

Project: Vernon Co. Clay Test Pit

=====

Sample Data

Location of Sample: TP-12/S-1

Sample Description: Dark yellowishbrown clayey SILT, trace sand

USCS Class: CL

Liquid limit: 35.2

AASHTO Class:

Plasticity index: 15.8

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash
Dry sample and tare=	665.10	167.40
Tare =	156.10	156.00
Dry sample weight =	509.00	11.40
Minus #200 from wash=	97.8 %	

Sieve tare method

Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.00	0.00	100.0
# 10	0.10	0.00	100.0
# 40	2.80	0.00	99.4
# 100	5.90	0.00	98.3
# 200	2.50	0.00	97.8

Hydrometer Analysis Data

Preparation sieve is number 200

Percent -#200 based on complete sample= 97.8

Weight of hydrometer sample: 50

Calculated biased weight= 51.14

Automatic temperature correction

Composite correction at 20 deg C = -6.5

Meniscus correction only= 1

Specific gravity of solids= 2.74

Specific gravity correction factor= 0.980

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	23.0	47.0	41.2	0.0128	48.0	8.4	0.0372	78.9
2.0	23.0	41.0	35.2	0.0128	42.0	9.4	0.0278	67.4
4.0	23.0	35.0	29.2	0.0128	36.0	10.4	0.0206	55.9
8.0	23.0	30.0	24.2	0.0128	31.0	11.2	0.0152	46.3
16.0	23.0	27.0	21.2	0.0128	28.0	11.7	0.0110	40.6
32.0	23.0	24.0	18.2	0.0128	25.0	12.2	0.0079	34.8
64.0	22.5	22.5	16.5	0.0129	23.5	12.4	0.0057	31.7
128.0	22.5	20.5	14.5	0.0129	21.5	12.8	0.0041	27.9
256.0	22.5	19.5	13.5	0.0129	20.5	12.9	0.0029	25.9
1463.0	22.0	18.5	12.4	0.0130	19.5	13.1	0.0012	23.8

Fractional Components

avel/Sand based on #4 sieve

nd/Fines based on #200 sieve

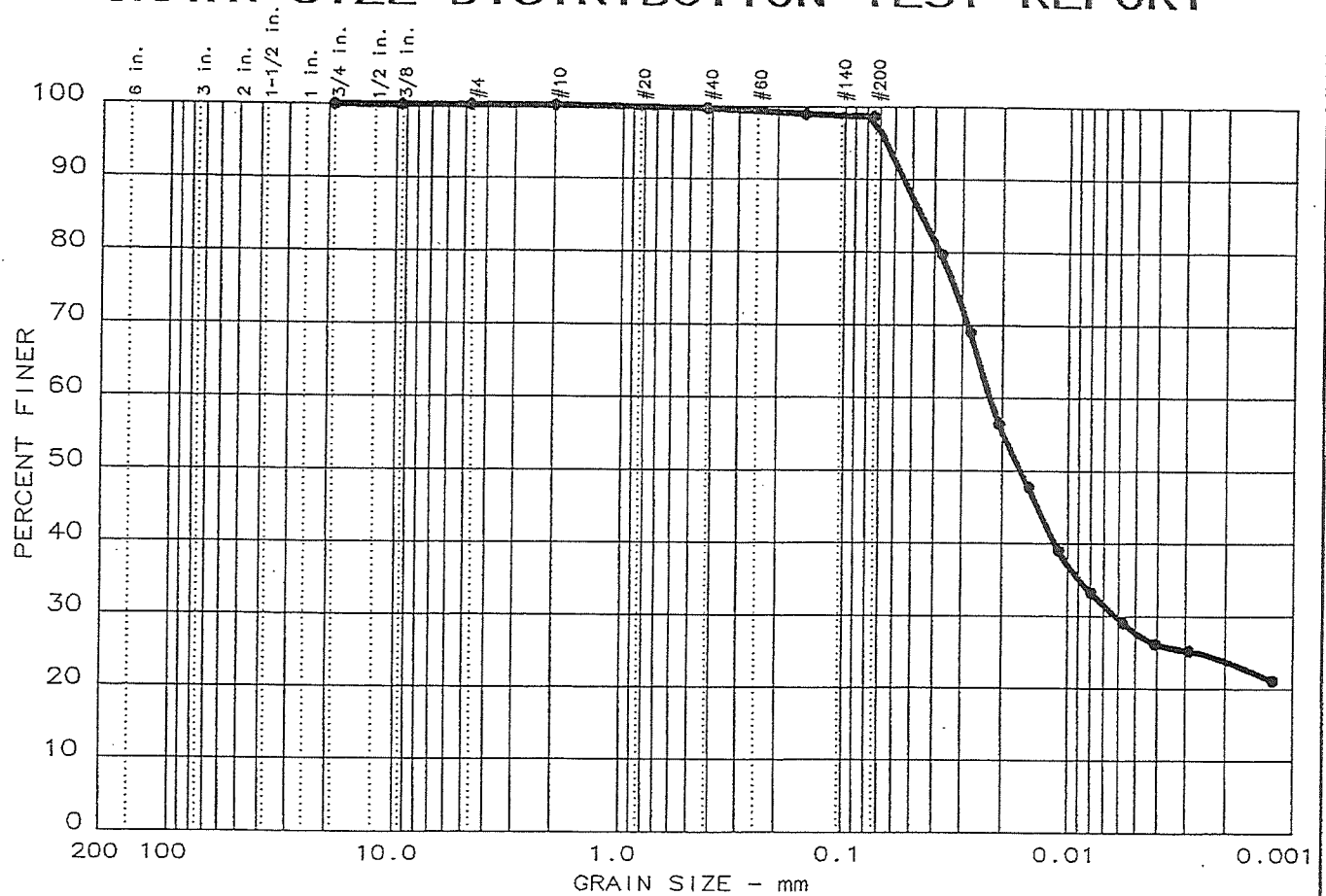
+ 3 in. = 0.0 % GRAVEL = 0.0 % SAND = 2.2

SILT = 67.5 % CLAY = 30.3

5= 0.05 D60= 0.023 D50= 0.017

0= 0.0049

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 10	0.0	0.0	1.3	71.0	27.7

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• 36.5	17.6			0.0165	0.0062				

MATERIAL DESCRIPTION	USCS	AASHTO
• Dark yellowbrown clayey SILT, trace sand	CL	

Project No.: 946 02 000 Project: Vernon Co. Clay Test Pit • Location: TP-13/S-1 Date: 3/29/05	Remarks: Clay cover Figure No. 1
GRAIN SIZE DISTRIBUTION TEST REPORT CENTRAL WISCONSIN ENGINEERS, INC.	

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 10

ate: 3/29/05

roject No.: 946 02 000

roject: Vernon Co. Clay Test Pit

Sample Data

ocation of Sample: TP-13/S-1

ample Description: Dark yellowbrown clayey SILT, trace sand

SCS Class: CL

Liquid limit: 36.5

ASHTO Class:

Plasticity index: 17.6

Notes

emarks: Clay cover

ig. No.: 1

Mechanical Analysis Data

	Initial	After wash	
ry sample and tare=	693.00	162.60	
are =	155.90	155.60	
ry sample weight =	537.10	7.00	
inus #200 from wash=	98.7 %		
ieve tare method			
Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.00	0.00	100.0
# 10	0.00	0.00	100.0
# 40	1.60	0.00	99.7
# 100	3.70	0.00	99.0
# 200	1.70	0.00	98.7

Hydrometer Analysis Data

eparation sieve is number 200

ercent -#200 based on complete sample= 98.7

eight of hydrometer sample: 50

alculated biased weight= 50.66

utomatic temperature correction

Composite correction at 20 deg C =-6.5

eniscus correction only= 1

pecific gravity of solids= 2.74

pecific gravity correction factor= 0.980

ydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	23.0	47.0	41.2	0.0128	48.0	8.4	0.0372	79.7
2.0	23.0	41.5	35.7	0.0128	42.5	9.3	0.0277	69.0
4.0	23.0	35.0	29.2	0.0128	36.0	10.4	0.0206	56.4
8.0	23.0	30.5	24.7	0.0128	31.5	11.1	0.0151	47.7
16.0	23.0	26.0	20.2	0.0128	27.0	11.9	0.0110	39.0
32.0	23.0	23.0	17.2	0.0128	24.0	12.4	0.0080	33.2
64.0	22.5	21.0	15.0	0.0129	22.0	12.7	0.0057	29.1
128.0	22.5	19.5	13.5	0.0129	20.5	12.9	0.0041	26.2
256.0	22.5	19.0	13.0	0.0129	20.0	13.0	0.0029	25.2
1456.0	22.0	17.0	10.9	0.0130	18.0	13.3	0.0012	21.1

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

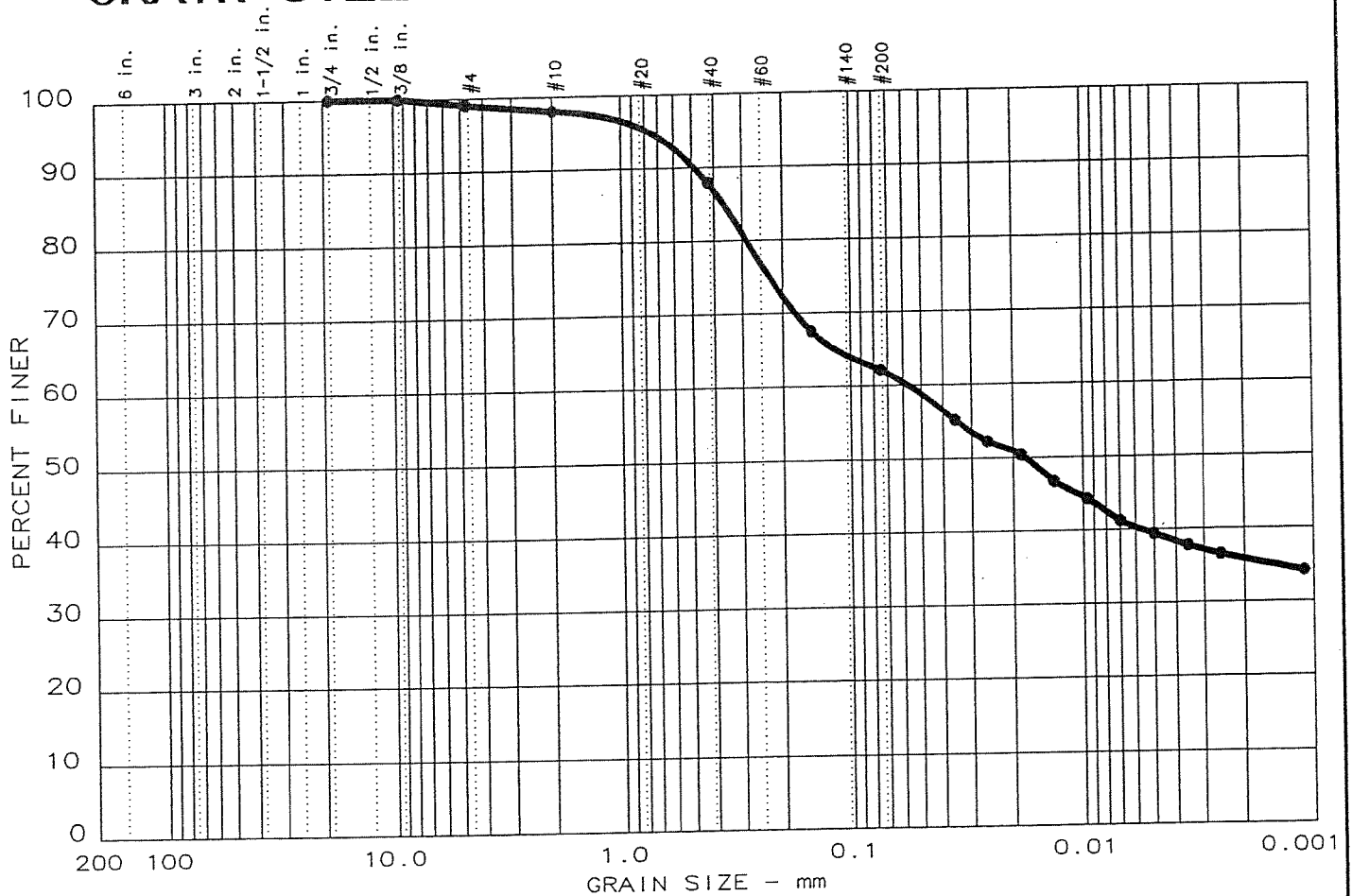
% + 3 in. = 0.0 % GRAVEL = 0.0 % SAND = 1.3

SILT = 71.0 % CLAY = 27.7

D85= 0.05 D60= 0.023 D50= 0.017

D30= 0.0062

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 11	0.0	0.9	36.9	22.8	39.4

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• 32.4	14.1	0.363		0.0178					

MATERIAL DESCRIPTION	USCS	AASHTO
• Yellowish brown silty sandy CLAY, trace gravel	CL	

Project No.: 946 02 000
 Project: Vernon Co. Clay Test Pit
 • Location: TP-13/S-2

Date: 3/31/05

GRAIN SIZE DISTRIBUTION TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Clay cover

Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 11

Date: 3/31/05

Project No.: 946 02 000

Project: Vernon Co. Clay Test Pit

Sample Data

Location of Sample: TP-13/S-2

Sample Description: Yellowish brown silty sandy CLAY, trace gravel

USCS Class: CL

Liquid limit: 32.4

AASHTO Class:

Plasticity index: 14.1

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash	
Dry sample and tare=	699.00	361.50	
Tare	= 155.90	155.70	
Dry sample weight =	543.10	205.80	
Minus #200 from wash=	62.1 %		
Sieve tare method			
Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	5.10	0.00	99.1
# 10	5.60	0.00	98.0
# 40	54.90	0.00	87.9
# 100	110.70	0.00	67.5
# 200	29.20	0.00	62.2

