LABORATORY TESTING - GEOTECHNICAL

Laboratory testing was performed on disturbed and undisturbed samples during the subsurface investigation. All testing was performed in accordance with ASTM standards or other standards where applicable. Selection of the samples to be tested and the tests to be performed on the samples were done by Bechtel. Bechtel submitted Geotechnical Laboratory Test Assignment Sheets dated November 16, December 7, 14, 19, 20, and 28, 2006, and January 2, 7, and 8, 2007. Revised Geotechnical Laboratory Test Assignment Sheets dated December 18 and 21, 2006, and January 8, 2007 were also submitted.

The laboratory personnel determined that some of the assigned tests on soil samples could not be performed because of insufficient sample volume.

Testing of soil samples, except for chemical tests, distribution coefficient (K_d), and Resonant Column Torsional shear (RCTS) testing, was performed in MACTEC's laboratories in Charlotte, North Carolina, Phoenix, Arizona, and Atlanta, Georgia.

Chemical testing for pH, sulfates and chlorides on selected soil samples as assigned by Bechtel was done by Severn Trent Laboratories, Inc. (STL), a subcontractor to MACTEC.

The distribution coefficient, K_d, will be conducted by the Savannah River National Laboratory, located at the Savannah River Site of the DOE in Aiken, South Carolina and operated by the Washington Savannah River Company. The Washington Savannah River Company LLC, under a Work for Others Agreement with MACTEC, will perform the Kd tests. These test results are not available at the time of this submittal. The K_d test results will be submitted as Attachment H at a later date.

Resonant Column Torsional Shear (RCTS) testing of soil samples as assigned by Bechtel is in progress by the Fugro Consultants laboratory in Houston, Texas, a subcontractor to MACTEC, under the technical overview of Dr. K.H. Stokoe of the University of Texas. The RCTS test results are not available at the time of this submittal. The RCTS test results, as well as the classification test results on the samples will be submitted as Attachment I at a later date.

Excluding the Kd and RCTS tests, the following tests were performed, and the results are presented in this Attachment F:

1.1 IDENTIFICATION TESTS

- Moisture content - ASTM D 2216-05
- Unit weight of soil - ASTM D 5084-03
- Specific gravity of soil - ASTM D 854-06
- Sieve and hydrometer analysis - ASTM D 422-63 (2002)e1 and ASTM D 6913-04e1
- Atterberg limits - ASTM D 4318-05
- Chemical analysis (pH, Chloride, Sulfate) - EPA 846 9045/9056-300.00/8056-300.00 and EPA SW-846 9045

1.2 COMPRESSIBILITY TEST

- Consolidation Tests; one dimensional - ASTM D 2435-04 Method B

1.3 COMPACTION AND STRENGTH TESTS

- Moisture density - ASTM D 1557-02e1
- Unconsolidated; undrained triaxial compression - ASTM D 2850-03a
- Consolidated; undrained triaxial compression- ASTM D 4767-04
- Direct shear; soil - ASTM D 3080-04
- Unconfined Compression - ASTM D-2166-00e1
- California Bearing Ratio - ASTM D 1883-05

1.4 REPORTING

Except for the Kd and RCTS tests, the laboratory test reports, consisting of individual test data and results sheets as required by the testing standard, are contained in this Attachment F. A summary of the test results on can be found in Table F-1 of this attachment.

1.5 QUALITY ASSURANCE

Quality related activities performed by MACTEC and it's subcontractors during the work herein presented were in accordance with the MACTEC Quality Assurance Manual and the MACTEC Quality Assurance Project Document. The MACTEC QA program complies with NQA-1 Subpart 2.2 and the requirements of 10CFR50 Appendix B.

1.6 DESCRIPTIONS

A brief description of the tests performed and reported in this Attachment F is as follows:

Moisture Content - ASTM D 2216-05

A test specimen is dried in an oven at a temperature according to the ASTM standard to a constant weight. The loss of weight due to drying is considered to be water. The water content is calculated by dividing the weight of water by the weight of the dry specimen. The water content is expressed as a percentage value.

Unit Weight of Soil - ASTM D 5084-03 (Sections 5.7 – 5.9. 8.1. 11.3.2)

Sections of the undisturbed samples were extruded from the sampling tubes and trimmed to remove any surface irregularities. Dimensions of the sample were measured and recorded and the weight was determined. Unit weight was calculated by dividing the sample weight by volume. If the moisture content is known, dry unit weight can be calculated by dividing the wet sample unit weight by (1 + moisture content, in decimal format).

Specific Gravity of Soil - ASTM D 854-06

The specific gravity is required in calculation of the soil properties void ratio and degree of saturation. Specific gravity G_s is defined as the ratio of the unit weight (or density) of soil solids (particles) to the unit weight (or density) of water. The specific gravity of the soil particles is determined according to Method B of the ASTM standard.

Sieve and Hydrometer Analysis - ASTM D 422-63 (2002)e1 and ASTM D 6913-04e1

Sieve Analysis – The dried soil sample is separated into a series of fractions using a standard set of nested sieves. The sieving operation is conducted by means of a lateral and vertical motion of the nest of sieves, accompanied by jarring action to keep the sample moving continuously over the surface of the sieves. The weights retained on each of the set of nested sieves are used to calculate the percent of the sample passing each sieve size.

Hydrometer Analysis – The portion of the soil sample passing the No. 10 (2.0 mm) sieve is soaked in water and dispersed using a dispersing agent. The solution is placed in a cylinder and stirred, and the density of the solution is monitored over time with a hydrometer to observe the settling out of suspended soil particles. Diameters corresponding to the readings of the hydrometer are then calculated using Stoke's law.

ASTM D 6913-04 is the current specification for grain size analysis, but does not include hydrometer testing. Where hydrometer testing was required, Section 1.4 of the specification allows that ASTM D 422-63 (2002) be used.

Section 5.1.1 of ASTM D 422-63 (2002) and Table 1 of ASTM D 6913-04 give minimum sample weight requirements (the minimum depends on the maximum particle size present) for each test. In cases where there was not enough sample to meet the appropriate recommended weight, the test was completed using the available sample and it was noted in the Remarks section of the Particle Size Distribution Report.

Atterberg Limits - ASTM D 4318-05

The specimen is processed to remove material retained on the No. 40 (425-μm) sieve. The liquid limit is determined by performing trials in which a portion of the specimen is spread in a brass cup, divided in two by a grooving tool, and then allowed to flow together from the shocks caused by repeatedly dropping the cup in a standard mechanical device. The multipoint liquid limit, Method A, requires three or more trials over a range of water contents to be performed and the data from the trials plotted or calculated to make a relationship from which the liquid limit is determined. The one-point liquid limit, Method B, uses the data from two trials at one water content multiplied by a correction factor to determine the liquid limit.

The plastic limit is determined by alternately pressing together and rolling into 1/8-inch (3.2-μm) diameter thread a small portion of plastic soil until its water content is reduced to a point at which the thread crumbles and can no longer be pressed together and re-rolled. The water content of the soil at this point is reported as the plastic limit.

The plasticity index is calculated as the difference between the liquid limit and the plastic limit.

Chemical Analysis (pH, Chloride, Sulfate) - EPA 846 9045/9056-300.00/8056-300.00 and EPA SW-846 9045

A small quantity of soil was placed in a jar and sent to the laboratory for chemical analysis. Chemical analyses consisted of soil pH, and chloride and sulfate ion concentration. Soil pH is measured using a pH meter with results reported to 0.1 pH units. The concentration of chloride and sulfate ions is measured using an ion chromatograph with results reported in units of milligrams per kilogram.

Consolidation Tests - ASTM D 2435-04 Method B

Sections of the undisturbed samples were extruded from the sampling tube for consolidation testing. The specimen was then trimmed into a disc 2.5 inches in diameter and 1-inch thick. The disc was confined in a stainless steel ring and sandwiched between porous plates. It was then subjected to incrementally increasing vertical loads and the resulting changes in specimen height with respect to time were measured with a micrometer dial gauge. The load increments were doubled each time, and deformation (consolidation) under each load increment was considered complete when the deformation, versus time plot became asymptotic using the log-time method. The test results are presented in the form of pressure versus percent strain, and pressure versus void ratio curves.

Moisture-Density Modified Proctor Test - ASTM D 1557-02e1

Two buckets of soil were obtained in the field for each bulk sample assigned by Bechtel. In the laboratory these buckets were thoroughly mixed to assure uniformity of test specimens for all testing assigned on the bulk samples.

For the moisture-density relationship, the samples were tested in accordance with the ASTM standard for the modified Proctor test. The test yielded the optimum moisture content and corresponding maximum dry density for the bulk sample.

Unconsolidated – Undrained Triaxial Compression Test - ASTM D 2850-03a

The undisturbed samples assigned for testing were cut into sections which were extruded vertically from the sampling tubes for triaxial shear testing. The specimens thus formed consisted of cylinders with nominal diameter 2.9 inches and a height to diameter ratio of between 2 and 2.5 as required by the ASTM standard. The specimens were encased in rubber membranes. Each was then placed into a compression chamber and confined by an all-around fluid pressure. The samples were then loaded axially without any special effort to saturate them, or otherwise change their moisture content, and without allowing any drainage to occur during the testing. Failure was assumed to have occurred when the specimens had undergone the maximum load they would support.

Consolidated – Undrained Triaxial Compression Test - ASTM D 4767-04

The specimens, encased in the rubber membranes, were saturated by back-pressure prior to shearing. Section 8.2.3.1 of the ASTM standard describes how to determine when the specimen is saturated. Drainage was allowed from the specimen during the consolidation phase, thus allowing equilibrium under the confining stress, but no drainage was allowed during the loading phase. Failure was assumed to have occurred when the specimens had reached the maximum deviator stress or an axial strain of 17 percent.

Pore pressures generated during the loading phase were measured. The test is termed consolidated-undrained and total stresses result if no pore pressure corrections are included. When the pore pressures generated during the loading phase are subtracted from the total stresses, effective stresses result.

Direct shear for Soil - ASTM D 3080-04

A soil specimen with a nominal diameter of 2.5 inches and a height of 1 inch is placed in a loading device and is held under constant normal (vertical) load while the loading device deforms the specimen at a controlled strain rate on or near a single shear plane determined by the configuration of the device. One vertical stress was assigned for each test, and shear stresses versus horizontal displacements are taken whereby peak shear stress is obtained. For each test, the vertical stress is constant throughout the test. The direct shear test, thus assigned, provides an estimate of the shear strength at the assigned normal (vertical) stress.

Unconfined Compression - ASTM D-2166-00e1

This test determines the unconfined compressive strength of cohesive soil in the undisturbed, remolded, or compacted condition, using strain-controlled application of the axial load. This test provides an approximate value of the strength of cohesive soils in terms of total stresses. This test is applicable only to cohesive materials which will not expel or bleed water (water expelled from the soil due to deformation or compaction) during the loading portion of the test and which will retain intrinsic strength after removal of confining pressures, such as clays or cemented soils.

California Bearing Ratio Test - ASTM D 1883-05

The California Bearing Ratio (CBR) test is used to compare the bearing capacity of a material to that of a well-graded crushed stone. Thus, a well-graded crushed stone material should have a CBR ≈ 100%. The test uses a loading device to advance a piston at 0.05 in/min into the compacted test material. The load required for advancing the piston is measured and recorded at specific penetration intervals and used to generate a stress versus penetration curve.

Each material tested had two specimens prepared at the optimum moisture content and compacted to 95% of the maximum dry density in a cylindrical mold. Surcharge weights were placed on top of the specimens to simulate the overburden stresses expected in the field. One of the specimens was then placed in a water bath to soak for 96 hours, while monitoring swelling that occurred. The other test specimen proceeded to penetration testing without soaking. Upon completion of the penetration test, the CBR of each specimen tested was computed using stress measurements corresponding to 0.1 and 0.2 inches penetration and the corresponding values for well-graded crushed stone—1,000 and 1,500 psi, respectively.

Section 7.1.2 of the ASTM standard was modified per Bechtel request as described in the previous paragraph.

TABLE F-1

LABORATORY TESTING SUMMARY

STP COL PROJECT

MACTEC ENGINEERING AND CONSULTING, INC.

PROJECT # 6050-06-0496

SAMPLE INFORMATION						PHYSICAL PROPERTIES: Grain Size (Passing %)					Natural Moisture Content (%) at e_o						Atterberg Limits			
Boring Number	Sample Number	Sample Top Depth, feet	Sample Bottom Depth, feet	USCS Symbol	USCS Material Description	Gravel	Sand	Silt	Clay	Fines	Physical Properties	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Liquid Limit, LL	Plastic Limit, PL	Plasticity Index, PI	Specific Gravity, Gs
B-819	SS-11	33.5	35	SP-SM	Poorly Graded Sand w/ Silt	0.0	88.2			11.8	27.0					27.0				
B-819	UD-3	43	45	CH	Fat Clay							28.5				28.5	66	24	42	
B-819	SS-13	48.5	50	CH	Fat Clay						23.1					23.1	65	20	45	
B-819	SS-16	63.5	65	SM	Silty Sand	0.0	80.1			19.9	19.9					19.9				
B-819	SS-18	73.5	75	SP-SM	Poorly Graded Sand w/ Silt	0.0	90.7			9.3	19.4					19.4				
B-819	UD-4	83	85									18.0	21.3	20.5		19.9				2.82
B-819	SS-21	93.5	95	SM	Silty Sand	0.0	56.3			43.7	25.2					25.2				
B-827	SS-3	3	4.5																	
B-827	SS-4	4.5	6								17.0					17.0				
B-827	SS-6	6	7.5	CL	Lean Clay with Sand	1.7	19.9			78.4	19.2					19.2	34	16	18	
B-827	SS-7	9	10.5																	
B-827	SS-8	10.5	12	ML	Sandy Silt	3.7	28.2	56.0	12.1	68.1	22.3					22.3	NV	NP	NP	
B-827	SS-10	23.5	25	CL	Lean Clay						25.5					25.5	29	19	10	
B-827	UD-2	28	30									21.3				21.3				
B-827	UD-3	48	50	CH	Fat Clay							28.2				28.2	54	21	33	
TP1-B919	1	0.5	6	CH	Fat Clay	0.0	11.0	45.1	43.9	89.0	20.2					20.2	50	17	33	
TP1-B927	1	0.5	4	CL	Lean Clay	0.0	11.4	41.6	47.0	88.6	24.1					24.1	45	15	30	
TP1-C304	1	3	6.75	CH	Fat Clay	0.0	9.5	44.0	46.5	90.5	21.7					21.7	51	15	36	
TP1-C404	1	2.25	7	CH	Fat Clay	0.9	12.1	28.7	58.3	87.0	24.3					24.3	62	18	44	
TP2-B919	2	6	8.5	CH	Fat Clay	0.0	0.8	7.6	91.6	99.2	25.9					25.9	74	22	52	
TP2-B927	2	5.5	8.5	CL	Lean Clay	0.2	8.8	48.1	42.9	91.0	22.0					22.0	41	15	26	
TP2-C304	2	6.75	9	CL	Lean Clay	0.4	9.2	62.9	27.5	90.4	25.5					25.5	40	17	23	
TP2-C404	2	7	9	CH	Fat Clay	1.0	1.9	7.2	89.9	97.1	28.4					28.4	77	21	56	

		Dry Density (pcf) at e_o						Void Ratio					Triaxial Tests								
Boring Number	Sample Number	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Wet Density (pcf)	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Test Type (1)	q_u (ksf)	C' (ksf)	φ' (degree)	σ_3 or σ_3' (ksf)	max σ_d (ksf)	Pore Pressure (ksf), at max σ_d	C (ksf)	φ (degree)
B-819	SS-11																				
B-819	UD-3	94.5				94.5	119.5	0.784				0.784	UU	3.5						1.7	0.0
B-819	SS-13																				
B-819	SS-16																				
B-819	SS-18																				
B-819	UD-4	102.8	103.3	97.7		101.3	121.4	0.591	0.583	0.675		0.616	CU		0.7	27.9				2.5	19.0
B-819	SS-21																				
B-827	SS-3																				
B-827	SS-4																				
B-827	SS-6																				
B-827	SS-7																				
B-827	SS-8																				
B-827	SS-10																				
B-827	UD-2	105.3				105.3	127.7	0.600				0.600	UNC	1.7						0.9	
B-827	UD-3	95.1				95.1	121.9	0.772				0.772	UNC	3.5						1.8	
TP1-B919	1																				
TP1-B927	1																				
TP1-C304	1																				
TP1-C404	1																				
TP2-B919	2																				
TP2-B927	2																				
TP2-C304	2																				
TP2-C404	2																				

		Consolidation						Direct Shear			Chemical Analysis			Compaction		
Boring Number	Sample Number	P_o (ksf)	P_c (ksf)	OCR	C_c	C_r	C_v (ft²/day)	τ (psi) max.	σ (psi)	Relative Displacement at Max Shear (%)	pH	Chloride (mg/kg)	Sulfide (mg/kg)	Optimum Moisture (%)	Maximum Density (pcf)	CBR (%)
B-819	SS-11															
B-819	UD-3															
B-819	SS-13															
B-819	SS-16															
B-819	SS-18															
B-819	UD-4															
B-819	SS-21															
B-827	SS-3										8.4	244.00	165.00			
B-827	SS-4															
B-827	SS-6															
B-827	SS-7										8.5	6.60	9.30			
B-827	SS-8															
B-827	SS-10															
B-827	UD-2															
B-827	UD-3															
TP1-B919	1													12.40	115.6	
TP1-B927	1													13.50	118.4	3
TP1-C304	1													11.20	112.2	
TP1-C404	1													13.80	116.8	3
TP2-B919	2													18.20	108.1	
TP2-B927	2													11.30	117.6	
TP2-C304	2													9.50	121.8	2
TP2-C404	2													9.40	121.7	3

Notes: (1) UNC = Unconfined Compression Test, UU = Unconsolidated - Undrained, CU = Consolidated - Undrained

TABLE F-1

LABORATORY TESTING SUMMARY

STP COL PROJECT

MACTEC ENGINEERING AND CONSULTING, INC.

PROJECT # 5050-08-0488

SAMPLE INFORMATION						PHYSICAL PROPERTIES																																															
						Grain Size (Passing %)					Natural Moisture Content (%) at σ_o						Atterberg Limits				Dry Density (pcf) at σ_o							Void Ratio					Triaxial Tests								Consolidation					Direct Shear			Chemical Analysis			Compaction		
Boring Number	Sample Number	Sample Top Depth, feet	Sample Bottom Depth, feet	USCS Symbol	USCS Material Description	Gravel	Sand	Silt	Clay	Fines	Physical Properties	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Liquid Limit, LL	Plastic Limit, PL	Plasticity Index, PI	Specific Gravity, Gs	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Wet Density (pcf)	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Test Type (1)	q_u (ksf)	C' (ksf)	φ' (degree)	σ_3 or σ_3' (ksf)	max σ_d (ksf)	Pore Pressure (ksf), at max σ_d	C (ksf)	φ (degree)	P_c (ksf)	P_o (ksf)	OCR	C_c	C_r	C_v (ft^2/day)	τ (psf) max.	σ (psf)	Relative Displacement at Max Shear (%)	pH	Chloride (mg/kg)	Sulfide (mg/kg)	Optimum Moisture (%)	Maximum Density (pcf)	CBR (%)
B-301	SS-34	168.5	170	ML	Silt with Sand	0.0	23.3			76.7	20.9					20.9	NV	NP	NP																																		
B-302-DH	SS-13	28.5	30	SM	Silty Sand	0.4	59.7			39.9	21.5					21.5																																			
B-303	UD-1	63	65	SM	Silty Sand	0.0	81.7	15.6	2.7	18.3		25.6			22.4	24.0	NV	NP	NP	2.70	102.4			102.7	102.6	127.1	0.646			0.640	0.643	UU	1.1						0.8	0.0	4.450	13.4	3.0	0.283	0.020							
B-303	UD-2	88	90	CH	Fat Clay	0.0	0.8	39.0	60.4	99.4		24.7			28.6	26.6	57	18	39	2.75	107.2			94.7	101.0	127.9	0.602			0.818	0.705	UU	6.9						3.5	0.0	6.018	13.4	2.2	0.249	0.040							
B-303	UD-3	108	110								8.7	15.1				12.4					123.5				123.0	134.9	0.494				0.494	UU	5.0					2.5	0.0												
B-303	UD-4	133	135	CH	Fat Clay with Sand	0.0	28.5	39.9	31.6	71.5		29.5				29.5	63	25	38	2.69	93.7				93.7	121.3	0.793				0.793	UU	0.3					0.1	0.0												
B-303	UD-4	133	135									19.9	18.0	18.3		18.7					108.4	111.5	111.4		110.4	131.1	0.556	0.506	0.508		0.523	CU		2.4	11.0			3.1	3.2												
B-303	UD-5	168	170	SM	Silty Sand	0.0	62.9			37.1		32.0				32.0	NV	NP	NP	2.67	96.4				96.4	127.2	0.749				0.749	UU	30.8					15.4	9.0												
B-305-DH	SS-2	1.5	3																																														9.2				
B-305-DH	UD-1	3	5	CH	Fat Clay	0.0	19.4	41.8	47.8	89.6		22.6			25.0	23.8	62	19	43	2.72	100.9			96.5	98.8	122.9	0.883			0.750	0.717	UNC	1.9						1.0		0.580	3.2	6.5	0.269	0.023							
B-305-DH	SS-3	6	7.5																																														8.0				
B-305-DH	SS-8	13.5	15	CL	Lean Clay with Gravel						19.8					19.8	30	16	14																																		
B-305-DH	SS-9	18.5	20	ML	Silt with Sand	0.0	22.5			77.5	22.7					22.7	NV	NP	NP																																		
B-305-DH	SS-11	27	28.5								24.0					24.0																																					
B-305-DH	UD-4	53	55	CL	Sandy Lean Clay	0.0	48.1	28.1	23.8	51.9		22.4			26.7	24.6	45	20	25	2.69	102.2			95.8	100.5	125.2	0.837			0.710	0.774	UNC	4.9						2.5		3.820	14.3	3.7	0.252	0.017							
B-305-DH	SS-18	58.5	60	CH	Fat Clay						20.9					20.9	58	20	38																																		
B-305-DH	SS-19	73.5	75	SP-SM	Poorly Graded Sand w/ Silt	0.0	88.4			11.6	23.1					23.1																																					
B-305-DH	UD-5	78	80	SP-SM	Poorly Graded Sand w/ Silt	0.0	93.5	0.7	5.8	6.5		22.4		22.0	22.0	22.1	NV	NP	NP	2.64	106.8			104.0	102.4	125.1	0.636			0.520	0.528	UNC	0.4						0.2		5.320	12.9	2.4	0.093	0.017							
B-305-DH	SS-20	83.5	85																																														8.9	20.60	14.50			
B-305-DH	SS-21	88.5	90	CH	Fat Clay	0.0	1.5	37.4	61.1	98.5	21.1					21.1	55	19	36																																		
B-305-DH	SS-22	93.5	95	CH	Fat Clay						22.5					22.5	50	17	33																																		
B-305-DH	UD-6	103	105	CH	Fat Clay	0.0	5.2			94.8																																											
B-305-DH	SS-24	108.5	110	SP-SM	Poorly Graded Sand w/ Silt	0.0	91.1			8.9	19.8					19.8																																					
B-305-DH	SS-25	118.5	120	CL	Lean Clay						21.8					21.8	43	15	28																																		
B-305-DH	UD-7	123	125								19.5	18.4			21.8	19.9					111.2			106.2	108.7	129.2	0.518			0.590	0.553	UNC	2.4						1.2		8.140	18.9	2.3	0.196	0.030							
B-305-DH	UD-7	123	125									20.1				20.1					106.9				108.9	129.4	0.577				0.577	UU	6.0					3.0	0.0												
B-305-DH	UD-8	134	140	CL	Lean Clay with Sand	0.0	15.9	59.9	24.2	84.1		18.1			19.0	18.6	32	14	18	2.70	109.7			108.7	109.2	129.5	0.529			0.550	0.545	UU	9.1						4.5	0.0	8.140	15.2	1.8	0.173	0.023							
B-305-DH	UD-9	158	160	CH	Fat Clay	0.0	9.2	25.7	65.1	91.8		16.4				16.4	56	20	36	2.70	89.1				89.1	103.7	0.892				0.892																14.03	25.00	60						
B-305-DH	SS-29	170	171.5	ML	Silt with Sand	0.0	22.7	67.8	9.5	77.3	23.9					23.9	NV	NP	NP																																				
B-305-DH	SS-30	178.5	180	CL	Lean Clay						21.7					21.7	48	15	33																																		
B-305-DH	SS-32	198.5	200	CH	Fat Clay						28.1					28.1	57	17	40																																		

TABLE F-1

LABORATORY TESTING SUMMARY

STP COL PROJECT

MACTEC ENGINEERING AND CONSULTING, INC.

PROJECT # 5050-06-0488

| SAMPLE INFORMATION | | | | | | PHYSICAL PROPERTIES | | | | | |

TABLE F-1

LABORATORY TESTING SUMMARY

STP COL PROJECT

MACTEC ENGINEERING AND CONSULTING, INC.

PROJECT # 6050-06-0456

SAMPLE INFORMATION						PHYSICAL PROPERTIES: Grain Size (Passing %)					Natural Moisture Content (%) at e_o						Atterberg Limits				Dry Density (pcf) at e_o						Void Ratio					Triaxial Tests									Consolidation						Direct Shear			Chemical Analysis			Compaction		
Boring Number	Sample Number	Sample Top Depth, feet	Sample Bottom Depth, feet	USCS Symbol	USCS Material Description	Gravel	Sand	Silt	Clay	Fines	Physical Properties	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Liquid Limit, LL	Plastic Limit, PL	Plasticity Index, PI	Specific Gravity, Gs	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Wet Density (pcf)	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Test Type (1)	q_u (ksf)	C' (ksf)	φ' (degree)	σ_3 or σ_3' (ksf)	max σ_d (ksf)	Pore Pressure (ksf), at max σ_d	C (ksf)	φ (degree)	P_c (ksf)	P_o (ksf)	OCR	C_c	C_r	C_v (ft²/day)	τ (psi) max.	σ (psi)	Relative Displacement at Max Shear (%)	pH	Chloride (mg/kg)	Sulfide (mg/kg)	Optimum Moisture (%)	Maximum Density (pcf)	CBR (%)
B-309	SS-18	53.5	55	CH	Fat Clay	0.5	8.1	35.5	55.9	91.4	20.7					20.7	55	14	41																																				
B-309	SS-19	58.5	60																																															8.6					
B-309	SS-20	63.5	65	SM	Silty Sand	0.0	60.8			39.2	23.4					23.4																																							
B-309	SS-21	68.5	70																																															8.8					
B-309	SS-22	73.5	75	SM	Silty Sand	0.0	87.9			12.1	24.2					24.2																																							
B-309	SS-23	78.5	80	SP-SM	Poorly Graded Sand w/ Silt	0.0	91.9			8.1	20.8					20.8																																							
B-309	SS-24	83.5	85																																															8.8	46.80	31.80			
B-309	SS-25	88.5	90	SM	Silty Sand	0.0	78.4			20.6	21.5					21.5																																							
B-309	SS-26	93.5	95																																															8.8					
B-309	SS-27	98.5	100	SP-SM	Poorly Graded Sand w/ Silt	0.0	91.2			8.8	23.8					23.8																																							
B-309	SS-28	108.5	110	SP-SM	Poorly Graded Sand w/ Silt	1.3	91.4			7.3	17.6					17.6																																							
B-309	SS-29	118.5	120	CH	Fat Clay	0.0	1.0			99.0	27.1					27.1	60	22	38																																				
B-309	SS-30	128.5	130								27.0					27.0																																							
B-309	SS-31	138.5	140	CL	Lean Clay						21.7					21.7	47	17	30																																				
B-309	SS-32	148.5	150	CH	Fat Clay						23.3					23.3	66	20	46																																				
B-309	SS-33	158.5	160	CL	Lean Clay	0.9	2.2	59.7	37.2	96.9	23.9					23.9	37	16	21																																				
B-309	SS-34	168.5	170								25.7					25.7																																							
B-309	SS-35	178.5	180	CH	Fat Clay	0.0	1.0			99.0	24.6					24.6	64	21	43																																				
B-309	SS-36	188.5	190	CH	Fat Clay						28.1					28.1	72	22	50																																				
B-309	SS-37	198.5	200	CH	Fat Clay						31.8					31.8	69	20	49																																				
B-314	UD-1	83	85	SP	Poorly Graded Sand	0.0	95.6	1.8	2.6	4.4		20.9				20.9	NV	NP	NP	2.70	101.5				101.5	122.7	0.860				0.860																13.78	20.00	80						
B-314	UD-2	113	115	CL	Lean Clay	0.0	3.1	33.0	63.9	96.9		20.0				20.0	38	13	25	2.72	106.6				106.6	127.9	0.593				0.593	UU	9.7						4.8	0.0															
B-314	UD-3	121	123								18.1	19.5				17.6					109.1				109.1	128.5	0.544				0.544	UU	6.1						3.8	0.0															
B-314	UD-4	141	143	CL	Lean Clay	0.0	12.5	51.2	36.3	87.5		24.2				24.2	46	15	31	2.74	98.9				98.9	120.3	0.767				0.767	UU	1.4						0.7	0.0															
B-314	UD-4	141	143									22.2	21.3	21.5		21.7					102.3	104.5	102.8		103.2	125.8	0.673	0.638	0.655		0.659	CU		1.2	20.0				2.3	9.0															
B-314	UD-5A	183	185	CH	Fat Clay	0.0	1.3	11.8	86.9	98.7		20.3				20.3	72	24	48	2.75	101.8				101.8	122.5	0.684				0.684	UU	10.5						6.3	0.0															
B-314	UD-5A	183	185									26.0	26.6			26.3					98.5	98.8			98.6	124.5	0.741	0.735			0.738	CU		1.9	7.4				0.9	11.2															
B-314	UD-6	191	193	CH	Fat Clay	0.0	6.6	11.8	81.6	93.4		28.5				28.5	64	24	40	2.70	94.0				94.0	118.9	0.793				0.793	UU	3.9						1.9	0.0															
B-319-DH	UD-1	128	130	CH	Fat Clay	0.0	2.6	24.0	73.4	97.4		21.0			17.8	19.3	70	25	45	2.72	103.5			106.0	104.8	125.0	0.640			0.600	0.620	UU	6.8						3.4	0.0	8.520	14.1	1.7	0.130	0.013										
B-319-DH	UD-2	143	145	ML	Sandy Silt	0.8	39.7			59.5	18.7					18.7	NV	NP	NP	2.72																																			
B-319-DH	UD-4	173	175	CH	Fat Clay	0.0	0.3	9.4	90.3	99.7					26.9	26.9	65	22	43	2.72				98.0	98.0	124.4				0.730	0.730										11.330	18.3	1.7	0.173	0.040										

TABLE F-1

LABORATORY TESTING SUMMARY

STP COL PROJECT

MACTEC ENGINEERING AND CONSULTING, INC.

PROJECT # 6050-06-0498

SAMPLE INFORMATION / PHYSICAL PROPERTIES

Boring Number	Sample Number	Sample Top Depth, feet	Sample Bottom Depth, feet	USCS Symbol	USCS Material Description	Grain Size (Passing %) Gravel	Sand	Silt	Clay	Fines	Natural Moisture Content (%) at e_o Physical Properties	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Atterberg Limits Liquid Limit, LL	Plastic Limit, PL	Plasticity Index, PI	Specific Gravity, Gs
B-319-DH	UD-5	188	190	CH	Fat Clay	0.0	1.7	26.5	71.8	98.3		23.9			29.1	25.5	62	21	41	2.72
B-321	UD-3	138	140	CL	Lean Clay							20.0				20.0	46	21	25	
B-323	SS-1	0	1.5								5.1					5.1				
B-323	SS-4	4.5	6	CH	Fat Clay						21.2					21.2	50	17	33	
B-323	SS-12	23.5	25	ML	Sandy Silt	0.0	30.1	54.9	15.0	69.9	22.5					22.5	NV	NP	NP	
B-323	SS-14	33.5	35								21.6					21.6				
B-323	SS-16	43.5	45	CL	Lean Clay						20.5					20.5	29	19	10	
B-323	SS-17	48.5	50								32.1					32.1				
B-323	SS-18	53.5	55	CL	Lean Clay						18.1					18.1	47	16	31	
B-323	SS-19	58.5	60								19.5					19.5				
B-323	SS-21	68.5	70	ML	Sandy Silt						23.2					23.2	NV	NP	NP	
B-323	SS-22	73.5	75	SP-SM	Poorly Graded Sand w/ Silt	0.0	88.1			11.9	20.0					20.0				
B-323	SS-23	78.5	80								20.4					20.4				
B-323	SS-24	83.5	85	SP-SM	Poorly Graded Sand w/ Silt	0.2	91.9			7.9	18.3					18.3				
B-323	SS-25	88.5	90	SP-SM	Poorly Graded Sand w/ Silt	0.0	89.6			10.4	22.0					22.0				
B-323	SS-26	93.5	95	SM	Silty Sand	0.1	79.9			20.0	17.8					17.8				
B-323	SS-27	98.5	100	SC	Clayey Sand	0.0	50.5			49.5	22.4					22.4				
B-328	SS 8	10.5	12								22.2					22.2				
B-328 repl B 323 SS-11	SS 11	18.5	20	ML	Silt	0.2	10.3			89.5	24.5					24.5				
B-328 repl B 323 SS-13	SS 13	28.5	30	SM	Silty Sand	0.0	62.8			37.2	21.3					21.3				
B-328 repl B 323 SS-15	SS-15	38.5	40	SP-SM	Poor Graded Sand w/ Silt	0.0	92.3			7.7	23.2					23.2				
B-328 repl B323 SS-20	SS-20	63.5	65								26.5					26.5				
B-328-DH	SS-2	1.5	3																	
B-328-DH	SS-4	4.5	6	CH	Fat Clay						22.2					22.2	53	17	36	
B-328-DH	SS-6	7.5	9																	
B-328-DH	SS-8	10.5	12	CL	Lean Clay						24.1					24.1	32	18	14	
B-328-DH	SS-9	18.5	20	ML	Sandy Silt						25.0					25.0	NV	NP	NP	
B-328-DH	SS-10	23.5	25	ML	Silt with Sand	0.0	21.8			78.2	22.1					22.1				
B-328-DH	SS-11	28.5	30																	
B-328-DH	SS-12	38.5	40	SP-SM	Poorly Graded Sand w/ Silt	0.0	93.5			6.5	23.2					23.2				
B-328-DH	SS-13	43.5	45	CH	Fat Clay						26.6					26.5	74	23	51	

Boring Number	Sample Number	Dry Density (pcf) at e_o Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Wet Density (pcf)	Void Ratio Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Triaxial Tests Test Type (1)	q_u (ksf)	C' (ksf)	φ' (degrees)	σ_3 or σ_3' (ksf)	max σ_d (ksf)	Pore Pressure (ksf), at max σ_d	C (ksf)	φ (degrees)
B-319-DH	UD-5	99.6			94.5	97.0	122.7	0.706			0.790	0.748	UU	7.6						3.8	0.0
B-321	UD-3	106.2				106.2	127.4	0.587				0.587	UU	9.8						4.9	0.0
B-323	SS-1																				
B-323	SS-4																				
B-323	SS-12																				
B-323	SS-14																				
B-323	SS-16																				
B-323	SS-17																				
B-323	SS-18																				
B-323	SS-19																				
B-323	SS-21																				
B-323	SS-22																				
B-323	SS-23																				
B-323	SS-24																				
B-323	SS-25																				
B-323	SS-26																				
B-323	SS-27																				
B-328	SS 8																				
B-328 repl B 323 SS-11	SS 11																				
B-328 repl B 323 SS-13	SS 13																				
B-328 repl B 323 SS-15	SS-15																				
B-328 repl B323 SS-20	SS-20																				
B-328-DH	SS-2																				
B-328-DH	SS-4																				
B-328-DH	SS-6																				
B-328-DH	SS-8																				
B-328-DH	SS-9																				
B-328-DH	SS-10																				
B-328-DH	SS-11																				
B-328-DH	SS-12																				
B-328-DH	SS-13																				

Boring Number	Sample Number	Consolidation P_o (ksf)	P_c (ksf)	OCR	C_c	C_r	C_v (ft²/day)	Direct Shear τ (psi) max.	σ (psi)	Relative Displacement at Max Shear (%)	Chemical Analysis pH	Chloride (mg/kg)	Sulfide (mg/kg)	Compaction Optimum Moisture (%)	Maximum Density (pcf)	CBR (%)
B-319-DH	UD-5	12.270	27.9	2.3	0.472	0.060										
B-321	UD-3															
B-323	SS-1															
B-323	SS-4															
B-323	SS-12															
B-323	SS-14															
B-323	SS-16															
B-323	SS-17															
B-323	SS-18															
B-323	SS-19															
B-323	SS-21															
B-323	SS-22															
B-323	SS-23															
B-323	SS-24															
B-323	SS-25															
B-323	SS-26															
B-323	SS-27															
B-328	SS 8															
B-328 repl B 323 SS-11	SS 11															
B-328 repl B 323 SS-13	SS 13															
B-328 repl B 323 SS-15	SS-15															
B-328 repl B323 SS-20	SS-20															
B-328-DH	SS-2										8.6	35.90	34.70			
B-328-DH	SS-4															
B-328-DH	SS-6										7.7	84.00	71.10			
B-328-DH	SS-8															
B-328-DH	SS-9															
B-328-DH	SS-10															
B-328-DH	SS-11										6.5	92.20	35.50			
B-328-DH	SS-12															
B-328-DH	SS-13															

TABLE F-1

LABORATORY TESTING SUMMARY

STP COL PROJECT

MACTEC ENGINEERING AND CONSULTING, INC.

PROJECT # 6050-06-0498

MAS 6/3/08

SAMPLE INFORMATION						PHYSICAL PROPERTIES – Grain Size (Passing %)					Natural Moisture Content (%) at e_0						Atterberg Limits				Dry Density (pcf) at e_0						Void Ratio					Triaxial Tests									Consolidation						Direct Shear			Chemical Analysis			Compaction		
Boring Number	Sample Number	Sample Top Depth, feet	Sample Bottom Depth, feet	USCS Symbol	USCS Material Description	Gravel	Sand	Silt	Clay	Fines	Physical Properties	Triaxial, Direct Shear, or Unconfined 1	Triaxial, Direct Shear, or Unconfined 2	Triaxial, Direct Shear, or Unconfined 3	Consolidation	Average	Liquid Limit, LL	Plastic Limit, PL	Plasticity Index, PI	Specific Gravity, Gs	Triaxial, Direct Shear, or Unconfined 1	Triaxial, Direct Shear, or Unconfined 2	Triaxial, Direct Shear, or Unconfined 3	Consolidation	Average	Wet Density (pcf)	Triaxial, Direct Shear, or Unconfined 1	Triaxial, Direct Shear, or Unconfined 2	Triaxial, Direct Shear, or Unconfined 3	Consolidation	Average	Test Type (1)	q_u (ksf)	C' (ksf)	φ' (degree)	σ_3 or σ_3' (ksf)	max σ_d (ksf)	Pore Pressure (ksf), at max σ_d	C (ksf)	φ (degree)	P_c (ksf)	P_o (ksf)	OCR	C_c	C_r	C_v (ft²/day)	τ (psi) max	σ (psi)	Relative Displacement at Max Shear (%)	pH	Chloride (mg/kg)	Sulfide (mg/kg)	Optimum Moisture (%)	Maximum Density (pcf)	CBR (%)
B-328-DH	SS-15	58.5	60	CH	Fat Clay						25.6					25.6	78	25	51																																				
B-328-DH	UD-4	73	73.8	SM	Silty Sand	0.0	82.7			17.3		25.8				25.8				2.68	94.5				94.5	118.9	0.770				0.770	UU	0.6						0.3	0.0															
B-328-DH	SS-18	78.5	80	SP-SM	Poorly Graded Sand w/ Silt	0.0	88.6			11.4	21.4					21.4																																							
B-328-DH	SS-19	88.5	90	SP-SM	Poorly Graded Sand w/ Silt	0.0	93.1			6.9	21.0					21.0																																							
B-328-DH	SS-21	98.5	100	SM	Silty Sand	1.1	86.3			12.6	21.0					21.0																																							
B-328-DH	SS-22	108.5	110	SP-SM	Poorly Graded Sand w/ Silt	8.6	83.9			7.5	14.6					14.6																																							
B-328-DH	SS-23	118.5	120	CL	Lean Clay	0.0	5.9			94.1	22.0					22.0	34	18	16																																				
B-328-DH	SS-24	128.5	130	CL	Sandy Lean Clay	0.0	48.7			51.3	21.0					21.0																																							
B-328-DH	SS-25	138.5	140	CH	Fat Clay						18.3					18.3	50	16	34																																				
B-328-DH	SS-26	148.5	150	SM	Silty Sand	1.1	73.6			25.3	21.3					21.3																																							
B-328-DH	SS-27	159	160	CL	Lean Clay with Sand						25.4					25.4	31	19	12																																				
B-328-DH	SS-29	178.5	180	CH	Fat Clay						23.6					23.6	62	20	42																																				
B-328-DH	SS-30	188.5	190								28.5					28.5																																							
B-330	UD-2	53	55									14.1	14.7	20.0		16.3					113.3	111.7	107.3		110.8	128.8	0.488	0.509	0.571		0.523	CU		2.2	0.0				2.2	0.0															
B-330	UD-3	63	65	SP	Poorly Graded Sand	0.0	96.5			3.5		25.2				25.2	NV	NP	NP	2.67	96.2				96.2	120.5	0.732				0.732	UU	0.3						0.1	0.0															
B-330	UD-4B	123	125									19.5				19.5					107.7				107.7	129.7	0.565				0.565	UU	2.2						1.1	0.0															
B-332	UD-1	3	5	CH	Fat Clay	0.0	6.6	39.7	53.7	93.4		23.1				23.1	70	25	45	2.74	99.6				99.6	122.6	0.717				0.717	UNC	3.9						1.9																
B-333	UD-1	8	10	CL	Lean Clay	0.0	3.5	58.8	37.7	96.5		23.7			24.9	24.3	43	16	27	2.67	99.6			99.4	99.6	123.8	0.671			0.680	0.676	UNC	2.6						1.3		1,005	9.2	9.2	0.282	0.020										
B-333	UD-2	18	20	CL	Lean Clay	0.0	3.7	71.5	24.8	96.3		23.0			23.8	23.4	30	19	11	2.70	91.7			101.4	96.6	119.1	0.838			0.660	0.749	UU	1.0						0.5	0.0	1,630	6.2	3.2	0.050	0.009										
B-338	UD-1	28	30	SM	Silty Sand	0.0	81.6	15.2	3.0	18.2		24.1			23.8	23.9	NV	NP	NP	2.65	101.8			98.7	100.2	124.2	0.625			0.680	0.653	UU	3.3						1.8	0.0	2,260	17.2	7.6	0.100	0.007										
B-338	UD-2	48	50	CL	Lean Clay	0.0	1.8	48.8	49.4	98.2		26.1			27.4	26.8	44	18	26	2.71	96.6			96.3	96.5	122.3	0.752			0.760	0.756	UU	4.6						2.2	0.0	3,610	13.9	4.0	0.256	0.030										
B-343	UD-3	58	60									19.4				19.4					106.9				106.9	126.6	0.576				0.576	UU	0.9						0.5	0.0															
B-343	UD-4A	70	72	CH	Fat Clay	0.0	3.8	10.0	86.2	96.2		23.6				23.6				2.78	100.4				100.4	124.1	0.729				0.729	UU	0.2						0.1	0.0															
B-343	UD-7	173	175	CL	Lean Clay						15.6	18.1				16.8	31	14	17	2.64	107.0				107.0	125.0	0.541				0.541	UU	2.7						1.4	0.0															
B-343	UD-7	173	175	CL								15.4	16.4	17.3		16.4					111.0	110.7	107.9		109.9	127.8	0.485	0.489	0.528		0.501	CU		0.2	28.8				1.5	25.0															
B-343	UD-8	198	200	CH	Fat Clay	0.0	29.8	19.6	50.8	70.4		22.1				22.1				2.73	100.4				100.4	122.6	0.698				0.698	UU	2.2						1.1	0.0															
B-344	SS-3	3	4.5	CH	Fat Clay						24.0					24.0	60	19	41																																				
B-344	SS-7	9	10.5	CL	Lean Clay						24.6					24.6	33	20	13																																				
B-344	SS-12	23.5	25	SM	Silty Sand	0.0	86.0			14.0	25.9					25.9																																							
B-344	SS-15	38.5	40	SP-SM	Poorly Graded Sand w/ Silt	0.0	92.6			7.4	21.8					21.8																																							
B-344	SS-17	48.5	50	CL	Lean Clay	1.1	10.1			88.8	27.7					27.7	38	15	23																																				

TABLE F-1

LABORATORY TESTING SUMMARY

STP COL PROJECT

MACTEC ENGINEERING AND CONSULTING, INC.

PROJECT # 5050-08-0436

SAMPLE INFORMATION						PHYSICAL PROPERTIES																																															
						Grain Size (Passing %)					Natural Moisture Content (%) at e_o						Atterberg Limits				Dry Density (pcf) at e_o						Void Ratio				Triaxial Tests									Consolidation					Direct Shear			Chemical Analysis			Compaction		
Boring Number	Sample Number	Sample Top Depth, feet	Sample Bottom Depth, feet	USCS Symbol	USCS Material Description	Gravel	Sand	Silt	Clay	Fines	Physical Properties	Triaxial, Direct Shear, or Unconfined 1	Triaxial, Direct Shear, or Unconfined 2	Triaxial, Direct Shear, or Unconfined 3	Consolidation	Average	Liquid Limit, LL	Plastic Limit, PL	Plasticity Index, PI	Specific Gravity, Gs	Triaxial, Direct Shear, or Unconfined 1	Triaxial, Direct Shear, or Unconfined 2	Triaxial, Direct Shear, or Unconfined 3	Consolidation	Average	Wet Density (pcf)	Triaxial, Direct Shear, or Unconfined 1	Triaxial, Direct Shear, or Unconfined 2	Triaxial, Direct Shear, or Unconfined 3	Consolidation	Average	Test Type (1)	σ_o (ksf)	C' (ksf)	φ' (degree)	σ_c or σ_c' (ksf)	max σ_d (ksf)	Pore Pressure (ksf), at max σ_d	C (ksf)	φ (degree)	P_c (ksf)	P_c (ksf)	OCR	C_c	C_r	C_v (ft^2/day)	τ (psf) max.	σ (psf)	Relative Displacement at Max. Shear (%)	pH	Chloride (mg/kg)	Sulfide (mg/kg)	Optimum Moisture (%)	Maximum Density (pcf)	CBR (%)
B-344	SS-19	58.5	60	CL	Sandy Lean Clay	2.2	43.0	31.5	23.3	54.8	16.8					16.8	30	15	15																																		
B-344	SS-21	68.5	70	SP-SM	Poorly Graded Sand w/ Silt	0.0	90.5			9.5	21.9					21.9																																					
B-344	SS-23	78.5	80	SP-SM	Poorly Graded Sand w/ Silt	0.0	92.6			7.4	20.3					20.3																																					
B-344	SS-24	83.5	85																																															8.9	32.80	27.50			
B-344	SS-25	88.5	90	CH	Fat Clay						22.7					22.7	53	17	36																																		
B-344	SS-26	93.5	95	CL	Lean Clay						20.7					20.7	44	15	29																																		
B-344	SS-27	99.5	100	CH	Fat Clay						29.3					29.3	62	20	42																																		
B-401	UD-2	58	60	CH	Fat Clay							23.8	22.6	23.8		23.4	67	21	36	2.69	101.5	102.9	101.1		101.8	125.7	0.656	0.632	0.691		0.649	CU		2.1	6.1				2.4	0.8														
B-401	UD-3	118	120	CL	Lean Clay							19.8				19.8	47	22	25	2.68	108.3				108.3	127.3	0.576				0.576	UU	4.0						2.0	0.0														
B-401	UD-4	183	185	SM	Silty Sand	0.0	81.8	15.7	2.5	18.2		24.6				24.6	NV	NP	NP	2.63	99.8				99.8	124.4	0.646				0.646	UU	0.4						0.2	0.0														
B-401	UD-5A	194	196									24.1				24.1					100.9				100.9	125.2	0.671				0.671	UU	7.2						3.8	0.0														
B-404	UD-1	58	60								22.6	21.0				21.8					104.0				104.0	126.7	0.620				0.620	UU	7.0						3.5	0.0														
B-404	UD-2	96	100	CH	Fat Clay	0.0	4.9	20.5	74.6	95.1		25.3				25.3	59	20	39	2.73	99.9				99.9	123.9	0.723				0.723	UU	7.0						3.5	0.0														
B-404	UD-3	121	123	CH	Fat Clay	0.0	0.7	15.7	83.6	99.3	23.4	27.7	20.8	22.6		23.8	62	23	39	2.77	94.4	105.5	101.4		100.4	124.2	0.632	0.636	0.703		0.724	CU		2.2	9.0				2.5	3.5														
B-404	UD-3	121	123									23.4				23.4					102.2				102.2	128.1	0.589				0.589	UU	7.0						3.5	0.0														
B-404	UD-3	121	123									27.7	20.8	22.6		23.7					94.4	105.5	101.4		100.4	124.2	0.629	0.636	0.703		0.723	CU		2.2	9.0				2.3	3.5														
B-404	UD-4	131	133	CH	Fat Clay	0.0	5.9	11.7	82.4	94.1		29.8				29.8	52	22	30	2.57	102.9				102.9	124.3	0.620				0.620	UU	6.8						3.5	0.0														
B-404	UD-5	141	143	CL	Sandy Lean Clay	0.0	33.4	43.0	23.6	66.6		18.0				18.0	30	18	12	2.67	109.3				109.3	129.0	0.525				0.525	UU	8.3						4.1	0.0														
B-404	UD-6	161	163	CL	Lean Clay	0.9	9.3	59.2	37.5	96.7			18.8	20.1		19.5	38	15	15	2.71		101.5	104.6		103.1	123.1		0.558	0.517		0.542	CU		6.9	6.0				7.7	2.8														
B-405-DH	SS-3	3	4.5	CH	Fat Clay						25.0					25.0	55	17	38																																		
B-405-DH	SS-4	4.5	6																																														6.5					
B-405-DH	SS-6	7.5	9								29.0					29.0																																					
B-405-DH	SS-8	13.5	15								19.8					19.8																																					
B-405-DH	SS-9	18.5	20																																														5.4					
B-405-DH	SS-10	23.5	25								27.8					27.8																																					
B-405-DH	SS-11	33.5	35	SM	Silty Sand	0.0	76.9			23.1	25.0					25.0																																					
B-405-DH	SS-12	38.5	40																																														8.1					
B-405-DH	SS-13	43.5	45	CL	Lean Clay	0.0	4.1			95.9	26.3					26.3																																					
B-405-DH	SS-15	53.5	55	CH	Fat Clay						27.9					27.9	68	23	45																																		
B-405-DH	SS-16	58.5	60																																														8.6					
B-405-DH	SS-17	68.5	70	SM	Silty Sand	0.0	85.2			14.8	20.9					20.9																																					

TABLE F-1

LABORATORY TESTING SUMMARY

STP COL PROJECT

MACTEC ENGINEERING AND CONSULTING, INC.

PROJECT # 5050-06-0496

SAMPLE INFORMATION						PHYSICAL PROPERTIES																																															
						Grain Size (Passing %)					Natural Moisture Content (%) at e_o						Atterberg Limits				Dry Density (pcf) at e_o						Void Ratio					Triaxial Tests									Consolidation					Direct Shear			Chemical Analysis			Compaction		
Boring Number	Sample Number	Sample Top Depth, feet	Sample Bottom Depth, feet	USCS Symbol	USCS Material Description	Gravel	Sand	Silt	Clay	Fines	Physical Properties	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Liquid Limit, LL	Plastic Limit, PL	Plasticity Index, PI	Specific Gravity, Gs	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Wet Density (pcf)	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Test Type (1)	q_u (ksf)	C' (ksf)	φ' (degree)	σ_3 or σ_3' (ksf)	max σ_d (ksf)	Pore Pressure (ksf), at max σ_d	C (ksf)	φ (degree)	P_c (ksf)	P_o (ksf)	OCR	C_c	C_r	C_v (ft^2/day)	τ (psi) max.	σ (psi)	Relative Displacement at Max Shear (%)	pH	Chloride (mg/kg)	Sulfate (mg/kg)	Optimum Moisture (%)	Maximum Density (pcf)	CBR (%)
B-405-DH	SS-18	73.5	75																																																		
B-405-DH	SS-19	78.5	80	SP-SM	Poorly Graded Sand w/ Silt	0.0	92.1			7.9	21.0					21.0																																					
B-405-DH	SS-20	88.5	90																																													8.5	33.50	44.60			
B-405-DH	SS-22	98.5	100	CH	Fat Clay						27.3					27.3	69	19	50																																		
B-405-DH	SS-23	108.5	110	SP-SM	Poorly Graded Sand w/ Silt	0.0	91.0			9.0	19.7					19.7																																					
B-405-DH	UD-5	113	115	CH	Fat Clay							25.8				25.8	73	23	50	2.71	97.6				97.6	122.7	0.735				0.735	UU	4.4						2.2	0.0												
B-405-DH	SS-24	118.5	120	CL	Lean Clay	0.0	9.2			90.8	22.3					22.3																																					
B-405-DH	SS-25	138.5	140	CL	Sandy Lean Clay						17.7					17.7	42	15	27																																		
B-405-DH	UD-7	148	150	SM	Silty Sand	0.0	82.3	17.7	0.0	17.7		24.0				24.0	NV	NP	NP	2.68	98.1				98.1	121.6	0.692				0.692																19.79	25.00	85						
B-405-DH	SS-27	158.5	160	CH	Fat Clay						23.7					23.7	66	17	38																																		
B-405-DH	SS-28	178.5	180	CL	Sandy Lean Clay						22.8					22.8	34	16	18																																		
B-405-DH	SS-29	188.5	190	CL	Sandy Lean Clay						16.7					16.7	38	14	24																																		
B-405-DH	UD-9	193	195	CL	Sandy Lean Clay	0.0	34.0			66.0	38.0					38.0				2.69																																	
B-405-DH	SS-30	198.5	200	CH	Fat Clay						24.0					24.0	61	19	42																																		
B-405-DH	UD-11	233	235									15.4			16.3	16.8				2.76	113.4			111.7	112.6	131.5	0.467			0.510	0.499	UU	7.9					4.0	0.0	15080	20.2	0.0	0.103	0.010							
B-405-DH	SS-32	238.5	240	ML	Sandy Silt	1.6	34.6			63.8	20.1					20.1																																					
B-405-DH	SS-33	258.5	260	CH	Fat Clay						27.3					27.3	72	21	51																																		
B-405-DH	UD-14	318	320	SC	Clayey Sand	0.0	78.3	21.1	0.6	21.7							50	25	25	2.67																																		
B-405-DH	SS-37	338.5	340	SM	Silty Sand	0.7	50.1			49.2	18.7					18.7																																					
B-405-DH	UD-15	343	345	SP	Poorly Graded Sand	0.0	95.3	0.0	4.7	4.7		20.9				20.9	NV	NP	NP	2.65	107.7				107.7	130.2	0.536				0.536	UU	5.7						2.9	0.0													
B-405-DH	UD-17	388	390	SC	Clayey Sand	1.8	72.3			25.9	28.0					28.0																																					
B-405-DH	SS-40	398.5	400	CL	Sandy Lean Clay						17.1					17.1	46	15	31																																		
B-405-DH	UD-18	418	418.4	SM	Silty Sand	1.1	82.9			16.3										2.69																																	
B-405-DH	SS-41	423.5	425	CH	Fat Clay						25.3					25.3	77	23	54																																		
B-405-DH	UD-20	458.5	460.5									17.6			30.0	23.8					106.2			93.7	99.9	123.7	0.587			0.870	0.729	UU	9.0					4.5	0.0	28.140	17.9	0.8	0.292	0.033							
B-405-DH	SS-45	488.5	500	CH	Sandy Fat Clay						21.8					21.8	59	19	40																																		
B-405-DH	UD-22	518	519	SM	Silty sand	0.0	79.3	4.1	16.5	20.7	25.4					25.4	NV	NP	NP	2.68																																		
B-405-DH	SS-46	523.5	525	SM	Silty Sand	0.4	62.4			37.2	21.6					21.6																																					
B-405-DH	SS-47	538.5	540	SM	Silty Sand	2.0	70.6			27.4	20.8					20.8																																					
B-405-DH	SS-49	578.5	580	CL	Lean Clay with Sand	0.7	19.9	38.5	41.7	80.3	19.9					19.9	47	16	31																																		
B-405-DH	UD-25	598	599	CL	Lean Clay	0.9	16.2	63.1	20.1	83.2		18.4				18.4	45	16	29	2.69	107.5				107.5	127.3	0.567				0.567	UNC	1.8						0.9														

TABLE F-1

LABORATORY TESTING SUMMARY

STP COL PROJECT

MACTEC ENGINEERING AND CONSULTING, INC.

PROJECT # 6050-06-0436

SAMPLE INFORMATION						PHYSICAL PROPERTIES: Grain Size (Passing %)					Natural Moisture Content (%) at e_o						Atterberg Limits				Dry Density (pcf) at e_o					
Boring Number	Sample Number	Sample Top Depth, feet	Sample Bottom Depth, feet	USCS Symbol	USCS Material Description	Gravel	Sand	Silt	Clay	Fines	Physical Properties	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Liquid Limit, LL	Plastic Limit, PL	Plasticity Index, PI	Specific Gravity, Gs	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Wet Density (pcf)
B-405-DH repl B305DH UD15A	SS 36	320	321.5	CH	Fat Clay	0.0	5.1	44.1	50.8	94.9	18.7					18.7	53	19	34							
B-407	SS-12	23.5	25	CL	Lean clay with sand	0.0	23.1			76.9	22.8					22.8	26	18	8							
B-409	UD-1	68	70	SM	Silty Sand	0.0	85.4	2.6	12.0	14.6	14.9	14.9				14.9	NV	NP	NP	2.65	90.9	103.0			97.0	111.4
B-409	UD-4A	160	162	CH	Fat Clay							19.6				19.6	62	27	35	2.68	103.3				103.3	123.5
B-409	UD-5	188	190	SP-SM	Poorly Graded Sand w/ Silt	0.0	90.2	9.2	0.6	9.8		26.1				26.1	NV	NP	NP	2.67	101.5				101.5	128.0
B-409	UD-6	198	200									25.3				25.3					98.9				98.9	121.5
B-415	UD-1	88	90	CH	Fat Clay	0.0	6.6	24.2	69.2	93.4		23.9				23.9	61	17	44	2.75	99.9				99.9	123.8
B-415	UD-3	124	126	CH	Fat Clay	0.0	18.5	16.0	65.6	81.5		34.0				34.0	51	16	35	2.71	85.0				85.0	113.9
B-419-DH	SS-2	1.5	3																							
B-419-DH	SS-3	3	4.5	CH	Fat Clay						25.3					25.3	62	17	45							
B-419-DH	SS-6	7.5	9																							
B-419-DH	SS-7	9	10.5	CH	Fat Clay						22.8					22.8	58	17	41							
B-419-DH	SS-9	12	13.5																							
B-419-DH	SS-10	13.5	15	CH	Fat Clay						21.2					21.2	51	16	35							
B-419-DH	SS-11	18.5	20																							
B-419-DH	SS-12	23.5	25								21.7					21.7										
B-419-DH	SS-14	33.5	35	SM	Silty Sand	0.0	76.1			23.9	26.7					26.7										
B-419-DH	SS-15	38.5	40																							
B-419-DH	SS-16	43.5	45	CH	Fat Clay						29.0					29.0	73	24	49							
B-419-DH	SS-18	53.5	55	CH	Fat Clay						16.0					16.0	53	17	36							
B-419-DH	SS-19	58.5	60								-															
B-419-DH	SS-20	63.5	65	SM	Silty Sand	1.5	59.0			39.5	20.5					20.5										
B-419-DH	SS-21	68.5	70																							
B-419-DH	SS-22	73.5	75	SP-SM	Poorly Graded Sand w/ Silt	0.0	90.3			9.7	21.1					21.1										
B-419-DH	UD-1	78	80	CL	Lean Clay	0.0	0.6	31.3	68.1	99.4		21.3			23.4	22.3	47	24	23	2.77	105.4			103.5	104.5	127.6
B-419-DH	SS-23	83.5	85																							
B-419-DH	SS-24	88.5	90	CH	Fat Clay						25.5					25.5	66	22	44							
B-419-DH	UD-2	98	100	CH	Fat Clay	0.0	4.9			95.1		27.0				27.0	61	24	37	2.79	94.1				94.1	119.5
B-419-DH	SS-26	108.5	110	SP-SM	Poorly Graded Sand w/ Silt	0.0	92.8			7.2	20.4					20.4										
B-419-DH	UD-3	118	120	CH	Fat Clay	0.0	4.9	24.9	70.2	95.1		19.3			24.4	21.8	56	17	39	2.71	105.5			103.9	104.7	127.6
B-419-DH	SS-27	128.5	130	CH	Fat Clay						25.0					25.0	72	23	49							

		Void Ratio					Triaxial Tests									Consolidation						Direct Shear			Chemical Analysis			Compaction		
Boring Number	Sample Number	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Test Type (1)	q_u (ksf)	C' (ksf)	φ' (degree)	σ_3 or σ_3' (ksf)	max σ_1 (ksf)	Pore Pressure (ksf), at max σ_d	C (ksf)	φ (degree)	P_o (ksf)	P_c (ksf)	OCR	C_c	C_r	C_v (ft²/day)	τ (psi) max.	σ (psi)	Relative Displacement at Max Shear (%)	pH	Chloride (mg/kg)	Sulfide (mg/kg)	Optimum Moisture (%)	Maximum Density (pcf)	CBR (%)
B-405-DH repl B305DH UD15A	SS 36																													
B-407	SS-12																													
B-409	UD-1	0.820	0.806			0.713	UU	9.4			6.0			4.7	0.0							8.81	15.00	40						
B-409	UD-4A	0.620				0.620	UU	1.0						0.5	0.0															
B-409	UD-5	0.642				0.642	UU	29.6						14.8	0.0															
B-409	UD-6	0.739				0.739	UU	5.6						2.8	0.0															
B-415	UD-1	0.718				0.718	UU	2.3						1.2	0.0															
B-415	UD-3	0.991				0.991	UU	0.3						0.1	0.0															
B-419-DH	SS-2																								8.4	98.90	82.80			
B-419-DH	SS-3																													
B-419-DH	SS-6																								8.2	513.00	380.00			
B-419-DH	SS-7																													
B-419-DH	SS-9																								8.8	184.00	45.10			
B-419-DH	SS-10																													
B-419-DH	SS-11																								8.7	84.20	17.60			
B-419-DH	SS-12																													
B-419-DH	SS-14																													
B-419-DH	SS-15																								9.0	63.80	11.00			
B-419-DH	SS-16																													
B-419-DH	SS-18																													
B-419-DH	SS-19																								9.0	55.20	10.20			
B-419-DH	SS-20																													
B-419-DH	SS-21																								8.4	42.10	11.60			
B-419-DH	SS-22																													
B-419-DH	UD-1	0.841			0.830	0.836	UU	7.4						3.7	0.0	5.365	18.0	3.3	0.243	0.037										
B-419-DH	SS-23																								8.6	40.00	47.80			
B-419-DH	SS-24																													
B-419-DH	UD-2	0.844			0.630	0.737	UU	1.5						0.7	0.0															
B-419-DH	SS-26																													
B-419-DH	UD-3	0.557			0.680	0.619	UU	6.3						3.2	0.0	7.890	21.4	2.7	0.278	0.030										
B-419-DH	SS-27																													

TABLE F-1

LABORATORY TESTING SUMMARY

STP COL PROJECT

MACTEC ENGINEERING AND CONSULTING, INC.

PROJECT # 6050-06-0496

SAMPLE INFORMATION / PHYSICAL PROPERTIES

Boring Number	Sample Number	Sample Top Depth, feet	Sample Bottom Depth, feet	USCS Symbol	USCS Material Description	Grain Size (Passing %) Gravel	Sand	Silt	Clay	Fines	Natural Moisture Content (%) at e_o Physical Properties	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Atterberg Limits Liquid Limit, LL	Plastic Limit, PL	Plasticity Index, PI	Specific Gravity, Gs	Dry Density (pcf) at e_o Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Wet Density (pcf)
B-419-DH	UD-4	138	140	CL	Lean Clay with Sand	0.0	21.3	45.2	33.5	78.7		14.9			17.3	16.1	40	15	25	2.65	111.5			111.3	111.4	129.3
B-419-DH	SS-28	148.5	150	SM	Silty Sand	0.0	85.2			14.8	21.8					21.8										
B-419-DH	UD-5	158	160	CL	Lean Clay	0.0	1.9	39.4	58.7	98.1		19.3			21.3	20.2	47	17	30	2.73	108.7			106.2	107.5	129.2
B-419-DH	SS-29	168.5	170	CH	Fat Clay						24.8					24.8	67	21	46							
B-419-DH	UD-6	178	180	CH	Fat Clay	0.0	0.2	24.9	74.9	99.8		20.6			23.3	22.0	53	28	33	2.74	109.0			102.9	106.0	129.2
B-419-DH	SS-30	188.5	190	CH	Fat Clay						31.8					31.8	85	23	62							
B-419-DH	UD-7	198	200	CH	Fat Clay	0.0	8.6	39.6	53.8	93.4	22.5	27.5			19.4	23.1	58	20	38	2.72	91.6			109.0	100.3	123.5
B-421	SS-2	1.5	3																							
B-421	SS-4	4.5	6	CH	Fat Clay						18.9					18.9	54	18	36							
B-421	SS-6	7.5	9																							
B-421	SS-9	12	13.5	CH	Fat Clay						20.4					20.4	63	21	42							
B-421	SS-11	18.5	20	CH	Fat Clay						22.5					22.5	65	22	43							
B-421	SS-12	23.5	25	CL	Lean Clay						25.5					25.5	38	14	24							
B-421	SS-13	28.5	30	SM	Silty Sand	0.0	75.2			24.8	23.8					23.6										
B-421	UD-1A	33.5	35.5	SP-SM	Poorly Graded Sand w/ Silt	0.0	94.5			5.5		23.0				23.0				2.67	97.2				97.2	119.6
B-421	SS-14	38.5	40																							
B-421	SS-15	43.5	45	SP-SM	Poorly Graded Sand w/ Silt	0.0	91.4			8.6	22.8					22.8										
B-421	SS-16	48.5	50								35.3					35.3										
B-421	UD-2	53	55	CH	Fat Clay	0.0	10.0	28.3	61.7	90.0					28.1	28.1	63	21	42	2.74				94.2	94.2	120.7
B-421	SS-17	59	60	ML	Sandy Silt						19.0					19.0	NV	NP	NP							
B-421	SS-18	63.5	65																							
B-421	SS-19	68.5	70	ML	Silt						20.1					20.1	NV	NP	NP							
B-421	SS-20	73.5	75	SP-SM	Poorly Graded Sand w/ Silt	0.0	92.2			7.8	20.3					20.3										
B-421	SS-21	78.5	80																							
B-421	UD-3	83	85	CH	Fat Clay	0.0	2.0	29.4	68.6	98.0		21.2			24.6	22.9	56	20	36	2.73	104.8			100.1	102.5	125.9
B-421	SS-22	88.5	90								23.6					23.6										
B-421	SS-23	93.5	95	CH	Fat Clay						21.5					21.5	65	20	45							
B-421	SS-24	98.5	100	SM	Silty Sand	0.0	87.7			12.3	19.3					19.3										
B-422C	SS 14	23.5	25	SC	Clayey Sand	0.0	58.7			41.3	27.0					27.0										
B-427	SS-3	3	4.5	CH	Fat Clay						23.5					23.5	56	19	39							
B-427	SS-4	4.5	6																							

Boring Number	Sample Number	Void Ratio Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Triaxial Tests Test Type (1)	q_u (ksf)	C' (ksf)	φ' (degree)	σ_3 or σ_3' (ksf)	max σ_d (ksf)	Pore Pressure (ksf), at max σ_d	C (ksf)	φ (degree)	Consolidation P_o (ksf)	P_c (ksf)	OCR	C_c	C_r	C_v (ft²/day)	Direct Shear τ (psi) max.	σ (psi)	Relative Displacement at Max Shear (%)	Chemical Analysis pH	Chloride (mg/kg)	Sulfide (mg/kg)	Compaction Optimum Moisture (%)	Maximum Density (pcf)	CBR (%)
B-419-DH	UD-4	0.484			0.520	0.502	UU	13.2						6.6	0.0	9.140	15.5	1.7	0.289	0.066										
B-419-DH	SS-28																													
B-419-DH	UD-5	0.589			0.600	0.585	UU	12.6						6.3	0.0	10.400	19.3	1.9	0.199	0.047										
B-419-DH	SS-29																													
B-419-DH	UD-6	0.667			0.650	0.614	UU	12.5						6.2	0.0	11.850	18.4	1.6	0.233	0.043										
B-419-DH	SS-30																													
B-419-DH	UD-7	0.853			0.660	0.707	UU	7.7						3.5	0.0	12.900	15.4	1.2	0.149	0.027										
B-421	SS-2																								6.9					
B-421	SS-4																													
B-421	SS-6																								8.4					
B-421	SS-9																													
B-421	SS-11																													
B-421	SS-12																													
B-421	SS-13																													
B-421	UD-1A	0.715				0.715																8.15	10.00	100						
B-421	SS-14																								8.1					
B-421	SS-15																													
B-421	SS-16																													
B-421	UD-2				0.810	0.810										3.620	6.1	1.8	0.213	0.033										
B-421	SS-17																													
B-421	SS-18																								8.5					
B-421	SS-19																													
B-421	SS-20																													
B-421	SS-21																								8.3	25.80	18.10			
B-421	UD-3	0.825			0.700	0.663	UU	8.2						3.1	0.0	5.700	18.0	3.2	0.229	0.040										
B-421	SS-22																													
B-421	SS-23																													
B-421	SS-24																													
B-422C	SS 14																													
B-427	SS-3																													
B-427	SS-4																								7.7					

TABLE F-1

LABORATORY TESTING SUMMARY

STP COL PROJECT

MACTEC ENGINEERING AND CONSULTING, INC.

PROJECT # 5050-08-0496

| SAMPLE INFORMATION | | | | | | PHYSICAL PROPERTIES | | | | | |

TABLE F-1

LABORATORY TESTING SUMMARY

STP COL PROJECT

MACTEC ENGINEERING AND CONSULTING, INC.

PROJECT # 5080-08-0488

SAMPLE INFORMATION						PHYSICAL PROPERTIES																																											
						Grain Size (Passing %)					Natural Moisture Content (%) at e_o					Atterberg Limits				Dry Density (pcf) at e_o						Void Ratio				Triaxial Tests								Consolidation				Direct Shear			Chemical Analysis			Compaction		
Boring Number	Sample Number	Sample Top Depth, feet	Sample Bottom Depth, feet	USCS Symbol	USCS Material Description	Gravel	Sand	Silt	Clay	Fines	Physical Properties	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Liquid Limit, LL	Plastic Limit, PL	Plasticity Index, PI	Specific Gravity, Gs	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Wet Density (pcf)	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Test Type (1)	σ_3 (ksf)	C' (ksf)	φ' (degree)	σ_3 or σ_c' (ksf)	max σ_d (ksf)	Pore Pressure (ksf), at max σ_d	C (ksf)	φ (degree)	P_c (ksf)	P_c (ksf)	OCR	C_c	C_r	C_v (ft^2/day)	τ (psf) max.	σ (psf)	Relative Displacement at Max Shear (%)	pH	Chloride (mg/kg)	Sulfide (mg/kg)	Optimum Moisture (%)	Maximum Density (pcf)	CBR (%)
B-432	SS-17	58.5	60								21.2					21.2																																			
B-432	SS-18	63.5	65	CH	Fat Clay						26.2					26.2	84	27	57																																
B-432	SS-19	68.5	70								28.1					28.1																																		
B-432	SS-20	73.5	75								20.3					20.3																																		
B-432	SS-21	78.5	80	SP-SM	Poorly Graded Sand w/ Silt	0.0	91.4			8.6	20.8					20.8																																			
B-432	SS-23	88.5	90	SM	Silty Sand	0.0	57.7			42.3	21.6					21.6																																			
B-432	SS-25	98.5	100	SM	Silty Sand	0.0	87.3			12.7	22.8					22.8																																			
B-432	SS-27	118.5	120	CH	Fat Clay						24.7					24.7	70	23	47																																
B-432	SS-29	128.5	130	CH	Fat Clay						21.2					21.2	68	19	47																																
B-432	SS-30	148.5	150	SM	Silty Sand	0.0	82.5			17.5	19.8					19.8																																			
B-902	UD-1	5	7	CH	Fat Clay							21.3				21.3	66	22	43		102.8				102.8	124.7	0.639				0.639	UNC	2.6						1.3													
B-902	SS-7	11.5	13	CH	Fat Clay						19.5					19.5	56	20	36																																
B-902	UD-2	16	17	CH	Fat Clay	0.0	0.5	16.6	80.8	99.4		24.3				24.3	59	20	39	2.73	100.2				100.2	124.5	0.701				0.701	UU	1.8						0.9	0.0												
B-902	SS-9	18.5	20	ML	Silt with Sand	0.0	28.0			72.0	26.8					26.8	NV	NP	NP																																
B-902	UD-3	23	25	SM	Silty Sand	0.0	53.6	30.0	16.4	46.4		24.8	24.9			24.9	NV	NP	NP	2.69	95.9	98.5			97.2	121.3	0.727	0.679			0.703	UU	6.7						3.4	0.0							7.12	10.00	40					
B-902	SS-10	28.5	30	SM	Silty Sand	0.0	81.4			18.6	24.0					24.0																																			
B-902	SS-11	33.5	35	SP-SM	Poorly Graded Sand w/ Silt	0.0	89.8			10.2	22.5					22.5																																			
B-902	SS-12	38.5	40	SP-SM	Poorly Graded Sand w/ Silt	0.0	93.5			6.5	22.5					22.5																																			
B-902	SS-14	48.5	50	CH	Fat Clay						31.4					31.4	67	18	49																																
B-902	SS-16	58.5	60	ML	Silt with Sand	0.0	19.9	62.6	17.5	80.1	24.9					24.9	NV	NP	NP																																
B-902	SS-18	68.5	70	CH	Fat Clay						25.7					25.7	73	25	48																																
B-902	SS-23	78.5	80	CH	Fat Clay						23.2					23.2	61	19	42																																
B-902	SS-22	88.5	90	CH	Fat Clay						23.8					23.8	66	22	44																																
B-902	SS-24	93.5	100	CH	Fat Clay						28.0					28.0	71	20	51																																
B-904	SS-3	3	4.5																																													6.3	92.80	232.00			
B-904	UD-1	5	7	CH	Fat Clay							22.3				22.3	68	22	46		99.7				99.7	122.0	0.691				0.691	UNC	2.3						1.2													
B-904	SS-6	10.5	12																																													8.5	189.00	36.00			
B-904	UD-2	18	20	CH	Fat Clay							21.1				21.1	63	22	41		101.3				101.3	122.7	0.664				0.664	UNC	3.8						2.0													
B-904	SS-9	23.5	25																																													8.7	124.00	12.30			
B-904	UD-3	28	30	ML	Sandy Silt	0.0	34.3			65.7		25.2	26.1	24.4		25.2	NV	NP	NP	2.71	98.7	96.8	97.3		98.8	121.3	0.749	0.761	0.739		0.746	CU		2.0	28.0				5.1	23.0												
B-904	UD-3	28	30									25.0				25.0					93.7				93.7	117.1	0.808				0.808	UU	0.3						0.1	0.0												

TABLE F-1

LABORATORY TESTING SUMMARY

STP COL PROJECT

MACTEC ENGINEERING AND CONSULTING, INC.

PROJECT # 6050-06-0496

SAMPLE INFORMATION: Boring Number	Sample Number	Sample Top Depth, feet	Sample Bottom Depth, feet	USCS Symbol	USCS Material Description	PHYSICAL PROPERTIES: Grain Size (Passing %): Gravel	Sand	Silt	Clay	Fines	Natural Moisture Content (%) at e_o: Physical Properties	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Atterberg Limits: Liquid Limit, LL	Plastic Limit, PL	Plasticity Index, PI	Specific Gravity, Gs	Dry Density (pcf) at e_o: Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Wet Density (pcf)	Void Ratio: Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Triaxial Tests: Test Type (1)	q_u (ksf)	C' (ksf)	φ' (degree)	σ_1 or σ_3' (ksf)	max σ_d (ksf)	Pore Pressure (ksf), at max σ_d	C (ksf)	φ (degree)	Consolidation: P_o (ksf)	P_c (ksf)	OCR	C_c	C_r	C_v (ft²/day)	Direct Shear: τ (psi) max.	σ (psi)	Relative Displacement at Max Shear (%)	Chemical Analysis: pH	Chloride (mg/kg)	Sulfide (mg/kg)	Compaction: Optimum Moisture (%)	Maximum Density (pcf)	CBR (%)
B-904	SS-10	33.5	35																																															8.8	108.00	23.20			
B-904	SS-11	38.5	40	SM	Silty Sand	0.0	83.4			16.6	22.4					22.4																																							
B-904	SS-12A/B	44	45																																															8.7	33.40	6.70			
B-904	SS-13	48.5	50																																															8.5	66.90	143.00			
B-904	UD-4	53	55	SC	Clayey Sand	0.0	76.3	4.8	18.9	23.7		32.5				32.5	64	24	40	2.66	87.4				87.4	115.8	0.900				0.900	UU	0.7						0.3																
B-904	SS-15	63.5	65	CH	Fat Clay						23.1					23.1	64	21	43																																				
B-904	SS-17	73.5	75	CH	Fat Clay						22.4					22.4	63	23	42																																				
B-904	UD-5	83	85	CH	Fat Clay							24.0				24.0	62	21	41	2.71	98.8				98.6	122.3	0.716				0.716	UU	3.3						1.8	0.0															
B-904	SS-20	93.5	95	CH	Fat Clay						25.0					25.0	64	21	43																																				
B-908	SS-3	3	4.5	CH	Fat Clay						27.0					27.0	53	21	32																																				
B-908	SS-9	12	13.5	CH	Fat Clay						24.8					24.8	72	25	47																																				
B-908	SS-12	23.5	25	SM	Silty Sand	0.0	66.2			33.8	24.0					24.0																																							
B-908	SS-13	28.5	30	SM	Silty Sand	0.6	65.1			34.3	24.3					24.3																																							
B-908	SS-14	33.5	35	SM	Silty Sand	1.4	84.0			14.6	23.0					23.0																																							
B-908	SS-15	38.5	40	SM	Silty Sand	5.9	81.8			12.3	20.2					20.2																																							
B-908	SS-16	43.5	45	SM	Silty Sand	0.0	57.1			42.9	22.4					22.4																																							
B-908	SS-18	53.5	55	CH	Fat Clay						30.6					30.6	83	24	59																																				
B-908	SS-21	68.5	70	CH	Fat Clay						26.1					26.1	71	31	40																																				
B-908	SS-23	78.5	80	CH	Fat Clay						21.8					21.8	59	17	42																																				
B-908	SS-24	83.5	85	CL-ML	Silty Clay						20.5					20.5	27	21	6																																				
B-908	SS-26	93.5	95	CH	Fat Clay						19.1					19.1	52	18	34																																				
B-909	SS-2	1.5	3	CH	Fat Clay						27.0					27.0	63	19	44																																				
B-909	SS-6	7.5	9	CH	Fat Clay						26.5					26.5	77	24	53																																				
B-909	SS-10	13.5	15	CH	Fat Clay						21.1					21.1	64	28	36																																				
B-909	SS-12	23.5	25	CL	Lean Clay						21.6					21.6	30	20	10																																				
B-909	SS-13	28.5	30	ML	Sandy Silt	2.1	38.3			59.6	26.0					26.0																																							
B-909	UD-1	33	35	SM	Silty Sand	0.0	75.9			24.1		23.8	22.6			23.2				2.73	101.6	98.1			99.9	123.0	0.679	0.737			0.708	UU	11.3						5.7	0.0							7.74	10.00	100						
B-909	SS-14	38.5	40																																															8.9	96.30	10.20			
B-909	UD-2	43	45	CH	Fat Clay	0.0	0.0	12.7	87.3	100.0		25.0			25.7	25.4	62	24	38	2.78	96.5			96.8	96.6	121.1	0.785			0.780	0.783	UU	4.4						2.2	0.0	3.185	11.3	3.5	0.096	0.007										
B-909	UD-3	48	50	CH	Fat Clay							30.5			34.8	32.8	74	21	53	2.65	88.6			86.0	87.3	115.9	0.869			0.920	0.895	UU	4.8						2.4	0.0	3.505	16.9	4.8	0.468	0.030										
B-909	UD-4	53	55	CH	Fat Clay	0.0	4.3	24.4	71.3	95.7		30.0				30.0	68	28	40	2.77	85.2				85.2	110.8	1.030				1.030	UU	0.9						0.4	0.0															

TABLE F-1

LABORATORY TESTING SUMMARY

STP COL PROJECT

MACTEC ENGINEERING AND CONSULTING, INC.

PROJECT # 5050-08-0496

SAMPLE INFORMATION						PHYSICAL PROPERTIES																																											
						Grain Size (Passing %)					Natural Moisture Content (%) at α_o						Atterberg Limits				Dry Density (pcf) at α_o							Void Ratio				Triaxial Tests									Consolidation					Direct Shear			Chemical Analysis			Compaction		
Boring Number	Sample Number	Sample Top Depth, feet	Sample Bottom Depth, feet	USCS Symbol	USCS Material Description	Gravel	Sand	Silt	Clay	Fines	Physical Properties	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Liquid Limit, LL	Plastic Limit, PL	Plasticity Index, PI	Specific Gravity, Gs	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Wet Density (pcf)	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Test Type (1)	q_u (ksf)	C' (ksf)	φ' (degree)	σ_c or σ_c' (ksf)	max σ_c (ksf)	Pore Pressure (ksf), at max σ_c	C (ksf)	φ (degree)	P_c (ksf)	P_c (ksf)	OCR	C_c	C_r	C_v (ft²/day)	ε (psi) max.	σ (psi)	Relative Displacement at Max Shear (%)	pH	Chloride (mg/kg)	Sulfide (mg/kg)	Optimum Moisture (%)	Maximum Density (pcf)	CBR (%)
B-909	SS-16	63.5	65	CH	Fat Clay						23.6					23.6	68	21	47																																
B-909	SS-18	73.5	75	CH	Fat Clay						23.7					23.7	71	21	50																																
B-909	UD-5	85	87	CL	Lean Clay	0.0	3.8	26.5	69.7	96.2		27.6	19.3	16.7		21.9	49	23	26	2.75	94.8	108.6	107.1		103.5	126.1	0.811	0.581	0.603		0.665	CU		1.0	12.0				0.9	6.0											
B-909	UD-6	93	95	CH	Fat Clay							17.9				17.9	55	21	34	2.71	109.7				105.7	129.3	0.542				0.542	UU	7.1						3.5	0.0											
B-909	UD-7	98	100									21.5				21.5					99.7				99.7	121.1	0.691				0.691	UU	5.6						2.6	0.0											
B-911	SS-12	23.5	25	ML	Silt	0.0	5.7			94.3	26.4					26.4	NV	NP	NP																																
B-912	SS-4	4.5	6																																													8.8	258.00	141.00			
B-912	SS-6	7.5	9	CH	Fat Clay						28.5					28.5	80	22	58																																
B-912	SS-9	12	13.5																																													8.8	48.90	6.10			
B-912	SS-10	13.5	15	CH	Fat Clay						17.2					17.2	58	17	41																																
B-912	SS-11	18.5	20																																													8.4	119.00	25.90			
B-912	SS-12	23.5	25								23.8					23.8																																			
B-912	SS-13	28.5	30																																													8.6	80.10	13.50			
B-912	SS-14	33.5	35	ML	Sandy Silt	4.0	36.8			59.2	28.5					28.5																																			
B-912	SS-15	38.5	40																																													9.0	92.10	9.80			
B-912	SS-16	43.5	45	ML	Silt with Sand	0.5	17.9			81.5	18.8					18.8																																			
B-912	SS-17A	48.5	50								26.2					26.2																																			
B-912	SS-18	53.5	55								34.3					34.3																																			
B-912	SS-19	58.5	60	CH	Fat Clay						25.9					25.9	72	22	50																																
B-912	SS-20	63.5	65								20.6					20.6																																			
B-912	SS-21	68.5	70	CL	Lean Clay						19.2					19.2	48	18	28																																
B-912	SS-22	73.5	75								24.8					24.8																																			
B-912	SS-23	78.5	80								24.5					24.5																																			
B-912	SS-24	83.5	85	CH	Fat Clay						25.0					25.0	74	21	53																																
B-912	SS-25	88.5	90								29.2					29.2																																			
B-912	SS-26	93.5	95								29.2					29.2																																			
B-912	SS-27	98.5	100								26.4					26.4																																			
B-914	SS-4	4.5	6	CL	Lean Clay						16.5					16.5	44	12	32																																	
B-914	SS-6	7.5	9								28.0					28.0																																			
B-914	SS-8	10.5	12								26.0					26.0																																			
B-914	SS-10	13.5	15								21.5					21.5																																			

TABLE F-1

LABORATORY TESTING SUMMARY

STP COL PROJECT

MACTEC ENGINEERING AND CONSULTING, INC.

PROJECT # 5050-06-0496

| SAMPLE INFORMATION | | | | | | PHYSICAL PROPERTIES | | | | | |

TABLE F-1

LABORATORY TESTING SUMMARY

STP COL PROJECT

MACTEC ENGINEERING AND CONSULTING, INC.

PROJECT # 5060-08-0499

SAMPLE INFORMATION						PHYSICAL PROPERTIES																																																			
						Grain Size (Passing %)					Natural Moisture Content (%) at e_o					Atterberg Limits				Dry Density (pcf) at e_o						Void Ratio					Triaxial Tests									Consolidation						Direct Shear			Chemical Analysis			Compaction		
Boring Number	Sample Number	Sample Top Depth, feet	Sample Bottom Depth, feet	USCS Symbol	USCS Material Description	Gravel	Sand	Silt	Clay	Fines	Physical Properties	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Liquid Limit, LL	Plastic Limit, PL	Plasticity Index, PI	Specific Gravity, Gs	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Wet Density (pcf)	Triaxial, Direct Shear, or Unconfined 1	2	3	Consolidation	Average	Test Type (1)	q_u (ksf)	C' (ksf)	φ' (degree)	σ_c or σ_c' (ksf)	max σ_d (ksf)	Pore Pressure (ksf), at max σ_d	C (ksf)	φ (degree)	P_o (ksf)	P_c (ksf)	OCR	C_c	C_r	C_v (ft^2/day)	τ (psf) max.	σ (psf)	Relative Displacement at Max Shear (%)	pH	Chloride (mg/kg)	Sulfide (mg/kg)	Optimum Moisture (%)	Maximum Density (pcf)	CBR (%)
B-919	SS-11	33.5	35	SP-SM	Poorly Graded Sand w/ Silt	0.0	88.2			11.8	27.0	-				27.0																																								
B-919	UD-3	43	45	CH	Fat Clay							26.5				26.5	65	24	42		94.5				94.5	119.5	0.784				0.784	UU	3.5						1.7	0.0															
B-919	SS-13	48.5	50	CH	Fat Clay						23.1					23.1	65	20	45																																					
B-919	SS-16	63.5	65	SM	Silty Sand	0.8	80.1			19.9	19.9					19.9																																							
B-919	SS-18	73.5	75	SP-SM	Poorly Graded Sand w/ Silt	0.0	90.7			9.3	19.4					19.4																																							
B-919	UD-4	83	85									19.0	21.3	20.5		19.9				2.62	102.8	103.3	97.7		101.3	121.4	0.691	0.583	0.675		0.618	CU		0.7	27.9				2.5	19.0															
B-919	SS-21	93.5	95	SM	Silty Sand	0.0	56.3			43.7	25.2					25.2																																							
B-927	SS-3	3	4.5			--																																														8.4	244.00	185.00			
B-927	SS-4	4.5	6								17.0					17.0																																							
B-927	SS-5	6	7.5	CL	Lean Clay with Sand	1.7	19.9			78.4	19.2					19.2	34	16	18																																					
B-927	SS-7	9	10.5																																																	8.5	6.50	9.30			
B-927	SS-9	10.5	12	ML	Sandy Silt	3.7	28.2	68.0	12.1	68.1	22.3					22.3	NV	NP	NP																																					
B-927	SS-10	23.5	25	CL	Lean Clay						25.5					25.5	28	19	10																																					
B-927	UD-2	28	30									21.3				21.3					105.3				105.3	127.7	0.600				0.600	UNC	1.7						0.9															
B-927	UD-3	48	50	CH	Fat Clay							28.2				28.2	54	21	33		95.1				95.1	121.9	0.772				0.772	UNC	3.6						1.8															
TP1-B919	1	0.5	6	CH	Fat Clay	0.9	11.0	45.1	43.9	89.0	20.2					20.2	50	17	33																																				12.40	115.8	
TP1-B927	1	0.5	4	CL	Lean Clay	0.0	11.4	41.6	47.0	88.6	24.1					24.1	45	15	30																																				13.50	116.4	3
TP1-C304	1	3	6.75	CH	Fat Clay	0.0	9.5	44.0	46.5	90.5	21.7					21.7	51	15	36																																				11.20	112.2	
TP1-C404	1	2.25	7	CH	Fat Clay	0.9	12.1	28.7	58.3	87.0	24.3					24.3	62	18	44																																				13.90	116.6	3
TP2-B919	2	6	8.5	CH	Fat Clay	0.0	0.8	7.8	91.6	99.2	25.9					25.9	74	22	52																																				18.20	109.1	
TP2-B927	2	5.5	8.5	CL	Lean Clay	0.2	9.8	48.1	42.9	91.0	22.0					22.0	41	15	26																																				11.30	117.8	
TP2-C304	2	6.75	9	CL	Lean Clay	0.4	8.2	62.9	27.5	90.4	25.5					25.5	40	17	23																																				9.50	121.5	2
TP2-C404	2	7	9	CH	Fat Clay	1.0	1.9	7.2	89.9	97.1	28.4					28.4	77	21	56																																				8.40	121.7	3

Notes: (1) UNC = Unconfined Compression Test, UU = Unconsolidated - Undrained, CU = Consolidated - Undrained

Prepared By/Date: Sm 4/3/07
Checked By/Date: [illegible] 4/3/07

Table F-2 **LABORATORY EQUIPMENT**

Laboratory equipment used for the testing included the following:

Serial or Lab ID Number(s)	MACTEC Office	Equipment Identification
1 thru 11, 472046	Charlotte	Hydrometer Cylinder
1 thru 4, A, B, and C	Charlotte	Soil/Solids Specific Flask/Pycnometer
100	Charlotte	Ruler
936-2	Charlotte	Mixer
H-4265	Charlotte	Mixing Cup
02105539	Charlotte	Caliper/Micrometer
1512	Charlotte	Balance/Scale (GT 4100)
N5	Charlotte	#200 Sieve
N4	Charlotte	#140 Sieve
28	Charlotte	#100 Sieve
N3	Charlotte	#60 Sieve
15	Charlotte	#40 Sieve
23	Charlotte	#20 Sieve
N2	Charlotte	#10 Sieve
7	Charlotte	#4 Sieve
10	Charlotte	3/8" Sieve
1	Charlotte	½" Sieve
12	Charlotte	¾" Sieve
4	Charlotte	1" Sieve
6	Charlotte	1-½" Sieve
3	Charlotte	2" Sieve
47	Charlotte	3" Sieve
0130869	Charlotte	Caliper
VAC-1	Charlotte	Vacuum System
H-1748	Charlotte	Absolute Pressure Gauge
98054228	Charlotte	Liquid Limit Device
5635726	Charlotte	Digital Immersion Thermometer
4085	Charlotte	Thermometer
154054	Charlotte	Caliper/Micrometer (Dial)
H-3250-943439720	Charlotte	Caliper/Micrometer (Length Comparator)
099472	Charlotte	Gage Blocks
9048	Charlotte	Balance
0002007	Charlotte	Caliper
4048	Charlotte	Scale
F9-1	Charlotte	Feeler Gage Set
622	Charlotte	Compression/Tension Loading Device
625	Charlotte	Digital Stopwatch
G-1	Charlotte	Weights
380645, 548966	Charlotte	Balance/Scale
O9HC, D ,E, F, G, H, 1290, CA8433	Charlotte	Weights
10190	Charlotte	Proving Ring

Serial or Lab ID (LID) Number(s)	MACTEC Office	Equipment Identification
RPA-6866	Charlotte	Drying Oven
05969	Charlotte	Digital Indicator (Mitutoyo)
H-4229-2	Charlotte	Calibration Block
144, 109, 500, 508, 503	Atlanta	Drying Ovens
2052	Atlanta	Flask #1
2053	Atlanta	Flask #2
2054	Atlanta	Flask #3
2055	Atlanta	Flask #4
2056	Atlanta	Flask #5
2057	Atlanta	Flask #6
2196	Atlanta	Flask #7
2197	Atlanta	Flask #8
2198	Atlanta	Flask #12
2180	Atlanta	Flask #16
2181	Atlanta	Flask #22
2182	Atlanta	Flask #25
2183	Atlanta	Flask #26
2184	Atlanta	Flask #27
2185	Atlanta	Flask #28
2186	Atlanta	Flask #29
2187	Atlanta	Flask #31
2188	Atlanta	Flask SP-2
2189	Atlanta	Flask SP-3
2190	Atlanta	Flask SP-4
2191	Atlanta	Flask SP-5
2192	Atlanta	Flask SP-7
2193	Atlanta	Flask SP-8
2194	Atlanta	Flask SP-9
2195	Atlanta	Flask SP-10
149	Atlanta	Thermometer
2126	Atlanta	Standard Thermometer
514	Atlanta	Glass Thermometer
418, 412, 411, 143, 416	Atlanta	Balance/Scale
448, 1150, 1260, 674, 444	Atlanta	#4 Sieve
1142, 568, 650, 443, 1143	Atlanta	#10 Sieve
569, 1141, 1140	Atlanta	#20 Sieve
1186, 1264, 1991, 1187	Atlanta	#40 Sieve
319, 1181	Atlanta	#60 Sieve
1918, 1138	Atlanta	#140 Sieve
1915, 1876, 2531	Atlanta	#200 Sieve

Serial or Lab ID (LID) Number(s)	MACTEC Office	Equipment Identification
310	Atlanta	3" Sieve
438	Atlanta	2-½" Sieve
743	Atlanta	2" Sieve
309, 671	Atlanta	1-½" Sieve
436, 672	Atlanta	1" Sieve
437, 669	Atlanta	¾" Sieve
457, 1145	Atlanta	½" Sieve
445, 314, 673	Atlanta	3/8" Sieve
785	Atlanta	#100 Sieve
2446	Atlanta	7/16" Sieve
449	Atlanta	¼" Sieve
486	Atlanta	Optical Scope
2151/52042	Atlanta	Hydrometer – 152H
1152, 1153, 1155 thru 1159	Atlanta	Hydrometer Cylinder
244, 242, 245, 246, 249, 270, 256, 265, 257, 264, 261	Atlanta	Sedimentation Cylinder
1165	Atlanta	Mixer Cup
2354	Atlanta	Mixer
485	Atlanta	Caliper Master
526	Atlanta	Calipers, 8" Digital
2424	Atlanta	8" Caliper
2563, 2376	Atlanta	Digital Calipers
2545 thru 2547	Atlanta	Digital Load Cell
2575 thru 2583	Atlanta	Digital Load Cell
Node 66	Atlanta	Pressure Transducer/Pressure Gauge
Node 67	Atlanta	Pressure Transducer/Pressure Gauge
Node 69	Atlanta	Pressure Transducer/Pressure Gauge
Node 70	Atlanta	Pressure Transducer/Pressure Gauge
Node 73	Atlanta	Pressure Transducer/Pressure Gauge
Node 72	Atlanta	Pressure Transducer/Pressure Gauge
Node 91	Atlanta	Pressure Transducer/Pressure Gauge
Node 92	Atlanta	Pressure Transducer/Pressure Gauge
Node 98	Atlanta	Pressure Transducer/Pressure Gauge
Node 94	Atlanta	Pressure Transducer/Pressure Gauge
Node 95	Atlanta	Pressure Transducer/Pressure Gauge
Node 97	Atlanta	Pressure Transducer/Pressure Gauge
OKET	Atlanta	Standard Weights
77675	Atlanta	Dead Weight Pressure Tester
485	Atlanta	Pressure Transducer with Readout
1449	Atlanta	Steel Grooving Tool
2255, 1644	Atlanta	Liquid Limit Device
526	Atlanta	Gauge Blocks

Serial or Lab ID (LID) Number(s)	MACTEC Office	Equipment Identification
IN7274, 241161	Phoenix	Thermometer
1345	Phoenix	Stop Watch
13012969, 14705863, 14705877, 897126	Phoenix	Digital Balance
1610 thru 1620	Phoenix	Soil/Solids Specific Gravity Flask/Pycnometer
2004-26, 2004-31	Phoenix	Straight Edge
ATS-4197	Phoenix	Function Generator
ATS-4005	Phoenix	Universal Counter
1079, 1400, 1158, 1399	Phoenix	Balance
1366,1633	Phoenix	Caliper
1633	Phoenix	24-inch Steel Rule
1608	Phoenix	Modified Rammer, Manual
1552, 1553	Phoenix	Standard Rammer, Mechanical
777, 1506, 1507, 1510	Phoenix	4" Proctor Mold
762, 1644	Phoenix	Liquid Limit Device
1366	Phoenix	Feeler Gauge
762 Block	Phoenix	Caliper/Steel Ruler
1640	Phoenix	5/16" Steel Ball w/ 9.84" Acrylic Tube
1301, 1302	Phoenix	Sieve Shaker (including timer)
1345	Phoenix	Timing Device
1638, G249, 1235, 1239, 1240, 1580	Phoenix	Sieve Nest
1642	Phoenix	#60 Sieve
1641/06339483	Phoenix	#140 Sieve
684, 91-15607	Phoenix	ASTM 152H Soil Test Soil Hydrometer
1621 thru 1632	Phoenix	Hydrometer Cylinder
1639	Phoenix	Hydrometer Water Bath
639, 1378, 1647/0900297	Phoenix	Drying Oven
1438 thru 1443, 1303 thru 1305	Phoenix	CBR Mold
1306	Phoenix	Surcharge Weights
1307	Phoenix	CBR Penetration Piston
JW49705	Phoenix	Digital Balance
1646	Phoenix	#40 Sieve
1645	Phoenix	#10 Sieve
1447, 1449, 1453	Phoenix	#200 Sieve
1394-1, 1395-1	Phoenix	Grooving Tool

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-309	SS-2	1.5-3	28.0
B-309	SS-5	6-7.5	27.2
B-309	SS-8	10.5-12	27.0
B-309	SS-10	13.5-15	23.6
B-309	SS-11	18.5-20	22.6
B-309	SS-13	28.5-30	24.8
B-309	SS-15	38.5-40	23.3
B-309	SS-16	43.5-45	24.8
B-309	SS-18	53.5-55	20.7
B-309	SS-20	63.5-65	23.4
B-309	SS-22	73.5-75	24.2

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2-17-07

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-309	SS-23	78.5-80	20.8
B-309	SS-25	88.5-90	21.5
B-309	SS-27	98.5-100	23.6
B-309	SS-28	108.5-110	17.6
B-309	SS-29	118.5-120	27.1
B-309	SS-30	128.5-130	27.0
B-309	SS-31	138.5-140	21.7
B-309	SS-32	148.5-150	23.3
B-309	SS-33	158.5-160	23.9
B-309	SS-34	168.5-170	25.7
B-309	SS-35	178.5-180	24.6

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MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-309	SS-36	188.5-190	28.1
B-309	SS-37	198.5-200	31.8
B-328	SS-4	4.5-6	22.2
B-328	SS-8	10.5-12	24.1
B-328	SS-9	18.5-20	25.0
B-328	SS-10	23.5-25	22.1
B-328	SS-12	38.5-40	23.2
B-328	SS-13	43.5-45	26.6
B-328	SS-15	58.5-60	25.6
B-328	SS-18	78.5-80	21.4
B-328	SS-19	88.5-90	21.0

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MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-328	SS-21	98.5-100	21.0
B-328	SS-22	108.5-110	14.6
B-328	SS-23	118.5-120	22.0
B-328	SS-24	128.5-130	21.0
B-328	SS-25	138.5-140	18.3
B-328	SS-26	148.5-150	21.3
B-328	SS-27	159-160	25.4
B-328	SS-29	178.5-180	23.6
B-328	SS-30	188.5-190	26.5
B-344	SS-3	3-4.5	24.0
B-344	SS-7	9-10.5	24.6

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MACTEC

Moisture Content Report
ASTM D2216-05

Project No. 5050-06-0496
Project Name Bechtel / STP / COL
MACTEC Lab Location Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-344	SS-12	23.5-25	25.9
B-344	SS-15	38.5-40	21.8
B-344	SS-17	48.5-50	27.7
B-344	SS-19	58.5-60	18.6
B-344	SS-21	68.5-70	21.9
B-344	SS-23	78.5-80	20.3
B-344	SS-25	88.5-90	22.7
B-344	SS-26	93.5-95	20.7
B-344	SS-27	98.5-100	29.3
B-405 DH	SS-3	3-4.5	25.0
B-405 DH	SS-6	7.5-9	29.0

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MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-405 DH	SS-8	13.5-15	19.8
B-405 DH	SS-10	23.5-25	27.6
B-405 DH	SS-11	33.5-35	25.0
B-405 DH	SS-13	43.5-45	26.3
B-405 DH	SS-15	53.5-55	27.9
B-405 DH	SS-17	68.5-70	20.9
B-405 DH	SS-19	78.5-80	21.0
B-405 DH	SS-22	98.5-100	27.3
B-405 DH	SS-23	108.5-110	19.7
B-405 DH	SS-24	118.5-120	22.3
B-405 DH	SS-26	138.5-140	17.7

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MACTEC

Moisture Content Report
ASTM D2216-05

Project No. 5050-06-0496
Project Name Bechtel / STP / COL
MACTEC Lab Location Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-405 DH	SS-27	158.5-160	23.7
B-405 DH	SS-28	178.5-180	22.6
B-405 DH	SS-29	188.5-190	16.7
B-405 DH	SS-30	198.5-200	24.0
B-405 DH	SS-32	238.5-240	20.1
B-405 DH	SS-33	258.5-260	27.3
B-405 DH	SS-37	338.5-340	16.7
B-405 DH	UD-17	388-390	28.0
B-405 DH	SS-40	398.5-400	17.1
B-405 DH	SS-41	423.5-425	25.3
B-405 DH	SS-45	498.5-500	21.8

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MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-405 DH	SS-46	523.5-525	21.6
B-405 DH	SS-47	538.5-540	20.8
B-405 DH	SS-49	578.5-580	19.9
B-432	SS-5	8-9.5	22.3
B-432	SS-8	12.5-14	21.4
B-432	SS-10	23.5-25	25.6
B-432	SS-12	33.5-35	24.2
B-432	SS-15	48.5-50	29.8
B-432	SS-16	53.5-55	23.4
B-432	SS-17	58.5-60	21.2
B-432	SS-18	63.5-65	26.2

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2-17-07

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-432	SS-19	68.5-70	28.1
B-432	SS-21	78.5-80	20.8
B-432	SS-23	88.5-90	21.6
B-432	SS-25	98.5-100	22.8
B-432	SS-27	118.5-120	24.7
B-432	SS-28	128.5-130	21.2
B-432	SS-30	148.5-150	19.8
B-305 DH	SS-8	13.5-15	19.9
B-305 DH	SS-9	18.5-20	22.7
B-305 DH	SS-11	27-28.5	24.0
B-305 DH	SS-16	58.5-60	20.9

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2-17-07

MACTEC

Moisture Content Report
ASTM D2216-05

Project No. 5050-06-0496
Project Name Bechtel / STP / COL
MACTEC Lab Location Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-305 DH	SS-19	73.5-75	23.1
B-305 DH	SS-21	88.5-90	21.1
B-305 DH	SS-22	93.5-95	22.5
B-305 DH	SS-24	108.5-110	19.8
B-305 DH	SS-25	118.5-120	21.8
B-305 DH	SS-29	170-171.5	23.9
B-305 DH	SS-30	178.5-180	21.7
B-305 DH	SS-32	198.5-200	26.1
B-305 DH	SS-33	218.5-220	19.8
B-305 DH	SS-35	258.5-260	29.6
B-305 DH	SS-36	278.5-280	30.4

MH
2-17-07

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-305 DH	SS-40	378.5-380	25.7
B-305 DH	SS-42	438.5-440	29.7
B-305 DH	SS-43	458.5-460	23.3
B-305 DH	SS-44	478.5-480	24.3
B-323	SS-1	0-1.5	5.1
B-323	SS-4	4.5-6	21.2
B-323	SS-12	23.5-25	22.5
B-323	SS-14	33.5-35	21.6
B-323	SS-16	43.5-45	20.5
B-323	SS-17	48.5-50	32.1
B-323	SS-18	53.5-55	18.1

MH
2-7-07

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-323	SS-19	58.5-60	19.5
B-323	SS-21	68.5-70	23.2
B-323	SS-22	73.5-75	20.0
B-323	SS-23	78.5-80	20.4
B-323	SS-24	83.5-85	18.3
B-323	SS-25	88.5-90	22.0
B-323	SS-26	93.5-95	17.8
B-323	SS-27	98.5-100	22.4
B-421	SS-4	4.5-6	18.9
B-421	SS-9	12-13.5	20.4
B-421	SS-11	18.5-20	22.5

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2-17-07

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-421	SS-13	28.5-30	23.6
B-421	SS-15	43.5-45	22.8
B-421	SS-16	48.5-50	35.3
B-421	SS-19	68.5-70	20.1
B-421	SS-20	73.5-75	20.3
B-421	SS-22	88.5-90	23.6
B-421	SS-23	93.5-95	21.5
B-421	SS-24	98.5-100	19.3
B-419	SS-3	3-4.5	25.3
B-419	SS-7	9-10.5	22.8
B-419	SS-10	13.5-15	21.2

MH
2-17-07

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-419	SS-12	23.5-25	21.7
B-419	SS-14	33.5-35	26.7
B-419	SS-16	43.5-45	29.0
B-419	SS-18	53.5-55	18.0
B-419	SS-20	63.5-65	20.5
B-419	SS-22	73.5-75	21.1
B-419	SS-24	88.5-90	25.5
B-419	SS-26	108.5-110	20.4
B-419	SS-27	128.5-130	25.0
B-419	SS-28	148.5-150	21.8
B-419	SS-29	168.5-170	24.8

MH
2-17-07

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-419	SS-30	188.5-190	31.6
B-427	SS-3	3-4.5	23.5
B-427	SS-7	9-10.5	24.0
B-427	SS-12	23.5-25	23.8
B-427	SS-14	33.5-35	24.6
B-427	SS-17	48.5-50	43.0
B-427	SS-19	58.5-60	18.9
B-427	SS-21	68.5-70	20.3
B-427	SS-24	83.5-85	18.9
B-427	SS-26	93.5-95	21.5
B-427	SS-28	108.5-110	16.7

MH
2-17-07

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-427	SS-29	118.5-120	21.0
B-427	SS-30	128.5-130	20.6
B-427	SS-31	138.5-140	15.7
B-427	SS-32	148.5-150	22.3
B-902	SS-7	11.5-13	19.5
B-902	SS-9	18.5-20	26.8
B-902	SS-10	28.5-30	24.0
B-902	SS-11	33.5-35	22.5
B-902	SS-12	38.5-40	22.5
B-902	SS-14	48.5-50	31.4
B-902	SS-16	58.5-60	24.9

MH
2-7-07

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-902	SS-18	68.5-70	25.7
B-902	SS-20	78.5-80	23.2
B-902	SS-22	88.5-90	23.8
B-902	SS-24	98.5-100	28.0
B-904	SS-11	38.5-40	22.4
B-904	SS-15	63.5-65	23.1
B-904	SS-17	73.5-75	22.4
B-904	SS-20	93.5-95	25.0
B-908	SS-3	3-4.5	27.0
B-908	SS-9	12-13.5	24.8
B-908	SS-12	23.5-25	24.0

MH
2-17-07

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-908	SS-13	28.5-30	24.3
B-908	SS-14	33.5-35	23.0
B-908	SS-15	38.5-40	20.2
B-908	SS-16	43.5-45	22.4
B-908	SS-18	53.5-55	30.6
B-908	SS-21	68.5-70	26.1
B-908	SS-23	78.5-80	21.8
B-908	SS-24	83.5-85	20.5
B-908	SS-26	93.5-95	19.1
B-909	SS-2	1.5-3	27.0
B-909	SS-6	7.5-9	26.5

MH
2-17-07

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-909	SS-10	13.5-15	21.1
B-909	SS-12	23.5-25	21.6
B-909	SS-13	28.5-30	26.0
B-909	SS-16	63.5-65	23.5
B-909	SS-18	73.5-75	23.7
B-912	SS-6	7.5-9	28.5
B-912	SS-10	13.5-15	17.2
B-912	SS-12	23.5-25	23.8
B-912	SS-14	33.5-35	26.5
B-912	SS-16	43.5-45	18.8
B-912	SS-18	53.5-55	34.3

MA
2-17-07

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-912	SS-19	58.5-60	25.9
B-912	SS-20	63.5-65	20.6
B-912	SS-21	68.5-70	19.2
B-912	SS-22	73.5-75	24.8
B-912	SS-23	78.5-80	24.5
B-912	SS-24	83.5-85	25.0
B-912	SS-25	88.5-90	26.2
B-912	SS-26	93.5-95	29.2
B-912	SS-27	98.5-100	26.4
B-914	SS-4	4.5-6	16.5
B-914	SS-6	7.5-9	28.0

MH
2-17-07

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-914	SS-8	10.5-12	26.0
B-914	SS-10	13.5-15	21.5
B-914	SS-11	18.5-20	24.4
B-914	SS-12	23.5-25	26.9
B-914	SS-13	28.5-30	25.4
B-914	SS-14	33.5-35	25.5
B-914	SS-16	43.5-45	28.1
B-914	SS-17	48.5-50	38.8
B-914	SS-18	53.5-55	24.7
B-914	SS-19	58.5-60	20.5
B-914	SS-20	63.5-65	22.9

MH
2-17-07

MACTEC

Moisture Content Report
ASTM D2216-05

Project No. 5050-06-0496
Project Name Bechtel / STP / COL
MACTEC Lab Location Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-914	SS-21	68.5-70	19.2
B-914	SS-22	73.5-75	19.8
B-914	SS-25	88.5-90	24.5
B-914	SS-26	93.5-95	23.3
B-914	SS-27	98.5-100	28.1
B-919	SS-3	3-4.5	22.2
B-919	SS-11	33.5-35	27.0
B-919	SS-13	48.5-50	23.1
B-919	SS-16	63.5-65	18.9
B-919	SS-18	73.5-75	19.4
B-919	SS-21	93.5-95	25.2

MH
2-17-07

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
TP1-C304	1	3-6.75	21.7
TP2-C304	2	6.57-9	25.5
TP1-C404	1	2.25-7	24.3
TP2-C404	2	7-9	28.4
TP1-B919	1	0.5-6	20.2
TP2-B919	2	6-8.5	25.9
TP1-B927	1	0.5-4	24.1
TP2-B927	2	5.5-8.5	22.0
B-927	SS-4	4.5-6	17.0
B-927	SS-8	10.5-12	22.3

MH
2-21-07

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-303	UD-3	108'- 110'	9.7
B-305	UD-7	123'- 125'	16.5
B-305DH	SS-41	398.5'- 400'	23.3
B-314	UD-3	121'- 123'	16.1
B-326	SS-8	10.5'- 12.0'	24.5
B-326	SS-11	18.5'- 20.0'	22.2
B-326	SS-13	28.5'- 30.0'	21.3
B-326	SS-15	38.5'- 40.0'	23.2
B-326	SS-20	63.5'- 65.0'	26.5
B-343	UD-7	173'- 175'	15.6
B-404	UD-1	88.0'- 90.0'	22.6

RF
3/5/07

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-405	UD-11	233'- 235'	15.2
B-405	UD-20	458.5'- 460.5'	19.5
B-409	UD-6	198'- 200'	27.0
B-422	SS-14	23.5'- 25.0'	27.0
B-428	SS-23	108.5'-110'	13.5
B-909	UD-7	98.0'-100'	26.1
B-918	UD-1	3.0'- 5.0'	13.6
B-919	UD-1	8.0'- 10.0'	23.3
B-919	UD-3	43.0'- 45.0'	28.1
B-927	UD-2	28.0'- 30.0'	17.2

RF
3/5/07

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

RF 3/30/07

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-407	SS-12	23.5'-25.0'	22.8
B-302	SS-13	28.5'-30.0'	21.5
B-301	SS-34	168.5'-170.0'	20.8
B-911	SS-12	23.5'-25.0'	28.4
B-927	SS-10	23.5'-25.0'	25.5
B-927	SS-5	6.0'-7.5'	19.2

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

RF 3/30/07

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-303	UD-3	108'- 110'	9.7
B-305DH	UD-7	123'- 125'	16.5
B-305DH	SS-41	398.5'- 400'	23.3
B-314	UD-3	121'- 123'	16.1
B-326	SS-8	10.5'- 12.0'	24.5
B-326	SS-11	18.5'- 20.0'	22.2
B-326	SS-13	28.5'- 30.0'	21.3
B-326	SS-15	38.5'- 40.0'	23.2
B-326	SS-20	63.5'- 65.0'	26.5
B-343	UD-7	173'- 175'	15.6
B-404	UD-1	88.0'- 90.0'	22.6

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

RF 3/30/07

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-432	SS-20	73.5'-75.0'	20.3
B-421	SS-12	23.5'-24.5'	25.5
B-421	SS-17	59.0'-60.0'	19.0
B-912	SS-17	49.5'-50.0'	26.2
B-914	SS-15	38.0'-40.0'	25.0
B-914	SS-23	78.5'-80.0'	18.8
B-914	SS-24	83.5'-85.0'	22.3

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

RC 3/30/07

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-432	SS-20	73.5'-75.0'	20.3
B-421	SS-12	23.5'-24.5'	25.5
B-421	SS-17	59.0'-60.0'	19.0
B-912	SS-17	49.5'-50.0'	26.2
B-914	SS-15	38.0'-40.0'	25.0
B-914	SS-23	78.5'-80.0'	18.8
B-914	SS-24	83.5'-85.0'	22.3

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

RF 3/30/07

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-303	UD-3	108'- 110'	9.7
B-305DH	UD-7	123'- 125'	16.5
B-305DH	SS-41	398.5'- 400'	23.3
B-314	UD-3	121'- 123'	16.1
B-326	SS-8	10.5'- 12.0'	24.5
B-326	SS-11	18.5'- 20.0'	22.2
B-326	SS-13	28.5'- 30.0'	21.3
B-326	SS-15	38.5'- 40.0'	23.2
B-326	SS-20	63.5'- 65.0'	26.5
B-343	UD-7	173'- 175'	15.6
B-404	UD-1	88.0'- 90.0'	22.6

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

RF 3/30/07

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-432	SS-20	73.5'-75.0'	20.3
B-421	SS-12	23.5'-24.5'	25.5
B-421	SS-17	59.0'-60.0'	19.0
B-912	SS-17	49.5'-50.0'	26.2
B-914	SS-15	38.0'-40.0'	25.0
B-914	SS-23	78.5'-80.0'	18.8
B-914	SS-24	83.5'-85.0'	22.3

MACTEC

Moisture Content Report
ASTM D2216-05

Project No.	5050-06-0496
Project Name	Bechtel / STP / COL
MACTEC Lab Location	Phoenix

RF 3/30/07

Boring No.	Sample No.	Depth (Ft)	Moisture Content (%)
B-407	SS-12	23.5'-25.0'	22.8
B-302	SS-13	28.5'-30.0'	21.5
B-301	SS-34	168.5'-170.0'	20.8
B-911	SS-12	23.5'-25.0'	28.4
B-927	SS-10	23.5'-25.0'	25.5
B-927	SS-5	6.0'-7.5'	19.2

MACTEC

Data Testing Sheet For The Standard Test Method For Laboratory Determination of Water Content of Soil and Rock by Mass
ASTM D2216-05

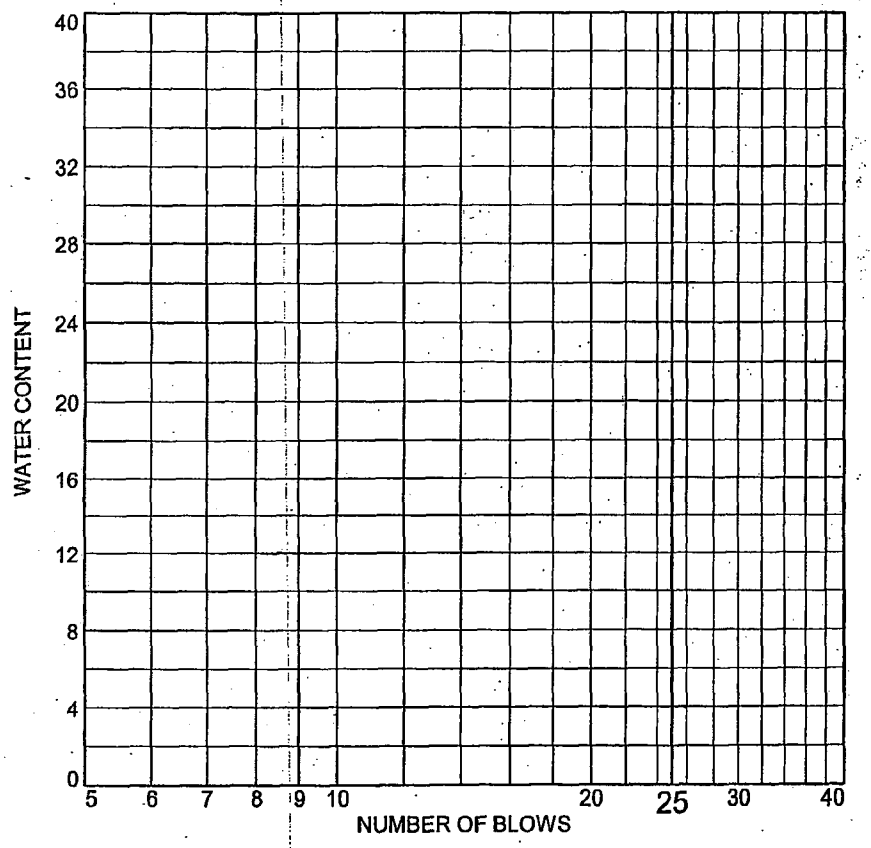
Project No.	5050-06-0496	Tested By	BM
Project Name	Bechtel/STP/COL	Test Date	4/4/07
Boring No.	N/A	Reviewed By	[illegible]
Sample Depth	N/A	Review Date	4/5/07
Sample No.	N/A	MACTEC Lab Location	ATL
Assignment Sheet Date			

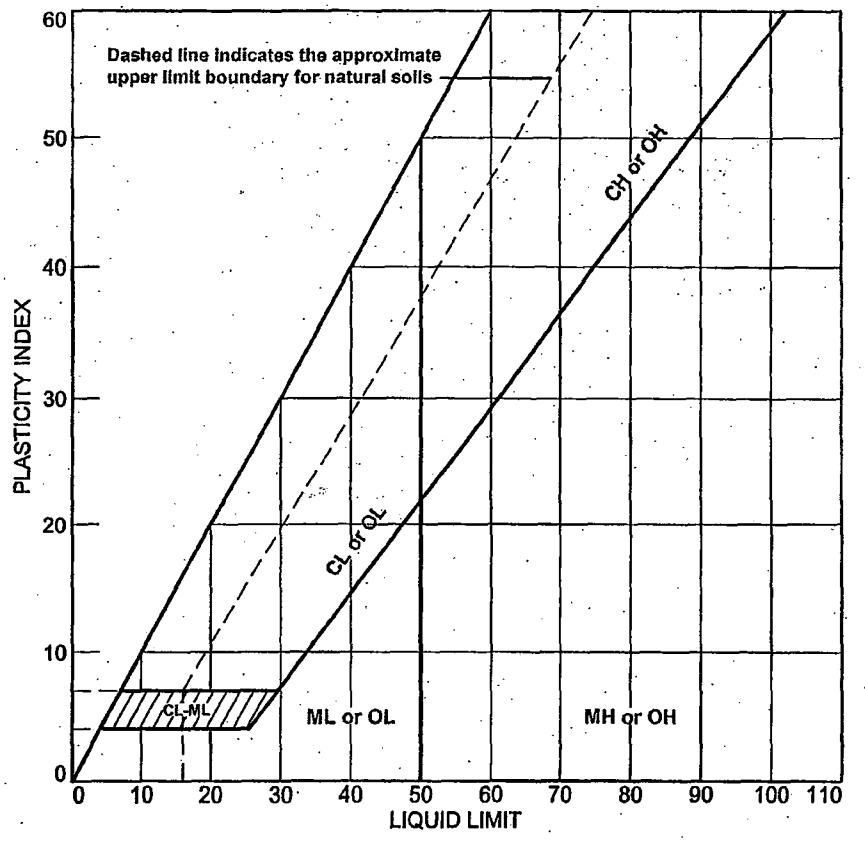
Boring No.	Sample No.	Depth (Ft)	Lab ID No.	Tare No.	Tare Wt. (grams)	Wet Soil + Tare (grams)	Dry Soil + Tare (grams)	Water Wt (grams)	Dry Soil Wt (grams)	Moisture Content (%)
B405	UD-9	193-195'	6923	C-15	15.95	62.30	49.54	12.76	33.59	38.0
B-432	UD-3	25-27'		V-13	15.45	101.40	88.57	12.83	73.10	17.6
B-405	UD-22	518-519'	6928	R-38	16.23	104.43	86.54	17.89	70.31	25.4

Equipment used	Equipment ID #
BALANCE: Sartorius	416
OVEN: Humboldt	109

KAW 4/5/07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 301	STP-310	168.5'-170.0'	11/18/2006	ML	Silt with Sand	20.8	NV	NP
		(SS-34)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

MH 4-3-07

KAW 4/3/07

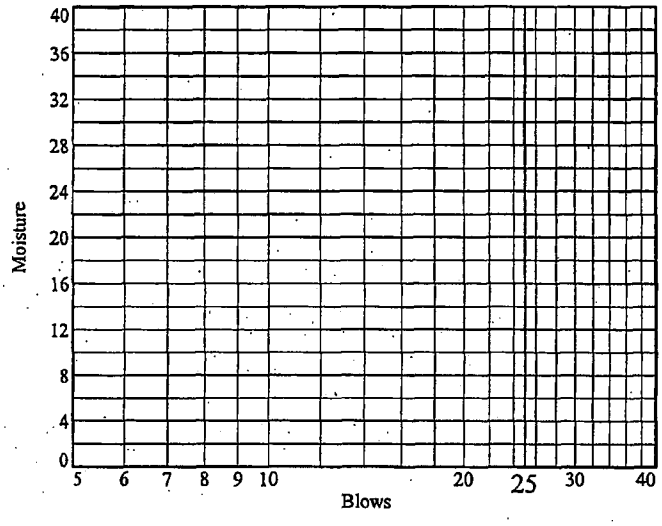
LIQUID AND PLASTIC LIMIT TEST DATA

4/1/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 301
Depth: 168.5'-170.0' **Sample Number:** STP-310 (SS-34)
Material Description: Silt with Sand
Date: 11/18/2006 **USCS Class.:** ML **AASHTO Class.:** A-4(0)
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare						
Dry+Tare						
Tare						
# Blows						
Moisture						



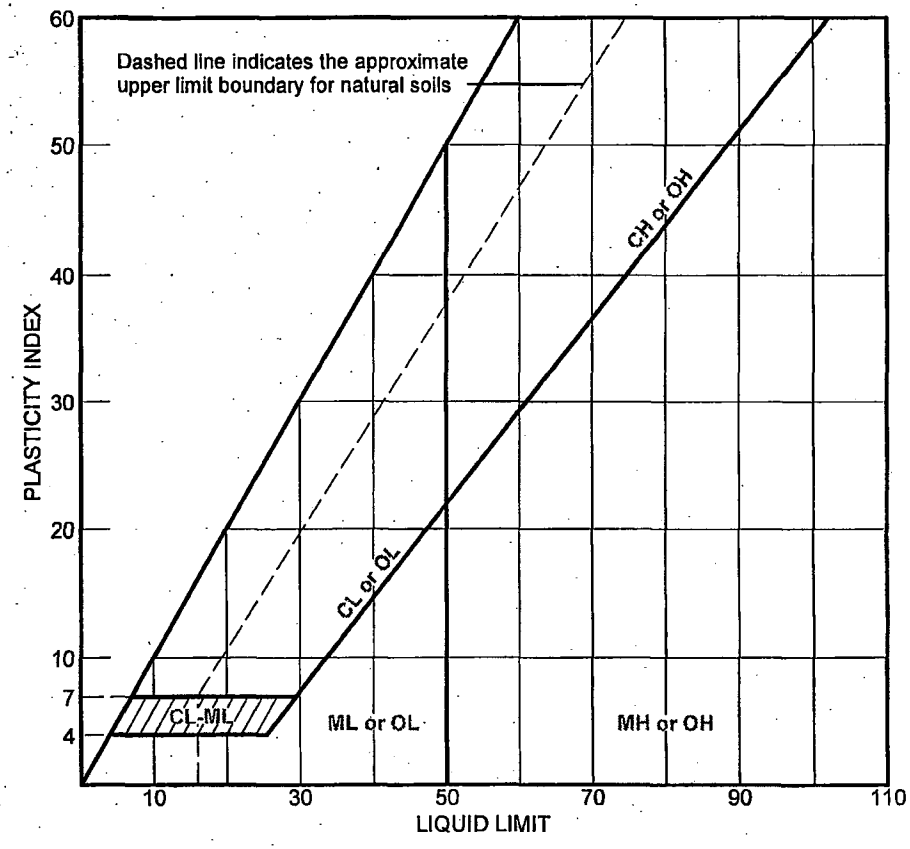
Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP
Natural Moisture= 20.8

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare					
Dry+Tare					
Tare					
Moisture					

MH 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-303	UD-1	63' to 65'	2-19-07	SM	Silty sand	25.5	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

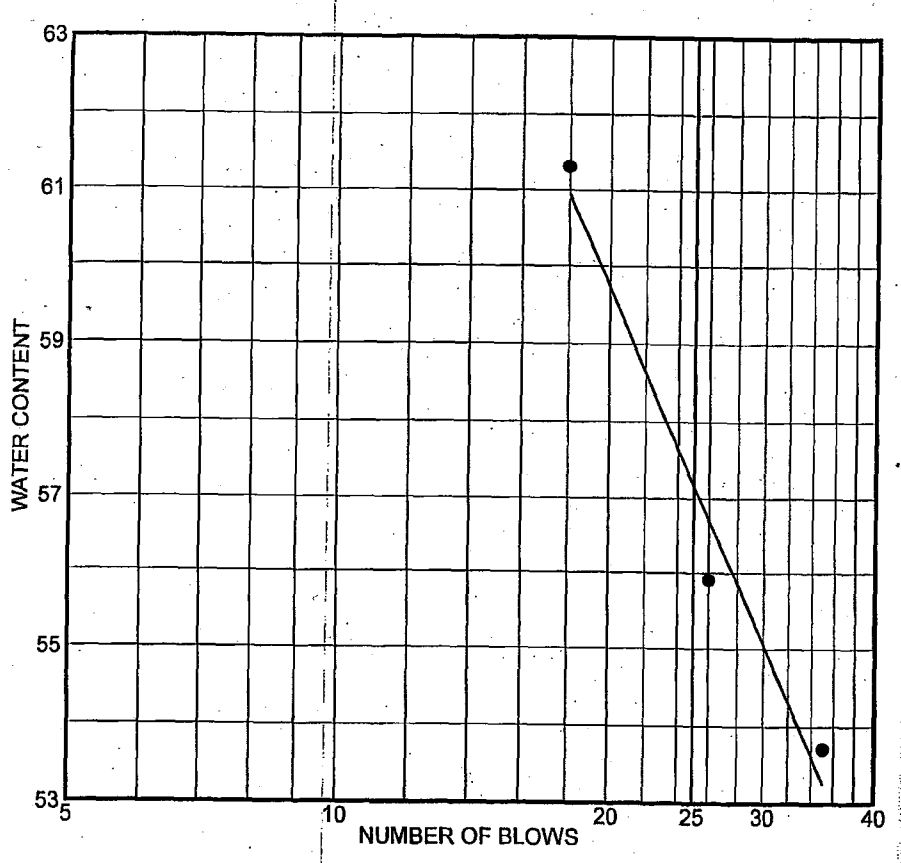
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

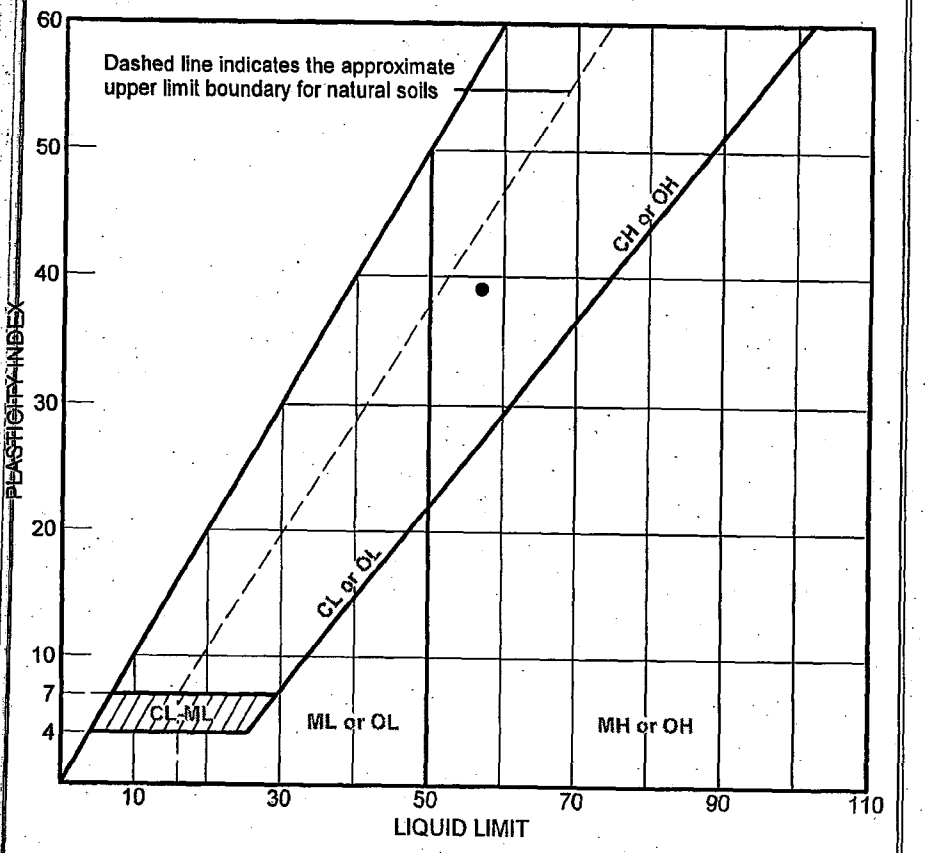
Sample Data

Source: B-303
Sample No.: UD-1
Elev. or Depth: 63' to 65'
Sample Length(in./cm.):
Location: B-303
Description: Silty sand
Date: 2-19-07
Natural Moisture: 25.5
USCS Class.: SM
AASHTO Class.:
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-303	UD-2	88' to 90'	2-19-07	CH	Fat clay	24.7	57	39

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

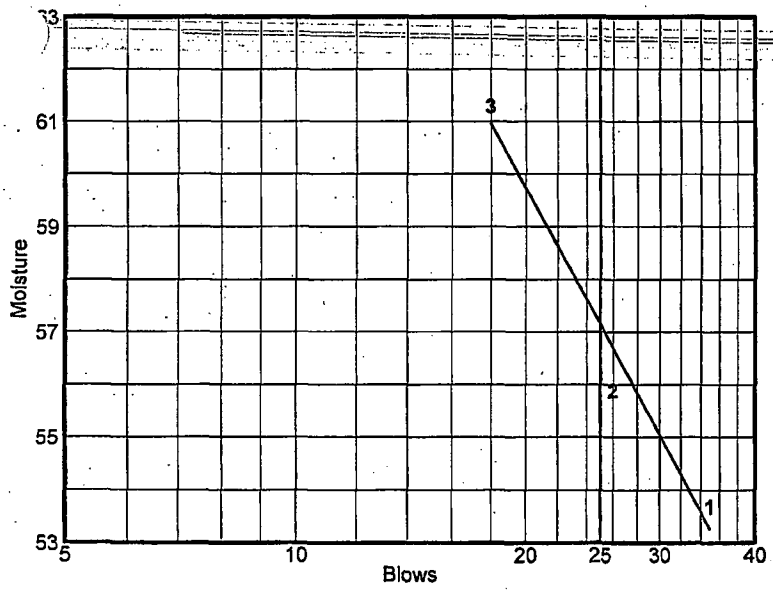
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-303
Sample No.: UD-2
Elev. or Depth: 88' to 90' **Sample Length(in./cm.):**
Location: B-303
Description: Fat clay
Date: 2-19-07 **Natural Moisture:** 24.7
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	23.70	22.17	22.39			
Dry+Tare	19.42	18.28	18.02			
Tare	11.45	11.32	10.89			
# Blows	35	26	18			
Moisture	53.7	55.9	61.3			

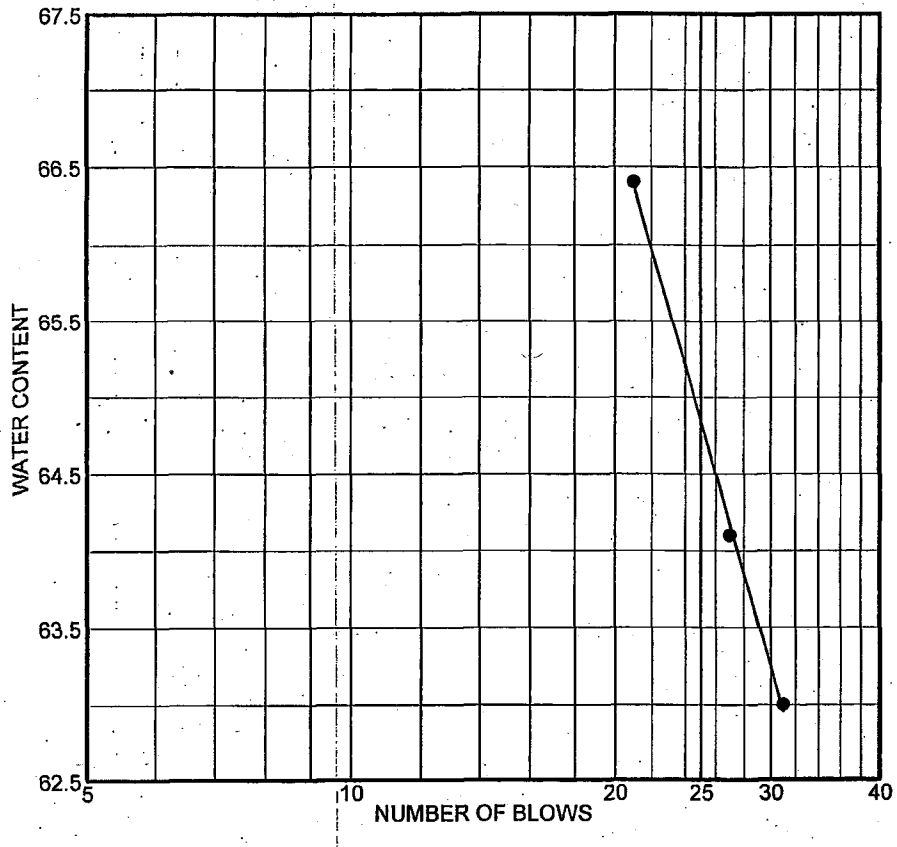


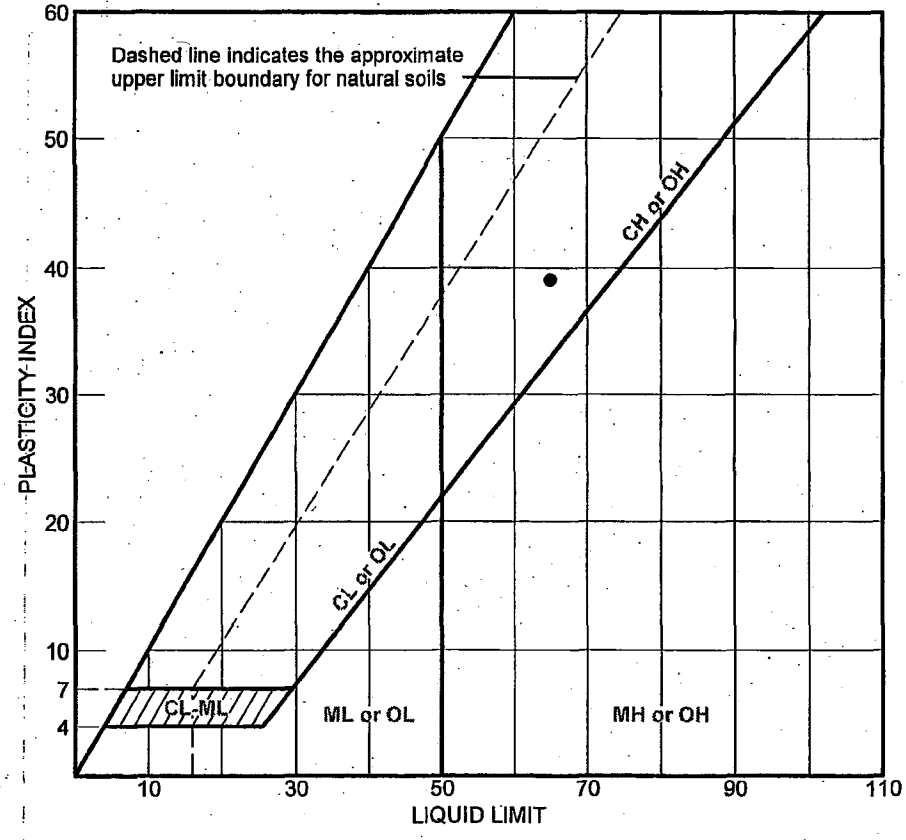
Liquid Limit= 57
Plastic Limit= 18
Plasticity Index= 39

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	19.83	19.84			
Dry+Tare	18.43	18.46			
Tare	10.93	10.70			
Moisture	18.7	17.8			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-303	UD-4	133' to 135'	2-23-07	CH	Fat clay with sand	29.5	65	39

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

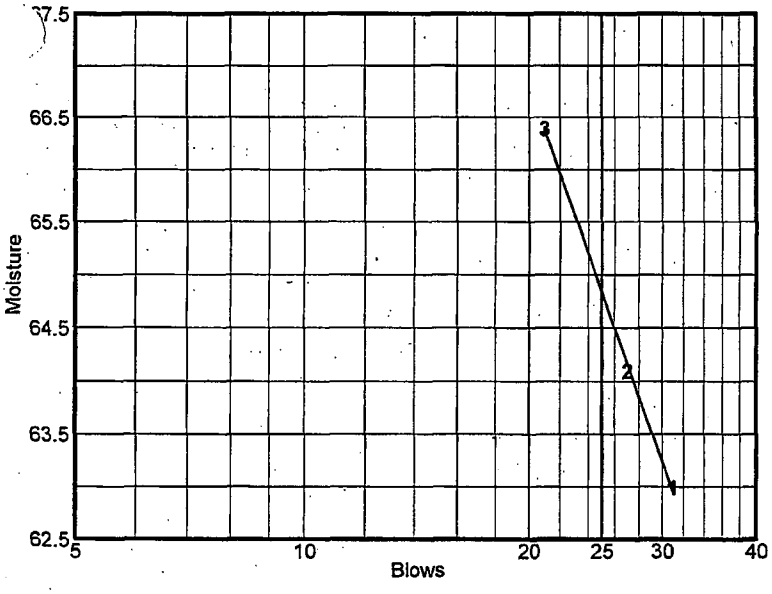
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-303
Sample No.: UD-4
Elev. or Depth: 133' to 135' **Sample Length(in./cm.):**
Location: B-303
Description: Fat clay with sand
Date: 2-23-07 **Natural Moisture:** 29.5
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	21.05	23.25	20.44			
Dry+Tare	17.12	18.46	16.68			
Tare	10.88	10.99	11.02			
# Blows	31	27	21			
Moisture	63.0	64.1	66.4			

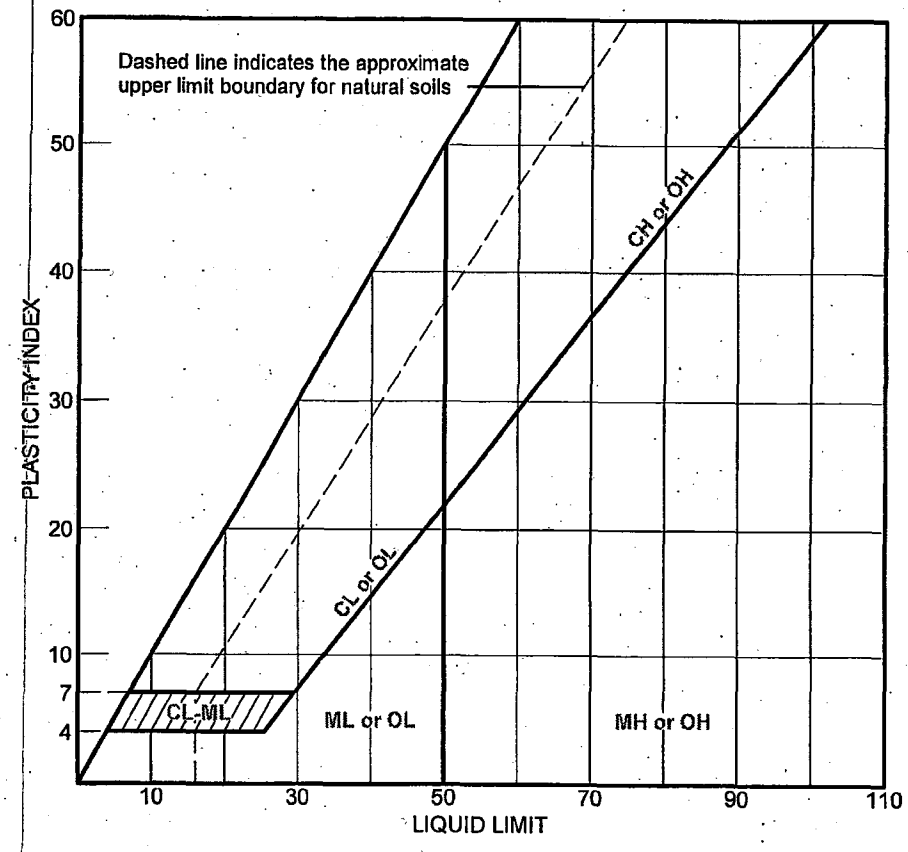


Liquid Limit= 65
Plastic Limit= 26
Plasticity Index= 39

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	10.96	12.27			
Dry+Tare	9.58	10.58			
Tare	4.21	4.35			
Moisture	25.7	27.1			

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-303	UD-5	168' to 170'	2-25-07	SM	Silty sand	32.0	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH KAW 4/13/07
ASTM D4318-05

KAW 4/13/07

LIQUID AND PLASTIC LIMIT TEST DATA

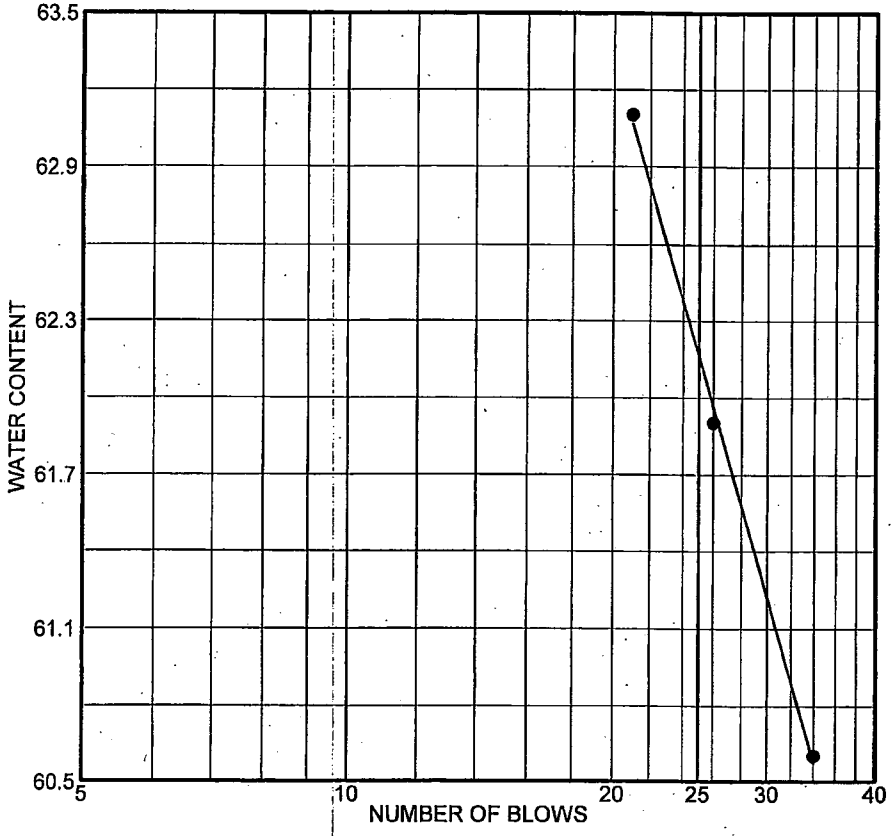
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

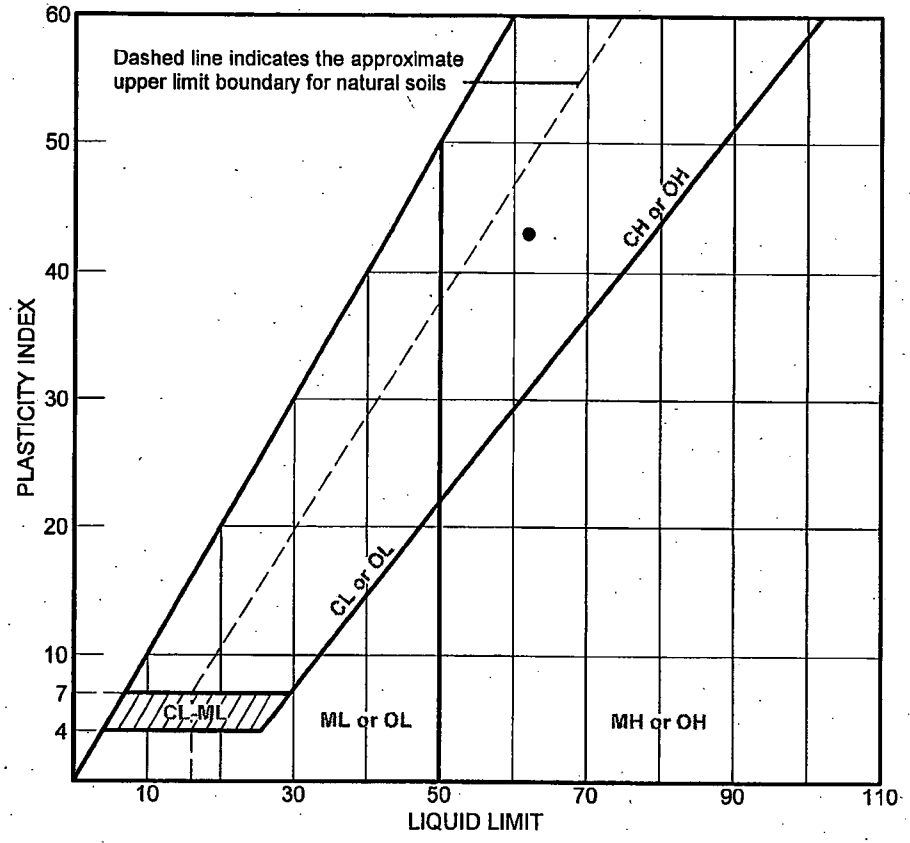
Sample Data

Source: B-303
Sample No.: UD-5
Elev. or Depth: 168' to 170' **Sample Length(in./cm.):**
Location: B-303
Description: Silty sand
Date: 2-25-07 **Natural Moisture:** 32.0
USCS Class.: SM **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-305-DH	UD-1	3' to 5'	2-22-07	CH	Fat clay	22.5	62	43

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed: MH KAW 4/13/07
ASTM D4318-05

KAW 4/13/07

LIQUID AND PLASTIC LIMIT TEST DATA

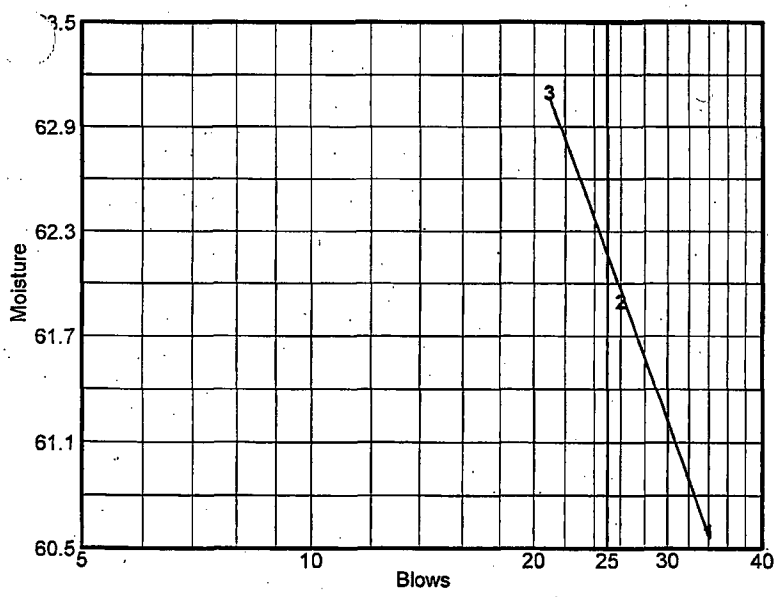
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-305-DH
Sample No.: UD-1
Elev. or Depth: 3' to 5' **Sample Length(in./cm.):**
Location: B-305-DH
Description: Fat clay
Date: 2-22-07 **Natural Moisture:** 22.5
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	23.05	22.60	26.07			
Dry+Tare	18.42	18.39	20.11			
Tare	10.78	11.59	10.67			
# Blows	34	26	21			
Moisture	60.6	61.9	63.1			

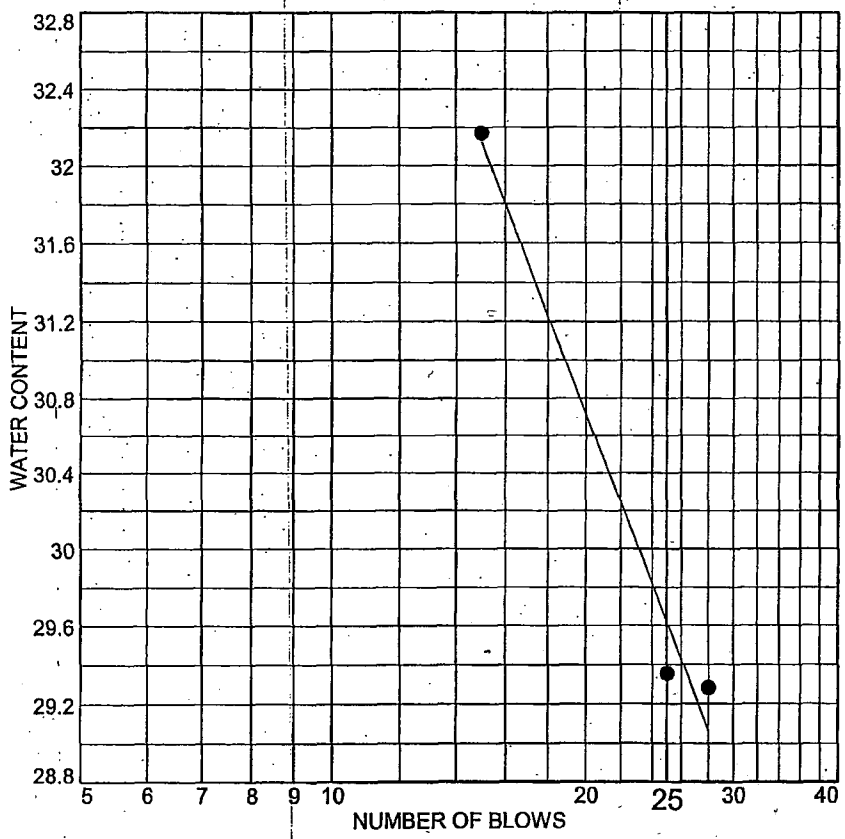


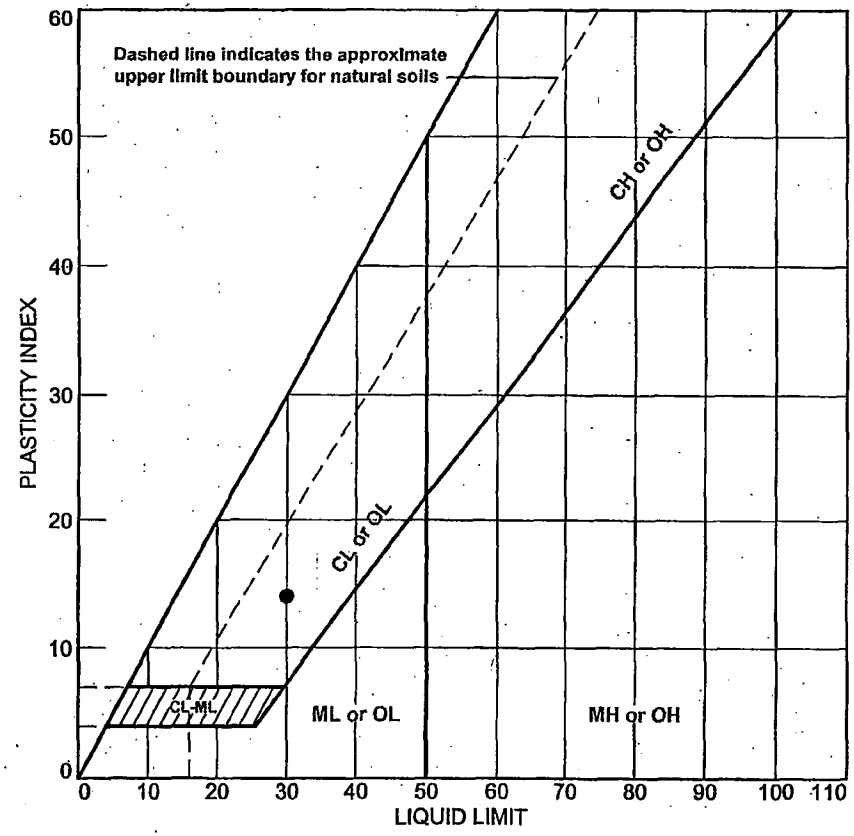
Liquid Limit= 62
Plastic Limit= 19
Plasticity Index= 43

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	17.05	16.38			
Dry+Tare	16.04	15.59			
Tare	10.63	11.31			
Moisture	18.7	18.5			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 305-DH	STP-097	13.5'-15.0'	11/19/2006	CL	Lean Clay with Gravel	19.9	30	14
		(SS-8)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:ST

ASTM D4318-05

MA 4-3-07

KAW 4/3/07

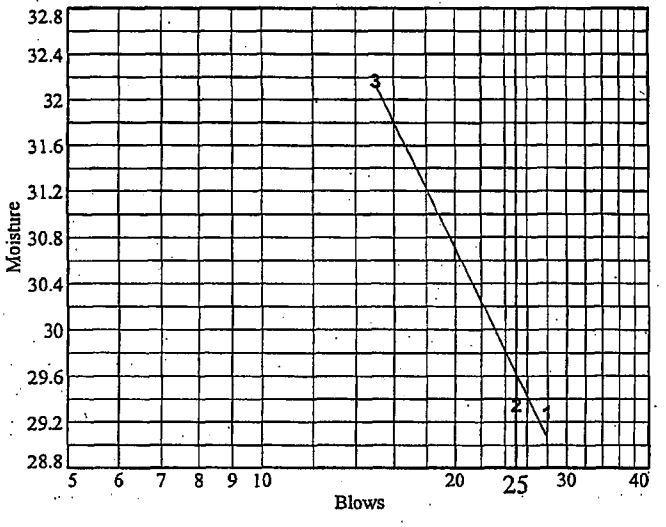
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 13.5'-15.0' **Sample Number:** STP-097 (SS-8)
Material Description: Lean Clay with Gravel
Date: 11/19/2006 **USCS Class.:** CL
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	39.45	39.16	38.77			
Dry+Tare	36.92	36.43	36.19			
Tare	28.28	27.13	28.17			
# Blows	28	25	15			
Moisture	29.3	29.4	32.2			



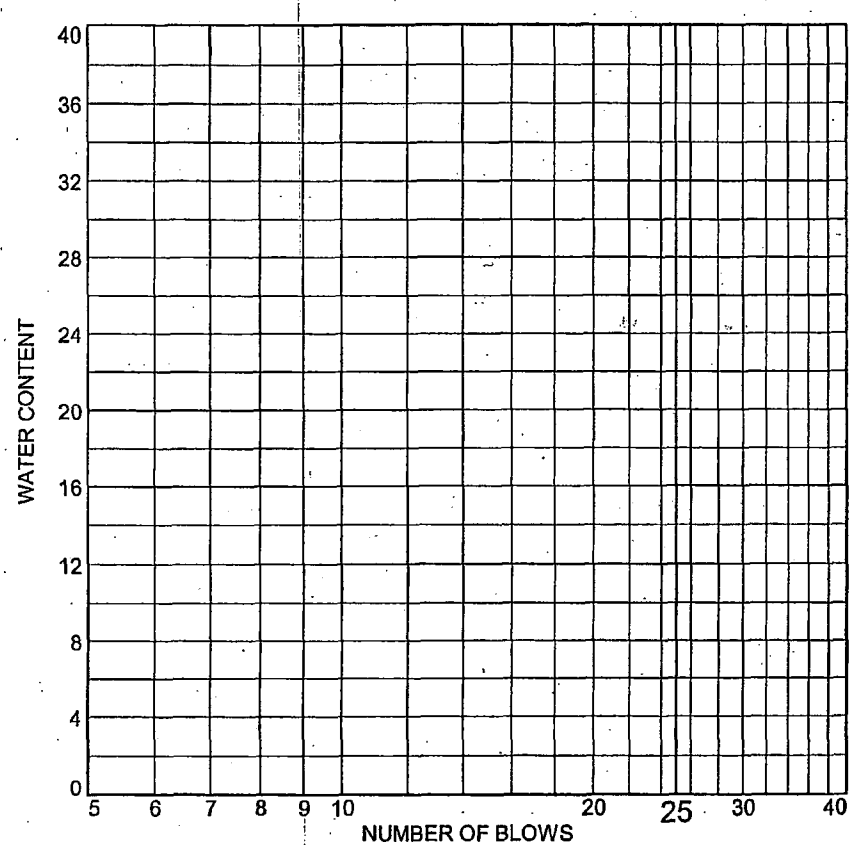
Liquid Limit= 30
Plastic Limit= 16
Plasticity Index= 14
Natural Moisture= 19.9
Liquidity Index= 0.3

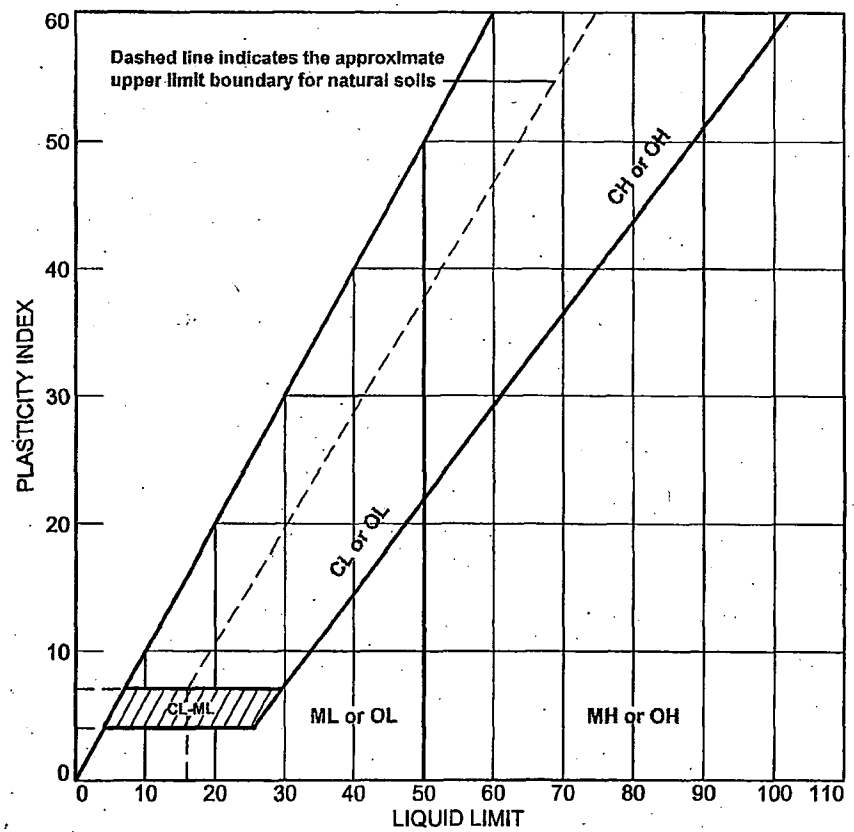
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.20	36.30			
Dry+Tare	35.09	35.17			
Tare	28.08	28.21			
Moisture	15.8	16.2			

MH 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 305-DH	STP-098	18.5'-20.0'	11/19/2006	ML	Silt with Sand	22.7	NV	NP
		(SS-9)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:ST

ASTM D4318-05

MAK 4-3-07

KAW 4/3/07

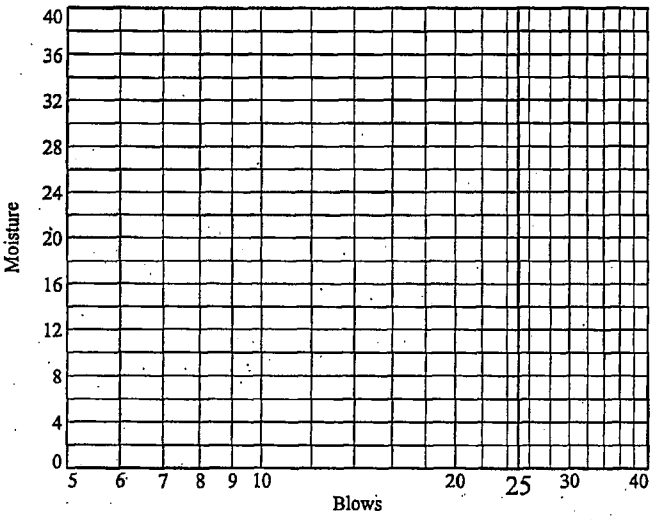
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 18.5'-20.0'
Sample Number: STP-098 (SS-9)
Material Description: Silt with Sand
Date: 11/19/2006
USCS Class.: ML
AASHTO Class.: A-4(0)
Testing Remarks: Tested By:AC/TH
Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare						
Dry+Tare						
Tare						
# Blows						
Moisture						



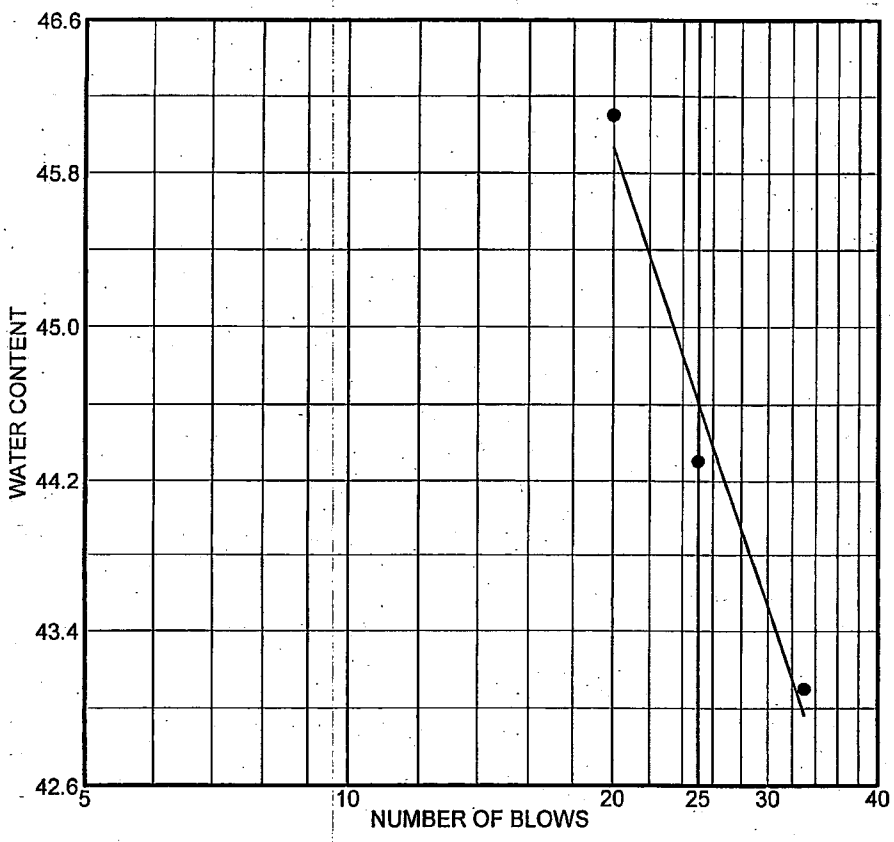
Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP
Natural Moisture= 22.7

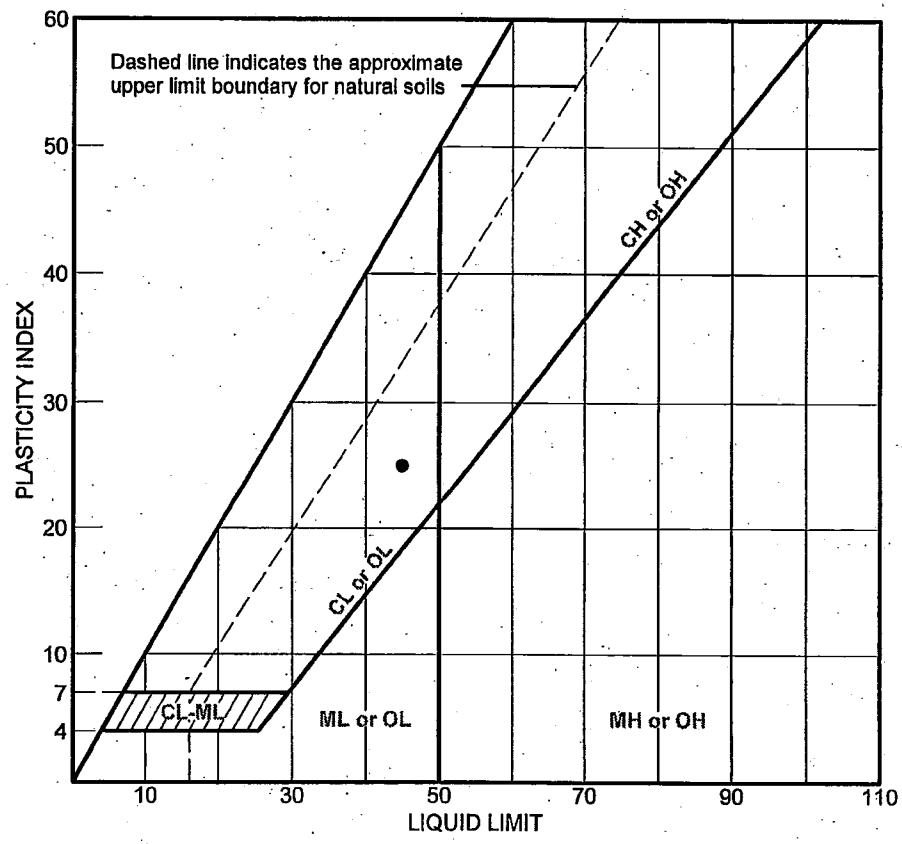
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare					
Dry+Tare					
Tare					
Moisture					

MAC 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-305-DH	UD-4	53' to 55'	2-23-07	CL	Sandy lean clay	22.4	45	25

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH KAW 4/13/07
ASTM D4318-05

KAW 4/13/07

LIQUID AND PLASTIC LIMIT TEST DATA

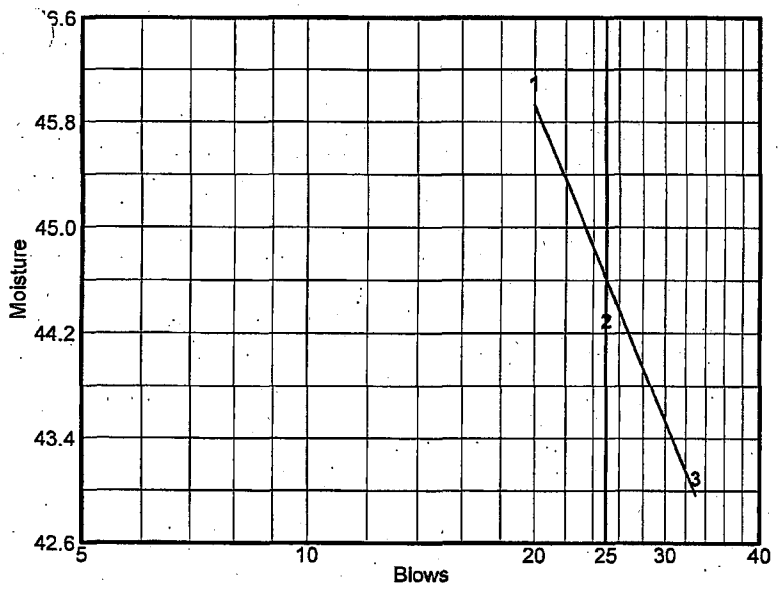
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-305-DH
Sample No.: UD-4
Elev. or Depth: 53' to 55' **Sample Length(in./cm.):**
Location: B-305-DH
Description: Sandy lean clay
Date: 2-23-07 **Natural Moisture:** 22.4
USCS Class.: CL **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	24.17	22.51	22.07			
Dry+Tare	20.01	19.00	18.78			
Tare	10.98	11.08	11.15			
# Blows	20	25	33			
Moisture	46.1	44.3	43.1			

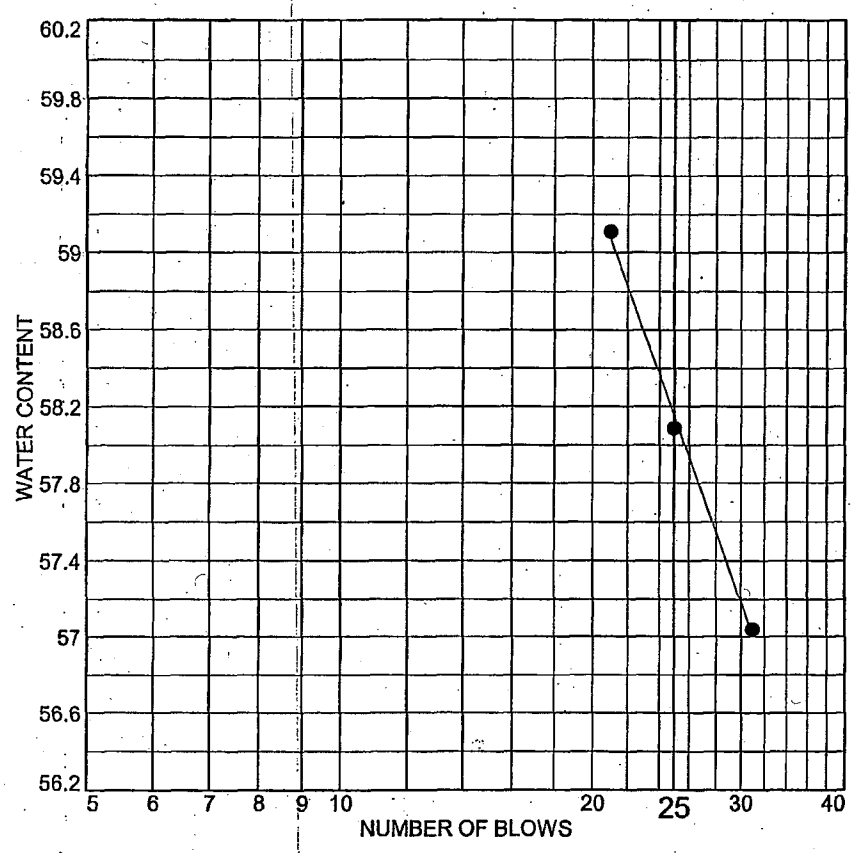


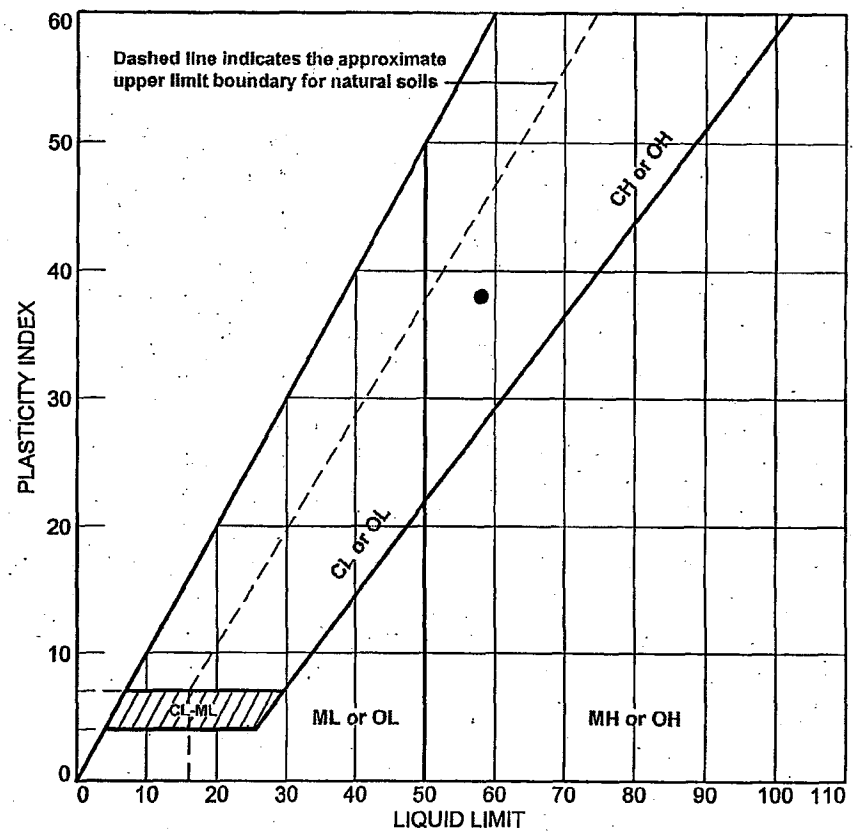
Liquid Limit= 45
Plastic Limit= 20
Plasticity Index= 25

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	15.45	11.95			
Dry+Tare	14.03	10.68			
Tare	6.56	4.39			
Moisture	19.0	20.2			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 305-DH	STP-100 (SS-16)	58.5'-60.0'	11/20/2006	CH	Fat Clay	20.9	58	38

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:ST

ASTM D4318-05

NK 4-3-07

KAW 4/3/07

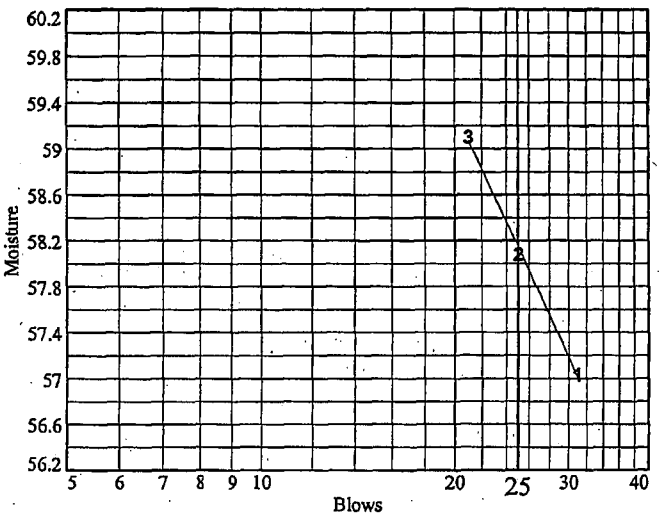
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 58.5'-60.0' **Sample Number:** STP-100 (SS-16)
Material Description: Fat Clay
Date: 11/20/2006 **USCS Class.:** CH
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.31	30.74	37.36			
Dry+Tare	34.15	27.40	33.92			
Tare	28.61	21.65	28.10			
# Blows	31	25	21			
Moisture	57.0	58.1	59.1			



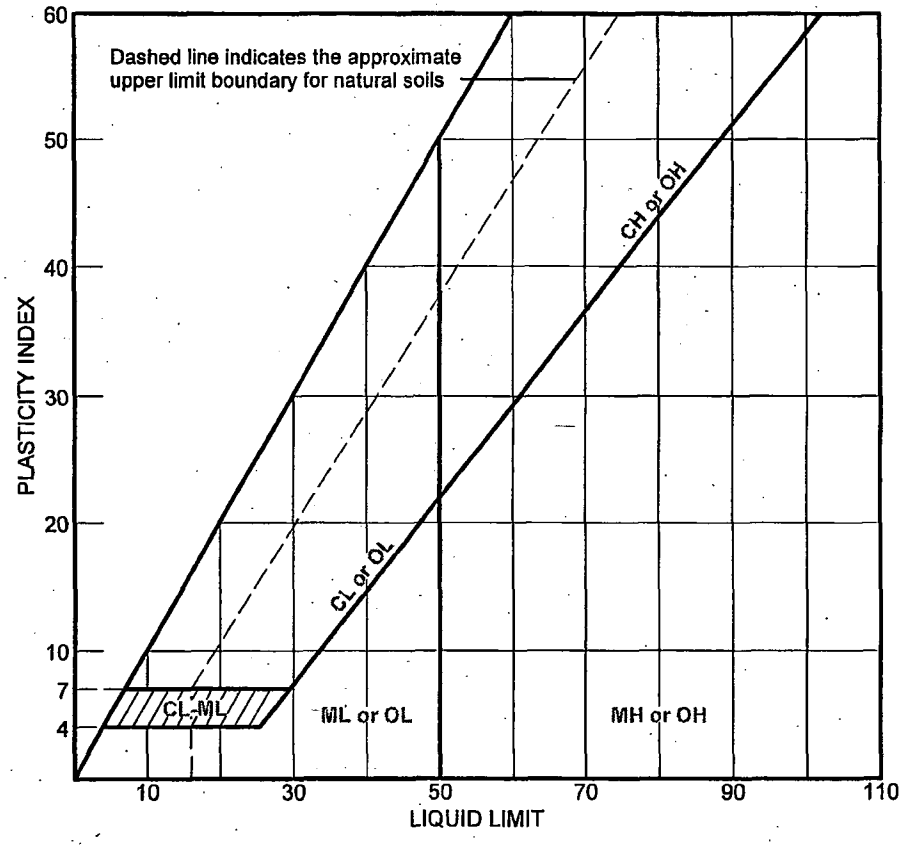
Liquid Limit= 58
Plastic Limit= 20
Plasticity Index= 38
Natural Moisture= 20.9
Liquidity Index= 0.0

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.14	35.22			
Dry+Tare	34.86	33.96			
Tare	28.44	27.59			
Moisture	19.9	19.8			

MAT 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-305-DH	UD-5	78' to 80'	2-25-07	SP-SM	Poorly graded sand with silt	22.1	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

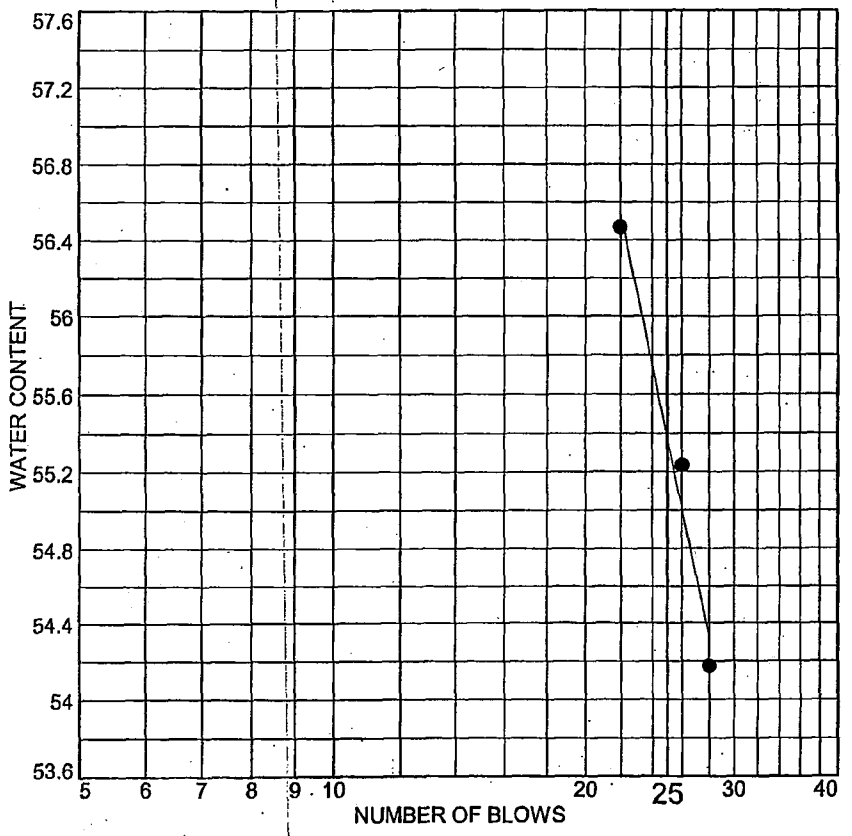
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

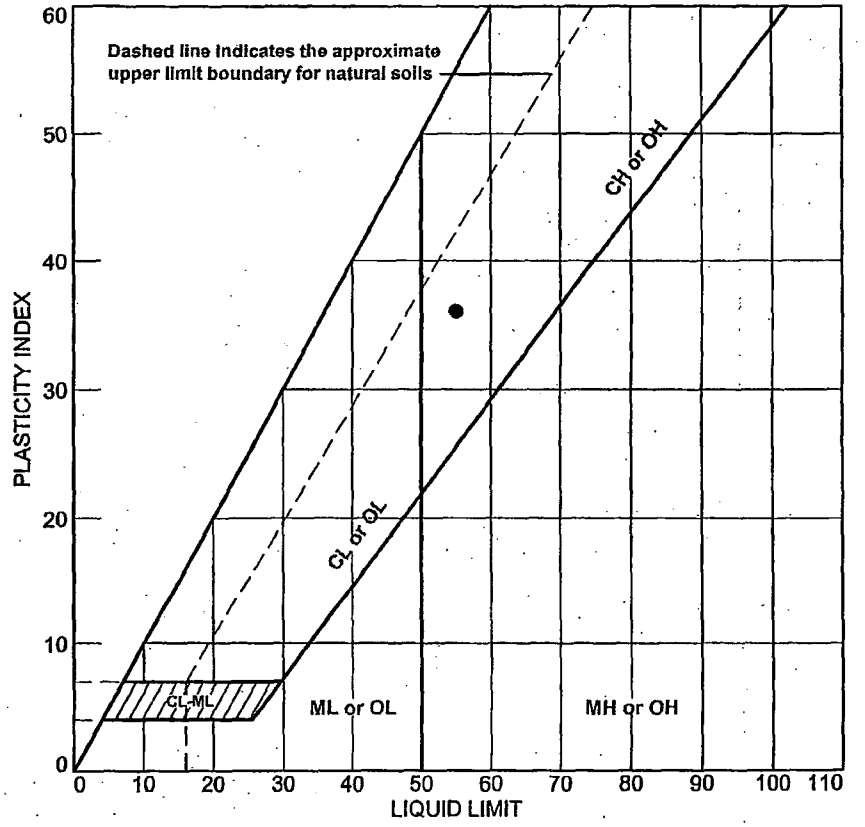
Sample Data

Source: B-305-DH
Sample No.: UD-5
Elev. or Depth: 78' to 80' **Sample Length(in./cm.):**
Location: B-305-DH
Description: Poorly graded sand with silt
Date: 2-25-07 **Natural Moisture:** 22.1
USCS Class.: SP-SM **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 305-DH	STP-102 (SS-21)	88.5'-90.0'	11/20/2006	CH	Fat Clay	21.1	55	36

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH
ASTM D4318-05

Reviewed By:ST

MH 4-3-07

KAW 4/3/07

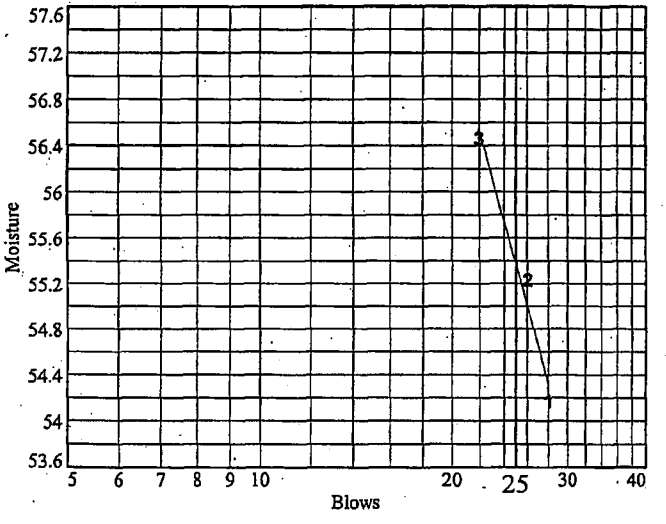
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 88.5'-90.0'
Sample Number: STP-102 (SS-21)
Material Description: Fat Clay
Date: 11/20/2006
USCS Class.: CH
AASHTO Class.: A-7-6(39)
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	34.15	31.29	37.23			
Dry+Tare	30.71	28.23	34			
Tare	24.36	22.69	28.28			
# Blows	28	26	22			
Moisture	54.2	55.2	56.5			



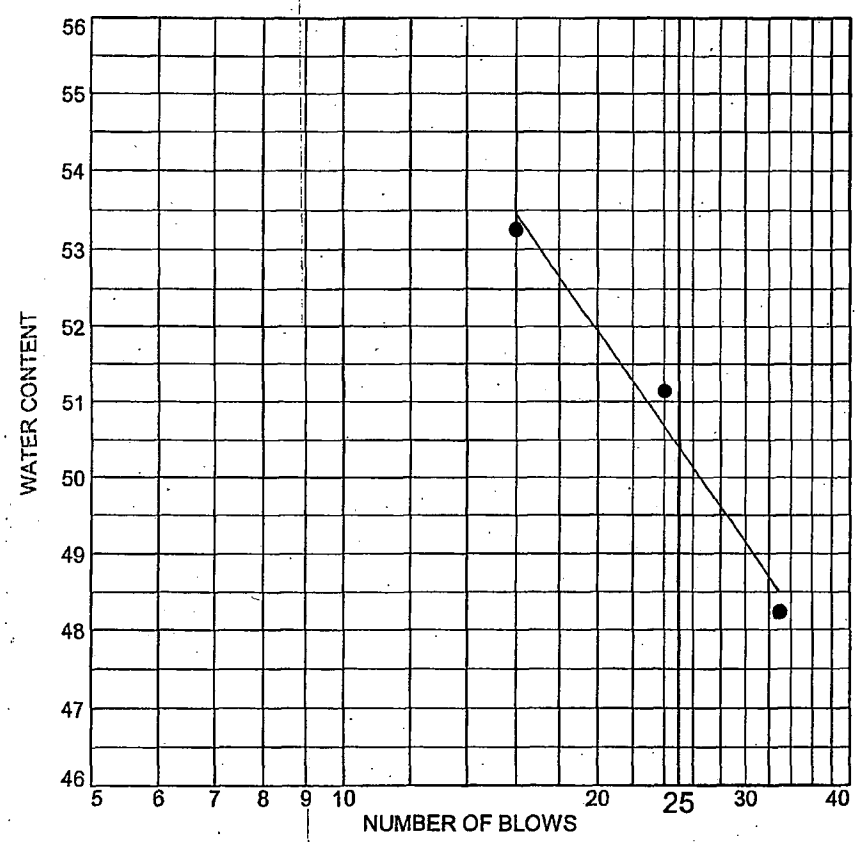
Liquid Limit= 55
Plastic Limit= 19
Plasticity Index= 36
Natural Moisture= 21.1
Liquidity Index= 0.1

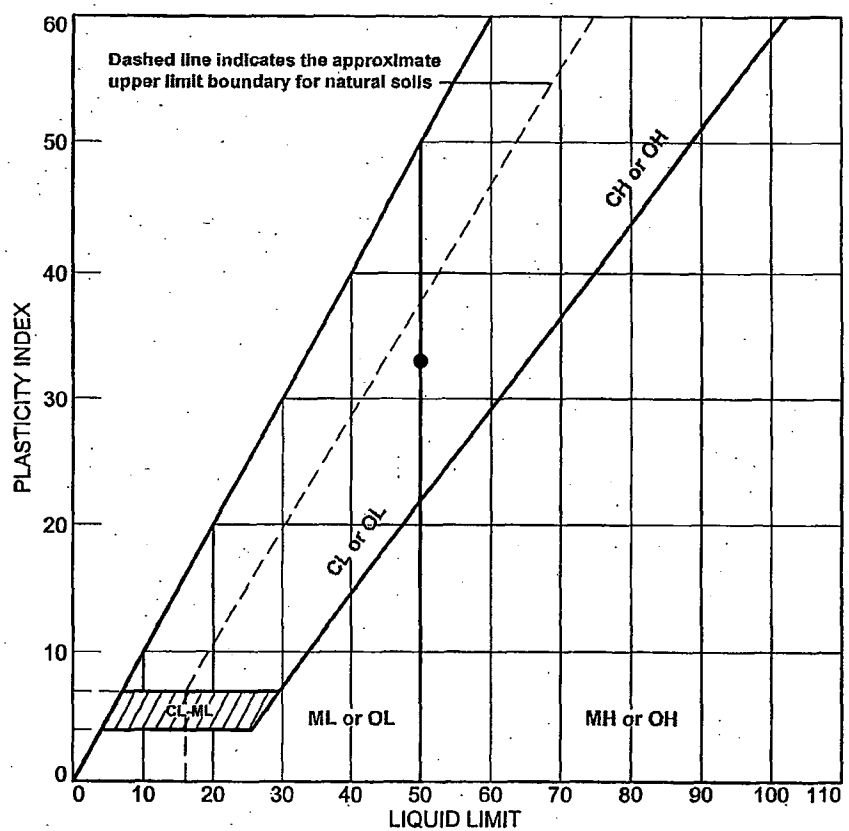
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.40	34.64			
Dry+Tare	34.23	33.44			
Tare	27.92	27.08			
Moisture	18.5	18.9			

MH 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 305-DH	STP-103 (SS-22)	93.5'-95.0'	11/20/2006	CH	Fat Clay	22.5	50	33

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:ST

ASTM D4318-05

MM 4-3-07

KAW 4/3/07

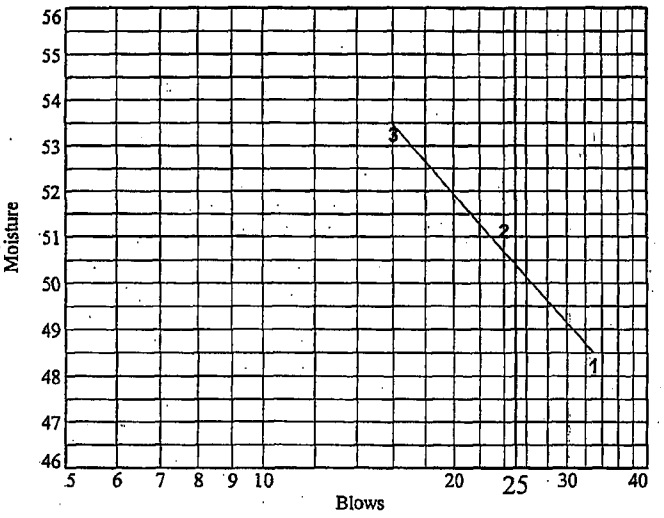
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 93.5'-95.0' **Sample Number:** STP-103 (SS-22)
Material Description: Fat Clay
Date: 11/20/2006 **USCS Class.:** CH
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	29.96	37.47	37.42			
Dry+Tare	27.23	34.57	34.23			
Tare	21.57	28.90	28.24			
# Blows	33	24	16			
Moisture	48.2	51.1	53.3			



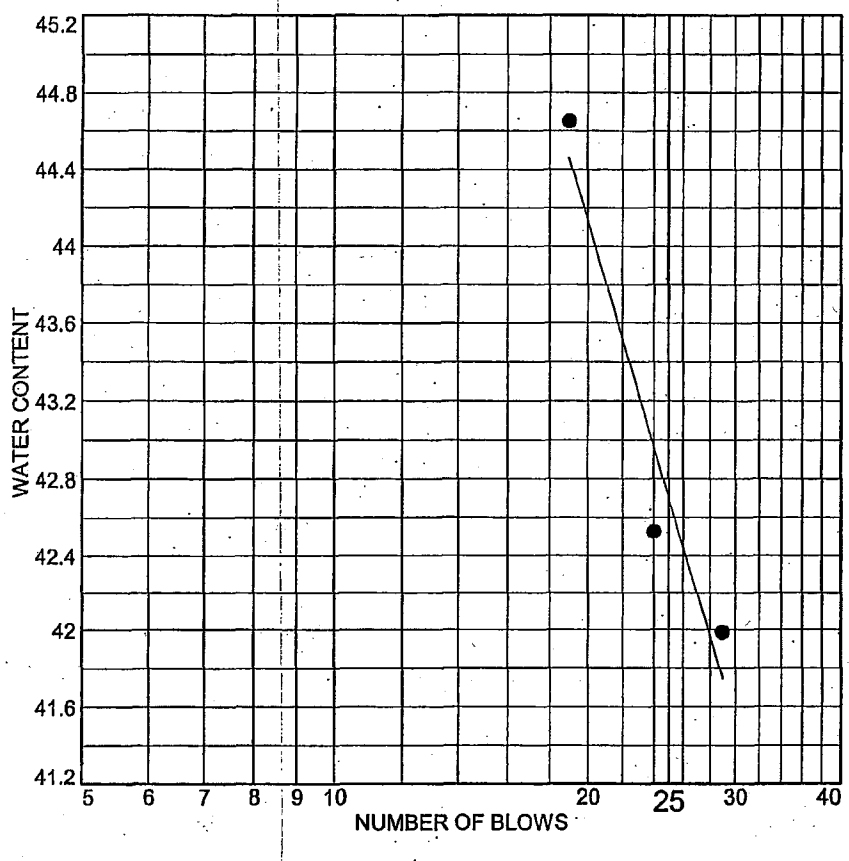
Liquid Limit= 50
Plastic Limit= 17
Plasticity Index= 33
Natural Moisture= 22.5
Liquidity Index= 0.2

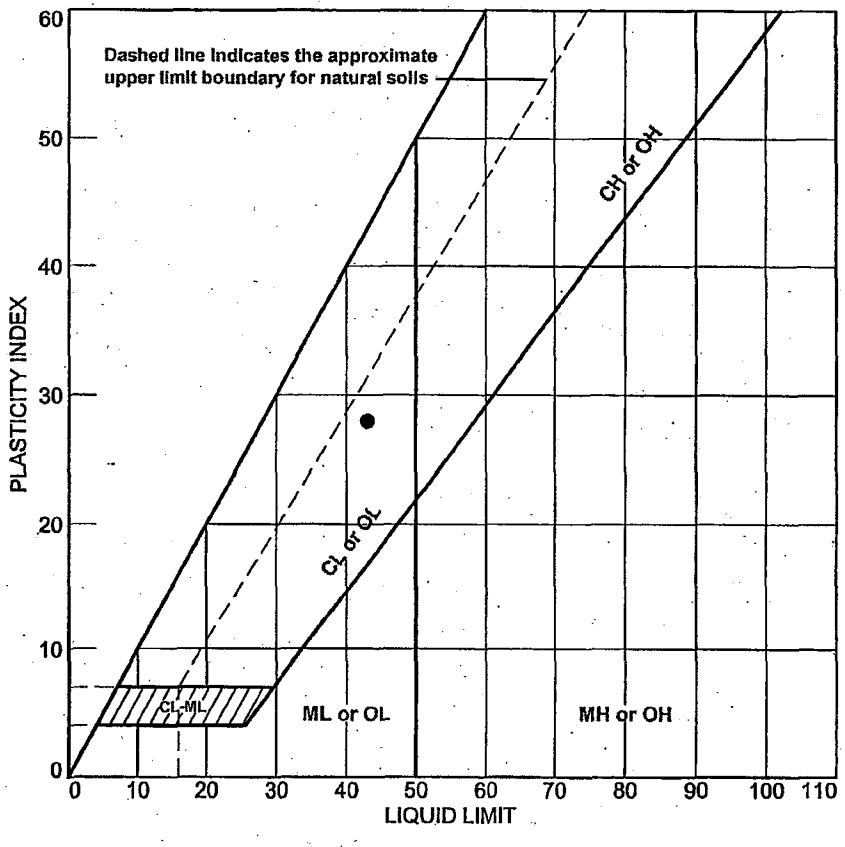
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	33.35	33.29			
Dry+Tare	32.24	32.17			
Tare	25.57	25.41			
Moisture	16.6	16.6			

MA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 305-DH	STP-105 (SS-25)	118.5'-120'	11/20/2006	CL	Lean Clay	21.8	43	28

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:ST

ASTM D4318-05

NM 4-3-07

KAW 4/3/07

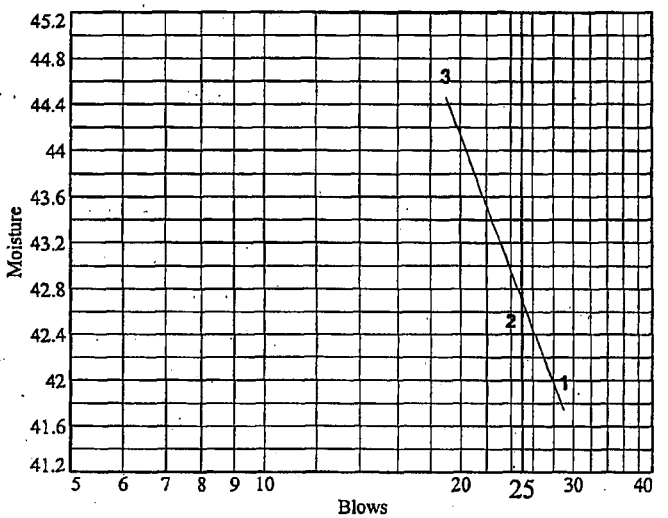
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 118.5'-120' **Sample Number:** STP-105 (SS-25)
Material Description: Lean Clay
Date: 11/20/2006 **USCS Class.:** CL
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	39.63	36.33	33.5			
Dry+Tare	36.46	33.57	30.16			
Tare	28.91	27.08	22.68			
# Blows	29	24	19			
Moisture	42.0	42.5	44.7			



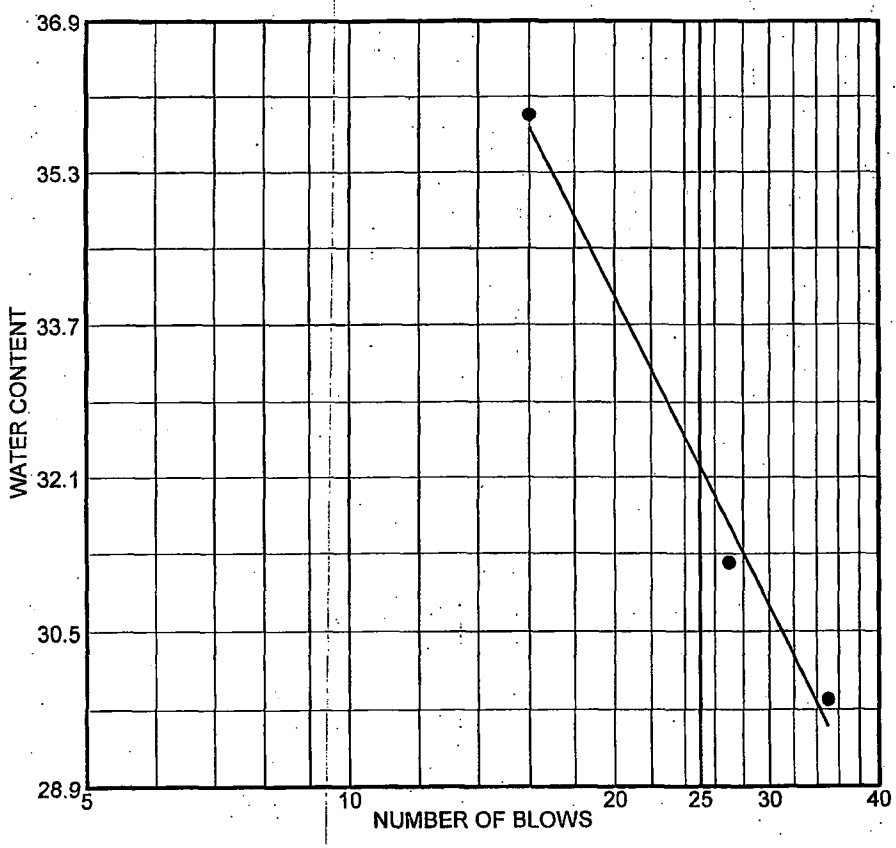
Liquid Limit= 43
Plastic Limit= 15
Plasticity Index= 28
Natural Moisture= 21.8
Liquidity Index= 0.2

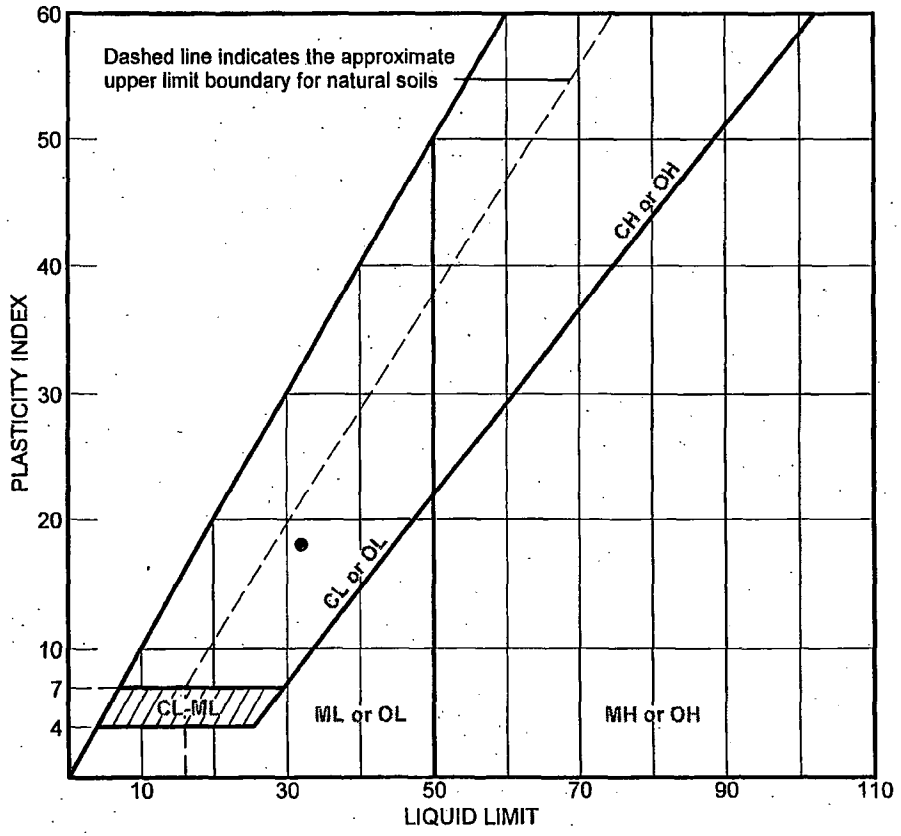
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	32.87	35.95			
Dry+Tare	31.73	34.94			
Tare	24.36	28.25			
Moisture	15.5	15.1			

MAH 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-305-DH	UD-8	138' to 140'	2-19-17	CL	Lean clay with sand	18.1	32	18

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

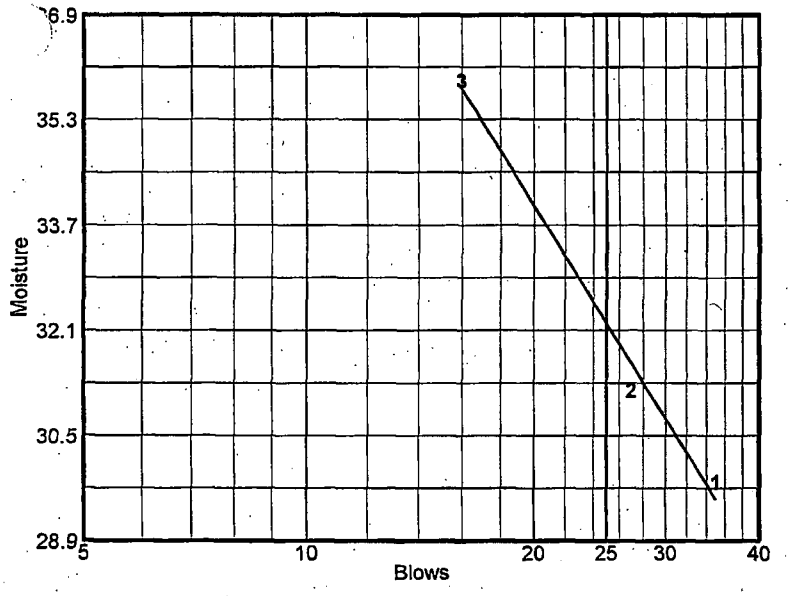
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-305-DH
Sample No.: UD-8
Elev. or Depth: 138' to 140' **Sample Length(in./cm.):**
Location: B-305 DH
Description: Lean clay with sand
Date: 2-19-17 **Natural Moisture:** 18.1
USCS Class.: CL **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	26.68	25.92	27.06			
Dry+Tare	23.06	22.31	22.72			
Tare	10.92	10.75	10.63			
# Blows	35	27	16			
Moisture	29.8	31.2	35.9			