Hydrometer Analysis Data

Separation sieve is number 200

Percent -#200 based on complete sample= 62.2

Weight of hydrometer sample: 50

Calculated biased weight= 80.44

Automatic temperature correction

Composite correction at 20 deg C = -6.5

Meniscus correction only= 1

Specific gravity of solids= 2.74

Specific gravity correction factor= 0.980

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	23.5	51.0	45.3	0.0127	52.0	7.8	0.0355	55.2
2.0	23.5	48.5	42.8	0.0127	49.5	8.2	0.0257	52.2
4.0	23.5	47.0	41.3	0.0127	48.0	8.4	0.0185	50.3
8.0	23.5	44.0	38.3	0.0127	45.0	8.9	0.0134	46.7
16.0	23.5	42.0	36.3	0.0127	43.0	9.2	0.0097	44.3
32.0	23.5	39.5	33.8	0.0127	40.5	9.7	0.0070	41.2
64.0	23.5	38.0	32.3	0.0127	39.0	9.9	0.0050	39.4
128.0	24.0	36.5	31.0	0.0127	37.5	10.1	0.0036	37.7
256.0	24.0	35.5	30.0	0.0127	36.5	10.3	0.0025	36.5
1440.0	22.5	34.0	28.0	0.0129	35.0	10.6	0.0011	34.2

Fractional Components

avel/Sand based on #4 sieve

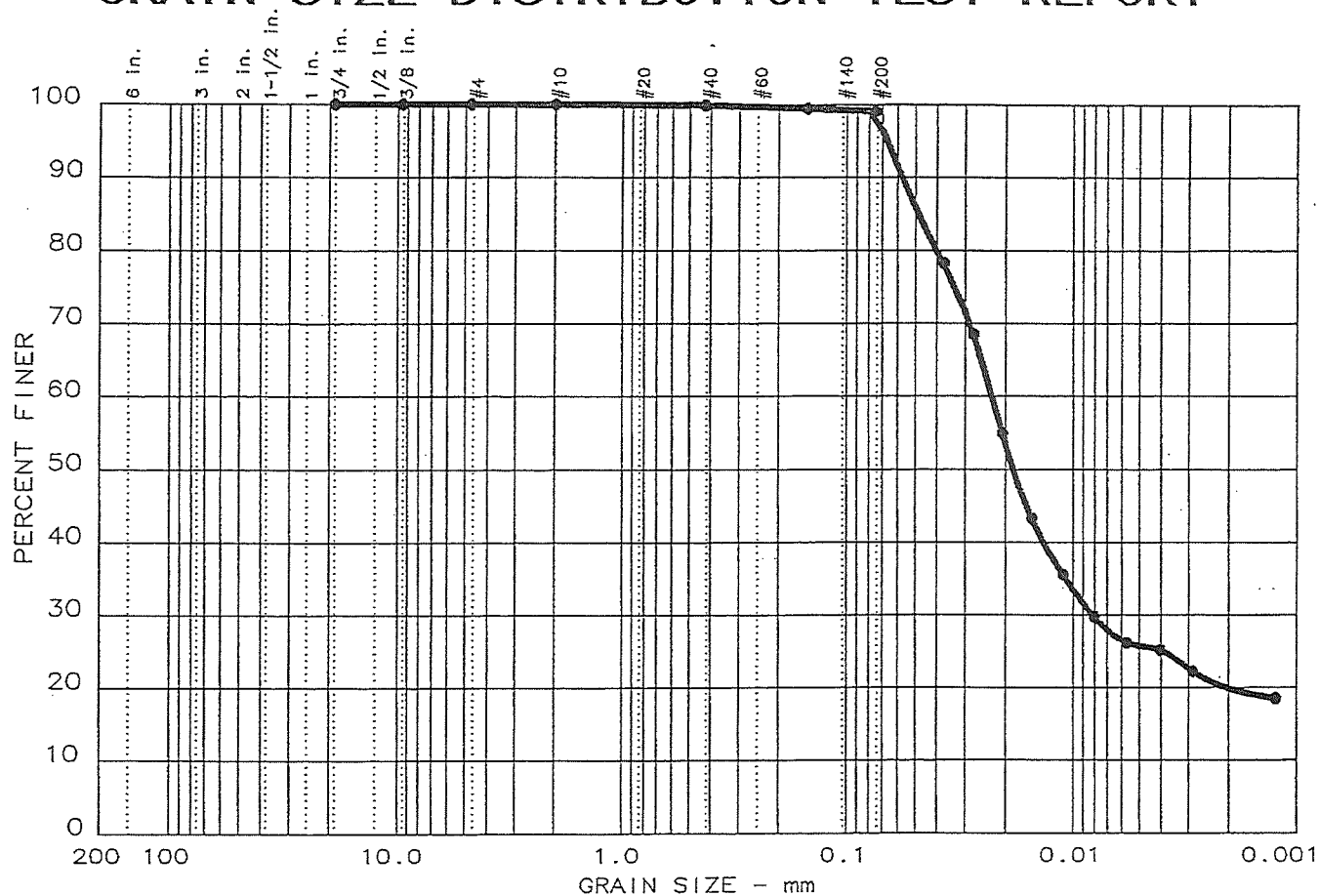
nd/Fines based on #200 sieve

+ 3 in. = 0.0 % GRAVEL = 0.9 % SAND = 36.9

SILT = 22.8 % CLAY = 39.4

5= 0.36 D60= 0.057 D50= 0.018

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 12	0.0	0.0	1.0	73.3	25.7

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• 28.1	7.7			0.0184	0.0081				

MATERIAL DESCRIPTION	USCS	AASHTO
• Dark yellowbrown clayey SILT, trace sand	CL	

Project No.: 946 02 000
 Project: Vernon Co. Clay Test Pit
 • Location: TP-14/S-1

Date: 3/31/05

GRAIN SIZE DISTRIBUTION TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Clay cover

Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 12

Date: 3/31/05

Project No.: 946 02 000

Project: Vernon Co. Clay Test Pit

Sample Data

Location of Sample: TP-14/S-1

Sample Description: Dark yellowbrown clayey SILT, trace sand

USCS Class: CL

Liquid limit: 28.1

AASHTO Class:

Plasticity index: 7.7

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash	
Dry sample and tare=	715.70	161.30	
Tare =	155.60	155.60	
Dry sample weight =	560.10	5.70	
Minus #200 from wash=	99.0 %		
Sieve tare method			
Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.00	0.00	100.0
# 10	0.00	0.00	100.0
# 40	0.80	0.00	99.9
# 100	2.40	0.00	99.4
# 200	2.30	0.00	99.0

Hydrometer Analysis Data

Separation sieve is number 200

Percent -#200 based on complete sample= 99.0

Weight of hydrometer sample: 50

Calculated biased weight= 50.50

Automatic temperature correction

Composite correction at 20 deg C = -6.5

Meniscus correction only= 1

Specific gravity of solids= 2.74

Specific gravity correction factor= 0.980

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	23.5	46.0	40.3	0.0127	47.0	8.6	0.0373	78.3
2.0	23.5	41.0	35.3	0.0127	42.0	9.4	0.0276	68.5
4.0	23.5	34.0	28.3	0.0127	35.0	10.6	0.0207	55.0
8.0	23.5	28.0	22.3	0.0127	29.0	11.5	0.0153	43.3
16.0	23.5	24.0	18.3	0.0127	25.0	12.2	0.0111	35.5
32.0	23.5	21.0	15.3	0.0127	22.0	12.7	0.0080	29.7
64.0	24.0	19.0	13.5	0.0127	20.0	13.0	0.0057	26.1
128.0	24.0	18.5	13.0	0.0127	19.5	13.1	0.0040	25.1
256.0	24.0	17.0	11.5	0.0127	18.0	13.3	0.0029	22.2
1440.0	22.5	15.5	9.5	0.0129	16.5	13.6	0.0013	18.5

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

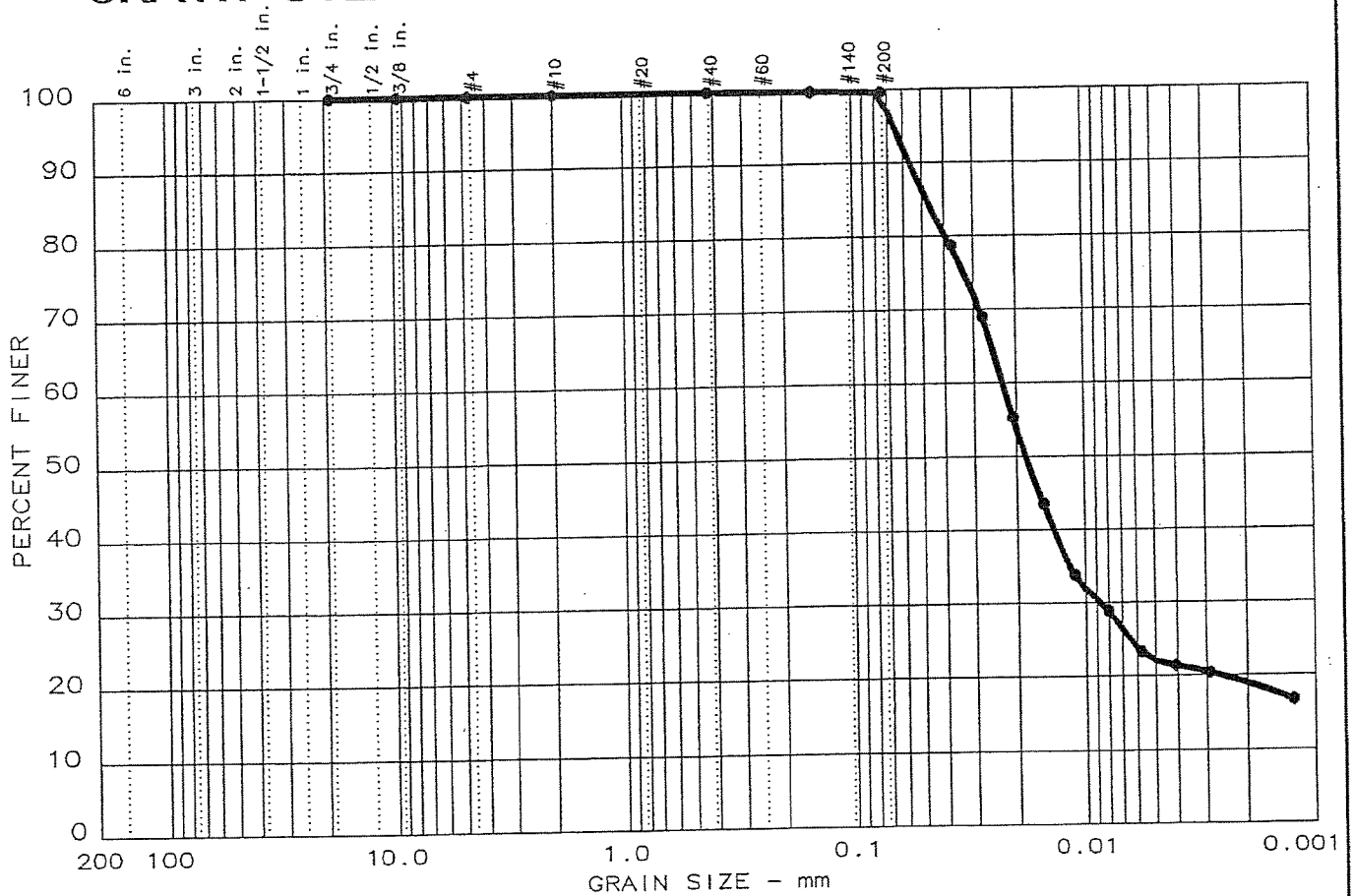
% + 3 in. = 0.0 % GRAVEL = 0.0 % SAND = 1.0

SILT = 73.3 % CLAY = 25.7

D85= 0.05 D60= 0.023 D50= 0.018

D30= 0.0081

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 18	0.0	0.0	0.4	77.5	22.1

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• 32.3	8.1			0.0182	0.0087				

MATERIAL DESCRIPTION	USCS	AASHTO
• Dark yellowbrown clayey SILT, trace sand	ML	

Project No.: 946 02 000 Project: Vernon Co. Clay Test Pit • Location: TP-14/S-2 Date: 3/31/05	Remarks: Clay cover Figure No. 1
GRAIN SIZE DISTRIBUTION TEST REPORT CENTRAL WISCONSIN ENGINEERS, INC.	