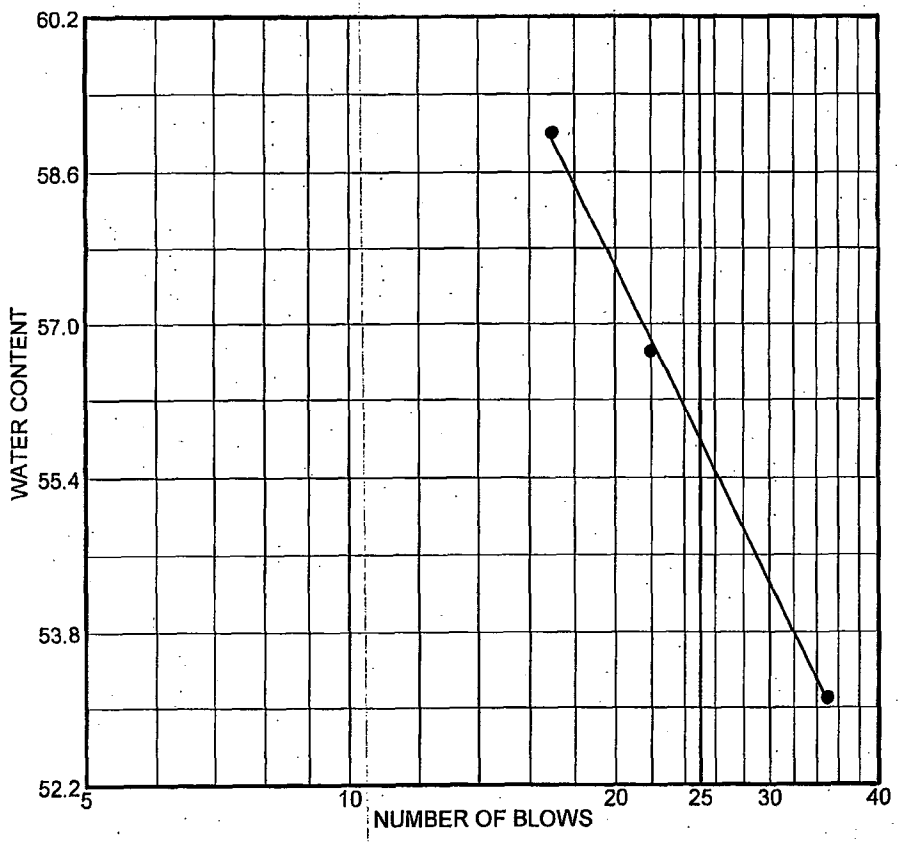


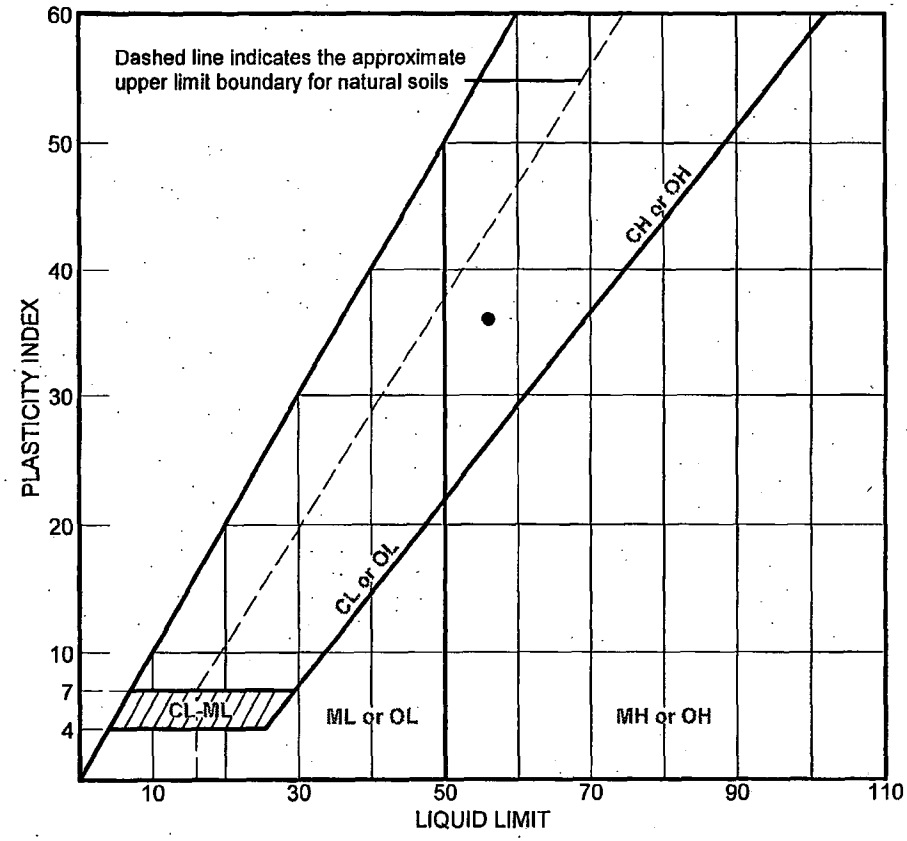
Liquid Limit= 32
Plastic Limit= 14
Plasticity Index= 18

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	19.91	20.91			
Dry+Tare	18.89	19.73			
Tare	11.45	11.02			
Moisture	13.7	13.5			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-305-DH	UD-9	158' to 160'	2-14-07	CH	Fat clay	16.4	56	36

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

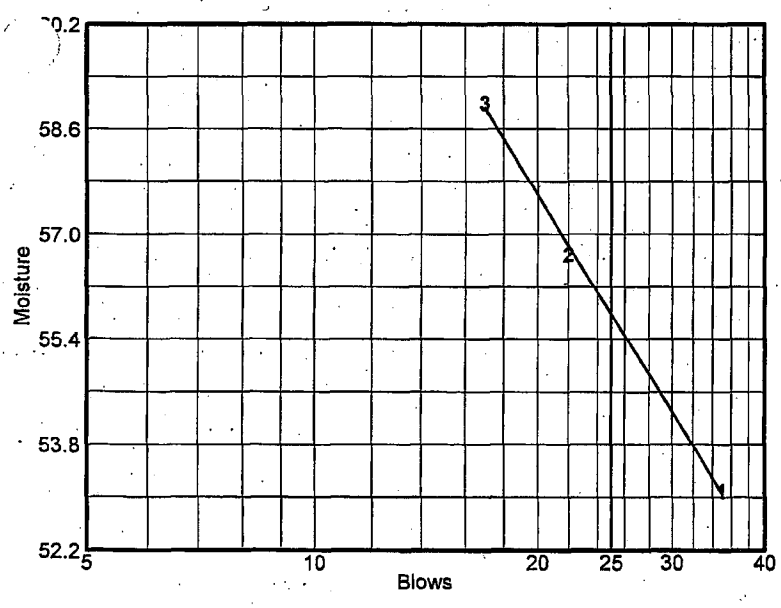
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-305-DH
Sample No.: UD-9
Elev. or Depth: 158' to 160' **Sample Length(in./cm.):**
Location: B-305-DH
Description: Fat clay
Date: 2-14-07 **Natural Moisture:** 16.4
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	29.21	30.69	29.17			
Dry+Tare	22.88	23.52	22.43			
Tare	10.95	10.88	11.01			
# Blows	35	22	17			
Moisture	53.1	56.7	59.0			

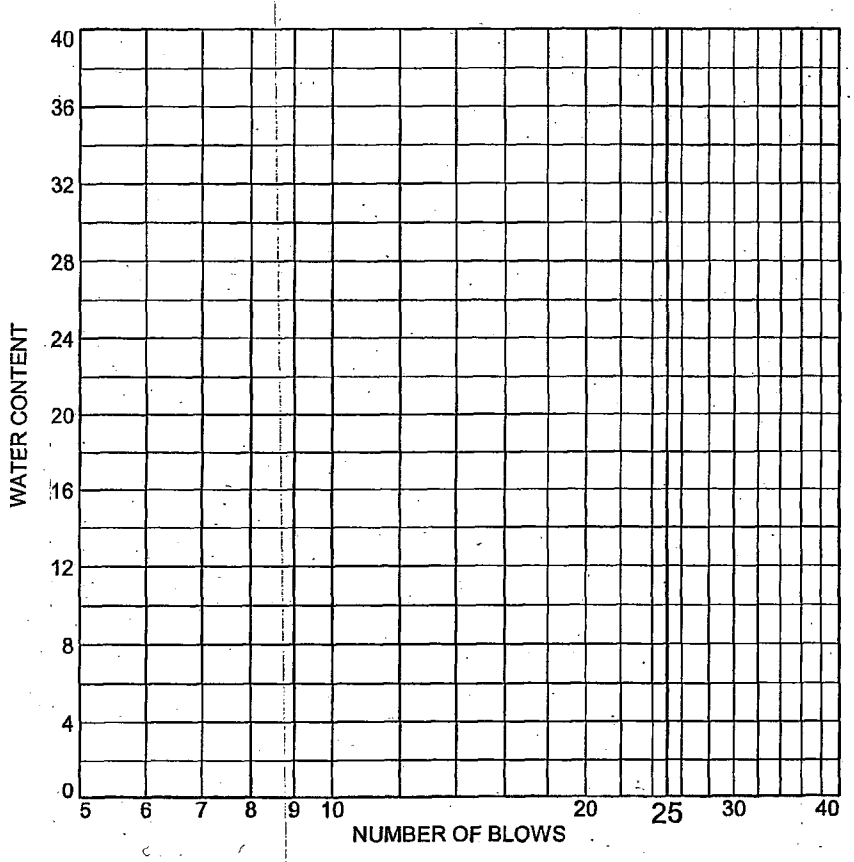


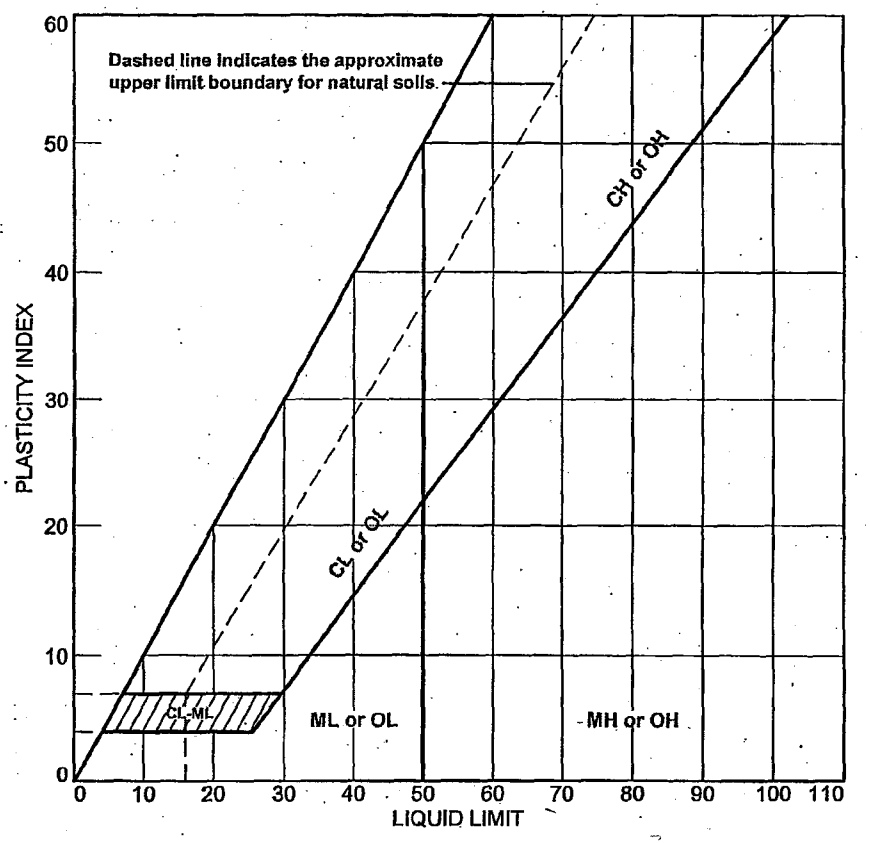
Liquid Limit= 56
Plastic Limit= 20
Plasticity Index= 36

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	24.82	24.04			
Dry+Tare	22.43	21.99			
Tare	11.01	10.79			
Moisture	20.9	18.3			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 305-DH	STP-106 (SS-29)	170.0'-171.5'	11/21/2006	ML	Silt with Sand	23.9	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

NAA 4-3-07

KAW 4/3/07

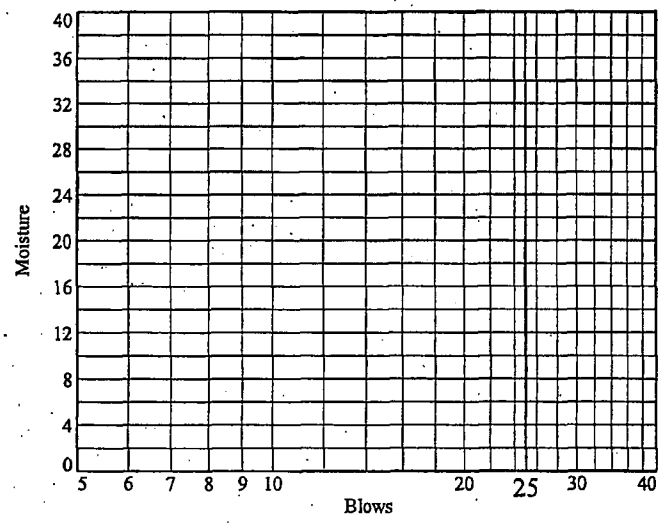
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 170.0'-171.5'
Sample Number: STP-106 (SS-29)
Material Description: Silt with Sand
Date: 11/21/2006
USCS Class.: ML
AASHTO Class.: A-4(0)
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare						
Dry+Tare						
Tare						
# Blows						
Moisture						



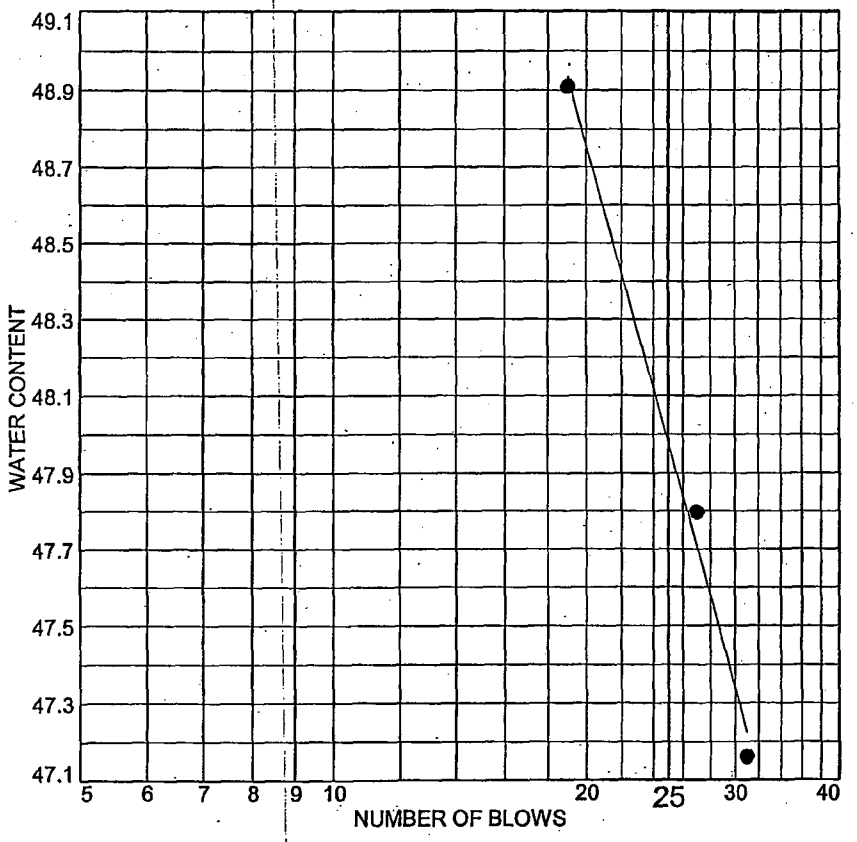
Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP
Natural Moisture= 23.9

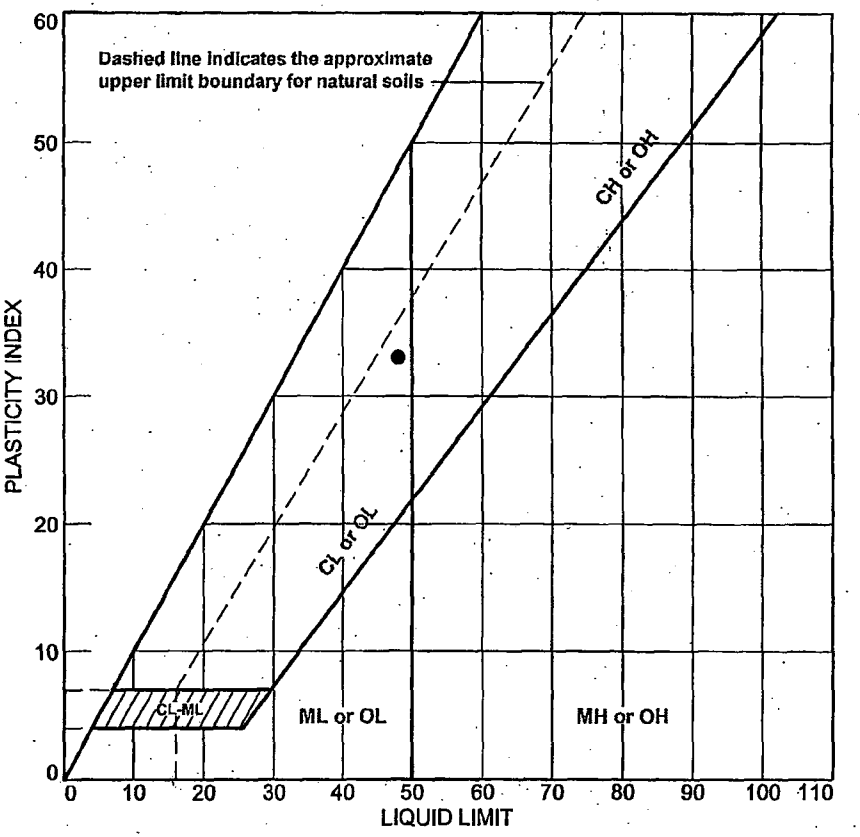
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare					
Dry+Tare					
Tare					
Moisture					

MM 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 305-DH	STP-107	178.5'-180'	11/21/2006	CL	Lean Clay	21.7	48	33
		(SS-30)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:ST

ASTM D4318-05

nM 4-3-07

KAW 4/3/07

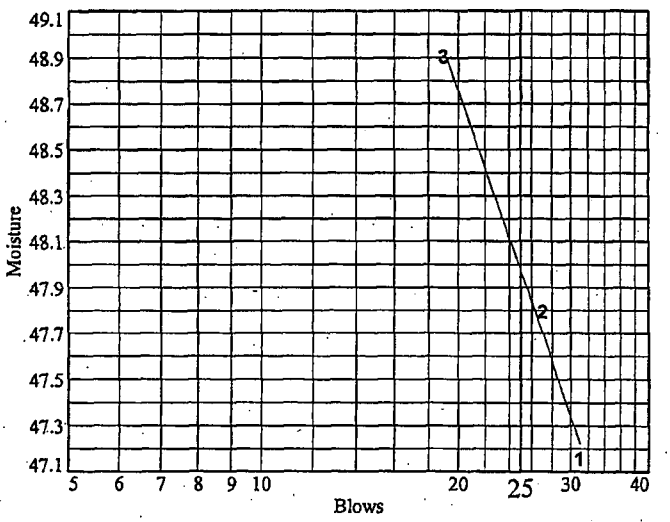
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 178.5'-180'
Sample Number: STP-107 (SS-30)
Material Description: Lean Clay
Date: 11/21/2006
USCS Class.: CL
Testing Remarks: Tested By:AC/TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.76	39.36	38.61			
Dry+Tare	34.77	35.78	35.25			
Tare	28.43	28.29	28.38			
# Blows	31	27	19			
Moisture	47.2	47.8	48.9			



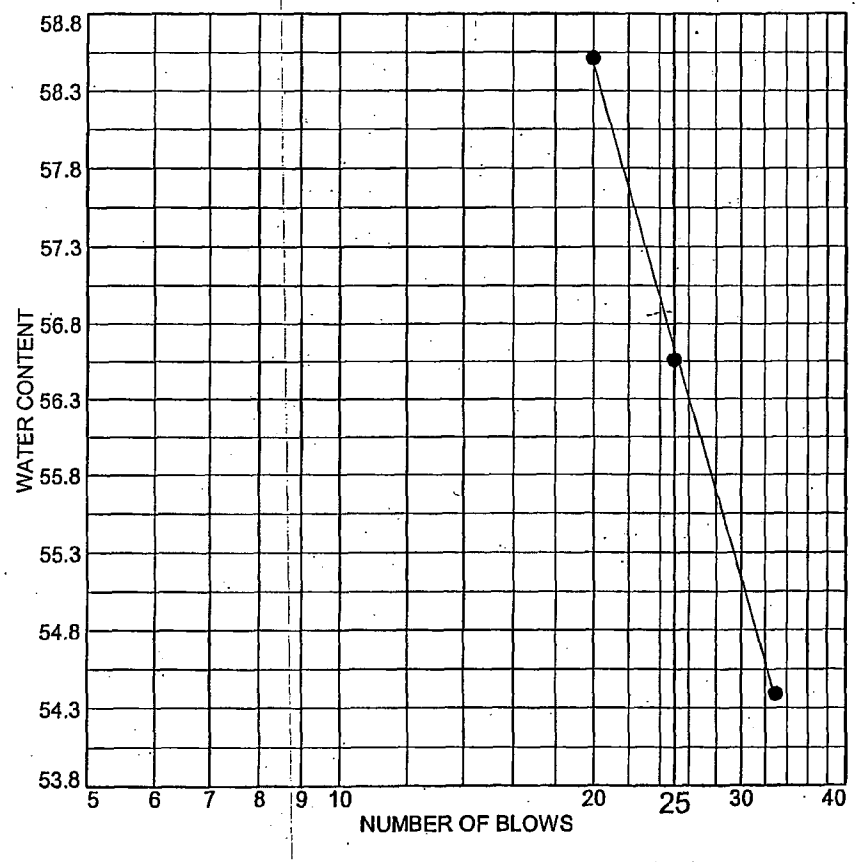
Liquid Limit= 48
Plastic Limit= 15
Plasticity Index= 33
Natural Moisture= 21.7
Liquidity Index= 0.2

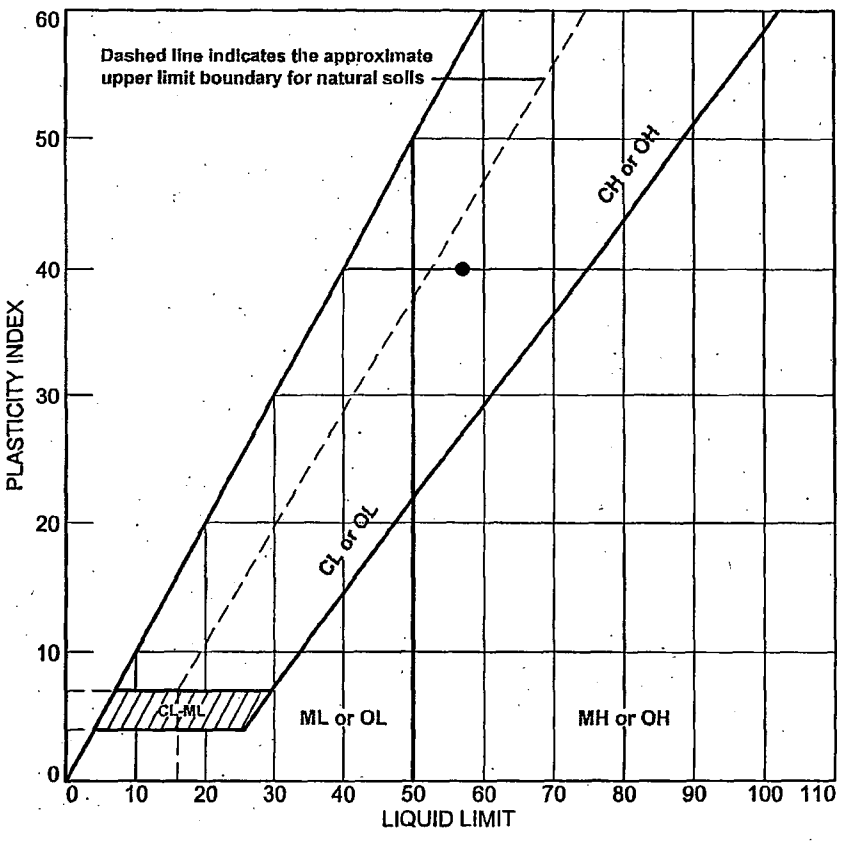
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	28.32	36.40			
Dry+Tare	27.44	35.37			
Tare	21.64	28.63			
Moisture	15.2	15.3			

NMK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 305-DH	STP-108 (SS-32)	198.5'-200'	11/21/2006	CH	Fat Clay	26.1	57	40

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:ST

ASTM D4318-05

MA 4-3-07

KAW 4/3/07

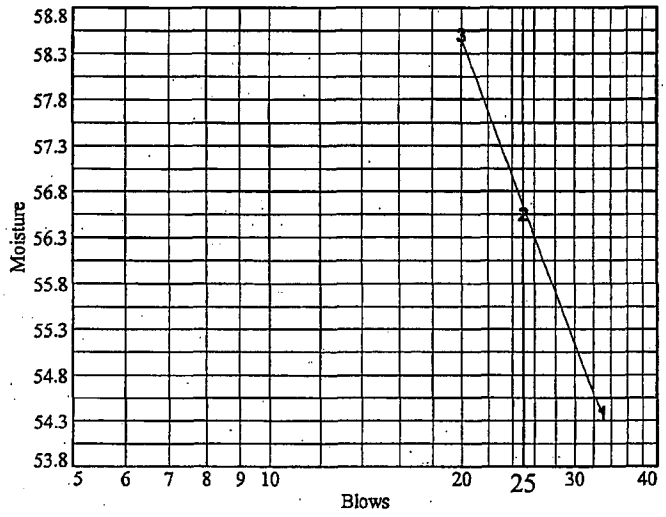
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 198.5'-200'
Sample Number: STP-108 (SS-32)
Material Description: Fat Clay
Date: 11/21/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	39.06	37.53	36.06			
Dry+Tare	35.22	34.08	32.76			
Tare	28.16	27.98	27.12			
# Blows	33	25	20			
Moisture	54.4	56.6	58.5			



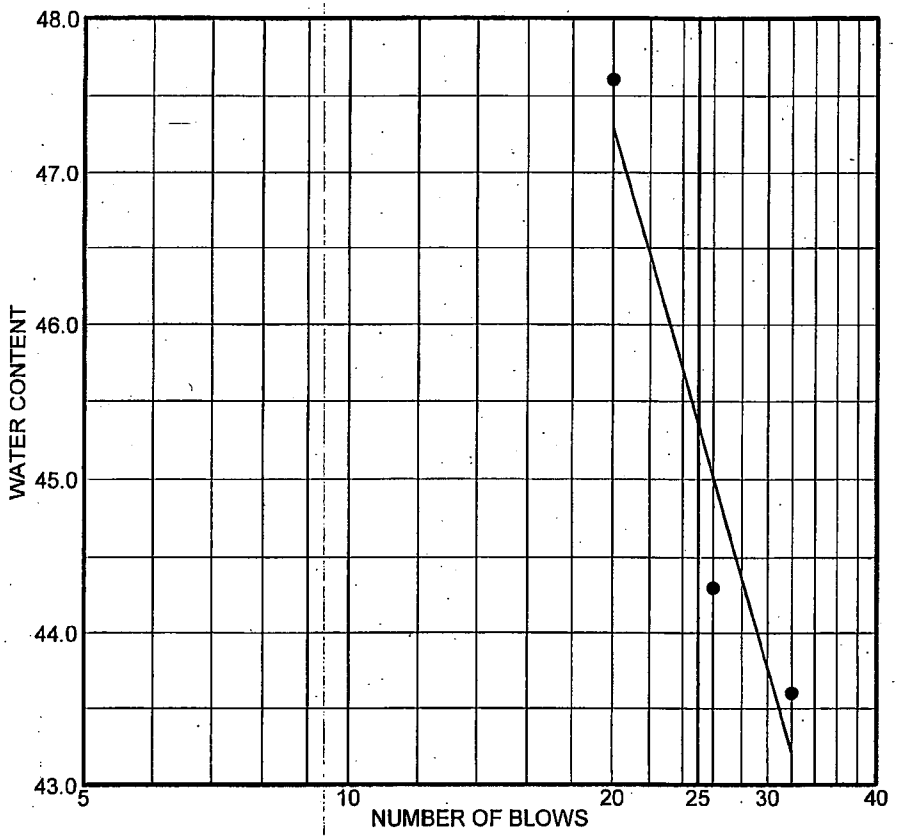
Liquid Limit= 57
Plastic Limit= 17
Plasticity Index= 40
Natural Moisture= 26.1
Liquidity Index= 0.2

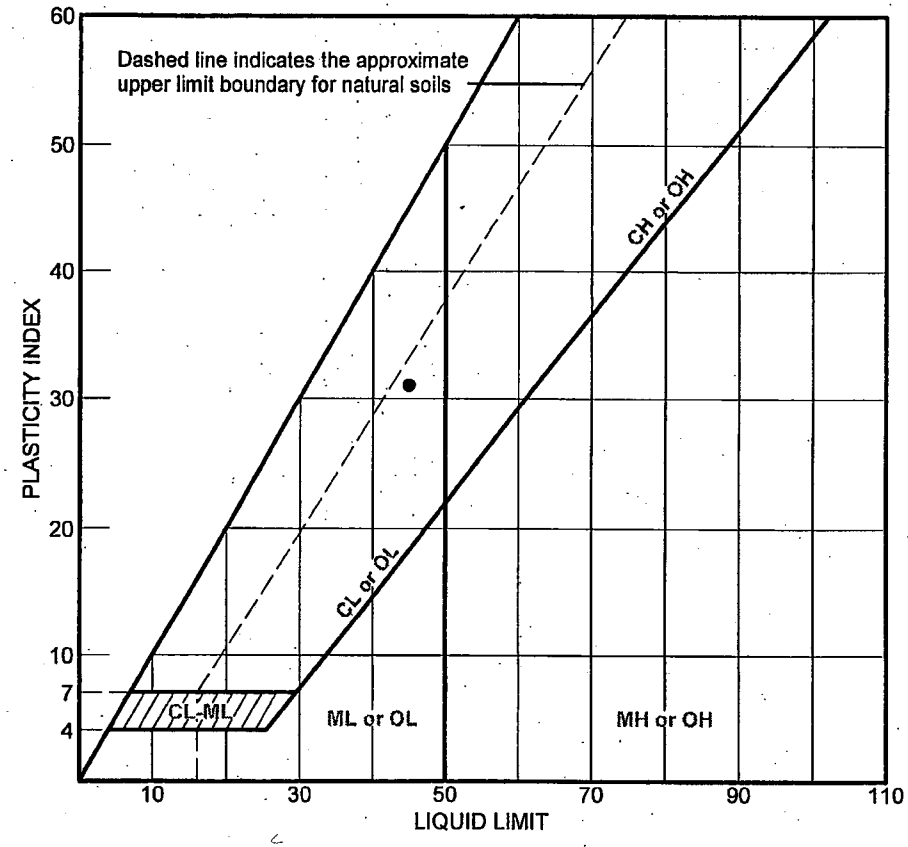
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.94	36			
Dry+Tare	34.81	34.84			
Tare	28.10	28.21			
Moisture	16.8	17.5			

NMA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-305-DH	UD-11	213' to 215'	2-19-07	CL	Lean clay with sand	20.9	45	31

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: ~~SS~~ KAW 4/3/07
ASTM D4318-05

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

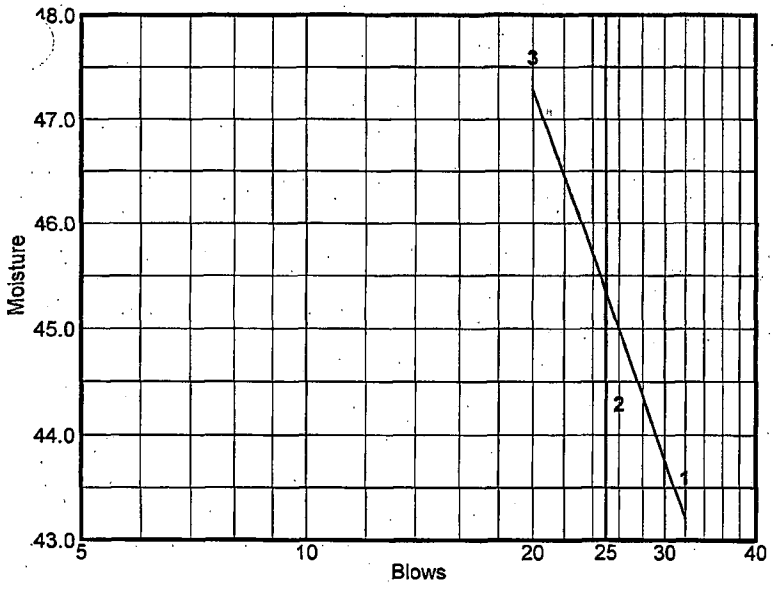
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-305-DH
Sample No.: UD-11
Elev. or Depth: 213' to 215' **Sample Length(in./cm.):**
Location: B-305 DH
Description: Lean clay with sand
Date: 2-19-07 **Natural Moisture:** 20.9
USCS Class.: CL **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	33.15	26.15	24.00			
Dry+Tare	26.42	21.68	19.75			
Tare	10.98	11.59	10.82			
# Blows	32	26	20			
Moisture	43.6	44.3	47.6			

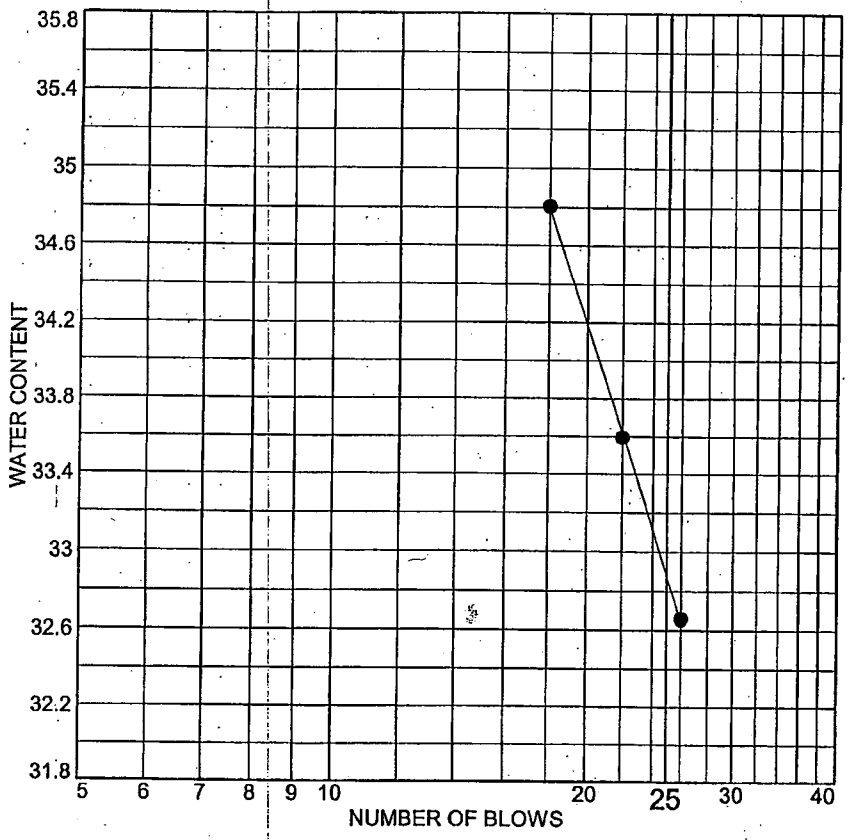


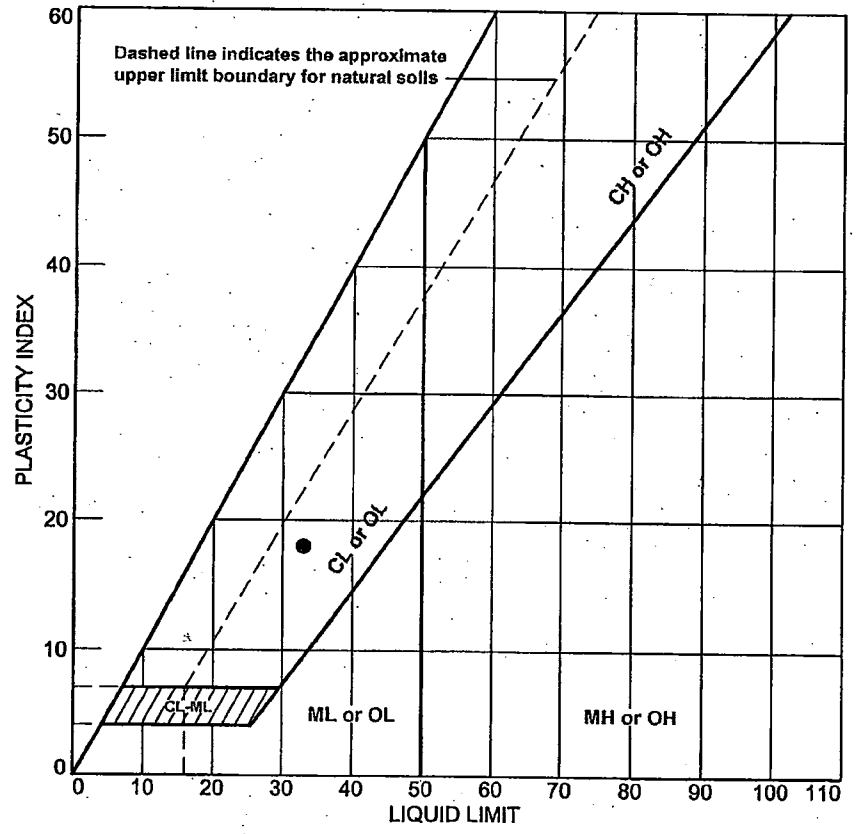
Liquid Limit= 45
Plastic Limit= 14
Plasticity Index= 31

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	18.76	17.44			
Dry+Tare	17.78	16.62			
Tare	10.90	11.00			
Moisture	14.2	14.6			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 305-DH	STP-109	218.5'-220'	11/22/2006	CL	Lean Clay	19.8	33	18
		(SS-33)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:ST

ASTM D4318-05

MM 4-3-07

KAW 4/13/07

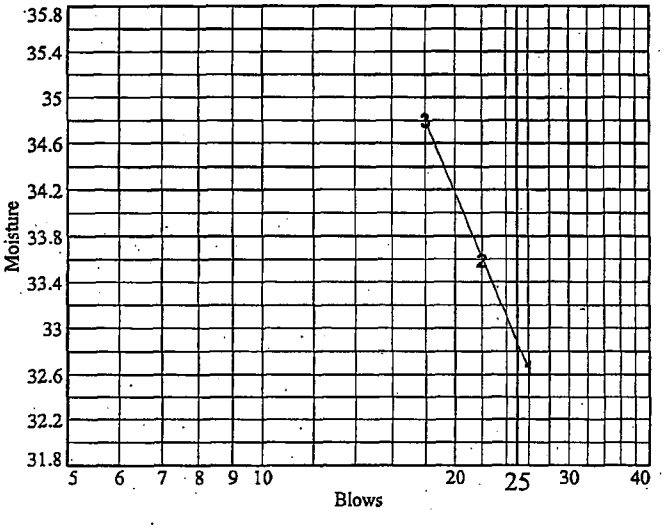
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 218.5'-220'
Sample Number: STP-109 (SS-33)
Material Description: Lean Clay
Date: 11/22/2006
USCS Class.: CL
Testing Remarks: Tested By:AC/TH
Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	38.75	38.53	38.72			
Dry+Tare	36.17	35.95	36.04			
Tare	28.27	28.27	28.34			
# Blows	26	22	18			
Moisture	32.7	33.6	34.8			



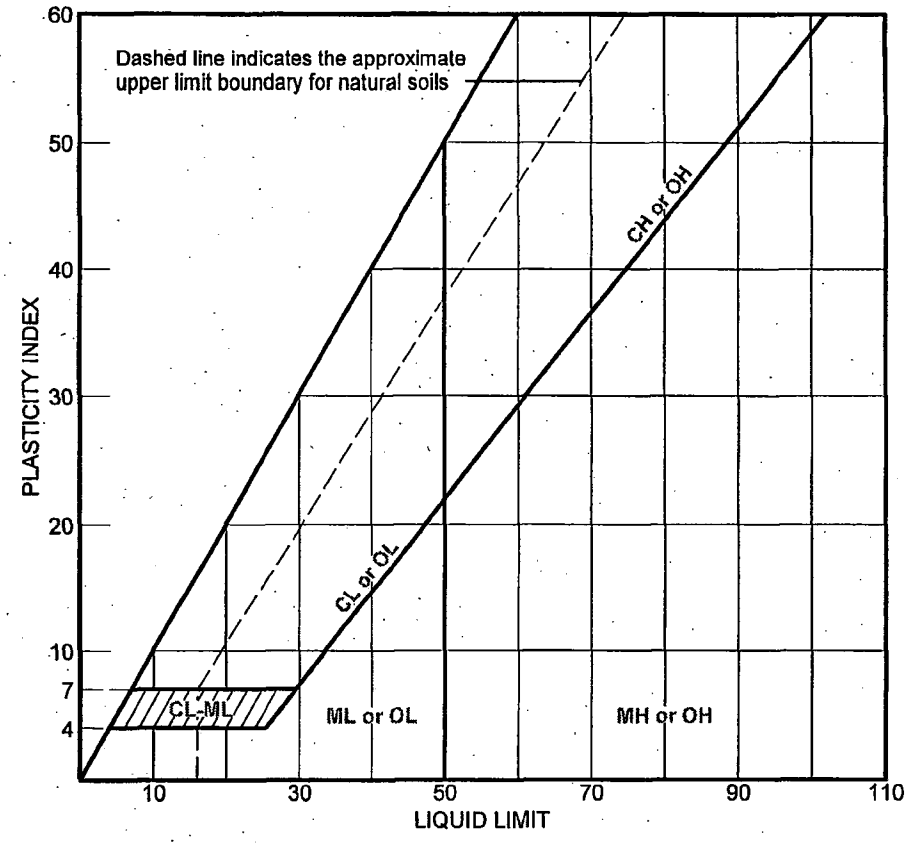
Liquid Limit= 33
Plastic Limit= 15
Plasticity Index= 18
Natural Moisture= 19.8
Liquidity Index= 0.3

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.13	35.98			
Dry+Tare	35.07	34.92			
Tare	28.16	28.10			
Moisture	15.3	15.5			

MWA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-305-DH	UD-12	228' to 230'	2-14-07	SM	Silty sand	21.5	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

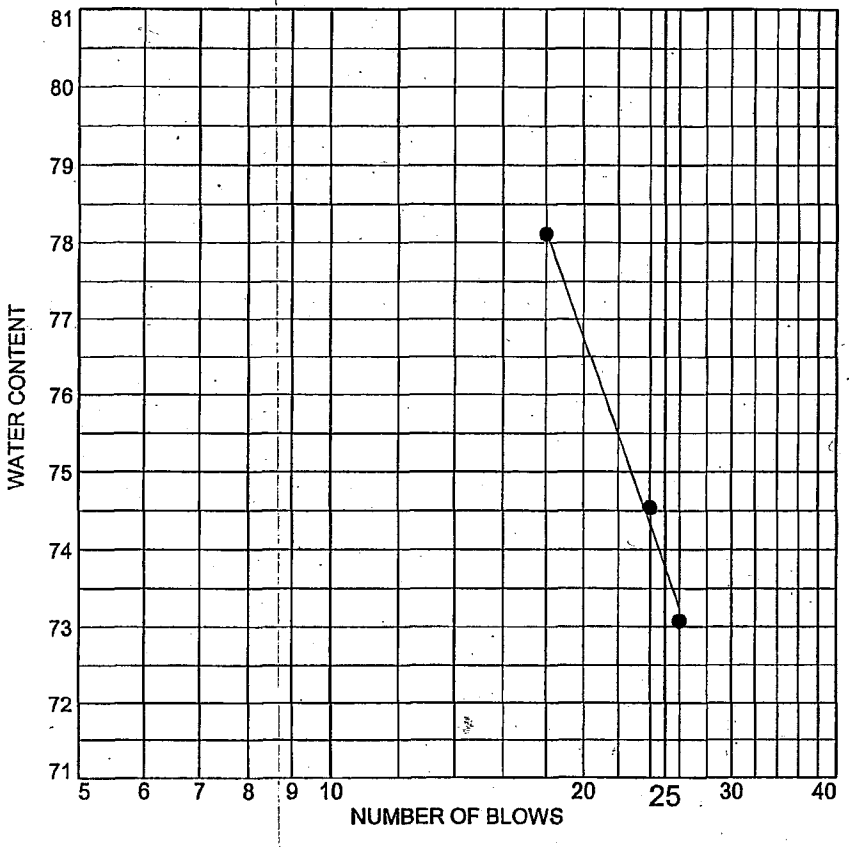
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

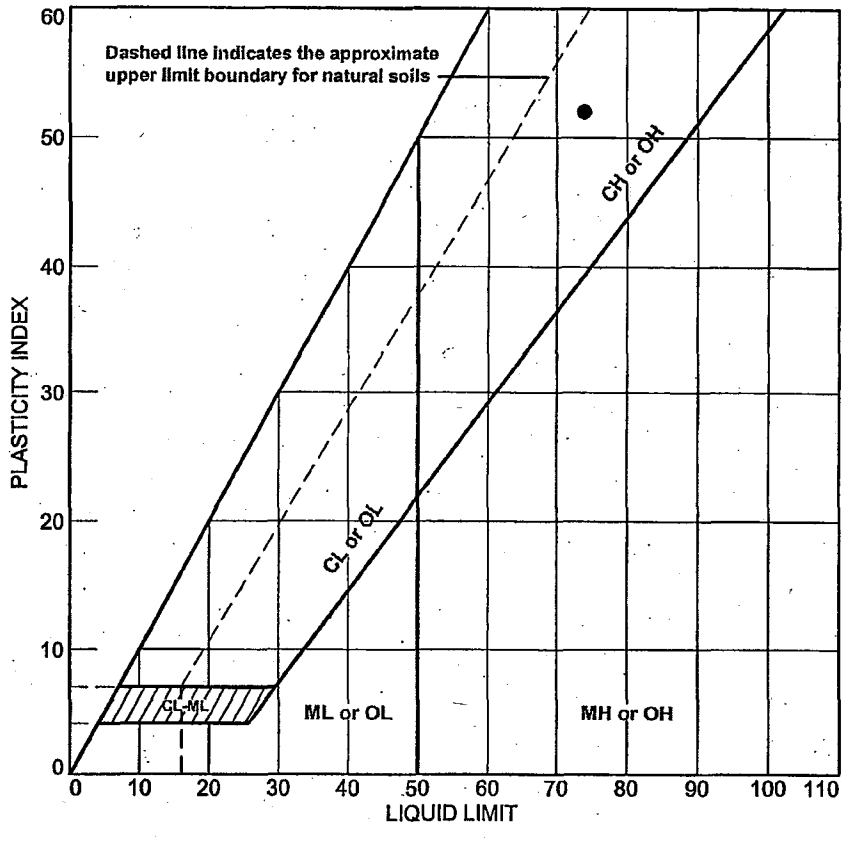
Sample Data

Source: B-305-DH
Sample No.: UD-12
Elev. or Depth: 228' to 230' **Sample Length(in./cm.):**
Location: B-305-DH
Description: Silty sand
Date: 2-14-07 **Natural Moisture:** 21.5
USCS Class.: SM **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 305-DH	STP-110	258.5'-260'	11/28/2006	CH	Fat Clay	29.6	74	52
		(SS-35)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:ST
ASTM D4318-05

MK 4-3-07

KAW 4/3/07

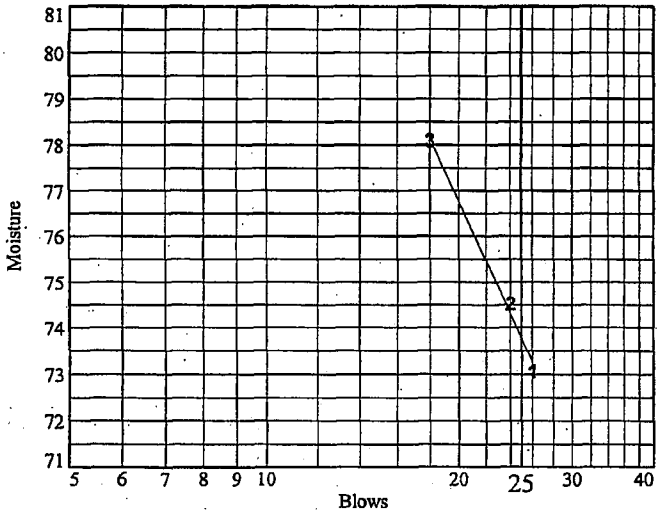
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 258.5'-260'
Sample Number: STP-110 (SS-35)
Material Description: Fat Clay
Date: 11/28/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	31.47	37.06	36.78			
Dry+Tare	27.29	33.02	32.89			
Tare	21.57	27.60	27.91			
# Blows	26	24	18			
Moisture	73.1	74.5	78.1			



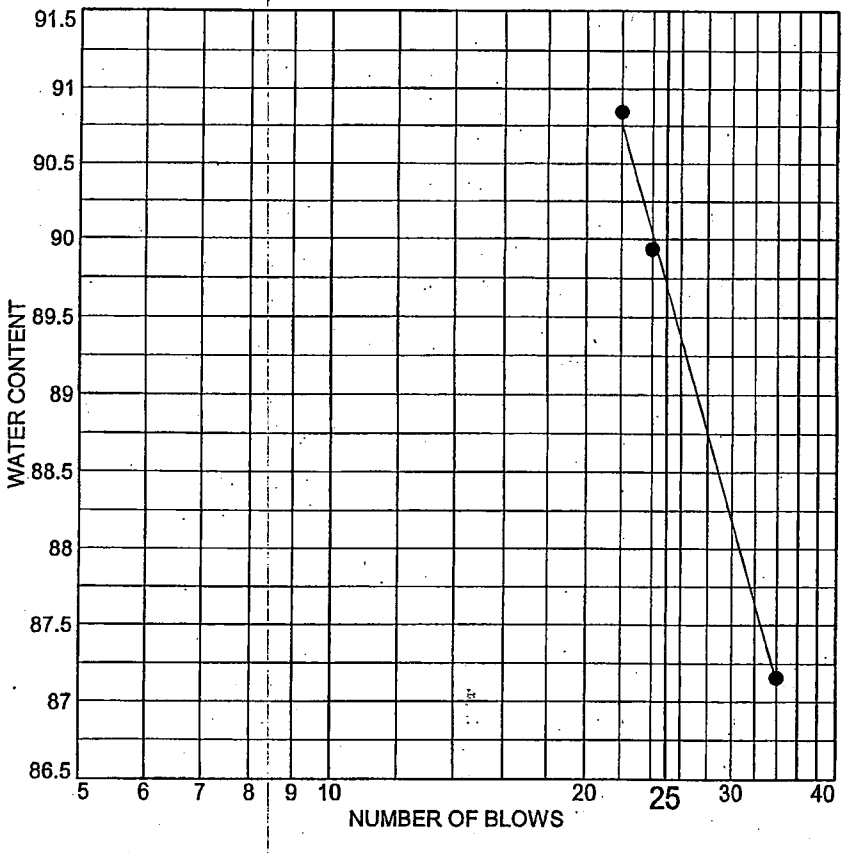
Liquid Limit= 74
Plastic Limit= 22
Plasticity Index= 52
Natural Moisture= 29.6
Liquidity Index= 0.1

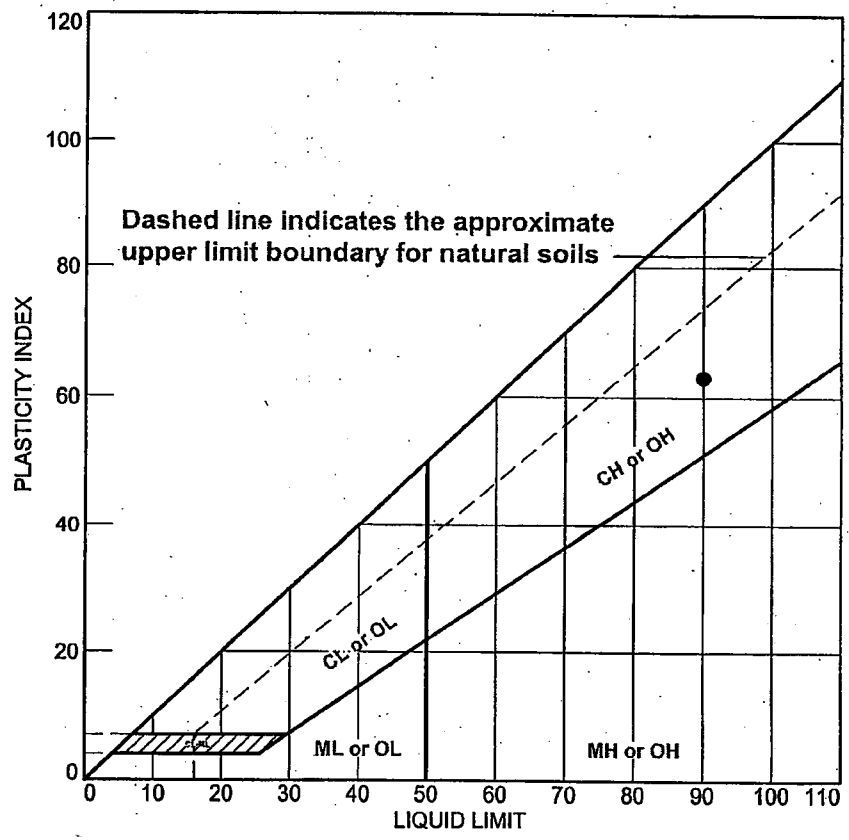
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	33.18	33.42			
Dry+Tare	31.77	32.01			
Tare	25.41	25.56			
Moisture	22.2	21.9			

MAT 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 305-DH	STP-111	278.5'-280'	11/29/2006	CH	Fat Clay	30.4	90	63
		(SS-36)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF

ASTM D4318-05

MA 4-3-07

KAW 4/3/07

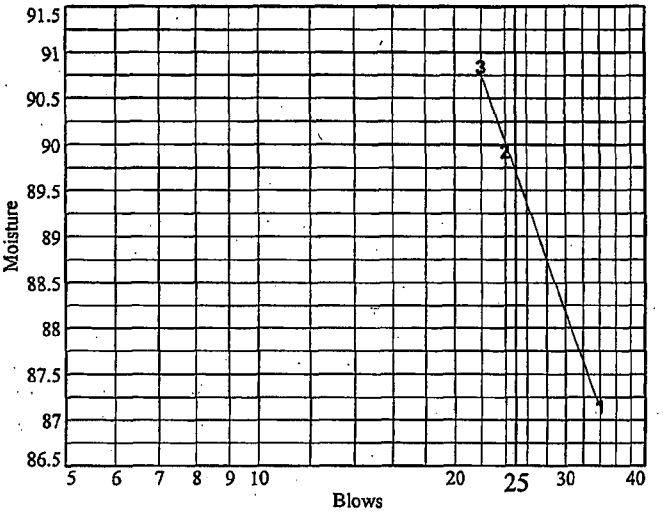
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 278.5'-280' **Sample Number:** STP-111 (SS-36)
Material Description: Fat Clay
Date: 11/29/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	33.57	37.30	36.5			
Dry+Tare	29.77	33.19	32.63			
Tare	25.41	28.62	28.37			
# Blows	34	24	22			
Moisture	87.2	89.9	90.8			



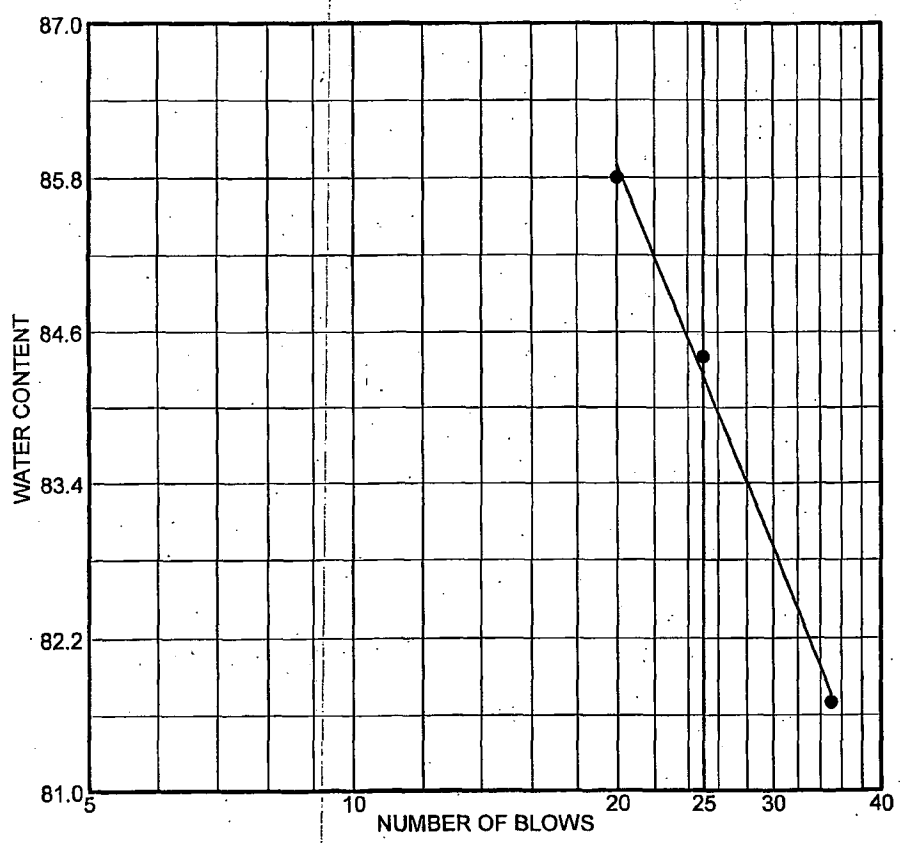
Liquid Limit= 90
Plastic Limit= 27
Plasticity Index= 63
Natural Moisture= 30.4
Liquidity Index= 0.1

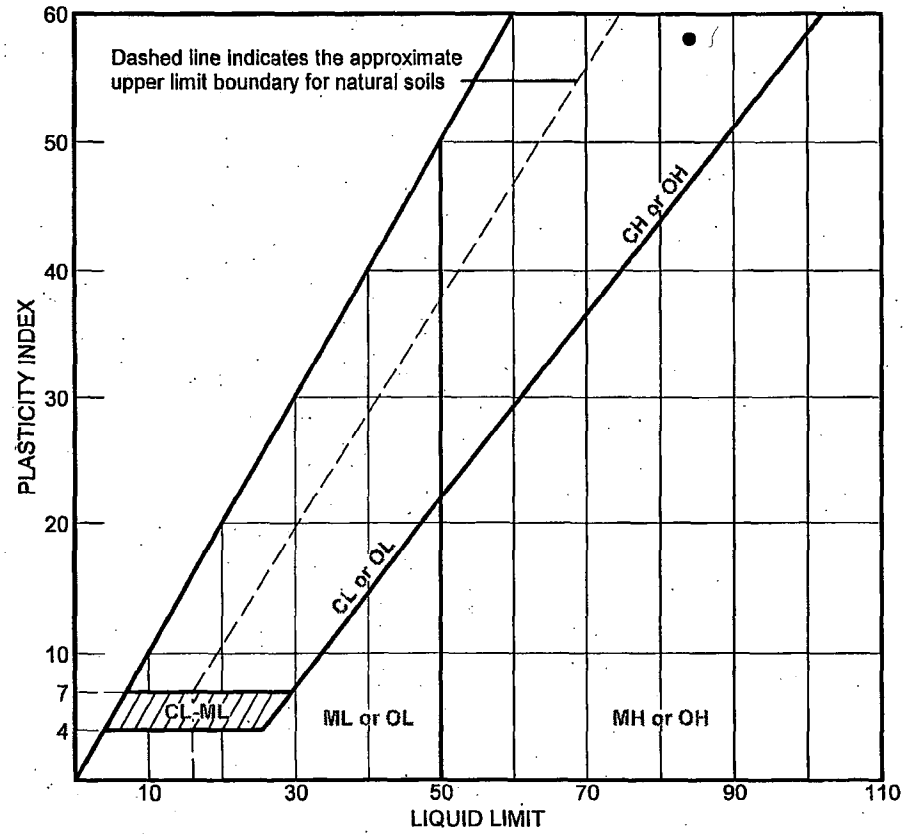
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	28.91	35.52			
Dry+Tare	27.37	33.91			
Tare	21.58	27.92			
Moisture	26.6	26.9			

MA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-305-DH	UD-14	288' to 291'	2-14-07	CH	Fat clay	40.2	84	58

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

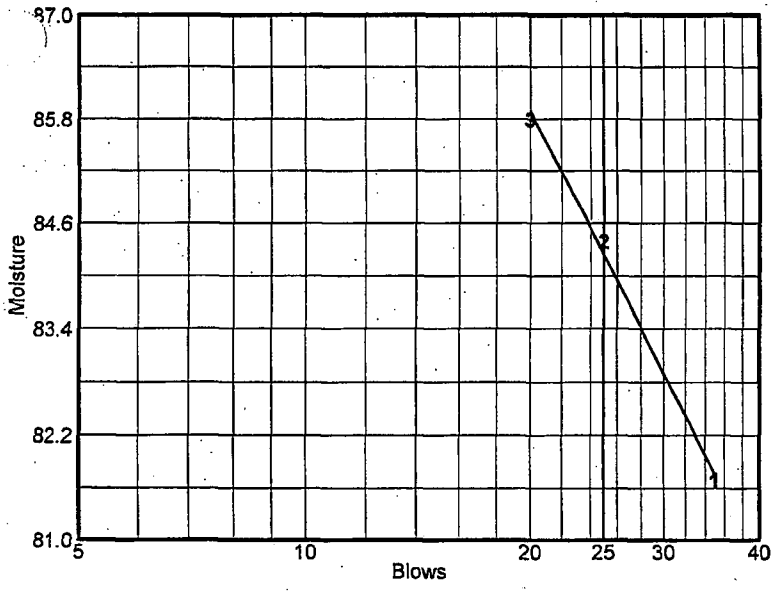
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-305-DH
Sample No.: UD-14
Elev. or Depth: 288' to 291' **Sample Length(in./cm.):**
Location: B-305-DH
Description: Fat clay
Date: 2-14-07 **Natural Moisture:** 40.2
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	23.45	23.72	25.99			
Dry+Tare	17.71	18.04	19.27			
Tare	10.68	11.31	11.44			
# Blows	35	25	20			
Moisture	81.7	84.4	85.8			

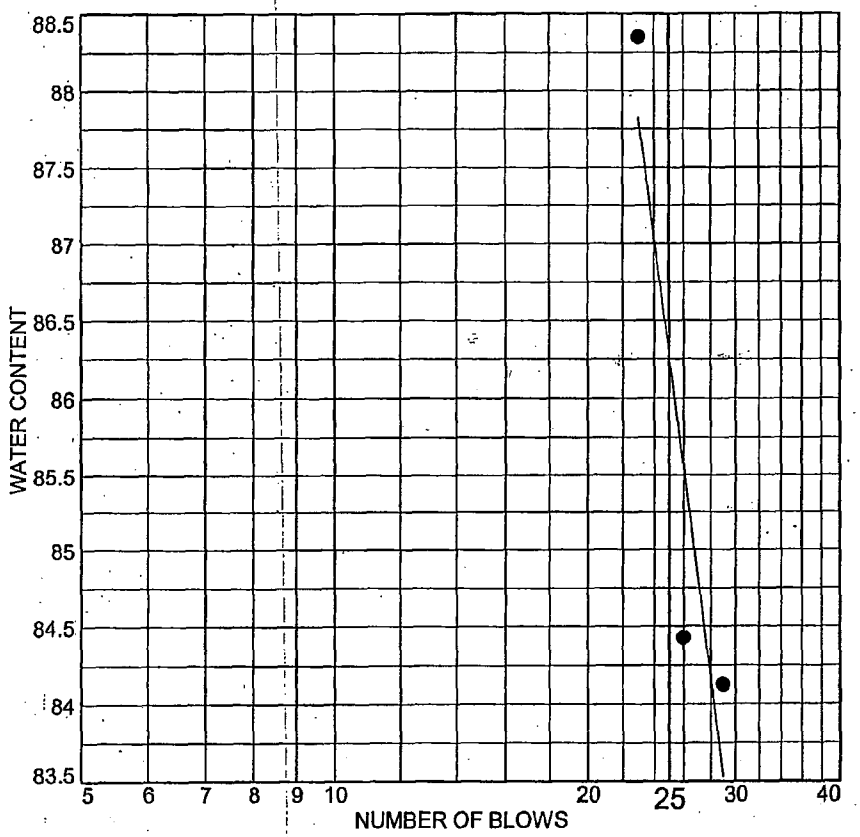


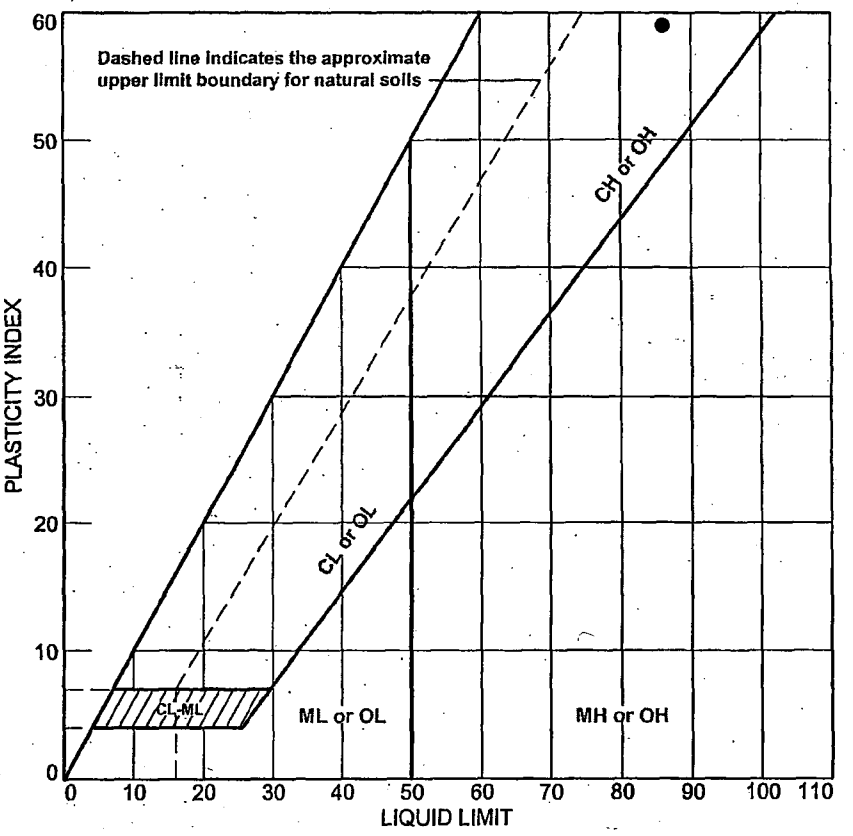
Liquid Limit= 84
Plastic Limit= 26
Plasticity Index= 58

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	20.87	22.60			
Dry+Tare	18.78	20.41			
Tare	10.98	11.59			
Moisture	26.8	24.8			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 305-DH	STP-114	438.5'-440'	12/3/2006	CH	Fat Clay	29.7	86	59
		(SS-42)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:RF

ASTM D4318-05

MK 4-3-07

KAW 4/3/07

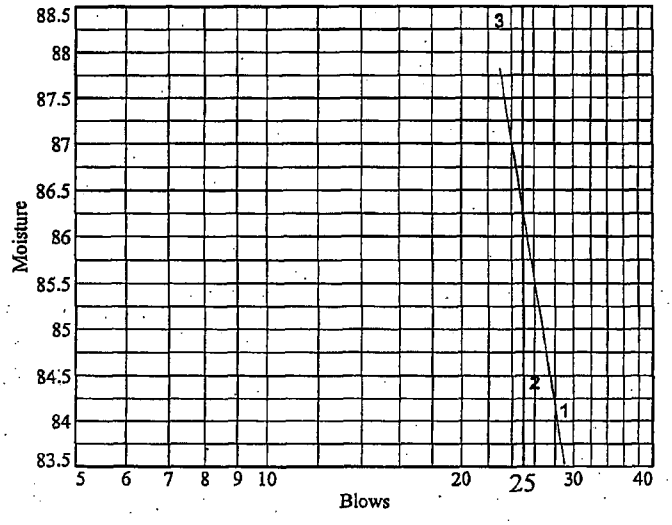
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 438.5'-440'
Sample Number: STP-114 (SS-42)
Material Description: Fat Clay
Date: 12/3/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	35.73	37.31	37.01			
Dry+Tare	32.02	33.46	32.99			
Tare	27.61	28.90	28.44			
# Blows	29	26	23			
Moisture	84.1	84.4	88.4			



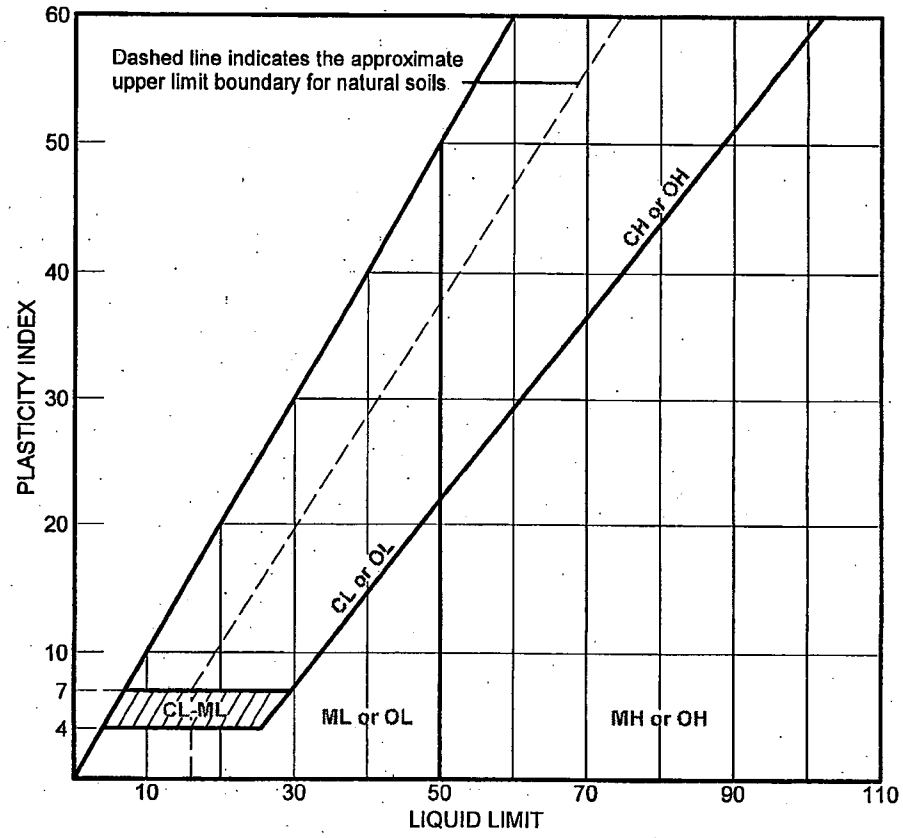
Liquid Limit= 86
Plastic Limit= 27
Plasticity Index= 59
Natural Moisture= 29.7
Liquidity Index= 0.0

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	34.24	35.78			
Dry+Tare	32.69	34.19			
Tare	27.09	28.30			
Moisture	27.7	27.0			

NA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-305-DH	UD-21A	453.75' to 455.75'	2-25-07	SP-SM	Poorly graded sand with silt	22.0	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

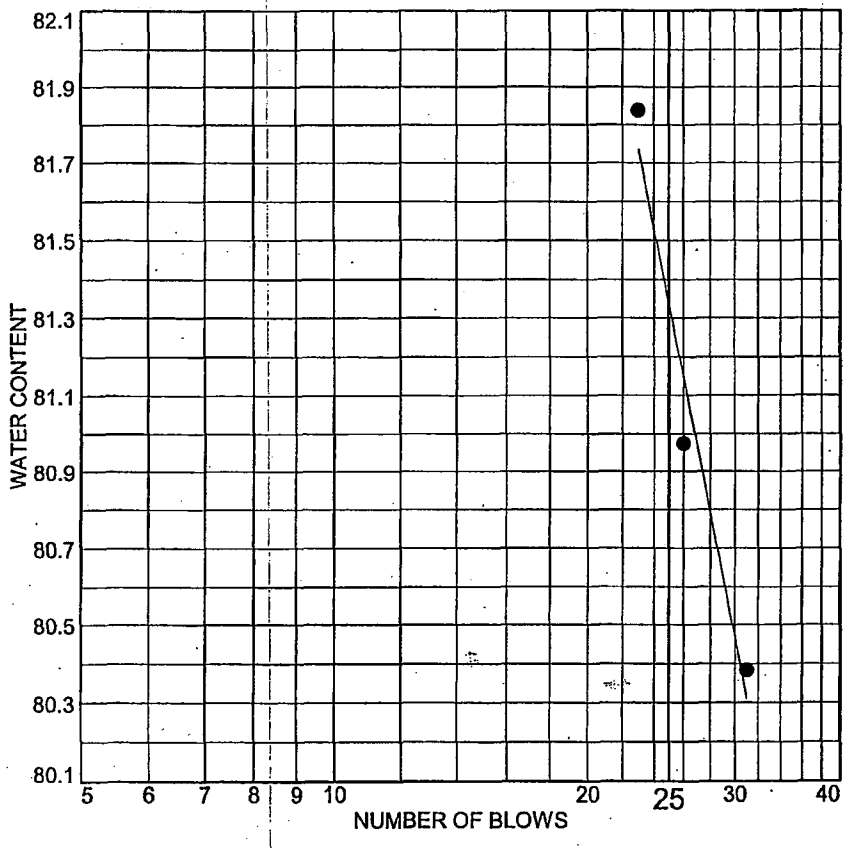
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
ject Number: 5050-06-0496

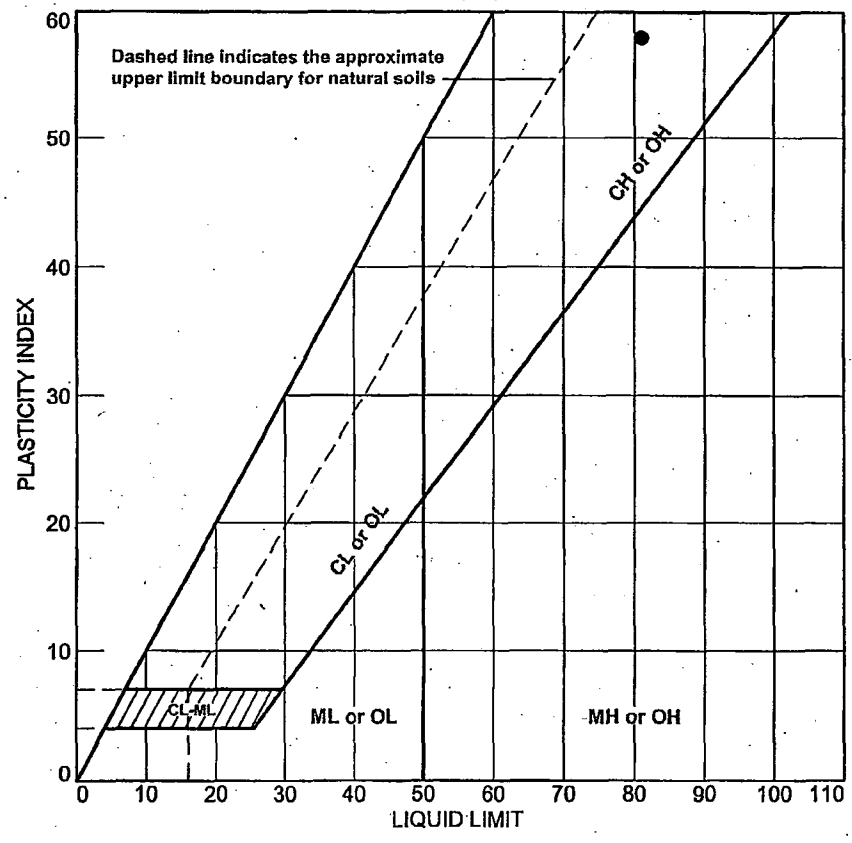
Sample Data

Source: B-305-DH
Sample No.: UD-21A
Elev. or Depth: 453.75' to 455.75' **Sample Length(in./cm.):**
Location: B-305-DH
Description: Poorly graded sand with silt
Date: 2-25-07 **Natural Moisture:** 22.0
USCS Class.: SP-SM **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 305-DH	STP-116	478.5'-480.0'	12/4/2006	CH	Fat Clay	24.3	81	58
		(SS-44)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:RF

ASTM D4318-05

MA 4-3-07

KAW 4/3/07

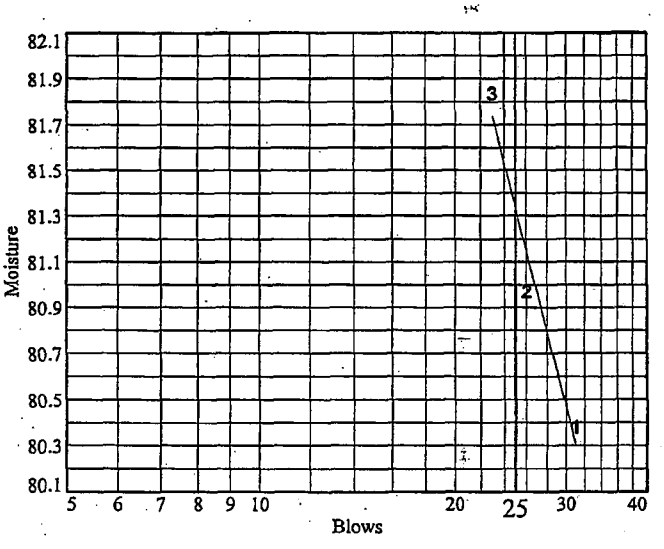
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 478.5'-480.0'
Sample Number: STP-116 (SS-44)
Material Description: Fat Clay
Date: 12/4/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	35.85	36.45	35.60			
Dry+Tare	32.49	32.79	31.86			
Tare	28.31	28.27	27.29			
# Blows	31	26	23			
Moisture	80.4	81.0	81.8			



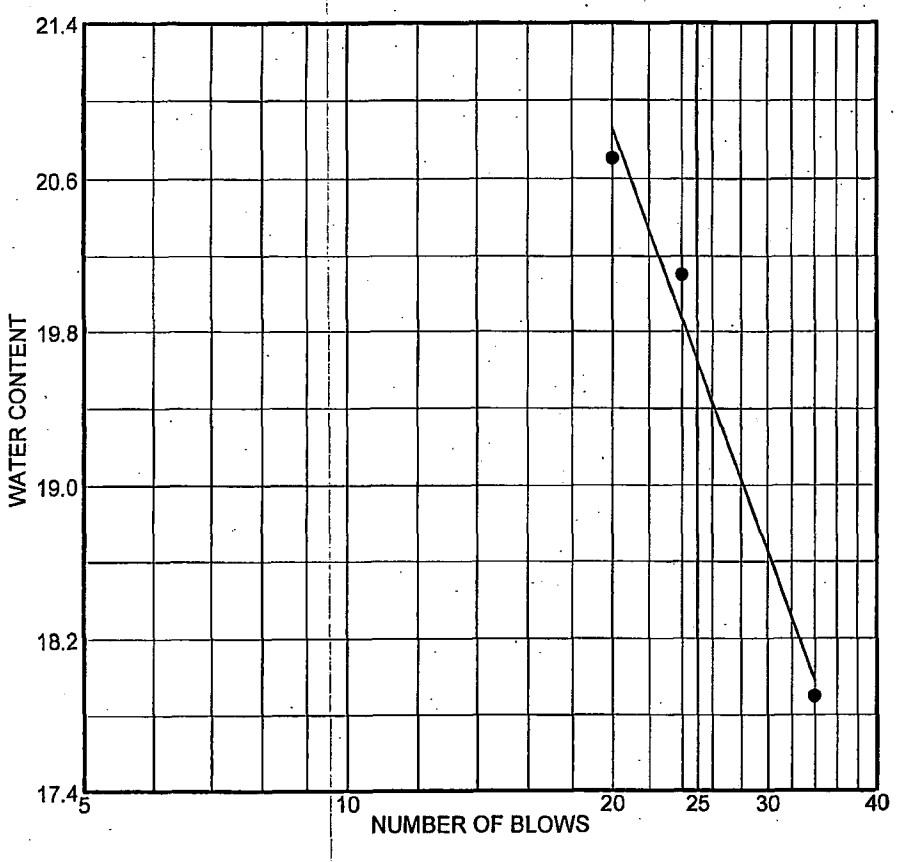
Liquid Limit= 81
Plastic Limit= 23
Plasticity Index= 58
Natural Moisture= 24.3
Liquidity Index= 0.0

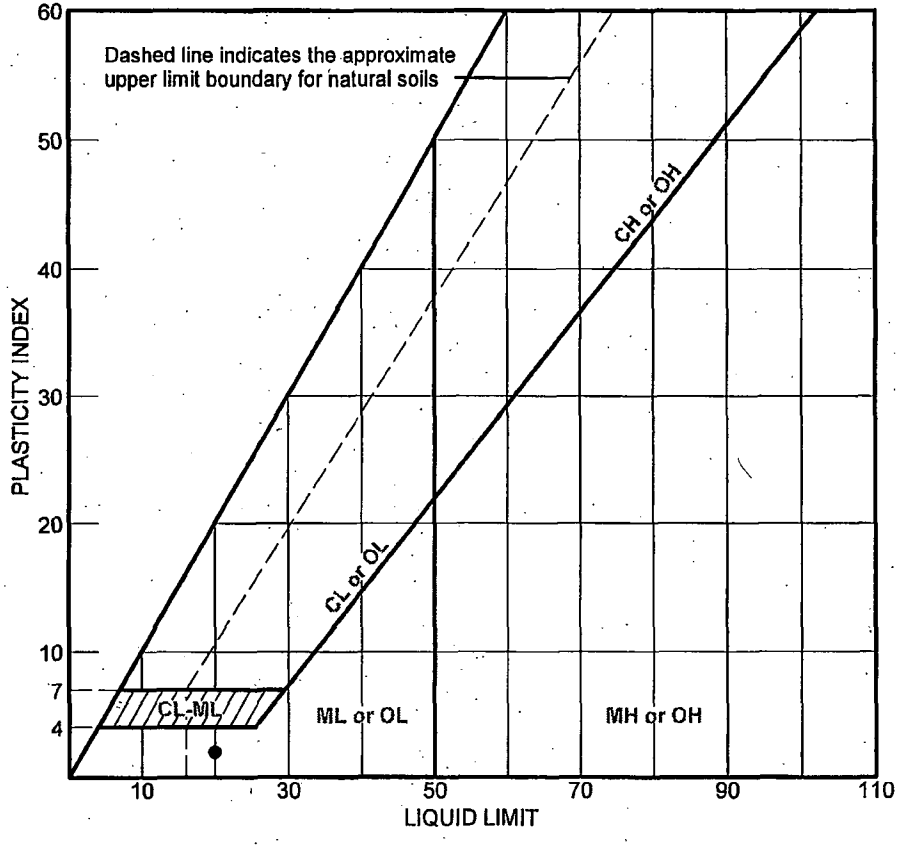
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	37.24	39.34			
Dry+Tare	35.55	37.27			
Tare	28.33	28.27			
Moisture	23.4	23.0			

MAA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-306	UD-2	63' to 65'	2-23-07	SM	Silty sand	22.9	20	2

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH KAW 4/3/07
ASTM D4318-05

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

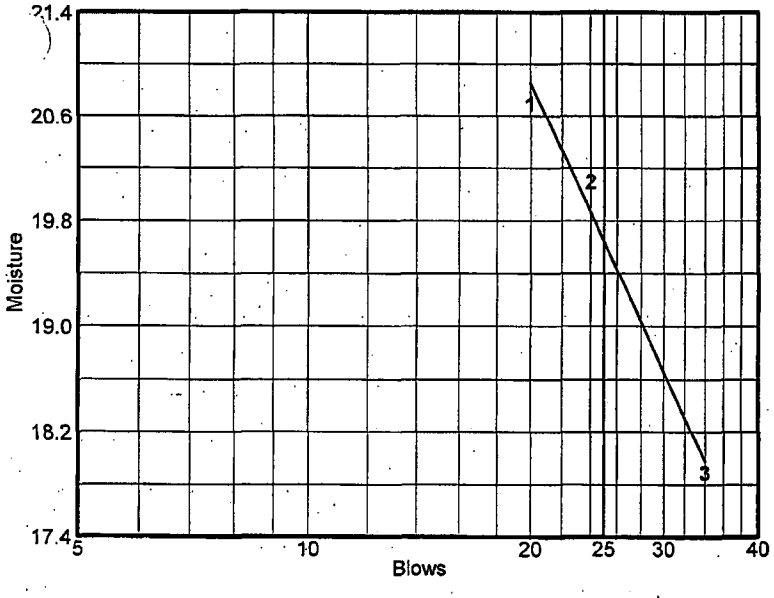
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-306
Sample No.: UD-2
Elev. or Depth: 63' to 65' **Sample Length(in./cm.):**
Location: B-306
Description: Silty sand
Date: 2-23-07 **Natural Moisture:** 22.9
USCS Class.: SM **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	27.62	33.05	29.21			
Dry+Tare	24.77	29.34	26.40			
Tare	11.00	10.92	10.66			
# Blows	20	24	34			
Moisture	20.7	20.1	17.9			

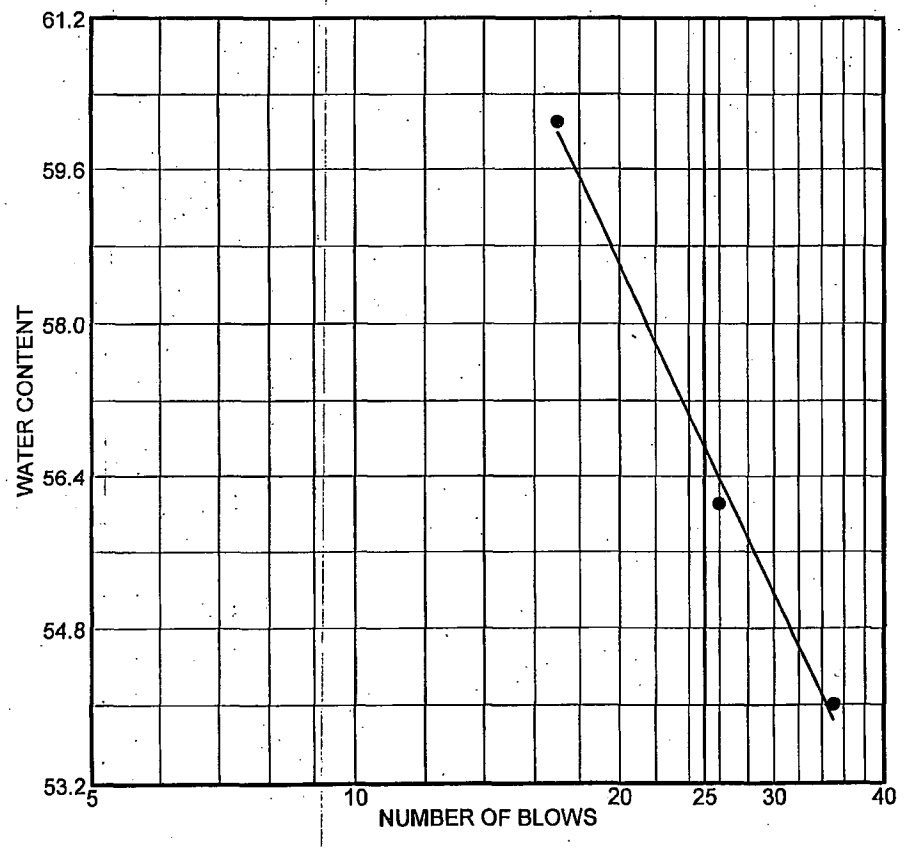


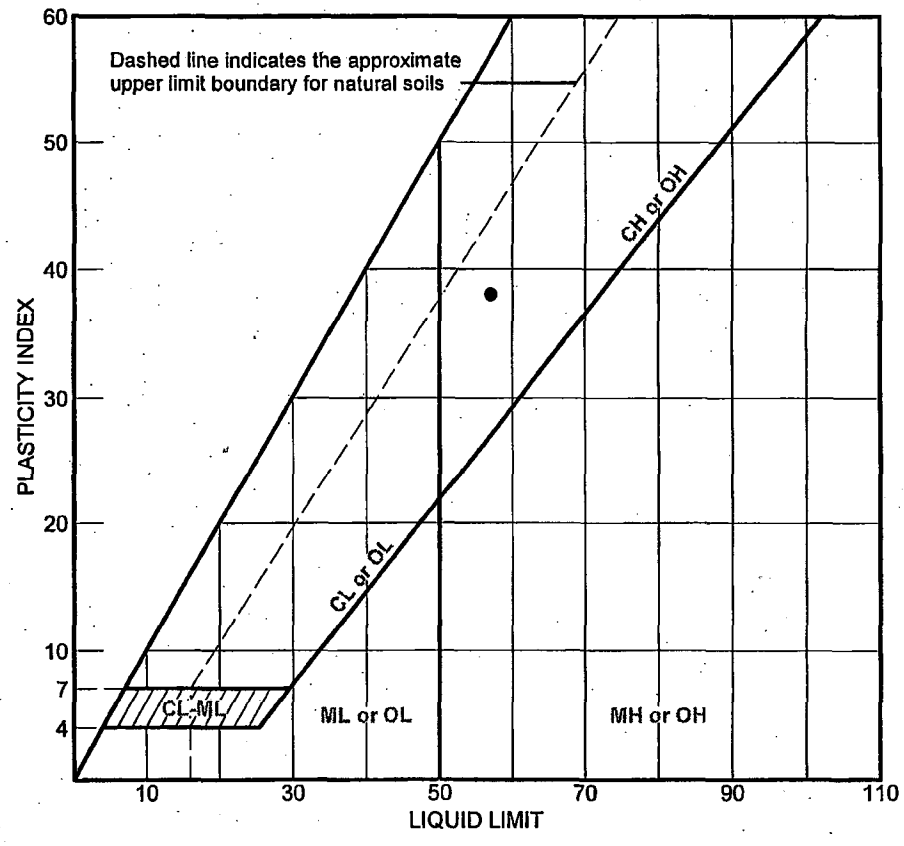
Liquid Limit= 20
Plastic Limit= 18
Plasticity Index= 2

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	13.51	14.28			
Dry+Tare	12.10	12.85			
Tare	4.33	4.46			
Moisture	18.1	17.0			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-306	UD-4	88' to 90'	2-20-07	CH	Fat clay	22.9	57	38

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

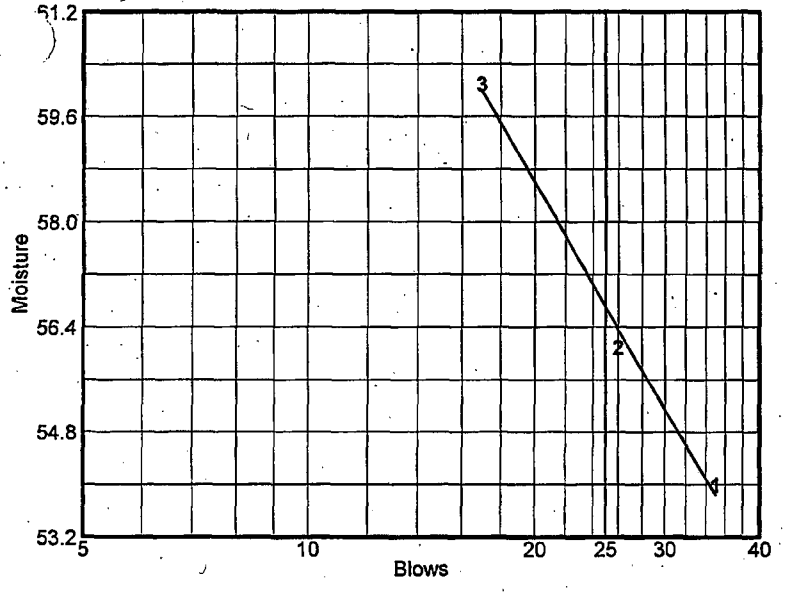
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-306
Sample No.: UD-4
Elev. or Depth: 88' to 90' **Sample Length(in./cm.):**
Location: B-306
Description: Fat clay
Date: 2-20-07 **Natural Moisture:** 22.9
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	25.83	30.13	26.68			
Dry+Tare	20.61	23.49	20.70			
Tare	10.95	11.66	10.75			
# Blows	35	26	17			
Moisture	54.0	56.1	60.1			

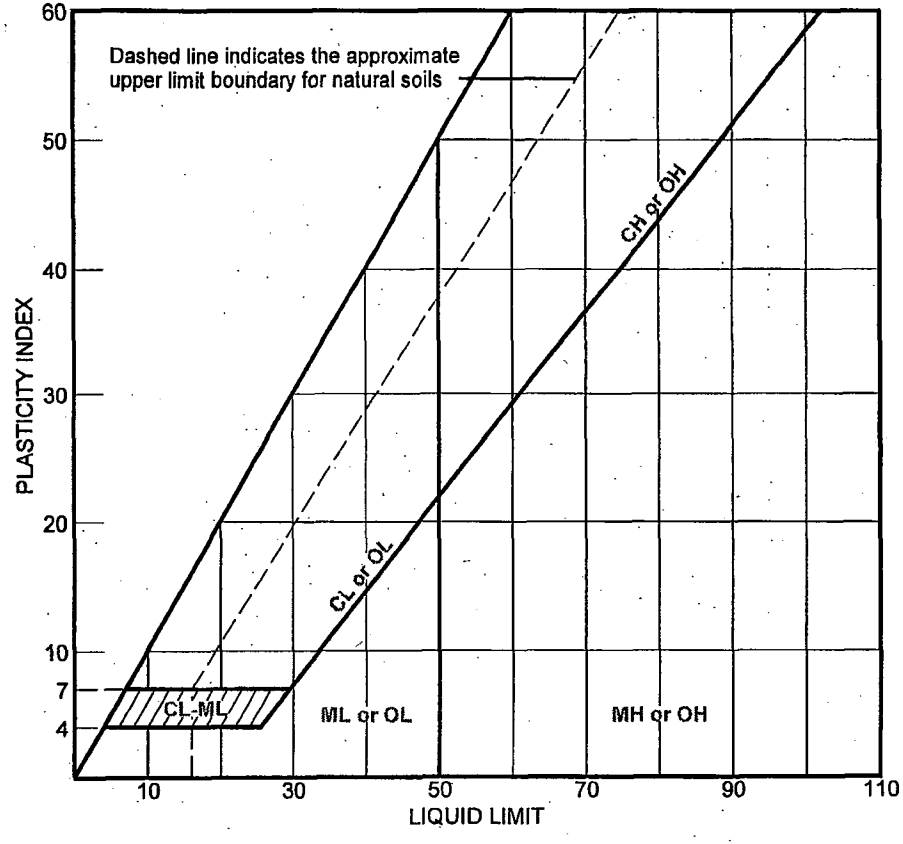


Liquid Limit= 57
Plastic Limit= 19
Plasticity Index= 38

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	33.47	34.82			
Dry+Tare	31.83	32.84			
Tare	23.33	22.45			
Moisture	19.3	19.1			

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-306	UD-5	98'to 100'	2-16-07	SP-SM	Poorly graded sand with silt	24.4	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

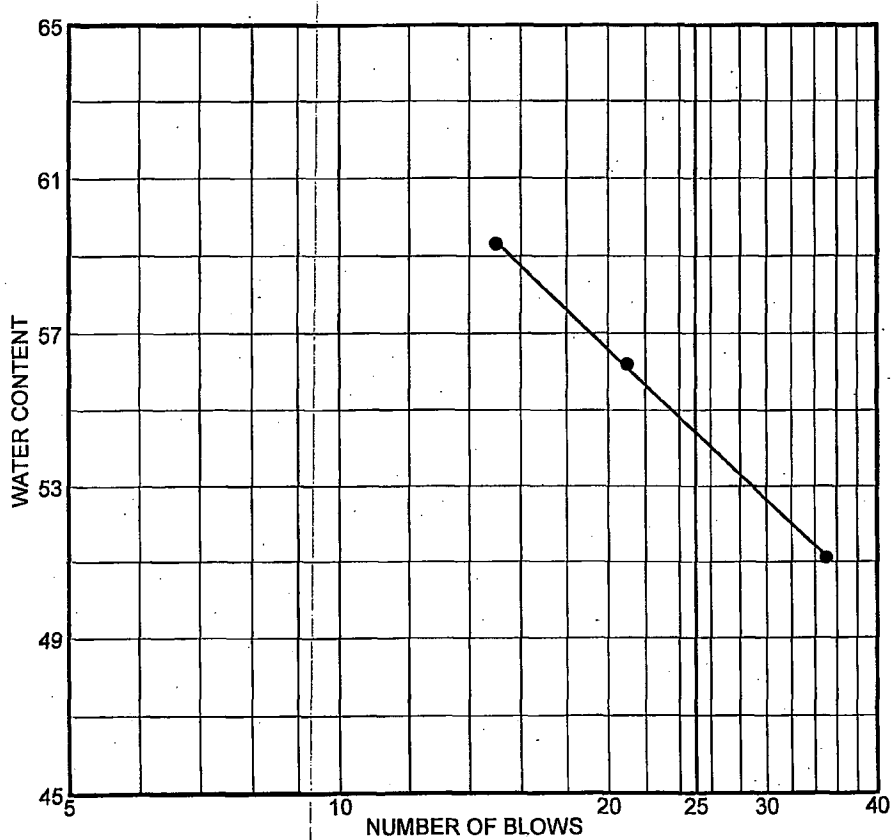
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

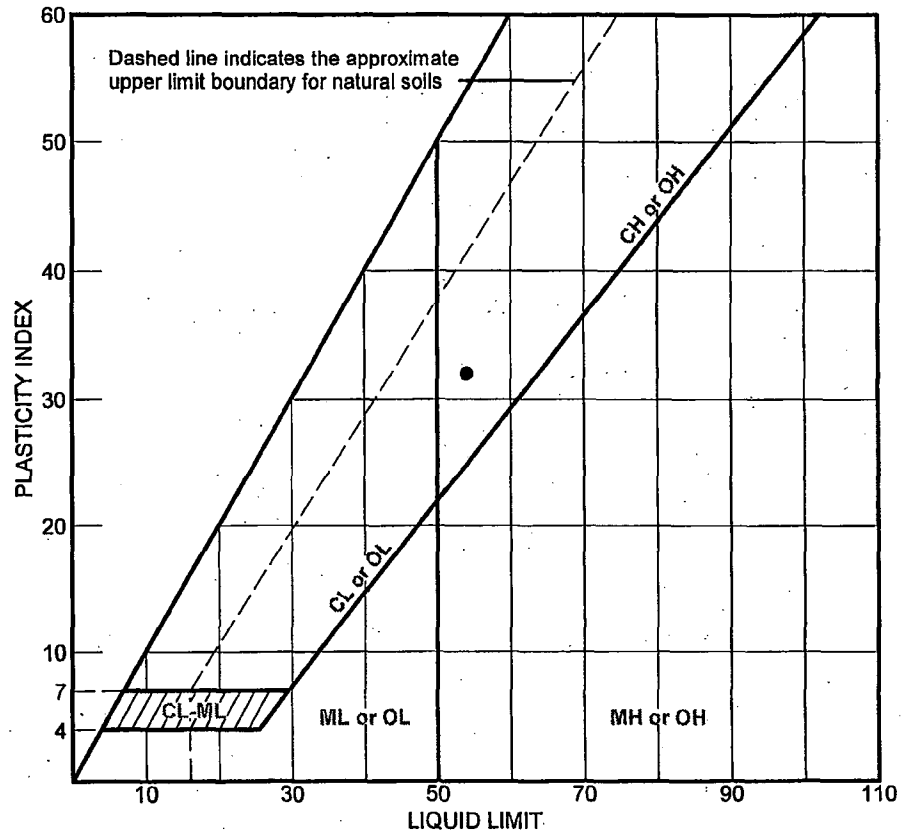
Sample Data

Source: B-306
Sample No.: UD-5
Elev. or Depth: 98'to 100' **Sample Length(in./cm.):**
Location: B-306
Description: Poorly graded sand with silt
Date: 2-16-07 **Natural Moisture:** 24.4
USCS Class.: SP-SM **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-306	UD-7	118' to 120'	2-20-07	CH	Fat clay	25.2	54	32

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

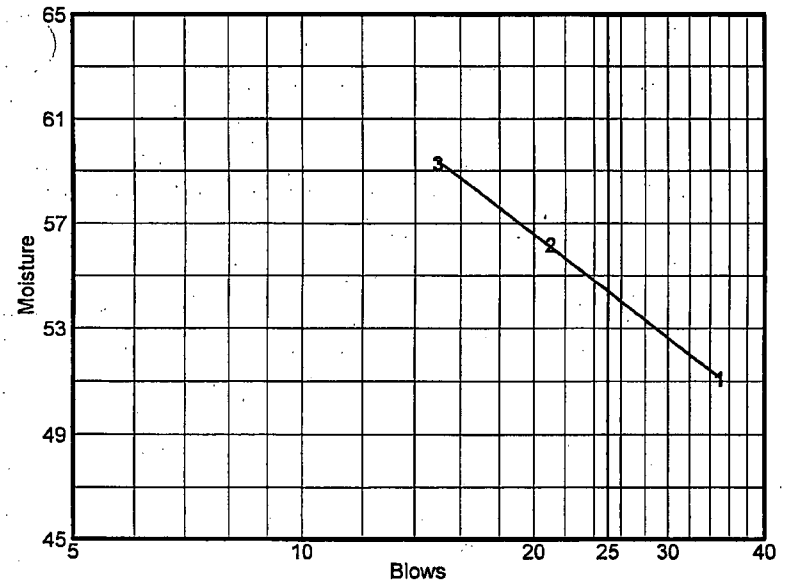
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-306
Sample No.: UD-7
Elev. or Depth: 118' to 120' **Sample Length(in./cm.):**
Location: B-306
Description: Fat clay
Date: 2-20-07 **Natural Moisture:** 25.2
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	28.80	26.19	31.52			
Dry+Tare	22.91	20.89	23.87			
Tare	11.39	11.46	10.98			
# Blows	35	21	15			
Moisture	51.1	56.2	59.3			

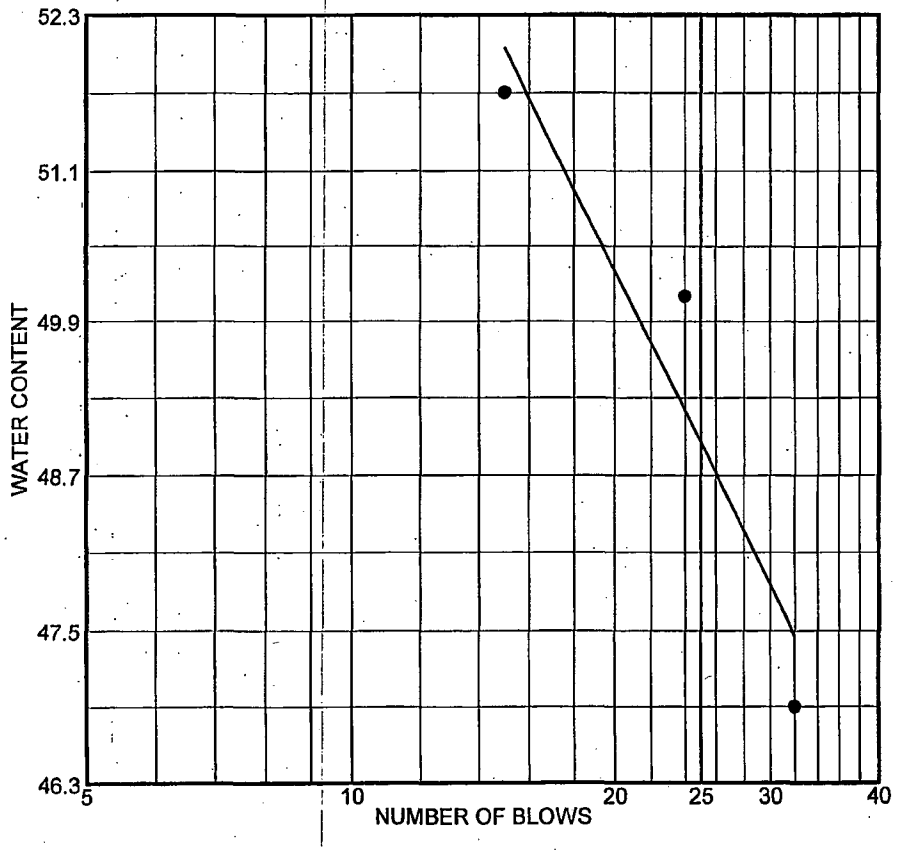


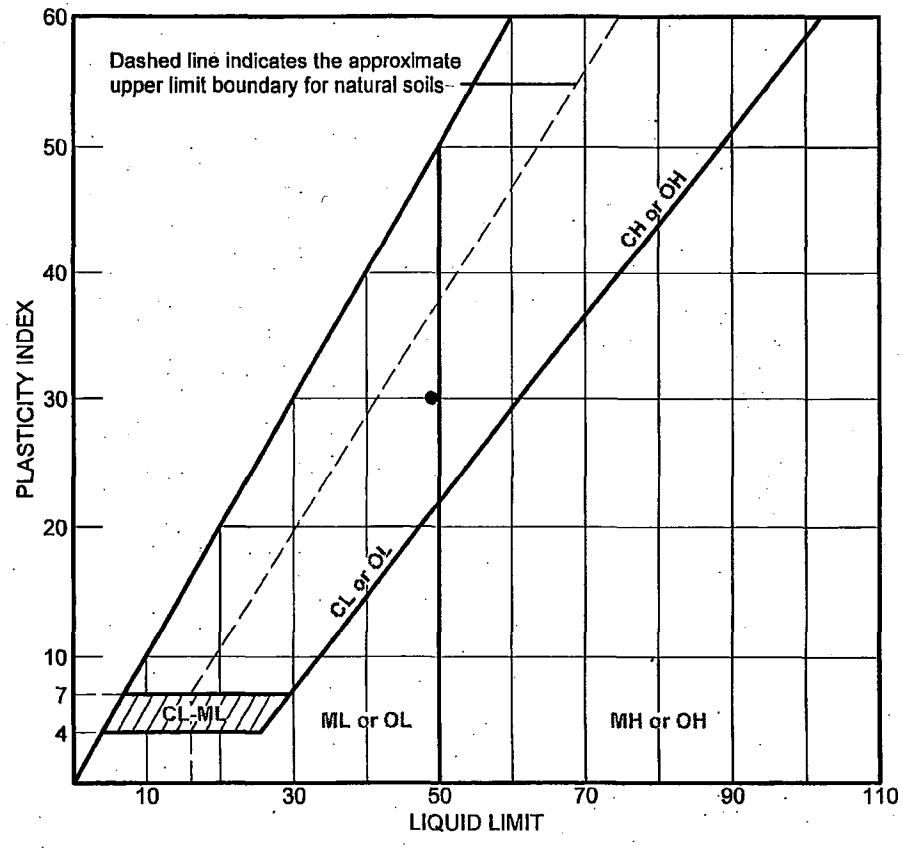
Liquid Limit= 54
Plastic Limit= 22
Plasticity Index= 32

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	18.51	19.15			
Dry+Tare	17.26	17.78			
Tare	11.45	11.57			
Moisture	21.5	22.1			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-307	UD-3	188' to 190'	3-22-07	CL	Lean Clay	21.9	49	30

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

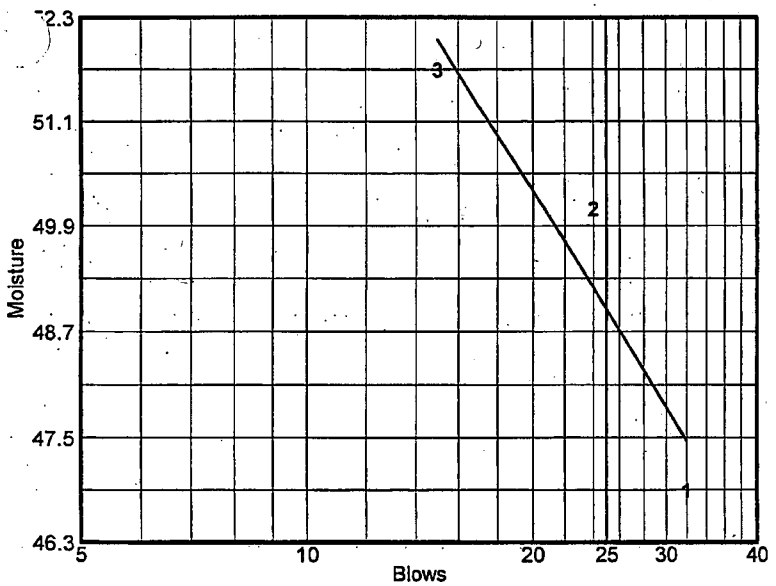
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-307
Sample No.: UD-3
Elev. or Depth: 188' to 190' **Sample Length(in./cm.):**
Location: B-307
Description: Lean Clay
Date: 3-22-07 **Natural Moisture:** 21.9
USCS Class.: CL **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	27.33	25.45	27.90			
Dry+Tare	22.04	20.58	22.35			
Tare	10.77	10.85	11.62			
# Blows	32	24	15			
Moisture	46.9	50.1	51.7			

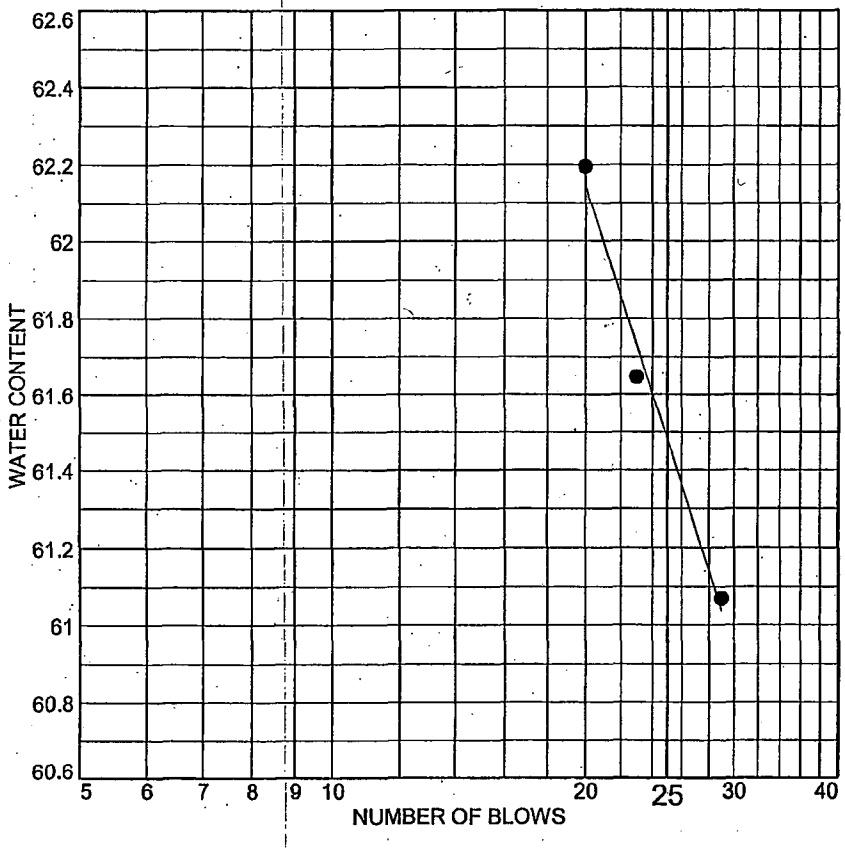


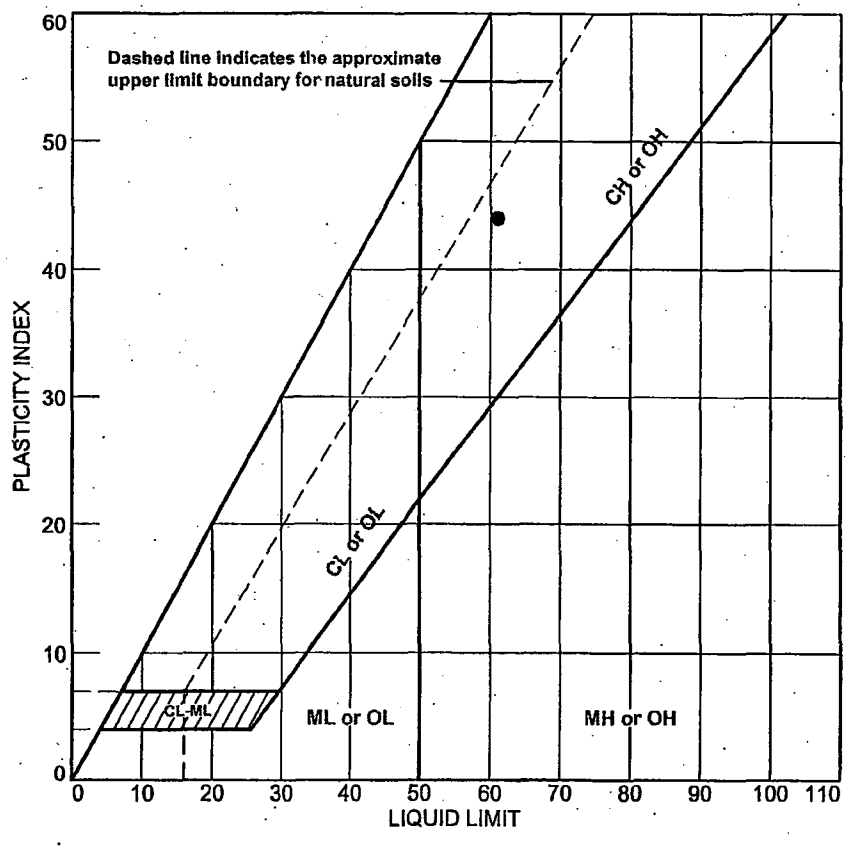
Liquid Limit= 49
Plastic Limit= 19
Plasticity Index= 30

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	19.27	18.67			
Dry+Tare	17.96	17.41			
Tare	10.88	10.77			
Moisture	18.5	19.0			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 309	STP-001 (SS-2)	1.5'-3.0'	11/13/2006	CH	Fat Clay	28.0	61	44

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:ST

ASTM D4318-05

MH 4-3-07

KAW 4/3/07

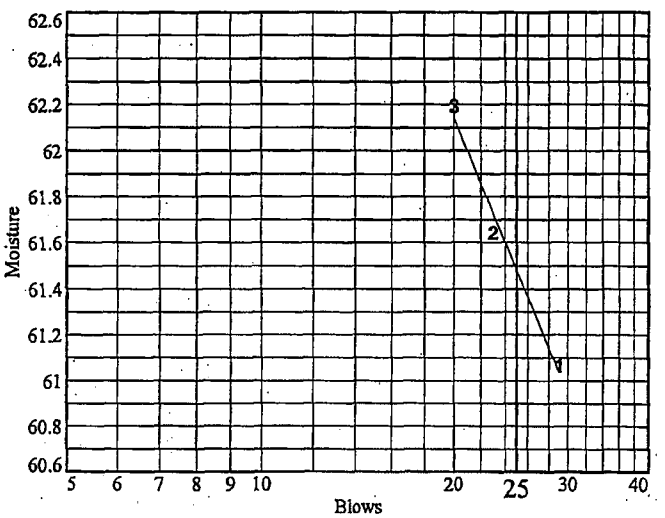
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 1.5'-3.0'
Sample Number: STP-001 (SS-2)
Material Description: Fat Clay
Date: 11/13/2006
USCS Class.: CH
Testing Remarks: Tested By:TH
Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	35.56	37.5	35.88			
Dry+Tare	32.36	33.98	32.82			
Tare	27.12	28.27	27.9			
# Blows	29	23	20			
Moisture	61.1	61.6	62.2			



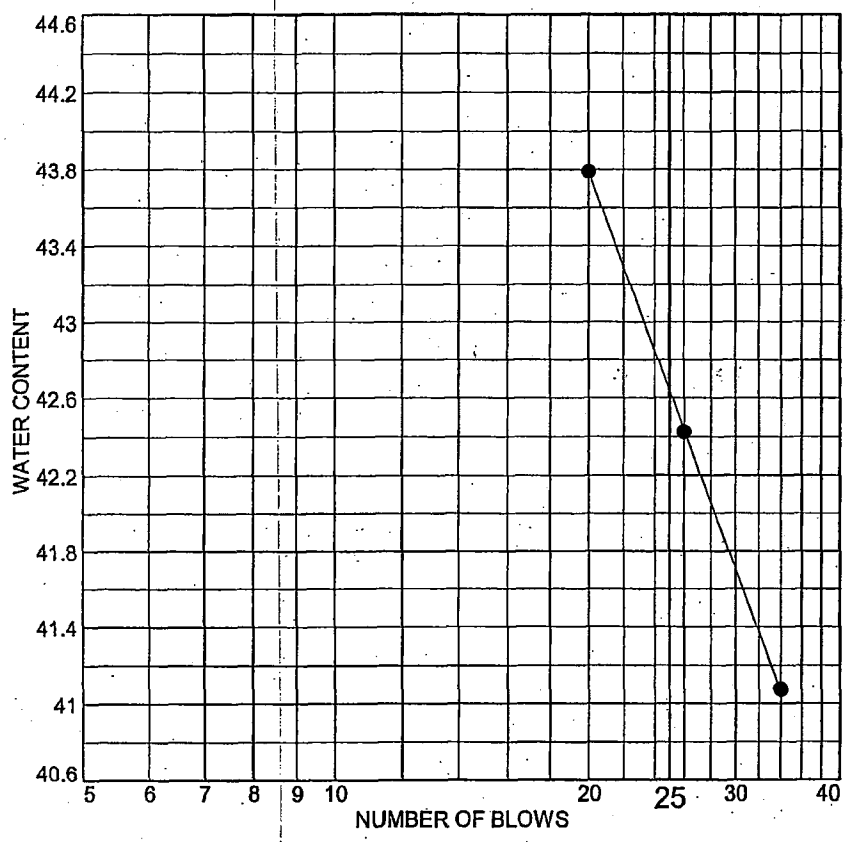
Liquid Limit= 61
Plastic Limit= 17
Plasticity Index= 44
Natural Moisture= 28.0
Liquidity Index= 0.2

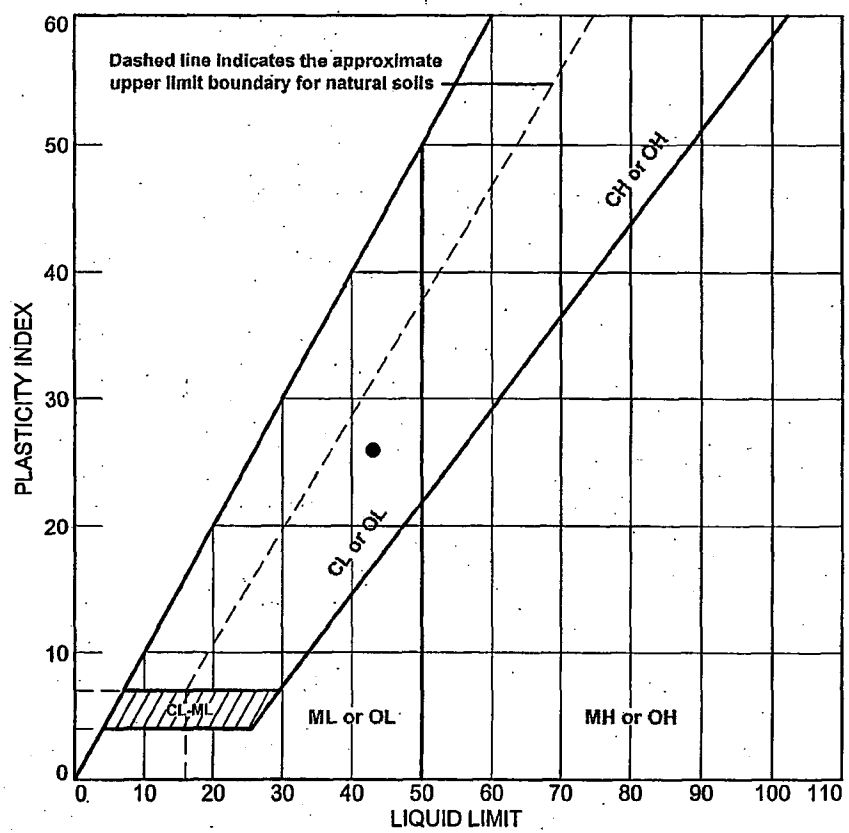
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.99	35.63			
Dry+Tare	34.88	34.51			
Tare	28.27	27.98			
Moisture	16.8	17.2			

MAA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 309	STP-002	6.0'-7.5'	11/13/2006	CL	Lean Clay	27.2	43	26
		(SS-5)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:ST

ASTM D4318-05

MA 4-3-07

KAW 4/3/07

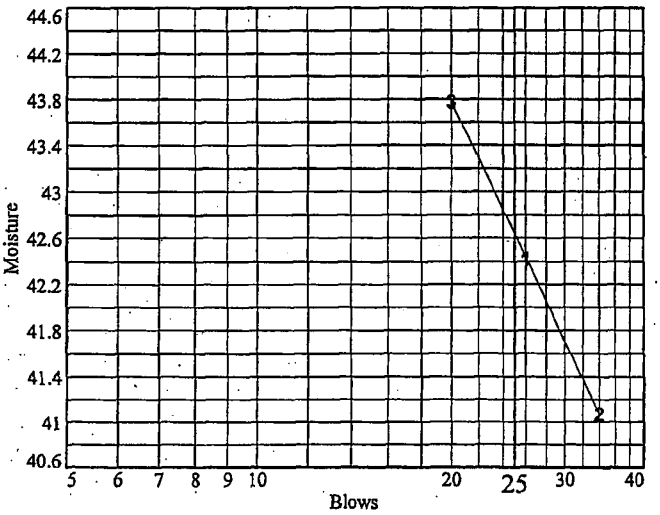
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 6.0'-7.5' **Sample Number:** STP-002 (SS-5)
Material Description: Lean Clay
Date: 11/13/2006 **USCS Class.:** CL
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.56	37.12	36.61			
Dry+Tare	34.76	34.52	33.72			
Tare	28.16	28.19	27.12			
# Blows	26	34	20			
Moisture	42.4	41.1	43.8			



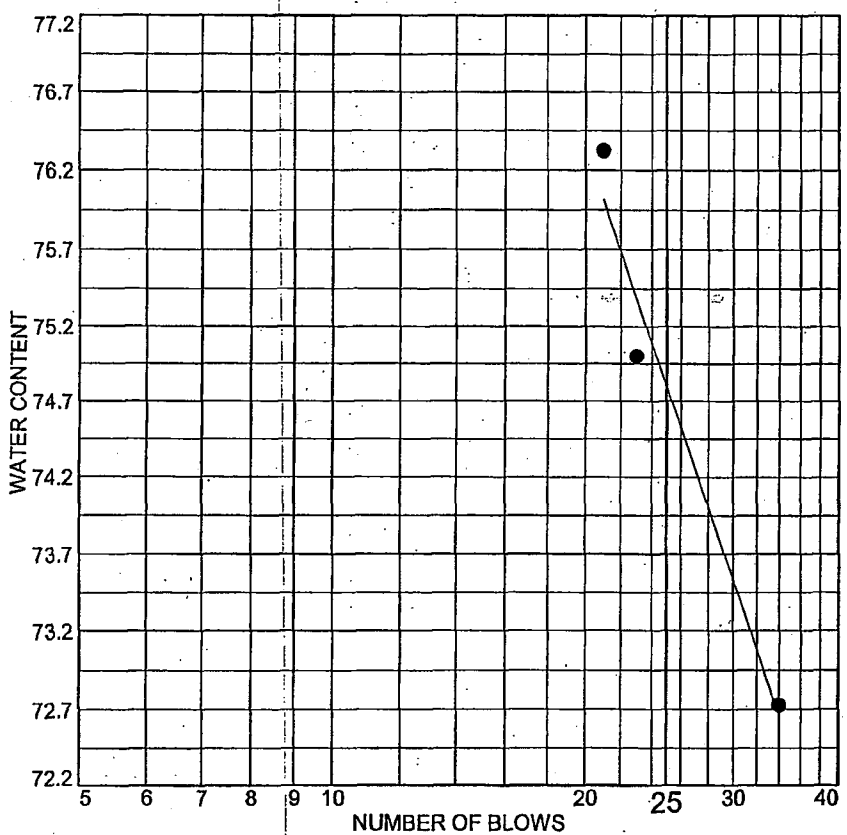
Liquid Limit= 43
Plastic Limit= 17
Plasticity Index= 26
Natural Moisture= 27.2
Liquidity Index= 0.4

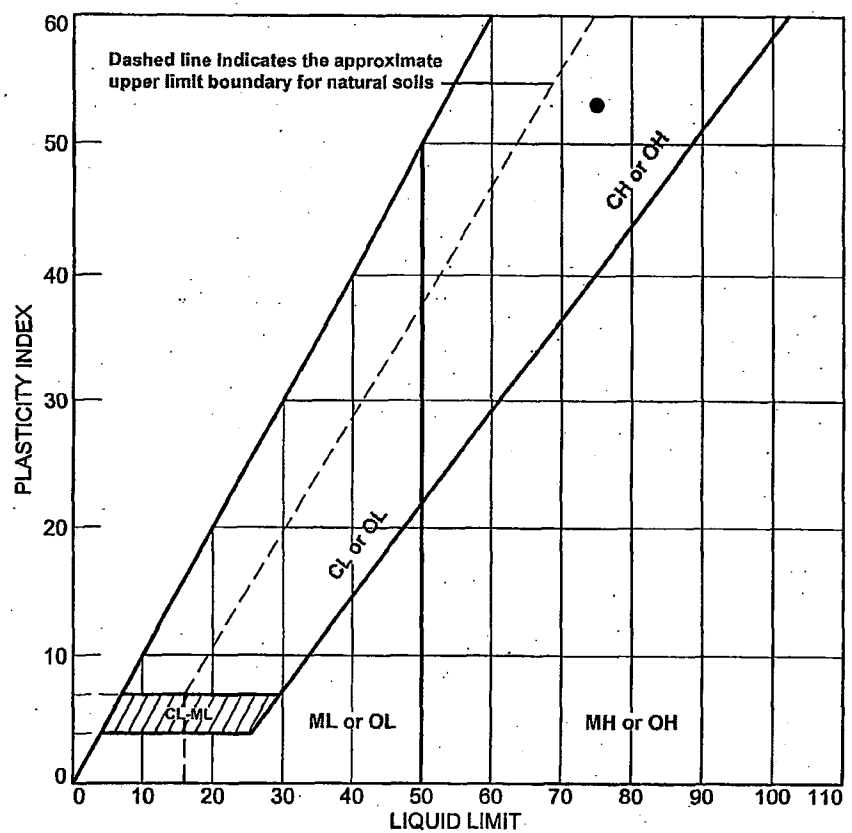
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.34	34.13			
Dry+Tare	34.29	33.13			
Tare	28.07	27.07			
Moisture	16.9	16.5			

MAK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 309	STP-003	10.5'-12.0'	11/13/2006	CH	Fat Clay	27.0	75	53
		(SS-8)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:ST

ASTM D4318-05

MM 4-3-07

KAW 4/3/07

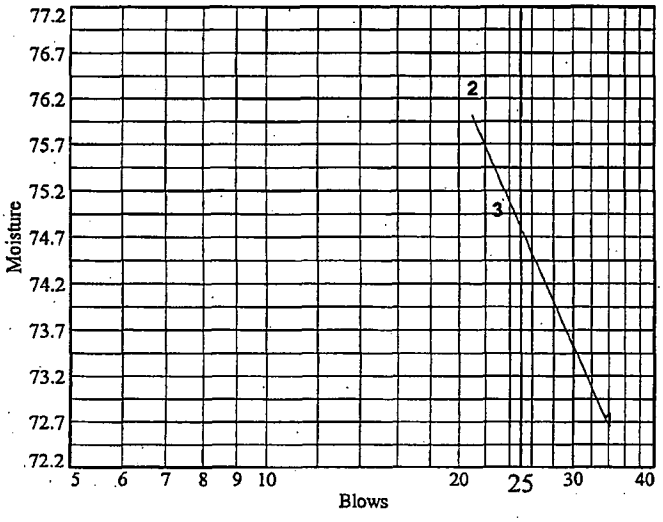
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 10.5'-12.0' **Sample Number:** STP-003 (SS-8)
Material Description: Fat Clay
Date: 11/13/2006 **USCS Class.:** CH
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	35.2	36	29.57			
Dry+Tare	32	32.68	26.15			
Tare	27.6	28.33	21.59			
# Blows	34	21	23			
Moisture	72.7	76.3	75.0			



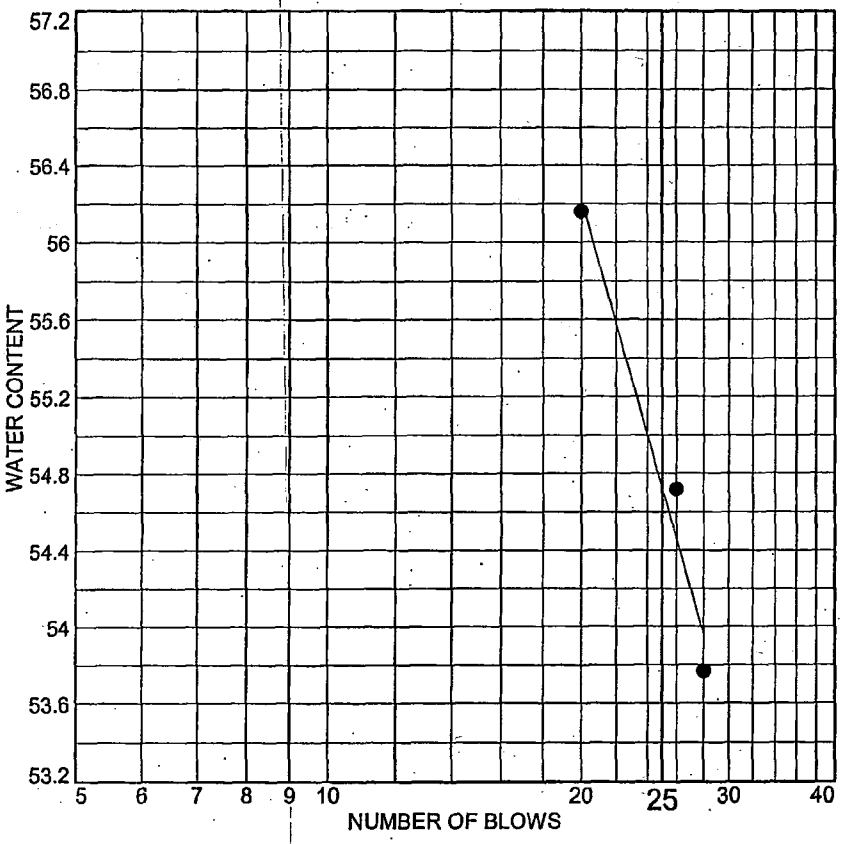
Liquid Limit= 75
Plastic Limit= 22
Plasticity Index= 53
Natural Moisture= 27.0
Liquidity Index= 0.1

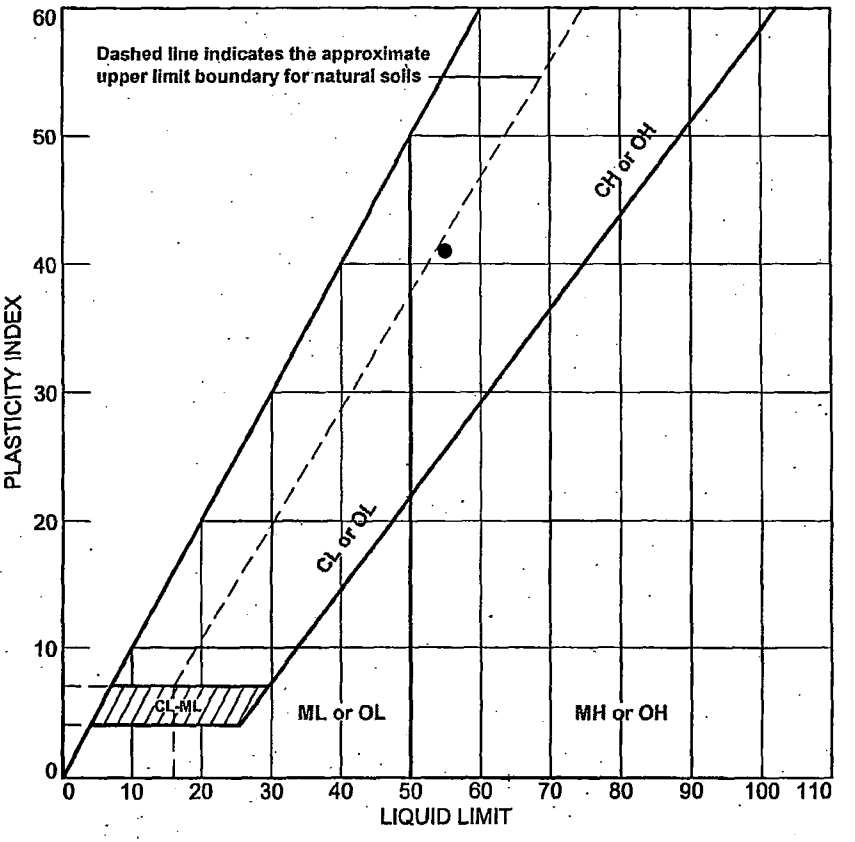
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.15	28			
Dry+Tare	33.96	26.84			
Tare	28.43	21.64			
Moisture	21.5	22.3			

MAC 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 309	STP-009	53.5'-55.0'	11/13/2006	CH	Fat clay	20.7	55	41
		(SS-18)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:ST

ASTM D4318-05

4-3-07

KAW 4/3/07

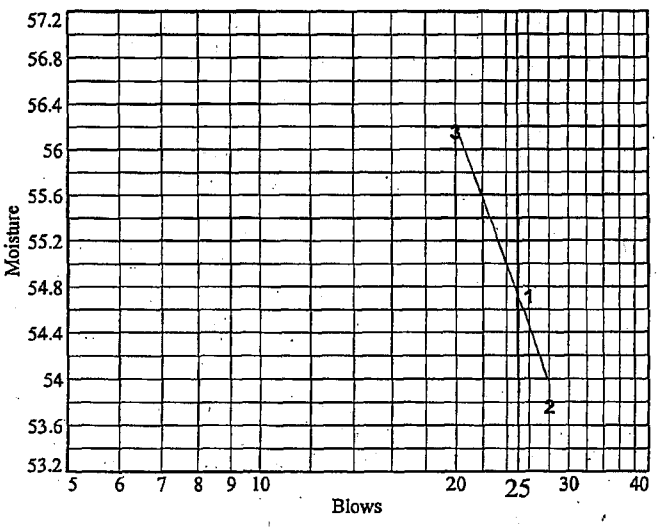
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 53.5'-55.0' **Sample Number:** STP-009 (SS-18)
Material Description: Fat clay
Date: 11/13/2006 **USCS Class.:** CH
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	34.65	31.45	36.37			
Dry+Tare	32.33	28.38	33.68			
Tare	28.09	22.67	28.89			
# Blows	26	28	20			
Moisture	54.7	53.8	56.2			



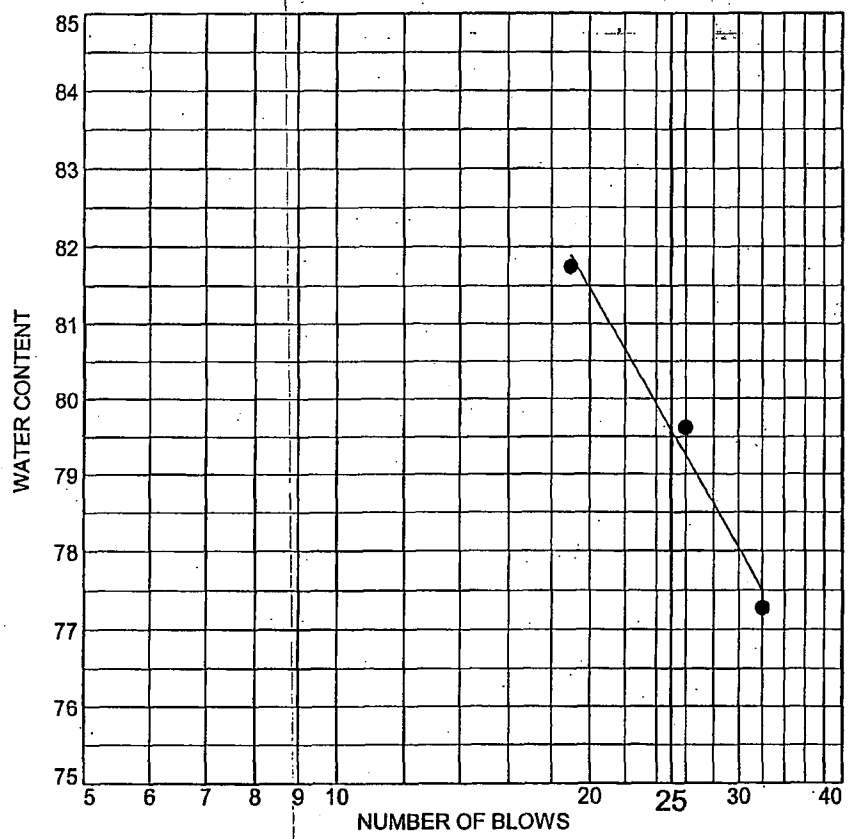
Liquid Limit= 55
Plastic Limit= 14
Plasticity Index= 41
Natural Moisture= 20.7
Liquidity Index= 0.2

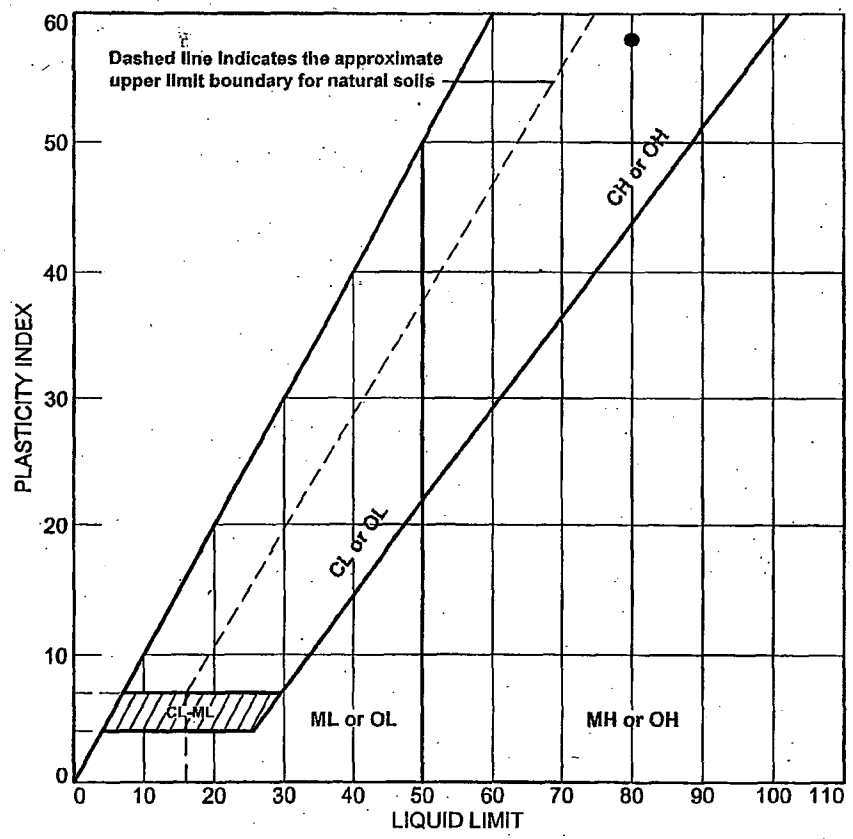
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	31.86	32.22			
Dry+Tare	30.91	31.38			
Tare	24.35	25.47			
Moisture	14.5	14.2			

MAK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 309	STP-016	118.5'-120'	11/14/2006	CH	Fat clay	27.1	80	58
		(SS-29)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:ST

ASTM D4318-05

NA

4-3-07

KAW 4/3/07

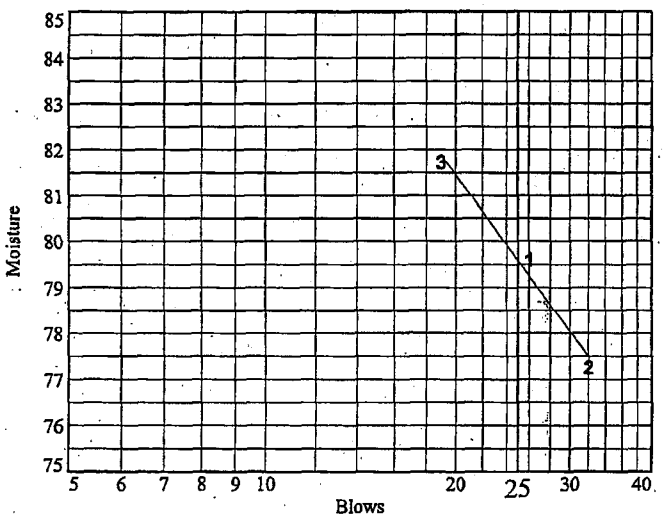
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 118.5'-120'
Sample Number: STP-016 (SS-29)
Material Description: Fat clay
Date: 11/14/2006
USCS Class.: CH
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.42	36.85	36.64			
Dry+Tare	32.71	33.11	32.79			
Tare	28.05	28.27	28.08			
# Blows	26	32	19			
Moisture	79.6	77.3	81.7			



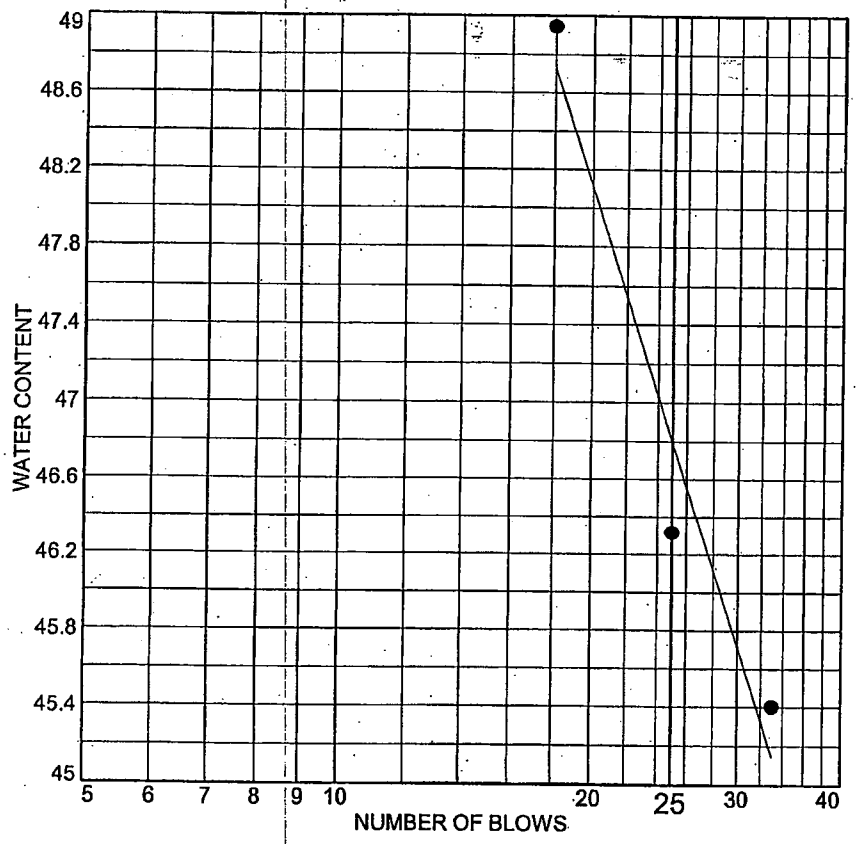
Liquid Limit= 80
Plastic Limit= 22
Plasticity Index= 58
Natural Moisture= 27.1
Liquidity Index= 0.1

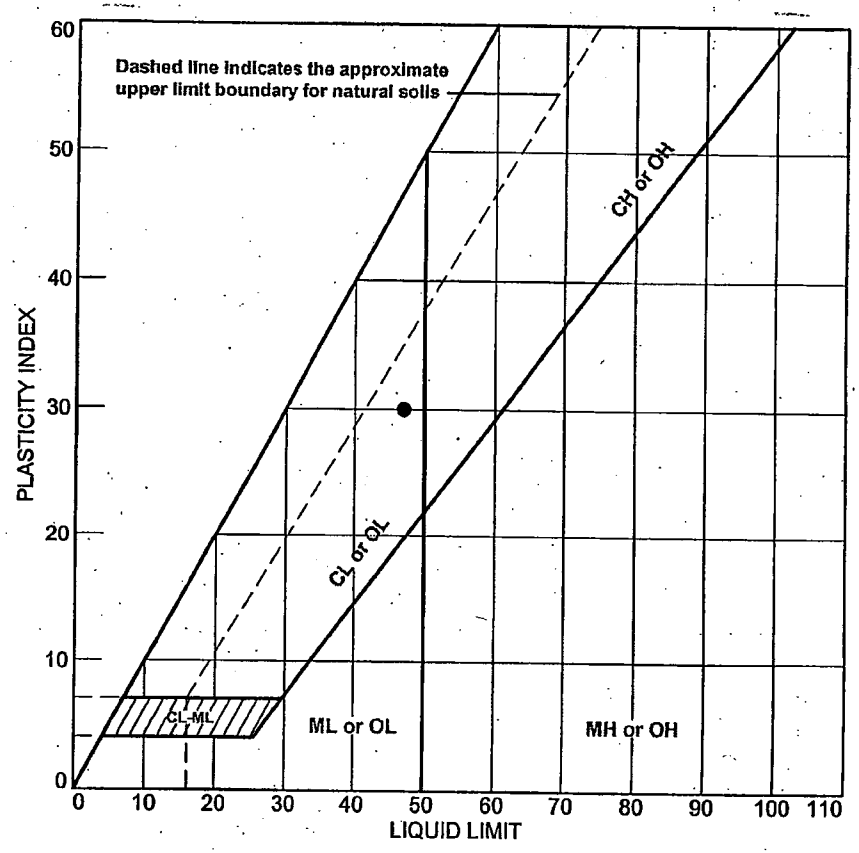
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.6	35.514			
Dry+Tare	34.28	34.17			
Tare	28.16	27.98			
Moisture	21.6	21.7			

MK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 309	STP-018 (SS-31)	138.5'-140'	11/14/2006	CL	Lean Clay	21.7	47	30

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:ST

ASTM D4318-05

4-3-07

KAW 4/3/07

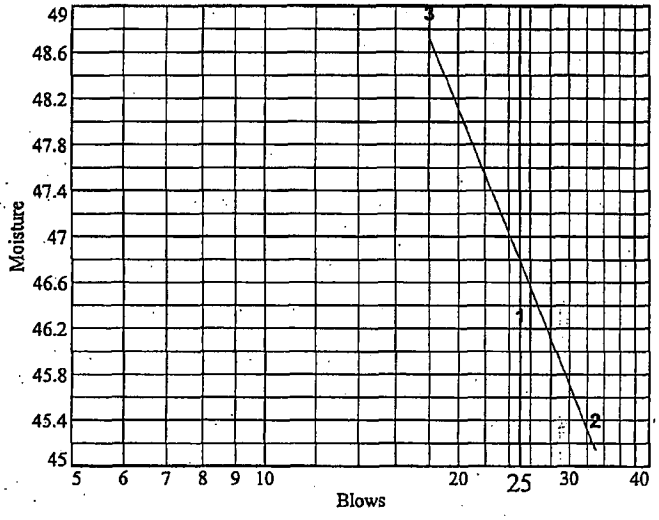
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 138.5'-140'
Sample Number: STP-018 (SS-31)
Material Description: Lean Clay
Date: 11/14/2006
USCS Class.: CL
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	35.94	29.33	37.08			
Dry+Tare	33.3	26.91	34.06			
Tare	27.6	21.58	27.89			
# Blows	25	33	18			
Moisture	46.3	45.4	48.9			



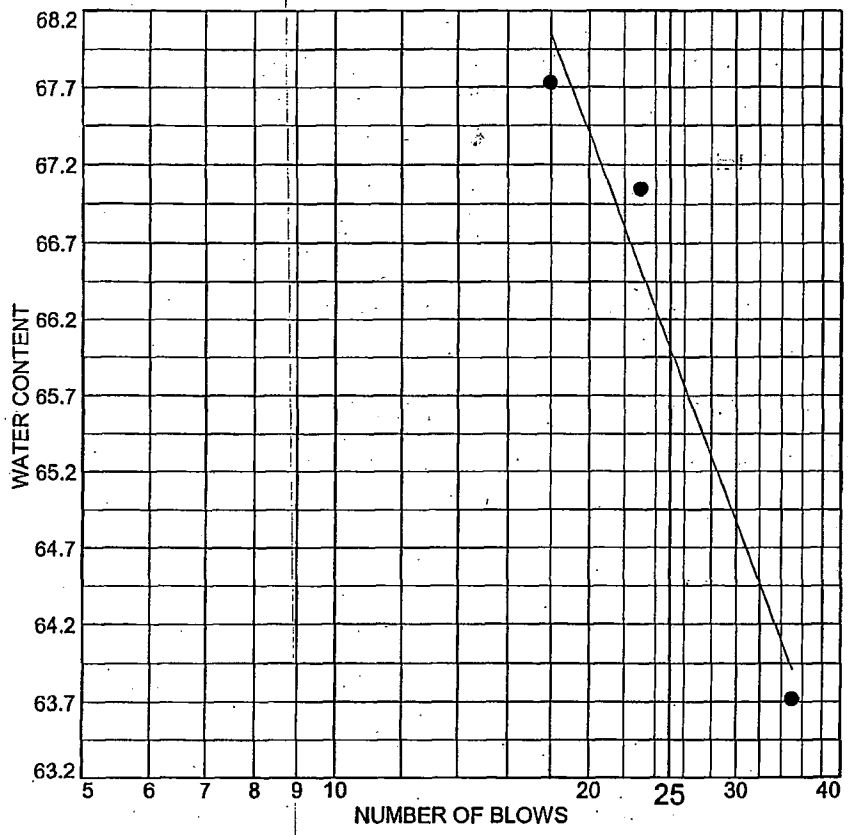
Liquid Limit= 47
Plastic Limit= 17
Plasticity Index= 30
Natural Moisture= 21.7
Liquidity Index= 0.2

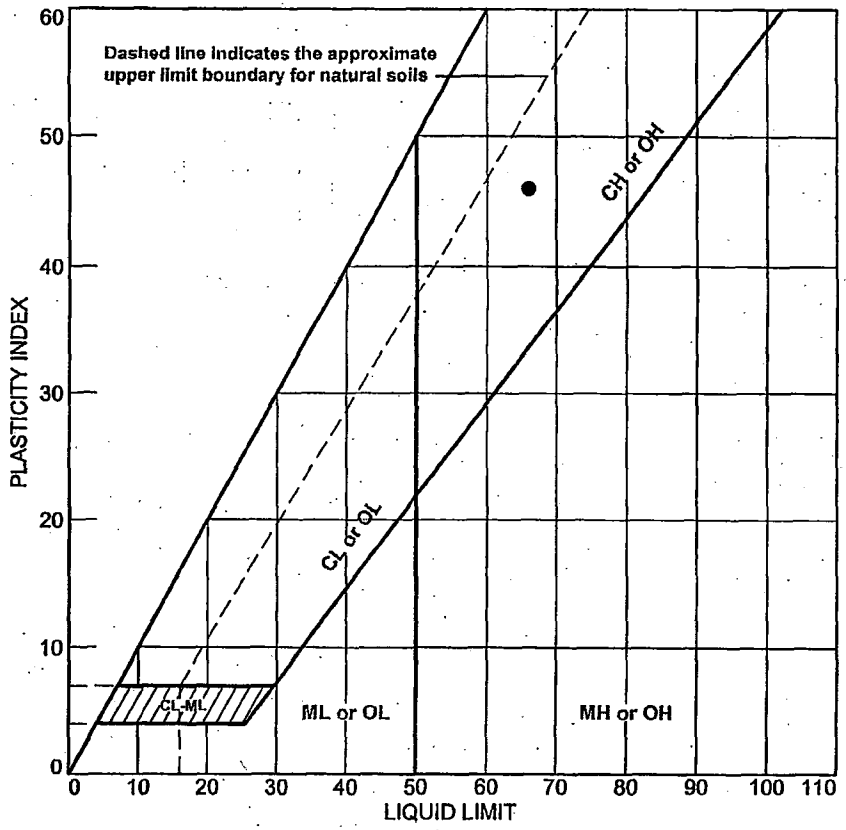
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.83	34.74			
Dry+Tare	34.75	33.65			
Tare	28.38	27.12			
Moisture	17.0	16.7			

MWK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 309	STP-019 (SS-32)	148.5'-150'	11/14/06	CH	Fat Clay	23.3	66	46

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:ST

ASTM D4318-05

MH 4-3-07

KAW 4/3/07

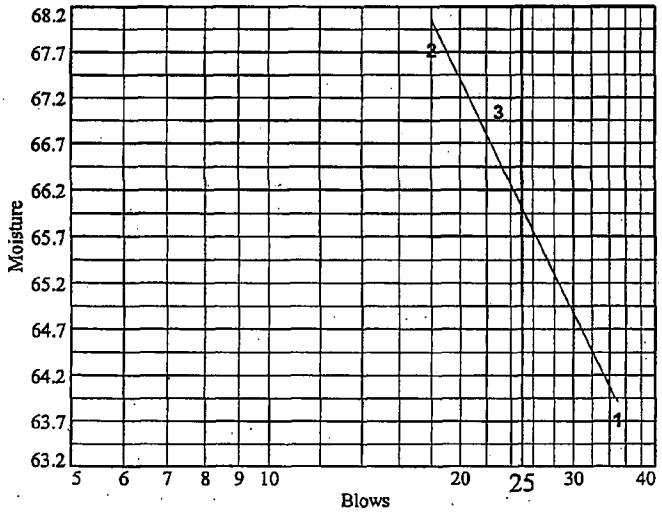
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 148.5'-150'
Sample Number: STP-019 (SS-32)
Material Description: Fat Clay
Date: 11/14/06
USCS Class.: CH
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.21	36.22	37.16			
Dry+Tare	33.68	33.03	33.64			
Tare	28.14	28.32	28.39			
# Blows	35	18	23			
Moisture	63.7	67.7	67.0			



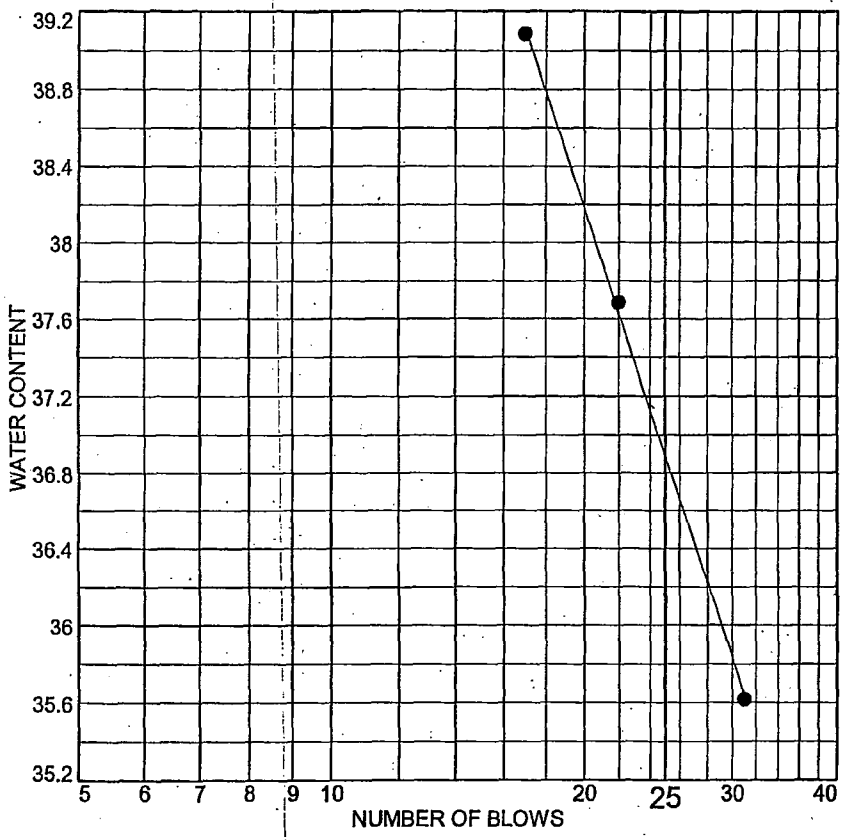
Liquid Limit= 66
Plastic Limit= 20
Plasticity Index= 46
Natural Moisture= 23.3
Liquidity Index= 0.1

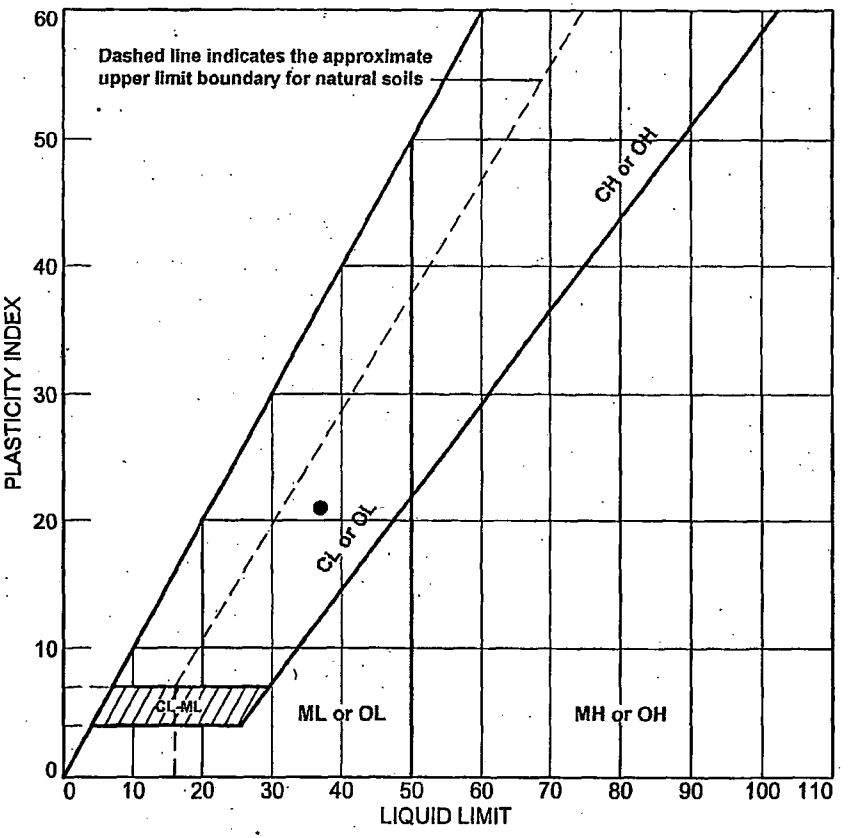
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.86	35.62			
Dry+Tare	34.57	34.42			
Tare	28.26	28.23			
Moisture	20.4	19.4			

MA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 309	STP-020 (SS-33)	158.5'-160'	11/13/2006	CL	Lean clay	23.9	37	21

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:ST
ASTM D 4318-05

MAT 4-3-07

KAW 4/3/07

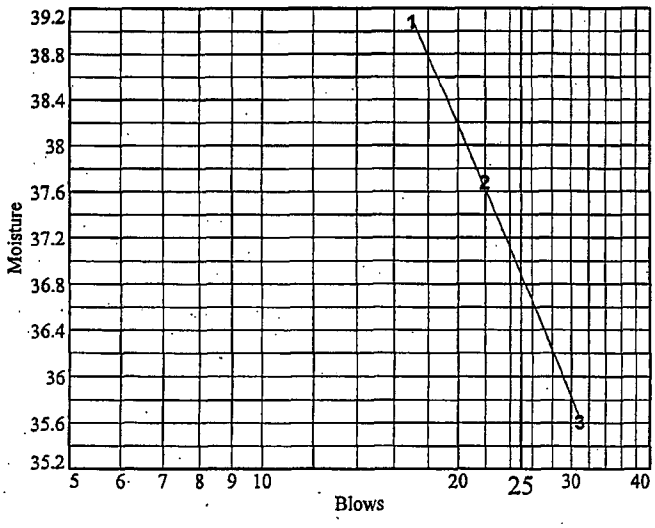
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 158.5'-160' **Sample Number:** STP-020 (SS-33)
Material Description: Lean clay
Date: 11/13/2006 **USCS Class.:** CL
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D 4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.87	36.35	36.81			
Dry+Tare	34.13	33.81	34.47			
Tare	27.12	27.07	27.90			
# Blows	17	22	31			
Moisture	39.1	37.7	35.6			



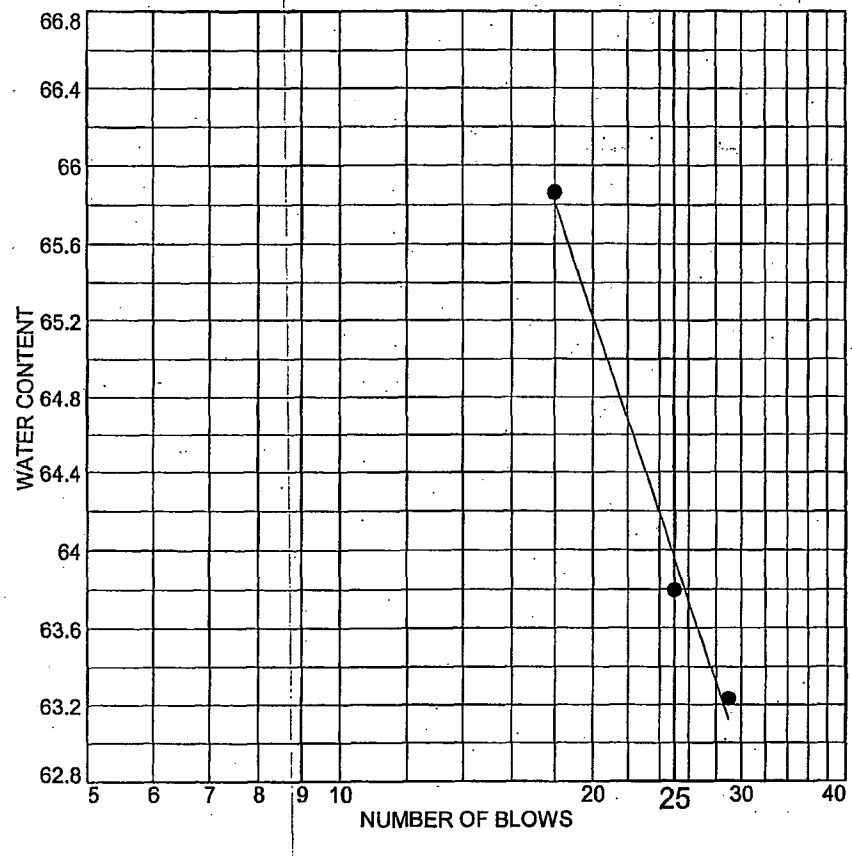
Liquid Limit= 37
Plastic Limit= 16
Plasticity Index= 21
Natural Moisture= 23.9
Liquidity Index= 0.4

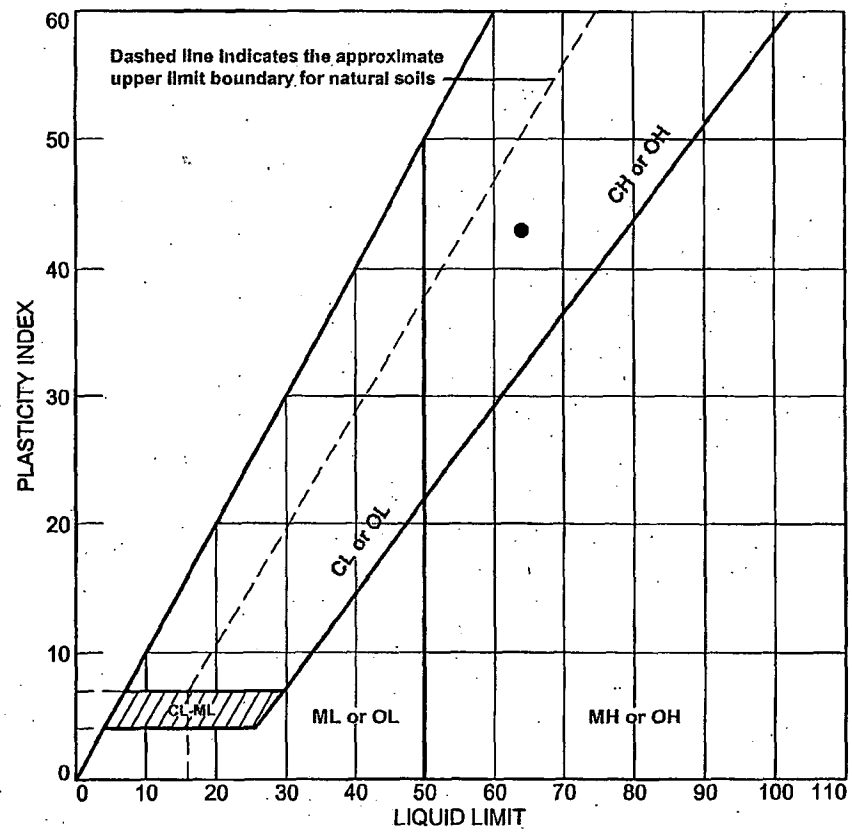
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	29.40	35.37			
Dry+Tare	28.31	34.32			
Tare	21.57	27.60			
Moisture	16.2	15.6			

MA
4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 309	STP-022	178.5'-180'	11/15/2006	CH	Fat clay	24.6	64	43
		(SS-35)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:ST

ASTM D4318-05

MK 4-3-07

KAW 4/3/07

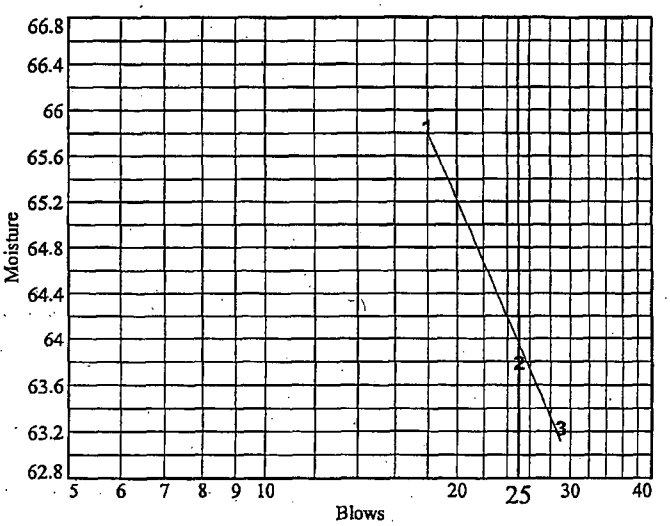
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 178.5'-180'
Sample Number: STP-022 (SS-35)
Material Description: Fat clay
Date: 11/15/2006
USCS Class.: CH
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.86	36.64	35.15			
Dry+Tare	34.04	33.38	32.02			
Tare	28.24	28.27	27.07			
# Blows	18	25	29			
Moisture	65.9	63.8	63.2			



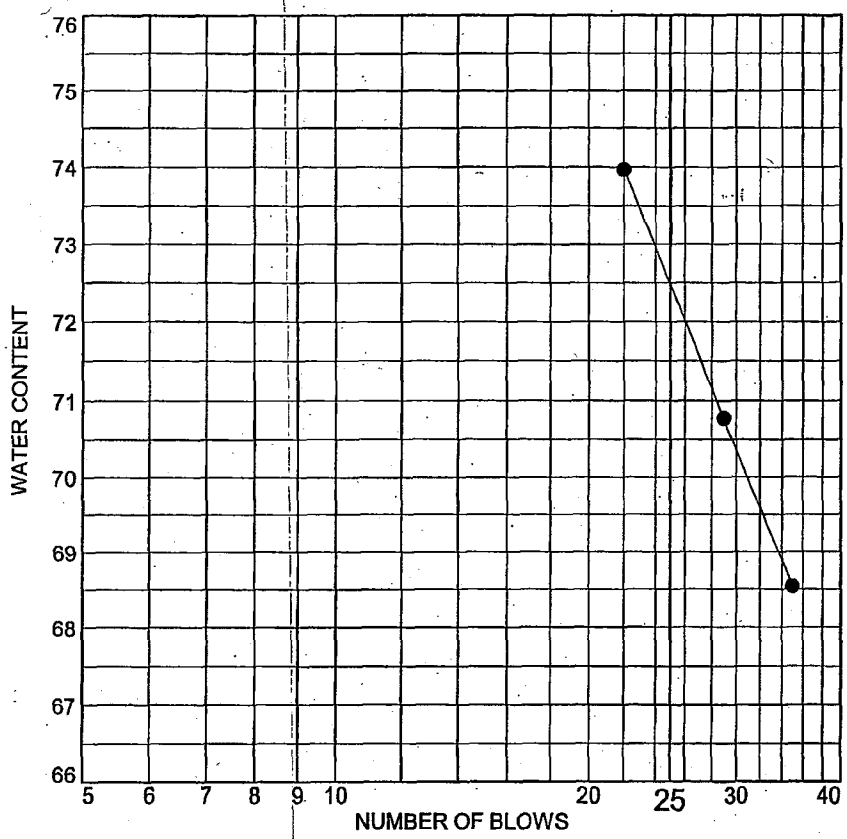
Liquid Limit= 64
Plastic Limit= 21
Plasticity Index= 43
Natural Moisture= 24.6
Liquidity Index= 0.1

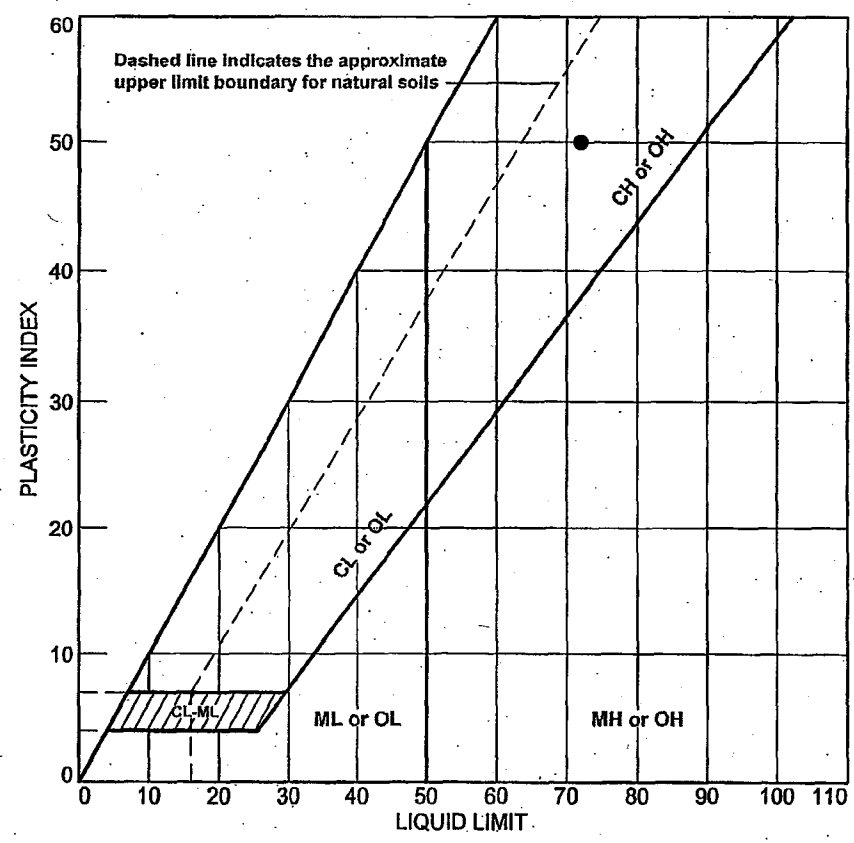
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.93	36.07			
Dry+Tare	34.58	34.68			
Tare	28.14	28.33			
Moisture	21.0	21.9			

4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 309	STP-023	188.5'-190'	11/15/2006	CH	Fat Clay	28.1	72	50
		(SS-36)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:ST

ASTM D4318-05

NMA 4-3-07

KAW 4/3/07

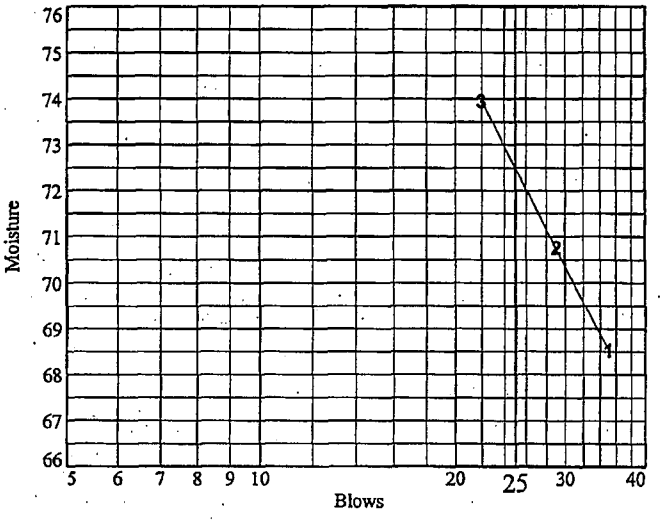
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 188.5'-190' **Sample Number:** STP-023 (SS-36)
Material Description: Fat Clay
Date: 11/15/2006 **USCS Class.:** CH
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	35.91	32.47	29.19			
Dry+Tare	32.86	29.54	25.98			
Tare	28.41	25.40	21.64			
# Blows	35	29	22			
Moisture	68.5	70.8	74.0			



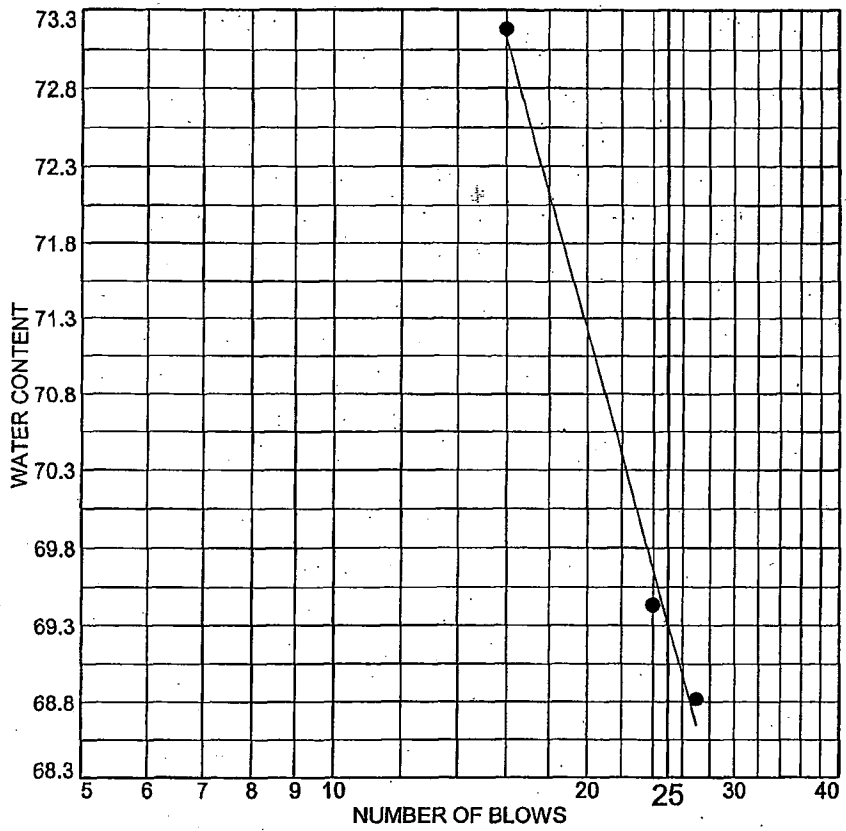
Liquid Limit= 72
Plastic Limit= 22
Plasticity Index= 50
Natural Moisture= 28.1
Liquidity Index= 0.1

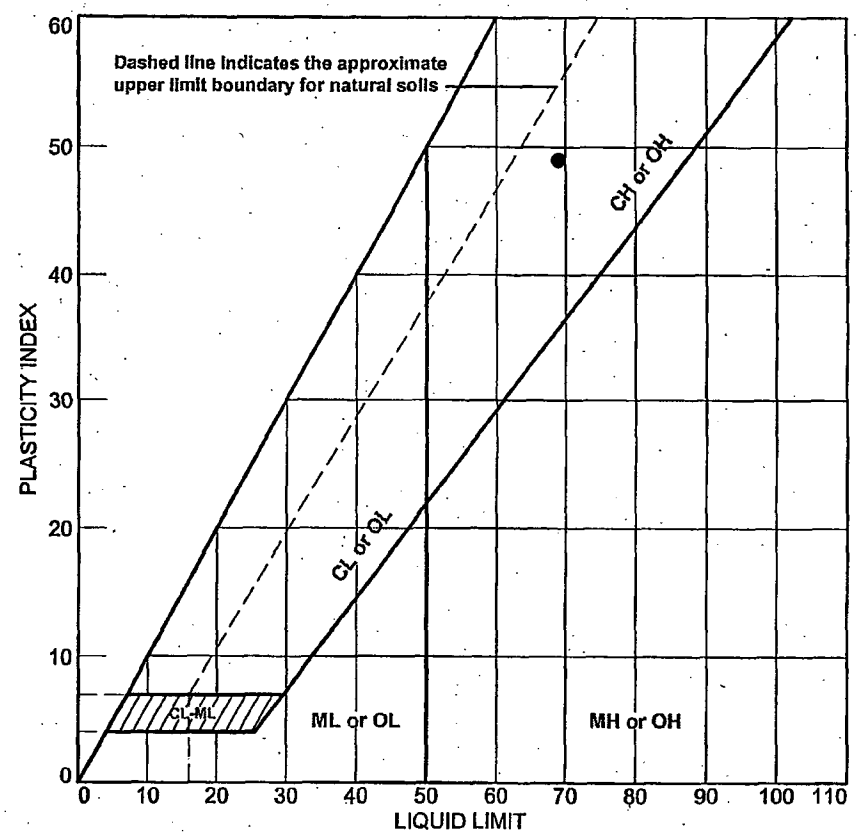
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	33.02	35.59			
Dry+Tare	31.63	34.23			
Tare	25.53	28.09			
Moisture	22.8	22.1			

MAS 4-30-1

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 309	STP-024 (SS-37)	198.5'-200'	11/15/2006	CH	Fat Clay	31.8	69	49

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:ST

ASTM D4318-05

MH 4-3-07

KAW 4/3/07

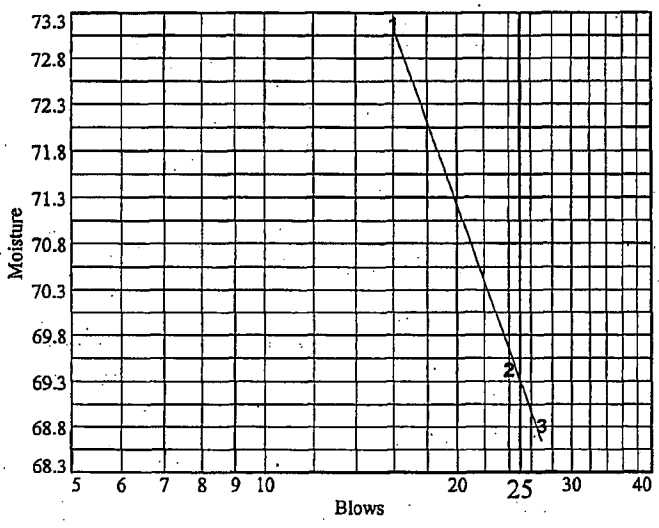
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 198.5'-200'
Sample Number: STP-024 (SS-37)
Material Description: Fat Clay
Date: 11/15/2006
USCS Class.: CH
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	31.00	37.57	37.77			
Dry+Tare	27.48	33.89	33.93			
Tare	22.67	28.59	28.35			
# Blows	16	24	27			
Moisture	73.2	69.4	68.8			



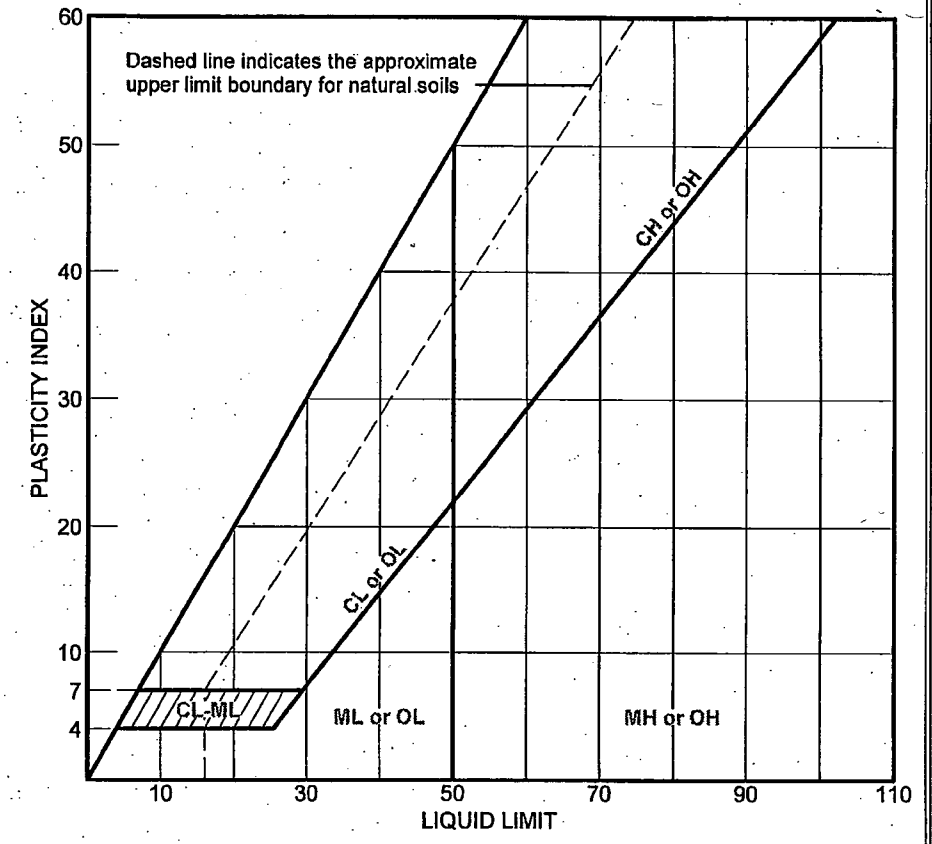
Liquid Limit= 69
Plastic Limit= 20
Plasticity Index= 49
Natural Moisture= 31.8
Liquidity Index= 0.2

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.42	31.51			
Dry+Tare	35.16	30.28			
Tare	28.88	24.35			
Moisture	20.1	20.7			

MWK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-314	UD-1	83' to 85'	2-16-07	SP	Poorly graded sand	20.9	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

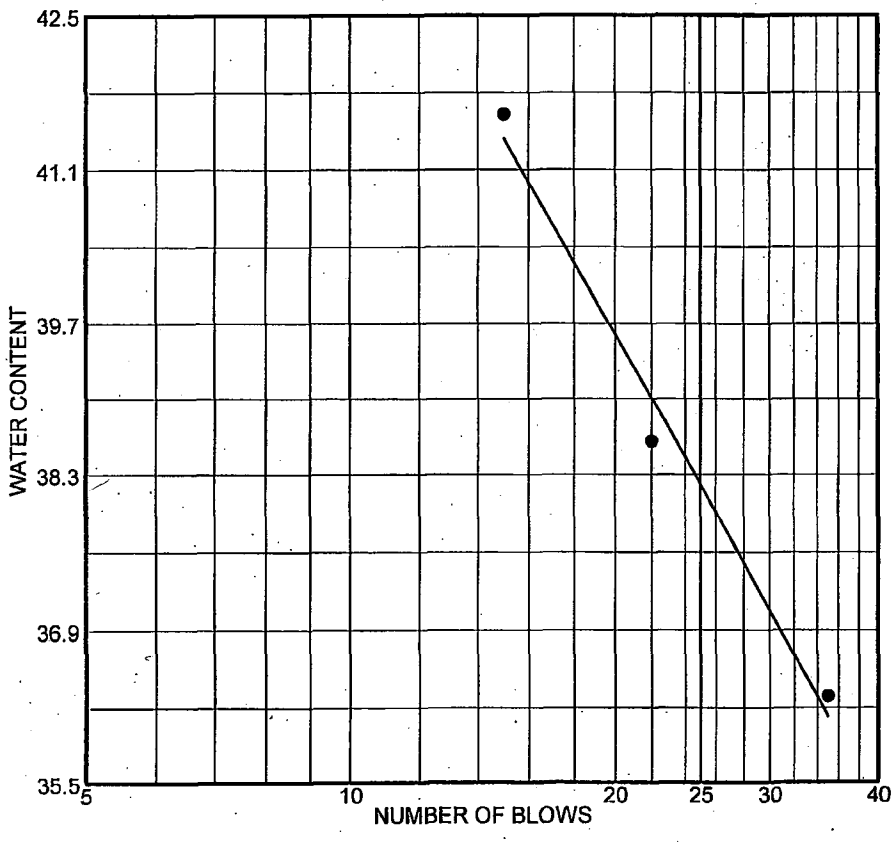
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

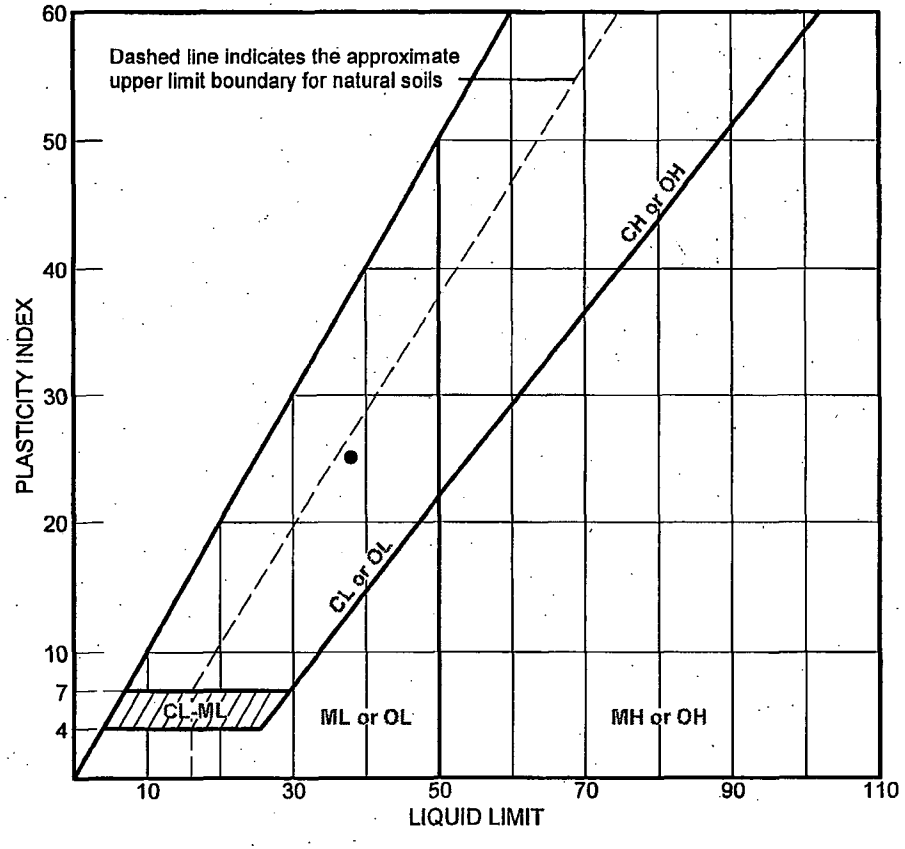
Sample Data

Source: B-314
Sample No.: UD-1
Elev. or Depth: 83' to 85' **Sample Length(in./cm.):**
Location: B-314
Description: Poorly graded sand
Date: 2-16-07 **Natural Moisture:** 20.9
USCS Class.: SP **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-314	UD-2	113' to 115'	2-20-07	CL	Lean clay	20.0	38	25

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS KAW 4/3/07
ASTM 4318-05

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

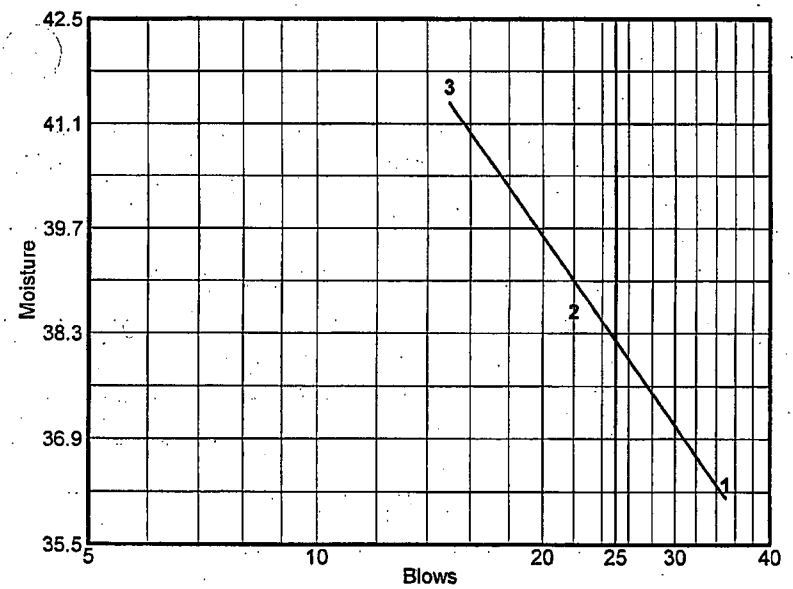
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-314
Sample No.: UD-2
Elev. or Depth: 113' to 115' **Sample Length(in./cm.):**
Location: B-314
Description: Lean clay
Date: 2-20-07 **Natural Moisture:** 20.0
USCS Class.: CL **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM 4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	30.02	33.60	33.11			
Dry+Tare	24.90	27.42	26.79			
Tare	10.78	11.39	11.58			
# Blows	35	22	15			
Moisture	36.3	38.6	41.6			

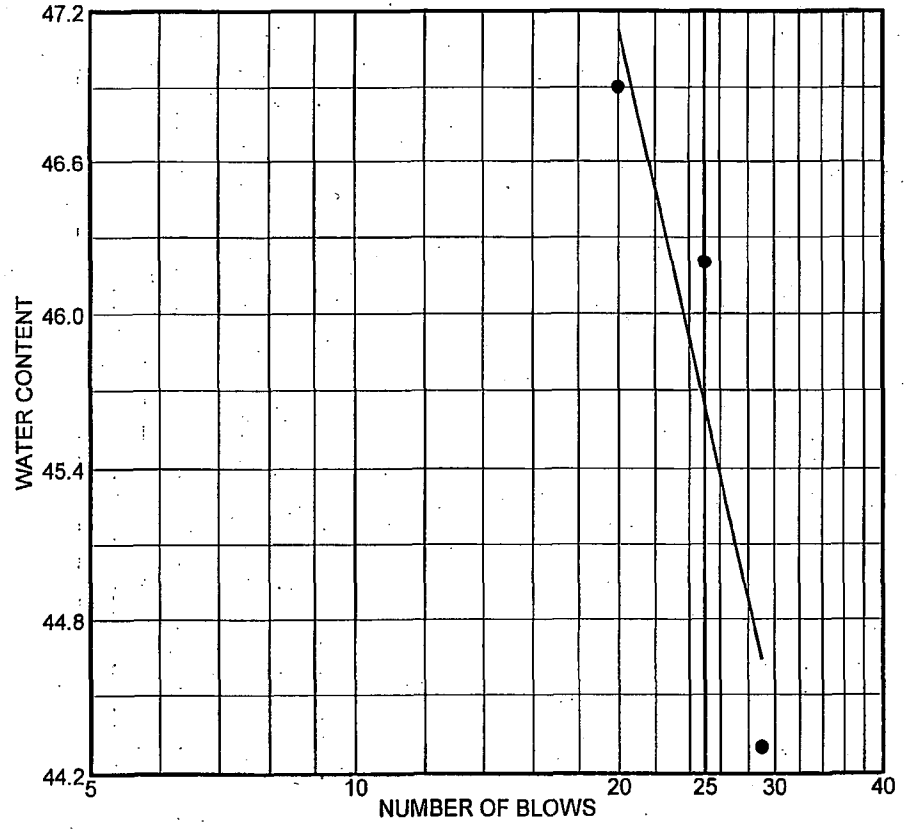


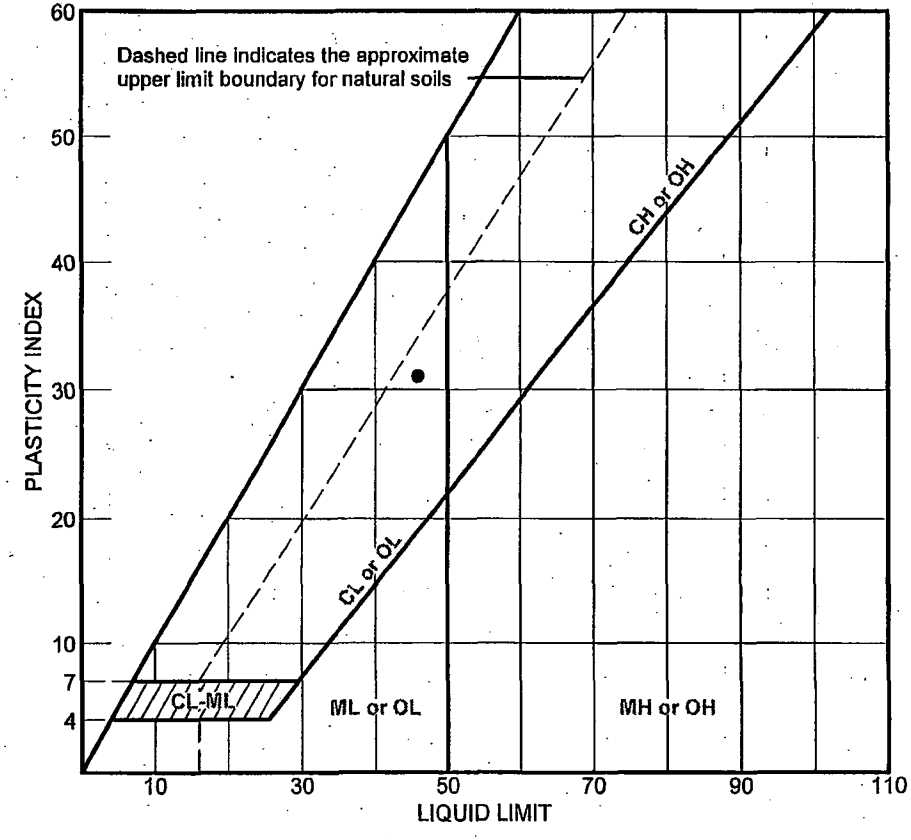
Liquid Limit= 38
Plastic Limit= 13
Plasticity Index= 25

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	19.74	20.01			
Dry+Tare	18.72	18.92			
Tare	11.00	10.67			
Moisture	13.2	13.2			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-314	UD-4	141' to 143'	2-20-07	CL	Lean clay	24.2	46	31

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS KAW 4/3/07
ASTM D4318-05

LIQUID AND PLASTIC LIMIT TEST DATA

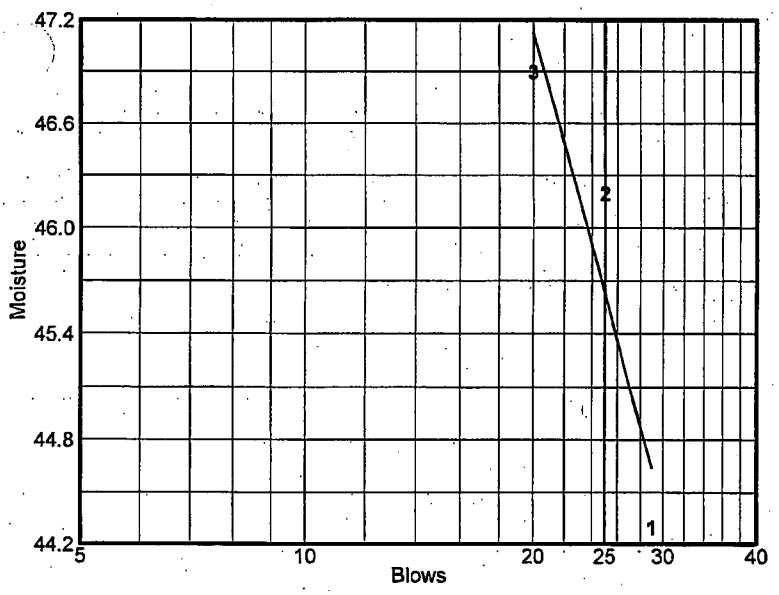
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-314
Sample No.: UD-4
Elev. or Depth: 141' to 143' **Sample Length(in./cm.):**
Location: B-314
Description: Lean clay
Date: 2-20-07 **Natural Moisture:** 24.2
USCS Class.: CL **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	31.60	27.51	31.50			
Dry+Tare	25.18	22.27	24.95			
Tare	10.70	10.93	10.99			
# Blows	29	25	20			
Moisture	44.3	46.2	46.9			

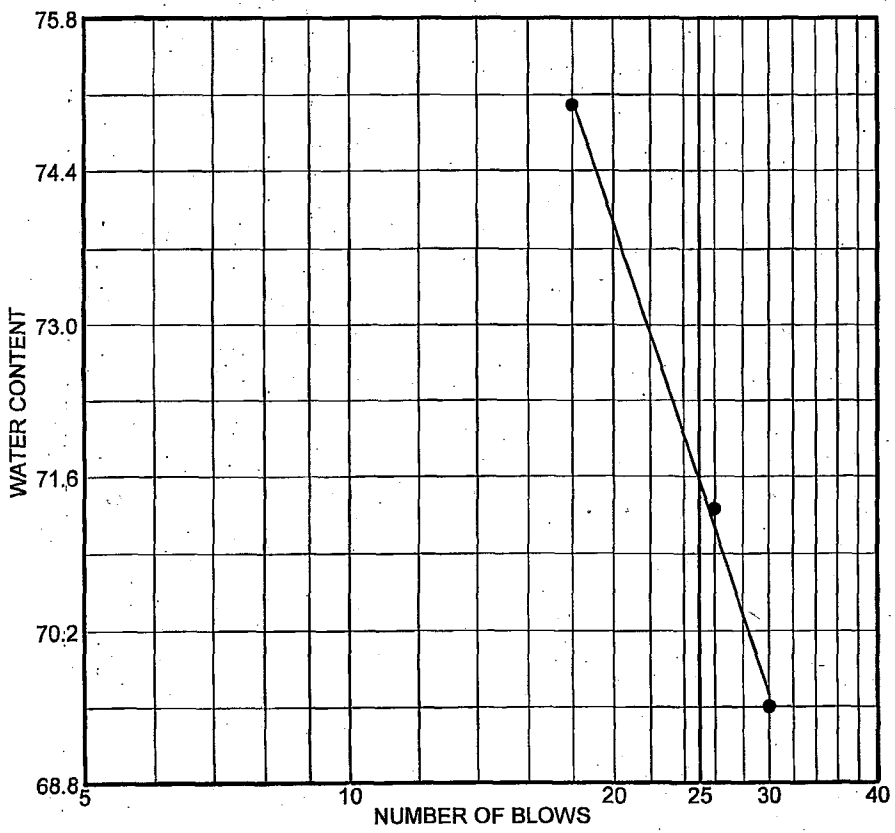


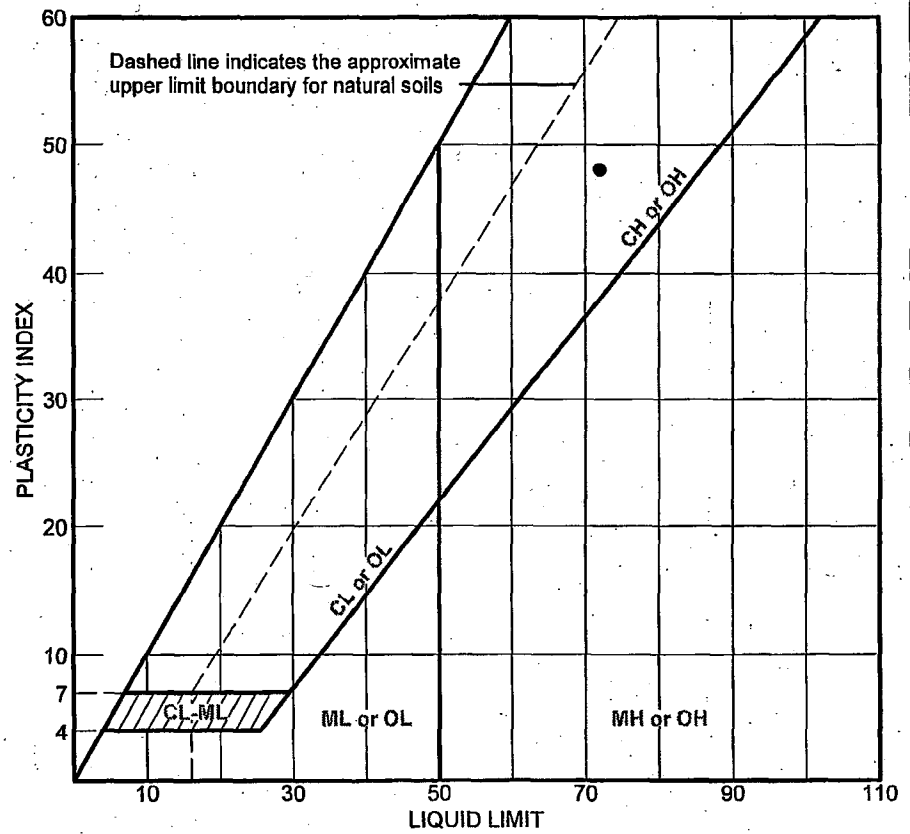
Liquid Limit= 46
Plastic Limit= 15
Plasticity Index= 31

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	26.68	23.95			
Dry+Tare	24.63	22.42			
Tare	11.45	11.60			
Moisture	15.6	14.1			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-314	UD-5A	183' to 185'	2-20-07	CH	Fat clay	20.3	72	48

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

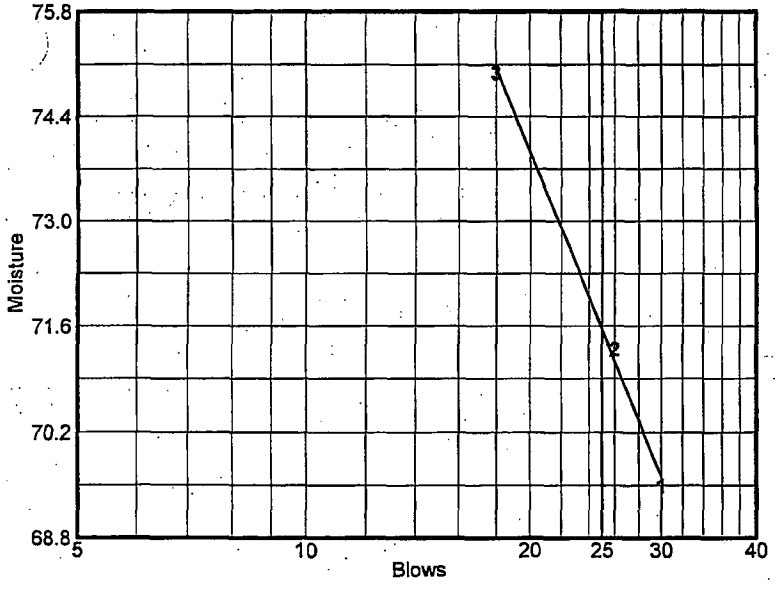
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-314
Sample No.: UD-5A
Elev. or Depth: 183' to 185' **Sample Length(in./cm.):**
Location: B-314
Description: Fat clay
Date: 2-20-07 **Natural Moisture:** 20.3
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	22.22	26.20	22.06			
Dry+Tare	17.65	20.12	17.24			
Tare	11.07	11.59	10.81			
# Blows	30	26	18			
Moisture	69.5	71.3	75.0			

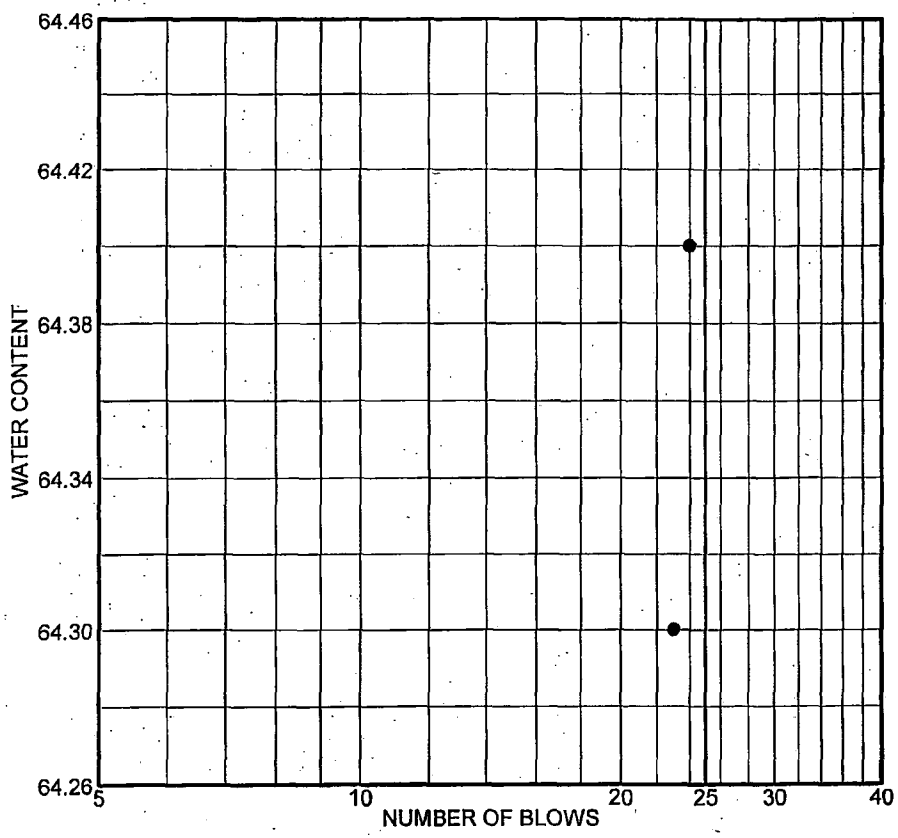


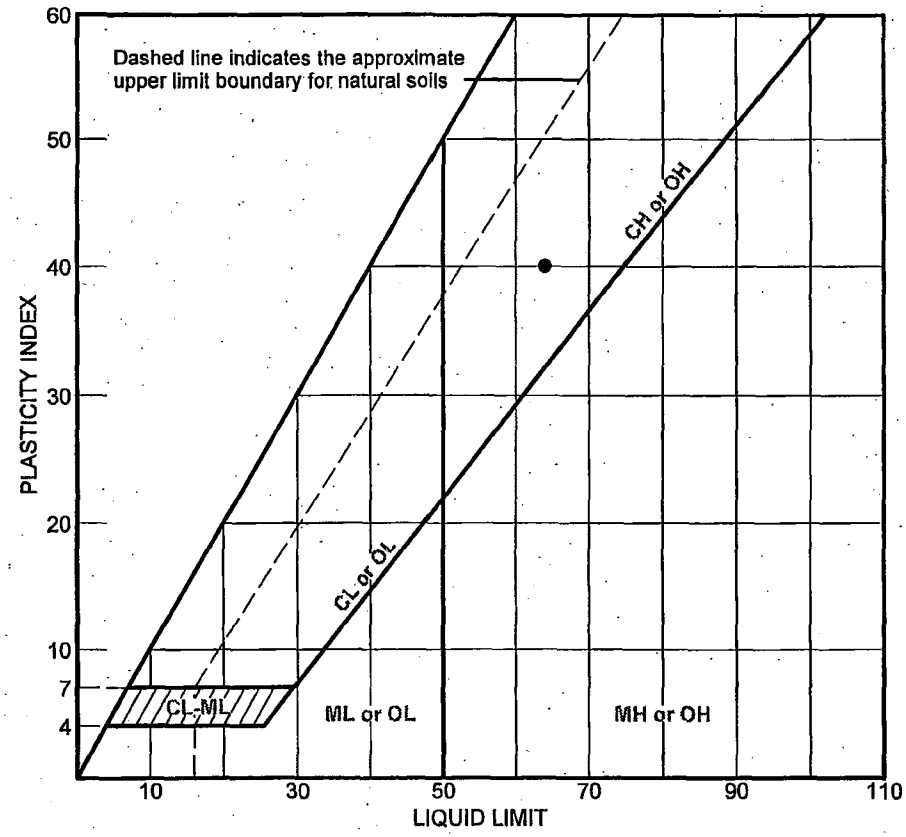
Liquid Limit= 72
Plastic Limit= 24
Plasticity Index= 48

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	19.67	19.08			
Dry+Tare	17.96	17.60			
Tare	11.03	11.48			
Moisture	24.7	24.2			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-314	UD-6	191' to 193'	3-16-07	CH	Fat clay	26.5	64	40

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05

KAW 4/13/07

LIQUID AND PLASTIC LIMIT TEST DATA

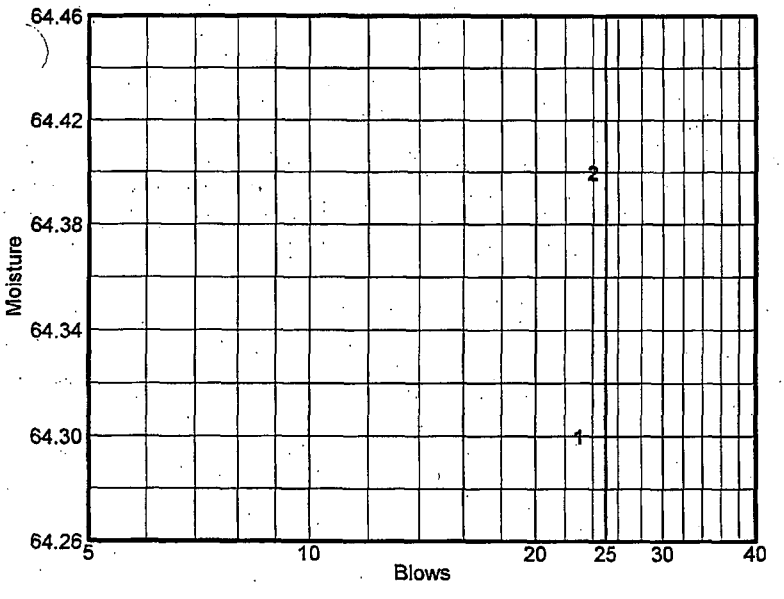
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-314
Sample No.: UD-6
Elev. or Depth: 191' to 193' **Sample Length(in./cm.):**
Location: B-314
Description: Fat clay
Date: 3-16-07 **Natural Moisture:** 26.5
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	25.13	25.50				
Dry+Tare	19.59	19.74				
Tare	10.98	10.80				
# Blows	23	24				
Moisture	64.3	64.4				

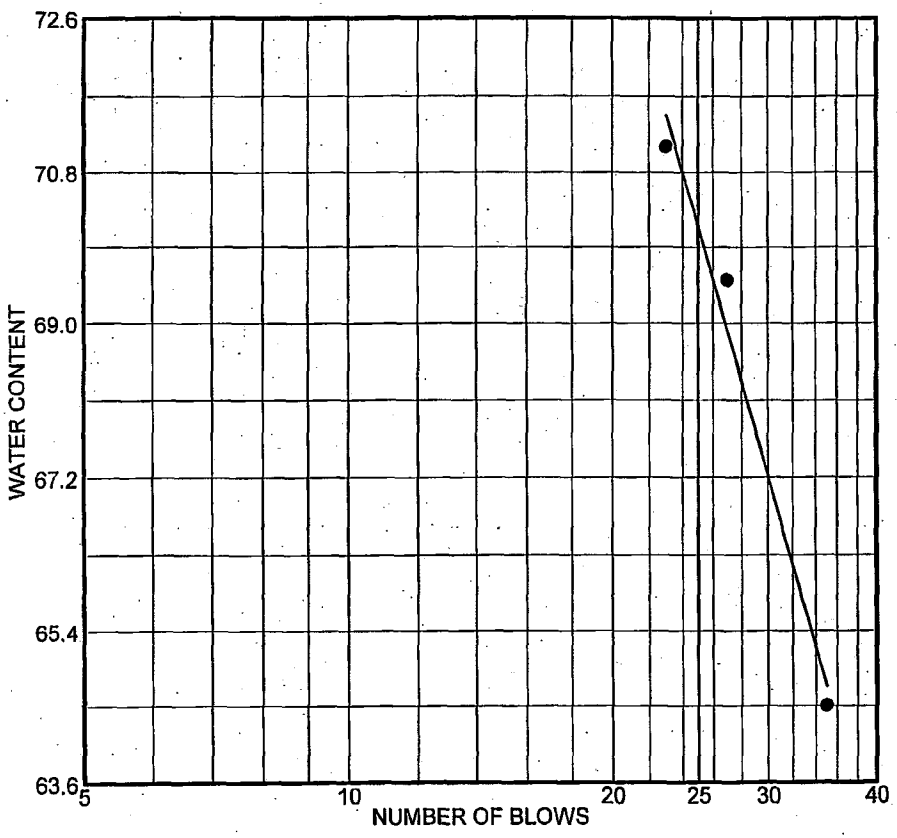


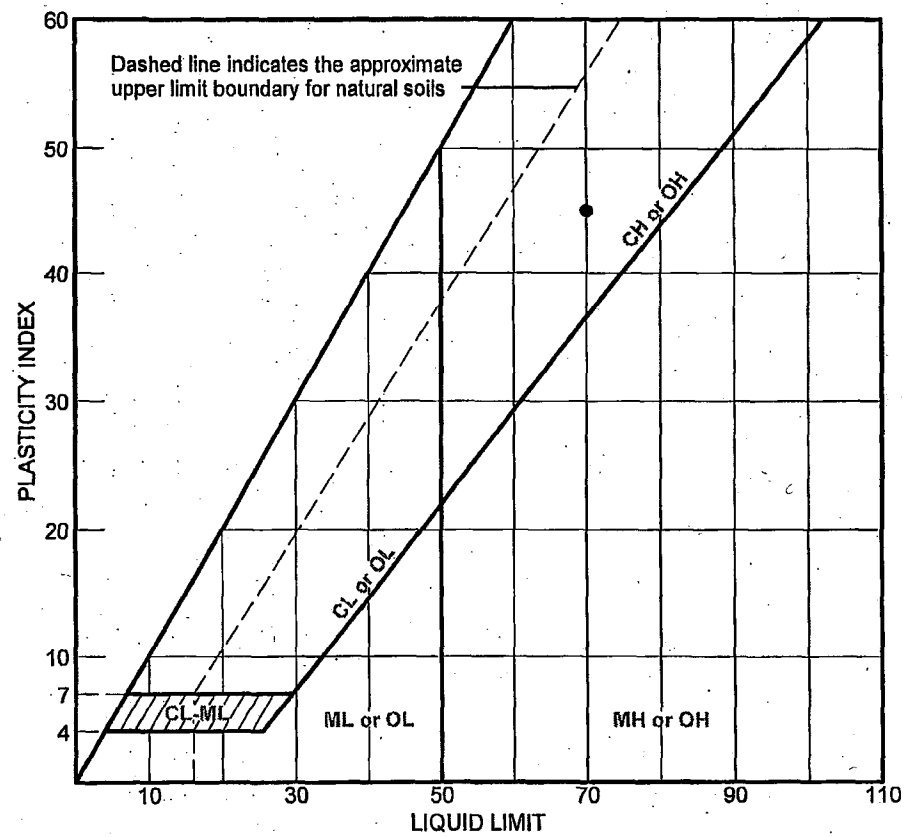
Liquid Limit= 64
Plastic Limit= 24
Plasticity Index= 40

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	23.52	22.73			
Dry+Tare	21.05	20.58			
Tare	10.88	11.65			
Moisture	24.3	24.1			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-319	UD-1	128' to 130'	2-19-07	CH	Fat clay	21.0	70	45

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

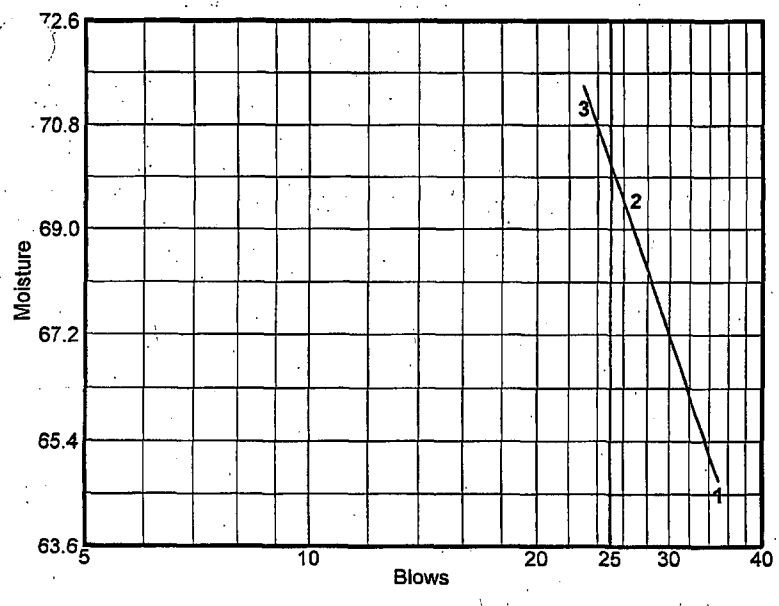
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-319
Sample No.: UD-1
Elev. or Depth: 128' to 130' **Sample Length(in./cm.):**
Location: B-319
Description: Fat clay
Date: 2-19-07 **Natural Moisture:** 21.0
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	25.64	27.40	27.06			
Dry+Tare	19.91	20.60	20.63			
Tare	11.03	10.82	11.59			
# Blows	35	27	23			
Moisture	64.5	69.5	71.1			

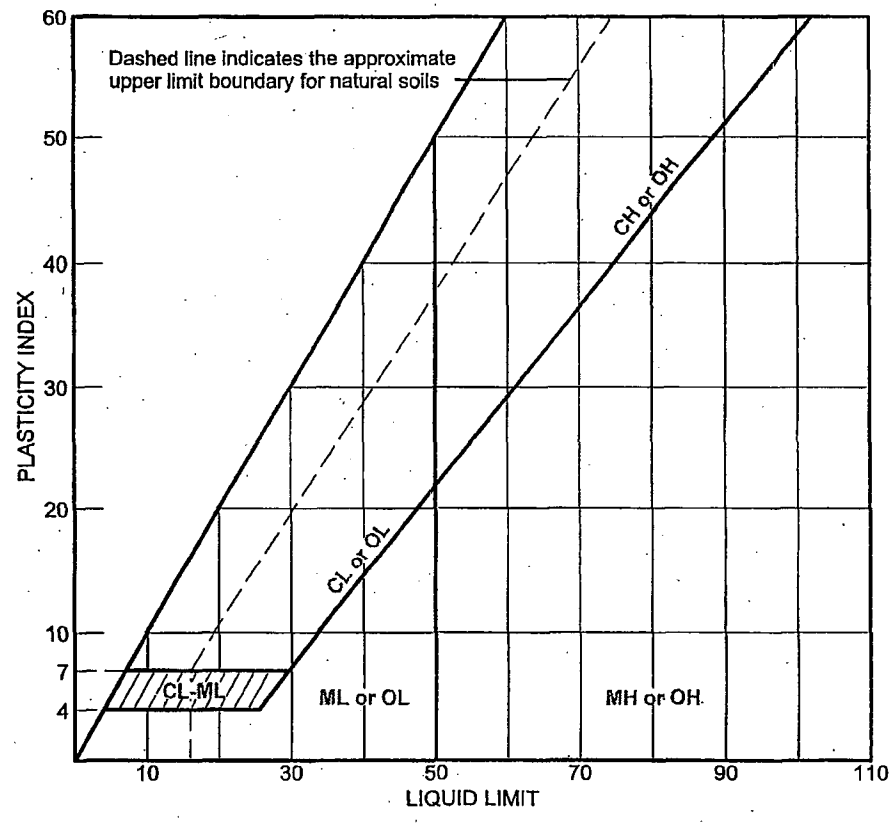


Liquid Limit= 70
Plastic Limit= 25
Plasticity Index= 45

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	24.77	23.3			
Dry+Tare	22.09	20.78			
Tare	10.95	10.75			
Moisture	24.1	25.1			

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D 4318-04



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
•	B-319	UD-2	143-145 ft.	4/4/07	ML	Tan Sandy silt	18.7	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050060486 | Lab no. 6917

MACTEC ENGINEERING AND CONSULTING, INC.

• Tested by: BM Reviewed by: HJ

HJ 4/05/07

LIQUID AND PLASTIC LIMIT TEST DATA

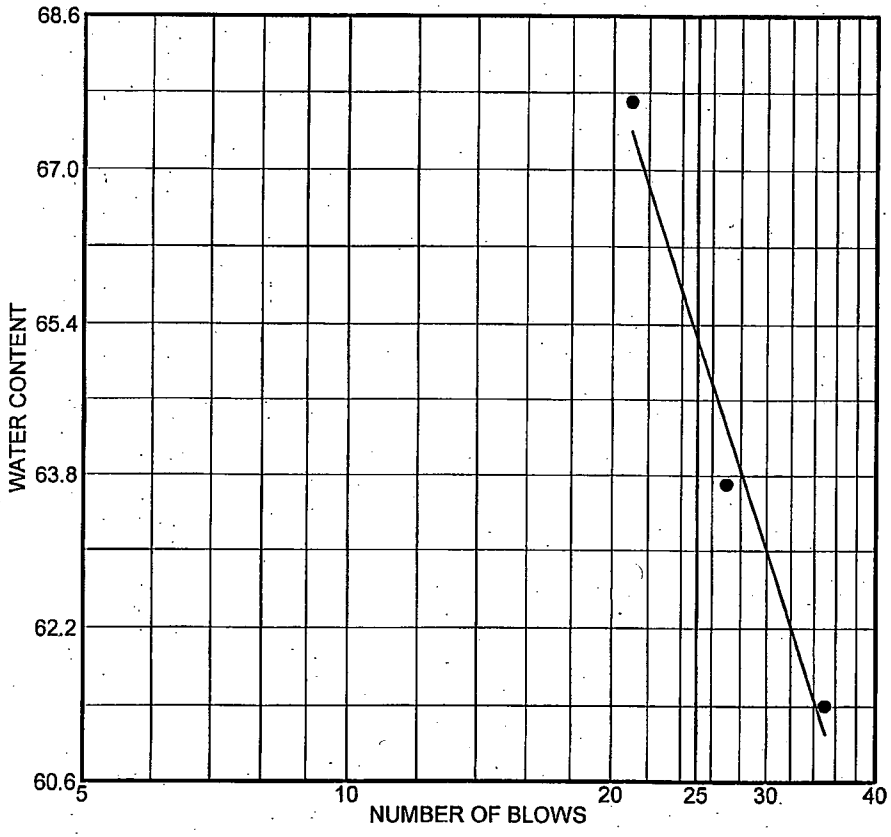
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050060486

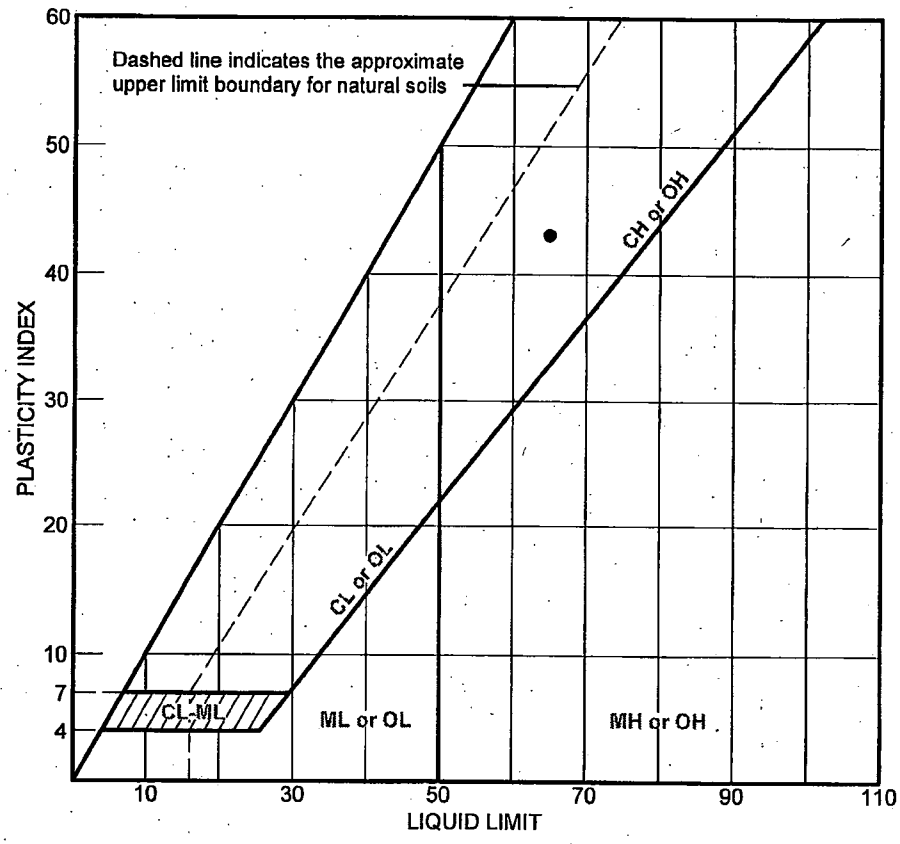
Sample Data

Source: B-319
Sample No.: UD-2
Elev. or Depth: 143-145 ft. **Sample Length(in./cm.):** 6917
Location: B-319
Description: Tan Sandy silt
Date: 4/4/07 **Natural Moisture:** 18.7
USCS Class.: ML **AASHTO Class.:**
Testing Remarks: Tested by: BM Reviewed by: HJ HJ 4/5/07

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-319	UD-4	173' to 175'	2-19-07	CH	Fat clay	26.9	65	43

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05 KAW 4/3/07

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

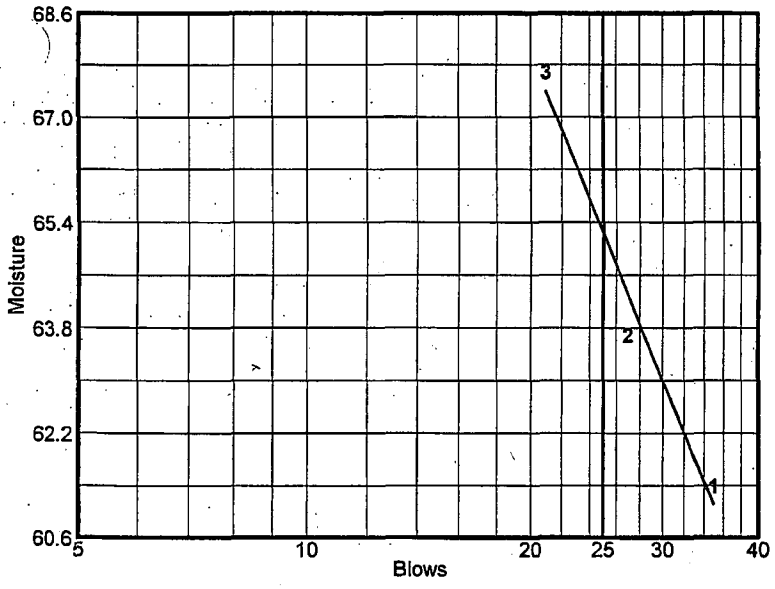
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-319
Sample No.: UD-4
Elev. or Depth: 173' to 175' **Sample Length(in./cm.):**
Location: B-319
Description: Fat clay
Date: 2-19-07 **Natural Moisture:** 26.9
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	28.77	30.33	31.07			
Dry+Tare	21.97	22.97	23.16			
Tare	10.90	11.42	11.48			
# Blows	35	27	21			
Moisture	61.4	63.7	67.7			

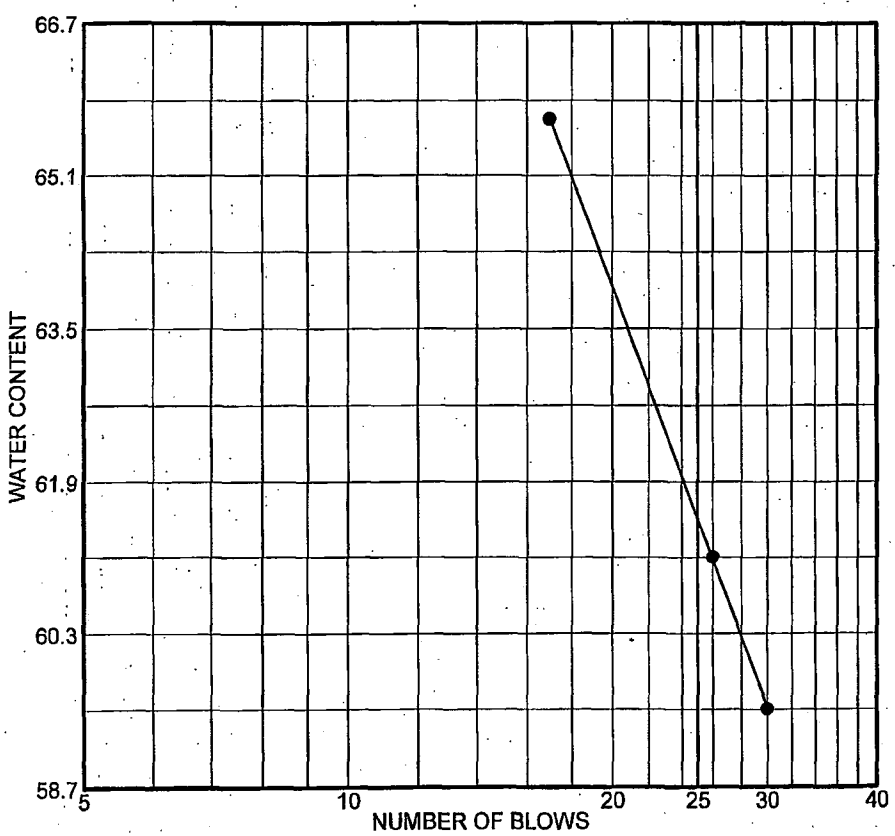


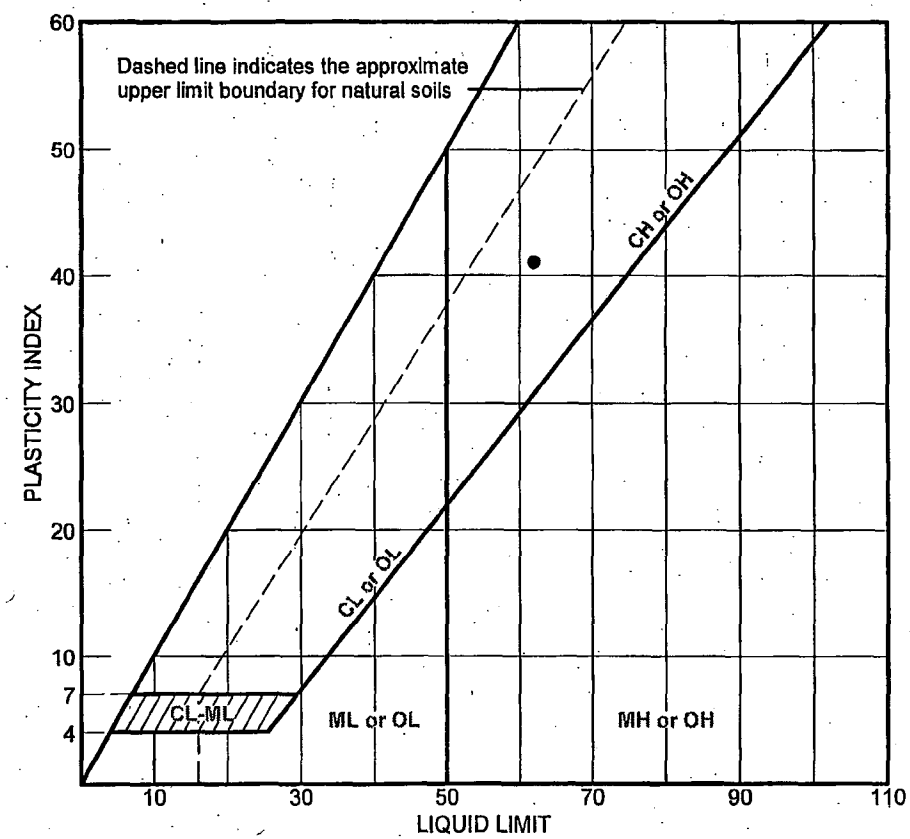
Liquid Limit= 65
Plastic Limit= 22
Plasticity Index= 43

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	18.61	25.13			
Dry+Tare	17.27	22.80			
Tare	11.57	11.60			
Moisture	23.5	20.8			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-319	UD-5	188' to 190'	2-19-07	CH	Fat clay	23.9	62	41

Client Bechtel Power Corporation
Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

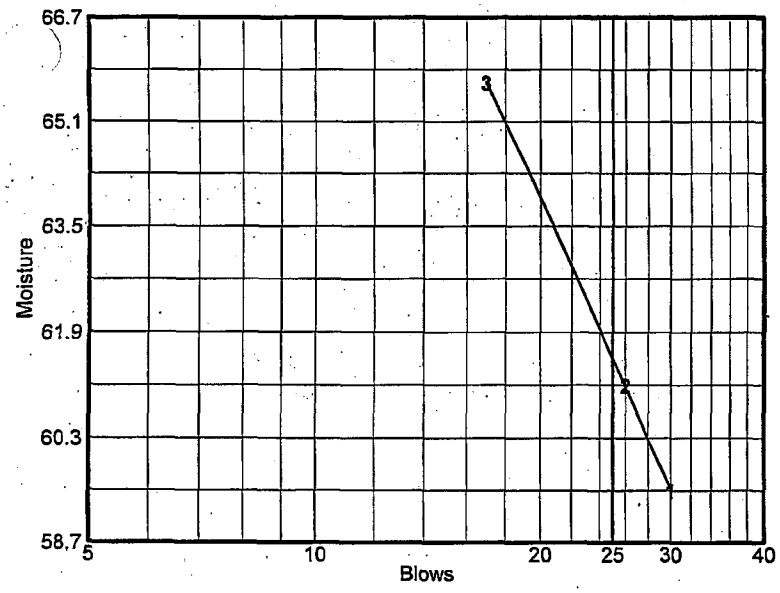
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-319
Sample No.: UD-5
Elev. or Depth: 188' to 190' **Sample Length(in./cm.):**
Location: B-319
Description: Fat clay
Date: 2-19-07 **Natural Moisture:** 23.9
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	25.50	25.55	30.16			
Dry+Tare	20.24	20.04	22.51			
Tare	11.40	11.02	10.87			
# Blows	30	26	17			
Moisture	59.5	61.1	65.7			

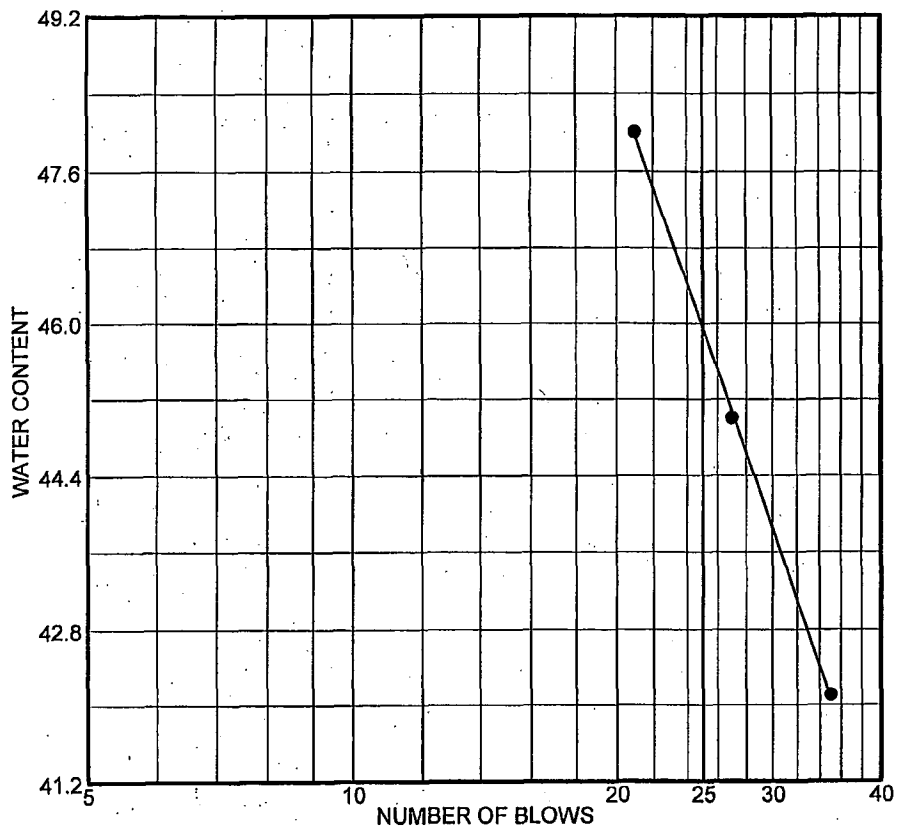


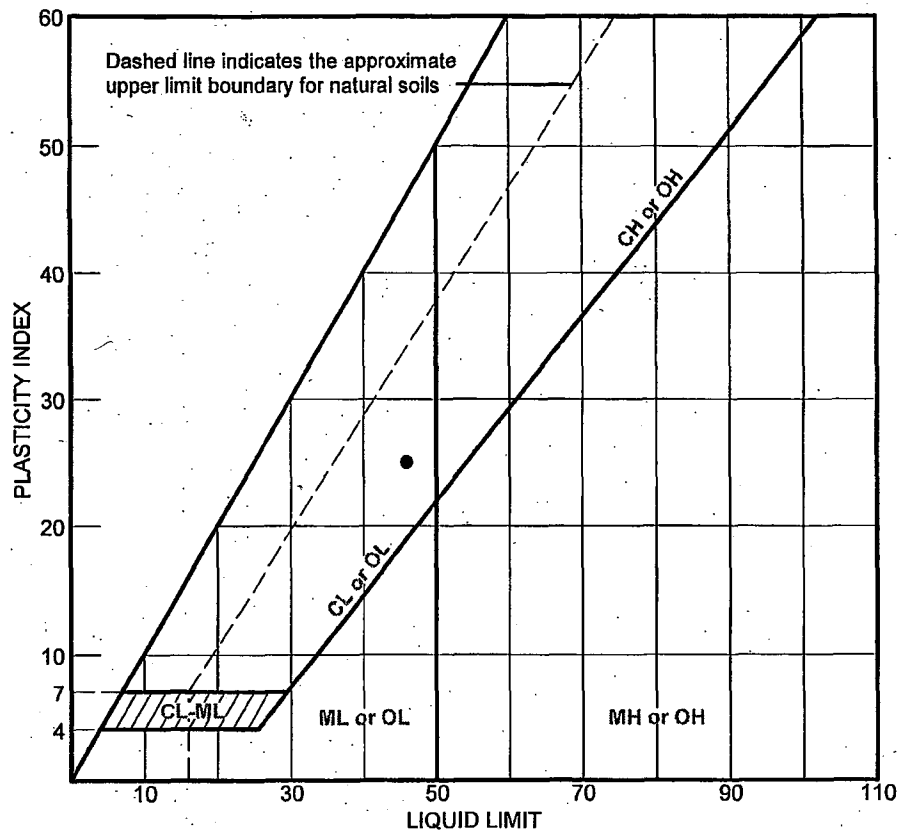
Liquid Limit= 62
Plastic Limit= 21
Plasticity Index= 41

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	20.60	21.17			
Dry+Tare	18.96	19.42			
Tare	11.21	10.96			
Moisture	21.2	20.7			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-321	UD-3	138' to 140'	3-12-07	CL	Lean Clay	20.0	46	25

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM 4318-05 KAW 413/07

KAW 413/07

LIQUID AND PLASTIC LIMIT TEST DATA

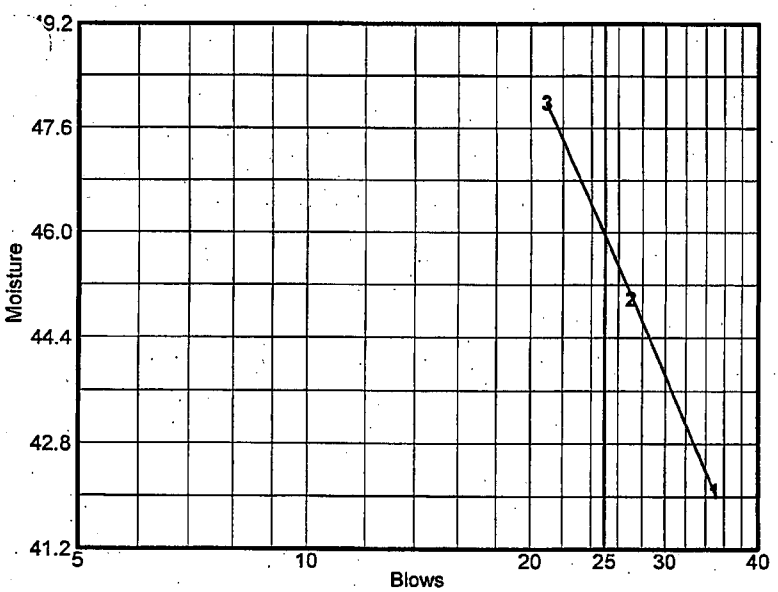
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-321
Sample No.: UD-3
Elev. or Depth: 138' to 140' **Sample Length(in./cm.):**
Location: B-321
Description: Lean Clay
Date: 3-12-07 **Natural Moisture:** 20.0
USCS Class.: CL **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM 4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	27.96	23.16	24.98			
Dry+Tare	22.90	19.51	20.55			
Tare	10.87	11.40	11.33			
# Blows	35	27	21			
Moisture	42.1	45.0	48.0			

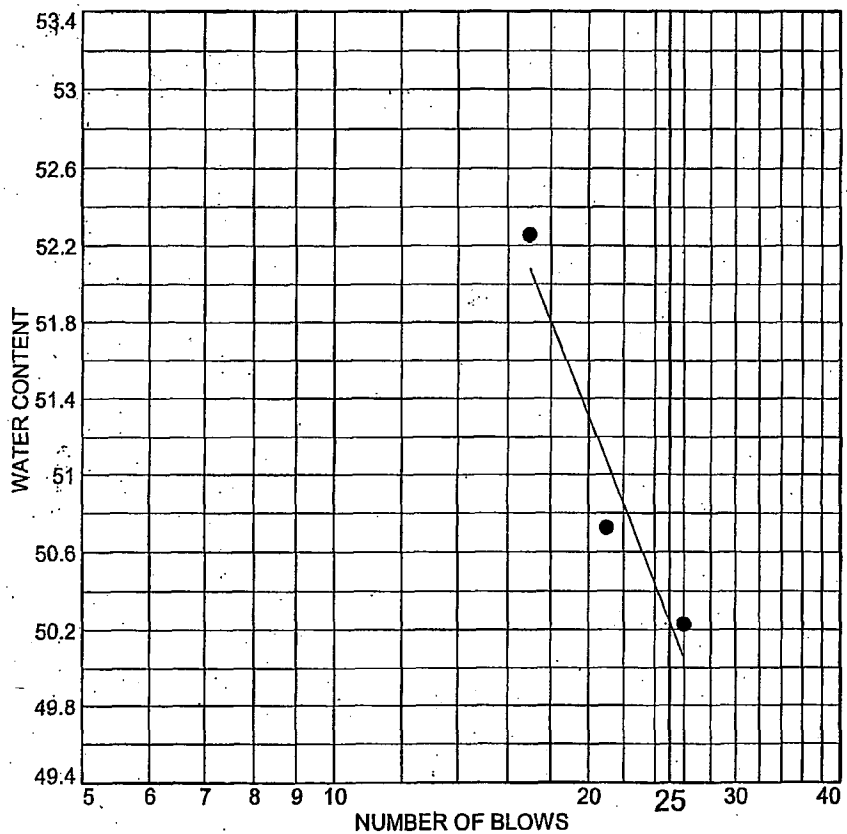


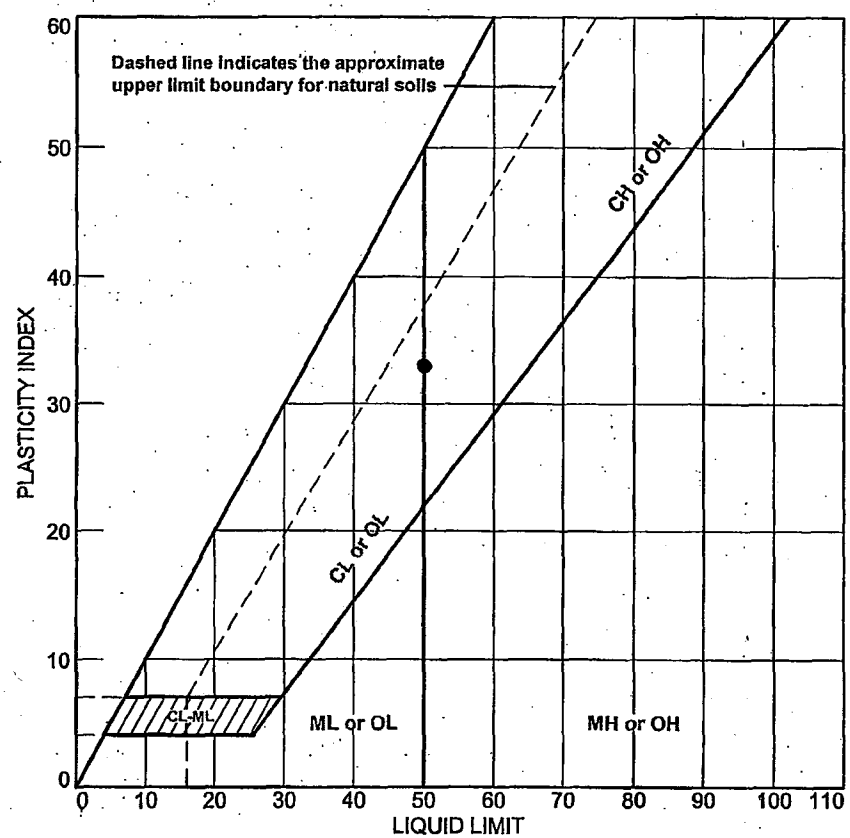
Liquid Limit= 46
Plastic Limit= 21
Plasticity Index= 25

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	20.72	20.84			
Dry+Tare	19.08	19.14			
Tare	11.59	10.92			
Moisture	21.9	20.7			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 323	STP-118	4.5'-6.0'	12/3/2006	CH	Fat Clay	21.2	50	33
		(SS-4)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:RF

ASTM D4318-05

MW 4-3-07

KAW 4/3/07

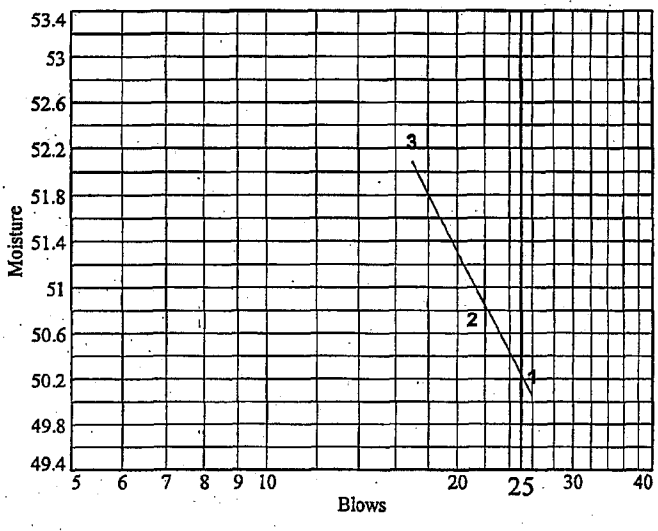
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 323
Depth: 4.5'-6.0'
Sample Number: STP-118 (SS-4)
Material Description: Fat Clay
Date: 12/3/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	34.32	31.01	36.7			
Dry+Tare	30.99	27.86	32.88			
Tare	24.36	21.65	25.57			
# Blows	26	21	17			
Moisture	50.2	50.7	52.3			



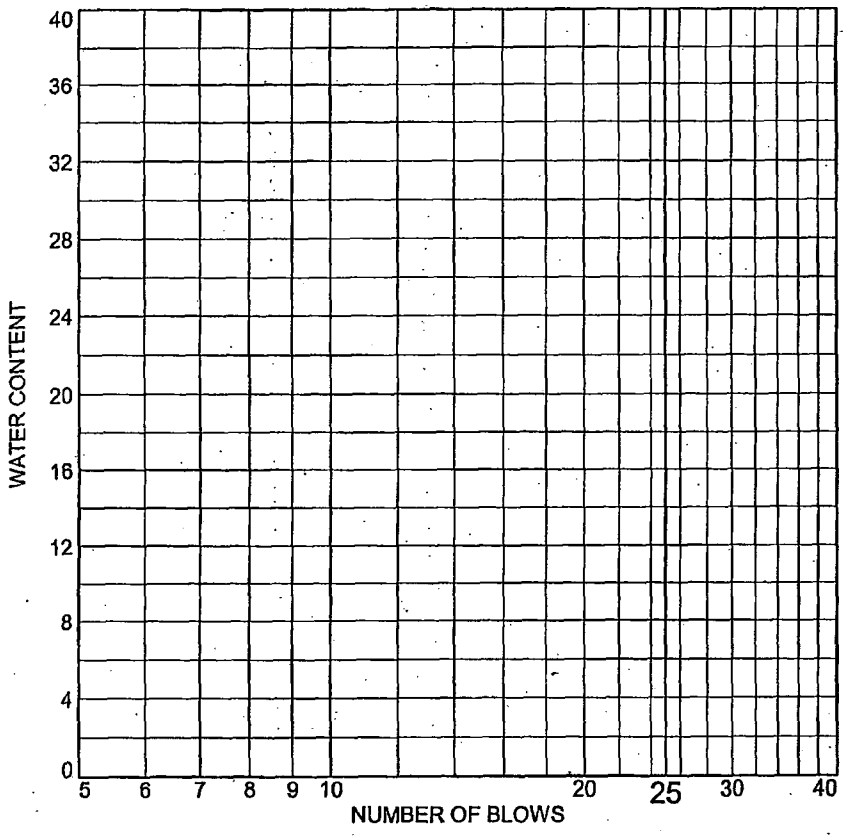
Liquid Limit= 50
Plastic Limit= 17
Plasticity Index= 33
Natural Moisture= 21.2
Liquidity Index= 0.1

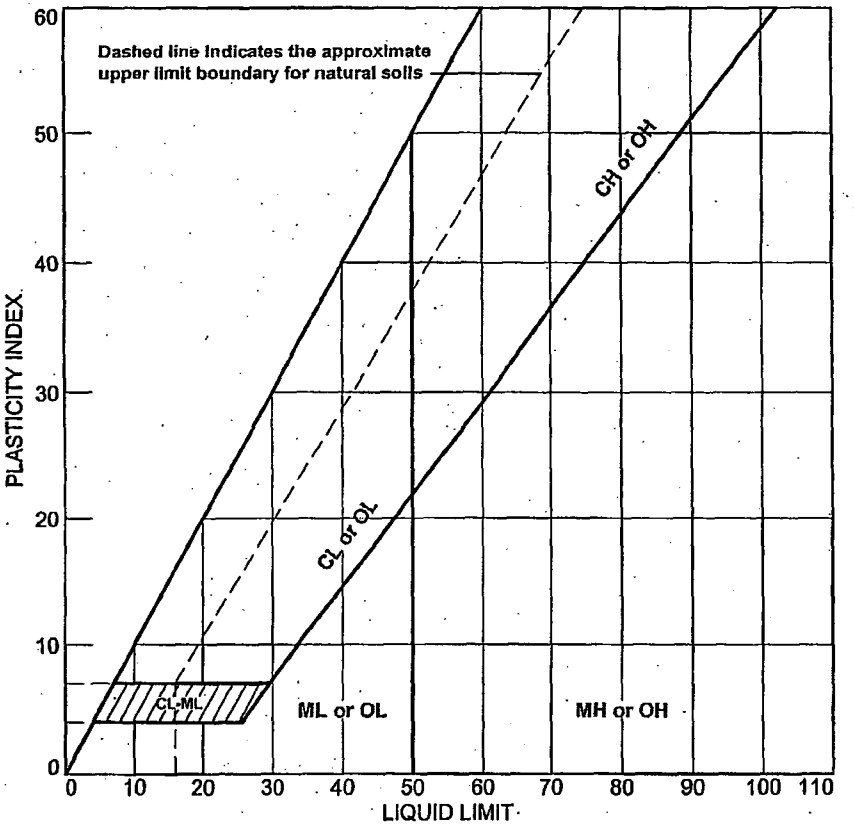
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	29.94	35.72			
Dry+Tare	28.9	34.63			
Tare	22.69	28.24			
Moisture	16.7	17.1			

MM 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 323	STP-121	23.5'-25.0'	12/3/2006	ML	Sandy Silt	22.5	NV	NP
		(SS-12)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:RF
ASTM D4318-05

4-3-07

KAW 4/03/07

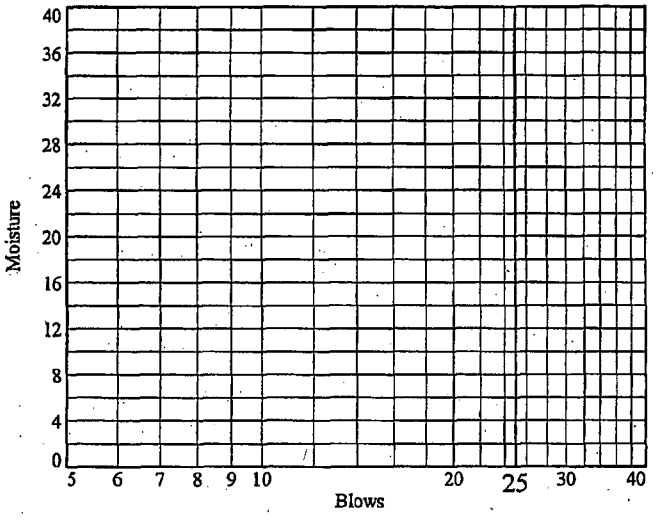
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 323
Depth: 23.5'-25.0' **Sample Number:** STP-121 (SS-12)
Material Description: Sandy Silt
Date: 12/3/2006 **USCS Class.:** ML **AASHTO Class.:** A-4(0)
Testing Remarks: Tested By:AC/TH Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare						
Dry+Tare						
Tare						
# Blows						
Moisture						



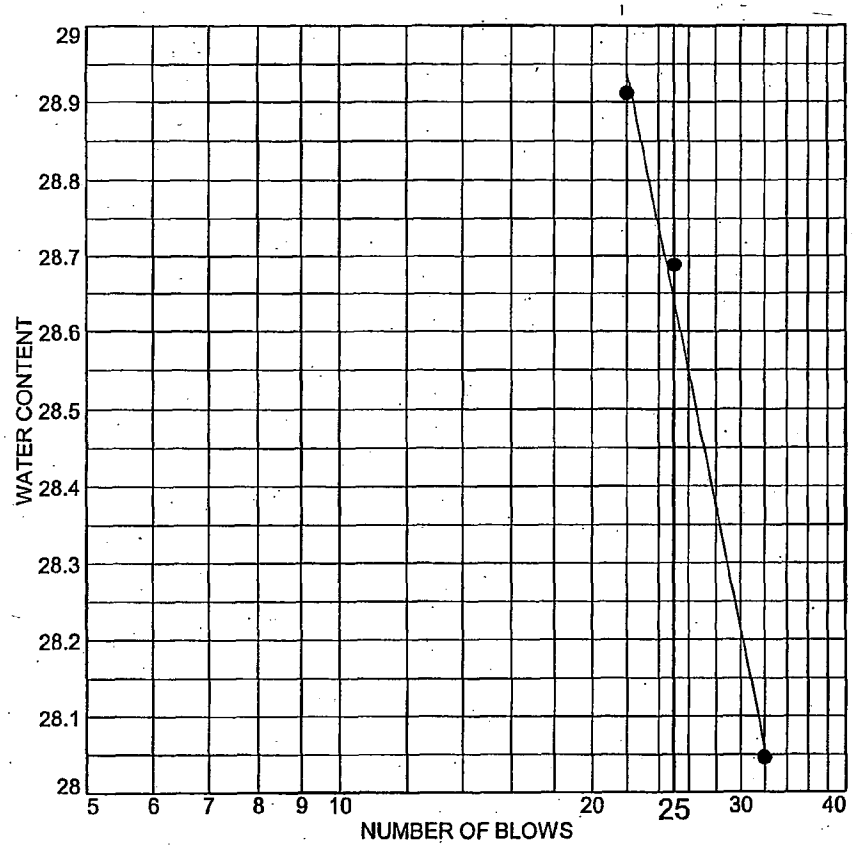
Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP
Natural Moisture= 22.5

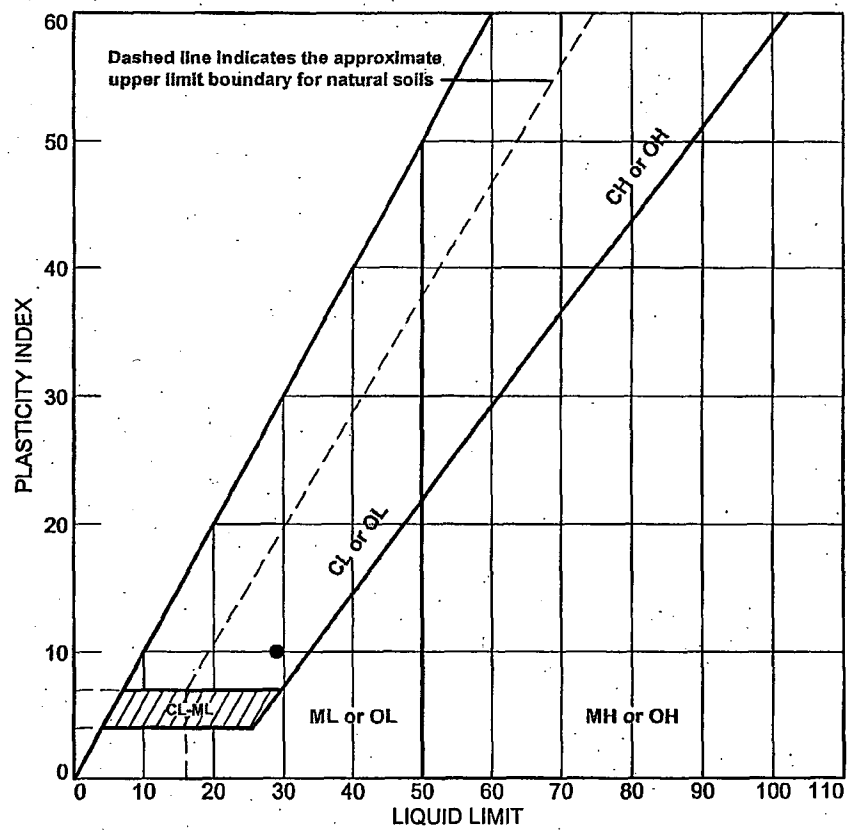
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare					
Dry+Tare					
Tare					
Moisture					

MAK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 323	STP-125	43.5'-45.0'	12/3/2006	CL	Lean Clay	20.5	29	10
		(SS-16)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:RF
ASTM D4318-05

MH
4-3-07

KAW 4/3/07

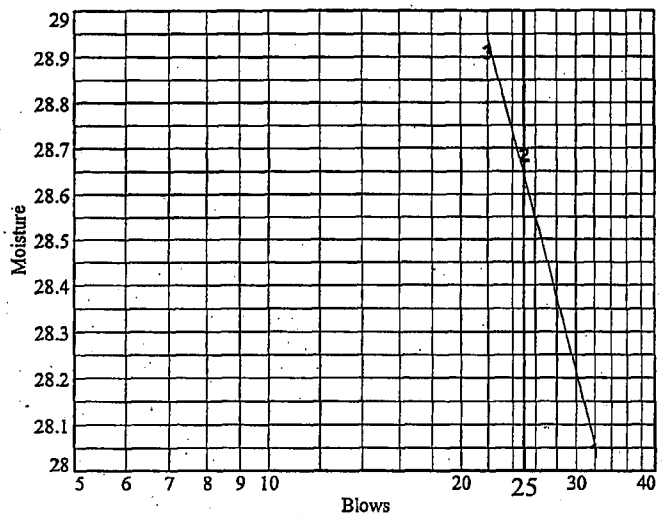
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 323
Depth: 43.5'-45.0' **Sample Number:** STP-125 (SS-16)
Material Description: Lean Clay
Date: 12/3/2006 **USCS Class.:** CL
Testing Remarks: Tested By:AC/TH Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.22	37.65	39.55			
Dry+Tare	35.01	35.53	37.00			
Tare	27.13	28.14	28.18			
# Blows	32	25	22			
Moisture	28.0	28.7	28.9			



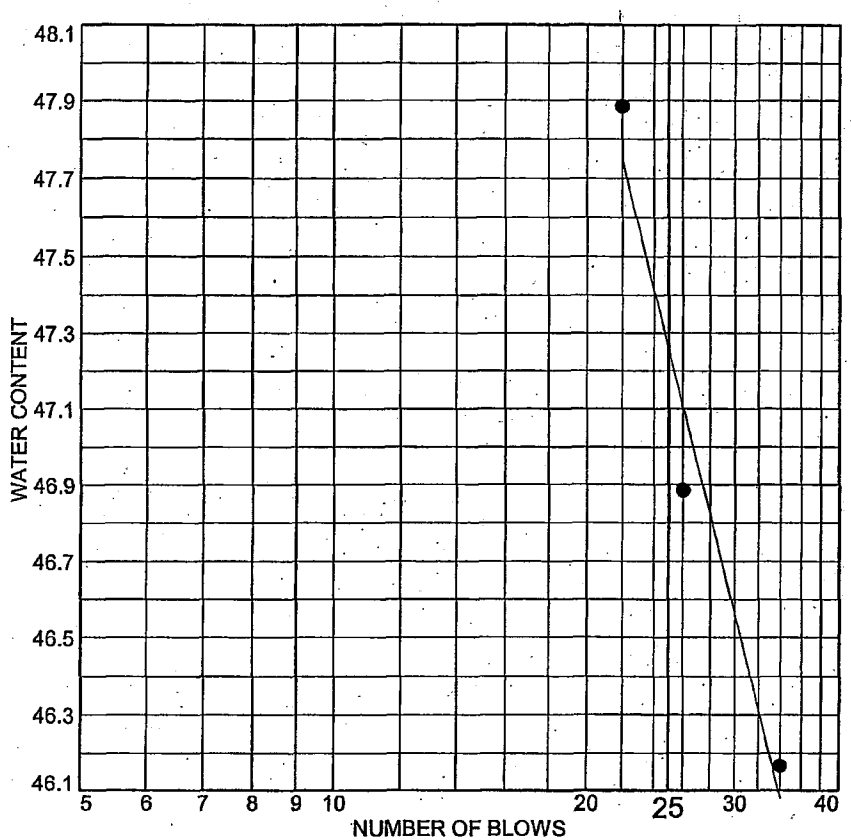
Liquid Limit= 29
Plastic Limit= 19
Plasticity Index= 10
Natural Moisture= 20.5
Liquidity Index= 0.2

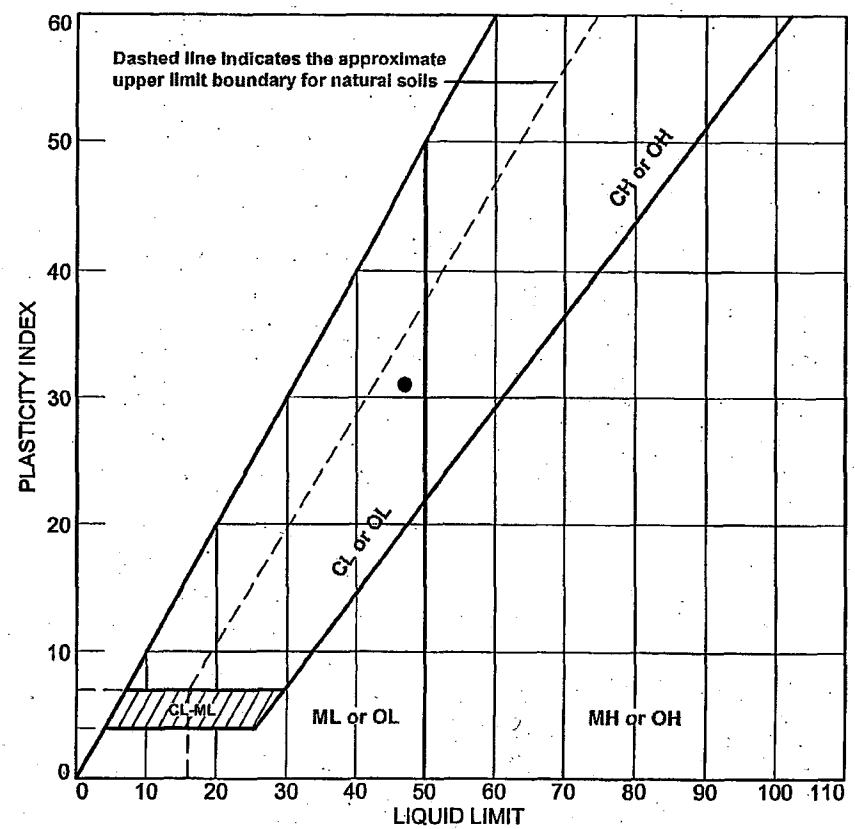
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	34.89	35.77			
Dry+Tare	33.63	34.59			
Tare	27.10	28.25			
Moisture	19.3	18.6			

MAK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 323	STP-127 (SS-18)	53.5'-55.0'	12/3/2006	CL	Lean Clay	18.1	47	31

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:RF

ASTM D4318-05

MA 4-3-07

KAW 4/3/07

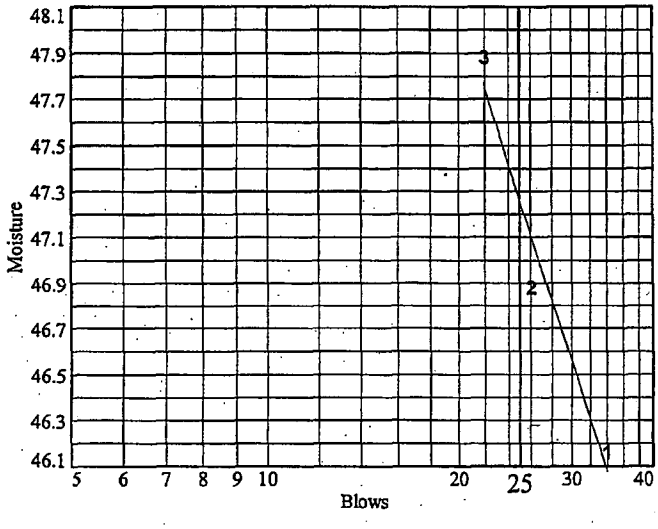
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 323
Depth: 53.5'-55.0'
Sample Number: STP-127 (SS-18)
Material Description: Lean Clay
Date: 12/3/2006
USCS Class.: CL
Testing Remarks: Tested By:AC/TH
Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	38.19	36.56	36.85			
Dry+Tare	35.06	33.85	34.02			
Tare	28.28	28.07	28.11			
# Blows	34	26	22			
Moisture	46.2	46.9	47.9			



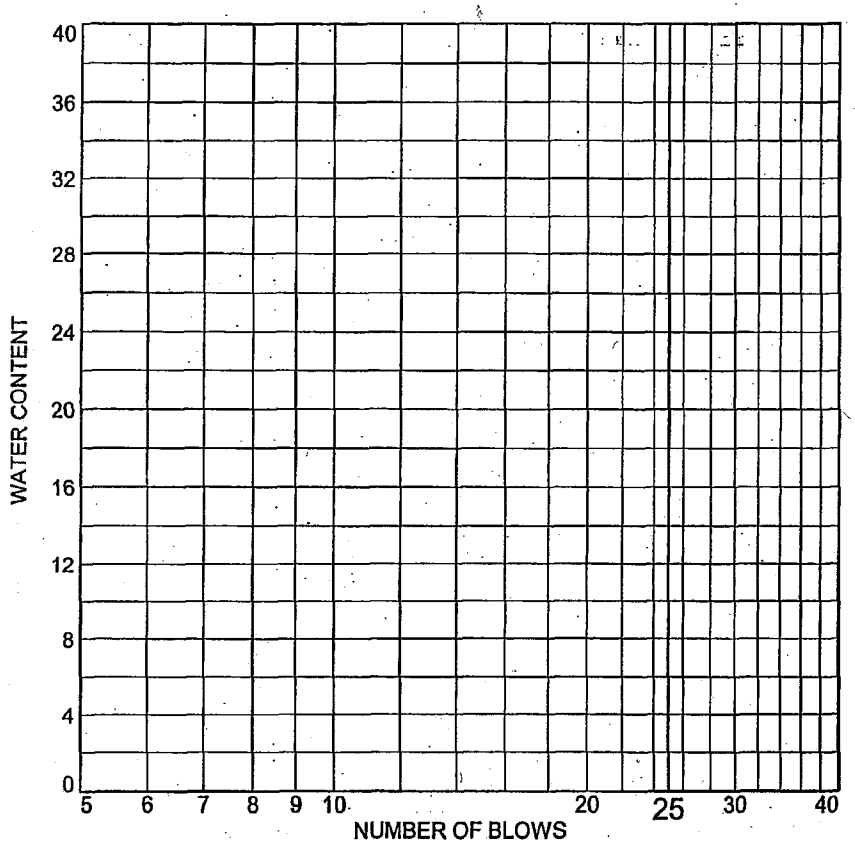
Liquid Limit= 47
Plastic Limit= 16
Plasticity Index= 31
Natural Moisture= 18.1
Liquidity Index= 0.1

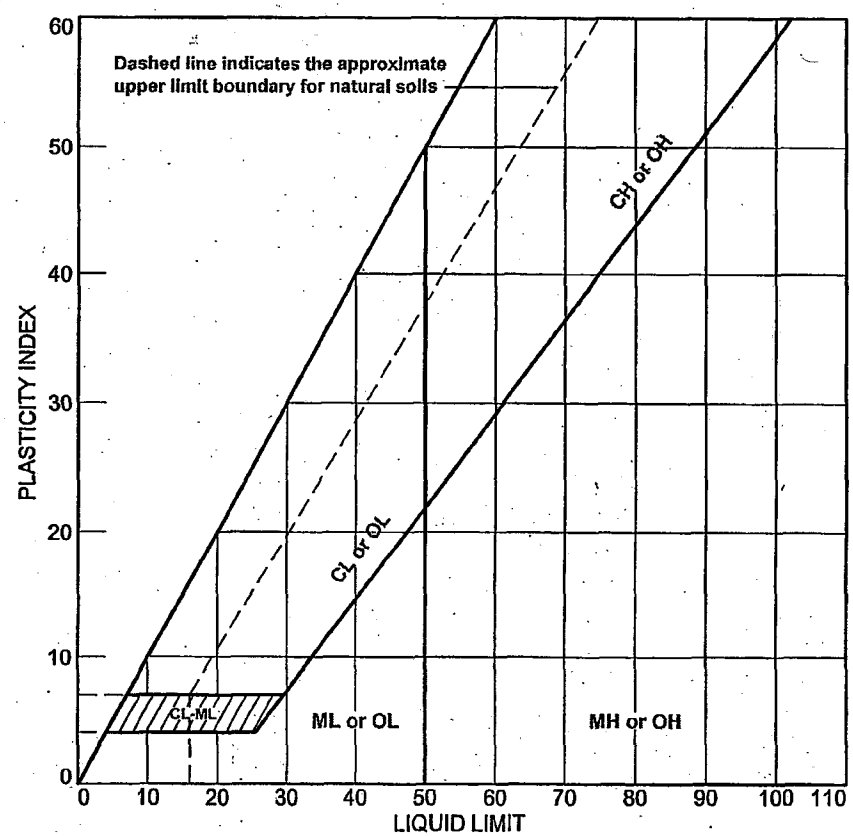
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.12	35.78			
Dry+Tare	35	34.72			
Tare	28	28.17			
Moisture	16.0	16.2			

MAT 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 323	STP-130	68.5'-70.0'	12/3/2006	ML	Sandy Silt	23.2	NV	NP
		(SS-21)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:RF
ASTM D4318-05

mt
4-3-07

KAW 4/3/07

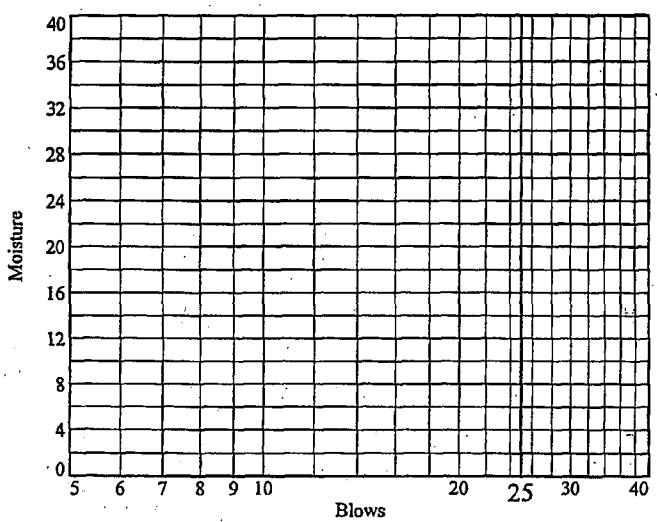
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 323
Depth: 68.5'-70.0'
Sample Number: STP-130 (SS-21)
Material Description: Sandy Silt
Date: 12/3/2006
USCS Class.: ML
Testing Remarks: Tested By:AC/TH
Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare						
Dry+Tare						
Tare						
# Blows						
Moisture						



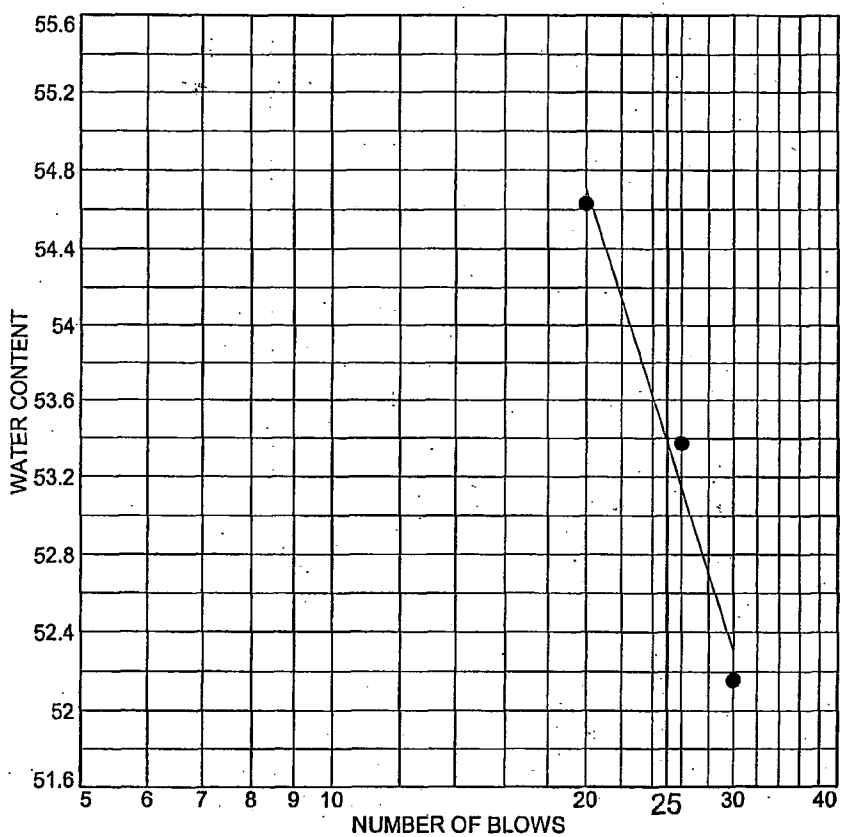
Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP
Natural Moisture= 23.2

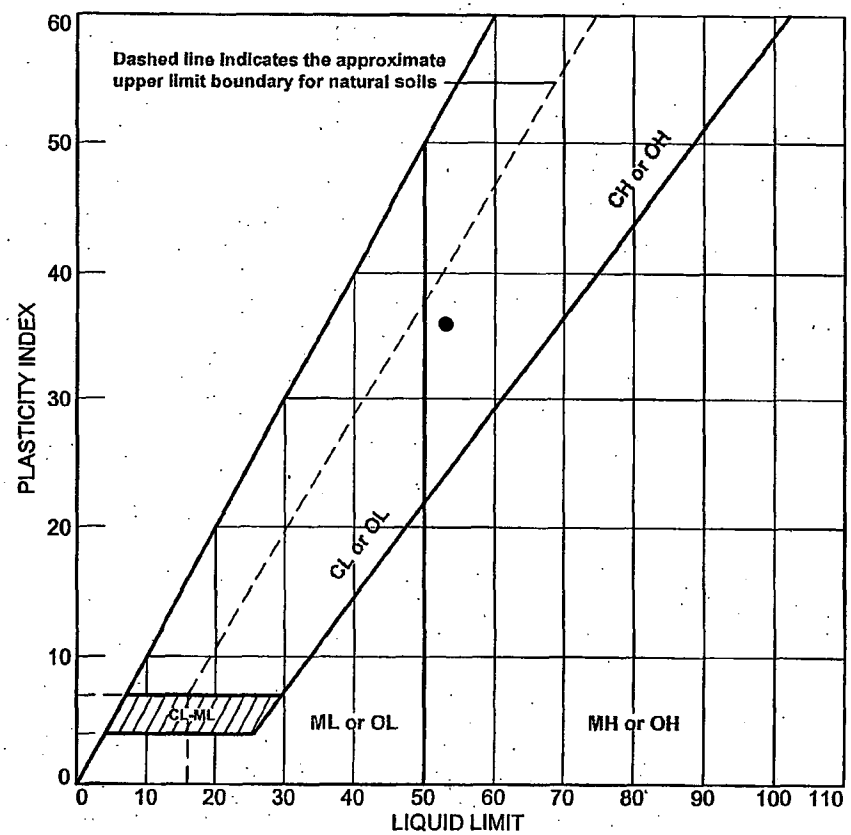
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare					
Dry+Tare					
Tare					
Moisture					

MA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 328	STP-025	4.5'-6.0'	10/25/2006	CH	Fat Clay	22.2	53	36
		(SS-4)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reveiwed By:ST

ASTM D4318-05

MA 4-3-07

KAW 4/3/07

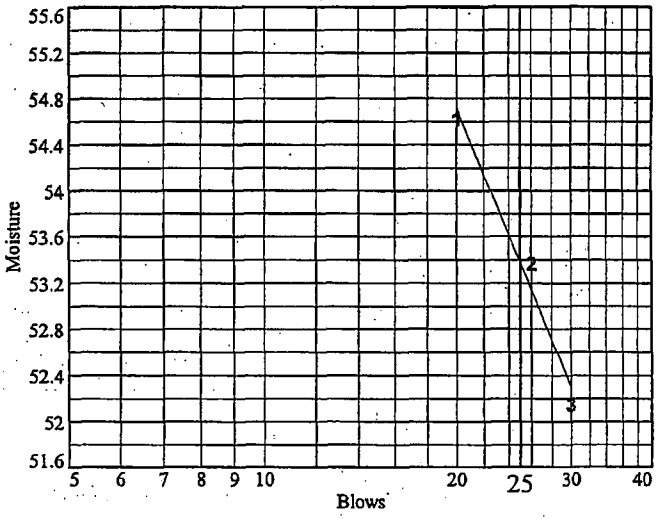
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 328
Depth: 4.5'-6.0' **Sample Number:** STP-025 (SS-4)
Material Description: Fat Clay
Date: 10/25/2006 **USCS Class.:** CH
Testing Remarks: Tested By:TH Reveiwed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.63	35.09	37.45			
Dry+Tare	34.09	32.32	34.18			
Tare	27.61	27.13	27.91			
# Blows	20	26	30			
Moisture	54.6	53.4	52.2			



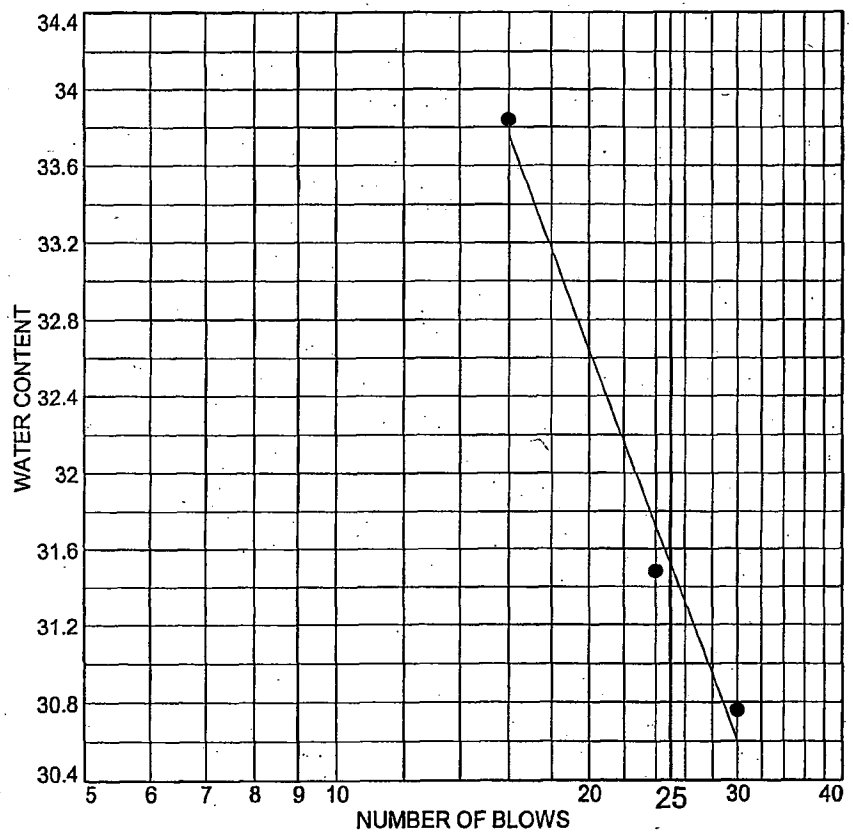
Liquid Limit= 53
Plastic Limit= 17
Plasticity Index= 36
Natural Moisture= 22.2
Liquidity Index= 0.1

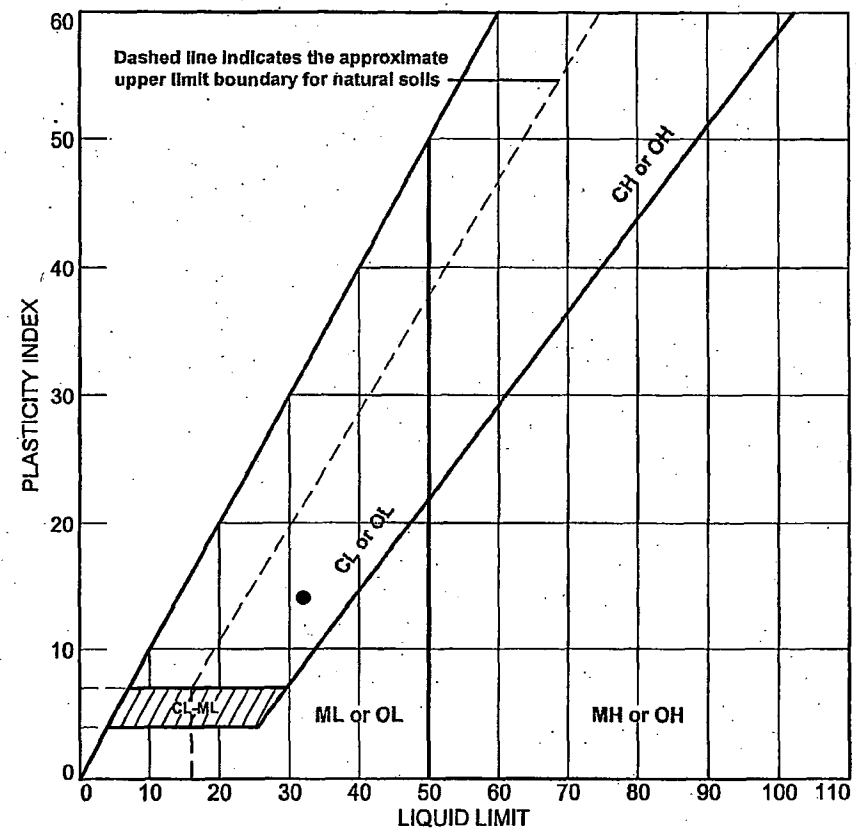
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.72	35.17			
Dry+Tare	34.64	34.13			
Tare	28.26	28.09			
Moisture	16.9	17.2			

NWA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 328	STP-026 (SS-8)	10.5'-12.0'	10/25/2006	CL	Lean Clay	24.1	32	14

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:ST
ASTM D4318-05

MA 4-3-07

KAW 4/3/07

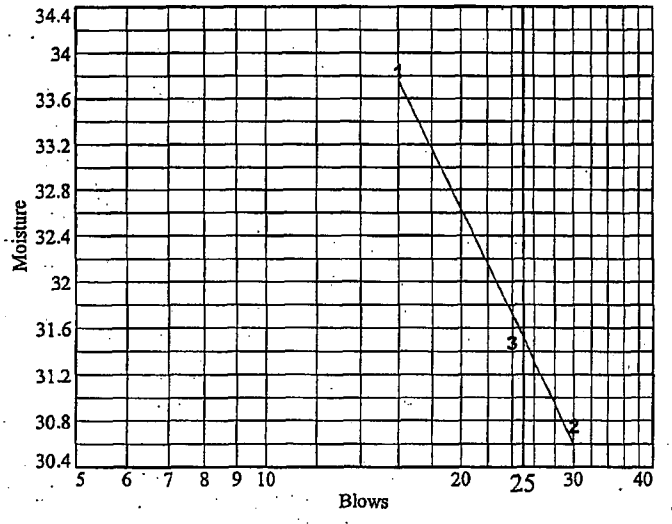
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 328
Depth: 10.5'-12.0' **Sample Number:** STP-026 (SS-8)
Material Description: Lean Clay
Date: 10/25/2006 **USCS Class.:** CL
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.11	37.4	37.28			
Dry+Tare	33.44	35.29	35.07			
Tare	25.55	28.43	28.05			
# Blows	16	30	24			
Moisture	33.8	30.8	31.5			



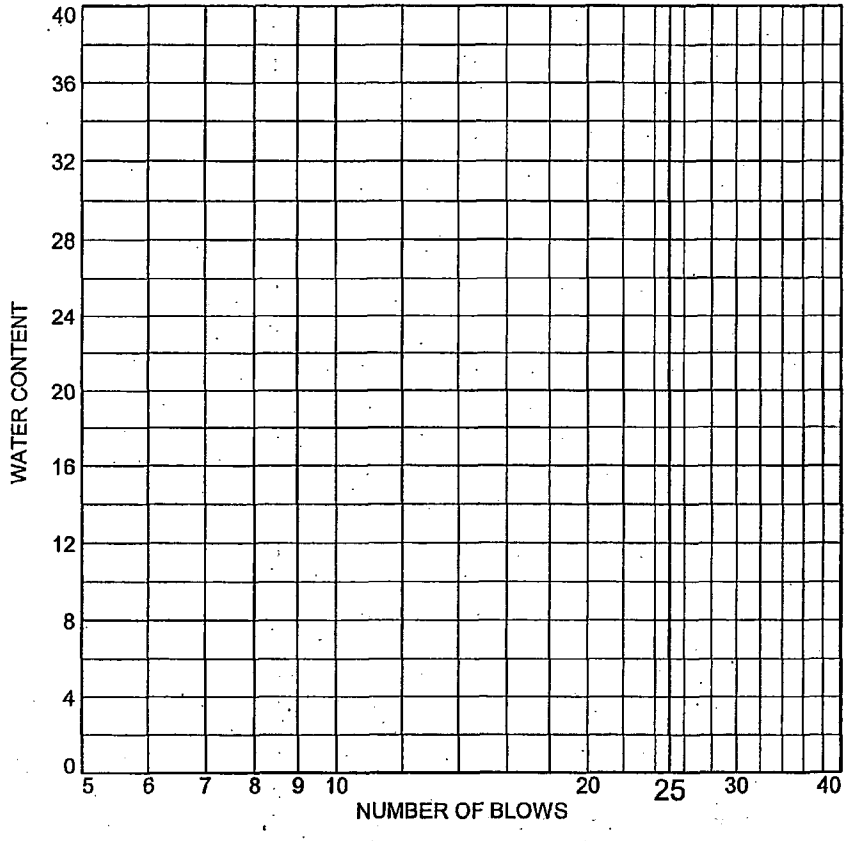
Liquid Limit= 32
Plastic Limit= 18
Plasticity Index= 14
Natural Moisture= 24.1
Liquidity Index= 0.4

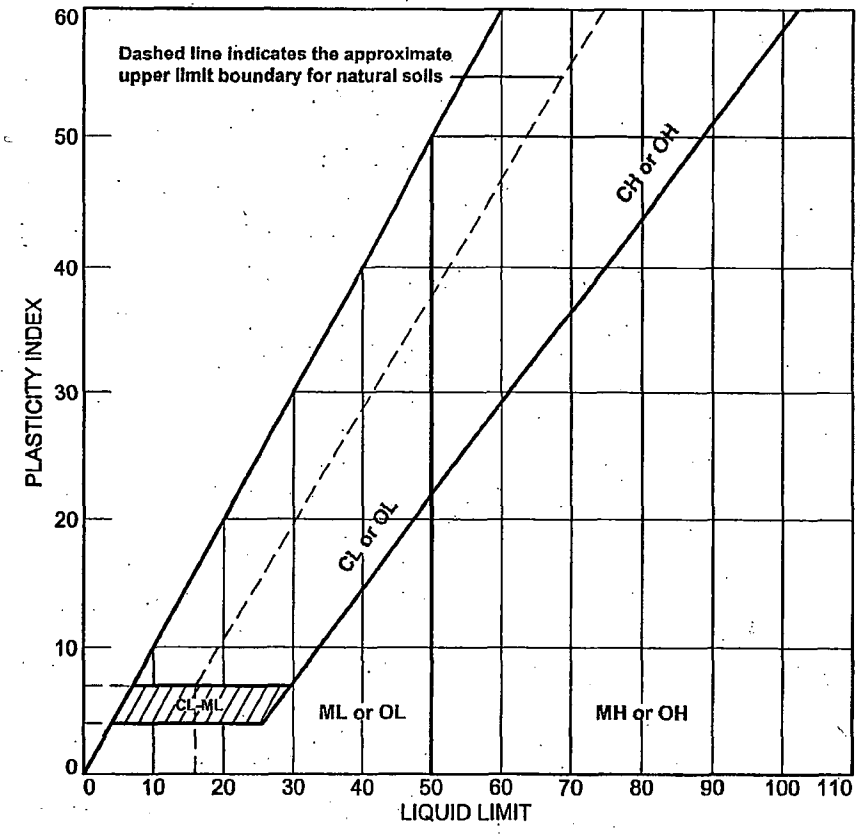
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.8	29.03			
Dry+Tare	34.67	27.92			
Tare	28.35	21.64			
Moisture	17.9	17.7			

MAT 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 328	STP-027 (SS-9)	18.5'-20.0'	11/04/2006	ML	Sandy Silt	25.0	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:ST

ASTM D4318-05

4-3-07

KAW 4/3/07

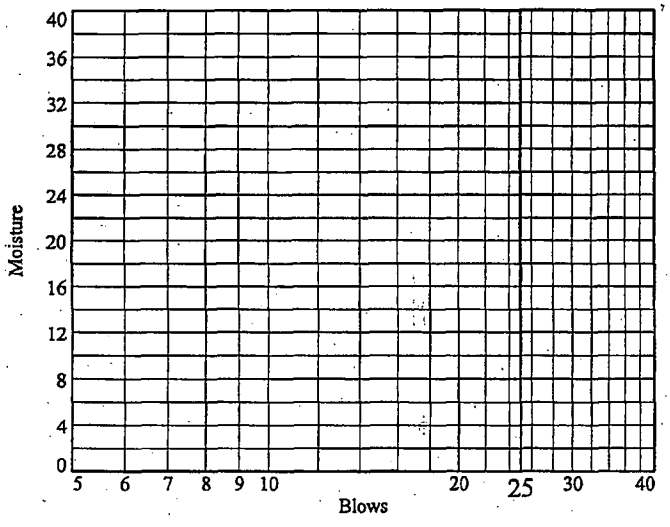
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 328
Depth: 18.5'-20.0' **Sample Number:** STP-027 (SS-9)
Material Description: Sandy Silt
Date: 11/04/2006 **USCS Class.:** ML
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare						
Dry+Tare						
Tare						
# Blows						
Moisture						



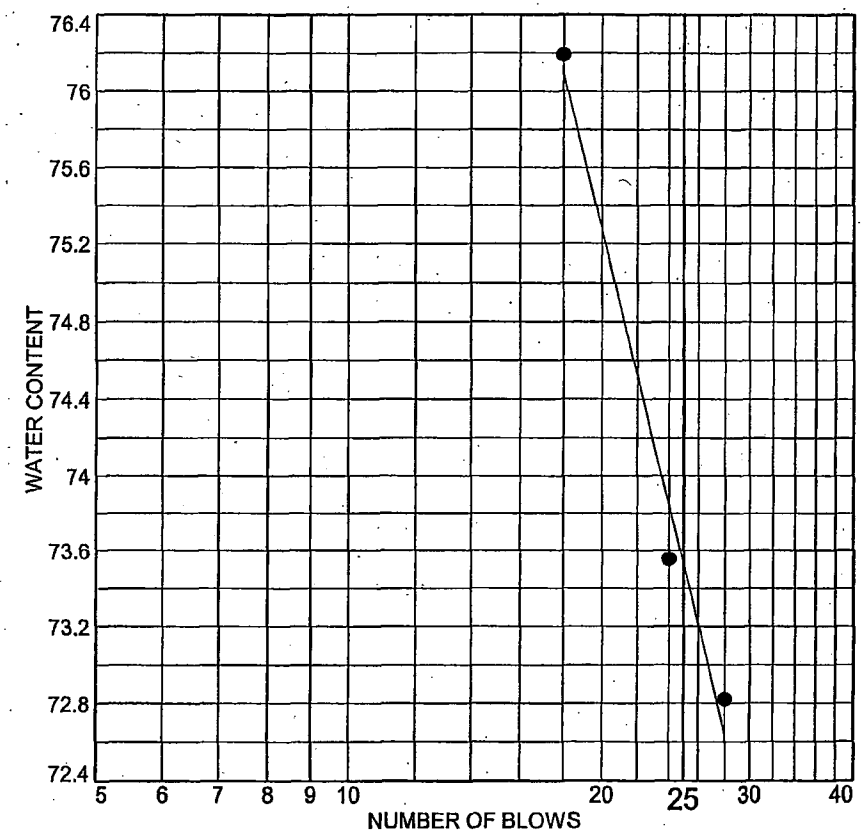
Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP
Natural Moisture= 25.0

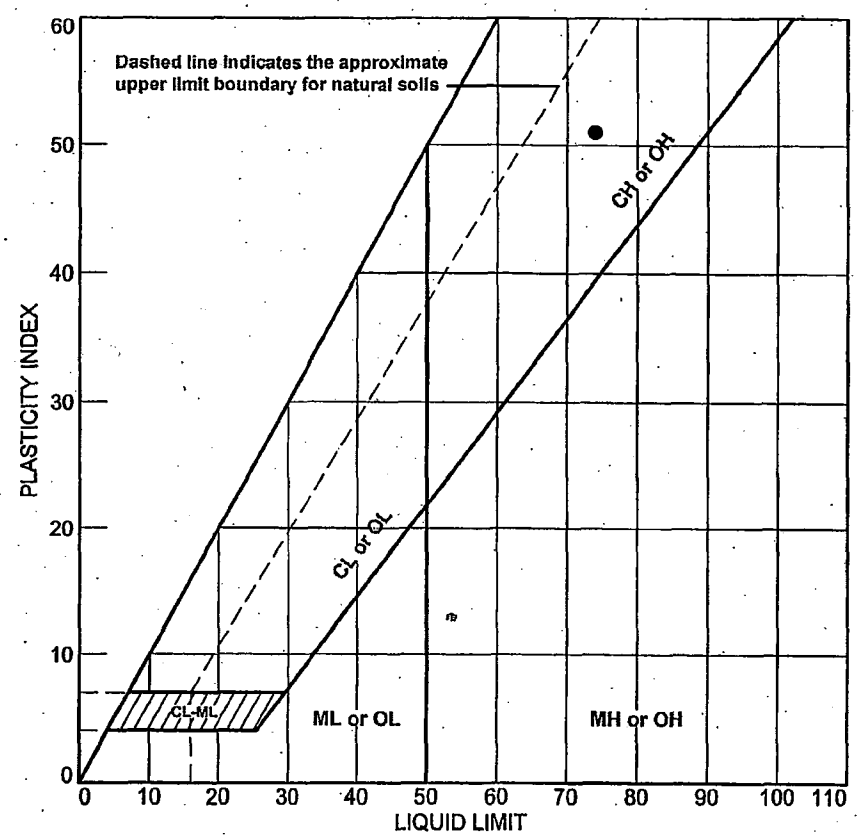
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare					
Dry+Tare					
Tare					
Moisture					

NWA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 328	STP-030	43.5'-45.0'	11/4/2006	CH	Fat Clay	26.6	74	51
		(SS-13)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:ST

ASTM D4318-05

4-3-07

KAW 4/3/07

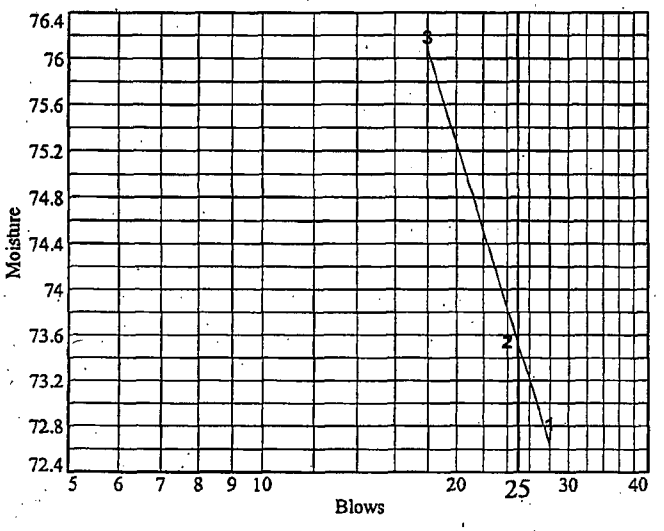
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 328
Depth: 43.5'-45.0' **Sample Number:** STP-030 (SS-13)
Material Description: Fat Clay
Date: 11/4/2006 **USCS Class.:** CH
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	35.02	36.47	38.71			
Dry+Tare	32.18	32.91	34.23			
Tare	28.28	28.07	28.35			
# Blows	28	24	18			
Moisture	72.8	73.6	76.2			



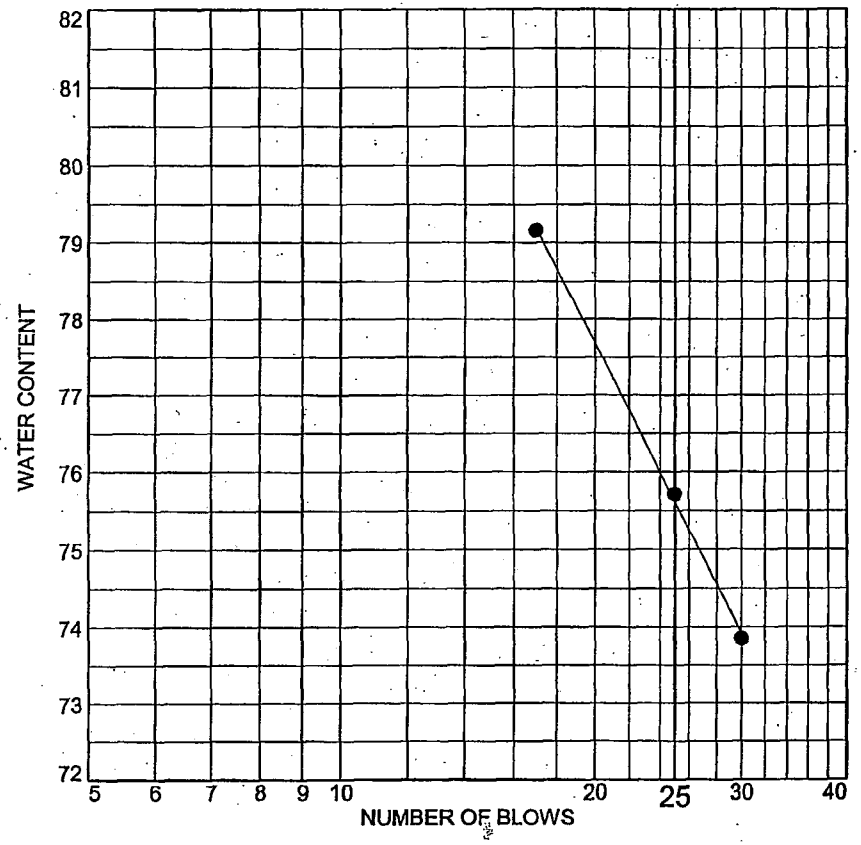
Liquid Limit= 74
Plastic Limit= 23
Plasticity Index= 51
Natural Moisture= 26.6
Liquidity Index= 0.1

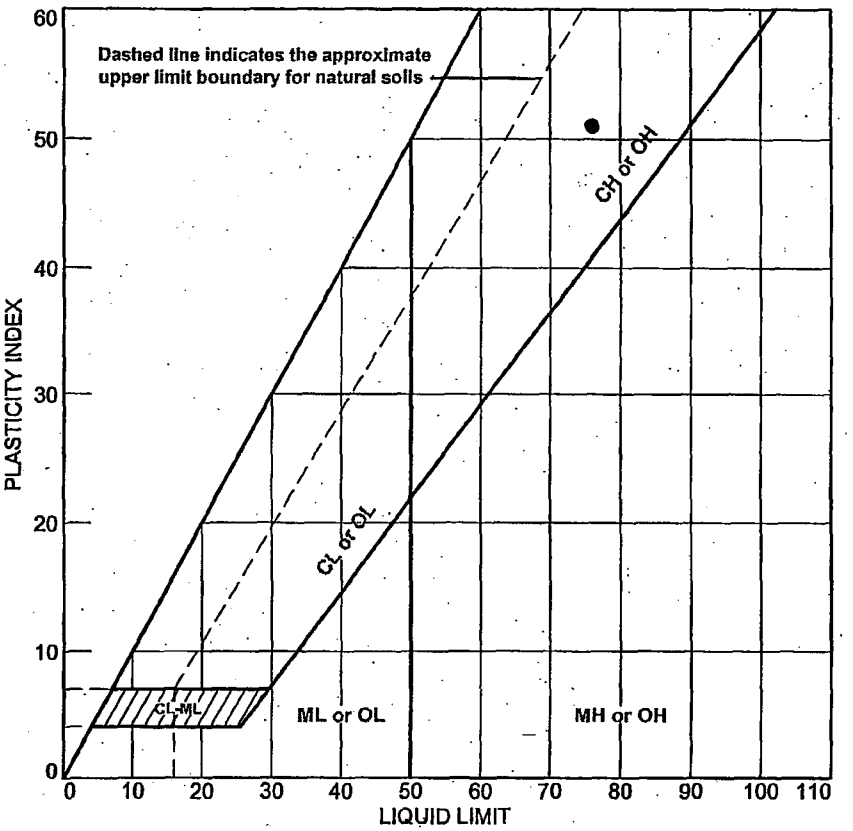
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.29	35.66			
Dry+Tare	34.87	34.26			
Tare	28.6	28.09			
Moisture	22.6	22.7			

MAT 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 328	STP-031	58.5'-60.0	1/4/2006	CH	Fat Clay	25.6	76	51
		(SS-15)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:ST

ASTM D4318-05

MA 4-3-07

KAW 413107

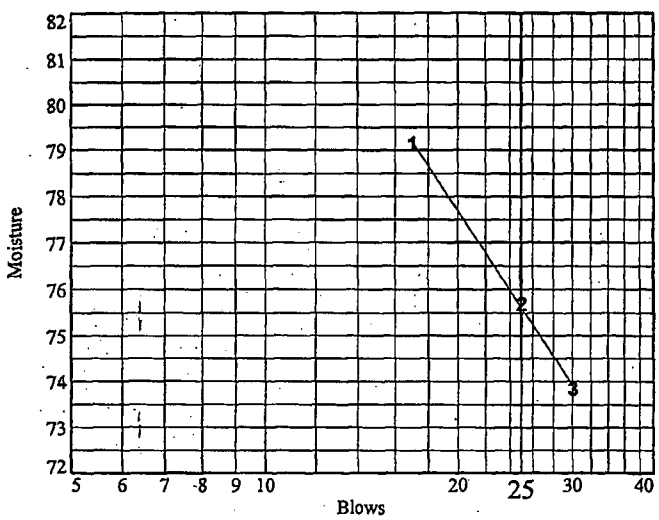
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 328
Depth: 58.5'-60.0 **Sample Number:** STP-031 (SS-15)
Material Description: Fat Clay
Date: 1/4/2006 **USCS Class.:** CH
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.57	34.02	34.27			
Dry+Tare	33.43	30.31	30.57			
Tare	28.20	25.41	25.56			
# Blows	17	25	30			
Moisture	79.2	75.7	73.9			



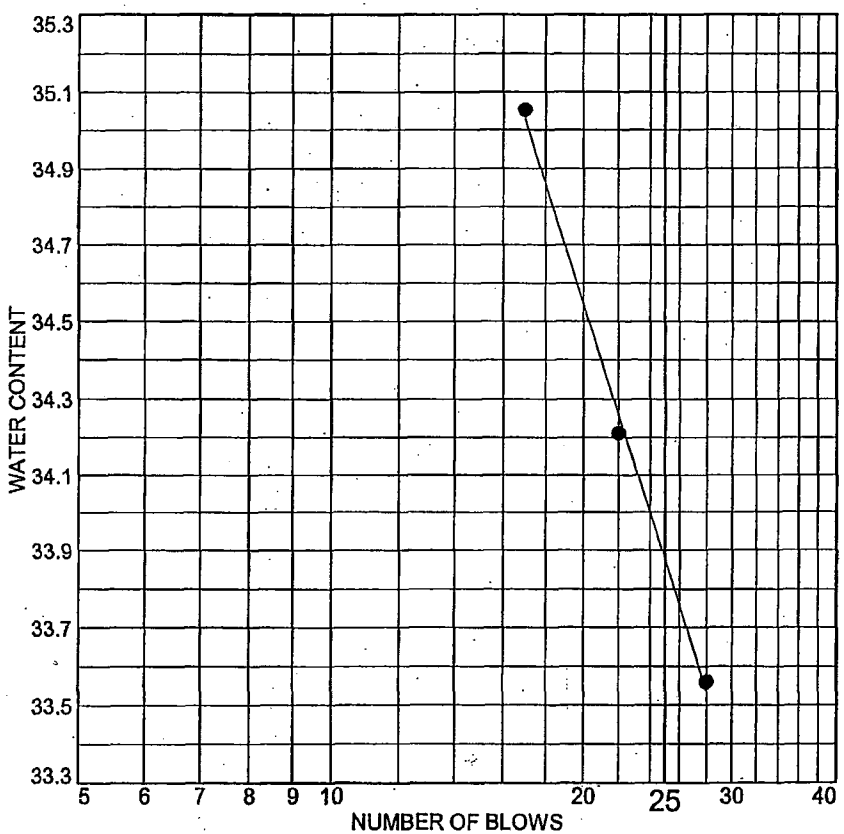
Liquid Limit= 76
Plastic Limit= 25
Plasticity Index= 51
Natural Moisture= 25.6
Liquidity Index= 0.0

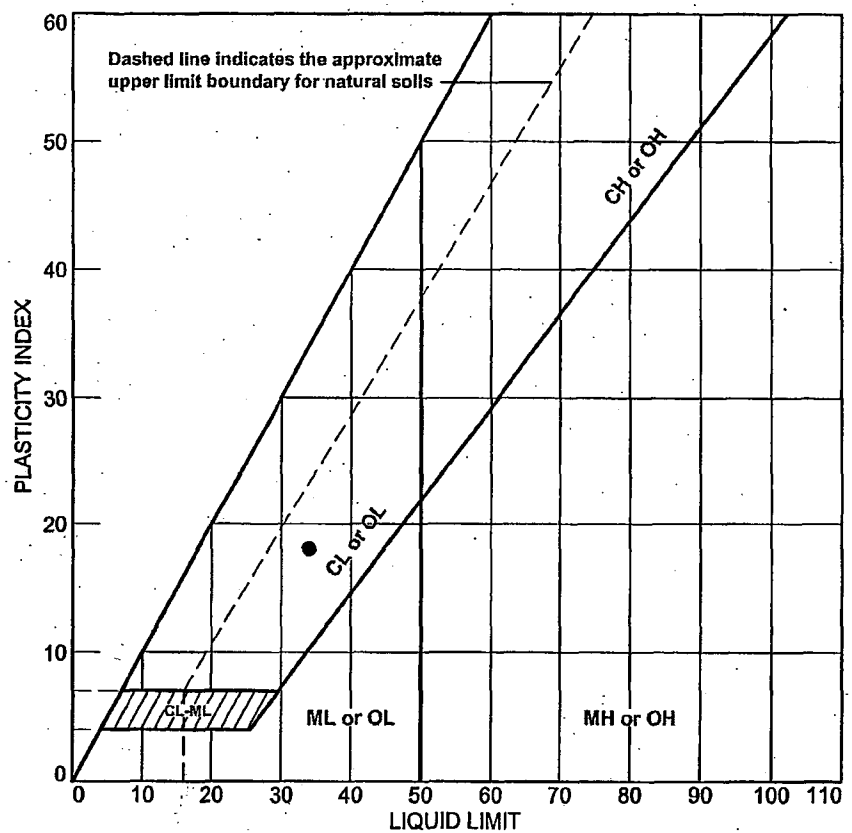
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.00	35.31			
Dry+Tare	34.46	33.83			
Tare	28.16	27.98			
Moisture	24.4	25.3			

MK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 328	STP-036	118.5'-120.0'	11/5/2006	CL	Lean Clay	22.0	34	18
		(SS-23)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:RF
ASTM D4318-05

4-3-07

KAW 4/3/07

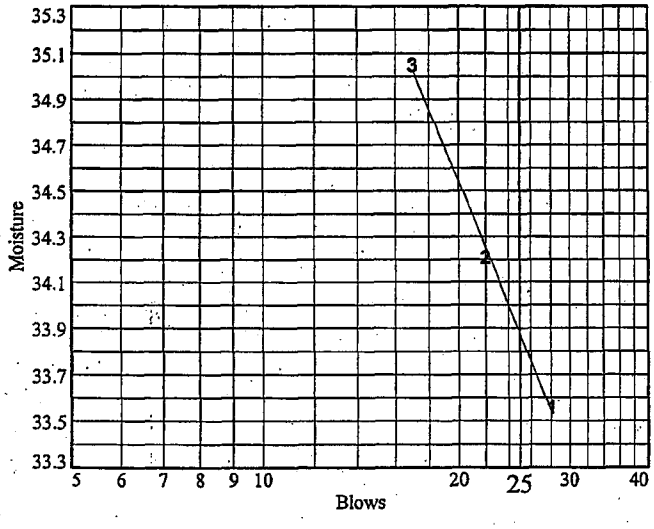
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 328
Depth: 118.5'-120.0' **Sample Number:** STP-036 (SS-23)
Material Description: Lean Clay
Date: 11/5/2006 **USCS Class.:** CL **AASHTO Class.:** A-6(16)
Testing Remarks: Tested By:AC/TH Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	38.14	37.51	36.31			
Dry+Tare	35.68	35.17	34			
Tare	28.35	28.33	27.41			
# Blows	28	22	17			
Moisture	33.6	34.2	35.1			



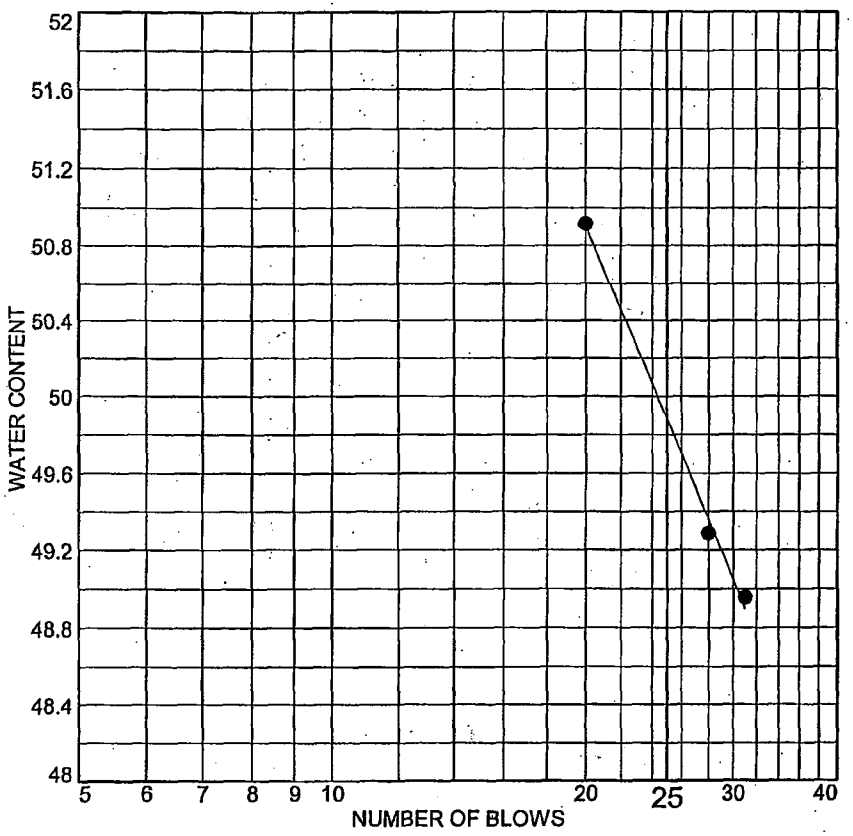
Liquid Limit= 34
Plastic Limit= 16
Plasticity Index= 18
Natural Moisture= 22.0
Liquidity Index= 0.3

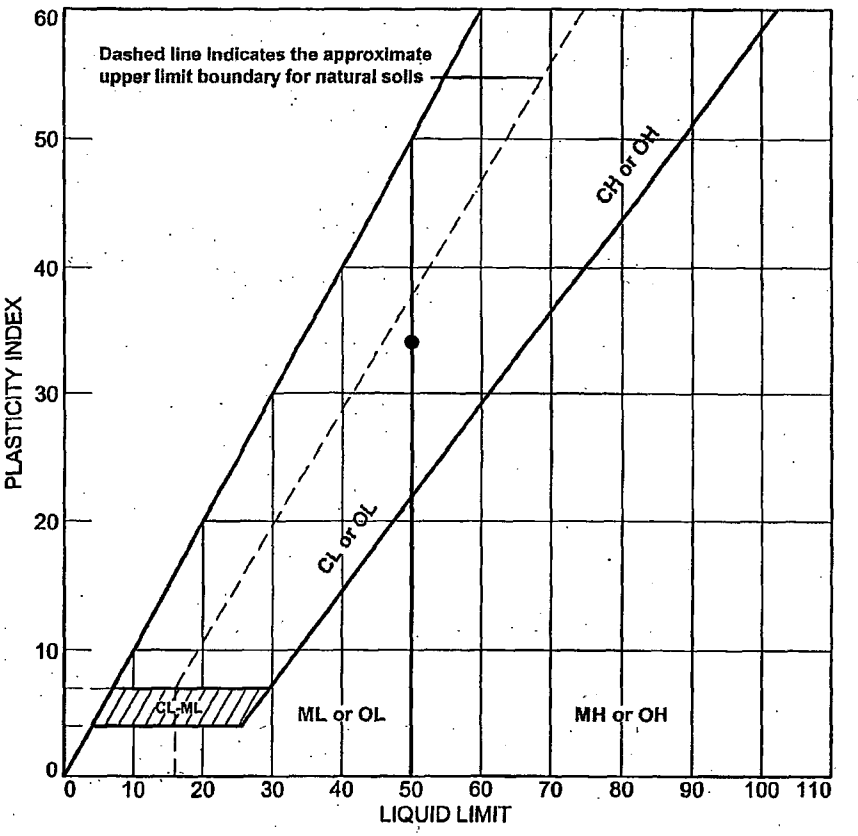
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	38.37	36.78			
Dry+Tare	36.99	35.59			
Tare	28.13	27.93			
Moisture	15.6	15.5			

MAT 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 328	STP-038 (SS-25)	138.5'-140.0'	11/6/2006	CH	Fat Clay	18.3	50	34

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:MH/RF
ASTM D4318-05

MH 4-3-07

KAW 4/3/07

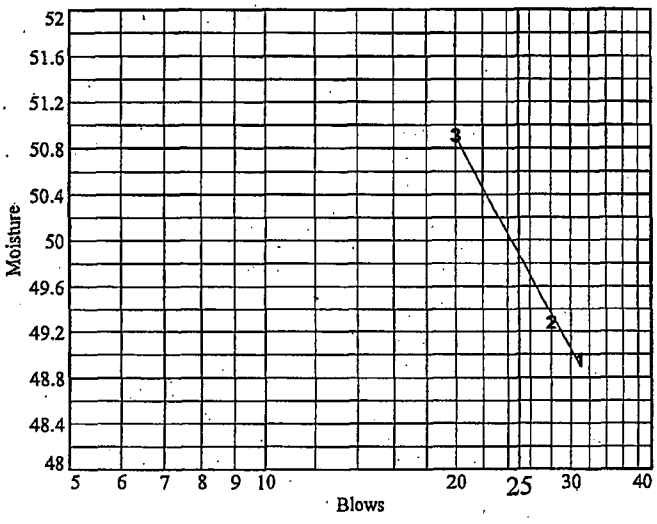
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 328
Depth: 138.5'-140.0'
Sample Number: STP-038 (SS-25)
Material Description: Fat Clay
Date: 11/6/2006
USCS Class.: CH
Testing Remarks: Tested By:AC Reviewed By:MH/RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.49	36.54	37.11			
Dry+Tare	34.44	33.78	33.77			
Tare	28.21	28.18	27.21			
# Blows	31	28	20			
Moisture	49.0	49.3	50.9			



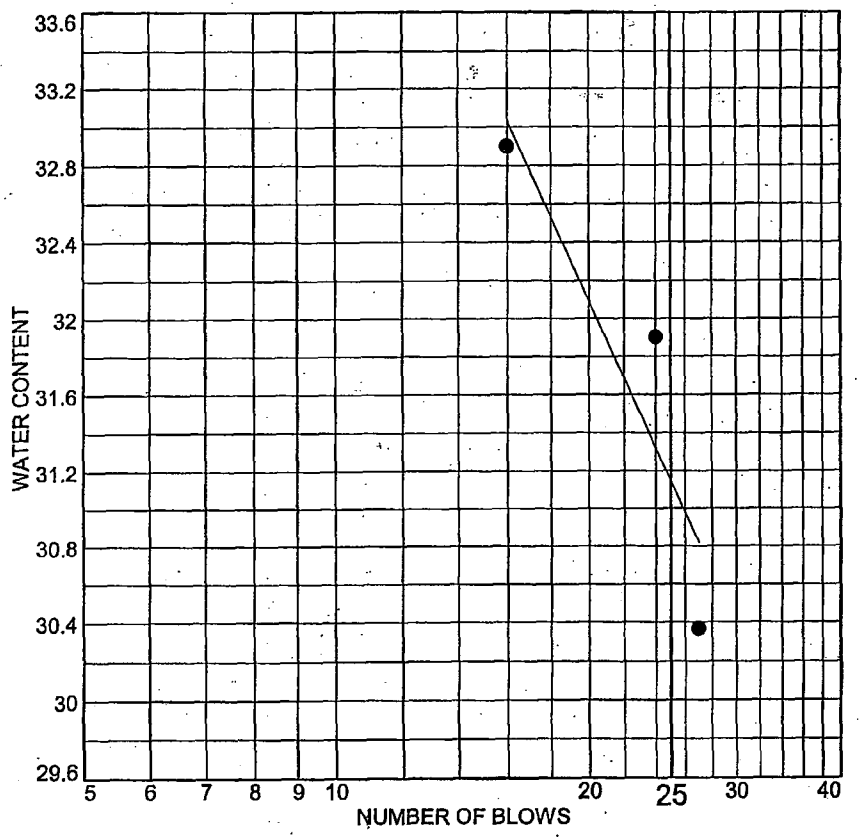
Liquid Limit= 50
Plastic Limit= 16
Plasticity Index= 34
Natural Moisture= 18.3
Liquidity Index= 0.1

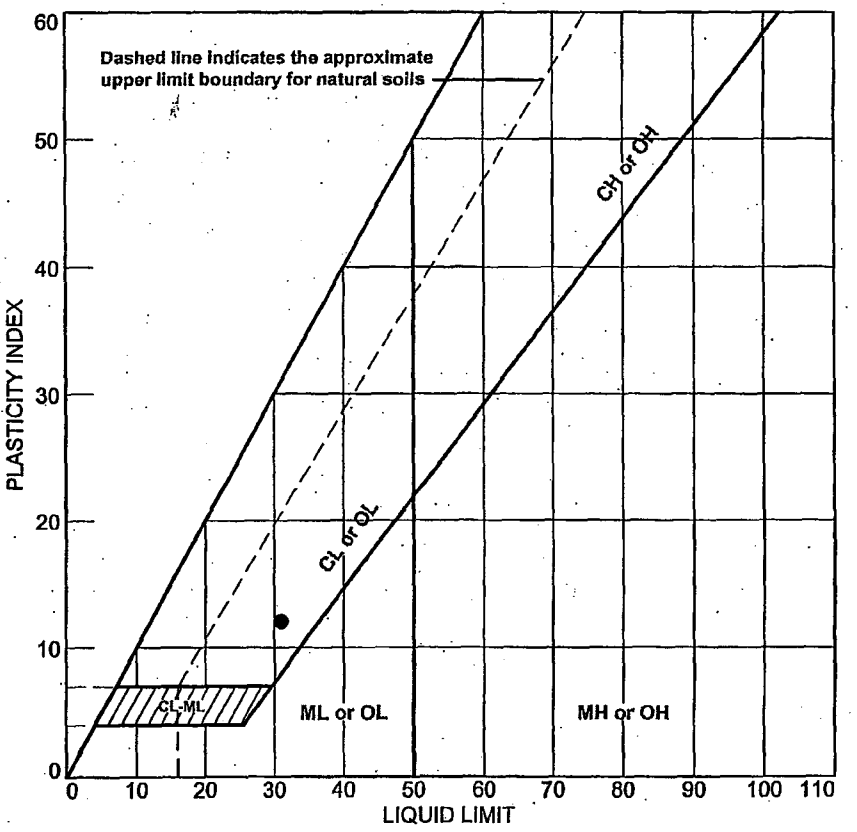
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	37.01	37.50			
Dry+Tare	35.83	36.29			
Tare	28.34	28.38			
Moisture	15.8	15.3			

MH 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 328	STP-040 (SS-27)	159'-160'	11/6/2006	CL	Lean Clay with Sand	25.4	31	12

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:RF
ASTM D4318-05

4-3-07

KAW 4/3/07

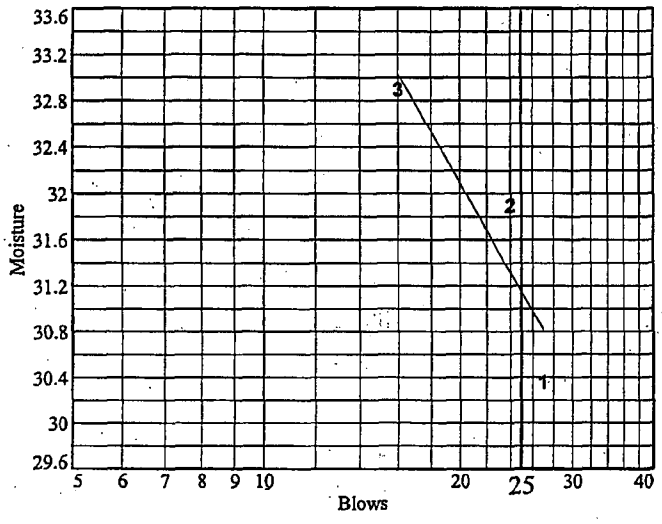
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 328
Depth: 159'-160' **Sample Number:** STP-040 (SS-27)
Material Description: Lean Clay with Sand
Date: 11/6/2006 **USCS Class.:** CL
Testing Remarks: Tested By:TH Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	40.34	39.15	38.47			
Dry+Tare	37.54	36.55	35.94			
Tare	28.32	28.40	28.25			
# Blows	27	24	16			
Moisture	30.4	31.9	32.9			



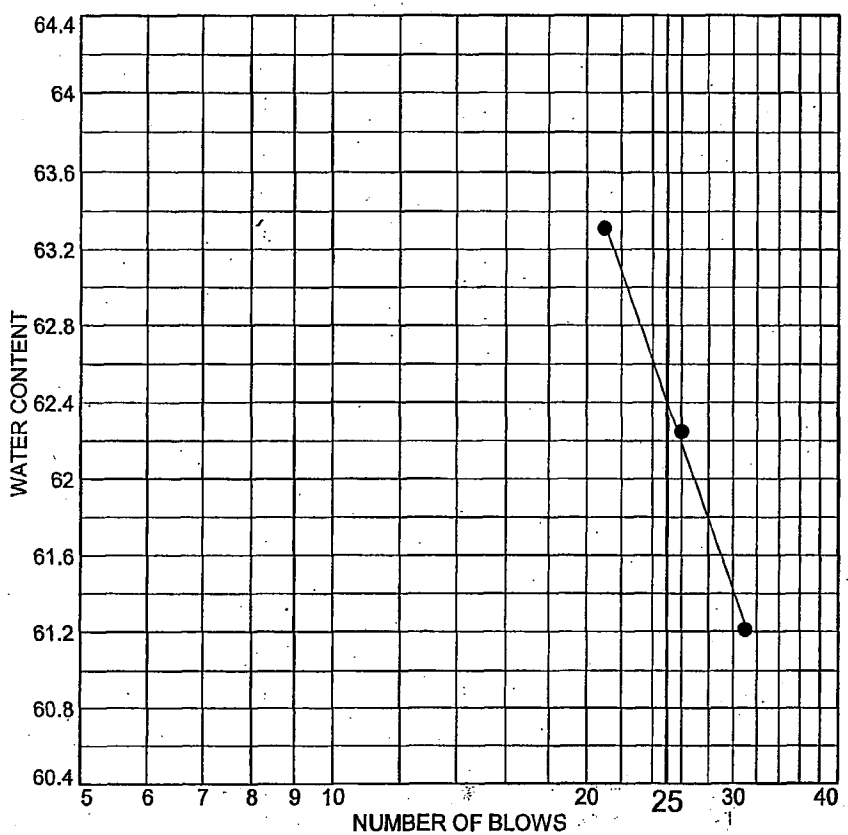
Liquid Limit= 31
Plastic Limit= 19
Plasticity Index= 12
Natural Moisture= 25.4
Liquidity Index= 0.5

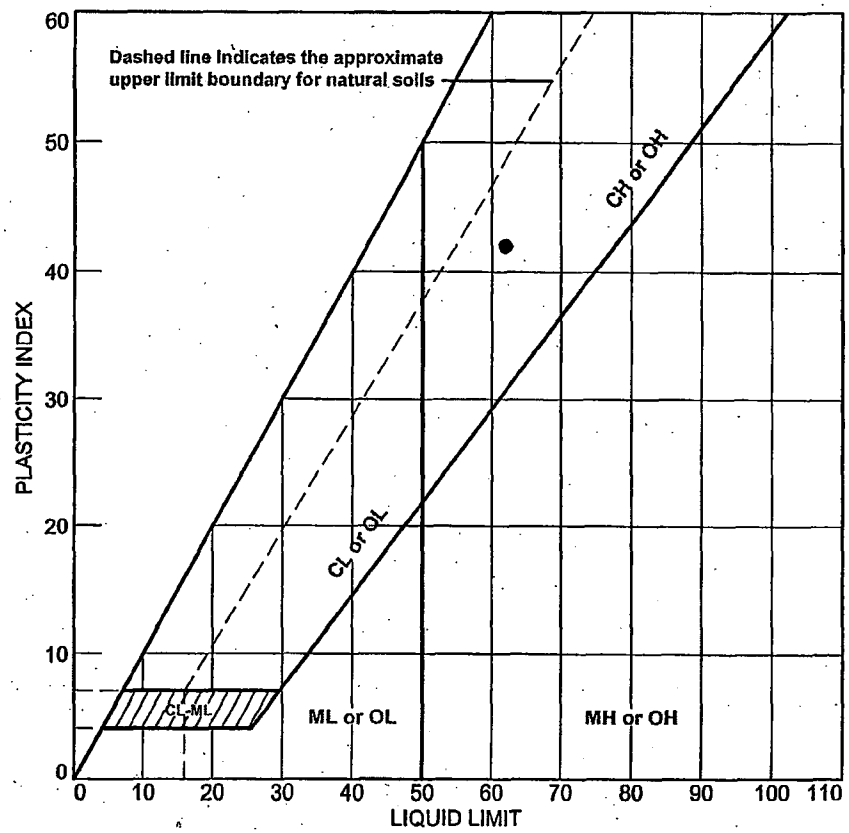
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	37.01	35.62			
Dry+Tare	35.43	34.36			
Tare	27.21	27.61			
Moisture	19.2	18.7			

MAK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 328	STP-041 (SS-29)	178.5'-180'	11/7/2006	CH	Fat Clay	23.6	62	42

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH Reviewed By:RF
ASTM D4318-05

4-3-07

KAW 4/3/07

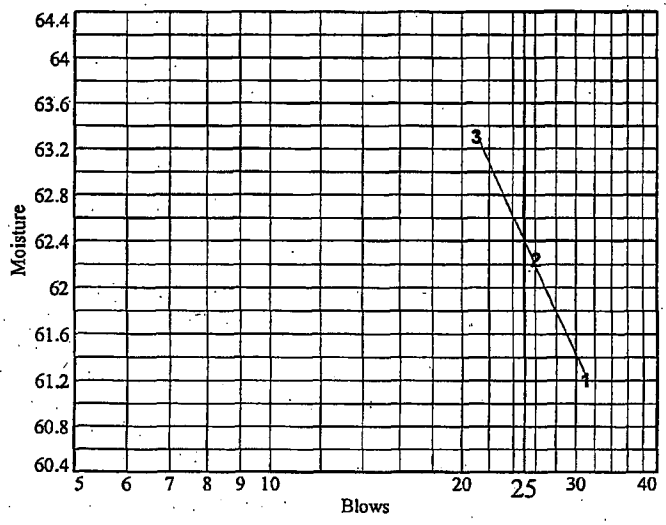
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 328
Depth: 178.5'-180'
Sample Number: STP-041 (SS-29)
Material Description: Fat Clay
Date: 11/7/2006
USCS Class.: CH
Testing Remarks: Tested By:TH Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	35.09	35.99	37.19			
Dry+Tare	32.06	32.89	33.29			
Tare	27.11	27.91	27.13			
# Blows	31	26	21			
Moisture	61.2	62.2	63.3			



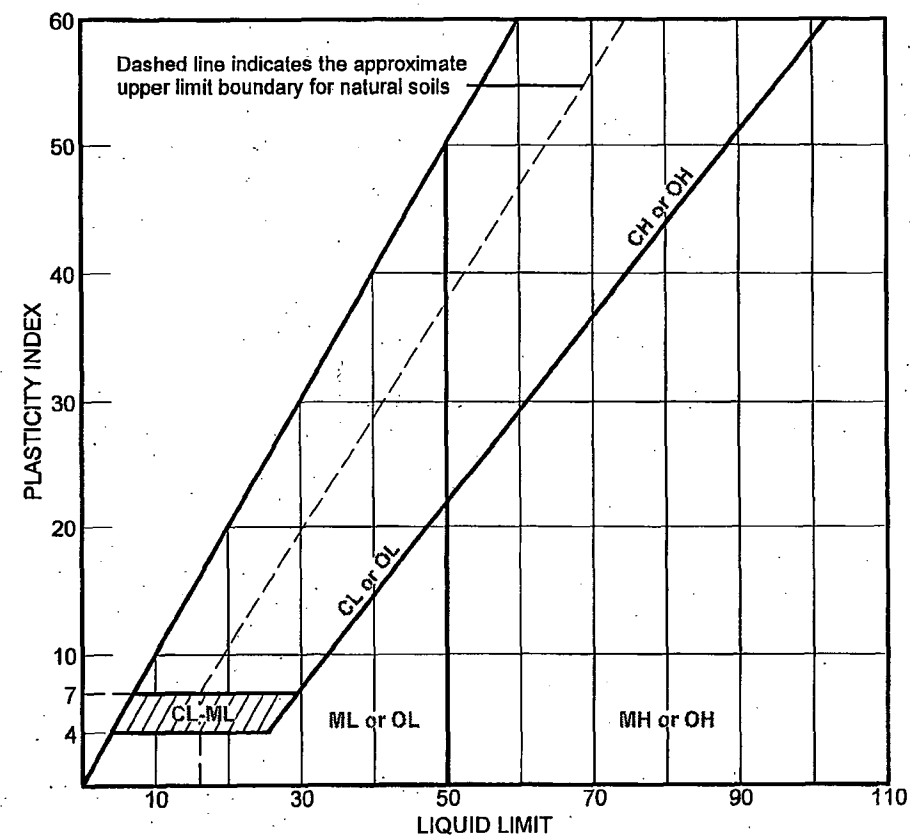
Liquid Limit= 62
Plastic Limit= 20
Plasticity Index= 42
Natural Moisture= 23.6
Liquidity Index= 0.1

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.63	35.94			
Dry+Tare	34.36	34.63			
Tare	28.09	28.27			
Moisture	20.3	20.6			

MAT 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-330	UD-3	63' to 65'	3-13-07	SP	Poorly graded sand	25.2	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH KAW 4/13/07
ASTM D4318-05

KAW 4/13/07

LIQUID AND PLASTIC LIMIT TEST DATA

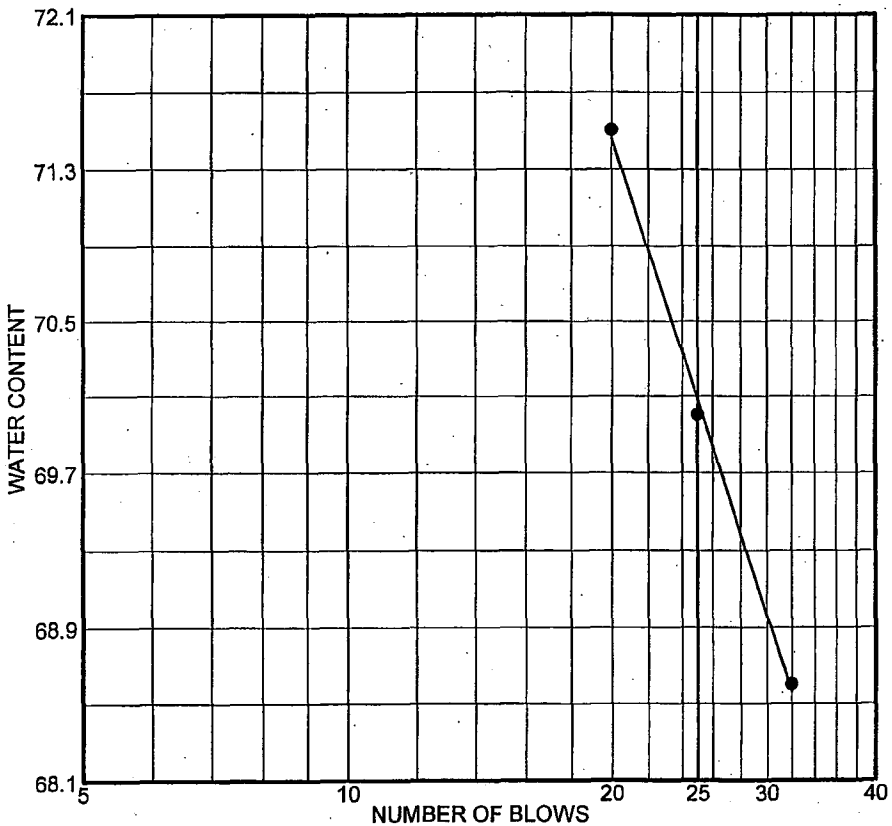
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

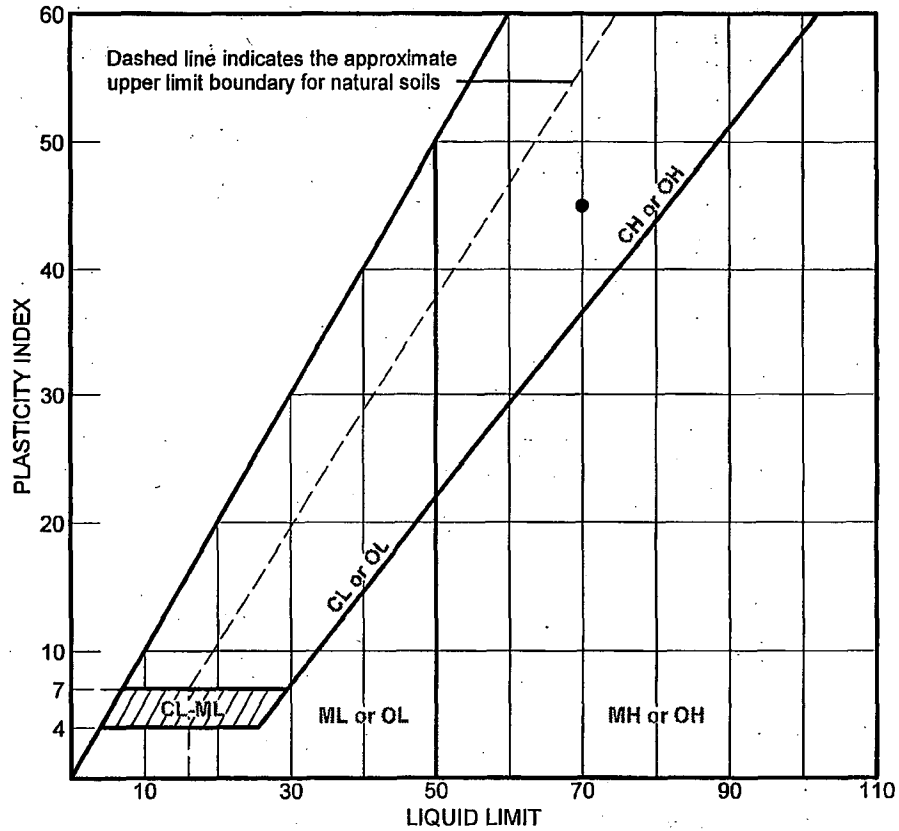
Sample Data

Source: B-330
Sample No.: UD-3
Elev. or Depth: 63' to 65' **Sample Length(in./cm.):**
Location: B-330
Description: Poorly graded sand
Date: 3-13-07 **Natural Moisture:** 25.2
USCS Class.: SP **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-332	UD-1	3' to 5'	2-22-07	CH	Fat clay	23.1	70	45

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05 KAW 4/13/07

KAW 4/13/07

LIQUID AND PLASTIC LIMIT TEST DATA

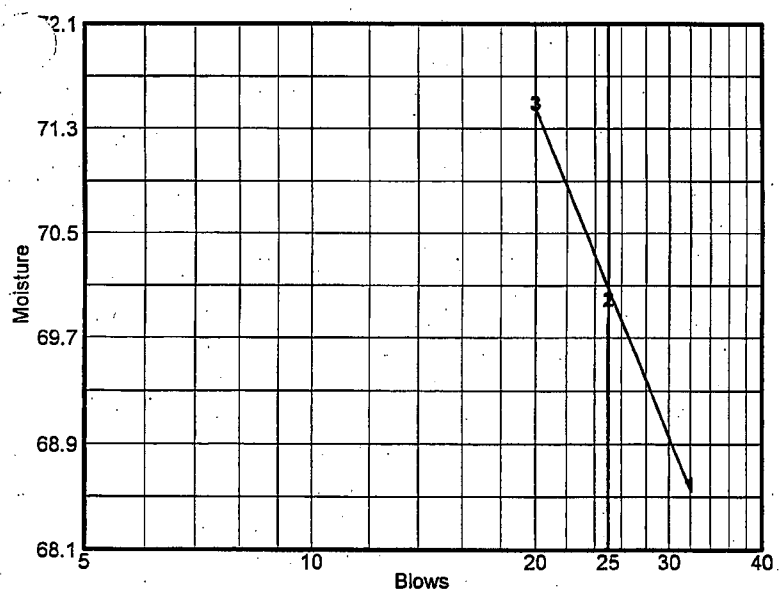
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-332
Sample No.: UD-1
Elev. or Depth: 3' to 5' **Sample Length(in./cm.):**
Location: B-332
Description: Fat clay
Date: 2-22-07 **Natural Moisture:** 23.1
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	12.79	15.81	16.32			
Dry+Tare	9.38	11.12	11.31			
Tare	4.41	4.42	4.30			
# Blows	32	25	20			
Moisture	68.6	70.0	71.5			

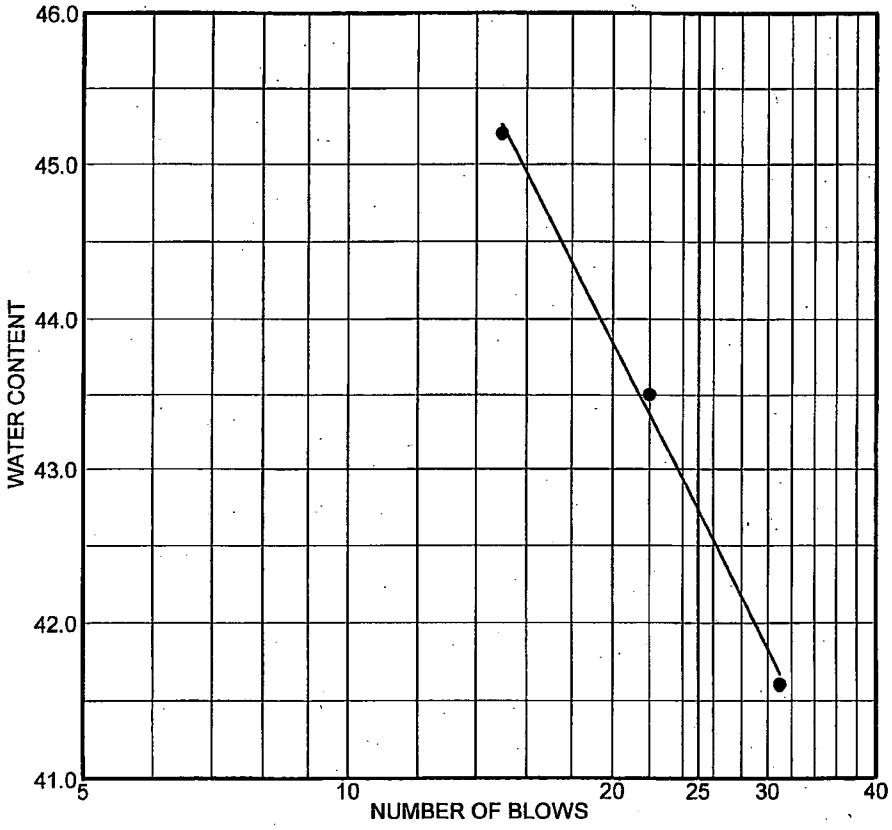


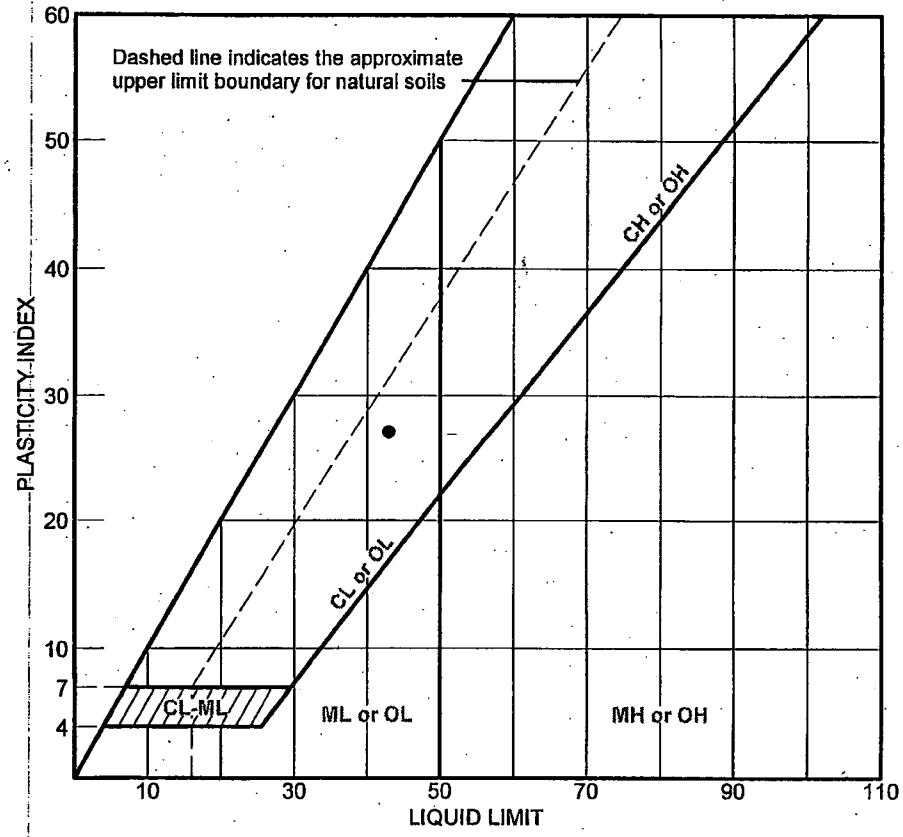
Liquid Limit= 70
Plastic Limit= 25
Plasticity Index= 45

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	14.43	13.03			
Dry+Tare	13.39	12.39			
Tare	9.08	9.90			
Moisture	24.1	25.7			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-333	UD-1	8' to 10'	2-19-07	CL	Lean clay	23.7	43	27

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

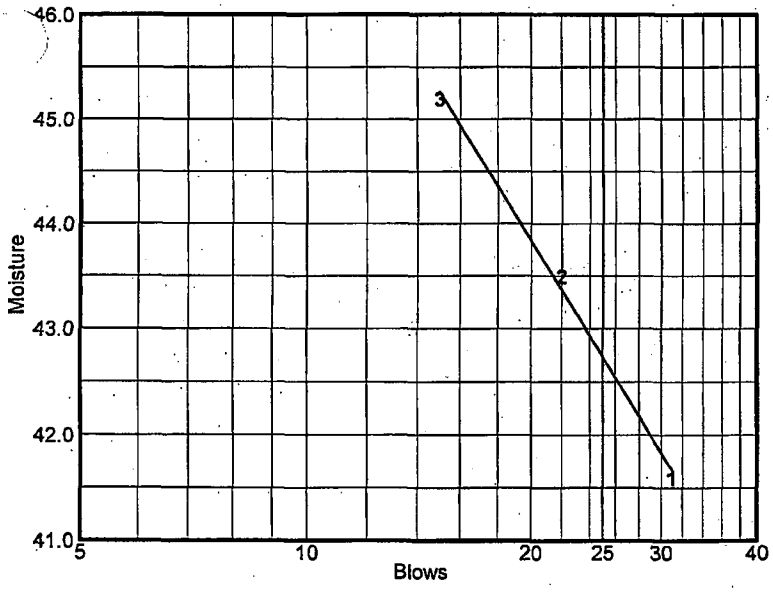
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-333
Sample No.: UD-1
Elev. or Depth: 8' to 10' **Sample Length(in./cm.):**
Location: B-333
Description: Lean clay
Date: 2-19-07 **Natural Moisture:** 23.7
USCS Class.: CL **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	29.41	30.83	30.09			
Dry+Tare	23.92	24.75	24.16			
Tare	10.73	10.76	11.04			
# Blows	31	22	15			
Moisture	41.6	43.5	45.2			

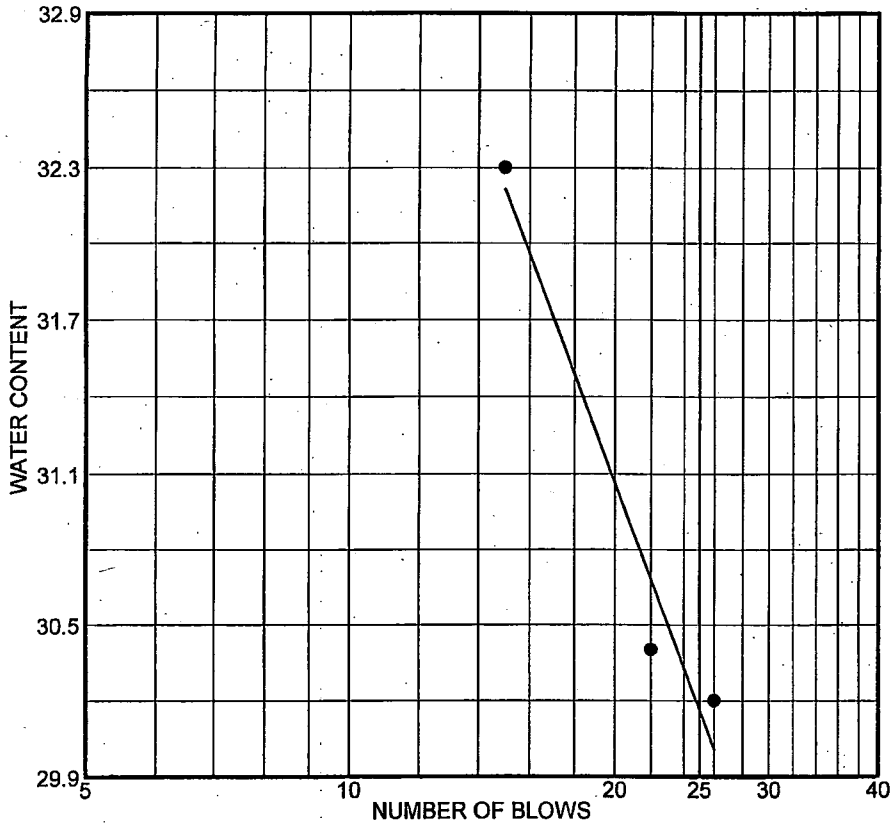


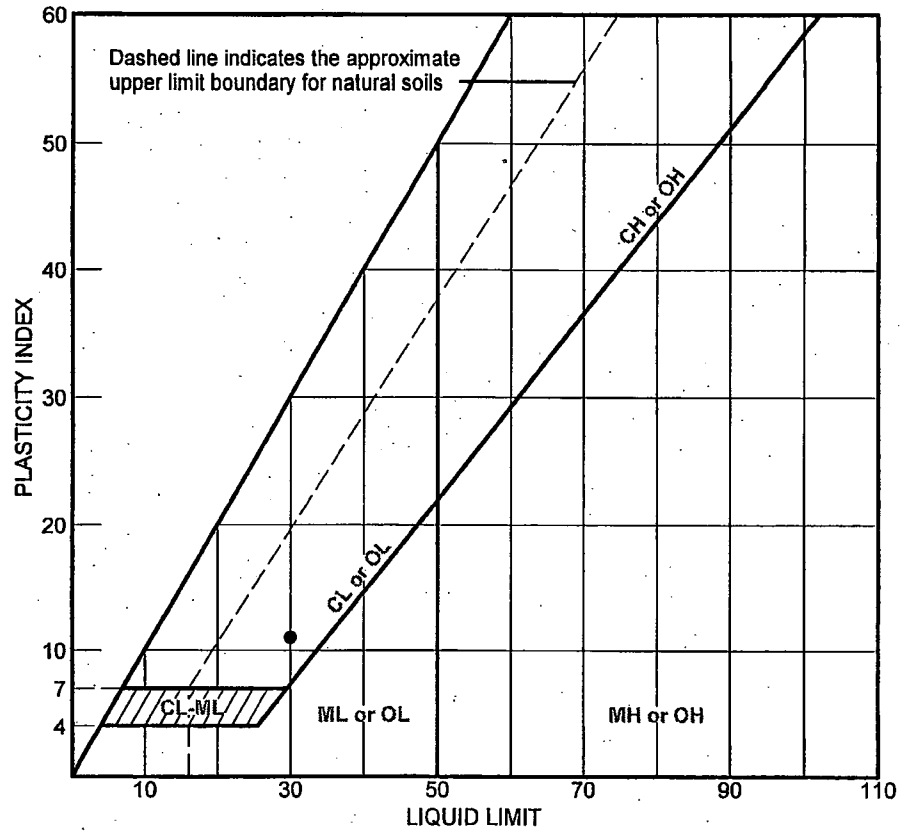
Liquid Limit= 43
Plastic Limit= 16
Plasticity Index= 27

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	24.70	23.68			
Dry+Tare	22.86	22.00			
Tare	10.83	11.51			
Moisture	15.3	16.0			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-333	UD-2	18' to 20'	2-19-07	CL	Lean clay	23.0	30	11

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05 KAW 4/3/07

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

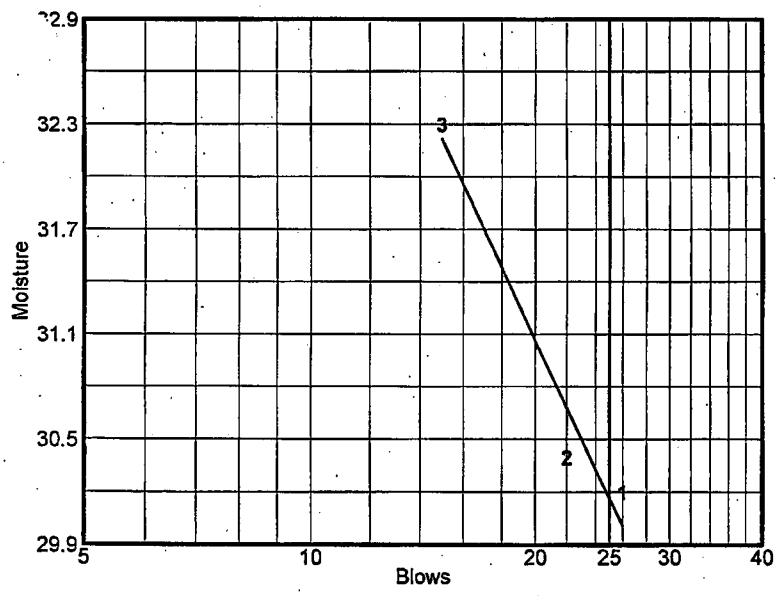
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-333
Sample No.: UD-2
Elev. or Depth: 18' to 20' **Sample Length(in./cm.):**
Location: B-333
Description: Lean clay
Date: 2-19-07 **Natural Moisture:** 23.0
USCS Class.: CL **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	34.77	34.23	35.32			
Dry+Tare	29.30	28.78	29.53			
Tare	11.18	10.85	11.58			
# Blows	26	22	15			
Moisture	30.2	30.4	32.3			

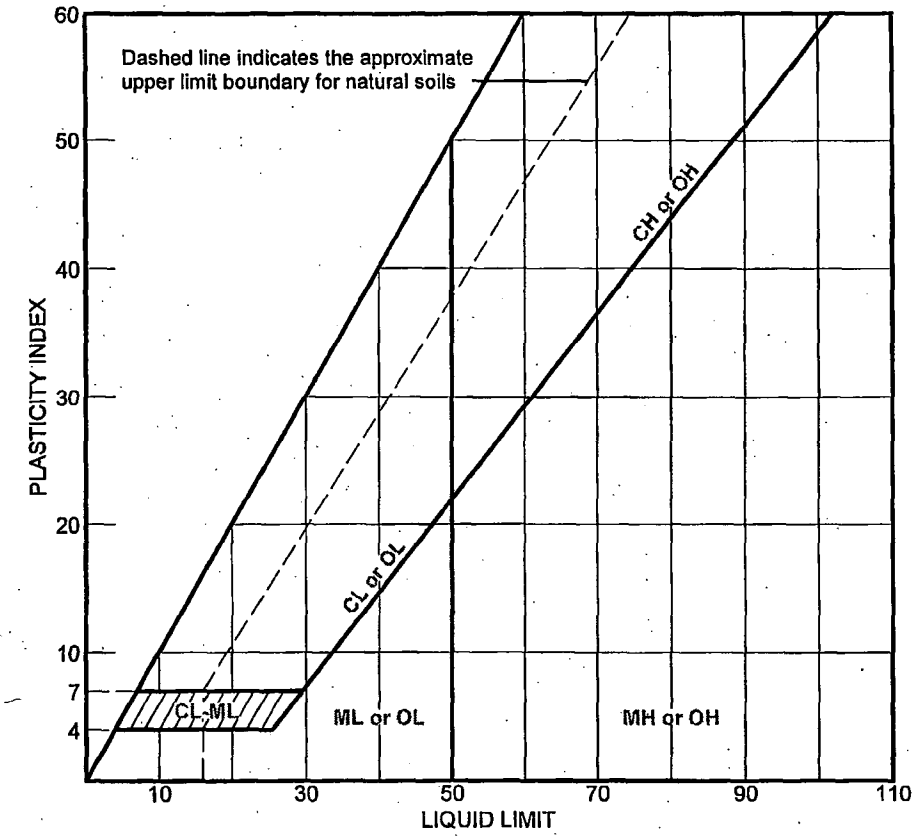


Liquid Limit= 30
Plastic Limit= 19
Plasticity Index= 11

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	26.42	26.67			
Dry+Tare	23.96	24.34			
Tare	11.01	11.67			
Moisture	19.0	18.4			

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-338	UD-1	28' to 30'	2-19-07	SM	Silty sand	24.1	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

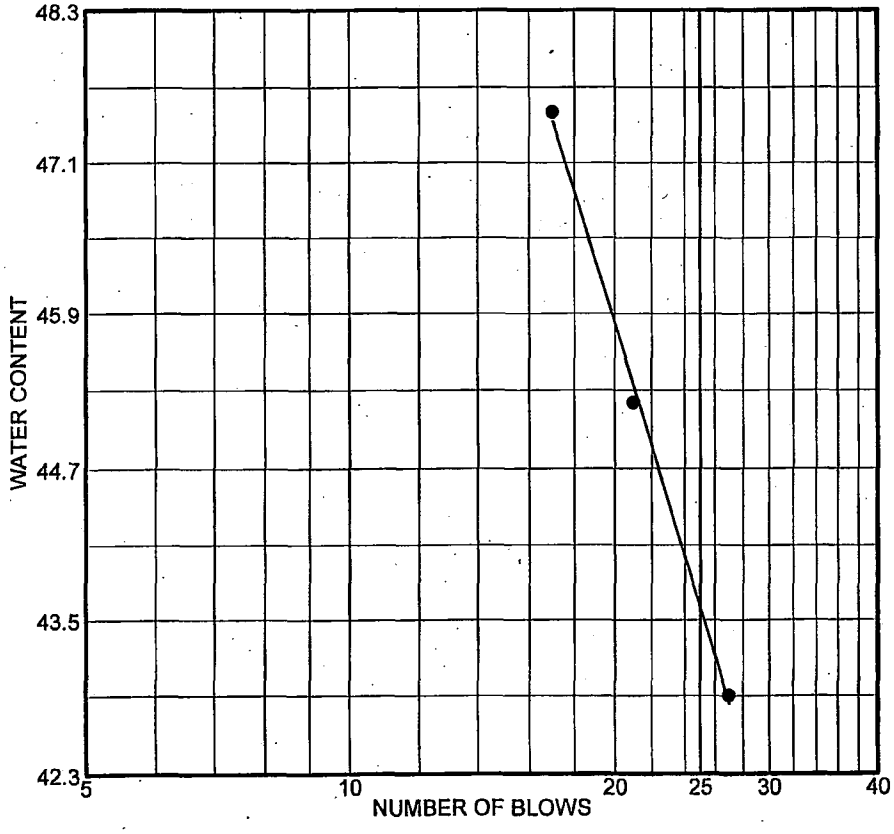
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

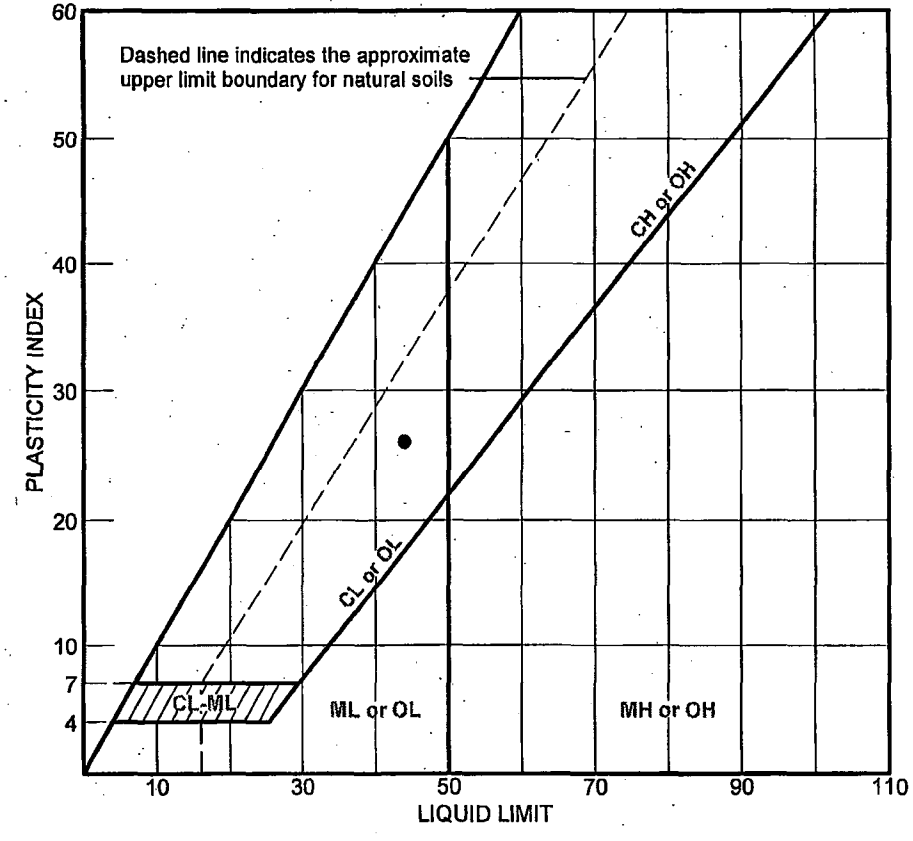
Sample Data

Source: B-338
Sample No.: UD-1
Elev. or Depth: 28' to 30' **Sample Length(in./cm.):**
Location: B-338
Description: Silty sand
Date: 2-19-07 **Natural Moisture:** 24.1
USCS Class.: SM **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-338	UD-2	48' to 50'	2-19-07	CL	Lean clay	26.1	44	26

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM 4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

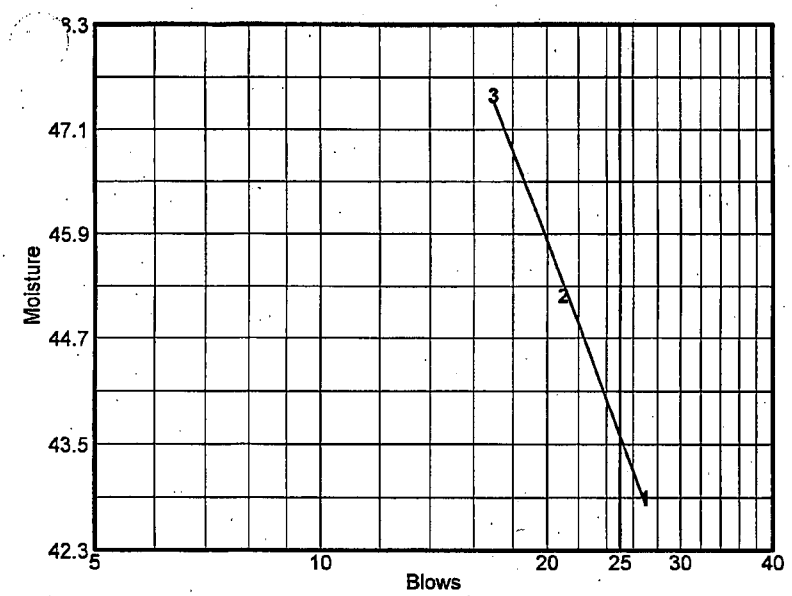
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-338
Sample No.: UD-2
Elev. or Depth: 48' to 50' **Sample Length(in./cm.):**
Location: B-338
Description: Lean clay
Date: 2-19-07 **Natural Moisture:** 26.1
USCS Class.: CL **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM 4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	26.85	27.90	27.32			
Dry+Tare	22.06	22.56	22.08			
Tare	10.89	10.74	11.06			
# Blows	27	21	17			
Moisture	42.9	45.2	47.5			

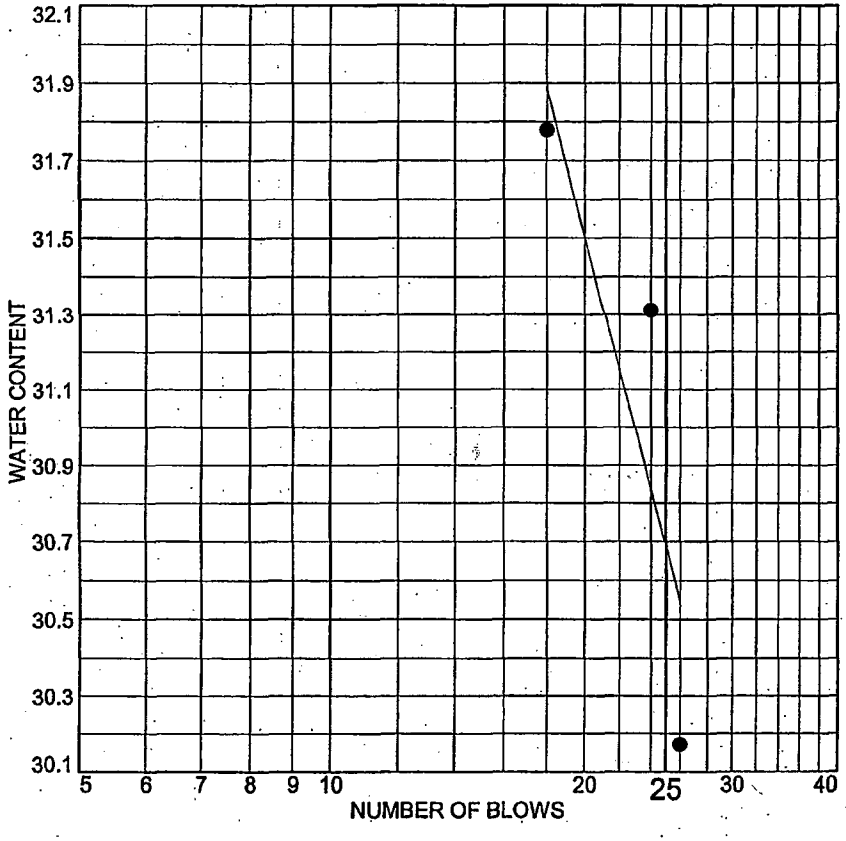


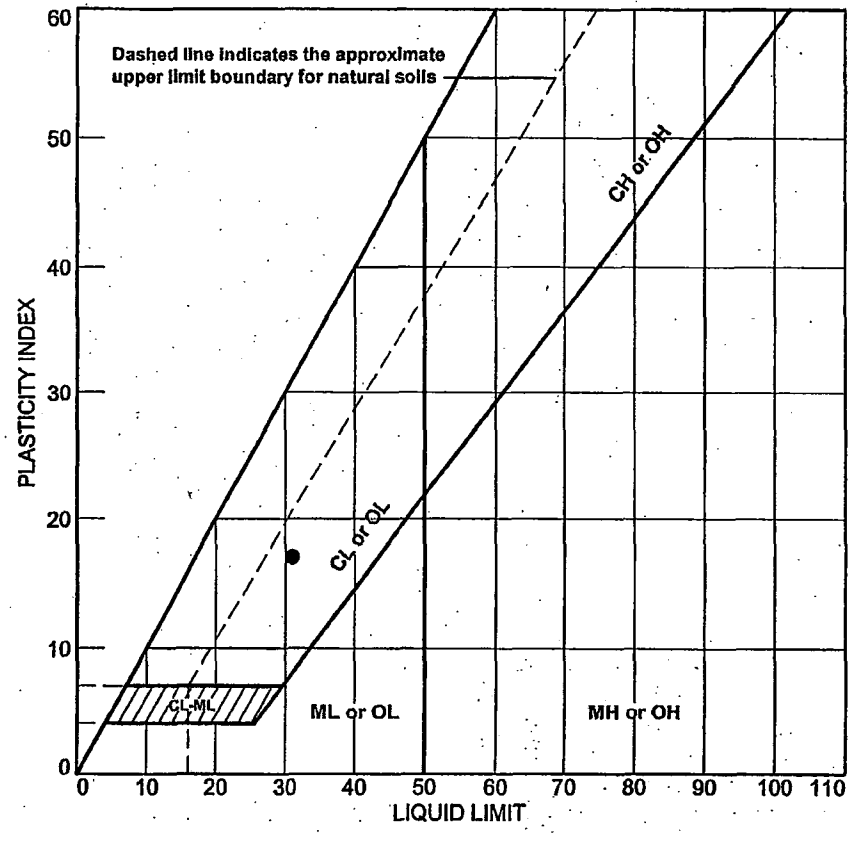
Liquid Limit= 44
Plastic Limit= 18
Plasticity Index= 26

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	18.12	19.64			
Dry+Tare	16.99	18.34			
Tare	10.80	11.20			
Moisture	18.3	18.2			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 343	STP-275 (UD-7)	173'-175'	12/19/2006	CL	Lean Clay	15.6	31	17

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF

ASTM D4318-05

RF 4/3/07

KAW 4/3/07

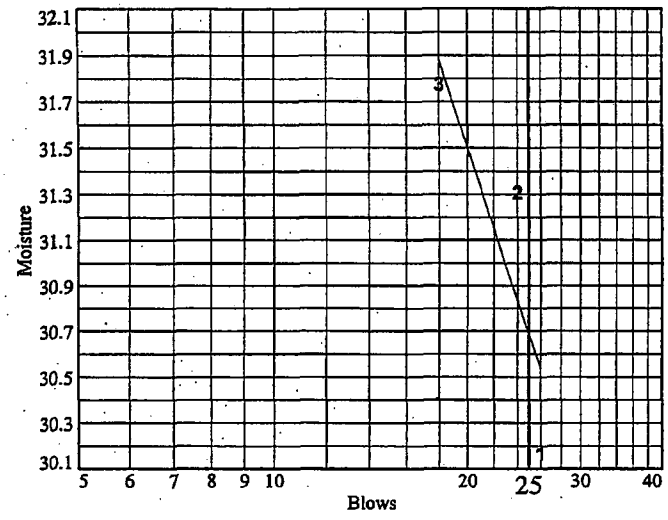
LIQUID AND PLASTIC LIMIT TEST DATA

4/3/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 343
Depth: 173'-175'
Sample Number: STP-275 (UD-7)
Material Description: Lean Clay
Date: 12/19/2006
USCS Class.: CL
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	38.05	37.36	37.31			
Dry+Tare	35.76	35.14	35.13			
Tare	28.17	28.05	28.27			
# Blows	26	24	18			
Moisture	30.2	31.3	31.8			



Liquid Limit= 31
Plastic Limit= 14
Plasticity Index= 17
Natural Moisture= 15.6
Liquidity Index= 0.1

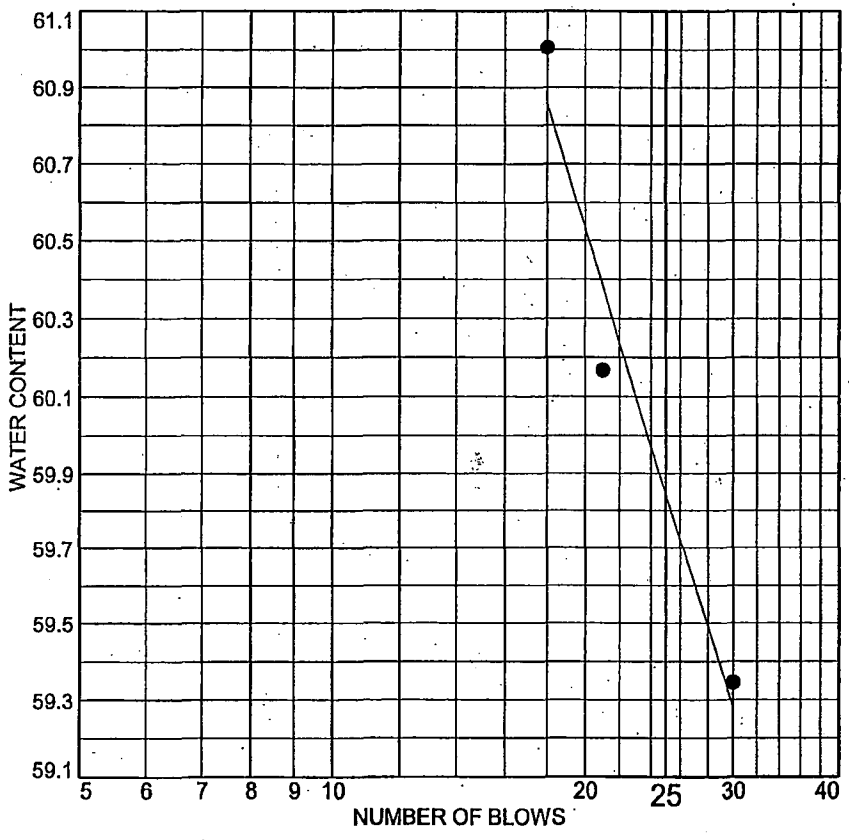
Plastic Limit Data

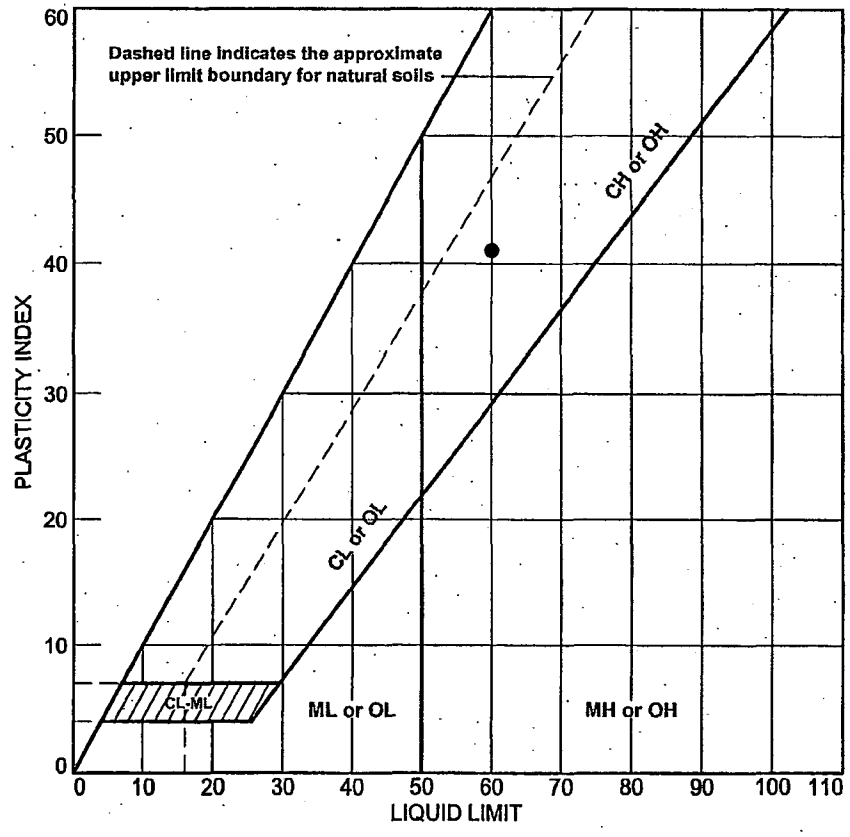
Run No.	1	2	3	4	
Wet+Tare	36.19	37.96			
Dry+Tare	35.19	36.73			
Tare	28.24	28.28			
Moisture	14.4	14.6			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
398.4	368.5	176.5	15.6

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 344	STP-043 (SS-3)	3.0'-4.5'	11/15/2006	CH	Fat Clay	24.0	60	41

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH
ASTM D4318-05

Reviewed By:ST

MA 4-3-07

KAW 4/3/07

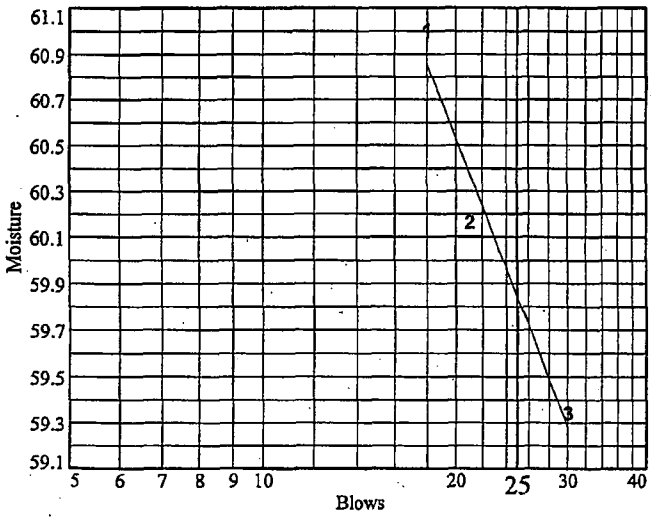
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 344
Depth: 3.0'-4.5'
Sample Number: STP-043 (SS-3)
Material Description: Fat Clay
Date: 11/15/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.72	37.79	36.48			
Dry+Tare	34.2	34.21	33.4			
Tare	28.43	28.26	28.21			
# Blows	18	21	30			
Moisture	61.0	60.2	59.3			



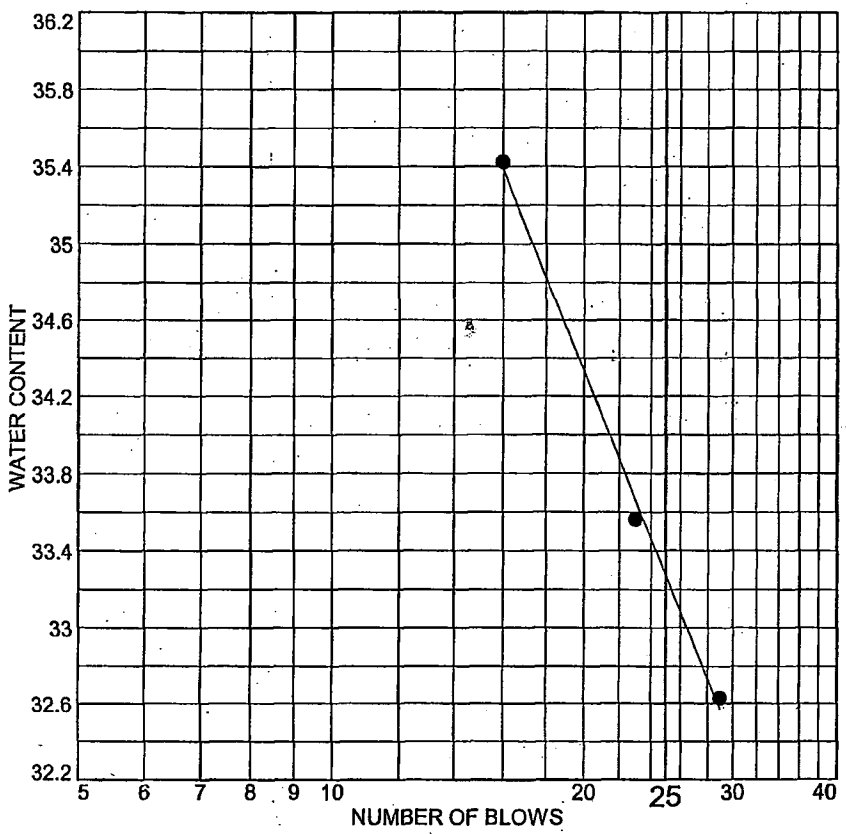
Liquid Limit= 60
Plastic Limit= 19
Plasticity Index= 41
Natural Moisture= 24.0
Liquidity Index= 0.1

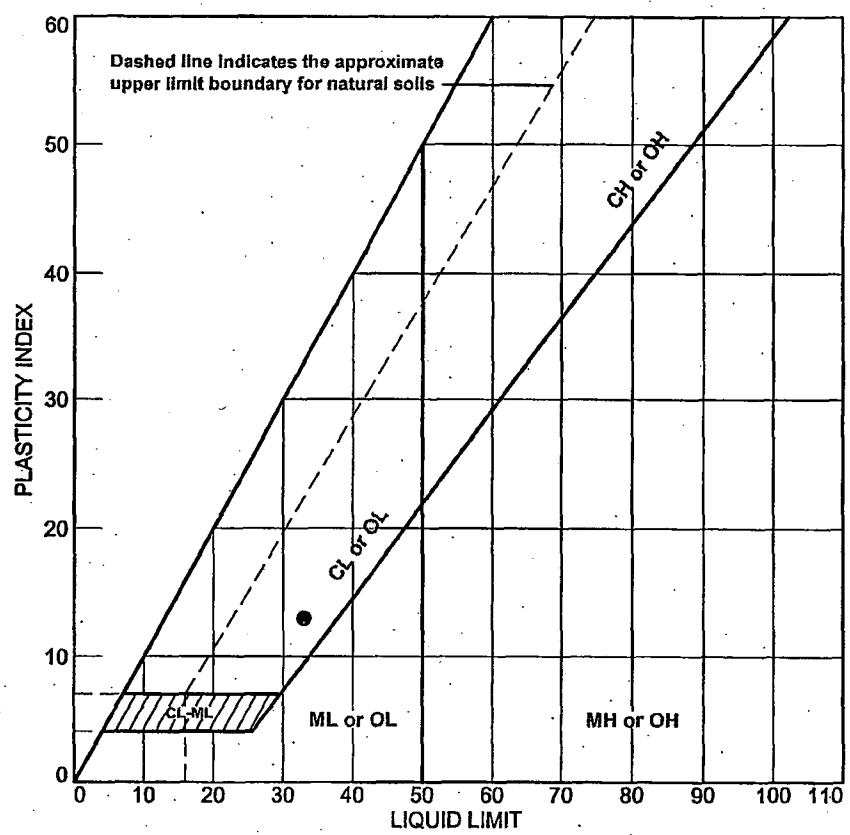
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.64	35.82			
Dry+Tare	34.4	34.61			
Tare	28.07	28.36			
Moisture	19.6	19.4			

MA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 344	STP-044	9.0'-10.5'	11/15/2006	CL	Lean Clay	24.6	33	13
		(SS-7)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:TH/AC Reviewed By:ST
ASTM D4318-05

MA 4-3-07

KAW 4/3/07

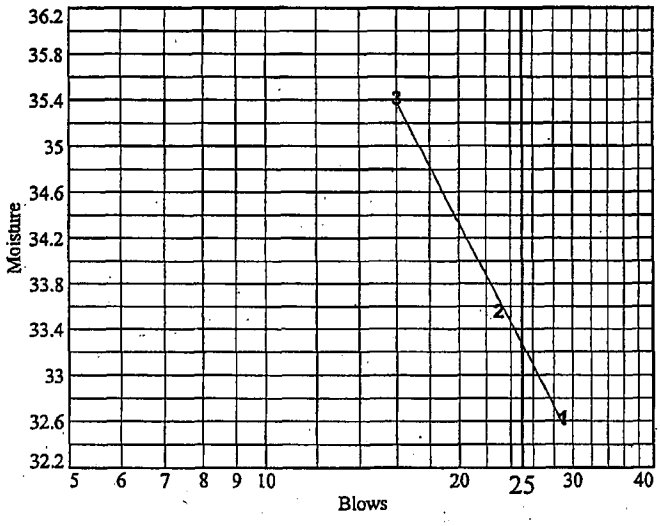
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 344
Depth: 9.0'-10.5'
Sample Number: STP-044 (SS-7)
Material Description: Lean Clay
Date: 11/15/2006
USCS Class.: CL
Testing Remarks: Tested By:TH/AC Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.71	35.71	36.15			
Dry+Tare	35.39	33.77	33.38			
Tare	28.28	27.99	25.56			
# Blows	29	23	16			
Moisture	32.6	33.6	35.4			



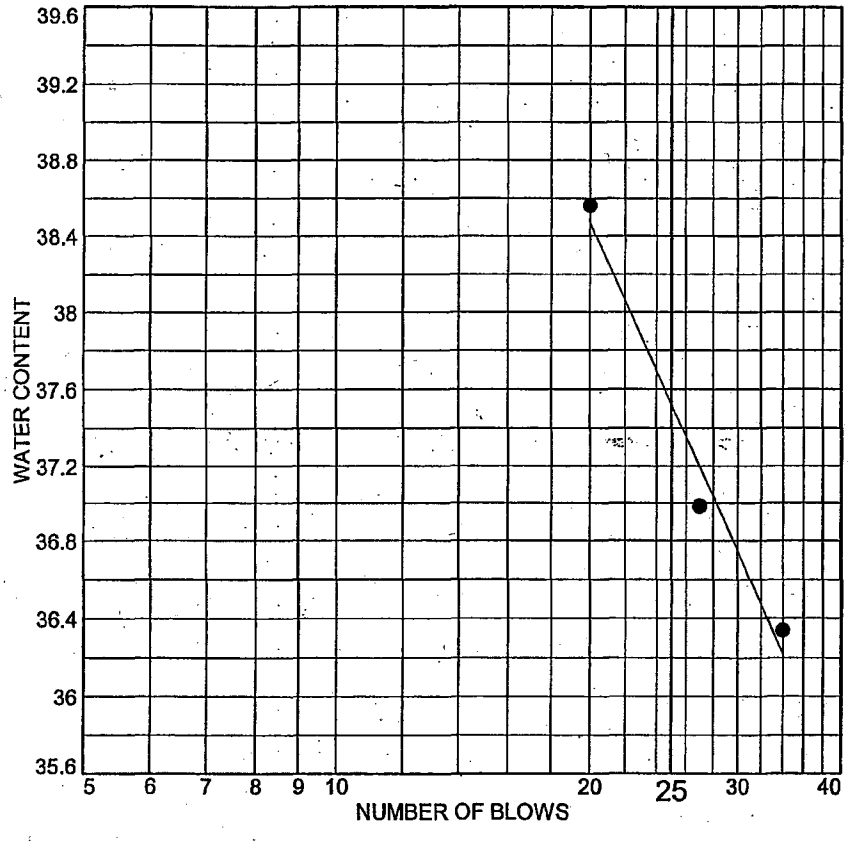
Liquid Limit= 33
Plastic Limit= 20
Plasticity Index= 13
Natural Moisture= 24.6
Liquidity Index= 0.4

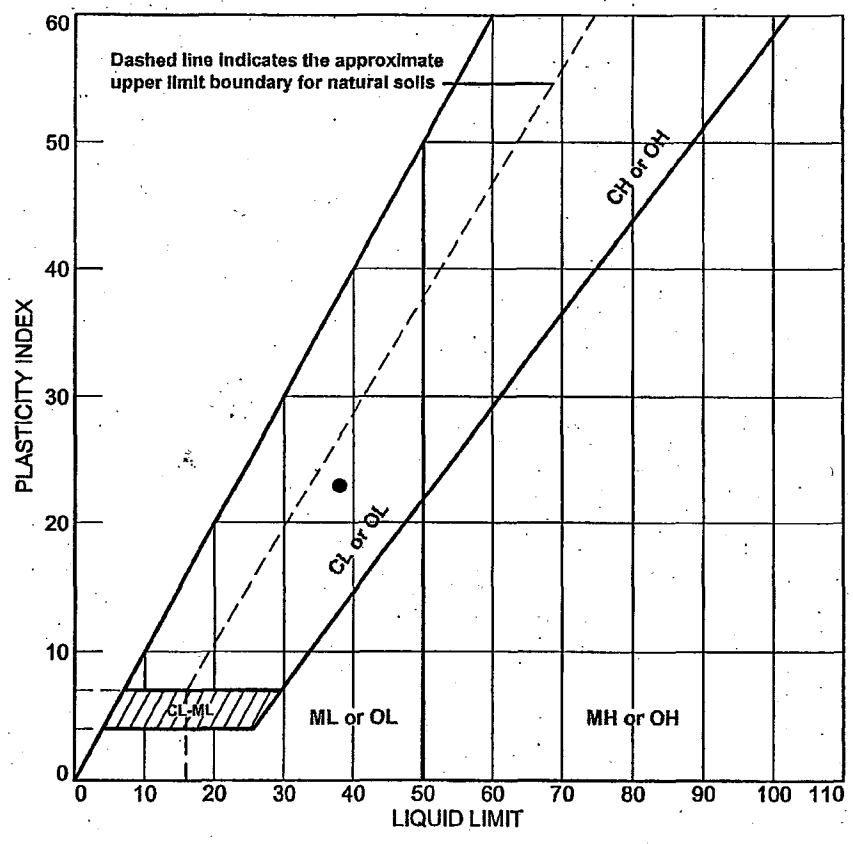
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	29.39	32.20			
Dry+Tare	28.09	30.89			
Tare	21.58	24.36			
Moisture	20.0	20.1			

MK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 344	STP-047	48.5'-50.0'	11/15/2006	CL	Lean Clay	27.7	38	23
		(SS-17)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

MA 4-3-07

KAW 4/3/07

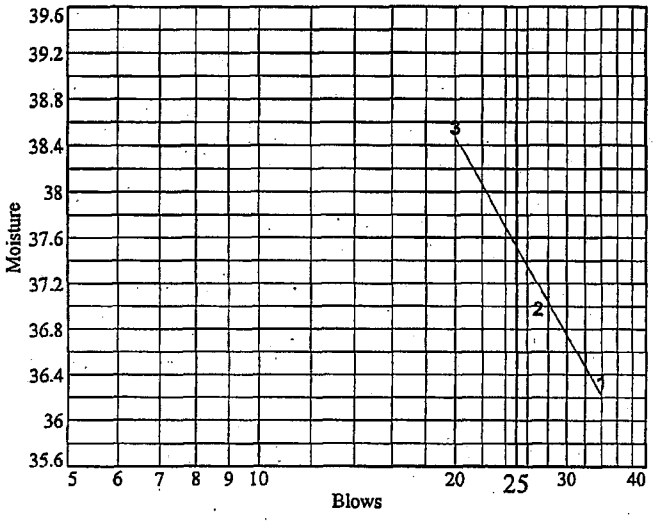
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 344
Depth: 48.5'-50.0' **Sample Number:** STP-047 (SS-17)
Material Description: Lean Clay
Date: 11/15/2006 **USCS Class.:** CL **AASHTO Class.:** A-6(20)
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	38.17	37.69	38.02			
Dry+Tare	35.55	35.09	35.34			
Tare	28.34	28.06	28.39			
# Blows	34	27	20			
Moisture	36.3	37.0	38.6			



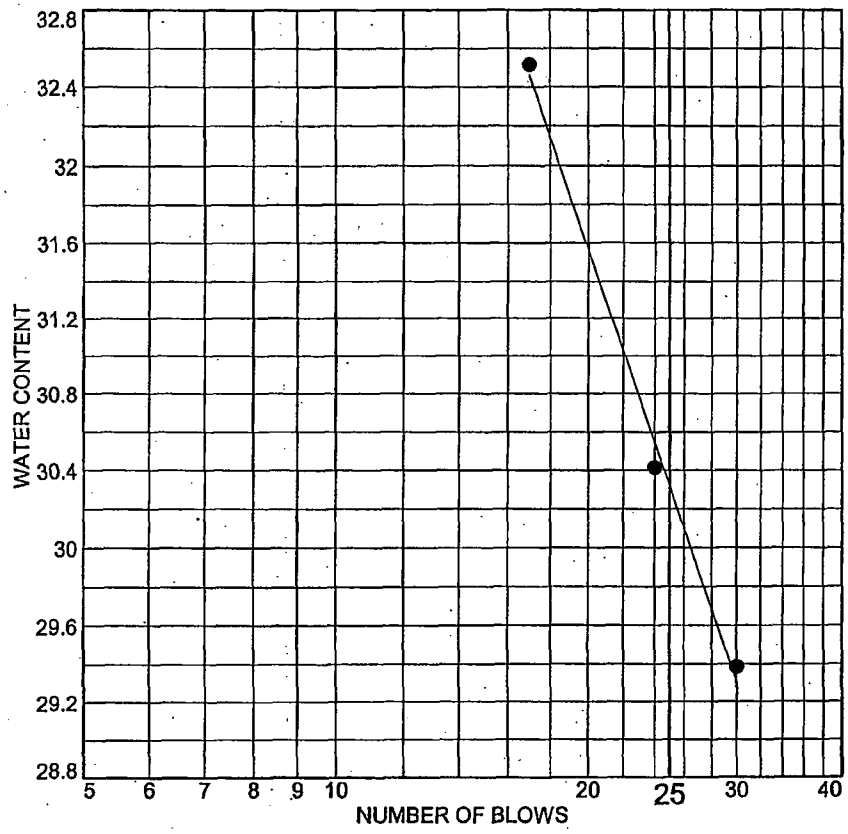
Liquid Limit= 38
Plastic Limit= 15
Plasticity Index= 23
Natural Moisture= 27.7
Liquidity Index= 0.6

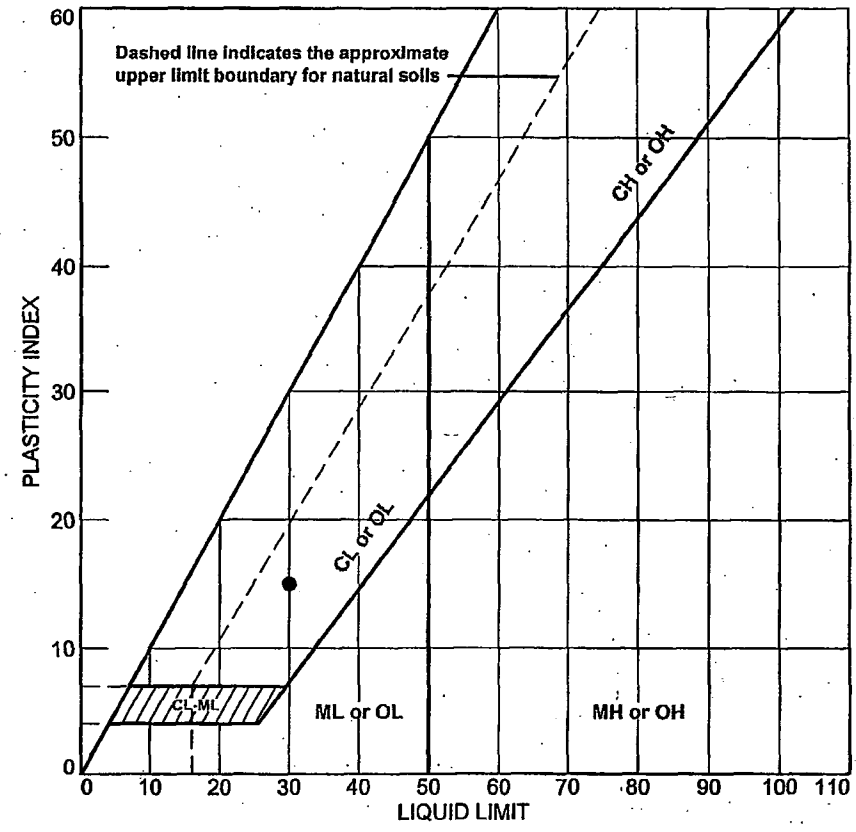
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	34.01	37.45			
Dry+Tare	32.75	36.18			
Tare	24.36	27.96			
Moisture	15.0	15.5			

MAK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 344	STP-048	58.5'-60.0'	11/15/2006	CL	Sandy Lean Clay	18.6	30	15
		(SS-19)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:ST

ASTM D4318-05

MAF 4-3-07

KAW 4/3/07

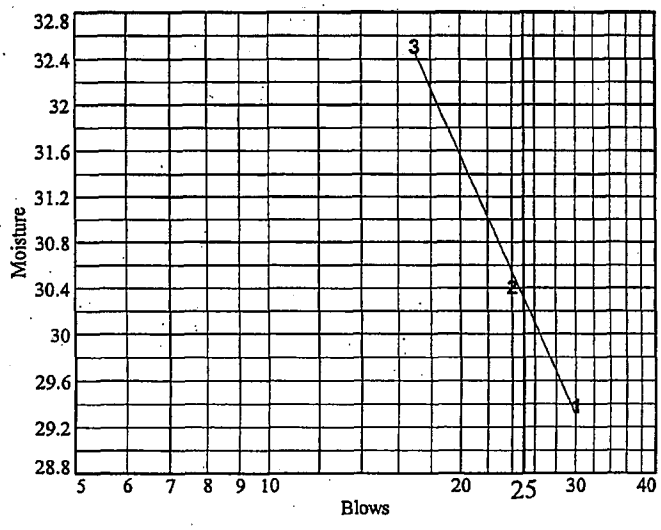
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 344
Depth: 58.5'-60.0'
Sample Number: STP-048 (SS-19)
Material Description: Sandy Lean Clay
Date: 11/15/2006
USCS Class.: CL
AASHTO Class.: A-6(5)
Testing Remarks: Tested By:AC/TH
Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	32.56	38.60	40.00			
Dry+Tare	30.08	36.03	37.09			
Tare	21.64	27.58	28.14			
# Blows	30	24	17			
Moisture	29.4	30.4	32.5			



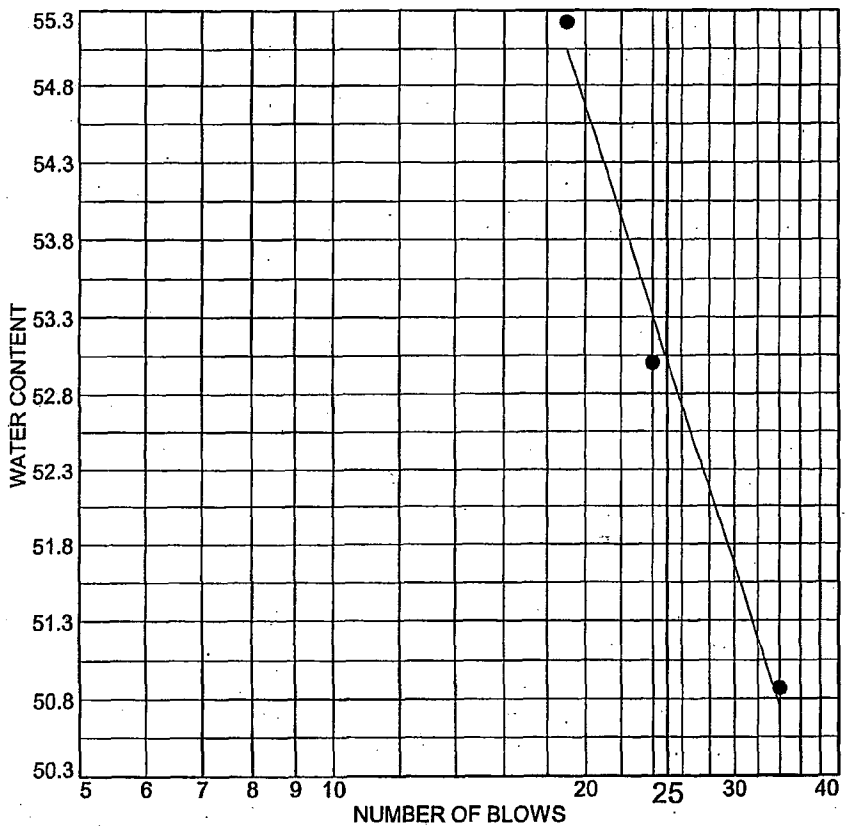
Liquid Limit= 30
Plastic Limit= 15
Plasticity Index= 15
Natural Moisture= 18.6
Liquidity Index= 0.2

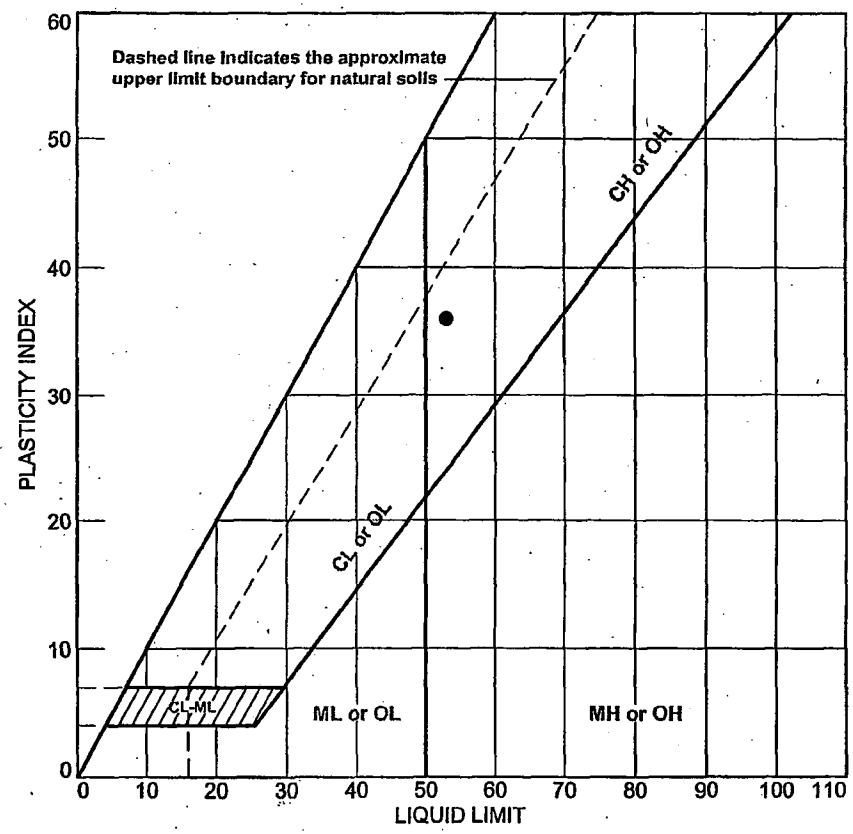
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	34.92	34.18			
Dry+Tare	34.01	33.24			
Tare	27.97	27.07			
Moisture	15.1	15.2			

MA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 344	STP-051 (SS-25)	88.5'-90.0'	11/15/2006	CH	Fat Clay	22.7	53	36

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:ST
ASTM D4318-05

4-3-07

KAW 4/3/07

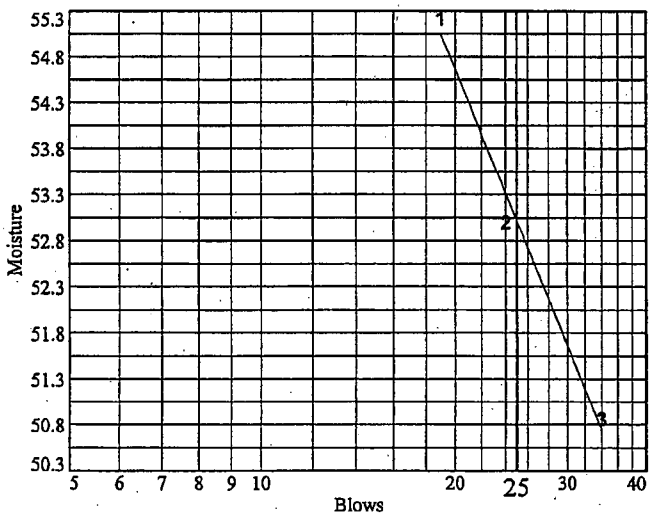
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 344
Depth: 88.5'-90.0'
Sample Number: STP-051 (SS-25)
Material Description: Fat Clay
Date: 11/15/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	34.32	37.56	31.37			
Dry+Tare	31.15	34.56	28.44			
Tare	25.41	28.90	22.68			
# Blows	19	24	34			
Moisture	55.2	53.0	50.9			



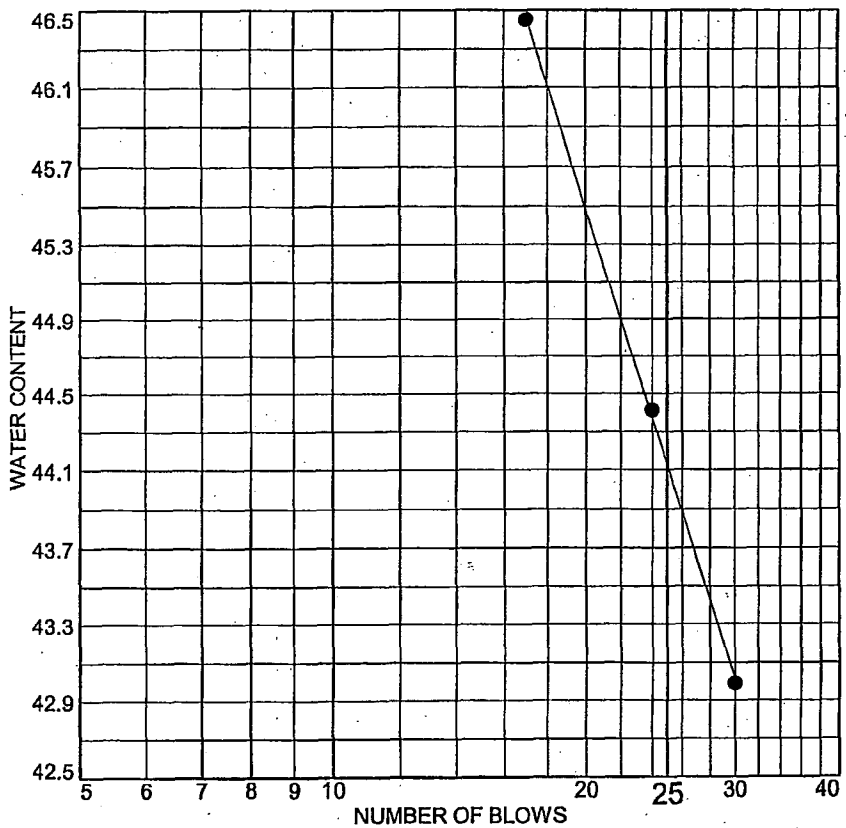
Liquid Limit= 53
Plastic Limit= 17
Plasticity Index= 36
Natural Moisture= 22.7
Liquidity Index= 0.2

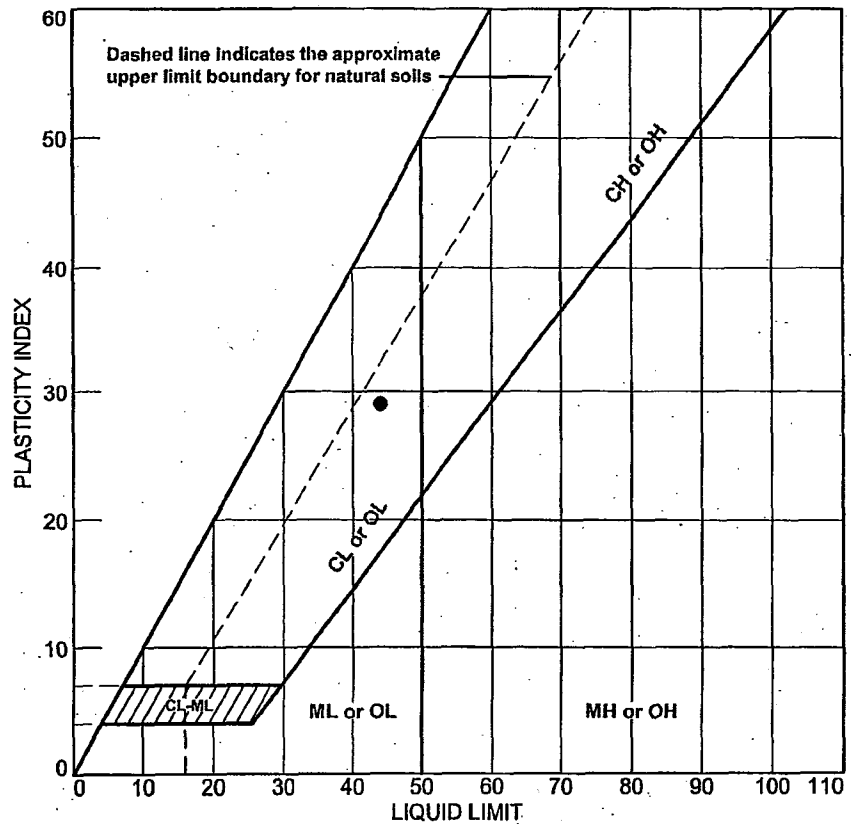
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.08	36.20			
Dry+Tare	34.92	35.07			
Tare	28.33	28.39			
Moisture	17.6	16.9			

MA
4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 344	STP-052	93.5'-95.0'	11/15/2006	CL	Lean Clay	20.7	44	29
		(SS-26)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:ST

ASTM D4318-05

4-3-07

KAW 4/3/07

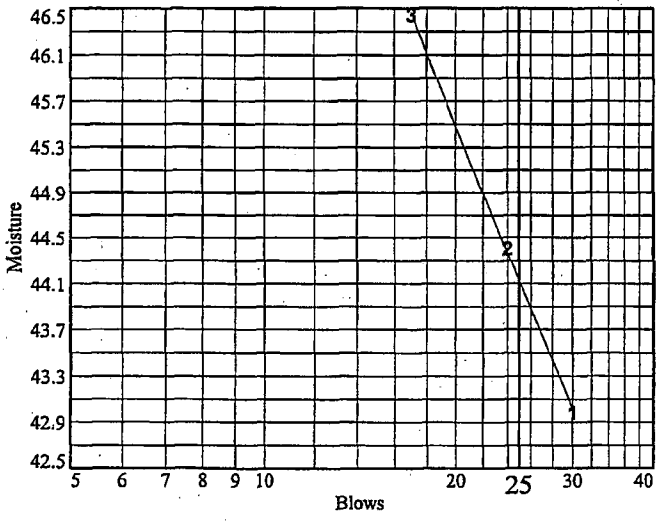
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 344
Depth: 93.5'-95.0'
Sample Number: STP-052 (SS-26)
Material Description: Lean Clay
Date: 11/15/2006
USCS Class.: CL
Testing Remarks: Tested By:AC/TH
Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.36	36.82	37.45			
Dry+Tare	33.57	33.84	34.57			
Tare	27.08	27.13	28.37			
# Blows	30	24	17			
Moisture	43.0	44.4	46.5			



Liquid Limit= 44
Plastic Limit= 15
Plasticity Index= 29
Natural Moisture= 20.7
Liquidity Index= 0.2

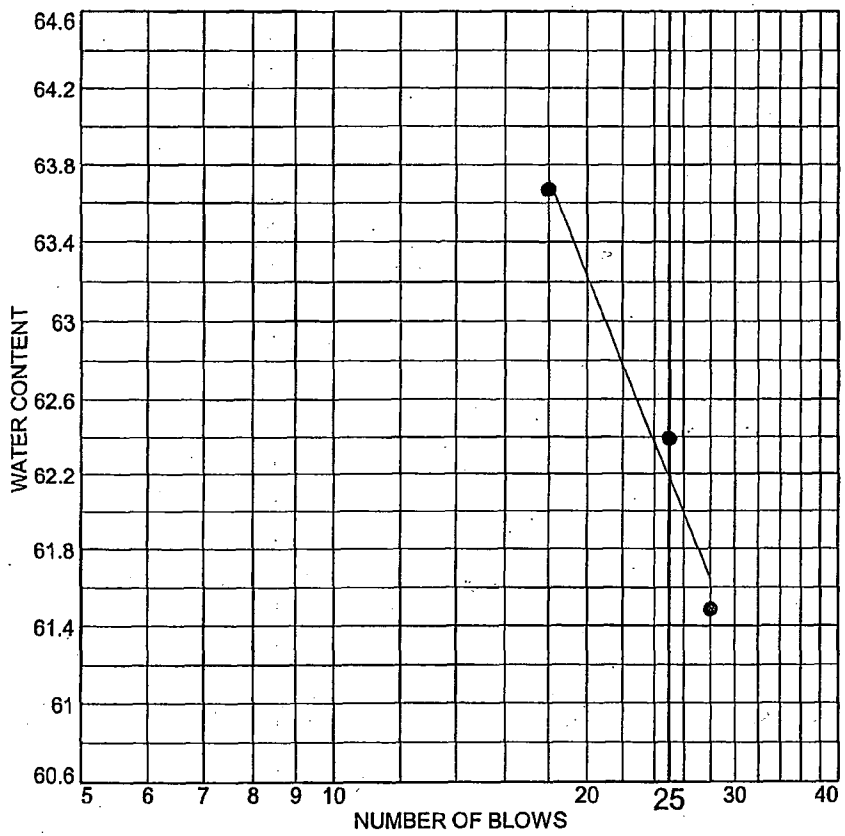
Plastic Limit Data

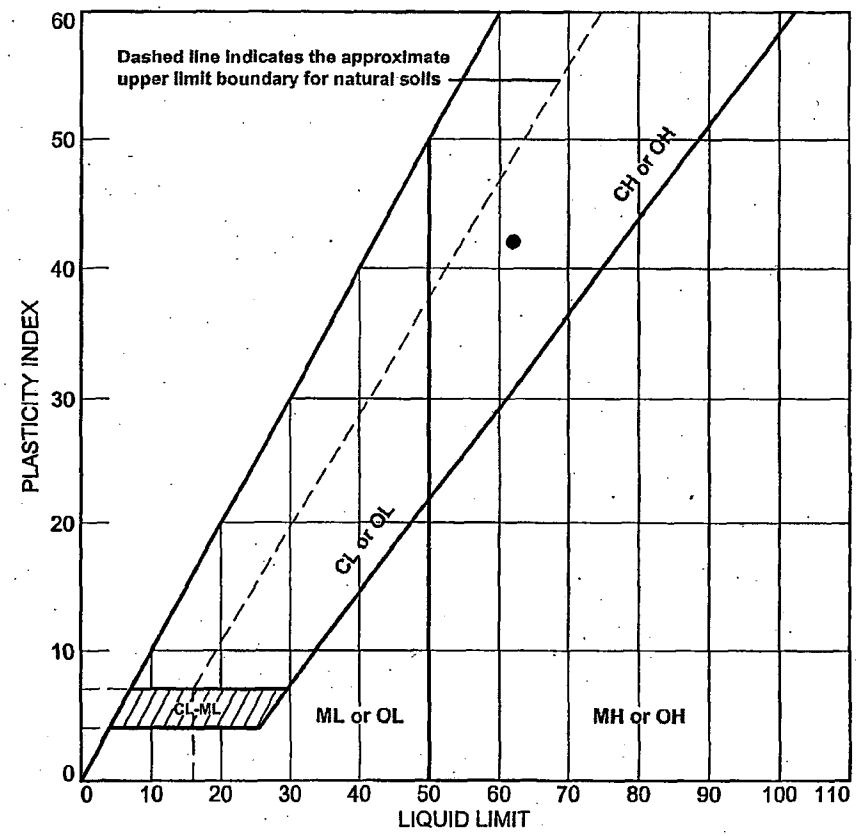
Run No.	1	2	3	4	
Wet+Tare	35.90	35.53			
Dry+Tare	34.95	34.54			
Tare	28.44	27.92			
Moisture	14.6	15.0			

MWF 4-3-07

MACTEC, Inc.