=====

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 18

Date: 3/31/05

Project No.: 946 02 000

Project: Vernon Co. Clay Test Pit

=====

Sample Data

Location of Sample: TP-14/S-2

Sample Description: Dark yellowbrown clayey SILT, trace sand

USCS Class: ML

Liquid limit: 32.3

AASHTO Class:

Plasticity index: 8.1

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash
Dry sample and tare=	654.90	156.70
Tare =	154.50	154.40
Dry sample weight =	500.40	2.30
Minus #200 from wash=	99.5 %	

Sieve tare method

Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.00	0.00	100.0
# 10	0.00	0.00	100.0
# 40	0.30	0.00	99.9
# 100	0.90	0.00	99.8
# 200	0.90	0.00	99.6

Hydrometer Analysis Data

Separation sieve is number 200

Percent -#200 based on complete sample= 99.6

Weight of hydrometer sample: 50

Calculated biased weight= 50.21

Automatic temperature correction

Composite correction at 20 deg C =-6.5

Meniscus correction only= 1

Specific gravity of solids= 2.74

Specific gravity correction factor= 0.980

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	23.5	46.0	40.3	0.0127	47.0	8.6	0.0373	78.7
2.0	23.5	41.0	35.3	0.0127	42.0	9.4	0.0276	68.9
4.0	23.5	34.0	28.3	0.0127	35.0	10.6	0.0207	55.3
8.0	23.5	28.0	22.3	0.0127	29.0	11.5	0.0153	43.6
16.0	23.5	23.0	17.3	0.0127	24.0	12.4	0.0112	33.8
32.0	23.5	20.5	14.8	0.0127	21.5	12.8	0.0080	28.9
64.0	24.0	17.5	12.0	0.0127	18.5	13.3	0.0058	23.3
128.0	24.0	16.5	11.0	0.0127	17.5	13.4	0.0041	21.4
256.0	24.0	16.0	10.5	0.0127	17.0	13.5	0.0029	20.4
1440.0	22.5	14.5	8.5	0.0129	15.5	13.8	0.0013	16.7

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

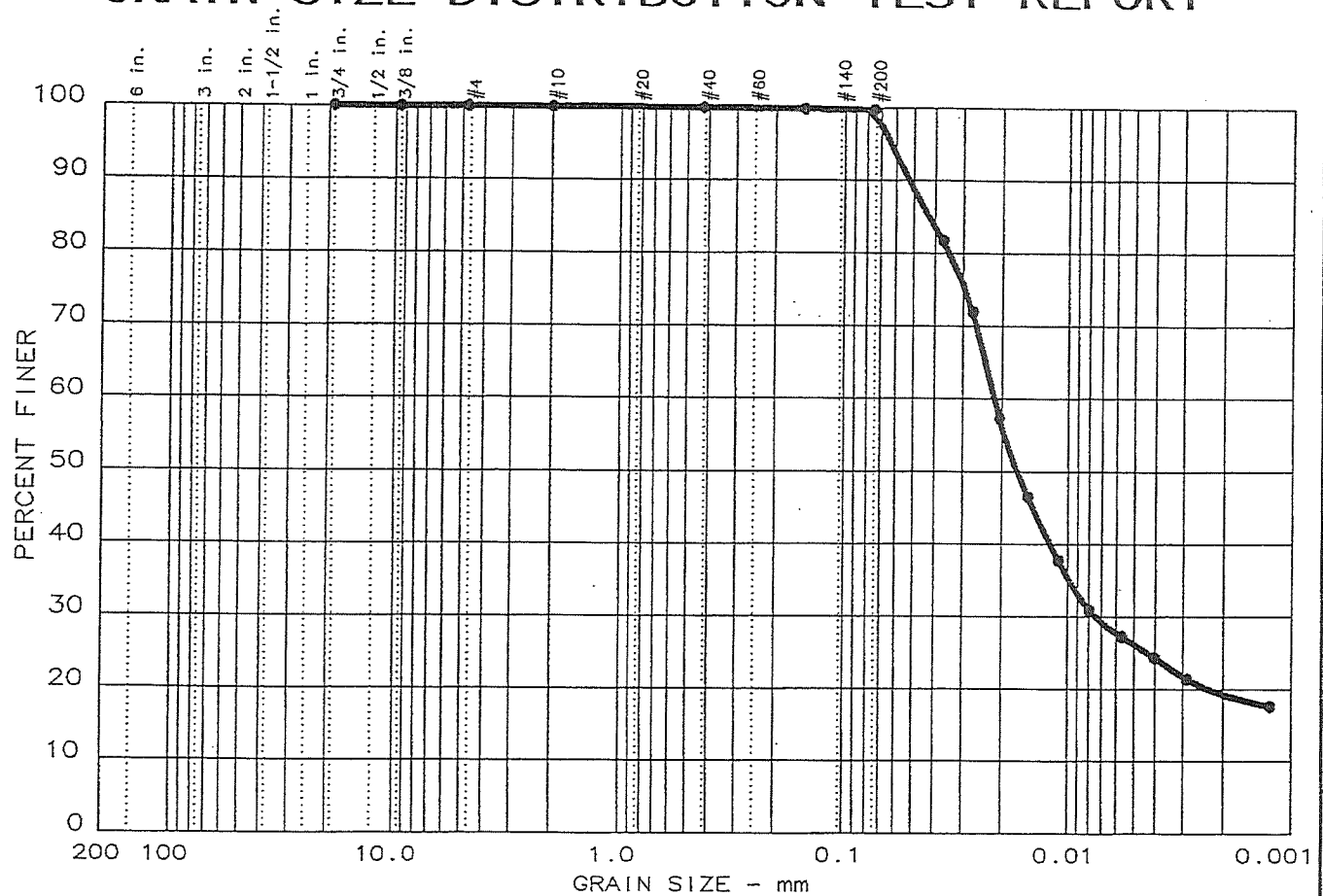
+ 3 in. = 0.0 % GRAVEL = 0.0 % SAND = 0.4

SILT = 77.5 % CLAY = 22.1

D₁₅ = 0.05 D₆₀ = 0.023 D₅₀ = 0.018

D₁₀ = 0.0087

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 19	0.0	0.0	0.3	73.5	26.2

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• 27.5	6.1			0.0170	0.0075				

MATERIAL DESCRIPTION	USCS	AASHTO
• Dark yellowbrown clayey SILT, trace sand	CL-ML	

Project No.: 946 02 000 Project: Vernon Co. Clay Test Pit • Location: TP-15/S-1 Date: 3/31/05	Remarks: Clay cover
GRAIN SIZE DISTRIBUTION TEST REPORT CENTRAL WISCONSIN ENGINEERS, INC.	Figure No. 1

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 19

Date: 3/31/05
Project No.: 946 02 000
Project: Vernon Co. Clay Test Pit

Sample Data

Location of Sample: TP-15/S-1
Sample Description: Dark yellowbrown clayey SILT, trace sand
USCS Class: CL-ML Liquid limit: 27.5
AASHTO Class: Plasticity index: 6.1

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash
Dry sample and tare=	665.90	157.00
Tare =	155.40	155.40
Dry sample weight =	510.50	1.60
Minus #200 from wash=	99.7 %	
Sieve tare method		
Sieve	Weight retained	Sieve tare Percent finer
0.75 inches	0.00	0.00 100.0
0.375 inches	0.00	0.00 100.0
# 4	0.00	0.00 100.0
# 10	0.00	0.00 100.0
# 40	0.50	0.00 99.9
# 100	0.50	0.00 99.8
# 200	0.60	0.00 99.7

Hydrometer Analysis Data

Separation sieve is number 200
Percent -#200 based on complete sample= 99.7
Weight of hydrometer sample: 50
Calculated biased weight= 50.16
Automatic temperature correction
Composite correction at 20 deg C =-6.5

Meniscus correction only= 1
Specific gravity of solids= 2.74
Specific gravity correction factor= 0.980
Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	23.5	47.5	41.8	0.0127	48.5	8.3	0.0368	81.7
2.0	23.5	42.5	36.8	0.0127	43.5	9.2	0.0272	71.9
4.0	23.5	35.0	29.3	0.0127	36.0	10.4	0.0205	57.3
8.0	23.5	29.5	23.8	0.0127	30.5	11.3	0.0151	46.5
16.0	23.5	25.0	19.3	0.0127	26.0	12.0	0.0110	37.7
32.0	23.5	21.5	15.8	0.0127	22.5	12.6	0.0080	30.9
64.0	24.0	19.5	14.0	0.0127	20.5	12.9	0.0057	27.3
128.0	24.0	18.0	12.5	0.0127	19.0	13.2	0.0041	24.3
256.0	24.0	16.5	11.0	0.0127	17.5	13.4	0.0029	21.4
1440.0	22.5	15.0	9.0	0.0129	16.0	13.7	0.0013	17.7

Fractional Components

Gravel/Sand based on #4 sieve

Sand/Fines based on #200 sieve

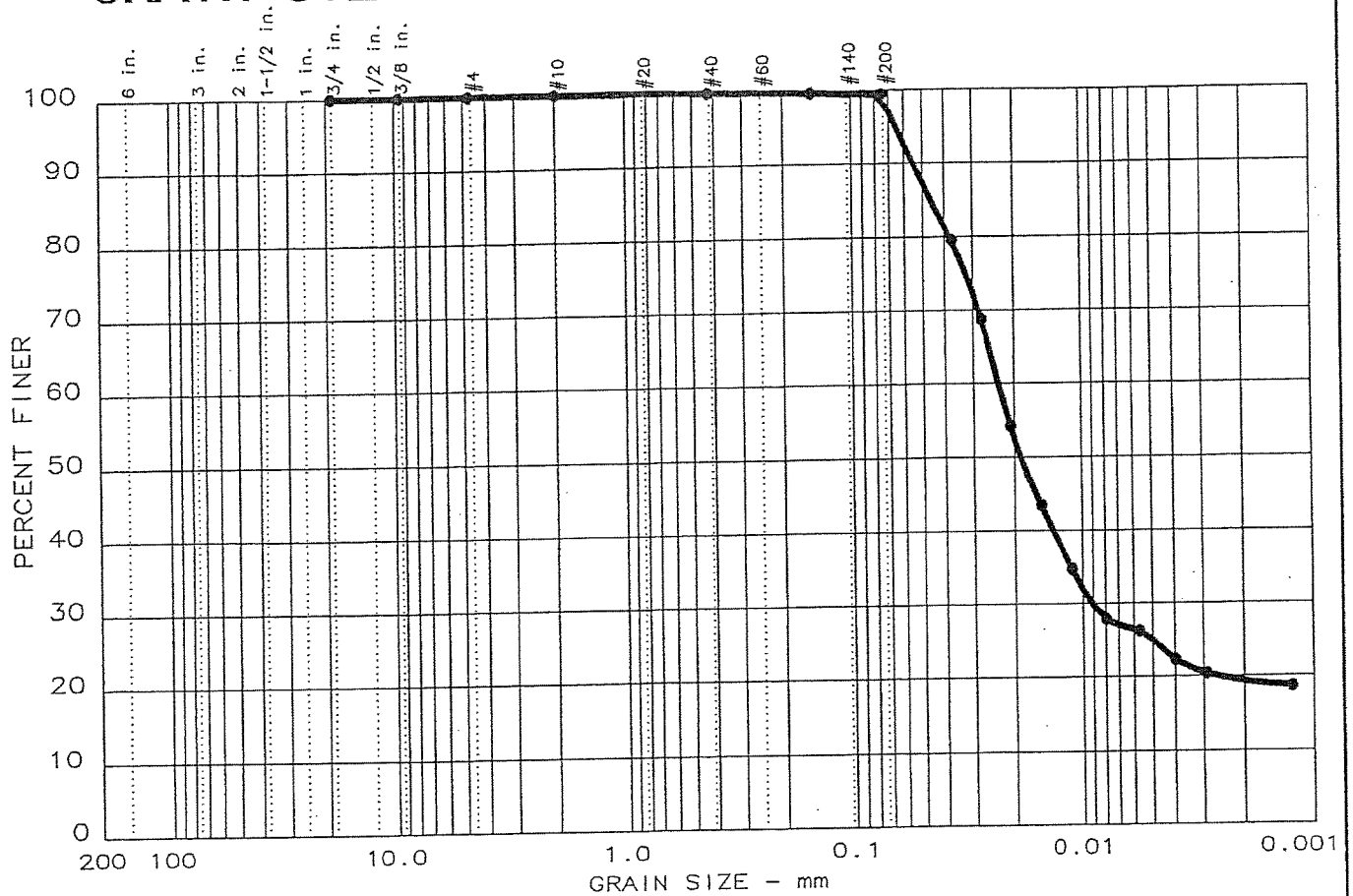
% + 3 in. = 0.0 % GRAVEL = 0.0 % SAND = 0.3

% SILT = 73.5 % CLAY = 26.2

D85= 0.04 D60= 0.022 D50= 0.017

D30= 0.0075

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 20	0.0	0.0	0.6	74.4	25.0

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• 32.3	10.0			0.0187	0.0091				

MATERIAL DESCRIPTION	USCS	AASHTO
• Dark yellowbrown clayey SILT, trace sand	CL	

Project No.: 946 02 000 Project: Vernon Co. Clay Test Pit • Location: TP-15/S-2 Date: 3/31/05	Remarks: Clay cover
GRAIN SIZE DISTRIBUTION TEST REPORT CENTRAL WISCONSIN ENGINEERS, INC.	Figure No. 1

=====

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 20

Date: 3/31/05
 Project No.: 946 02 000
 Project: Vernon Co. Clay Test Pit

=====

Sample Data

Location of Sample: TP-15/S-2
 Sample Description: Dark yellowbrown clayey SILT, trace sand
 USCS Class: CL Liquid limit: 32.3
 AASHTO Class: Plasticity index: 10.0

Notes

Remarks: Clay cover

Fig. No.: 1

Mechanical Analysis Data

	Initial	After wash	
Dry sample and tare=	681.90	157.70	
Tare =	154.40	154.40	
Dry sample weight =	527.50	3.30	
Minus #200 from wash=	99.4 %		
Sieve tare method			
Sieve	Weight retained	Sieve tare	Percent finer
0.75 inches	0.00	0.00	100.0
0.375 inches	0.00	0.00	100.0
# 4	0.00	0.00	100.0
# 10	0.00	0.00	100.0
# 40	0.40	0.00	99.9
# 100	1.40	0.00	99.7
# 200	1.40	0.00	99.4

Hydrometer Analysis Data

Separation sieve is number 200
 Percent -#200 based on complete sample= 99.4
 Weight of hydrometer sample: 50
 Calculated biased weight= 50.31
 Automatic temperature correction
 Composite correction at 20 deg C =-6.5