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 344	STP-053	98.5'-100.0	11/15/2006	CH	Fat Clay	29.3	62	42
		(SS-27)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:ST
ASTM D4318-05

MAT 4-3-07

KAW 4/3/07

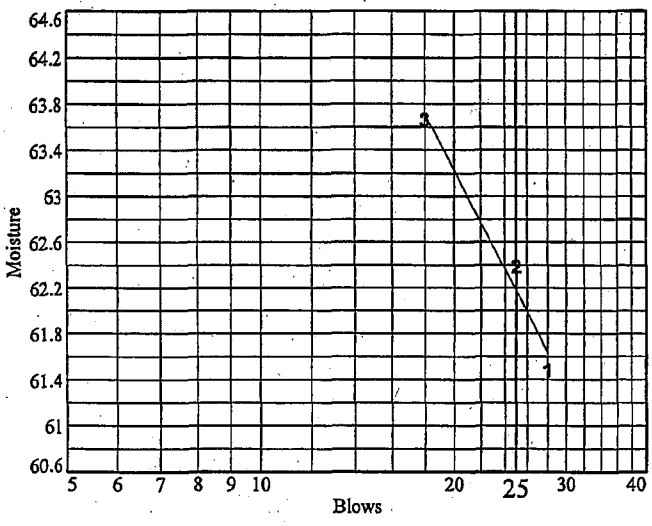
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 344
Depth: 98.5'-100.0 **Sample Number:** STP-053 (SS-27)
Material Description: Fat Clay
Date: 11/15/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC/TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.26	37.22	37.72			
Dry+Tare	32.78	33.67	33.97			
Tare	27.12	27.98	28.08			
# Blows	28	25	18			
Moisture	61.5	62.4	63.7			



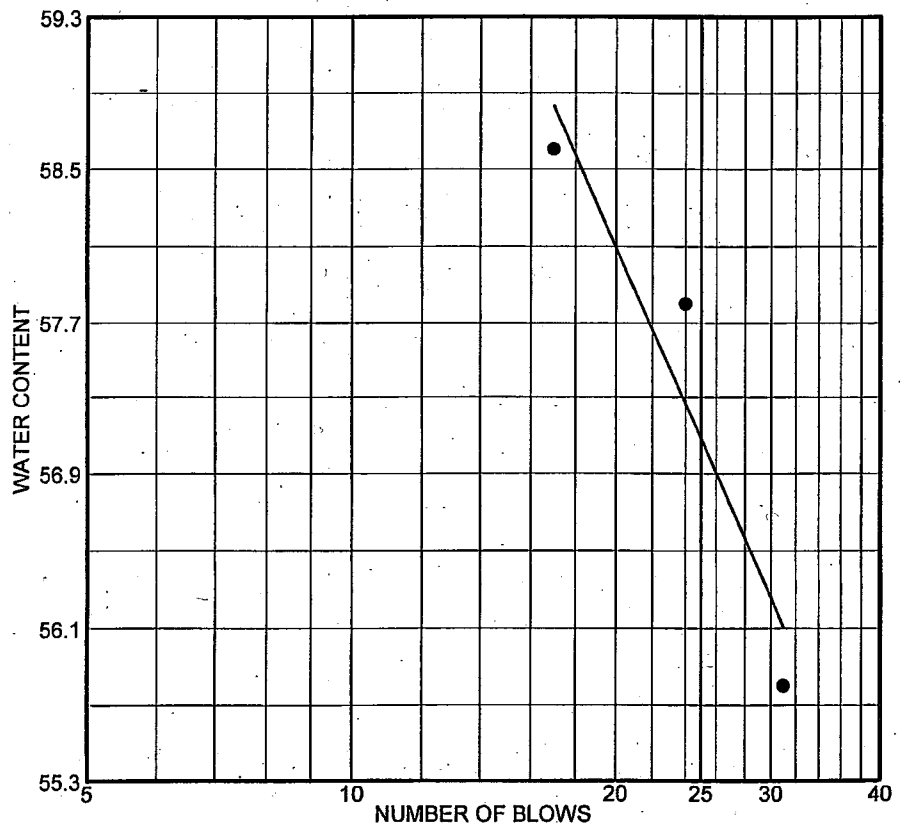
Liquid Limit= 62
Plastic Limit= 20
Plasticity Index= 42
Natural Moisture= 29.3
Liquidity Index= 0.2

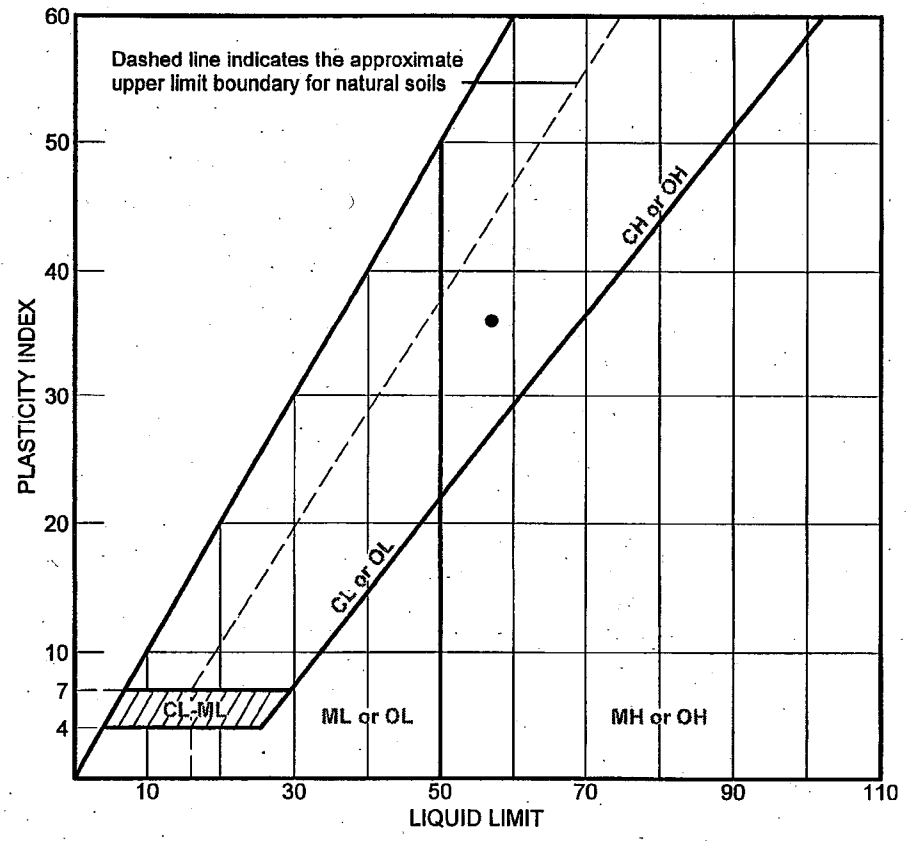
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.84	35.65			
Dry+Tare	34.56	34.43			
Tare	28.26	28.27			
Moisture	20.3	19.8			

MAT 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-401	UD-2	88' to 90'	3-12-07	CH	Fat Clay	23.9	57	36

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05 KAW 4/13/07

KAW 4/13/07

LIQUID AND PLASTIC LIMIT TEST DATA

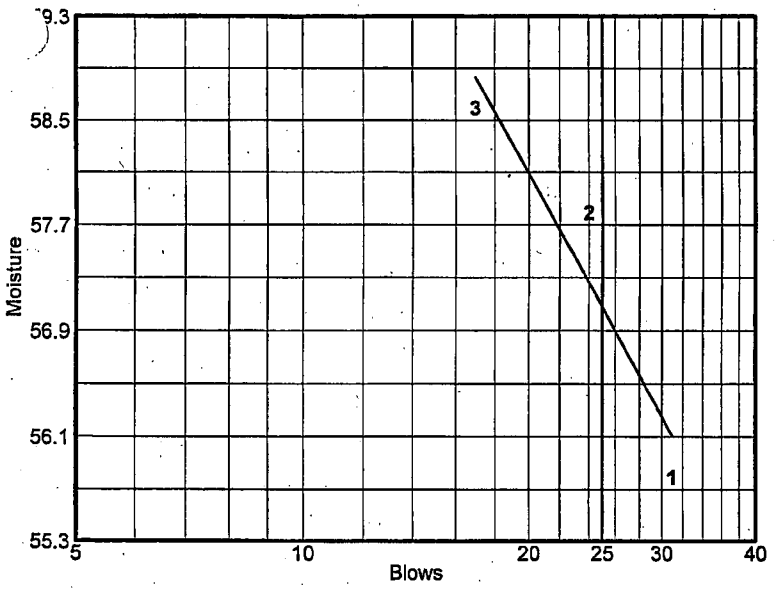
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-401
Sample No.: UD-2
Elev. or Depth: 88' to 90' **Sample Length(in./cm.):**
Location: B-401
Description: Fat Clay
Date: 3-12-07 **Natural Moisture:** 23.9
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	25.16	25.34	24.89			
Dry+Tare	20.02	20.31	19.70			
Tare	10.81	11.61	10.84			
# Blows	31	24	17			
Moisture	55.8	57.8	58.6			

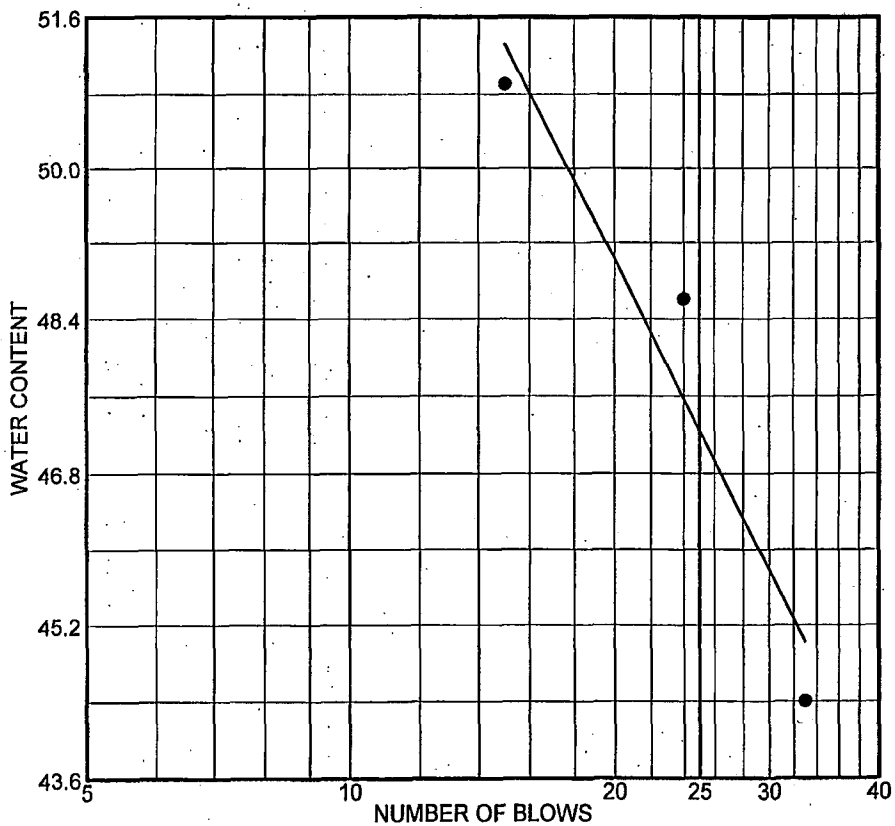


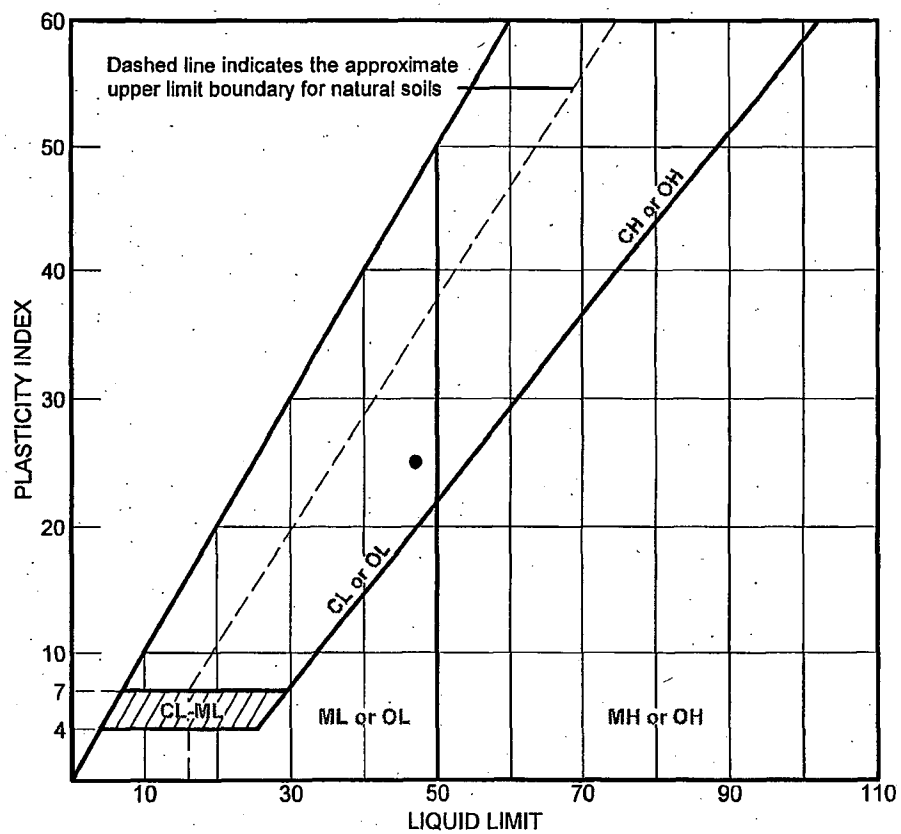
Liquid Limit= 57
Plastic Limit= 21
Plasticity Index= 36

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	17.06	18.49			
Dry+Tare	15.97	17.22			
Tare	11.00	10.91			
Moisture	21.9	20.1			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-401	UD-3	118' to 120'	3-13-07			19.8	47	25

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05

KAW 4/3/07

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

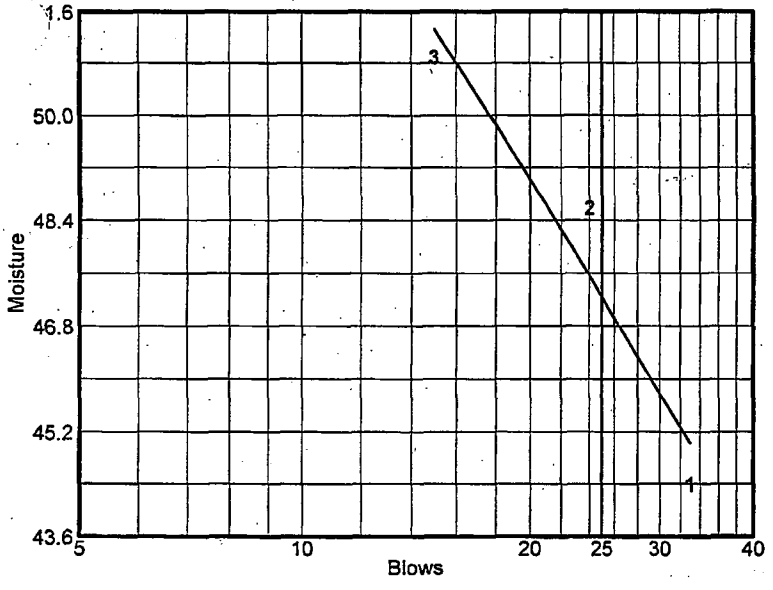
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-401
Sample No.: UD-3
Elev. or Depth: 118' to 120' **Sample Length(in./cm.):**
Location: B-401
Description:
Date: 3-13-07 **Natural Moisture:** 19.8
USCS Class.: **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	24.08	23.91	22.74			
Dry+Tare	20.01	19.65	18.93			
Tare	10.85	10.89	11.45			
# Blows	33	24	15			
Moisture	44.4	48.6	50.9			

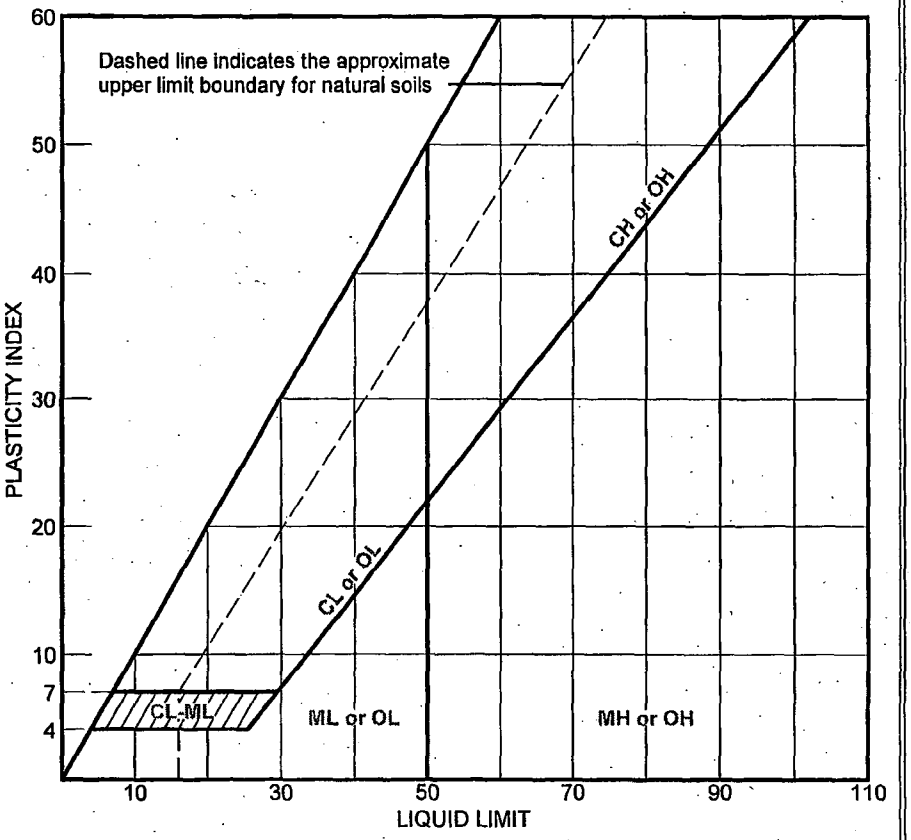


Liquid Limit= 47
Plastic Limit= 22
Plasticity Index= 25

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	21.76	21.42			
Dry+Tare	19.91	19.62			
Tare	11.33	11.56			
Moisture	21.6	22.3			

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-401	UD-4	153' to 154'	3-13-07	SM	Silty sand	24.6	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH KAW 4/3/07
ASTM D4318-05

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

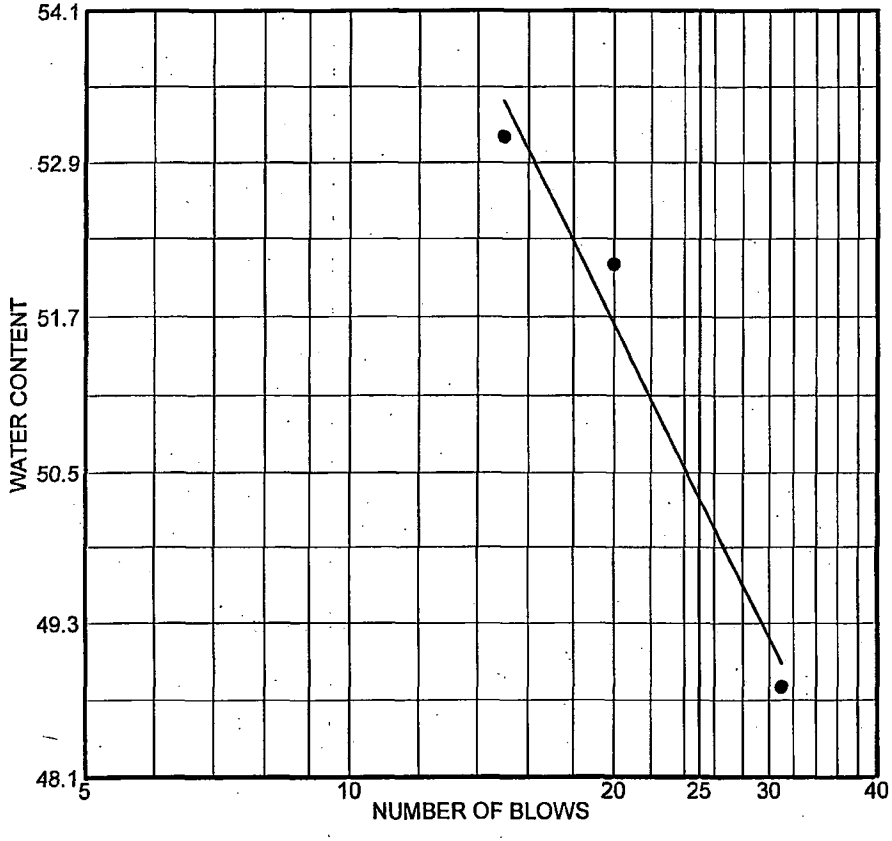
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

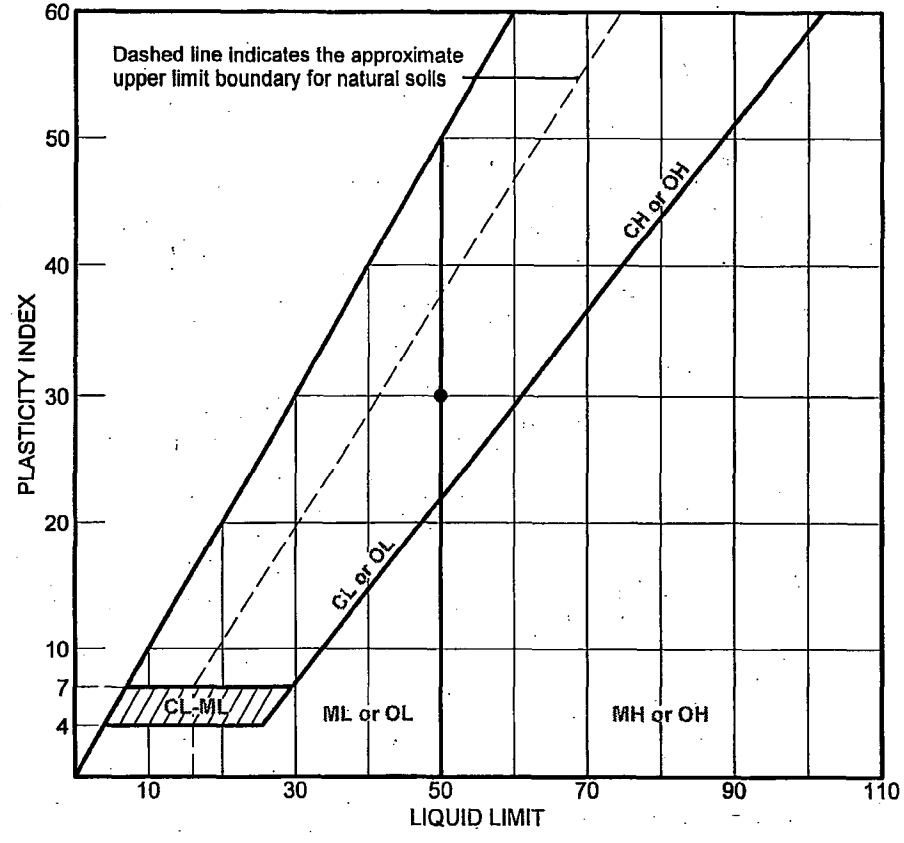
Sample Data

Source: B-401
Sample No.: UD-4
Elev. or Depth: 153' to 154' **Sample Length(in./cm.):**
Location: B-401
Description: Silty sand
Date: 3-13-07 **Natural Moisture:** 24.6
USCS Class.: SM **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-404	UD-2	98' to 100'	2-20-07	CH	Fat clay	25.3	50	30

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS KAW 4/13/07
ASTM D4318-05

KAW 4/13/07

LIQUID AND PLASTIC LIMIT TEST DATA

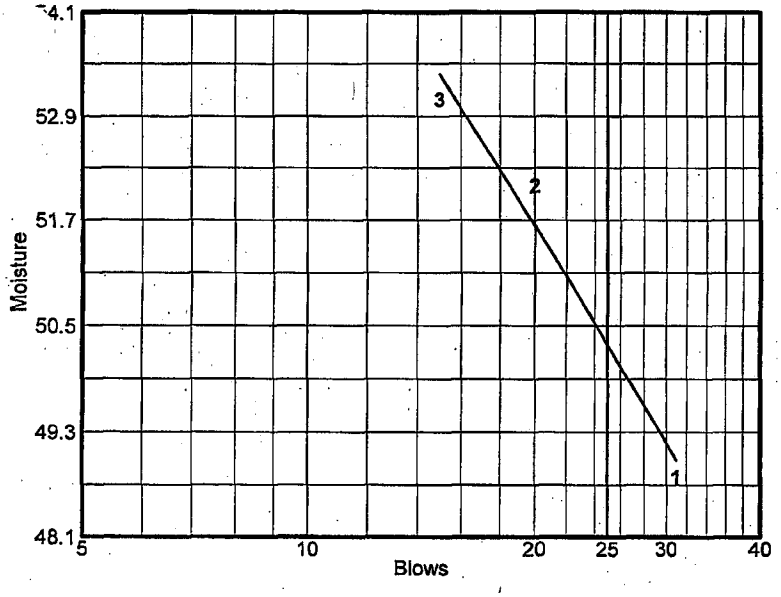
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-404
Sample No.: UD-2
Elev. or Depth: 98' to 100' **Sample Length(in./cm.):**
Location: B-404
Description: Fat clay
Date: 2-20-07 **Natural Moisture:** 25.3
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	34.03	35.08	36.54			
Dry+Tare	26.53	26.98	27.70			
Tare	11.15	11.44	11.05			
# Blows	31	20	15			
Moisture	48.8	52.1	53.1			

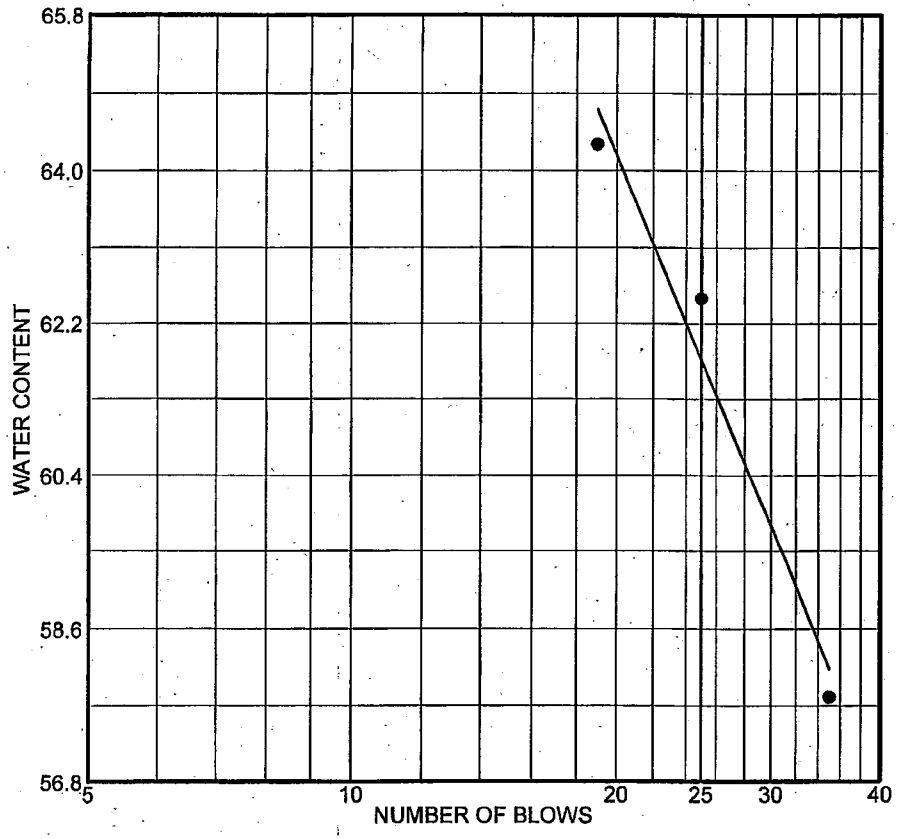


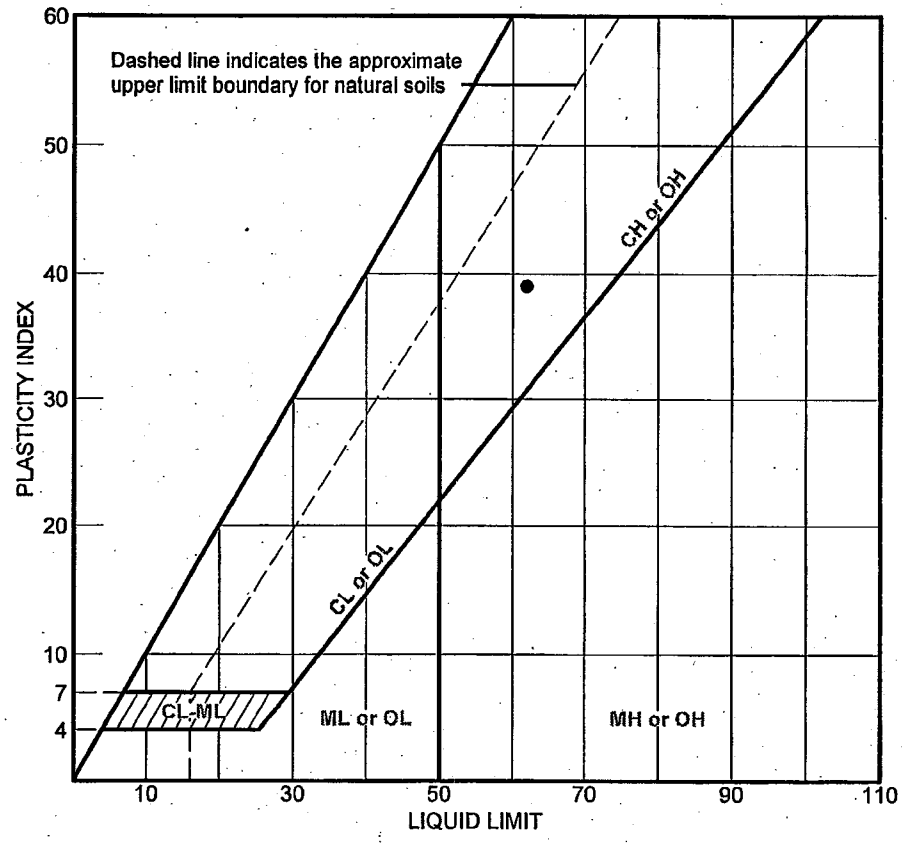
Liquid Limit= 50
Plastic Limit= 20
Plasticity Index= 30

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	20.27	21.07			
Dry+Tare	18.72	19.33			
Tare	10.95	10.88			
Moisture	19.9	20.6			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-404	UD-3	121' to 123'	2-20-07	CH	Fat clay	23.4	62	39

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS KAW 4/13/07
ASTM D4318-05

KAW 4/13/07

LIQUID AND PLASTIC LIMIT TEST DATA

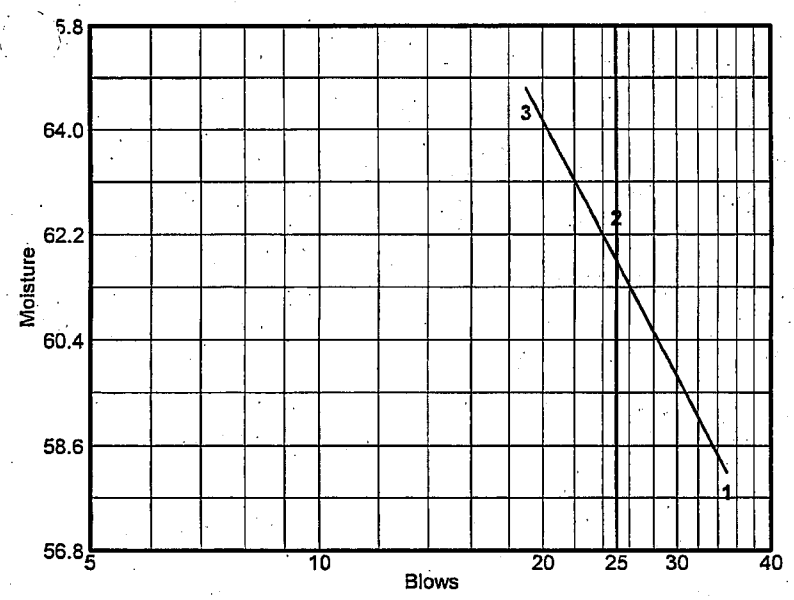
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-404
Sample No.: UD-3
Elev. or Depth: 121' to 123' **Sample Length(in./cm.):**
Location: B-404
Description: Fat clay
Date: 2-20-07 **Natural Moisture:** 23.4
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	22.44	25.48	26.81			
Dry+Tare	18.21	20.17	20.59			
Tare	10.89	11.67	10.91			
# Blows	35	25	19			
Moisture	57.8	62.5	64.3			

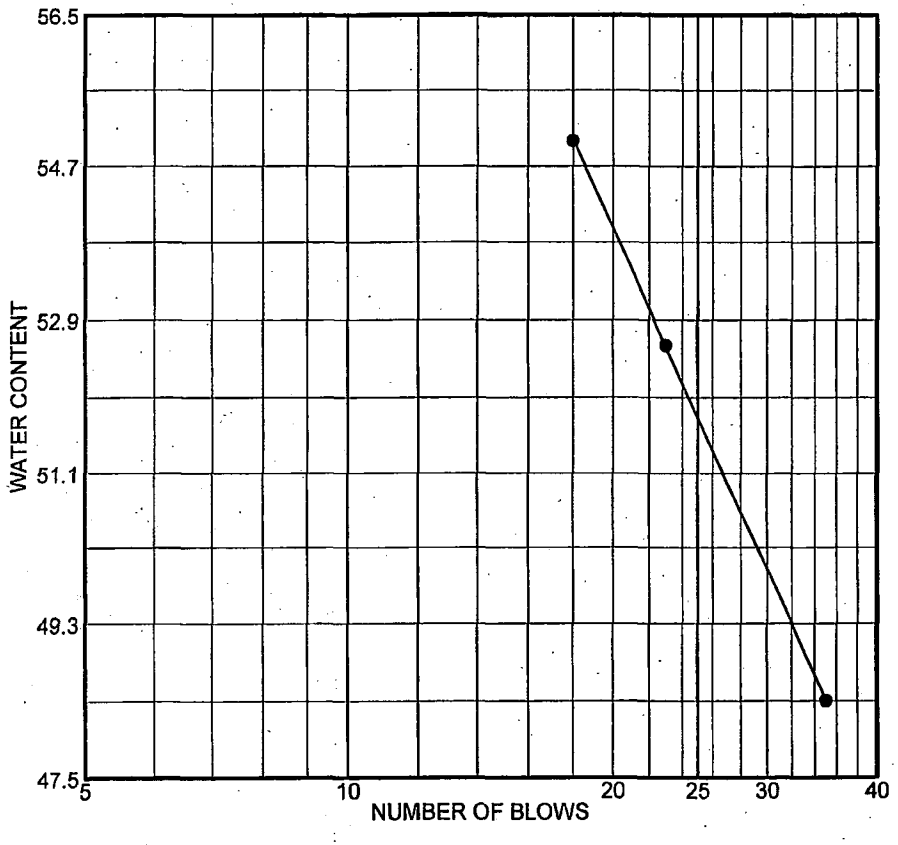


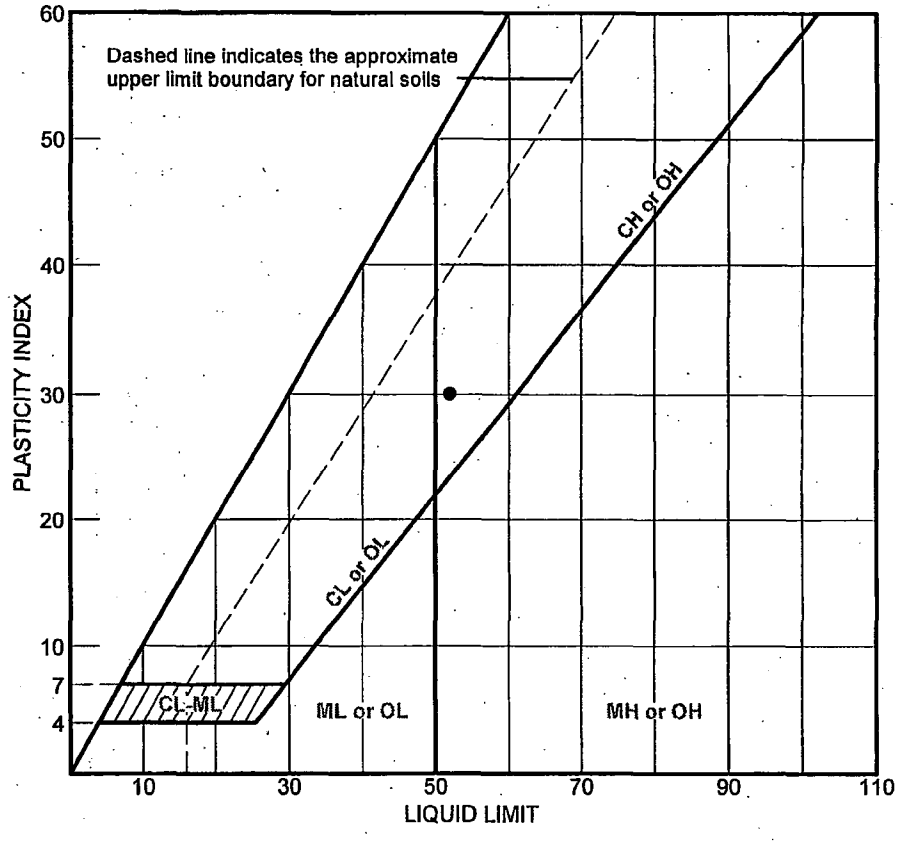
Liquid Limit= 62
Plastic Limit= 23
Plasticity Index= 39

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	22.99	17.21			
Dry+Tare	20.85	16.08			
Tare	11.58	10.99			
Moisture	23.1	22.2			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-404	UD-4	131' to 133'	2-20-07	CH	Fat clay	20.8	52	30

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05 KAW 4/13/07

KAW 4/13/07

LIQUID AND PLASTIC LIMIT TEST DATA

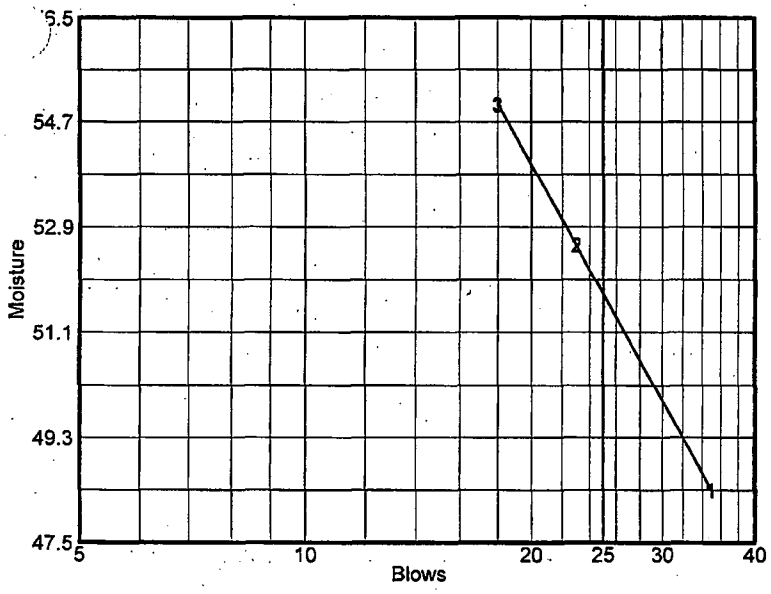
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-404
Sample No.: UD-4
Elev. or Depth: 131' to 133' **Sample Length(in./cm.):**
Location: B-404
Description: Fat clay
Date: 2-20-07 **Natural Moisture:** 20.8
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	30.10	26.07	34.45			
Dry+Tare	24.05	20.88	26.35			
Tare	11.55	11.02	11.63			
# Blows	35	23	18			
Moisture	48.4	52.6	55.0			

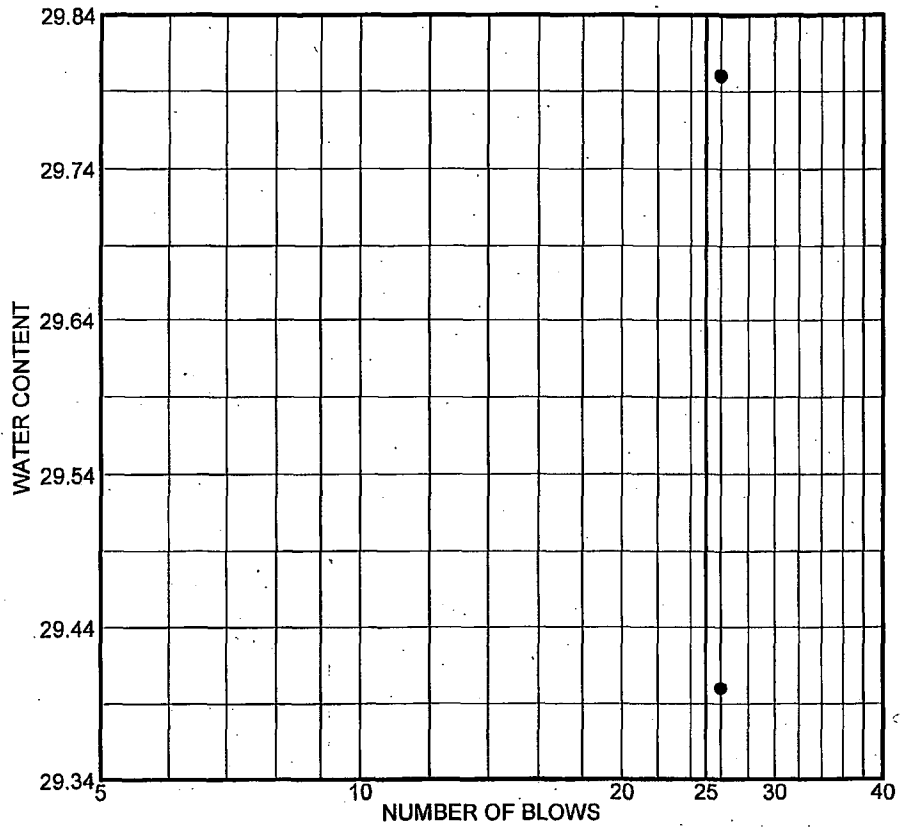


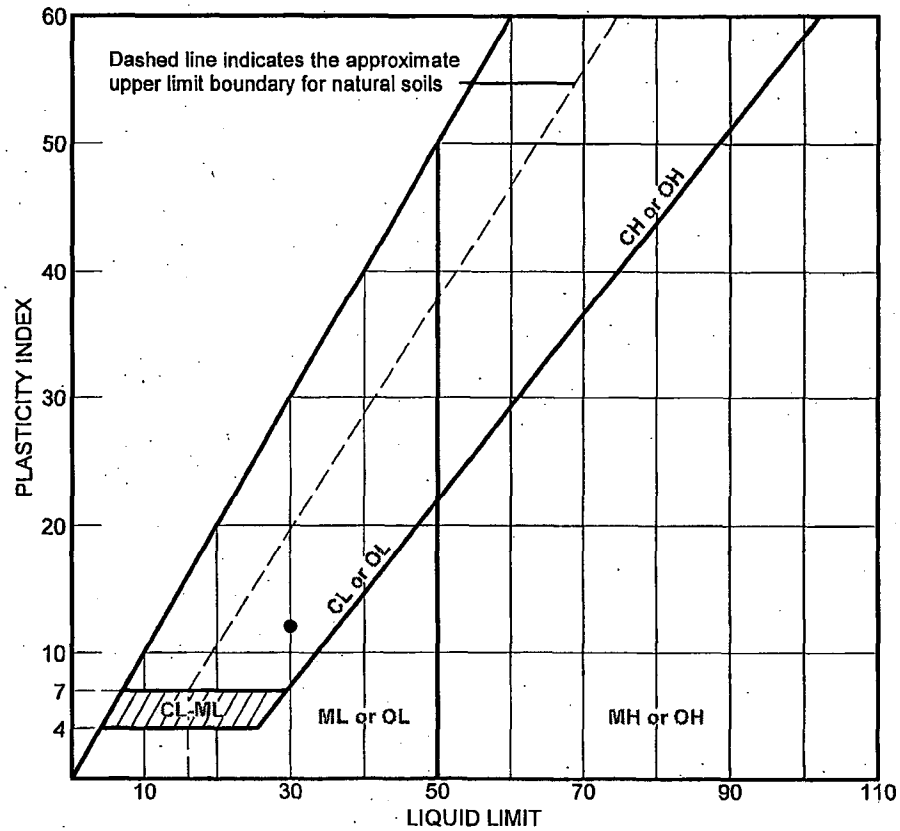
Liquid Limit= 52
Plastic Limit= 22
Plasticity Index= 30

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	18.74	18.11			
Dry+Tare	17.34	16.79			
Tare	10.93	10.88			
Moisture	21.8	22.3			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-404	UD-5	141' to 143'	3-16-07	CL	Sandy lean clay	18.0	30	12

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05 KAW 4/3/07

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

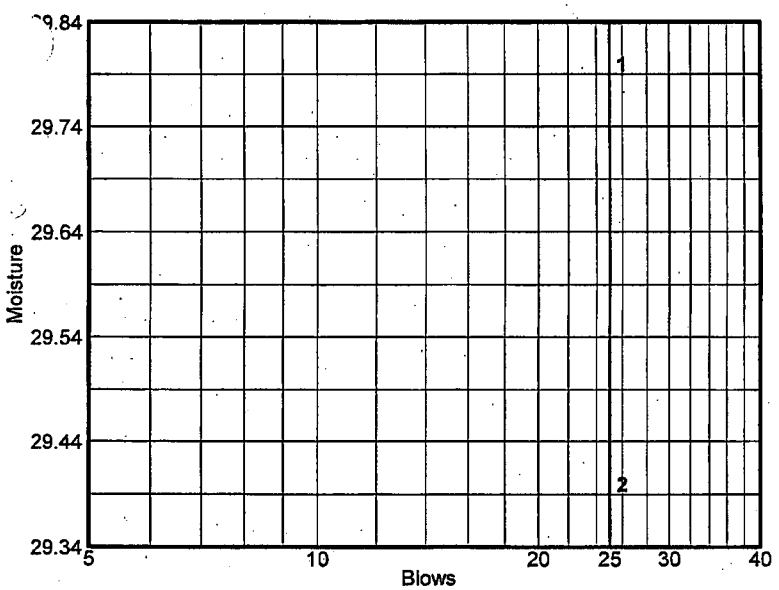
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-404
Sample No.: UD-5
Elev. or Depth: 141' to 143' **Sample Length(in./cm.):**
Location: B-404
Description: Sandy lean clay
Date: 3-16-07 **Natural Moisture:** 18.0
USCS Class.: CL **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	24.86	26.28				
Dry+Tare	21.65	22.80				
Tare	10.88	10.98				
# Blows	26	26				
Moisture	29.8	29.4				

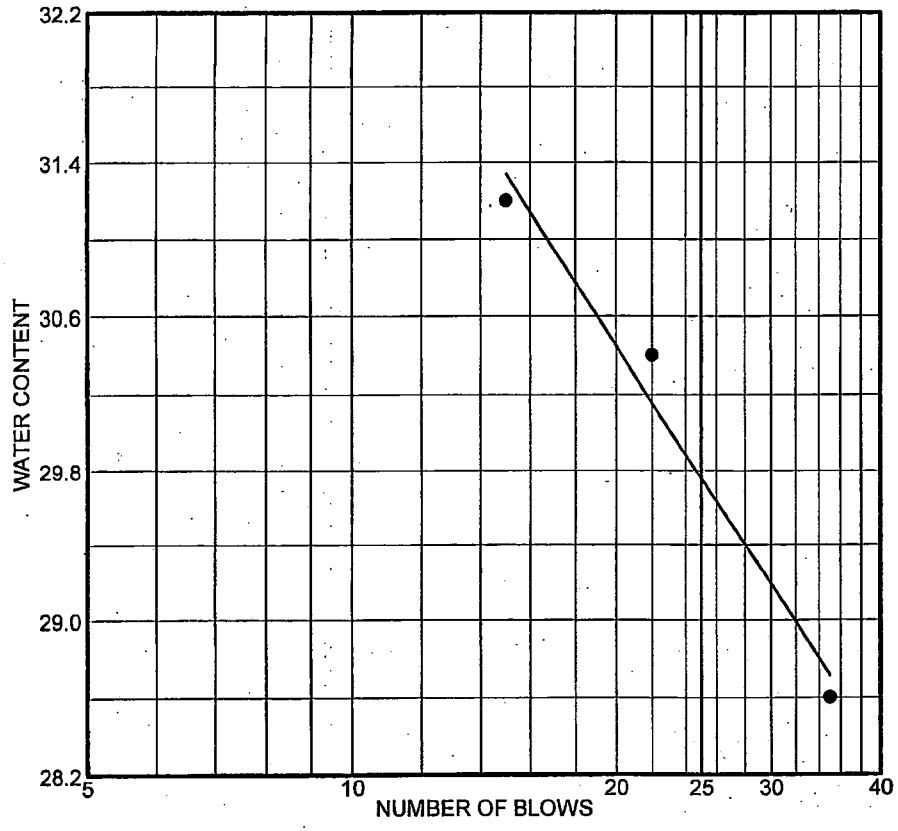


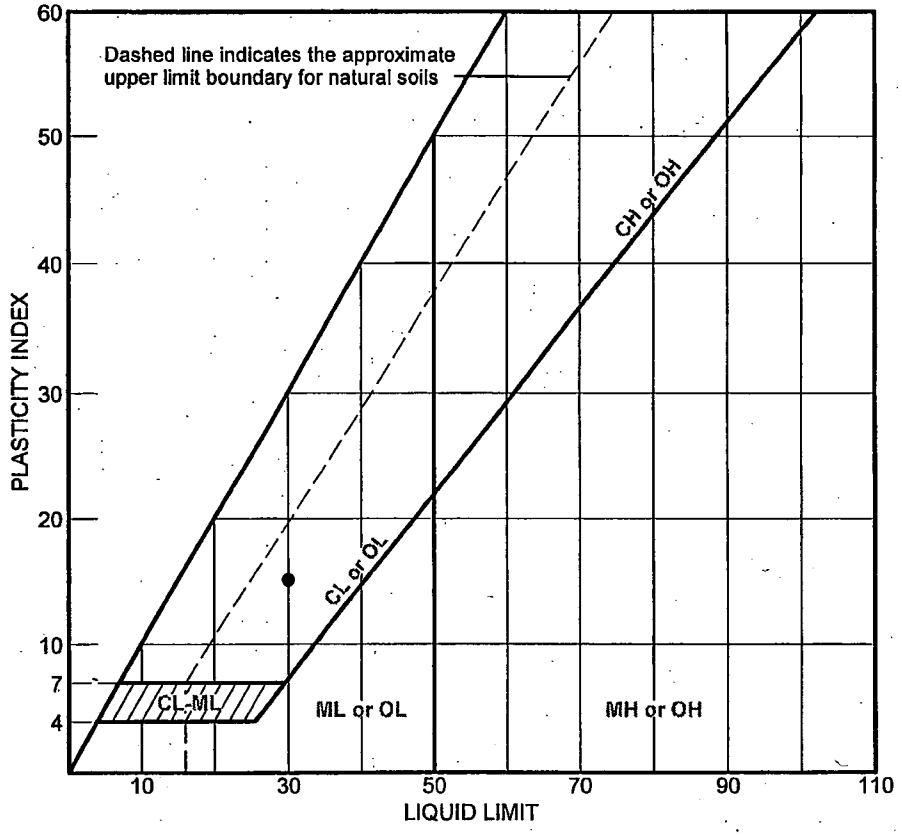
Liquid Limit= 30
Plastic Limit= 18
Plasticity Index= 12

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	17.94	18.97			
Dry+Tare	16.86	17.82			
Tare	10.78	11.54			
Moisture	17.8	18.3			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-404	UD-6	161' to 163'	2-20-07	CL	Lean clay	20.2	30	15

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05 KAW 4/3/07

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

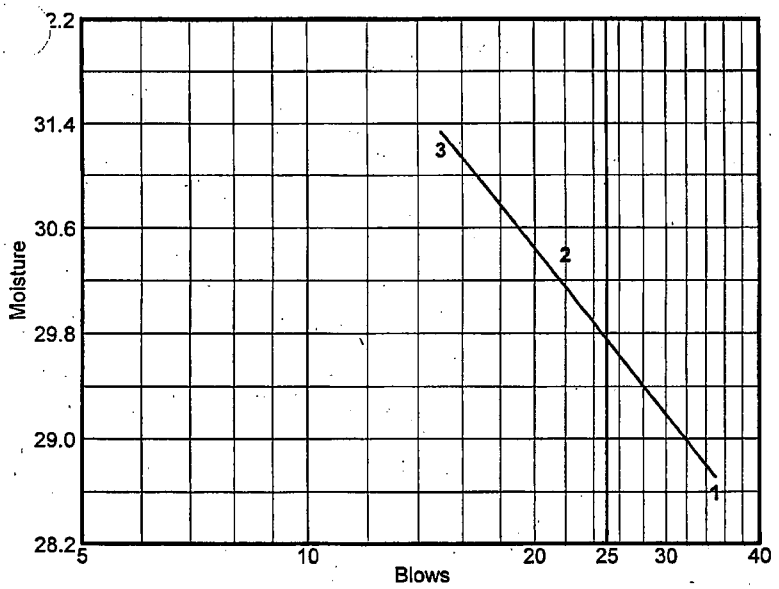
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-404
Sample No.: UD-6
Elev. or Depth: 161' to 163' **Sample Length(in./cm.):**
Location: B-404
Description: Lean clay
Date: 2-20-07 **Natural Moisture:** 20.2
USCS Class.: CL **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	27.90	27.04	30.54			
Dry+Tare	24.11	23.28	25.87			
Tare	10.84	10.93	10.88			
# Blows	35	22	15			
Moisture	28.6	30.4	31.2			

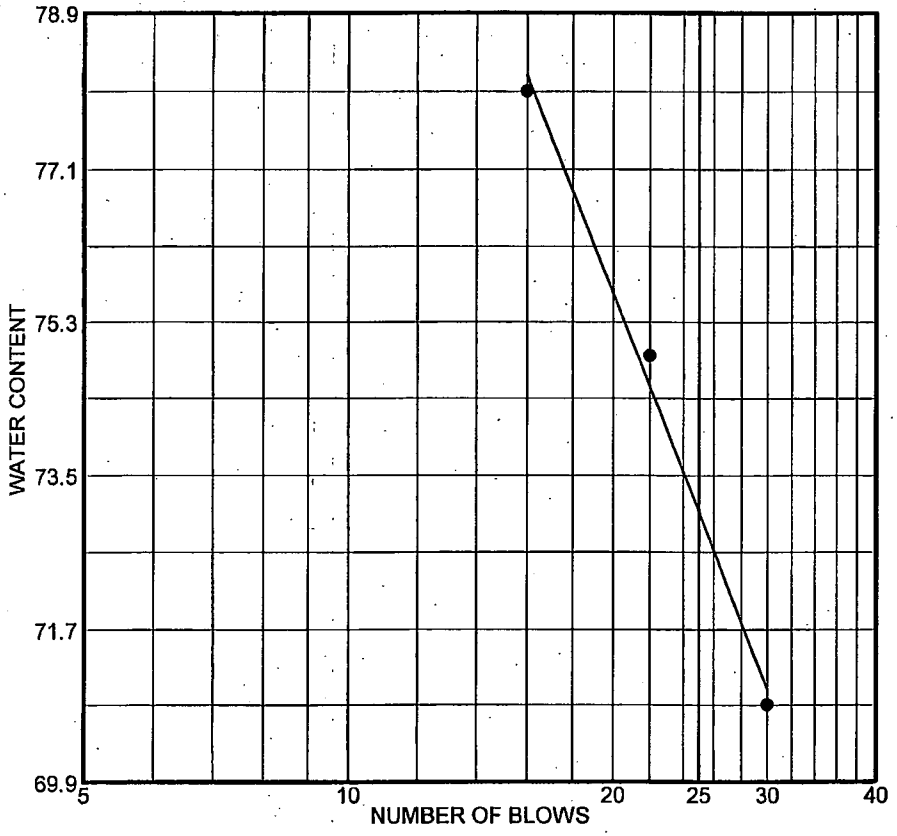


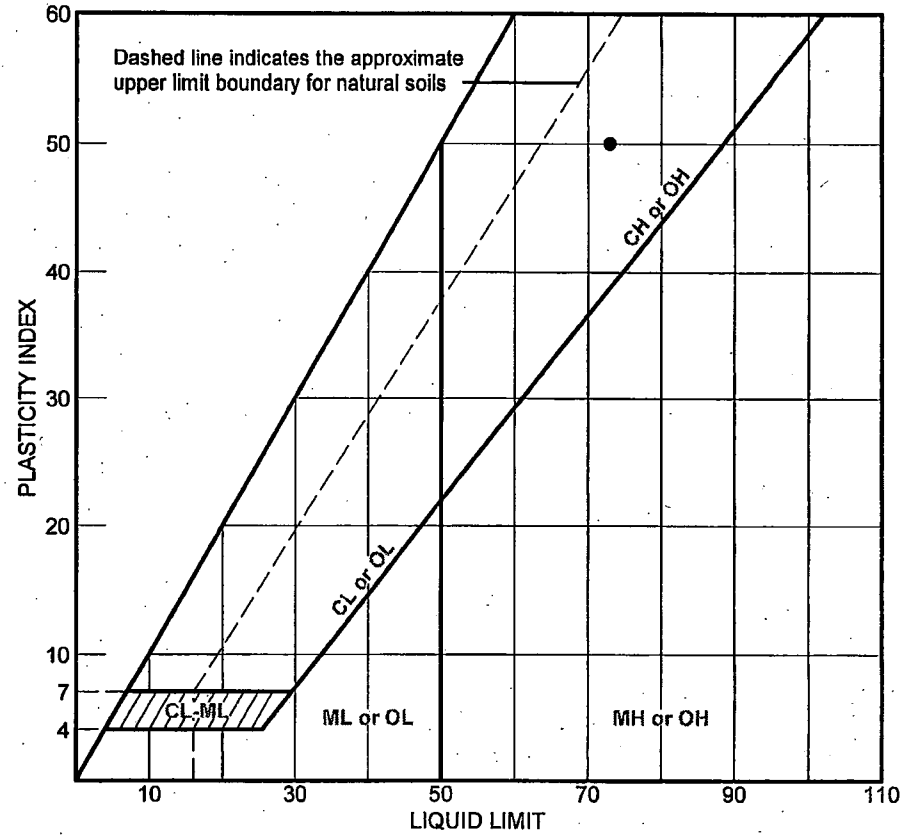
Liquid Limit= 30
Plastic Limit= 15
Plasticity Index= 15

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	20.16	17.27			
Dry+Tare	19.06	16.45			
Tare	11.60	10.98			
Moisture	14.7	15.0			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-405-DH	UD-5	113' TO 115'	2-22-07	CH	Fat clay	25.8	73	50

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 Figure

MACTEC, INC.

Charlotte, North Carolina

● Insufficient material for 2 PL determinations and particle size analysis.
Tested by: JA Reviewed by: SS
ASTM 4318-05 KAW 4/3/07

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

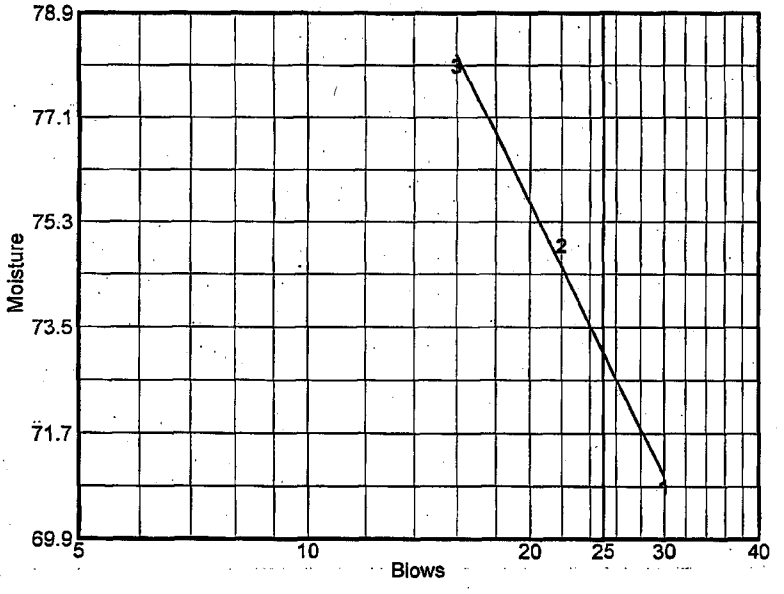
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-405-DH
Sample No.: UD-5
Elev. or Depth: 113' TO 115' **Sample Length(in./cm.):**
Location: B-405-DH
Description: Fat clay
Date: 2-22-07 **Natural Moisture:** 25.8
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Insufficient material for 2 PL determinations and particle size analysis.
Tested by: JA Reviewed by: SS
ASTM 4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	19.05	21.15	23.62			
Dry+Tare	15.65	16.79	18.36			
Tare	10.85	10.97	11.62			
# Blows	30	22	16			
Moisture	70.8	74.9	78.0			



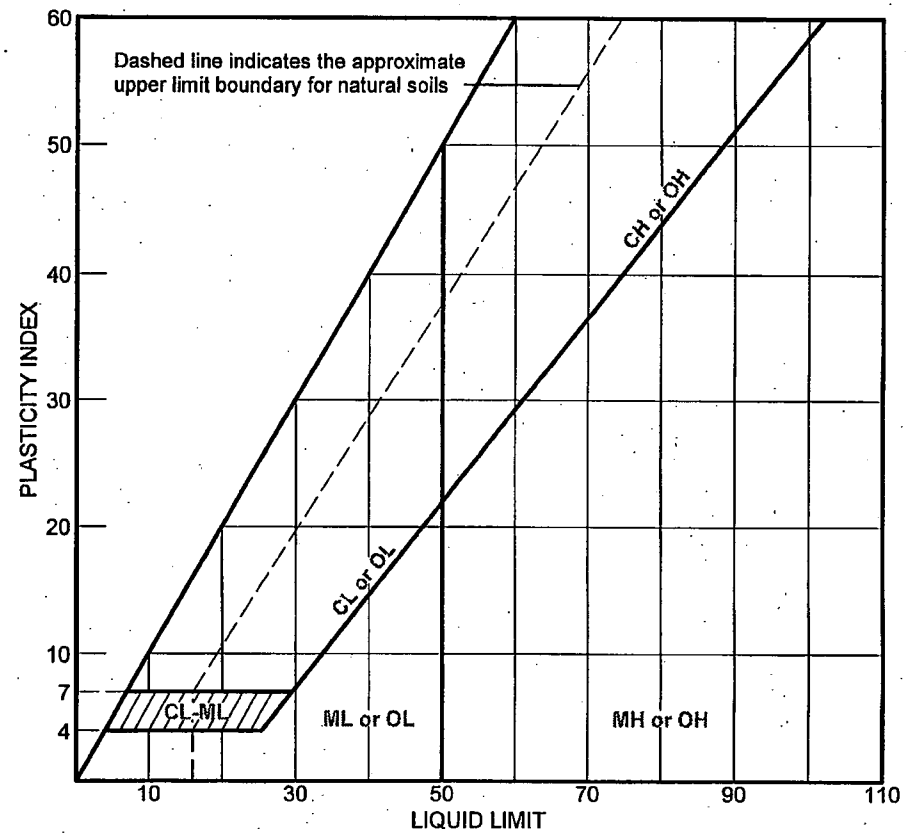
Liquid Limit= 73
Plastic Limit= 23
Plasticity Index= 50

LIQUID AND PLASTIC LIMIT TEST DATA

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	11.13				
Dry+Tare	9.87				
Tare	4.45				
Moisture	23.2				

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-405	UD-7	148' to 150'	2-14-07	SM	Silty sand	24.0	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

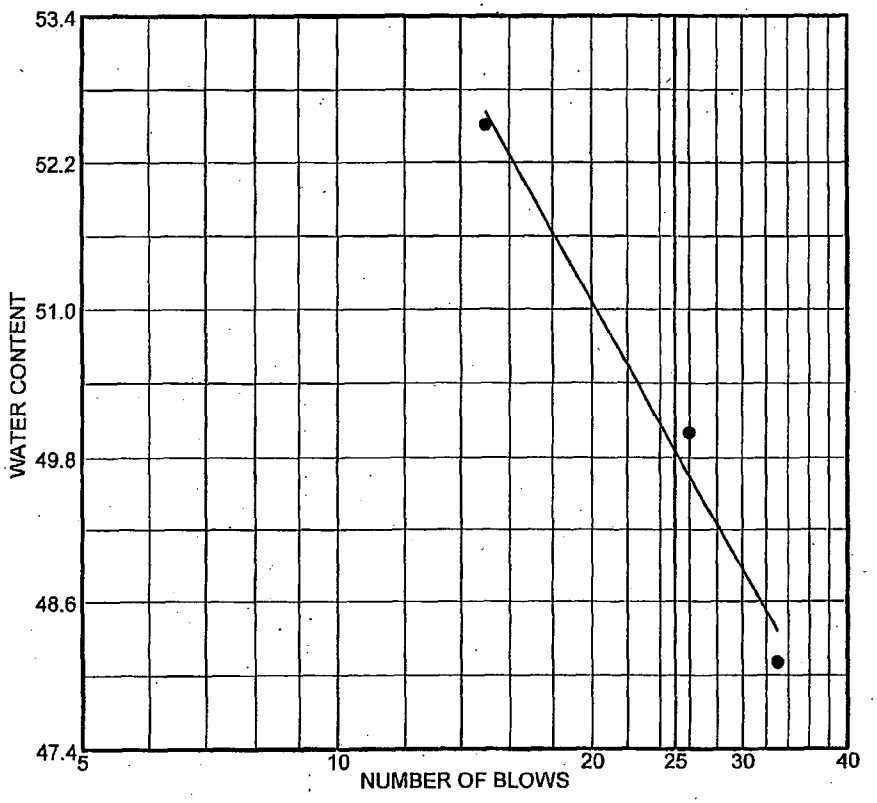
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

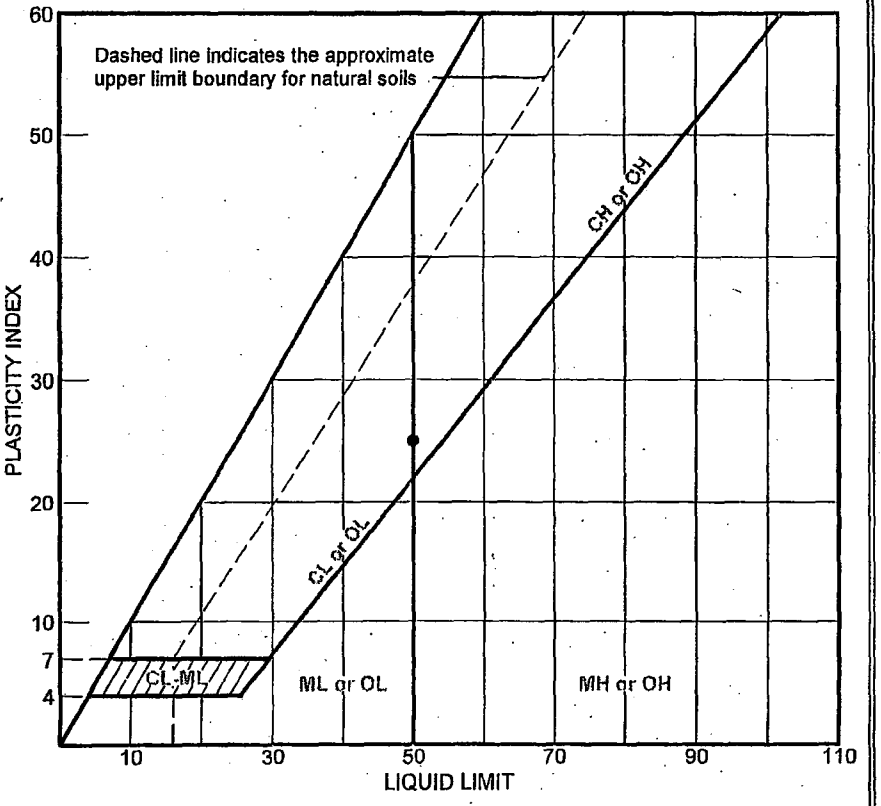
Sample Data

Source: B-405
Sample No.: UD-7
Elev. or Depth: 148' to 150' **Sample Length(in./cm.):**
Location: B-405
Description: Silty sand
Date: 2-14-07 **Natural Moisture:** 24.0
USCS Class.: SM **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-405	UD-14	318' to 320'	2-23-07	SC	Clayey sand		50	25

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05

KAW 3/29/07

LIQUID AND PLASTIC LIMIT TEST DATA

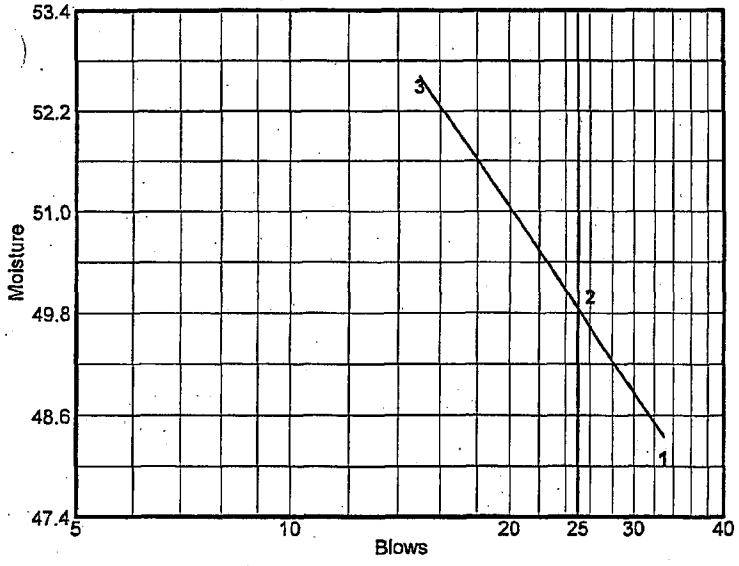
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-405
Sample No.: UD-14
Elev. or Depth: 318' to 320' **Sample Length(in./cm.):**
Location: B-405
Description: Clayey sand
Date: 2-23-07 **Natural Moisture:** **USCS Class.:** SC **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	25.75	30.62	22.31			
Dry+Tare	20.92	24.23	18.29			
Tare	10.87	11.46	10.63			
# Blows	33	26	15			
Moisture	48.1	50.0	52.5			

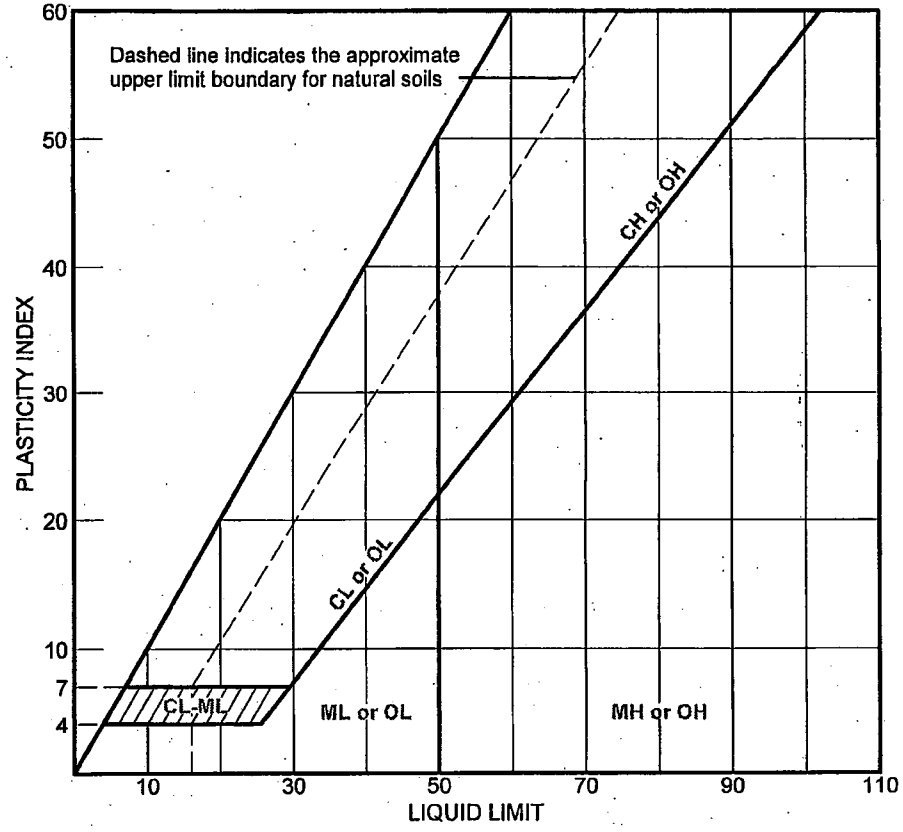


Liquid Limit= 50
Plastic Limit= 25
Plasticity Index= 25

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	22.96	19.27			
Dry+Tare	20.66	17.62			
Tare	11.57	10.94			
Moisture	25.3	24.7			

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-405-DH	UD-15	343' to 345'	2-25-07	SP	Poorly graded sand	20.9	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05 KAW 4/13/07

KAW 4/13/07

LIQUID AND PLASTIC LIMIT TEST DATA

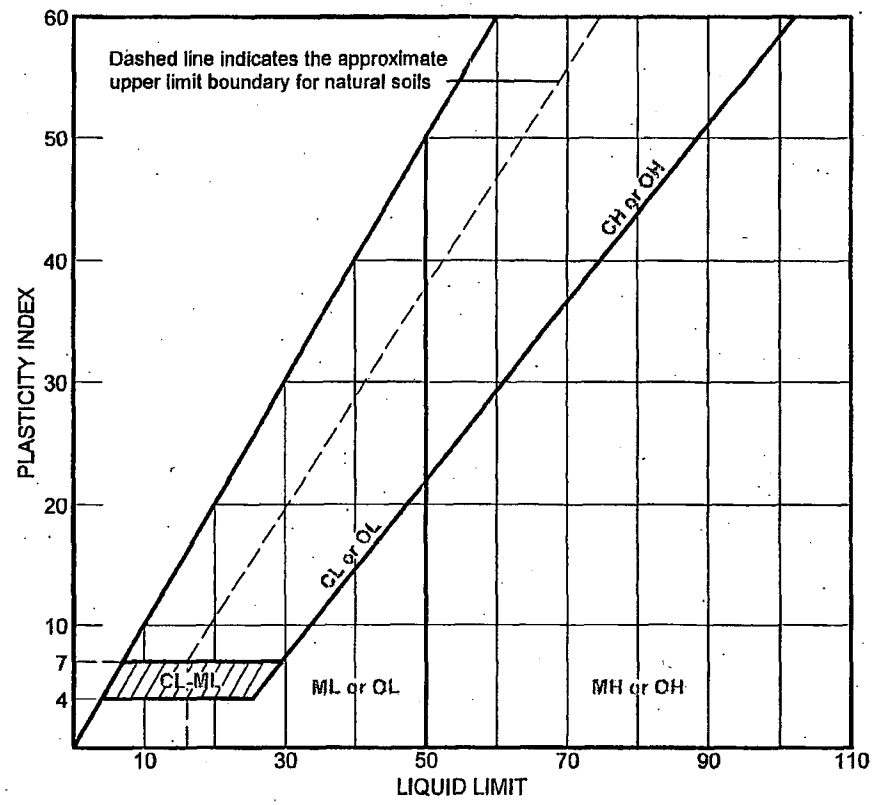
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-405-DH
Sample No.: UD-15
Elev. or Depth: 343' to 345' **Sample Length(in./cm.):**
Location: B-405-DH
Description: Poorly graded sand
Date: 2-25-07 **Natural Moisture:** 20.9
USCS Class.: SP **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-405	UD-22	518' to 520'	2-25-07	SM	Silty sand		NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05

KAW 3/29/07

LIQUID AND PLASTIC LIMIT TEST DATA

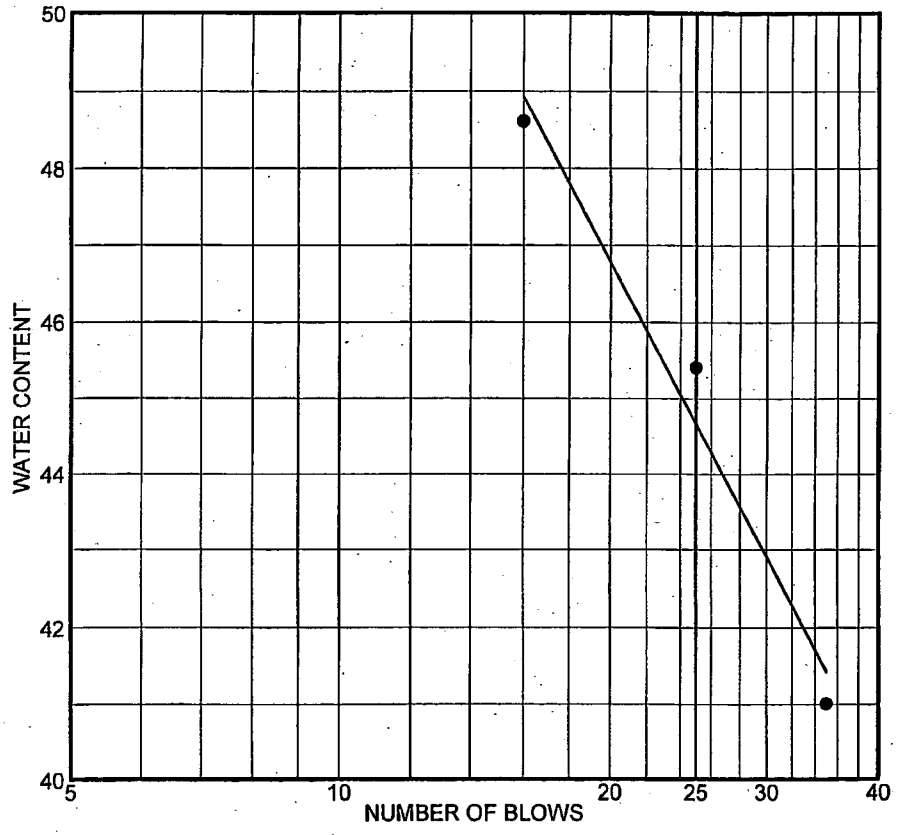
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

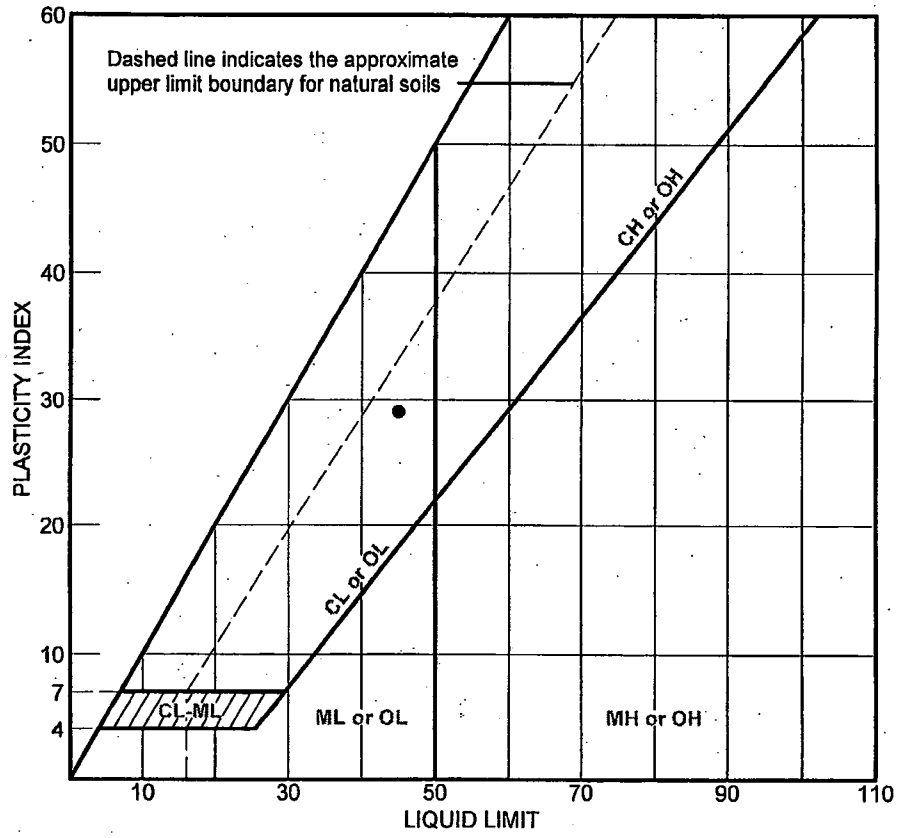
Sample Data

Source: B-405
Sample No.: UD-22
Elev. or Depth: 518' to 520' **Sample Length(in./cm.):**
Location: B-405
Description: Silty sand
Date: 2-25-07 **Natural Moisture:** **USCS Class.:** SM **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-405-DH	UD-25	598' to 599'	2-22-07	CL	Lean clay	18.4	45	29

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05 KAW 4/3/07

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

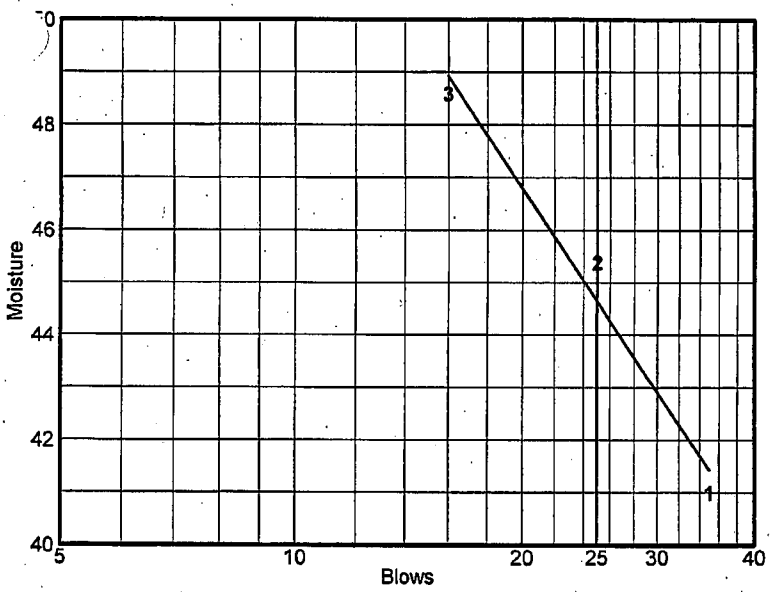
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-405-DH
Sample No.: UD-25
Elev. or Depth: 598' to 599' **Sample Length(in./cm.):**
Location: B-405-DH
Description: Lean clay
Date: 2-22-07 **Natural Moisture:** 18.4
USCS Class.: CL **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	26.84	25.80	25.80			
Dry+Tare	22.20	21.09	20.95			
Tare	10.88	10.72	10.98			
# Blows	35	25	16			
Moisture	41.0	45.4	48.6			

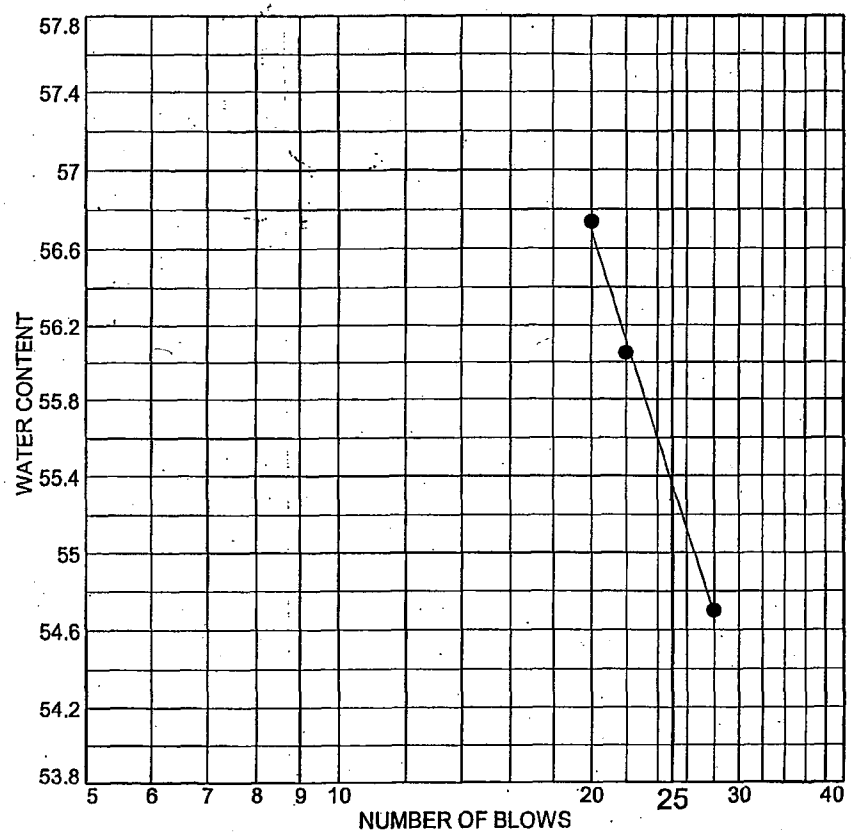


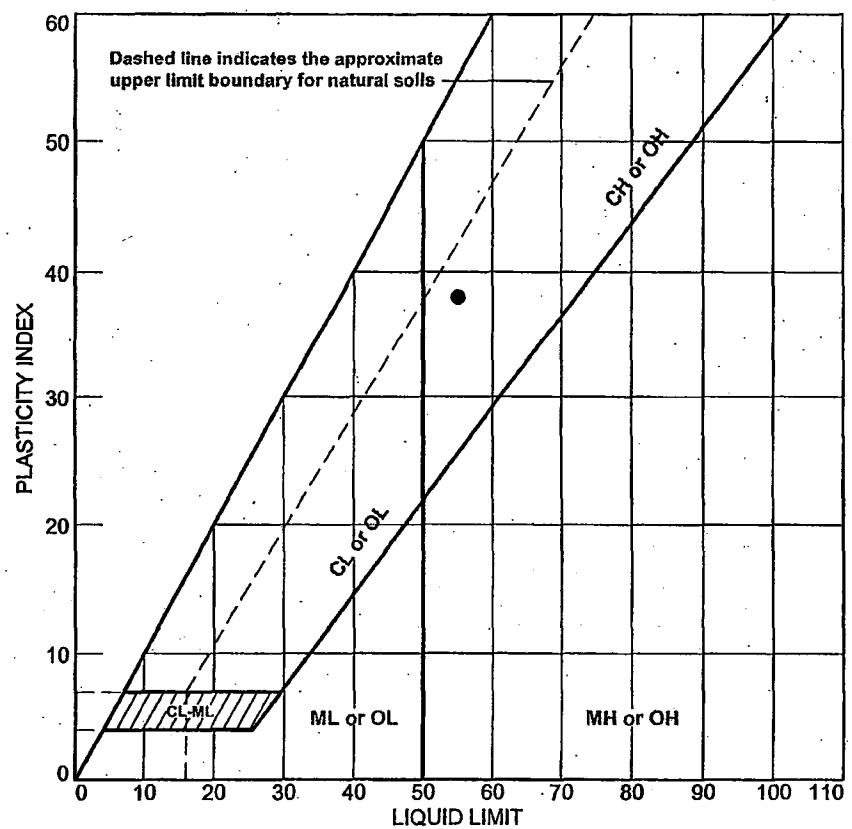
Liquid Limit= 45
Plastic Limit= 16
Plasticity Index= 29

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	19.84	25.07			
Dry+Tare	18.63	23.10			
Tare	10.99	10.97			
Moisture	15.8	16.2			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 405-DH	STP-054 (SS-3)	3.0'-4.5'	10/18/2006	CH	Fat Clay	25.0	55	38

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:ST

ASTM D4318-05

MM 4-3-07

KAW 4/3/07

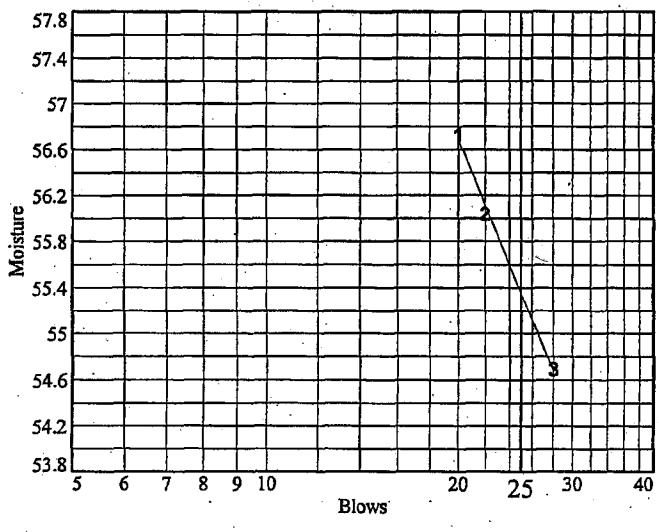
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 405-DH
Depth: 3.0'-4.5'
Sample Number: STP-054 (SS-3)
Material Description: Fat Clay
Date: 10/18/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.62	36.76	37.82			
Dry+Tare	34.21	33.47	34.56			
Tare	28.20	27.60	28.60			
# Blows	20	22	28			
Moisture	56.7	56.0	54.7			



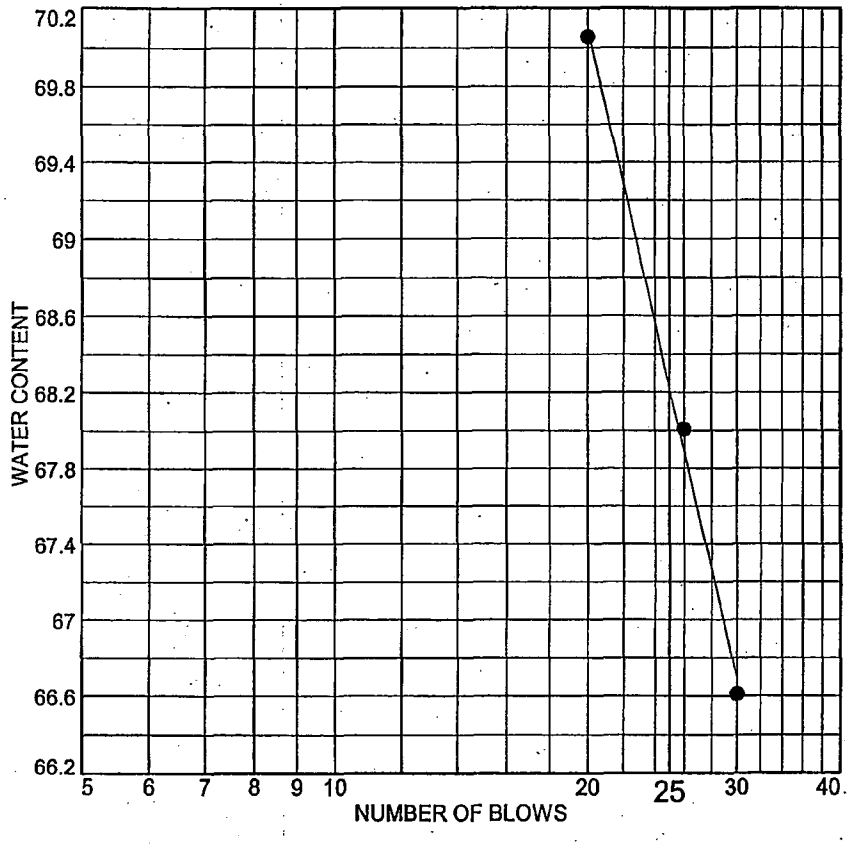
Liquid Limit= 55
Plastic Limit= 17
Plasticity Index= 38
Natural Moisture= 25.0
Liquidity Index= 0.2

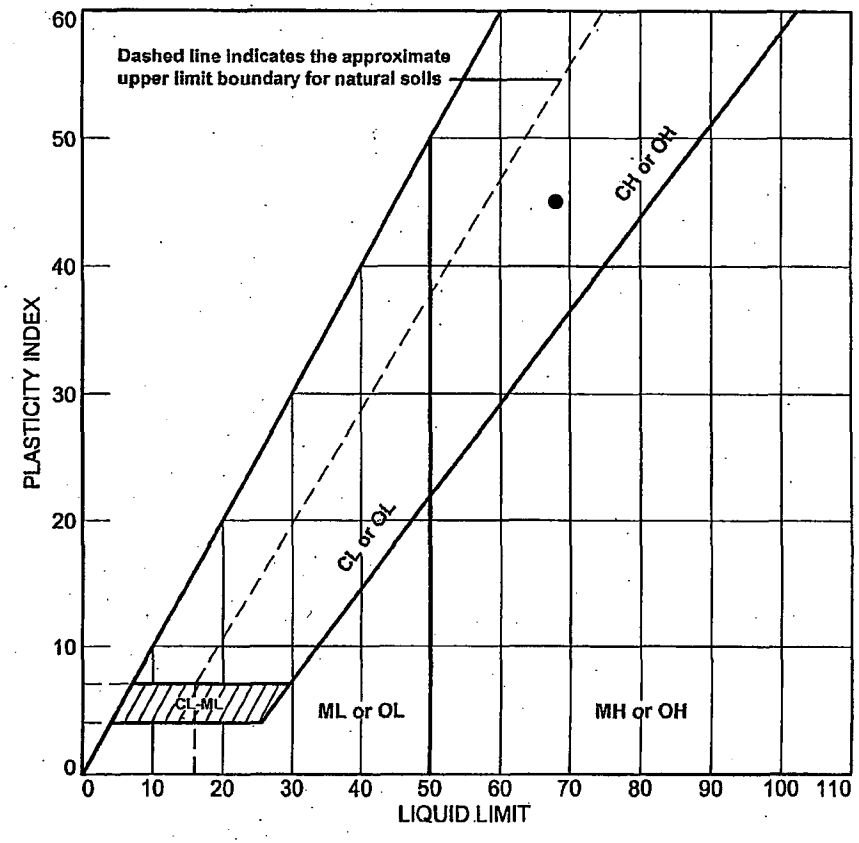
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	28.52	28.24			
Dry+Tare	27.51	27.24			
Tare	21.64	21.57			
Moisture	17.2	17.6			

MK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 405-DH	STP-060	53.5'-55.0'	10/19/2006	CH	Fat Clay	27.9	68	45
		(SS-15)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:ST

ASTM D4318-05

MH 4-3-07

KAW 4/3/07

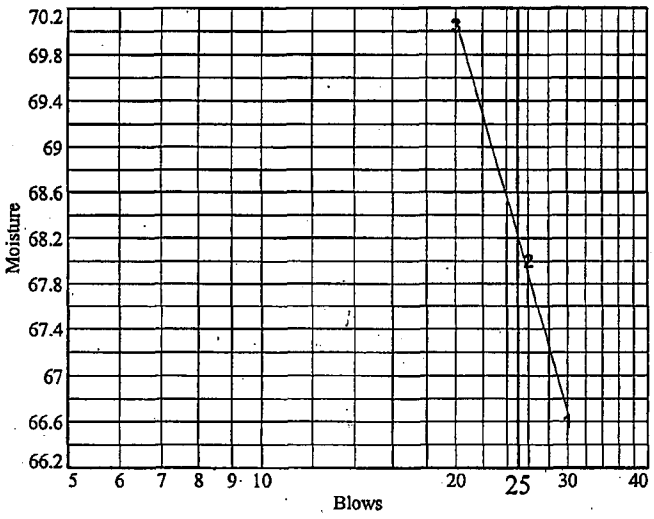
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 405-DH
Depth: 53.5'-55.0'
Sample Number: STP-060 (SS-15)
Material Description: Fat Clay
Date: 10/19/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.97	36.49	37.47			
Dry+Tare	34.08	33.11	33.68			
Tare	28.24	28.14	28.27			
# Blows	30	26	20			
Moisture	66.6	68.0	70.1			



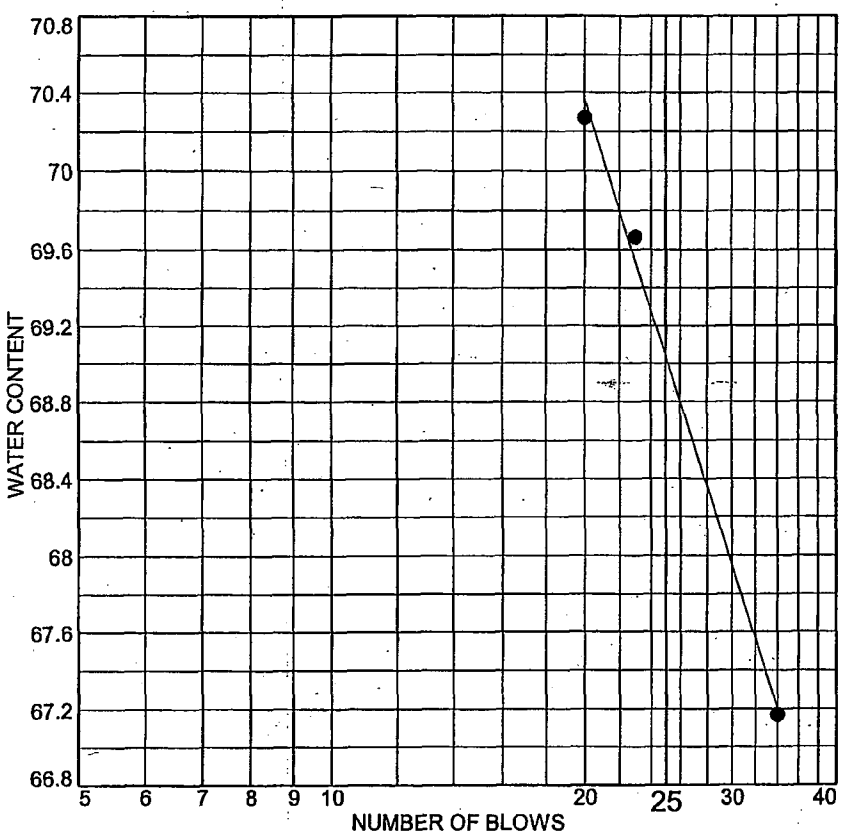
Liquid Limit= 68
Plastic Limit= 23
Plasticity Index= 45
Natural Moisture= 27.9
Liquidity Index= 0.1

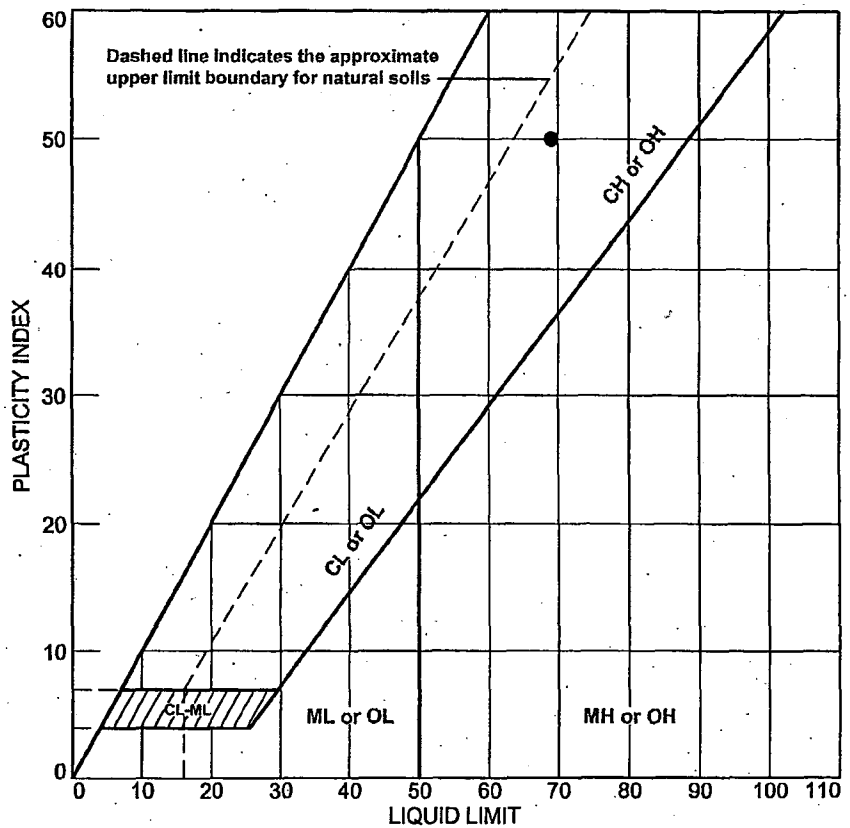
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.37	35.81			
Dry+Tare	33.95	34.43			
Tare	27.91	28.43			
Moisture	23.5	23.0			

MAT 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 405-DH	STP-063	98.5'-100.0'	10/20/2006	CH	Fat Clay	27.3	69	50
		(SS-22)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:MH

ASTM D4318-05

MH 4-3-07

KAW 4/3/07

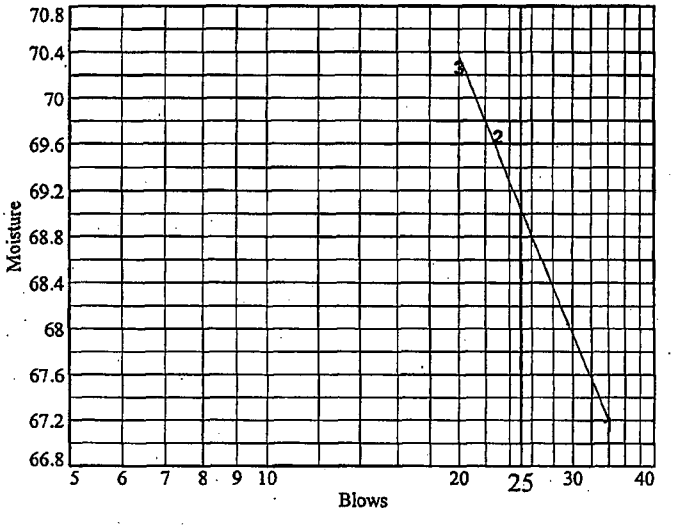
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 405-DH
Depth: 98.5'-100.0' **Sample Number:** STP-063 (SS-22)
Material Description: Fat Clay
Date: 10/20/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	35.92	36.32	36.26			
Dry+Tare	32.36	32.99	32.88			
Tare	27.06	28.21	28.07			
# Blows	34	23	20			
Moisture	67.2	69.7	70.3			



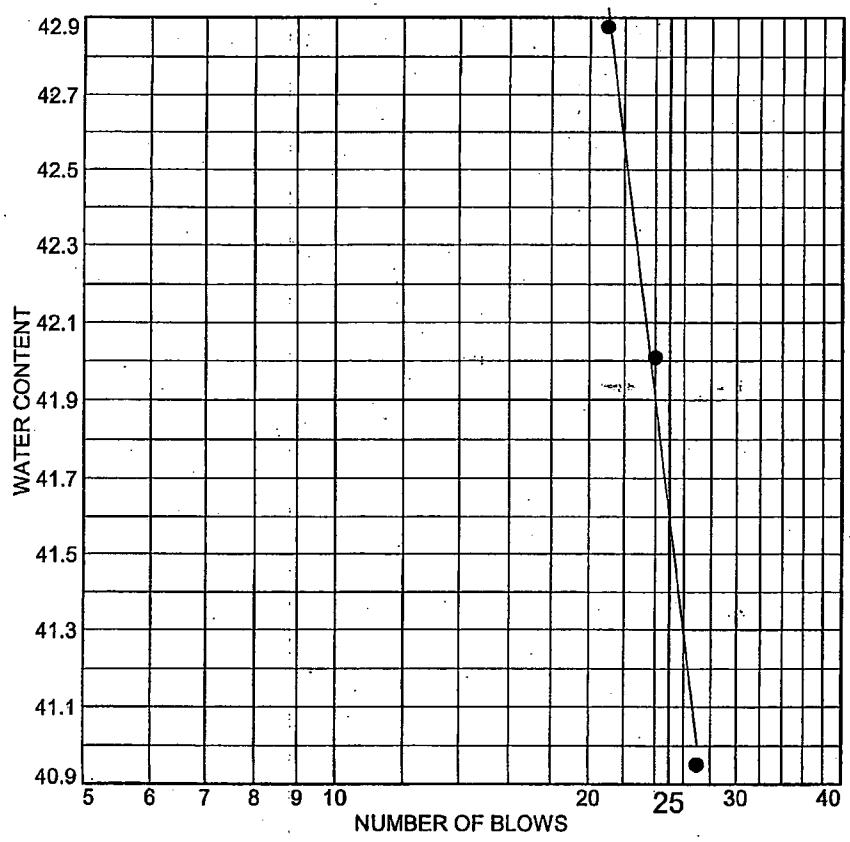
Liquid Limit= 69
Plastic Limit= 19
Plasticity Index= 50
Natural Moisture= 27.3
Liquidity Index= 0.2

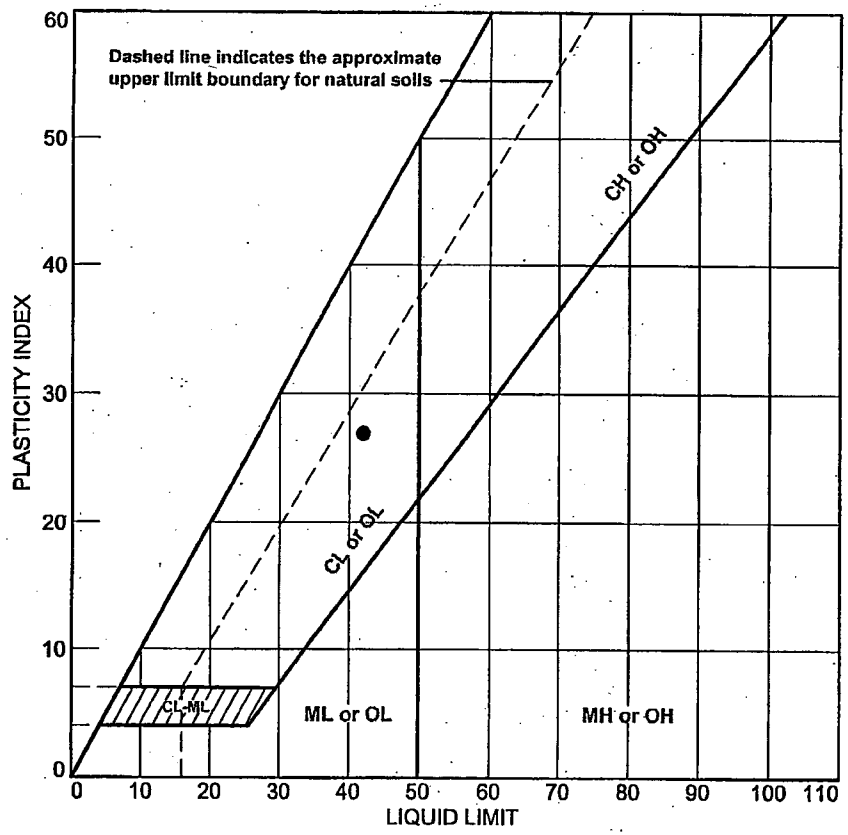
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	37.38	36.34			
Dry+Tare	35.89	35.03			
Tare	27.99	28.06			
Moisture	18.9	18.8			

MAK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 405-DH	STP-066 (SS-26)	138.5'-140.0'	10/20/2006	CL	Sandy Lean Clay	17.7	42	27

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

4-3-07

KAW 4/3/07

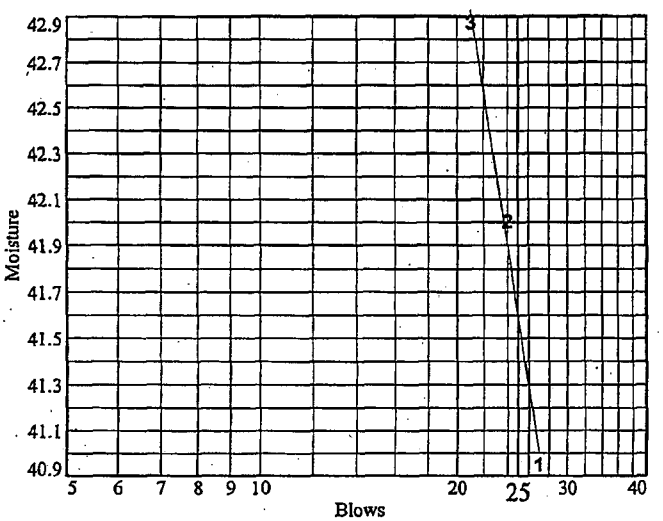
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 405-DH
Depth: 138.5'-140.0' **Sample Number:** STP-066 (SS-26)
Material Description: Sandy Lean Clay
Date: 10/20/2006 **USCS Class.:** CL
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	39.01	38.35	38.21			
Dry+Tare	35.91	35.38	35.20			
Tare	28.34	28.31	28.18			
# Blows	27	24	21			
Moisture	41.0	42.0	42.9			



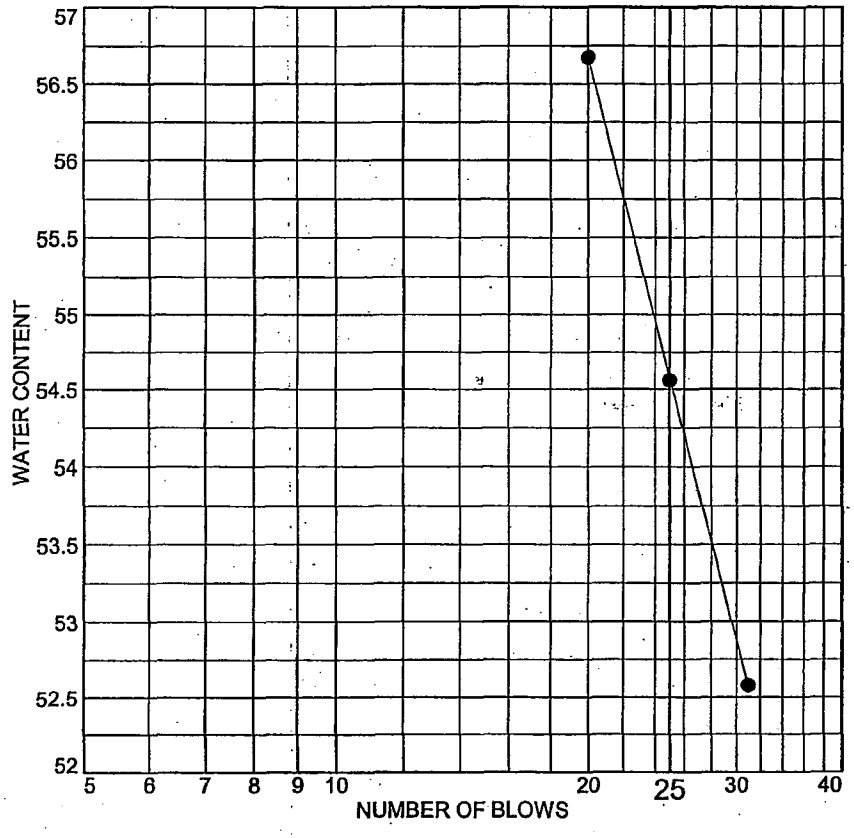
Liquid Limit= 42
Plastic Limit= 15
Plasticity Index= 27
Natural Moisture= 17.7
Liquidity Index= 0.1

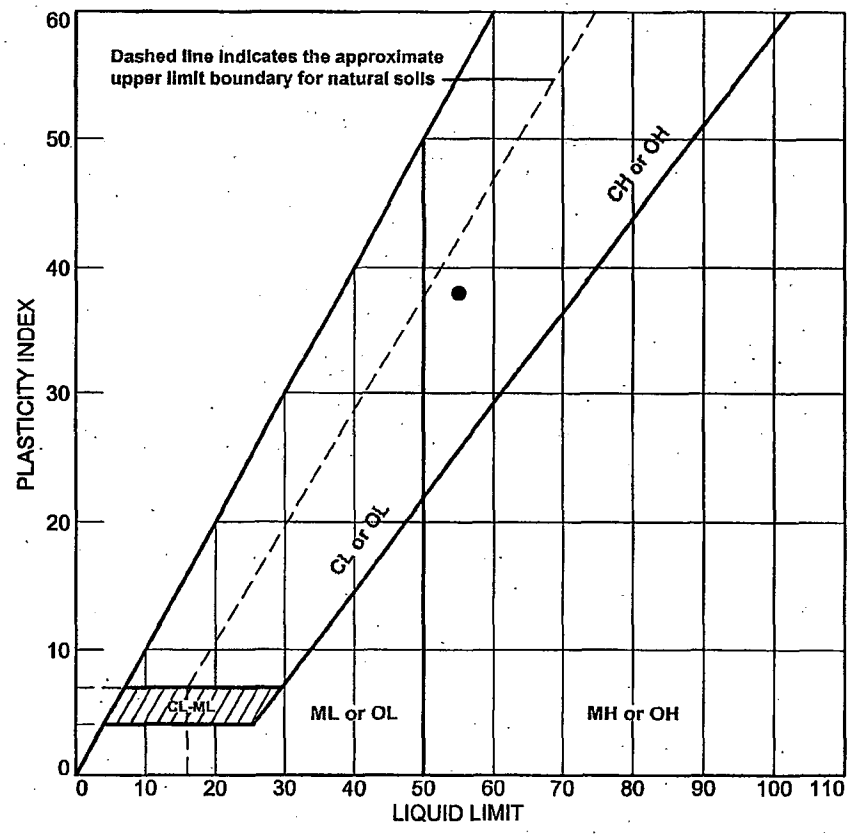
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.96	35.71			
Dry+Tare	35.82	34.71			
Tare	28.03	27.92			
Moisture	14.6	14.7			

MAB 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 405-DH	STP-067	158.5'-160'	10/21/2006	CH	Fat Clay	23.7	55	38
		(SS-27)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:ST
ASTM D4318-05

MA
4-3-07

ICAW 4/3/07

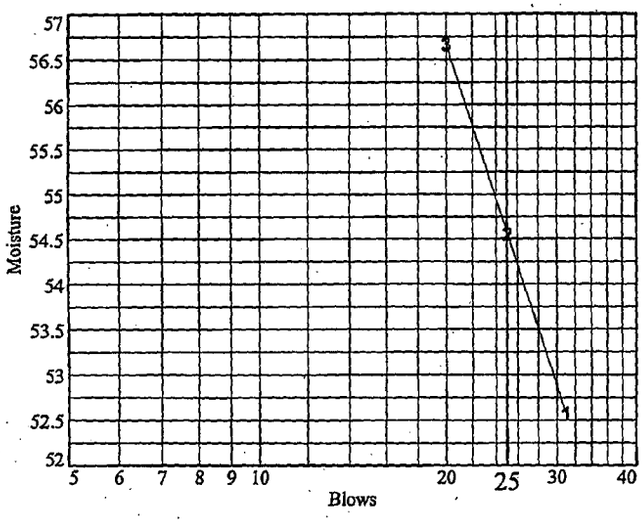
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 405-DH
Depth: 158.5'-160'
Sample Number: STP-067 (SS-27)
Material Description: Fat Clay
Date: 10/21/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.21	37.42	36.68			
Dry+Tare	34.15	34.19	33.58			
Tare	28.33	28.27	28.11			
# Blows	31	25	20			
Moisture	52.6	54.6	56.7			



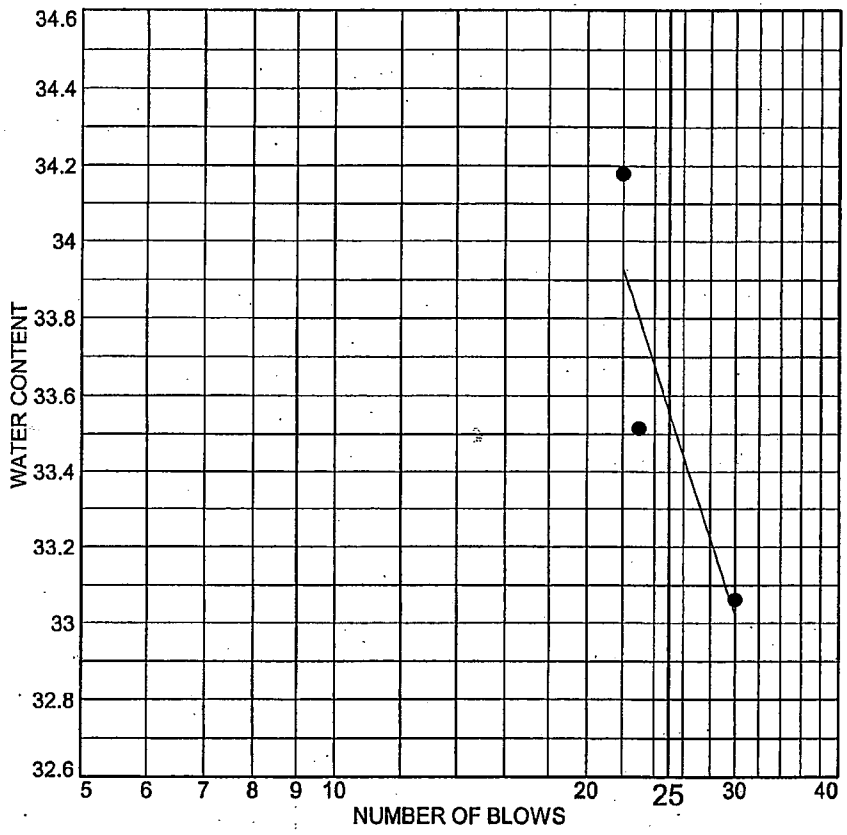
Liquid Limit= 55
Plastic Limit= 17
Plasticity Index= 38
Natural Moisture= 23.7
Liquidity Index= 0.2

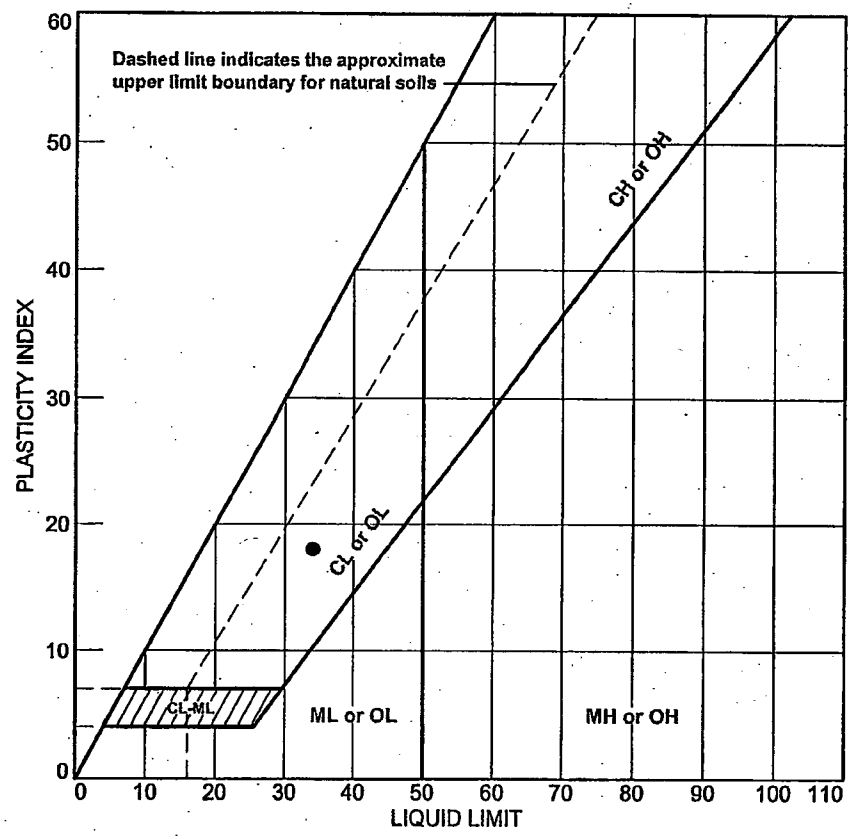
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.76	36.08			
Dry+Tare	34.61	34.96			
Tare	28.00	28.37			
Moisture	17.4	17.0			

NM 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 405-DH	STP-068 (SS-28)	178.5'-180.0'	10/21/2006	CL	Sandy Lean Clay	22.6	34	18

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF

ASTM D4318-05

MH 4-3-07

KAW 4/3/07

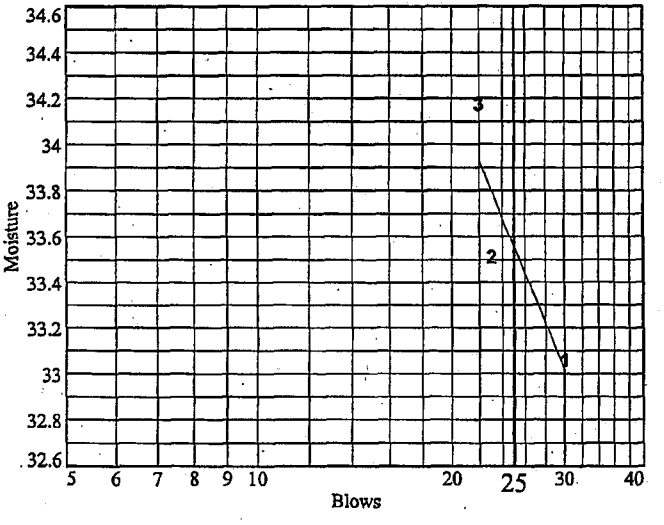
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 405-DH
Depth: 178.5'-180.0' **Sample Number:** STP-068 (SS-28)
Material Description: Sandy Lean Clay
Date: 10/21/2006 **USCS Class.:** CL
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	32.46	36.92	36.27			
Dry+Tare	30.03	34.46	34.25			
Tare	22.68	27.12	28.34			
# Blows	30	23	22			
Moisture	33.1	33.5	34.2			



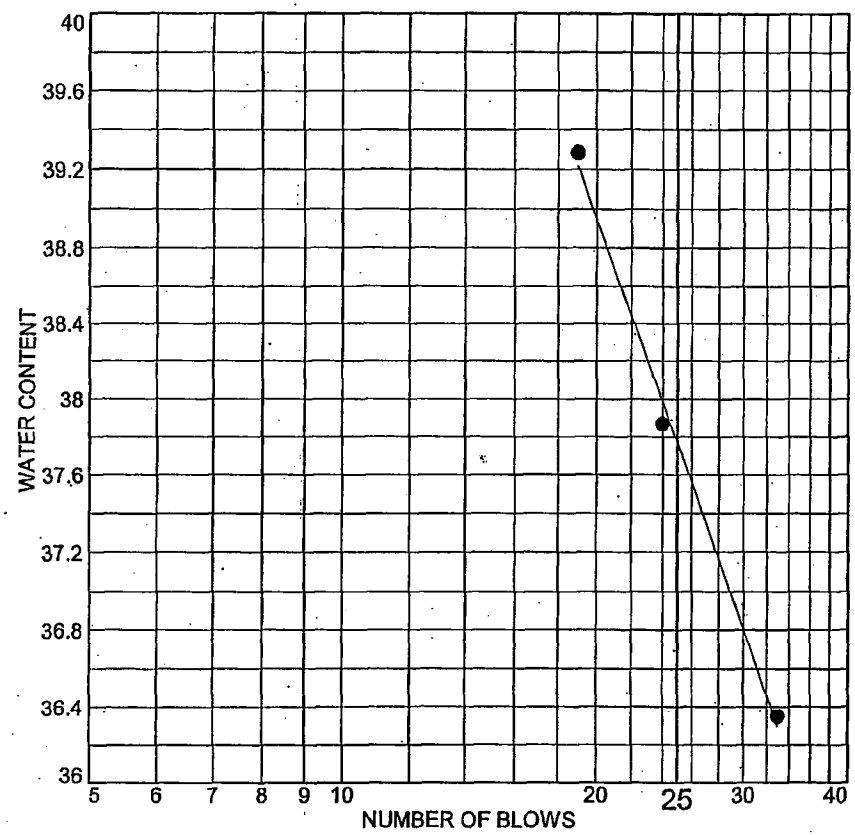
Liquid Limit= 34
Plastic Limit= 16
Plasticity Index= 18
Natural Moisture= 22.6
Liquidity Index= 0.4

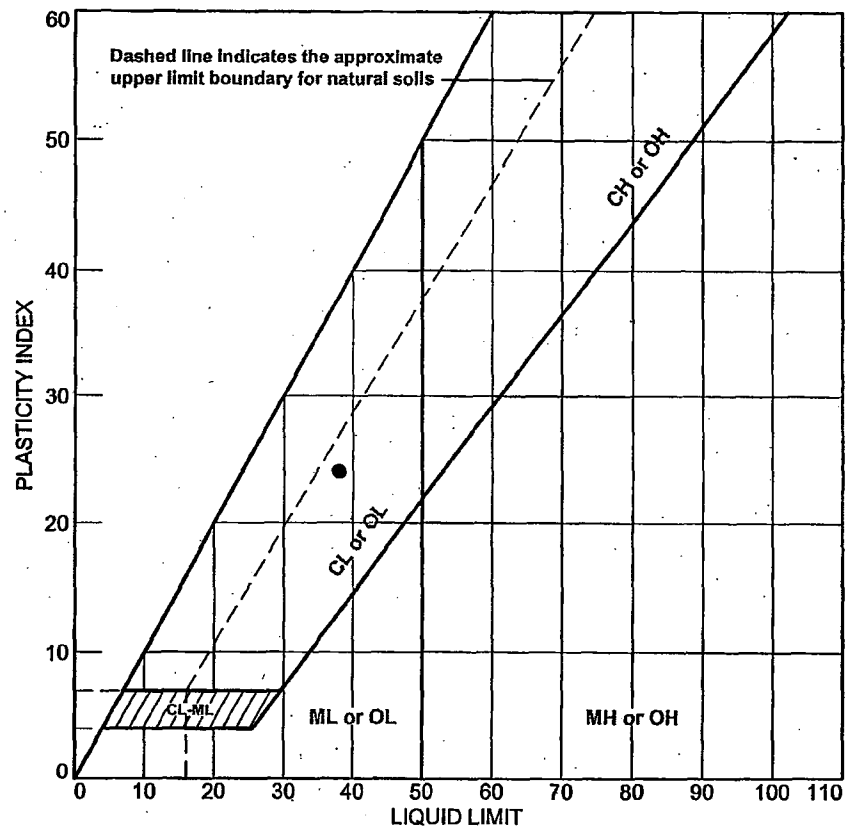
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	37.61	37.79			
Dry+Tare	36.43	36.48			
Tare	28.89	28.11			
Moisture	15.6	15.7			

MK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 405-DH	STP-069 (SS-29)	188.5'-190'	10/21/2006	CL	Sandy Lean Clay	16.7	38	24

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:ST/RF
ASTM D4318-05

MH
4-3-07

KAW 4/3/07

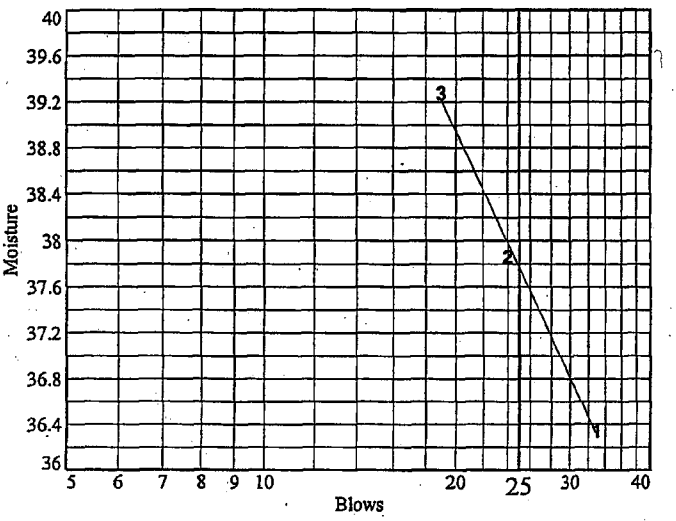
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 405-DH
Depth: 188.5'-190'
Sample Number: STP-069 (SS-29)
Material Description: Sandy Lean Clay
Date: 10/21/2006
USCS Class.: CL
Testing Remarks: Tested By:AC/TH Reviewed By:ST/RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	31.74	38.03	32.04			
Dry+Tare	29.05	35.33	29.09			
Tare	21.65	28.20	21.58			
# Blows	33	24	19			
Moisture	36.4	37.9	39.3			



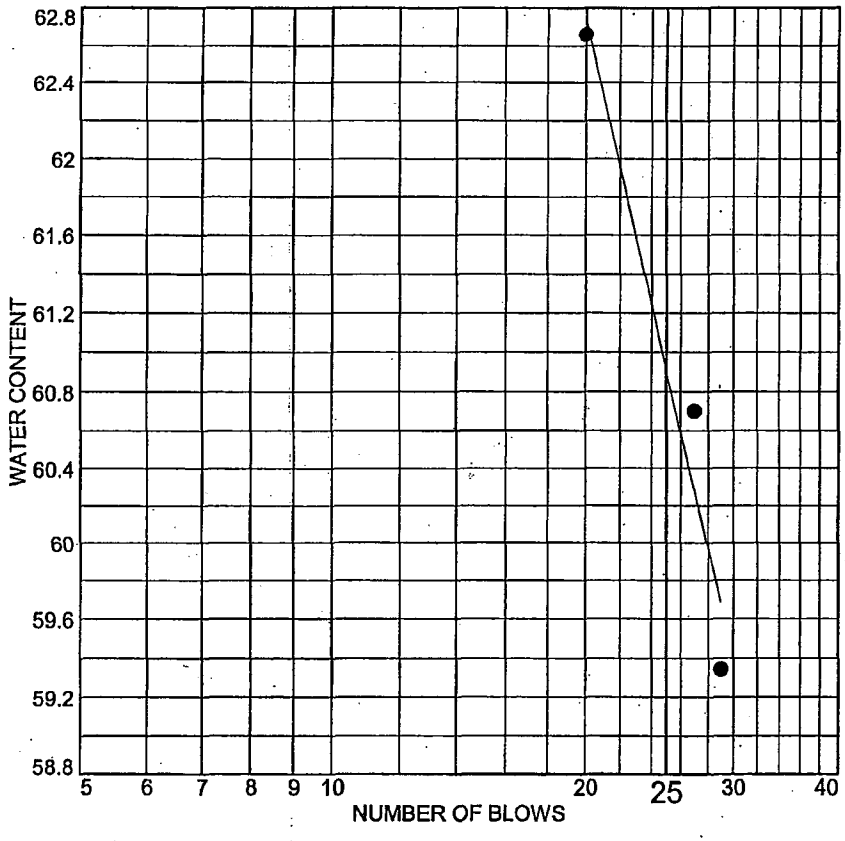
Liquid Limit= 38
Plastic Limit= 14
Plasticity Index= 24
Natural Moisture= 16.7
Liquidity Index= 0.1

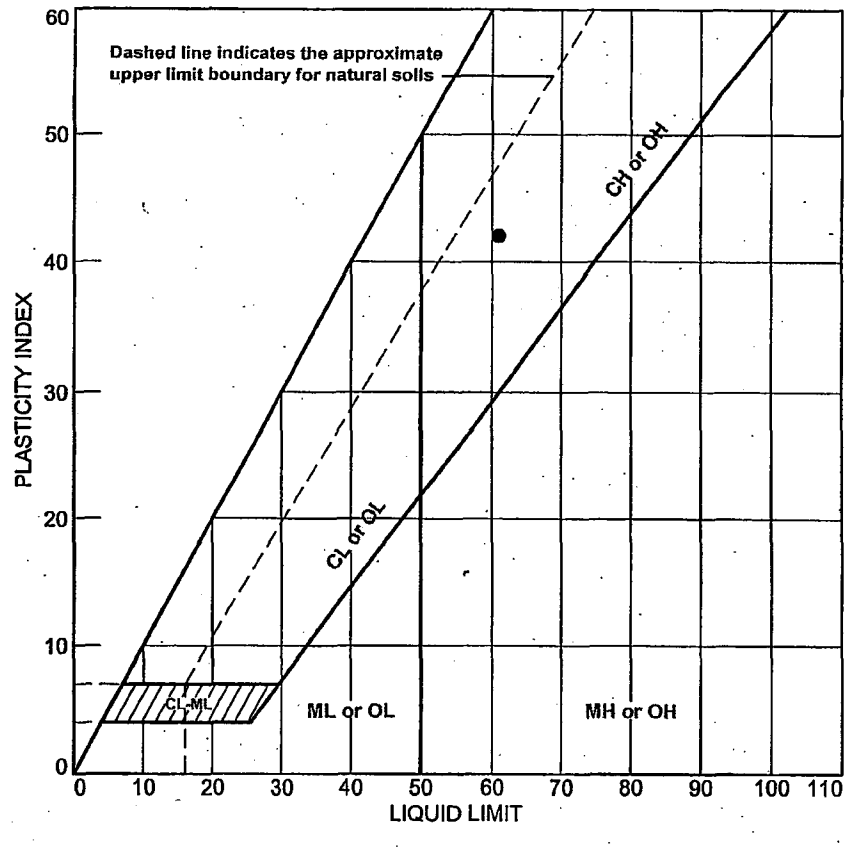
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	34.68	34.62			
Dry+Tare	33.72	33.67			
Tare	27.08	27.13			
Moisture	14.5	14.5			

MAK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 405-DH	STP-070	198.5'-200.0'	10/21/2006	CH	Fat Clay	24.0	61	42
		(SS-30)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:RF

ASTM D4318-05

NM 4-3-07

KAW 4/3/07

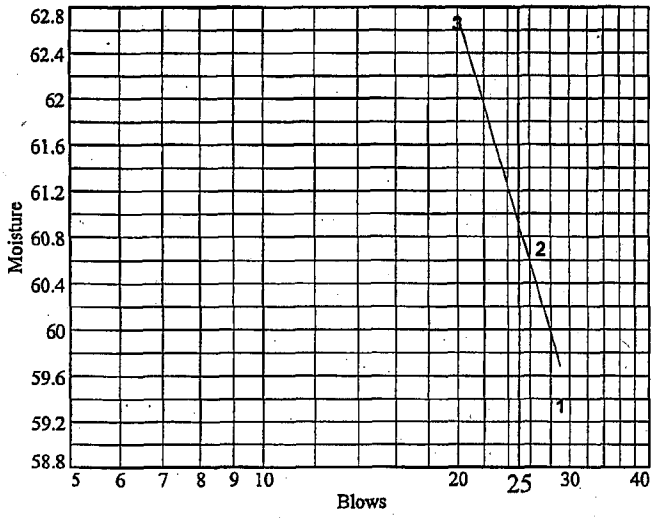
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 405-DH
Depth: 198.5'-200.0'
Sample Number: STP-070 (SS-30)
Material Description: Fat Clay
Date: 10/21/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	38.85	36.50	34.34			
Dry+Tare	34.88	33.38	30.90			
Tare	28.19	28.24	25.41			
# Blows	29	27	20			
Moisture	59.3	60.7	62.7			



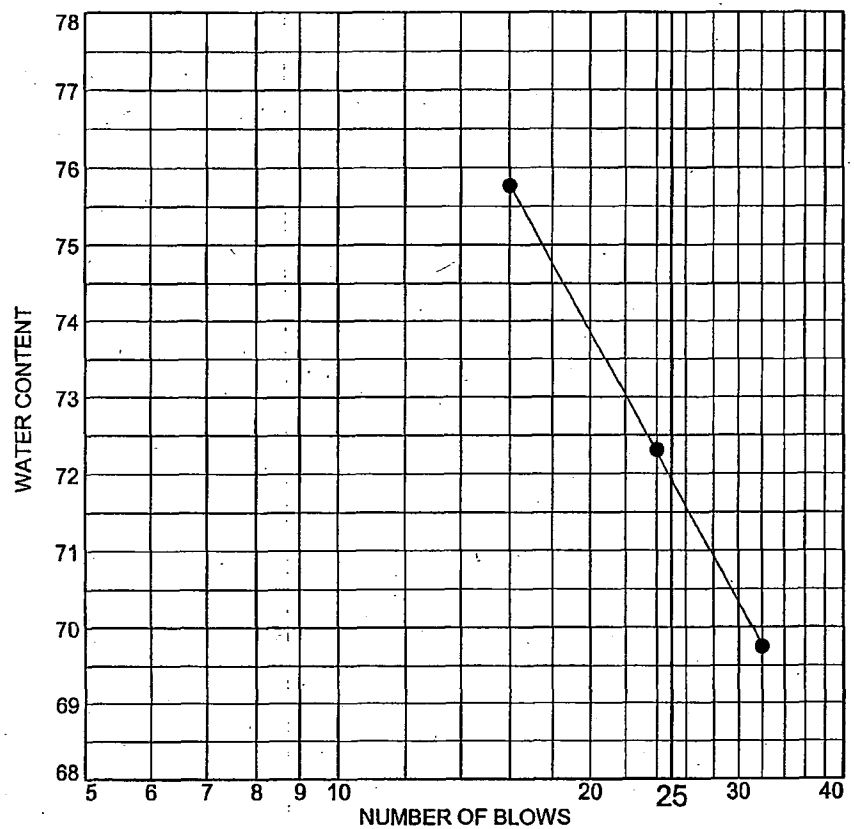
Liquid Limit= 61
Plastic Limit= 19
Plasticity Index= 42
Natural Moisture= 24.0
Liquidity Index= 0.1

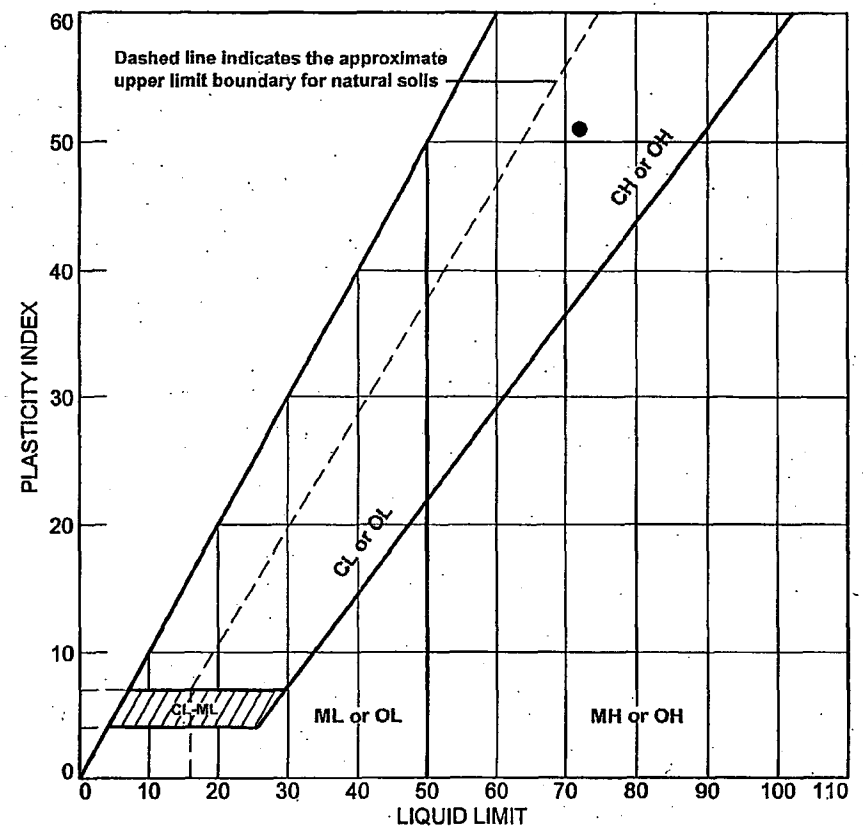
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.07	38.12			
Dry+Tare	34.83	36.59			
Tare	28.21	28.36			
Moisture	18.7	18.6			

DMA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 405-DH	STP-072 (SS-33)	258.5'-260.0'	10/22/2006	CH	Fat Clay	27.3	72	51

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

NM 4-3-07

KAW 4/3/07

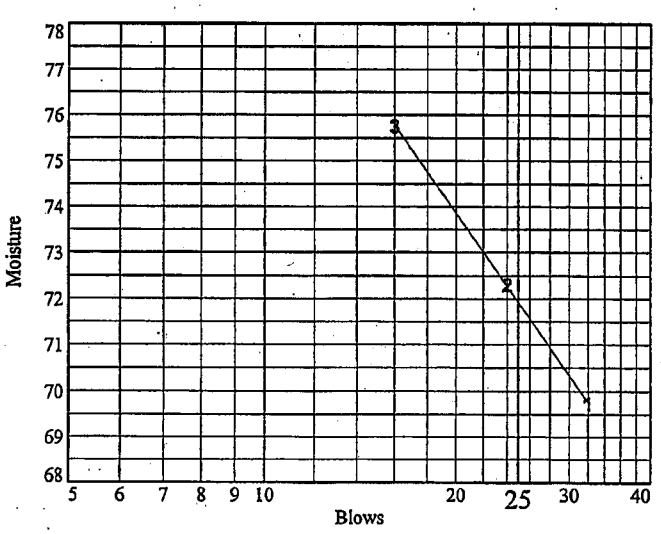
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 405-DH
Depth: 258.5'-260.0' **Sample Number:** STP-072 (SS-33)
Material Description: Fat Clay
Date: 10/22/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	33.32	35.71	35.66			
Dry+Tare	30.07	32.55	31.97			
Tare	25.41	28.18	27.10			
# Blows	32	24	16			
Moisture	69.7	72.3	75.8			



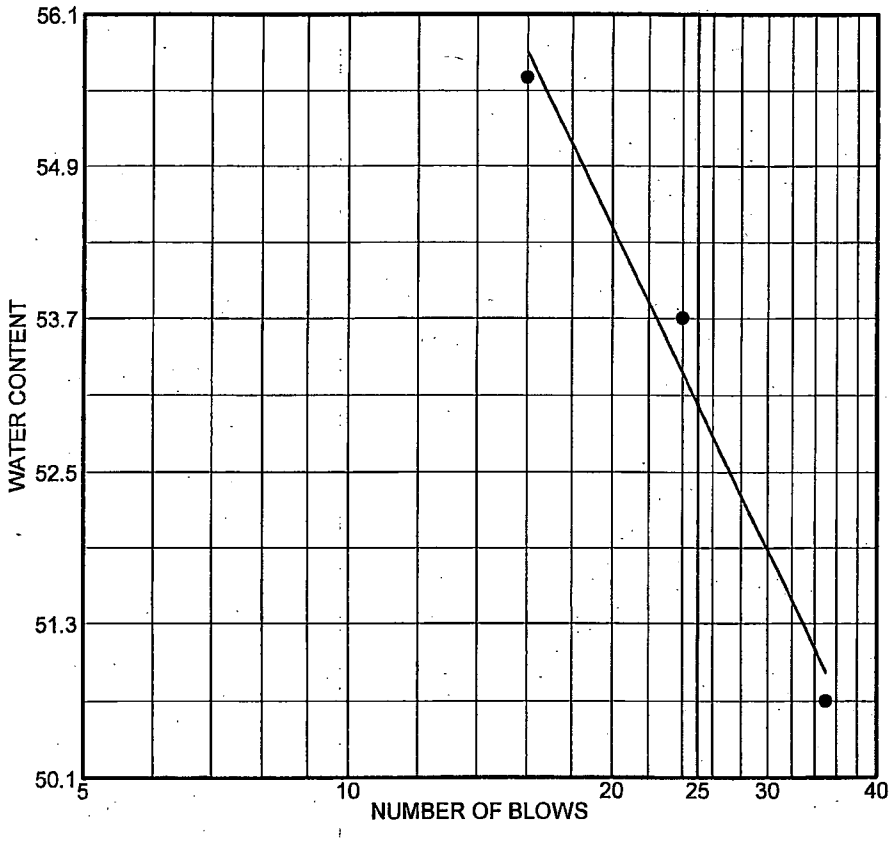
Liquid Limit= 72
Plastic Limit= 21
Plasticity Index= 51
Natural Moisture= 27.3
Liquidity Index= 0.1

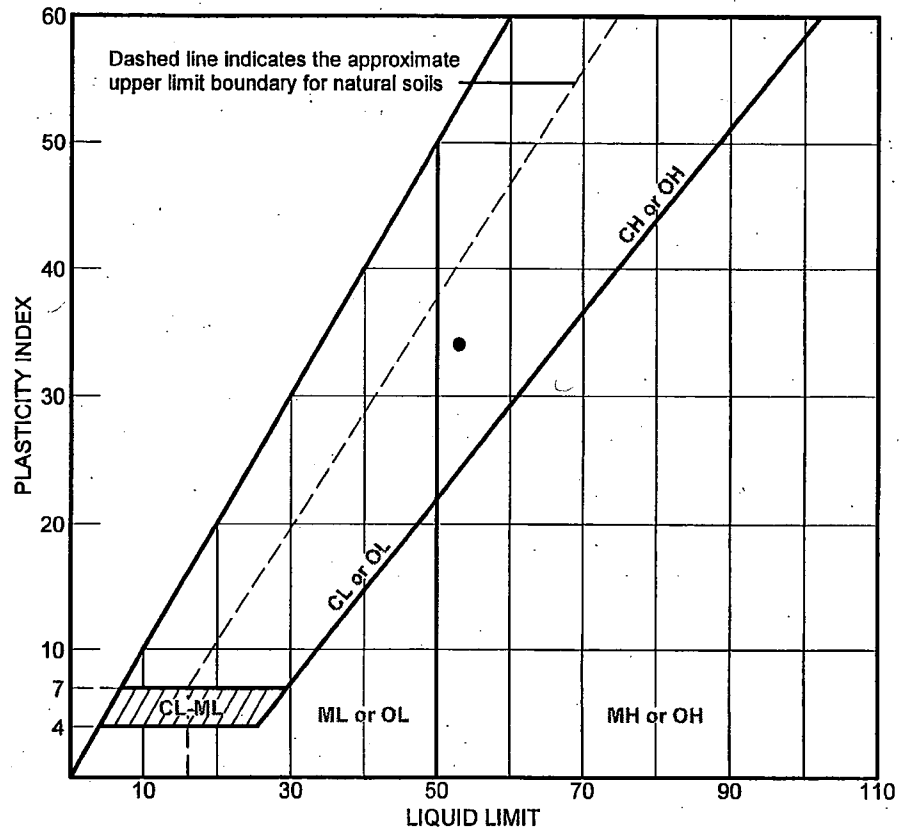
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	37.59	36.67			
Dry+Tare	35.96	35.24			
Tare	28.05	28.28			
Moisture	20.6	20.5			

MK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-405-DH	SS-36	320.0' to 321.5'	3-15-07	CH	Fat clay	19.7	53	34

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH KAW 4/13/07
ASTM D4318-05

KAW 4/13/07

LIQUID AND PLASTIC LIMIT TEST DATA

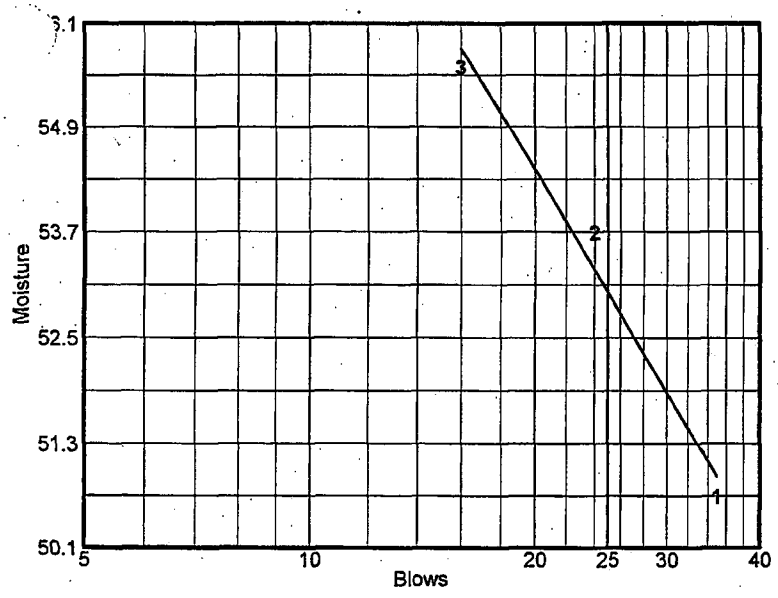
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-405-DH
Sample No.: SS-36
Elev. or Depth: 320.0' to 321.5' **Sample Length(in./cm.):**
Location: B-405-DH
Description: Fat clay
Date: 3-15-07 **Natural Moisture:** 19.7
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	25.39	26.12	26.72			
Dry+Tare	20.52	20.83	21.05			
Tare	10.92	10.97	10.86			
# Blows	35	24	16			
Moisture	50.7	53.7	55.6			

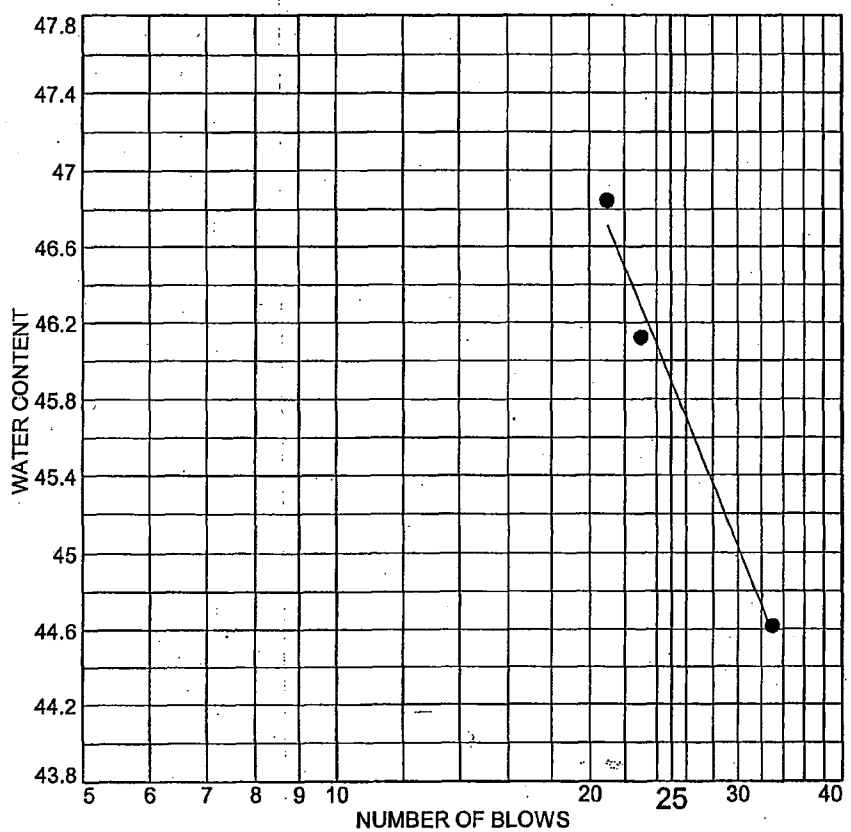


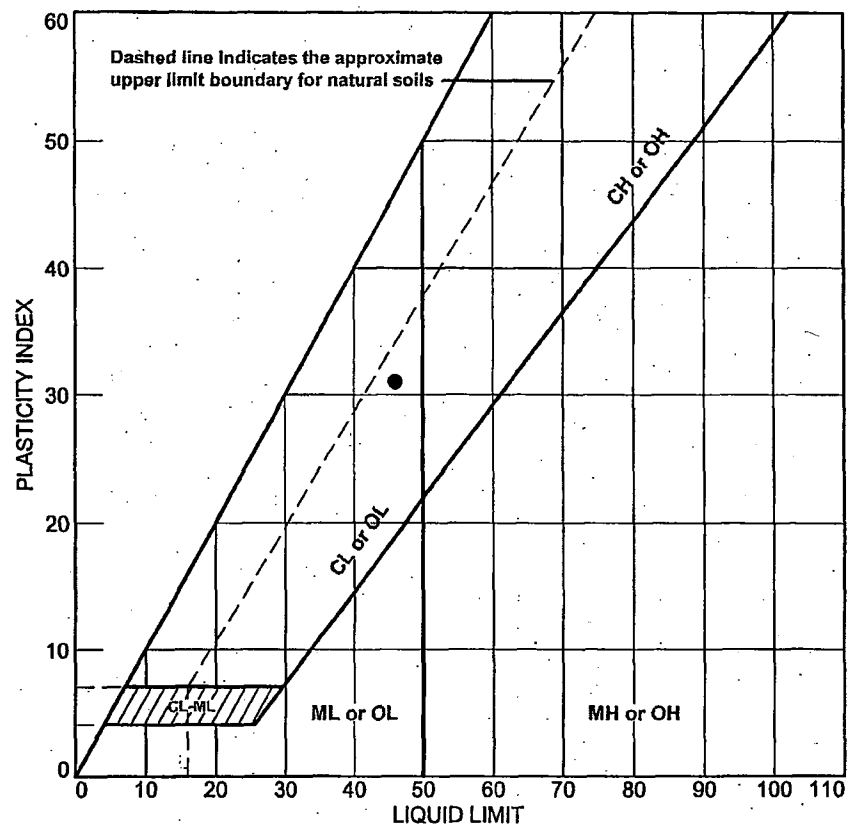
Liquid Limit= 53
Plastic Limit= 19
Plasticity Index= 34

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	18.28	18.43			
Dry+Tare	17.09	17.22			
Tare	10.89	10.94			
Moisture	19.2	19.3			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 405-DH	STP-075 (SS-40)	398.5'-400'	10/30/2006	CL	Sandy Lean Clay	17.1	46	31

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:ST
ASTM D4319-05

MH
4-3-07

KAW 4/13/07

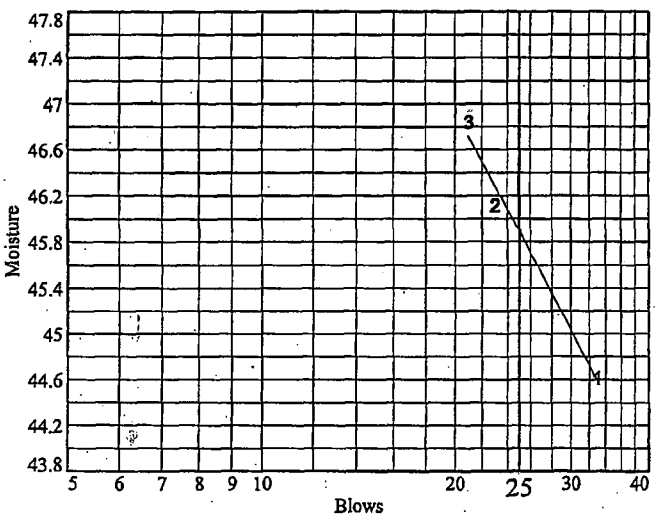
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 405-DH
Depth: 398.5'-400'
Sample Number: STP-075 (SS-40)
Material Description: Sandy Lean Clay
Date: 10/30/2006
USCS Class.: CL
Testing Remarks: Tested By:AC/TH
Reviewed By:ST
ASTM D4319-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	39.59	38.51	36.44			
Dry+Tare	36.15	35.24	33.47			
Tare	28.44	28.15	27.13			
# Blows	33	23	21			
Moisture	44.6	46.1	46.8			



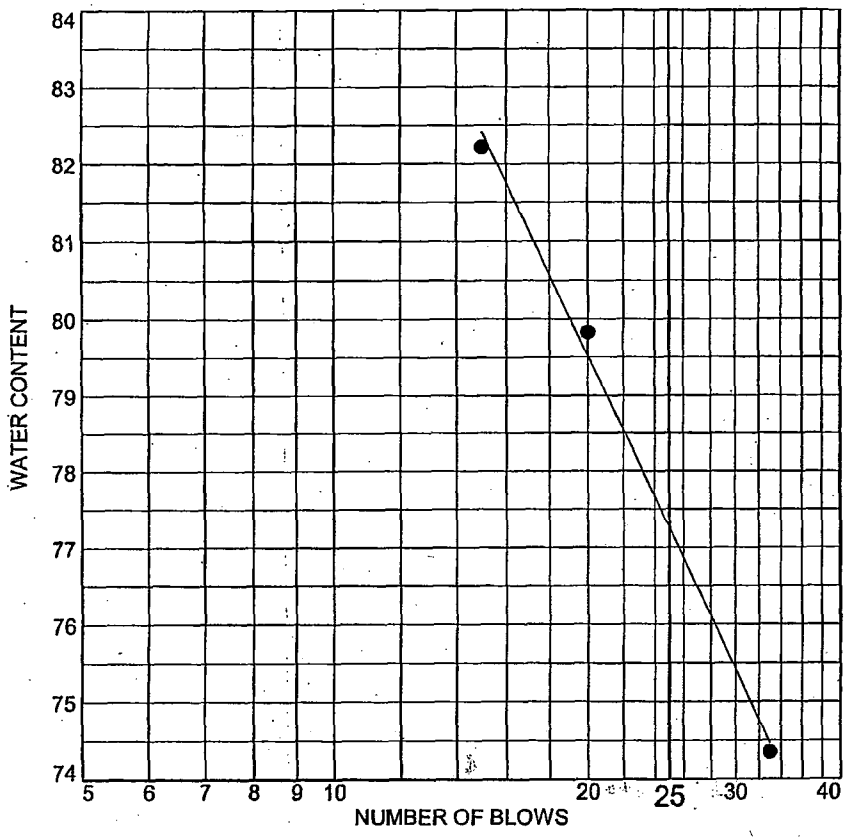
Liquid Limit= 46
Plastic Limit= 15
Plasticity Index= 31
Natural Moisture= 17.1
Liquidity Index= 0.1

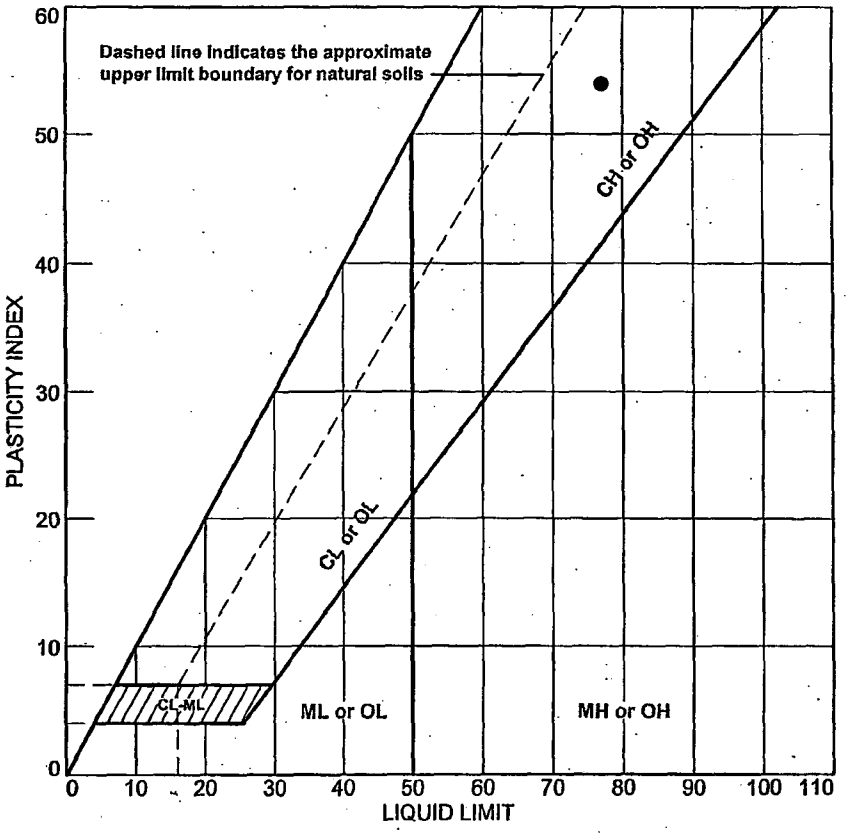
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.21	37.43			
Dry+Tare	35.14	36.22			
Tare	27.91	28.24			
Moisture	14.8	15.2			

MAK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 405-DH	STP-076	423.5'-425'	10/31/2006	CH	Fat Clay	25.3	77	54
		(SS-41)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:ST

ASTM D4318-05

NA 4-3-07

KAW 4/3/07

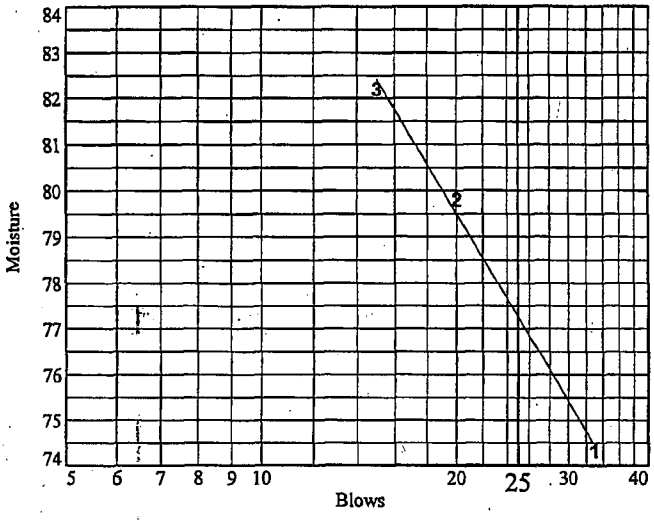
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 405-DH
Depth: 423.5'-425'
Sample Number: STP-076 (SS-41)
Material Description: Fat Clay
Date: 10/31/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.29	36.33	38.09			
Dry+Tare	32.87	32.69	33.70			
Tare	28.27	28.13	28.36			
# Blows	33	20	15			
Moisture	74.3	79.8	82.2			



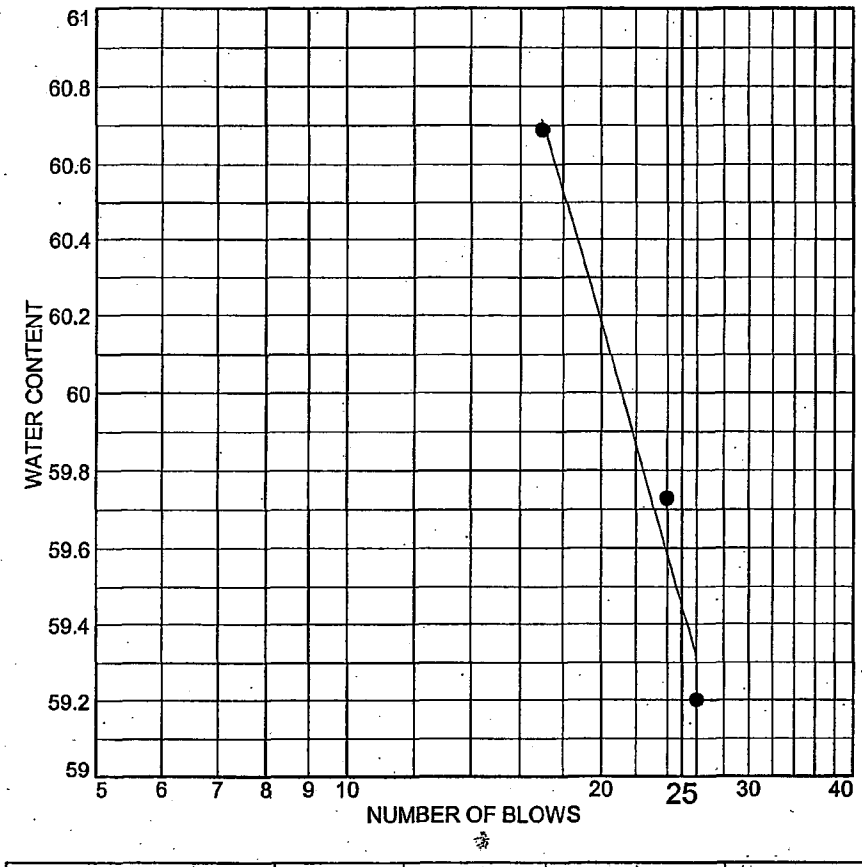
Liquid Limit= 77
Plastic Limit= 23
Plasticity Index= 54
Natural Moisture= 25.3
Liquidity Index= 0.0

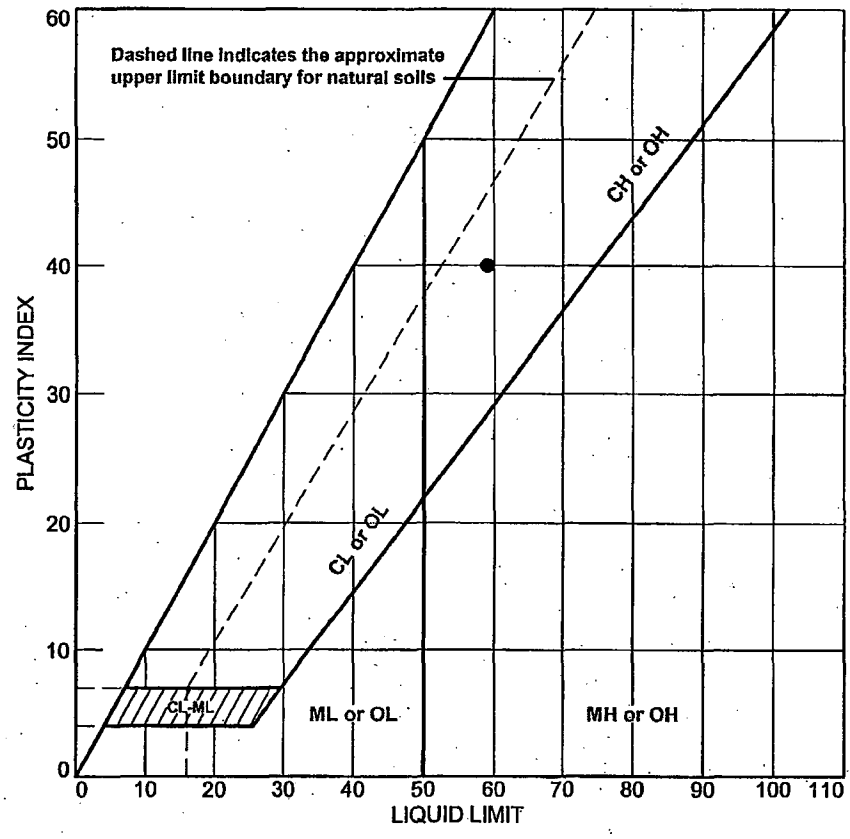
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.91	36.07			
Dry+Tare	34.39	34.61			
Tare	27.99	28.33			
Moisture	23.7	23.2			

4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 405-DH	STP-077	498.5'-500'	11/2/2006	CH	Sandy Fat Clay	21.8	59	40
		(SS-45)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Rewiewed By:ST

ASTM D4319-05

MH 4-3-07

KAW 4/3/07

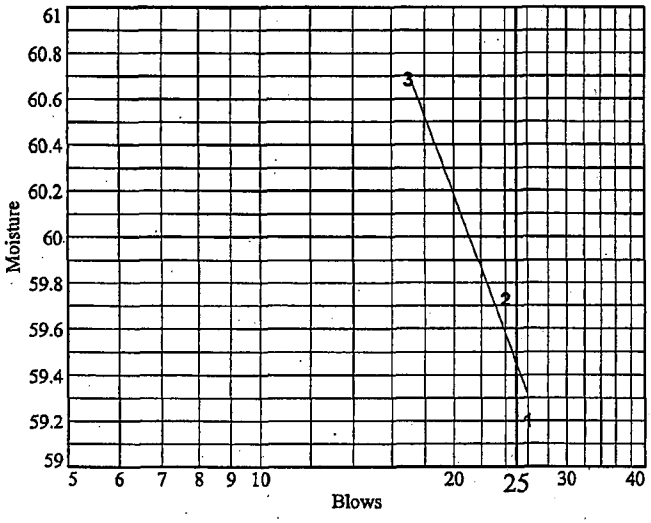
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 405-DH
Depth: 498.5'-500'
Sample Number: STP-077 (SS-45)
Material Description: Sandy Fat Clay
Date: 11/2/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Rewiewed By:ST
ASTM D4319-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.44	37.80	36.85			
Dry+Tare	34.03	34.27	33.50			
Tare	28.27	28.36	27.98			
# Blows	26	24	17			
Moisture	59.2	59.7	60.7			



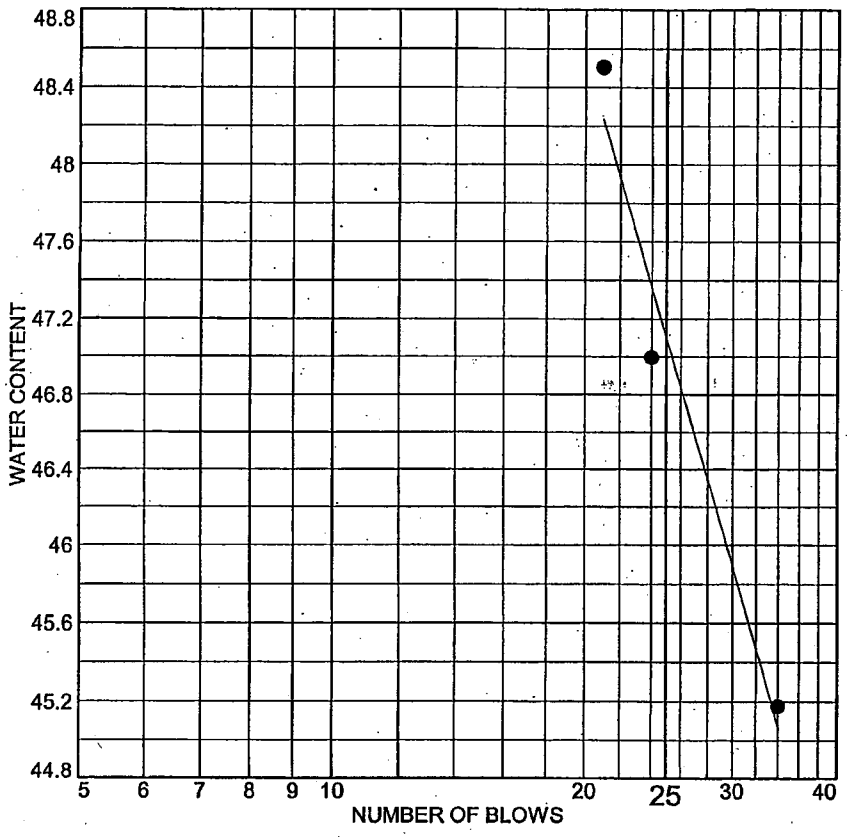
Liquid Limit= 59
Plastic Limit= 19
Plasticity Index= 40
Natural Moisture= 21.8
Liquidity Index= 0.1

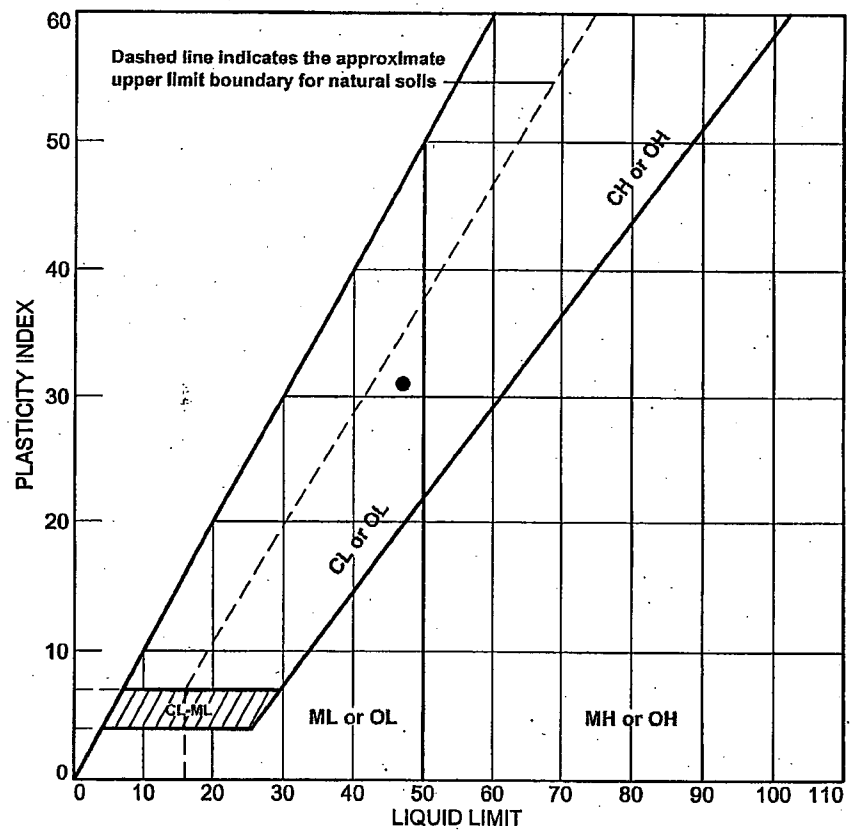
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.23	34.60			
Dry+Tare	34.08	33.39			
Tare	28.16	27.13			
Moisture	19.4	19.3			

MAC 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 405-DH	STP-080 (SS-49)	578.5'-580'	11/5/2006	CL	Lean Clay with Sand	19.9	47	31

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:ST
ASTM D4318-05

MH
4-3-07

KAW 4/3/07

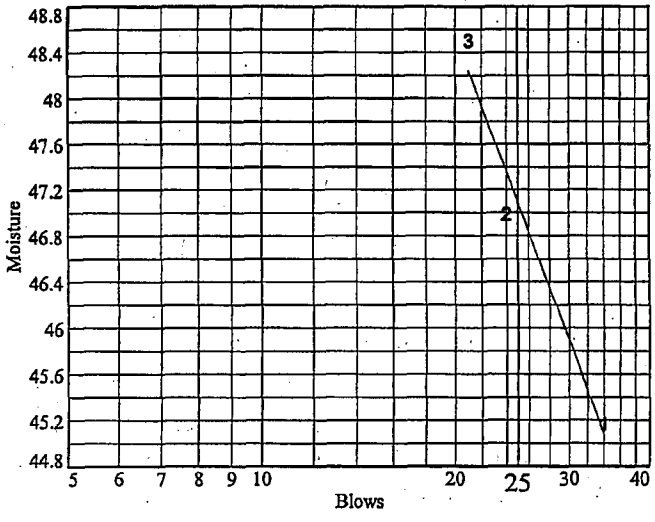
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 405-DH
Depth: 578.5'-580' **Sample Number:** STP-080 (SS-49)
Material Description: Lean Clay with Sand
Date: 11/5/2006 **USCS Class.:** CL
Testing Remarks: Tested By:AC/TH Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	38.02	39.08	37.33			
Dry+Tare	34.93	35.64	34.25			
Tare	28.09	28.32	27.90			
# Blows	34	24	21			
Moisture	45.2	47.0	48.5			



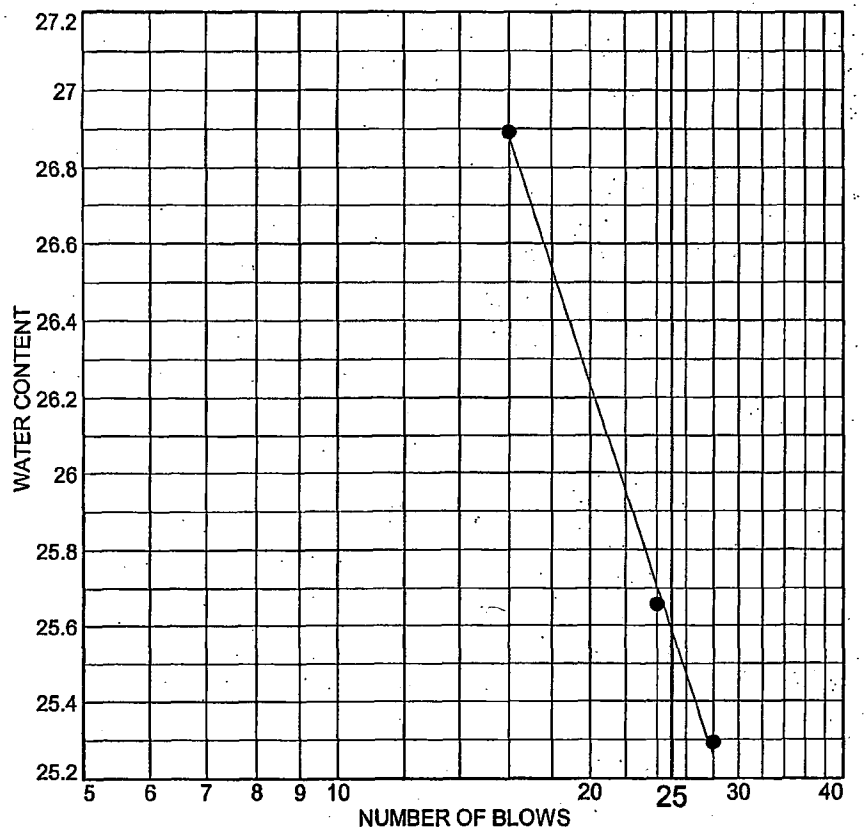
Liquid Limit= 47
Plastic Limit= 16
Plasticity Index= 31
Natural Moisture= 19.9
Liquidity Index= 0.1

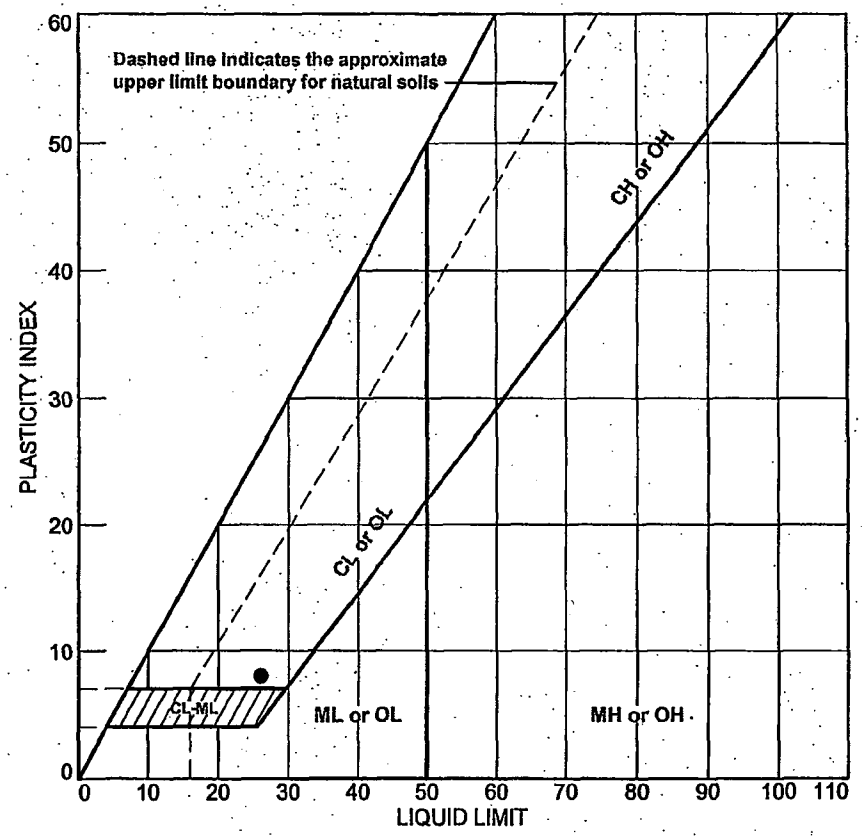
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.99	36.44			
Dry+Tare	34.94	35.37			
Tare	28.24	28.45			
Moisture	15.7	15.5			

MH 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 407	STP-308 (SS-12)	23.5'-25.0'	12/14/2006	CL	Lean Clay with Sand	22.8	26	8

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:MH
ASTM D4318-05

MH 4-3-07

KAW 4/3/07

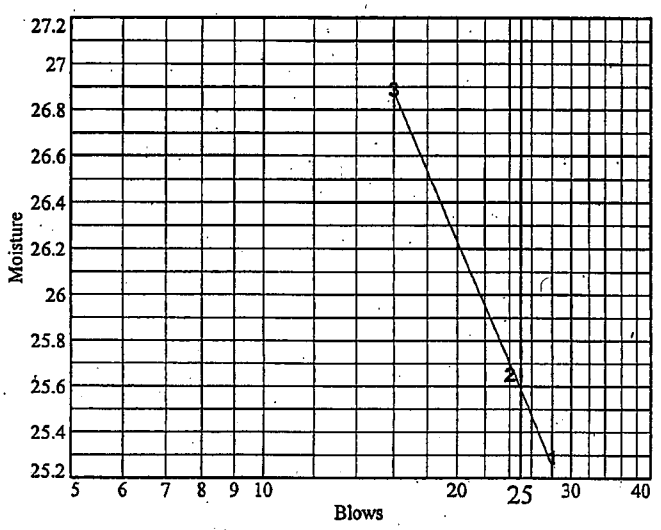
LIQUID AND PLASTIC LIMIT TEST DATA

4/1/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 407
Depth: 23.5'-25.0' **Sample Number:** STP-308 (SS-12)
Material Description: Lean Clay with Sand
Date: 12/14/2006 **USCS Class.:** CL **AASHTO Class.:** A-4(4)
Testing Remarks: Tested By:AC Reviewed By:MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	39.85	39.32	39.19			
Dry+Tare	37.47	37.07	36.88			
Tare	28.06	28.30	28.29			
# Blows	28	24	16			
Moisture	25.3	25.7	26.9			



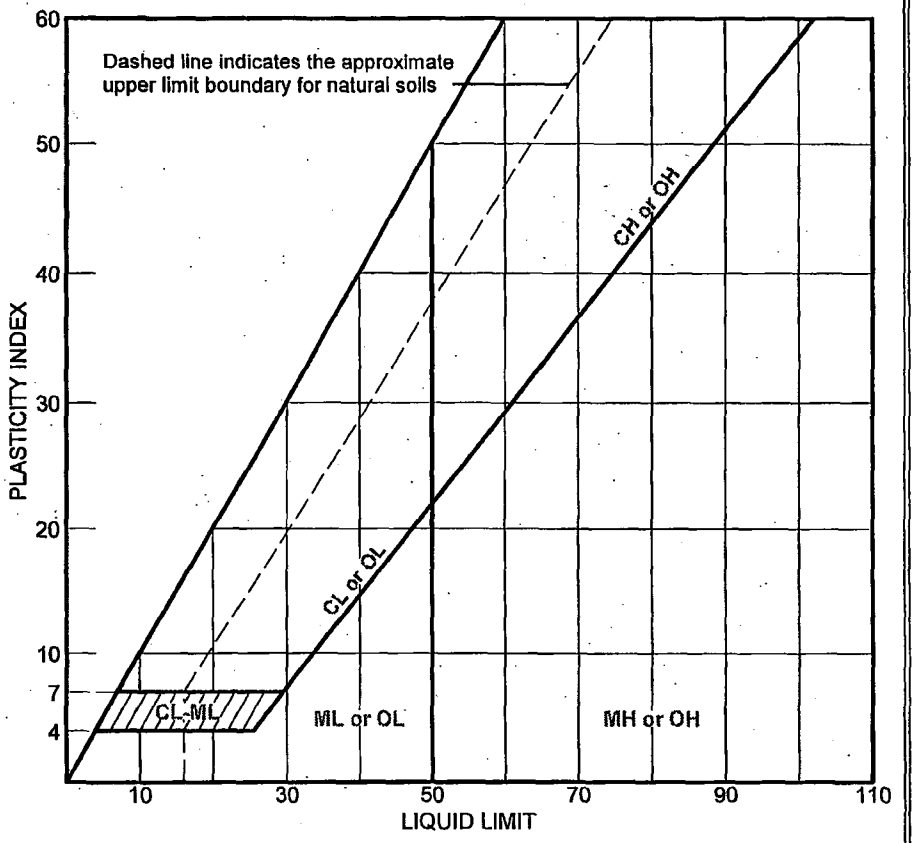
Liquid Limit= 26
Plastic Limit= 18
Plasticity Index= 8
Natural Moisture= 22.8
Liquidity Index= 0.6

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	37.79	35.63			
Dry+Tare	36.30	34.35			
Tare	28.08	27.17			
Moisture	18.1	17.8			

MK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-409	UD-1	68' to 70'	2-14-07	SM	Silty Sand	14.9	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

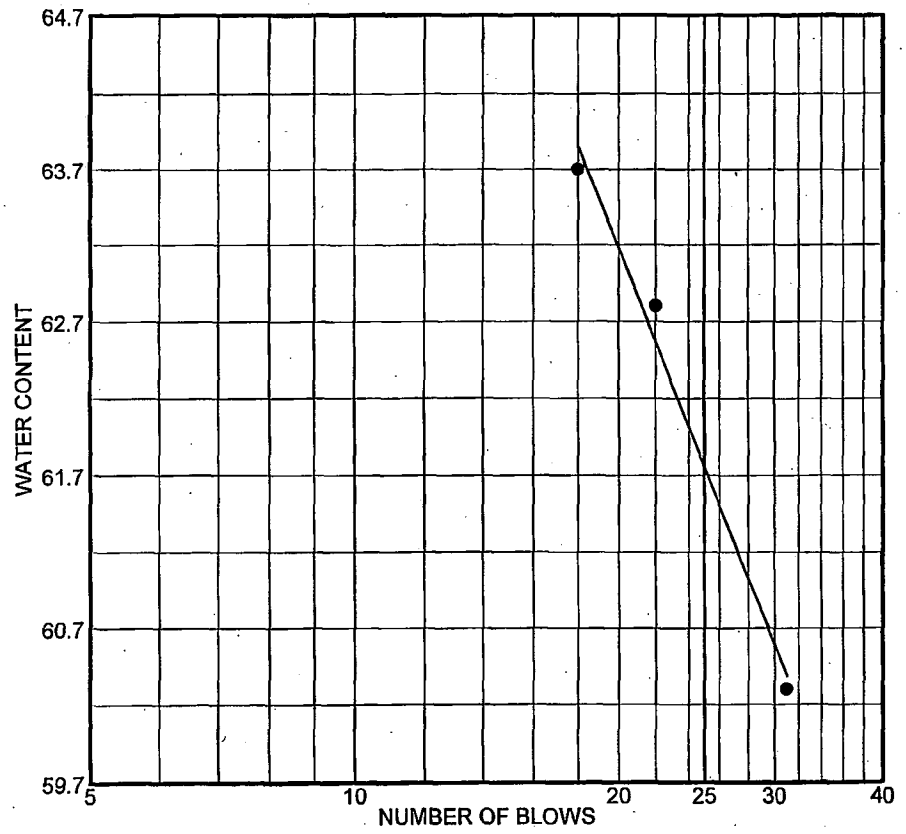
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

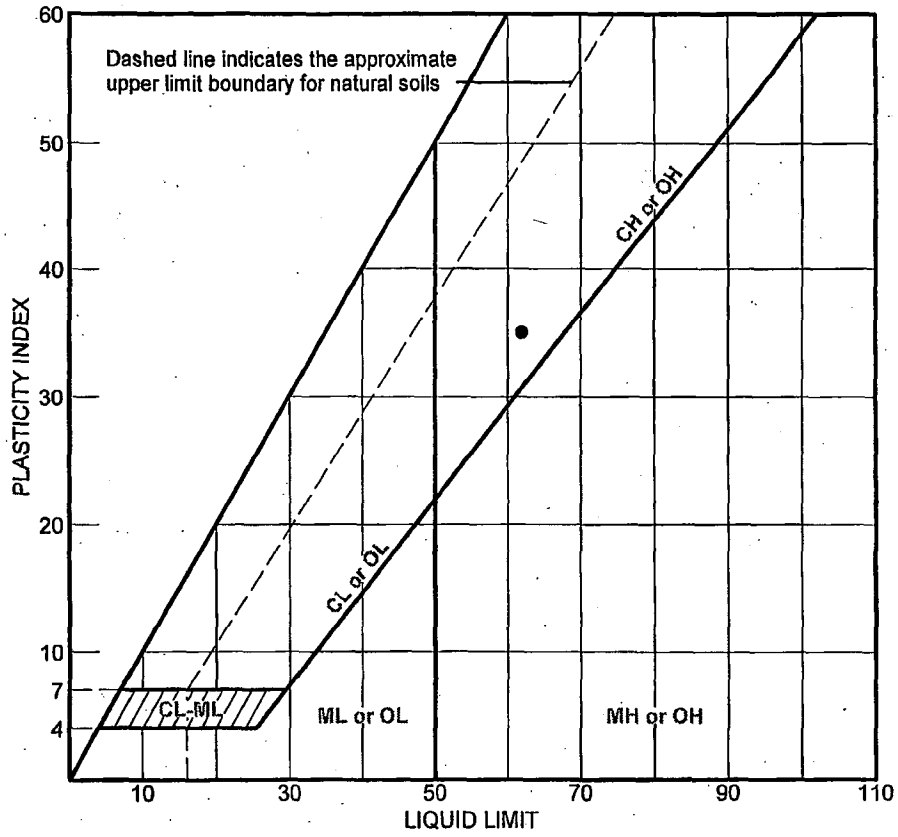
Sample Data

Source: B-409
Sample No.: UD-1
Elev. or Depth: 68' to 70' **Sample Length(in./cm.):**
Location: B-409
Description: Silty Sand
Date: 2-14-07 **Natural Moisture:** 14.9
USCS Class.: SM **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-409	UD-4A	160' to 162'	2-24-07	CH	Fat Clay	19.6	62	35

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05

KAW 4/13/07

LIQUID AND PLASTIC LIMIT TEST DATA

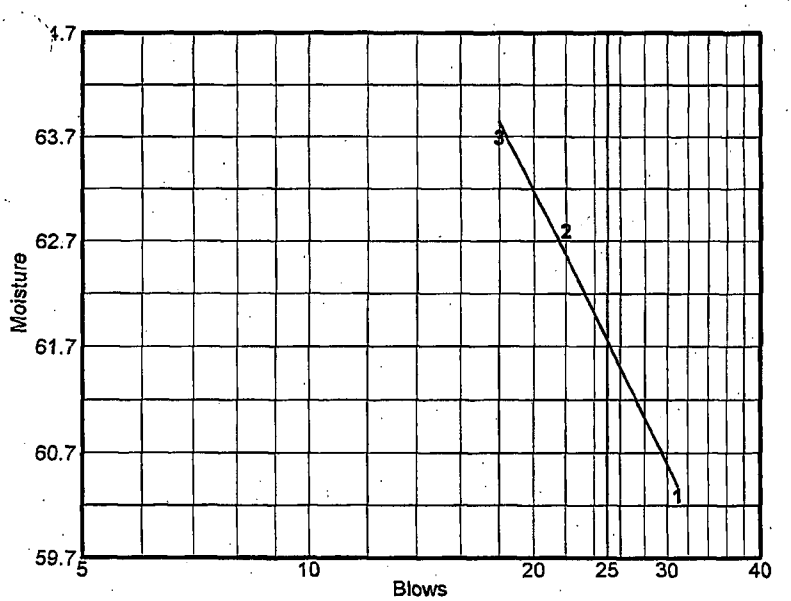
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-409
Sample No.: UD-4A
Elev. or Depth: 160' to 162' **Sample Length(in./cm.):**
Location: B-409
Description: Fat Clay
Date: 2-24-07 **Natural Moisture:** 19.6
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	24.41	22.05	22.78			
Dry+Tare	19.58	17.77	18.17			
Tare	11.57	10.96	10.93			
# Blows	31	22	18			
Moisture	60.3	62.8	63.7			

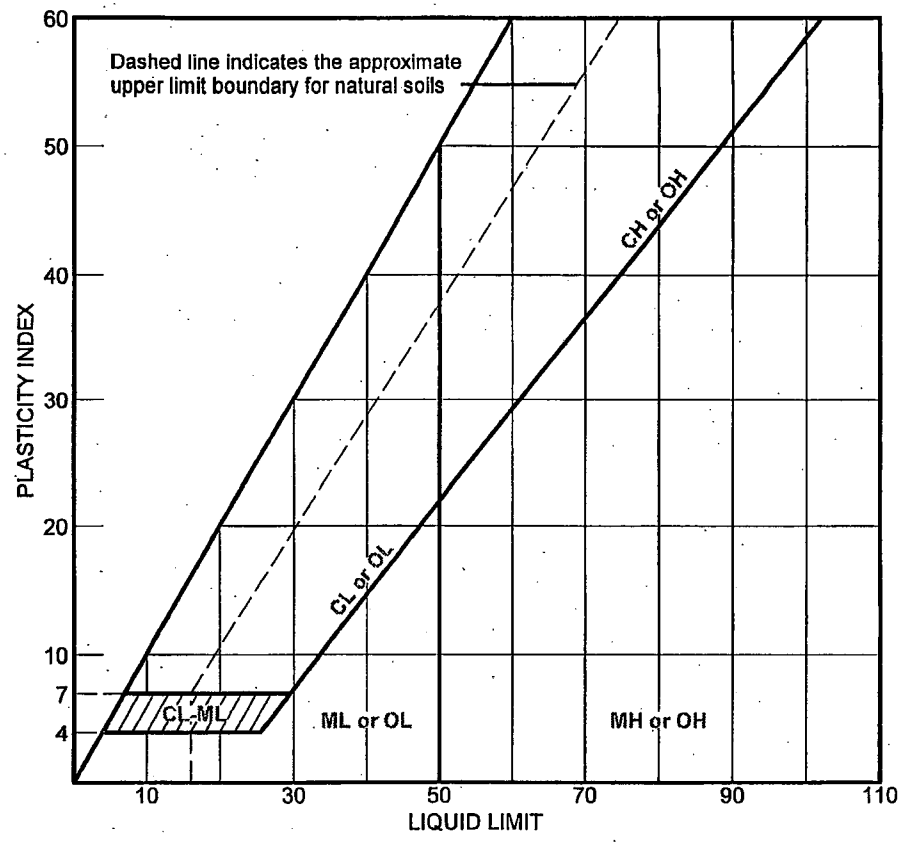


Liquid Limit= 62
Plastic Limit= 27
Plasticity Index= 35

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	19.86	21.16			
Dry+Tare	18.05	19.07			
Tare	11.30	11.64			
Moisture	26.8	28.1			

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-409	UD-5	188' to 190'	2-25-07	SP-SM	Poorly graded sand with silt	38.2	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05 KAW 4/3/07

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

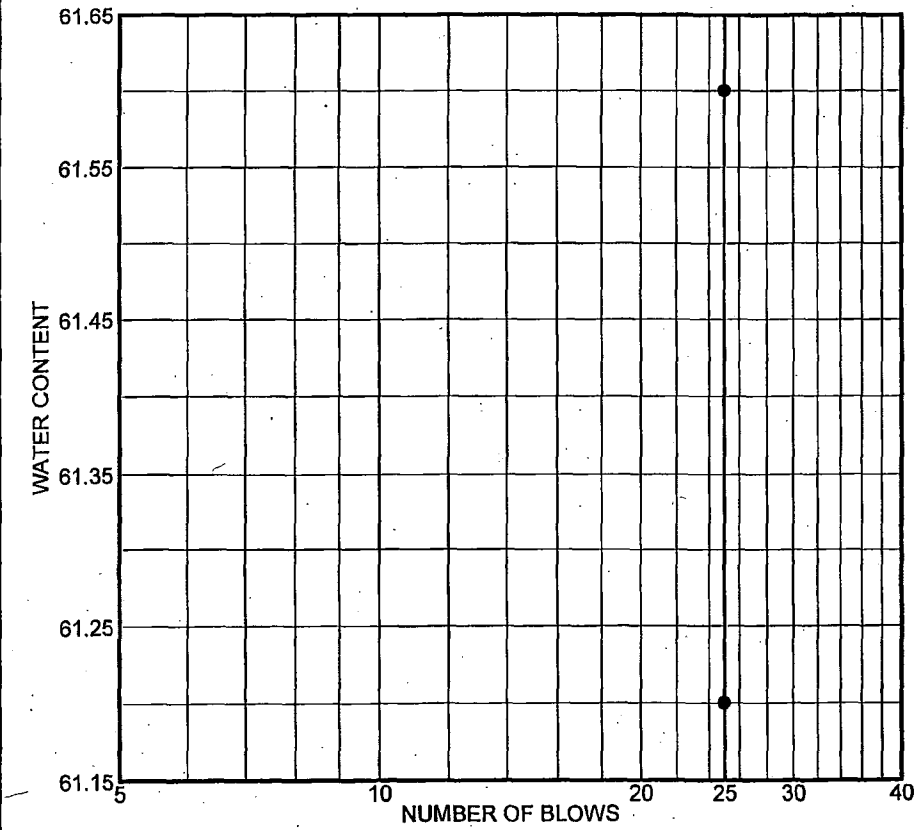
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

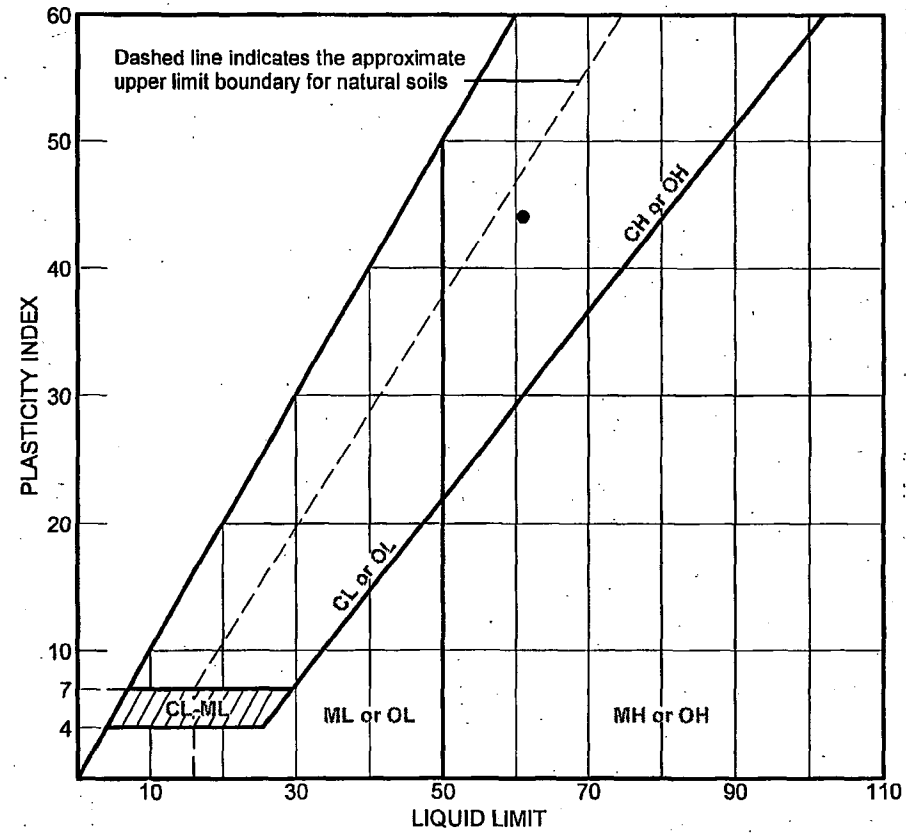
Sample Data

Source: B-409
Sample No.: UD-5
Elev. or Depth: 188' to 190' **Sample Length(in./cm.):**
Location: B-409
Description: Poorly graded sand with silt
Date: 2-25-07 **Natural Moisture:** 38.2
USCS Class.: SP-SM **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-415	UD-1	88' to 90'	3-16-07	CH	Fat clay	23.9	61	44

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

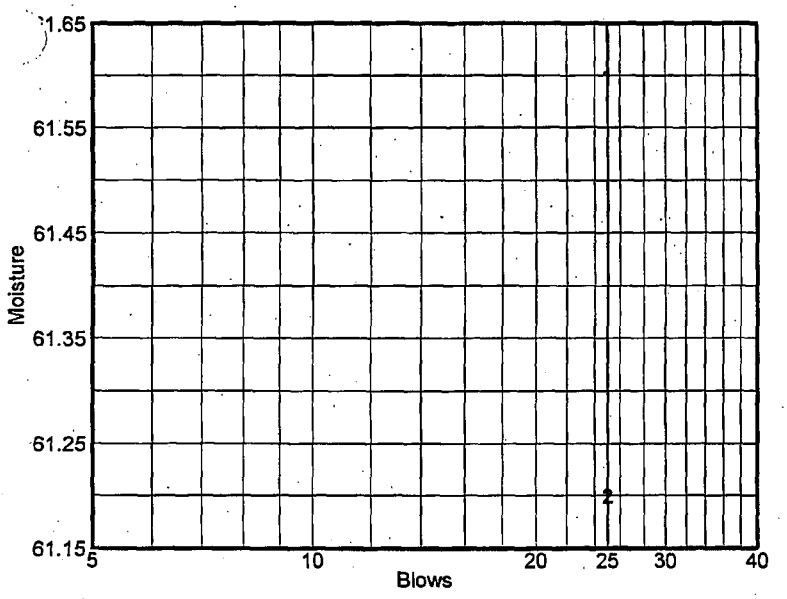
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-415
Sample No.: UD-1
Elev. or Depth: 88' to 90' **Sample Length(in./cm.):**
Location: B-415
Description: Fat clay
Date: 3-16-07 **Natural Moisture:** 23.9
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	19.92	20.11				
Dry+Tare	16.50	16.65				
Tare	10.95	11.0				
# Blows	25	25				
Moisture	61.6	61.2				

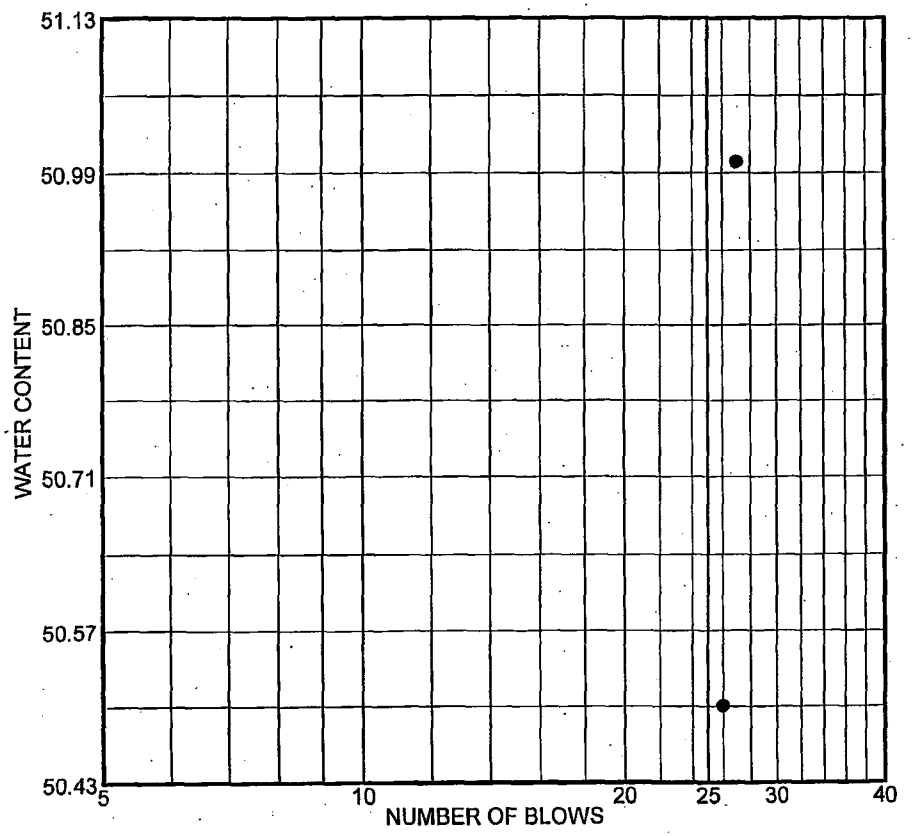


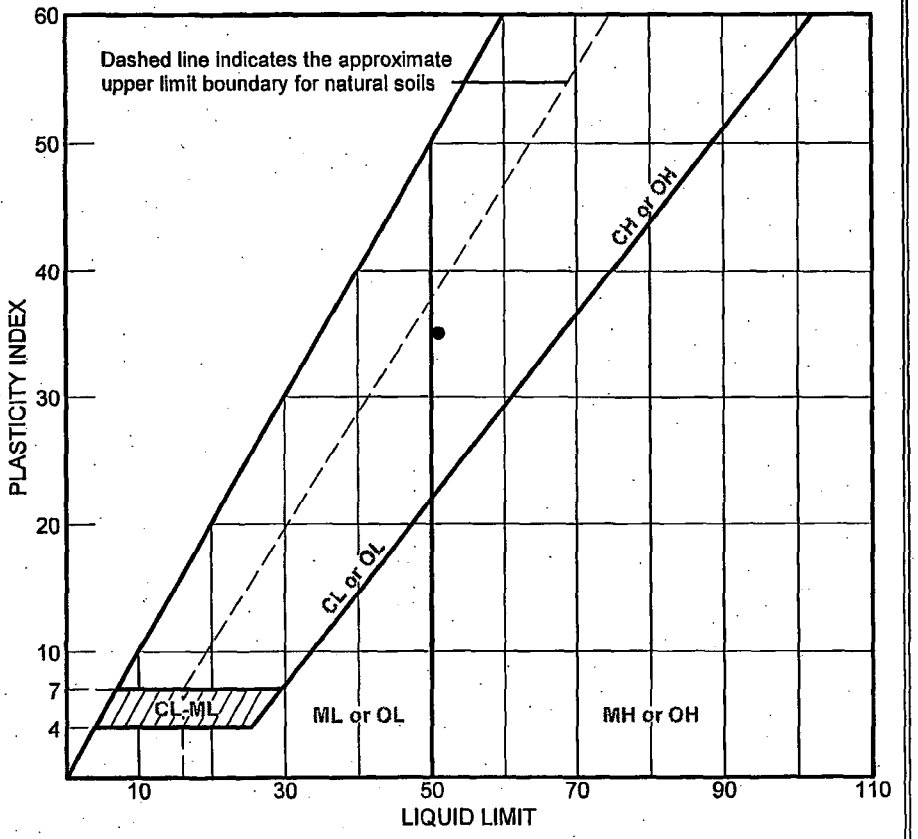
Liquid Limit= 61
Plastic Limit= 17
Plasticity Index= 44

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	17.89	20.37			
Dry+Tare	16.89	19.07			
Tare	10.81	11.54			
Moisture	16.4	17.3			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-415	UD-3	124' to 126'	3-16-07	CH	Fat clay with sand	34.0	51	35

Client Bechtel Power Corporation
Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

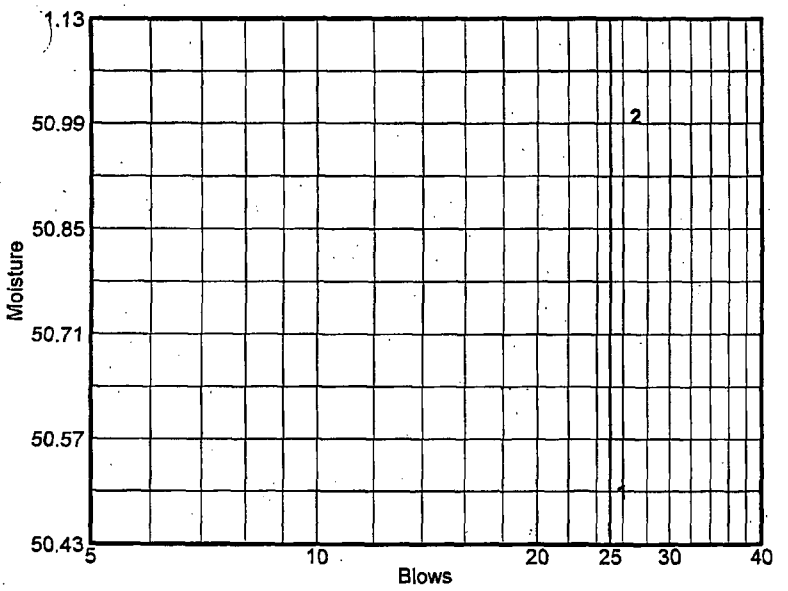
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-415
Sample No.: UD-3
Elev. or Depth: 124' to 126' **Sample Length(in./cm.):**
Location: B-415
Description: Fat clay with sand
Date: 3-16-07 **Natural Moisture:** 34.0
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	21.91	18.45				
Dry+Tare	18.23	15.94				
Tare	10.94	11.02				
# Blows	26	27				
Moisture	50.5	51.0				

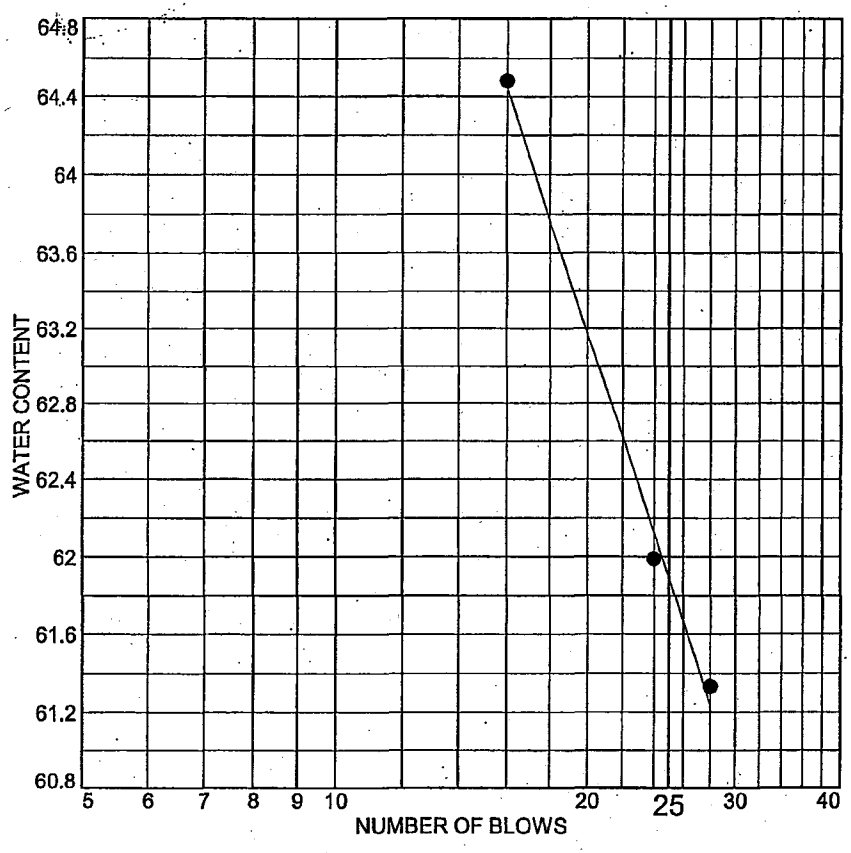


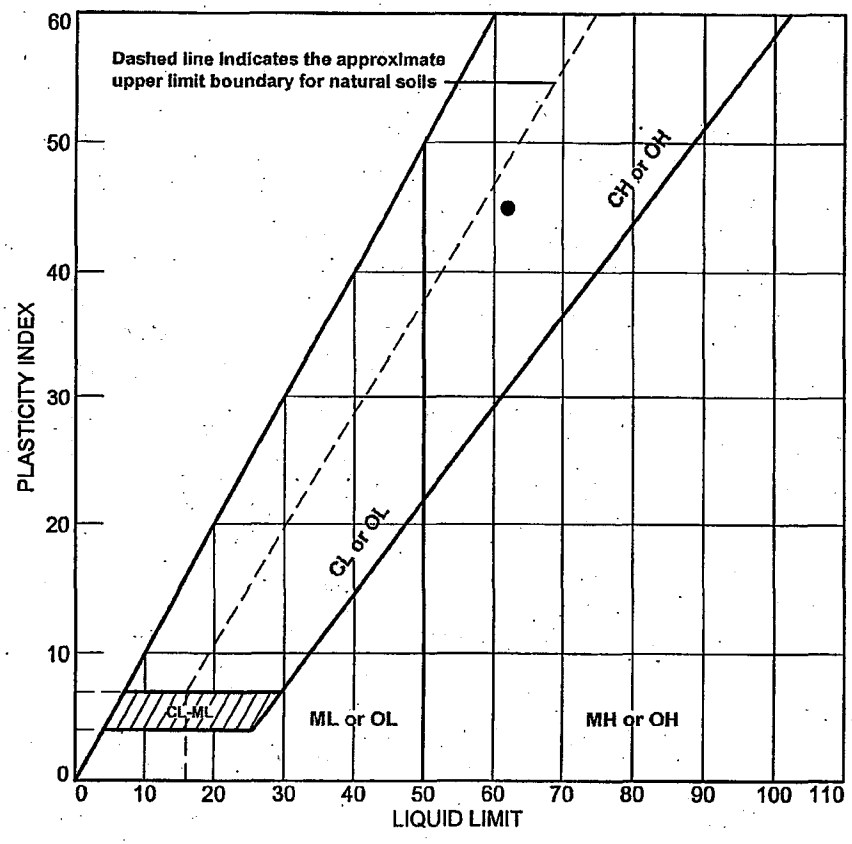
Liquid Limit= 51
Plastic Limit= 16
Plasticity Index= 35

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	17.55	19.10			
Dry+Tare	16.62	18.05			
Tare	10.70	11.46			
Moisture	15.7	15.9			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 419	STP-150	3.0'-4.5'	12/1/2006	CH	Fat Clay	25.3	62	45
		(SS-3)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:RF

ASTM D4318-05

MA 4-3-07

KAW 4/3/07

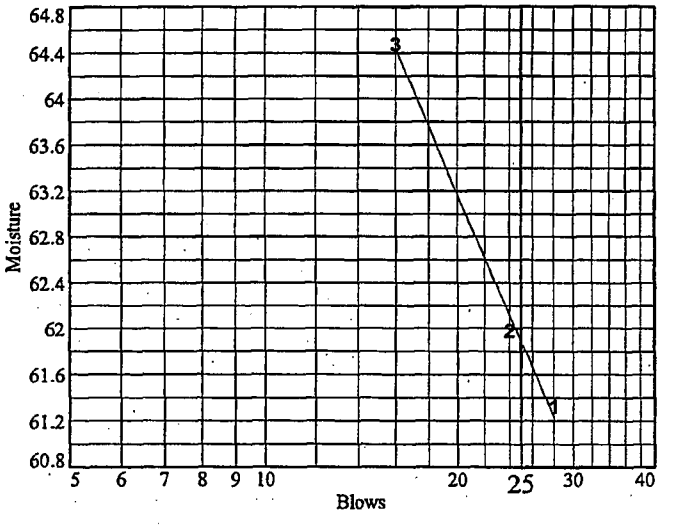
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 419
Depth: 3.0'-4.5'
Sample Number: STP-150 (SS-3)
Material Description: Fat Clay
Date: 12/1/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.08	36.58	37.77			
Dry+Tare	33.40	33.40	34.03			
Tare	27.40	28.27	28.23			
# Blows	28	24	16			
Moisture	61.3	62.0	64.5			



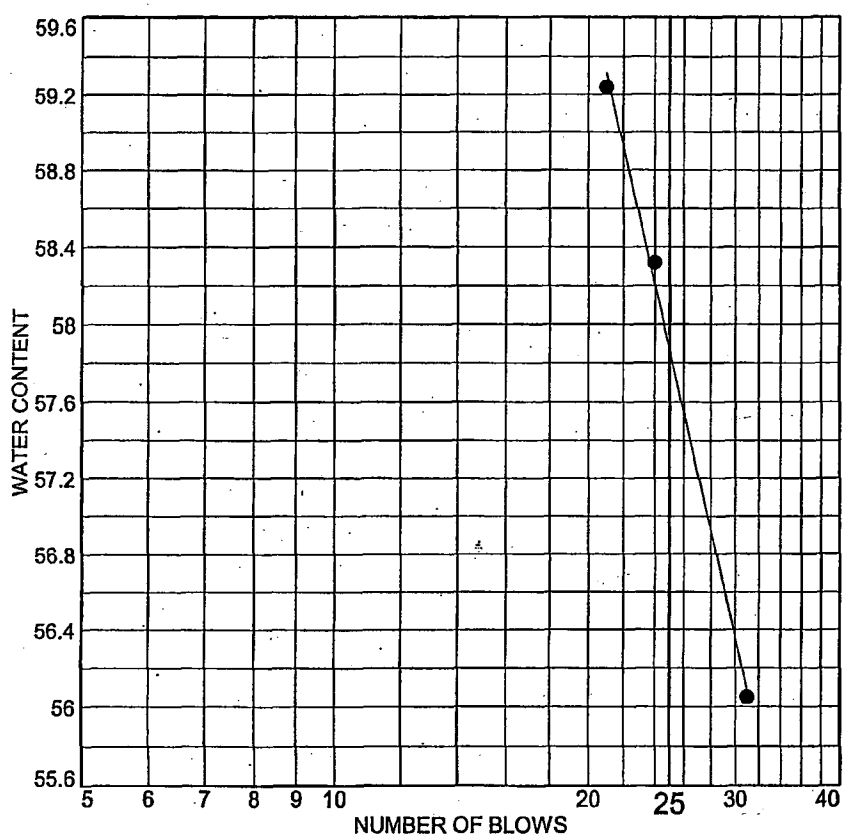
Liquid Limit= 62
Plastic Limit= 17
Plasticity Index= 45
Natural Moisture= 25.3
Liquidity Index= 0.2

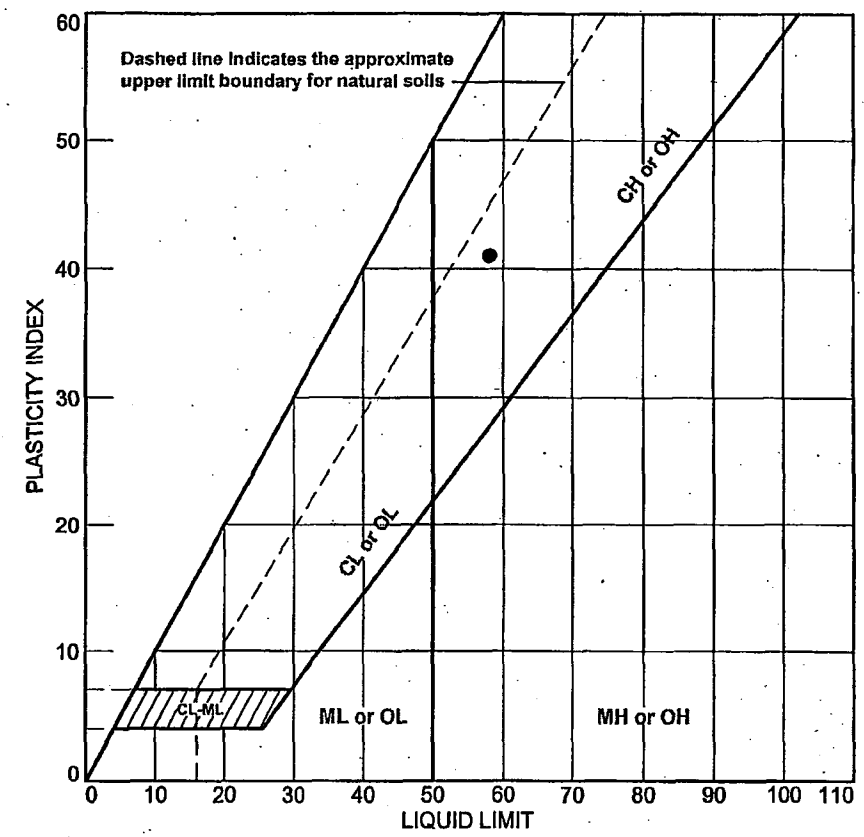
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.35	35.53			
Dry+Tare	35.17	34.52			
Tare	28.30	28.25			
Moisture	17.2	16.1			

NA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 419	STP-151 (SS-7)	9.0'-10.5'	12/1/2006	CH	Fat Clay	22.8	58	41

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH/MH Reviewed By:RF
ASTM D4318-05

MA 4-3-07

KAW 4/3/07

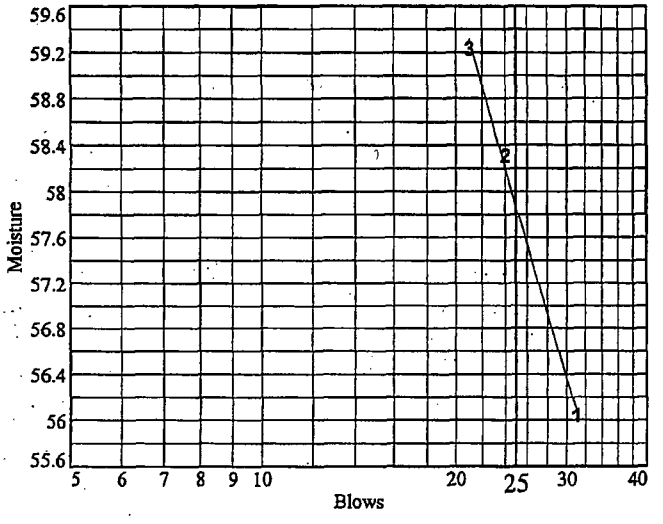
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 419
Depth: 9.0'-10.5' **Sample Number:** STP-151 (SS-7)
Material Description: Fat Clay
Date: 12/1/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC/TH/MH Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	35.94	35.53	36.73			
Dry+Tare	32.79	32.41	33.62			
Tare	27.17	27.06	28.37			
# Blows	31	24	21			
Moisture	56.0	58.3	59.2			



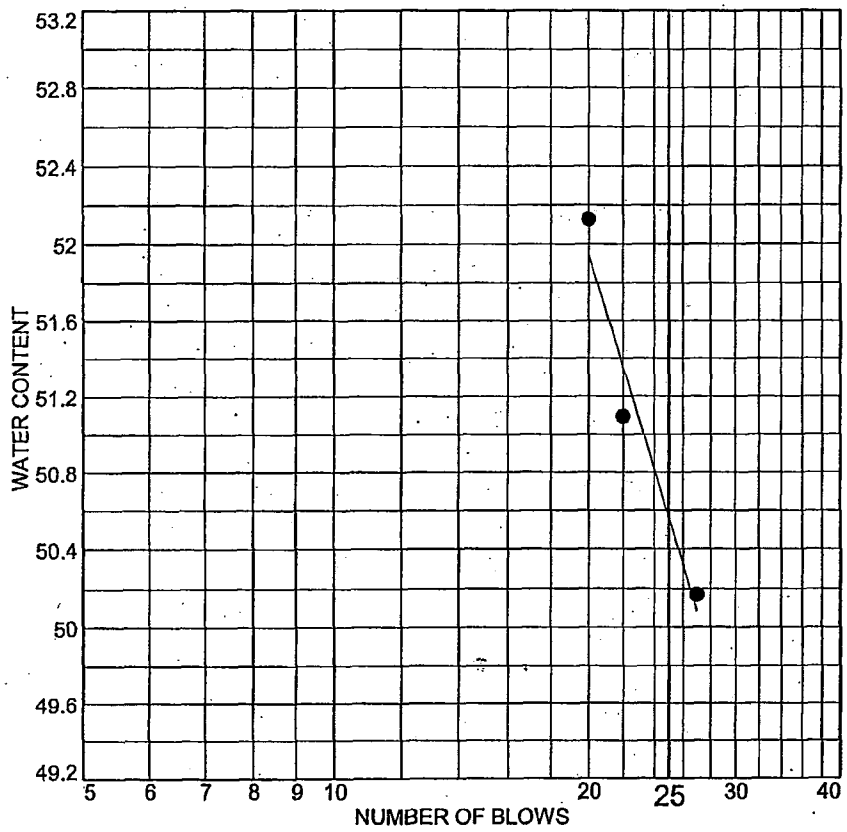
Liquid Limit= 58
Plastic Limit= 17
Plasticity Index= 41
Natural Moisture= 22.8
Liquidity Index= 0.1

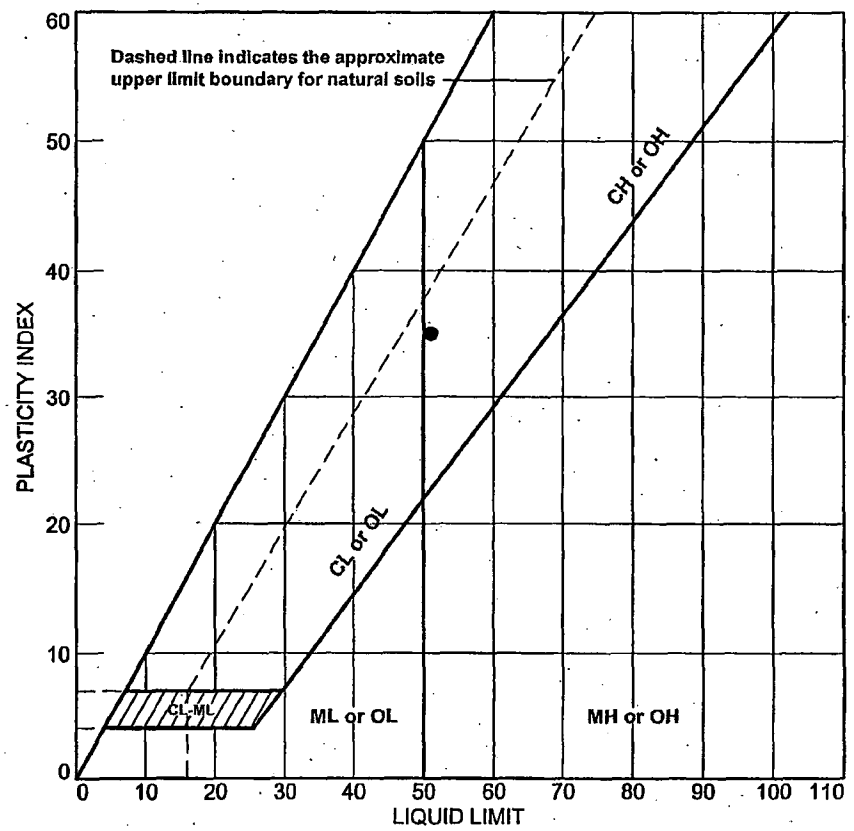
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	34.87	35.20			
Dry+Tare	33.87	34.19			
Tare	28.11	28.24			
Moisture	17.4	17.0			

MK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 419	STP-152 (SS-10)	13.5'-15.0'	12/1/2006	CH	Fat Clay	21.2	51	35

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/MH Reviewed By:RF
ASTM D4318-05

MH 4-3-07

KAW 4/3/07

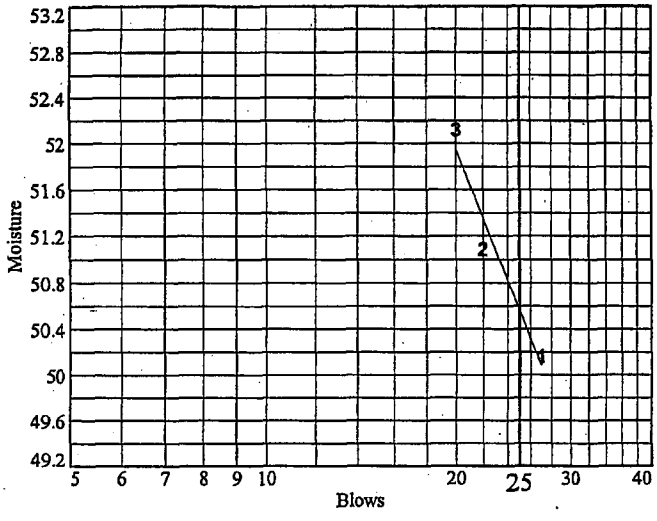
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 419
Depth: 13.5'-15.0'
Sample Number: STP-152 (SS-10)
Material Description: Fat Clay
Date: 12/1/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/MH Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.09	38.51	34.15			
Dry+Tare	33.10	35.01	31.21			
Tare	27.14	28.16	25.57			
# Blows	27	22	20			
Moisture	50.2	51.1	52.1			



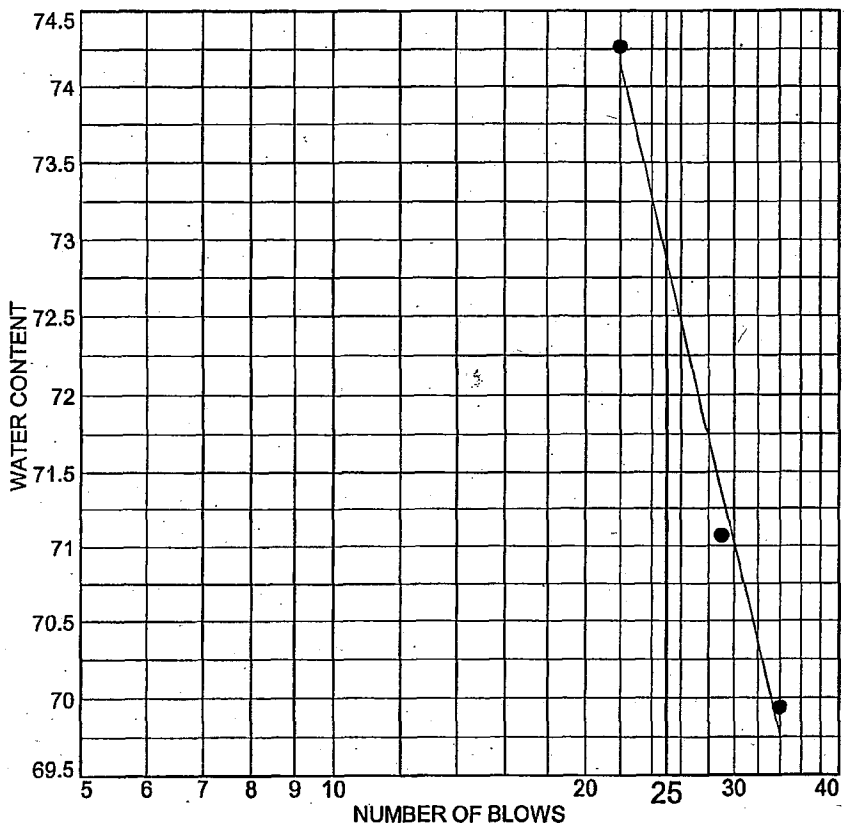
Liquid Limit= 51
Plastic Limit= 16
Plasticity Index= 35
Natural Moisture= 21.2
Liquidity Index= 0.1

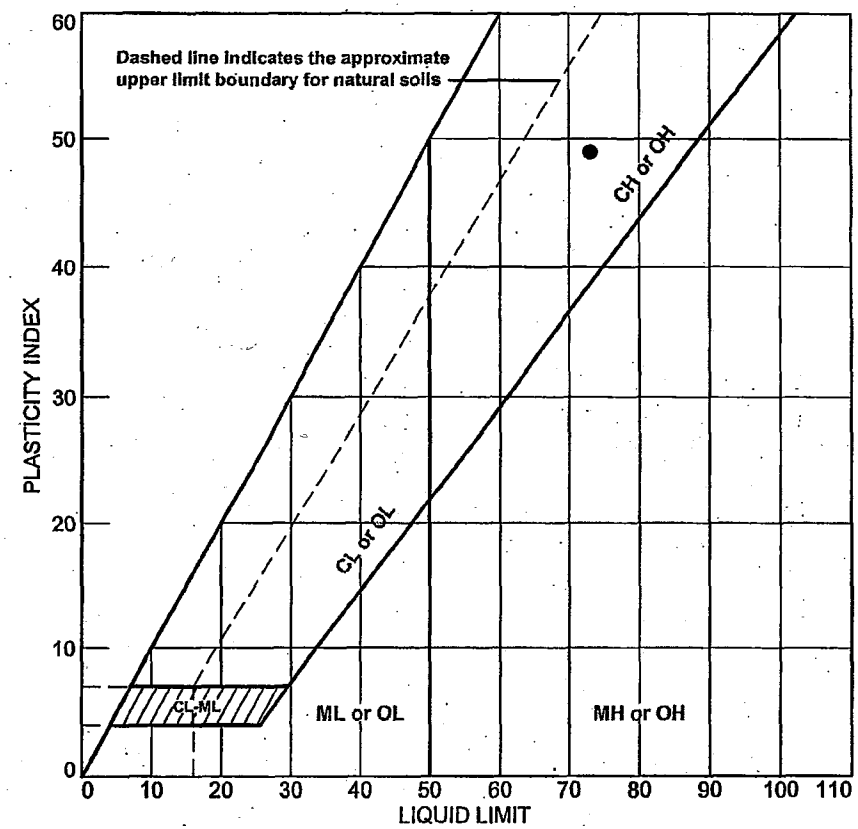
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	38.93	38.83			
Dry+Tare	37.41	37.33			
Tare	28.09	28.32			
Moisture	16.3	16.6			

MW 4/3/07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 419	STP-155	43.5'-45.0'	12/1/2006	CH	Fat Clay	29.0	73	49
		(SS-16)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:RF

ASTM D4318-05

4-3-07

KAW 4/3/07

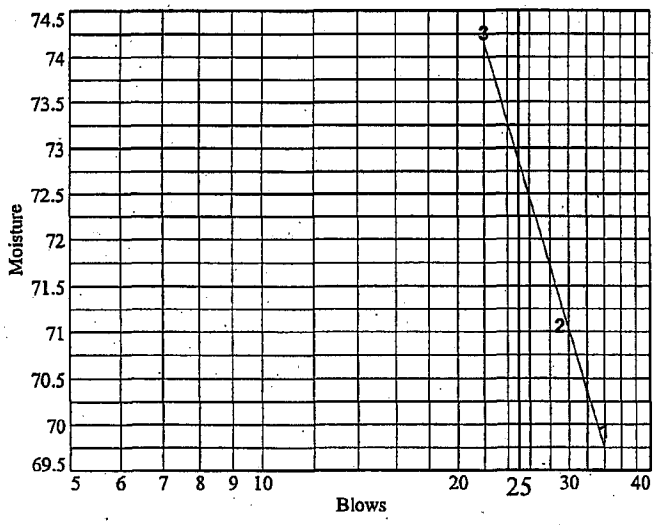
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 419
Depth: 43.5'-45.0'
Sample Number: STP-155 (SS-16)
Material Description: Fat Clay
Date: 12/1/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.44	34.66	35.64			
Dry+Tare	33.02	31.54	32.35			
Tare	28.13	27.15	27.92			
# Blows	34	29	22			
Moisture	69.9	71.1	74.3			



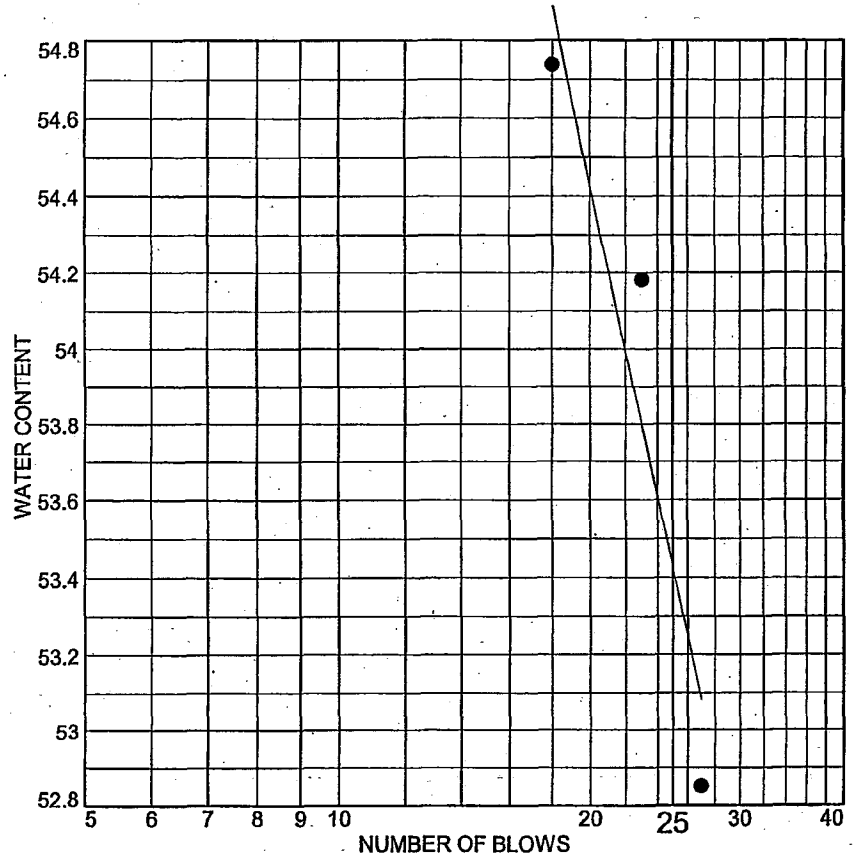
Liquid Limit= 73
Plastic Limit= 24
Plasticity Index= 49
Natural Moisture= 29.0
Liquidity Index= 0.1

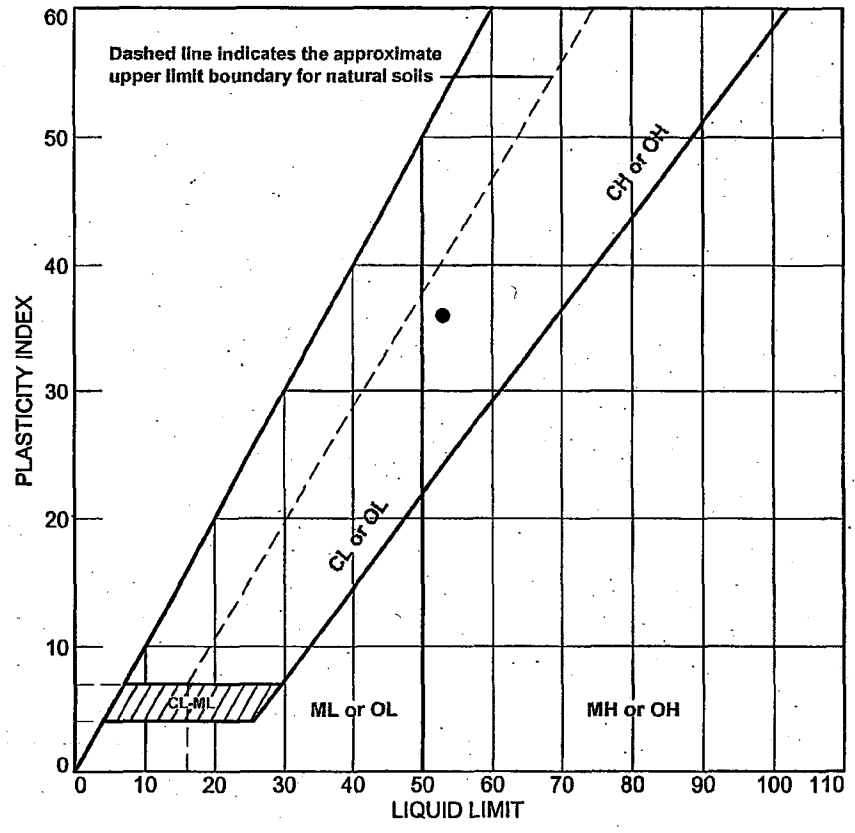
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	31.83	29.97			
Dry+Tare	30.39	28.59			
Tare	24.37	22.68			
Moisture	23.9	23.4			

NK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 419	STP-156 (SS-18)	53.5'-55.0'	12/1/2006	CH	Fat Clay	18.0	53	36

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH/JW Reviewed By:RF
ASTM D4318-05

MH 4-3-07

KAW 4/3/07

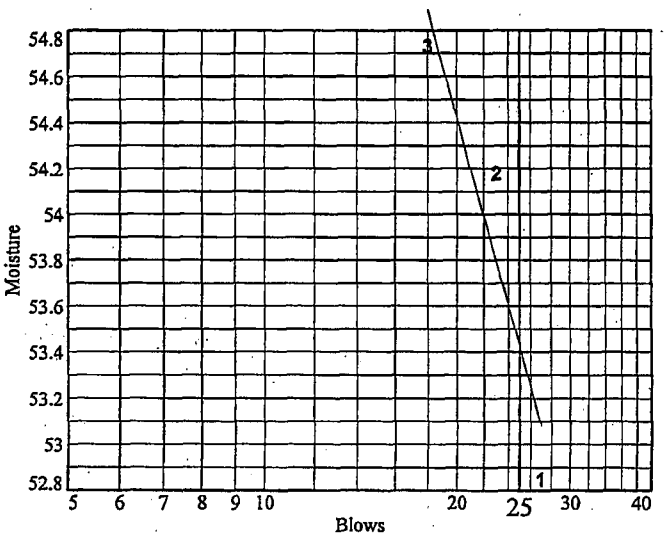
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 419
Depth: 53.5'-55.0' **Sample Number:** STP-156 (SS-18)
Material Description: Fat Clay
Date: 12/1/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC/TH/JW Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	39.37	36.76	38.29			
Dry+Tare	35.57	33.78	34.65			
Tare	28.38	28.28	28			
# Blows	27	23	18			
Moisture	52.9	54.2	54.7			



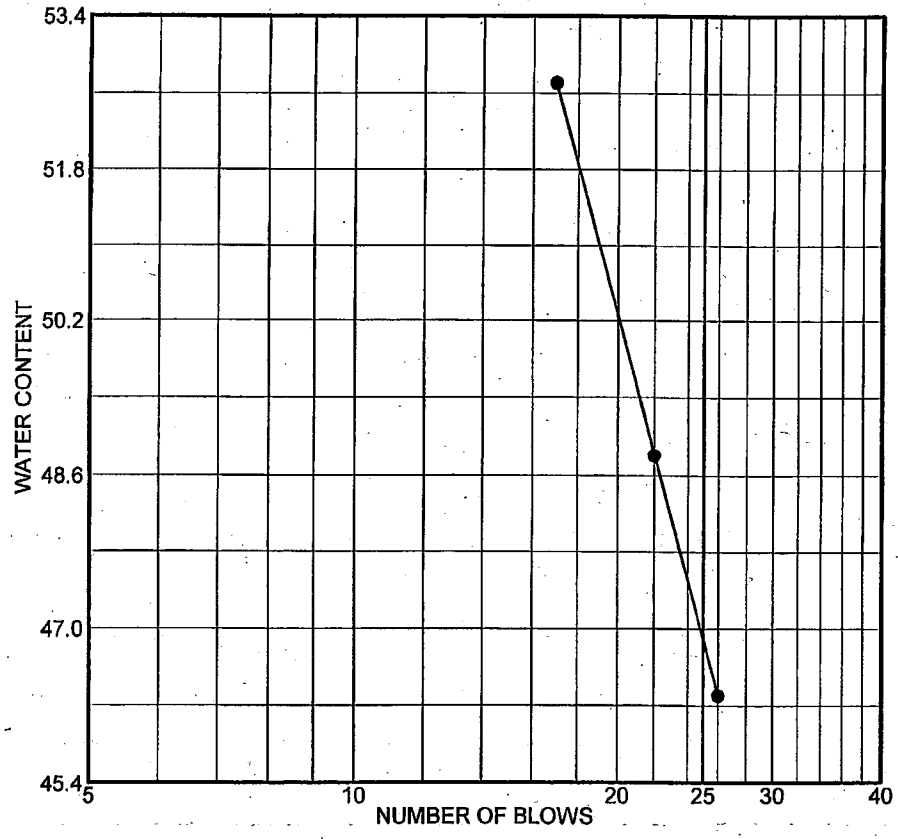
Liquid Limit= 53
Plastic Limit= 17
Plasticity Index= 36
Natural Moisture= 18.0
Liquidity Index= 0.0

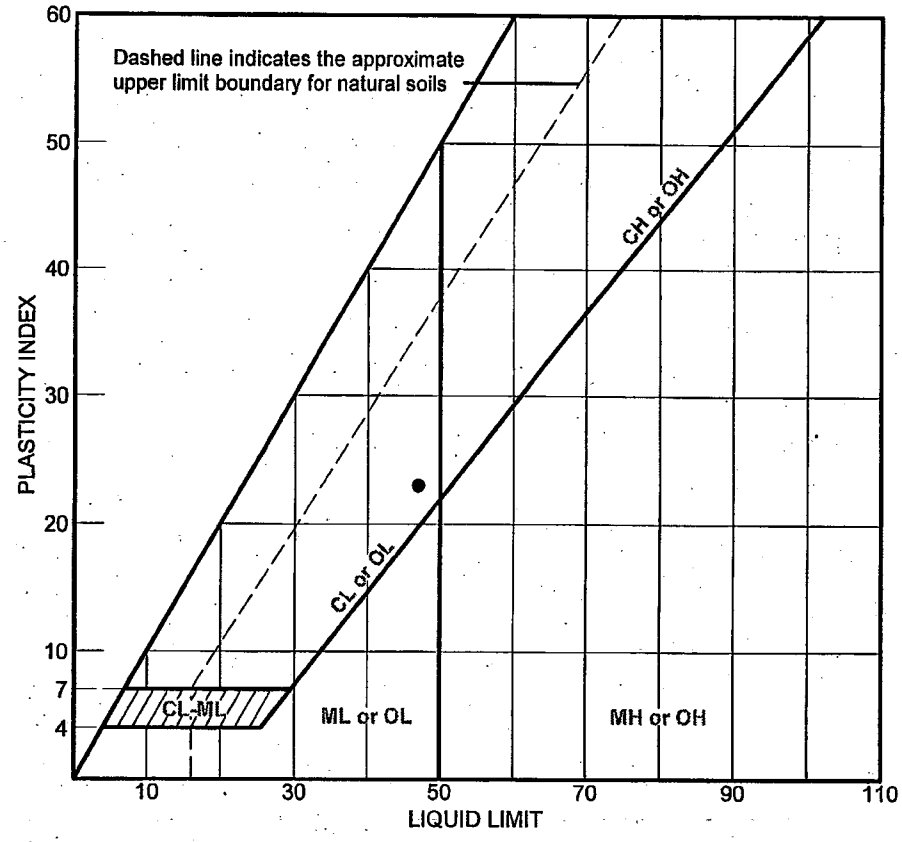
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.99	34.60			
Dry+Tare	34.84	33.50			
Tare	28.25	27.10			
Moisture	17.5	17.2			

NK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-419	UD-1	78' to 80'	2-22-07	CL	Lean clay	21.3	47	23

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05 KAW 4/3/07

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

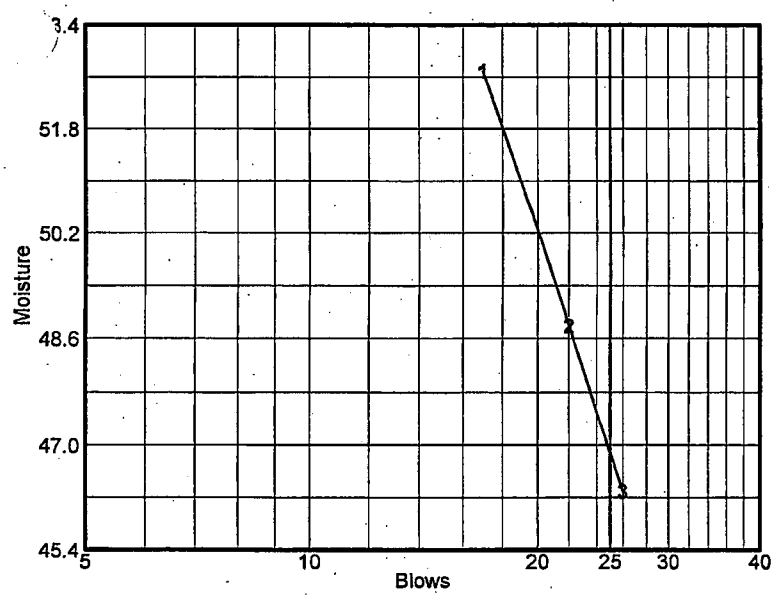
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-419
Sample No.: UD-1
Elev. or Depth: 78' to 80' **Sample Length(in./cm.):**
Location: B-419
Description: Lean clay
Date: 2-22-07 **Natural Moisture:** 21.3
USCS Class.: CL **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	14.95	14.01	14.39			
Dry+Tare	11.30	10.84	11.22			
Tare	4.38	4.34	4.37			
# Blows	17	22	26			
Moisture	52.7	48.8	46.3			

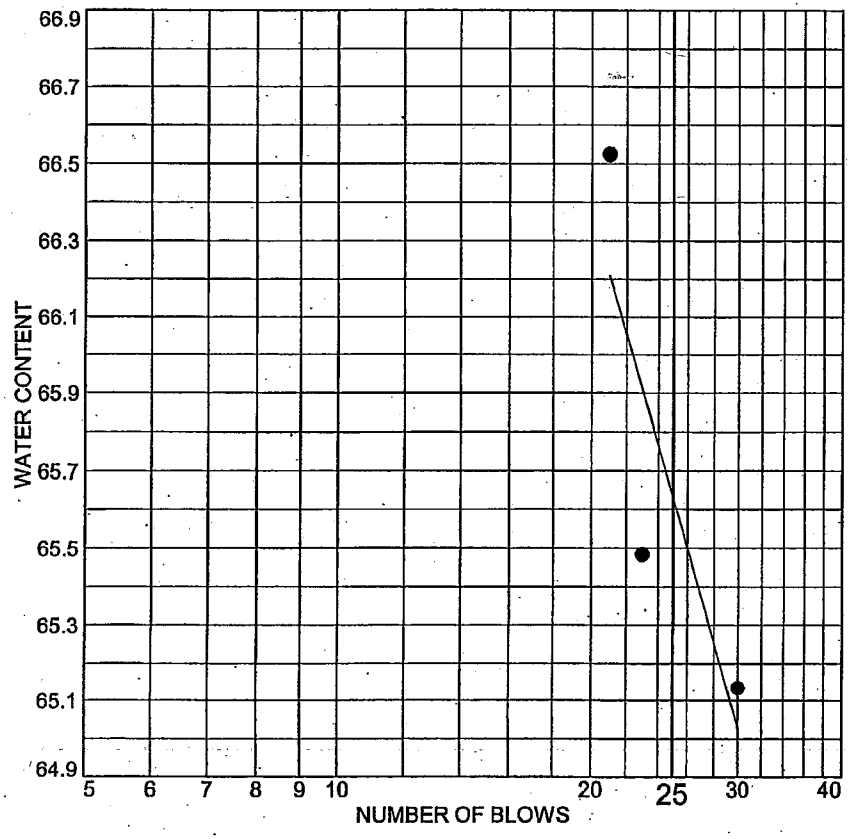


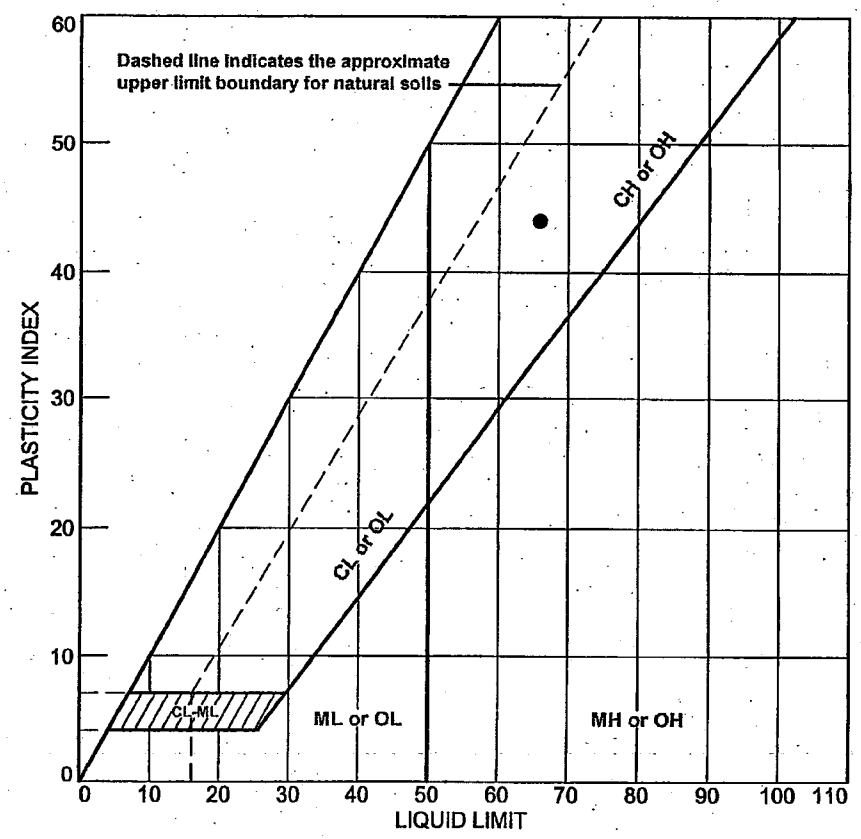
Liquid Limit= 47
Plastic Limit= 24
Plasticity Index= 23

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	17.77	16.93			
Dry+Tare	16.20	15.21			
Tare	9.48	7.92			
Moisture	23.4	23.6			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 419	STP-159 (SS-24)	88.5'-90.0'	12/2/2006	CH	Fat Clay	25.5	66	44

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH/JW Reviewed By:RF

ASTM D4318-05

4-3-07

KAW 413107

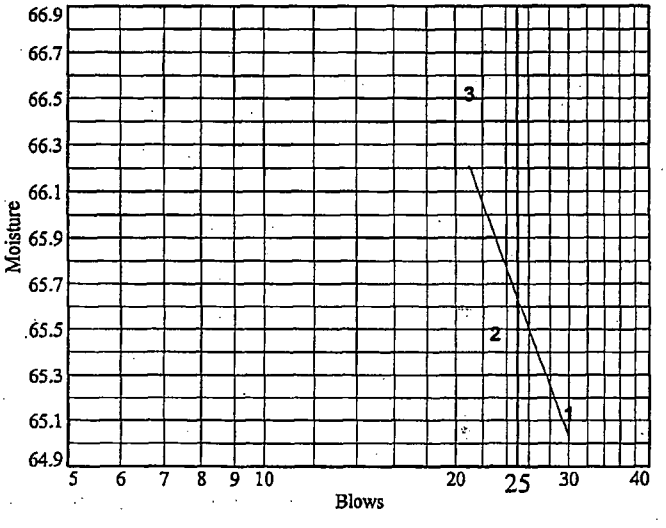
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 419
Depth: 88.5'-90.0' **Sample Number:** STP-159 (SS-24)
Material Description: Fat Clay
Date: 12/2/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC/TH/JW Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	35.75	36.49	33.16			
Dry+Tare	32.35	33.17	30.06			
Tare	27.13	28.10	25.40			
# Blows	30	23	21			
Moisture	65.1	65.5	66.5			



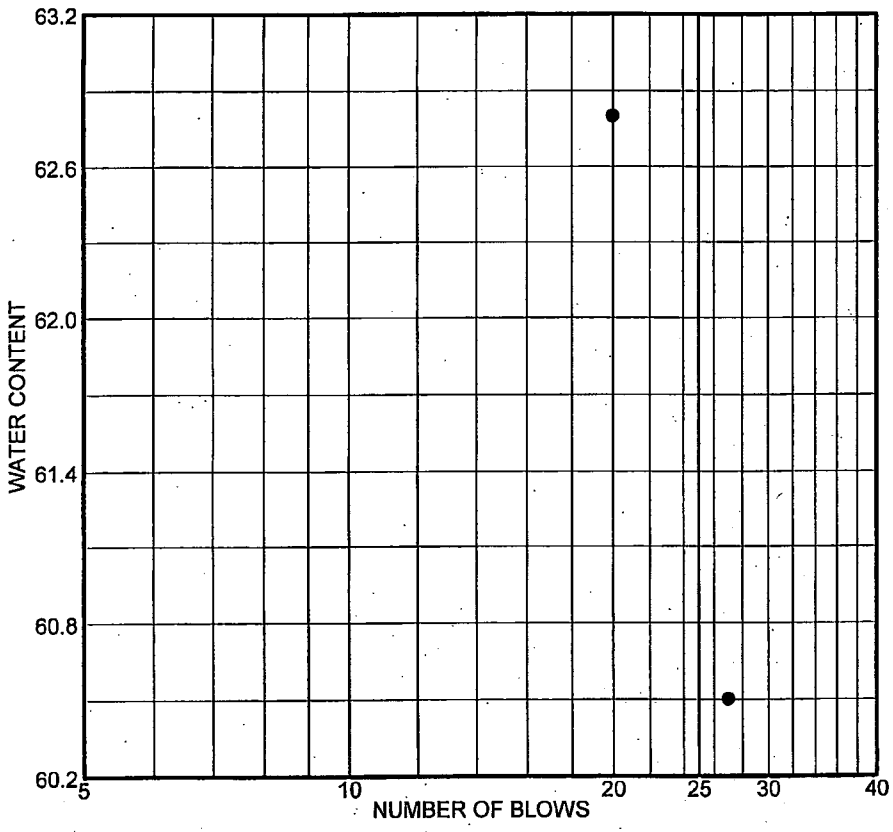
Liquid Limit= 66
Plastic Limit= 22
Plasticity Index= 44
Natural Moisture= 25.5
Liquidity Index= 0.1

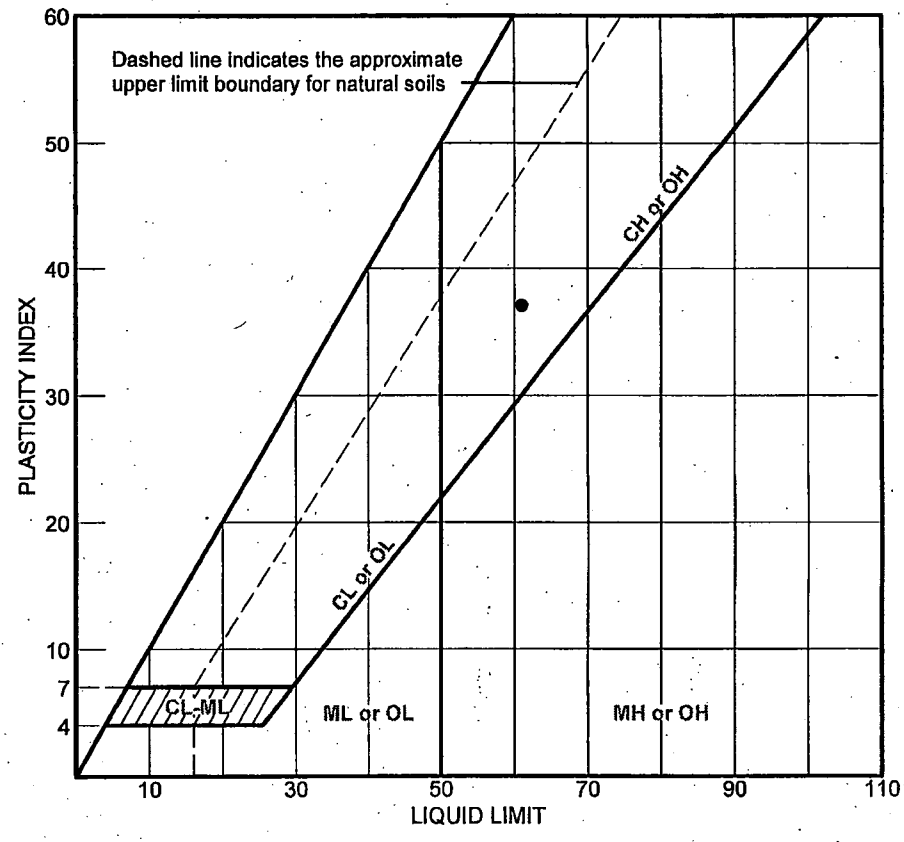
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	34.81	34.49			
Dry+Tare	33.62	33.37			
Tare	28.29	28.31			
Moisture	22.3	22.1			

MK 4/3/07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-419	UD-2	98' to 100'	2-22-07	CH	Fat clay	27.0	61	37

Client Bechtel Power Corporation
Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH KAW 4/3/07
ASTM D4318-05
One point ran due to insufficient material.

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

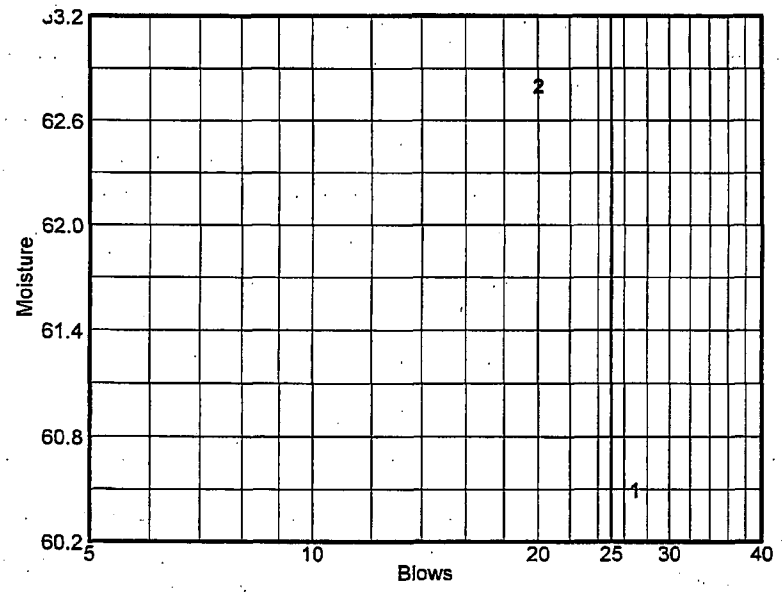
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-419
Sample No.: UD-2
Elev. or Depth: 98' to 100' **Sample Length(in./cm.):**
Location: B-419
Description: Fat clay
Date: 2-22-07 **Natural Moisture:** 27.0
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05
One point ran due to insufficient material.

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	24.16	19.52				
Dry+Tare	21.08	16.21				
Tare	15.99	10.94				
# Blows	27	20				
Moisture	60.5	62.8				

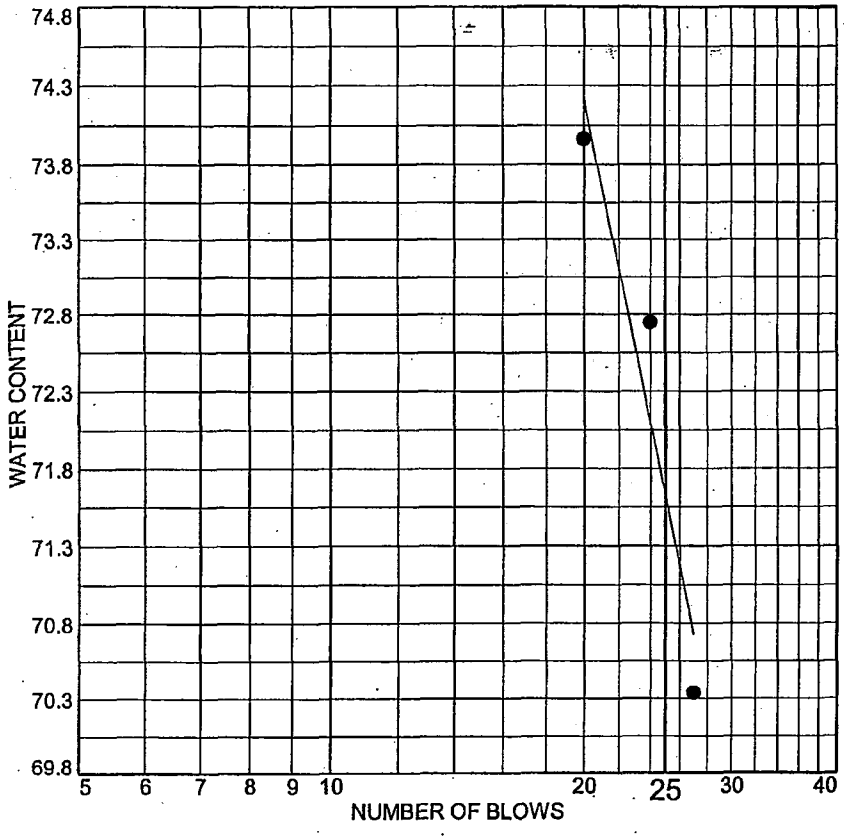


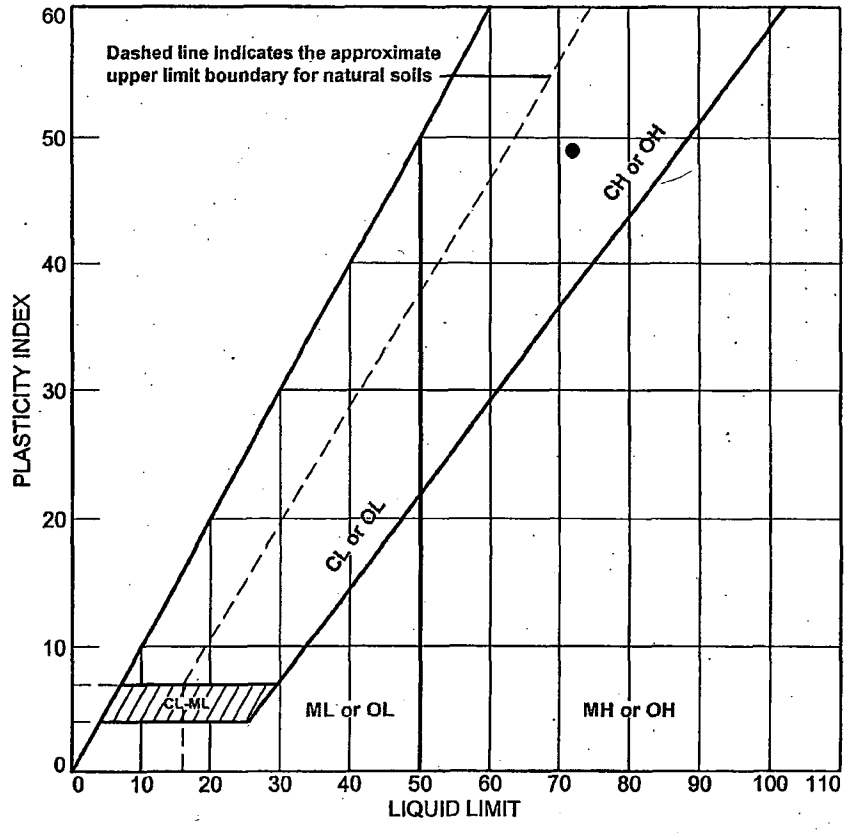
Liquid Limit= 61
Plastic Limit= 24
Plasticity Index= 37

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	20.70	18.32			
Dry+Tare	18.81	17.05			
Tare	10.74	11.67			
Moisture	23.4	23.6			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 419	STP-161	128.5'-130'	12/2/2006	CH	Fat CLay	25.0	72	49
		(SS-27)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH/JW Reviewed By:RF

ASTM D4318-05

MA 4-3-07

KAW 4/3/07

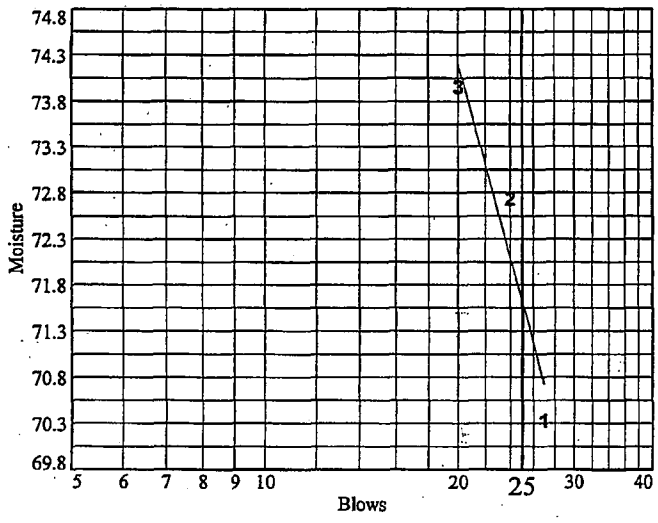
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 419
Depth: 128.5'-130' **Sample Number:** STP-161 (SS-27)
Material Description: Fat CLay
Date: 12/2/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC/TH/JW Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.32	34.04	36.99			
Dry+Tare	33	30.41	33.24			
Tare	28.28	25.42	28.17			
# Blows	27	24	20			
Moisture	70.3	72.7	74.0			



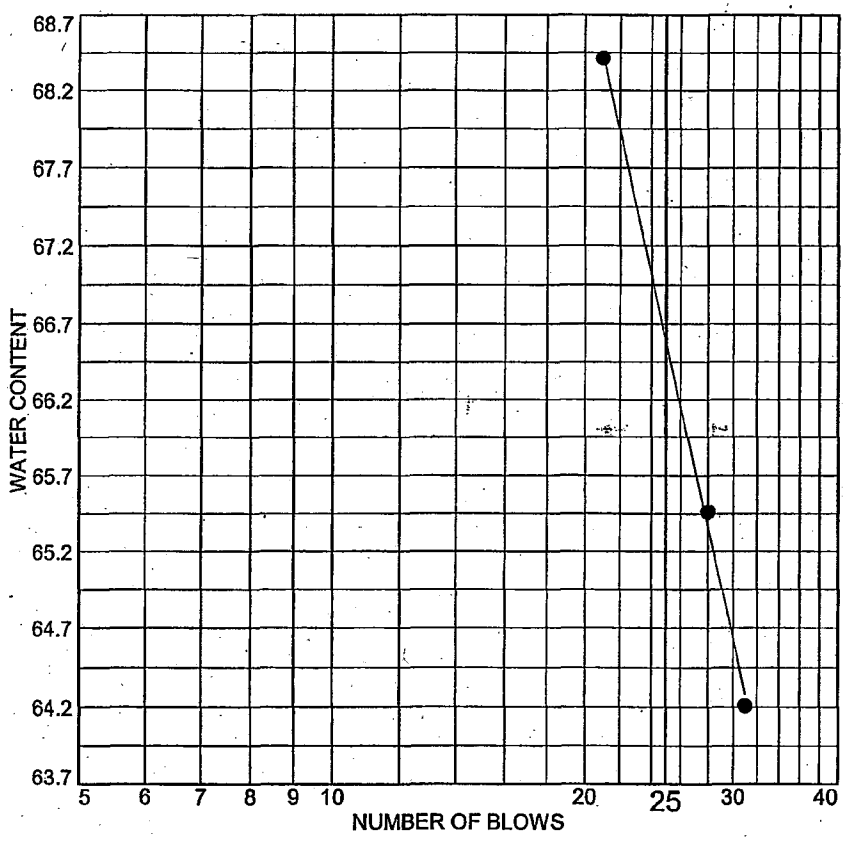
Liquid Limit= 72
Plastic Limit= 23
Plasticity Index= 49
Natural Moisture= 25.0
Liquidity Index= 0.0

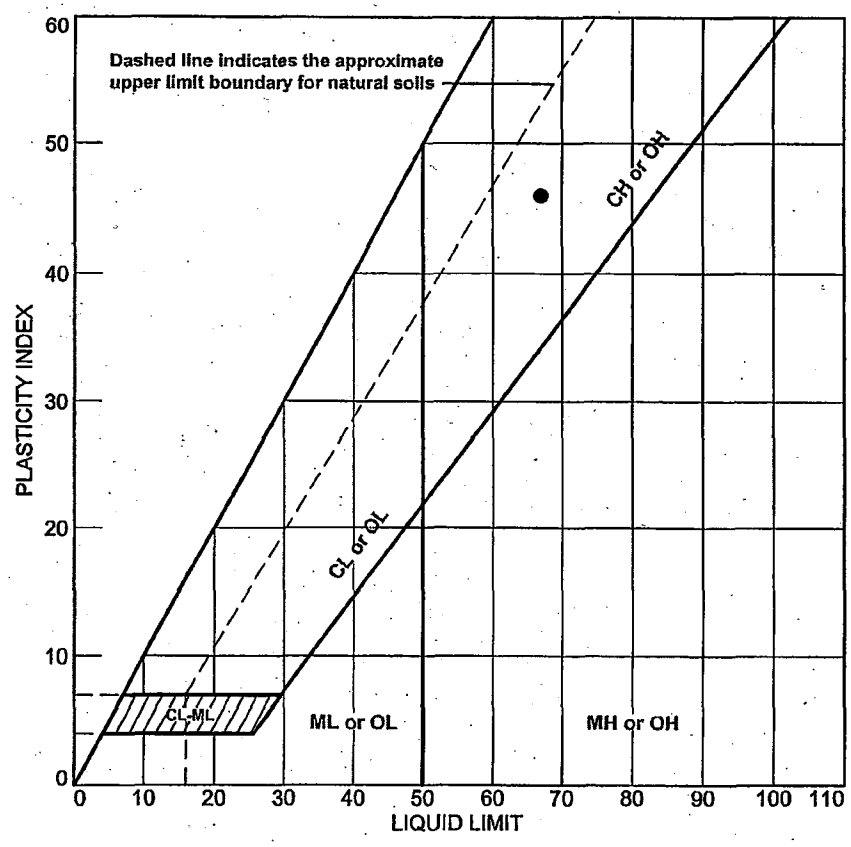
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	37.60	34.91			
Dry+Tare	35.81	33.45			
Tare	28.18	27.09			
Moisture	23.5	23.0			

MK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 419	STP-163 (SS-29)	168.5'-170'	12/2/2006	CH	Fat Clay	24.8	67	46

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:MH/TH
ASTM D4318-05

Reviewed By:RF

MA 4-3-07

KAW 4/3/07

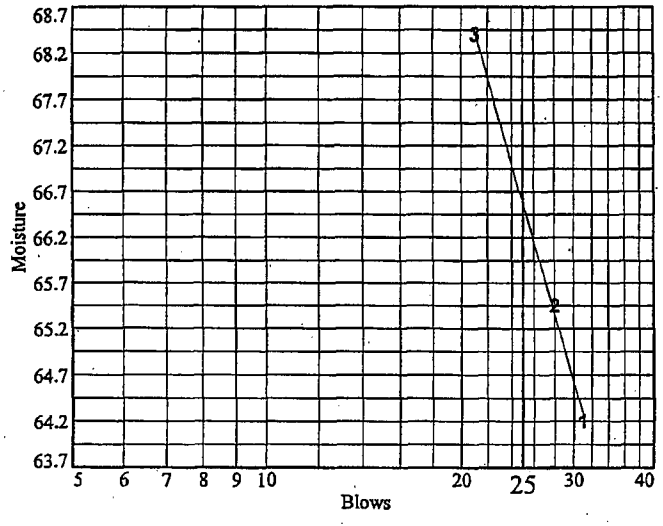
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 419
Depth: 168.5'-170'
Sample Number: STP-163 (SS-29)
Material Description: Fat Clay
Date: 12/2/2006
USCS Class.: CH
Testing Remarks: Tested By:MH/TH
Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.43	38.39	37.69			
Dry+Tare	33.86	34.41	33.38			
Tare	28.30	28.33	27.08			
# Blows	31	28	21			
Moisture	64.2	65.5	68.4			



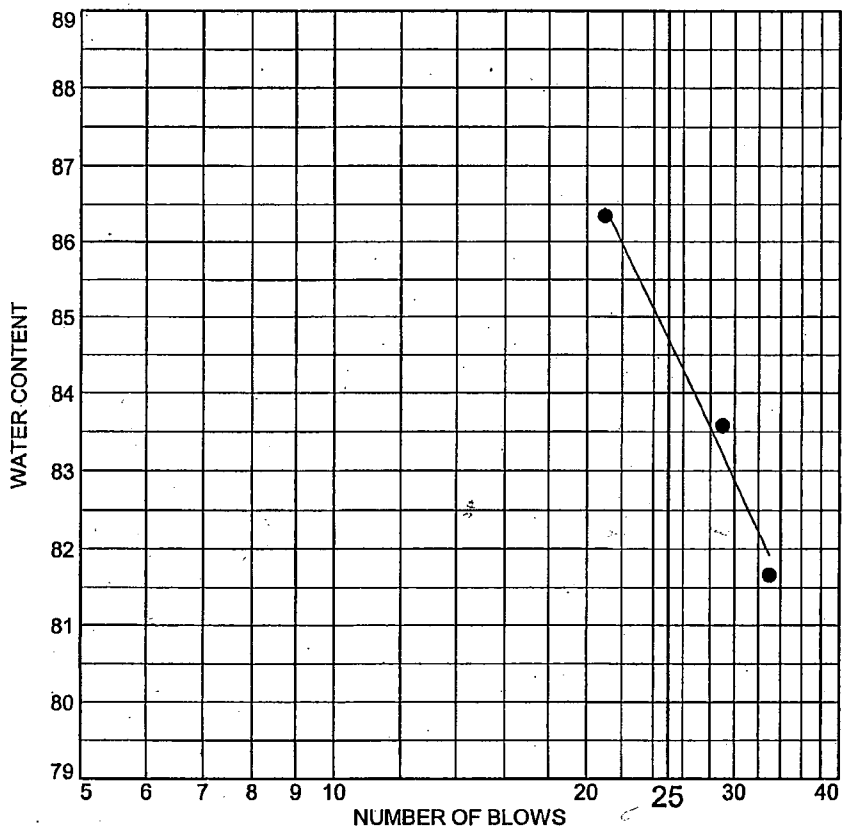
Liquid Limit= 67
Plastic Limit= 21
Plasticity Index= 46
Natural Moisture= 24.8
Liquidity Index= 0.1

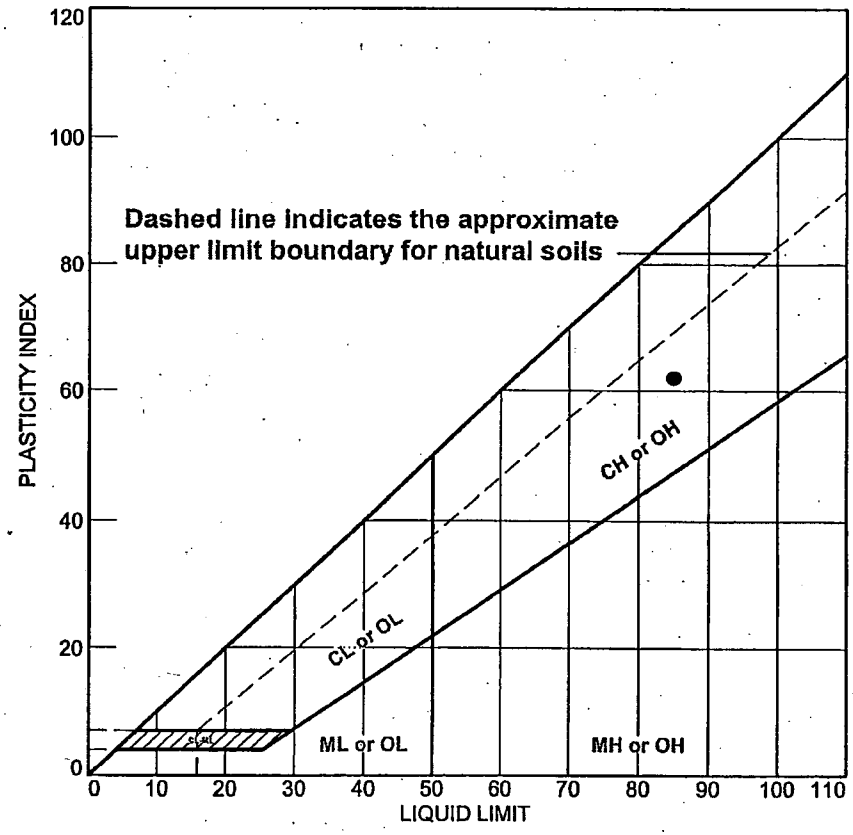
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	39.14	40.18			
Dry+Tare	37.26	38.09			
Tare	28.36	28.17			
Moisture	21.1	21.1			

MK 43-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 419	STP-164	188.5'-190.0'	12/06/2006	CH	Fat Clay	31.6	85	62
		(SS-30)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

MA
4-3-07

KAW 4/3/07

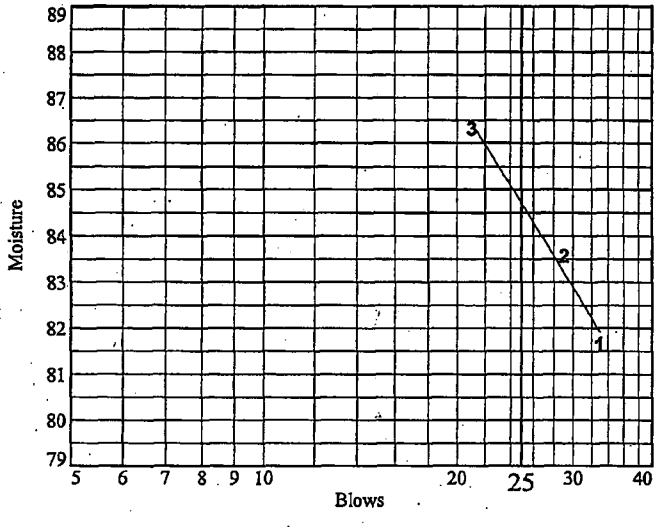
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 419
Depth: 188.5'-190.0'
Sample Number: STP-164 (SS-30)
Material Description: Fat Clay
Date: 12/06/2006
USCS Class.: CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.66	36.09	36.28			
Dry+Tare	32.83	32.68	32.55			
Tare	28.14	28.60	28.23			
# Blows	33	29	21			
Moisture	81.7	83.6	86.3			



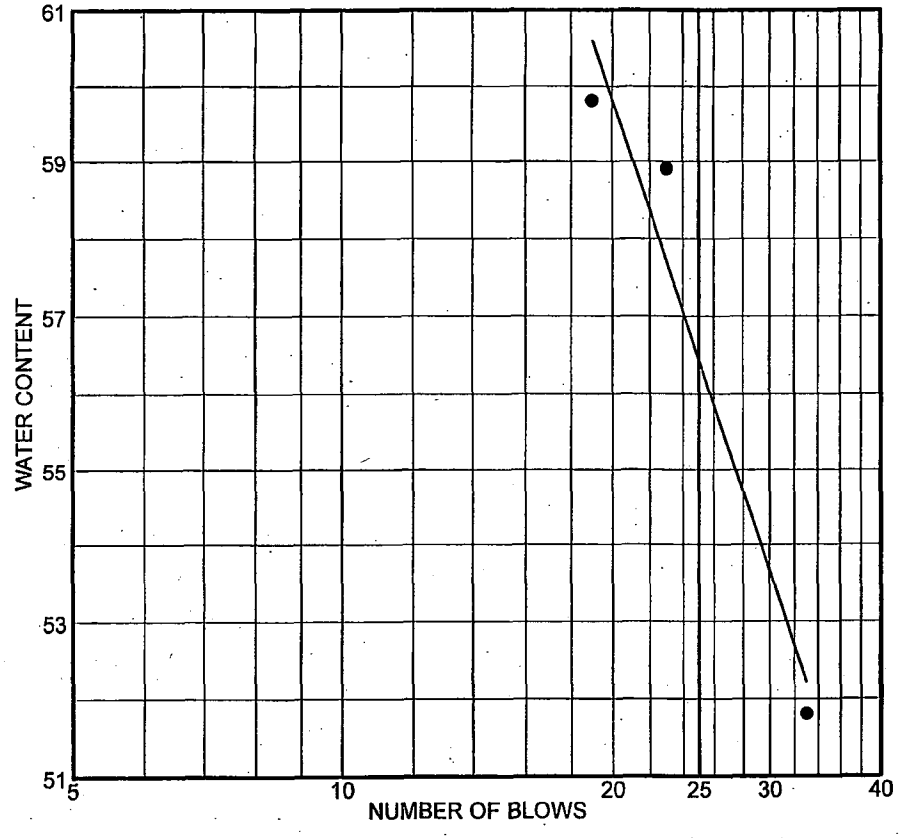
Liquid Limit= 85
Plastic Limit= 23
Plasticity Index= 62
Natural Moisture= 31.6
Liquidity Index= 0.1

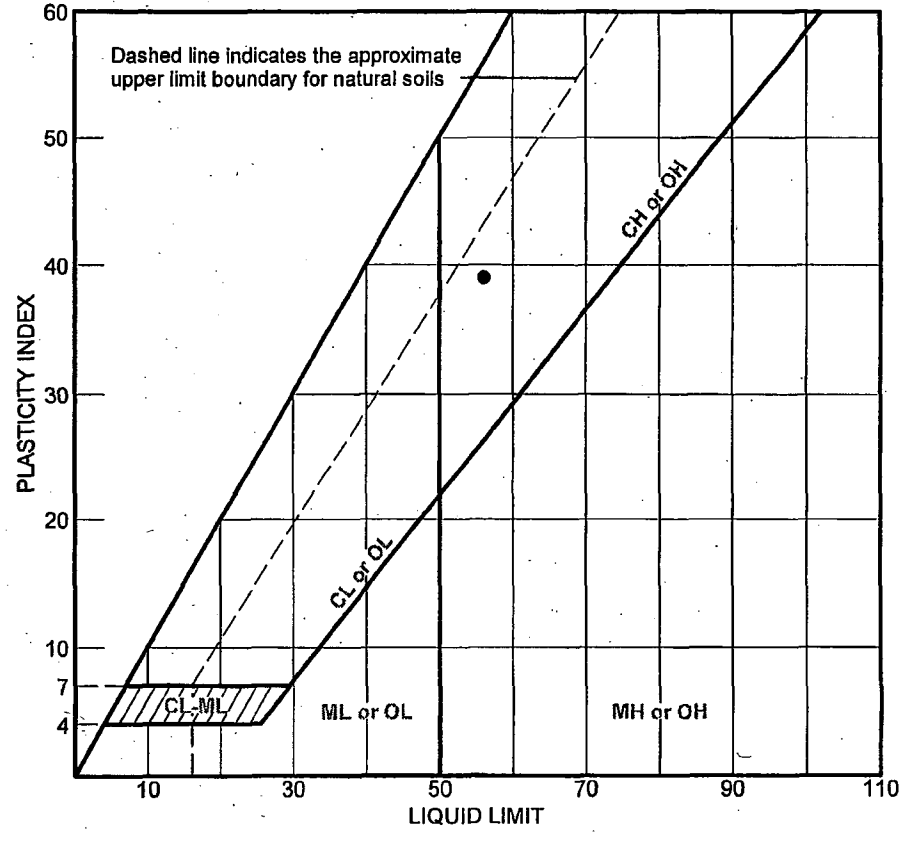
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	39.04	37.96			
Dry+Tare	36.99	36.14			
Tare	28.26	28.28			
Moisture	23.5	23.2			

MAT 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-419	UD-3	118' to 120'	2-20-07	CH	Fat clay	19.3	56	39

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

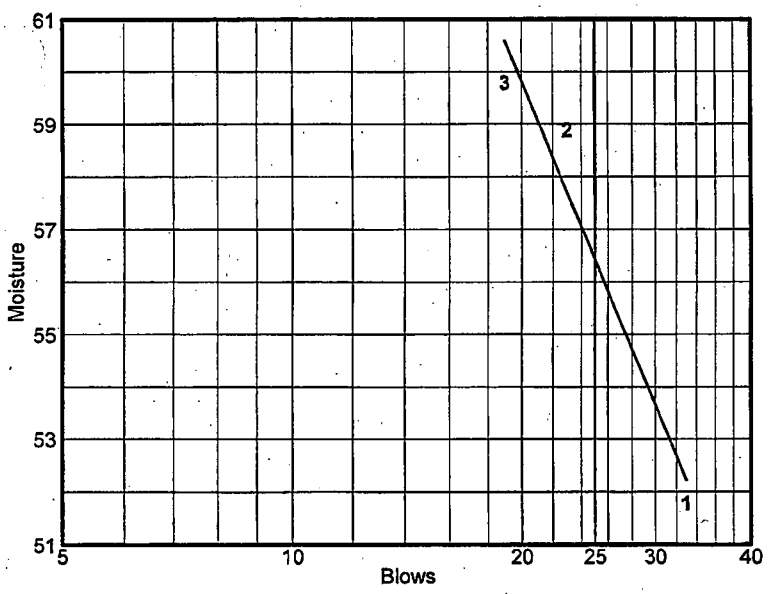
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-419
Sample No.: UD-3
Elev. or Depth: 118' to 120' **Sample Length(in./cm.):**
Location: B-419
Description: Fat clay
Date: 2-20-07 **Natural Moisture:** 19.3
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	28.79	32.44	32.30			
Dry+Tare	22.71	24.43	24.32			
Tare	10.98	10.84	10.97			
# Blows	33	23	19			
Moisture	51.8	58.9	59.8			

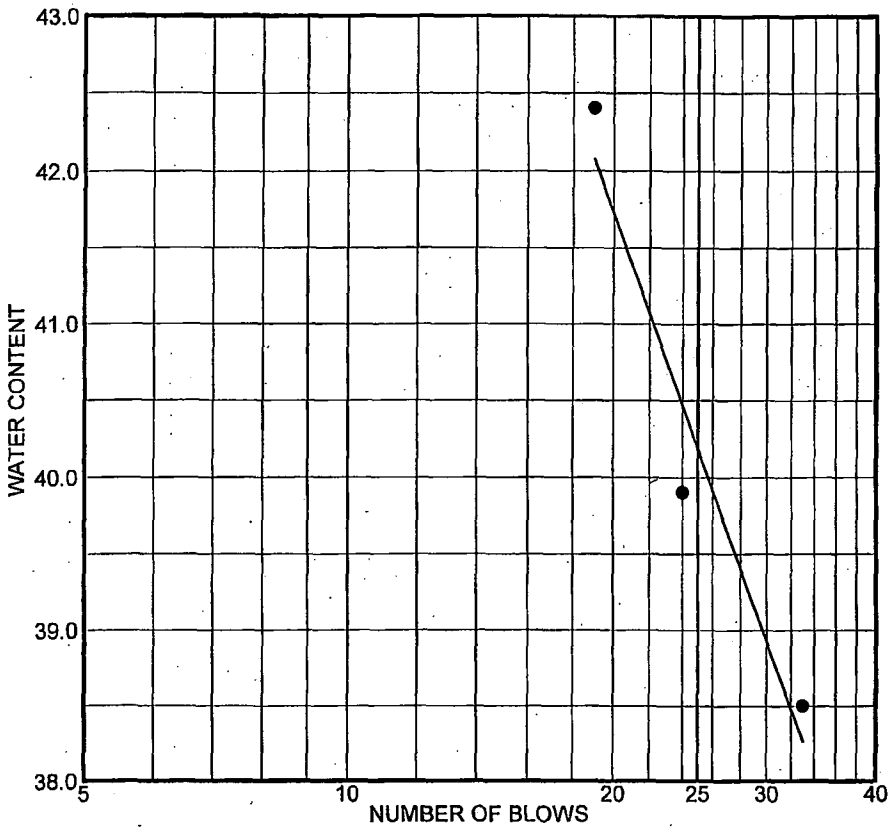


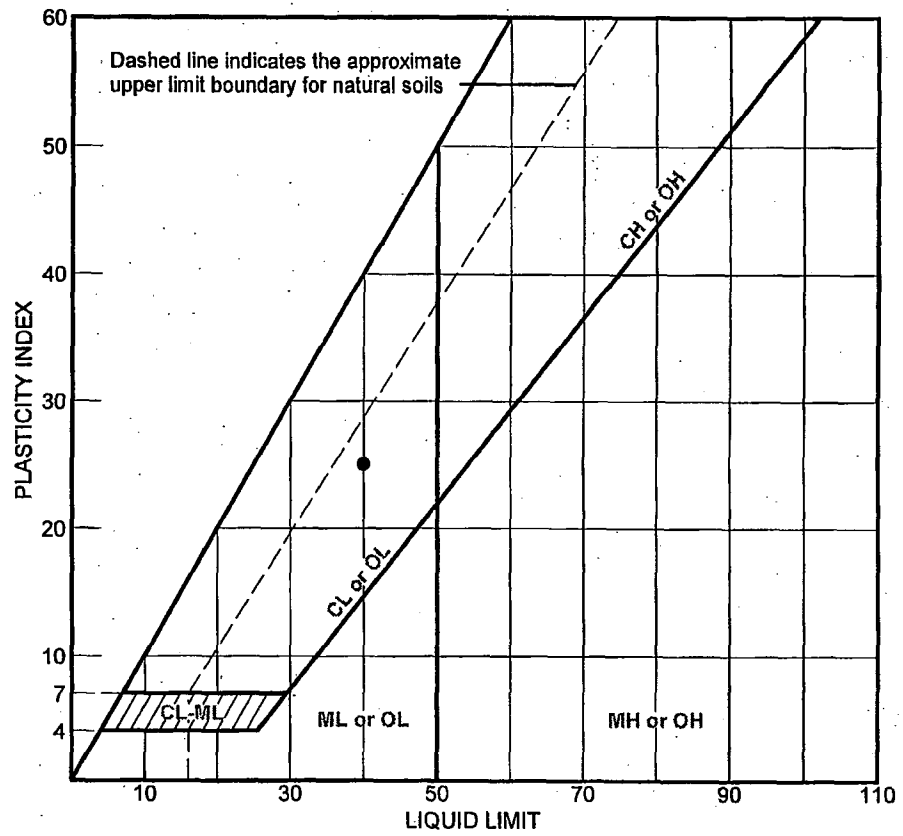
Liquid Limit= 56
Plastic Limit= 17
Plasticity Index= 39

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	27.55	24.27			
Dry+Tare	25.10	22.39			
Tare	11.01	11.05			
Moisture	17.4	16.6			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-419	UD-4	138' to 140'	2-20-07	CL	Lean clay with sand	14.9	40	25

Client Bechtel Power Corporation
Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

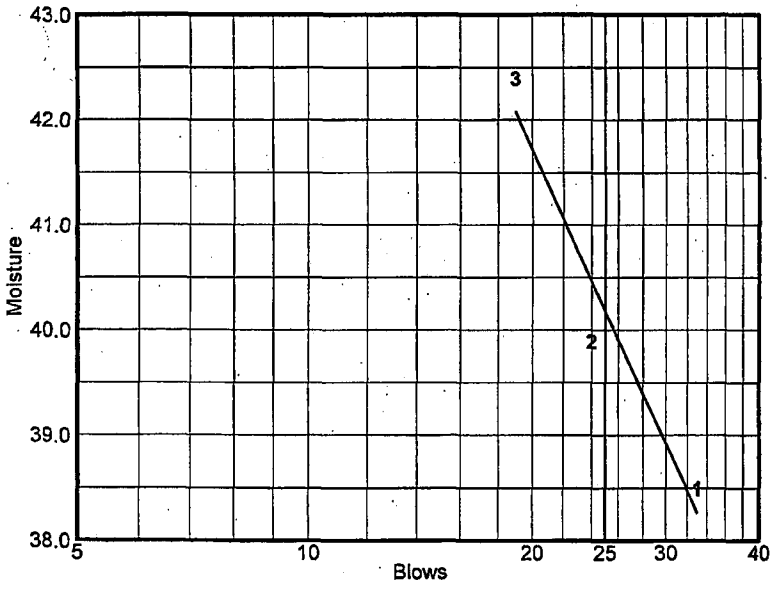
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-419
Sample No.: UD-4
Elev. or Depth: 138' to 140' **Sample Length(in./cm.):**
Location: B-419
Description: Lean clay with sand
Date: 2-20-07 **Natural Moisture:** 14.9
USCS Class.: CL **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	31.70	32.95	35.82			
Dry+Tare	26.13	26.69	28.40			
Tare	11.65	11.02	10.90			
# Blows	33	24	19			
Moisture	38.5	39.9	42.4			

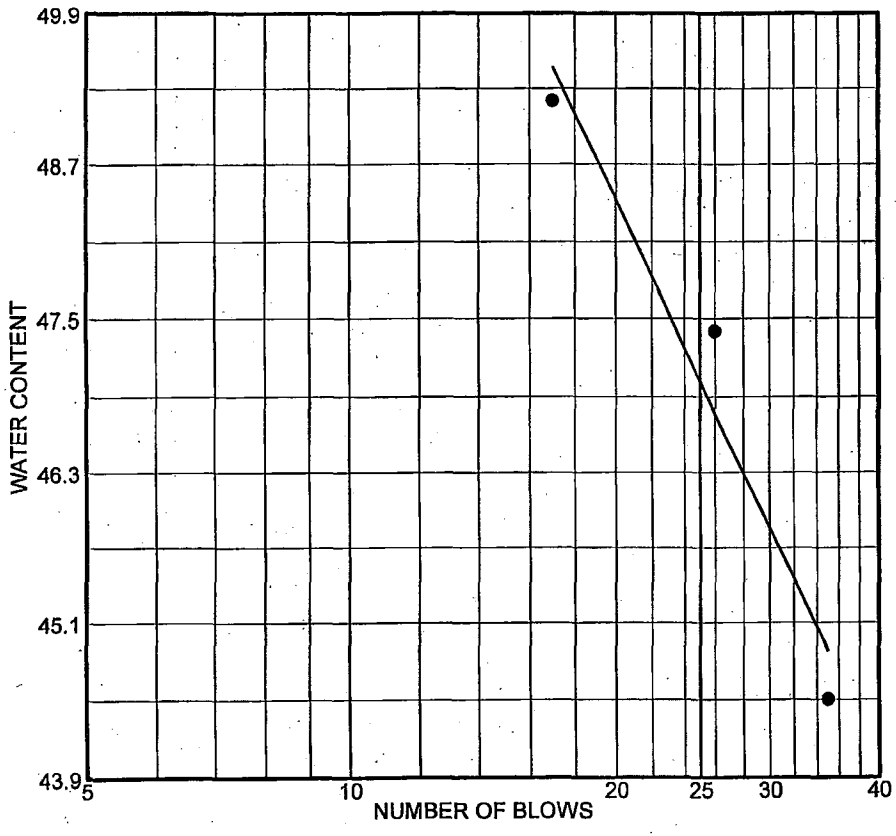


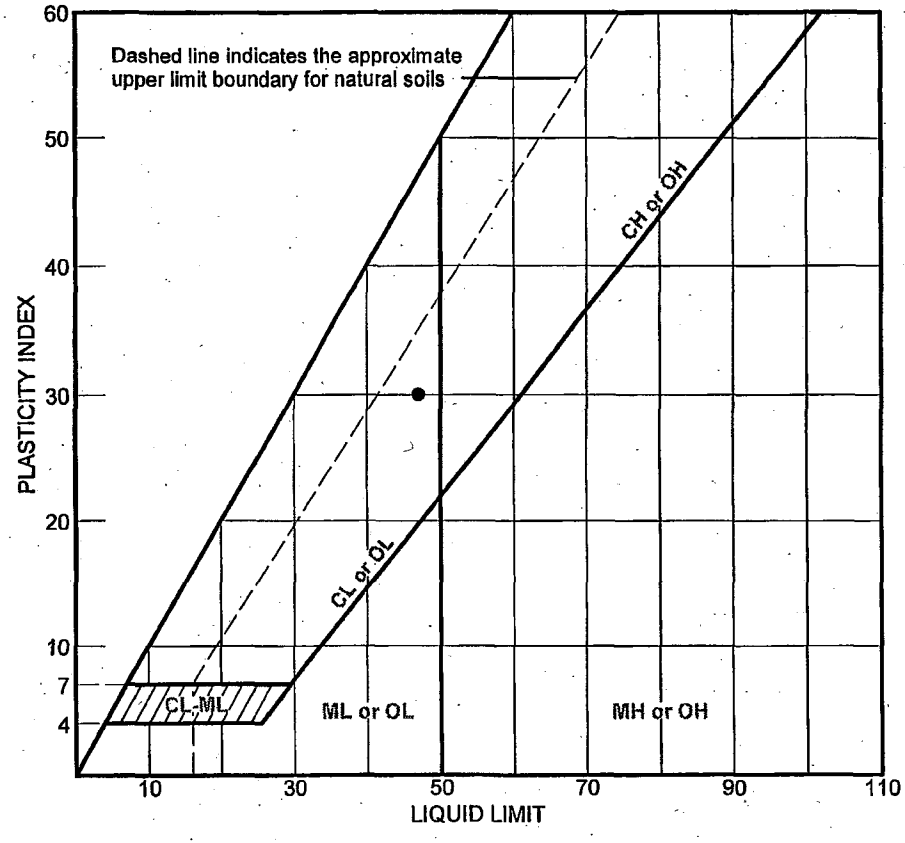
Liquid Limit= 40
Plastic Limit= 15
Plasticity Index= 25

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	25.04	25.04			
Dry+Tare	23.14	23.14			
Tare	10.84	10.84			
Moisture	15.4	15.4			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-419	UD-5	158' to 160'	2-20-07	CL	Lean clay	19.3	47	30

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

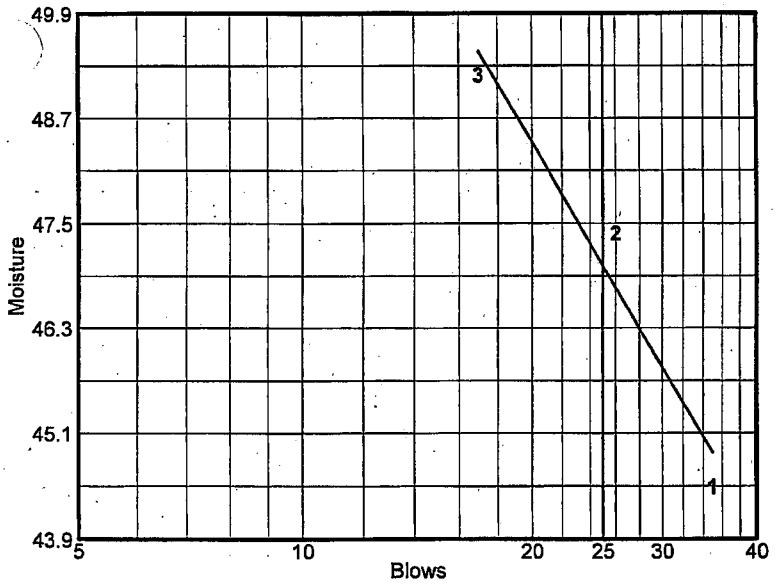
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-419
Sample No.: UD-5
Elev. or Depth: 158' to 160' **Sample Length(in./cm.):**
Location: B-419
Description: Lean clay
Date: 2-20-07 **Natural Moisture:** 19.3
USCS Class.: CL **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	30.07	26.02	28.13			
Dry+Tare	24.13	21.37	22.46			
Tare	10.79	11.57	10.93			
# Blows	35	26	17			
Moisture	44.5	47.4	49.2			

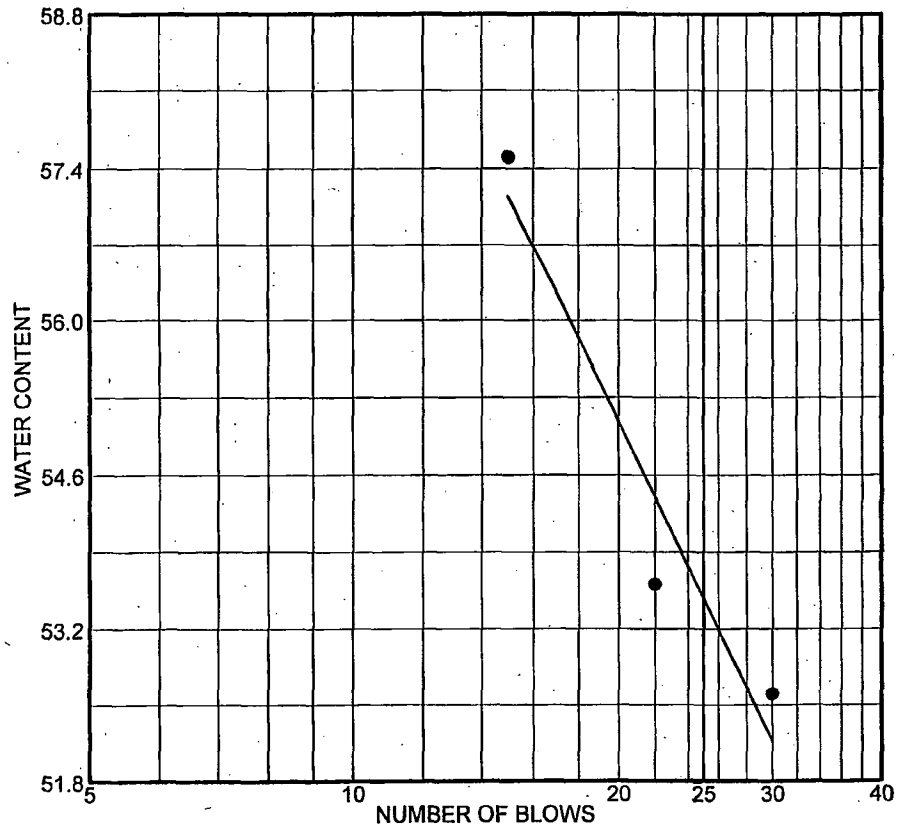


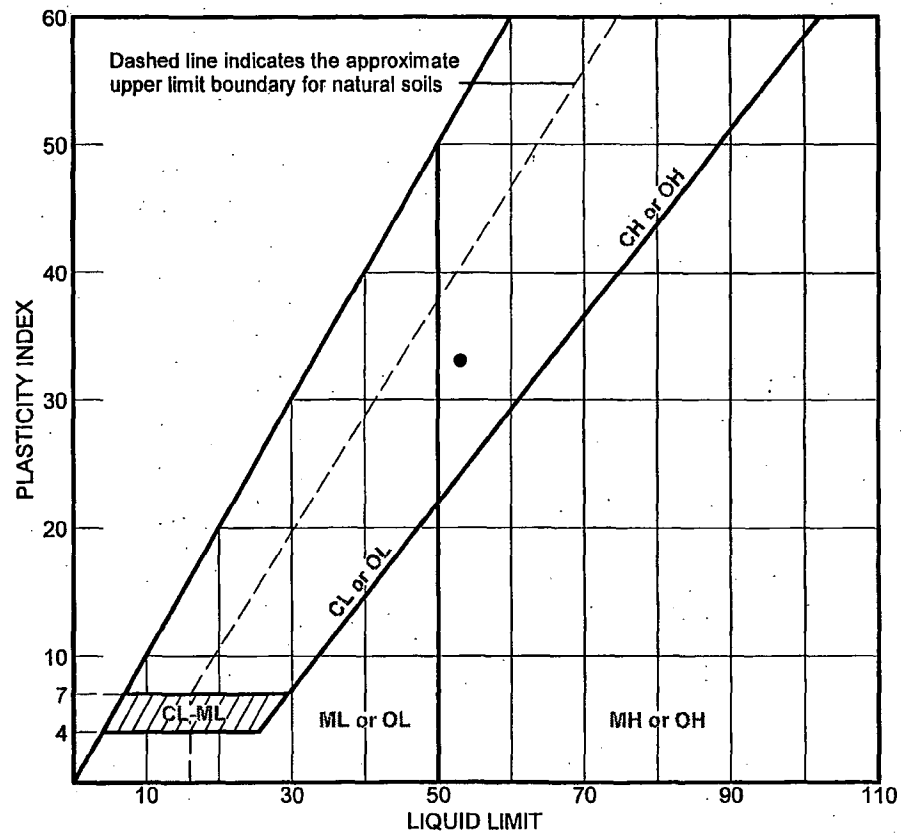
Liquid Limit= 47
Plastic Limit= 17
Plasticity Index= 30

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	21.73	20.33			
Dry+Tare	20.32	18.99			
Tare	11.66	11.05			
Moisture	16.3	16.9			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-419	UD-6	178' to 180'	2-20-07	CH	Fat clay	20.6	53	33

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

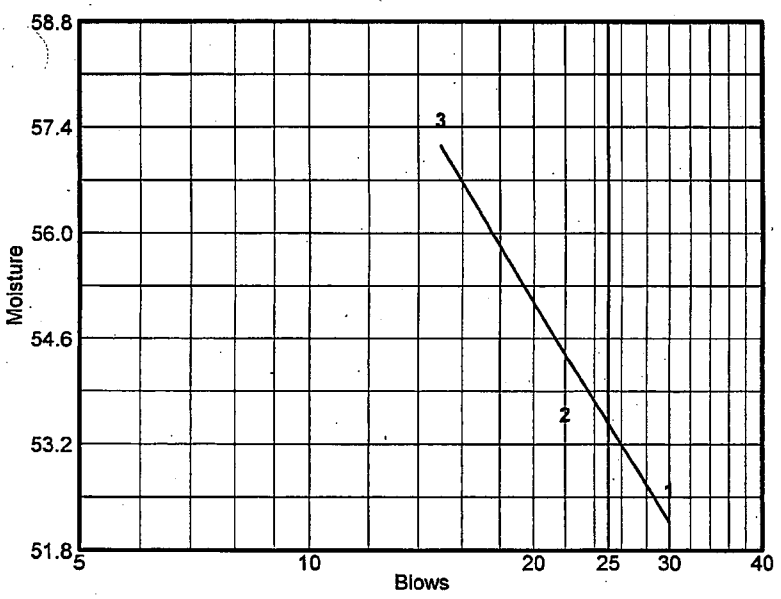
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-419
Sample No.: UD-6
Elev. or Depth: 178' to 180' **Sample Length(in./cm.):**
Location: B-419
Description: Fat clay
Date: 2-20-07 **Natural Moisture:** 20.6
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	30.80	29.15	36.61			
Dry+Tare	23.88	22.99	27.46			
Tare	10.72	11.49	11.56			
# Blows	30	22	15			
Moisture	52.6	53.6	57.5			

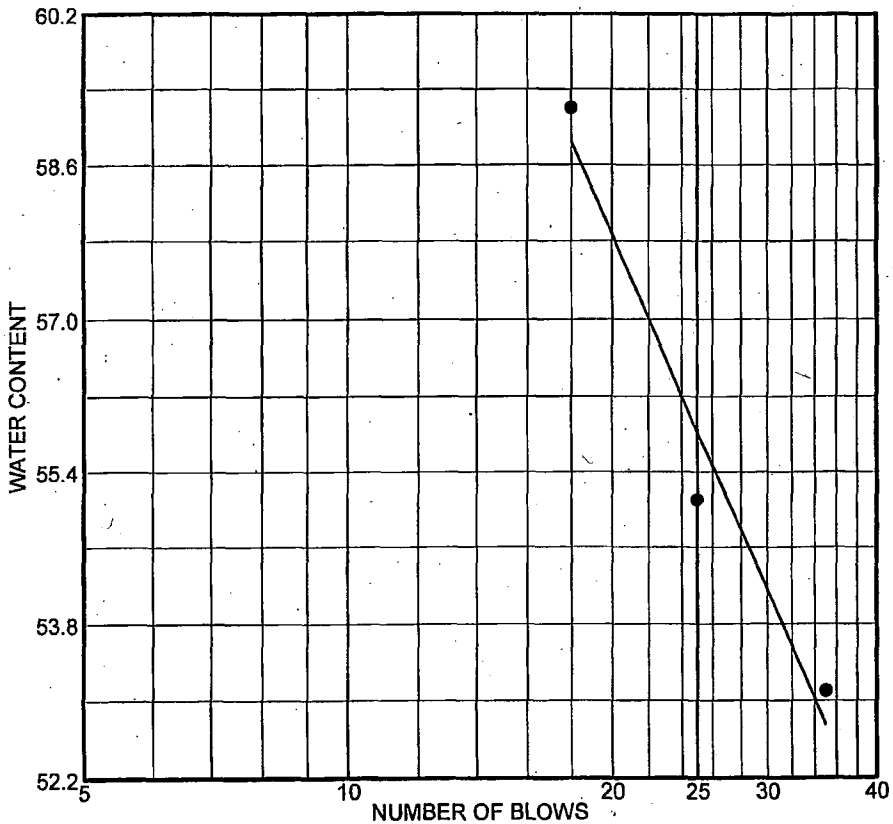


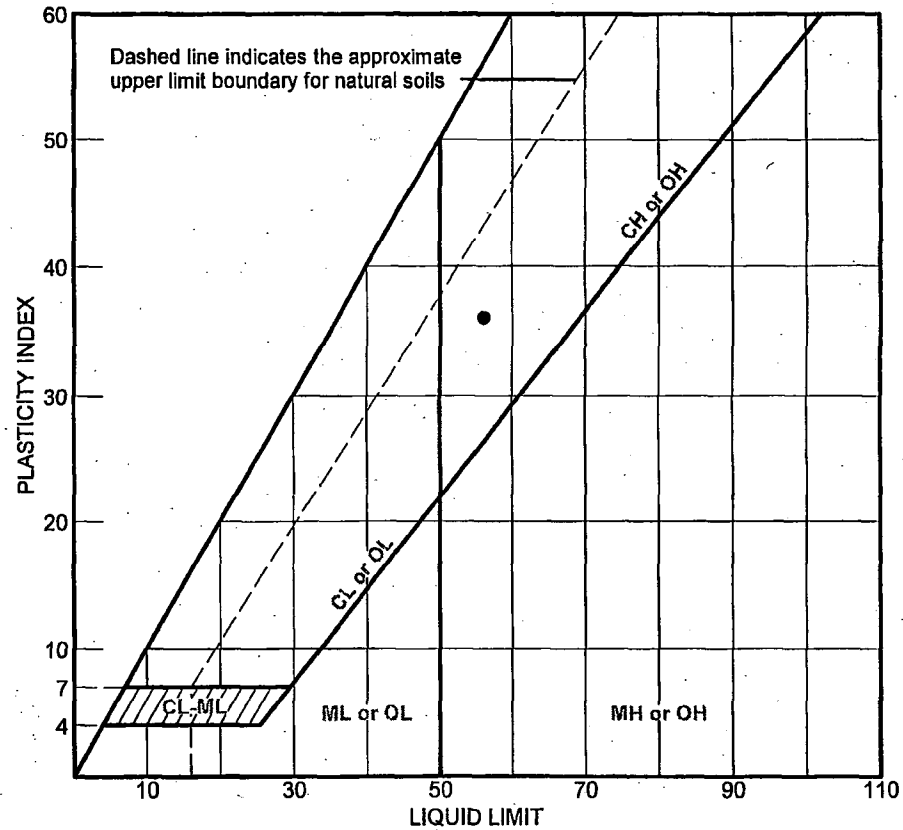
Liquid Limit= 53
Plastic Limit= 20
Plasticity Index= 33

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	25.45	24.98			
Dry+Tare	23.09	22.78			
Tare	11.00	11.60			
Moisture	19.5	19.7			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-419	UD-7	198' to 200'	2-20-07	CH	Fat clay	22.5	56	36

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

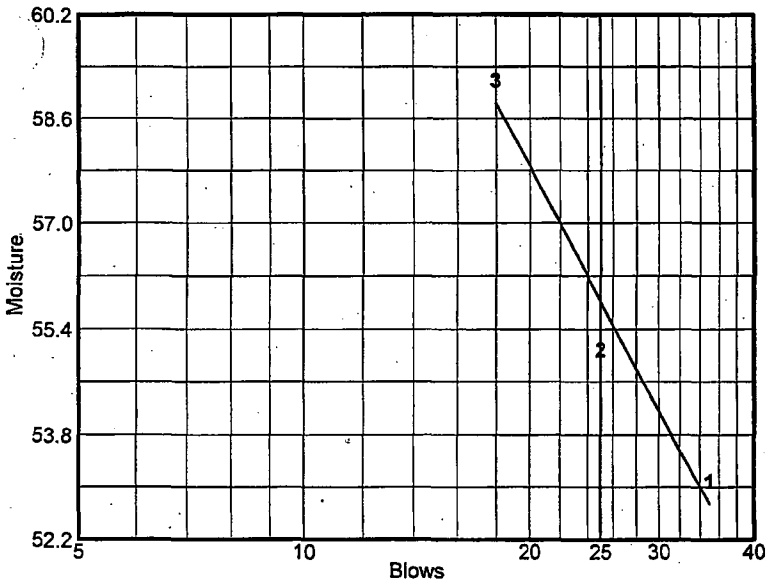
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-419
Sample No.: UD-7
Elev. or Depth: 198' to 200' **Sample Length(in./cm.):**
Location: B-419
Description: Fat clay
Date: 2-20-07 **Natural Moisture:** 22.5
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	19.11	25.10	25.41			
Dry+Tare	16.24	20.07	19.99			
Tare	10.84	10.94	10.84			
# Blows	35	25	18			
Moisture	53.1	55.1	59.2			

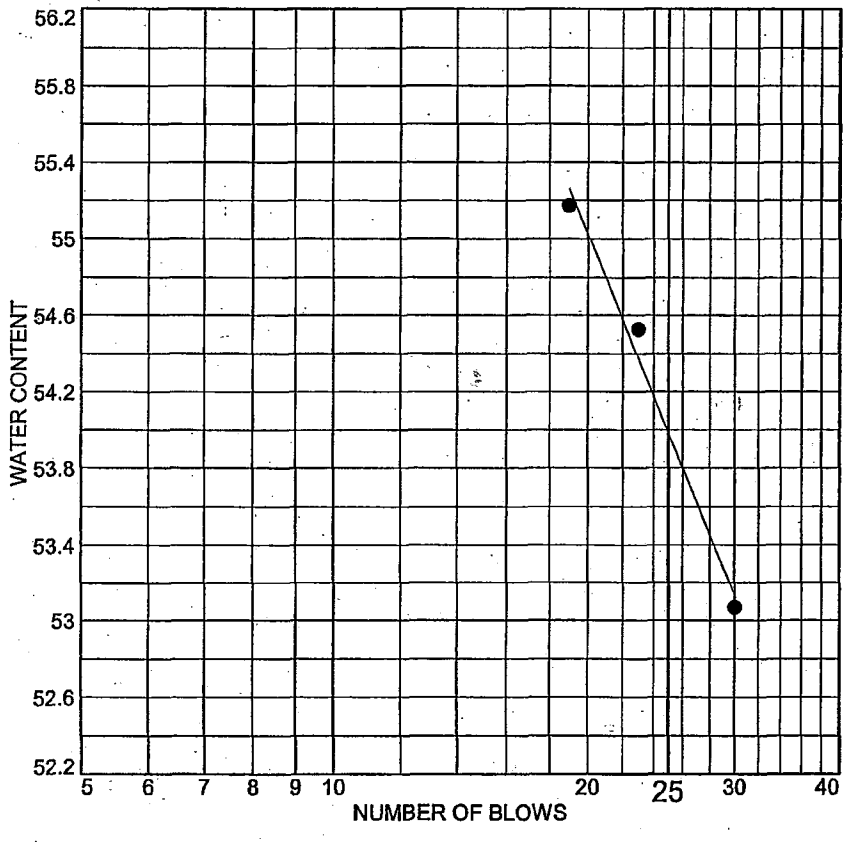


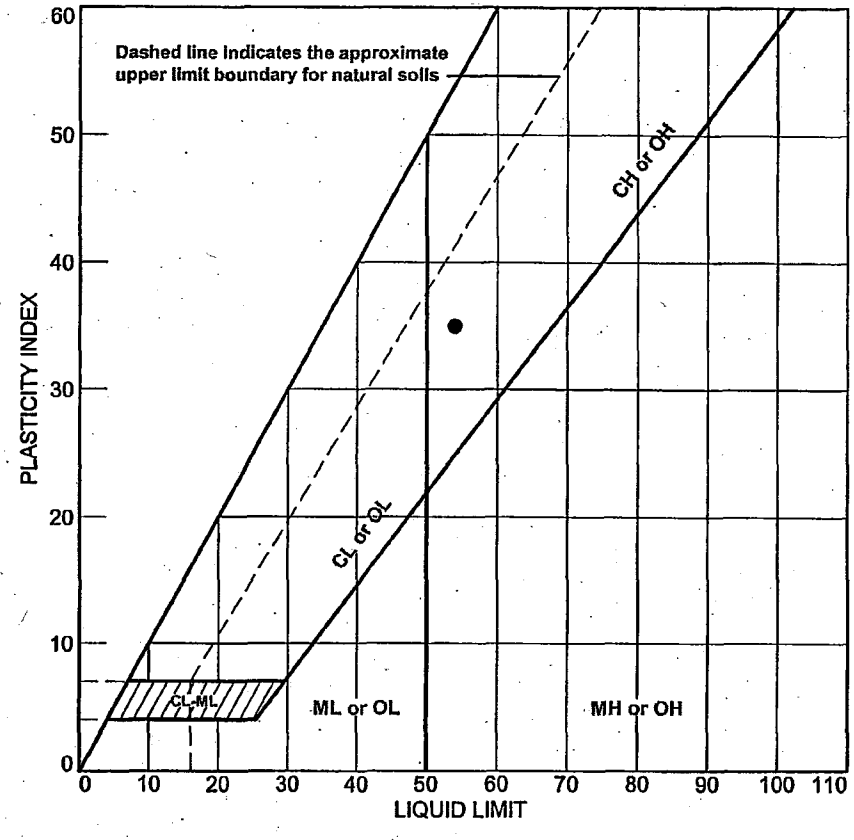
Liquid Limit= 56
Plastic Limit= 20
Plasticity Index= 36

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	19.88	21.19			
Dry+Tare	18.42	19.48			
Tare	11.01	11.02			
Moisture	19.7	20.2			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 421	STP-137	4.5'-6.0'	11/27/2006	CH	Fat Clay	18.9	54	35
		(SS-4)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:RF

ASTM D4318-05

KAW 4-3-07

KAW 4/3/07

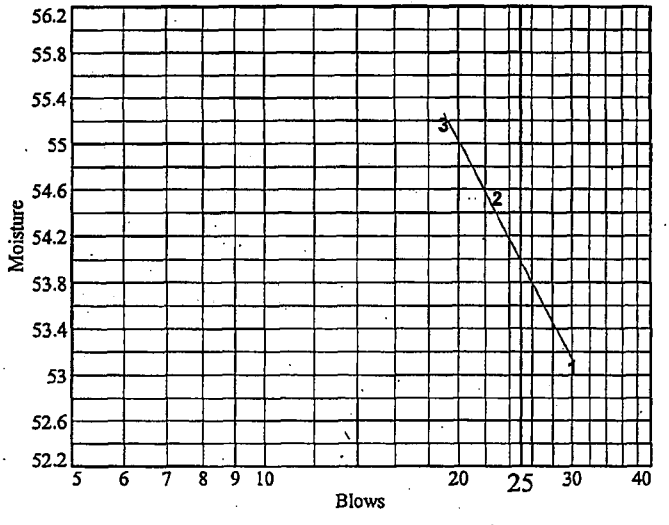
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 421
Depth: 4.5'-6.0'
Sample Number: STP-137 (SS-4)
Material Description: Fat Clay
Date: 11/27/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	33.14	34.77	36.55			
Dry+Tare	30.46	32.06	33.19			
Tare	25.41	27.09	27.10			
# Blows	30	23	19			
Moisture	53.1	54.5	55.2			



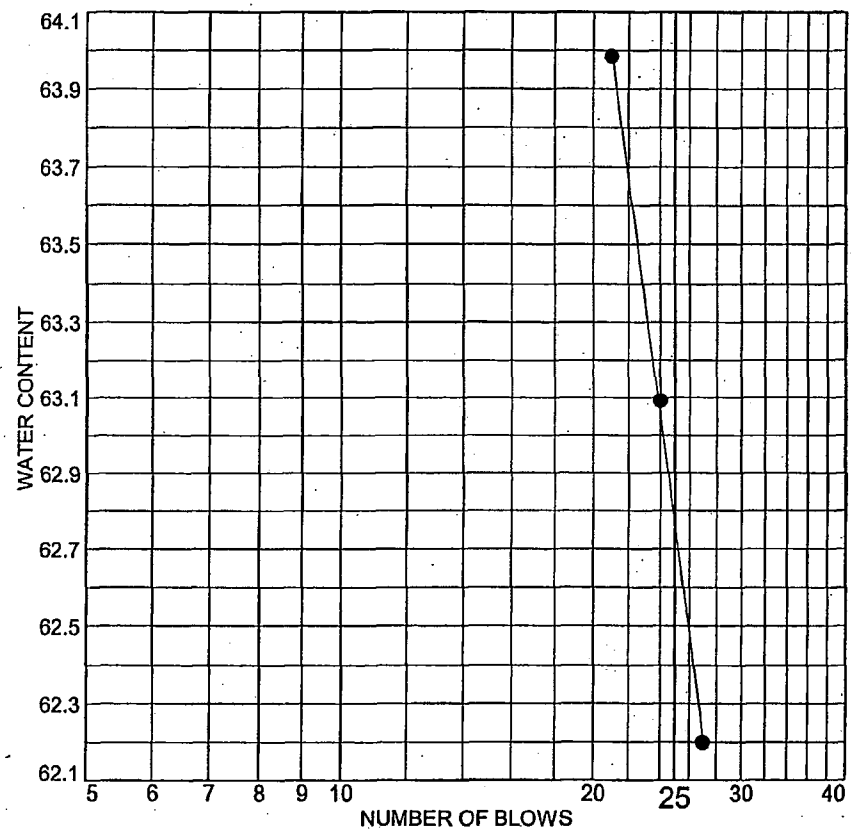
Liquid Limit= 54
Plastic Limit= 19
Plasticity Index= 35
Natural Moisture= 18.9
Liquidity Index= 0.0

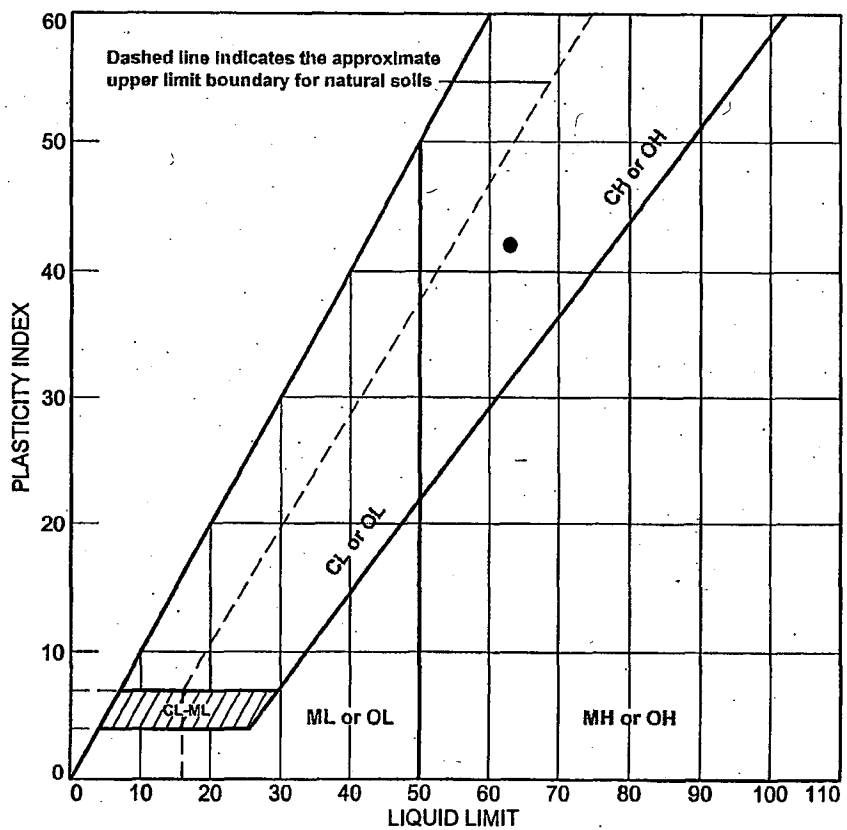
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.28	36.72			
Dry+Tare	34.20	35.37			
Tare	28.25	28.24			
Moisture	18.2	18.9			

MA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 421	STP-138	12.0'-13.5'	11/27/2006	CH	Fat Clay	20.4	63	42
		(SS-9)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF

ASTM D4318-05

4-3-07

KAW 4/3/07

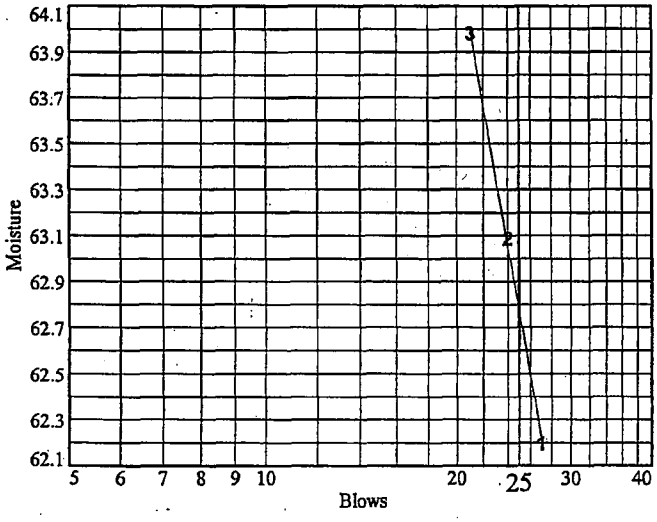
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 421
Depth: 12.0'-13.5' **Sample Number:** STP-138 (SS-9)
Material Description: Fat Clay
Date: 11/27/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	38.35	37.11	36.55			
Dry+Tare	34.73	33.64	33.21			
Tare	28.91	28.14	27.99			
# Blows	27	24	21			
Moisture	62.2	63.1	64.0			



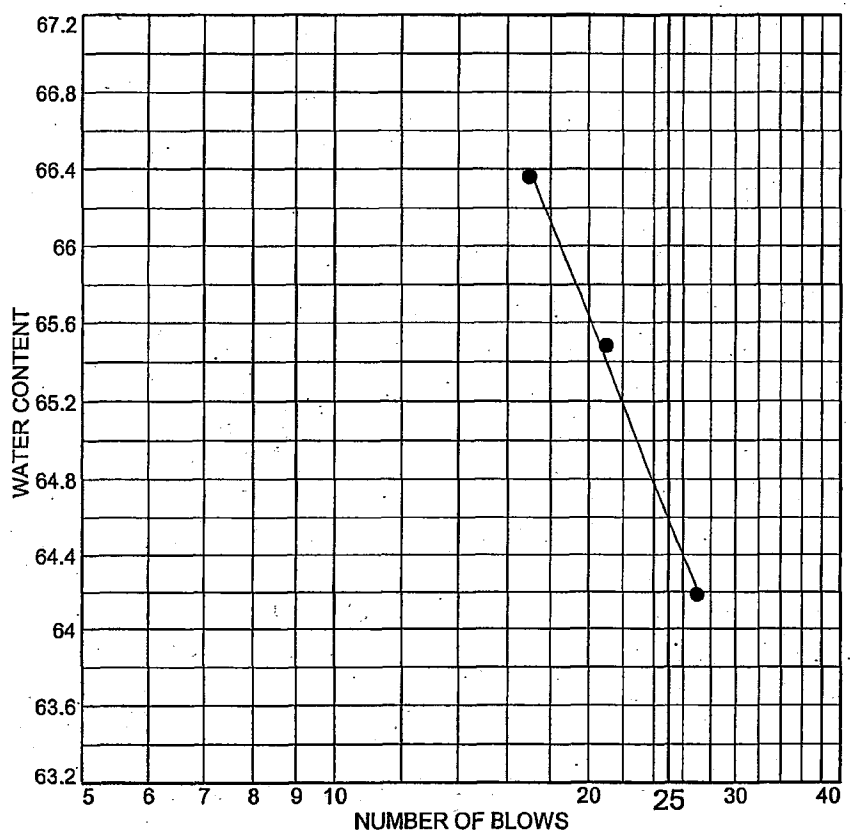
Liquid Limit= 63
Plastic Limit= 21
Plasticity Index= 42
Natural Moisture= 20.4
Liquidity Index= 0.0

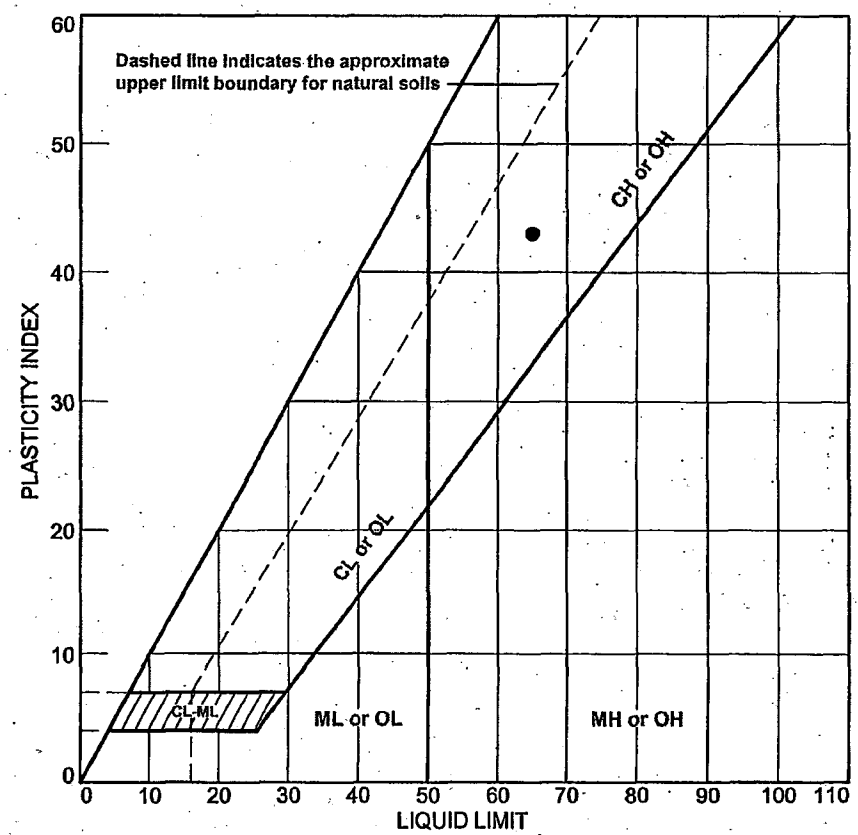
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.27	36.07			
Dry+Tare	34.88	34.75			
Tare	28.35	28.29			
Moisture	21.3	20.4			

NW 4/3/07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 421	STP-139	18.5'-20.0'	11/27/2006	CH	Fat Clay	22.5	65	43
		(SS-11)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:RF

ASTM D4318-05

MA 4-3-07

KAW 4/3/07

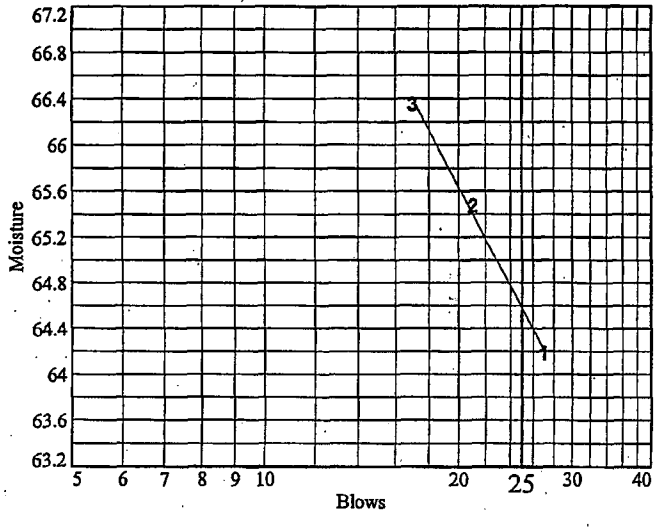
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 421
Depth: 18.5'-20.0'
Sample Number: STP-139 (SS-11)
Material Description: Fat Clay
Date: 11/27/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.33	35.99	36.21			
Dry+Tare	33.14	32.86	32.62			
Tare	28.17	28.08	27.21			
# Blows	27	21	17			
Moisture	64.2	65.5	66.4			



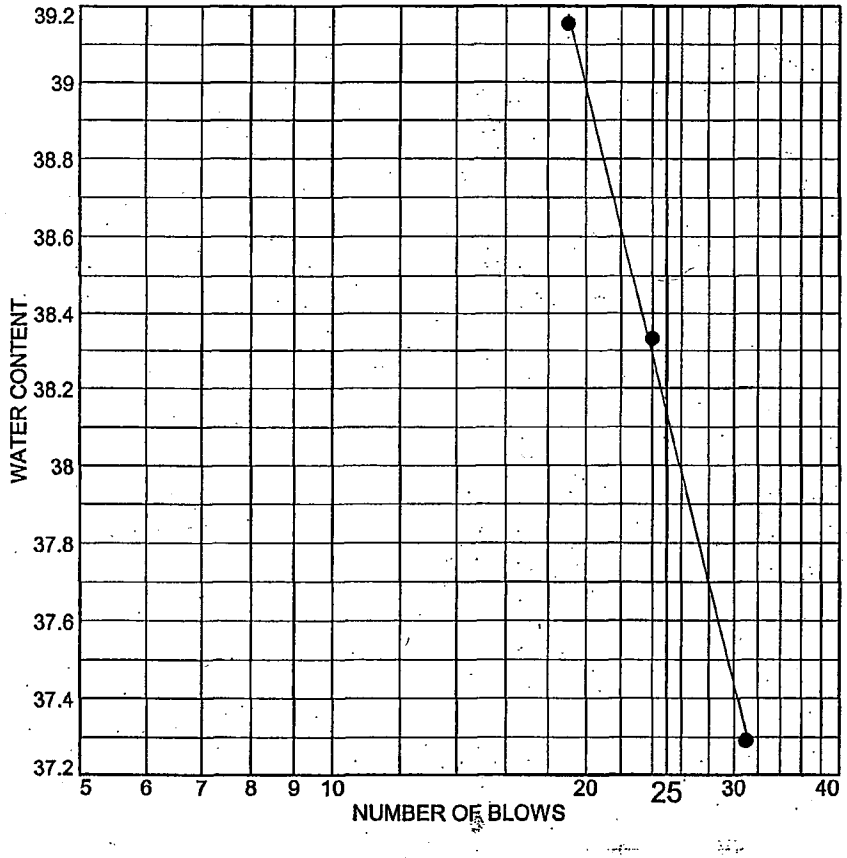
Liquid Limit= 65
Plastic Limit= 22
Plasticity Index= 43
Natural Moisture= 22.5
Liquidity Index= 0.0

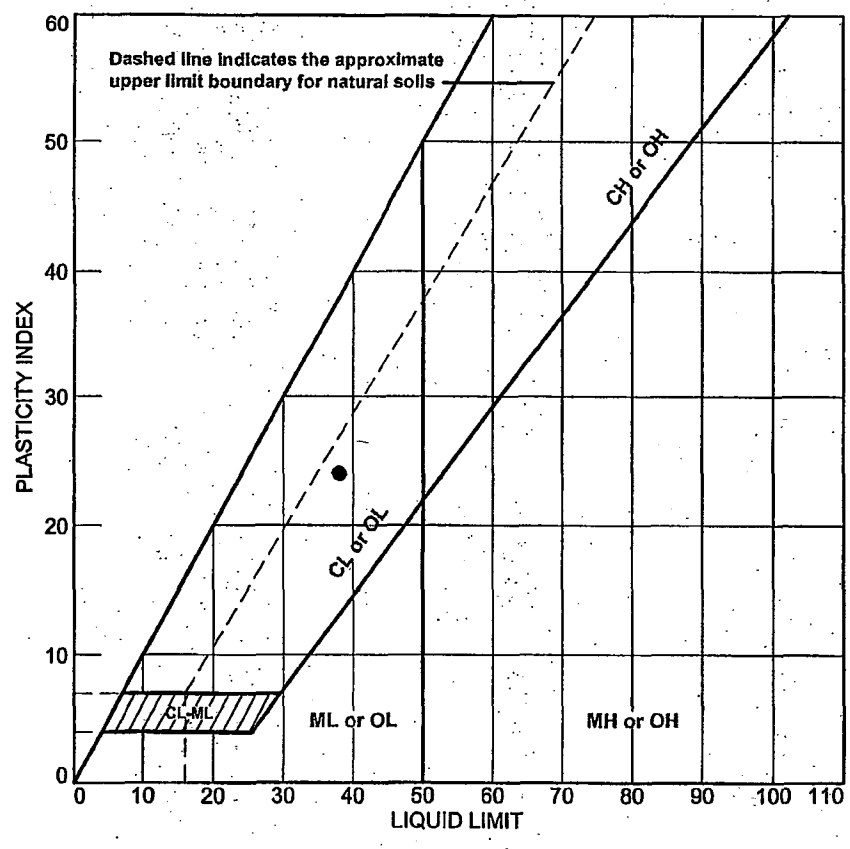
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.60	34.91			
Dry+Tare	35.05	32.98			
Tare	28.11	24.37			
Moisture	22.3	22.4			

MK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 421	STP-140 (SS-12)	23.5'-24.5'	11/27/2006	CL	Lean Clay	25.5	38	24

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

4-3-07

KAW 4/3/07

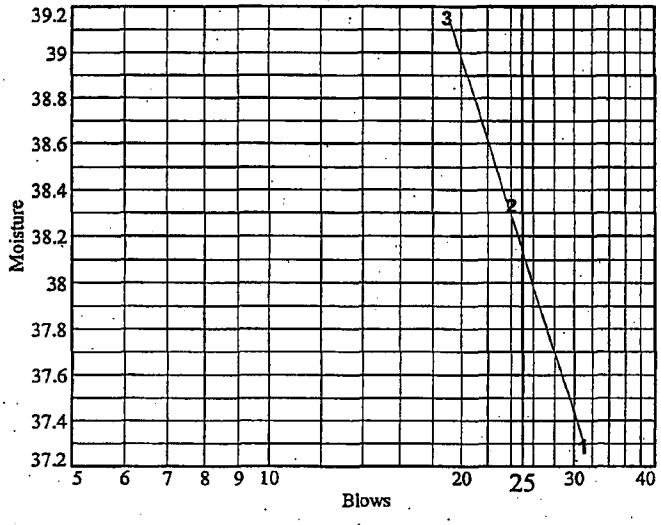
LIQUID AND PLASTIC LIMIT TEST DATA

4/1/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 421
Depth: 23.5'-24.5' **Sample Number:** STP-140 (SS-12)
Material Description: Lean Clay
Date: 11/27/2006 **USCS Class.:** CL
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.21	37.41	38.77			
Dry+Tare	34.76	34.88	35.99			
Tare	28.19	28.28	28.89			
# Blows	31	24	19			
Moisture	37.3	38.3	39.2			



Liquid Limit= 38
Plastic Limit= 14
Plasticity Index= 24
Natural Moisture= 25.5
Liquidity Index= 0.5

Plastic Limit Data

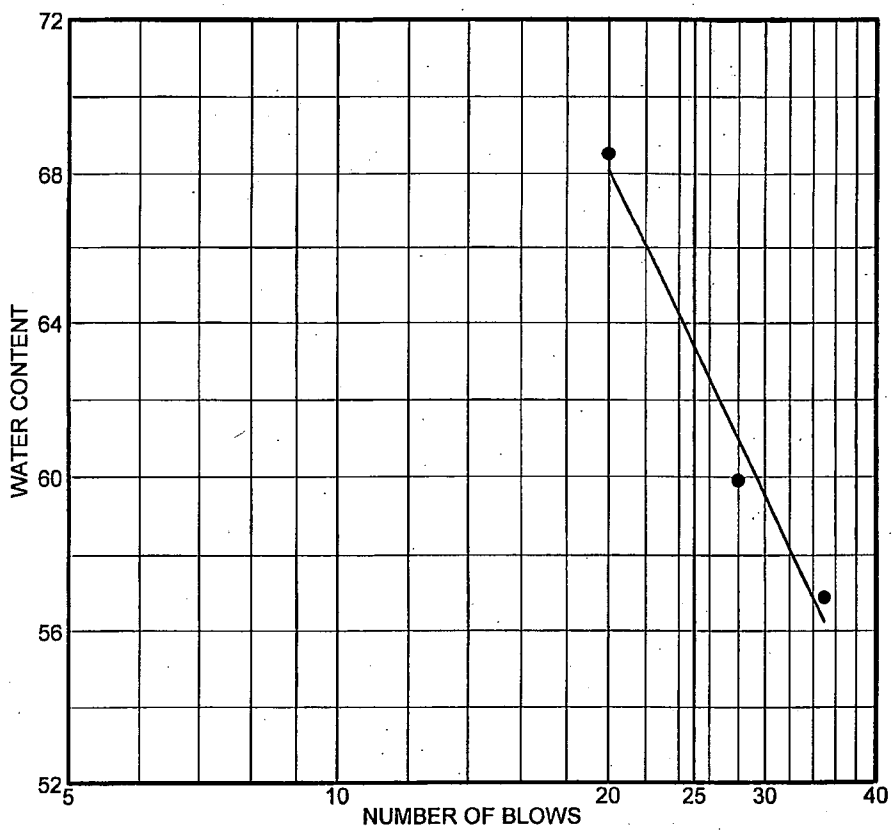
Run No.	1	2	3	4	
Wet+Tare	36.57	36.60			
Dry+Tare	35.58	35.45			
Tare	28.28	26.91			
Moisture	13.6	13.5			

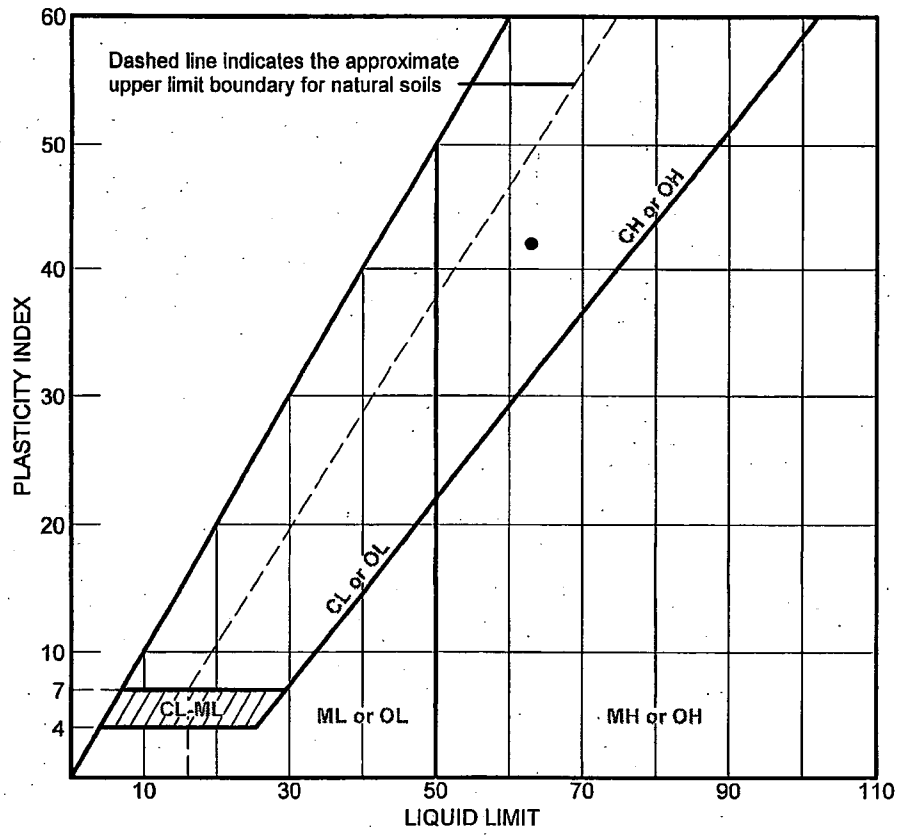
Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
539.2	465.3	175.2	25.5

NA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-421	UD-2	53' to 55'	2-19-07	CH	Fat clay	28.1	63	42

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

KAW 4/3/07

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

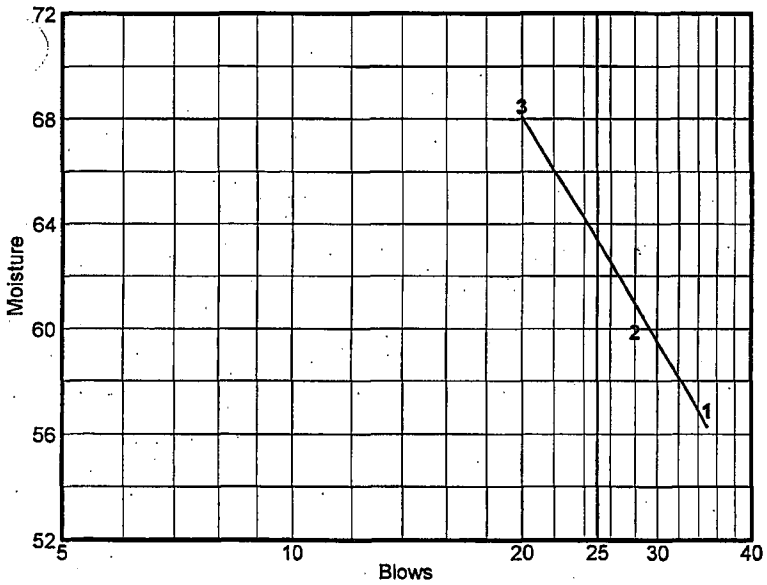
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-421
Sample No.: UD-2
Elev. or Depth: 53' to 55' **Sample Length(in./cm.):**
Location: B-421
Description: Fat clay
Date: 2-19-07 **Natural Moisture:** 28.1
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	32.15	34.70	35.08			
Dry+Tare	24.45	25.72	25.23			
Tare	10.92	10.73	10.85			
# Blows	35	28	20			
Moisture	56.9	59.9	68.5			

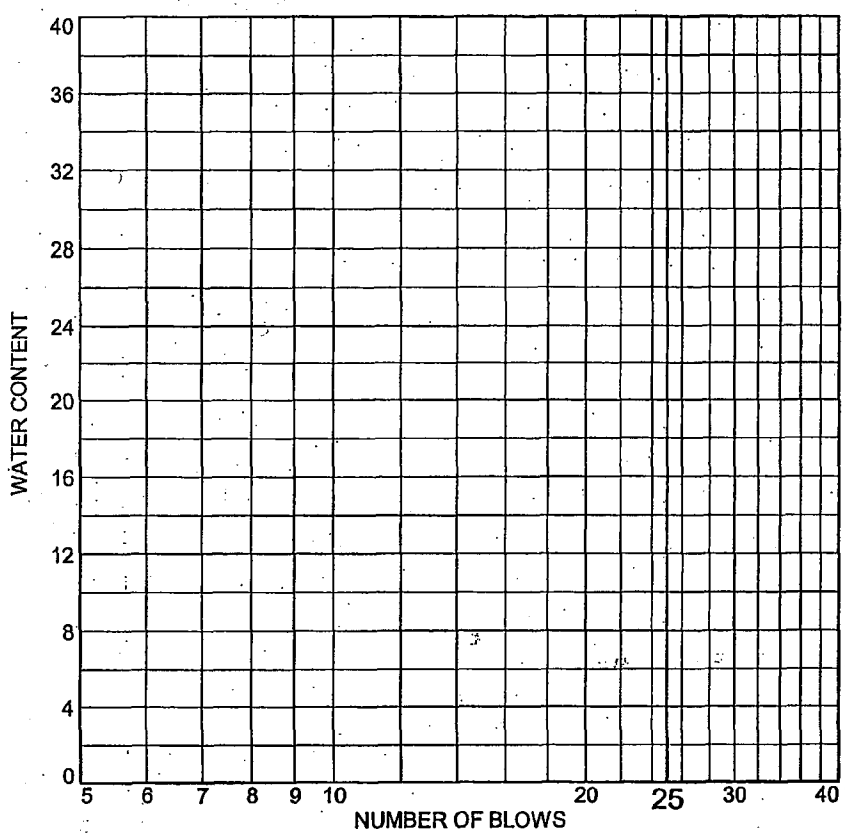


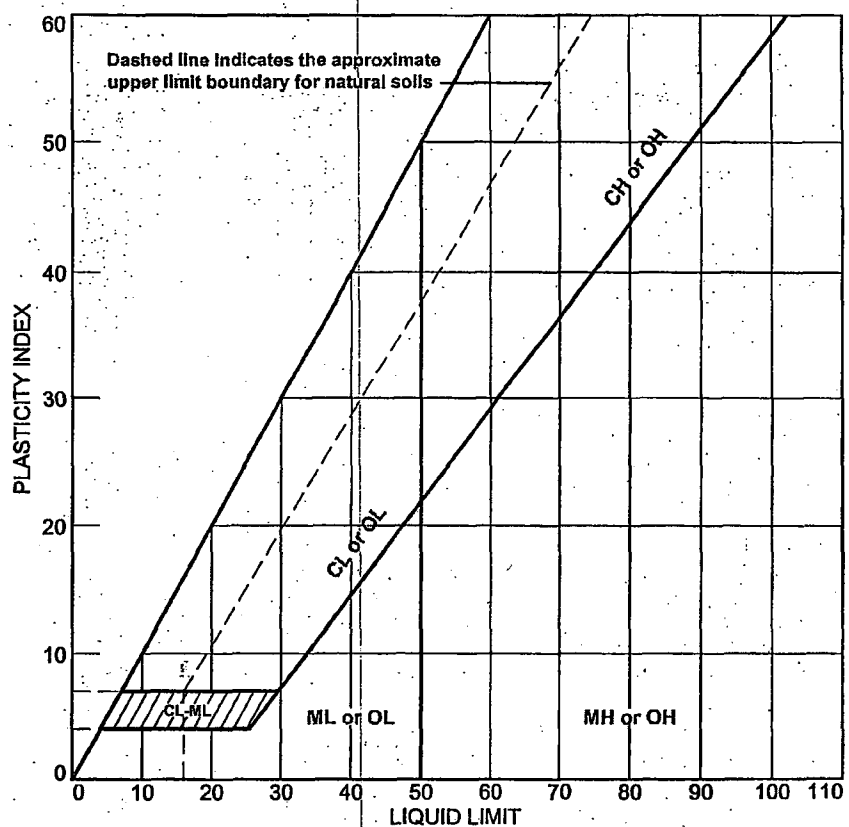
Liquid Limit= 63
Plastic Limit= 21
Plasticity Index= 42

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	25.07	25.44			
Dry+Tare	22.62	23.05			
Tare	10.91	11.46			
Moisture	20.9	20.6			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 421	STP-144 (SS-17)	59.0'-60.0'	11/28/2006	ML	Sandy Silt	19.0	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF

ASTM D4318-05

4-3-07

KAW 413107

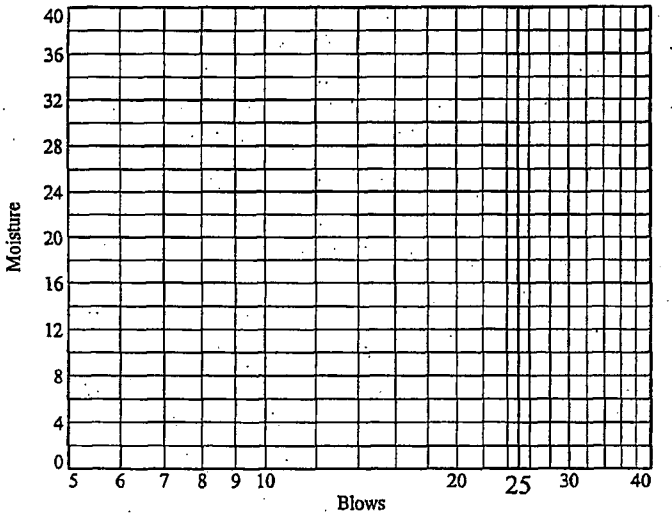
LIQUID AND PLASTIC LIMIT TEST DATA

4/1/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 421
Depth: 59.0'-60.0' **Sample Number:** STP-144 (SS-17)
Material Description: Sandy Silt
Date: 11/28/2006 **USCS Class.:** ML
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare						
Dry+Tare						
Tare						
# Blows						
Moisture						



Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP
Natural Moisture= 19.0

Plastic Limit Data

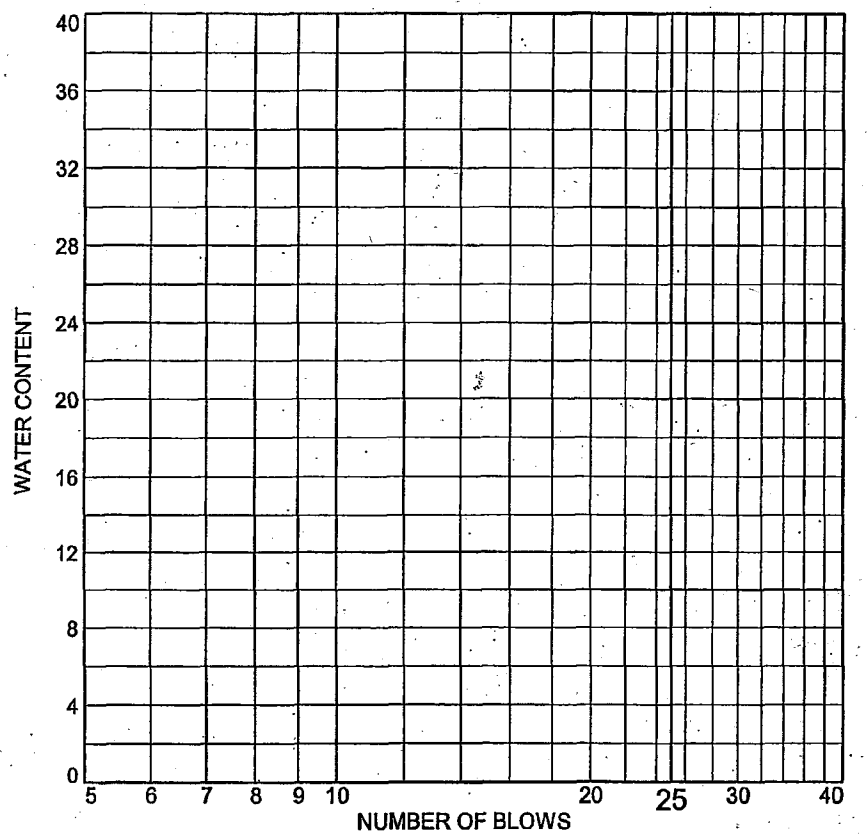
Run No.	1	2	3	4	
Wet+Tare					
Dry+Tare					
Tare					
Moisture					

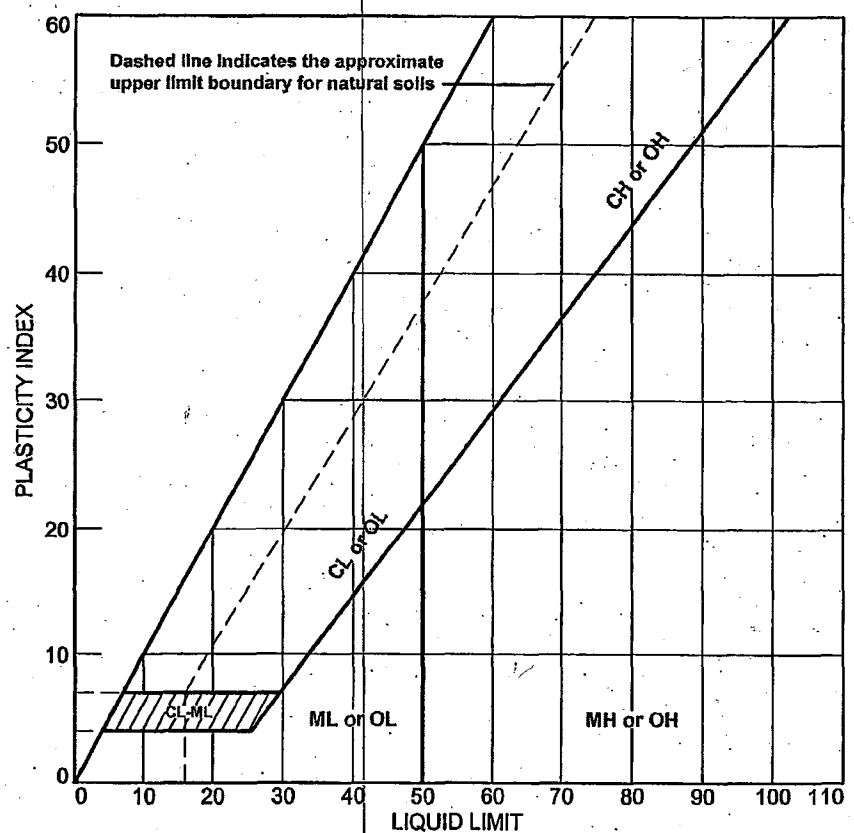
Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
471.9	424.4	174.8	19.0

MK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 421	STP-145 (SS-19)	68.5'-70.0'	11/28/2006	ML	Silt	20.1	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH
ASTM D4318-05

Reviewed By:RF

4-3-07

KAW 4/03/07

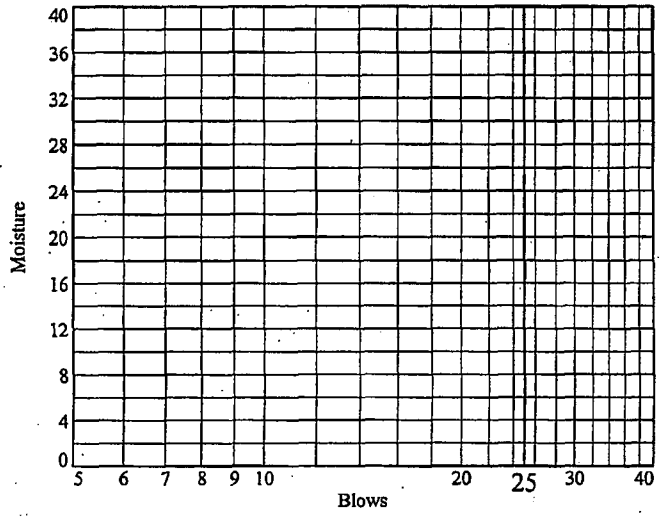
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 421
Depth: 68.5'-70.0'
Sample Number: STP-145 (SS-19)
Material Description: Silt
Date: 11/28/2006
USCS Class.: ML
Testing Remarks: Tested By:AC/TH Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare						
Dry+Tare						
Tare						
# Blows						
Moisture						



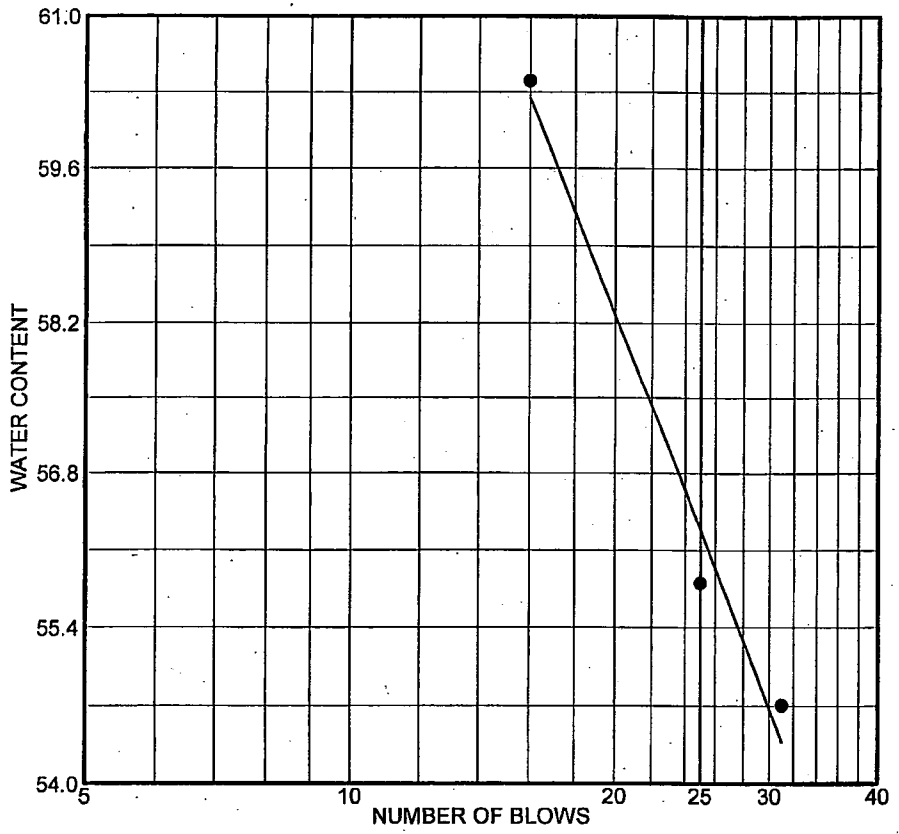
Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP
Natural Moisture= 20.1

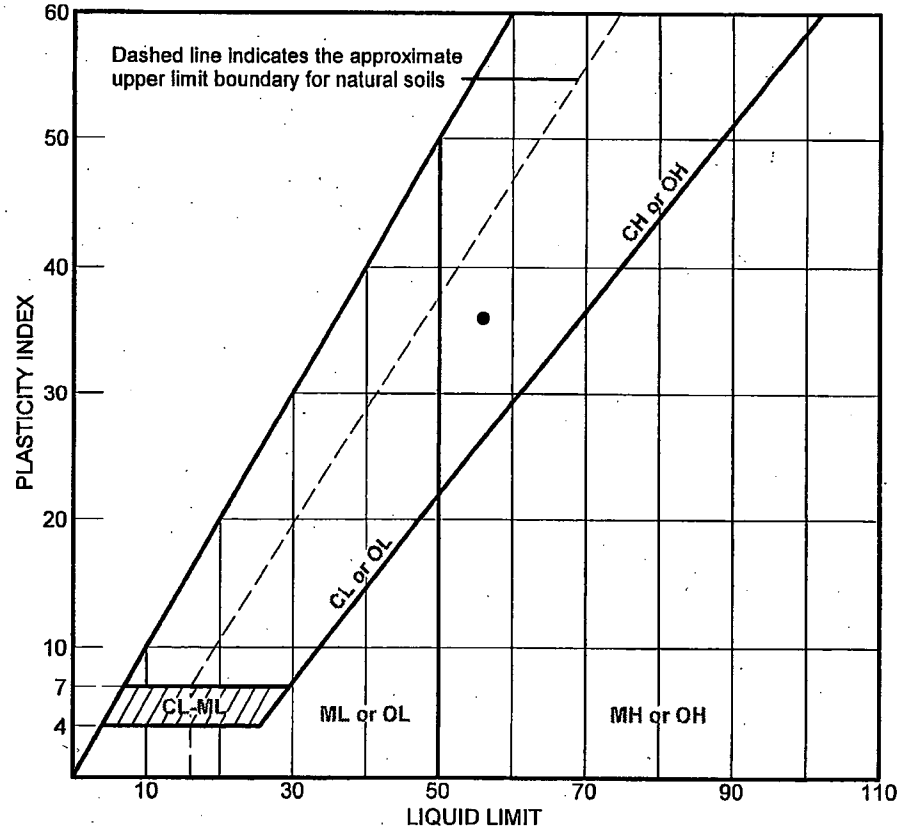
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare					
Dry+Tare					
Tare					
Moisture					

MWK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-421	UD-3	83' to 85'	2-20-07	CH	Fat clay	21.2	56	36

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05 KAW 4/3/07

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

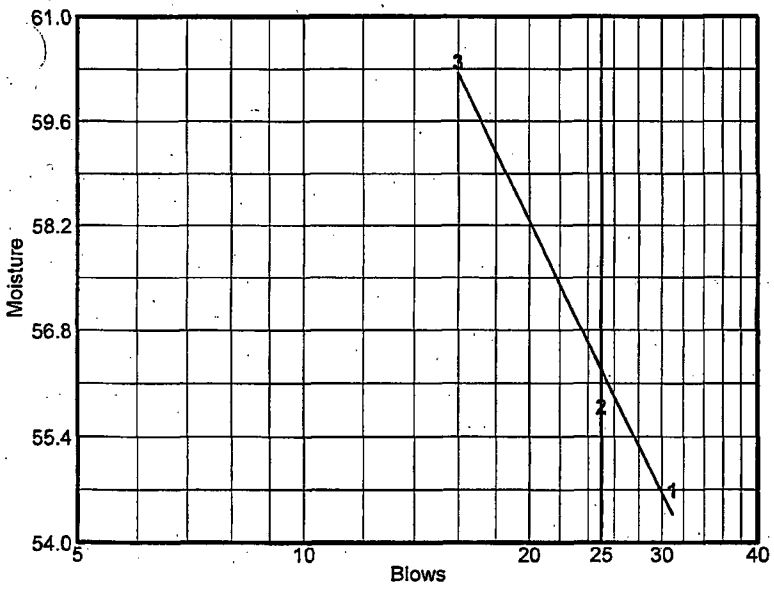
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-421
Sample No.: UD-3
Elev. or Depth: 83' to 85' **Sample Length(in./cm.):**
Location: B-421
Description: Fat clay
Date: 2-20-07 **Natural Moisture:** 21.2
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	23.71	29.11	22.02			
Dry+Tare	17.62	21.02	16.20			
Tare	6.49	6.51	6.56			
# Blows	31	25	16			
Moisture	54.7	55.8	60.4			

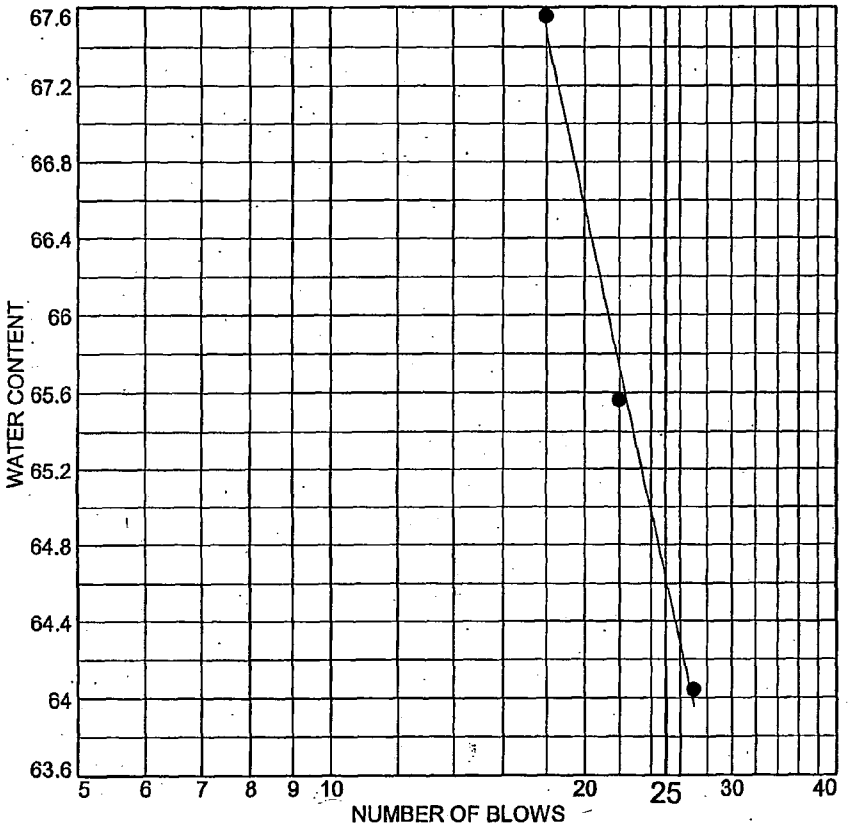


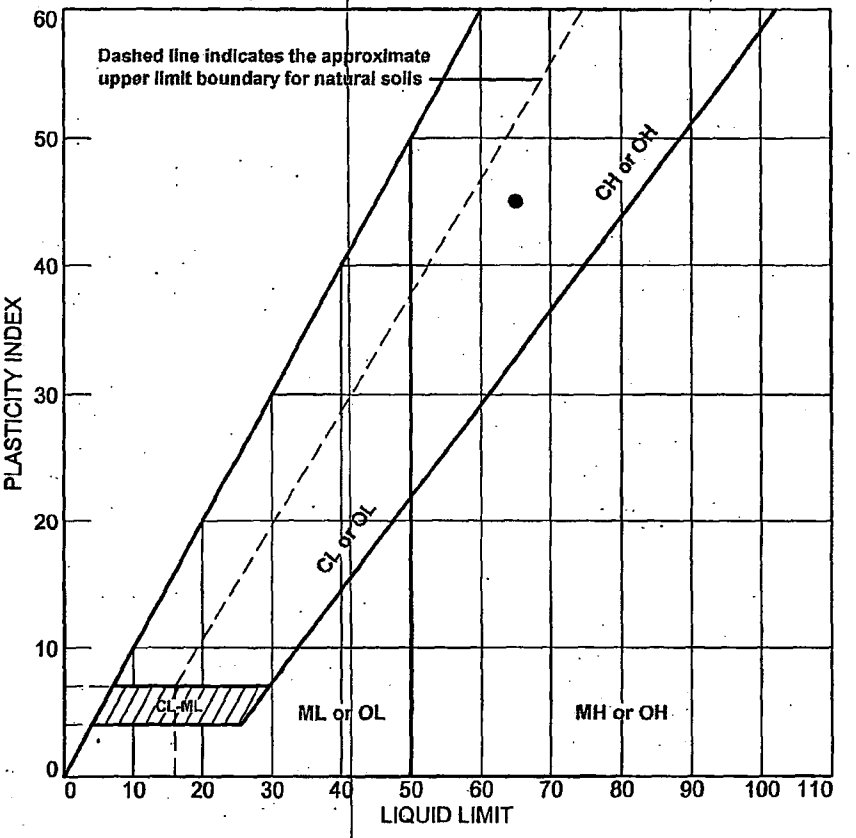
Liquid Limit= 56
Plastic Limit= 20
Plasticity Index= 36

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	18.20	20.04			
Dry+Tare	16.27	17.77			
Tare	6.50	6.47			
Moisture	19.8	20.1			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 421	STP-148 (SS-23)	93.5'-95.0'	11/29/2006	CH	Fat Clay	21.5	65	45

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:RF
ASTM D4318-05

mf
4-3-07

KAW 4/3/07

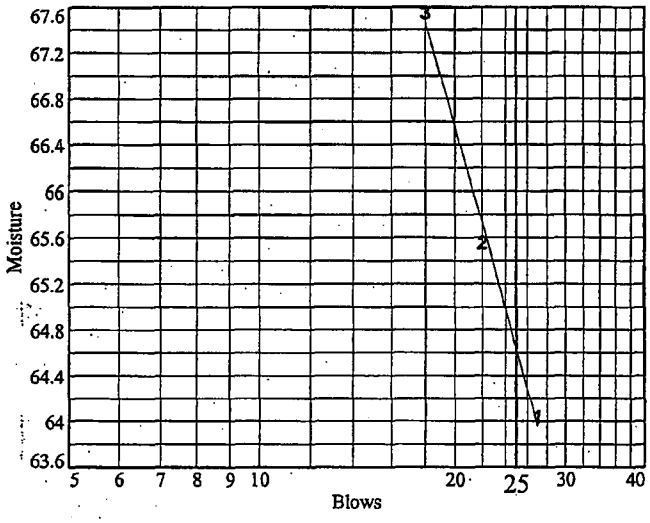
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 421
Depth: 93.5'-95.0'
Sample Number: STP-148 (SS-23)
Material Description: Fat Clay
Date: 11/29/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.39	35.70	36.83			
Dry+Tare	33.81	32.73	33.29			
Tare	28.22	28.20	28.05			
# Blows	27	22	18			
Moisture	64.0	65.6	67.6			



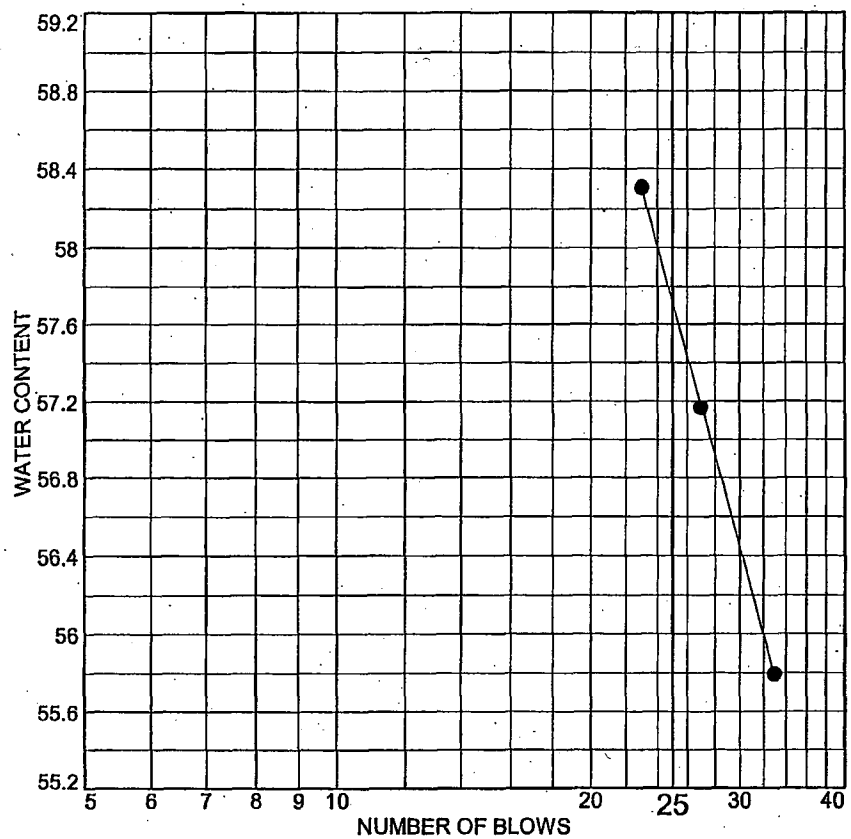
Liquid Limit= 65
Plastic Limit= 20
Plasticity Index= 45
Natural Moisture= 21.5
Liquidity Index= 0.0

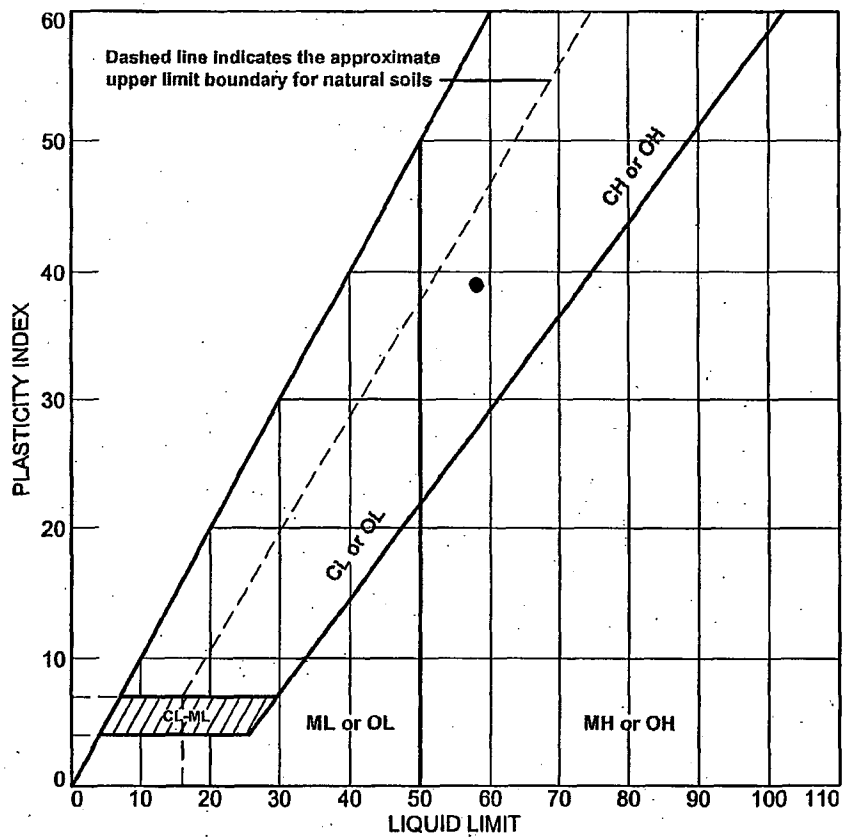
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	34.96	36.10			
Dry+Tare	33.84	34.76			
Tare	28.29	28.17			
Moisture	20.2	20.3			

MAK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 427	STP-165	3.0'-4.5'	11/29/2006	CH	Fat clay	23.5	58	39
		(SS-3)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH/JW Reviewed By:RF

ASTM D4318-05

MAT 4-3-07

KAW 4/3/07

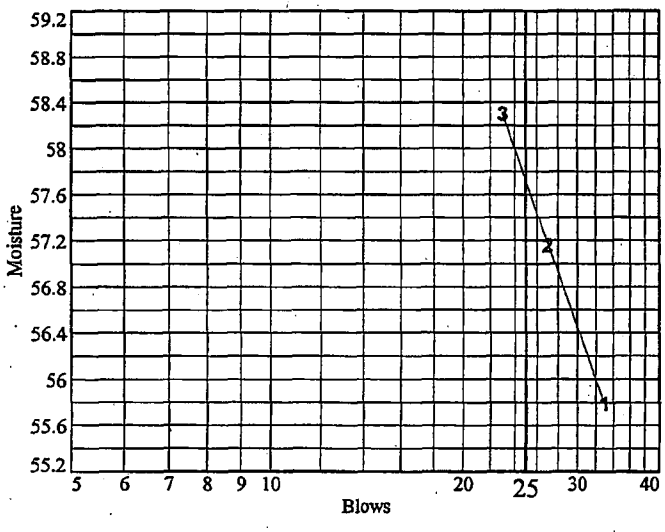
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 427
Depth: 3.0'-4.5' **Sample Number:** STP-165 (SS-3)
Material Description: Fat clay
Date: 11/29/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC/TH/JW Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.04	37.75	37.60			
Dry+Tare	32.91	34.28	34.09			
Tare	27.30	28.21	28.07			
# Blows	33	27	23			
Moisture	55.8	57.2	58.3			



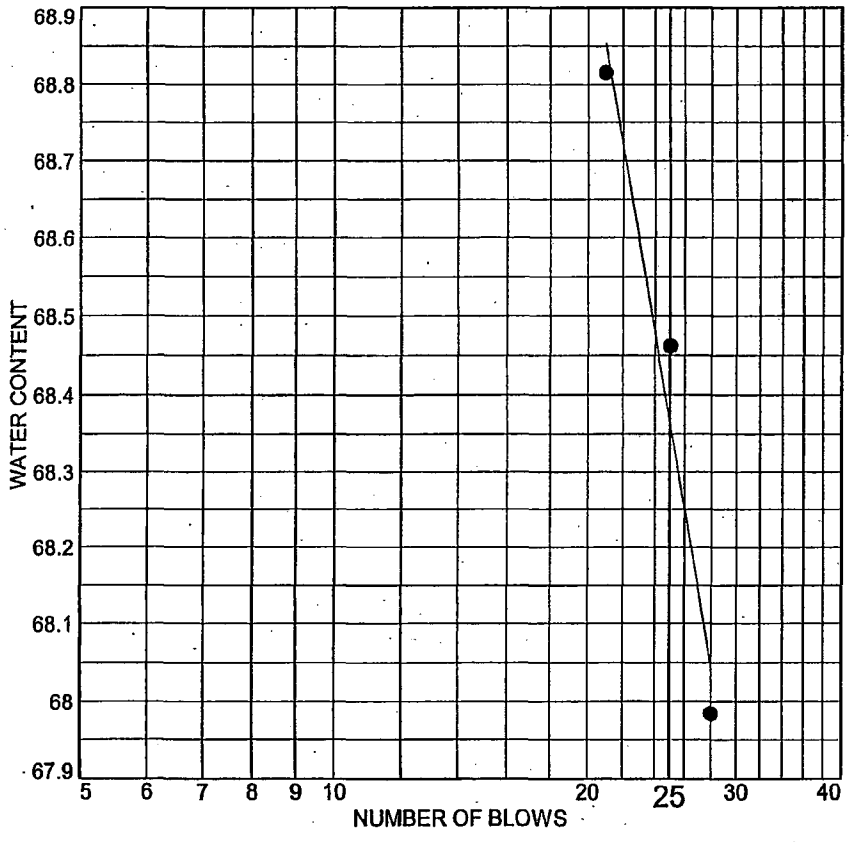
Liquid Limit= 58
Plastic Limit= 19
Plasticity Index= 39
Natural Moisture= 23.5
Liquidity Index= 0.1

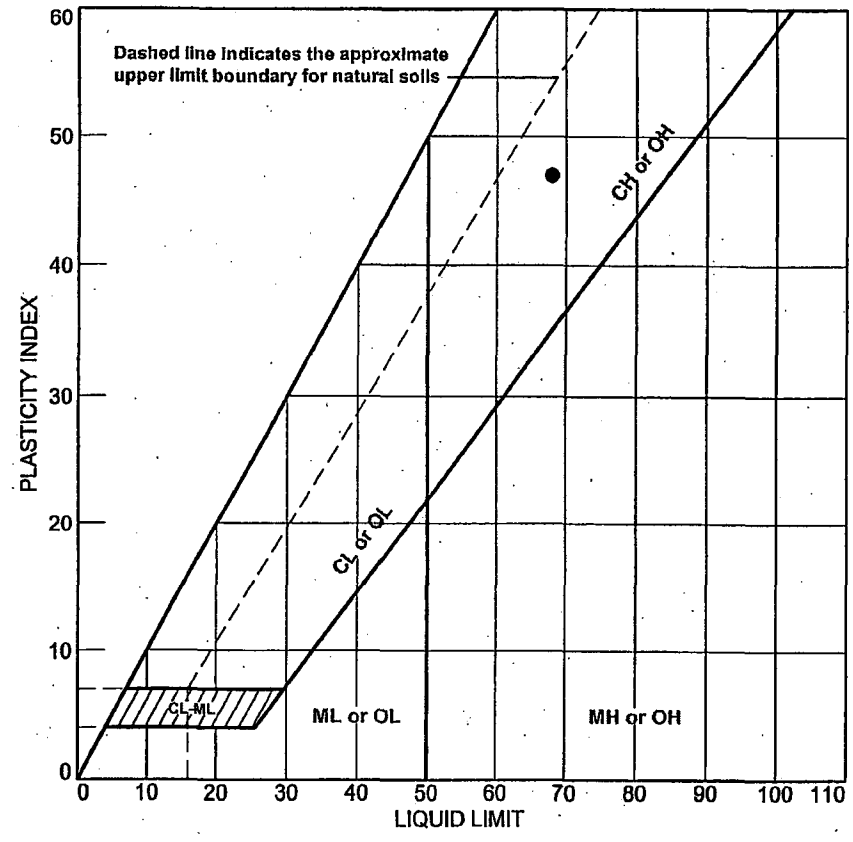
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	32.79	36.36			
Dry+Tare	31.16	34.99			
Tare	22.69	27.92			
Moisture	19.2	19.4			

4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 427	STP-166	9.0'-10.5'	11/29/2006	CH	Fat Clay	24.0	68	47
		(SS-7)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH
ASTM D4318-05

Reviewed By:MH

MH
4-3-07

KAW 4/3/07

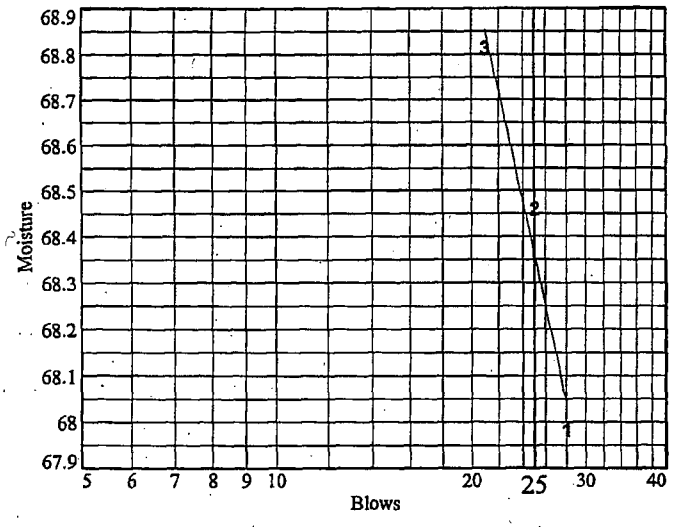
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 427
Depth: 9.0'-10.5'
Sample Number: STP-166 (SS-7)
Material Description: Fat Clay
Date: 11/29/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.61	36.94	36.29			
Dry+Tare	33.17	33.38	32.98			
Tare	28.11	28.18	28.17			
# Blows	28	25	21			
Moisture	68.0	68.5	68.8			



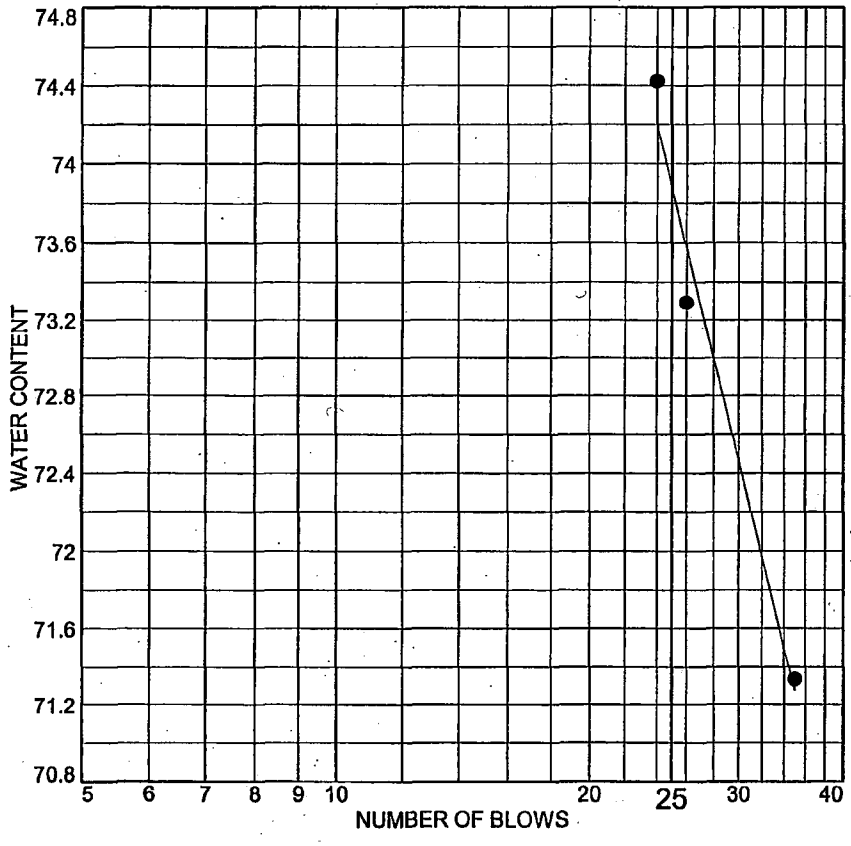
Liquid Limit= 68
Plastic Limit= 21
Plasticity Index= 47
Natural Moisture= 24.0
Liquidity Index= 0.1

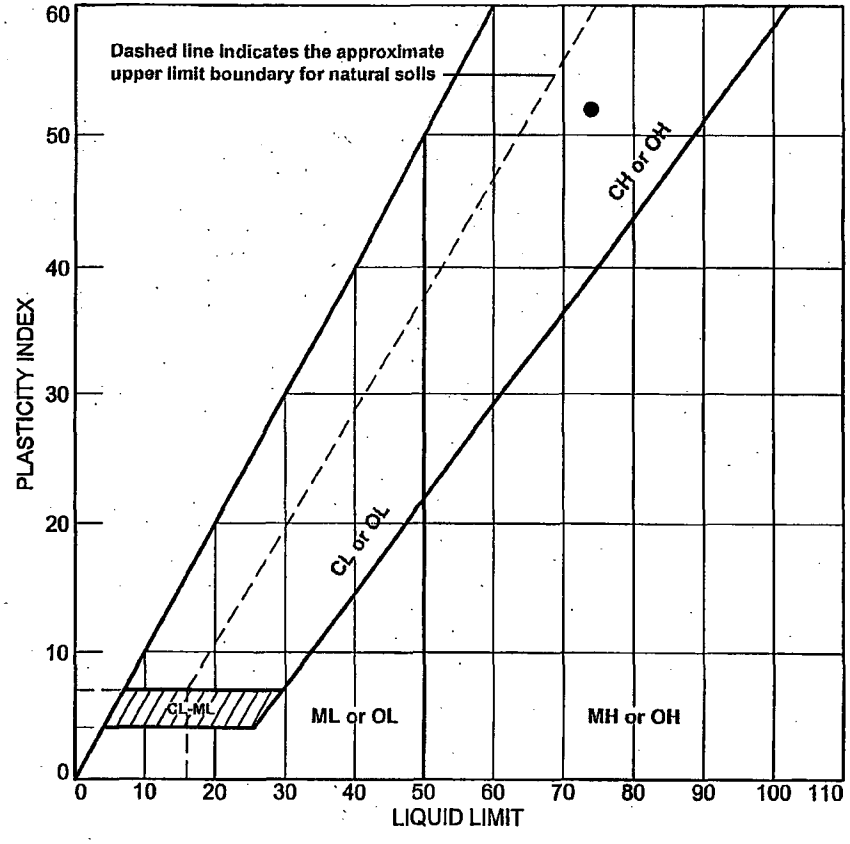
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	34.80	37.01			
Dry+Tare	33.46	35.42			
Tare	27.24	27.89			
Moisture	21.5	21.1			

MAT 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 427	STP-260 (SS-17)	48.5'-50.0'	11/30/2006	CH	Fat Clay	43.0	74	52

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF

ASTM D4318-05

4-3-07

KAW 413107

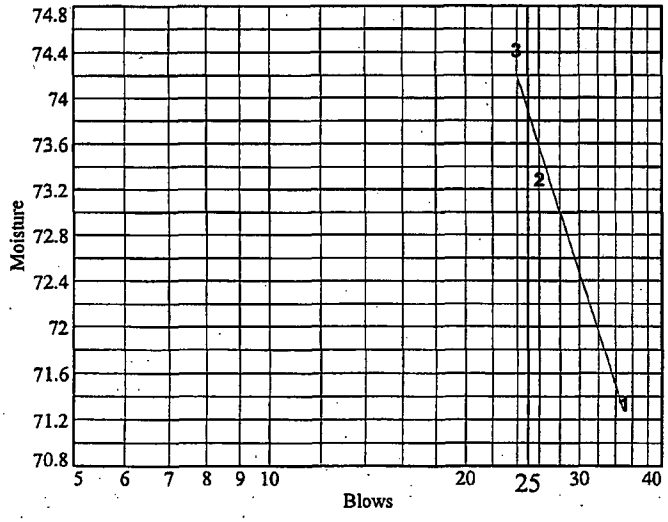
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 427
Depth: 48.5'-50.0' **Sample Number:** STP-260 (SS-17)
Material Description: Fat Clay
Date: 11/30/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.02	36.32	36.64			
Dry+Tare	32.71	32.78	33.09			
Tare	28.07	27.95	28.32			
# Blows	35	26	24			
Moisture	71.3	73.3	74.4			



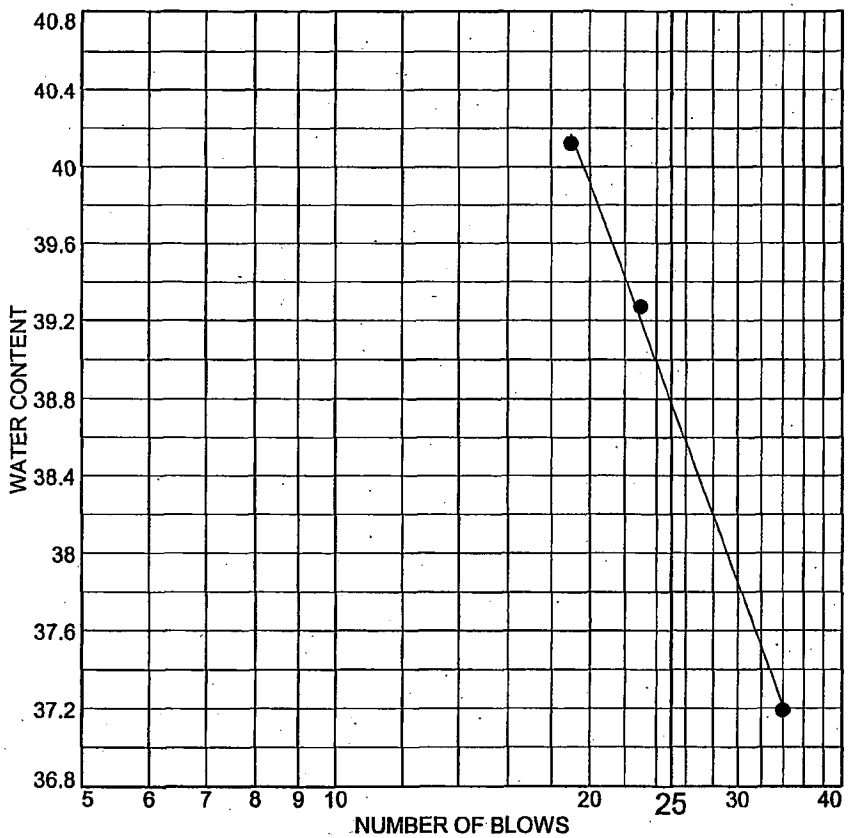
Liquid Limit= 74
Plastic Limit= 22
Plasticity Index= 52
Natural Moisture= 43.0
Liquidity Index= 0.4

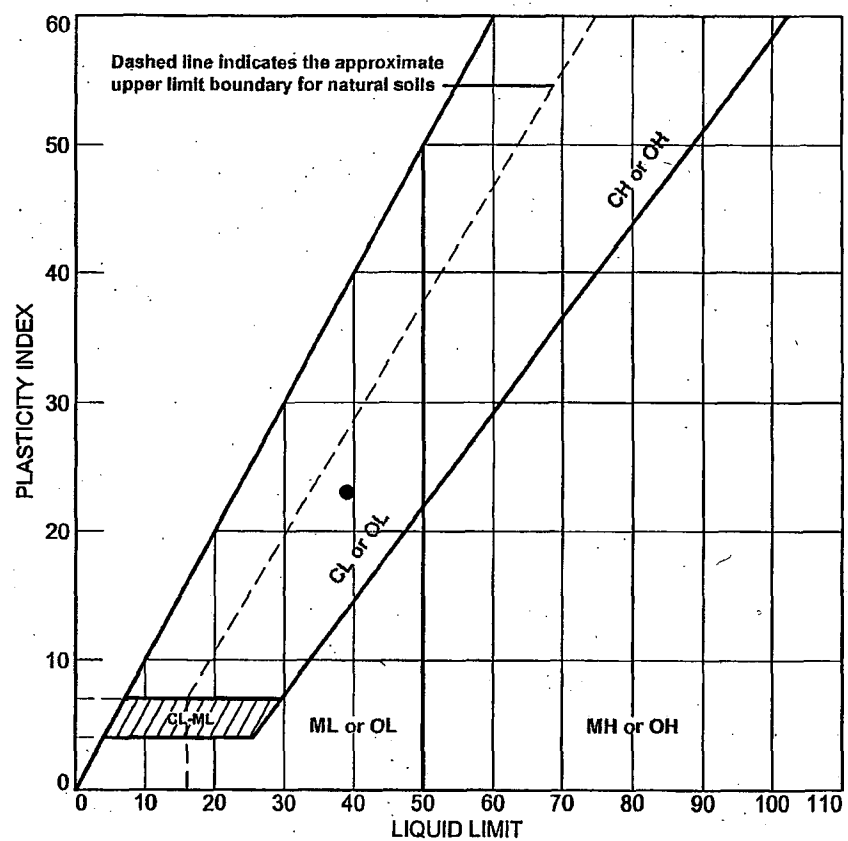
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.29	36.14			
Dry+Tare	34.84	34.52			
Tare	28.13	27.10			
Moisture	21.6	21.8			

MNF 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 427	STP-170 (SS-19)	58.5'-60.0'	11/30/2006	CL	Lean CLay	18.9	39	23

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH/JW Reviewed By:RF
ASTM D4318-05

MH
4-3-07

KAW 4/3/07

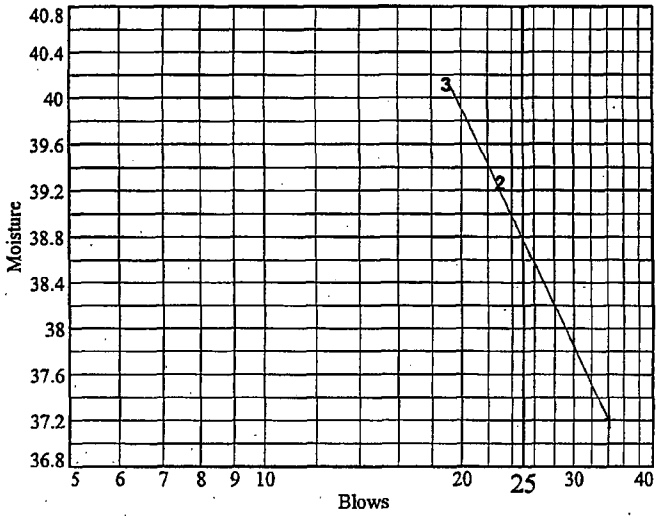
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 427
Depth: 58.5'-60.0' **Sample Number:** STP-170 (SS-19)
Material Description: Lean CLay
Date: 11/30/2006 **USCS Class.:** CL
Testing Remarks: Tested By:AC/TH/JW Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	38.23	38.87	39.64			
Dry+Tare	35.53	35.85	36.33			
Tare	28.27	28.16	28.08			
# Blows	34	23	19			
Moisture	37.2	39.3	40.1			



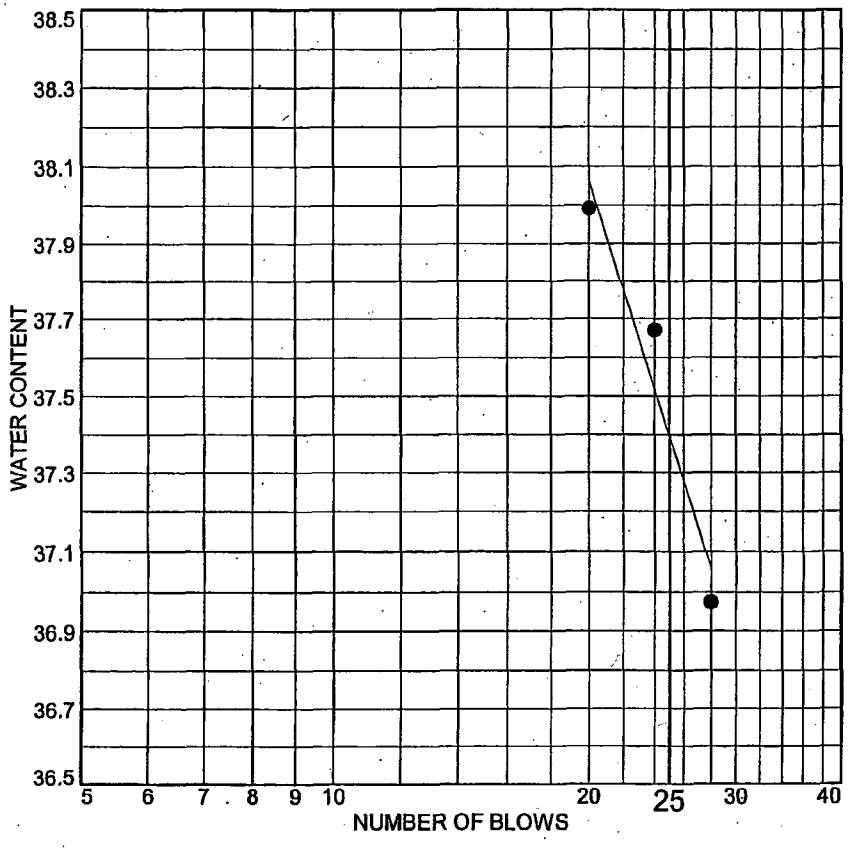
Liquid Limit= 39
Plastic Limit= 16
Plasticity Index= 23
Natural Moisture= 18.9
Liquidity Index= 0.1

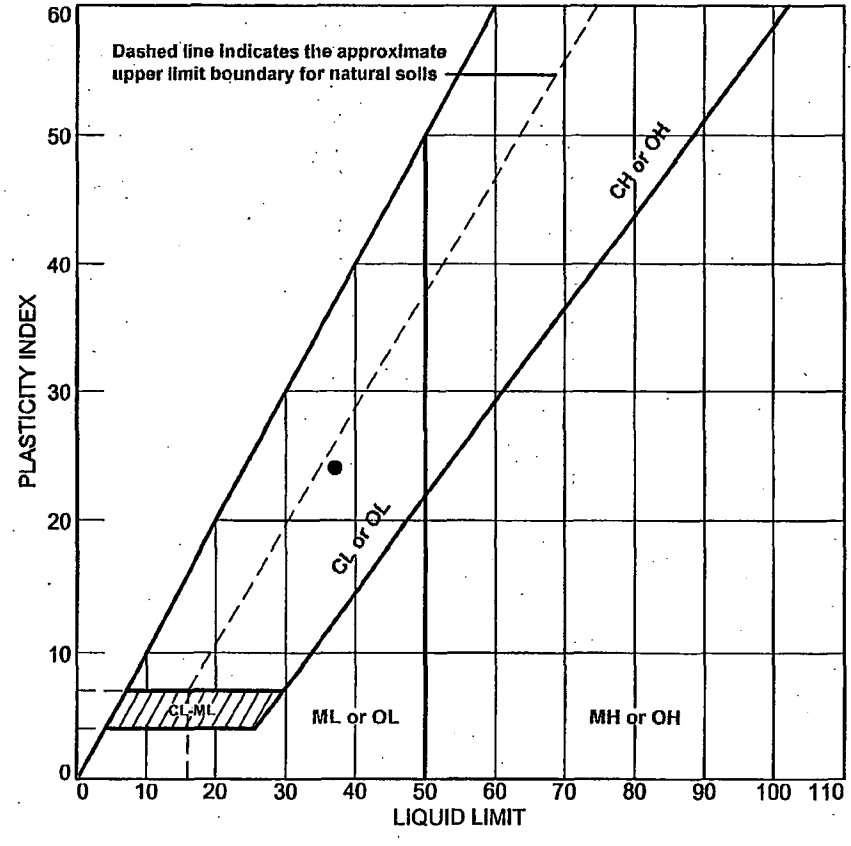
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.69	35.52			
Dry+Tare	34.68	34.52			
Tare	28.25	28.33			
Moisture	15.7	16.2			

MAA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 427	STP-172 (SS-24)	83.5'-85.0'	12/1/2006	CL	Lean Clay	18.9	37	24

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

MH
4-3-07

KAW 413107

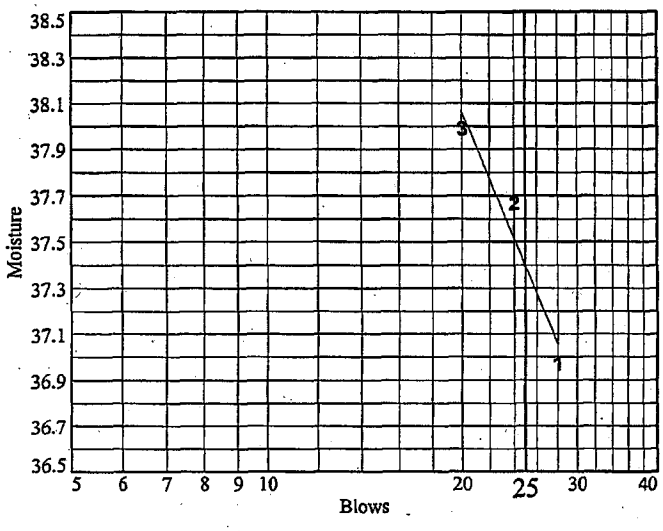
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 427
Depth: 83.5'-85.0' **Sample Number:** STP-172 (SS-24)
Material Description: Lean Clay
Date: 12/1/2006 **USCS Class.:** CL
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.95	39.20	36.28			
Dry+Tare	35.31	36.16	33.29			
Tare	28.17	28.09	25.42			
# Blows	28	24	20			
Moisture	37.0	37.7	38.0			



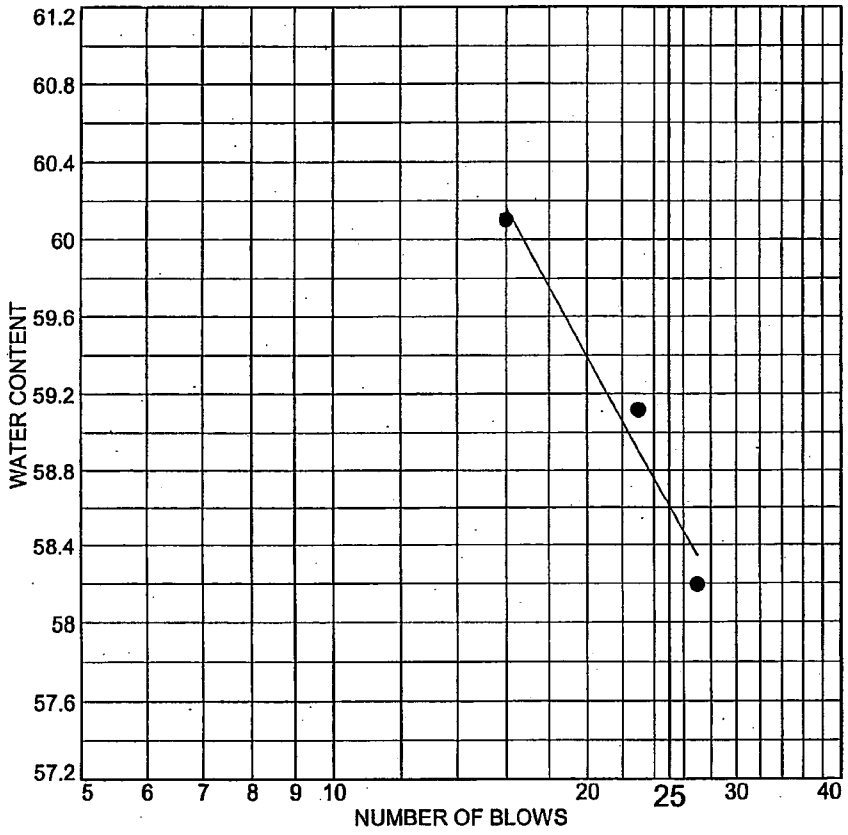
Liquid Limit= 37
Plastic Limit= 13
Plasticity Index= 24
Natural Moisture= 18.9
Liquidity Index= 0.2