Meniscus correction only= 1
 Specific gravity of solids= 2.74
 Specific gravity correction factor= 0.980
 Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.0	23.5	46.5	40.8	0.0127	47.5	8.5	0.0371	79.5
2.0	23.5	41.0	35.3	0.0127	42.0	9.4	0.0276	68.8
4.0	23.5	33.5	27.8	0.0127	34.5	10.6	0.0208	54.2
8.0	23.5	28.0	22.3	0.0127	29.0	11.5	0.0153	43.5
16.0	23.5	23.5	17.8	0.0127	24.5	12.3	0.0112	34.7
33.0	23.5	20.0	14.3	0.0127	21.0	12.9	0.0079	27.9
64.0	24.0	19.0	13.5	0.0127	20.0	13.0	0.0057	26.2
134.0	24.0	17.0	11.5	0.0127	18.0	13.3	0.0040	22.3
256.0	24.0	16.0	10.5	0.0127	17.0	13.5	0.0029	20.4
1440.0	22.5	15.5	9.5	0.0129	16.5	13.6	0.0013	18.6

Fractional Components

avel/Sand based on #4 sieve

nd/Fines based on #200 sieve

+ 3 in. = 0.0 % GRAVEL = 0.0 % SAND = 0.6

SILT = 74.4 % CLAY = 25.0

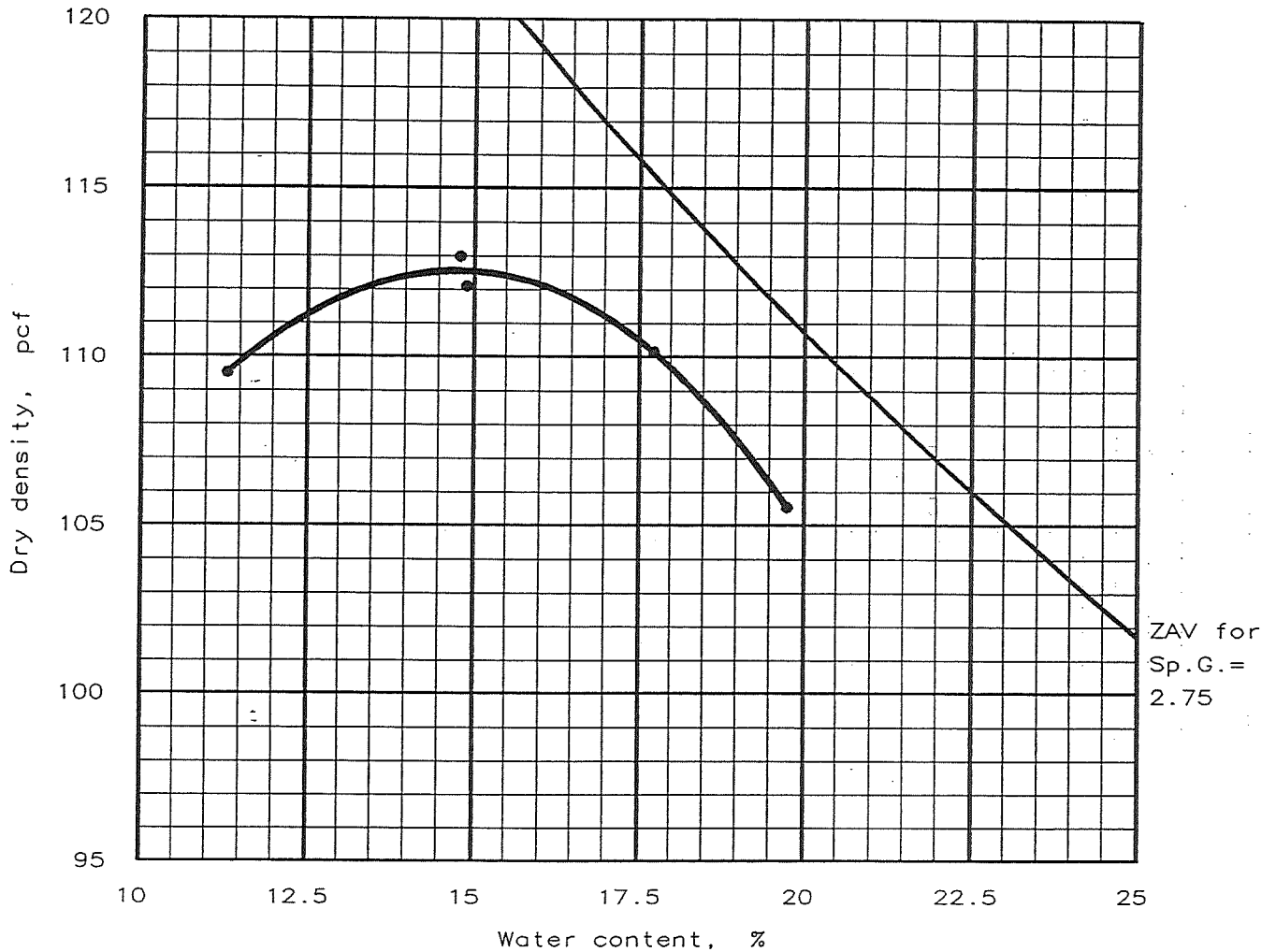
5= 0.05 D60= 0.023 D50= 0.019

0= 0.0091

APPENDIX G

PROCTOR TEST RESULTS

MOISTURE DENSITY RELATIONSHIP TEST



Test specification: ASTM D 698-91 Procedure A, Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
1.2'-3	CL		22.9 %		40.3	18.3	0.0 %	99.0 %

TEST RESULTS		MATERIAL DESCRIPTION
Maximum dry density = 112.6 pcf Optimum moisture = 14.8 %		Lt. brown clayey SILT, trace sand
Project No.: 946 02 000 Project: Vernon Co. Clay Test Pit Location: TP-3 Date: 4/25/05		Remarks:
MOISTURE DENSITY RELATIONSHIP TEST CENTRAL WISCONSIN ENGINEERS, INC.		
		Fig. No. 1

Fig. No. 1

===== MOISTURE-DENSITY TEST DATA =====

DATA FILE: 135

PROJECT DATA

te: 4/25/05
 oject No.: 946 02 000
 oject: Vernon Co. Clay Test Pit
 cation 1: TP-3

marks 1:

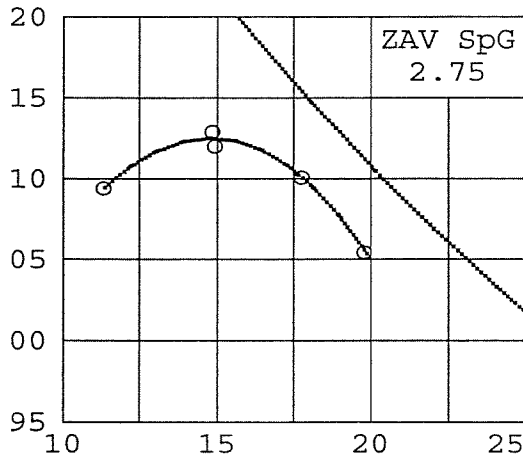
terial 1: Lt. brown clayey SILT,
 scription 2: trace sand
 evation or depth: 1.2'-3
 g. No.: 1

----- SPECIMEN DATA

CS classification: CL AASHTO classification:
 tural moisture: 22.9 Specific gravity:
 rcent retained on No.4 sieve: 0.0
 rcent passing No. 200 sieve: 99.0
 quid limit: 40.3 Plastic limit: 22 Plasticity index: 18.3

----- TEST DATA AND RESULTS FOR CURVE 1

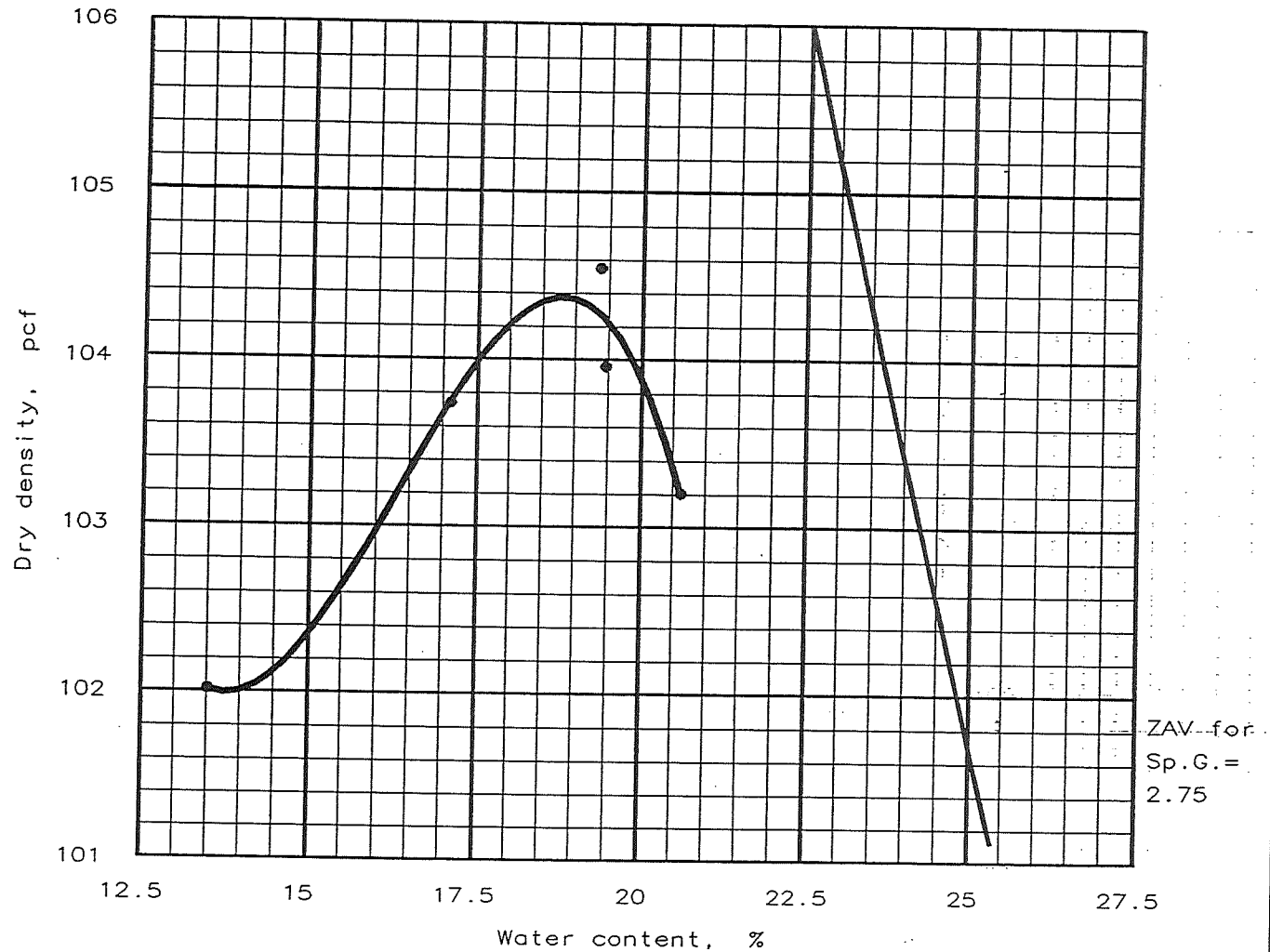
pe of test: Standard, ASTM D 698-91 Procedure A



Max dry den= 112.6 pcf, Opt moisture= 14.8 %

ersize Correction Not Applied

MOISTURE DENSITY RELATIONSHIP TEST



Test specification: ASTM D 698-91 Procedure A, Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No. 4	% < No. 200
	USCS	AASHTO						
1'-2'	CL		22.2 %		43.9	23.9	0.9 %	95.5 %

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 104.4 pcf Optimum moisture = 18.8 %	Yellowbrown clayey SILT, trace sand & gravel
Project No.: 946 02 000 Project: Vernon Co. Clay Test Pit Location: TP-7 Date: 4/20/05	Remarks:
MOISTURE DENSITY RELATIONSHIP TEST CENTRAL WISCONSIN ENGINEERS, INC.	Fig. No. 1

MOISTURE-DENSITY TEST DATA

DATA FILE: 136

PROJECT DATA

Date: 4/20/05
 Project No.: 946 02 000
 Project: Vernon Co. Clay Test Pit
 Location 1: TP-7

Remarks 1:

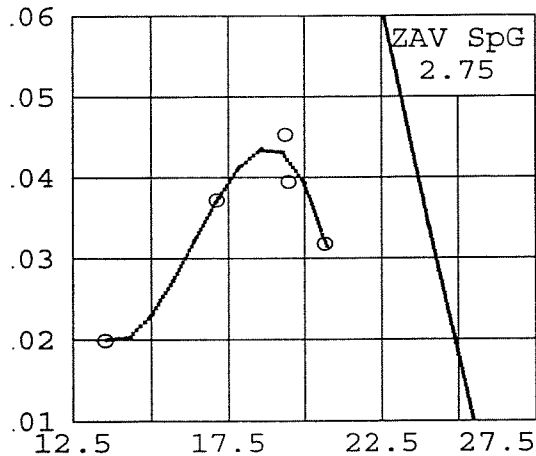
Material 1: Yellowbrown clayey SILT,
 Description 2: trace sand & gravel
 Elevation or depth: 1'-2'
 Log No.: 1

SPECIMEN DATA

CS classification: CL AASHTO classification:
 Natural moisture: 22.2 Specific gravity:
 Percent retained on No. 4 sieve: 0.9
 Percent passing No. 200 sieve: 95.5
 Liquid limit: 43.9 Plastic limit: 20 Plasticity index: 23.9