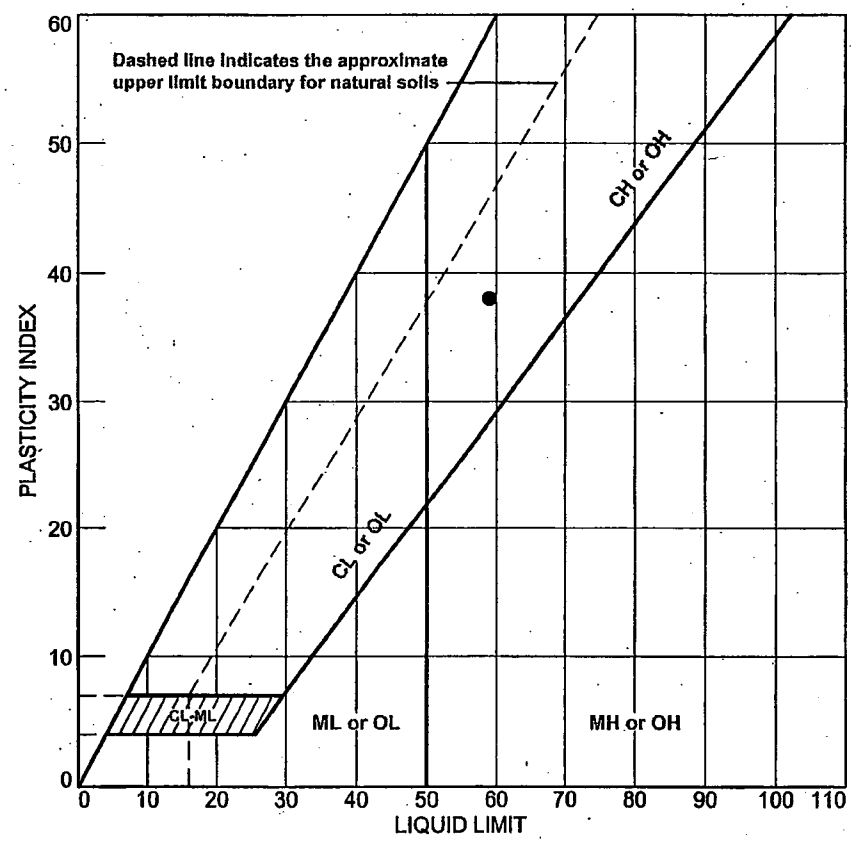
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.57	35.17			
Dry+Tare	34.67	34.27			
Tare	27.61	27.20			
Moisture	12.7	12.7			

MAA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 427	STP-175	118.5'-120.0'	12/2/2006	CH	Fat CLay	21.0	59	38
		(SS-29)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:MH

ASTM D4318-05

MH 4-3-07

KAW 4/3/07

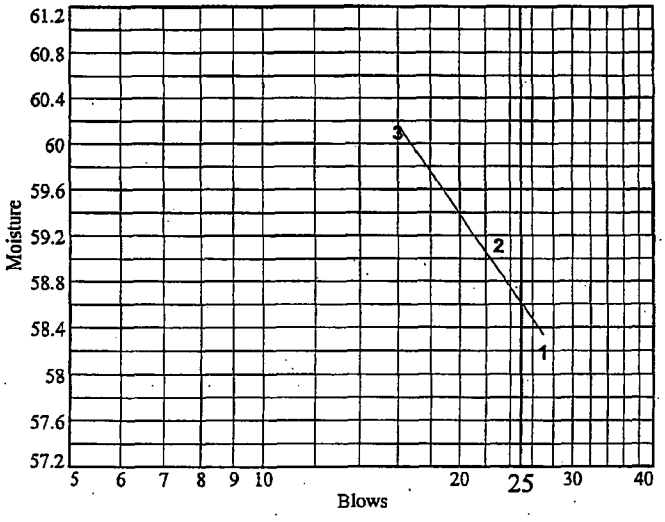
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 427
Depth: 118.5'-120.0' **Sample Number:** STP-175 (SS-29)
Material Description: Fat CLay
Date: 12/2/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	35.64	31.32	33.79			
Dry+Tare	32.87	28.11	30.25			
Tare	28.11	22.68	24.36			
# Blows	27	23	16			
Moisture	58.2	59.1	60.1			



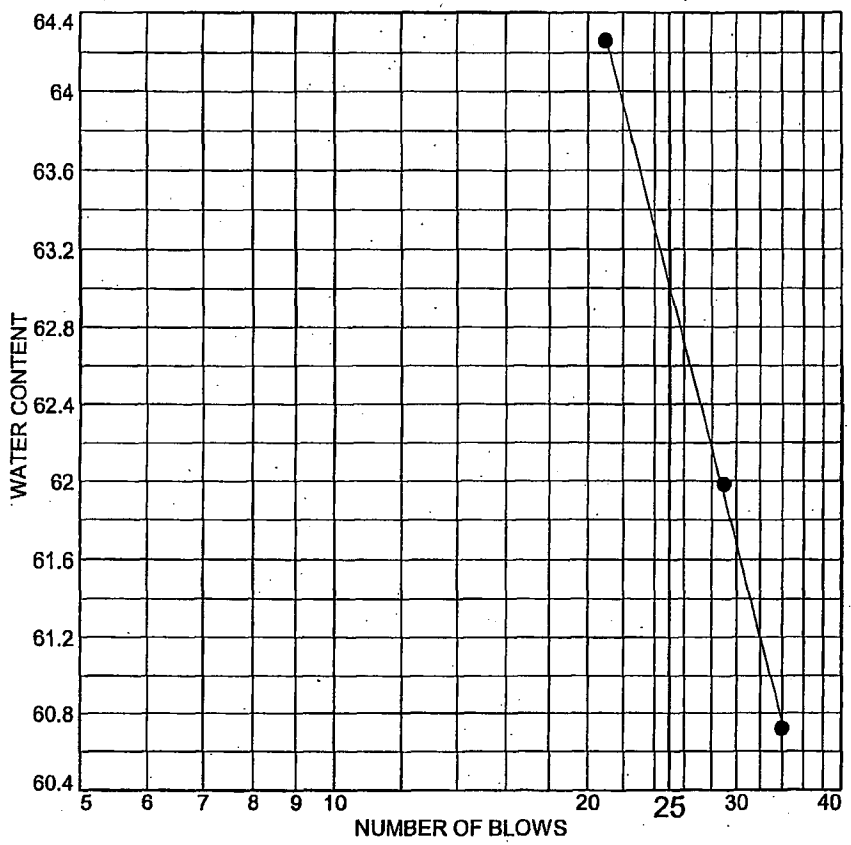
Liquid Limit= 59
Plastic Limit= 21
Plasticity Index= 38
Natural Moisture= 21.0
Liquidity Index= 0.0

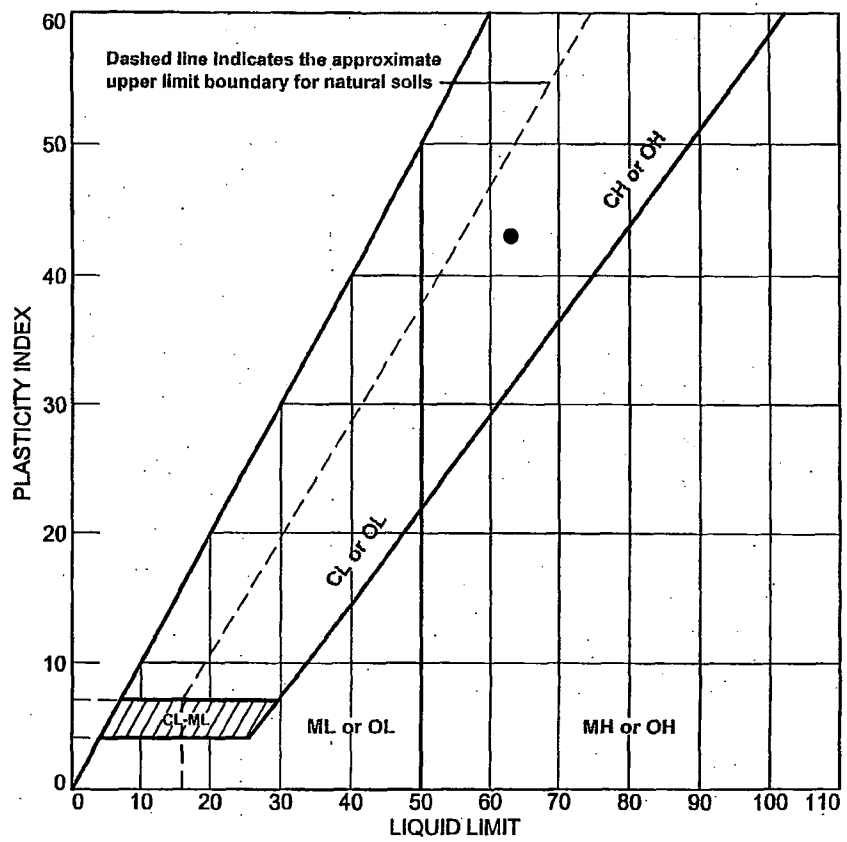
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	37.23	35.21			
Dry+Tare	35.62	33.81			
Tare	28	27.17			
Moisture	21.1	21.1			

MH 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 427	STP-176	128.5'-130	12/1/2006	CH	Fat Clay	20.6	63	43
		(SS-30)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH/JW Reviewed By:RF
ASTM D4318-05

4-3-07

KAW 4/3/07

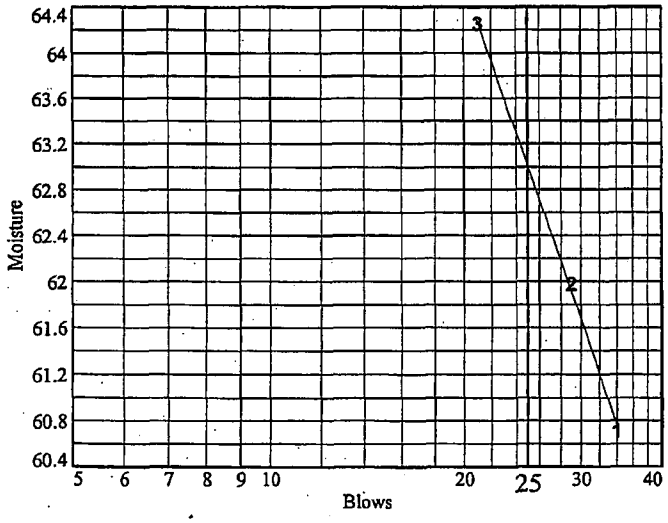
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 427
Depth: 128.5'-130 **Sample Number:** STP-176 (SS-30)
Material Description: Fat Clay
Date: 12/1/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC/TH/JW Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.95	35.89	37.47			
Dry+Tare	33.58	32.89	33.91			
Tare	28.03	28.05	28.37			
# Blows	34	29	21			
Moisture	60.7	62.0	64.3			



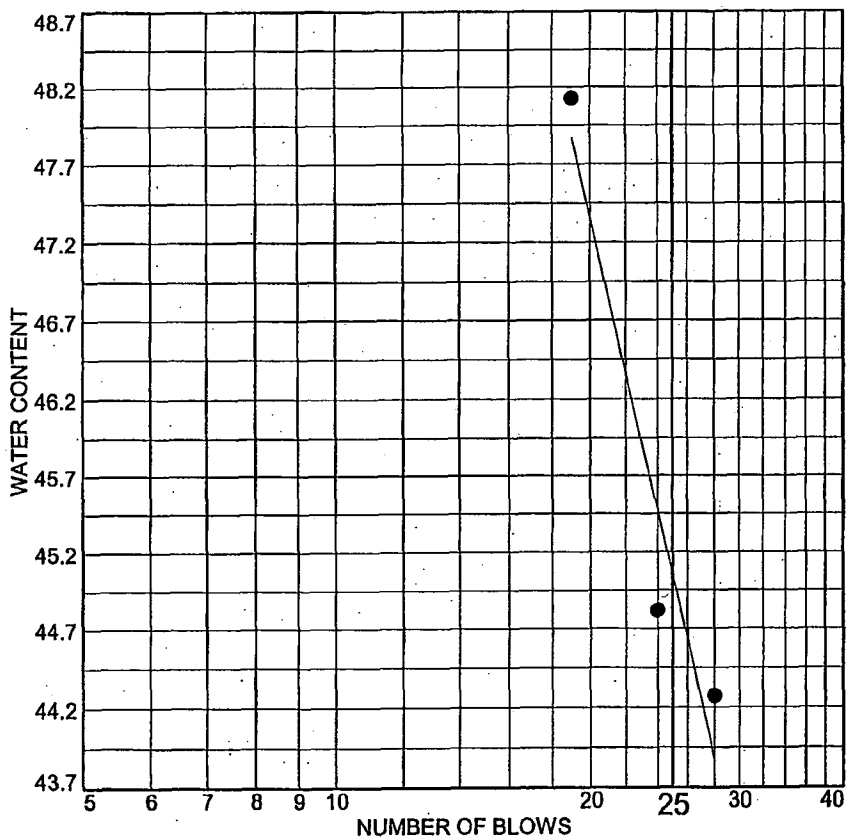
Liquid Limit= 63
Plastic Limit= 20
Plasticity Index= 43
Natural Moisture= 20.6
Liquidity Index= 0.0

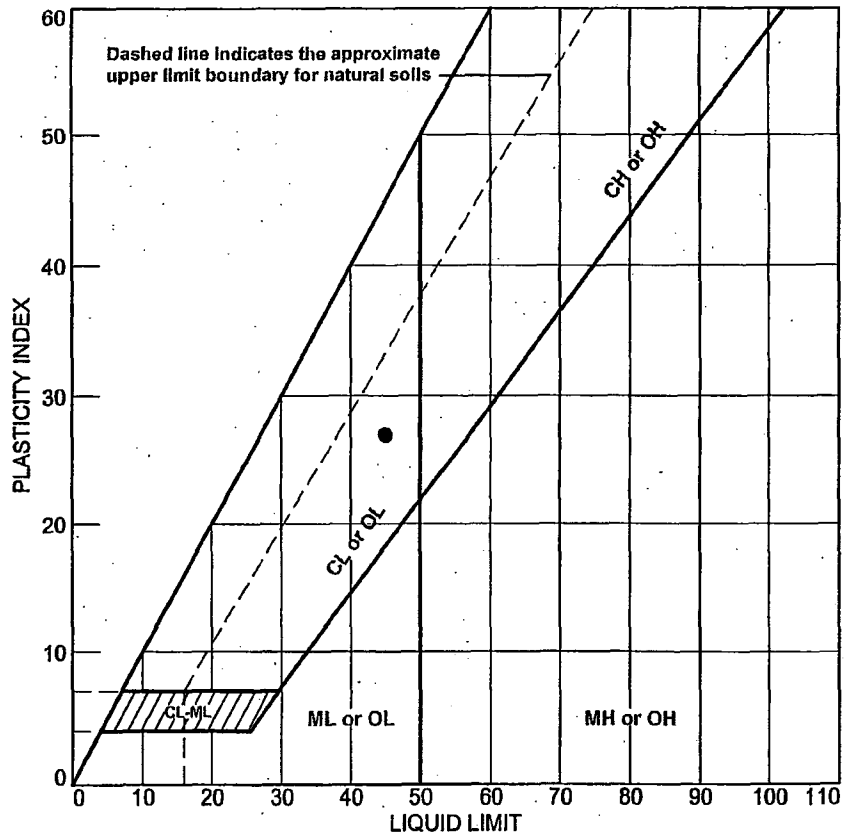
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	33.65	35.20			
Dry+Tare	32.75	34.03			
Tare	28.28	28.19			
Moisture	20.1	20.0			

MA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 427	STP-177 (SS-31)	138.5'-140'	12/1/2006	CL	Lean Clay	15.7	45	27

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH/JW Reviewed By:RF
ASTM D4318-05

4-3-07

KAW 4/3/07

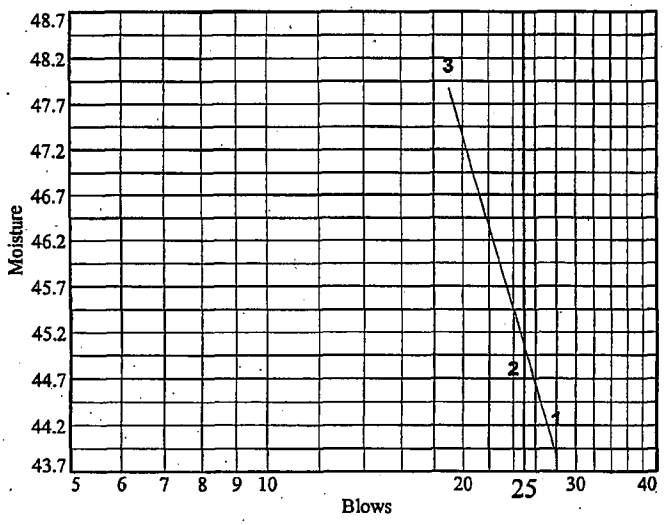
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 427
Depth: 138.5'-140'
Sample Number: STP-177 (SS-31)
Material Description: Lean Clay
Date: 12/1/2006
USCS Class.: CL
Testing Remarks: Tested By:AC/TH/JW Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.37	34.69	37.73			
Dry+Tare	34.24	31.49	34.26			
Tare	27.17	24.35	27.05			
# Blows	28	24	19			
Moisture	44.3	44.8	48.1			



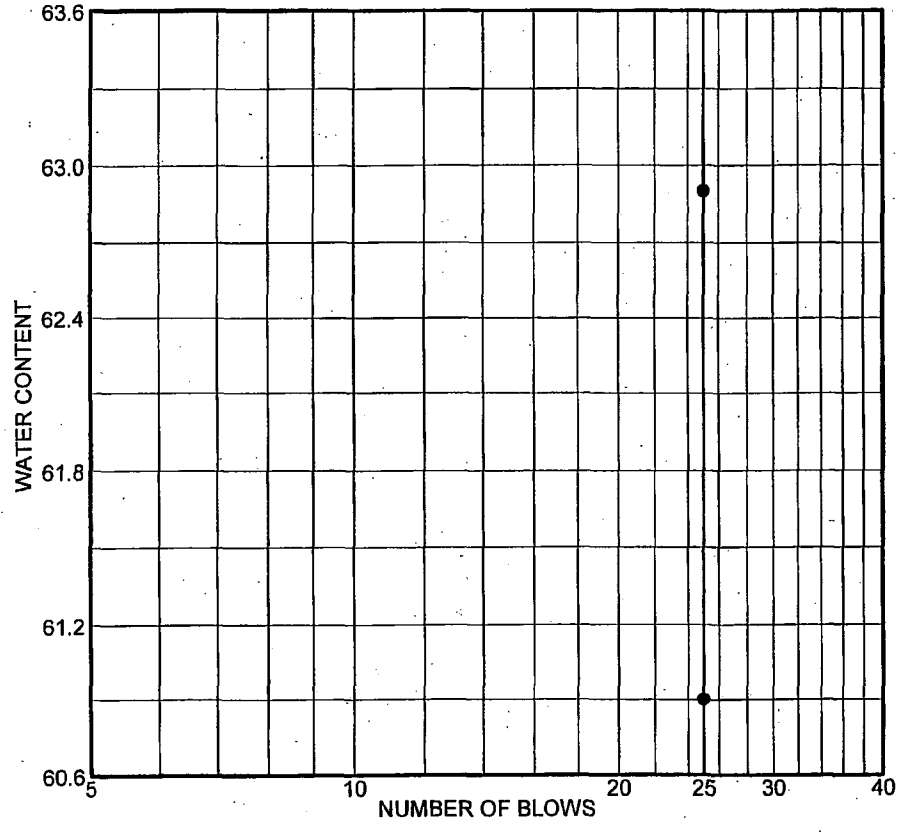
Liquid Limit= 45
Plastic Limit= 18
Plasticity Index= 27
Natural Moisture= 15.7
Liquidity Index= -0.1

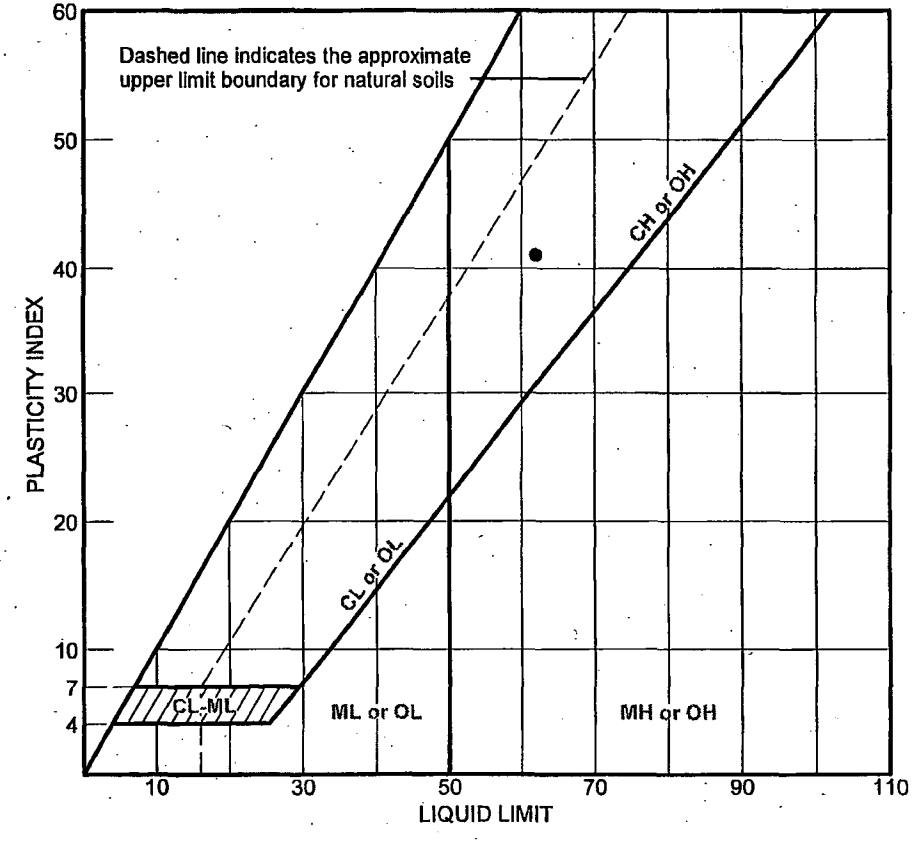
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.86	34.92			
Dry+Tare	34.66	33.72			
Tare	28.14	27.14			
Moisture	18.4	18.2			

MA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-428-DH	UD-6	113' to 115'	3-16-07	CH	Fat clay	27.3	62	41

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

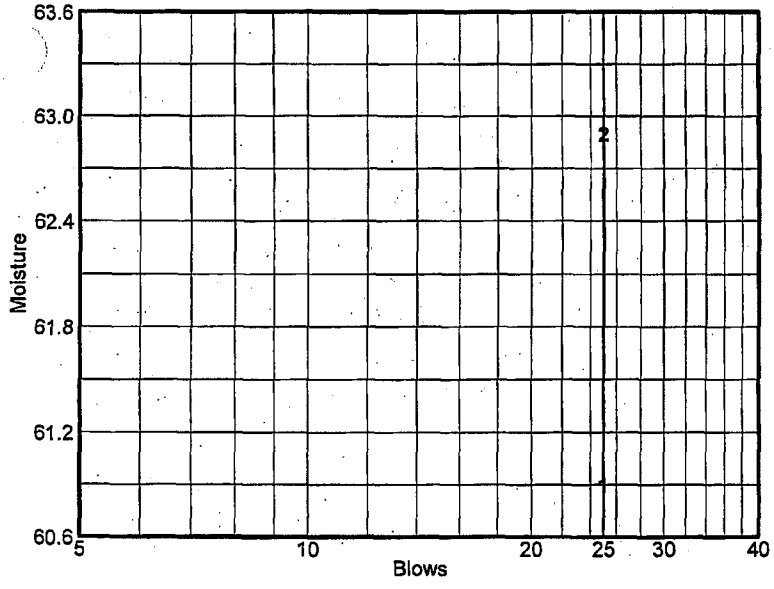
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-428-DH
Sample No.: UD-6
Elev. or Depth: 113' to 115' **Sample Length(in./cm.):**
Location: B-428-DH
Description: Fat clay
Date: 3-16-07 **Natural Moisture:** 27.3
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	23.68	26.62				
Dry+Tare	18.90	20.51				
Tare	11.05	10.79				
# Blows	25	25				
Moisture	60.9	62.9				

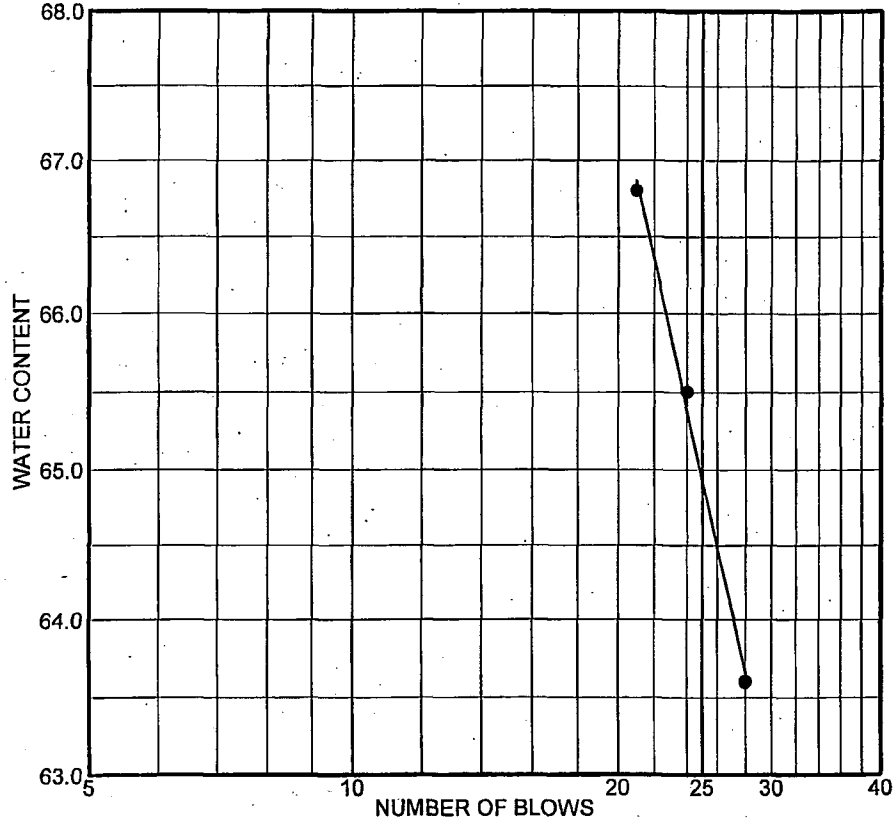


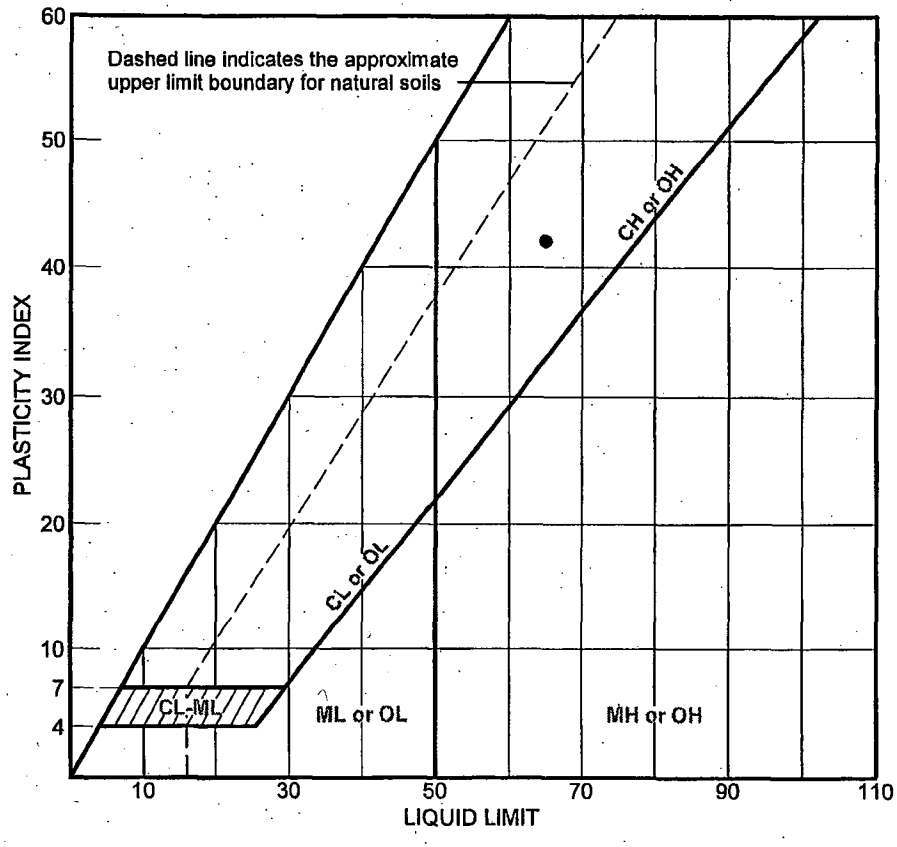
Liquid Limit= 62
Plastic Limit= 21
Plasticity Index= 41

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	18.02	17.60			
Dry+Tare	16.75	16.44			
Tare	10.66	10.88			
Moisture	20.9	20.9			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-432	UD-1	3' to 5'	2-22-07	CH	Fat clay	20.7	65	42

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH KAW 4/3/07
ASTM D4318-05

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

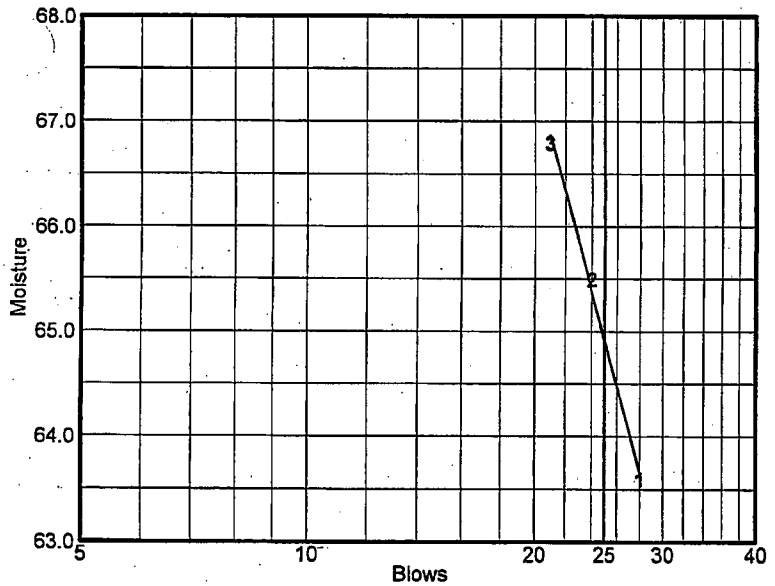
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-432
Sample No.: UD-1
Elev. or Depth: 3' to 5' **Sample Length(in./cm.):**
Location: B-432
Description: Fat clay
Date: 2-22-07 **Natural Moisture:** 20.7
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	16.44	17.88	15.85			
Dry+Tare	11.75	12.46	11.28			
Tare	4.38	4.19	4.44			
# Blows	28	24	21			
Moisture	63.6	65.5	66.8			

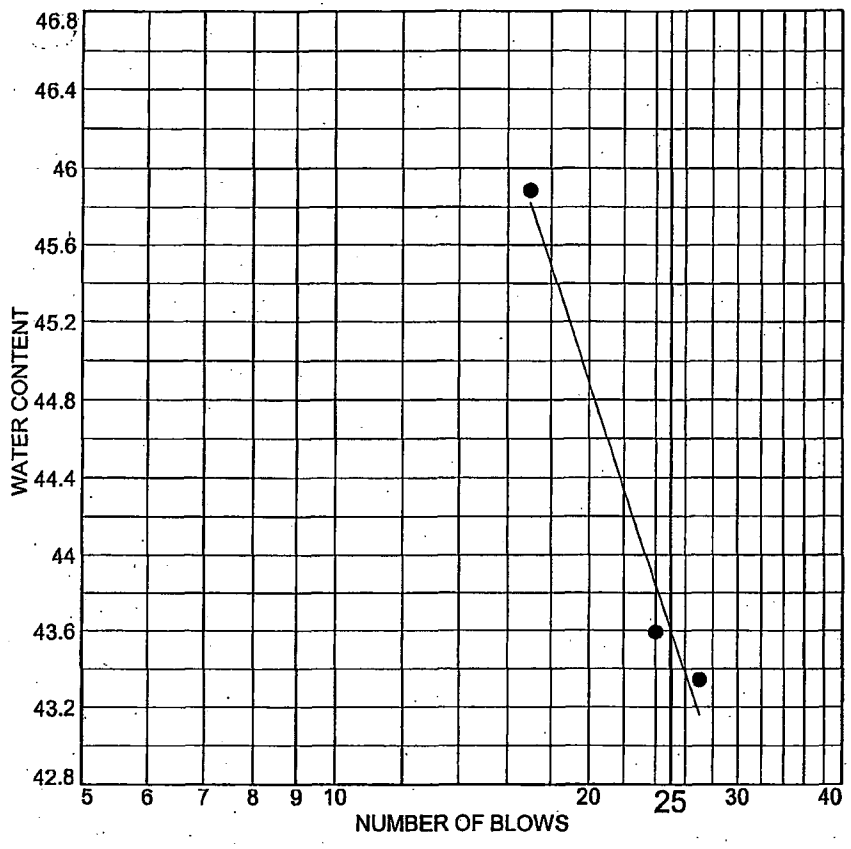


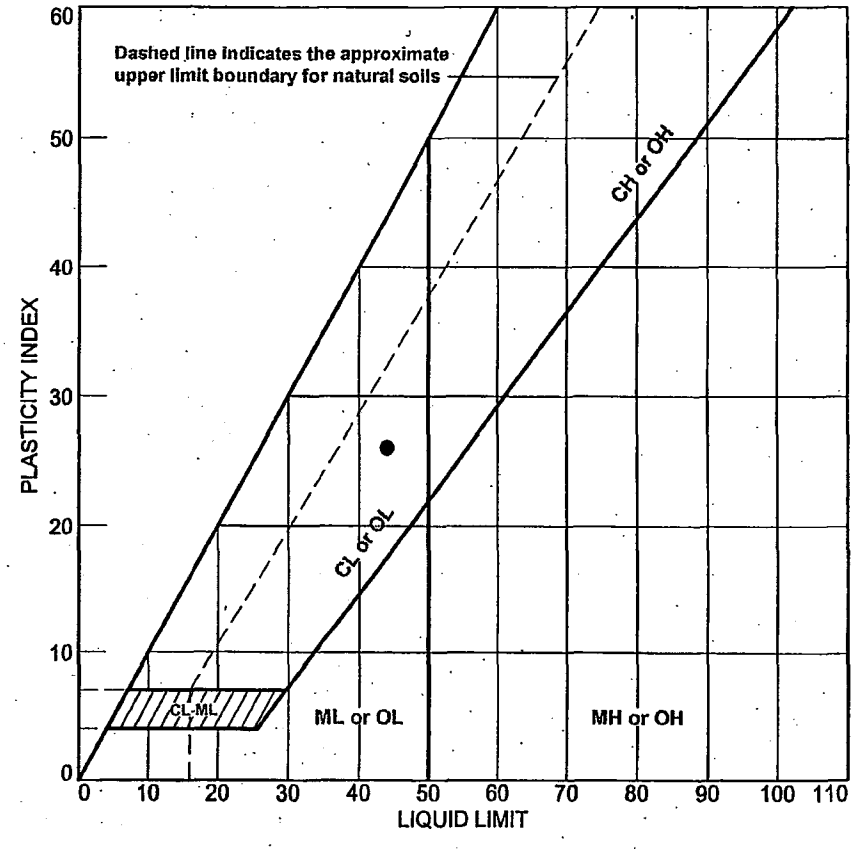
Liquid Limit= 65
Plastic Limit= 23
Plasticity Index= 42

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	13.26	12.18			
Dry+Tare	12.29	11.41			
Tare	8.22	8.08			
Moisture	23.8	23.1			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 432	STP-082	12.5'-14.0'	11/8/2006	CL	Lean Clay	21.4	44	26
		(SS-8)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH
ASTM D4318-05

Reviewed By:ST

MA
4-3-07

KAW 4/3/07

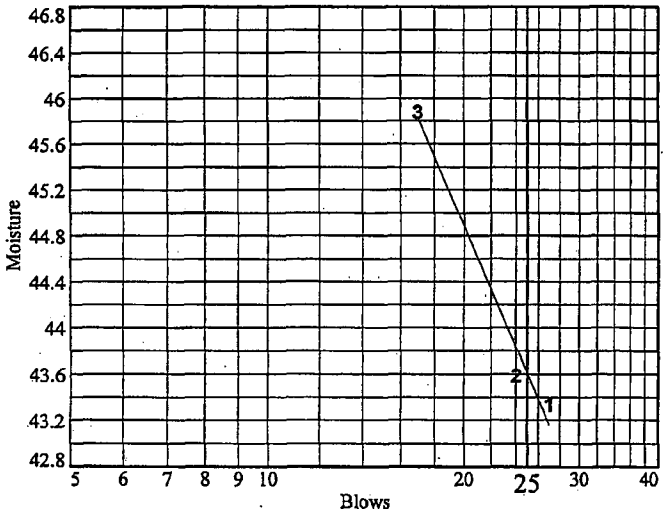
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 432
Depth: 12.5'-14.0'
Sample Number: STP-082 (SS-8)
Material Description: Lean Clay
Date: 11/8/2006
USCS Class.: CL
Testing Remarks: Tested By:AC/TH
Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	38.51	38.57	32.03			
Dry+Tare	35.45	35.44	28.74			
Tare	28.39	28.26	21.57			
# Blows	27	24	17			
Moisture	43.3	43.6	45.9			



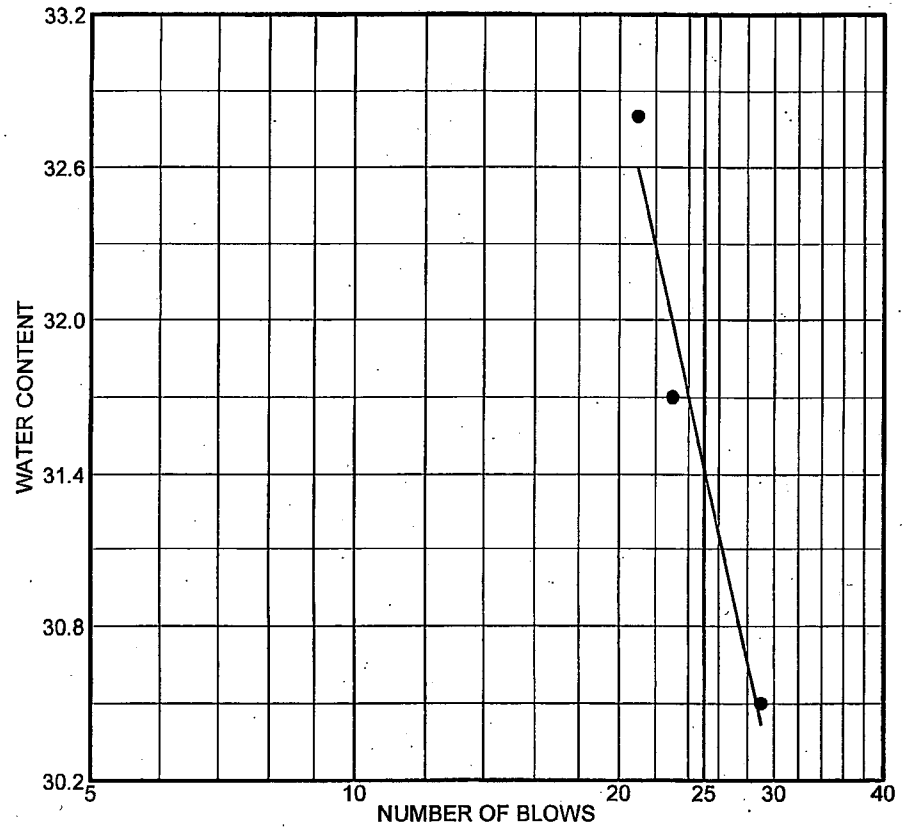
Liquid Limit= 44
Plastic Limit= 18
Plasticity Index= 26
Natural Moisture= 21.4
Liquidity Index= 0.1

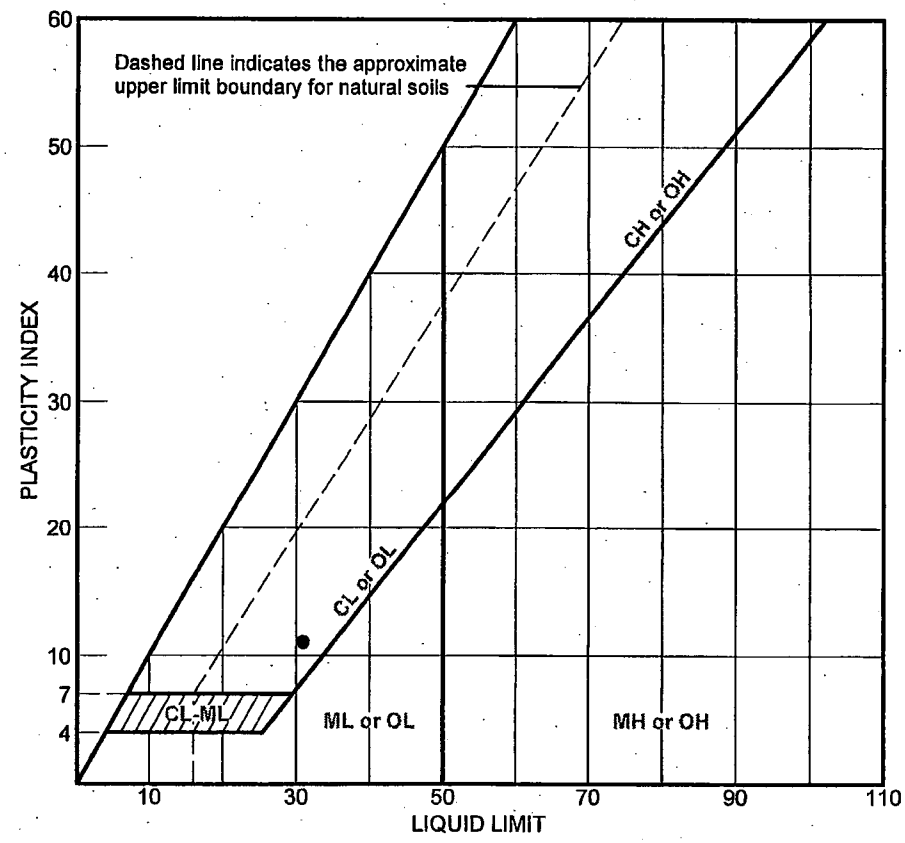
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.16	35.19			
Dry+Tare	33.94	33.95			
Tare	27.15	27.08			
Moisture	18.0	18.0			

MA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-432	UD-2	15' to 17'	2-22-07	CL	Lean clay	23.2	31	11

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH KAW 4/13/07
ASTM D4318-05

KAW 4/13/07

LIQUID AND PLASTIC LIMIT TEST DATA

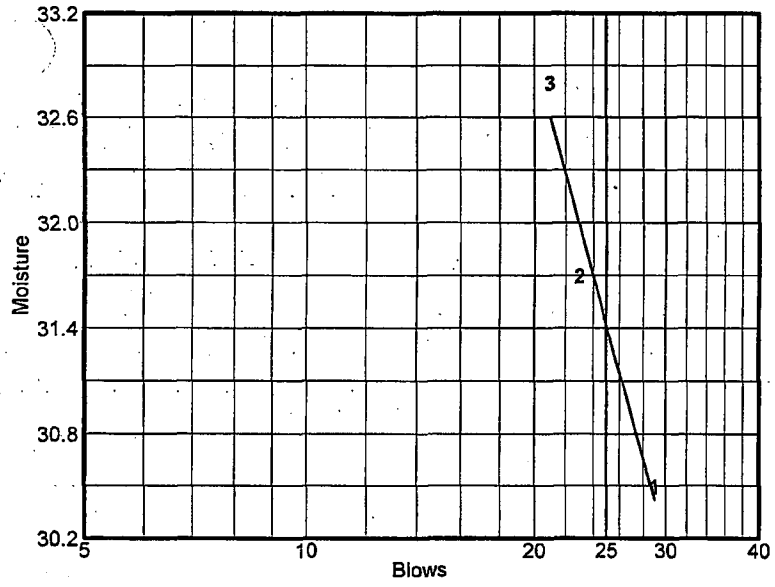
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-432
Sample No.: UD-2
Elev. or Depth: 15' to 17' **Sample Length(in./cm.):**
Location: B-432
Description: Lean clay
Date: 2-22-07 **Natural Moisture:** 23.2
USCS Class.: CL **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	24.77	24.16	22.87			
Dry+Tare	21.51	20.95	19.87			
Tare	10.83	10.83	10.72			
# Blows	29	23	21			
Moisture	30.5	31.7	32.8			

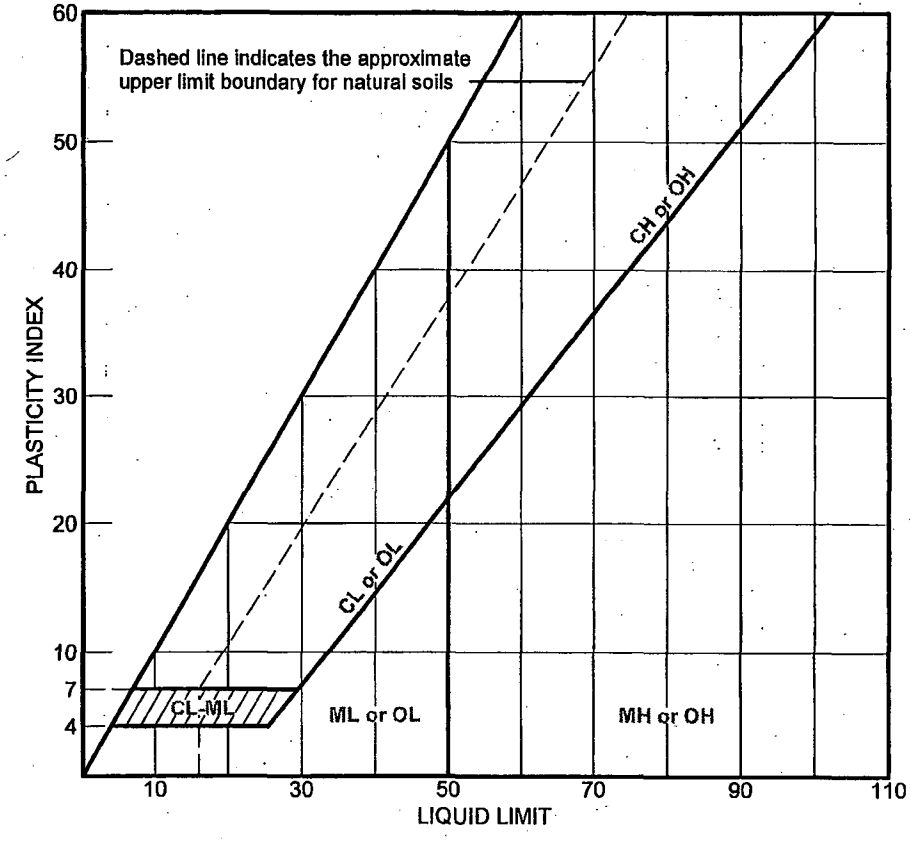


Liquid Limit= 31
Plastic Limit= 20
Plasticity Index= 11

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	23.27	22.36			
Dry+Tare	21.34	20.47			
Tare	11.50	10.94			
Moisture	19.6	19.8			

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-432	UD-3	25' to 27'	3-22-07	SM	Silty Sand		NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05 KAW 413107

KAW 413107

LIQUID AND PLASTIC LIMIT TEST DATA

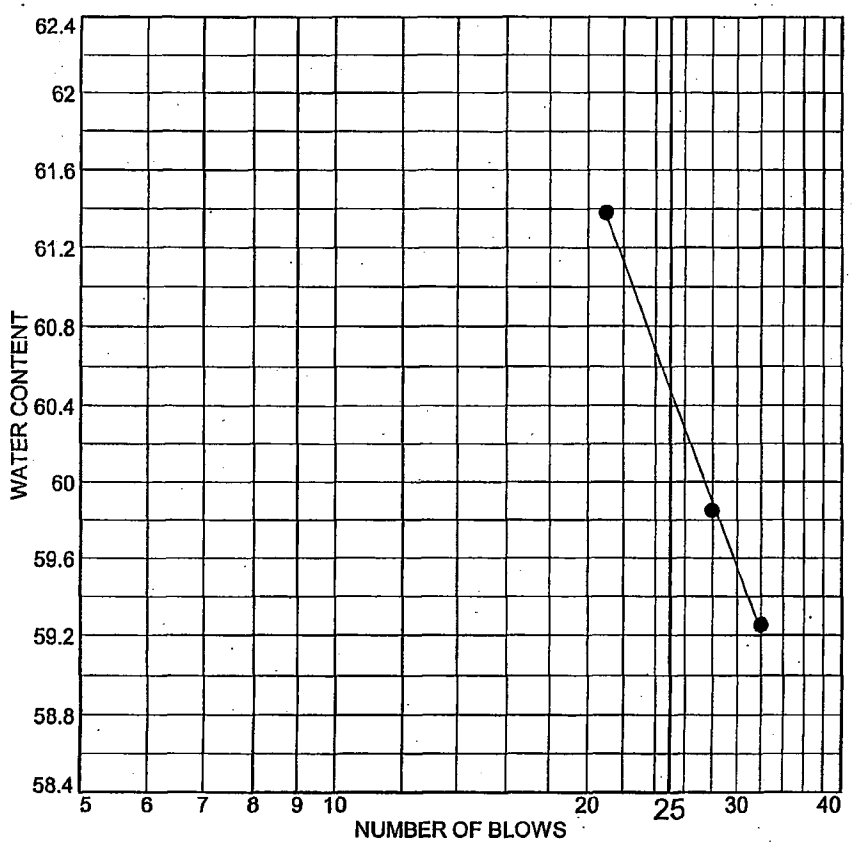
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

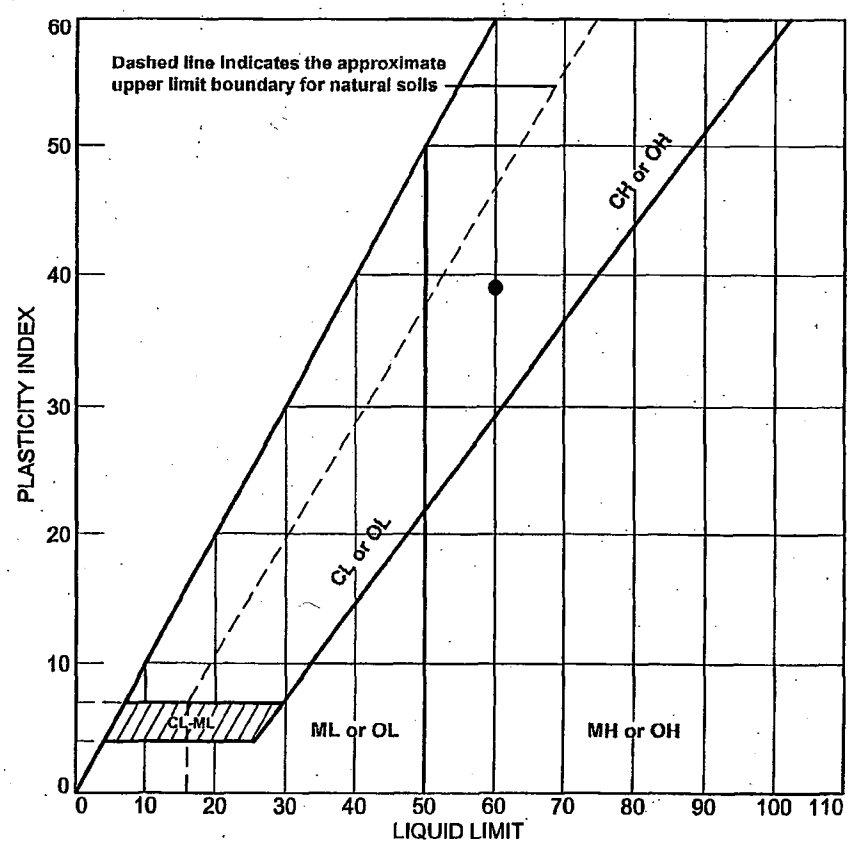
Sample Data

Source: B-432
Sample No.: UD-3
Elev. or Depth: 25' to 27' **Sample Length(in./cm.):**
Location: B-432
Description: Silty Sand
Date: 3-22-07 **Natural Moisture:** **USCS Class.:** SM **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 432	STP-085 (SS-15)	48.5'-50.0'	11/13/2006	CH	Fat Clay	29.8	60	39

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:ST

ASTM D4318-05

MA 4-3-07

KAW 4/3/07

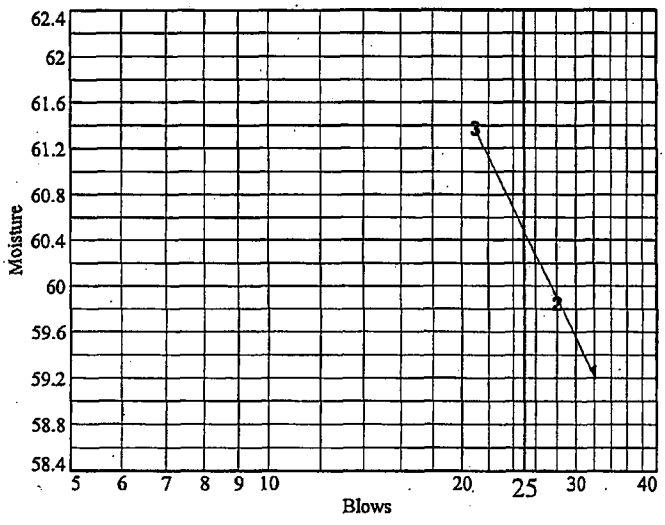
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 432
Depth: 48.5'-50.0'
Sample Number: STP-085 (SS-15)
Material Description: Fat Clay
Date: 11/13/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	32.32	34.01	37.57			
Dry+Tare	28.35	30.79	34.01			
Tare	21.65	25.41	28.21			
# Blows	32	28	21			
Moisture	59.3	59.9	61.4			



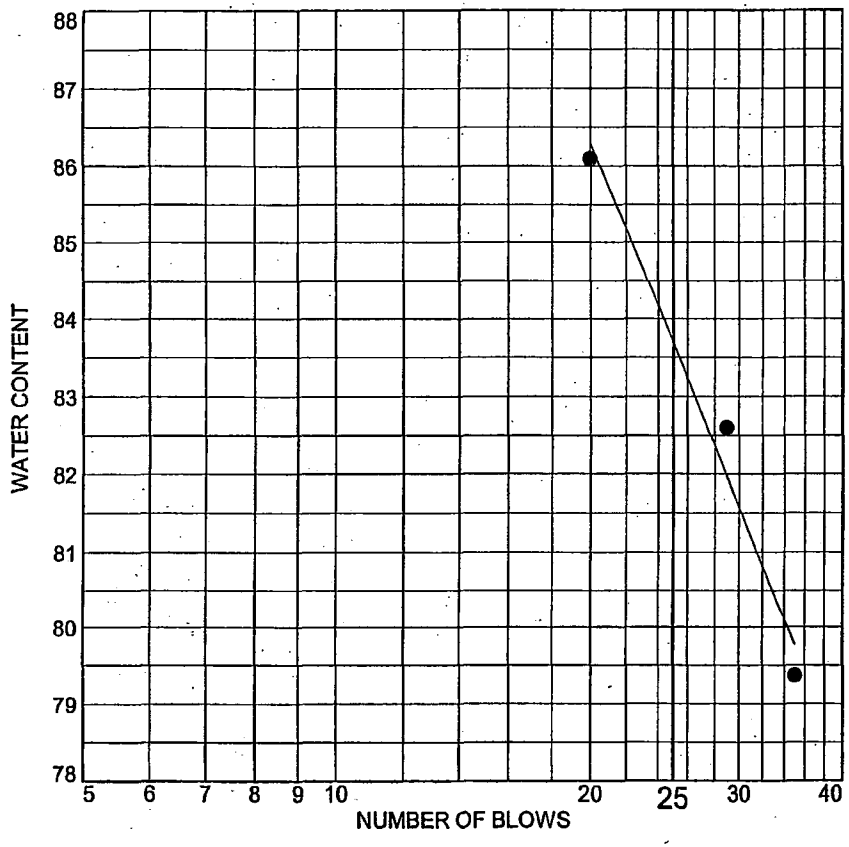
Liquid Limit= 60
Plastic Limit= 21
Plasticity Index= 39
Natural Moisture= 29.8
Liquidity Index= 0.2

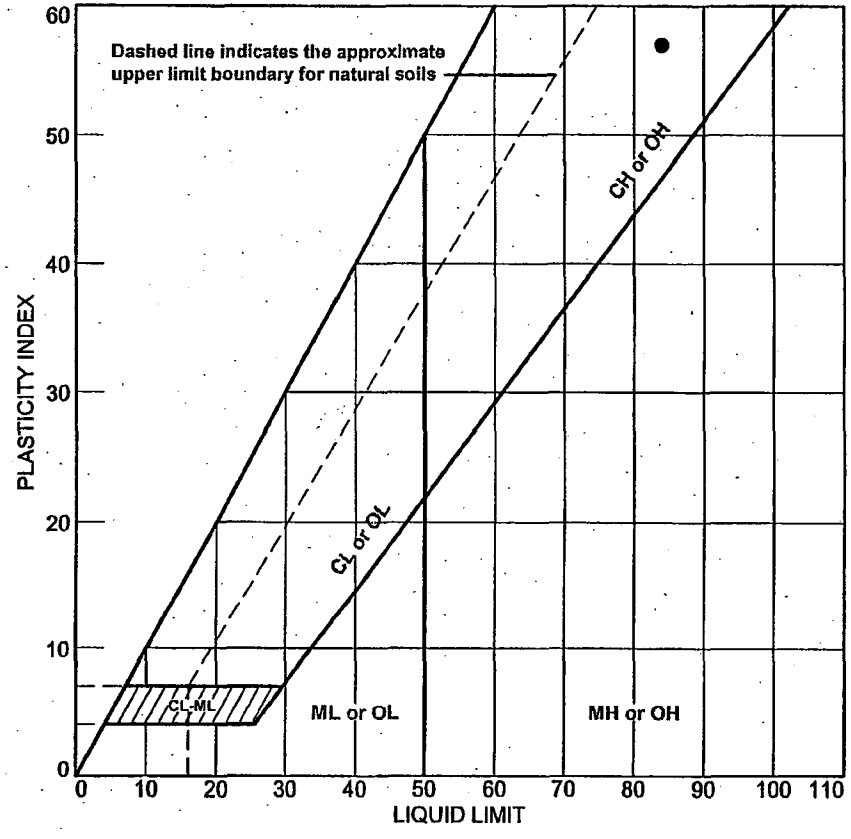
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.64	35.80			
Dry+Tare	34.35	34.50			
Tare	28.08	28.17			
Moisture	20.6	20.5			

MAK
4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 432	STP-088	63.5'-65.0'	11/13/2006	CH	Fat Clay	26.2	84	57
		(SS-18)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:ST

ASTM D4318-05

4-3-07

KAW 4/3/07

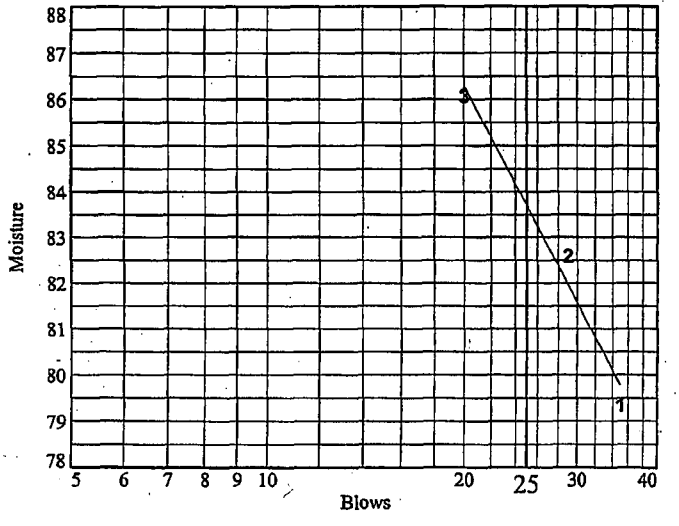
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 432
Depth: 63.5'-65.0'
Sample Number: STP-088 (SS-18)
Material Description: Fat Clay
Date: 11/13/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	32.79	37.32	35.36			
Dry+Tare	29.06	33.38	31.77			
Tare	24.36	28.61	27.60			
# Blows	35	29	20			
Moisture	79.4	82.6	86.1			



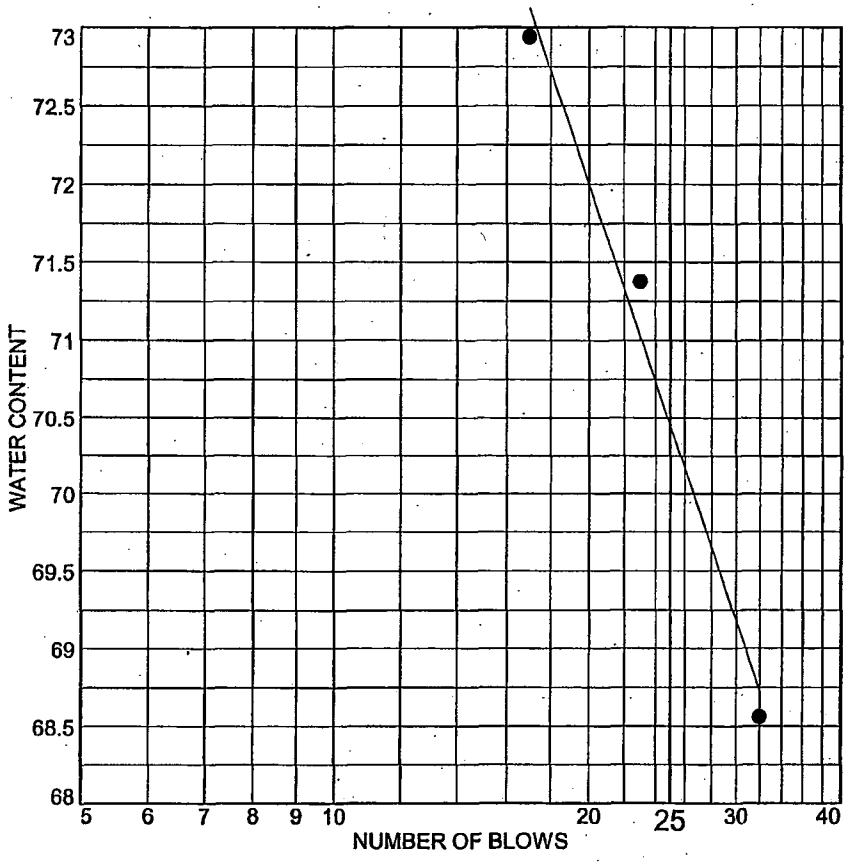
Liquid Limit= 84
Plastic Limit= 27
Plasticity Index= 57
Natural Moisture= 26.2
Liquidity Index= 0.0

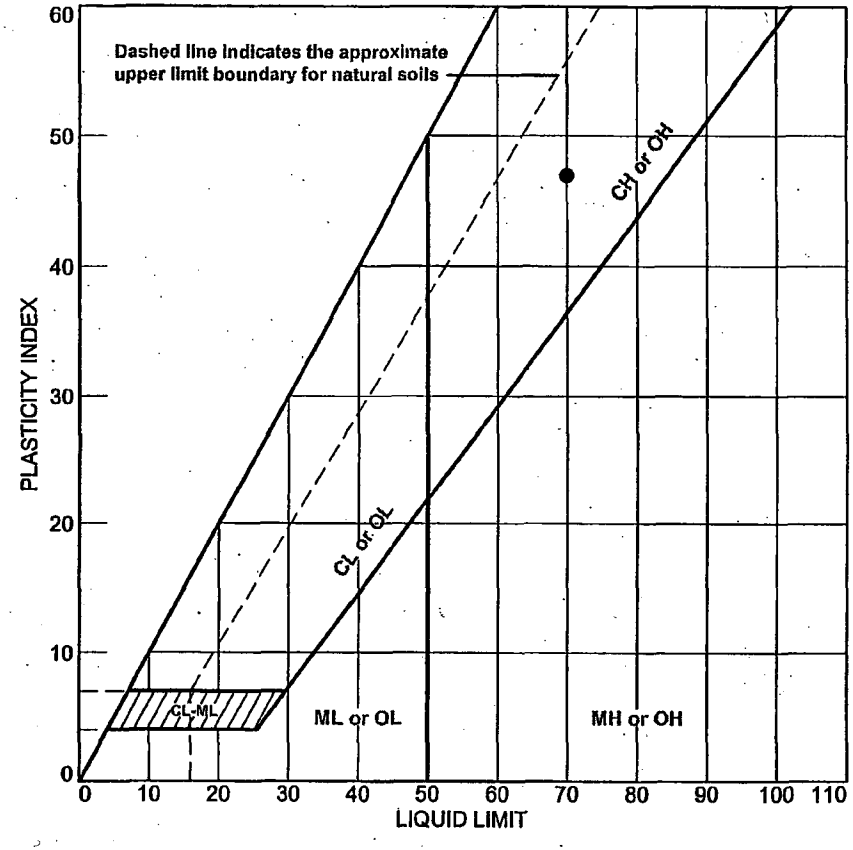
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.35	29.96			
Dry+Tare	34.79	28.42			
Tare	28.90	22.69			
Moisture	26.5	26.9			

NMA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 432	STP-094 (SS-27)	118.5'-120'	11/14/2006	CH	Fat Clay	24.7	70	47

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:ST
ASTM D4318-05

NM 4-3-07

KAW 4/3/07

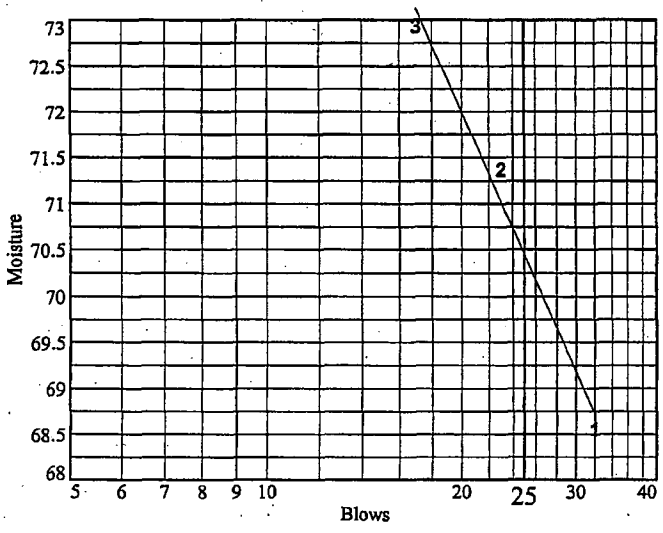
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 432
Depth: 118.5'-120'
Sample Number: STP-094 (SS-27)
Material Description: Fat Clay
Date: 11/14/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:ST
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.23	37.96	37.10			
Dry+Tare	33.13	33.97	33.38			
Tare	27.15	28.38	28.28			
# Blows	32	23	17			
Moisture	68.6	71.4	72.9			



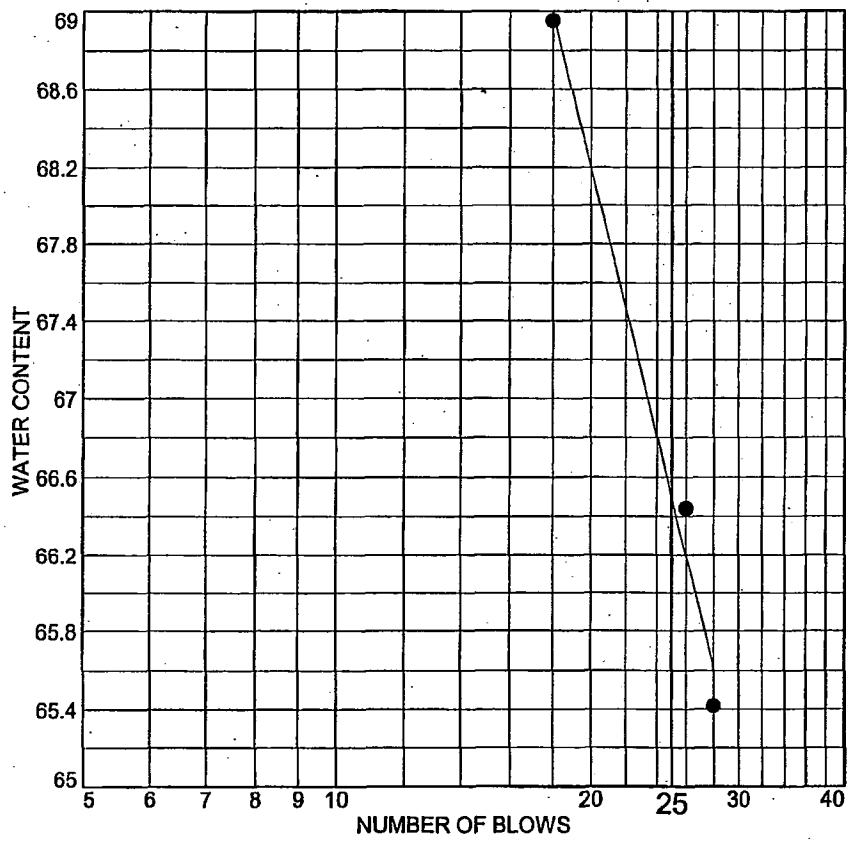
Liquid Limit= 70
Plastic Limit= 23
Plasticity Index= 47
Natural Moisture= 24.7
Liquidity Index= 0.0

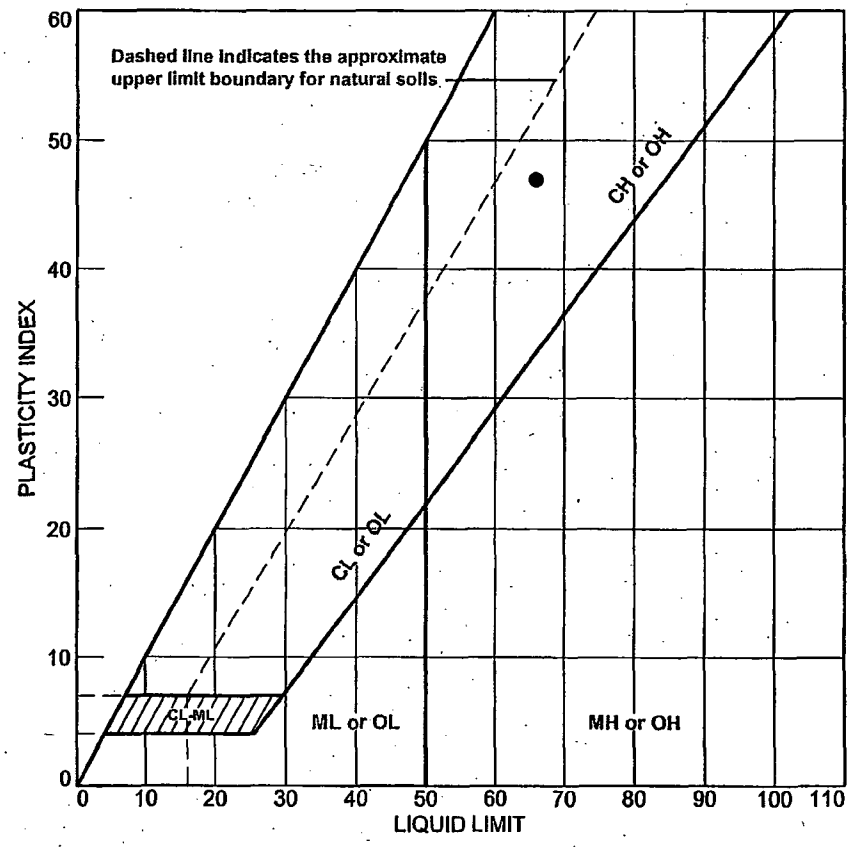
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.61	35.76			
Dry+Tare	34.17	34.34			
Tare	27.99	28.16			
Moisture	23.3	23.0			

NAT
4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 432	STP-259	128.5'-130.0'	11/14/2006	CH	Fat Clay	21.2	66	47
		(SS-28)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:RF
ASTM D4318-05

MA
4-3-07

KAW 4/3/07

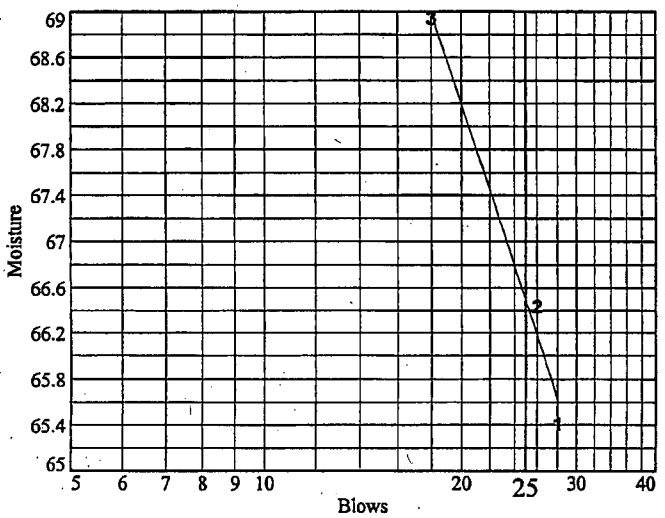
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 432
Depth: 128.5'-130.0'
Sample Number: STP-259 (SS-28)
Material Description: Fat Clay
Date: 11/14/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	35.35	35.72	36.49			
Dry+Tare	32.21	32.77	33.07			
Tare	27.41	28.33	28.11			
# Blows	28	26	18			
Moisture	65.4	66.4	69.0			



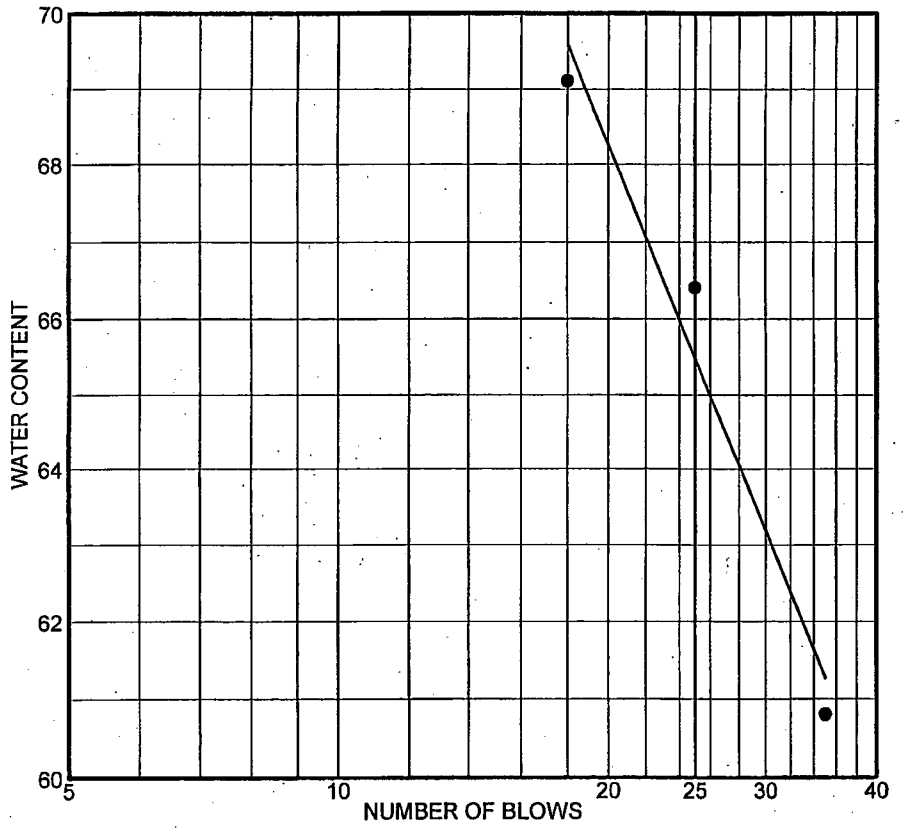
Liquid Limit= 66
Plastic Limit= 19
Plasticity Index= 47
Natural Moisture= 21.2
Liquidity Index= 0.0

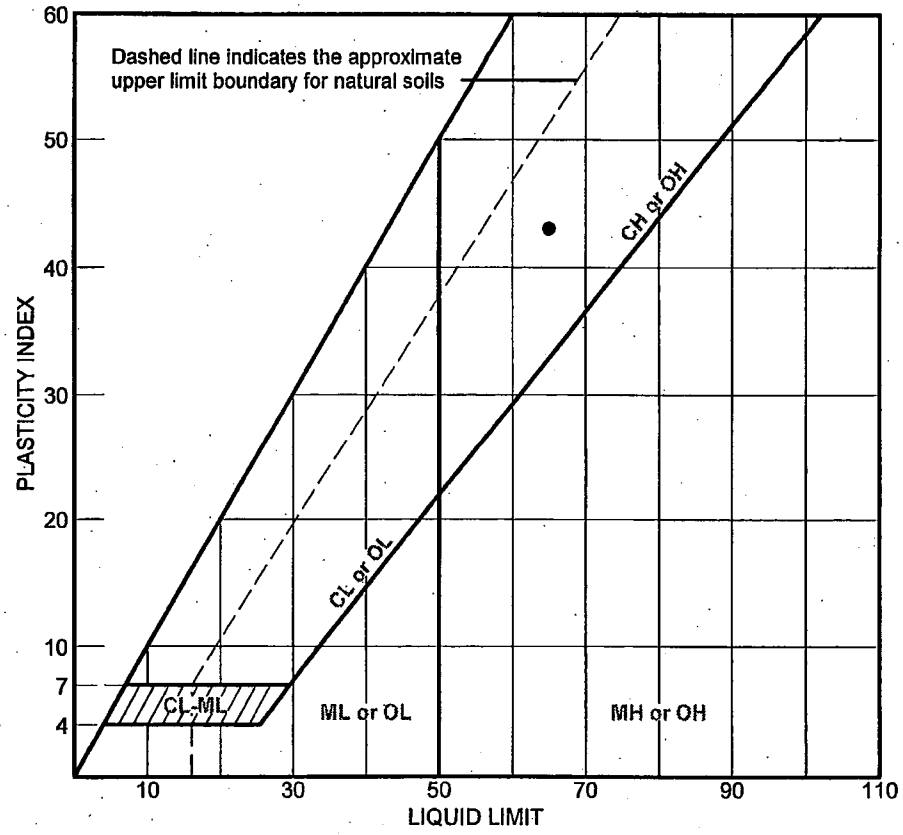
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.80	36.34			
Dry+Tare	35.39	35.05			
Tare	28.07	28.25			
Moisture	19.3	19.0			

MAK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-902	UD-1	5' to 7'	2-19-07	CH	Fat Clay	21.3	65	43

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05 KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

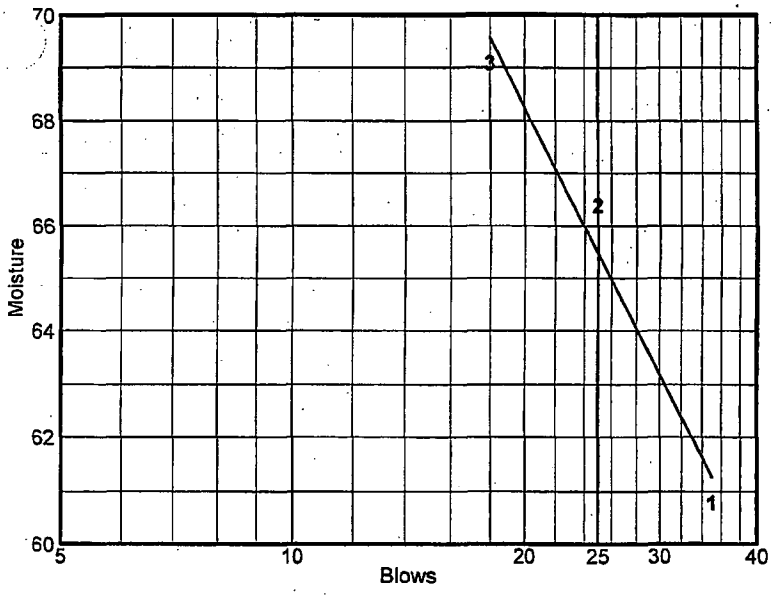
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-902
Sample No.: UD-1
Elev. or Depth: 5' to 7' **Sample Length(in./cm.):**
Location: B-902
Description: Fat Clay
Date: 2-19-07 **Natural Moisture:** 21.3
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	28.92	30.55	35.20			
Dry+Tare	22.38	22.75	25.29			
Tare	11.63	11.00	10.94			
# Blows	35	25	18			
Moisture	60.8	66.4	69.1			

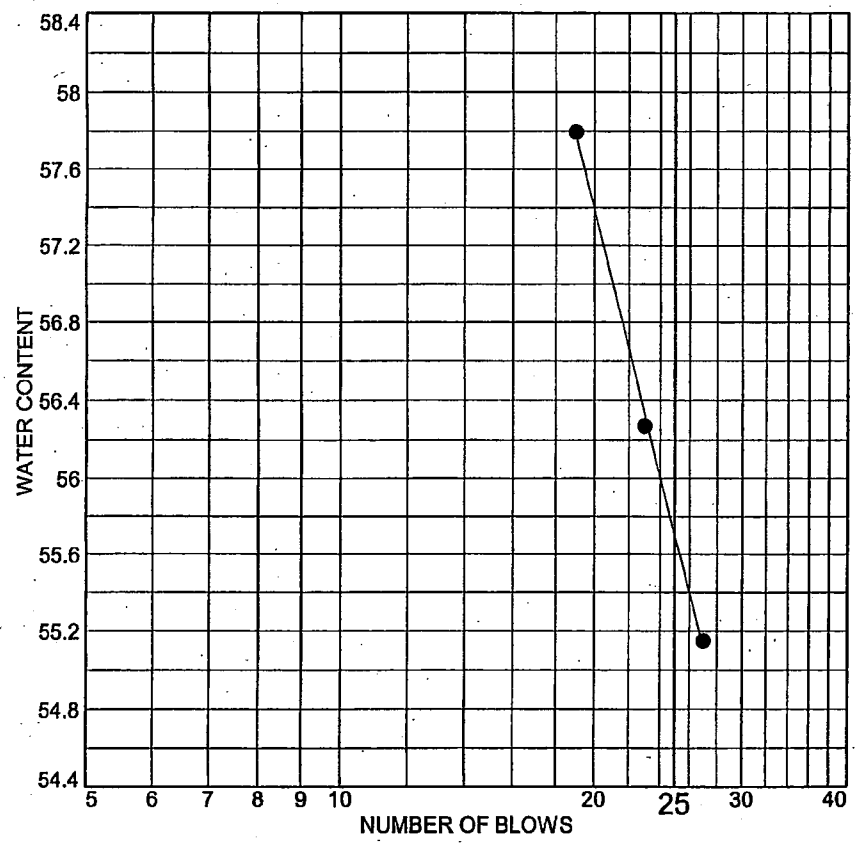


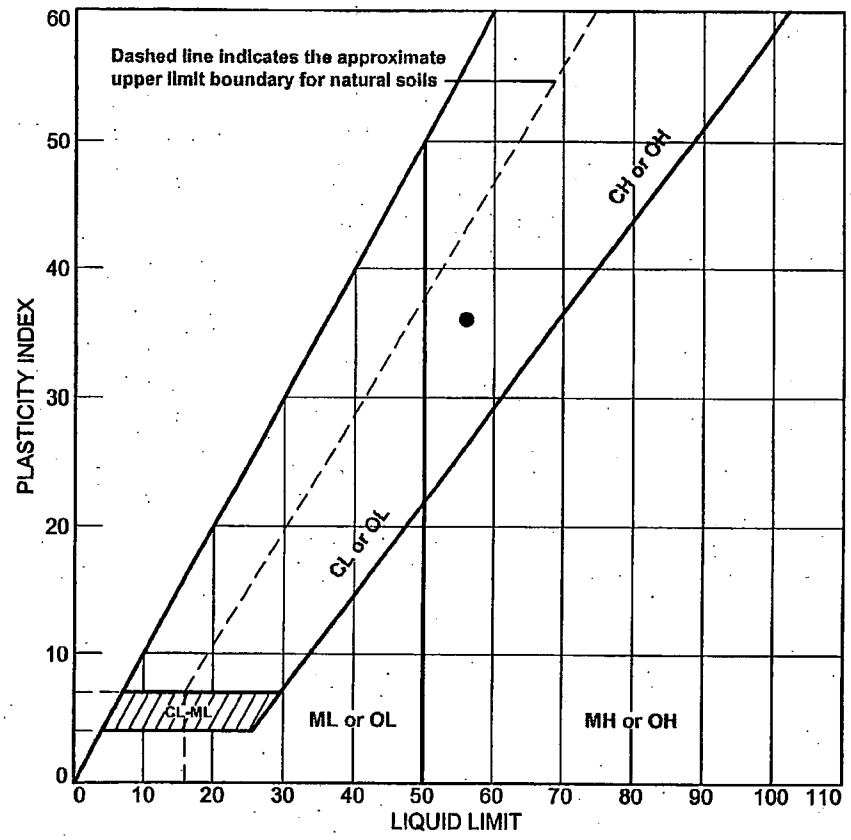
Liquid Limit= 65
Plastic Limit= 22
Plasticity Index= 43

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	18.96	17.52			
Dry+Tare	17.57	16.29			
Tare	11.33	10.74			
Moisture	22.3	22.2			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 902	STP-179	11.5'-13.0'	12/12/2006	CH	Fat Clay	19.5	56	36
		(SS-7)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH/JW Reviewed By:RF
ASTM D4318-05

MA
4-3-07

KAW 4/3/07

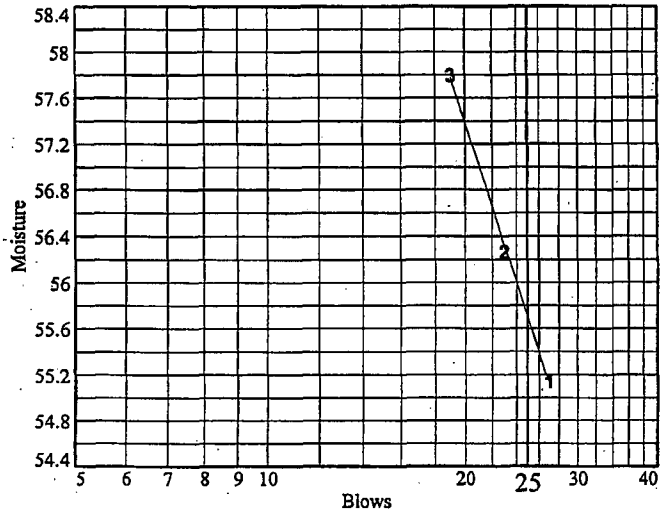
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 902
Depth: 11.5'-13.0' **Sample Number:** STP-179 (SS-7)
Material Description: Fat Clay
Date: 12/12/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC/TH/JW Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.67	37.77	36.67			
Dry+Tare	34.35	34.27	33.52			
Tare	28.33	28.05	28.07			
# Blows	27	23	19			
Moisture	55.1	56.3	57.8			



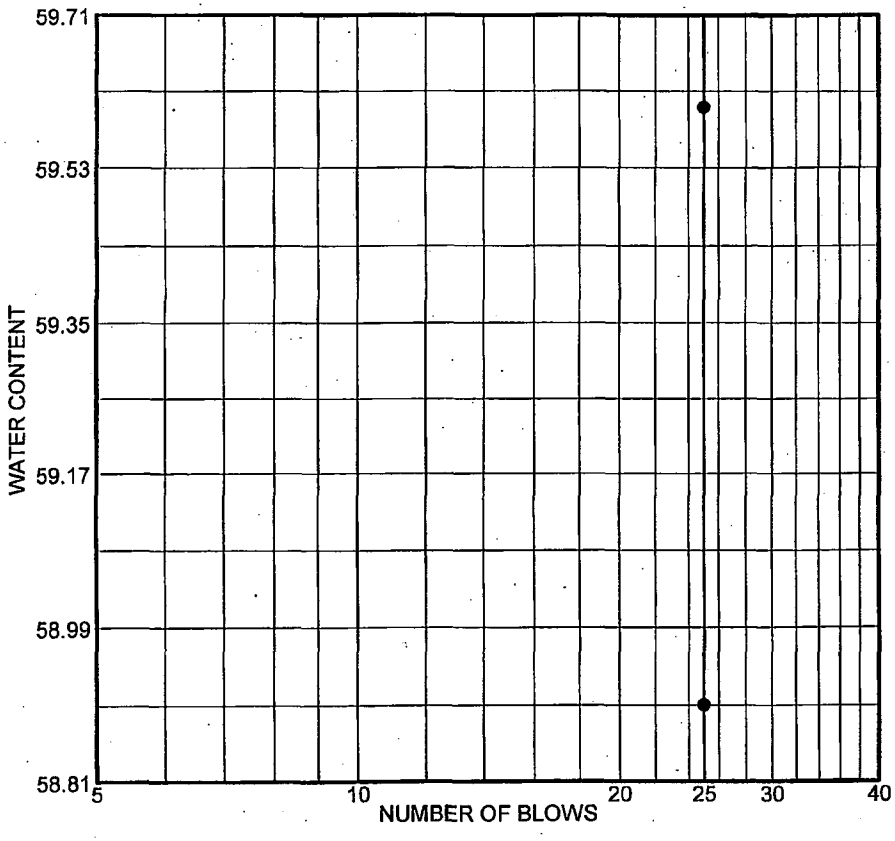
Liquid Limit= 56
Plastic Limit= 20
Plasticity Index= 36
Natural Moisture= 19.5
Liquidity Index= 0.0

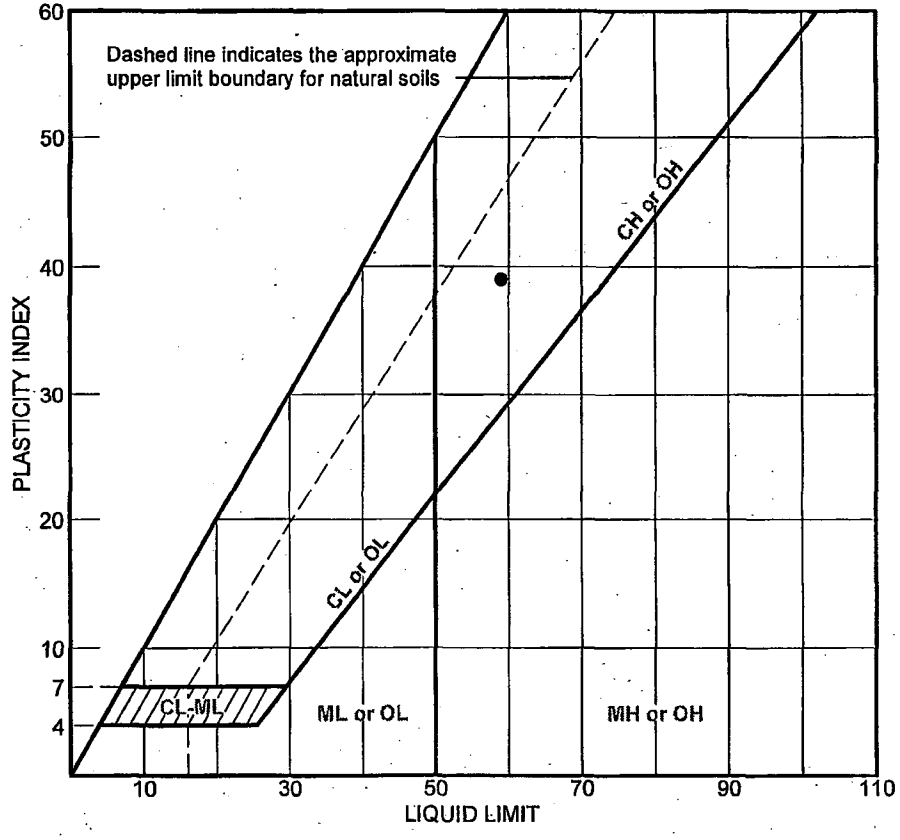
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	38.02	37.30			
Dry+Tare	36.37	35.77			
Tare	28.29	28.21			
Moisture	20.4	20.2			

MK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-902	UD-2	15' to 17'	3-16-07	CH	Fat clay	24.3	59	39

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05

KAW 4/03/07

LIQUID AND PLASTIC LIMIT TEST DATA

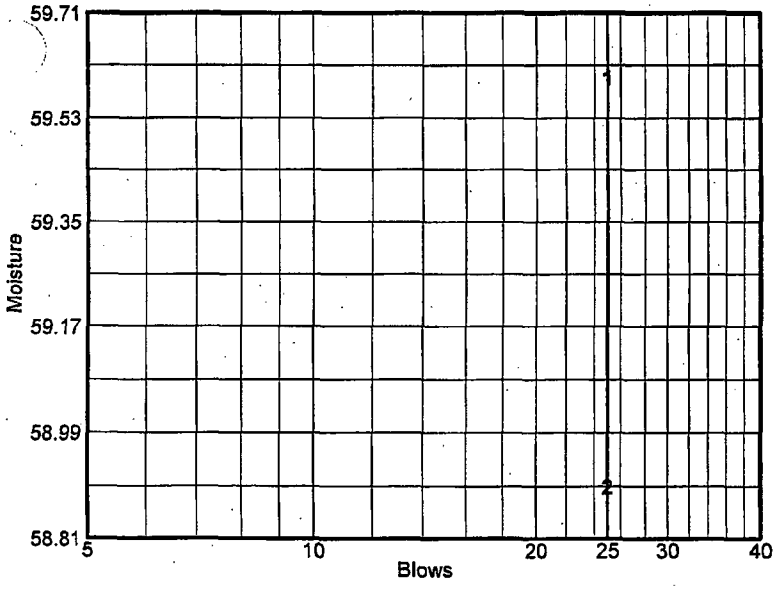
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-902
Sample No.: UD-2
Elev. or Depth: 15' to 17' **Sample Length(in./cm.):**
Location: B-902
Description: Fat clay
Date: 3-16-07 **Natural Moisture:** 24.3
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	23.26	28.91				
Dry+Tare	18.57	22.25				
Tare	10.70	10.94				
# Blows	25	25				
Moisture	59.6	58.9				

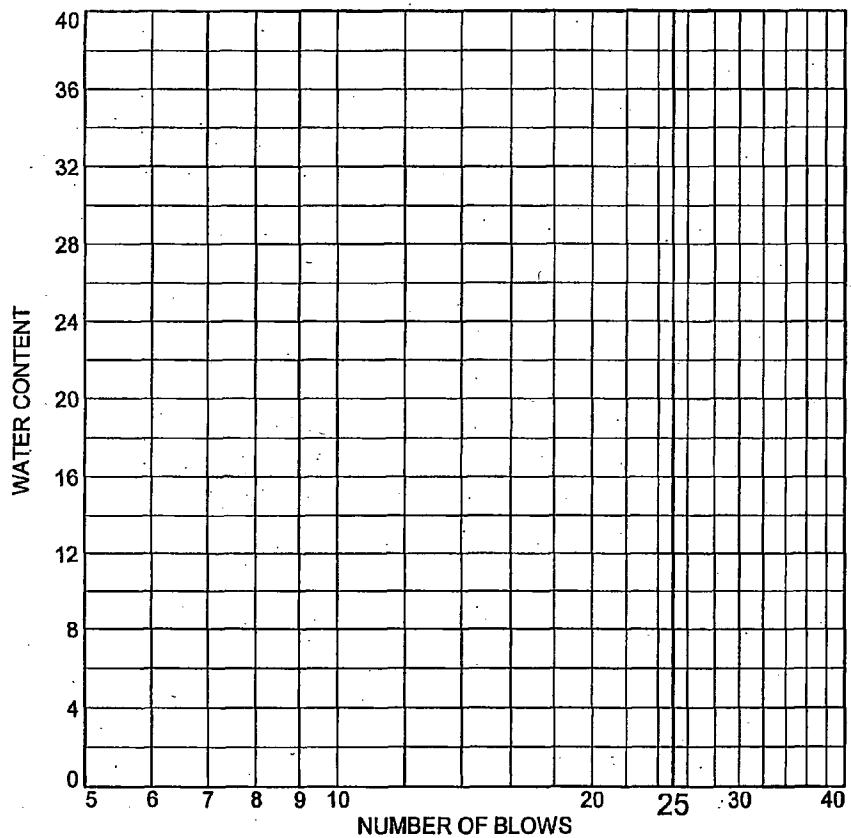


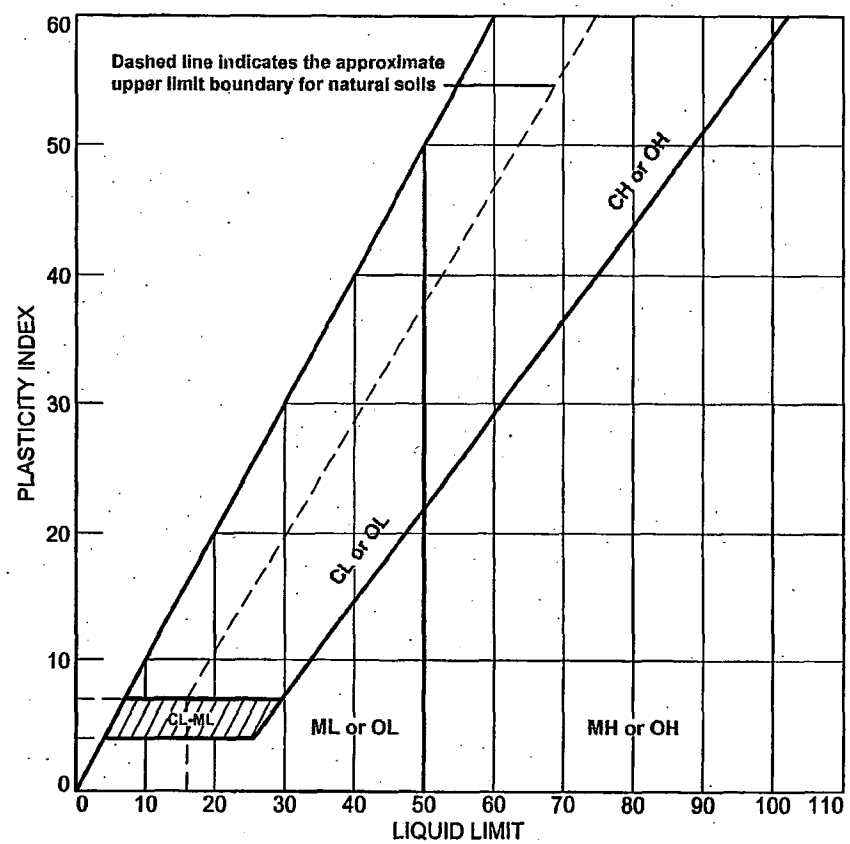
Liquid Limit= 59
Plastic Limit= 20
Plasticity Index= 39

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	19.69	20.27			
Dry+Tare	18.36	18.73			
Tare	11.54	10.97			
Moisture	19.5	19.8			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 902	STP-180	18.5'-20.0'	12/12/2006	ML	Silt with Sand	26.8	NV	NP
		(SS-9)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:RF

ASTM D4318-05

4-3-07

KAW 4/3/07

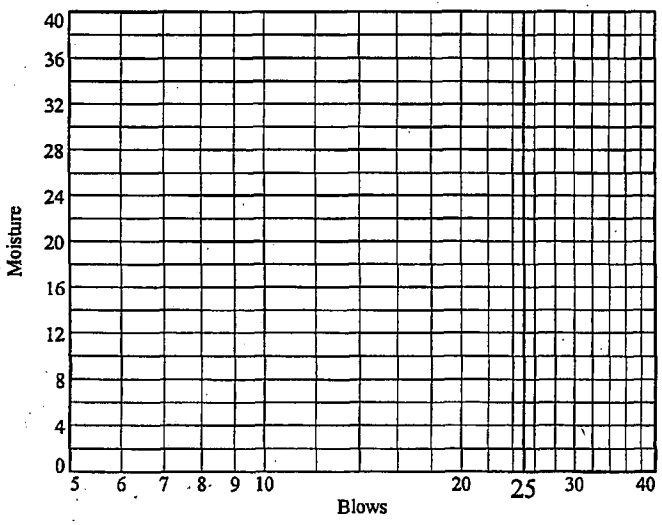
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 902
Depth: 18.5'-20.0'
Sample Number: STP-180 (SS-9)
Material Description: Silt with Sand
Date: 12/12/2006
USCS Class.: ML
Testing Remarks: Tested By:AC/TH
Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare						
Dry+Tare						
Tare						
# Blows						
Moisture						



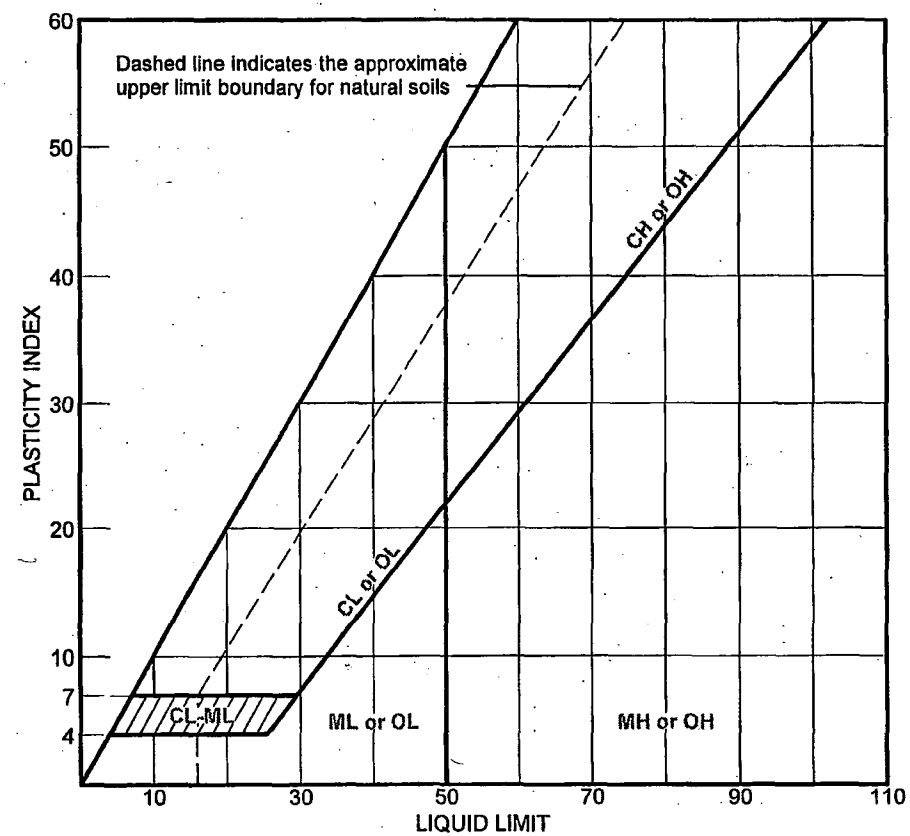
Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP
Natural Moisture= 26.8

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare					
Dry+Tare					
Tare					
Moisture					

NA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-902	UD-3	23' to 25'	2-13-07	SM	Silty sand	24.8	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

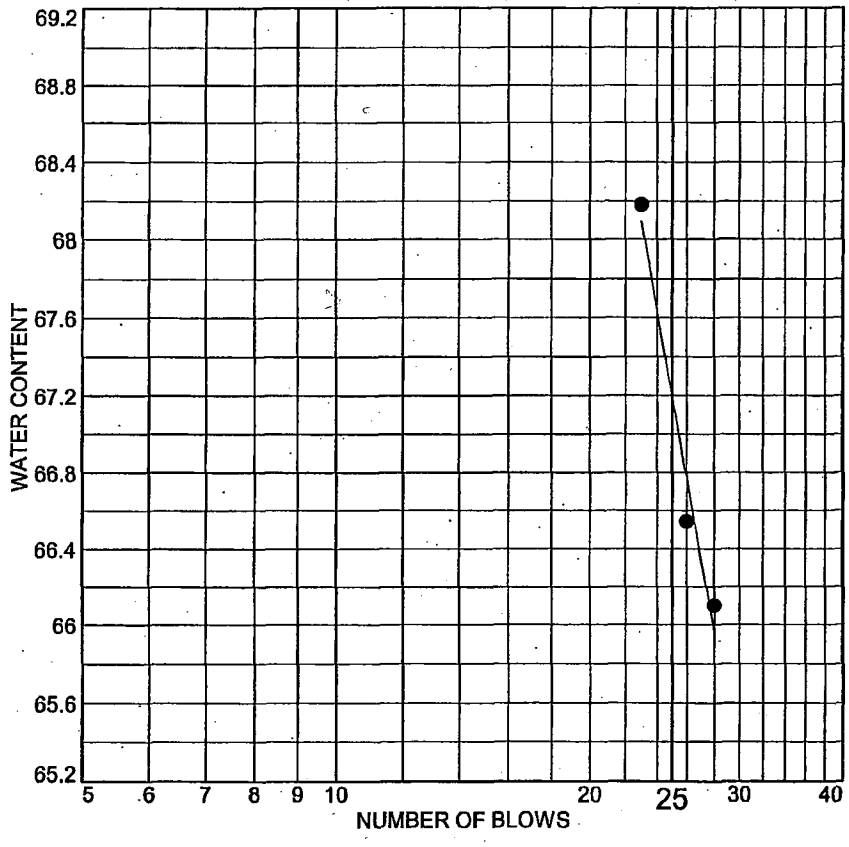
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

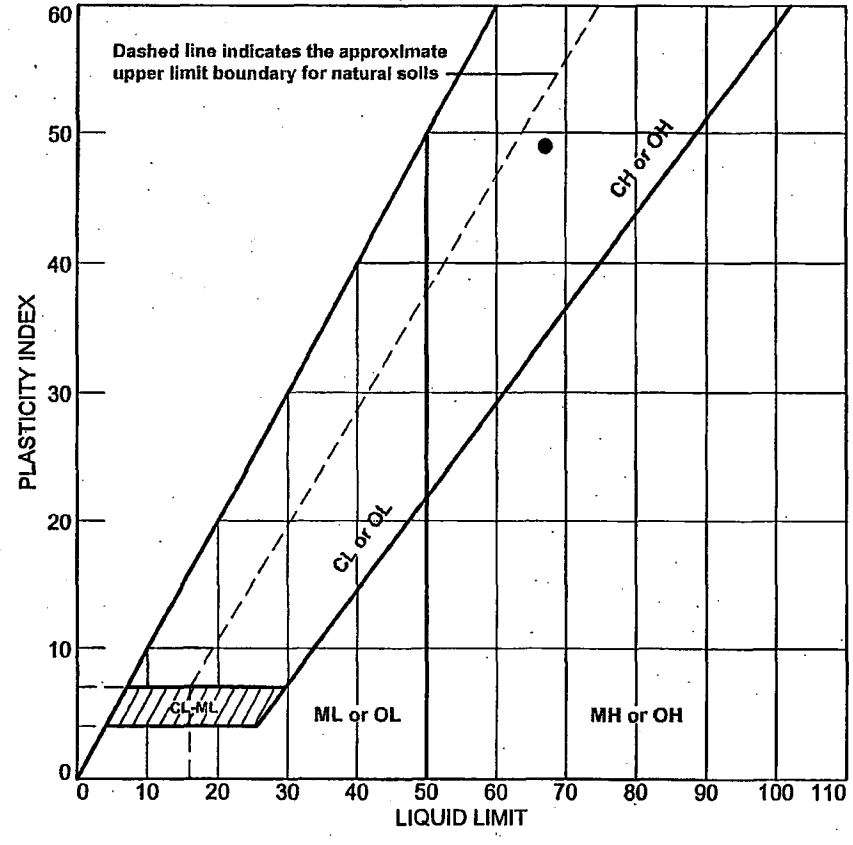
Sample Data

Source: B-902
Sample No.: UD-3
Elev. or Depth: 23' to 25' **Sample Length(in./cm.):**
Location: B-902
Description: Silty sand
Date: 2-13-07 **Natural Moisture:** 24.8
USCS Class.: SM **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 902	STP-184 (SS-14)	48.5'-50.0'	12/12/2006	CH	Fat Clay	31.4	67	49

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:MH

ASTM D4318-05

4-3-07

KAW 4/3/07

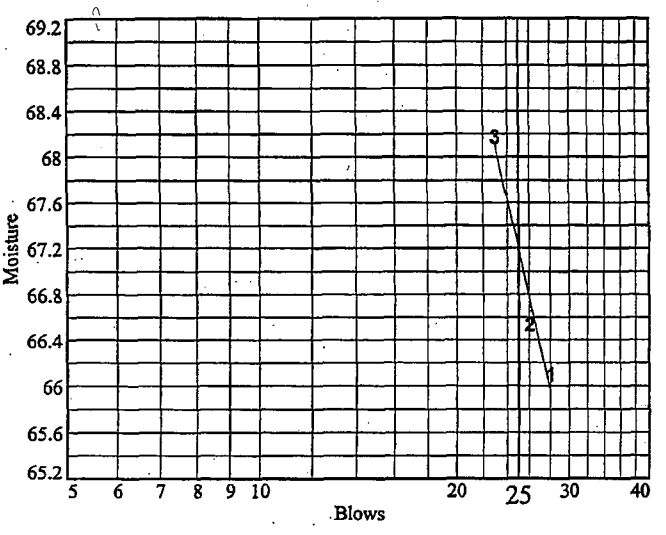
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 902
Depth: 48.5'-50.0'
Sample Number: STP-184 (SS-14)
Material Description: Fat Clay
Date: 12/12/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	38.13	37.13	37.26			
Dry+Tare	34.23	33.51	33.51			
Tare	28.33	28.07	28.01			
# Blows	28	26	23			
Moisture	66.1	66.5	68.2			



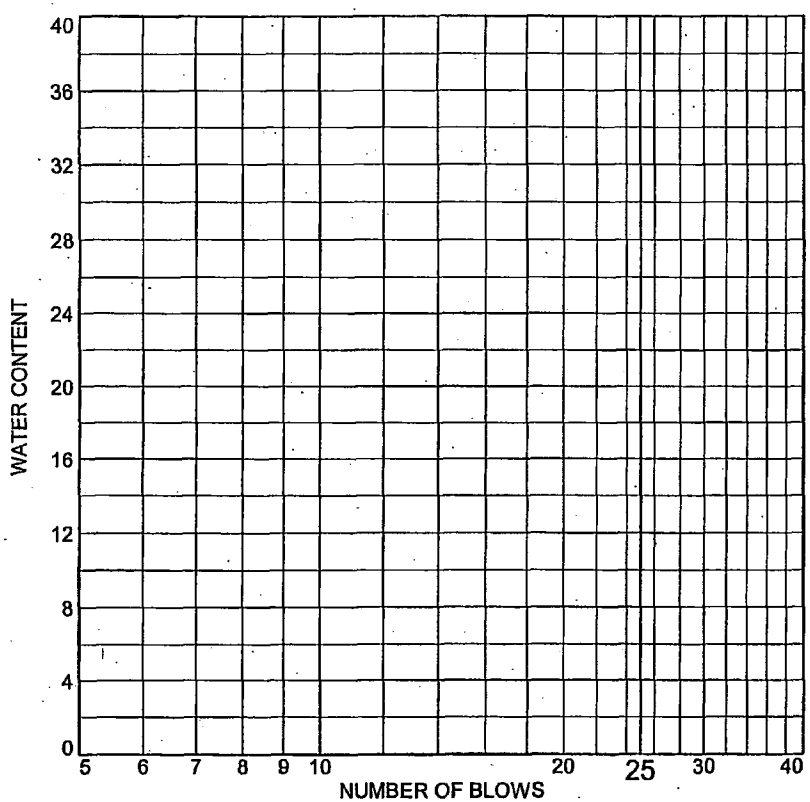
Liquid Limit= 67
Plastic Limit= 18
Plasticity Index= 49
Natural Moisture= 31.4
Liquidity Index= 0.3

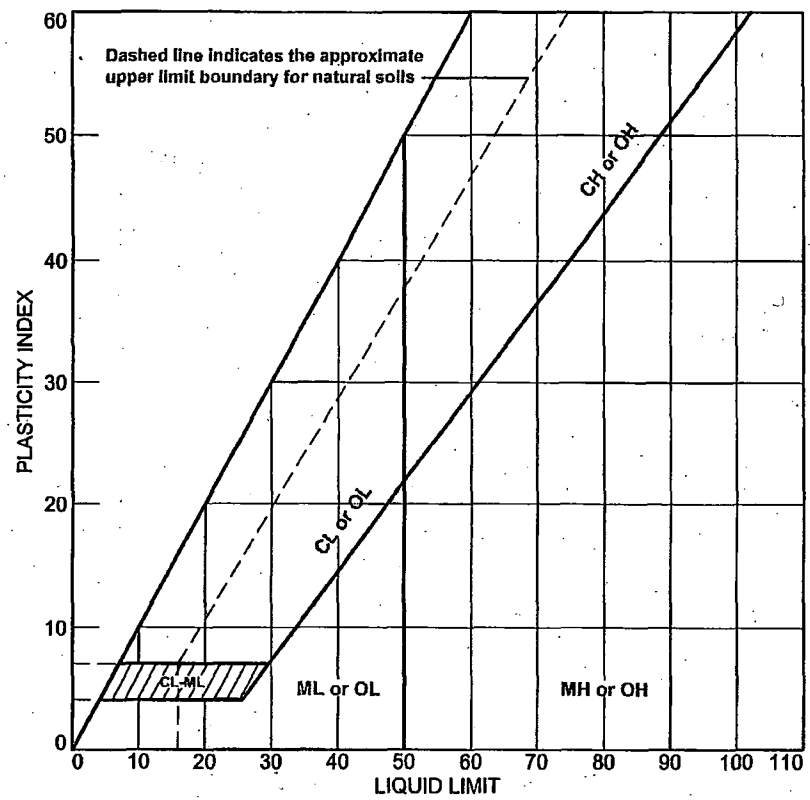
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.79	37.17			
Dry+Tare	35.48	35.61			
Tare	28.18	27.07			
Moisture	17.9	18.3			

4-307

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 902	STP-185 (SS-16)	58.5'-60.0'	12/12/2006	ML	Silt with Sand	24.9	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:RF

ASTM D4318-05

MA 4-3-07

KAW 4/3/07

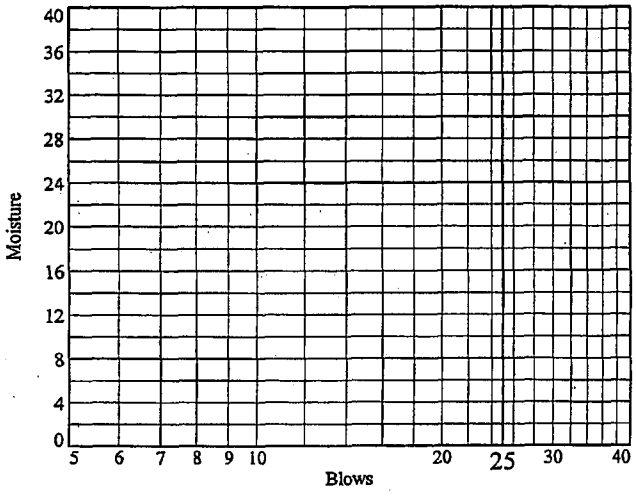
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 902
Depth: 58.5'-60.0'
Sample Number: STP-185 (SS-16)
Material Description: Silt with Sand
Date: 12/12/2006
USCS Class.: ML
Testing Remarks: Tested By:AC/TH
Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare						
Dry+Tare						
Tare						
# Blows						
Moisture						



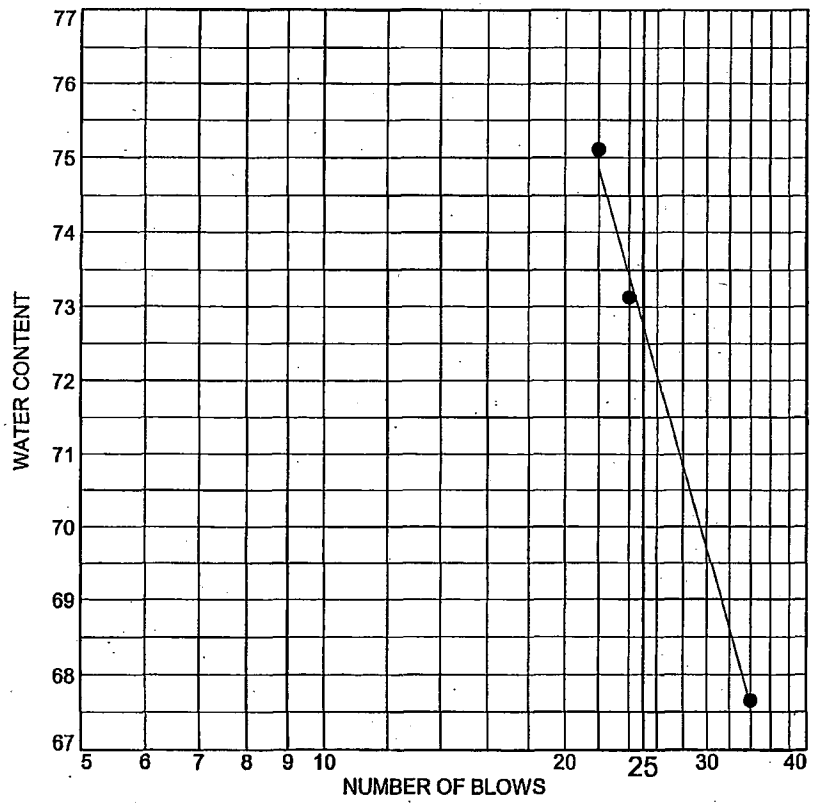
Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP
Natural Moisture= 24.9

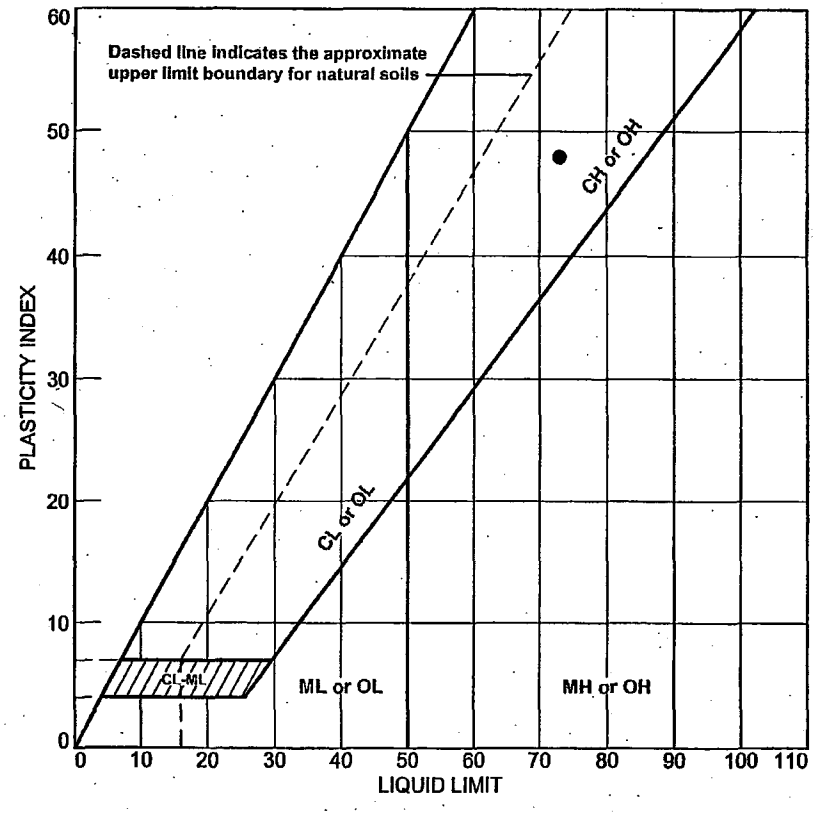
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare					
Dry+Tare					
Tare					
Moisture					

MW 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 902	STP-186	68.5'-70'	12/13/2006	CH	Fat Clay	25.7	73	48
		(SS-18)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF

ASTM D4318-05

4-3-07

KAW 4/3/07

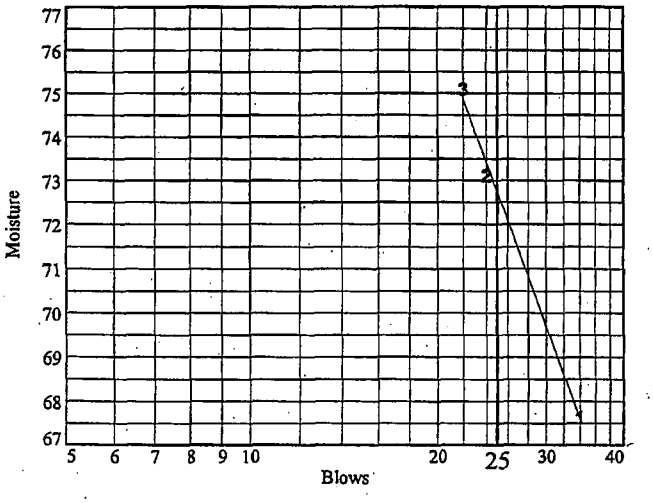
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 902
Depth: 68.5'-70' **Sample Number:** STP-186 (SS-18)
Material Description: Fat Clay
Date: 12/13/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	38.43	35.89	36.09			
Dry+Tare	34.33	32.57	32.62			
Tare	28.27	28.03	28			
# Blows	34	24	22			
Moisture	67.7	73.1	75.1			



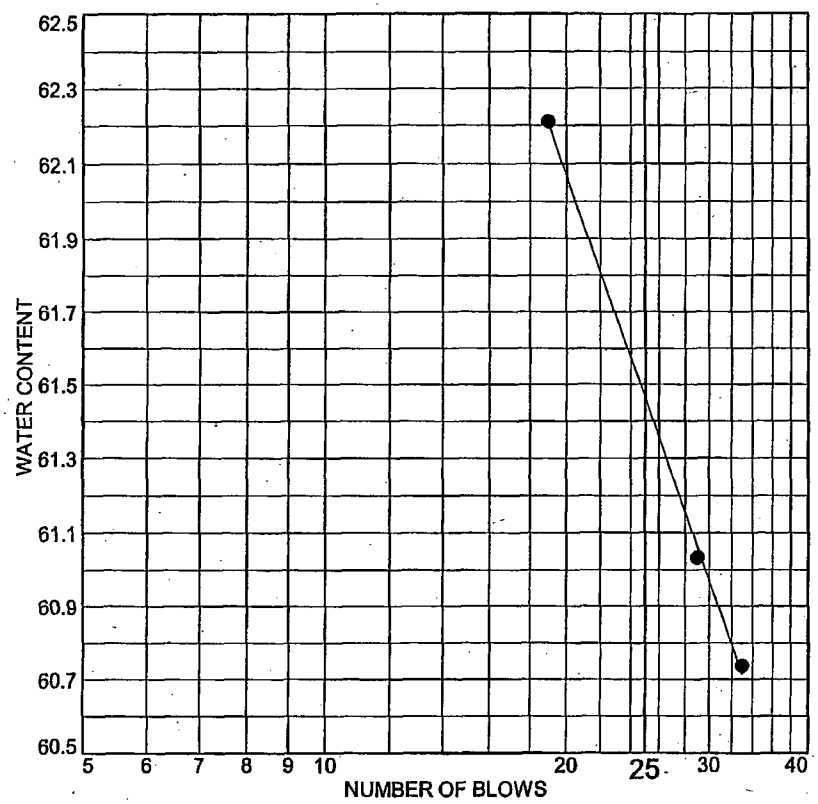
Liquid Limit= 73
Plastic Limit= 25
Plasticity Index= 48
Natural Moisture= 25.7
Liquidity Index= 0.0

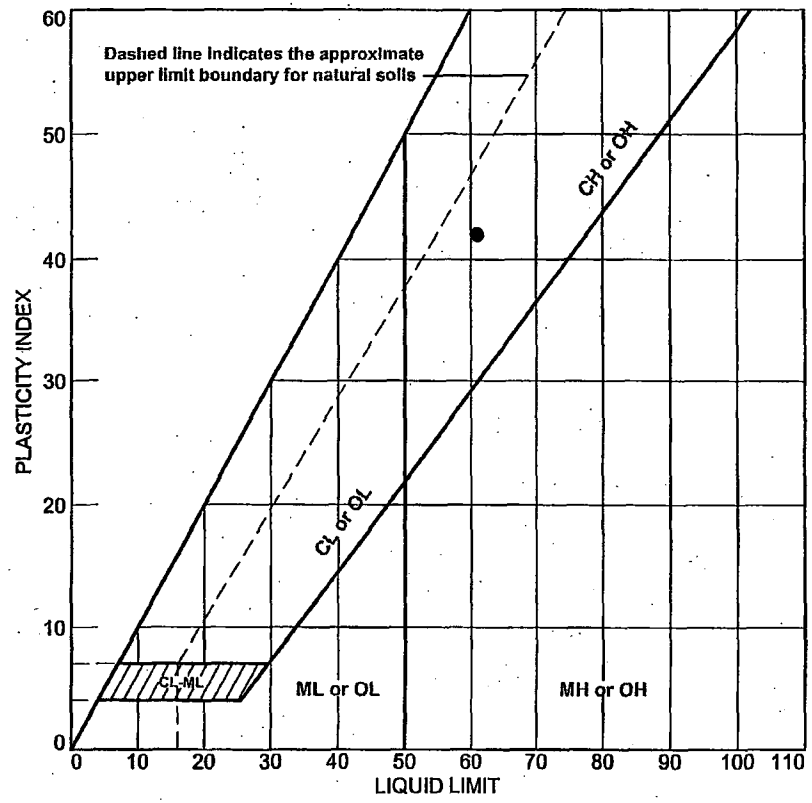
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.54	37.96			
Dry+Tare	34.22	35.85			
Tare	28.89	27.40			
Moisture	24.8	25.0			

NM 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 902	STP-187 (SS-20)	78.5'-80.0'	12/13/2006	CH	Fat Clay	23.2	61	42

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:MH/TH Reviewed By:RF

ASTM D4318-05

4-3-07

KAW 4/3/07

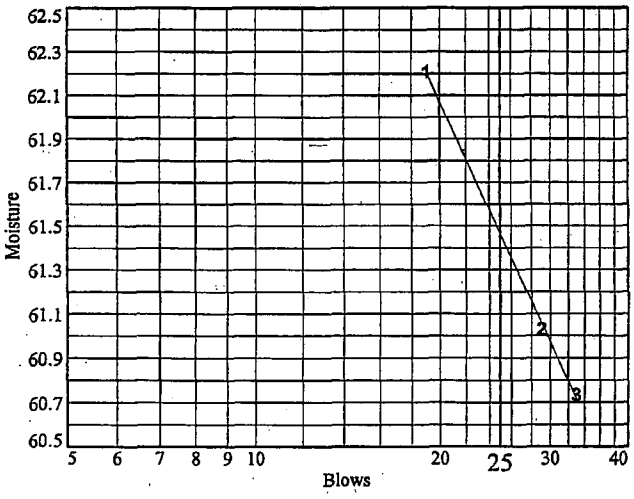
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 902
Depth: 78.5'-80.0' **Sample Number:** STP-187 (SS-20)
Material Description: Fat Clay
Date: 12/13/2006 **USCS Class.:** CH
Testing Remarks: Tested By:MH/TH Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.12	41.09	38.41			
Dry+Tare	33.35	36.25	34.62			
Tare	27.29	28.32	28.38			
# Blows	19	29	33			
Moisture	62.2	61.0	60.7			



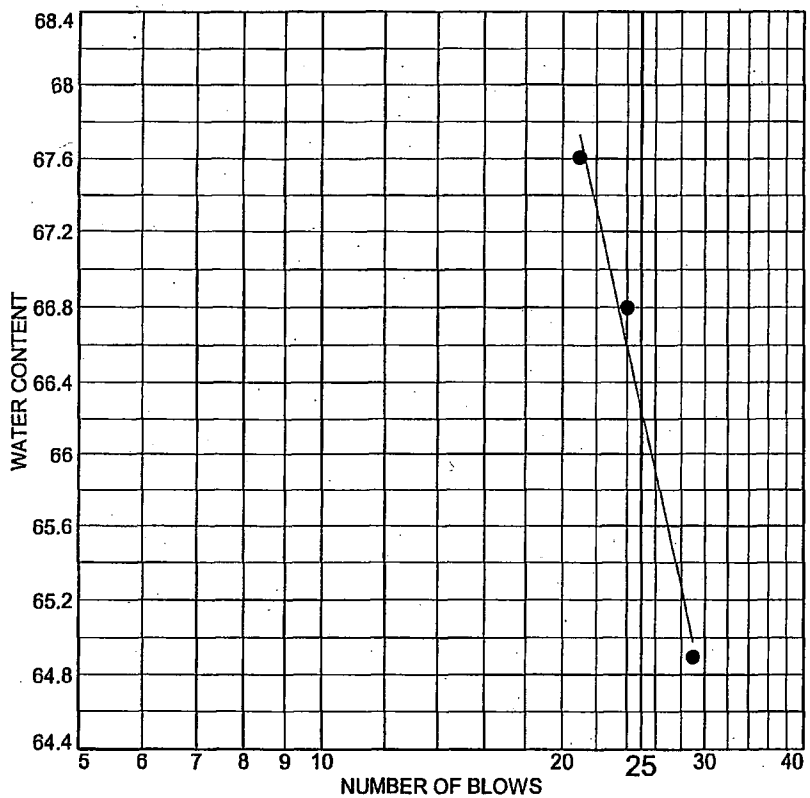
Liquid Limit= 61
Plastic Limit= 19
Plasticity Index= 42
Natural Moisture= 23.2
Liquidity Index= 0.1

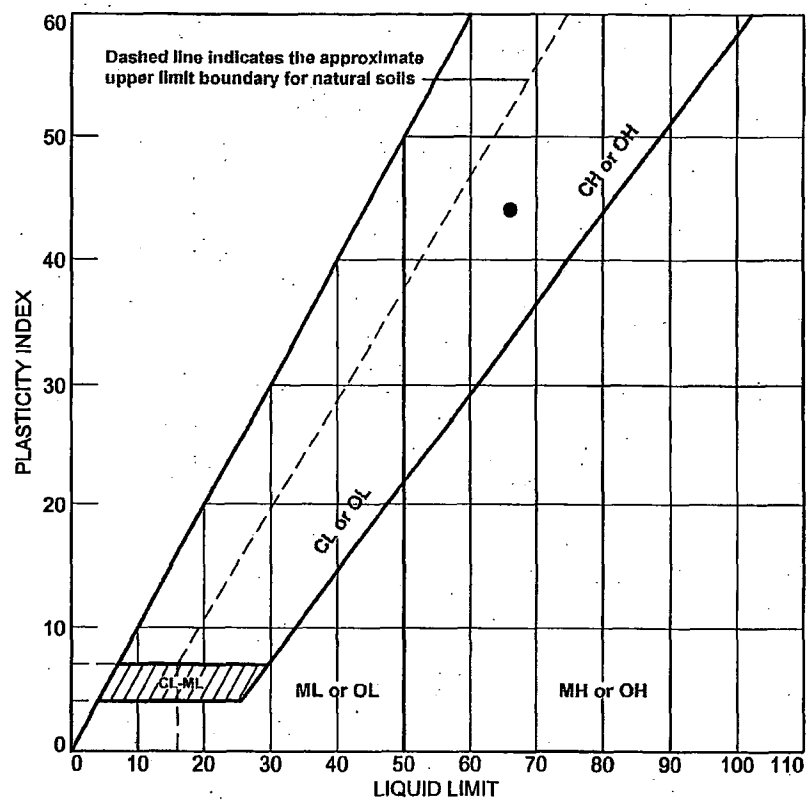
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	39.94	37.94			
Dry+Tare	38.08	36.31			
Tare	28.29	27.61			
Moisture	19.0	18.7			

MH 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 902	STP-188 (SS-22)	88.5'-90.0'	12/13/2006	CH	Fat Clay	23.8	66	44

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

4-3-07

KAW 4/3/07

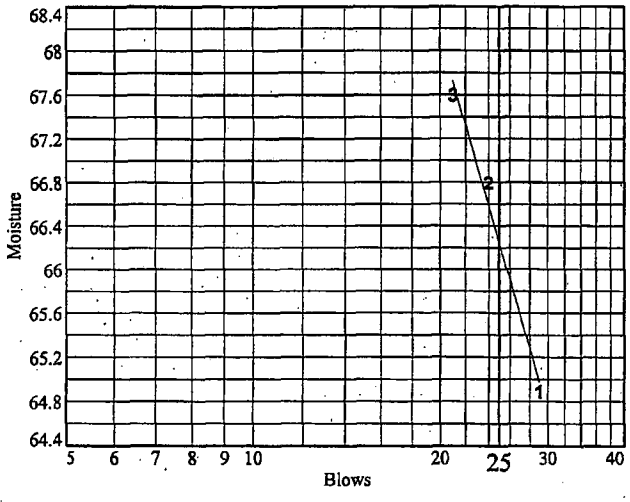
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 902
Depth: 88.5'-90.0' **Sample Number:** STP-188 (SS-22)
Material Description: Fat Clay
Date: 12/13/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	33.15	36.59	36.70			
Dry+Tare	30.10	33.21	33.34			
Tare	25.40	28.15	28.37			
# Blows	29	24	21			
Moisture	64.9	66.8	67.6			



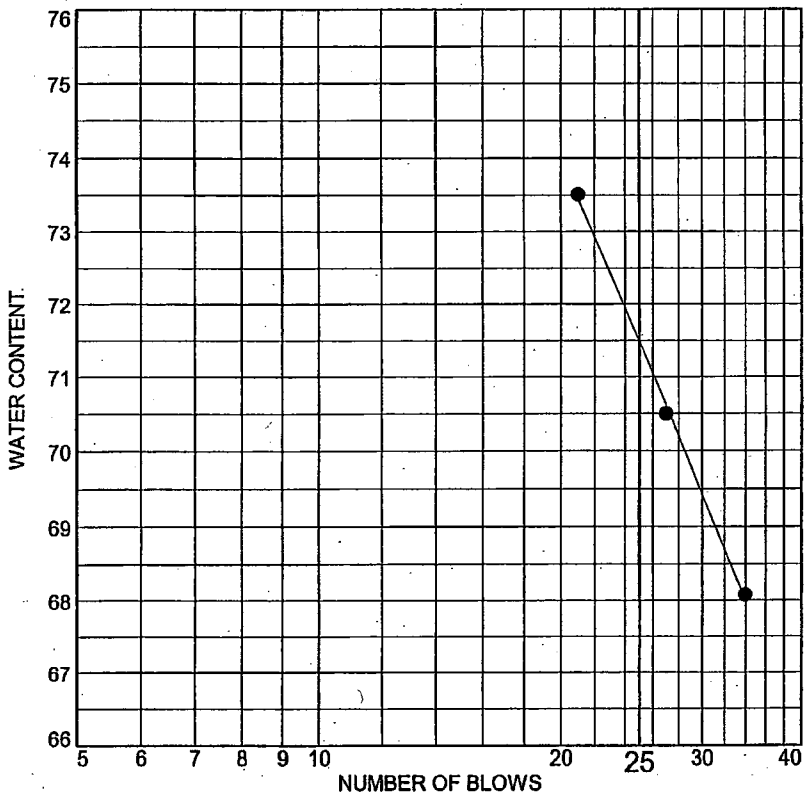
Liquid Limit= 66
Plastic Limit= 22
Plasticity Index= 44
Natural Moisture= 23.8
Liquidity Index= 0.0

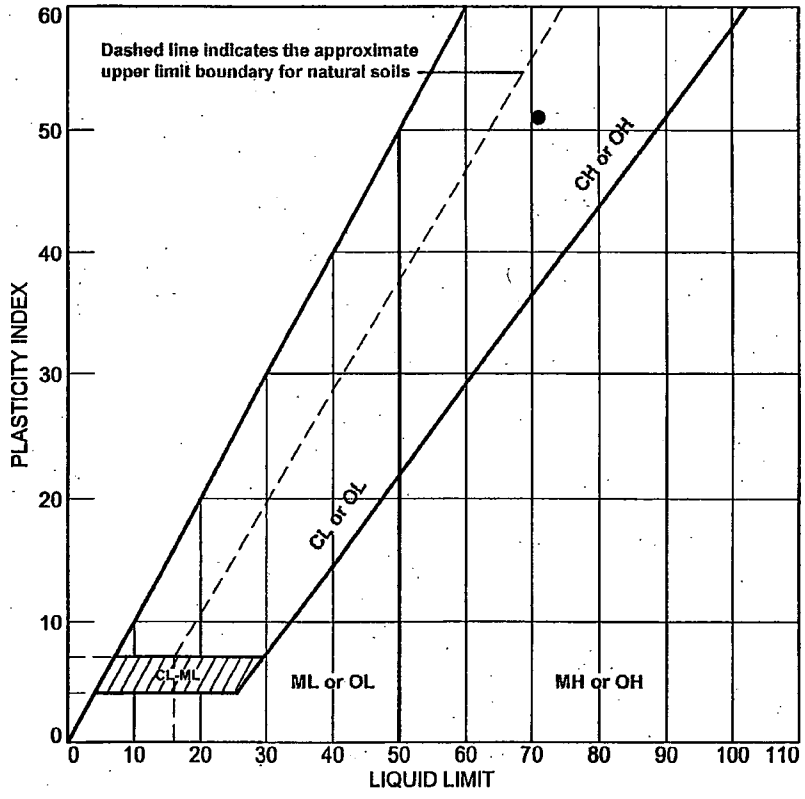
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	37.68	35.43			
Dry+Tare	35.99	34.13			
Tare	28.28	28.33			
Moisture	21.9	22.4			

MM 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 902	STP-189	98.5'-100'	12/13/2006	CH	Fat Clay	28.0	71	51
		(SS-24)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:RF

ASTM D4318-05

NA 4-3-07

KAW 4/3/07

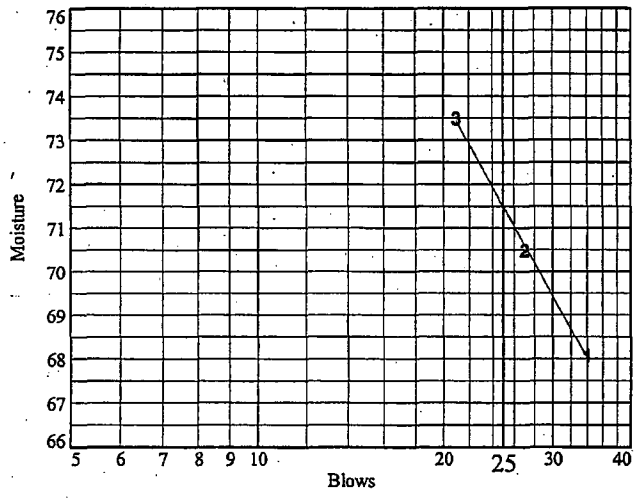
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 902
Depth: 98.5'-100'
Sample Number: STP-189 (SS-24)
Material Description: Fat Clay
Date: 12/13/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.23	35.95	36.98			
Dry+Tare	33.52	32.27	33.29			
Tare	28.07	27.05	28.27			
# Blows	34	27	21			
Moisture	68.1	70.5	73.5			



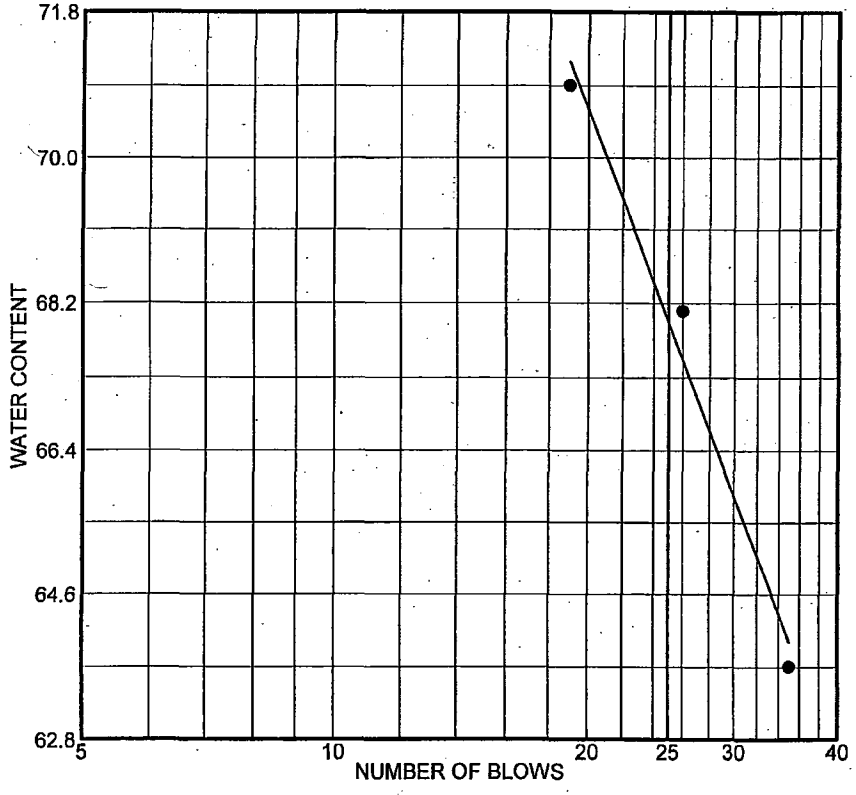
Liquid Limit= 71
Plastic Limit= 20
Plasticity Index= 51
Natural Moisture= 28.0
Liquidity Index= 0.2

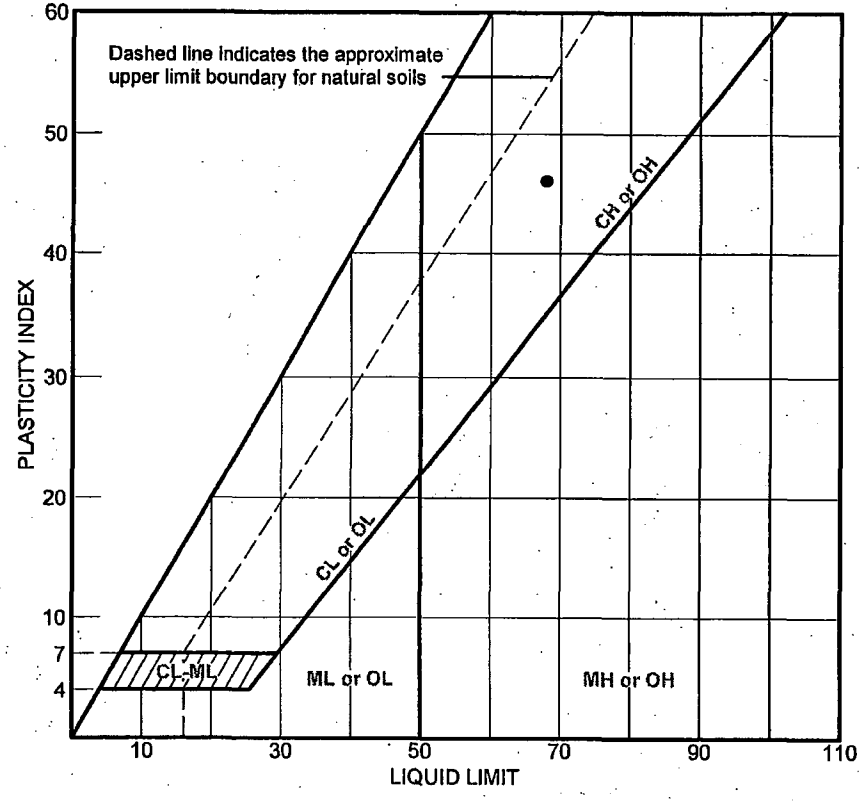
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.18	34.05			
Dry+Tare	34.01	33.07			
Tare	28.27	28.18			
Moisture	20.4	20.0			

MM 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-904	UD-1	5' to 7'	2-19-07	CH	Fat Clay	22.3	68	46

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05 KAW 413107

KAW 413107

LIQUID AND PLASTIC LIMIT TEST DATA

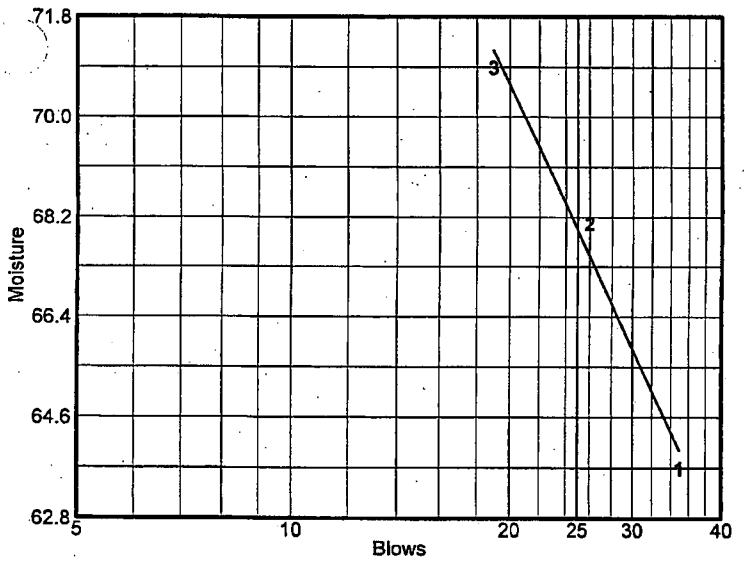
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-904
Sample No.: UD-1
Elev. or Depth: 5' to 7' **Sample Length(in./cm.):**
Location: B-904
Description: Fat Clay
Date: 2-19-07 **Natural Moisture:** 22.3
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	28.66	32.83	31.35			
Dry+Tare	22.02	23.96	22.87			
Tare	11.60	10.93	10.91			
# Blows	35	26	19			
Moisture	63.7	68.1	70.9			

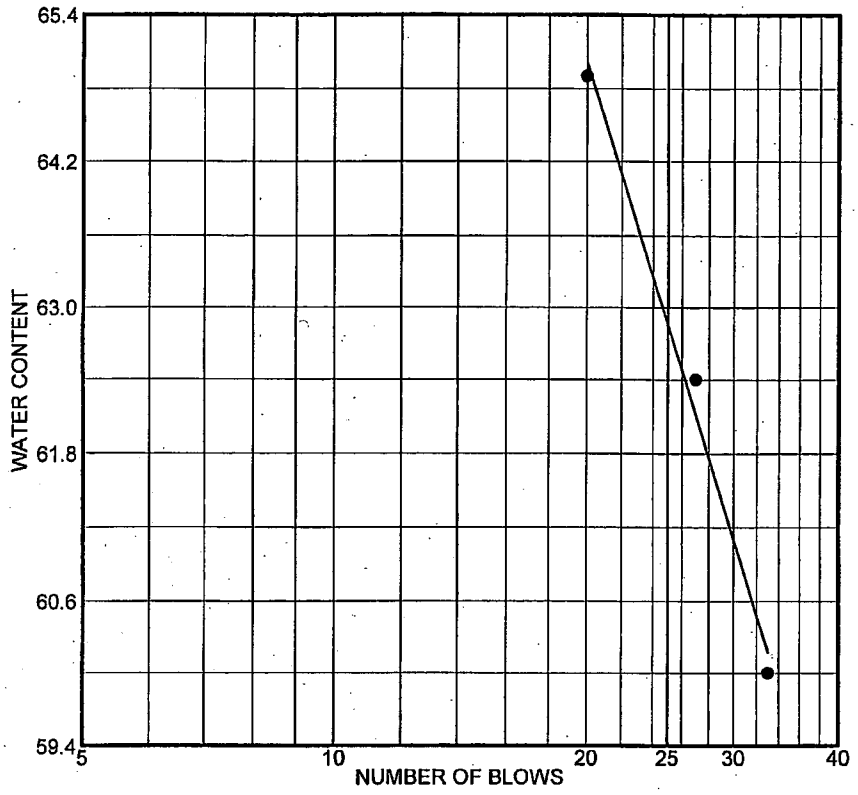


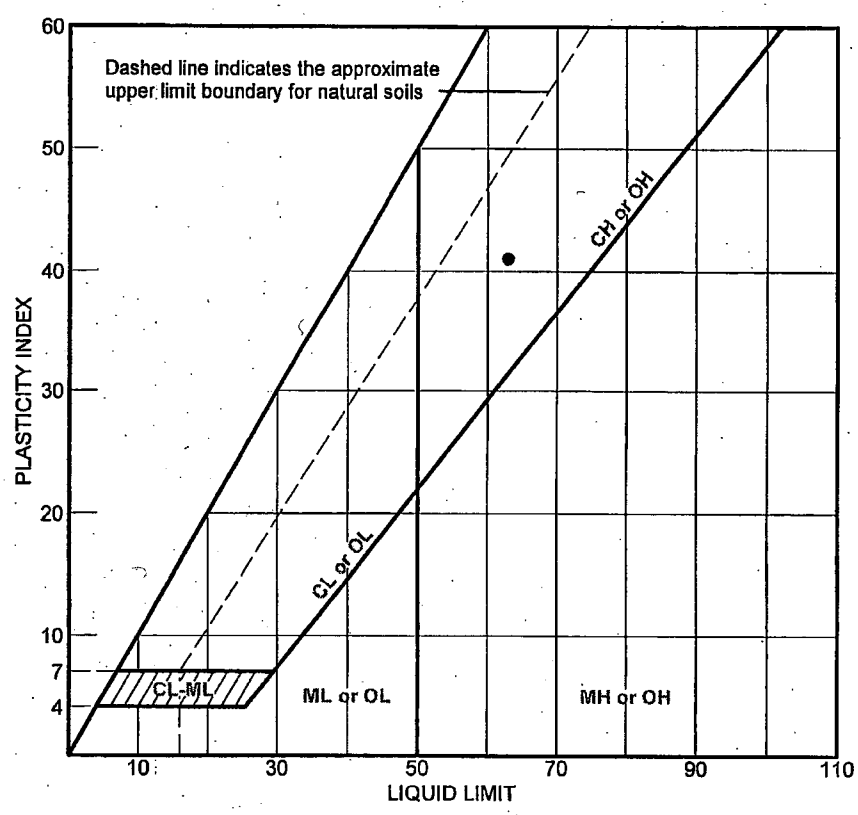
Liquid Limit= 68
Plastic Limit= 22
Plasticity Index= 46

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	17.86	20.82			
Dry+Tare	16.59	19.02			
Tare	10.84	10.88			
Moisture	22.1	22.1			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-904	UD-2	18' to 20'	2-19-07	CH	Fat Clay	21.1	63	41

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH KAW 413/07
ASTM D4318-05

KAW 413/07

LIQUID AND PLASTIC LIMIT TEST DATA

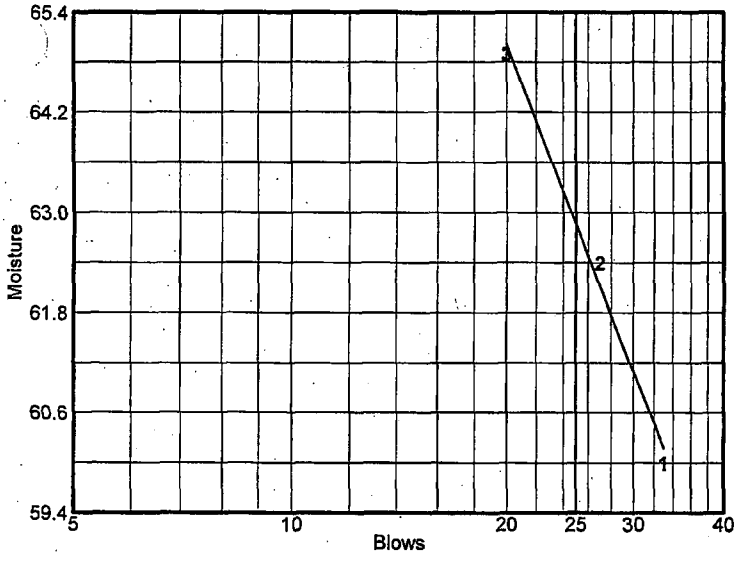
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-904
Sample No.: UD-2
Elev. or Depth: 18' to 20' **Sample Length(in./cm.):**
Location: B-904
Description: Fat Clay
Date: 2-19-07 **Natural Moisture:** 21.1
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	27.25	32.61	31.82			
Dry+Tare	21.17	24.17	23.63			
Tare	11.03	10.64	11.02			
# Blows	33	27	20			
Moisture	60.0	62.4	64.9			

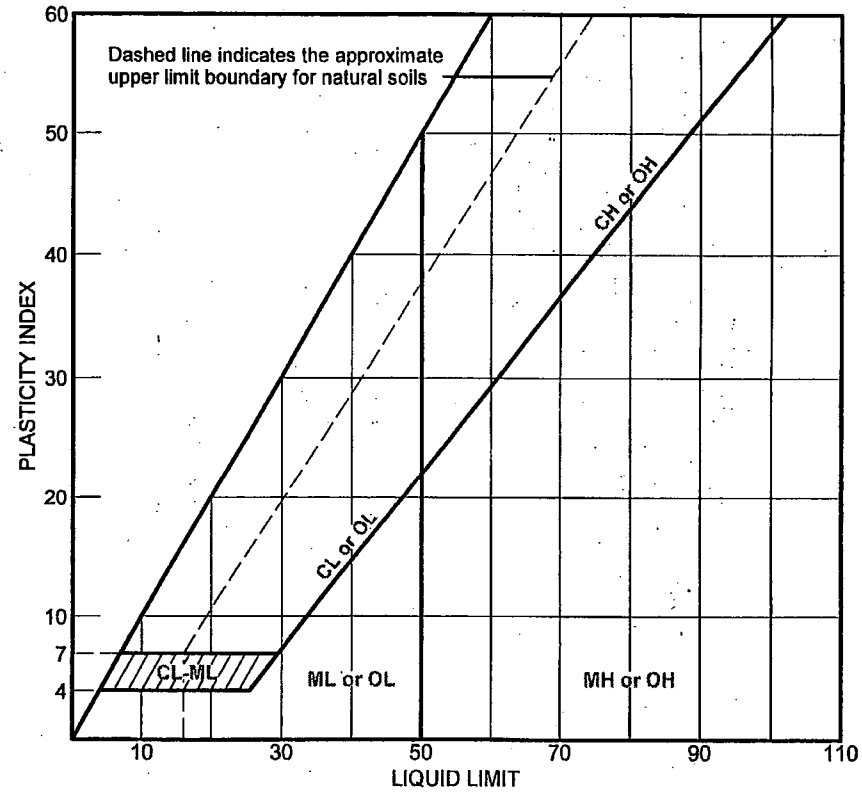


Liquid Limit= 63
Plastic Limit= 22
Plasticity Index= 41

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	20.97	20.20			
Dry+Tare	19.28	18.63			
Tare	11.57	11.40			
Moisture	21.9	21.7			

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-904	UD-3	28' to 30'	2-25-07	ML	Sandy silt	25.2	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH KAW 4/13/07
ASTM D4318-05

KAW 4/13/07

LIQUID AND PLASTIC LIMIT TEST DATA

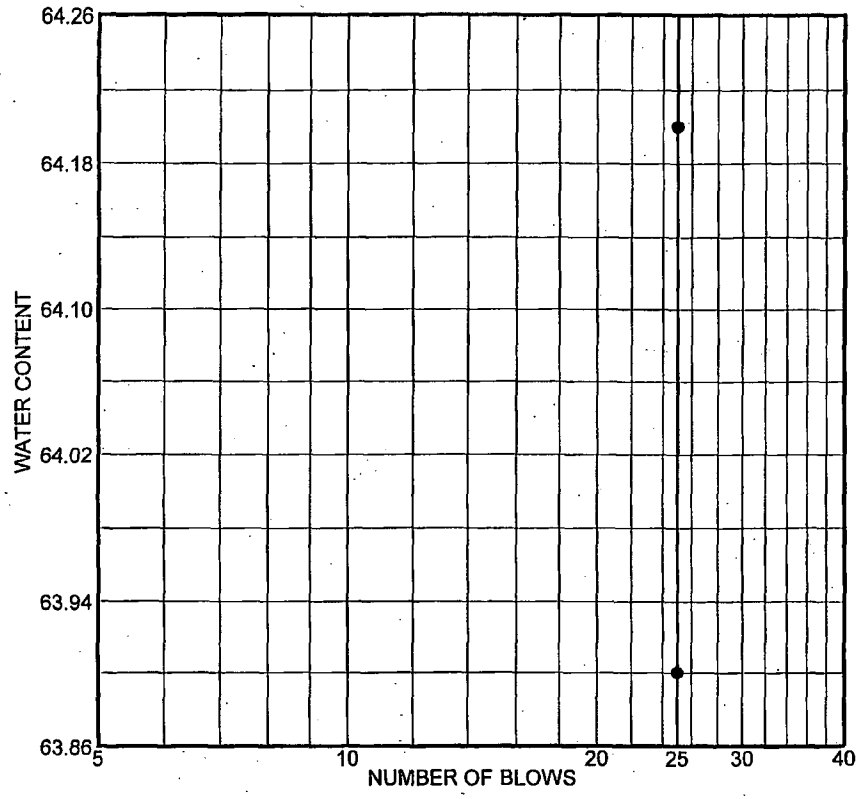
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

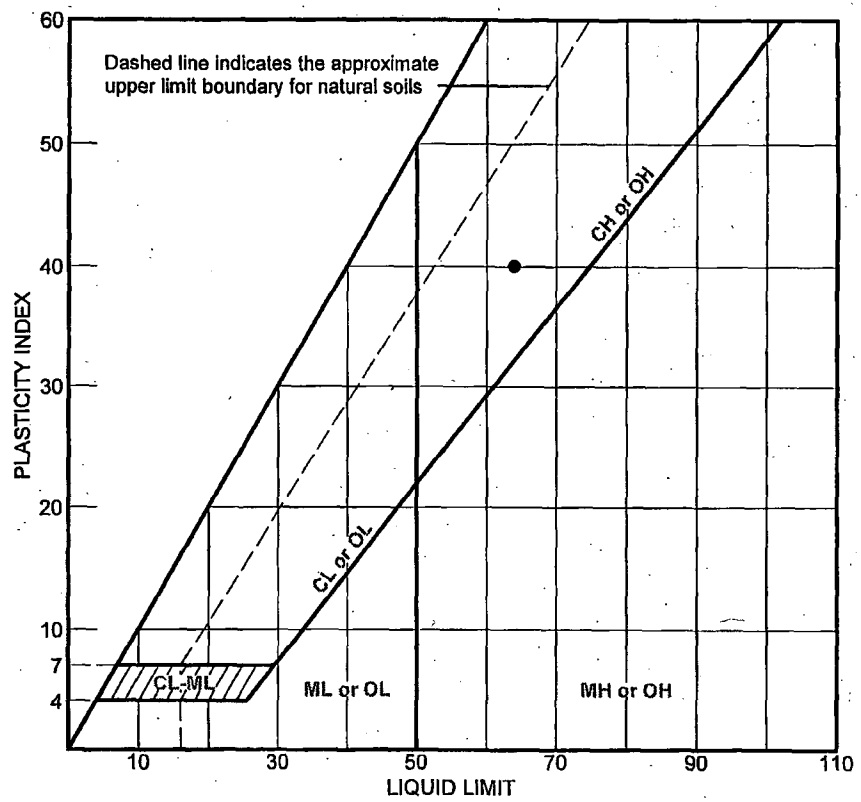
Sample Data

Source: B-904
Sample No.: UD-3
Elev. or Depth: 28' to 30' **Sample Length(in./cm.):**
Location: B-904
Description: Sandy silt
Date: 2-25-07 **Natural Moisture:** 25.2
USCS Class.: ML **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-904	UD-4	53' to 55'	3-22-07	SC	Clayey sand	32.5	64	40

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

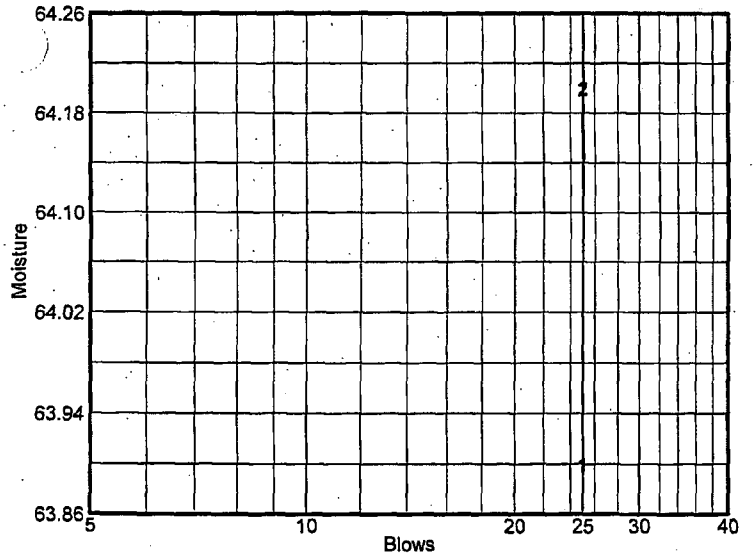
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-904
Sample No.: UD-4
Elev. or Depth: 53' to 55' **Sample Length(in./cm.):**
Location: B-904
Description: Clayey sand
Date: 3-22-07 **Natural Moisture:** 32.5
USCS Class.: SC **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	22.51	22.73				
Dry+Tare	17.90	18.14				
Tare	10.68	10.99				
# Blows	25	25				
Moisture	63.9	64.2				

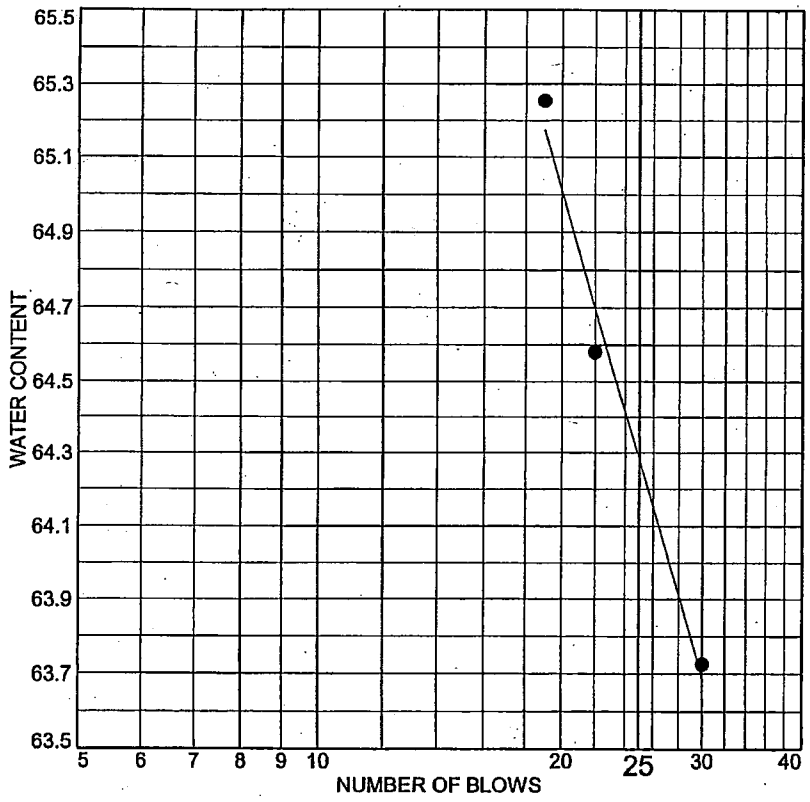


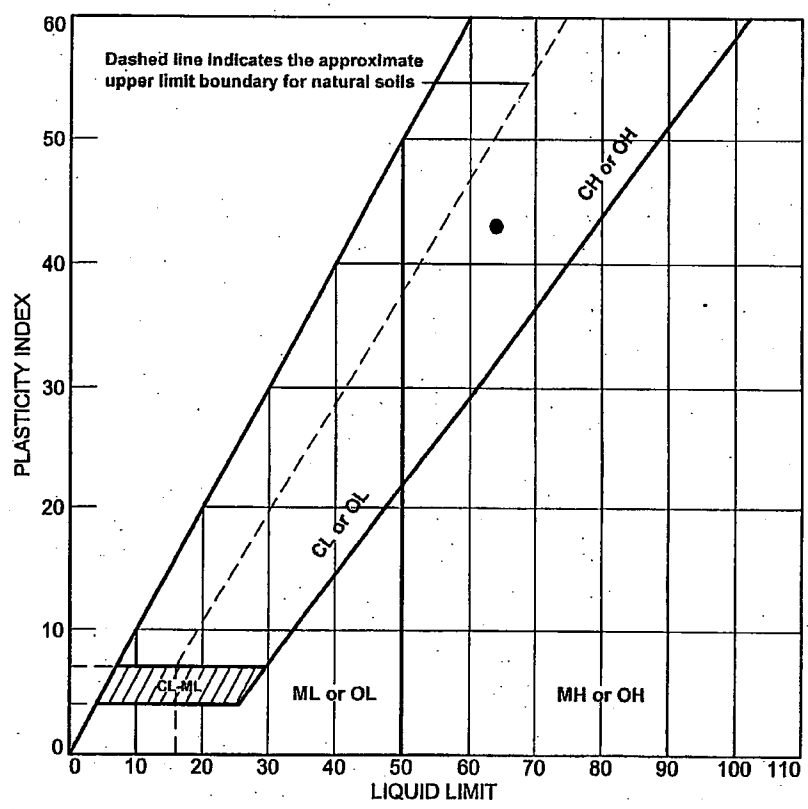
Liquid Limit= 64
Plastic Limit= 24
Plasticity Index= 40

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	19.31	18.78			
Dry+Tare	17.68	17.25			
Tare	10.86	10.89			
Moisture	23.9	24.1			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 904	STP-191 (SS-15)	63.5'-65.0'	12/17/2006	CH	Fat Clay	23.1	64	43

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:MH
ASTM D4318-05

MH 4-3-07

KAW 4/3/07

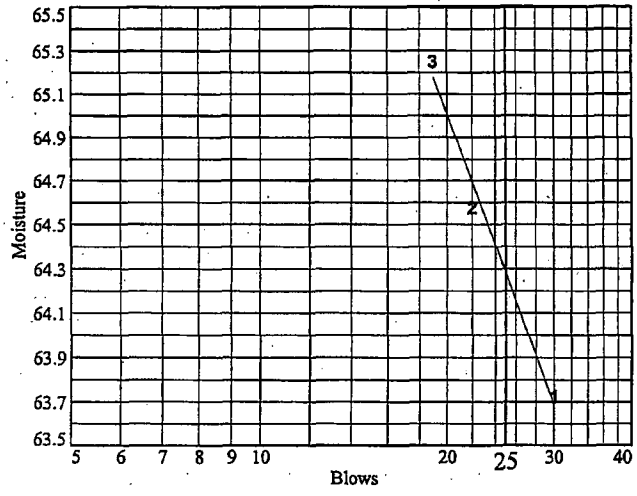
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 904
Depth: 63.5'-65.0' **Sample Number:** STP-191 (SS-15)
Material Description: Fat Clay
Date: 12/17/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.39	38.15	38			
Dry+Tare	33.14	34.23	34.15			
Tare	28.04	28.16	28.25			
# Blows	30	22	19			
Moisture	63.7	64.6	65.3			



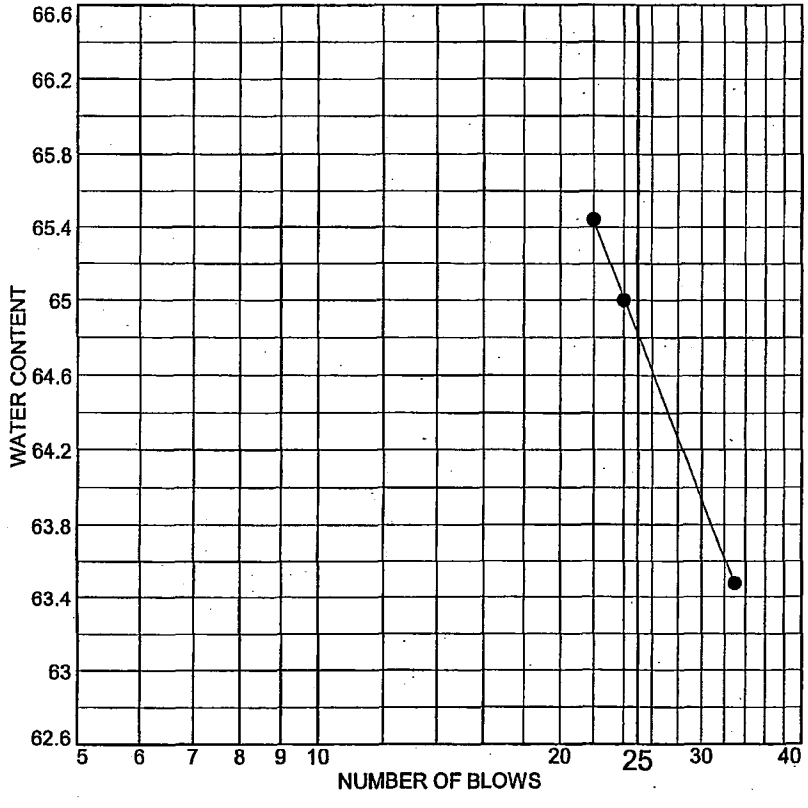
Liquid Limit= 64
Plastic Limit= 21
Plasticity Index= 43
Natural Moisture= 23.1
Liquidity Index= 0.0

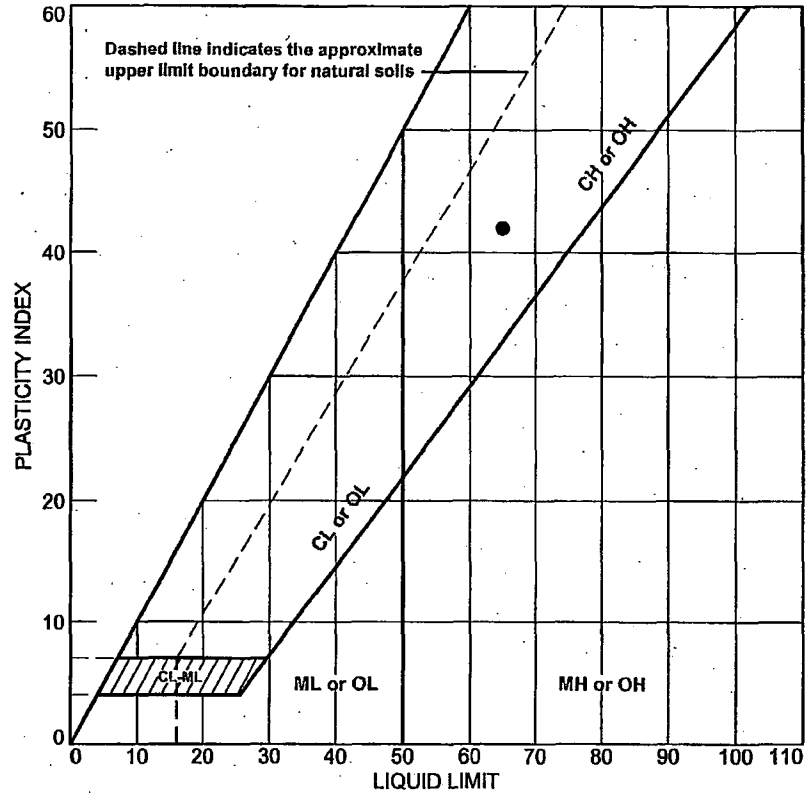
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.52	35.39			
Dry+Tare	34.22	34.11			
Tare	28.09	28.06			
Moisture	21.2	21.2			

MH 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 904	STP-192 (SS-17)	73.5'-75.0'	12/17/2006	CH	Fat Clay	22.4	65	42

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

MH 4-3-07

KAW 4/3/07

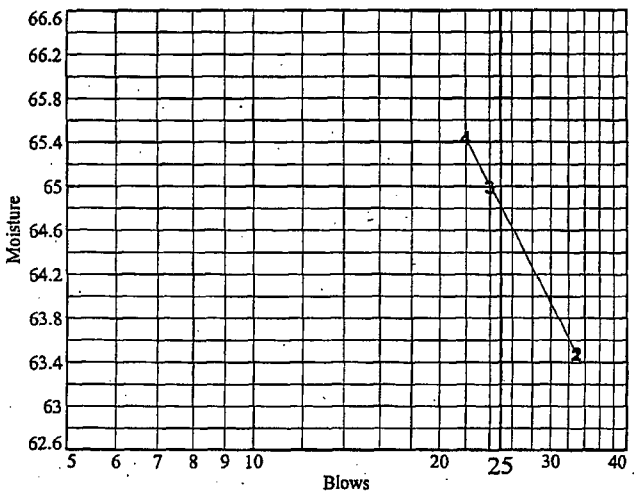
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 904
Depth: 73.5'-75.0' **Sample Number:** STP-192 (SS-17)
Material Description: Fat Clay
Date: 12/17/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	33.76	33.76	36.90	37.07		
Dry+Tare	30.11	30.11	33.52	33.51		
Tare	24.36	24.36	28.32	28.07		
# Blows	33	33	24	22		
Moisture	63.5	63.5	65.0	65.4		



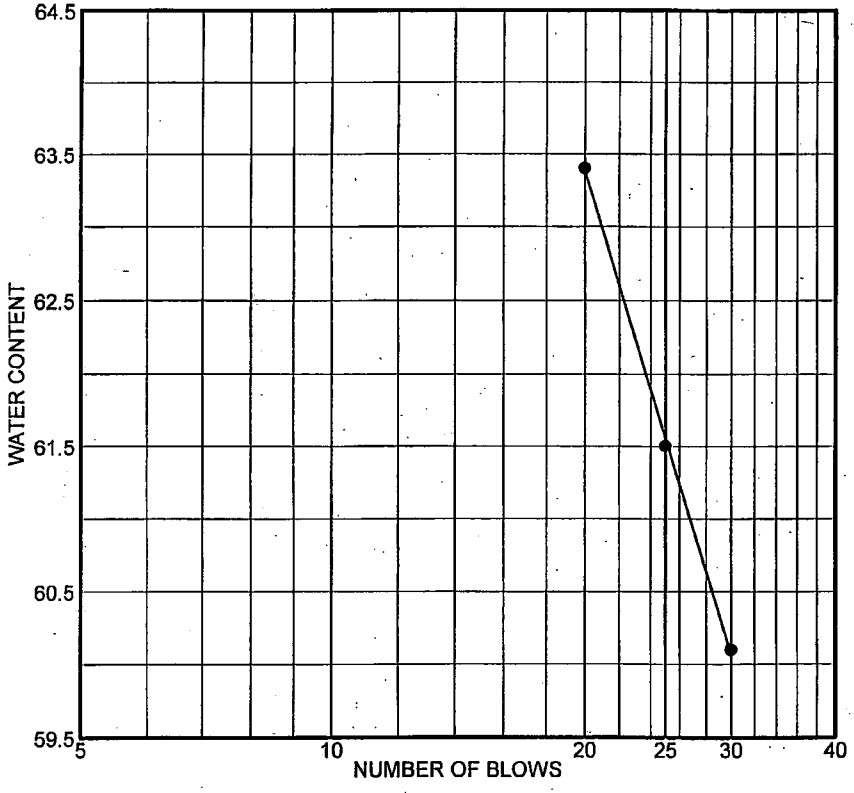
Liquid Limit= 65
Plastic Limit= 23
Plasticity Index= 42
Natural Moisture= 22.4
Liquidity Index= 0.0

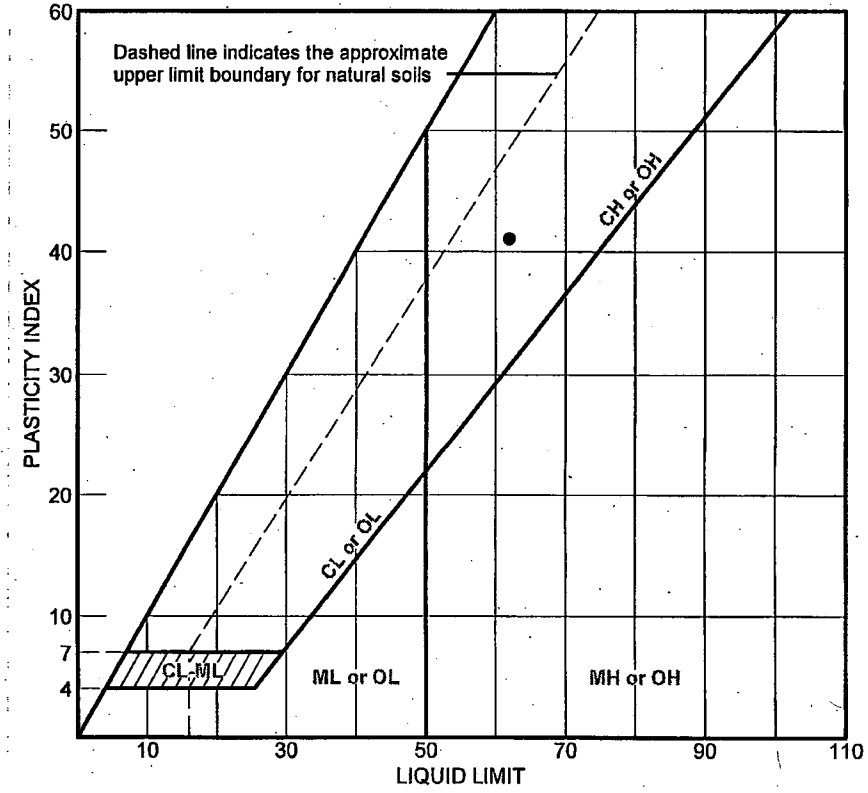
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	33.45	35.74			
Dry+Tare	32.25	34.17			
Tare	27.05	27.30			
Moisture	23.1	22.9			

MAK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-904	UD-5	83' to 85'	2-19-07	CH	Fat Clay	24.0	62	41

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05 KAW 4/3/07

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

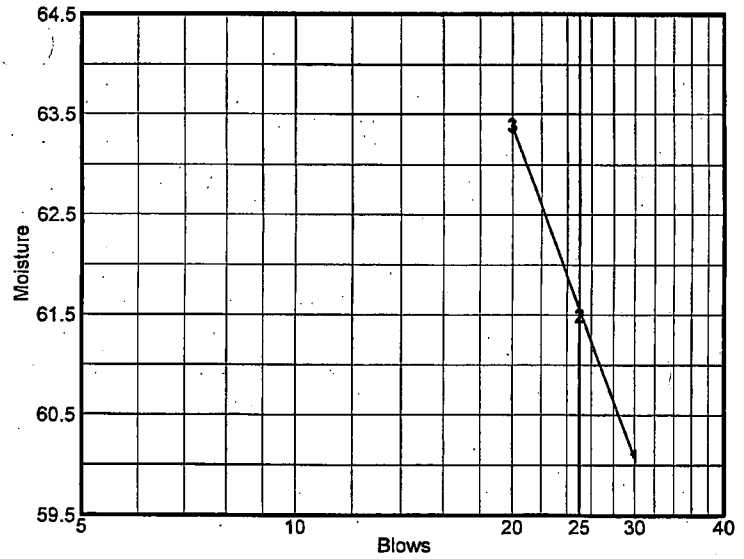
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-904
Sample No.: UD-5
Elev. or Depth: 83' to 85' **Sample Length(in./cm.):**
Location: B-904
Description: Fat Clay
Date: 2-19-07 **Natural Moisture:** 24.0
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	26.79	28.97	30.74			
Dry+Tare	20.80	22.30	23.07			
Tare	10.84	11.45	10.98			
# Blows	30	25	20			
Moisture	60.1	61.5	63.4			

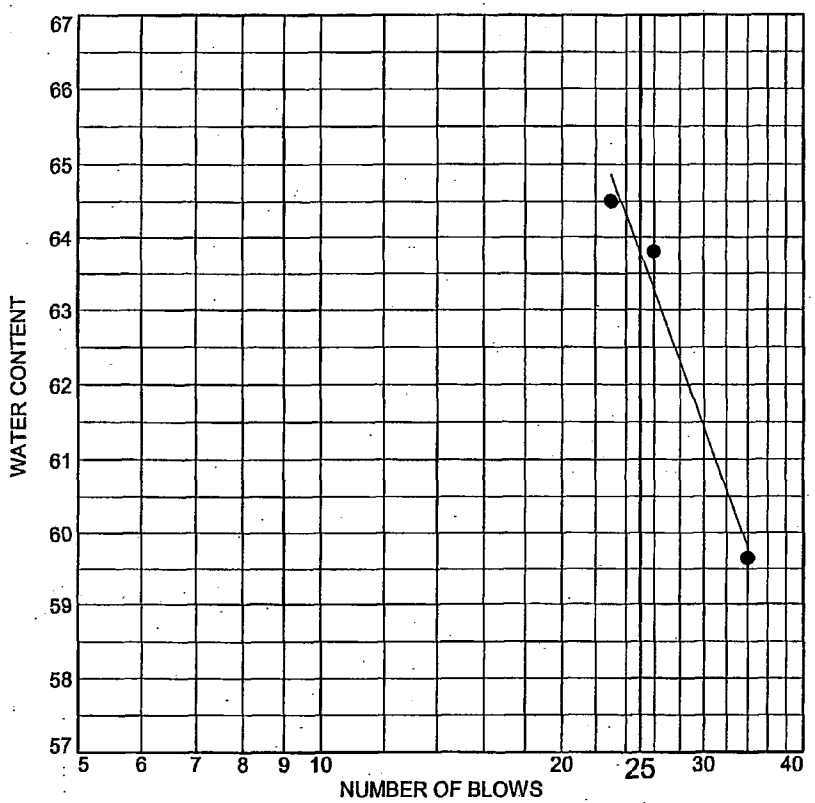


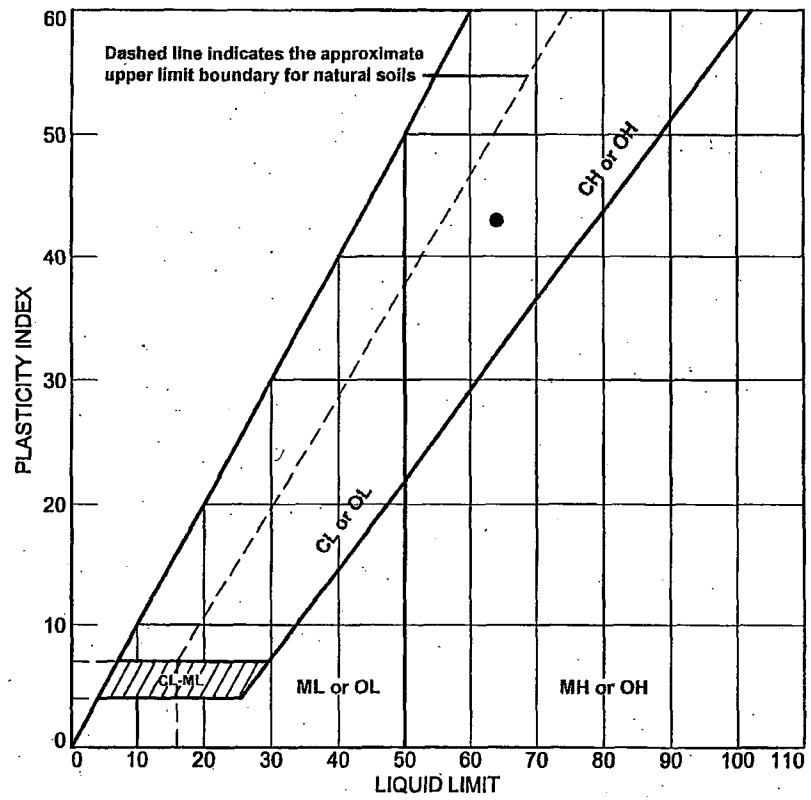
Liquid Limit= 62
Plastic Limit= 21
Plasticity Index= 41

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	18.13	19.05			
Dry+Tare	16.84	17.71			
Tare	10.79	11.18			
Moisture	21.3	20.5			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 904	STP-193 (SS-20)	93.5'-95.0'	12/17/2006	CH	Fat Clay	25.0	64	43

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF

ASTM D4318-05

MA 4-3-07

KAW 4/3/07

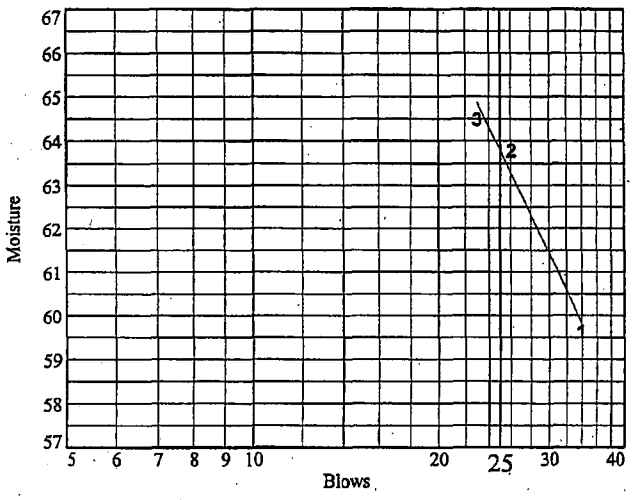
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 904
Depth: 93.5'-95.0' **Sample Number:** STP-193 (SS-20)
Material Description: Fat Clay
Date: 12/17/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	33.83	36.40	35.77			
Dry+Tare	30.74	33.28	32.79			
Tare	25.56	28.39	28.17			
# Blows	34	26	23			
Moisture	59.7	63.8	64.5			



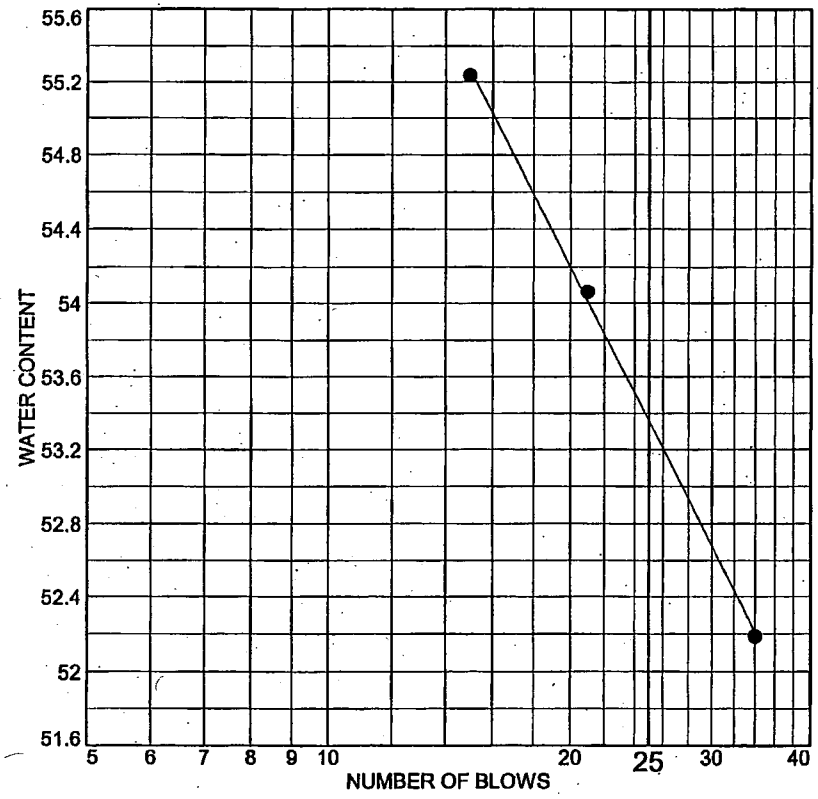
Liquid Limit= 64
Plastic Limit= 21
Plasticity Index= 43
Natural Moisture= 25.0
Liquidity Index= 0.1

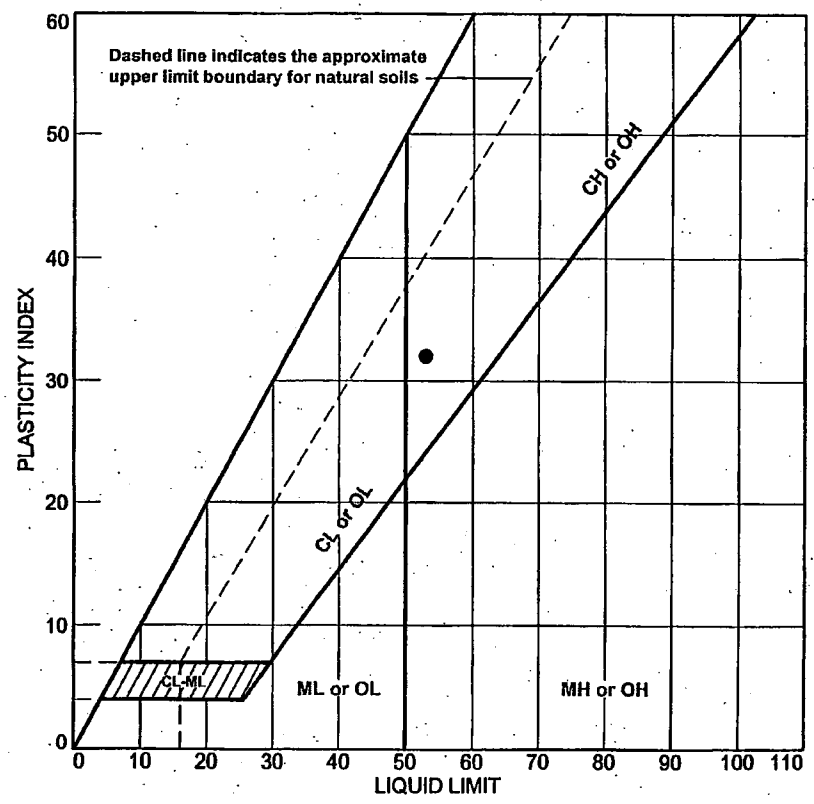
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	34.76	36.12			
Dry+Tare	33.61	34.79			
Tare	28.08	28.22			
Moisture	20.8	20.2			

MAC 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 908	STP-194 (SS-3)	3.0'-4.5'	12/15/2006	CH	Fat Clay	27.0	53	32

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:MH/RF

ASTM D4318-05

RF 2/4/07

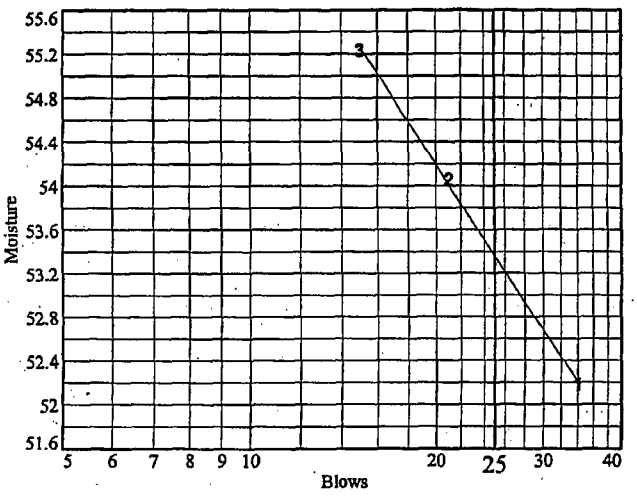
KAW 4/4/07

LIQUID AND PLASTIC LIMIT TEST DATA

4/4/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 908
Depth: 3.0'-4.5' **Sample Number:** STP-194 (SS-3)
Material Description: Fat Clay
Date: 12/15/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:MH/RF
ASTM D4318-05

Run No.	1	2	3	4	5	6
Wet+Tare	39.05	37.54	37.36			
Dry+Tare	35.35	34.28	34.09			
Tare	28.26	28.25	28.17			
# Blows	34	21	15			
Moisture	52.2	54.1	55.2			

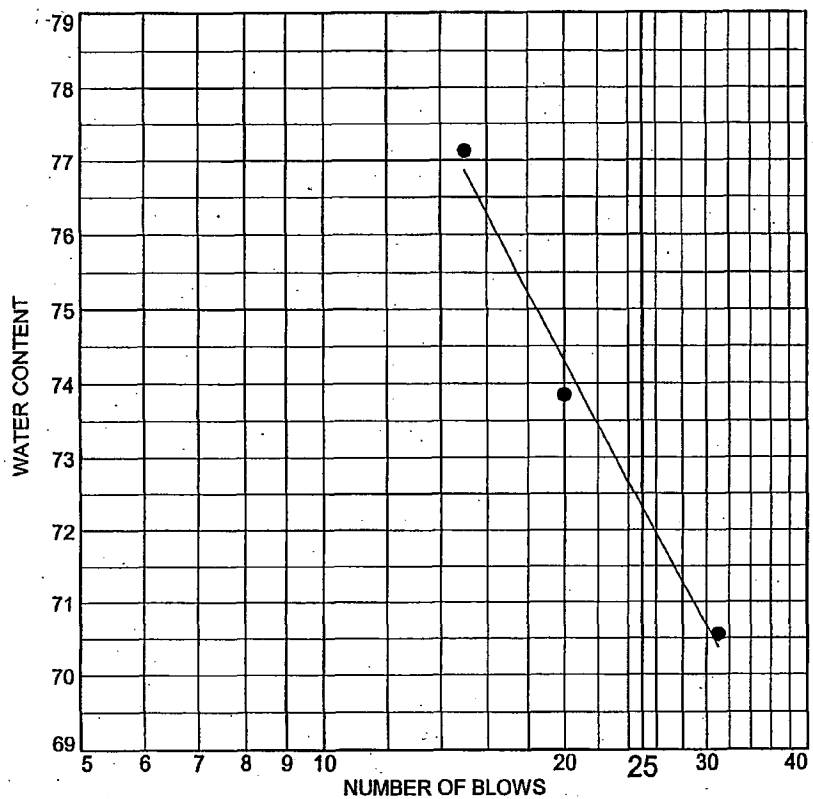


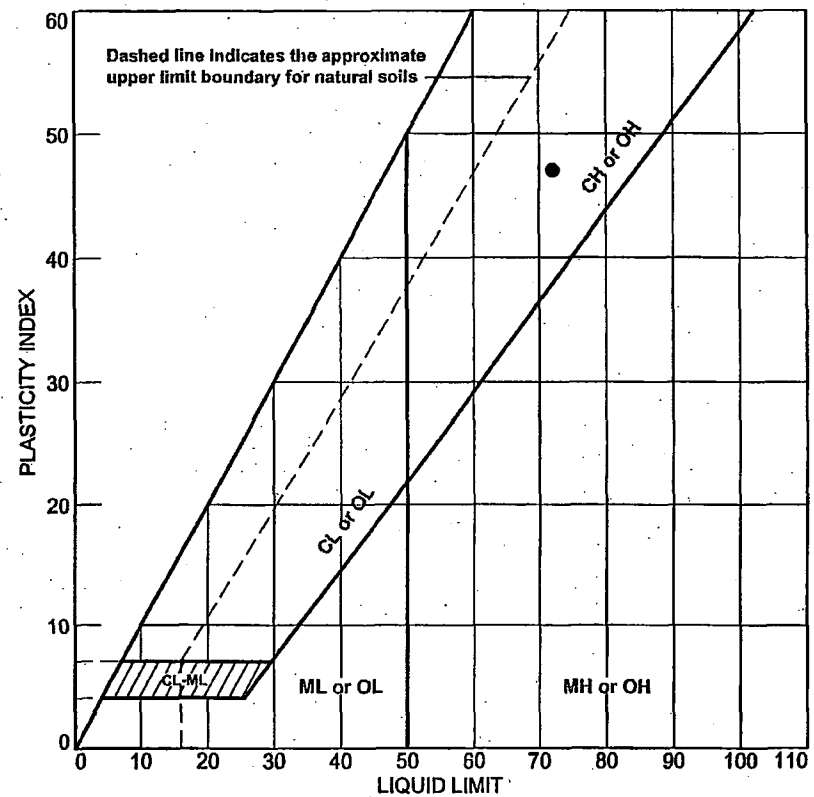
Liquid Limit= 53
Plastic Limit= 21
Plasticity Index= 32
Natural Moisture= 27.0
Liquidity Index= 0.2

Run No.	1	2	3	4	
Wet+Tare	36.40	34.57			
Dry+Tare	34.81	33.28			
Tare	27.13	27.10			
Moisture	20.7	20.9			

04/4/07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 908	STP-195 (SS-9)	12.0'-13.5'	12/15/2006	CH	Fat Clay	24.8	72	47

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF

ASTM D4318-05

MH 4-3-07

KAW 4/3/07

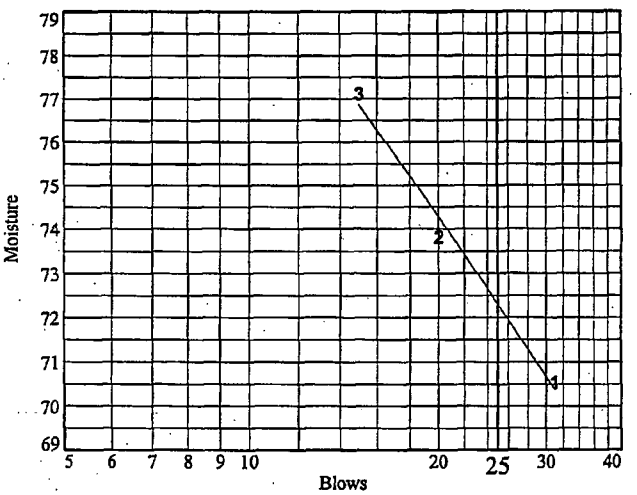
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 908
Depth: 12.0'-13.5' **Sample Number:** STP-195 (SS-9)
Material Description: Fat Clay
Date: 12/15/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.65	35.75	32.88			
Dry+Tare	33.72	32.56	29.17			
Tare	28.15	28.24	24.36			
# Blows	31	20	15			
Moisture	70.6	73.8	77.1			



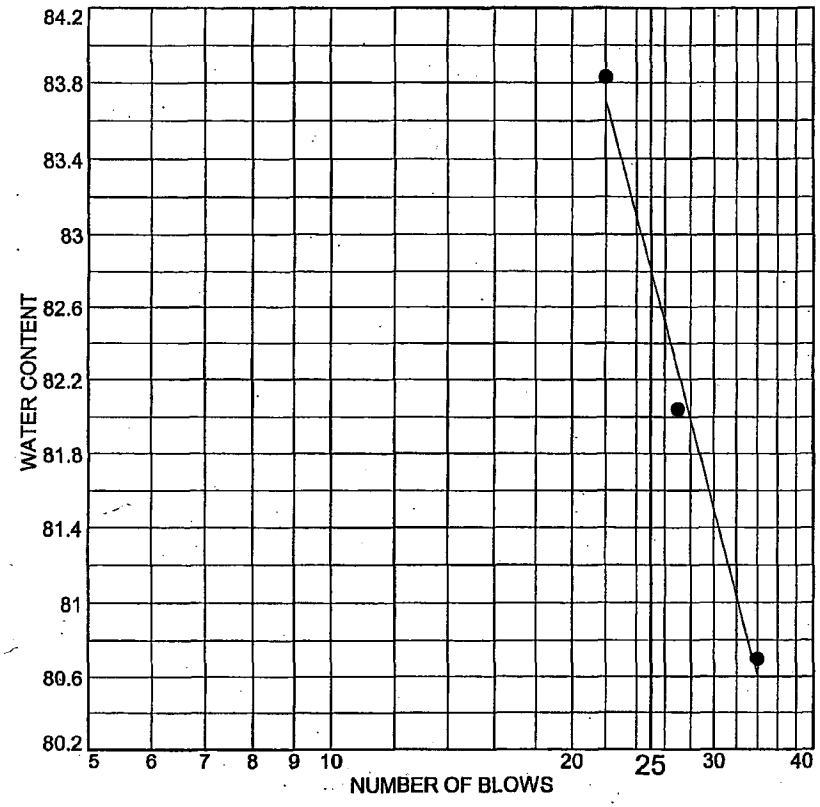
Liquid Limit= 72
Plastic Limit= 25
Plasticity Index= 47
Natural Moisture= 24.8
Liquidity Index= 0.0

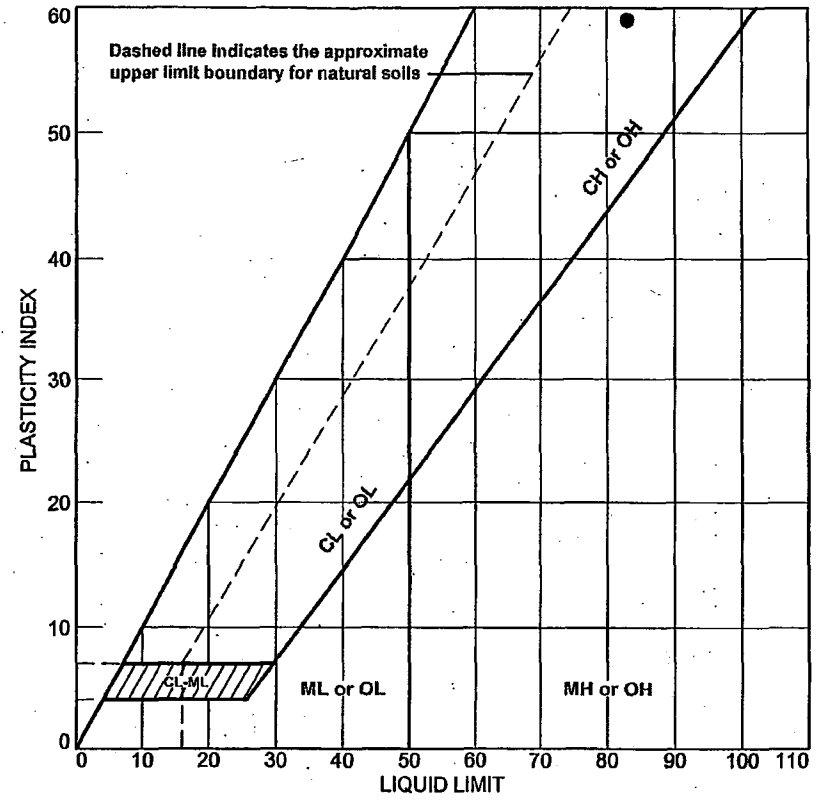
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	33.83	37.45			
Dry+Tare	32.18	35.57			
Tare	25.55	28.24			
Moisture	24.9	25.6			

4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 908	STP-201 (SS-18)	53.5'-55.0'	12/15/2006	CH	Fat Clay	30.6	83	59

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

4-3-07

KAW 4/3/07

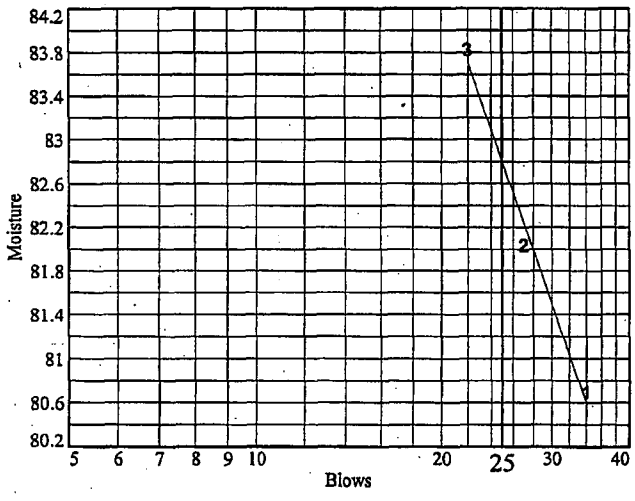
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 908
Depth: 53.5'-55.0' **Sample Number:** STP-201 (SS-18)
Material Description: Fat Clay
Date: 12/15/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.03	36.31	36.95			
Dry+Tare	33.10	32.61	33.01			
Tare	28.23	28.10	28.31			
# Blows	34	27	22			
Moisture	80.7	82.0	83.8			



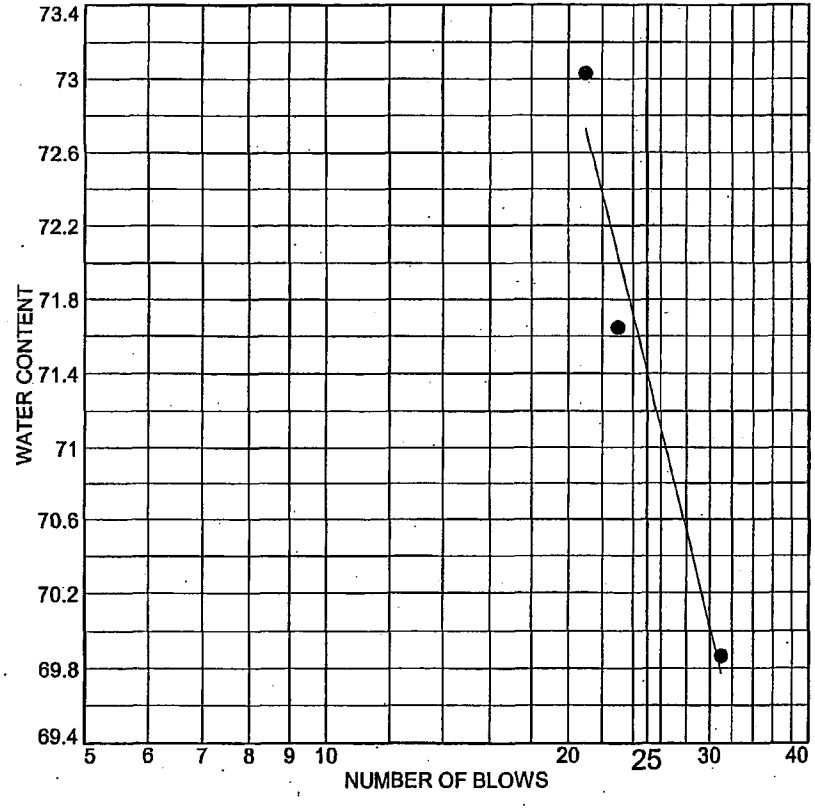
Liquid Limit= 83
Plastic Limit= 24
Plasticity Index= 59
Natural Moisture= 30.6
Liquidity Index= 0.1

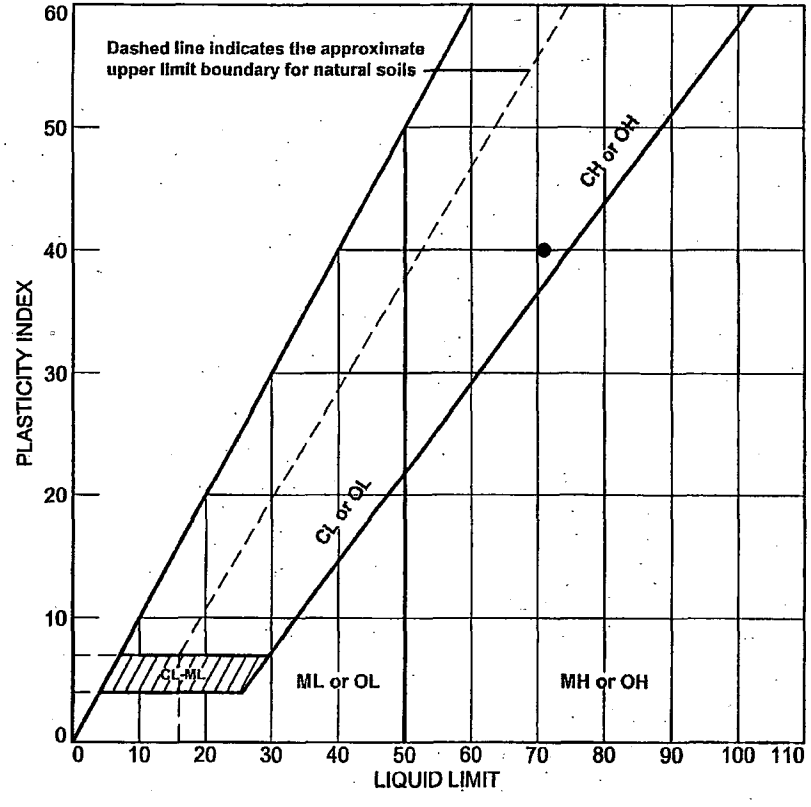
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	33.27	33.54			
Dry+Tare	32.10	32.53			
Tare	27.17	28.24			
Moisture	23.7	23.5			

MAA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 908	STP-202 (SS-21)	68.5'-70.0'	12/15/2006	CH	Fat Clay	26.1	71	40

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF

ASTM D4318-05

MH 4-3-07

KAW 4/3/07

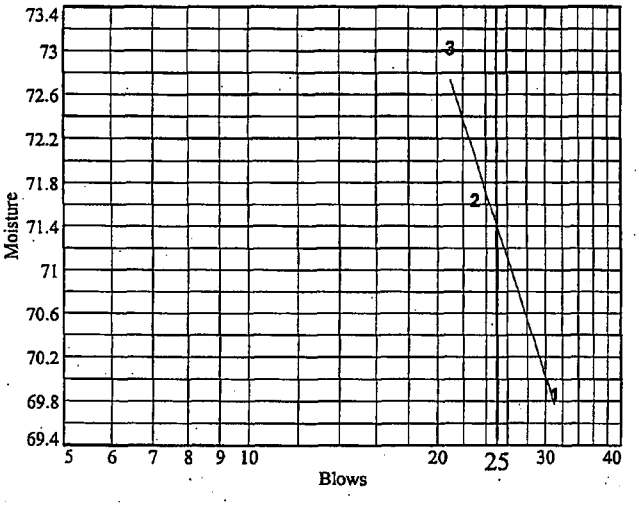
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 908
Depth: 68.5'-70.0' **Sample Number:** STP-202 (SS-21)
Material Description: Fat Clay
Date: 12/15/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	35.71	34.88	35.43			
Dry+Tare	32.58	32.05	32.37			
Tare	28.10	28.10	28.18			
# Blows	31	23	21			
Moisture	69.9	71.6	73.0			



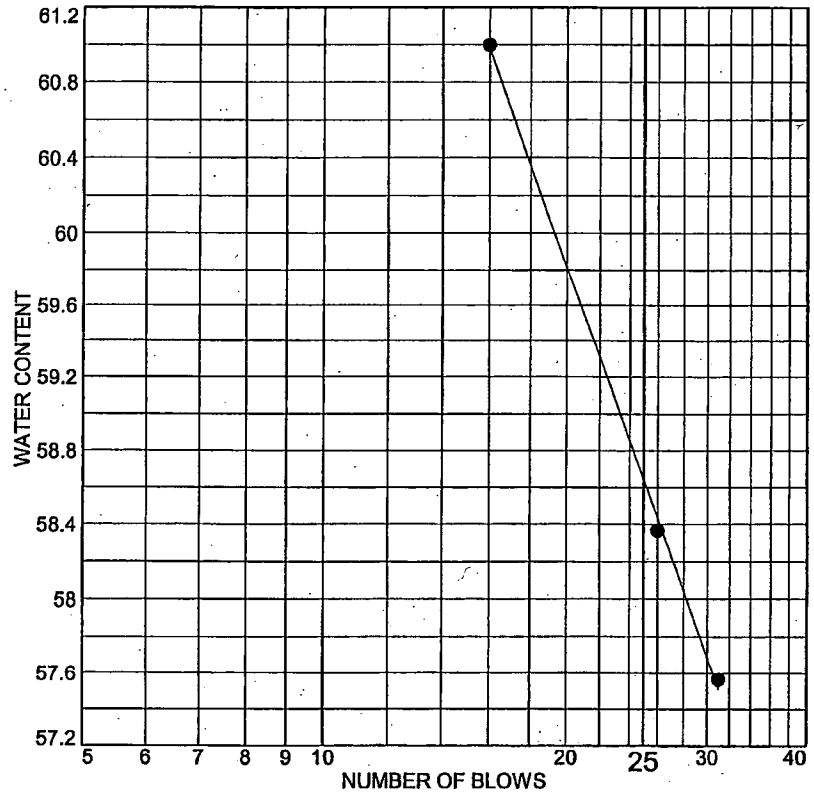
Liquid Limit= 71
Plastic Limit= 31
Plasticity Index= 40
Natural Moisture= 26.1
Liquidity Index= -0.1

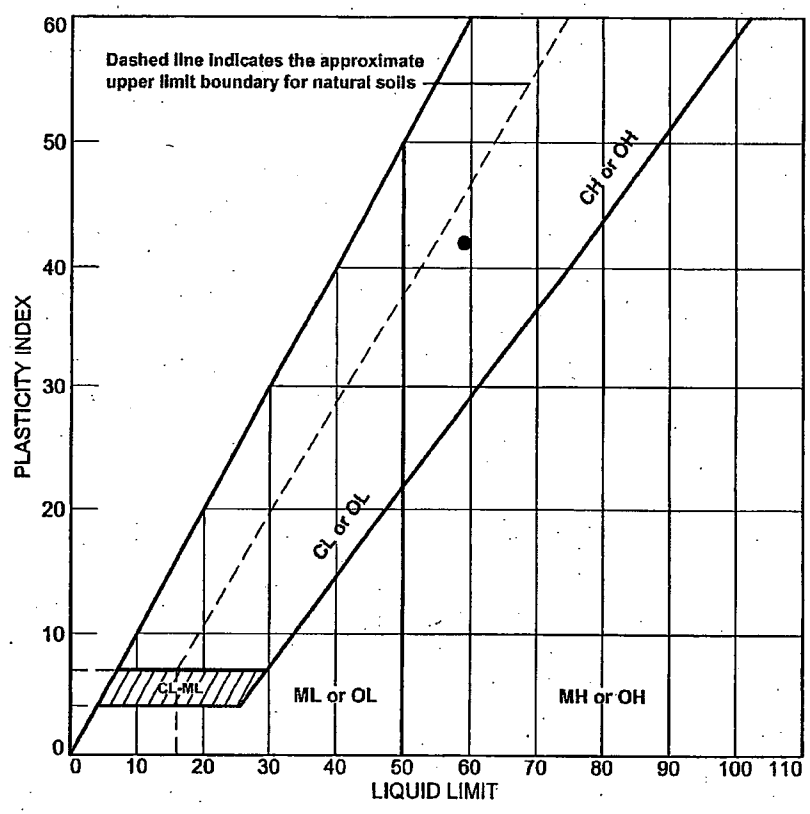
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	33.22	35.54			
Dry+Tare	31.83	33.75			
Tare	27.20	28.20			
Moisture	30.0	32.3			

MM 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 908	STP-203	78.5'-80.0'	12/15/2006	CH	Fat Clay	21.8	59	42
		(SS-23)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:MH
ASTM D4318-05

MH 4-3-07

KAW 4/3/07

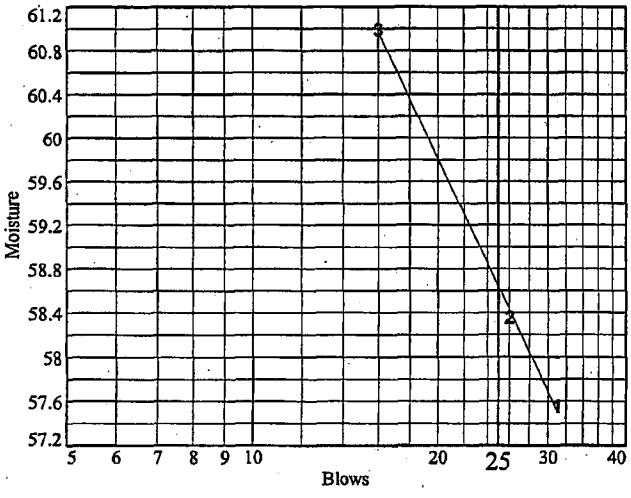
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 908
Depth: 78.5'-80.0'
Sample Number: STP-203 (SS-23)
Material Description: Fat Clay
Date: 12/15/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	35.71	35.57	37.39			
Dry+Tare	32.59	32.50	33.84			
Tare	27.17	27.24	28.02			
# Blows	31	26	16			
Moisture	57.6	58.4	61.0			



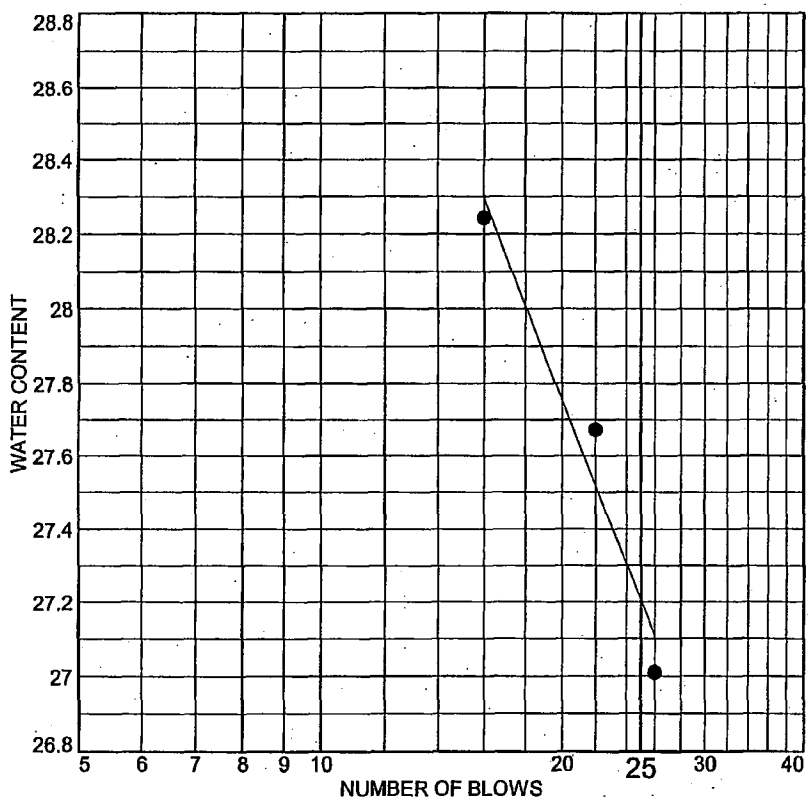
Liquid Limit= 59
Plastic Limit= 17
Plasticity Index= 42
Natural Moisture= 21.8
Liquidity Index= 0.1

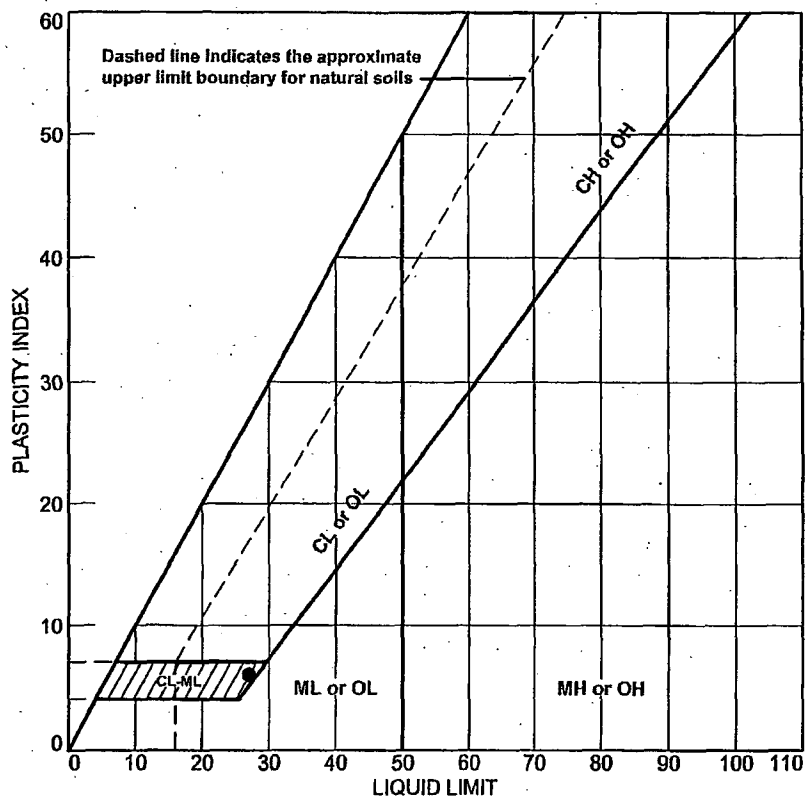
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	34.87	37.56			
Dry+Tare	33.75	36.19			
Tare	27.30	28.33			
Moisture	17.4	17.4			

MH 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 908	STP-204 (SS-24)	83.5'-85.0'	12/15/2006	CL-ML	Silty Clay	20.5	27	6

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH/JW Reviewed By:RF
ASTM D4318-05

MM
4-3-07

KAW 4/3/07

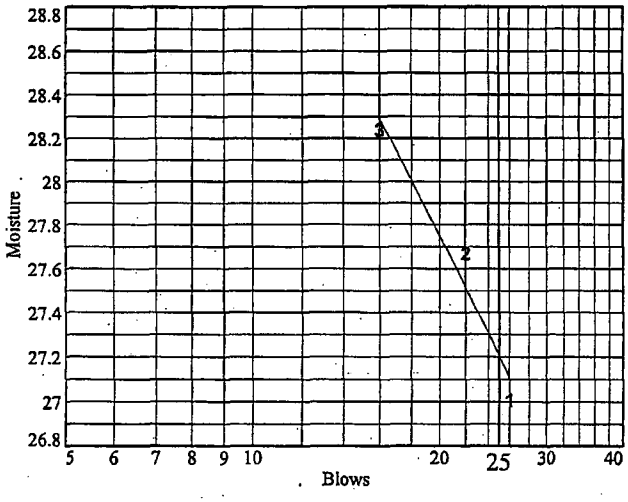
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 908
Depth: 83.5'-85.0' **Sample Number:** STP-204 (SS-24)
Material Description: Silty Clay
Date: 12/15/2006 **USCS Class.:** CL-ML
Testing Remarks: Tested By:AC/TH/JW Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	40.52	40.67	38.65			
Dry+Tare	37.90	37.77	36.32			
Tare	28.20	27.29	28.07			
# Blows	26	22	16			
Moisture	27.0	27.7	28.2			



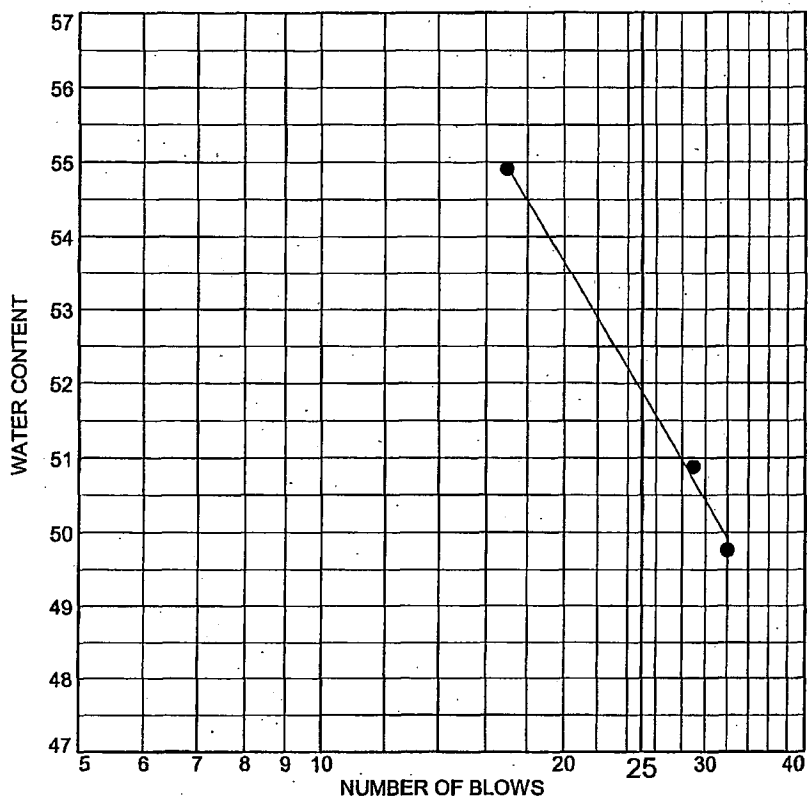
Liquid Limit= 27
Plastic Limit= 21
Plasticity Index= 6
Natural Moisture= 20.5
Liquidity Index= -0.1

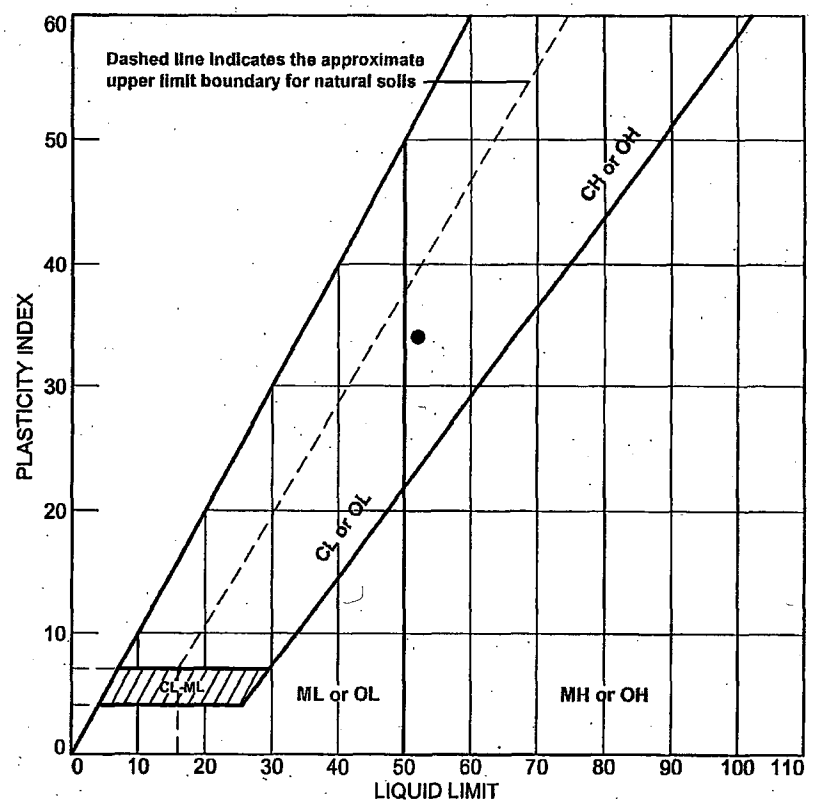
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	40.07	35.63			
Dry+Tare	38.01	34.35			
Tare	28.37	28.04			
Moisture	21.4	20.3			

MA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 908	STP-205 (SS-26)	93.5'-95.0'	12/15/2006	CH	Fat Clay	19.1	52	34

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

MA
4-3-07

KAW 4/3/07

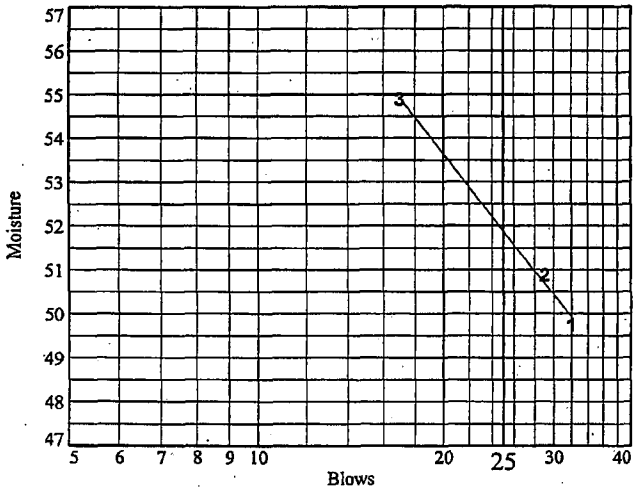
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 908
Depth: 93.5'-95.0'
Sample Number: STP-205 (SS-26)
Material Description: Fat Clay
Date: 12/15/2006
USCS Class.: CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.62	40.02	37.18			
Dry+Tare	34.47	36.00	33.60			
Tare	28.14	28.10	27.08			
# Blows	32	29	17			
Moisture	49.8	50.9	54.9			



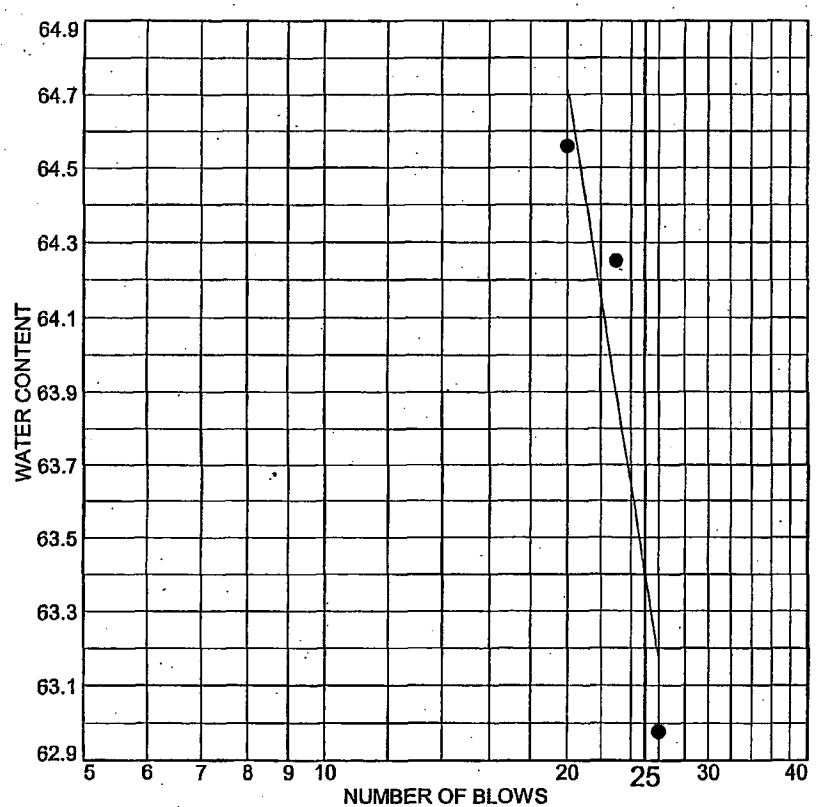
Liquid Limit= 52
Plastic Limit= 18
Plasticity Index= 34
Natural Moisture= 19.1
Liquidity Index= 0.0

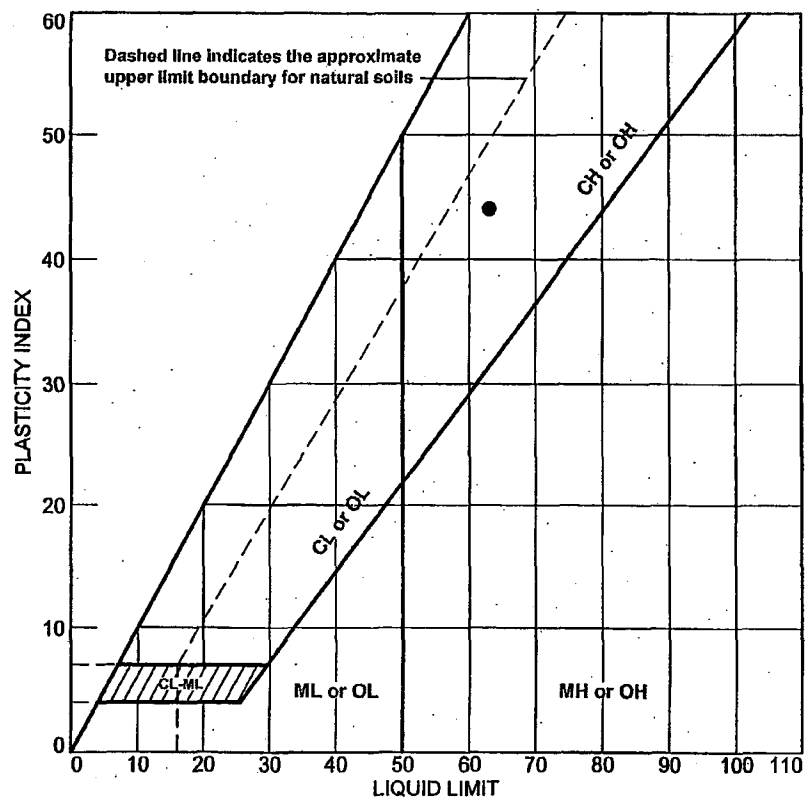
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	34.96	35.75			
Dry+Tare	33.95	34.61			
Tare	28.28	28.32			
Moisture	17.8	18.1			

MK 4-30-7

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 909	STP-206 (SS-2)	1.5'-3.0'	12/13/2006	CH	Fat Clay	27.0	63	44

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:MH
ASTM D4318-05

MH 4.3.07

KAW 4/3/07

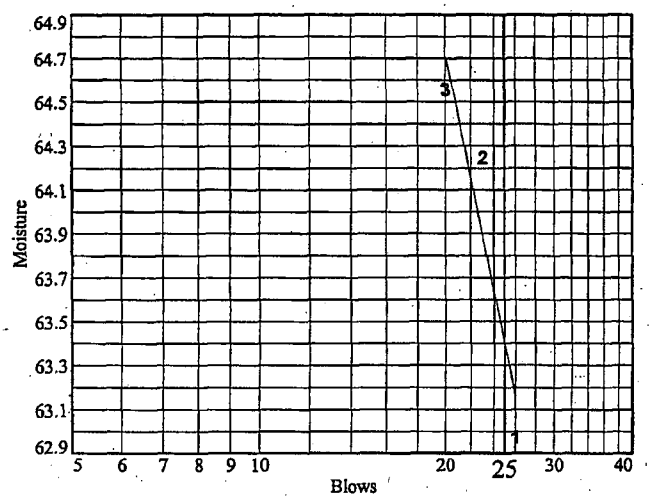
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 909
Depth: 1.5'-3.0' **Sample Number:** STP-206 (SS-2)
Material Description: Fat Clay
Date: 12/13/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	31.21	37.99	36.75			
Dry+Tare	27.91	34.09	33.38			
Tare	22.67	28.02	28.16			
# Blows	26	23	20			
Moisture	63.0	64.3	64.6			



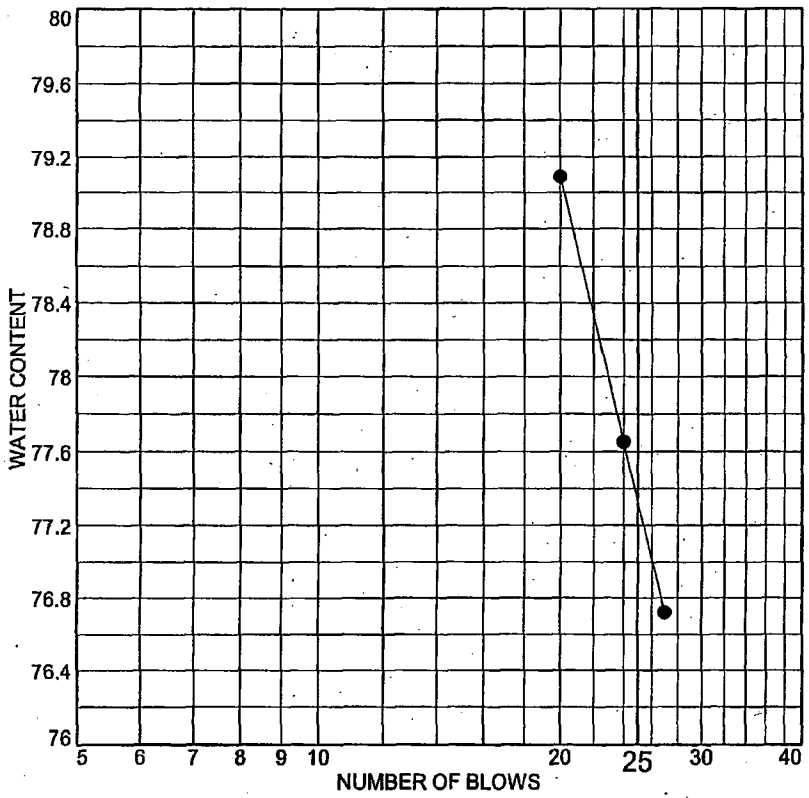
Liquid Limit= 63
Plastic Limit= 19
Plasticity Index= 44
Natural Moisture= 27.0
Liquidity Index= 0.2

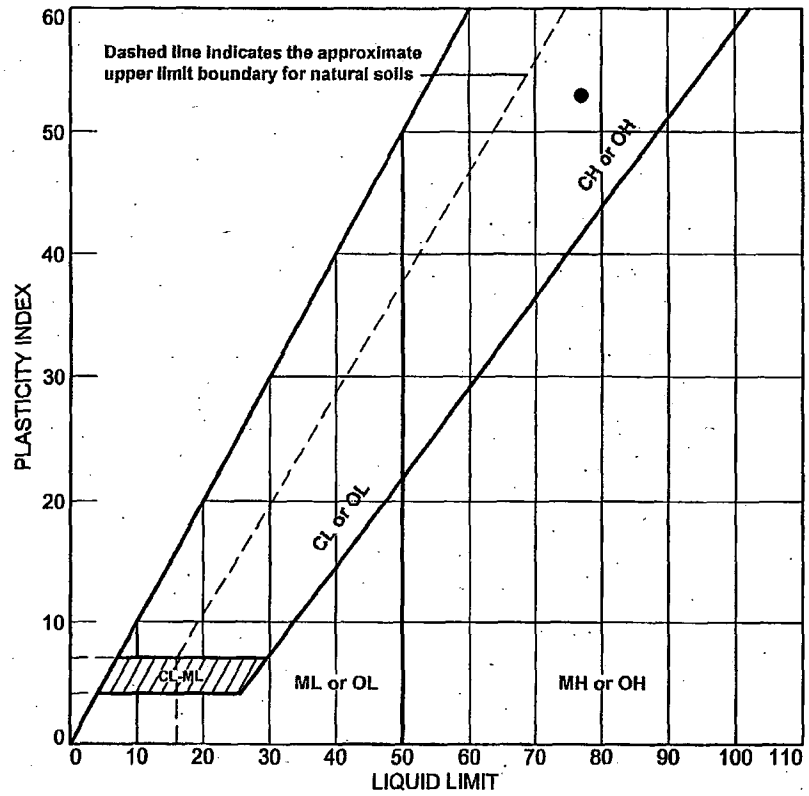
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.10	36.80			
Dry+Tare	34.65	35.42			
Tare	27.12	28.24			
Moisture	19.3	19.2			

NM 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 909	STP-207	7.5'-9.0'	12/13/06	CH	Fat Clay	26.5	77	53
		(SS-6)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF

ASTM D4318-05

4-3-07

KAW 4/3/07

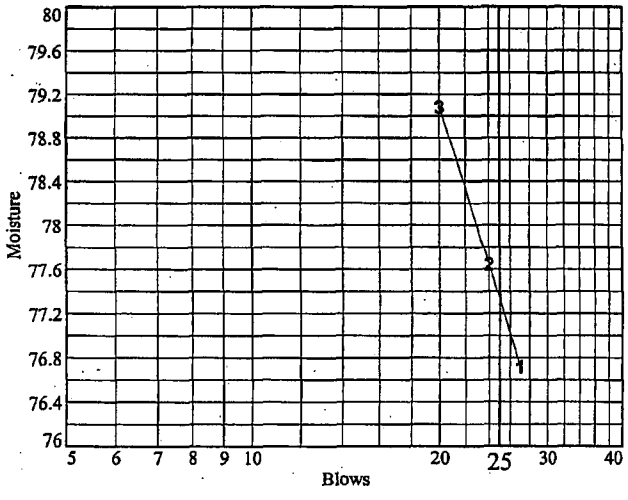
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 909
Depth: 7.5'-9.0' **Sample Number:** STP-207 (SS-6)
Material Description: Fat Clay
Date: 12/13/06 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	35.90	35.97	35.69			
Dry+Tare	32.11	32.53	32.40			
Tare	27.17	28.10	28.24			
# Blows	27	24	20			
Moisture	76.7	77.7	79.1			



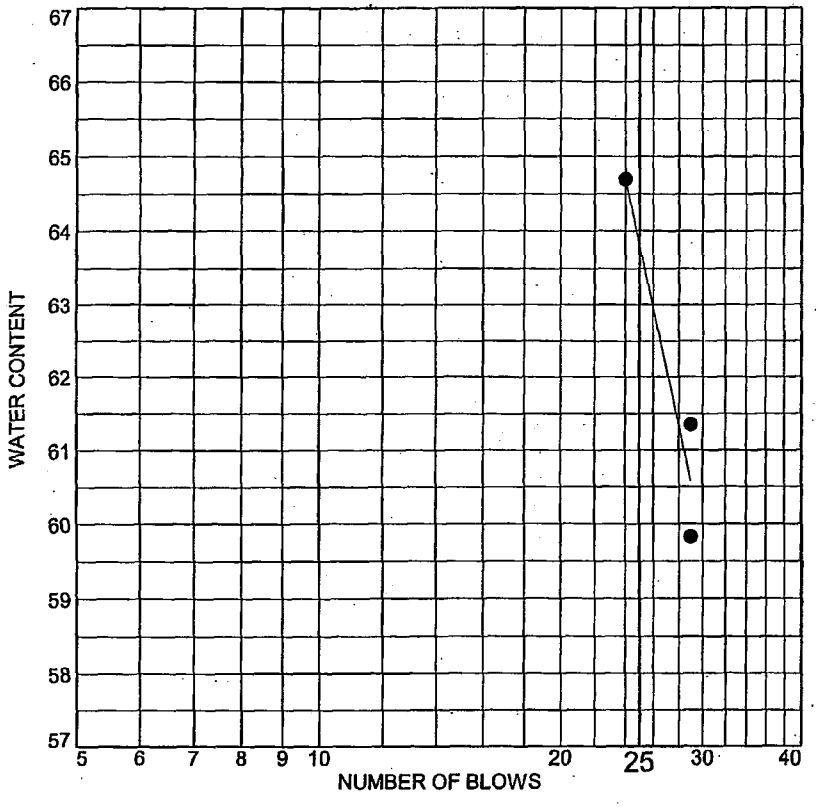
Liquid Limit= 77
Plastic Limit= 24
Plasticity Index= 53
Natural Moisture= 26.5
Liquidity Index= 0.0

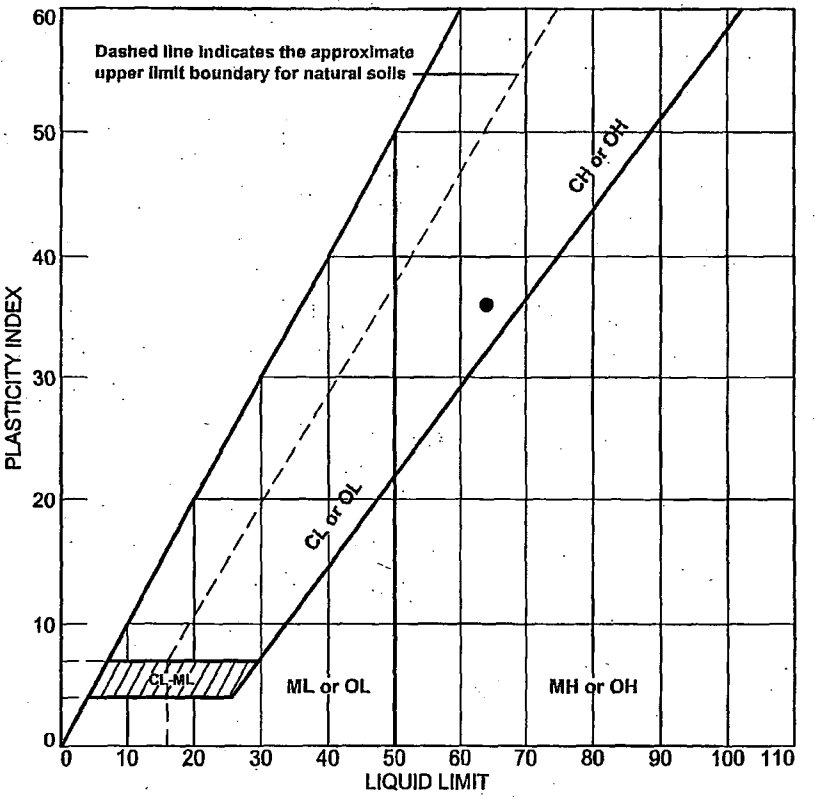
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.80	37.04			
Dry+Tare	35.16	35.32			
Tare	28.25	28.17			
Moisture	23.7	24.1			

MAH 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 909	STP-208	13.5'-15.0'	12/13/2006	CH	Fat Clay	21.1	64	36
		(SS-10)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:MH Reviewed By:RF

ASTM D4318-05

MH 4-3-07

KAW 4/3/07

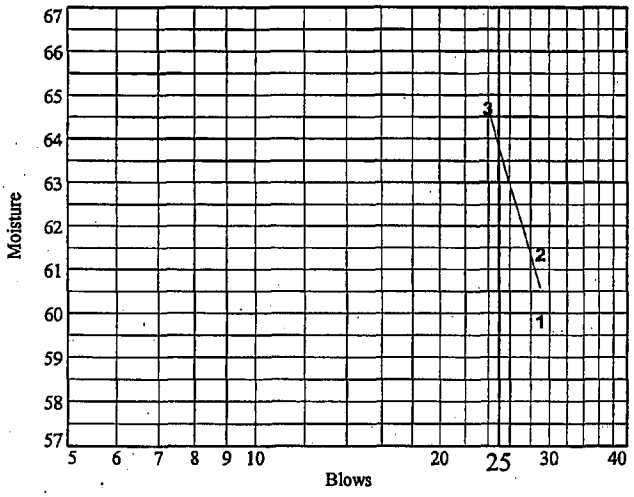
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 909
Depth: 13.5'-15.0' **Sample Number:** STP-208 (SS-10)
Material Description: Fat Clay
Date: 12/13/2006 **USCS Class.:** CH
Testing Remarks: Tested By:MH Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.11	38.16	38.84			
Dry+Tare	33.67	34.35	34.24			
Tare	27.92	28.14	27.13			
# Blows	29	29	24			
Moisture	59.8	61.4	64.7			



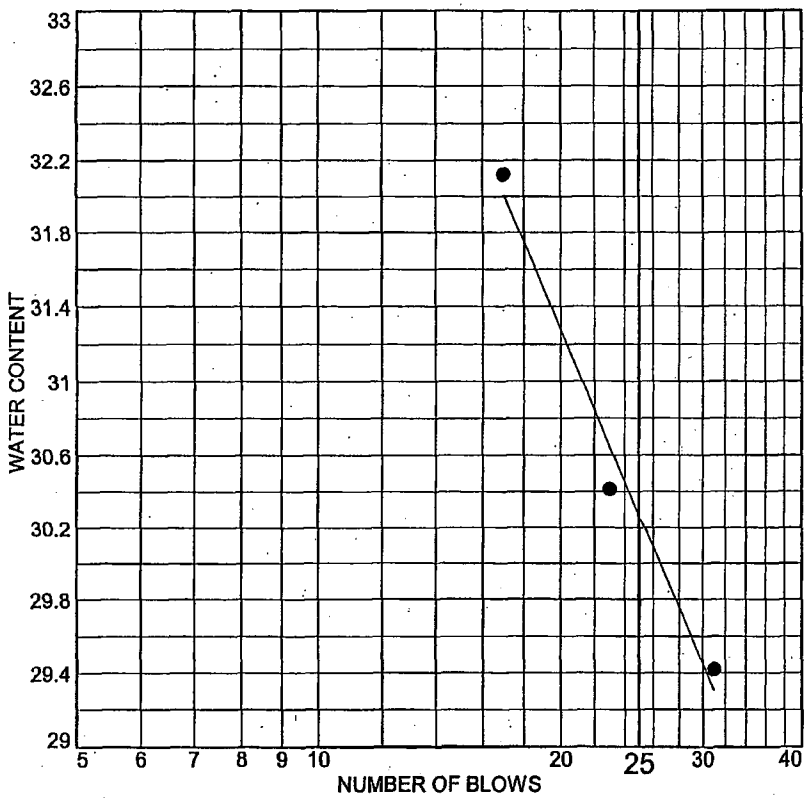
Liquid Limit= 64
Plastic Limit= 28
Plasticity Index= 36
Natural Moisture= 21.1
Liquidity Index= -0.2

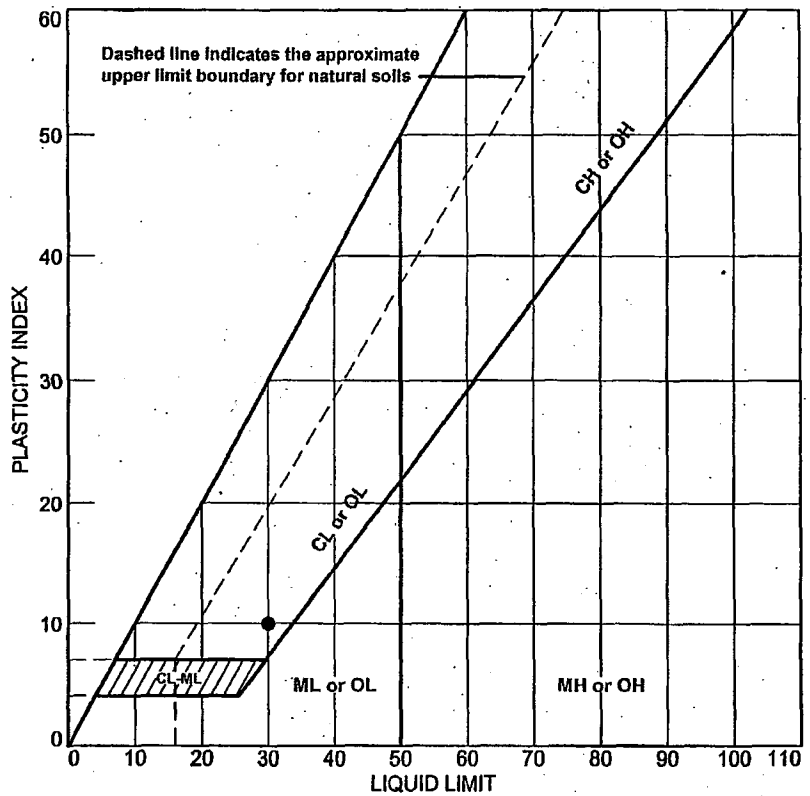
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	30.23	34.32			
Dry+Tare	28.35	33.12			
Tare	22.67	28.05			
Moisture	33.1	23.7			

MA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 909	STP-209 (SS-12)	23.5'-25.0'	12/13/2006	CL	Lean Clay	21.6	30	10

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

4-3-07

KAW 4/3/07

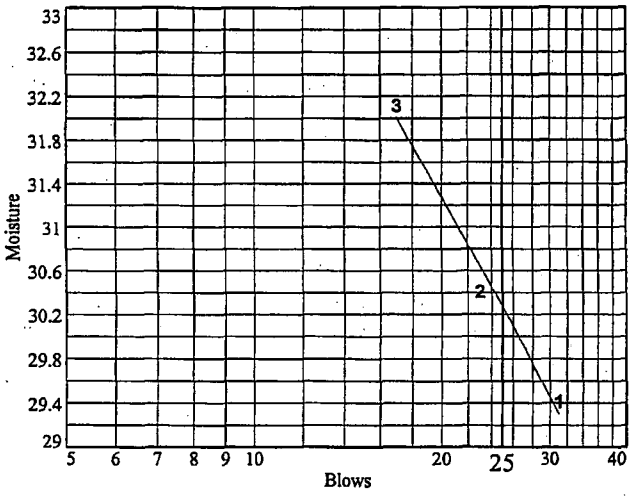
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 909
Depth: 23.5'-25.0' **Sample Number:** STP-209 (SS-12)
Material Description: Lean Clay
Date: 12/13/2006 **USCS Class.:** CL
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.75	38.45	39.17			
Dry+Tare	34.17	35.81	36.52			
Tare	25.40	27.13	28.27			
# Blows	31	23	17			
Moisture	29.4	30.4	32.1			



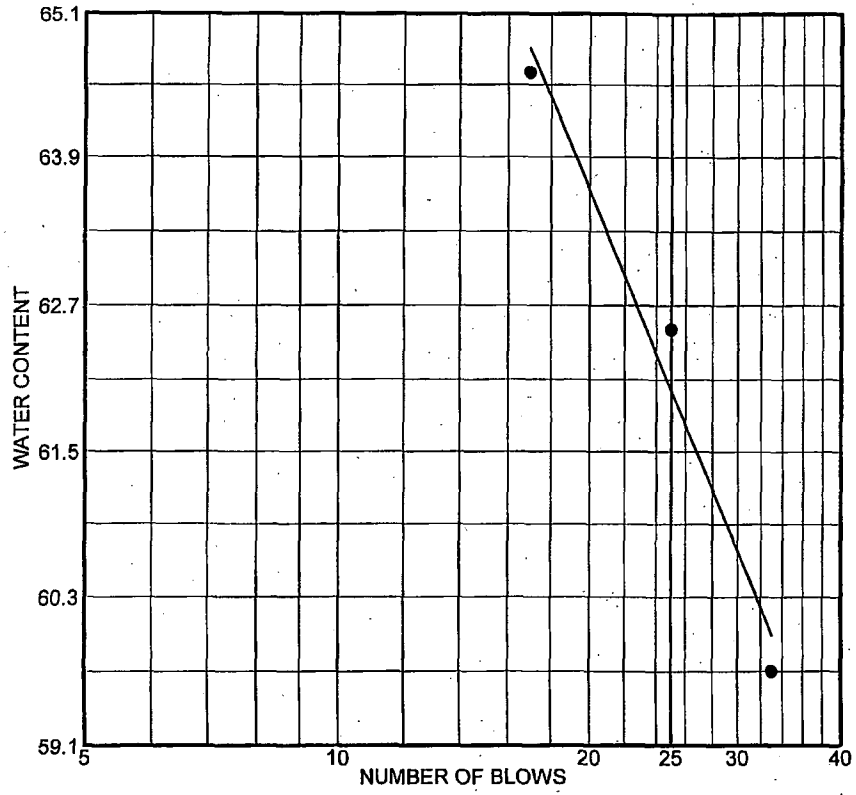
Liquid Limit= 30
Plastic Limit= 20
Plasticity Index= 10
Natural Moisture= 21.6
Liquidity Index= 0.2

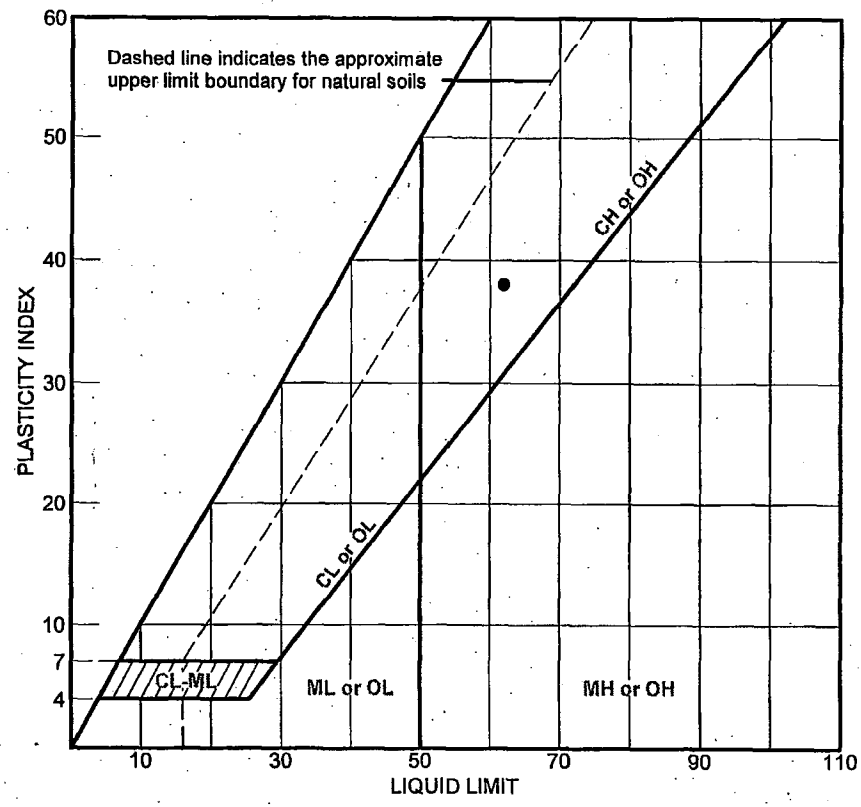
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.80	35.55			
Dry+Tare	34.57	34.37			
Tare	28.33	28.39			
Moisture	19.7	19.7			

MH 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-909	UD-2	43' to 45'	2-20-07	CH	Fat clay	25.0	62	38

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/13/07

LIQUID AND PLASTIC LIMIT TEST DATA

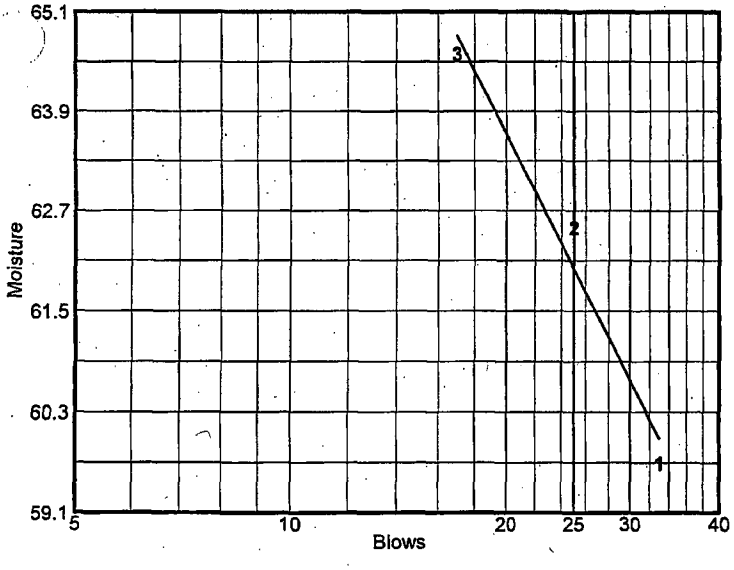
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-909
Sample No.: UD-2
Elev. or Depth: 43' to 45' **Sample Length(in./cm.):**
Location: B-909
Description: Fat clay
Date: 2-20-07 **Natural Moisture:** 25.0
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	24.77	26.72	25.25			
Dry+Tare	19.77	20.63	19.56			
Tare	11.39	10.89	10.75			
# Blows	33	25	17			
Moisture	59.7	62.5	64.6			

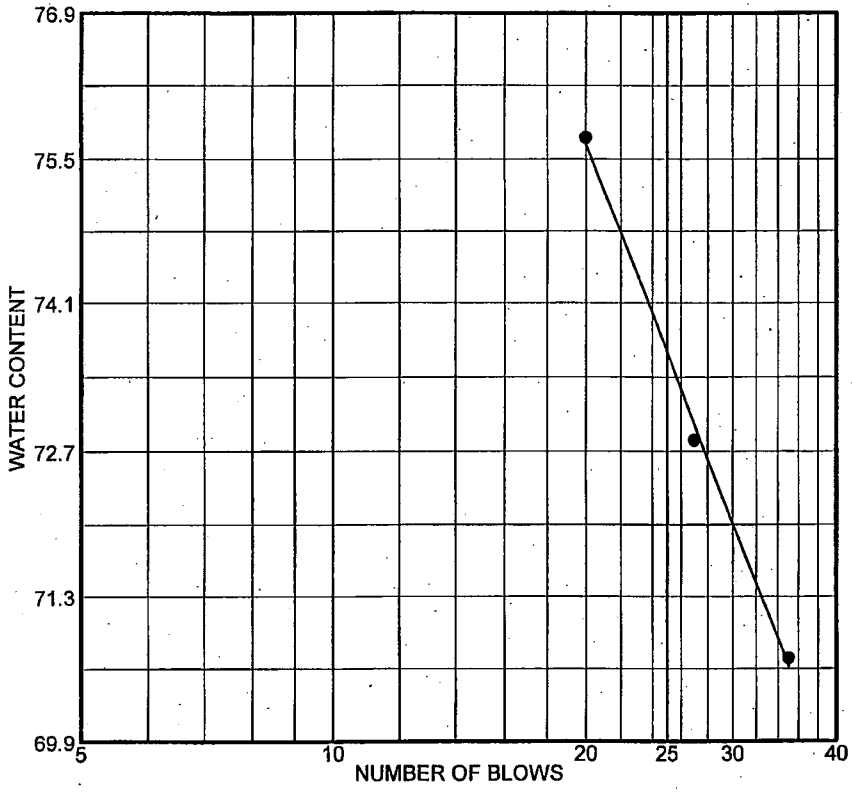


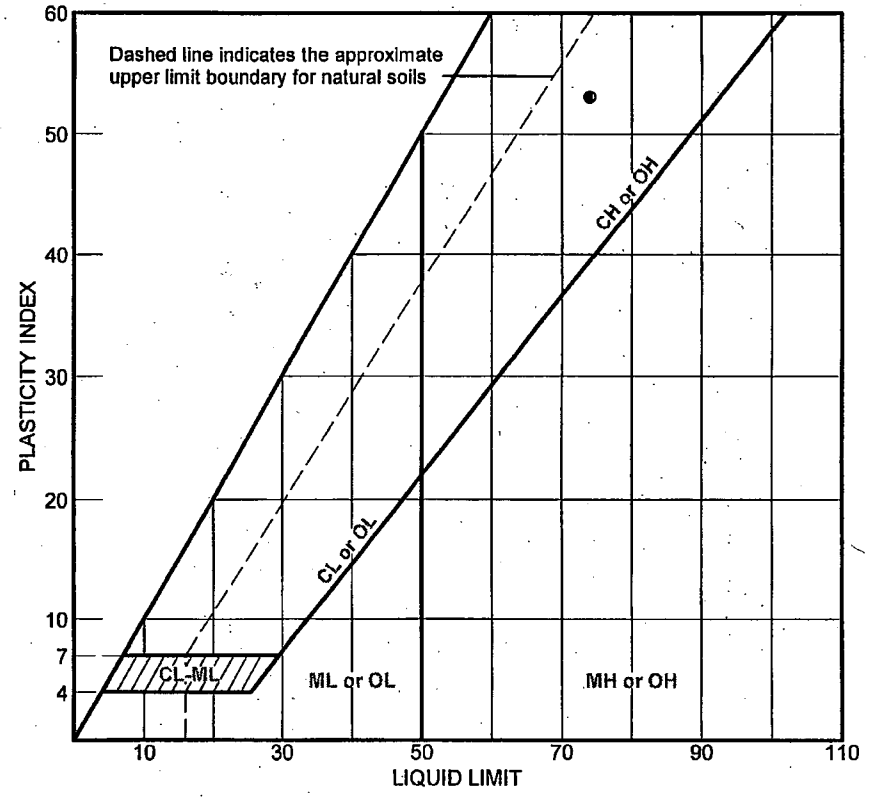
Liquid Limit= 62
Plastic Limit= 24
Plasticity Index= 38

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	21.43	20.50			
Dry+Tare	19.40	18.63			
Tare	10.85	10.95			
Moisture	23.7	24.3			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-909	UD-3	48' to 50'	2-20-07	CH	Fat Clay	30.6	74	53

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: SS
ASTM D4318-05

SS 2/25/2007

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

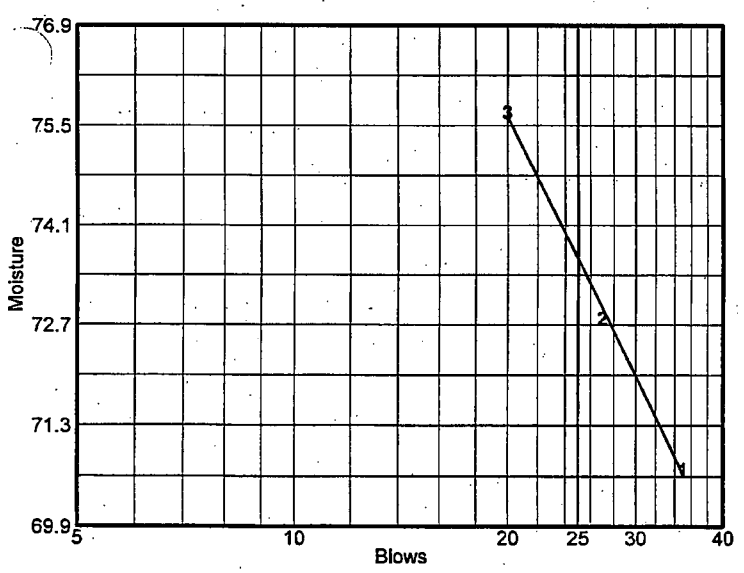
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-909
Sample No.: UD-3
Elev. or Depth: 48' to 50' **Sample Length(in./cm.):**
Location: B-909
Description: Fat Clay
Date: 2-20-07 **Natural Moisture:** 30.6
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	28.52	27.55	31.81			
Dry+Tare	21.49	20.71	22.86			
Tare	11.55	11.31	11.03			
# Blows	35	27	20			
Moisture	70.7	72.8	75.7			

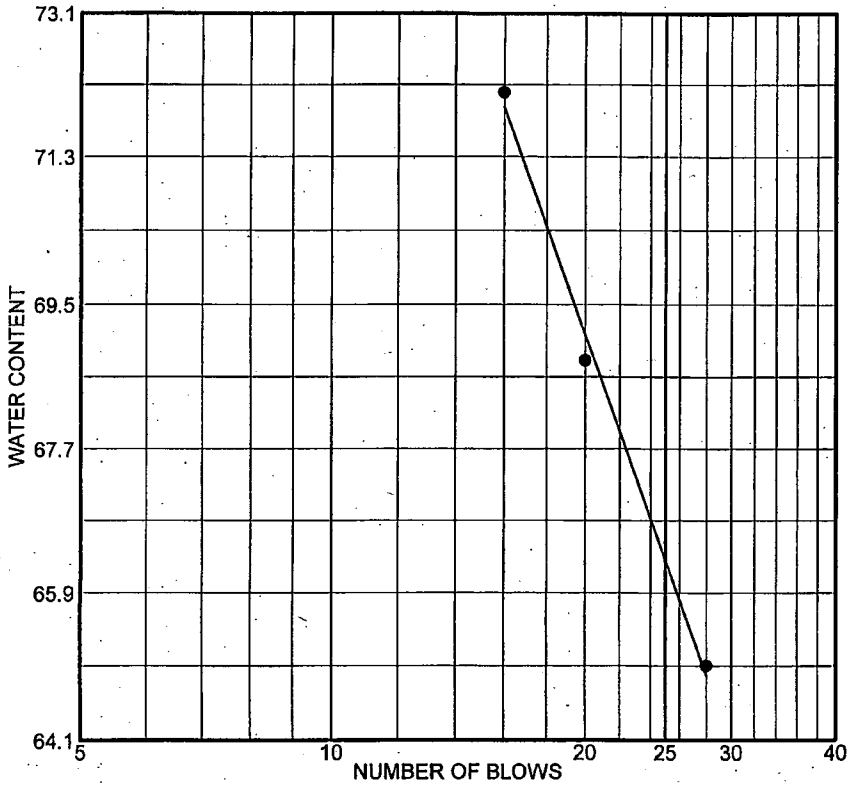


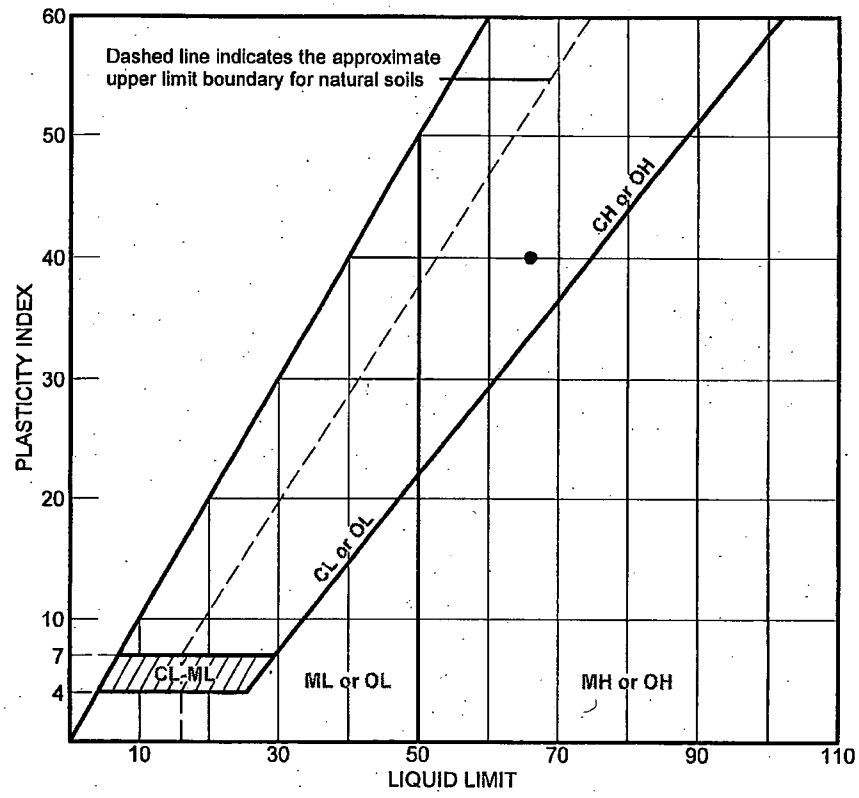
Liquid Limit= 74
Plastic Limit= 21
Plasticity Index= 53

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	24.36	24.54			
Dry+Tare	21.93	22.19			
Tare	10.73	11.11			
Moisture	21.7	21.2			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-909	UD-4	53' to 55'	2-22-07	CH	Fat clay	30.0	66	40

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH KAW 4/3/07
ASTM D4318-05

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

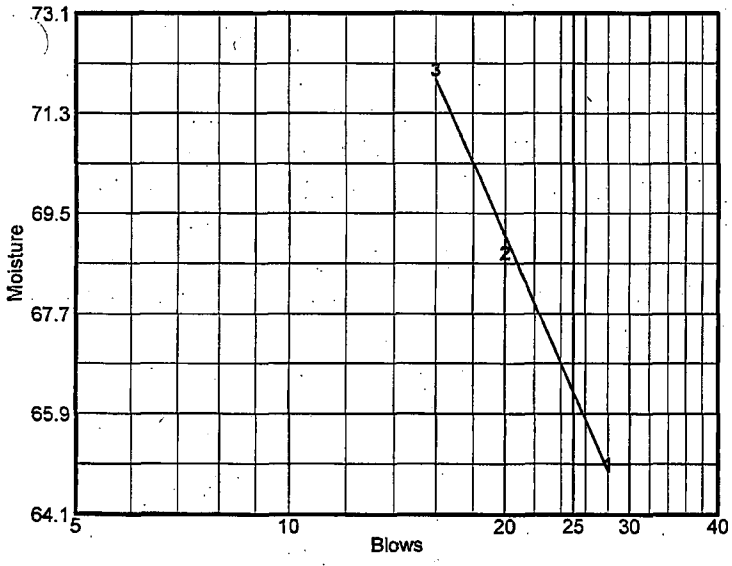
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-909
Sample No.: UD-4
Elev. or Depth: 53' to 55' **Sample Length(in./cm.):**
Location: B-909
Description: Fat clay
Date: 2-22-07 **Natural Moisture:** 30.0
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	25.03	25.43	29.40			
Dry+Tare	19.56	19.56	21.66			
Tare	11.15	11.03	10.92			
# Blows	28	20	16			
Moisture	65.0	68.8	72.1			

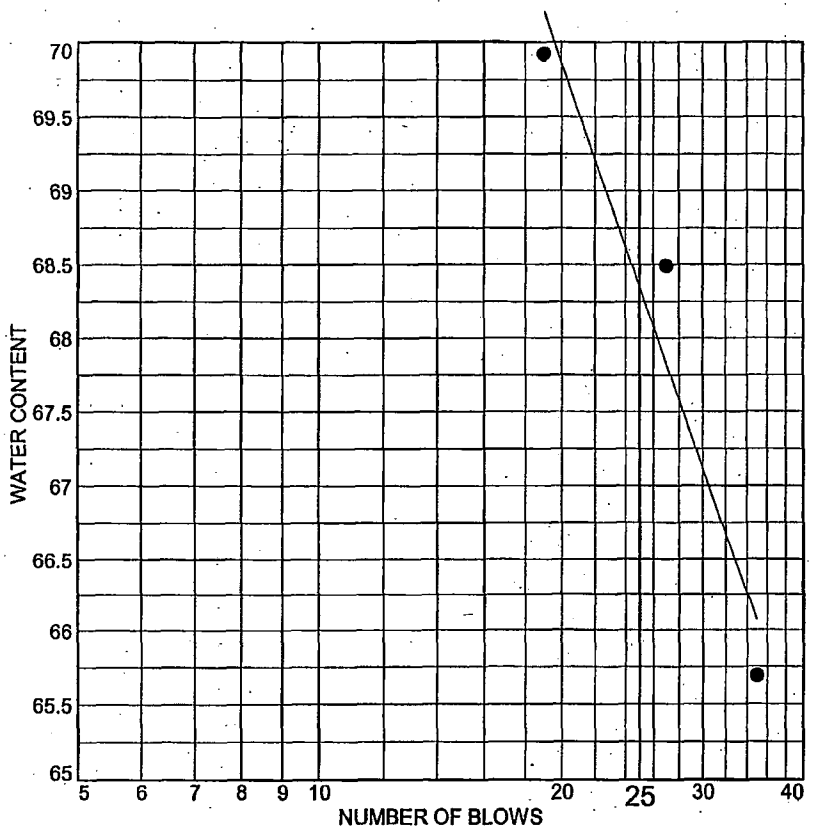


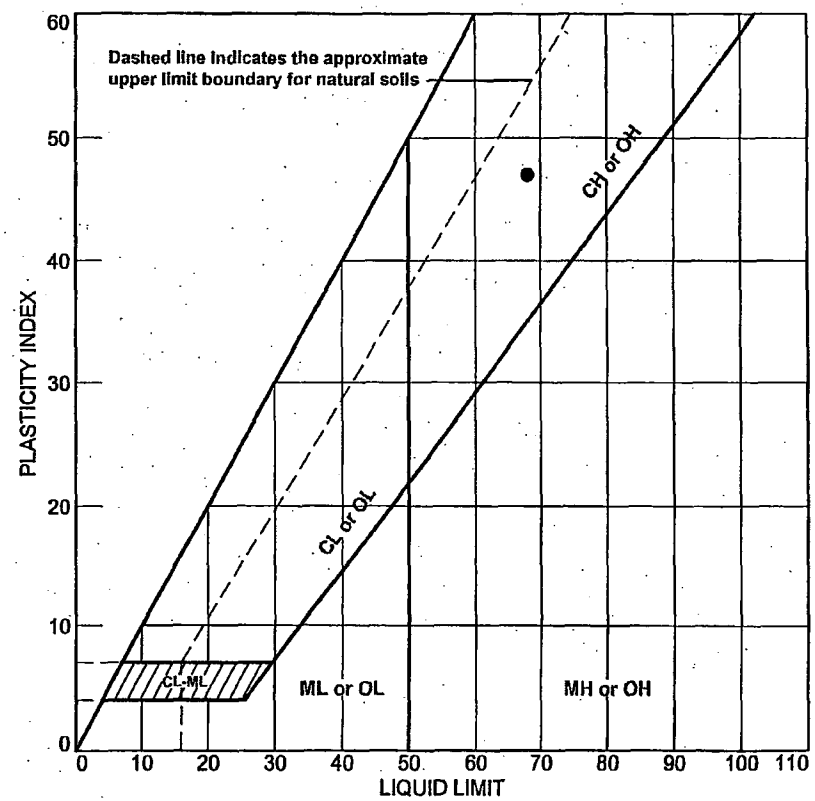
Liquid Limit= 66
Plastic Limit= 26
Plasticity Index= 40

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	21.44	18.90			
Dry+Tare	19.27	17.25			
Tare	10.93	11.03			
Moisture	26.0	26.5			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 909	STP-211 (SS-16)	63.5'-65.0'	12/14/2006	CH	Fat Clay	23.5	68	47

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/MH Reviewed By:RF

ASTM D4318-05

MH 4-3-07

KAW 4/3/07

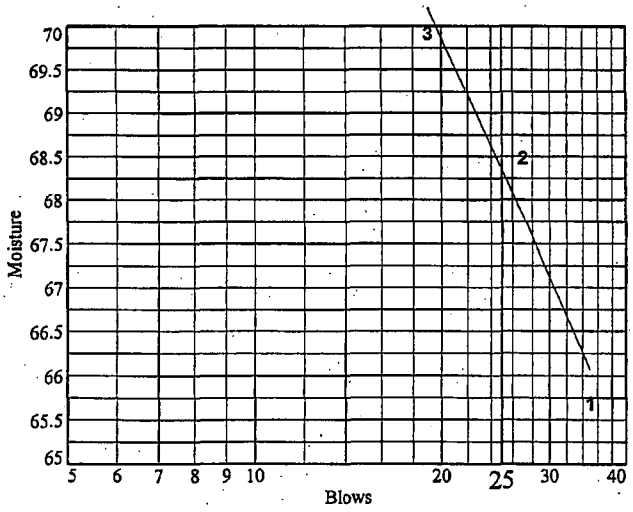
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 909
Depth: 63.5'-65.0'
Sample Number: STP-211 (SS-16)
Material Description: Fat Clay
Date: 12/14/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/MH Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	41.71	40.56	37.01			
Dry+Tare	36.33	35.56	33.43			
Tare	28.14	28.26	28.31			
# Blows	35	27	19			
Moisture	65.7	68.5	69.9			



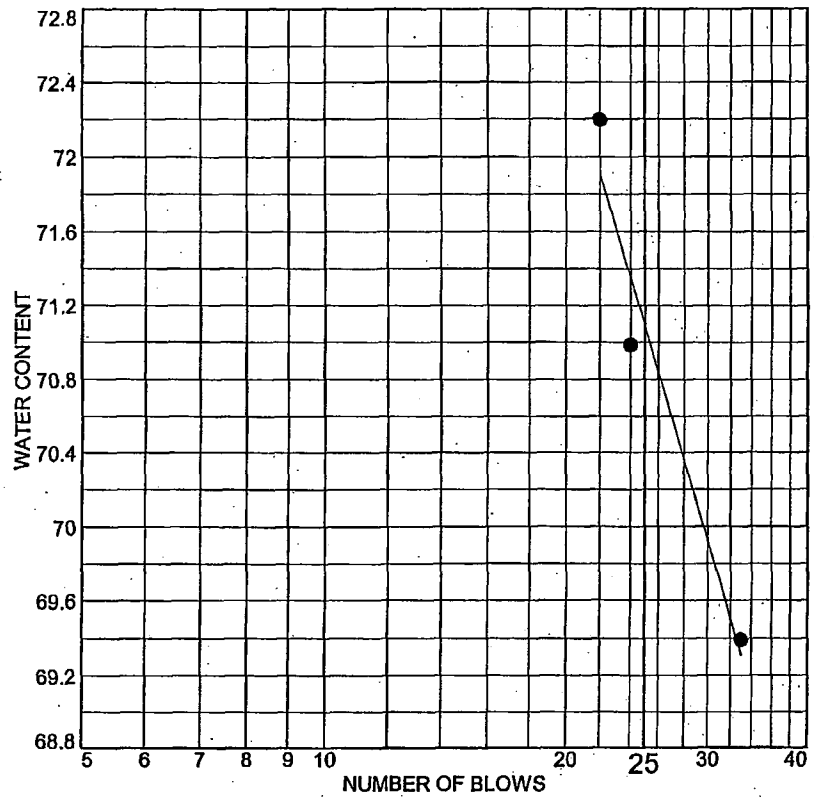
Liquid Limit= 68
Plastic Limit= 21
Plasticity Index= 47
Natural Moisture= 23.5
Liquidity Index= 0.1

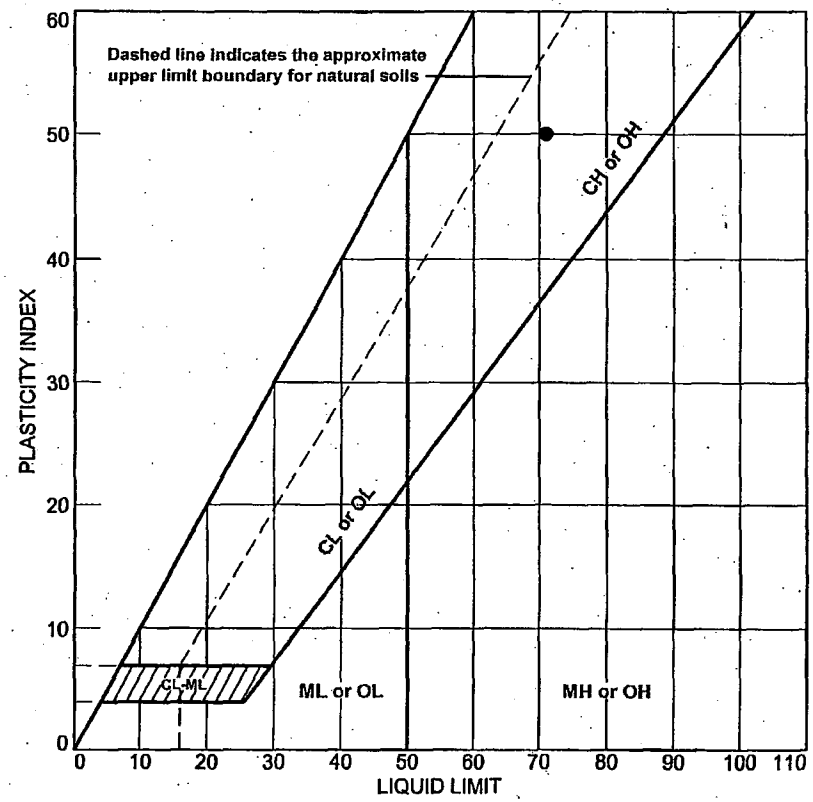
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.49	35.81			
Dry+Tare	34.19	34.51			
Tare	27.93	28.13			
Moisture	20.8	20.4			

MA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 909	STP-212	73.5'-75.0'	12/14/2006	CH	Fat Clay	23.7	71	50
		(SS-18)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:RF

ASTM D4318-05

4-3-07

KAW 4/3/07

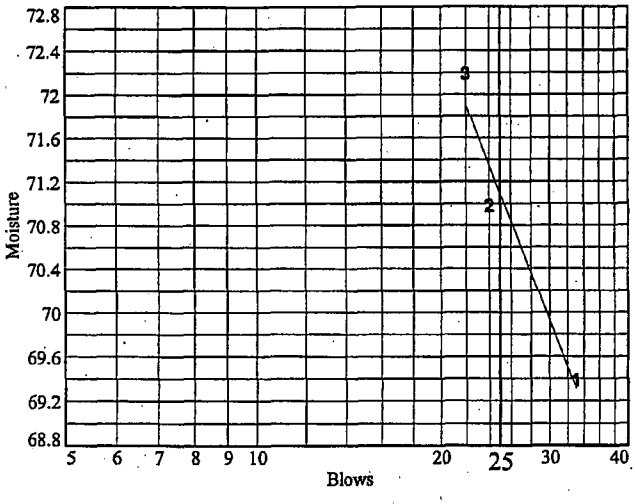
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 909
Depth: 73.5'-75.0'
Sample Number: STP-212 (SS-18)
Material Description: Fat Clay
Date: 12/14/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.24	37.09	35.70			
Dry+Tare	32.93	33.42	32.61			
Tare	28.16	28.25	28.33			
# Blows	33	24	22			
Moisture	69.4	71.0	72.2			



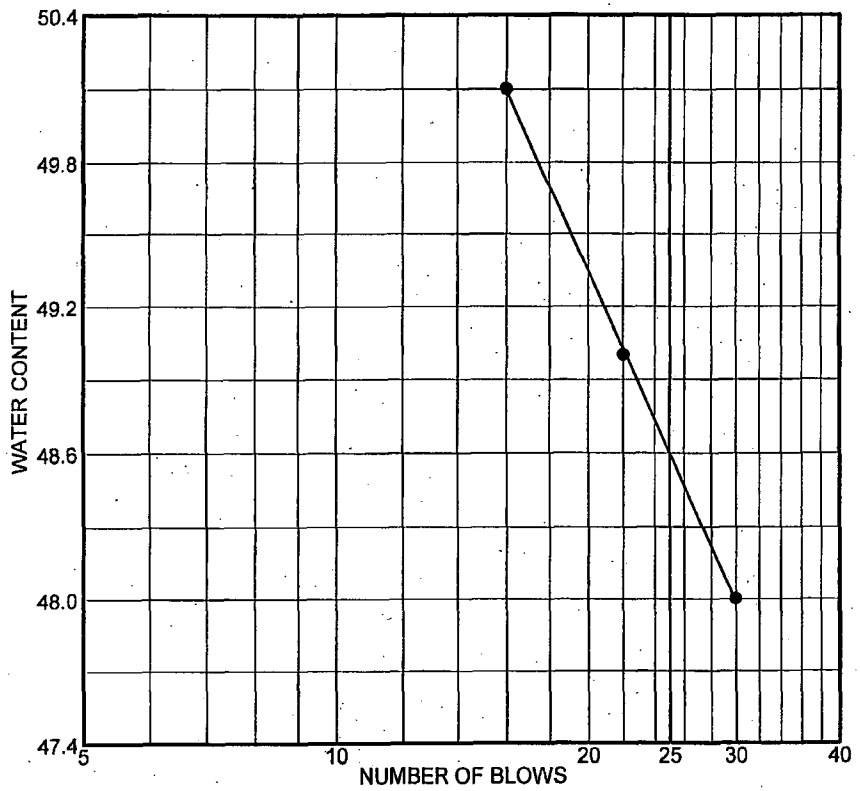
Liquid Limit= 71
Plastic Limit= 21
Plasticity Index= 50
Natural Moisture= 23.7
Liquidity Index= 0.1

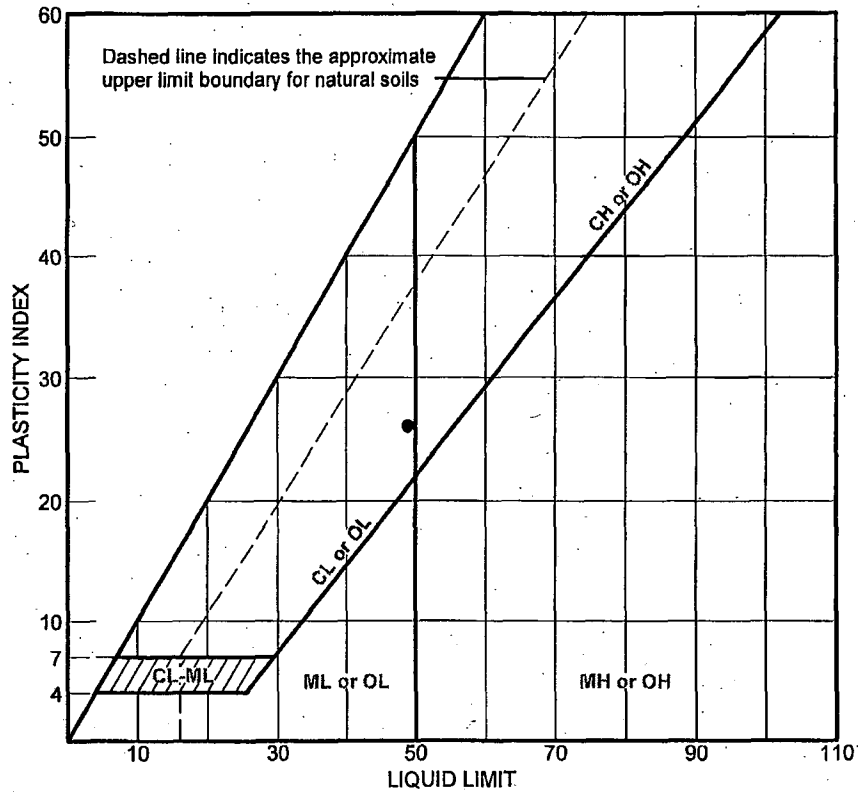
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	37.18	36.76			
Dry+Tare	35.59	35.07			
Tare	28.08	27.09			
Moisture	21.2	21.2			

MAT 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-909	UD-5	85' to 87'	2-24-07	CL	Lean clay	27.6	49	26

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH KAW 413/07
ASTM D4318-05

KAW 413/07

LIQUID AND PLASTIC LIMIT TEST DATA

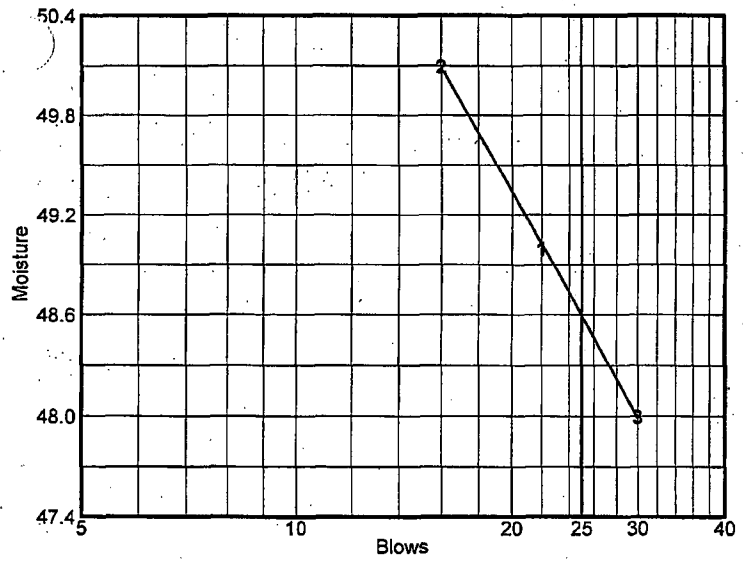
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-909
Sample No.: UD-5
Elev. or Depth: 85' to 87' **Sample Length(in./cm.):**
Location: B-909
Description: Lean clay
Date: 2-24-07 **Natural Moisture:** 27.6
USCS Class.: CL **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	32	32.92	24.19			
Dry+Tare	26.73	25.53	20.07			
Tare	15.97	10.77	11.48			
# Blows	22	16	30			
Moisture	49.0	50.1	48.0			

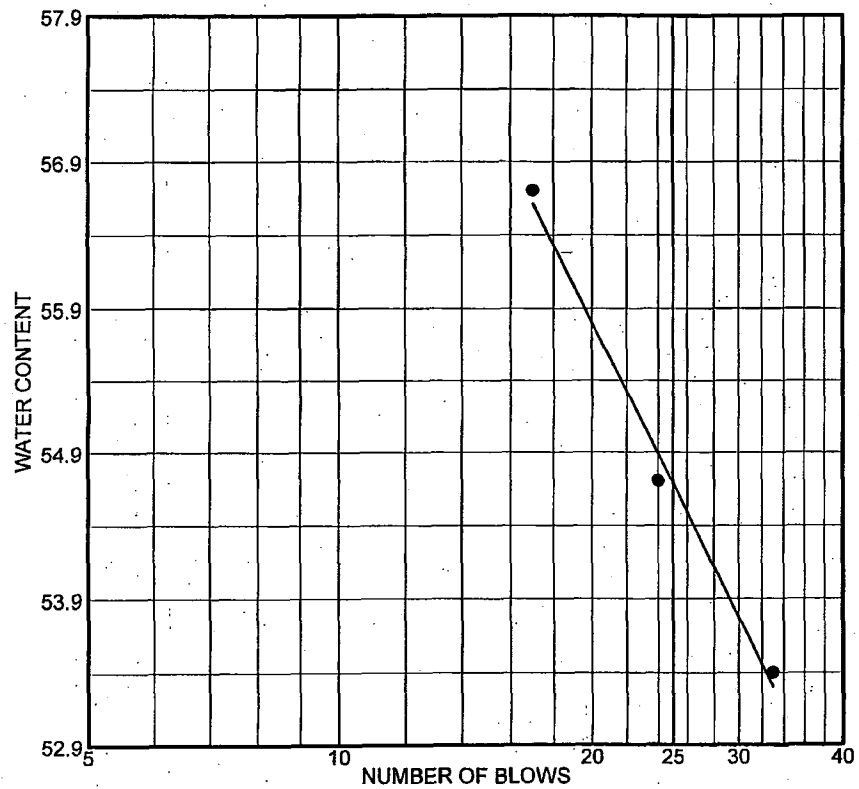


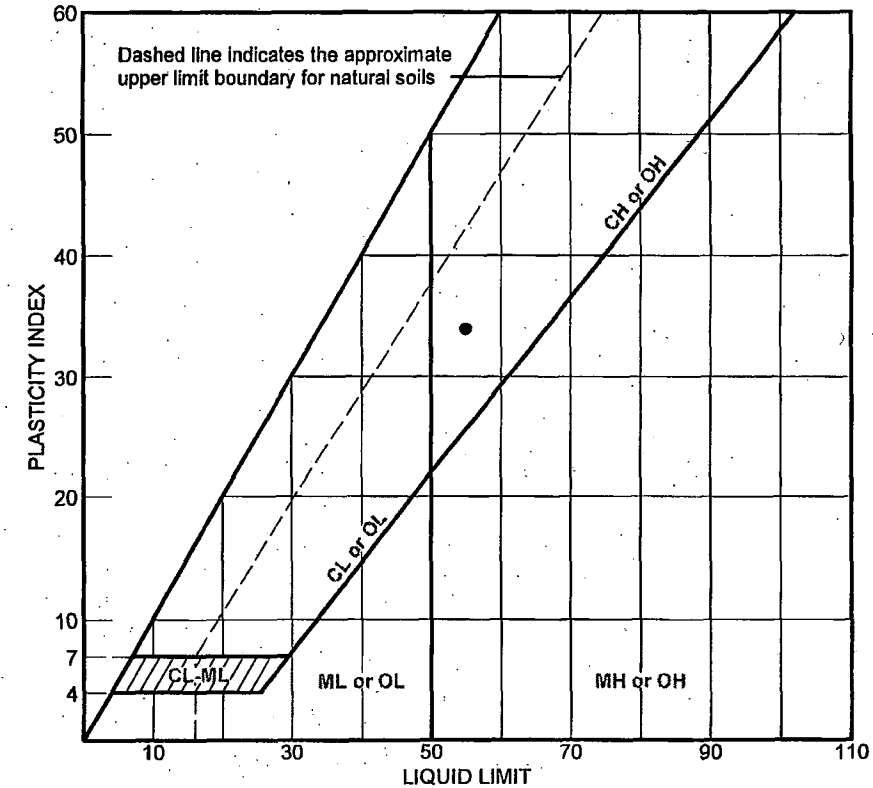
Liquid Limit= 49
Plastic Limit= 23
Plasticity Index= 26

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	20.31	17.83			
Dry+Tare	18.72	16.54			
Tare	11.59	10.89			
Moisture	22.3	22.8			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-909	UD-6	93' to 95'	2-20-07	CH	Fat Clay	17.9	55	34

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH KAW 4/3/07
ASTM D4318-05

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

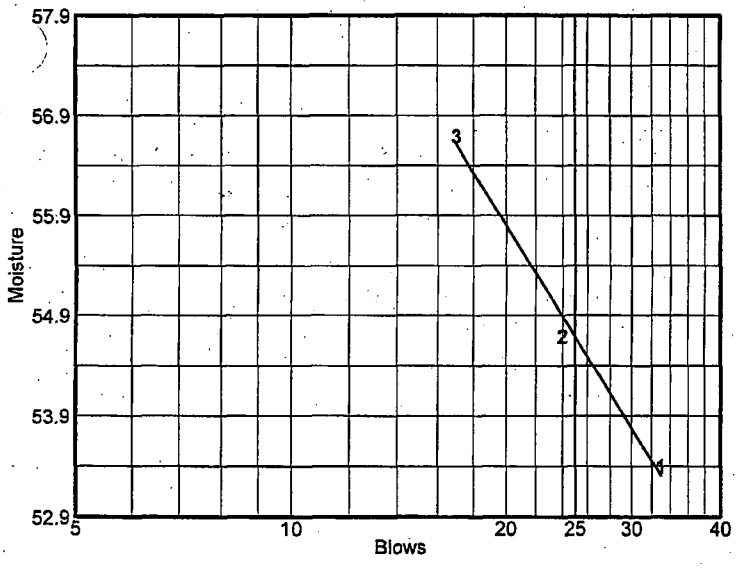
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-909
Sample No.: UD-6
Elev. or Depth: 93' to 95' **Sample Length(in./cm.):**
Location: B-909
Description: Fat Clay
Date: 2-20-07 **Natural Moisture:** 17.9
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	35.30	31.10	36.70			
Dry+Tare	27.07	24.20	27.36			
Tare	11.67	11.59	10.89			
# Blows	33	24	17			
Moisture	53.4	54.7	56.7			

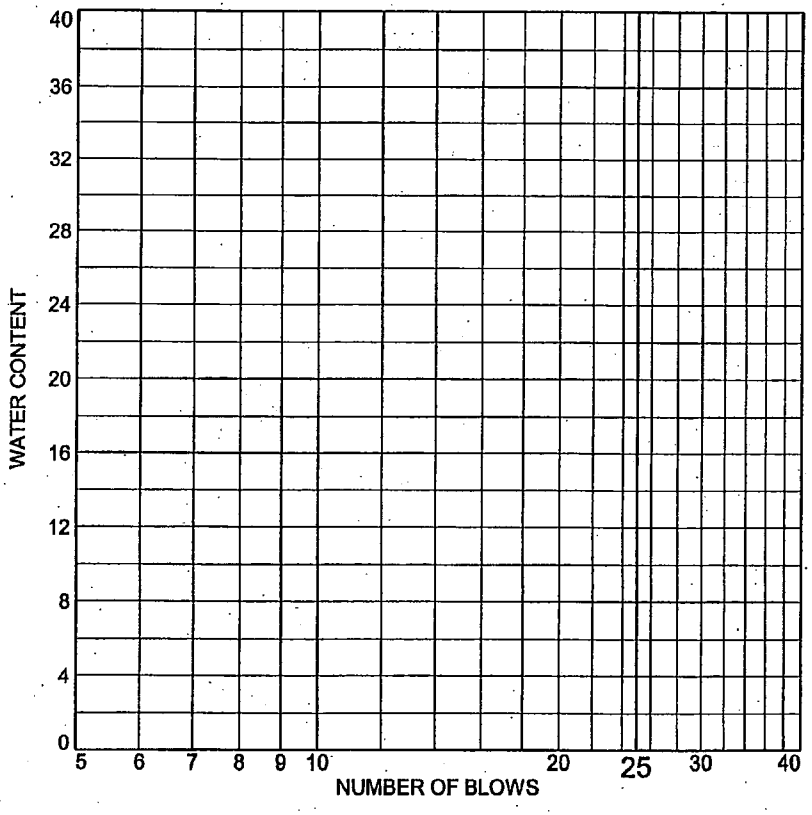


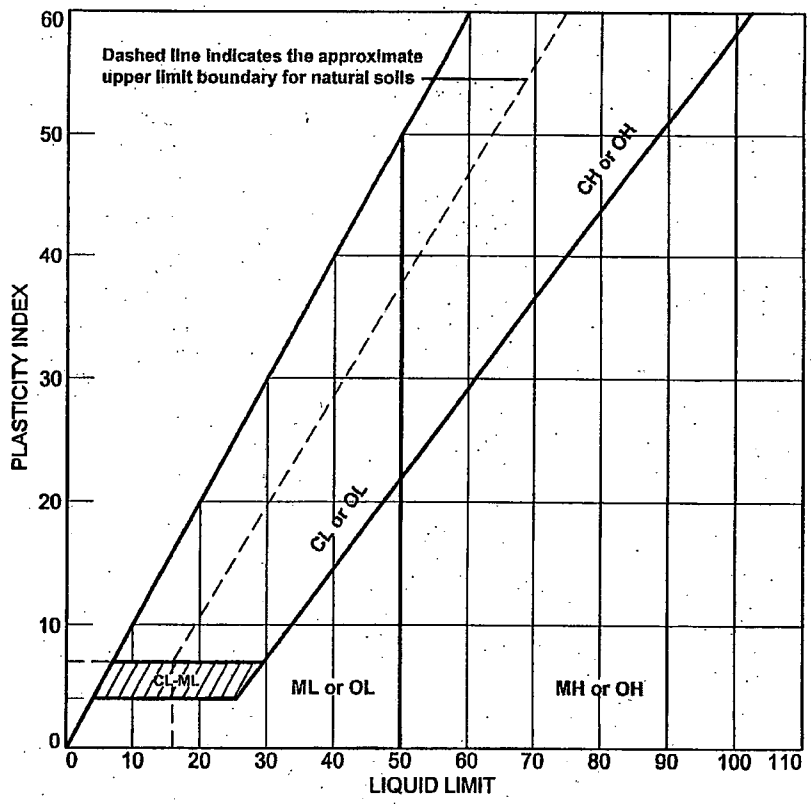
Liquid Limit= 55
Plastic Limit= 21
Plasticity Index= 34

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	18.64	20.34			
Dry+Tare	17.25	18.70			
Tare	10.69	11.00			
Moisture	21.2	21.3			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 911	STP-311 (SS-12)	23.5'-25.0'	12/14/2006	ML	Silt	28.4	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF KAW 4/3/07

ASTM D4318-05

4-3-07

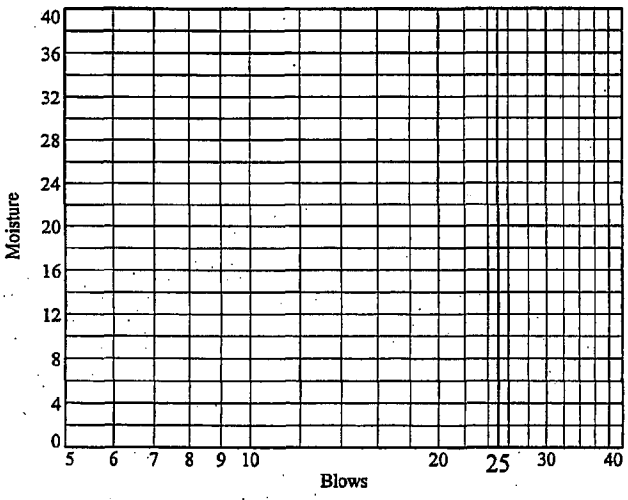
KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

4/1/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 911
Depth: 23.5'-25.0' **Sample Number:** STP-311 (SS-12)
Material Description: Silt
Date: 12/14/2006 **USCS Class.:** ML **AASHTO Class.:** A-4(0)
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Run No.	1	2	3	4	5	6
Wet+Tare						
Dry+Tare						
Tare						
# Blows						
Moisture						

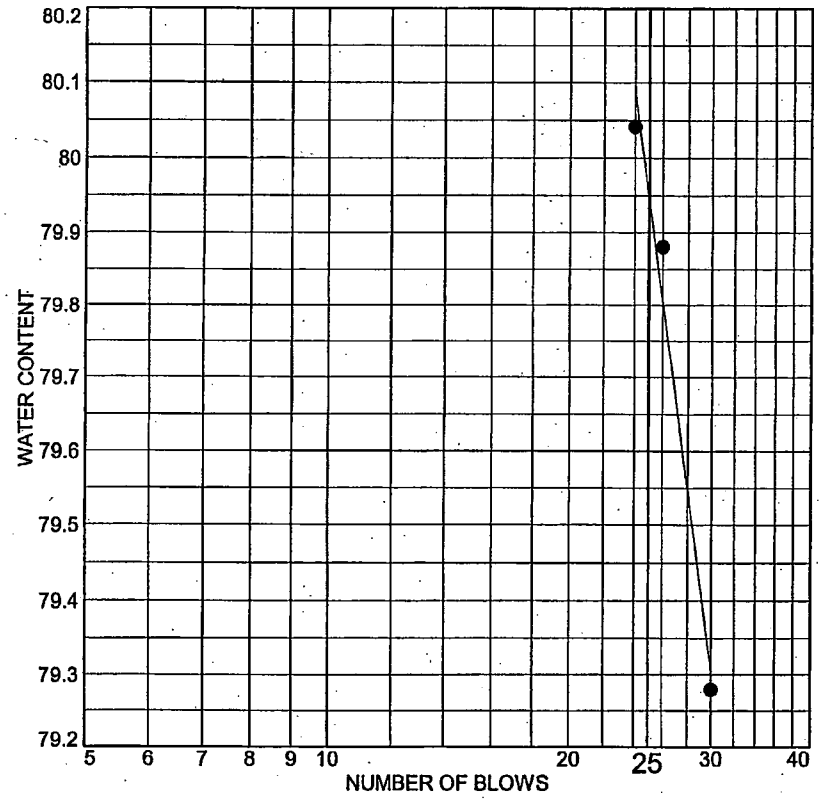


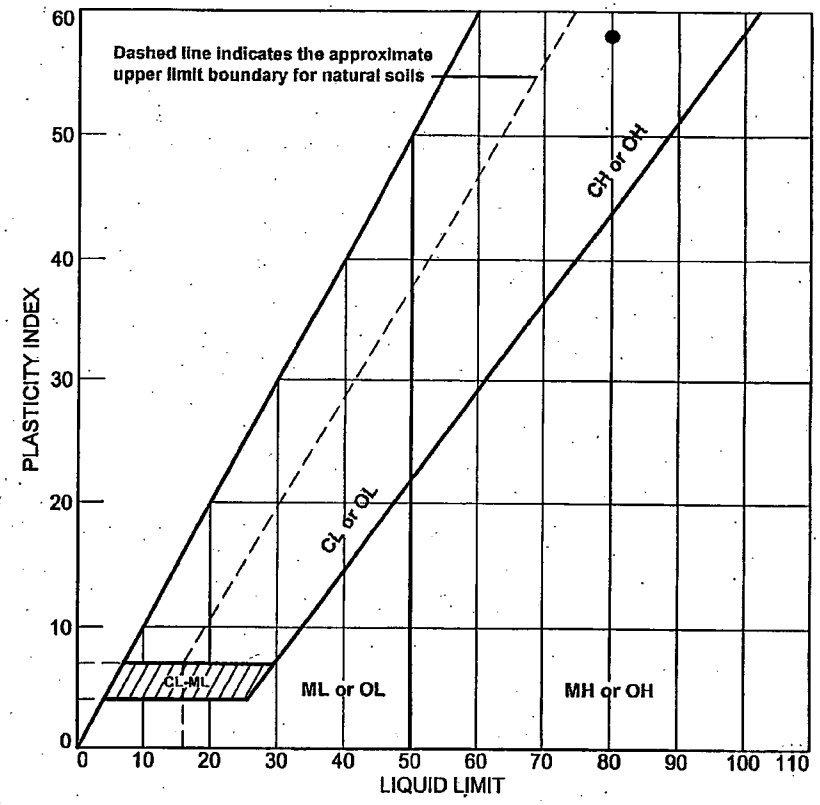
Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP
Natural Moisture= 28.4

Run No.	1	2	3	4	
Wet+Tare					
Dry+Tare					
Tare					
Moisture					

MA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 912	STP-213	7.5'-9.0'	12/13/2006	CH	Fat Clay	28.5	80	58
		(SS-6)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:MH Reviewed By:RF

ASTM D4318-05

MH 4-3-07

KAW 4/3/07

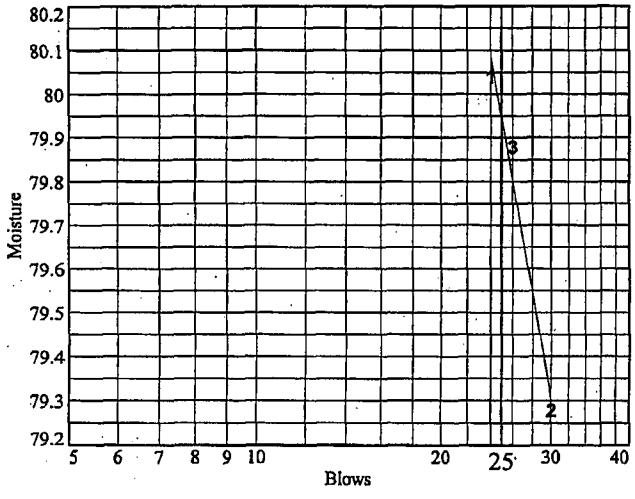
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 912
Depth: 7.5'-9.0' **Sample Number:** STP-213 (SS-6)
Material Description: Fat Clay
Date: 12/13/2006 **USCS Class.:** CH
Testing Remarks: Tested By:MH Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.85	37.97	37.06			
Dry+Tare	33.00	33.57	33.05			
Tare	28.19	28.02	28.03			
# Blows	24	30	26			
Moisture	80.0	79.3	79.9			



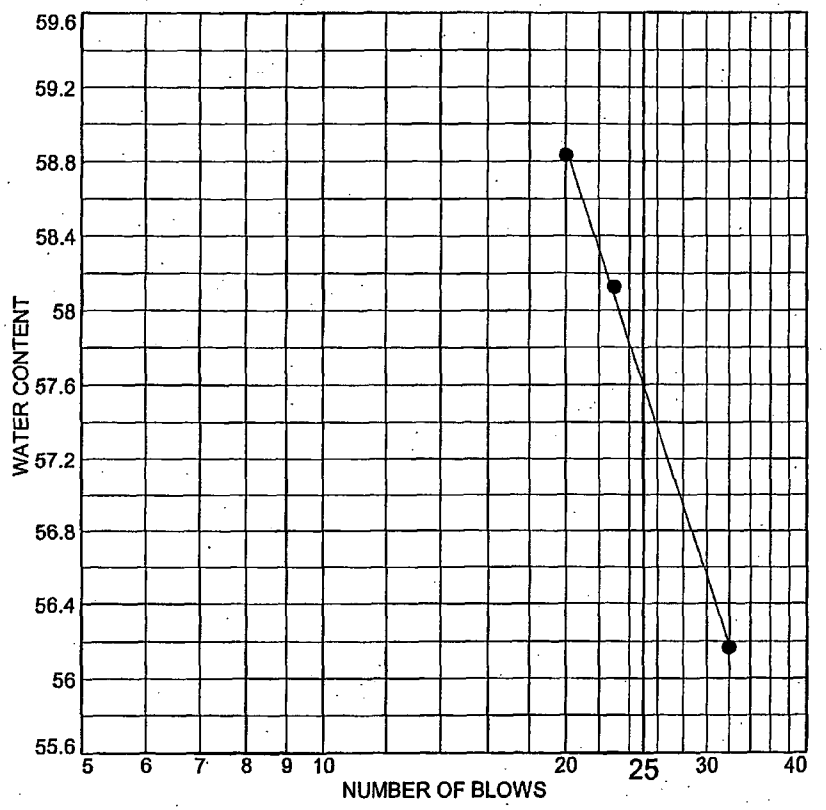
Liquid Limit= 80
Plastic Limit= 22
Plasticity Index= 58
Natural Moisture= 28.5
Liquidity Index= 0.1

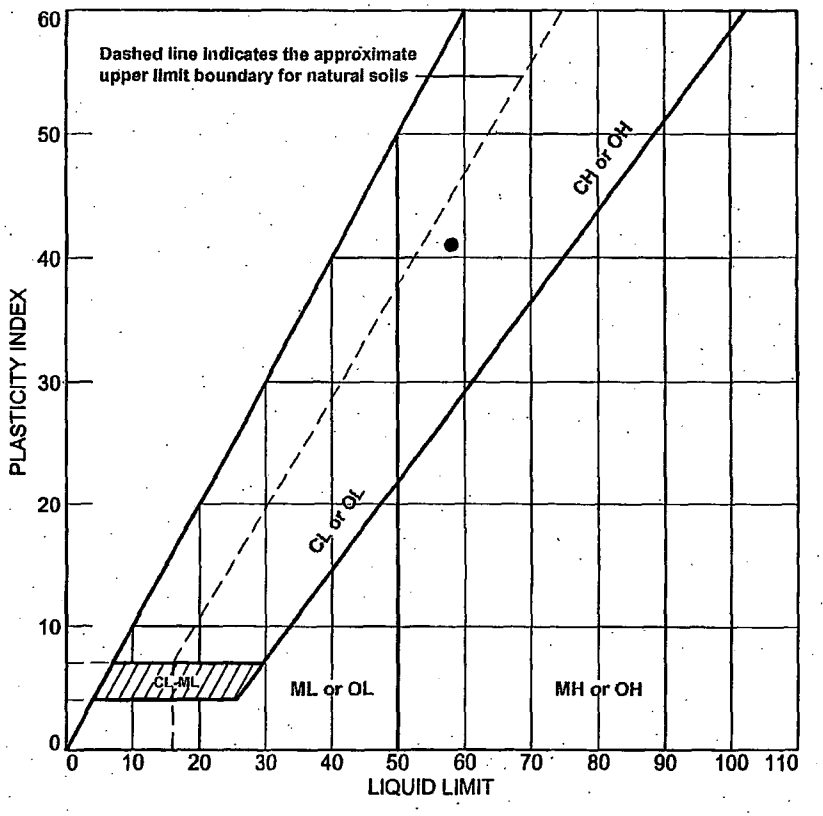
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	34.76	35.69			
Dry+Tare	33.55	34.33			
Tare	28.08	28.22			
Moisture	22.1	22.3			

MAK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 912	STP-214	13.5'-15.0'	12/13/2006	CH	Fat Clay	17.2	58	41
		(SS-10)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

MA
4-3-07

KAW 4/3/07

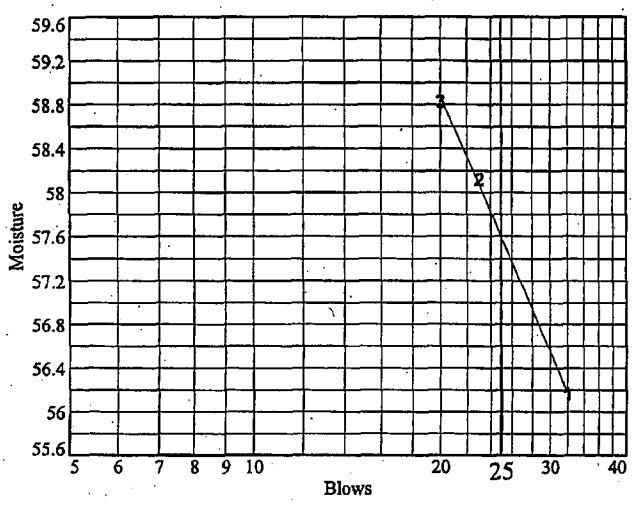
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 912
Depth: 13.5'-15.0' **Sample Number:** STP-214 (SS-10)
Material Description: Fat Clay
Date: 12/13/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.34	36.45	33.08			
Dry+Tare	33.38	33.41	29.85			
Tare	28.11	28.18	24.36			
# Blows	32	23	20			
Moisture	56.2	58.1	58.8			



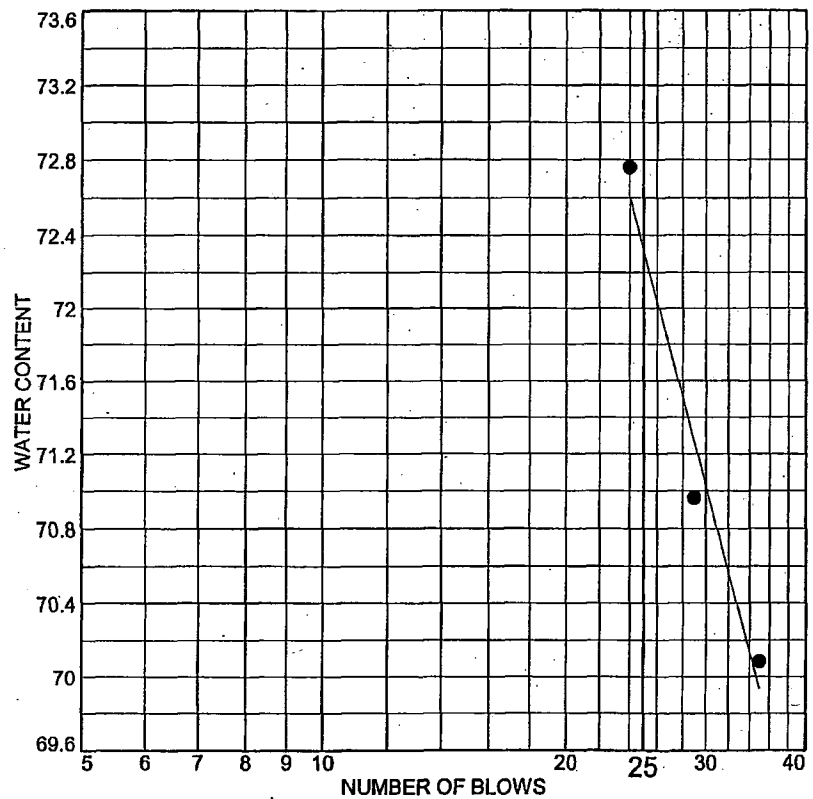
Liquid Limit= 58
Plastic Limit= 17
Plasticity Index= 41
Natural Moisture= 17.2
Liquidity Index= 0.0

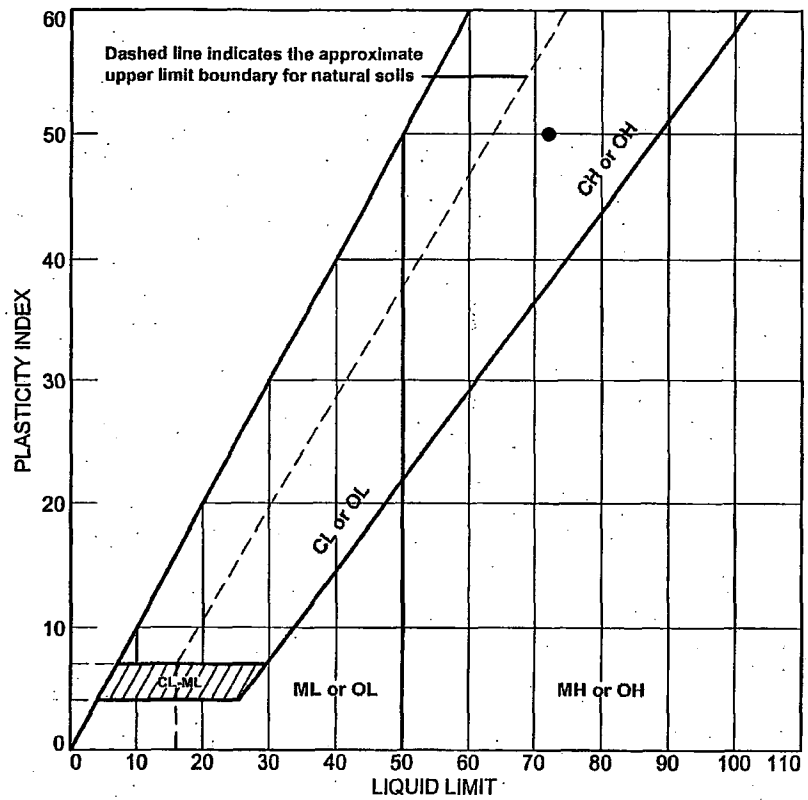
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.76	35.88			
Dry+Tare	34.66	34.81			
Tare	28.11	28.38			
Moisture	16.8	16.6			

MH 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 912	STP-220 (SS-19)	58.5'-60.0'	12/13/2006	CH	Fat Clay	25.9	72	50

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:MH/TH
ASTM D4318-05

Reviewed By:RF

MH 4-3-07

KAW 2/4/07

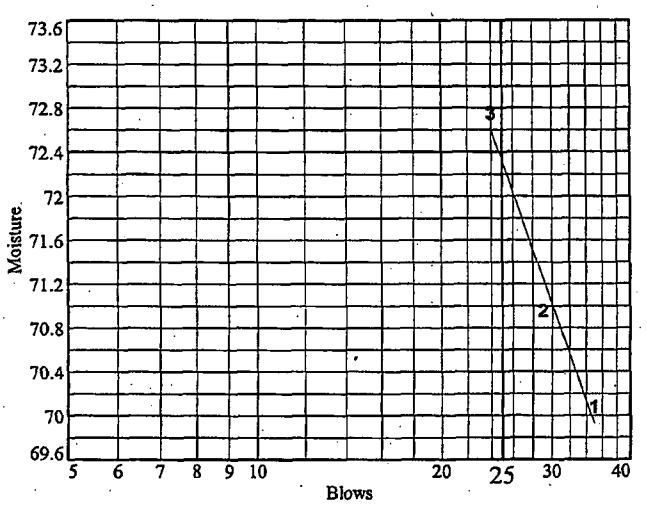
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 912
Depth: 58.5'-60.0' **Sample Number:** STP-220 (SS-19)
Material Description: Fat Clay
Date: 12/13/2006 **USCS Class.:** CH
Testing Remarks: Tested By:MH/TH Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	38.25	37.47	37.85			
Dry+Tare	34.08	32.46	33.71			
Tare	28.13	25.40	28.02			
# Blows	35	29	24			
Moisture	70.1	71.0	72.8			



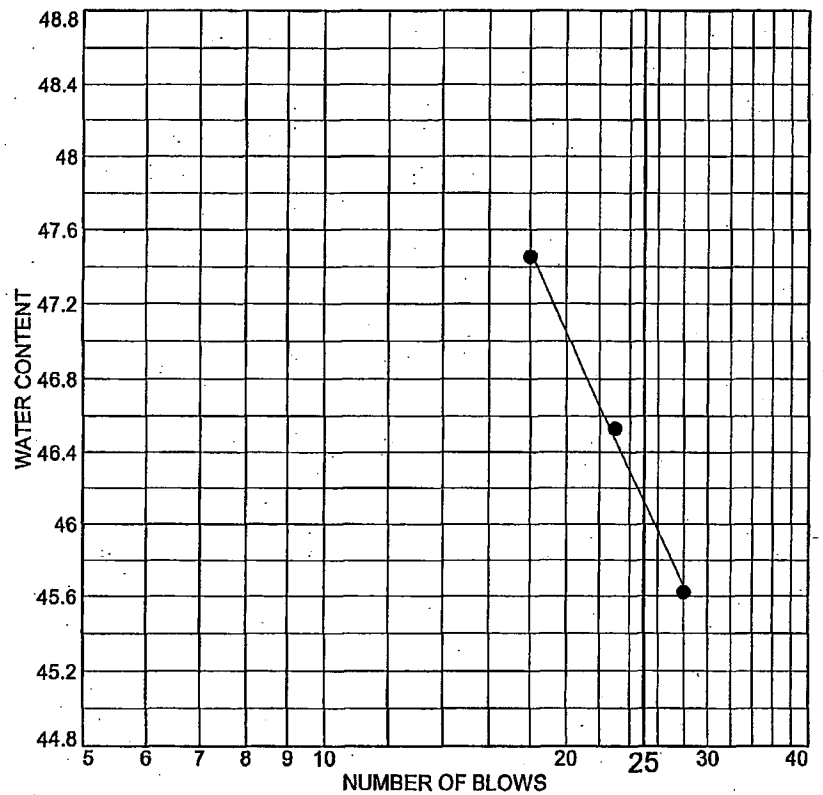
Liquid Limit= 72
Plastic Limit= 22
Plasticity Index= 50
Natural Moisture= 25.9
Liquidity Index= 0.1

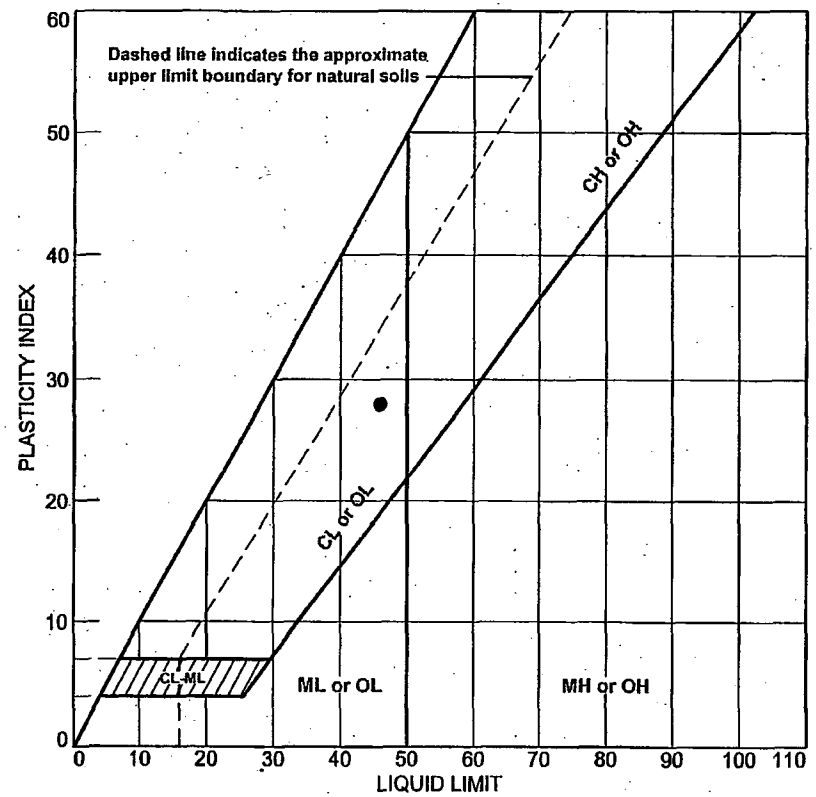
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	38.33	38.84			
Dry+Tare	36.48	36.85			
Tare	28.11	27.90			
Moisture	22.1	22.2			

MH 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 912	STP-222	68.5'-70.0'	12/13/2006	CL	Lean Clay	19.2	46	28
		(SS-21)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH
ASTM D4318-05

Reviewed By:RF

MH 4-3-07

KAW 4/3/07

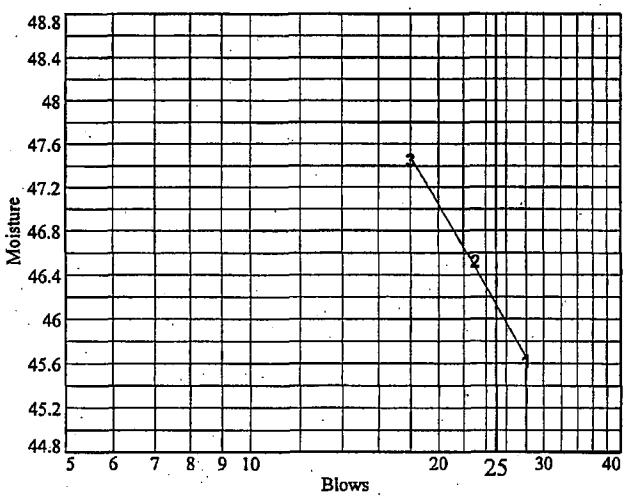
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 912
Depth: 68.5'-70.0'
Sample Number: STP-222 (SS-21)
Material Description: Lean Clay
Date: 12/13/2006
USCS Class.: CL
Testing Remarks: Tested By:AC/TH Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.71	36.54	37.04			
Dry+Tare	34	33.59	34.15			
Tare	28.06	27.25	28.06			
# Blows	28	23	18			
Moisture	45.6	46.5	47.5			



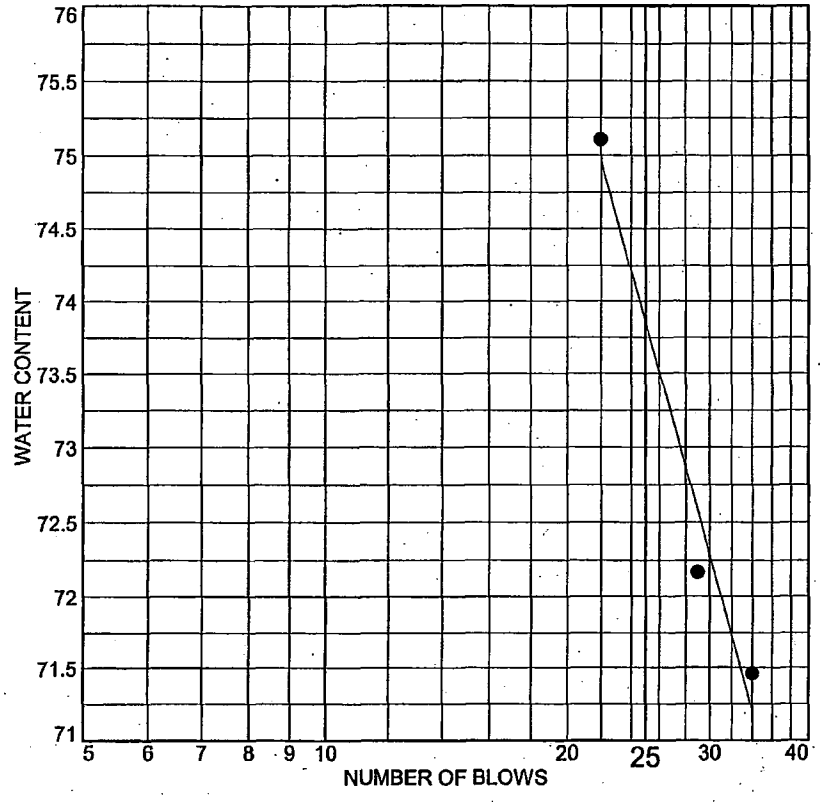
Liquid Limit= 46
Plastic Limit= 18
Plasticity Index= 28
Natural Moisture= 19.2
Liquidity Index= 0.0

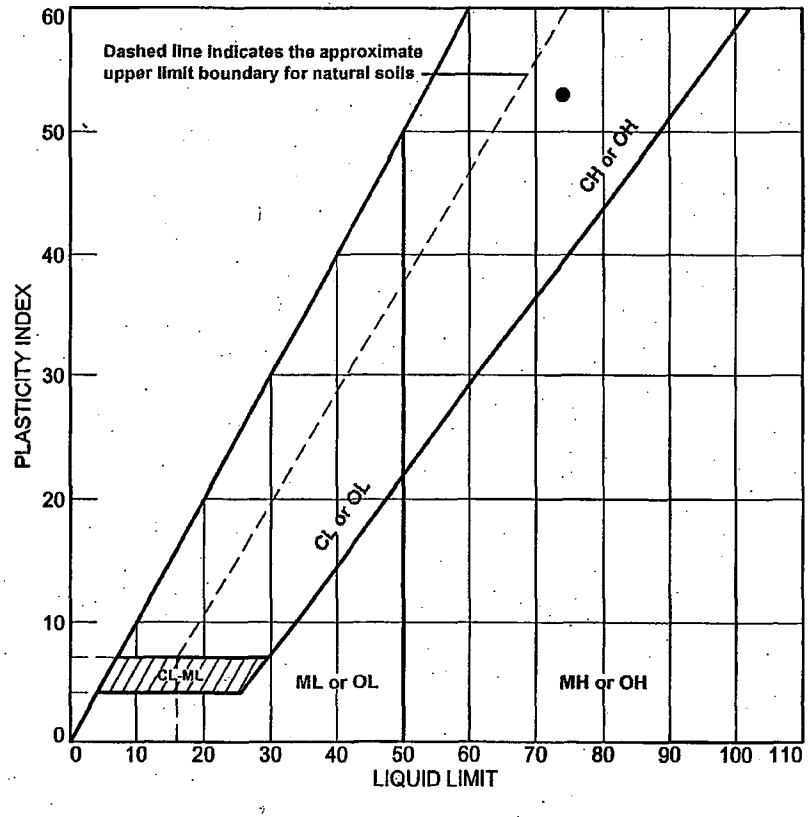
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	42.21	41.08			
Dry+Tare	40.09	38.99			
Tare	28.18	27.25			
Moisture	17.8	17.8			

MK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 912	STP-225	83.5'-85.0'	12/13/2006	CH	Fat Clay	25.0	74	53
		(SS-24)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF

ASTM D4318-05

MK 4-3-07

KAW 4/3/07

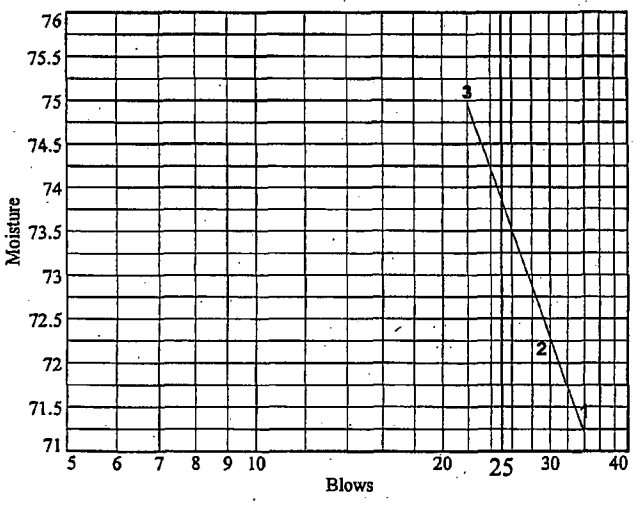
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 912
Depth: 83.5'-85.0' **Sample Number:** STP-225 (SS-24)
Material Description: Fat Clay
Date: 12/13/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.22	37.24	36.58			
Dry+Tare	32.94	33.48	33.02			
Tare	28.35	28.27	28.28			
# Blows	34	29	22			
Moisture	71.5	72.2	75.1			



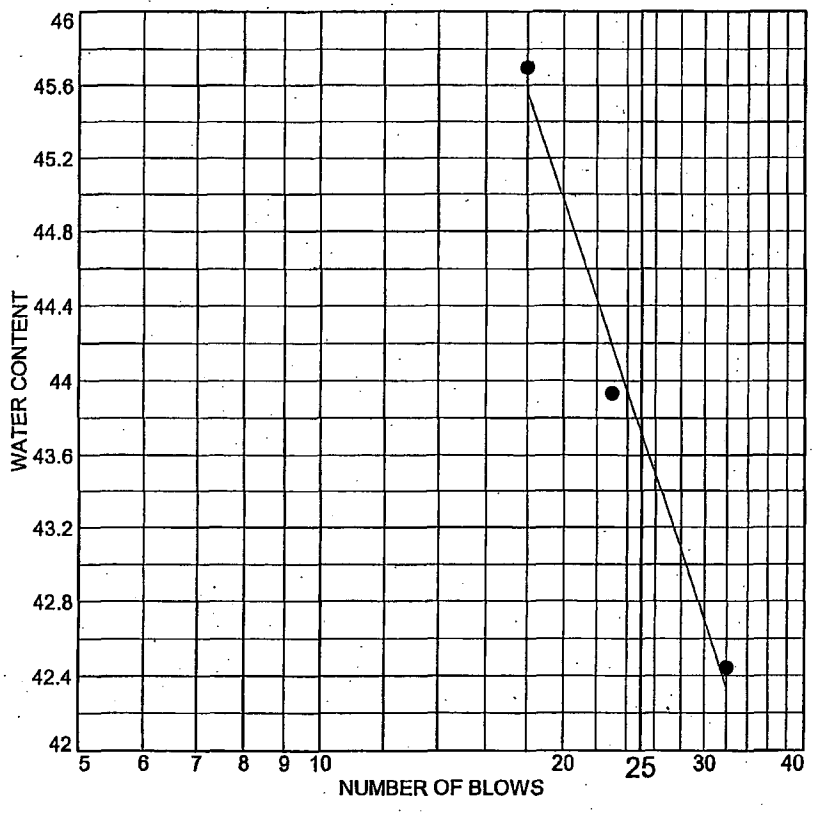
Liquid Limit= 74
Plastic Limit= 21
Plasticity Index= 53
Natural Moisture= 25.0
Liquidity Index= 0.1

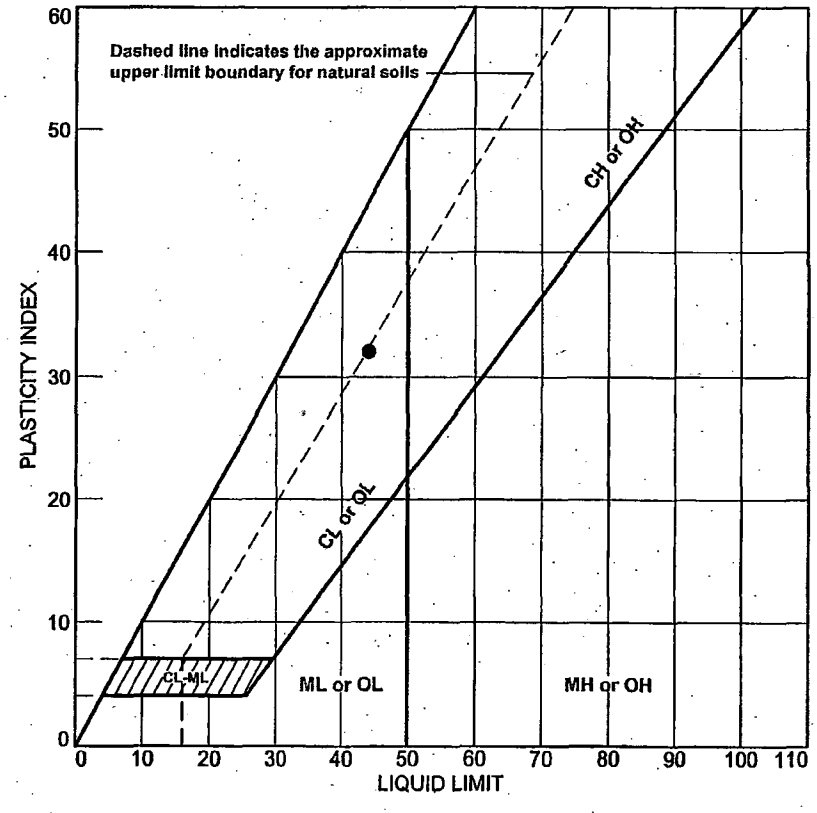
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	39.52	39.83			
Dry+Tare	37.57	37.85			
Tare	28.19	28.35			
Moisture	20.8	20.8			

MAK 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 914	STP-229 (SS-4)	4.5'-6.0'	12/12/2006	CL	Lean Clay	16.5	44	32

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

MA 4-3-07

KAW 4/3/07

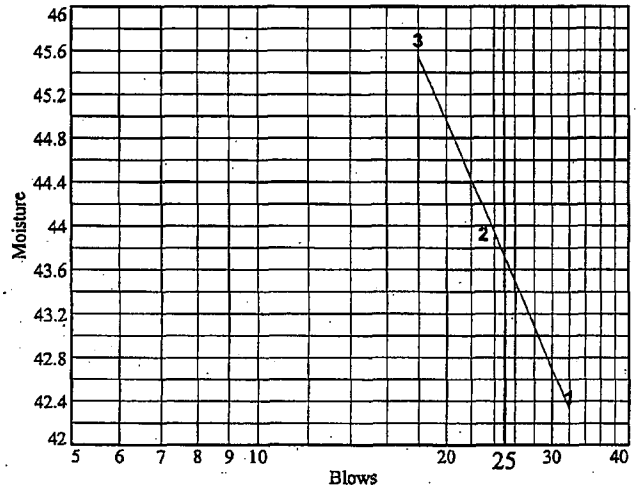
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 914
Depth: 4.5'-6.0' **Sample Number:** STP-229 (SS-4)
Material Description: Lean Clay
Date: 12/12/2006 **USCS Class.:** CL
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.56	38.82	38.42			
Dry+Tare	34.78	35.49	35.34			
Tare	28.23	27.91	28.60			
# Blows	32	23	18			
Moisture	42.4	43.9	45.7			



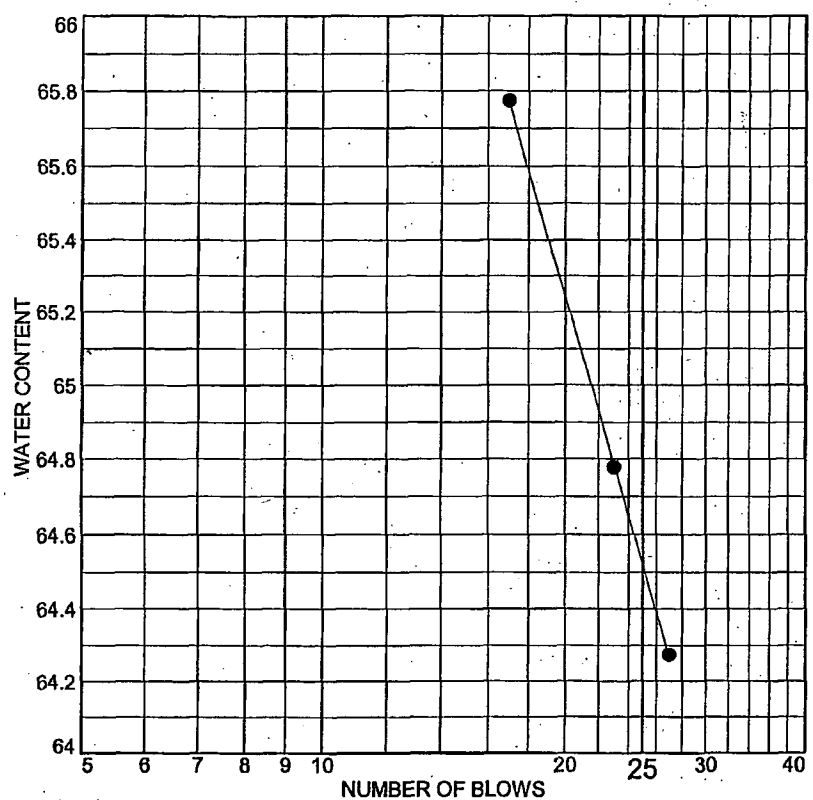
Liquid Limit= 44
Plastic Limit= 12
Plasticity Index= 32
Natural Moisture= 16.5
Liquidity Index= 0.1

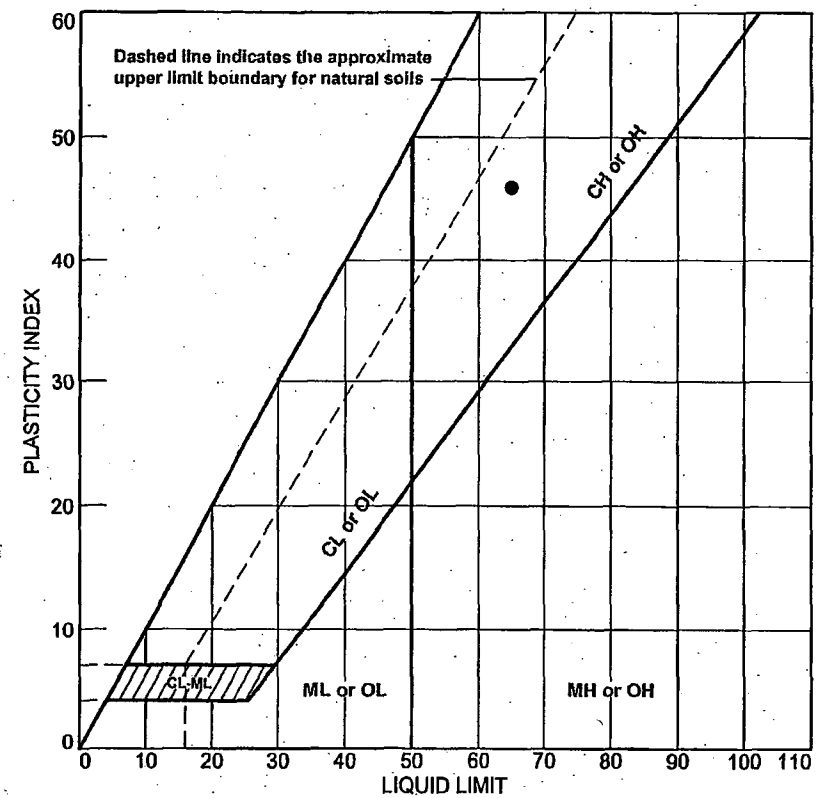
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.62	34.46			
Dry+Tare	34.83	33.68			
Tare	28.25	27.12			
Moisture	12.0	11.9			

NM 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 914	STP-233	18.5'-20.0'	12/12/2006	CH	Fat Clay	24.4	65	46
		(SS-11)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/MH Reviewed By:RF

ASTM D4318-05

4-3-07

KAW 4/3/07

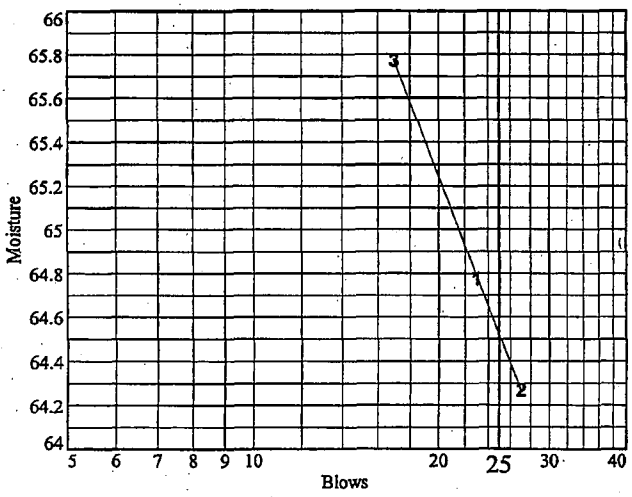
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 914
Depth: 18.5'-20.0'
Sample Number: STP-233 (SS-11)
Material Description: Fat Clay
Date: 12/12/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/MH
Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.51	37.44	36.70			
Dry+Tare	32.85	33.77	33.26			
Tare	27.20	28.06	28.03			
# Blows	23	27	17			
Moisture	64.8	64.3	65.8			



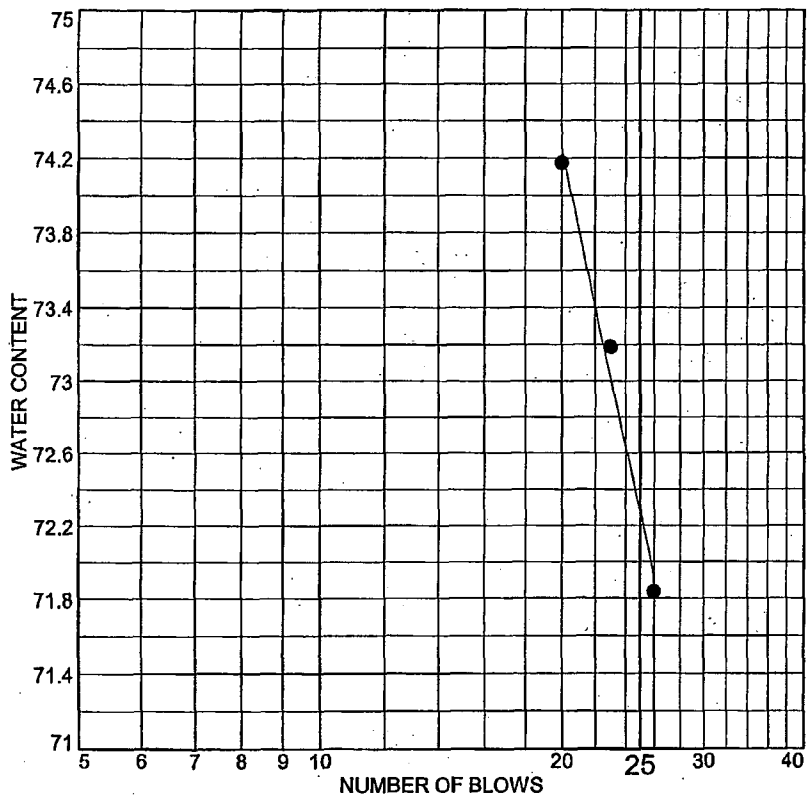
Liquid Limit= 65
Plastic Limit= 19
Plasticity Index= 46
Natural Moisture= 24.4
Liquidity Index= 0.1

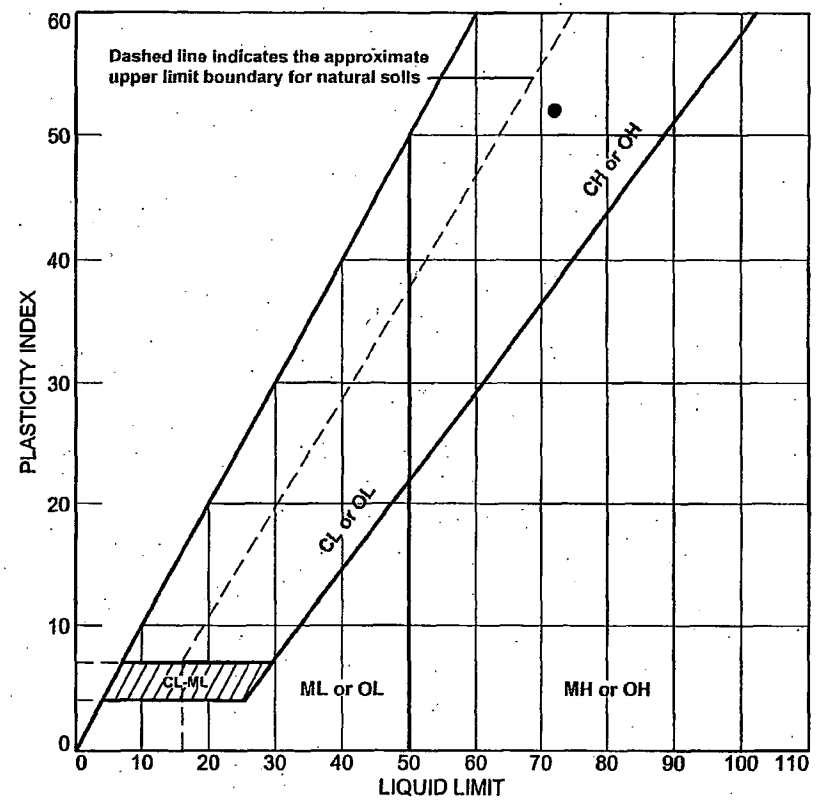
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	34.81	35.87			
Dry+Tare	33.61	34.66			
Tare	27.24	28.05			
Moisture	18.8	18.3			

NM 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 914	STP-238 (SS-16)	43.5'-45.0'	12/12/2006	CH	Fat Clay	28.1	72	52

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH
ASTM D4318-05

Reviewed By:RF

4-30-07

KAW 4/3/07

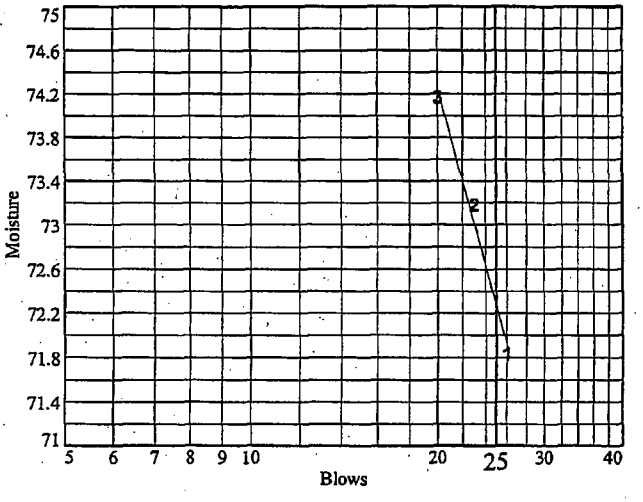
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 914
Depth: 43.5'-45.0'
Sample Number: STP-238 (SS-16)
Material Description: Fat Clay
Date: 12/12/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.42	35.14	37.31			
Dry+Tare	32.9	32.11	33.49			
Tare	28	27.97	28.34			
# Blows	26	23	20			
Moisture	71.8	73.2	74.2			



Liquid Limit= 72
Plastic Limit= 20
Plasticity Index= 52
Natural Moisture= 28.1
Liquidity Index= 0.2

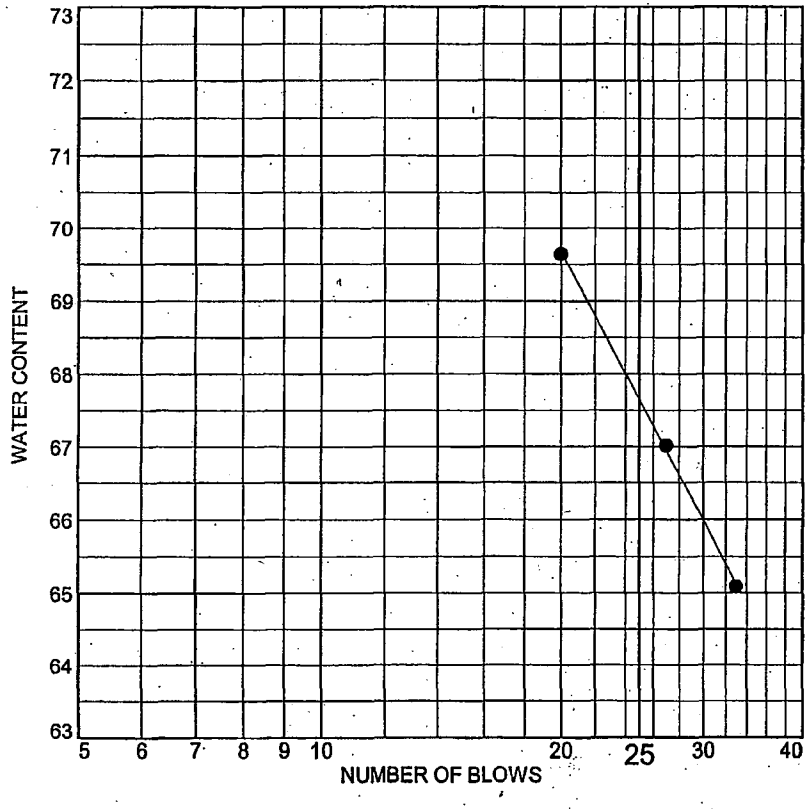
Plastic Limit Data

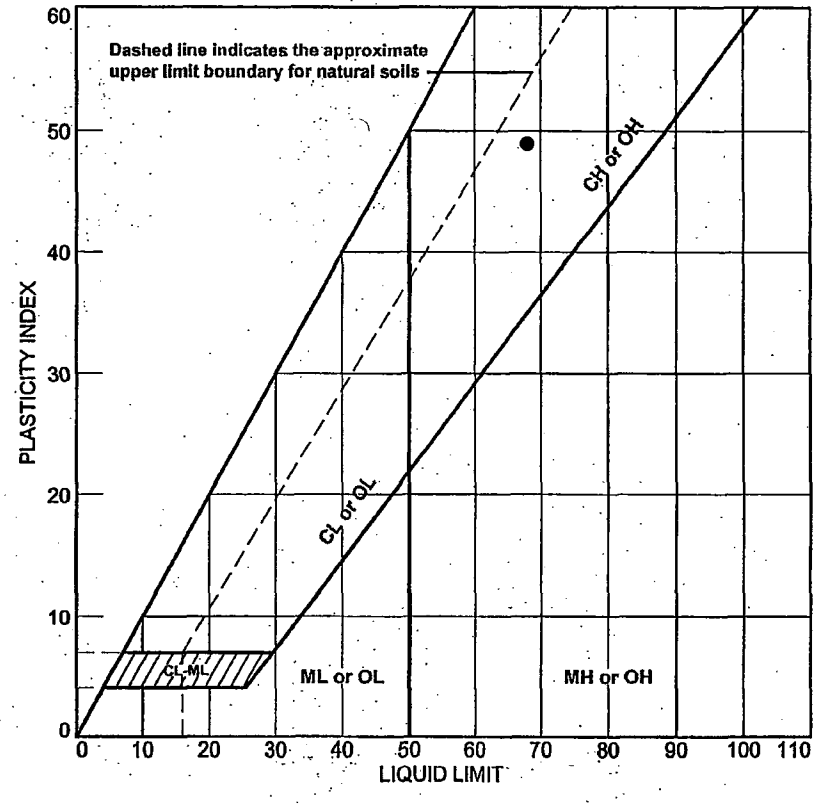
Run No.	1	2	3	4	
Wet+Tare	35.02	40.07			
Dry+Tare	33.67	38.04			
Tare	26.92	28.15			
Moisture	20.0	20.5			

MAT 4-3-07

MACTEC, Inc.

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 914	STP-246	83.5'-85.0'	12/12/2006	CH	Fat Clay	22.3	68	49
		(SS-24)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF

ASTM D4318-05

RF 3/30/07

KAW 4/1/07

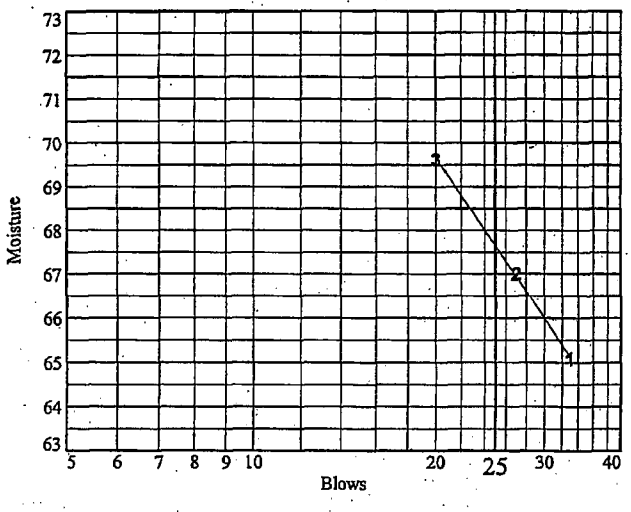
LIQUID AND PLASTIC LIMIT TEST DATA

3/30/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 914
Depth: 83.5'-85.0' **Sample Number:** STP-246 (SS-24)
Material Description: Fat Clay
Date: 12/12/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:RF RF 3/30/07
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.63	35.25	36.33			
Dry+Tare	33.33	32.06	33.05			
Tare	28.26	27.30	28.34			
# Blows	33	27	20			
Moisture	65.1	67.0	69.6			



Liquid Limit= 68
Plastic Limit= 19
Plasticity Index= 49
Natural Moisture= 22.3
Liquidity Index= 0.1

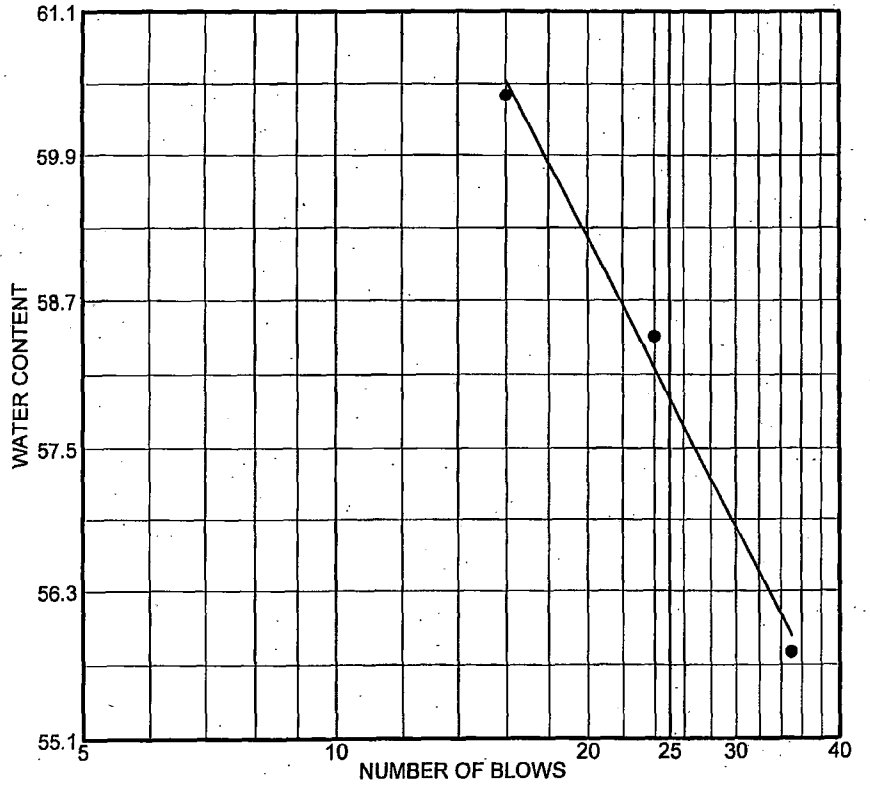
Plastic Limit Data

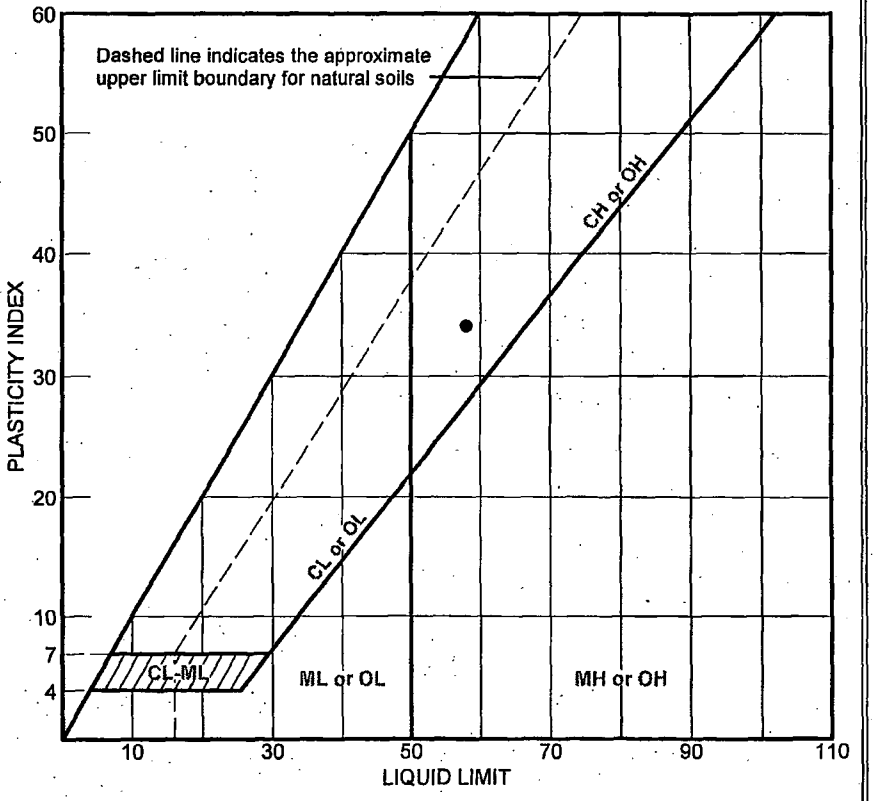
Run No.	1	2	3	4	
Wet+Tare	37.30	36.32			
Dry+Tare	35.88	35.06			
Tare	28.25	28.33			
Moisture	18.6	18.7			

Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
406.7	364.5	175.2	22.3

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-916	UD-1	13' to 15'	3-13-07	CH	Fat Clay	21.3	58	34

Client Bechtel Power Corporation
Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05 KAW 4/13/07

KAW 4/13/07

LIQUID AND PLASTIC LIMIT TEST DATA

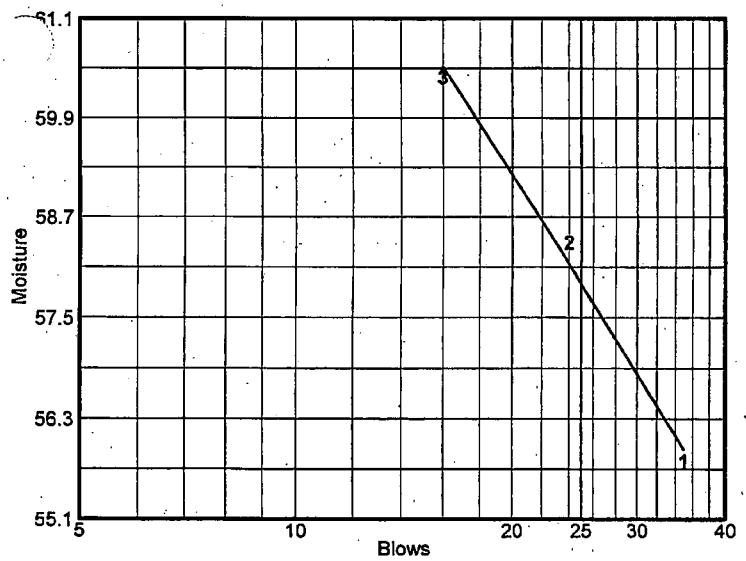
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-916
Sample No.: UD-1
Elev. or Depth: 13' to 15' **Sample Length(in./cm.):**
Location: B-916
Description: Fat Clay
Date: 3-13-07 **Natural Moisture:** 21.3
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	22.12	22.54	22.93			
Dry+Tare	18.34	18.21	18.41			
Tare	11.57	10.80	10.93			
# Blows	35	24	16			
Moisture	55.8	58.4	60.4			

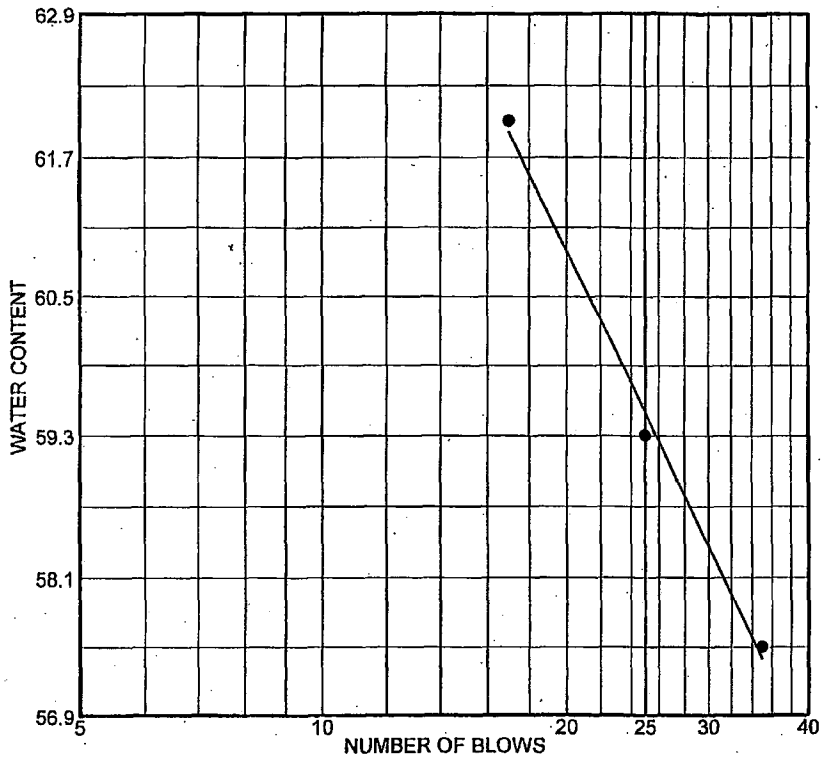


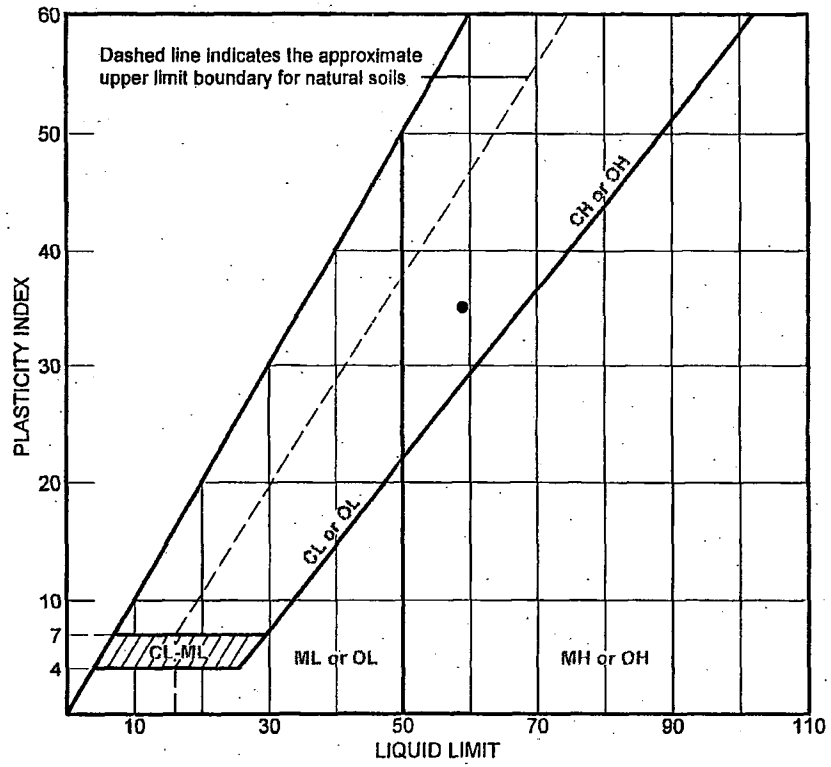
Liquid Limit= 58
Plastic Limit= 24
Plasticity Index= 34

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	21.36	20.08			
Dry+Tare	19.34	18.34			
Tare	10.79	10.98			
Moisture	23.6	23.6			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-916	UD-3	48' to 50'	3-22-07	CH	Fat Clay	22.5	59	35

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05

KAW 4/3/07

KAW 3/31/07

LIQUID AND PLASTIC LIMIT TEST DATA

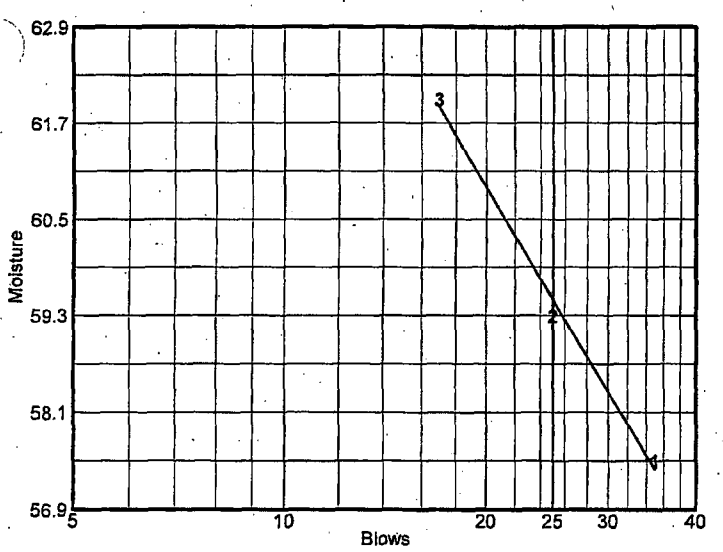
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-916
Sample No.: UD-3
Elev. or Depth: 48' to 50' **Sample Length(in./cm.):**
Location: B-916
Description: Fat Clay
Date: 3-22-07 **Natural Moisture:** 22.5
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	27.85	29.57	31.72			
Dry+Tare	21.66	22.64	24.00			
Tare	10.90	10.95	11.54			
# Blows	35	25	17			
Moisture	57.5	59.3	62.0			

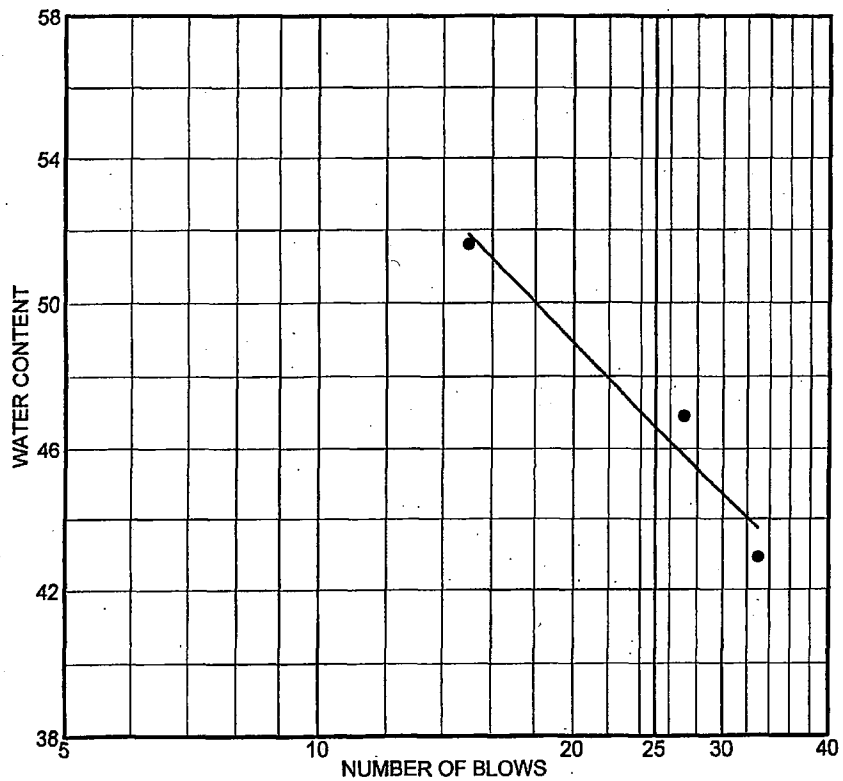


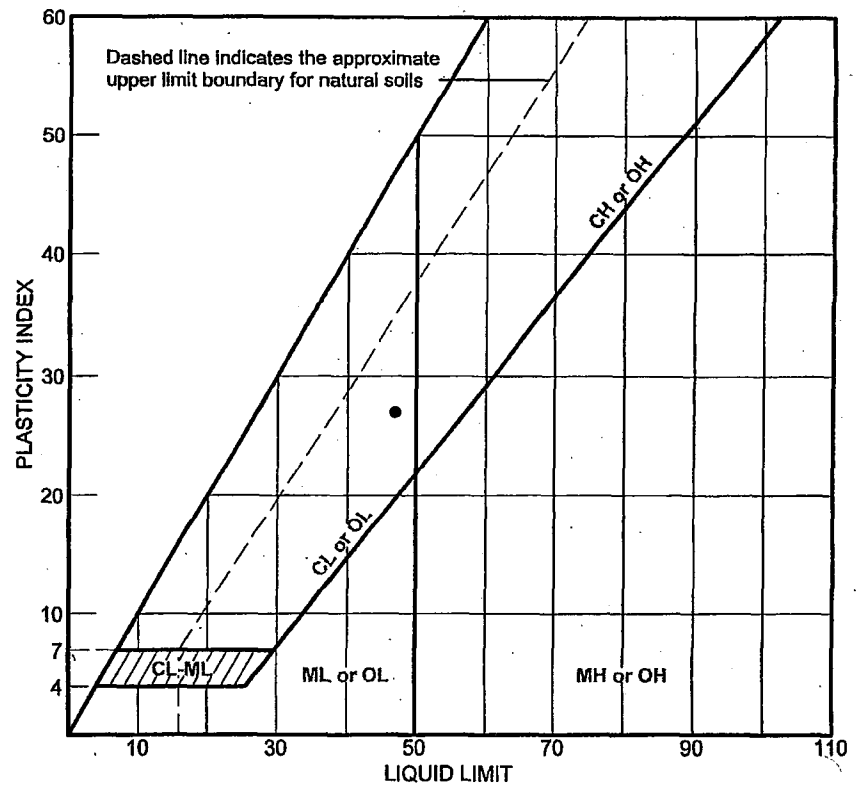
Liquid Limit= 59
Plastic Limit= 24
Plasticity Index= 35

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	23.02	20.96			
Dry+Tare	20.71	18.99			
Tare	10.87	10.72			
Moisture	23.5	23.8			

LIQUID AND PLASTIC LIMITS TEST REPORT ASTM D 4318-04





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-918	UD-2	18-20	12/16/06	CL	Lean Clay	23.4	47	27

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050060486 | Lab no. 7329

MACTEC ENGINEERING AND CONSULTING, INC.

● Tested by: BM Reviewed by; HJ

HJ 4/4/07

KAW 4/3/07

LIQUID AND PLASTIC LIMIT TEST DATA

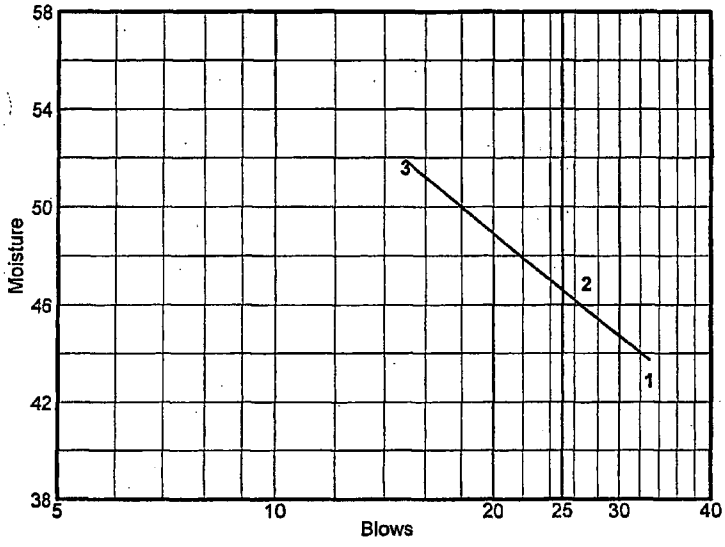
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050060486

Sample Data

Source: B-918
Sample No.: UD-2
Elev. or Depth: 18-20 **Sample Length(in./cm.):** 7329
Location: B-918
Description: Lean Clay
Date: 12/16/06 **Natural Moisture:** 23.4
USCS Class.: CL **AASHTO Class.:**
Testing Remarks: Tested by: BM Reviewed by; HJ

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	23.31	21.41	21.73			
Dry+Tare	19.96	18.51	18.57			
Tare	12.15	12.33	12.45			
# Blows	33	27	15			
Moisture	42.9	46.9	51.6			

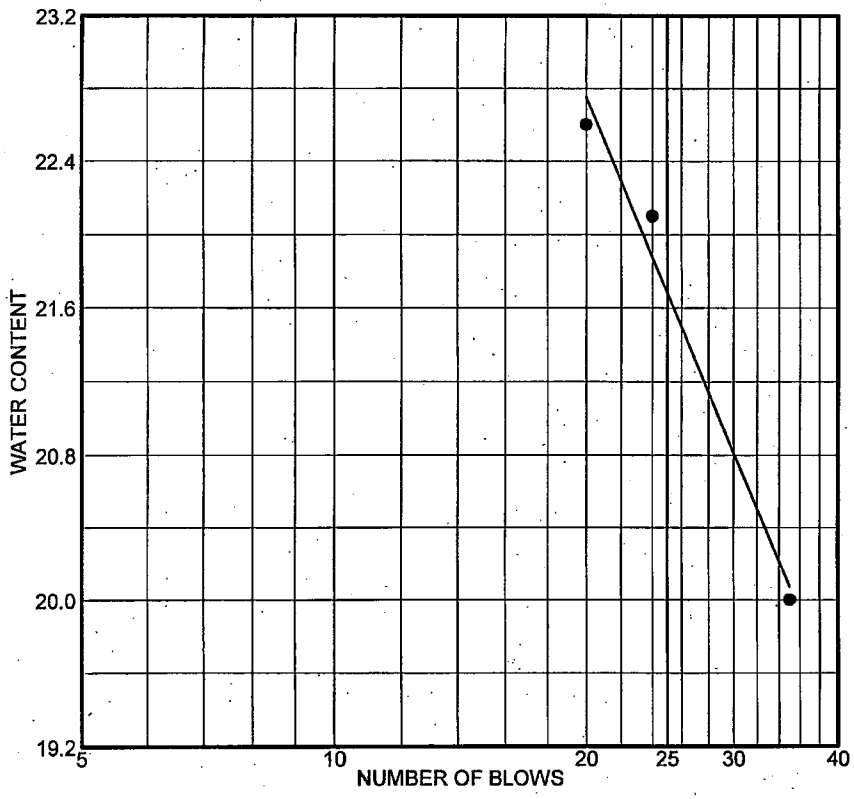


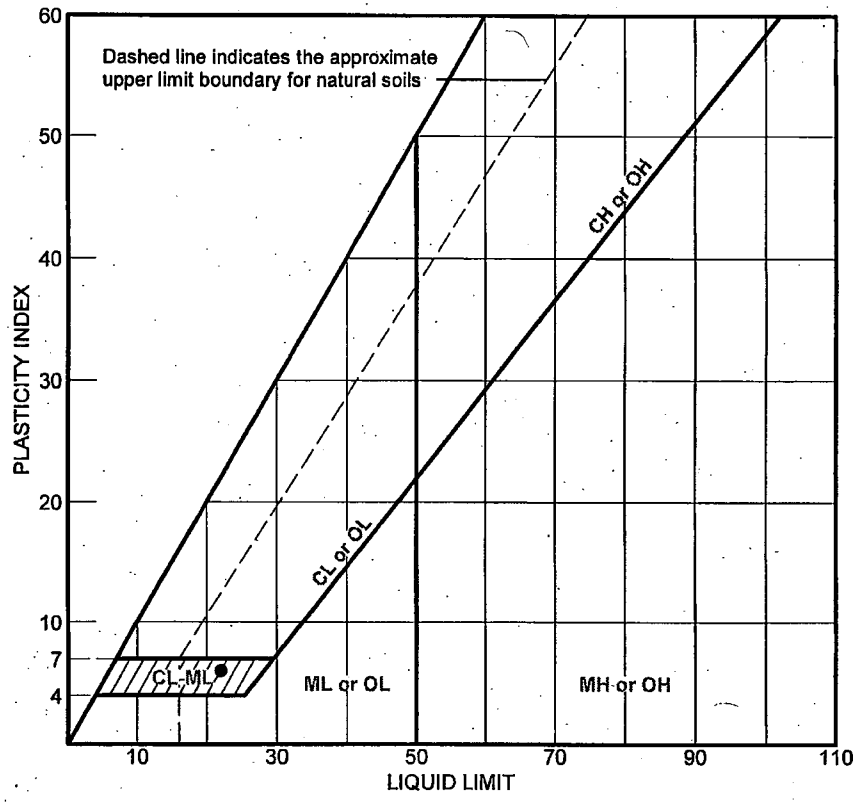
Liquid Limit= 47
Plastic Limit= 20
Plasticity Index= 27

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	18.65	18.89			
Dry+Tare	17.58	17.8			
Tare	12.17	12.41			
Moisture	19.8	20.2			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-918	UD-4	58' to 60'	2-24-07	CL-ML	Silty Clay with Sand	17.7	22	6

Client Bechtel Power Corporation
Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MS
ASTM D4318-05

LIQUID AND PLASTIC LIMIT TEST DATA

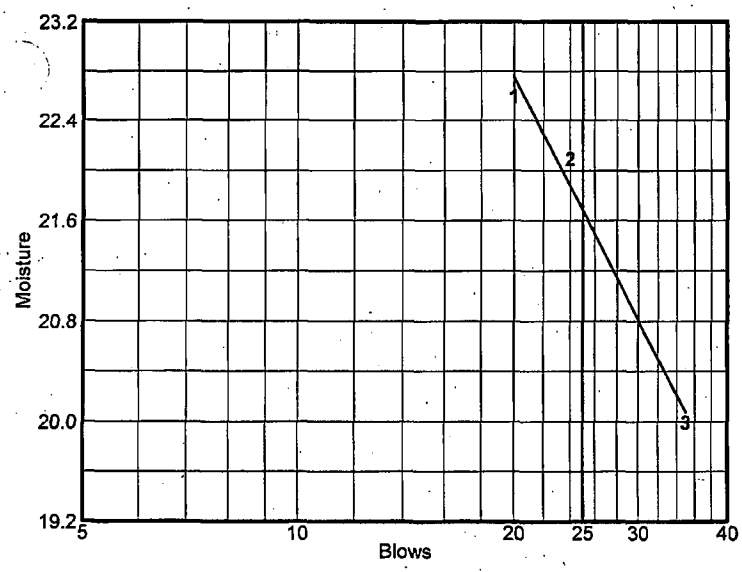
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-918
Sample No.: UD-4
Elev. or Depth: 58' to 60' **Sample Length(in./cm.):**
Location: B-918
Description: Silty Clay with Sand
Date: 2-24-07 **Natural Moisture:** 17.7
USCS Class.: CL-ML **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MS
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	23.46	26.82	32.82			
Dry+Tare	21.16	23.97	29.29			
Tare	11.0	11.07	11.60			
# Blows	20	24	35			
Moisture	22.6	22.1	20.0			

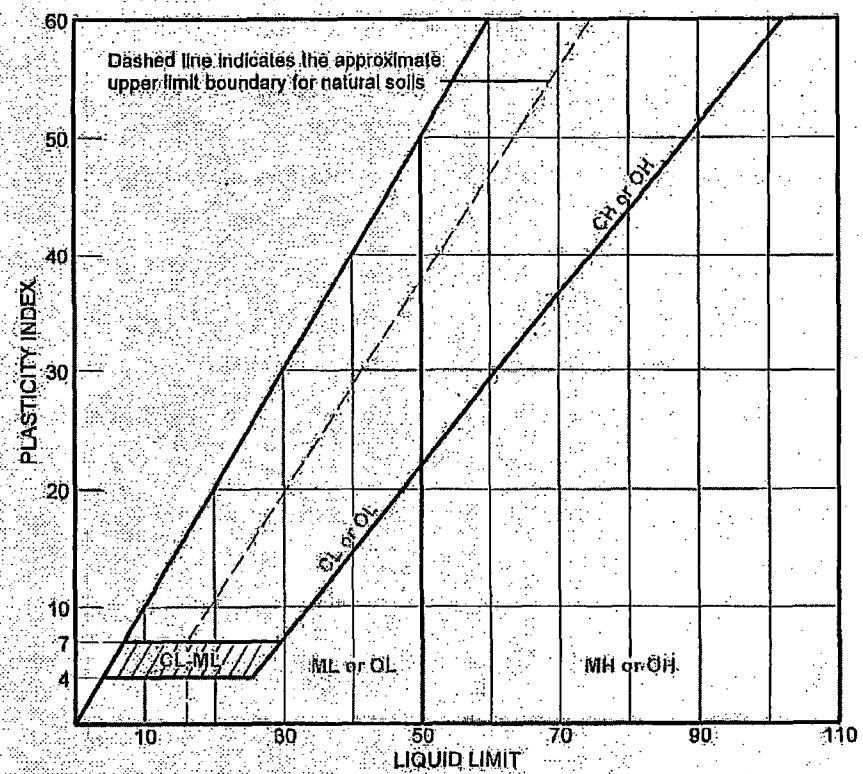


Liquid Limit= 22
Plastic Limit= 16
Plasticity Index= 6

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	18.19	12.64			
Dry+Tare	16.74	11.48			
Tare	7.92	4.33			
Moisture	16.4	16.2			

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-918	SS-19	83.5' to 85'	3-15-07	SP	Poorly graded sand	19.3	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH NR 3-26-07
ASTM D4318-05

KAW 3/29/07

LIQUID AND PLASTIC LIMIT TEST DATA

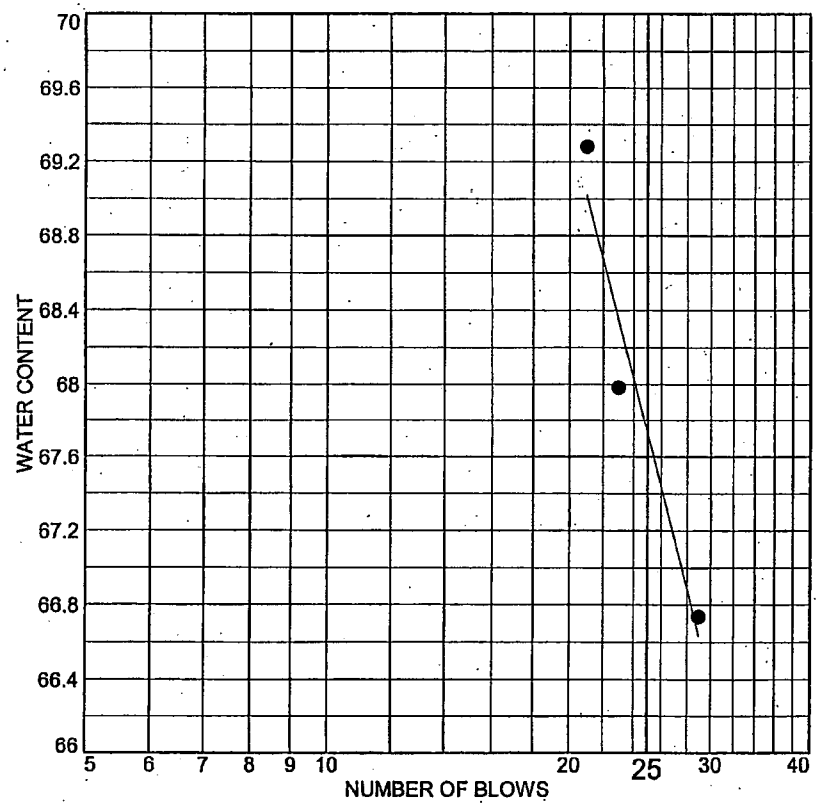
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

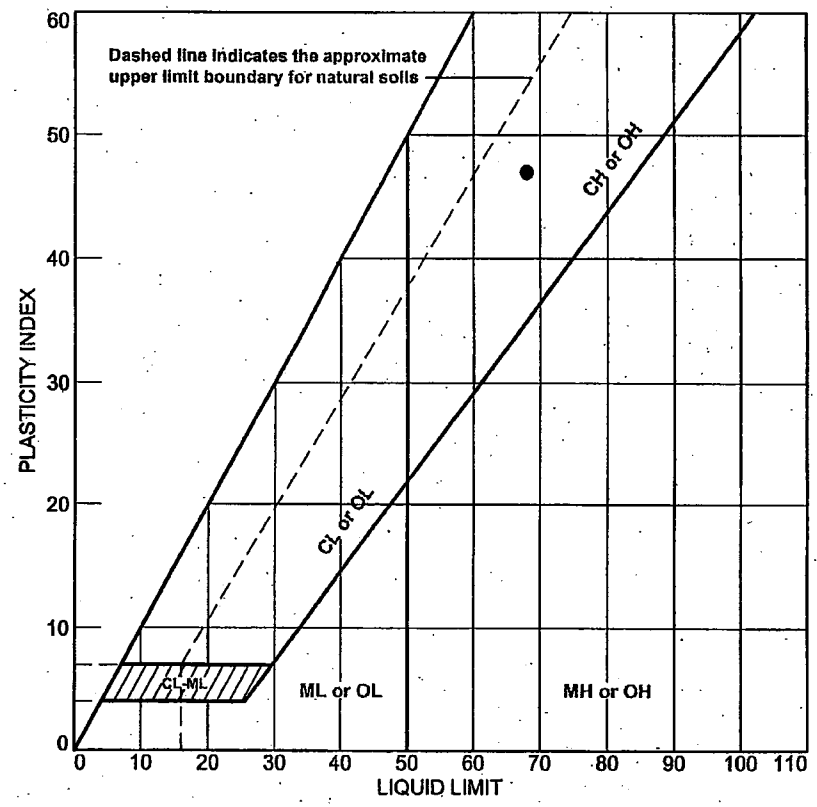
Sample Data

Source: B-918
Sample No.: SS-19
Elev. or Depth: 83.5' to 85' **Sample Length(in./cm.):**
Location: B-918
Description: Poorly graded sand
Date: 3-15-07 **Natural Moisture:** 19.3
USCS Class.: SP **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 919	STP-273 (UD-1)	8.0'-10.0'	12/17/2006	CH	Fat Clay	23.3	68	47

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

MA 4-2-07

KAW 4/3/07

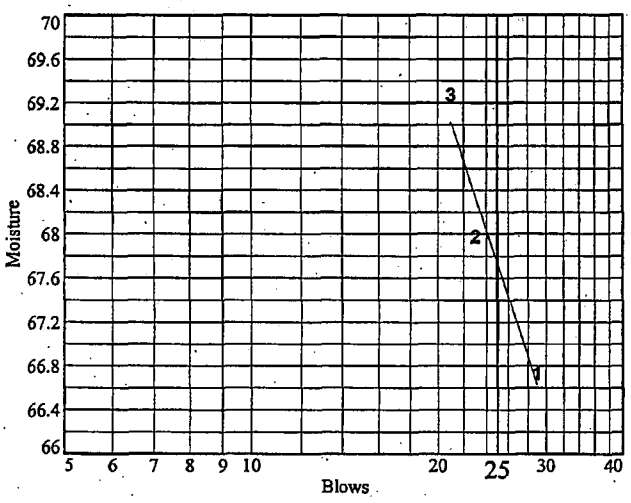
LIQUID AND PLASTIC LIMIT TEST DATA

3/19/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 919
Depth: 8.0'-10.0'
Sample Number: STP-273 (UD-1)
Material Description: Fat Clay
Date: 12/17/2006
USCS Class.: CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.06	35.93	36.32			
Dry+Tare	32.87	32.83	33.05			
Tare	28.09	28.27	28.33			
# Blows	29	23	21			
Moisture	66.7	68.0	69.3			



Liquid Limit= 68
Plastic Limit= 21
Plasticity Index= 47
Natural Moisture= 23.3
Liquidity Index= 0.0

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.32	35.89			
Dry+Tare	33.88	34.53			
Tare	27.12	28.13			
Moisture	21.3	21.2			

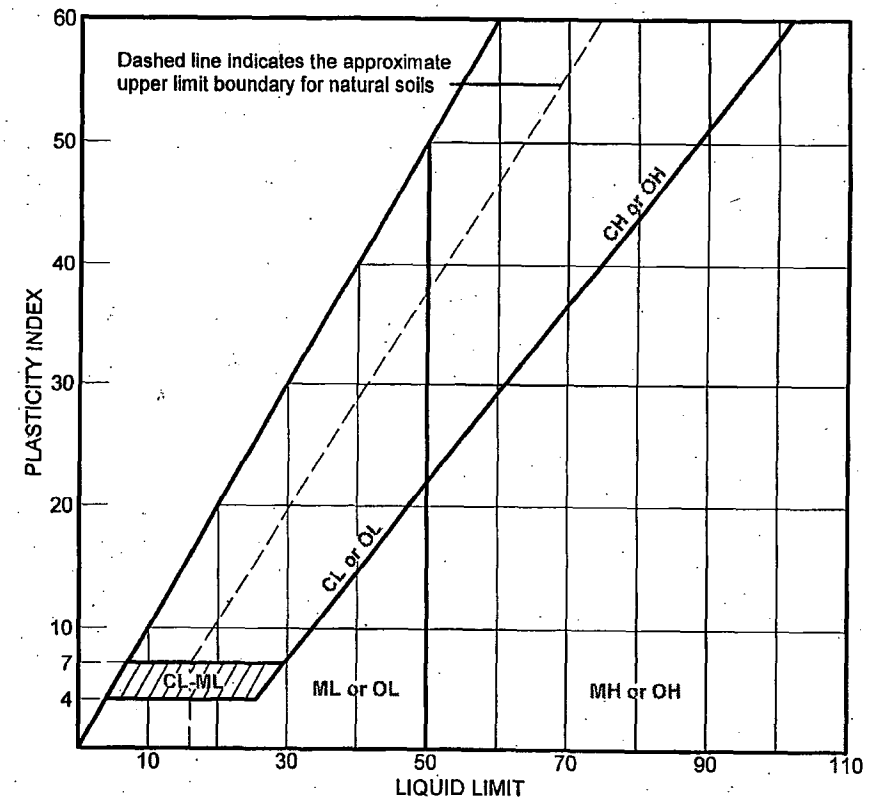
Natural Moisture Data

Wet+Tare	Dry+Tare	Tare	Moisture
453.4	400.3	172.6	23.3

MA 4-3-07

MACTEC, Inc.

LIQUID AND PLASTIC LIMITS TEST REPORT



	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-919	UD-2	23' to 25'	2-25-07	ML	Sandy Silt	20.4	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05 KAW 4/13/07

KAW 4/13/07

LIQUID AND PLASTIC LIMIT TEST DATA

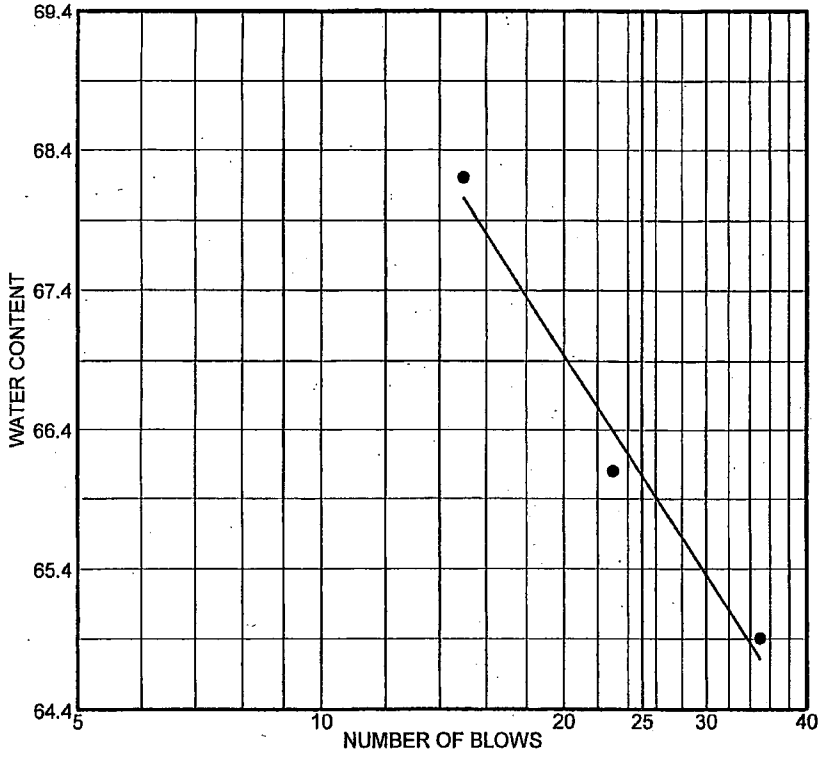
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

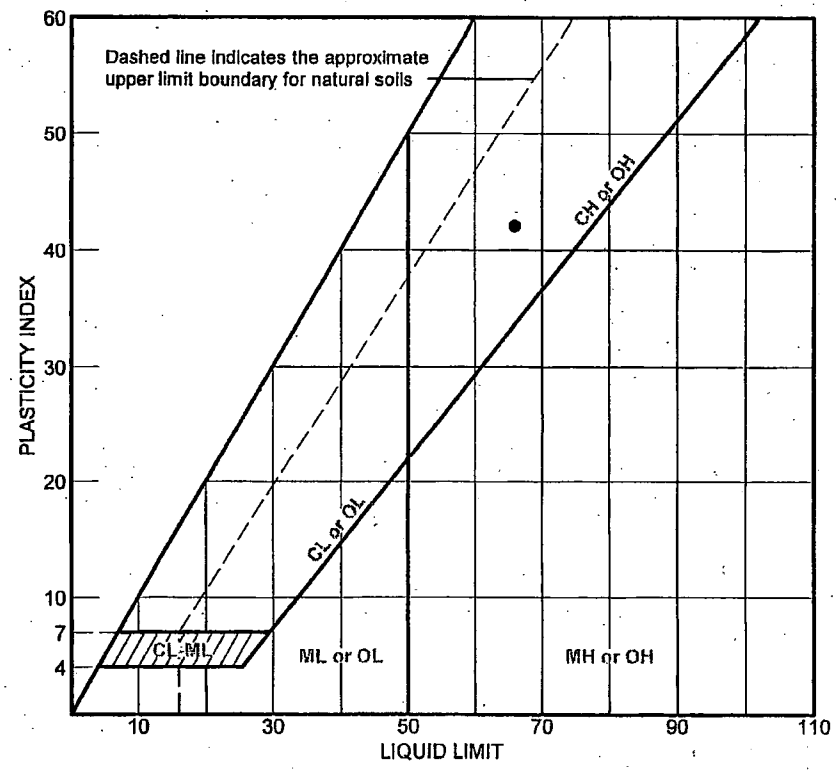
Sample Data

Source: B-919
Sample No.: UD-2
Elev. or Depth: 23' to 25' **Sample Length(in./cm.):**
Location: B-919
Description: Sandy Silt
Date: 2-25-07 **Natural Moisture:** 20.4
USCS Class.: ML **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-919	UD-3	43' to 45'	3-22-07	CH	Fat Clay	26.5	66	42

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reveiwed by: MH
ASTM D4318-05

KAW 3/30/07

LIQUID AND PLASTIC LIMIT TEST DATA

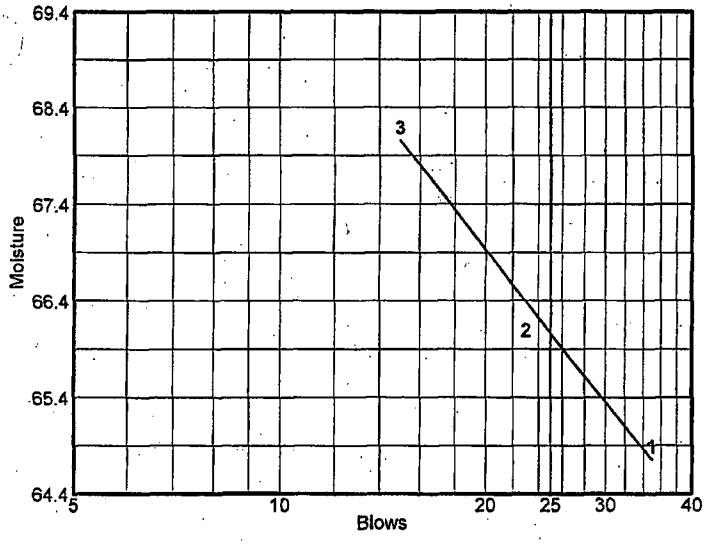
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-919
Sample No.: UD-3
Elev. or Depth: 43' to 45' **Sample Length(in./cm.):**
Location: B-919
Description: Fat Clay
Date: 3-22-07 **Natural Moisture:** 26.5
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reveiwed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	27.44	29.35	29.47			
Dry+Tare	20.99	22.04	21.84			
Tare	11.05	10.98	10.66			
# Blows	35	23	15			
Moisture	64.9	66.1	68.2			

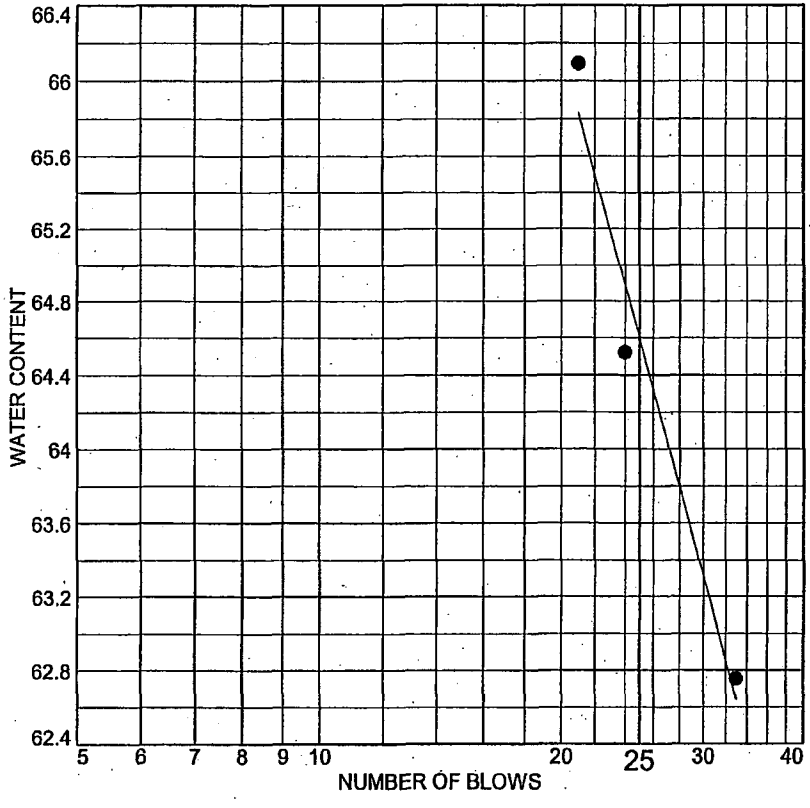


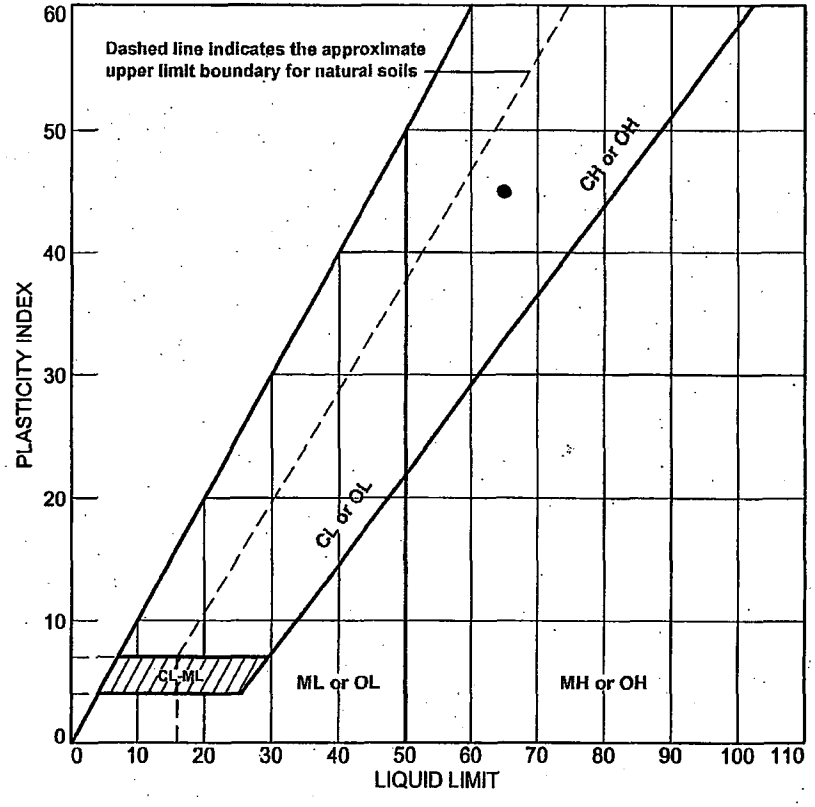
Liquid Limit= 66
Plastic Limit= 24
Plasticity Index= 42

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	17.37	18.32			
Dry+Tare	16.06	16.90			
Tare	10.80	10.95			
Moisture	24.9	23.9			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 919	STP-252	48.5'-50.0'	12/17/2006	CH	Fat Clay	23.1	65	45
		(SS-13)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:MH/RF
ASTM D4318-05

MA 4-3-07

KAW 4/3/07

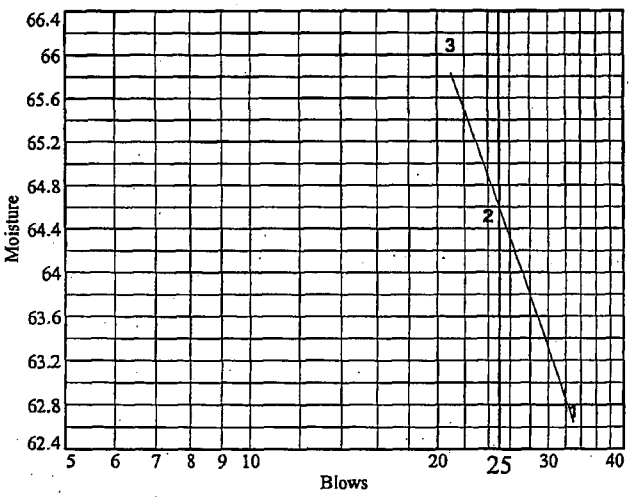
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 919
Depth: 48.5'-50.0'
Sample Number: STP-252 (SS-13)
Material Description: Fat Clay
Date: 12/17/2006
USCS Class.: CH
Testing Remarks: Tested By:AC Reviewed By:MH/RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.80	37.38	37.92			
Dry+Tare	34.06	33.67	34.08			
Tare	28.10	27.92	28.27			
# Blows	33	24	21			
Moisture	62.8	64.5	66.1			



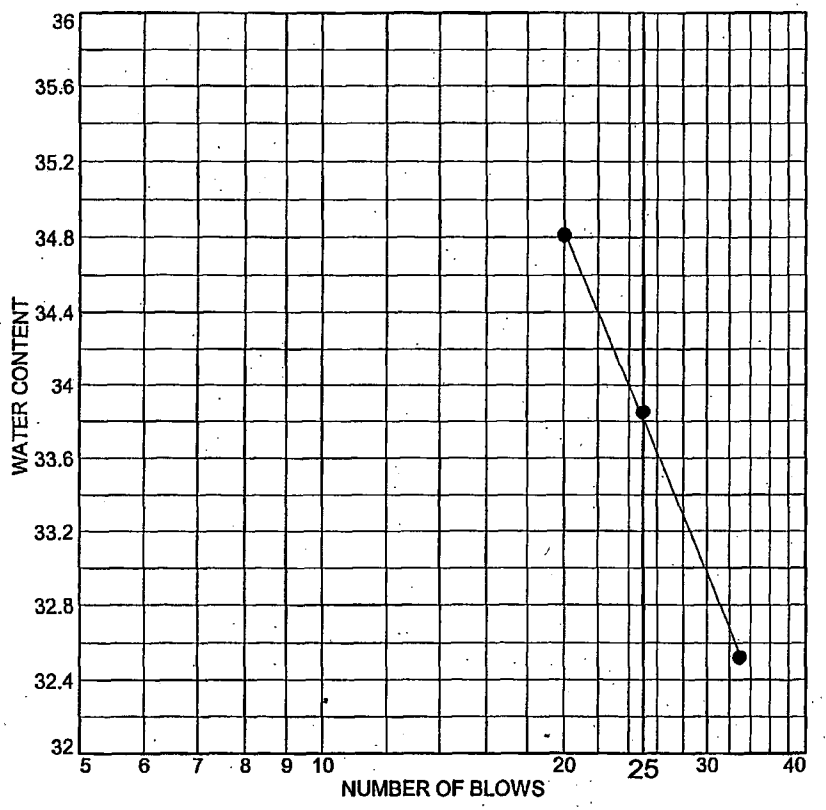
Liquid Limit= 65
Plastic Limit= 20
Plasticity Index= 45
Natural Moisture= 23.1
Liquidity Index= 0.1

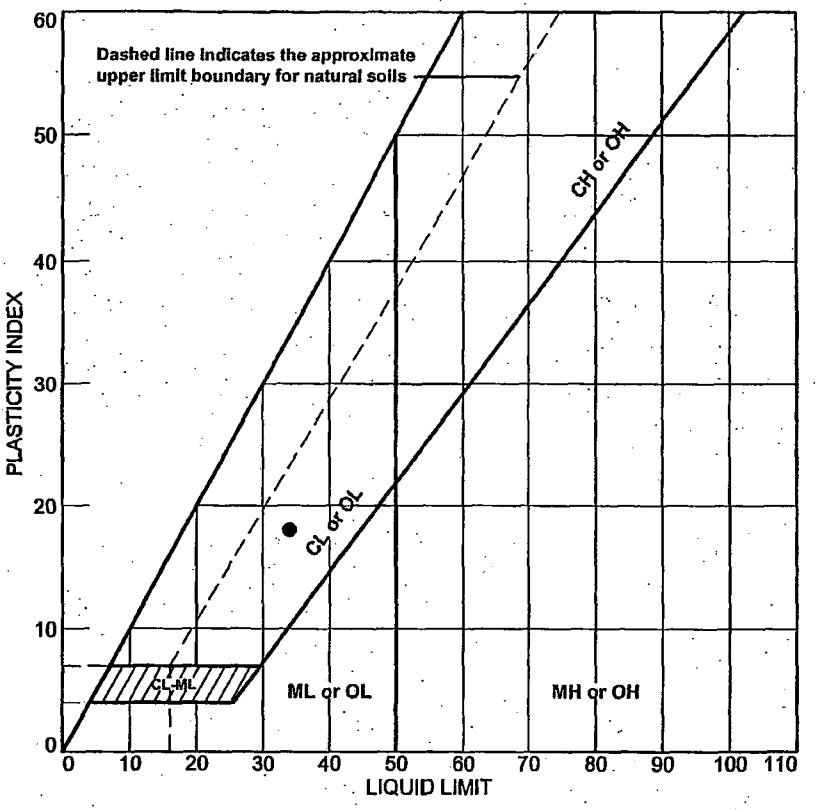
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.08	37.88			
Dry+Tare	34.75	36.32			
Tare	28.13	28.34			
Moisture	20.1	19.5			

MH 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 927	STP-313 (SS-5)	6.0'-7.5'	12/15/2006	CL	Lean Clay with Sand	19.2	34	18

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:MH
ASTM D4318-05

MH 4-3-07

KAW 4/3/07

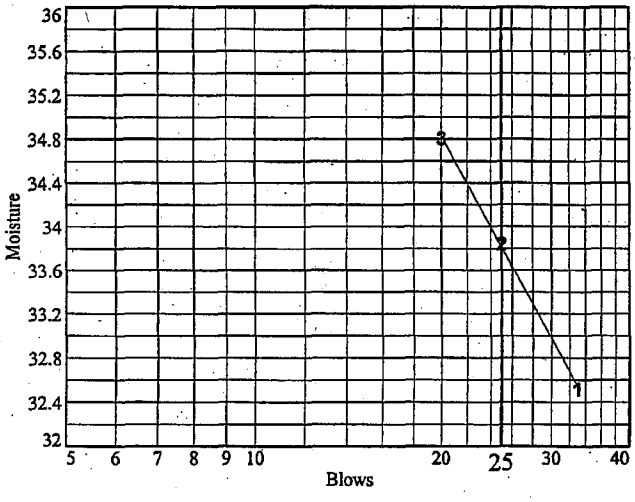
LIQUID AND PLASTIC LIMIT TEST DATA

4/1/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 927
Depth: 6.0'-7.5' **Sample Number:** STP-313 (SS-5)
Material Description: Lean Clay with Sand
Date: 12/15/2006 **USCS Class.:** CL **AASHTO Class.:** A-6(12)
Testing Remarks: Tested By:AC Reviewed By:MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.90	36.72	37.99			
Dry+Tare	34.76	34.32	35.48			
Tare	28.18	27.23	28.27			
# Blows	33	25	20			
Moisture	32.5	33.9	34.8			



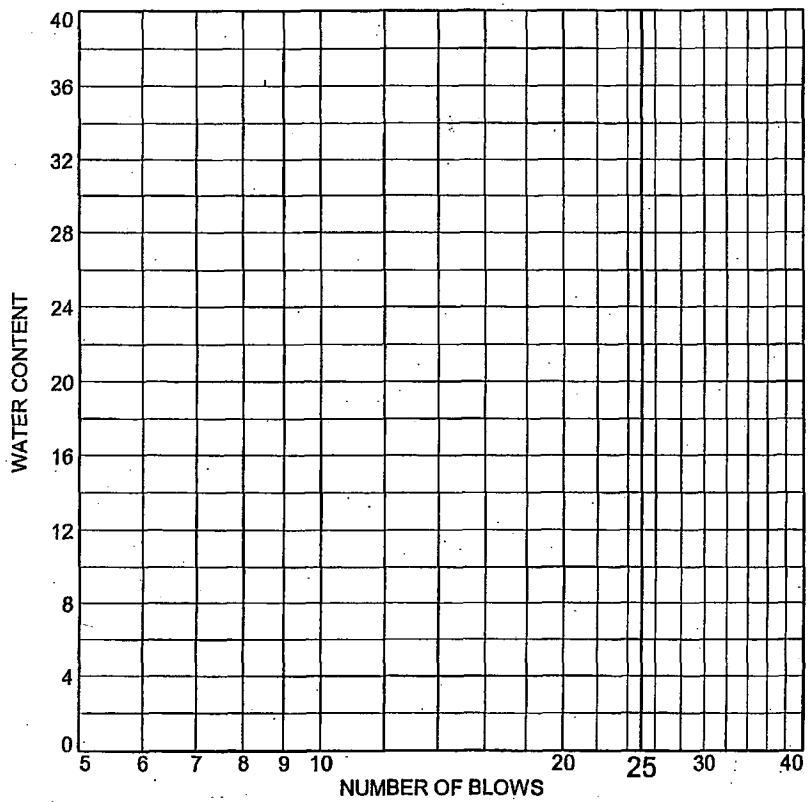
Liquid Limit= 34
Plastic Limit= 16
Plasticity Index= 18
Natural Moisture= 19.2
Liquidity Index= 0.2

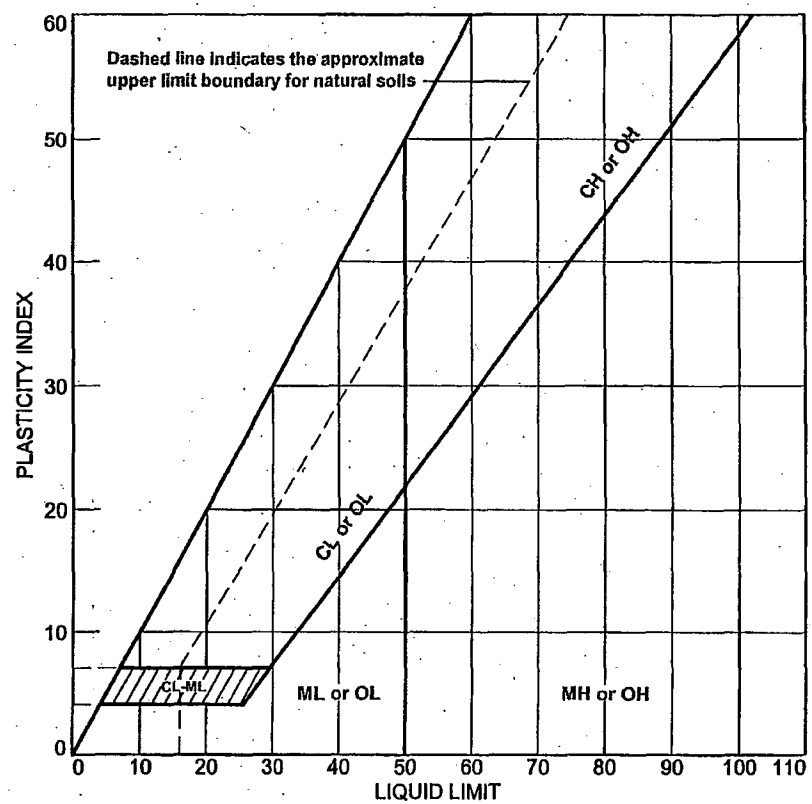
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.90	36.76			
Dry+Tare	34.84	35.57			
Tare	28.29	28.33			
Moisture	16.2	16.4			

MH 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 927	STP-257	10.5'-12.0'	12/15/2006	ML	Sandy Silt	22.3	NV	NP
		(SS-8)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

4-3-07

KAW 8 4/3/07

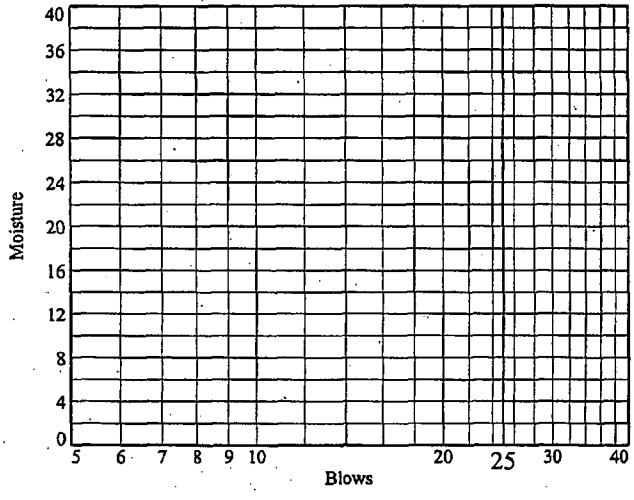
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 927
Depth: 10.5'-12.0' **Sample Number:** STP-257 (SS-8)
Material Description: Sandy Silt
Date: 12/15/2006 **USCS Class.:** ML
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare						
Dry+Tare						
Tare						
# Blows						
Moisture						



Liquid Limit= NV
Plastic Limit= NP
Plasticity Index= NP
Natural Moisture= 22.3

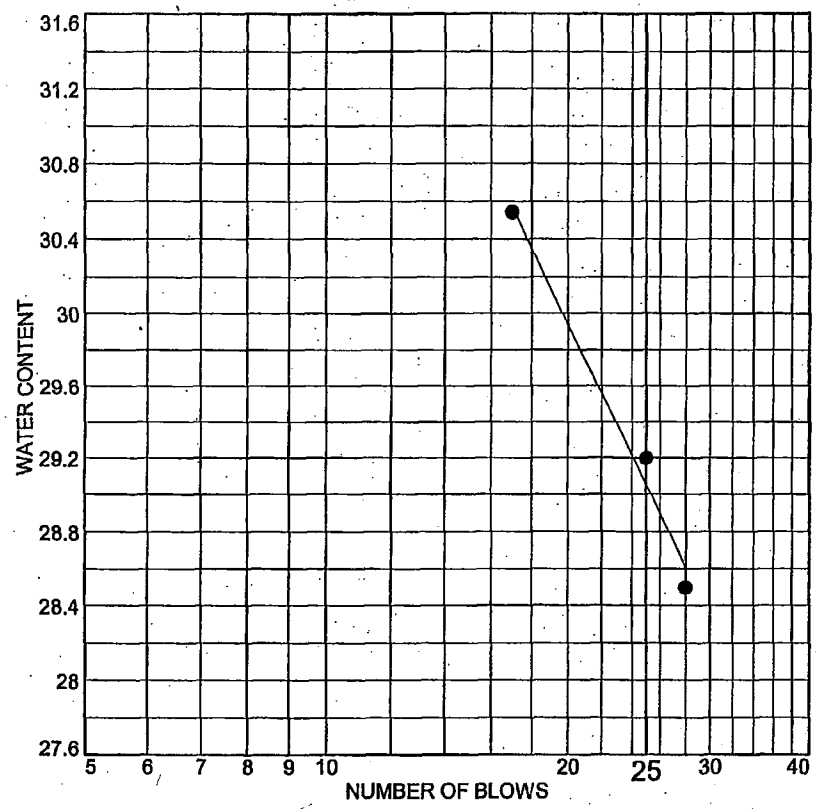
Plastic Limit Data

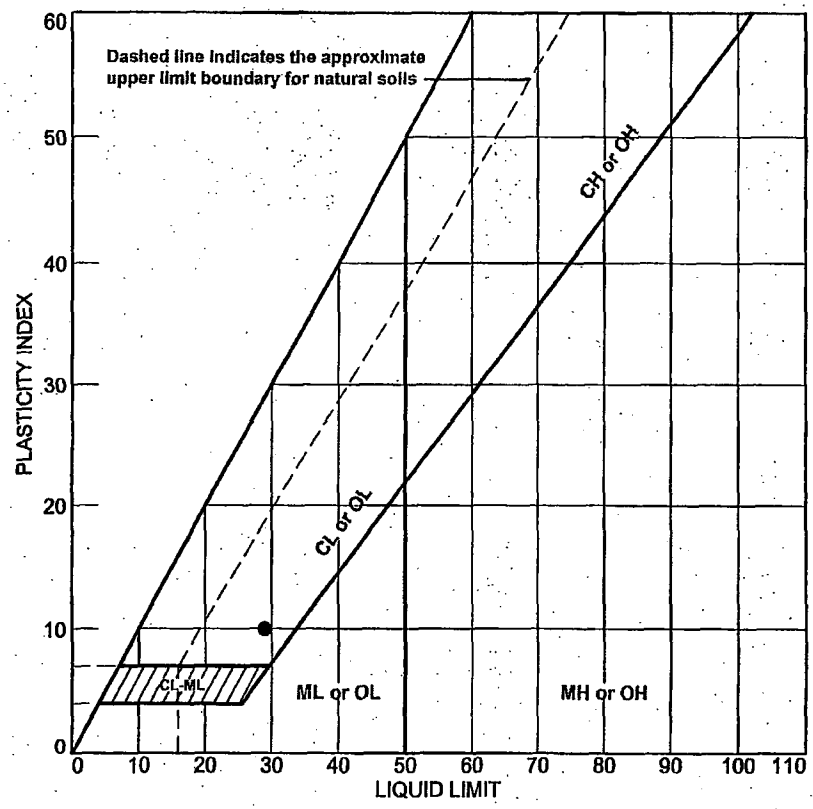
Run No.	1	2	3	4	
Wet+Tare					
Dry+Tare					
Tare					
Moisture					

MAC 2-3-07

MACTEC, Inc.