TEST DATA AND RESULTS FOR CURVE 1

Type of test: Standard, ASTM D 698-91 Procedure A

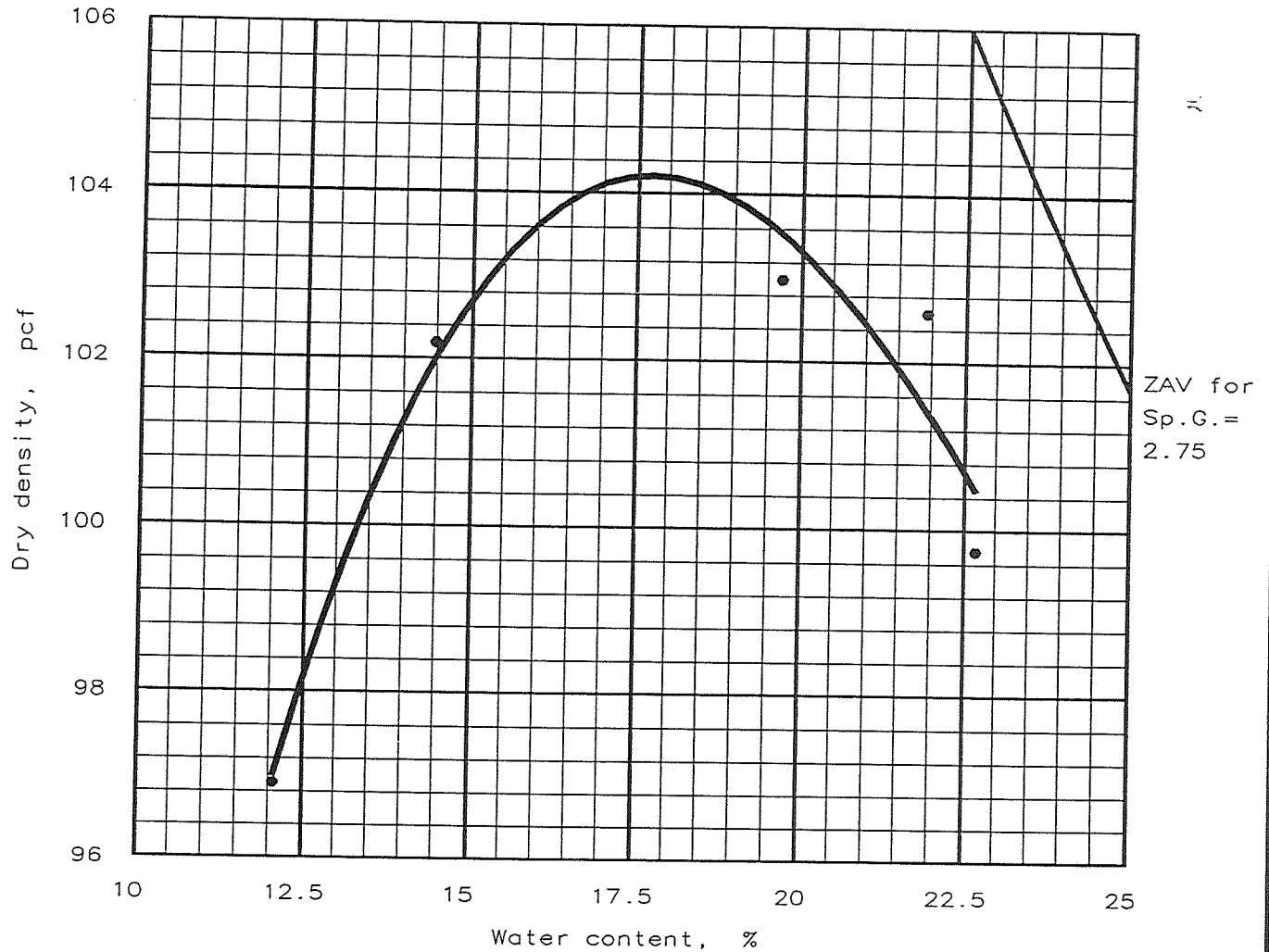


POINT NO.	1	2	3	4	5
WM + WS	13.27	13.46	13.55	13.57	13.56
WM	9.41	9.41	9.41	9.41	9.41
WW+T #1	577.70	557.90	571.90	589.20	584.20
WD+T #1	517.80	487.30	490.90	505.50	497.20
TARE #1	74.40	74.80	74.70	73.30	75.50
MOIST #1	13.5	17.1	19.5	19.4	20.6

MOISTURE	13.5	17.1	19.5	19.4	20.6
DRY DEN	102.0	103.7	104.0	104.6	103.2

Max dry den= 104.4 pcf, Opt moisture= 18.8 %
 Oversize Correction Not Applied

MOISTURE DENSITY RELATIONSHIP TEST



Test specification: ASTM D 698-91 Procedure A, Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
7'-9.5	CL		27.5 %		33.4	12.4	0.0 %	99.2 %

TEST RESULTS		MATERIAL DESCRIPTION
Maximum dry density = 104.2 pcf Optimum moisture = 17.7 %		Yellowbrown Clayey SILT, Trace sand
Project No.: 946 02 000 Project: Vernon Co. Clay Test Pit Location: TP-10 Date: 5/18/05		Remarks: <

MOISTURE-DENSITY TEST DATA

DATA FILE: 143

PROJECT DATA

Date: 5/18/05
 Project No.: 946 02 000
 Project: Vernon Co. Clay Test Pit
 Location 1: TP-10

Remarks 1:

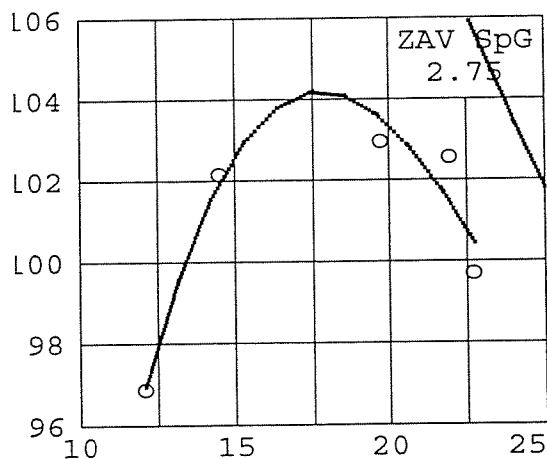
Material 1: Yellowbrown Clayey SILT,
 Description 2: Trace sand
 Elevation or depth: 7'-9.5
 Log. No.: 1

SPECIMEN DATA

USCS classification: CL AASHTO classification:
 Natural moisture: 27.5 Specific gravity:
 Percent retained on No. 4 sieve: 0.0
 Percent passing No. 200 sieve: 99.2
 Liquid limit: 33.4 Plastic limit: 21 Plasticity index: 12.4

TEST DATA AND RESULTS FOR CURVE 1

Type of test: Standard, ASTM D 698-91 Procedure A



POINT NO.	1	2	3	4	5
WM + WS	13.03	13.31	13.52	13.58	13.49
WM	9.41	9.41	9.41	9.41	9.41
WW+T #1	570.70	573.30	570.20	533.40	599.20
WD+T #1	517.30	510.20	488.80	450.80	502.30
TARE #1	74.70	74.50	75.90	74.10	75.40
MOIST #1	12.1	14.5	19.7	21.9	22.7
MOISTURE	12.1	14.5	19.7	21.9	22.7
DRY DEN	96.9	102.2	103.0	102.6	99.8

Max dry den= 104.2 pcf, Opt moisture= 17.7 %

versize Correction Not Applied

APPENDIX H

PERMEABILITY TEST RESULTS

CWE Falling Head Permeability Test

Project: Vernon County Balefill
 Project No. 946-02-00
 Sample No. TP-7/ S-1
 Sample Type: Test pits

Area of Standpipe (sq cm):	1.77
Sample Height (cm):	7.1
Sample Area (sq cm):	18.85

Diameter (cm):	4.9
Dry Density (lb/ft ³):	125.8
% Moisture:	22.9%
Additional Height(cm)	157.8

Trial	Initial Readings		Final Readings		Elapsed Time (seconds)	Initial Head (cm)	Final Head (cm)	Permeability K (cm/sec)
	Date (dy/mn/yr)	Time (hr:mn:sc)	Height (cm)	Date (dy/mn/yr)	Time (hr:mn:sc)	Height (cm)		
1	06/12/05	13:10:00	53.5	06/13/05	13:10:00	53.1	211.3	210.9
2	06/13/05	13:10:00	53.1	06/14/05	13:15:00	52.8	210.9	210.6
3	06/14/05	13:15:00	52.8	06/15/05	13:06:00	52.5	210.6	210.3
4	06/15/05	13:06:00	52.5	06/16/05	13:25:00	52.1	210.3	209.9
5	06/16/05	13:25:00	52.1	06/17/05	13:26:00	51.7	209.9	209.5
6	06/17/05	13:26:00	51.7				209.5	
7								
8								
9								
10								
11								
12								
13								
14								
Ave K _f =								1.32E-08

CWE Falling Head Permeability Test

Project: Vernon County Balefill
 Project No. 946-02-00
 Sample No. TP-3/ S-1
 Sample Type: Test pits

Area of Standpipe (sq cm):	1.77
Sample Height (cm):	7.2
Sample Area (sq cm):	18.85

Diameter (cm):	4.9
Dry Density (lb/ft ³):	118.4
% Moisture:	19.8%
Additional Height(cm)	157.8

Trial	Initial Readings		Final Readings		Elapsed Time (seconds)	Initial Head (cm)	Final Head (cm)	Permeability K (cm/sec)
	Date (dy/mn/yr)	Time (hr:mn:sc)	Date (dy/mn/yr)	Time (hr:mn:sc)				
1	06/12/05	13:11:00	06/13/05	13:11:00	86,400	202.8	202	3.09E-08
2	06/13/05	13:11:00	06/14/05	13:14:00	86,580	202.0	199.6	9.33E-08
3	06/14/05	13:14:00	06/15/05	13:05:00	85,860	199.6	196.8	1.11E-07
4	06/15/05	13:05:00	06/16/05	13:24:00	87,540	196.8	194	1.11E-07
5	06/16/05	13:24:00	06/17/05	13:25:00	86,460	194.0	191.3	1.10E-07
6	06/17/05	13:25:00				191.3		
7								
8								
9								
10								
11								
12								
13								
14								
Ave K _t =								9.12E-08

CWE Falling Head Permeability Test

Project: Vernon Co. Clay Test Pit
 Project No. 946-02-00
 Sample No. TP-10/S-2
 Sample Type: Test Pits

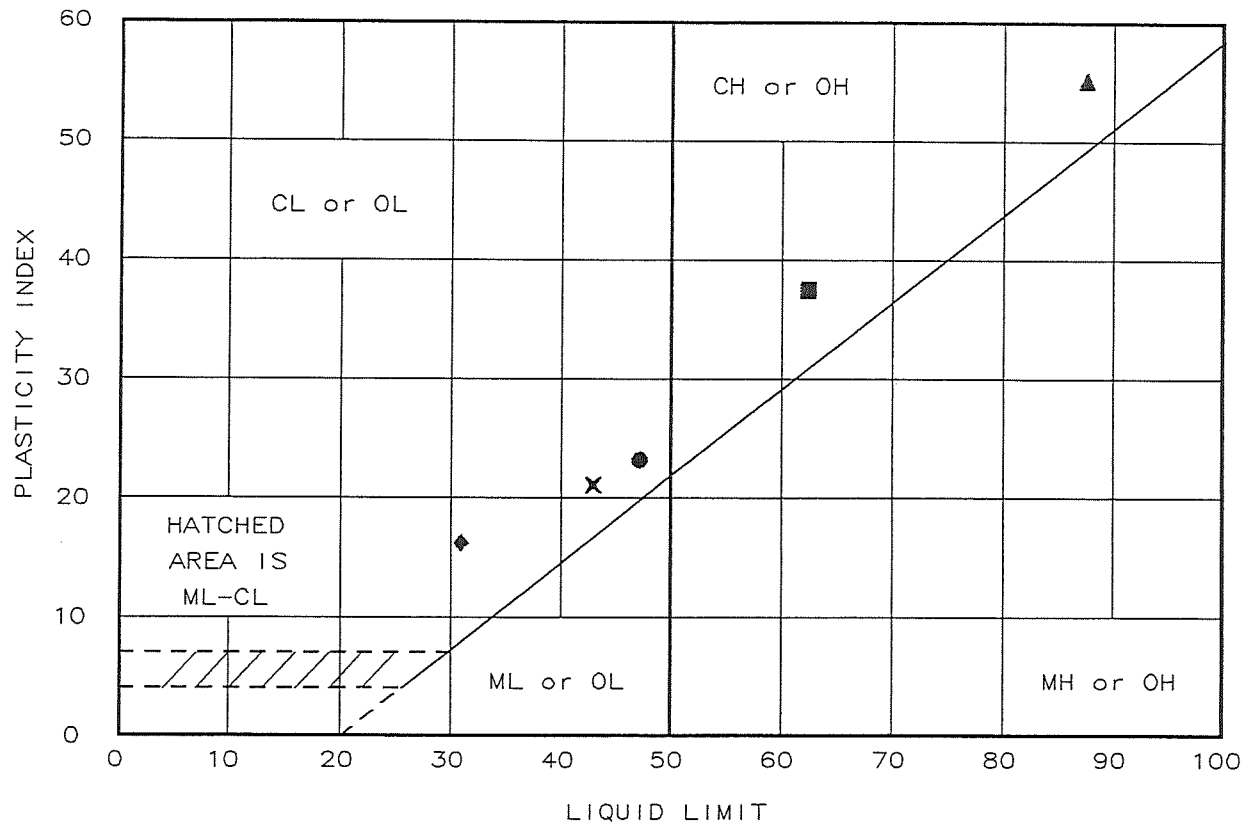
Area of Standpipe (sq cm):	1.77	Diameter (cm):	5
Sample Height (cm):	7.1	Dry Density (lb/ft ³):	106.24 lb./cu. ft.
Sample Area (sq cm):	19.63	% Moisture:	21.9%
		Additional Height(cm)	157.8

Trial	Initial Readings		Final Readings		Elapsed Time (seconds)	Initial Head (cm)	Final Head (cm)	Permeability K (cm/sec)
	Date (dy/mn/yr)	Time (hr:mn:sc)	Height (cm)	Date (dy/mn/yr)	Time (hr:mn:sc)	Height (cm)		
	06/26/05	13:00:00	58.0	06/27/05	13:05:00	54.7	215.8	1.14E-07
2	06/27/05	13:05:00	54.7	06/28/05	13:00:00	47.1	212.5	2.71E-07
3	06/28/05	13:00:00	47.1	06/29/05	15:00:00	35.6	204.9	3.95E-07
4	06/29/05	15:00:00	35.6	06/30/05	16:33:00	33.4	193.4	7.96E-08
5	06/30/05	16:33:00	33.4	07/01/05	12:47:00	28.8	191.2	2.14E-07
6	07/01/05	12:47:00	28.8				186.6	
7								
8								
9								
10								
11								
12								
13								
14								
Ave K _f =								2.15E-07

APPENDIX I

ATTERBERG LIMITS TEST RESULTS

LIQUID AND PLASTIC LIMITS TEST REPORT



Location + Description	LL	PL	PI	-200	ASTM D 2487-90
● TP-1/S-1 1.5'-3.5' Lt. brown clayey SILT, lit. sand, trace gravel	47.2	24.0	23.2	90.2	CL, Lean clay
▲ TP-1/S-2 3.5'-5.0' Lt. brown silty CLAY, trace sand & gravel	87.5	32.4	55.1	95.0	CH, Fat clay
■ TP-2/S-2 3'-4.4' Yellowbrown silty sandy CLAY, little gravel	62.4	24.9	37.5	74.4	CH, Fat clay with sand
◆ TP-3/S-2 3'-5' Lt. brown clayey sandy SILT, trace gravel	30.9	14.7	16.2	80.7	CL, Lean clay with sand
X TP-6/S-1 1.0'-2.5' Yellowbrown clayey SILT, trace sand & gravel	42.9	21.8	21.1	96.2	CL, Lean clay

Project No.: 946-02-000
 Project: Vernon Co. Clay Test Pit

 Client: Vernon Co. Landfill
 Location:

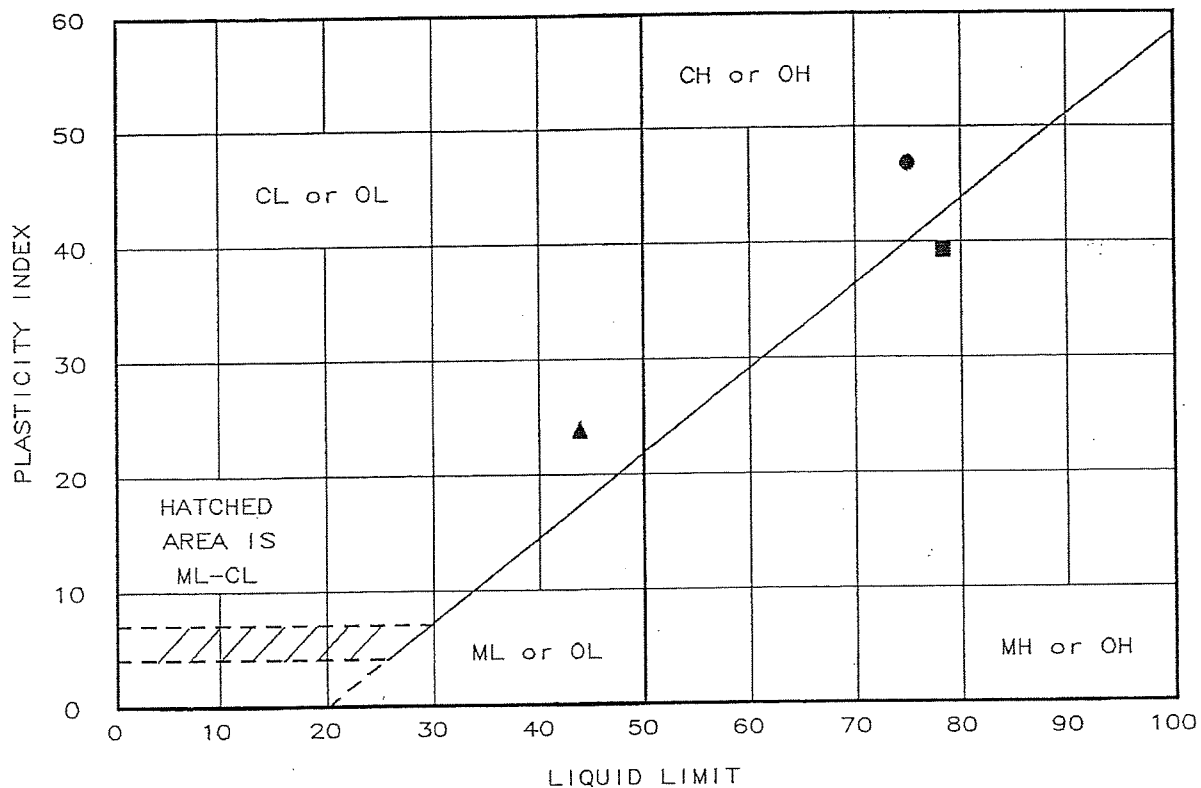
Date: 3/17/05

Remarks:
 Plastic bag samples

LIQUID AND PLASTIC LIMITS TEST REPORT
CENTRAL WISCONSIN ENGINEERS, INC.

Fig. No. 1

LIQUID AND PLASTIC LIMITS TEST REPORT



Location + Description	LL	PL	PI	-200	ASTM D 2487-90
● TP-6/S-2 2.5'-4.6' Yellowbrown silty CLAY, little sand	74.9	28.1	46.8	89.7	CH, Fat clay
▲ TP-7/S-1 1'-2' Yellowbrown clayey SILT, trace sand & gravel	43.9	20.0	23.9	95.5	CL, Lean clay
■ TP-7/S-2 2'-2.5' Brown silty CLAY, little sand & gravel	78.3	39.0	39.3	94.7	MH, Elastic silt

Project No.: 946-02-000
 Project: Vernon Co. Clay Test Pit
 Client: Vernon Co. Landfill
 Location:

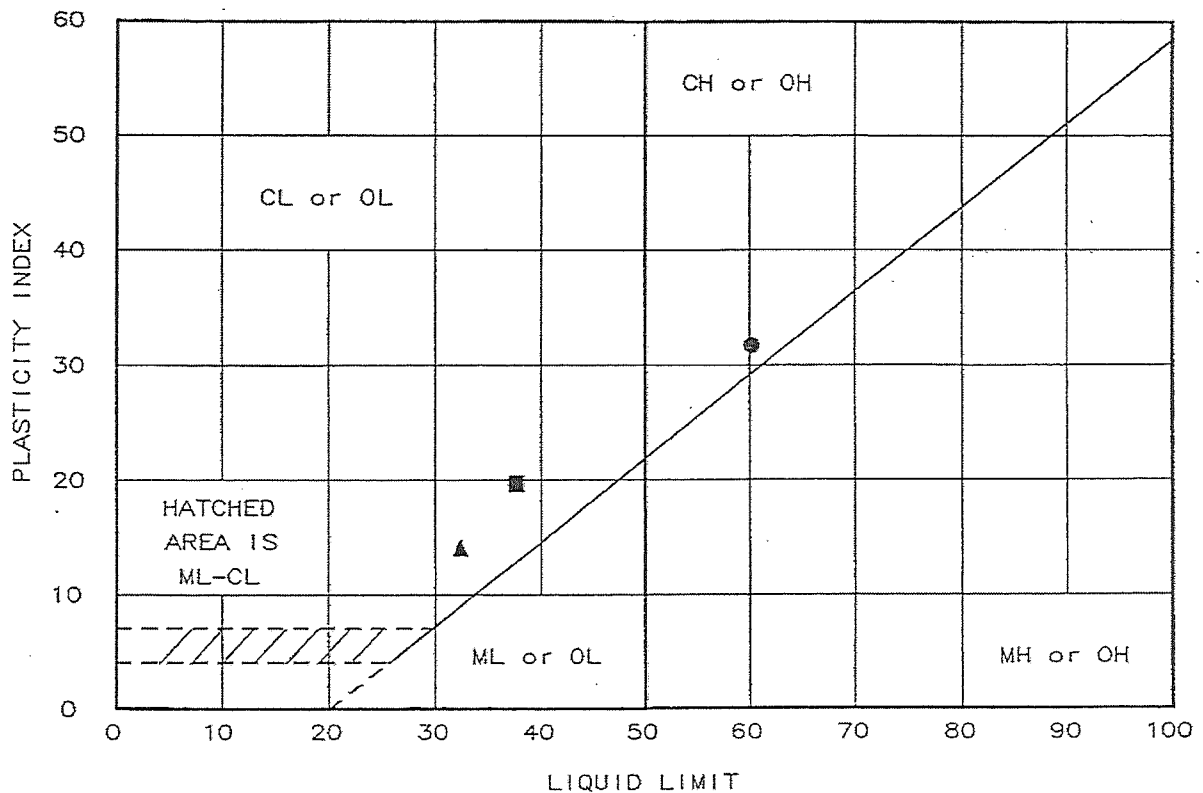
Date: 3/18/05

LIQUID AND PLASTIC LIMITS TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Plastic bag samples

Fig. No. 1

LIQUID AND PLASTIC LIMITS TEST REPORT



Location + Description	LL	PL	PI	-200	ASTM D 2487-90
● TP-11/S-2 4.2'-6.8' Dark yellowbrown silty CLAY, little sand, trace gravel	60.2	28.5	31.7	88.2	CH, Fat clay
▲ TP-13/S-2 4'-5' Yellowish brown silty sandy CLAY, trace gravel	32.4	18.3	14.1	62.2	CL, Sandy lean clay
■ TP-11/S-1 1.2'-4.2' Dark yellowbrown clayey SILT, trace sand	37.7	18.0	19.7	97.4	CL, Lean clay

Project No.: 946-02-000
 Project: Vernon Co. Clay Test Pit
 Client: Vernon Co. Landfill
 Location:

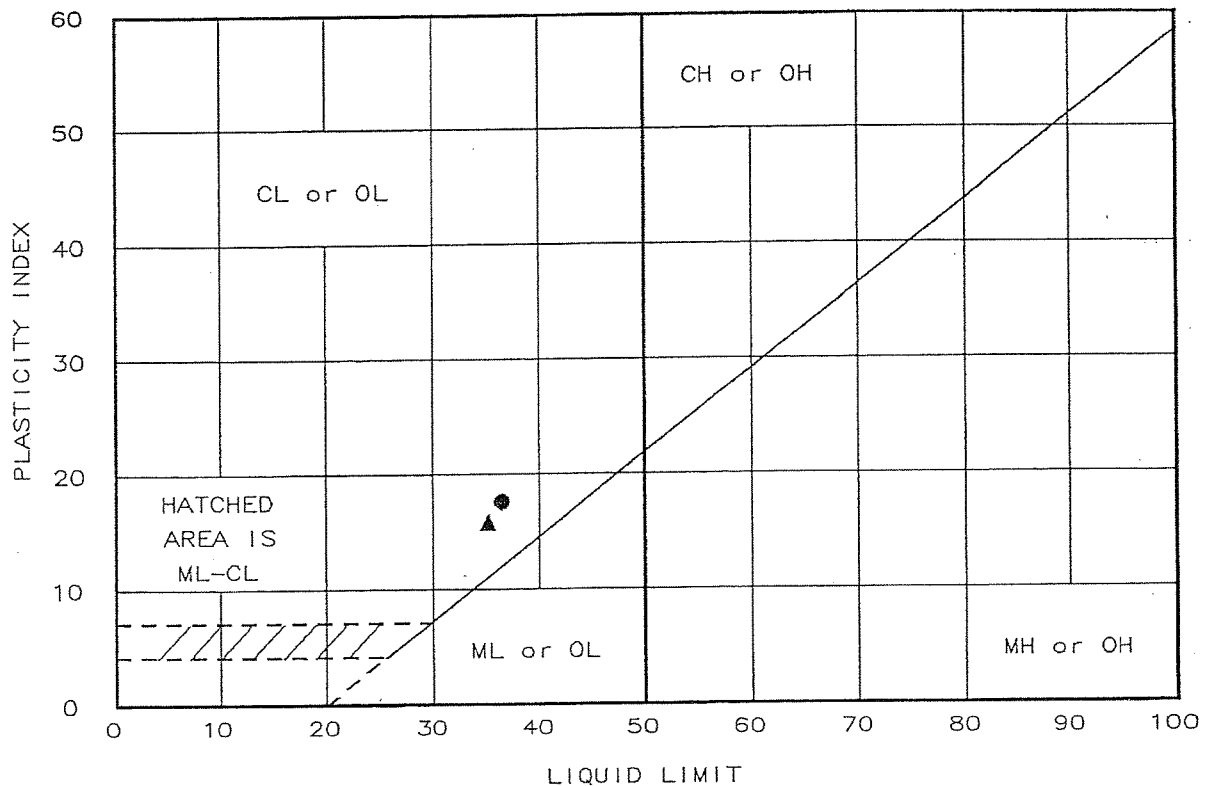
Date: 3/25/05

LIQUID AND PLASTIC LIMITS TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Plastic bag samples

Fig. No. 1

LIQUID AND PLASTIC LIMITS TEST REPORT



Location + Description	LL	PL	PI	-200	ASTM D 2487-90
● TP-13/S-1 1'-4' Dark yellowbrown clayey SILT, trace sand	36.5	18.9	17.6	98.7	CL, Lean clay
▲ TP-12/S-1 1'-3.2' Dark yellowishbrown clayey SILT, trace sand	35.2	19.4	15.8	97.8	CL, Lean clay

Project No.: 946-02-000
Project: Vernon Co. Clay Test Pit

Client: Vernon Co. Landfill
Location:

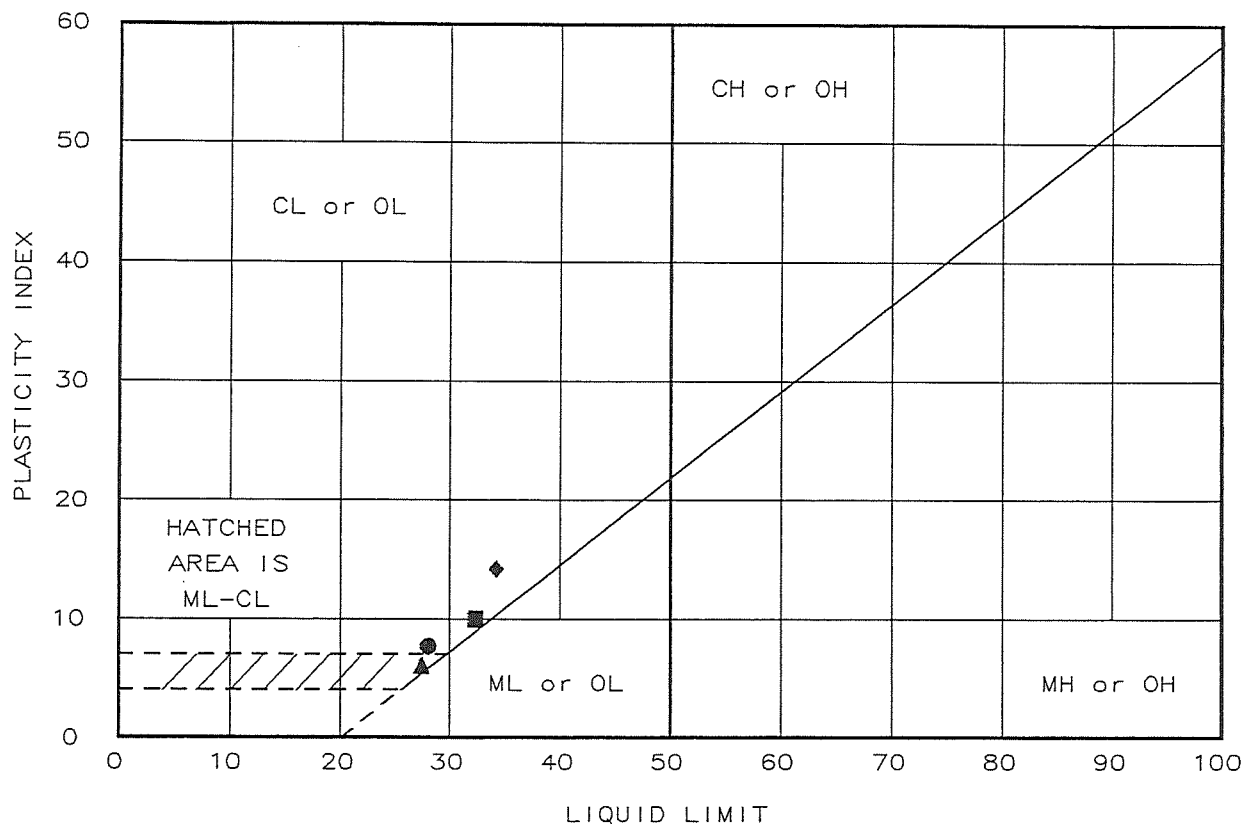
Date: 4/1/05

LIQUID AND PLASTIC LIMITS TEST REPORT
CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
Plastic bag samples

Fig. No. 1

LIQUID AND PLASTIC LIMITS TEST REPORT



Location + Description	LL	PL	PI	-200	ASTM D 2487-90
● TP-14/S-1 1'-3' Dark yellowbrown clayey SILT, trace sand	28.1	20.4	7.7	99.0	CL, Lean clay
▲ TP-15/S-1 1.2'-3.5' Dark yellowbrown clayey SILT, trace sand	27.5	21.4	6.1	99.7	CL-ML, Silty clay
■ TP-15/S-2 7'-9.2' Dark yellowbrown clayey SILT, trace sand	32.3	22.3	10	99.4	CL, Lean clay
◆ TP-10/S-1 1.5'-3.5' Yellowbrown clayey SILT, trace sand	34.2	20.0	14.2	99.1	CL, Lean clay

Project No.: 946-02-000
 Project: Vernon Co. Clay Test Pit

 Client: Vernon Co. Landfill
 Location:

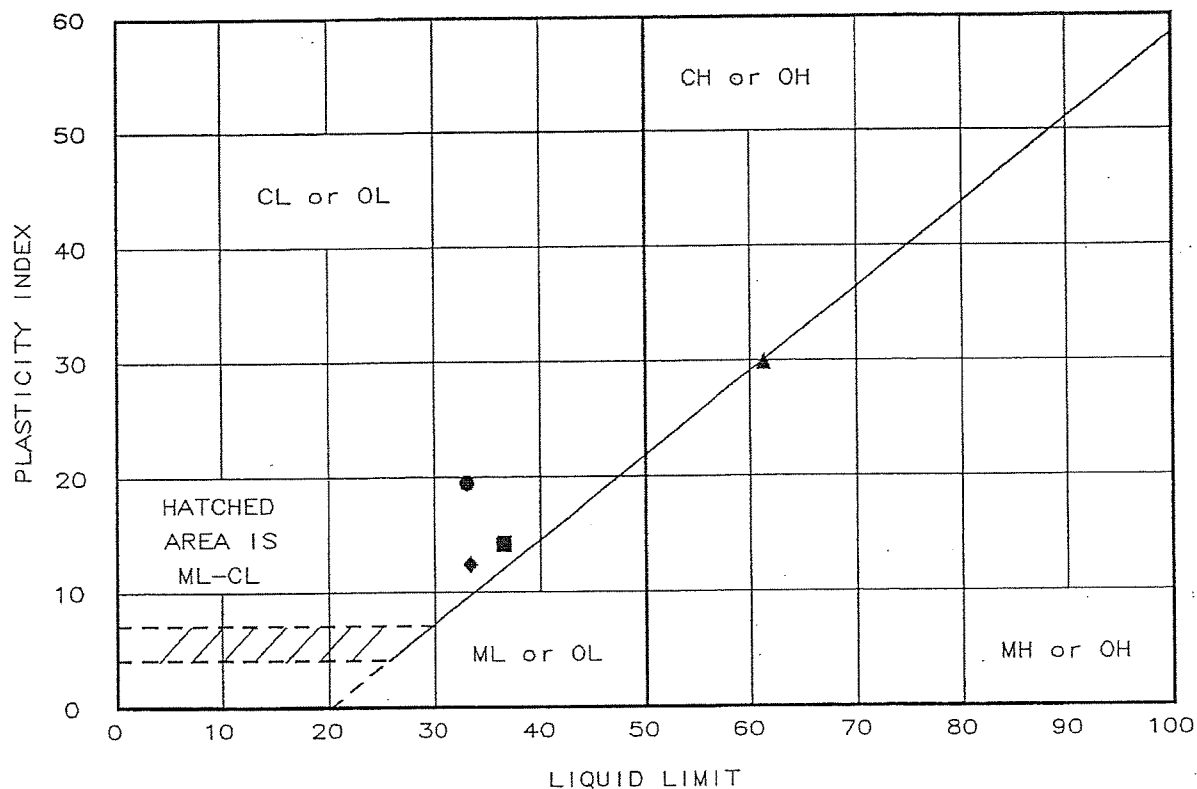
Date: 4/4/05

LIQUID AND PLASTIC LIMITS TEST REPORT
CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Plastic bag samples

Fig. No. 1

LIQUID AND PLASTIC LIMITS TEST REPORT



Location + Description	LL	PL	PI	-200	ASTM D 2487-90
● TP-2/S-1 1.4'-3' Dark yellowbrown clayey SILT, little sand	33.1	13.6	19.5	91.1	CL, Lean clay
▲ TP-8/S-2 6'-7' Yellowbrown clayey sandy SILT, trace gravel			9	76.9	MH, Elastic silt with sand
■ TP-9/S-1 1'-2.5' Dark yellowbrown clayey SILT, trace sand	36.6	22.4	14.2	99.6	CL, Lean clay
◆ TP-10/S-2 7'-9.5' yellowbrown clayey SILT, trace sand	33.4	21.0	12.4	99.2	CL, Lean clay

Project No.: 946-02-000
 Project: Vernon Co. Clay Test Pit

 Client: Vernon Co. Landfill
 Location:

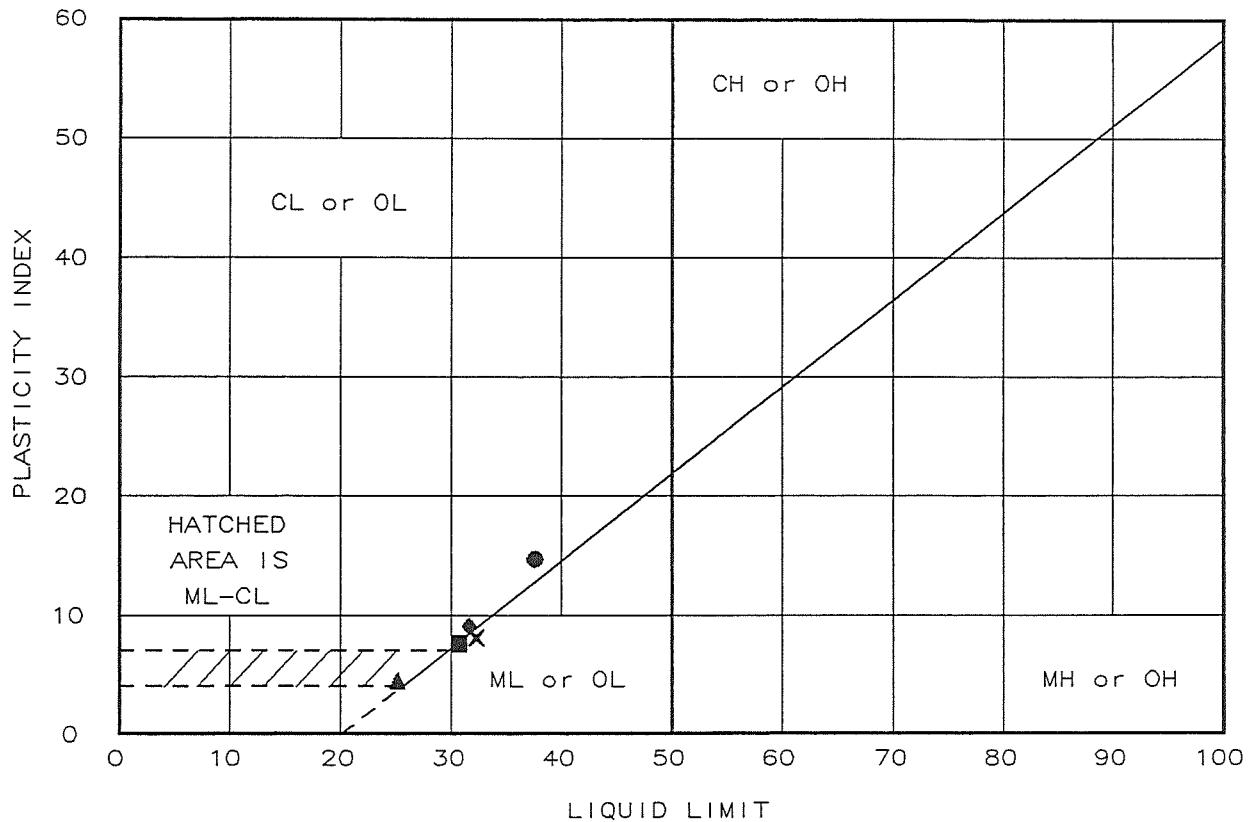
Date: 4/5/05

LIQUID AND PLASTIC LIMITS TEST REPORT
 CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Plastic bag samples

Fig. No. 1

LIQUID AND PLASTIC LIMITS TEST REPORT



Location + Description	LL	PL	PI	-200	ASTM D 2487-90
● TP-5/S-1 1'-3' Yellowish brown clayey SILT, trace sand	37.6	22.9	14.7	99.4	CL, Lean clay
▲ TP-5/S-2 6'-7.6' Yellowbrown clayey SILT, little sand, trace gravel	25.1	20.6	4.5	88.9	CL-ML, Silty clay
■ TP-8/S-1 1'-3' Yellowbrown clayey SILT, trace sand	30.7	23.1	7.6	99.2	ML, Silt
◆ TP-9/S-2 7'-8.5' Dark yellowbrown clayey SILT, trace sand	31.6	22.5	9.1	99.5	CL, Lean clay
✕ TP-14/S-2 6'-7.5' Dark yellowbrown clayey SILT, trace sand	32.3	24.2	8.1	99.6	ML, Silt

Project No.: 946-02-000
Project: Vernon Co. Clay Test Pit

Client: Vernon Co. Landfill
Location:

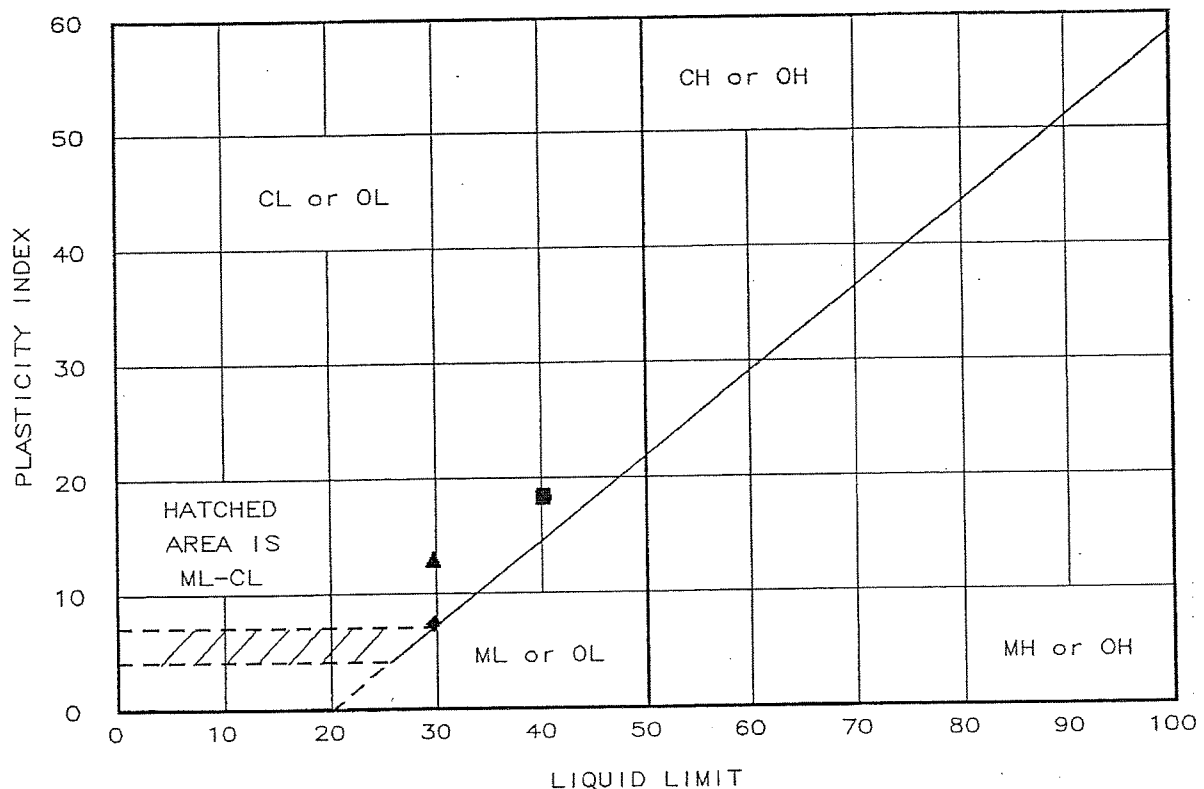
Date: 4/11/05

Remarks:
Plastic bag samples

LIQUID AND PLASTIC LIMITS TEST REPORT
CENTRAL WISCONSIN ENGINEERS, INC.

Fig. No. 1

LIQUID AND PLASTIC LIMITS TEST REPORT



Location + Description	LL	PL	PI	-200	ASTM D 2487-90
● TP-3/S-1 1.2'-3' Light brown clayey SILT, trace sand	40.3	22.0	18.3	99.0	CL, Lean clay
▲ TP-3/S-3 5'-8' Brown clayey SAND, little silt, trace gravel	29.7	16.7	13	32.2	SC, Clayey sand
■ TP-4/S-1 1.1'-5' Yellowish brown clayey SILT, trace sand	40.2	21.8	18.4	99.1	CL, Lean clay
◆ TP-4/S-2 8'-9.1' Yellowish brown clayey SILT, trace sand	29.7	22.3	7.4	98.9	CL, Lean clay

Project No.: 946-02-000
 Project: Vernon Co. Clay Test Pit

 Client: Vernon Co. Landfill
 Location:

Date: 4/11/05

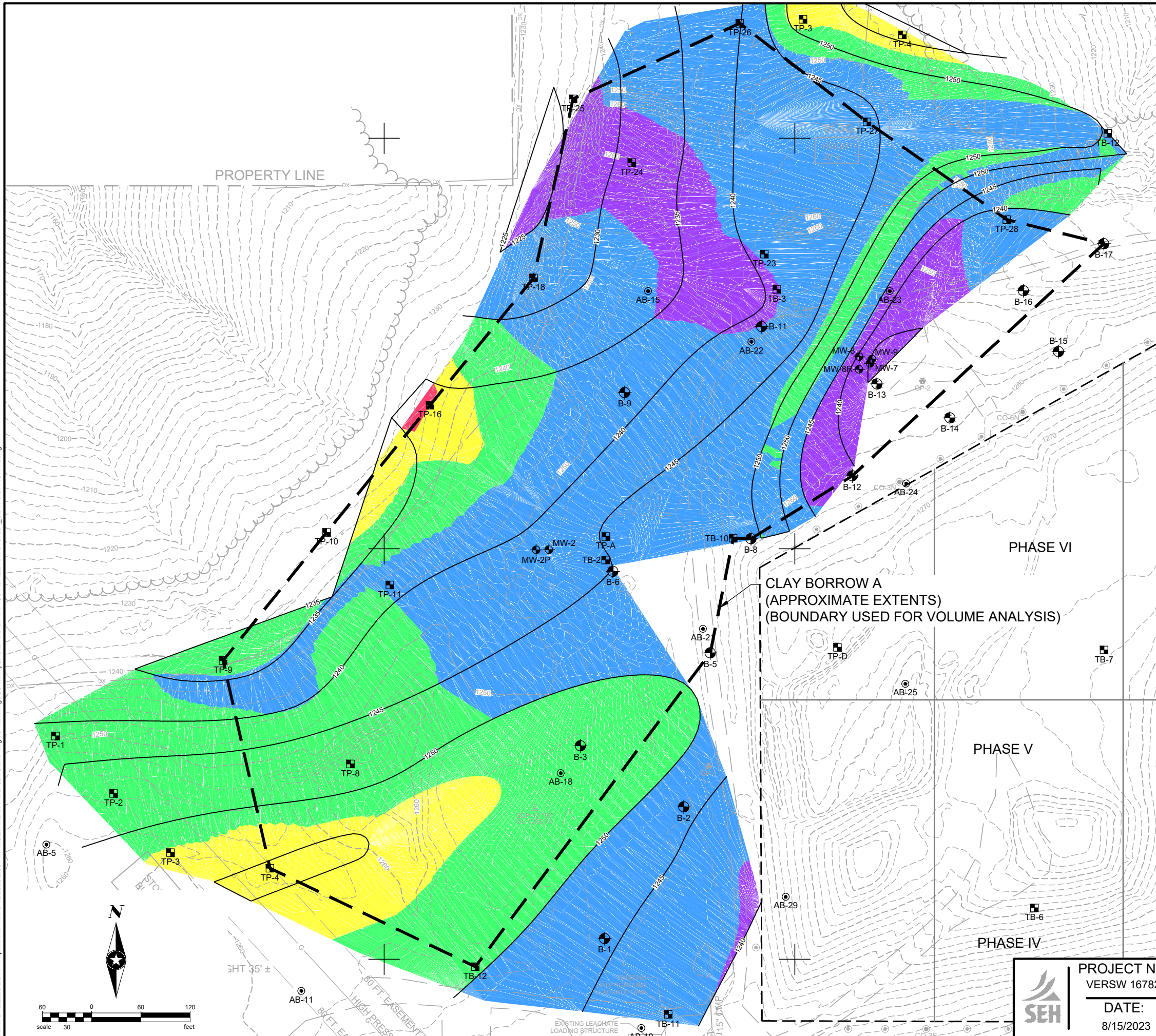
LIQUID AND PLASTIC LIMITS TEST REPORT
CENTRAL WISCONSIN ENGINEERS, INC.

Remarks:
 Plastic bag samples

Fig. No. 1

T-3 – Updated Isopach Maps for Clay Borrow Areas

Save: 8/15/2023 2:34 PM hpeterson Plot: 8/15/2023 2:55 PM X:\U2\VERSIONS\167824\5-final-dsgn\51-drawings\85-Heavy\CV\FEASIBILITY STUDY\SHEETS\VC167824_Clay Borrow A.dwg



NOTES:

1. GRAY CONTOURS REPRESENT EXISTING GRADE ELEVATIONS. CONTOUR INTERVAL IS 2-FOOT.
2. BOLD CONTOURS REPRESENT BOTTOM OF ACCEPTABLE CLAY ELEVATIONS. CONTOUR INTERVAL IS 5-FOOT.

VOLUME ANALYSIS:

BASE: BOTTOM OF CLAY
COMPARISON: TOP OF CLAY

CUT: 0 CY
FILL: 119,187 CY

NET: 119,187 CY

Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-0.39	0.00	Red
2	0.00	2.00	Yellow
3	2.00	5.00	Green
4	5.00	10.00	Blue
5	10.00	20.00	Purple

PHASE VI

CLAY BORROW A
(APPROXIMATE EXTENTS)
(BOUNDARY USED FOR VOLUME ANALYSIS)

PHASE V

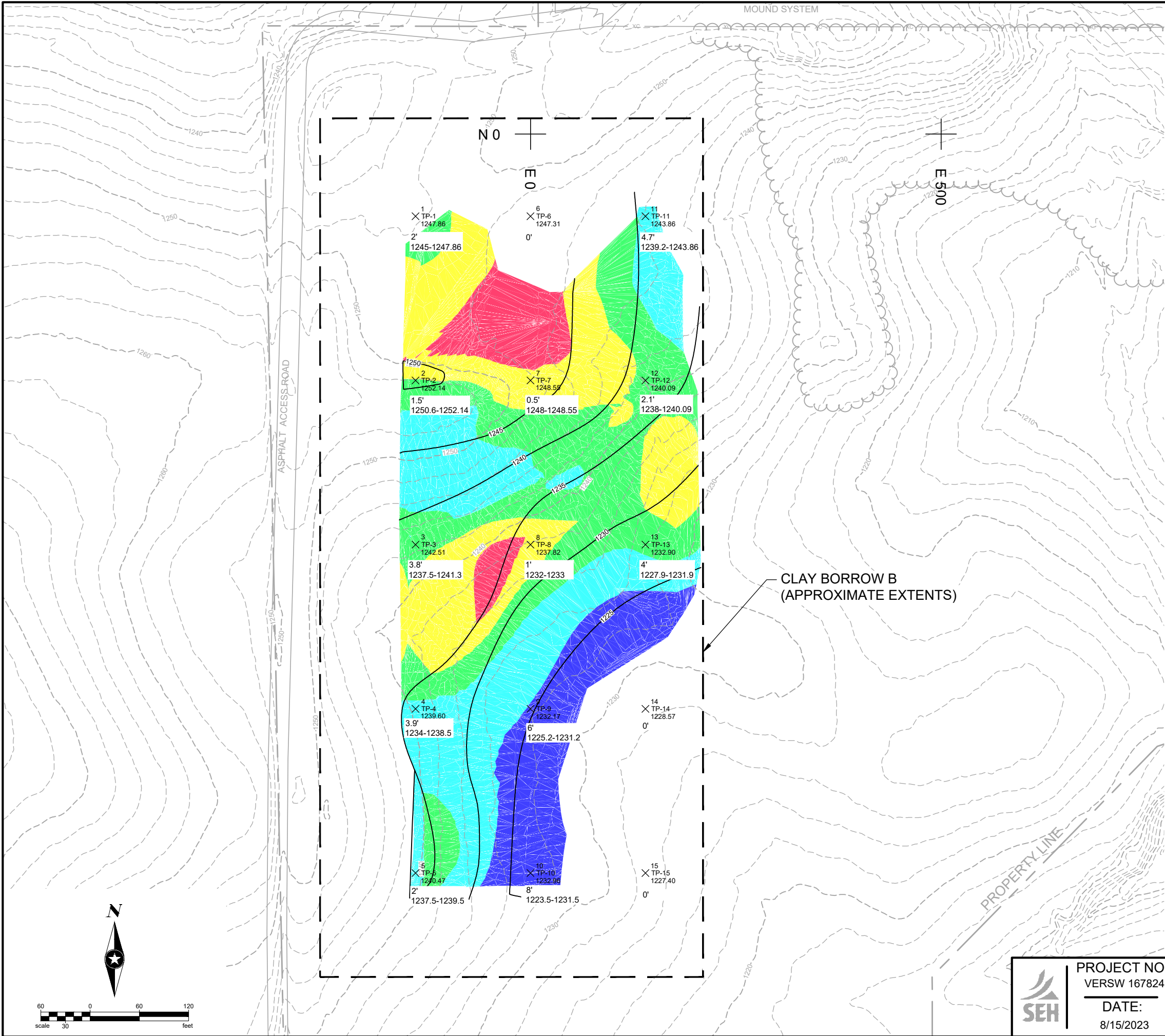
PHASE IV

PROJECT NO.
VERSW 167824
DATE:
8/15/2023

VERNON COUNTY LANDFILL
FEASIBILITY STUDY
ISOPACH MAP (UPDATED)
CLAY BORROW A

FIGURE
NO. 1

Save: 8/15/2023 2:45 PM rpeterson Plot: 8/15/2023 2:49 PM X:\UZ\VERS\167824\5-final-dgn\51-drawings\65-Heavy\CM\FEASIBILITY STUDY\SHEETS\VC167824_CLAY BORROW B.dwg



NOTES:

1. GRAY CONTOURS REPRESENT EXISTING GRADE ELEVATIONS. CONTOUR INTERVAL IS 2-FOOT.
2. BOLD CONTOURS REPRESENT BOTTOM OF ACCEPTABLE CLAY ELEVATIONS. CONTOUR INTERVAL IS 5-FOOT.

VOLUME ANALYSIS:

BASE: BOTTOM OF CLAY
COMPARISON: TOP OF CLAY

CUT: 432 CY
FILL: 28,571 CY
(ONLY FILL CONSIDERED)

CLAY VOLUME = 28,571 CY

Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-1.69	0.00	Red
2	0.00	2.00	Yellow
3	2.00	4.00	Green
4	4.00	6.00	Cyan
5	6.00	8.72	Blue



PROJECT NO.
VERSW 167824
DATE:
8/15/2023

VERNON COUNTY LANDFILL
FEASIBILITY STUDY
ISOPACH MAP (UPDATED)
CLAY BORROW B

FIGURE
NO. 2