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 927	STP-312 (SS-10)	23.5'-25.0'	12/16/2006	CL	Lean Clay	25.5	29	10

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:MH

ASTM D4318-05

MH 4-3-07

KAW 4/3/07

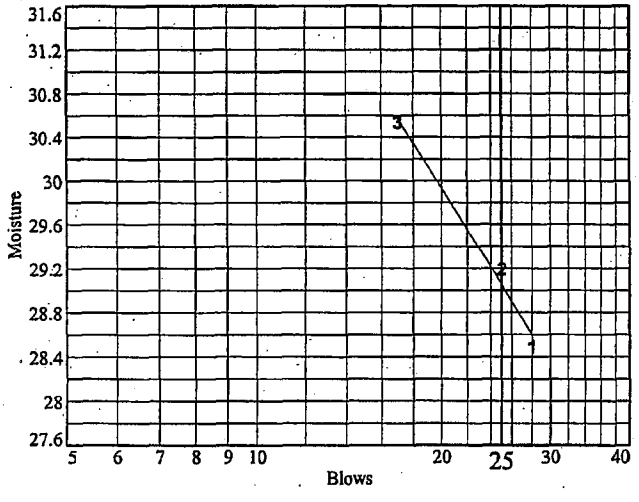
LIQUID AND PLASTIC LIMIT TEST DATA

4/1/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 927
Depth: 23.5'-25.0' **Sample Number:** STP-312 (SS-10)
Material Description: Lean Clay
Date: 12/16/2006 **USCS Class.:** CL
Testing Remarks: Tested By:AC Reviewed By:MH
ASTM D4318-05

Liquid Limit

Run No.	1	2	3	4	5	6
Wet+Tare	37.90	38.22	36.81			
Dry+Tare	35.74	35.96	34.84			
Tare	28.16	28.22	28.39			
# Blows	28	25	17			
Moisture	28.5	29.2	30.5			



Liquid Limit= 29
Plastic Limit= 19
Plasticity Index= 10
Natural Moisture= 25.5
Liquidity Index= 0.6

Plastic Limit

Run No.	1	2	3	4	
Wet+Tare	37.83	36.15			
Dry+Tare	36.30	34.90			
Tare	28.36	28.38			
Moisture	19.3	19.2			

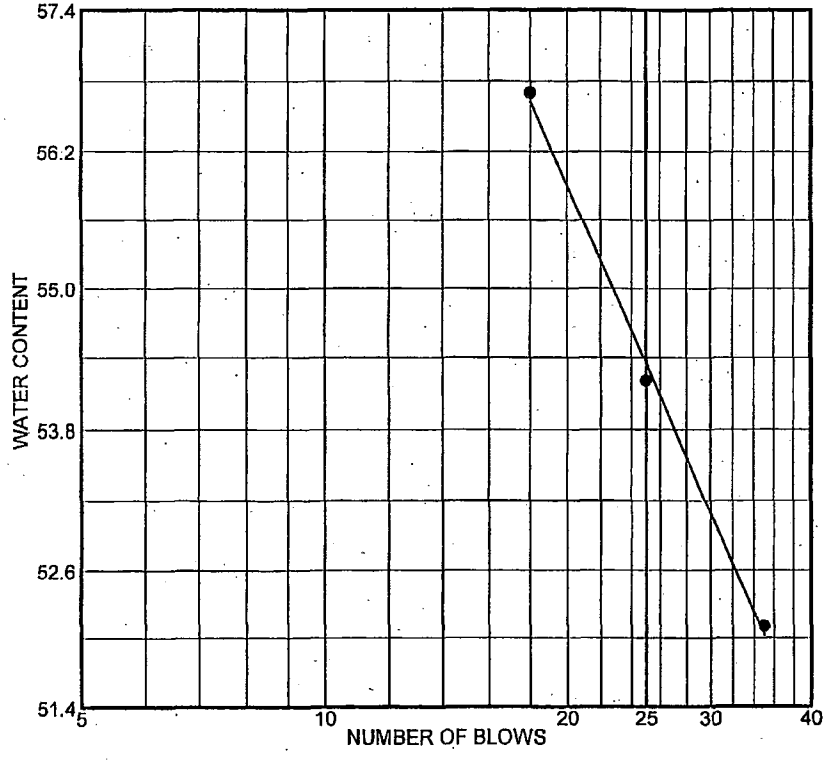
Natural Moisture

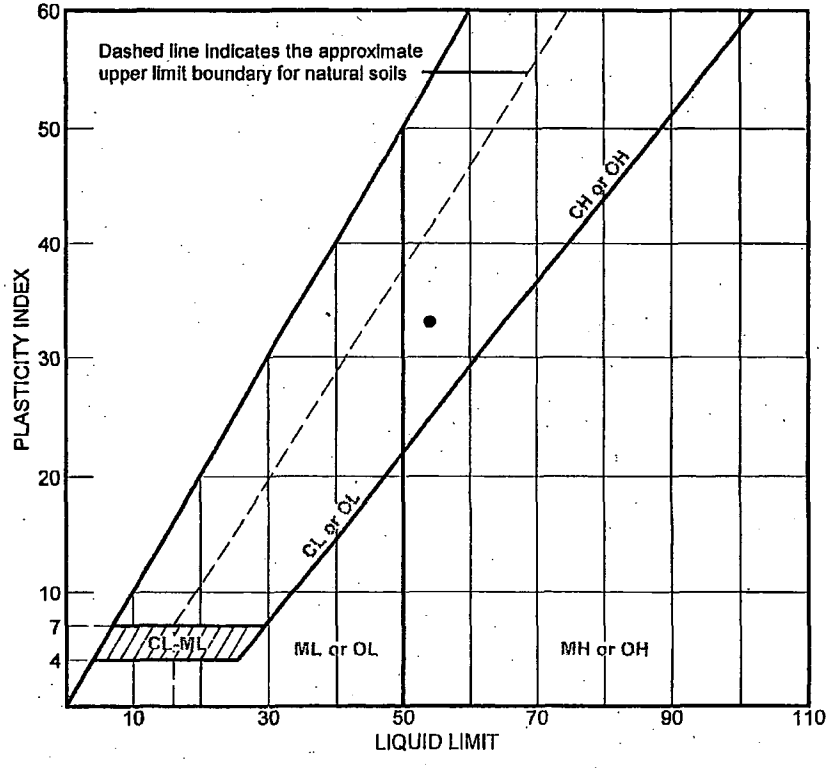
Wet+Tare	Dry+Tare	Tare	Moisture
806.2	678.4	177.6	25.5

MH 4-3-07

MACTEC, Inc.

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	B-927	UD-3	48' to 50'	3-22-07	CH	Fat Clay	28.2	54	33

Client Bechtel Power Corporation
Project Bechtel/STP/COL
Project No. 5050-06-0496 Figure

MACTEC, INC.

Charlotte, North Carolina

● Tested by: JA Reviewed by: MH
ASTM D4318-05

KAW 3/30/07

LIQUID AND PLASTIC LIMIT TEST DATA

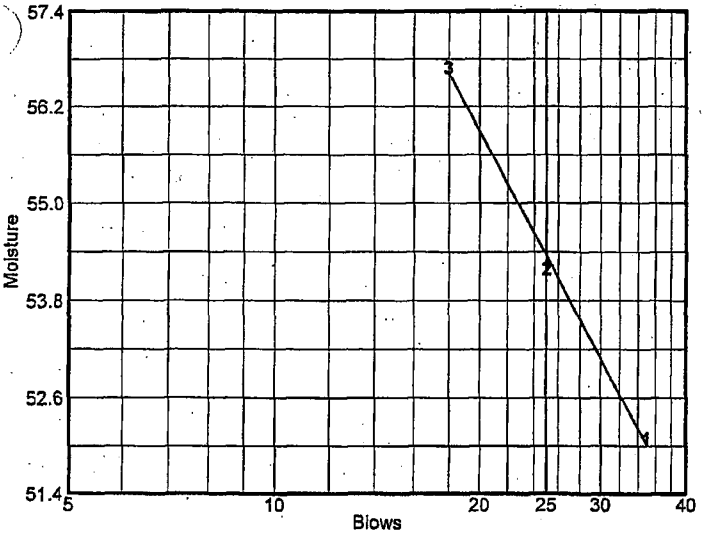
Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-927
Sample No.: UD-3
Elev. or Depth: 48' to 50' **Sample Length(in./cm.):**
Location: B-927
Description: Fat Clay
Date: 3-22-07 **Natural Moisture:** 28.2
USCS Class.: CH **AASHTO Class.:**
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	33.66	32.89	29.43			
Dry+Tare	25.90	25.35	23.00			
Tare	11.01	11.43	11.65			
# Blows	35	25	18			
Moisture	52.1	54.2	56.7			

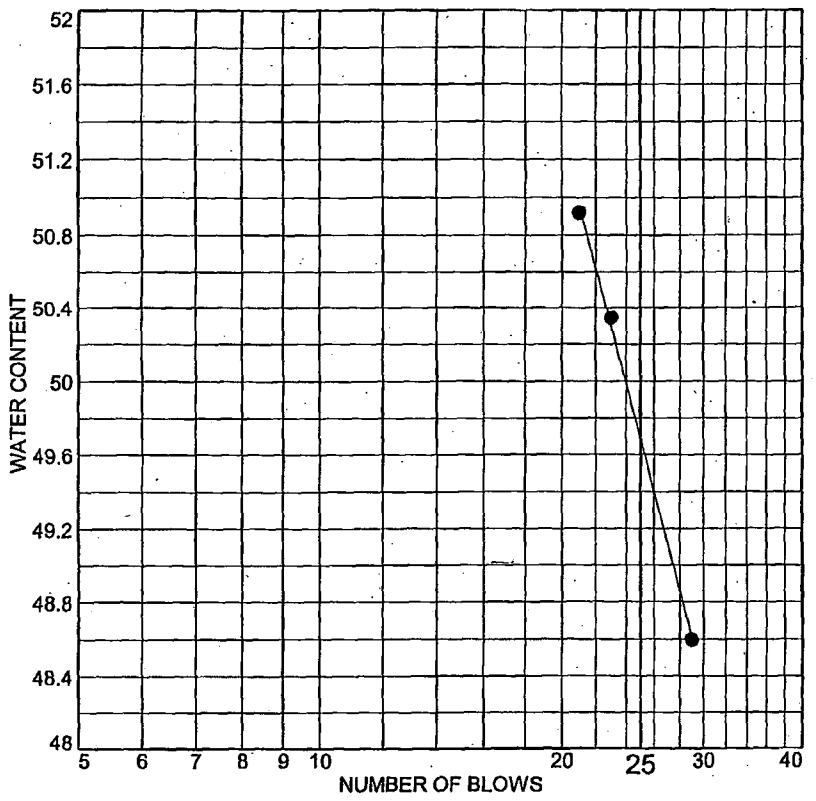


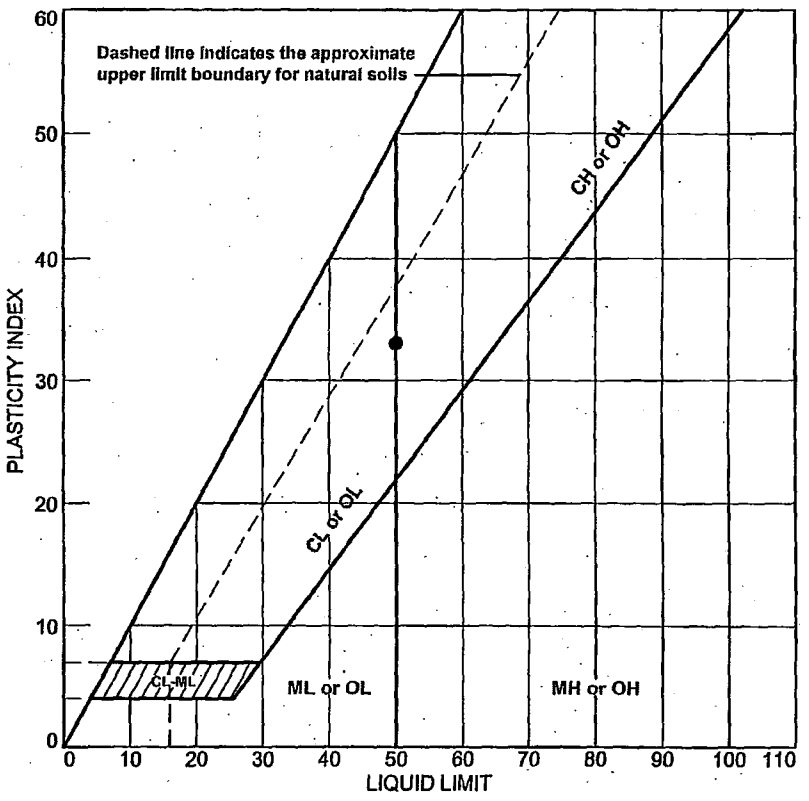
Liquid Limit= 54
Plastic Limit= 21
Plasticity Index= 33

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	18.14	18.28			
Dry+Tare	16.98	16.91			
Tare	10.94	10.88			
Moisture	19.2	22.7			

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 919	STP-265 (TP-1)	.5'-6.0'	2/17/07	CH	Fat Clay	20.2	50	33

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05
4-3-07

KAW 4/3/07

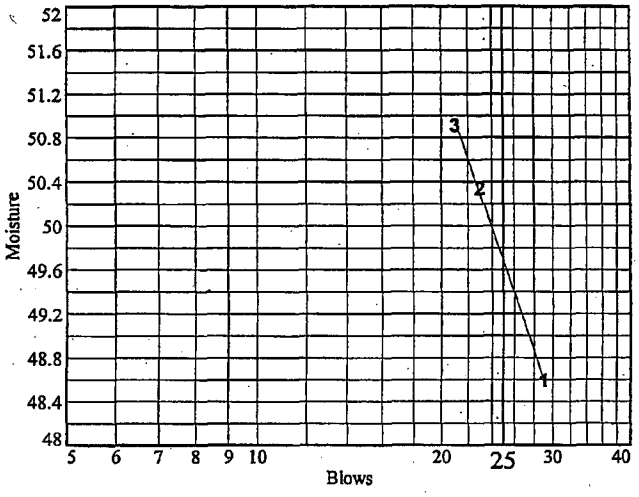
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 919
Depth: .5'-6.0' **Sample Number:** STP-265 (TP-1)
Material Description: Fat Clay
Date: 2/17/07 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	38.26	36.88	36.97			
Dry+Tare	34.97	33.96	33.65			
Tare	28.20	28.16	27.13			
# Blows	29	23	21			
Moisture	48.6	50.3	50.9			



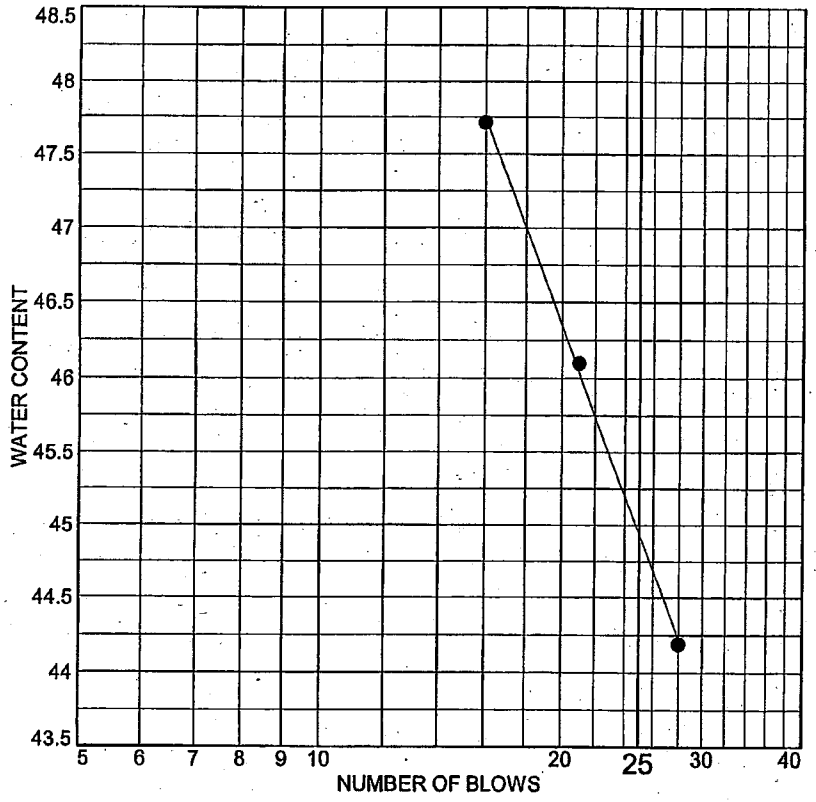
Liquid Limit= 50
Plastic Limit= 17
Plasticity Index= 33
Natural Moisture= 20.2
Liquidity Index= 0.1

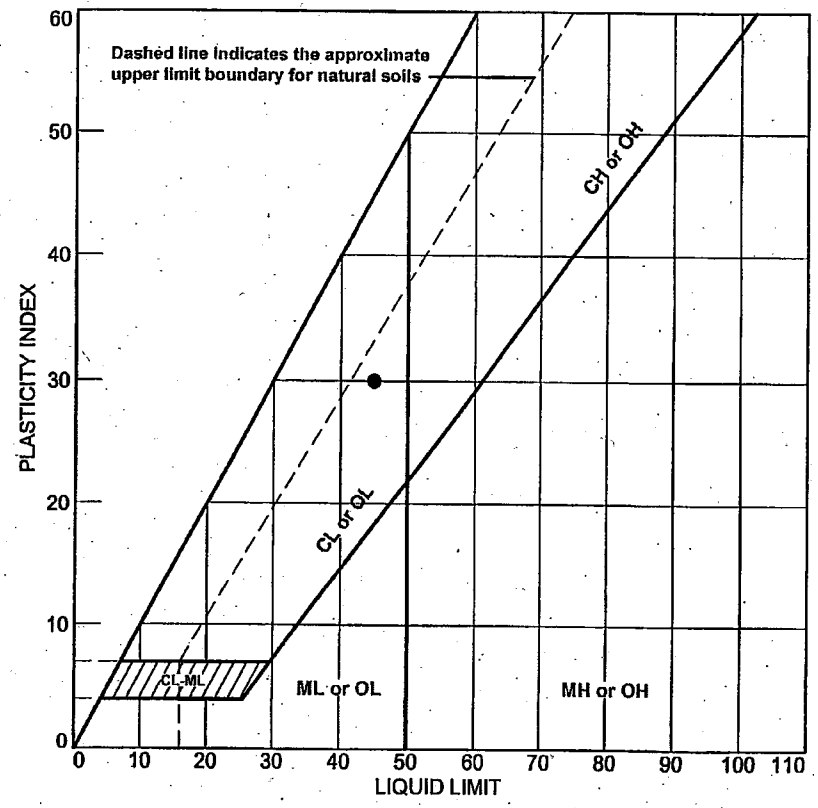
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	37.71	37.37			
Dry+Tare	36.29	36.01			
Tare	27.99	28.02			
Moisture	17.1	17.0			

MAT 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 927	STP-267 (TP1)	0.5'-4.0'	12/19/2006	CL	Lean Clay	24.1	45	30

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

MH
4-3-07

KAW 4/3/07

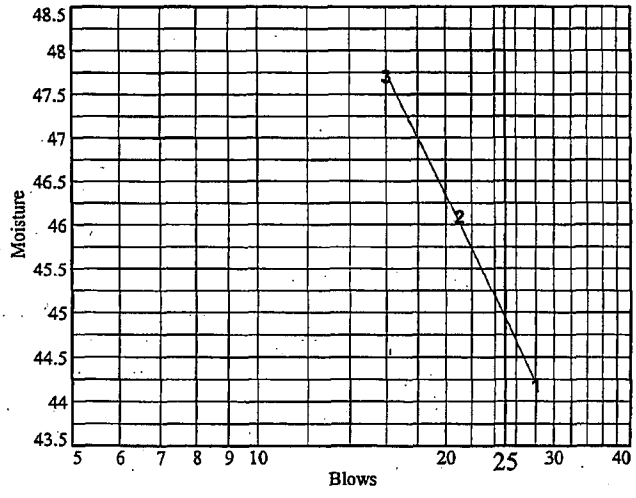
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 927
Depth: 0.5'-4.0' **Sample Number:** STP-267 (TP1)
Material Description: Lean Clay
Date: 12/19/2006 **USCS Class.:** CL
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.87	38.03	35.10			
Dry+Tare	34.60	34.90	31.97			
Tare	27.20	28.11	25.41			
# Blows	28	21	16			
Moisture	44.2	46.1	47.7			



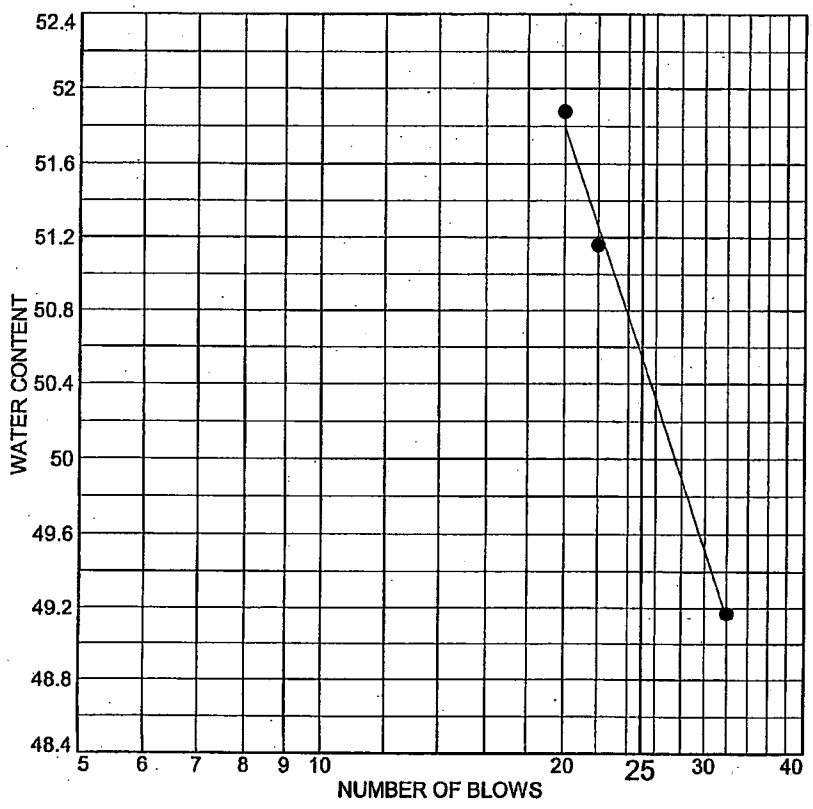
Liquid Limit= 45
Plastic Limit= 15
Plasticity Index= 30
Natural Moisture= 24.1
Liquidity Index= 0.3

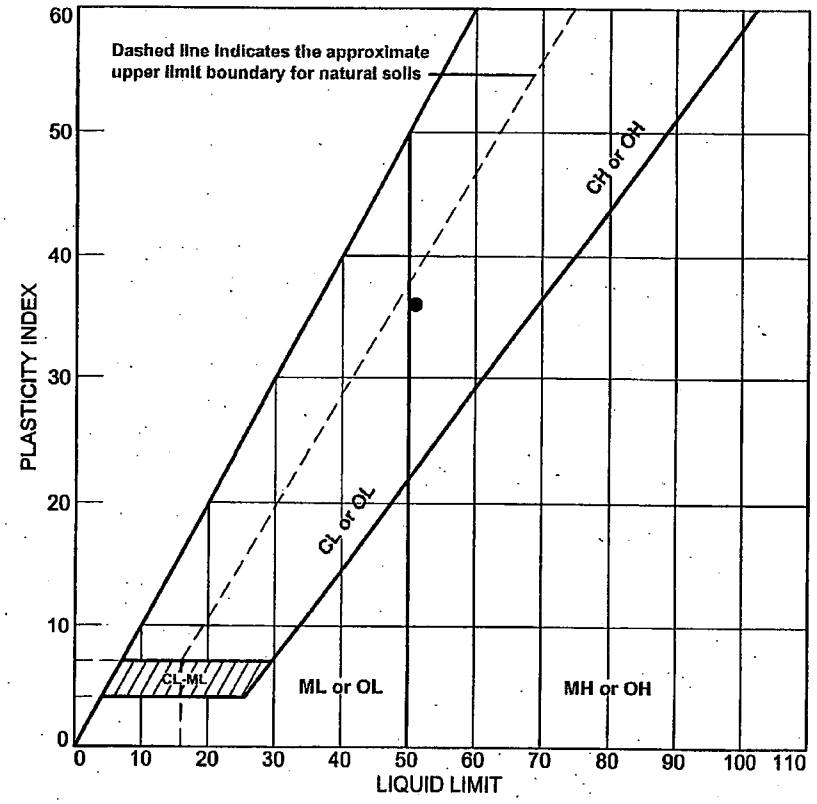
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.96	38.38			
Dry+Tare	34.88	37.08			
Tare	27.41	28.33			
Moisture	14.5	14.9			

NW 4.3.07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	C 304	STP-261 (TP1)	3.0'-6.75'	12/18/2006	CH	Fat Clay	21.7	51	36

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:MH/RF
ASTM D4318-05

MH
4-3-07

KAW 4/3/07

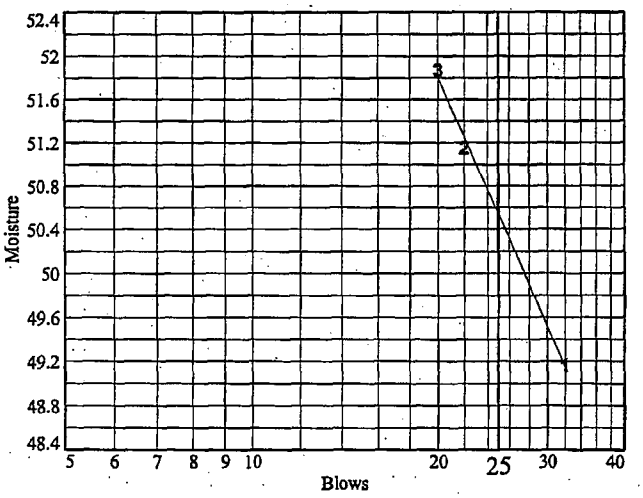
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: C 304
Depth: 3.0'-6.75'
Sample Number: STP-261 (TP1)
Material Description: Fat Clay
Date: 12/18/2006
USCS Class.: CH
Testing Remarks: Tested By:AC Reviewed By:MH/RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.18	37.38	36.54			
Dry+Tare	33.22	34.29	33.64			
Tare	27.20	28.25	28.05			
# Blows	32	22	20			
Moisture	49.2	51.2	51.9			



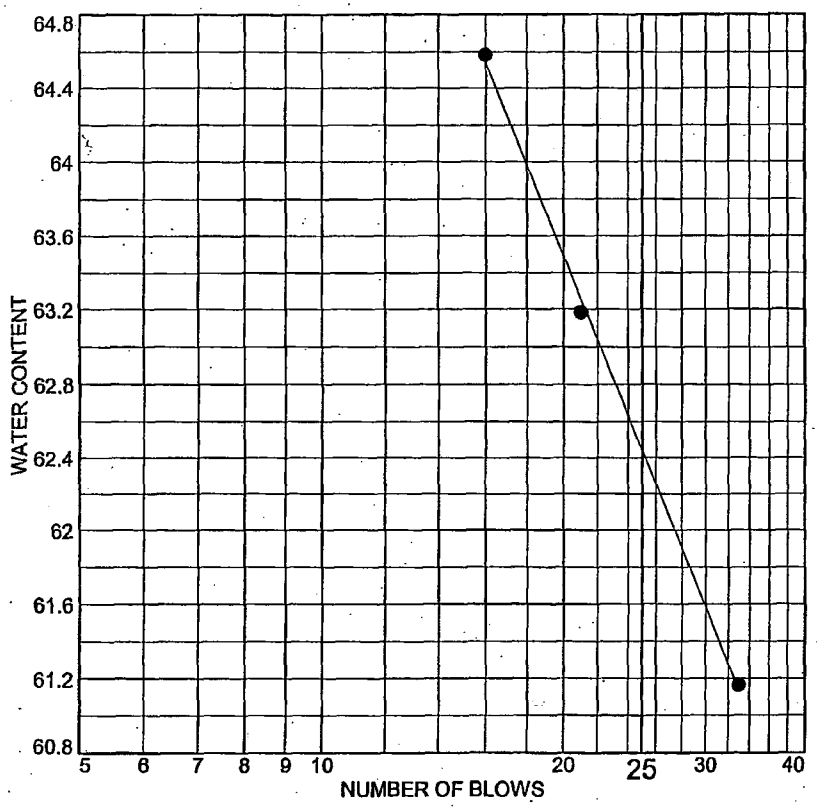
Liquid Limit= 51
Plastic Limit= 15
Plasticity Index= 36
Natural Moisture= 21.7
Liquidity Index= 0.2

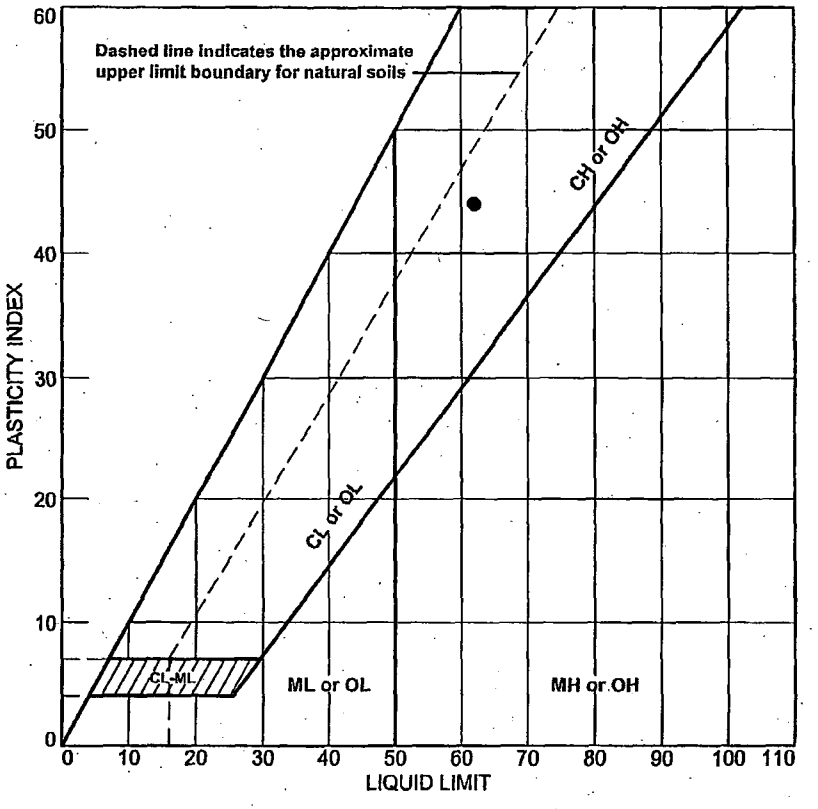
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	38.06	32.15			
Dry+Tare	36.78	31.27			
Tare	28.36	25.55			
Moisture	15.2	15.4			

MH 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	C 404	STP-263 (TP1)	2.25'-7.0'	12/18/2006	CH	Fat Clay	24.3	62	44

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

4-3-07

KAW 4/3/07

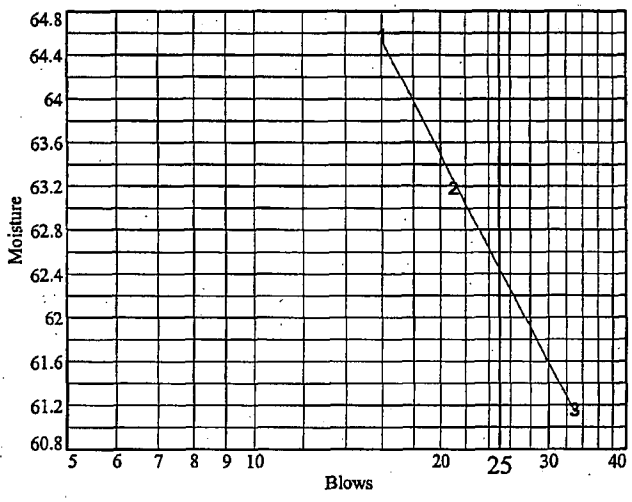
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: C 404
Depth: 2.25'-7.0' **Sample Number:** STP-263 (TP1)
Material Description: Fat Clay
Date: 12/18/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	38.32	37.92	32.66			
Dry+Tare	34.29	34.23	29.51			
Tare	28.05	28.39	24.36			
# Blows	16	21	33			
Moisture	64.6	63.2	61.2			



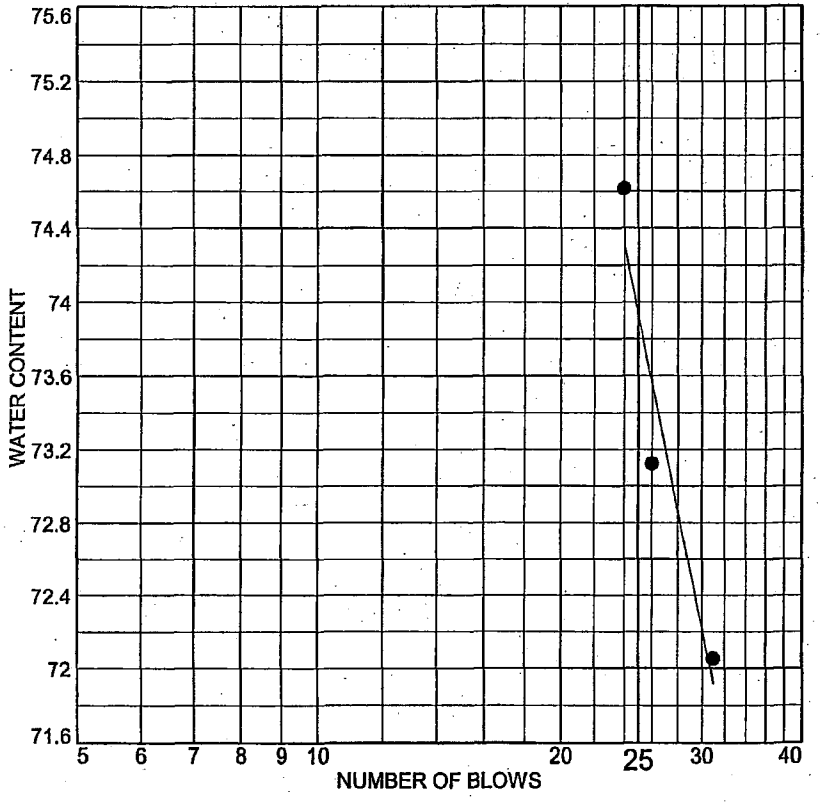
Liquid Limit= 62
Plastic Limit= 18
Plasticity Index= 44
Natural Moisture= 24.3
Liquidity Index= 0.1

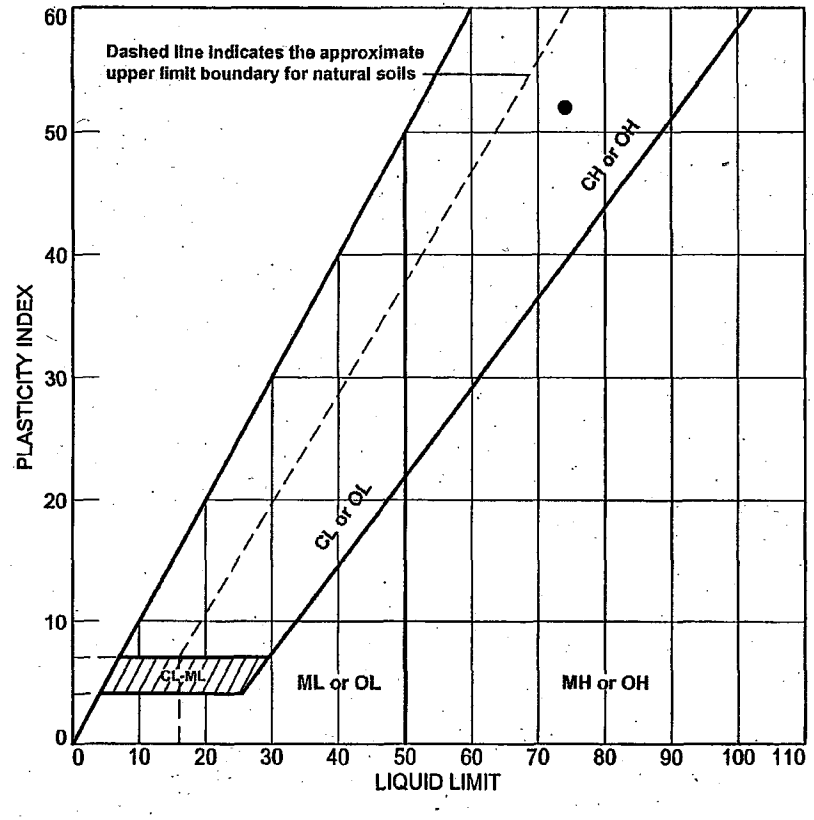
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.58	36.98			
Dry+Tare	34.45	35.67			
Tare	28.15	28.33			
Moisture	17.9	17.8			

MAC 4-2-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 919	STP-266	6'-8.5'	12/19/2006	CH	Fat Clay	25.9	74	52
		(TP-2)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:MH/RF

ASTM D4318-05

MH 4-3-07

KAW 4/3/07

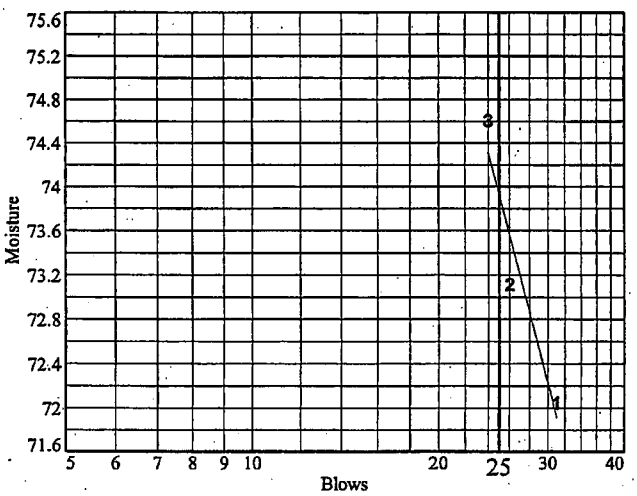
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 919
Depth: 6'-8.5'
Sample Number: STP-266 (TP-2)
Material Description: Fat Clay
Date: 12/19/2006
USCS Class.: CH
Testing Remarks: Tested By:AC/TH
Reviewed By:MH/RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	34.93	35.67	36.12			
Dry+Tare	31.63	32.46	32.74			
Tare	27.05	28.07	28.21			
# Blows	31	26	24			
Moisture	72.1	73.1	74.6			



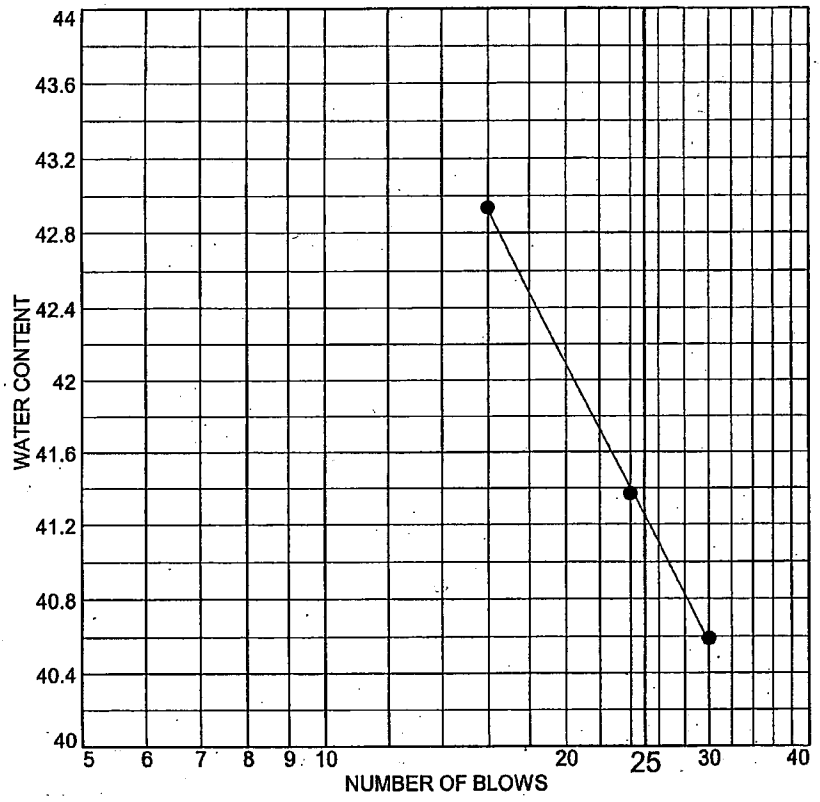
Liquid Limit= 74
Plastic Limit= 22
Plasticity Index= 52
Natural Moisture= 25.9
Liquidity Index= 0.1

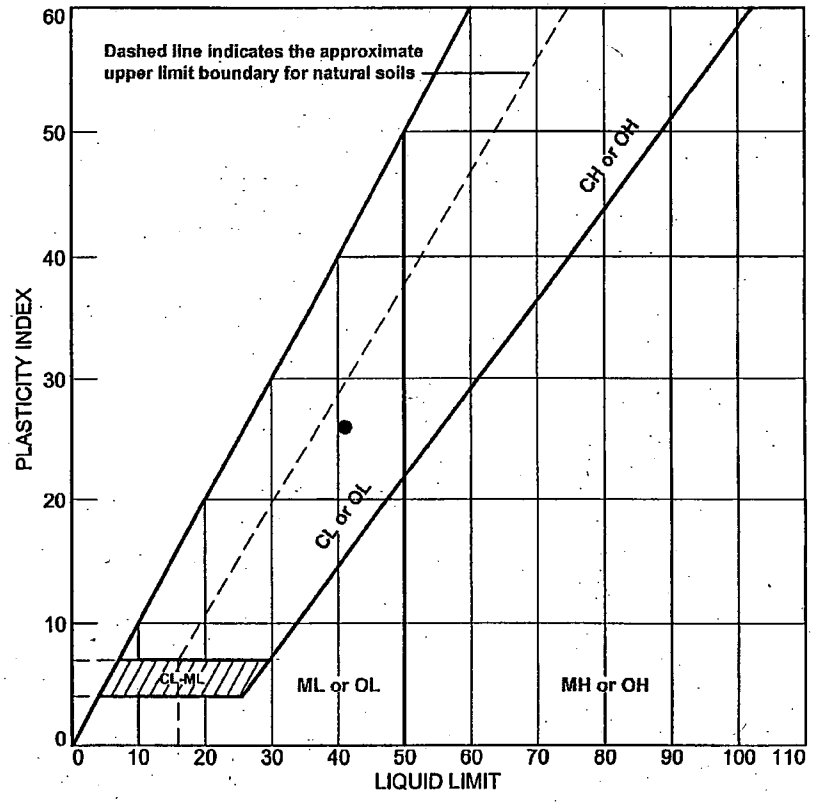
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	38.93	40.67			
Dry+Tare	36.76	38.45			
Tare	26.91	28.14			
Moisture	22.0	21.5			

MAH 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	Boring 927	STP-268 (TP2)	5.5'-8.5'	12/19/2006	CL	Lean Clay	22.0	41	26

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF
ASTM D4318-05

NM
4-7-07

KAW 4/3/07

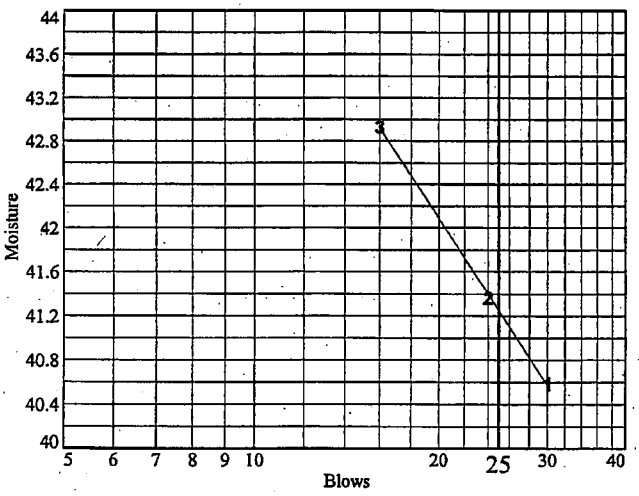
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 927
Depth: 5.5'-8.5' **Sample Number:** STP-268 (TP2)
Material Description: Lean Clay
Date: 12/19/2006 **USCS Class.:** CL
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	37.71	37.57	39.13			
Dry+Tare	34.95	34.79	35.97			
Tare	28.15	28.07	28.61			
# Blows	30	24	16			
Moisture	40.6	41.4	42.9			



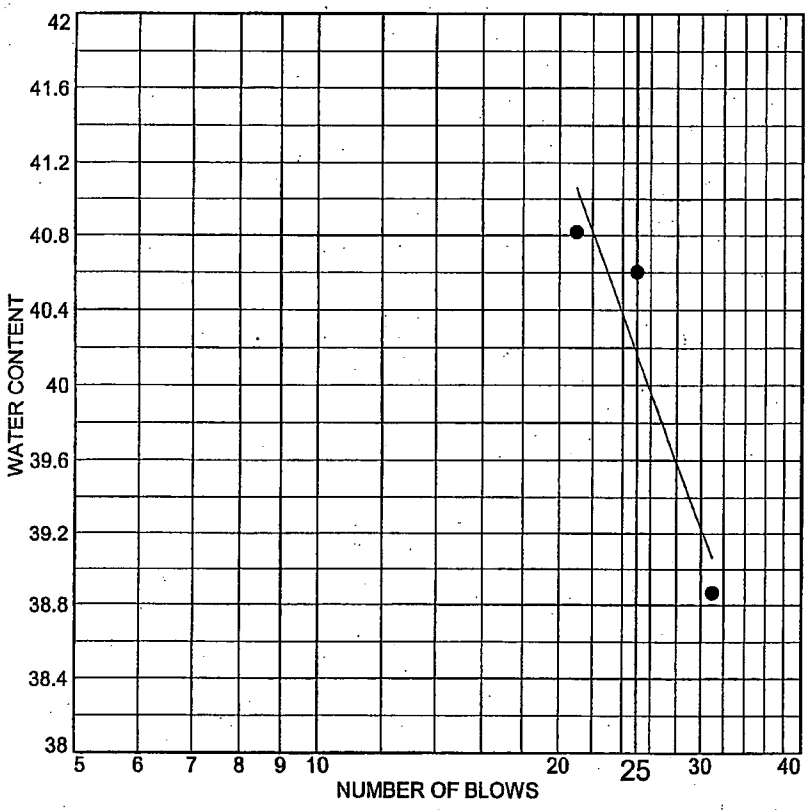
Liquid Limit= 41
Plastic Limit= 15
Plasticity Index= 26
Natural Moisture= 22.0
Liquidity Index= 0.3

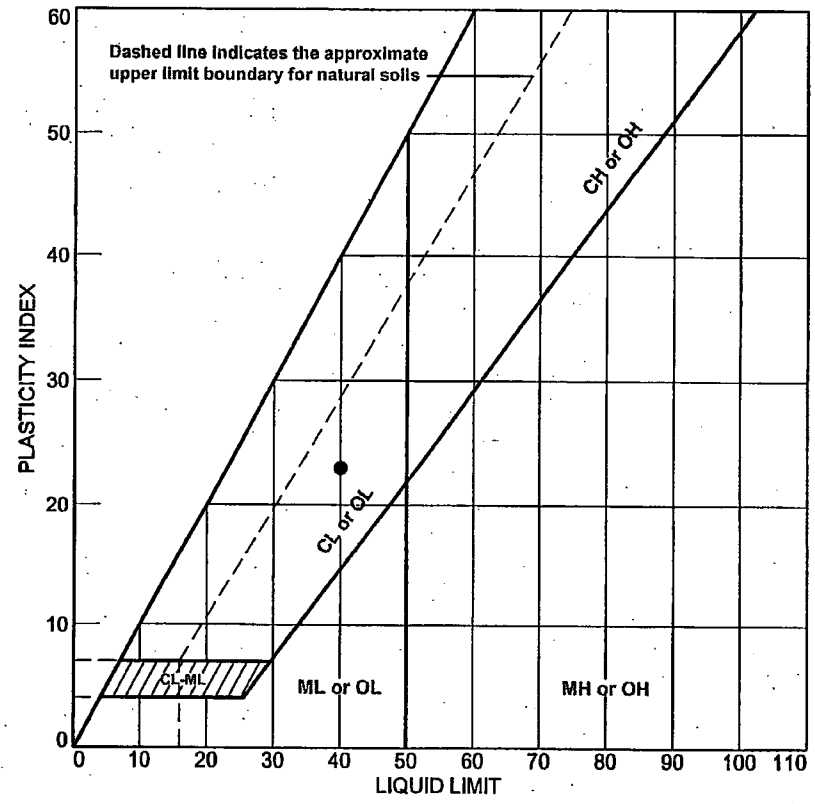
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	36.43	38.99	3		
Dry+Tare	35.42	37.58			
Tare	28.35	28.03			
Moisture	14.3	14.8			

MAA 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	C 304	STP-262	6.57'-9.0'	12/18/2006	CL	Lean Clay	25.5	40	23
		(TP-2)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC/TH Reviewed By:MH/RF

ASTM D4318-05

MH 4-3-07

KAW 4/3/07

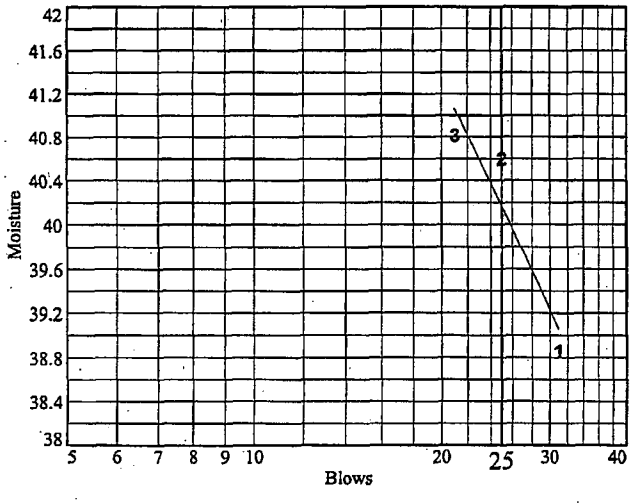
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: C 304
Depth: 6.57'-9.0'
Sample Number: STP-262 (TP-2)
Material Description: Lean Clay
Date: 12/18/2006
USCS Class.: CL
Testing Remarks: Tested By:AC/TH
Reviewed By:MH/RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	35.15	38.06	38.81			
Dry+Tare	32.13	35.23	35.72			
Tare	24.36	28.26	28.15			
# Blows	31	25	21			
Moisture	38.9	40.6	40.8			



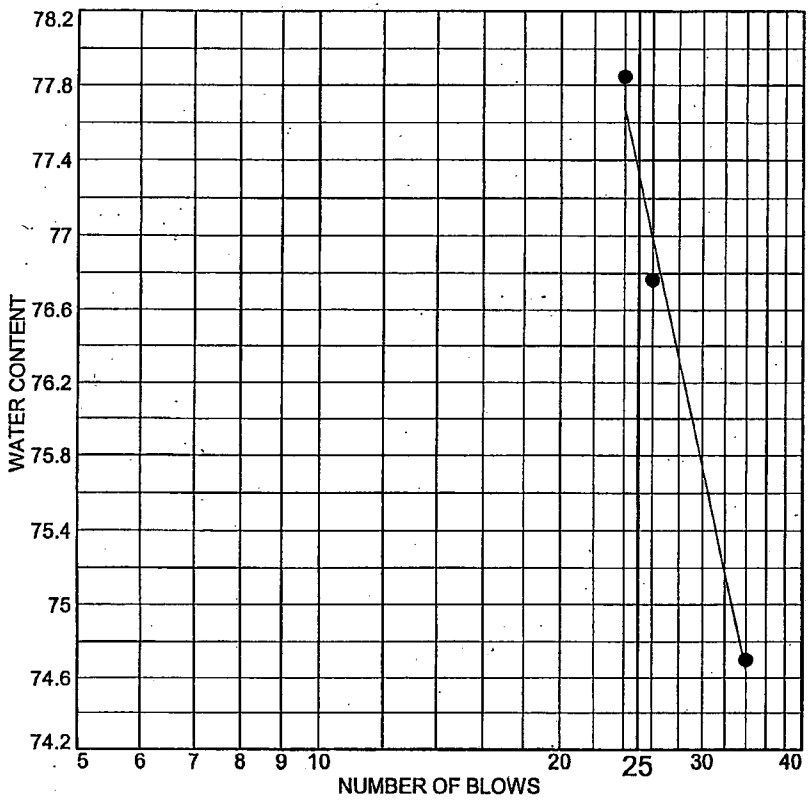
Liquid Limit= 40
Plastic Limit= 17
Plasticity Index= 23
Natural Moisture= 25.5
Liquidity Index= 0.4

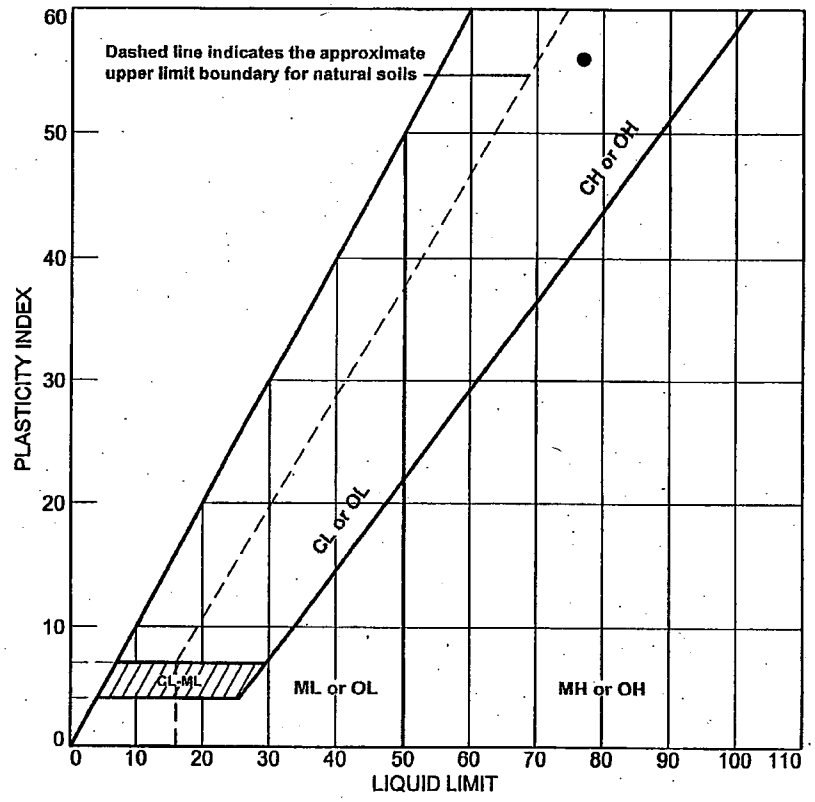
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	35.75	37.77			
Dry+Tare	34.64	36.36			
Tare	28.26	28.18			
Moisture	17.4	17.2			

MH 4-3-07

LIQUID AND PLASTIC LIMITS TEST REPORT





	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PI
●	C 404	STP-264	7.0'-9.0'	12/18/2006	CH	Fat Clay	28.4	77	56
		(TP2)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

● Tested By:AC Reviewed By:RF

ASTM D4318-05

4-3-07

KAW 4/13/07

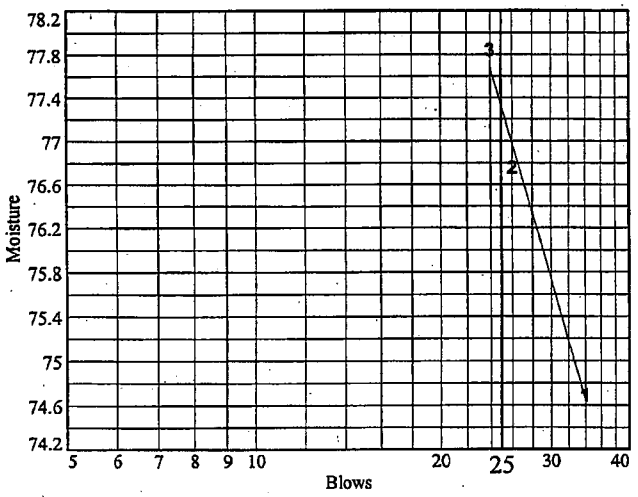
LIQUID AND PLASTIC LIMIT TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: C 404
Depth: 7.0'-9.0' **Sample Number:** STP-264 (TP2)
Material Description: Fat Clay
Date: 12/18/2006 **USCS Class.:** CH
Testing Remarks: Tested By:AC Reviewed By:RF
ASTM D4318-05

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	36.79	36.88	36.64			
Dry+Tare	33.07	33.18	32.95			
Tare	28.09	28.36	28.21			
# Blows	34	26	24			
Moisture	74.7	76.8	77.8			



Liquid Limit= 77
Plastic Limit= 21
Plasticity Index= 56
Natural Moisture= 28.4
Liquidity Index= 0.1

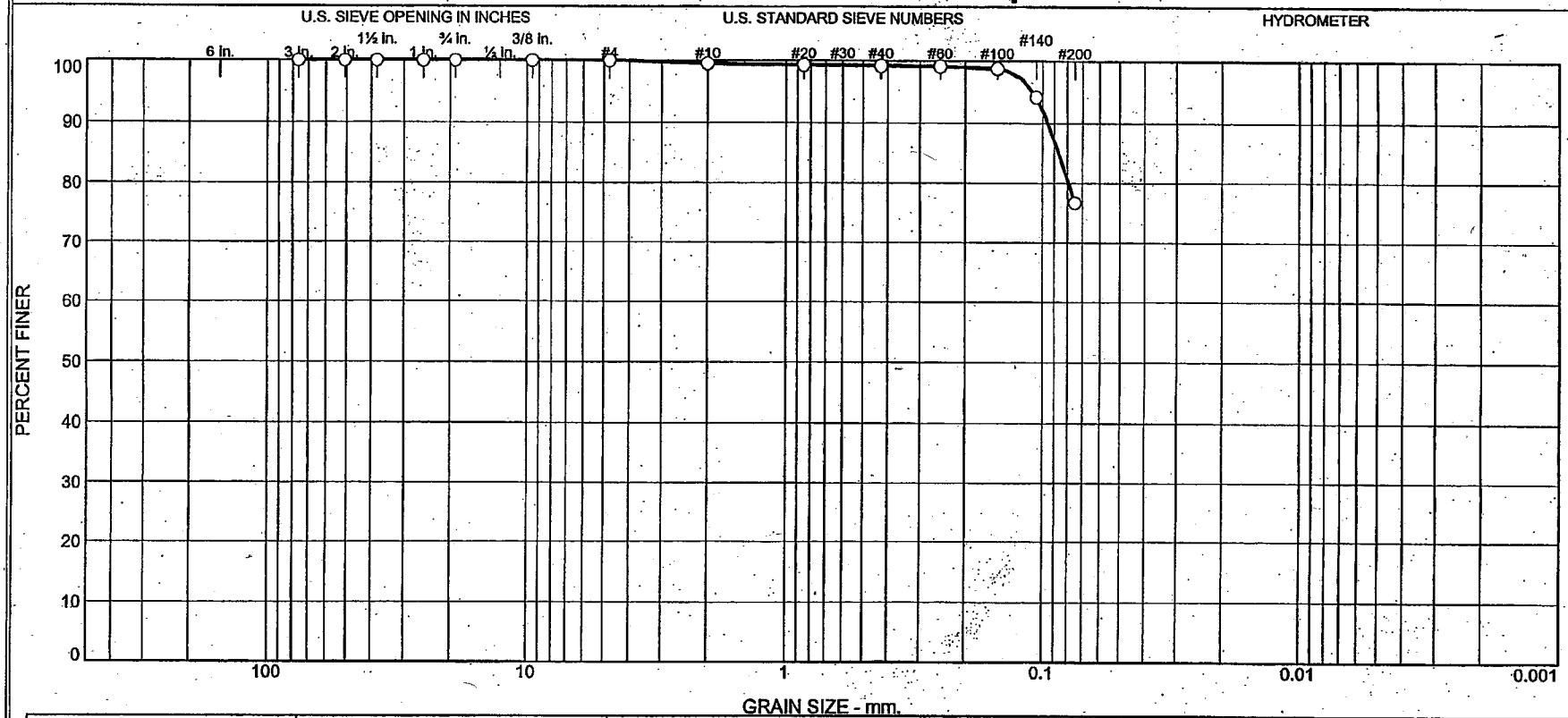
Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	32.27	39.89			
Dry+Tare	30.39	37.88			
Tare	21.56	28.27			
Moisture	21.3	20.9			

MM 4-3-07

MACTEC, Inc.

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.4	0.4	22.5	76.7	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 301	STP-310	168.5'-170.0'	11/18/2006	ML	Silt with Sand	20.8	NV	NP
		(SS-34)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:RF

ASTM D6913-04e1

MH 4-3-07

KAW 4/31/07

GRAIN SIZE DISTRIBUTION TEST DATA

4/1/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 301
Depth: 168.5'-170.0'
Sample Number: STP-310 (SS-34)
Material Description: Silt with Sand
Date: 11/18/2006
Natural Moisture: 20.8
Liquid Limit: NV
Plastic Limit: NP
USCS Class.: ML
Testing Remarks: Tested By:TH Reviewed By:RF
ASTM D6913-04e1

Sieve Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
260.00	174.90	0.00	3	0.00	100.0
			2	0.00	100.0
			1.5	0.00	100.0
			1	0.00	100.0
			.75	0.00	100.0
			.375	0.00	100.0
			#4	0.00	100.0
			#10	0.37	99.6
			#20	0.57	99.3
			#40	0.67	99.2
			#60	0.72	99.2
			#100	1.00	98.8
			#140	4.94	94.2
			#200	19.87	76.7

Fractional Components

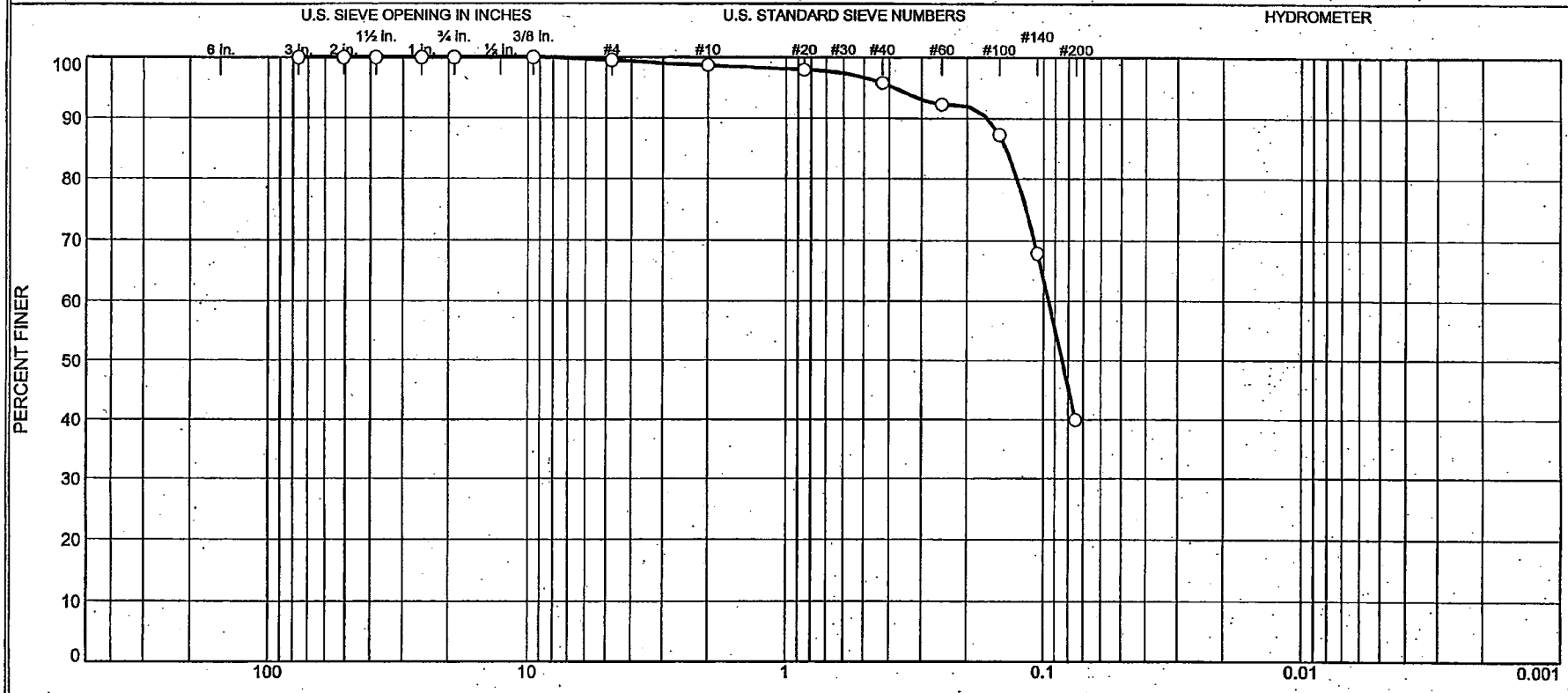
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.4	0.4	22.5	23.3			76.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
						0.0793	0.0866	0.0954	0.1088

Fineness Modulus
0.04

MH 4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.4	0.9	2.9	55.9	39.9	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 302-DH	STP-309	28.5'-30.0'	11/16/2006	SM	Silty Sand	21.5		
		(SS-13)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:RF
ASTM D6913-04e1

MK 4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

4/1/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 302-DH
Depth: 28.5'-30.0' **Sample Number:** STP-309 (SS-13)
Material Description: Silty Sand
Date: 11/16/2006 **Natural Moisture:** 21.5
USCS Class.: SM
Testing Remarks: Tested By:TH Reviewed By:RF
ASTM D6913-04e1

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
263.50	175.80	0.00	3	0.00	100.0
			2	0.00	100.0
			1.5	0.00	100.0
			1	0.00	100.0
			.75	0.00	100.0
			.375	0.00	100.0
			#4	0.39	99.6
			#10	1.12	98.7
			#20	1.76	98.0
			#40	3.70	95.8
			#60	6.81	92.2
			#100	11.18	87.3
			#140	28.14	67.9
			#200	52.72	39.9

Fractional Components

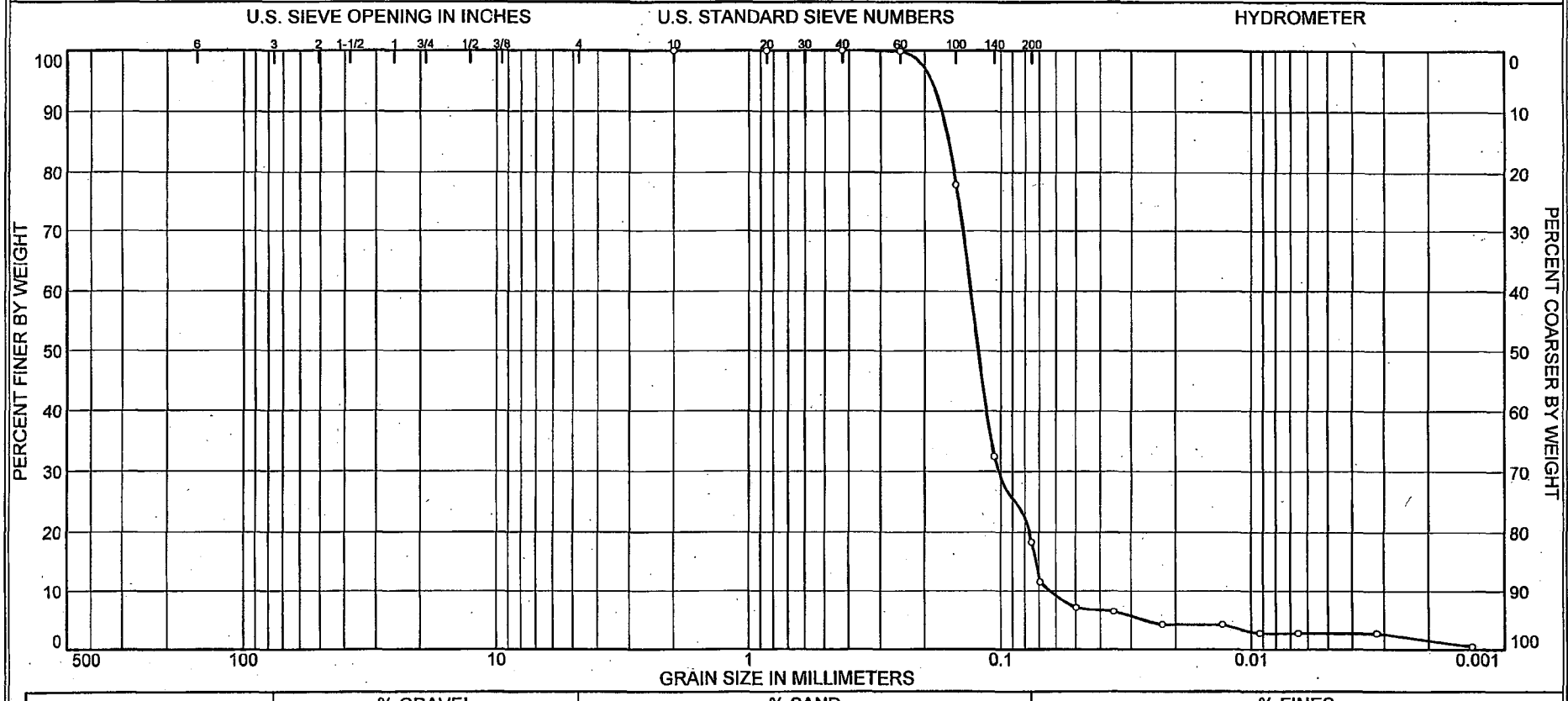
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.4	0.4	0.9	2.9	55.9	59.7			39.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0845	0.0955	0.1277	0.1414	0.1668	0.3832

Fineness Modulus
0.26

MH 4-3-07

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.0	0.0	81.7	15.6	2.7

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	B-303	UD-1	63' to 65'	2-19-07	SM	Silty sand	25.5	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

○ Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1 KAW 4/3/07
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-303
Sample No.: UD-1
Elev. or Depth: 63' to 65' **Sample Length(in./cm.):**
Location: B-303
Description: Silty sand
Date: 2-19-07 **Natural Moisture:** 25.5
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SM
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	121.68
Tare =	0.00
Dry sample weight =	121.68

Sample split on number 10 sieve
Split sample data:
Sample and tare = 67.01 Tare = .00 Sample weight = 67.01
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.00	100.0
# 40	0.00	100.0
# 60	0.04	99.9
# 100	14.78	77.9
# 140	45.22	32.5
# 200	54.78	18.3

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 67.12
Hygroscopic moisture correction:
Moist weight & tare = 43.08
Dry weight & tare = 43.03
Tare = 11.51
Hygroscopic moisture= 0.2 %
Calculated biased weight= 67.01
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1.0
Specific gravity of solids= 2.699
Specific gravity correction factor= 0.989

Hydrometer type: 152H

Effective depth L= 16.294964 - 0.164 x Rm

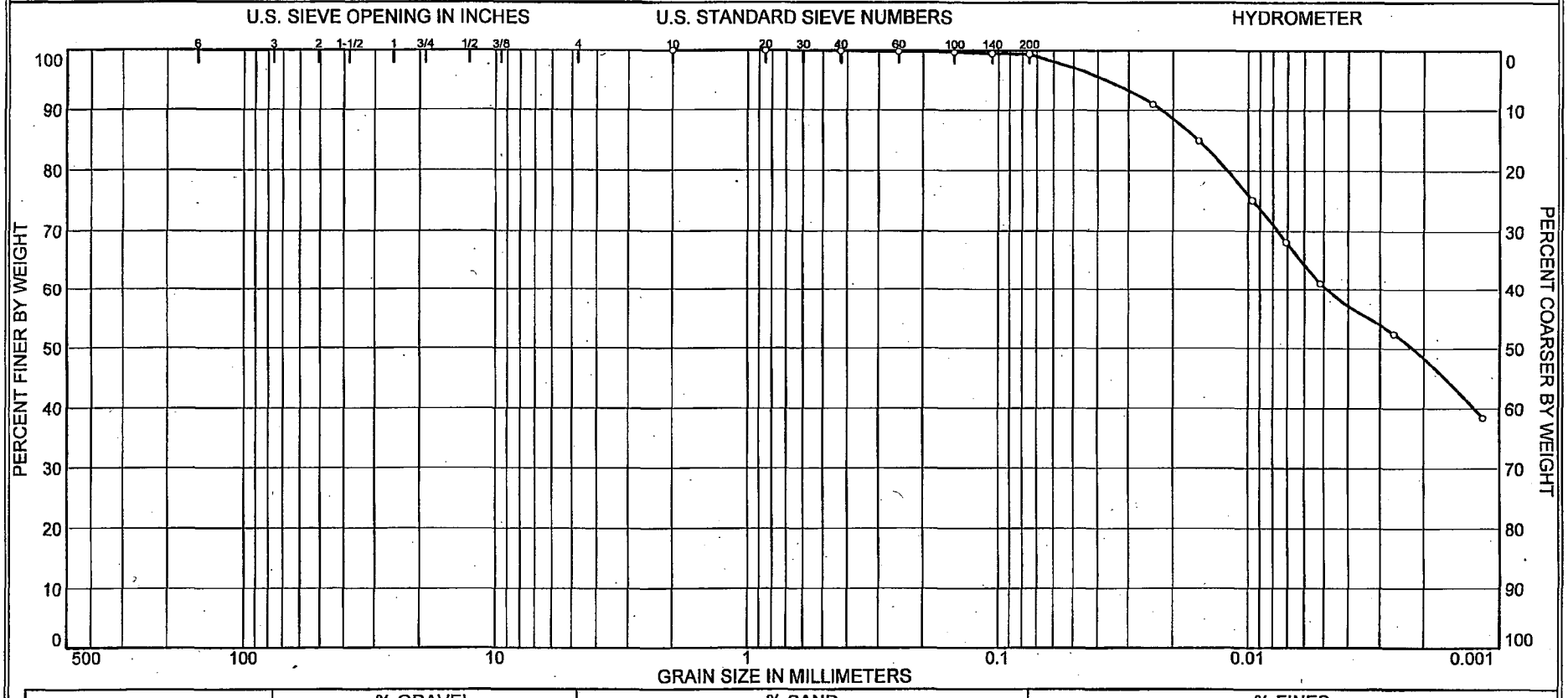
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
0.50	23.1	11.0	7.8	0.0129	12.0	14.3	0.0693	11.5
1.00	23.1	8.0	4.8	0.0129	9.0	14.8	0.0498	7.1
2.00	23.1	7.5	4.3	0.0129	8.5	14.9	0.0353	6.4
5.00	23.1	6.0	2.8	0.0129	7.0	15.1	0.0225	4.2
15.00	23.1	6.0	2.8	0.0129	7.0	15.1	0.0130	4.2
30.00	23.1	5.0	1.8	0.0129	6.0	15.3	0.0092	2.7
60.00	23.1	5.0	1.8	0.0129	6.0	15.3	0.0065	2.7
250.00	23.1	5.0	1.8	0.0129	6.0	15.3	0.0032	2.7
1440.00	23.3	3.5	0.4	0.0129	4.5	15.6	0.0013	0.5

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 81.7 (**% coarse =** **% medium** = 0.0 **% fine** = 81.7)
% SILT = 15.6 **% CLAY** = 2.7

D_{85}= 0.16 D_{60}= 0.13 D_{50}= 0.12
D_{30}= 0.10 D_{15}= 0.07 D_{10}= 0.06
C_c= 1.2473 C_u= 2.0712

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.0	0.1	0.5	39.0	60.4

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	B-303	UD-2	88' to 90'	2-19-07	CH	Fat clay	24.7	57	18

Client Bechtel Power Corporation
Project Bechtel/STP/COL
Project No. 5050-06-0496 Figure

MACTEC, INC.

Charlotte, North Carolina

○ Tested by: JA Reviewed by: SS KAW 4/3/07
ASTM D422-63 (2002)e1
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-303
Sample No.: UD-2
Elev. or Depth: 88' to 90' **Sample Length(in./cm.):**
Location: B-303
Description: Fat clay
Date: 2-19-07 **Natural Moisture:** 24.7
Liquid Limit: 57 **Plastic Limit:** 18 **USCS Class.:** CH
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	79.53
Tare =	0.00
Dry sample weight =	79.53

Sample split on number 10 **sieve**
Split sample data:
Sample and tare = 55.70 **Tare =** .00 **Sample weight =** 55.70
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.00	100.0
# 40	0.08	99.9
# 60	0.12	99.8
# 100	0.19	99.7
# 140	0.30	99.5
# 200	0.35	99.4

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 56.65
Hygroscopic moisture correction:
Moist weight & tare = 34.94
Dry weight & tare = 34.53
Tare = 10.72
Hygroscopic moisture= 1.7 %
Calculated biased weight= 55.69
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.751
Specific gravity correction factor= 0.978

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

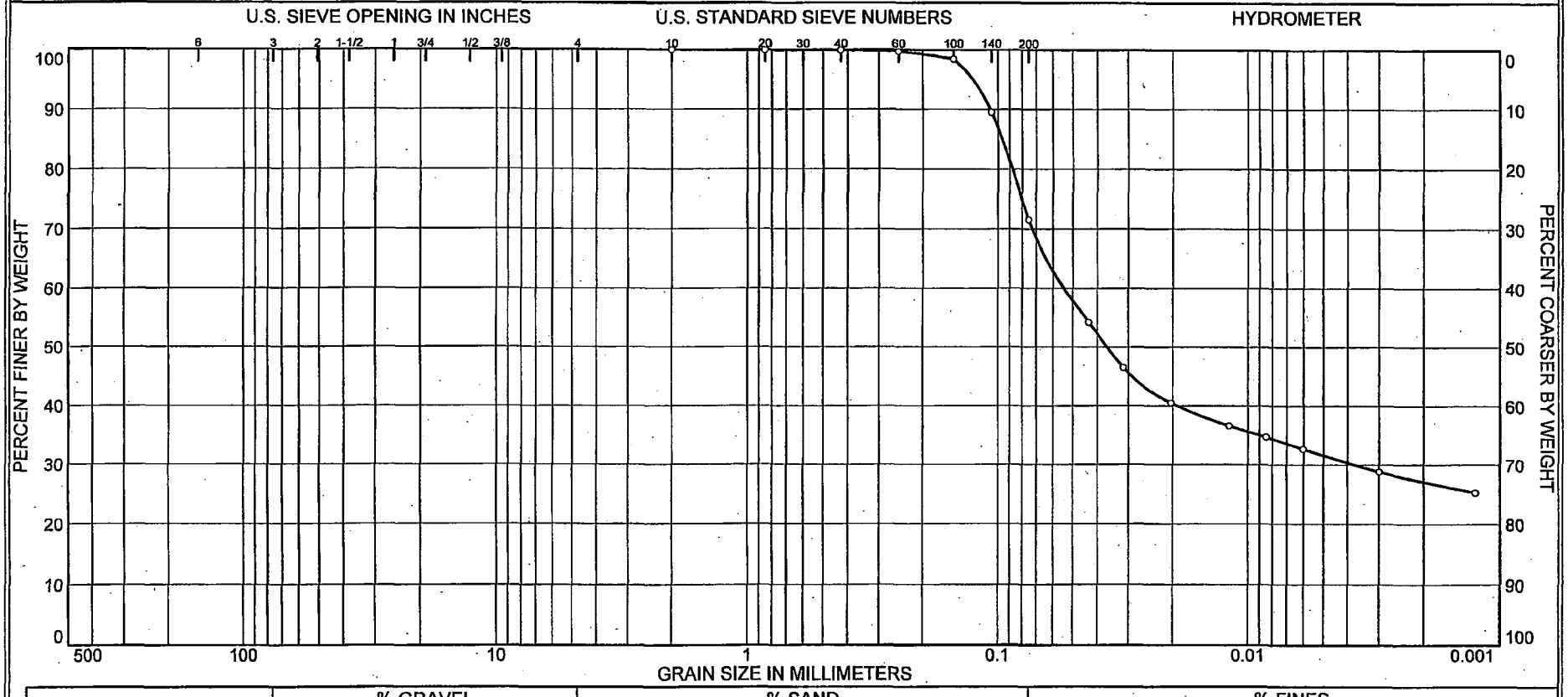
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	23.1	55.0	51.8	0.0128	56.0	7.1	0.0240	91.0
5.00	23.1	51.5	48.3	0.0128	52.5	7.7	0.0158	84.9
15.00	23.1	46.0	42.8	0.0128	47.0	8.6	0.0096	75.2
30.00	23.1	42.0	38.8	0.0128	43.0	9.2	0.0071	68.2
60.00	23.1	38.0	34.8	0.0128	39.0	9.9	0.0052	61.1
250.00	23.1	33.0	29.8	0.0128	34.0	10.7	0.0026	52.4
1440.00	23.3	25.0	21.9	0.0127	26.0	12.0	0.0012	38.4

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 0.6 (**% coarse =** **% medium** = 0.1 **% fine** = 0.5)
% SILT = 39.0 **% CLAY** = 60.4

D_{85}= 0.02 D_{60}= 0.00 D_{50}= 0.00

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.0	0.1	28.4	39.9	31.6

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	B-303	UD-4	133' to 135'	2-23-07	CH	Fat clay with sand	29.5	65	26

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

○ Tested by: JA Reviewed by: MH
ASTM D422-63 (2002)e1 KAW 4/3/07
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-303
Sample No.: UD-4
Elev. or Depth: 133' to 135' **Sample Length(in./cm.):**
Location: B-303
Description: Fat clay with sand
Date: 2-23-07 **Natural Moisture:** 29.5
Liquid Limit: 65 **Plastic Limit:** 26 **USCS Class.:** CH
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	132.57
Tare =	0.00
Dry sample weight =	132.57

Sample split on number 10 **sieve**
Split sample data:
Sample and tare = 50.94 **Tare =** .00 **Sample weight =** 50.94
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.06	99.9
# 40	0.06	99.9
# 60	0.14	99.7
# 100	0.76	98.5
# 140	5.35	89.5
# 200	14.50	71.5

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 51.45
Hygroscopic moisture correction:
Moist weight & tare = 56.75
Dry weight & tare = 56.31
Tare = 11.00
Hygroscopic moisture= 1.0 %
Calculated biased weight= 50.96
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.685
Specific gravity correction factor= 0.992

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

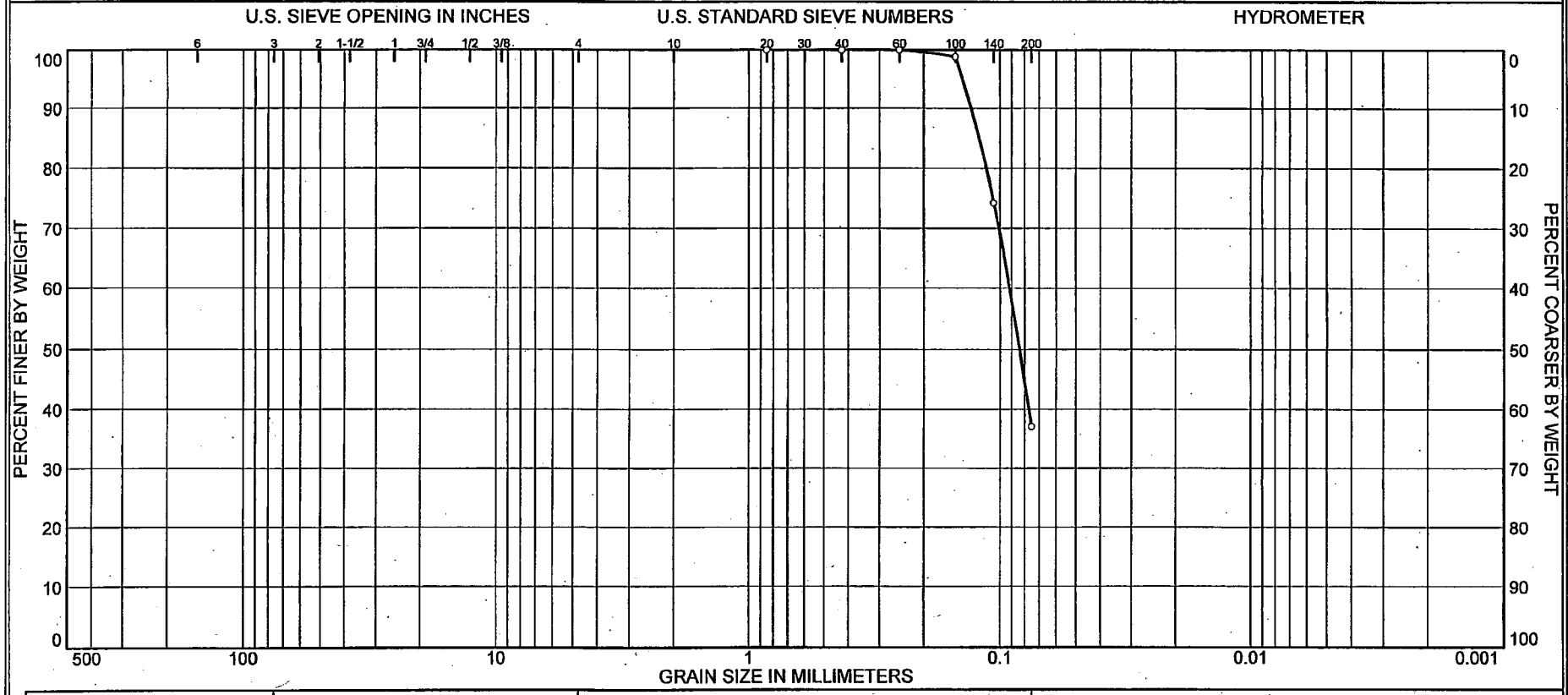
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.00	23.1	31.0	27.8	0.0130	32.0	11.0	0.0432	54.2
2.00	23.1	27.0	23.8	0.0130	28.0	11.7	0.0314	46.4
5.00	23.1	24.0	20.8	0.0130	25.0	12.2	0.0203	40.5
15.00	23.1	22.0	18.8	0.0130	23.0	12.5	0.0119	36.6
30.00	23.1	21.0	17.8	0.0130	22.0	12.7	0.0085	34.7
60.00	23.1	20.0	16.8	0.0130	21.0	12.9	0.0060	32.7
250.00	23.1	18.0	14.8	0.0130	19.0	13.2	0.0030	28.8
1440.00	23.9	16.0	13.0	0.0129	17.0	13.5	0.0012	25.3

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 28.5 **(% coarse =** **% medium =** 0.1 **% fine =** 28.4**)**
% SILT = 39.9 **% CLAY =** 31.6

D_{85}= 0.10 D_{60}= 0.05 D_{50}= 0.04
D_{30}= 0.00

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.0	0.0	62.9	37.1	

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	B-303	UD-5	168' to 170'	2-25-07	SM	Silty sand	32.0	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

○ Tested by: JA Reviewed by: MH
ASTM D6913-04e1 KAW 4/3/07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-303
Sample No.: UD-5
Elev. or Depth: 168' to 170' **Sample Length(in./cm.):**
Location: B-303
Description: Silty sand
Date: 2-25-07 **Natural Moisture:** 32.0
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SM
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	243.32
Tare =	87.11
Dry sample weight =	156.21

Tare for cumulative weight retained= .00

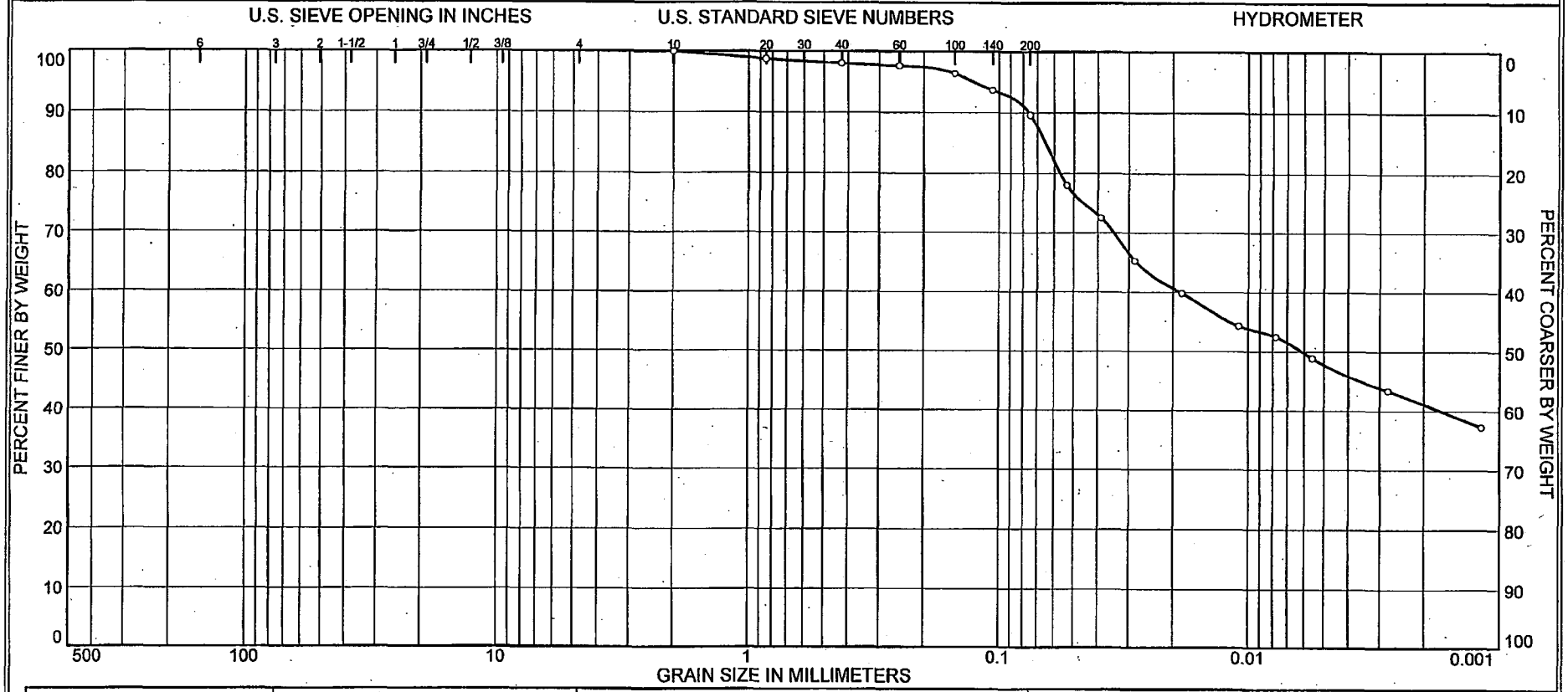
Sieve	Cumul. Wt. retained	Percent finer
# 20	0.00	100.0
# 40	0.01	100.0
# 60	0.02	100.0
# 100	1.72	98.9
# 140	40.37	74.2
# 200	98.23	37.1

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 62.9 **(% coarse =** **% medium =** **% fine** = 62.9)
% FINES = 37.1

D_{85}= 0.12 D_{60}= 0.09 D_{50}= 0.08

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.0	1.9	8.5	41.8	47.8

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	B-305-DH	UD-1	3' to 5'	2-22-07	CH	Fat clay	22.5	62	19

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

○ Tested by: JA Reviewed by: MH
ASTM D422-63 (2002)e1 KAW 4/3/07
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-305-DH
Sample No.: UD-1
Elev. or Depth: 3' to 5' **Sample Length(in./cm.):**
Location: B-305-DH
Description: Fat clay
Date: 2-22-07 **Natural Moisture:** 22.5
Liquid Limit: 62 **Plastic Limit:** 19 **USCS Class.:** CH
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	86.02
Tare =	0.00
Dry sample weight =	86.02

Sample split on number 10 **sieve**
Split sample data:
Sample and tare = 54.04 **Tare =** .00 **Sample weight =** 54.04
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.63	98.8
# 40	1.05	98.1
# 60	1.24	97.7
# 100	1.93	96.4
# 140	3.45	93.6
# 200	5.64	89.6

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 55.61
Hygroscopic moisture correction:
Moist weight & tare = 43.57
Dry weight & tare = 42.66
Tare = 10.74
Hygroscopic moisture= 2.9 %
Calculated biased weight= 54.07
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.718
Specific gravity correction factor= 0.985

Hydrometer type: 152H

Effective depth L= 16.294964 - 0.164 x Rm

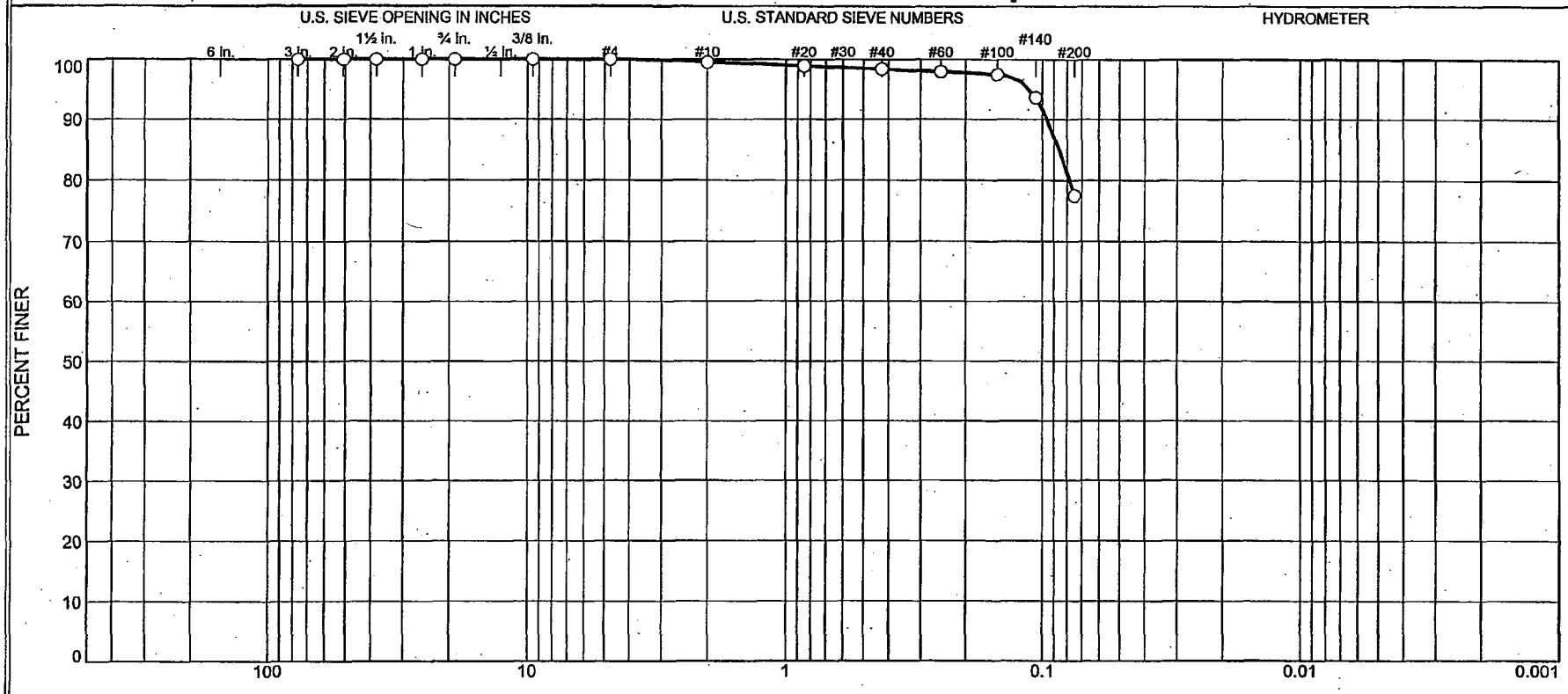
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
0.50	23.1	46.0	42.8	0.0129	47.0	8.6	0.0534	78.0
1.00	23.1	43.0	39.8	0.0129	44.0	9.1	0.0388	72.5
2.00	23.1	39.0	35.8	0.0129	40.0	9.7	0.0284	65.3
5.00	23.1	36.0	32.8	0.0129	37.0	10.2	0.0184	59.8
15.00	23.1	33.0	29.8	0.0129	34.0	10.7	0.0109	54.3
30.00	23.1	32.0	28.8	0.0129	33.0	10.9	0.0078	52.5
60.00	23.1	30.0	26.8	0.0129	31.0	11.2	0.0056	48.9
250.00	23.1	27.0	23.8	0.0129	28.0	11.7	0.0028	43.4
1440.00	23.9	23.5	20.5	0.0128	24.5	12.3	0.0012	37.3

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 10.4 (**% coarse =** **% medium** = 1.9 **% fine** = 8.5)
% SILT = 41.8 **% CLAY** = 47.8

D_{85}= 0.07 D_{60}= 0.02 D_{50}= 0.01

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.5	1.1	20.9	77.5	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 305-DH	STP-098	18.5'-20.0'	11/19/2006	ML	Silt with Sand	22.7	NV	NP
		(SS-9)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:RF
ASTM D6913-04e1

MK 4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 18.5'-20.0'
Sample Number: STP-098 (SS-9)
Material Description: Silt with Sand
Date: 11/19/2006
Natural Moisture: 22.7
Liquid Limit: NV
Plastic Limit: NP
USCS Class.: ML
Testing Remarks: Tested By:TH Reviewed By:RF
ASTM D6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 16.70
Tare Wt. = 0.00
Minus #200 from wash = 77.5%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
252.70	178.40	0.00	3"	0.00	100.0
			2"	0.00	100.0
			1.5"	0.00	100.0
			1"	0.00	100.0
			3/4"	0.00	100.0
			3/8"	0.00	100.0
			#4	0.00	100.0
			#10	0.35	99.5
			#20	0.81	98.9
			#40	1.18	98.4
			#60	1.49	98.0
			#100	1.86	97.5
			#140	4.73	93.6
			#200	16.70	77.5

Fractional Components

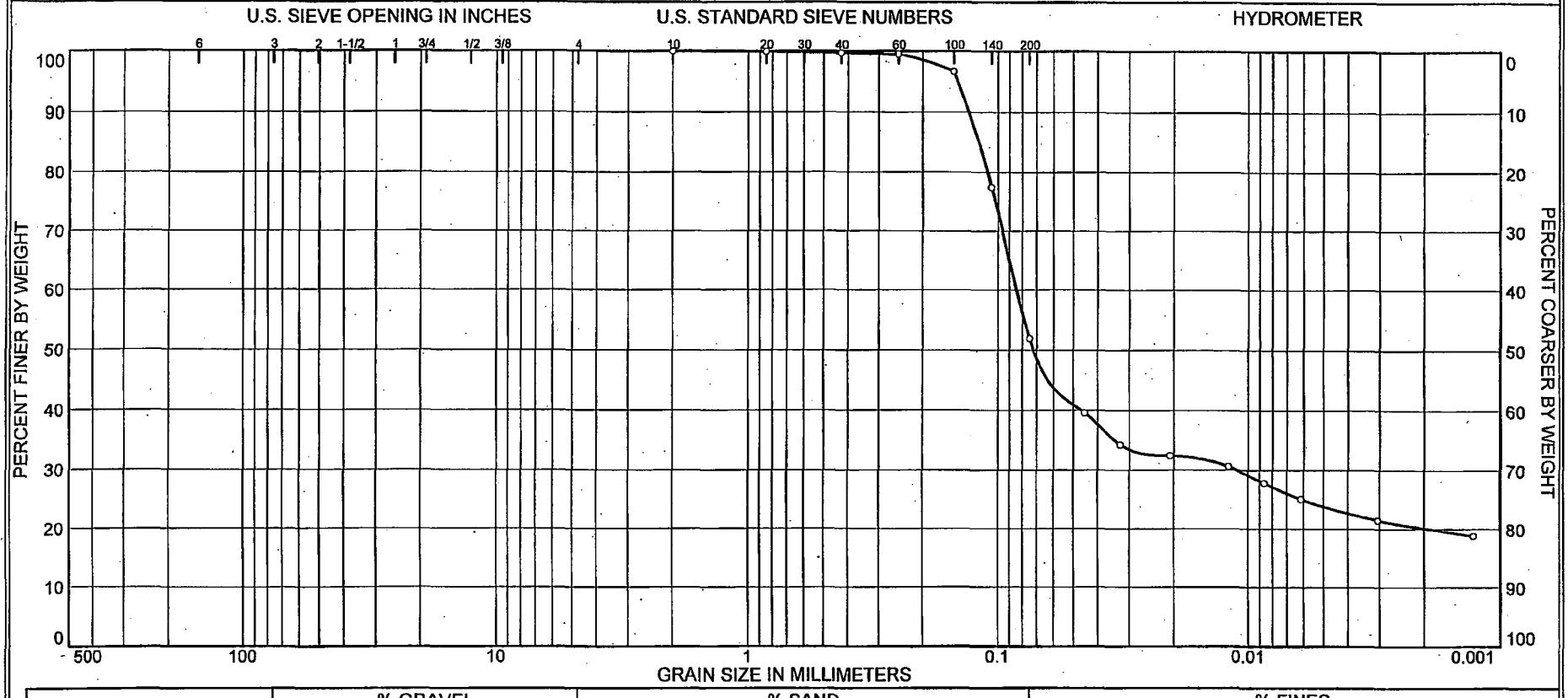
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.5	1.1	20.9	22.5			77.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
						0.0784	0.0862	0.0958	0.1119

Fineness Modulus
0.07

MAA 4-3-07

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
O	0.0	0.0	0.0	0.0	0.3	47.8	28.1	23.8

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
O	B-305-DH	UD-4	53' to 55'	2-23-07	CL	Sandy lean clay	22.4	45	20

Client Bechtel Power Corporation
Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

O Tested by: JA Reviewed by: MH
ASTM D422-63 (2002)e1 KAW 4/3/07
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-305-DH
Sample No.: UD-4
Elev. or Depth: 53' to 55' **Sample Length(in./cm.):**
Location: B-305-DH
Description: Sandy lean clay
Date: 2-23-07 **Natural Moisture:** 22.4
Liquid Limit: 45 **Plastic Limit:** 20 **USCS Class.:** CL
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	108.90
Tare =	0.00
Dry sample weight =	108.90

Sample split on number 10 **sieve**
Split sample data:
Sample and tare = 54.63 **Tare =** .00 **Sample weight =** 54.63
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.05	99.9
# 40	0.15	99.7
# 60	0.30	99.5
# 100	1.80	96.7
# 140	12.35	77.4
# 200	26.27	51.9

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 54.96
Hygroscopic moisture correction:
Moist weight & tare = 51.10
Dry weight & tare = 50.88
Tare = 11.57
Hygroscopic moisture= 0.6 %
Calculated biased weight= 54.65
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.683
Specific gravity correction factor= 0.993

Hydrometer type: 152H

Effective depth L= 16.294964 - 0.164 x Rm

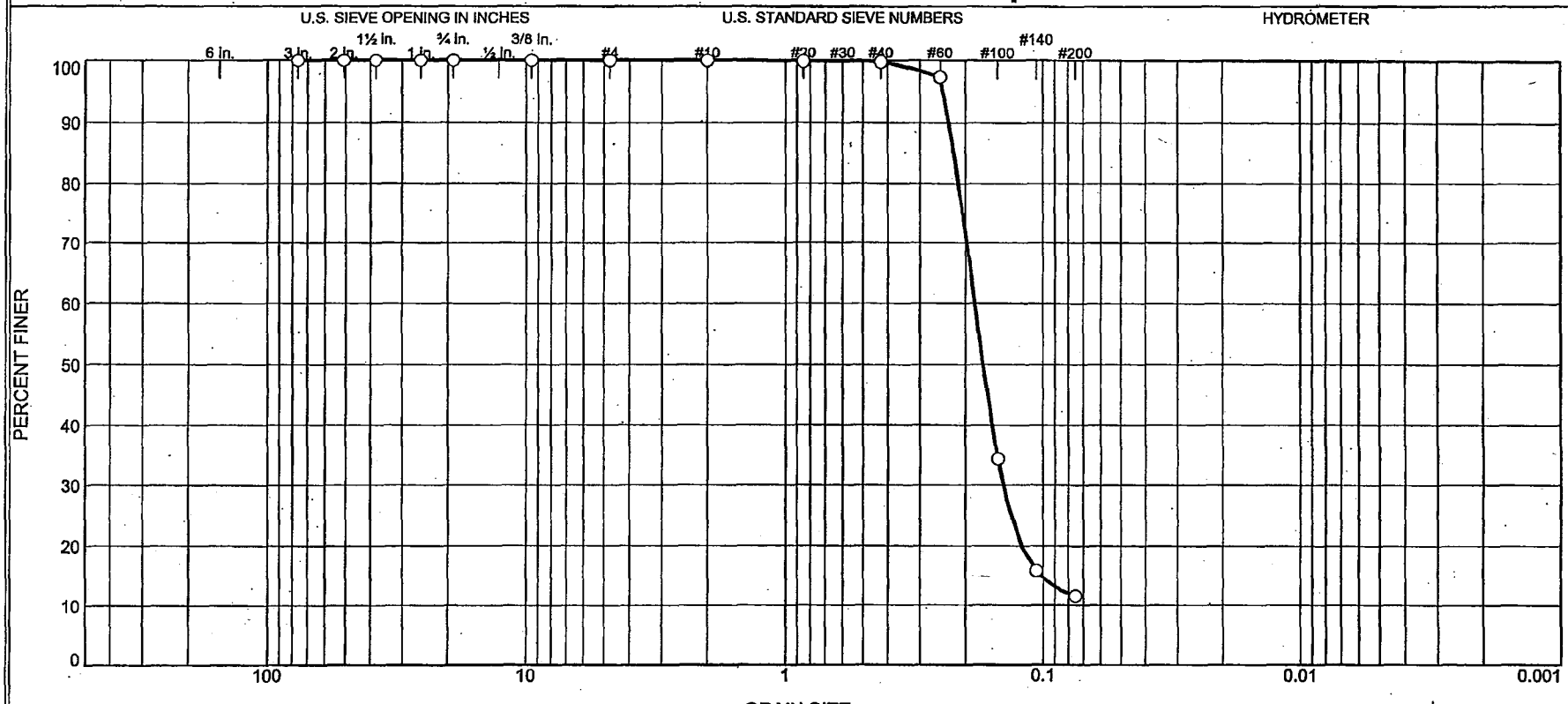
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.00	23.1	25.0	21.8	0.0130	26.0	12.0	0.0451	39.6
2.00	23.1	22.0	18.8	0.0130	23.0	12.5	0.0326	34.2
5.00	23.1	21.0	17.8	0.0130	22.0	12.7	0.0207	32.4
15.00	23.1	20.0	16.8	0.0130	21.0	12.9	0.0120	30.6
30.00	23.1	18.5	15.3	0.0130	19.5	13.1	0.0086	27.8
60.00	23.1	17.0	13.8	0.0130	18.0	13.3	0.0061	25.1
250.00	23.1	15.0	11.8	0.0130	16.0	13.7	0.0030	21.5
1440.00	23.2	13.5	10.3	0.0130	14.5	13.9	0.0013	18.8

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 48.1 (**% coarse =** **% medium** = 0.3 **% fine** = 47.8)
% SILT = 28.1 **% CLAY** = 23.8

D_{85}= 0.12 D_{60}= 0.08 D_{50}= 0.07
D_{30}= 0.01

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.0	0.2	88.2	11.6	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 305-DH	STP-101	73.5'-75.0'	11/20/2006	SP-SM	Poorly Graded Sand with Silt	23.1		
		(SS-19)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:RF
ASTM D6913-04e1

NAA
4-3-07

KAW 4/13/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 73.5'-75.0'
Sample Number: STP-101 (SS-19)
Material Description: Poorly Graded Sand with Silt
Date: 11/20/2006
Natural Moisture: 23.1
USCS Class.: SP-SM
Testing Remarks: Tested By:TH Reviewed By:RF
ASTM D6913-04e1
Material specification: ASTM D 6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 74.37
Tare Wt. = 0.00
Minus #200 from wash = 11.6%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Lower Spec. Limit, %	Upper Spec. Limit, %	Deviation From Spec., %
259.30	175.20	0.00	3"	0.00	100.0			
			2"	0.00	100.0			
			1.5"	0.00	100.0			
			1"	0.00	100.0			
			3/4"	0.00	100.0			
			3/8"	0.00	100.0			
			#4	0.00	100.0			
			#10	0.00	100.0			
			#20	0.11	99.9			
			#40	0.19	99.8			
			#60	2.21	97.4			
			#100	55.18	34.4			
			#140	70.85	15.8			
			#200	74.37	11.6			

Fractional Components

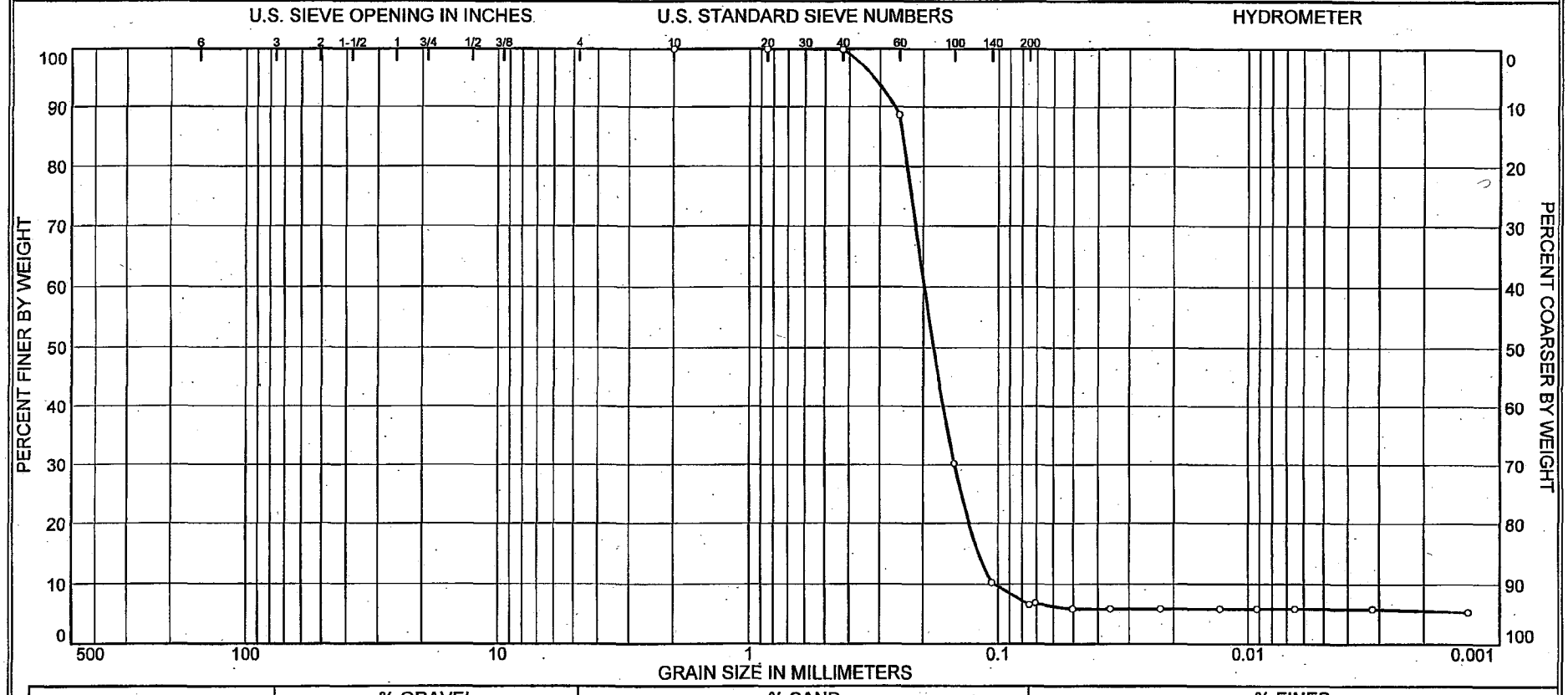
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.2	88.2	88.4			11.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.1022	0.1216	0.1430	0.1709	0.1837	0.2124	0.2211	0.2309	0.2429

Fineness Modulus
0.67

MH 4-3-07

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.0	0.1	93.4	0.7	5.8

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	B-305-DH	UD-5	78' to 80'	2-25-07	SP-SM	Poorly graded sand with silt	22.1	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

○ Tested by: JA Reviewed by: MH KAW 4/3/07
ASTM D422-63 (2002)e1
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-305-DH
Sample No.: UD-5
Elev. or Depth: 78' to 80' **Sample Length(in./cm.):**
Location: B-305-DH
Description: Poorly graded sand with silt
Date: 2-25-07 **Natural Moisture:** 22.1
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SP-SM
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	189.03
Tare =	0.00
Dry sample weight =	189.03

Sample split on number 10 **sieve**
Split sample data:
Sample and tare = 100.65 **Tare =** .00 **Sample weight =** 100.65
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.00	100.0
# 40	0.08	99.9
# 60	11.37	88.7
# 100	70.25	30.2
# 140	90.35	10.2
# 200	94.13	6.5

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 100.85
Hygroscopic moisture correction:
Moist weight & tare = 67.28
Dry weight & tare = 67.18
Tare = 11.58
Hygroscopic moisture= 0.2 %
Calculated biased weight= 100.67
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.644
Specific gravity correction factor= 1.001

Hydrometer type: 152H

Effective depth L= 16.294964 - 0.164 x Rm

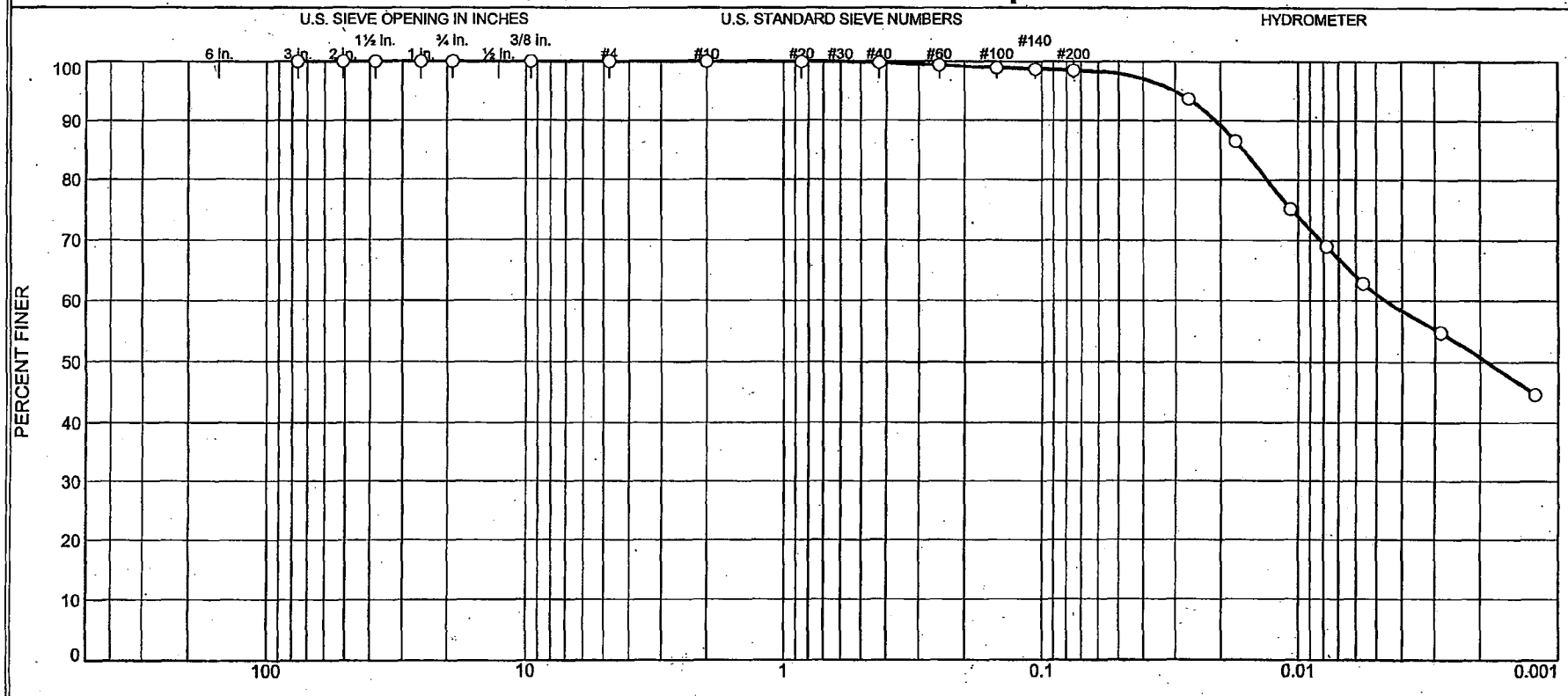
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
0.50	23.1	10.0	6.8	0.0132	11.0	14.5	0.0709	6.8
1.00	23.1	9.0	5.8	0.0132	10.0	14.7	0.0504	5.8
2.00	23.1	9.0	5.8	0.0132	10.0	14.7	0.0356	5.8
5.00	23.1	9.0	5.8	0.0132	10.0	14.7	0.0225	5.8
15.00	23.1	9.0	5.8	0.0132	10.0	14.7	0.0130	5.8
30.00	23.1	9.0	5.8	0.0132	10.0	14.7	0.0092	5.8
60.00	23.1	9.0	5.8	0.0132	10.0	14.7	0.0065	5.8
250.00	23.1	9.0	5.8	0.0132	10.0	14.7	0.0032	5.8
1440.00	23.2	8.5	5.3	0.0131	9.5	14.7	0.0013	5.3

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 93.5 **(% coarse =** **% medium =** 0.1 **% fine =** 93.4**)**
% SILT = 0.7 **% CLAY =** 5.8

D_{85}= 0.24 D_{60}= 0.20 D_{50}= 0.18
D_{30}= 0.15 D_{15}= 0.12 D_{10}= 0.10
C_c= 1.0848 C_u= 1.9075

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.0	0.2	1.3	37.4	61.1

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 305-DH	STP-102 (SS-21)	88.5'-90.0'	11/20/2006	CH	Fat Clay	21.1	55	19

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:DK/TH Reviewed By:ST
ASTM D6913-04e1 / ASTM D422-63(2002)e1
Specific gravity was estimated

MA 4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 88.5'-90.0' **Sample Number:** STP-102 (SS-21)
Material Description: Fat Clay
Date: 11/20/2006 **Natural Moisture:** 21.1
Liquid Limit: 55 **Plastic Limit:** 19 **USCS Class.:** CH
Testing Remarks: Tested By:DK/TH Reviewed By:ST
ASTM D6913-04e1 / ASTM D422-63(2002)e1
Specific gravity was estimated
Material specification: ASTM D 6913-04e1 / ASTM D 422-63 (2002)e1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 1.24
Tare Wt. = 0.00
Minus #200 from wash = 98.5%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Lower Spec. Limit, %	Upper Spec. Limit, %	Deviation From Spec., %
257.60	176.50	0.00	3"	0.00	100.0			
			2"	0.00	100.0			
			1.5"	0.00	100.0			
			1"	0.00	100.0			
			3/4"	0.00	100.0			
			3/8"	0.00	100.0			
			#4	0.00	100.0			
			#10	0.02	100.0			
			#20	0.04	100.0			
			#40	0.17	99.8			
			#60	0.52	99.4			
			#100	0.89	98.9			
			#140	1.06	98.7			
			#200	1.24	98.5			

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50.4
Hygroscopic moisture correction:
Moist weight and tare = 186.60
Dry weight and tare = 186.30
Tare weight = 174.20
Hygroscopic moisture = 2.5%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

MAH 4-3-07

Hydrometer Test Data (continued)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	52.0	46.1	0.0135	52.0	7.8	0.0267	93.7
5.00	20.4	48.5	42.5	0.0136	48.5	8.3	0.0175	86.5
15.00	20.2	43.0	37.0	0.0136	43.0	9.2	0.0107	75.2
30.00	20.0	40.0	34.0	0.0136	40.0	9.7	0.0078	69.0
60.00	20.0	37.0	31.0	0.0136	37.0	10.2	0.0056	62.9
250.00	20.0	33.0	27.0	0.0136	33.0	10.9	0.0028	54.8
1440.00	20.0	28.0	22.0	0.0136	28.0	11.7	0.0012	44.6

Fractional Components

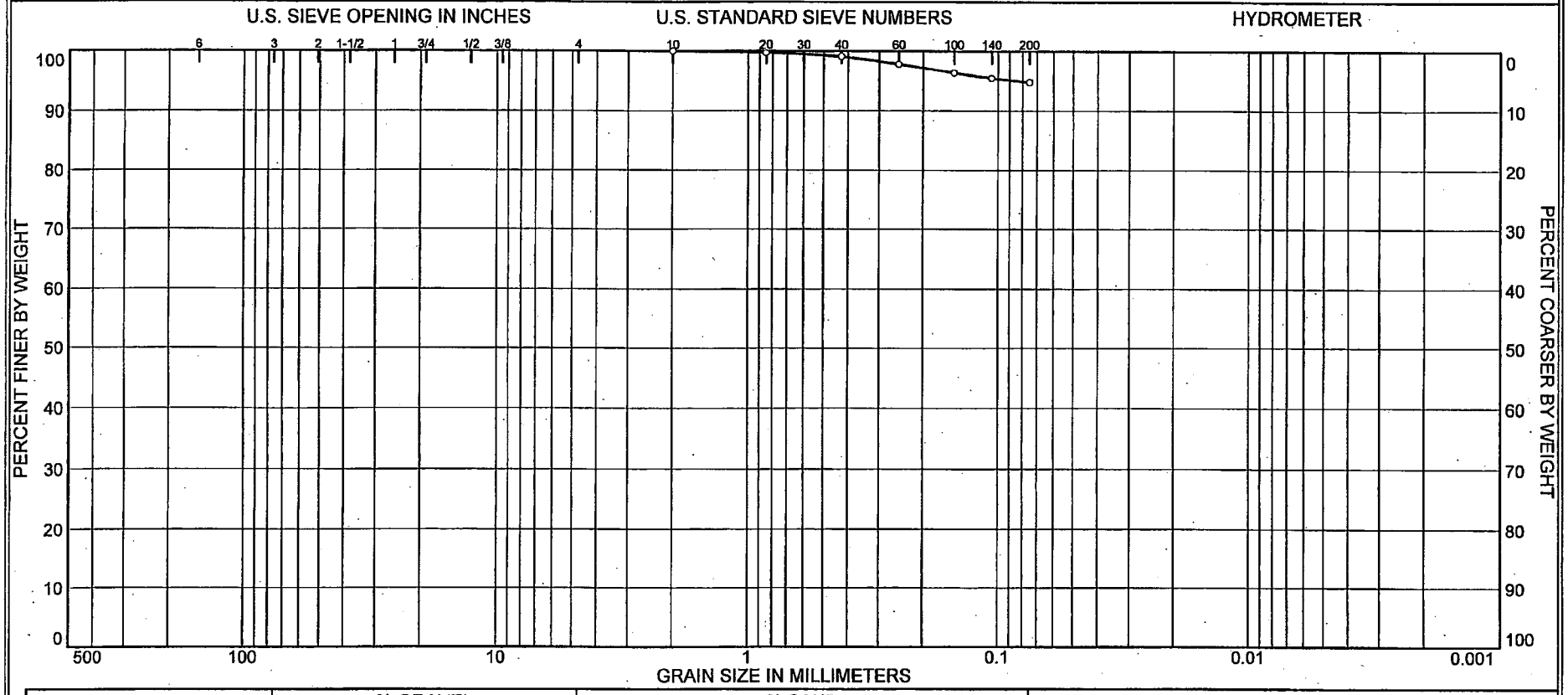
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.2	1.3	1.5	37.4	61.1	98.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0019	0.0046	0.0132	0.0164	0.0210	0.0300

Fineness Modulus
0.02

MWA 4-3-07

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.0	0.9	4.3	94.8	

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	B-305-DH	UD-6	103' to 105'	2-26-07	CH	Fat Clay			

Client Bechtel Power Corporation
Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

○ Tested by: JA Reviewed by: MH KAW 4/3/07
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-305-DH
Sample No.: UD-6
Elev. or Depth: 103' to 105' **Sample Length(in./cm.):**
Location: B-305-DH
Description: Fat Clay
Date: 2-26-07 **Natural Moisture:**
Liquid Limit: **Plastic Limit:** **USCS Class.:** CH
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	236.41
Tare =	104.31
Dry sample weight =	132.10

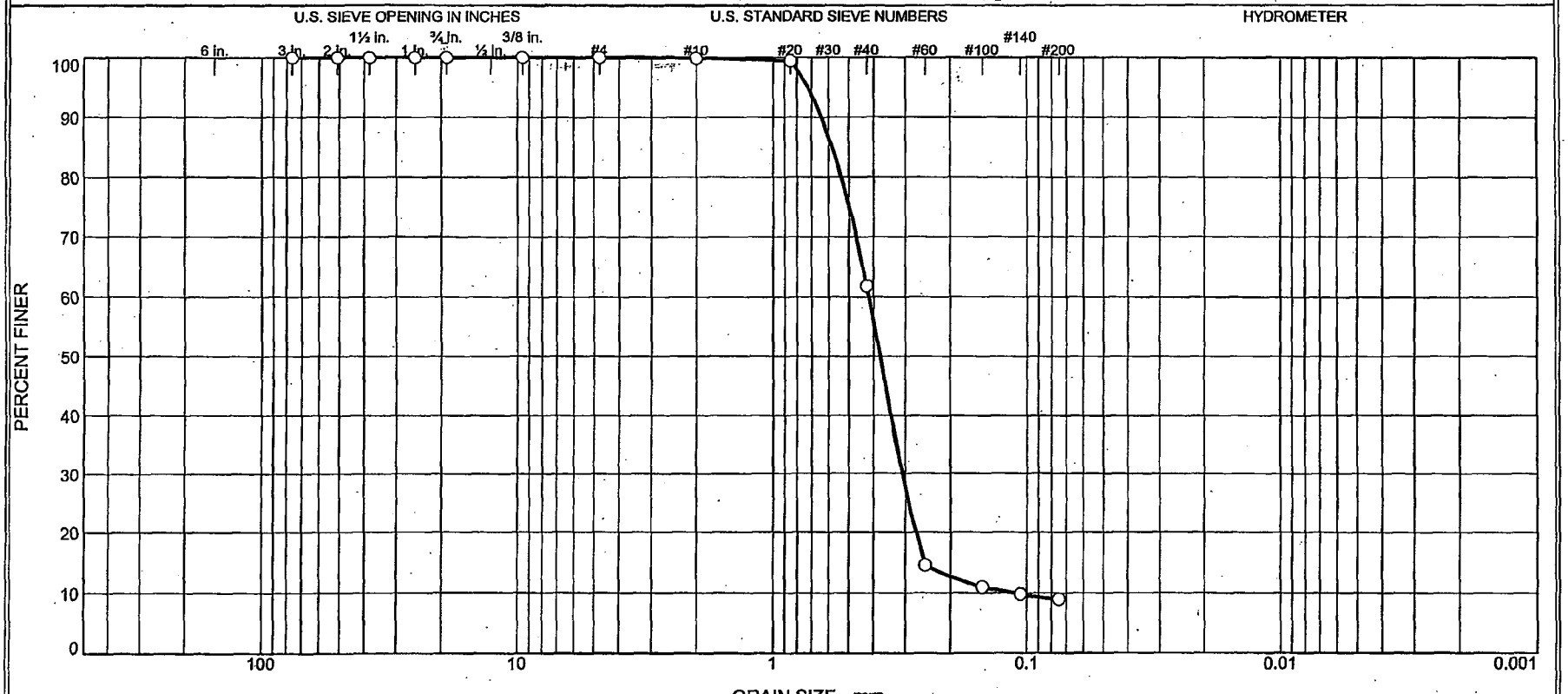
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.44	99.7
# 40	1.13	99.1
# 60	2.74	97.9
# 100	4.71	96.4
# 140	5.90	95.5
# 200	6.90	94.8

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 5.2 **(% coarse =** **% medium** = 0.9 **% fine** = 4.3)
% FINES = 94.8

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.1	38.0	53.0	8.9	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 305-DH	STP-104 (SS-24)	108.5'-110'	11/20/2006	SP-SM	Poorly Graded Sand with Silt	19.8		

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST
ASTM D6913-04e1

4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 108.5'-110'
Sample Number: STP-104 (SS-24)
Material Description: Poorly Graded Sand with Silt
Date: 11/20/2006
Natural Moisture: 19.8
USCS Class.: SP-SM
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D6913-04e1
Material specification: ASTM D 6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 69.49
Tare Wt. = 0.00
Minus #200 from wash = 8.9%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Lower Spec. Limit, %	Upper Spec. Limit, %	Deviation From Spec., %
253.00	176.70	0.00	3	0.00	100.0			
			2	0.00	100.0			
			1.5	0.00	100.0			
			1	0.00	100.0			
			3/4	0.00	100.0			
			3/8	0.00	100.0			
			#4	0.00	100.0			
			#10	0.09	99.9			
			#20	0.47	99.4			
			#40	29.10	61.9			
			#60	65.18	14.6			
			#100	67.93	11.0			
			#140	68.81	9.8			
			#200	69.49	8.9			

Fractional Components

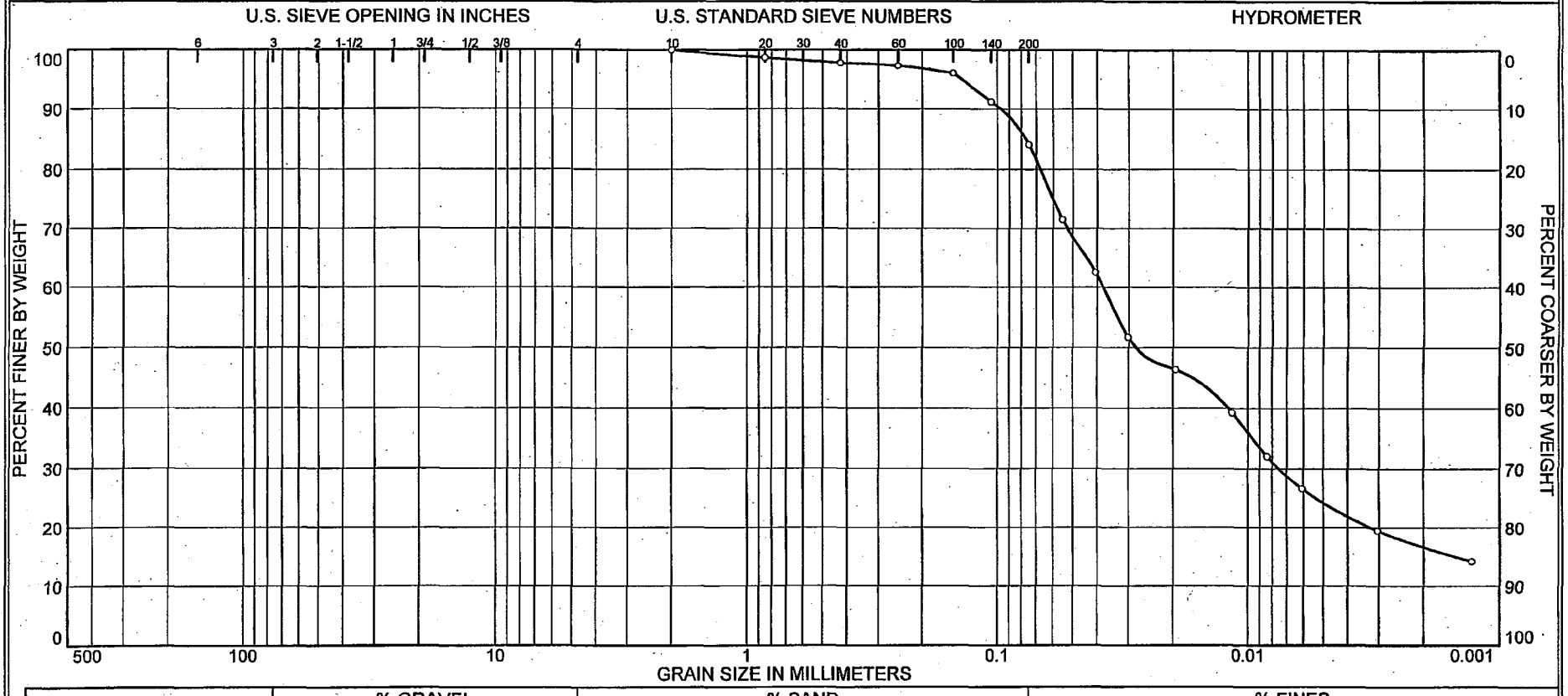
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.1	38.0	53.0	91.1			8.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1127	0.2521	0.2732	0.3082	0.3766	0.4166	0.5354	0.5813	0.6408	0.7251

Fineness Modulus	C_u	C_c
1.75	3.70	2.02

NM 4-3-07

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.0	2.2	13.7	59.9	24.2

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	B-305-DH	UD-8	138' to 140'	2-19-17	CL	Lean clay with sand	18.1	32	14

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

○ Tested by: JA Reviewed by: SS KAW 4/3/07
ASTM D422-63 (2002)e1
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-305-DH
Sample No.: UD-8
Elev. or Depth: 138' to 140' **Sample Length(in./cm.):**
Location: B-305 DH
Description: Lean clay with sand
Date: 2-19-17 **Natural Moisture:** 18.1
Liquid Limit: 32 **Plastic Limit:** 14 **USCS Class.:** CL
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	79.45
Tare =	0.00
Dry sample weight =	79.45

Sample split on number 10 **sieve**
Split sample data:
Sample and tare = 55.04 **Tare =** .00 **Sample weight =** 55.04
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.69	98.7
# 40	1.20	97.8
# 60	1.47	97.3
# 100	2.18	96.0
# 140	4.84	91.2
# 200	8.75	84.1

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 55.48
Hygroscopic moisture correction:
Moist weight & tare = 35.42
Dry weight & tare = 35.22
Tare = 10.90
Hygroscopic moisture= 0.8 %
Calculated biased weight= 55.03
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.704
Specific gravity correction factor= 0.988

Hydrometer type: 152H

Effective depth L= 16.294964 - 0.164 x Rm

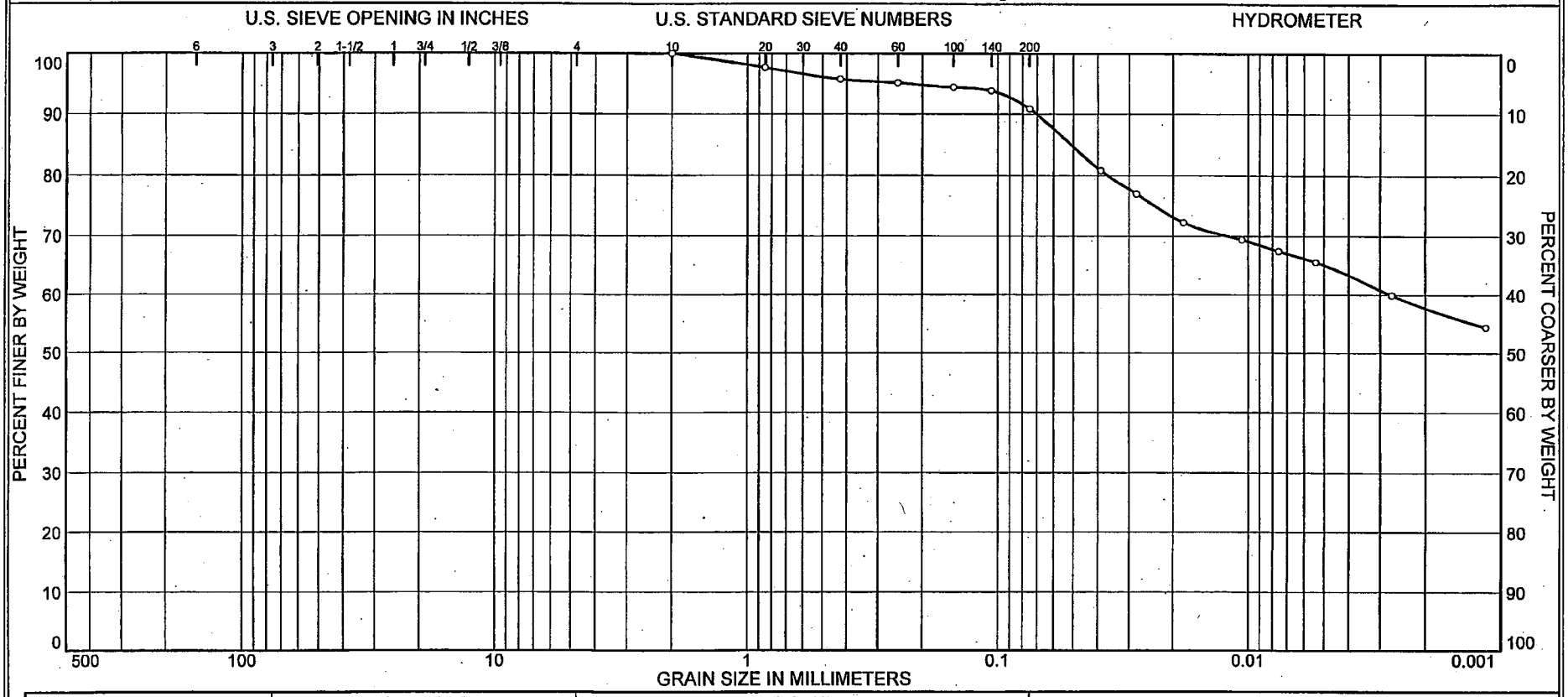
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
0.50	23.1	43.0	39.8	0.0129	44.0	9.1	0.0551	71.5
1.00	23.1	38.0	34.8	0.0129	39.0	9.9	0.0407	62.5
2.00	23.1	32.0	28.8	0.0129	33.0	10.9	0.0302	51.7
5.00	23.1	29.0	25.8	0.0129	30.0	11.4	0.0195	46.4
15.00	23.1	25.0	21.8	0.0129	26.0	12.0	0.0116	39.2
30.00	23.1	21.0	17.8	0.0129	22.0	12.7	0.0084	32.0
60.00	23.1	18.0	14.8	0.0129	19.0	13.2	0.0061	26.6
250.00	23.1	14.0	10.8	0.0129	15.0	13.8	0.0030	19.4
1440.00	23.3	11.0	7.9	0.0129	12.0	14.3	0.0013	14.1

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 15.9 **(% coarse =** **% medium =** 2.2 **% fine =** 13.7**)**
% SILT = 59.9 **% CLAY =** 24.2

D_{85}= 0.08 D_{60}= 0.04 D_{50}= 0.03
D_{30}= 0.01 D_{15}= 0.00

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
O	0.0	0.0	0.0	0.0	4.2	5.0	25.7	65.1

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
O	B-305-DH	UD-9	158' to 160'	2-14-07	CH	Fat clay	16.4	56	20

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

O Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1 KAW 4/3/07
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-305-DH
Sample No.: UD-9
Elev. or Depth: 158' to 160' **Sample Length(in./cm.):**
Location: B-305-DH
Description: Fat clay
Date: 2-14-07 **Natural Moisture:** 16.4
Liquid Limit: 56 **Plastic Limit:** 20 **USCS Class.:** CH
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial	After wash
Dry sample and tare=	52.02	52.02
Tare =	0.00	0.00
Dry sample weight =	52.02	52.02

Minus #200 from wash= 0.0 %
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	1.20	97.7
# 40	2.19	95.8
# 60	2.52	95.2
# 100	2.85	94.5
# 140	3.16	93.9
# 200	4.77	90.8

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 53.53
Hygroscopic moisture correction:
Moist weight & tare = 35.55
Dry weight & tare = 34.86
Tare = 10.77
Hygroscopic moisture= 2.9 %
Calculated biased weight= 52.04
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	0.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.703
Specific gravity correction factor= 0.988
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

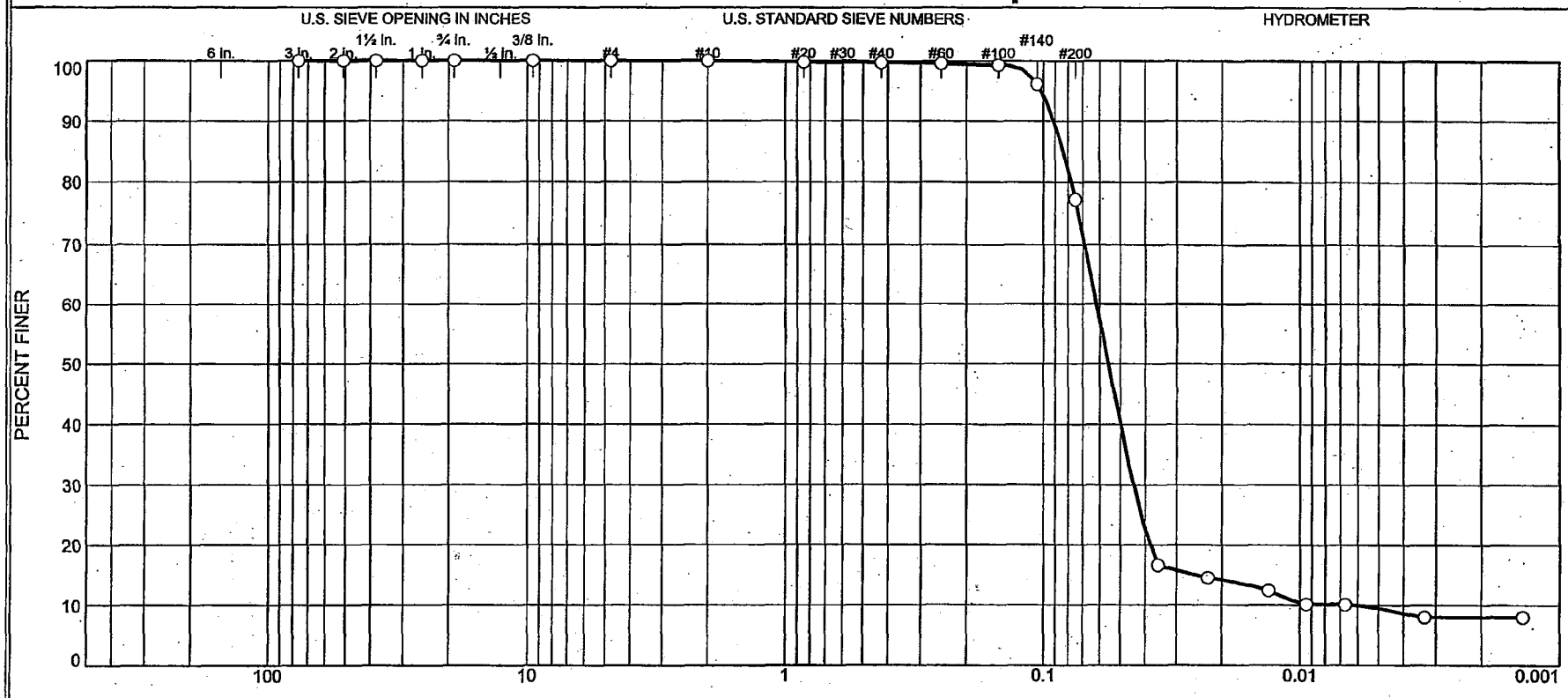
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.00	23.1	43.0	42.5	0.0129	44.0	9.1	0.0390	80.8
2.00	23.1	41.0	40.5	0.0129	42.0	9.4	0.0280	77.0
5.00	23.1	38.5	38.0	0.0129	39.5	9.8	0.0181	72.2
15.00	23.1	37.0	36.5	0.0129	38.0	10.1	0.0106	69.4
30.00	23.1	36.0	35.5	0.0129	37.0	10.2	0.0076	67.5
60.00	23.1	35.0	34.5	0.0129	36.0	10.4	0.0054	65.6
250.00	23.1	32.0	31.5	0.0129	33.0	10.9	0.0027	59.9
1440.00	23.3	29.0	28.6	0.0129	30.0	11.4	0.0011	54.4

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 9.2 (**% coarse =** **% medium** = 4.2 **% fine** = 5.0)
% SILT = 25.7 **% CLAY** = 65.1

D_{85}= 0.05 D_{60}= 0.00

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.0	0.3	22.4	67.8	9.5

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 305-DH	STP-106	170.0'-171.5'	11/21/2006	ML	Silt with Sand	23.9	NV	NP
		(SS-29)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH/DK Reviewed By:RF
ASTM D6913-04e1/ ASTM D422-63(2002)e1
Specific gravity was estimated

NA 4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 170.0'-171.5' **Sample Number:** STP-106 (SS-29)
Material Description: Silt with Sand
Date: 11/21/2006 **Natural Moisture:** 23.9
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** ML
Testing Remarks: Tested By:TH/DK Reviewed By:RF
ASTM D6913-04e1/ ASTM D422-63(2002)e1
Specific gravity was estimated
Material specification: ASTM D 6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 18.62
Tare Wt. = 0.00
Minus #200 from wash = 77.3%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Lower Spec. Limit, %	Upper Spec. Limit, %	Deviation From Spec., %
258.00	176.00	0.00	3"	0.00	100.0			
			2"	0.00	100.0			
			1.5"	0.00	100.0			
			1"	0.00	100.0			
			3/4"	0.00	100.0			
			3/8"	0.00	100.0			
			#4	0.00	100.0			
			#10	0.00	100.0			
			#20	0.18	99.8			
			#40	0.26	99.7			
			#60	0.32	99.6			
			#100	0.56	99.3			
			#140	3.17	96.1			
			#200	18.62	77.3			

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50.3
Hygroscopic moisture correction:
Moist weight and tare = 189.00
Dry weight and tare = 188.80
Tare weight = 176.50
Hygroscopic moisture = 1.6%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 **x Rm**

MAK 4-3-07

Hydrometer Test Data (continued)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	14.0	8.2	0.0134	14.0	14.0	0.0355	16.7
5.00	21.1	13.0	7.2	0.0135	13.0	14.2	0.0227	14.5
15.00	20.9	12.0	6.2	0.0135	12.0	14.3	0.0132	12.4
30.00	20.3	11.0	5.0	0.0136	11.0	14.5	0.0094	10.1
60.00	20.1	11.0	5.0	0.0136	11.0	14.5	0.0067	10.1
250.00	20.0	10.0	4.0	0.0136	10.0	14.7	0.0033	8.0
1440.00	20.0	10.0	4.0	0.0136	10.0	14.7	0.0014	8.0

Fractional Components

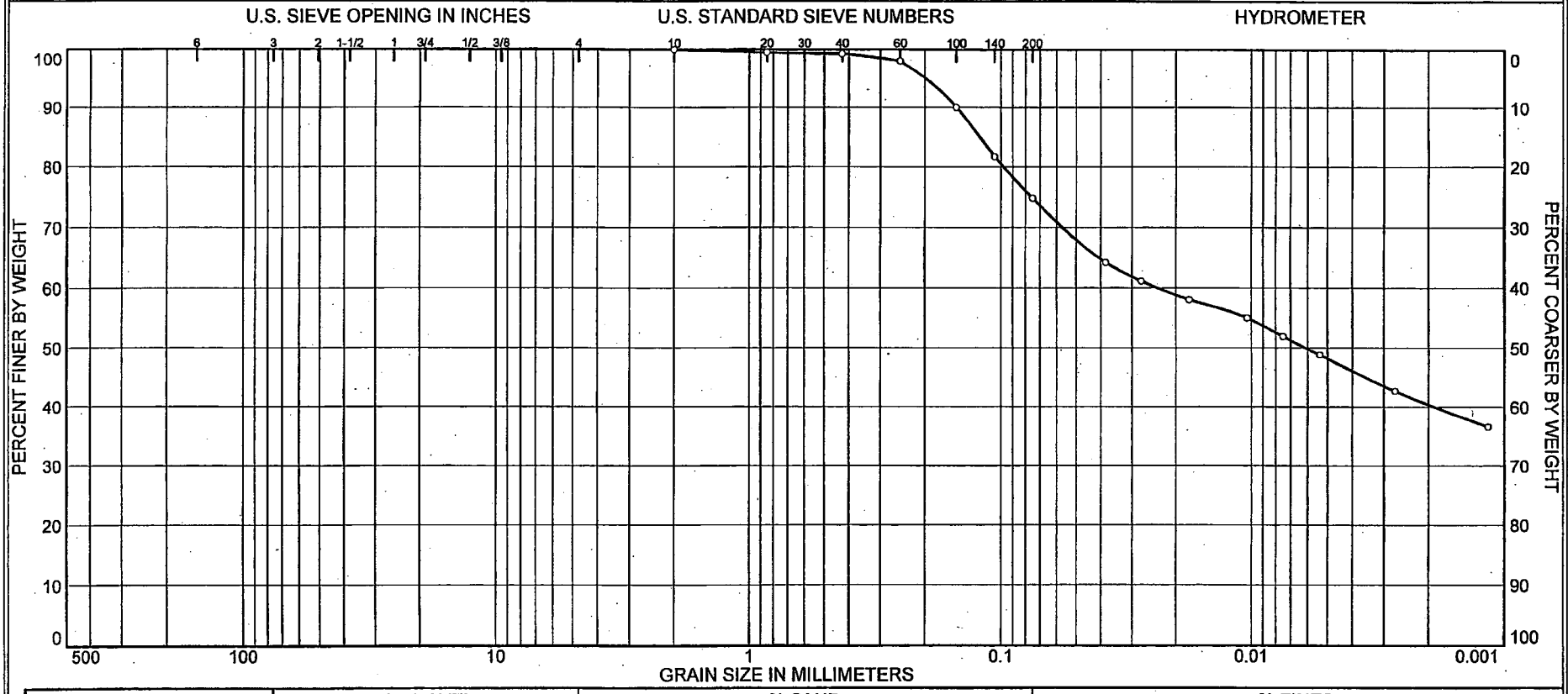
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.3	22.4	22.7	67.8	9.5	77.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0062	0.0251	0.0382	0.0444	0.0556	0.0617	0.0777	0.0835	0.0910	0.1022

Fineness Modulus	C_u	C_c
0.01	9.96	5.16

MA 4-3-07

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.0	0.7	24.5	26.7	48.1

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	B-305-DH	UD-11	213' to 215'	2-19-07	CL	Lean clay with sand	20.9	45	14

Client Bechtel Power Corporation
Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

○ Tested by: JA Reviewed by: SS KAW 4/3/07
ASTM D422-63 (2002)e1
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-305-DH
Sample No.: UD-11
Elev. or Depth: 213' to 215' **Sample Length(in./cm.):**
Location: B-305 DH
Description: Lean clay with sand
Date: 2-19-07 **Natural Moisture:** 20.9
Liquid Limit: 45 **Plastic Limit:** 14 **USCS Class.:** CL
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	93.68
Tare =	0.00
Dry sample weight =	93.68

Sample split on number 10 sieve
Split sample data:
Sample and tare = 64.24 Tare = .00 Sample weight = 64.24
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.31	99.5
# 40	0.47	99.3
# 60	1.19	98.1
# 100	6.40	90.0
# 140	11.77	81.7
# 200	16.19	74.8

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 65.46
Hygroscopic moisture correction:
Moist weight & tare = 40.68
Dry weight & tare = 40.13
Tare = 10.94
Hygroscopic moisture= 1.9 %
Calculated biased weight= 64.25
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.712
Specific gravity correction factor= 0.986

Hydrometer type: 152H

Effective depth L= 16.294964 - 0.164 x Rm

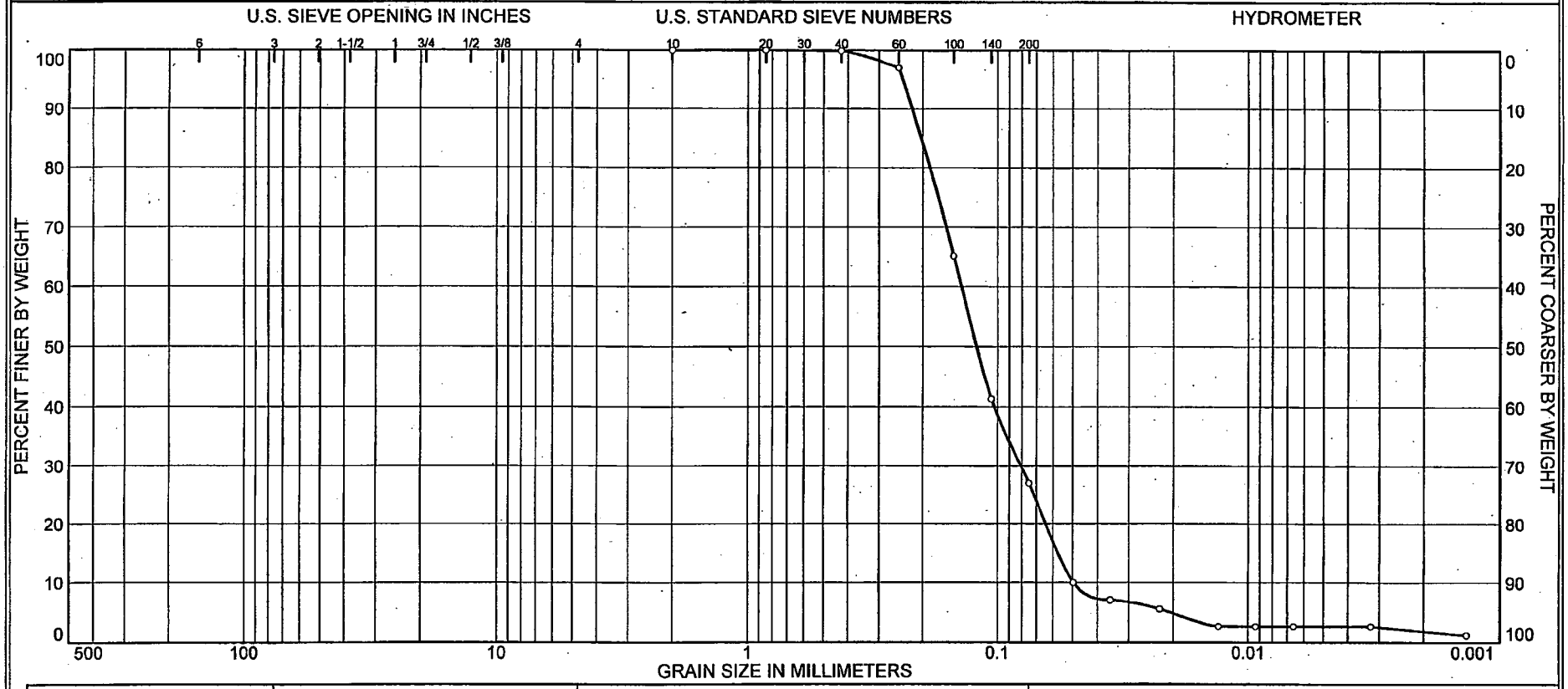
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.00	23.1	45.0	41.8	0.0129	46.0	8.8	0.0382	64.2
2.00	23.1	43.0	39.8	0.0129	44.0	9.1	0.0275	61.1
5.00	23.1	41.0	37.8	0.0129	42.0	9.4	0.0177	58.0
15.00	23.1	39.0	35.8	0.0129	40.0	9.7	0.0104	55.0
30.00	23.1	37.0	33.8	0.0129	38.0	10.1	0.0075	51.9
60.00	23.1	35.0	31.8	0.0129	36.0	10.4	0.0054	48.8
250.00	23.1	31.0	27.8	0.0129	32.0	11.0	0.0027	42.7
1440.00	23.4	27.0	23.9	0.0129	28.0	11.7	0.0012	36.6

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 25.2 **(% coarse =** **% medium** = 0.7 **% fine** = 24.5)
% SILT = 26.7 **% CLAY** = 48.1

D_{85}= 0.12 D_{60}= 0.02 D_{50}= 0.01

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.0	0.1	72.9	24.4	2.6

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	B-305-DH	UD-12	228' to 230'	2-14-07	SM	Silty sand	21.5	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 Figure

MACTEC, INC.

Charlotte, North Carolina

○ Tested by: JA Reviewed by: SS KAW 4/3/07
ASTM D422-63 (2002)e1
ASTM D6913-04e1

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-305-DH
Sample No.: UD-12
Elev. or Depth: 228' to 230' **Sample Length(in./cm.):**
Location: B-305-DH
Description: Silty sand
Date: 2-14-07 **Natural Moisture:** 21.5
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SM
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial	After wash
Dry sample and tare=	140.61	0.00
Tare =	0.00	0.00
Dry sample weight =	140.61	0.00

Minus #200 from wash= 100.0 %
Sample split on number 10 **sieve**
Split sample data:
Sample and tare = 68.63 **Tare =** .00 **Sample weight =** 68.63
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.00	100.0
# 40	0.07	99.9
# 60	1.97	97.1
# 100	23.97	65.1
# 140	40.29	41.3
# 200	50.07	27.0

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 68.77
Hygroscopic moisture correction:
Moist weight & tare = 36.96
Dry weight & tare = 36.92
Tare = 11.58
Hygroscopic moisture= 0.2 %
Calculated biased weight= 68.66
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.670

Specific gravity correction factor= 0.995
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

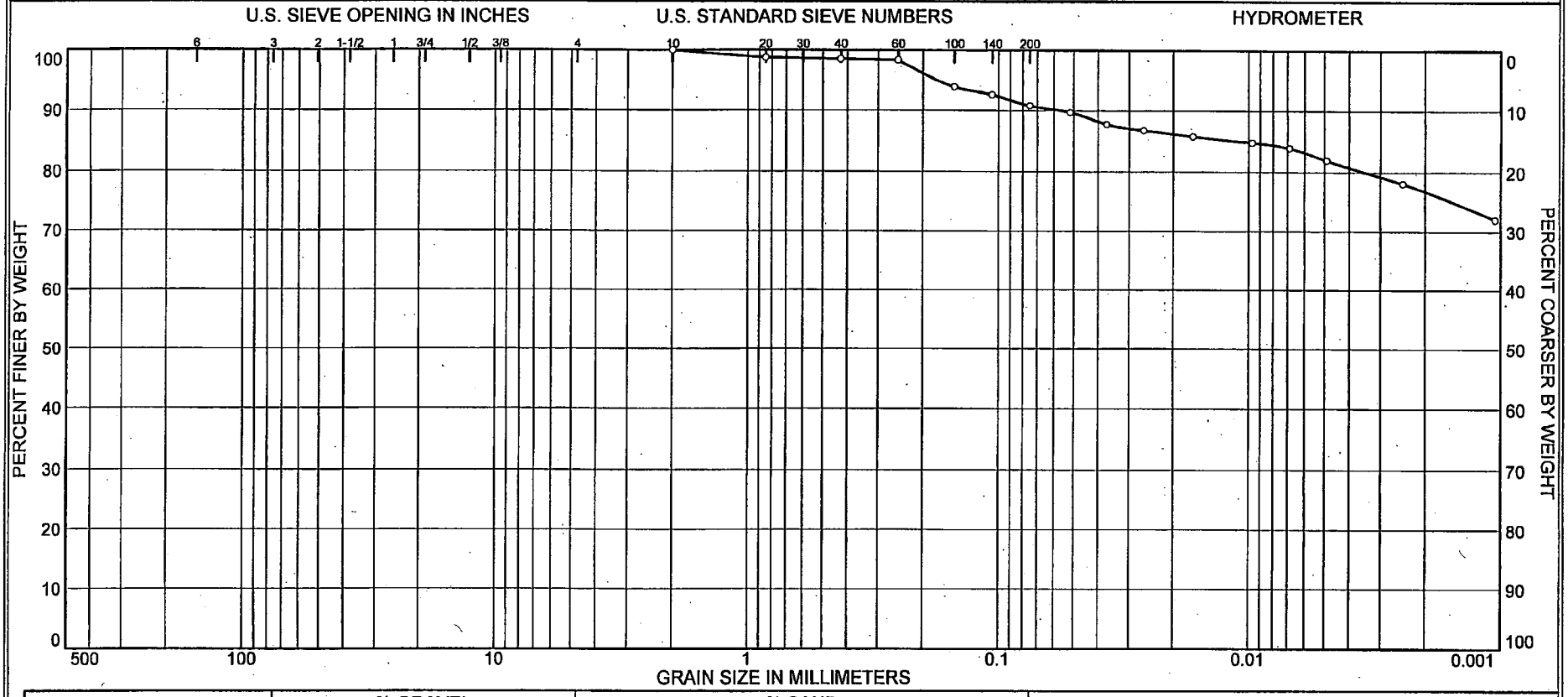
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.00	23.1	10.0	6.8	0.0131	11.0	14.5	0.0497	9.9
2.00	23.1	8.0	4.8	0.0131	9.0	14.8	0.0355	7.0
5.00	23.1	7.0	3.8	0.0131	8.0	15.0	0.0226	5.5
15.00	23.1	5.0	1.8	0.0131	6.0	15.3	0.0132	2.6
30.00	23.1	5.0	1.8	0.0131	6.0	15.3	0.0093	2.6
60.00	23.1	5.0	1.8	0.0131	6.0	15.3	0.0066	2.6
250.00	23.1	5.0	1.8	0.0131	6.0	15.3	0.0032	2.6
1440.00	23.3	4.0	0.9	0.0130	5.0	15.5	0.0014	1.2

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 73.0 **(% coarse =** **% medium =** 0.1 **% fine =** 72.9**)**
% SILT = 24.4 **% CLAY =** 2.6

D_{85}= 0.20 D_{60}= 0.14 D_{50}= 0.12
D_{30}= 0.08 D_{15}= 0.06 D_{10}= 0.05
C_c= 0.9387 C_u= 2.8024

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.0	1.4	7.8	8.8	82.0

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	B-305-DH	UD-14	288' to 291'	2-14-07	CH	Fat clay	40.2	84	26

Client Bechtel Power Corporation
Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

○ Tested by: JA Reviewed by: SS KAW 4/3/07
ASTM D422-63 (2002)e1
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-305-DH
Sample No.: UD-14
Elev. or Depth: 288' to 291' **Sample Length(in./cm.):**
Location: B-305-DH
Description: Fat clay
Date: 2-14-07 **Natural Moisture:** 40.2
Liquid Limit: 84 **Plastic Limit:** 26 **USCS Class.:** CH
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial	After wash
Dry sample and tare=	75.92	0.00
Tare =	0.00	0.00
Dry sample weight =	75.92	0.00

Minus #200 from wash= 100.0 %
Sample split on number 10 **sieve**
Split sample data:
Sample and tare = 50.43 **Tare =** .00 **Sample weight =** 50.43
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.61	98.8
# 40	0.72	98.6
# 60	0.82	98.4
# 100	3.10	93.9
# 140	3.75	92.6
# 200	4.65	90.8

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 50.88
Hygroscopic moisture correction:
Moist weight & tare = 25.67
Dry weight & tare = 25.54
Tare = 11.17
Hygroscopic moisture= 0.9 %
Calculated biased weight= 50.42
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.715

Specific gravity correction factor= 0.986
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

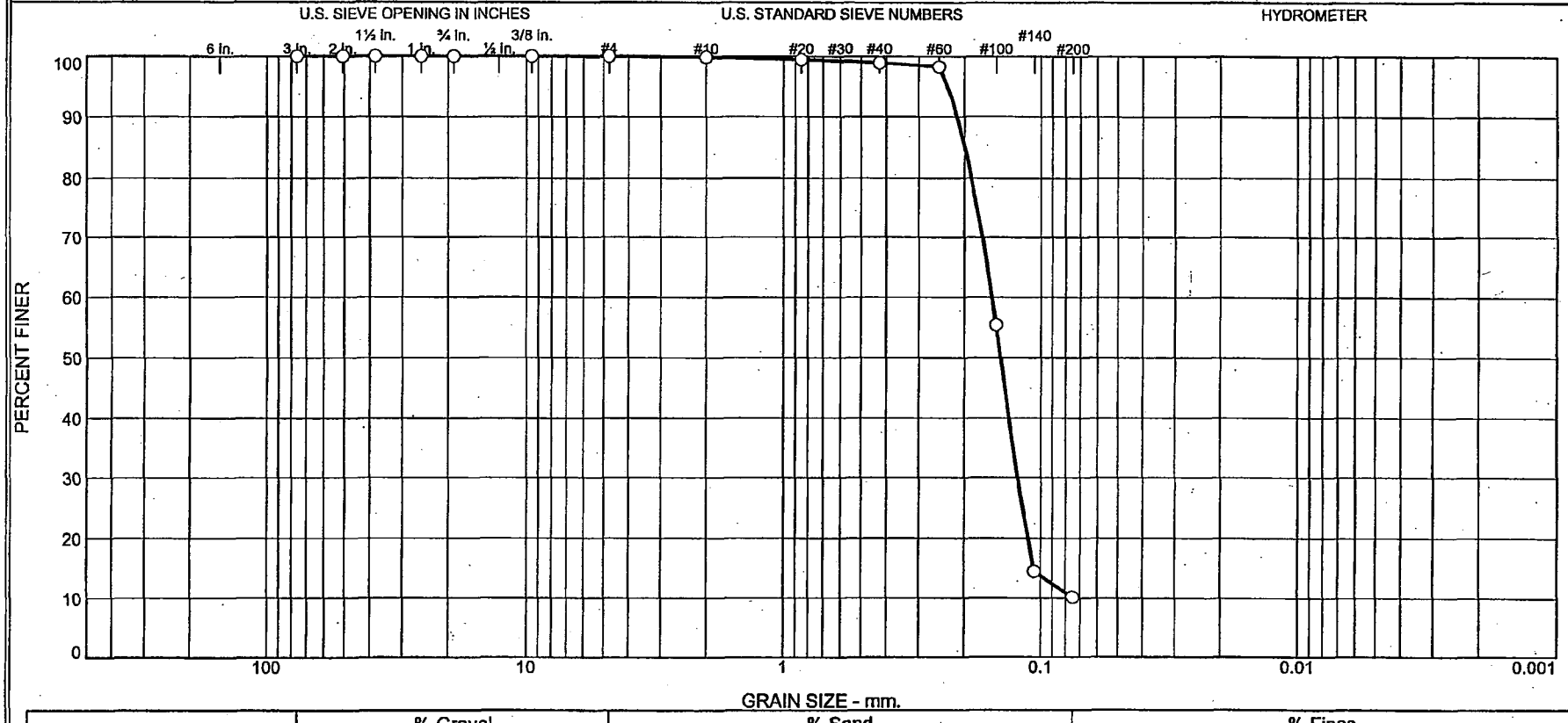
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
0.50	23.4	49.0	45.9	0.0128	50.0	8.1	0.0517	89.7
1.00	23.4	48.0	44.9	0.0128	49.0	8.3	0.0369	87.8
2.00	23.4	47.5	44.4	0.0128	48.5	8.3	0.0262	86.8
5.00	23.4	47.0	43.9	0.0128	48.0	8.4	0.0167	85.8
15.00	23.4	46.5	43.4	0.0128	47.5	8.5	0.0097	84.8
30.00	23.4	46.0	42.9	0.0128	47.0	8.6	0.0069	83.9
60.00	23.4	45.0	41.9	0.0128	46.0	8.8	0.0049	81.9
250.00	23.6	43.0	39.9	0.0128	44.0	9.1	0.0024	78.1
1440.00	23.1	40.0	36.8	0.0129	41.0	9.6	0.0011	72.0

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 9.2 **(% coarse =** **% medium =** 1.4 **% fine =** 7.8**)**
% SILT = 8.8 **% CLAY =** 82.0

D_{85}= 0.01

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.1	1.0	88.7	10.2	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 305-DH	STP-112 (SS-40)	378.5'-380	12/2/2006	SP-SM	Poorly Graded Sand with Silt	25.7		

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST
ASTM D6913-04e1

MA 4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 378.5'-380 **Sample Number:** STP-112 (SS-40)
Material Description: Poorly Graded Sand with Silt
Date: 12/2/2006 **Natural Moisture:** 25.7
USCS Class.: SP-SM
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 75.53
Tare Wt. = 0.00
Minus #200 from wash = 10.2%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
259.10	175.00	0.00	3	0.00	100.0
			2	0.00	100.0
			1.5	0.00	100.0
			1	0.00	100.0
			3/4	0.00	100.0
			3/8	0.00	100.0
			#4	0.00	100.0
			#10	0.12	99.9
			#20	0.48	99.4
			#40	0.91	98.9
			#60	1.48	98.2
			#100	37.49	55.4
			#140	71.86	14.6
			#200	75.53	10.2

Fractional Components

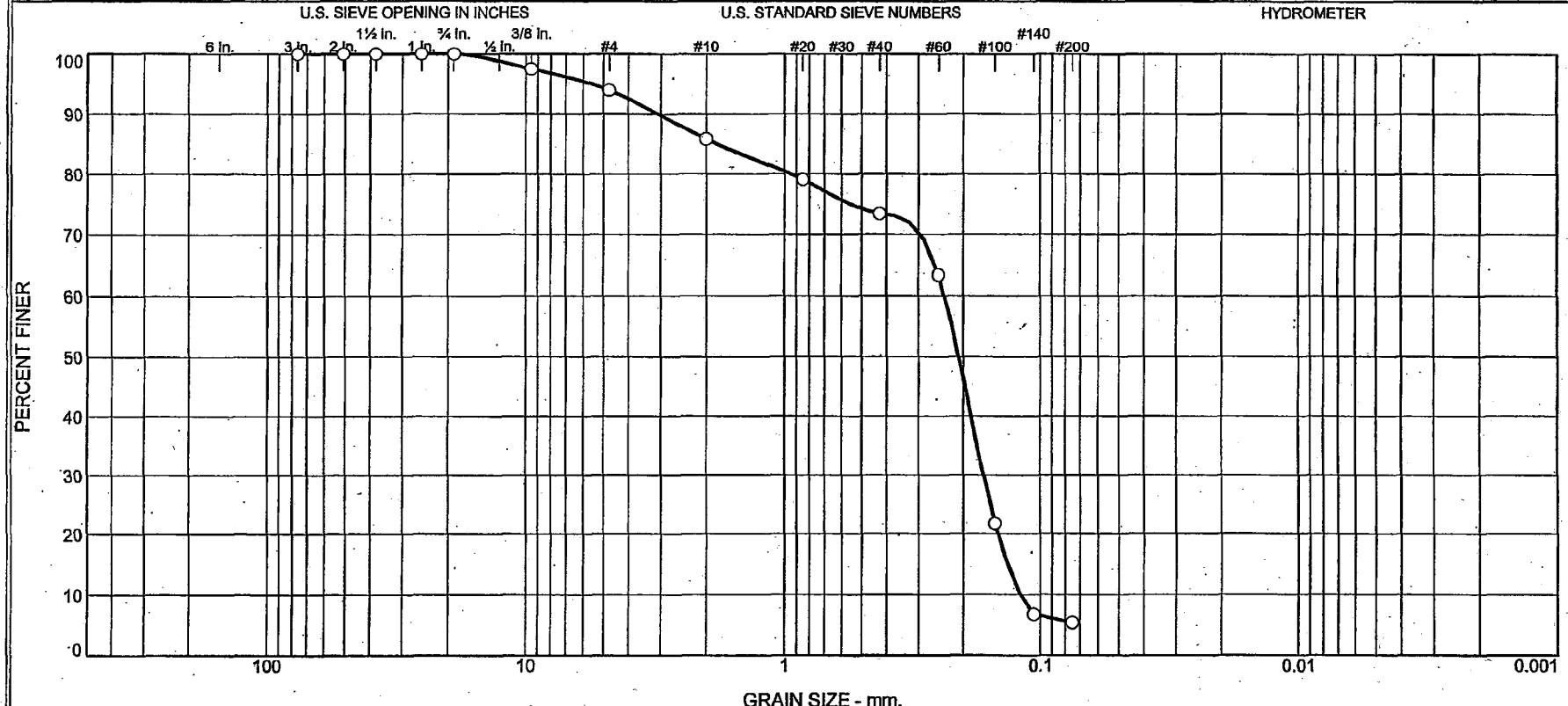
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.1	1.0	88.7	89.8			10.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.1067	0.1131	0.1237	0.1439	0.1556	0.1875	0.1988	0.2128	0.2316

Fineness Modulus
0.47

NB 4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	6.1	8.1	12.4	68.0	5.4	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 305-DH	STP-113	398.5'-400'	12/02/2006	SP	Poorly Graded Sand	23.3		
		(SS-41)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:RF

Noticeable quanitiy of shells present in sample

ASTM D6913-04e1

MA 4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

3/19/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 398.5'-400'
Sample Number: STP-113 (SS-41)
Material Description: Poorly Graded Sand
Date: 12/02/2006
Natural Moisture: 23.3
USCS Class.: SP
Testing Remarks: Tested By:TH Reviewed By:RF
Noticeable quanitiy of shells present in sample
ASTM D6913-04e1

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
335.30	176.70	0.00	3	0.00	100.0
			2	0.00	100.0
			1.5	0.00	100.0
			1	0.00	100.0
			.75	0.00	100.0
			.375	3.98	97.5
			#4	9.62	93.9
			#10	22.52	85.8
			#20	33.20	79.1
			#40	42.18	73.4
			#60	58.06	63.4
			#100	124.16	21.7
			#140	147.87	6.8
			#200	150.07	5.4

Fractional Components

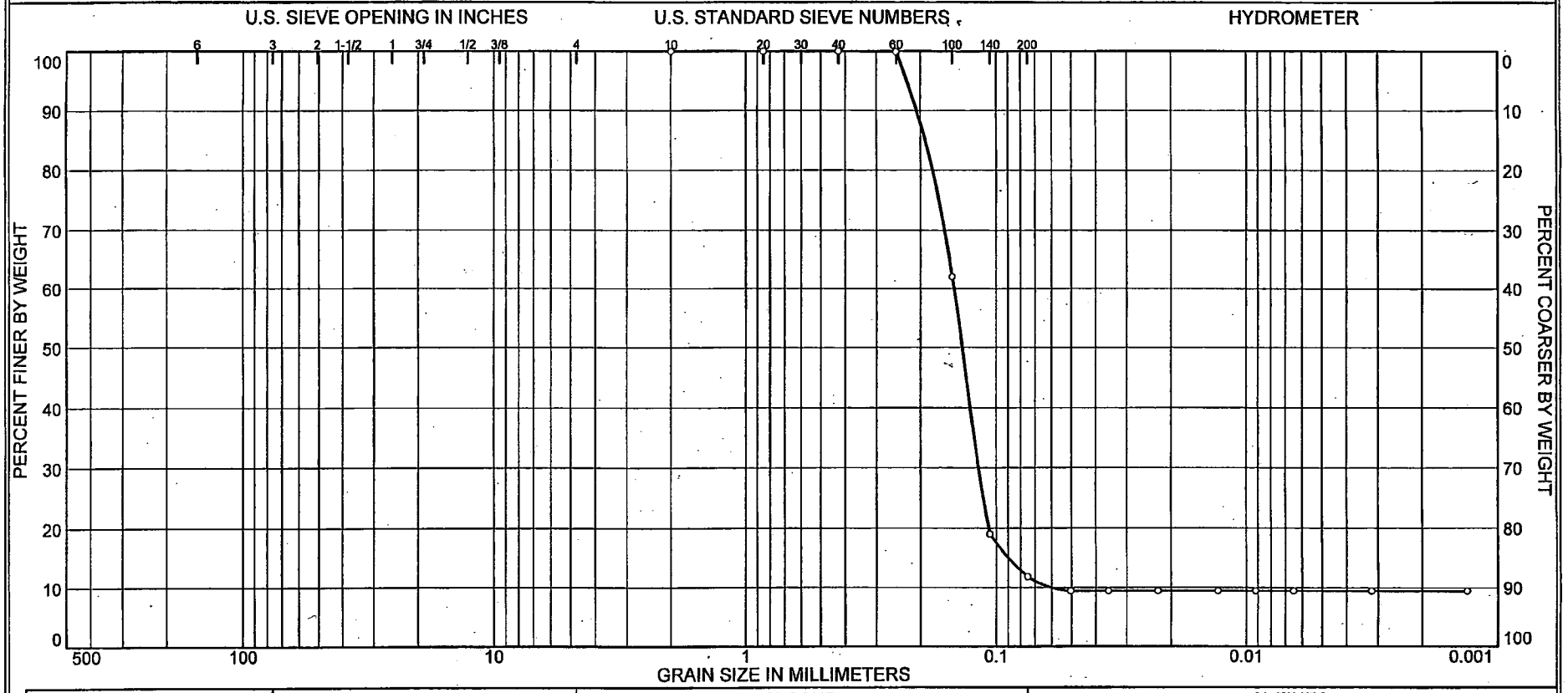
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	6.1	6.1	8.1	12.4	68.0	88.5			5.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1198	0.1345	0.1463	0.1666	0.2086	0.2369	0.9449	1.8197	3.0744	5.5909

Fineness Modulus	C_u	C_c
1.72	1.98	0.98

MAK 4-3-07

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
O	0.0	0.0	0.0	0.0	0.0	88.2	2.4	9.4

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
O	B-305-DH	UD-21A	453.75' to 455.75'	2-25-07	SP-SM	Poorly graded sand with silt	22.0	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

O Tested by: JA Reviewed by: MH
ASTM D422-63 (2002)e1 KAW 4/3/07
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-305-DH
Sample No.: UD-21A
Elev. or Depth: 453.75' to 455.75' **Sample Length(in./cm.):**
Location: B-305-DH
Description: Poorly graded sand with silt
Date: 2-25-07 **Natural Moisture:** 22.0
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SP-SM
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	101.26
Tare =	0.00
Dry sample weight =	101.26

Sample split on number 10 **sieve**
Split sample data:
Sample and tare = 54.15 **Tare =** .00 **Sample weight =** 54.15
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.00	100.0
# 40	0.00	100.0
# 60	0.07	99.9
# 100	20.59	62.0
# 140	43.84	19.0
# 200	47.75	11.8

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 51.30
Hygroscopic moisture correction:
Moist weight & tare = 55.38
Dry weight & tare = 55.25
Tare = 11.62
Hygroscopic moisture= 0.3 %
Calculated biased weight= 51.15
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.667
Specific gravity correction factor= 0.996

Hydrometer type: 152H

Effective depth L= 16.294964 - 0.164 x Rm

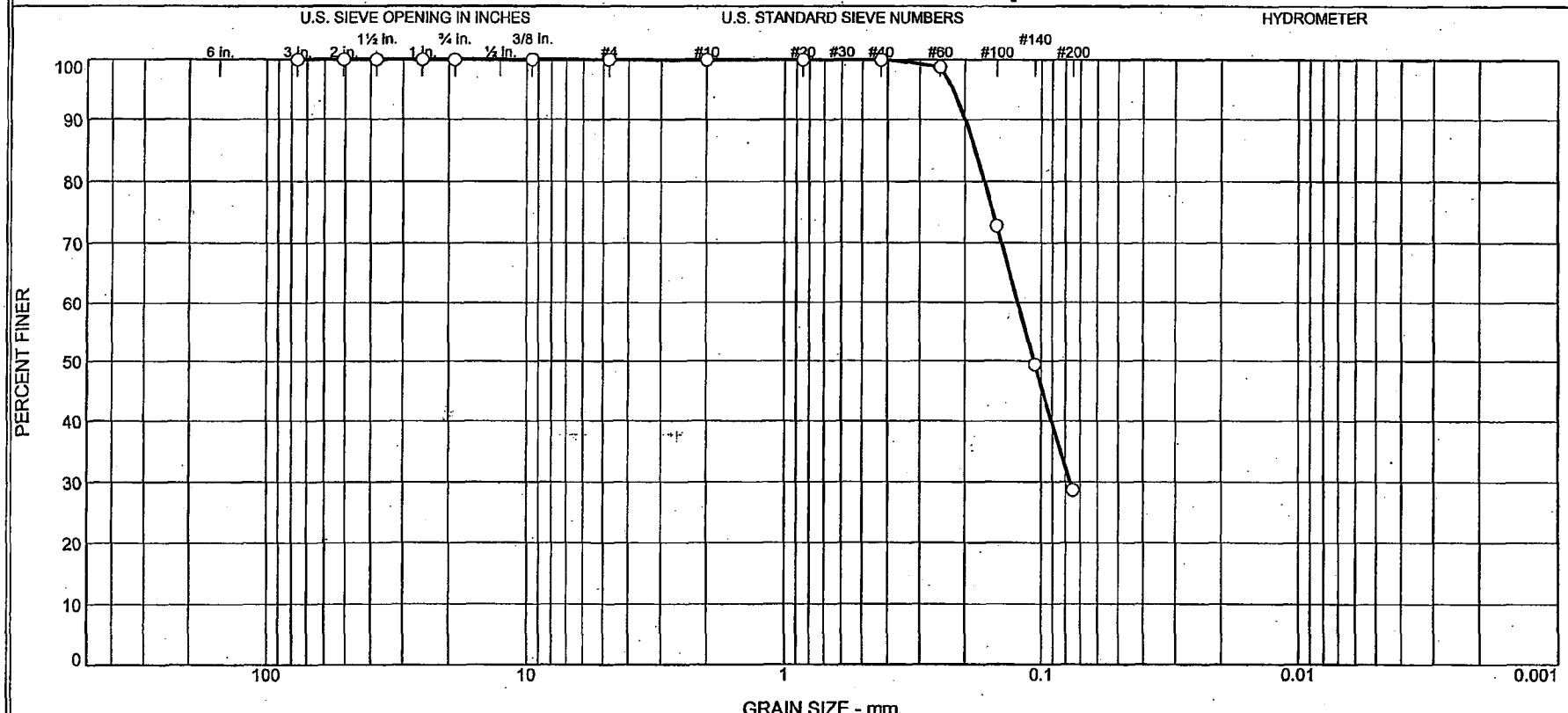
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.00	23.1	8.0	4.8	0.0131	9.0	14.8	0.0503	9.4
2.00	23.1	8.0	4.8	0.0131	9.0	14.8	0.0356	9.4
5.00	23.1	8.0	4.8	0.0131	9.0	14.8	0.0225	9.4
15.00	23.1	8.0	4.8	0.0131	9.0	14.8	0.0130	9.4
30.00	23.1	8.0	4.8	0.0131	9.0	14.8	0.0092	9.4
60.00	23.1	8.0	4.8	0.0131	9.0	14.8	0.0065	9.4
250.00	23.1	8.0	4.8	0.0131	9.0	14.8	0.0032	9.4
1440.00	23.2	8.0	4.8	0.0131	9.0	14.8	0.0013	9.4

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 88.2 (**% coarse =** **% medium** = 0.0 **% fine** = 88.2)
% SILT = 2.4 **% CLAY** = 9.4

D_{85}= 0.19 D_{60}= 0.15 D_{50}= 0.14
D_{30}= 0.12 D_{15}= 0.09 D_{10}= 0.06
C_c= 1.5537 C_u= 2.4303

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.0	0.0	71.4	28.6	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 305-DH	STP-115 (SS-43)	458.5'	12/4/2006	SM	Silty Sand	23.3		

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:RF
ASTM D6913-04e1

MA 4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 305-DH
Depth: 458.5'
Sample Number: STP-115 (SS-43)
Material Description: Silty Sand
Date: 12/4/2006
Natural Moisture: 23.3
USCS Class.: SM
Testing Remarks: Tested By:TH Reviewed By:RF
ASTM D6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 58.37
Tare Wt. = 0.00
Minus #200 from wash = 28.6%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
258.70	176.90	0.00	3	0.00	100.0
			2	0.00	100.0
			1.5	0.00	100.0
			1	0.00	100.0
			3/4	0.00	100.0
			3/8	0.00	100.0
			#4	0.00	100.0
			#10	0.00	100.0
			#20	0.00	100.0
			#40	0.00	100.0
			#60	1.00	98.8
			#100	22.24	72.8
			#140	41.42	49.4
			#200	58.37	28.6

Fractional Components

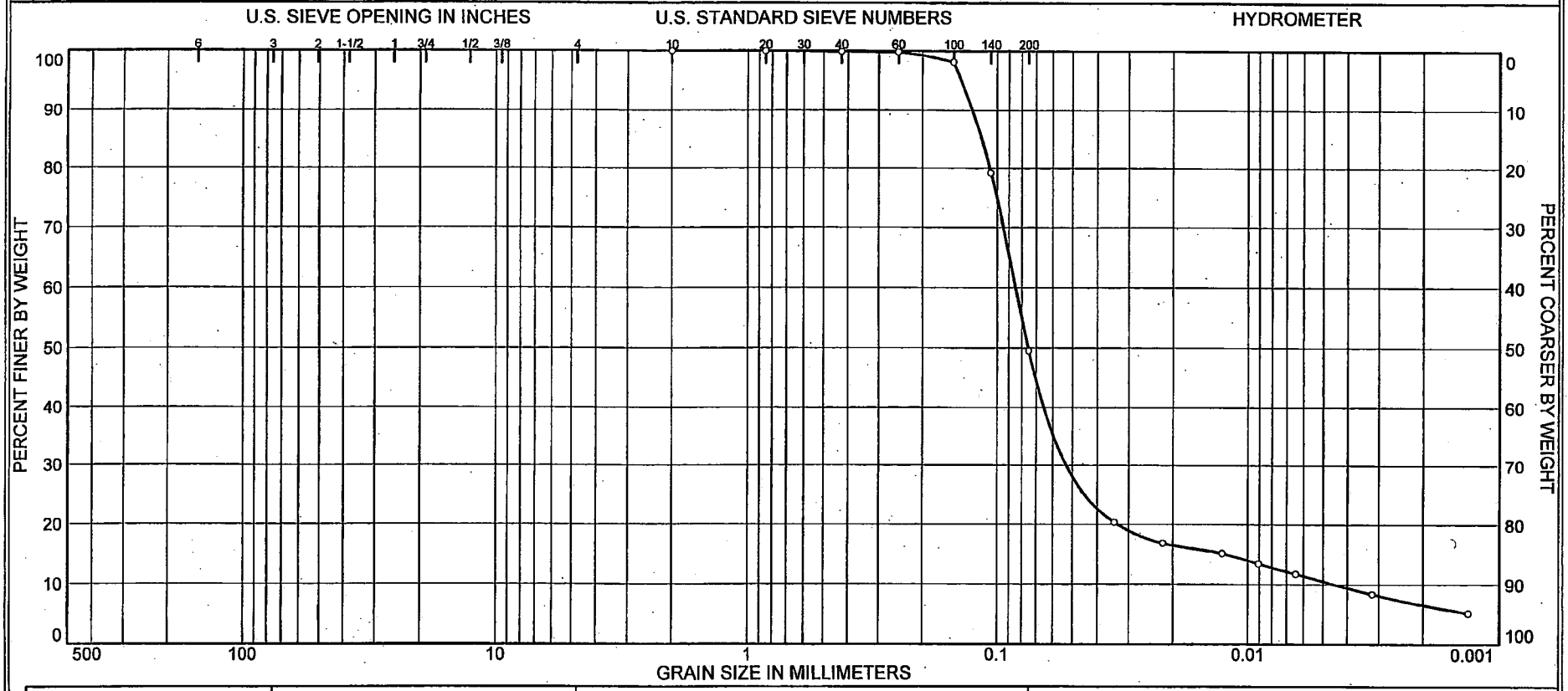
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.0	71.4	71.4			28.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0768	0.1070	0.1243	0.1675	0.1819	0.1994	0.2225

Fineness Modulus
0.28

MAK 4-3-07

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.0	0.1	50.4	39.1	10.4

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	B-306	UD-2	63' to 65'	q-23-07	SM	Silty sand	22.9	20	18

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

○ Tested by: JA Reviewed by: MH
ASTM D422-63 (2002)e1 KAW 4/3/07
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-306
Sample No.: UD-2
Elev. or Depth: 63' to 65' **Sample Length(in./cm.):**
Location: B-306
Description: Silty sand
Date: q-23-07 **Natural Moisture:** 22.9
Liquid Limit: 20 **Plastic Limit:** 18 **USCS Class.:** SM
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	96.18
Tare =	0.00
Dry sample weight =	96.18

Sample split on number 10 sieve
Split sample data:
Sample and tare = 58.16 **Tare =** .00 **Sample weight =** 58.16
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.00	100.0
# 40	0.03	99.9
# 60	0.10	99.8
# 100	1.02	98.2
# 140	12.08	79.2
# 200	29.36	49.5

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 58.68
Hygroscopic moisture correction:
Moist weight & tare = 49.35
Dry weight & tare = 49.02
Tare = 11.62
Hygroscopic moisture= 0.9 %
Calculated biased weight= 58.17
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.662
Specific gravity correction factor= 0.997

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

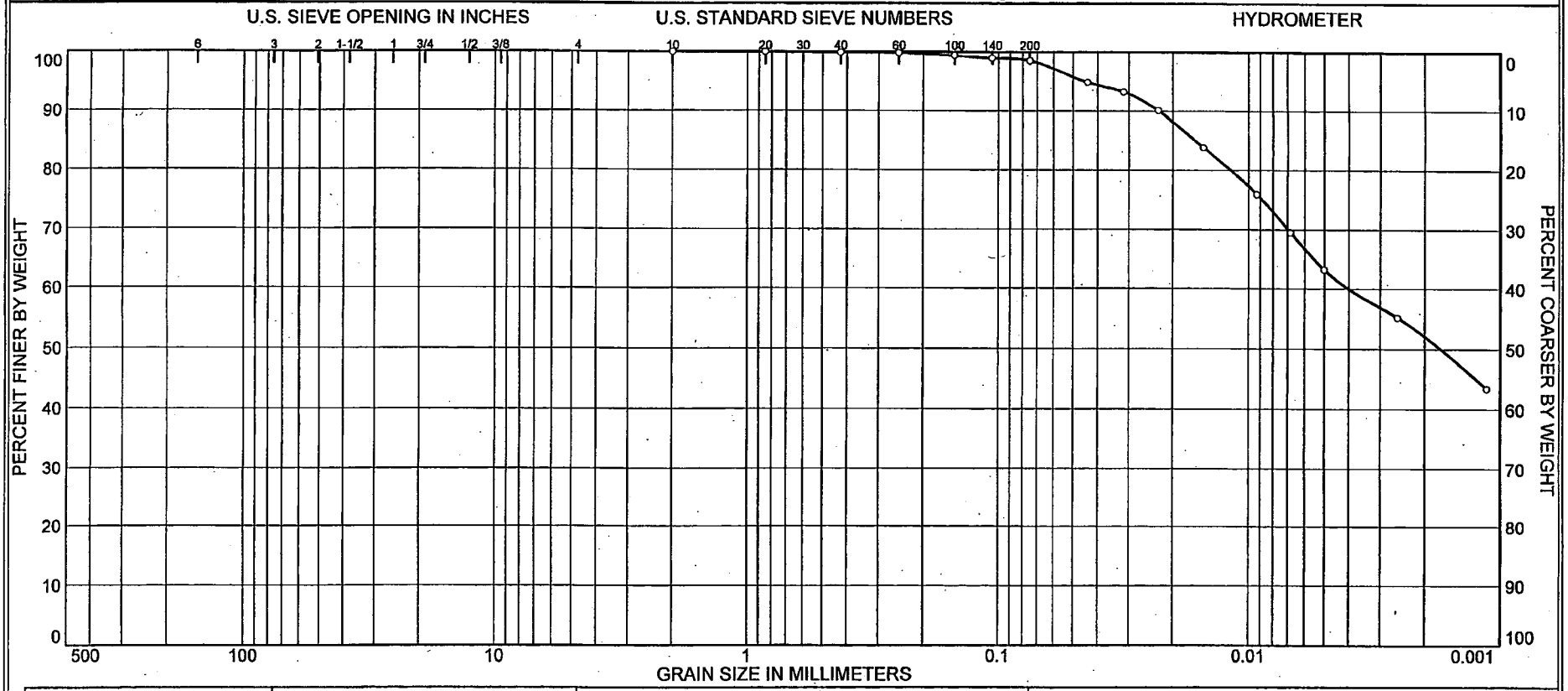
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	23.1	15.0	11.8	0.0131	16.0	13.7	0.0342	20.3
5.00	23.1	13.0	9.8	0.0131	14.0	14.0	0.0219	16.8
15.00	23.1	12.0	8.8	0.0131	13.0	14.2	0.0127	15.1
30.00	23.1	11.0	7.8	0.0131	12.0	14.3	0.0090	13.4
60.00	23.1	10.0	6.8	0.0131	11.0	14.5	0.0064	11.7
250.00	23.1	8.0	4.8	0.0131	9.0	14.8	0.0032	8.3
1440.00	23.9	6.0	3.0	0.0130	7.0	15.1	0.0013	5.1

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 50.5 **(% coarse =** **% medium** = 0.1 **% fine** = 50.4)
% SILT = 39.1 **% CLAY** = 10.4

D_{85}= 0.12 D_{60}= 0.08 D_{50}= 0.08
D_{30}= 0.05 D_{15}= 0.01 D_{10}= 0.00
C_c= 7.2619 C_u= 18.5478

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
O	0.0	0.0	0.0	0.0	0.1	1.3	35.4	63.2

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
O	B-306	UD-4	88' to 90'	2-20-07	CH	Fat clay	22.9	57	19

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

O Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1 KAW 4/3/07
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-306
Sample No.: UD-4
Elev. or Depth: 88' to 90' **Sample Length(in./cm.):**
Location: B-306
Description: Fat clay
Date: 2-20-07 **Natural Moisture:** 22.9
Liquid Limit: 57 **Plastic Limit:** 19 **USCS Class.:** CH
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	90.83
Tare =	0.00
Dry sample weight =	90.83

Sample split on number 10 sieve
Split sample data:
Sample and tare = 62.15 Tare = .00 Sample weight = 62.15
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.02	100.0
# 40	0.07	99.9
# 60	0.13	99.8
# 100	0.35	99.4
# 140	0.60	99.0
# 200	0.88	98.6

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 63.77
Hygroscopic moisture correction:
Moist weight & tare = 36.93
Dry weight & tare = 36.28
Tare = 11.41
Hygroscopic moisture= 2.6 %
Calculated biased weight= 62.15
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1.0
Specific gravity of solids= 2.715
Specific gravity correction factor= 0.986

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

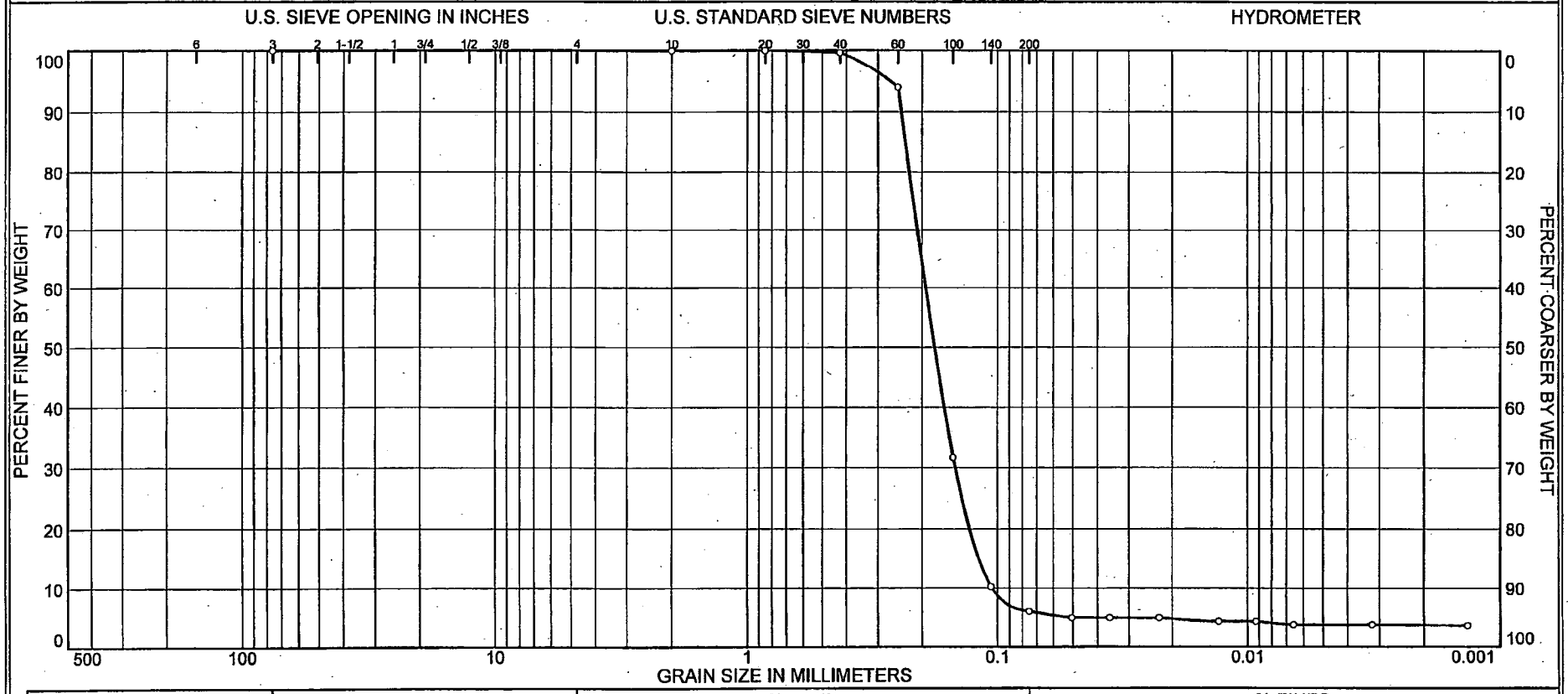
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
0.50	23.1	63.0	59.8	0.0129	64.0	5.8	0.0439	94.9
1.00	23.1	62.0	58.8	0.0129	63.0	6.0	0.0315	93.3
2.00	23.1	60.0	56.8	0.0129	61.0	6.3	0.0229	90.1
5.00	23.1	56.0	52.8	0.0129	57.0	6.9	0.0152	83.8
15.00	23.1	51.0	47.8	0.0129	52.0	7.8	0.0093	75.9
30.00	23.1	47.0	43.8	0.0129	48.0	8.4	0.0068	69.5
60.00	23.1	43.0	39.8	0.0129	44.0	9.1	0.0050	63.2
250.00	23.1	38.0	34.8	0.0129	39.0	9.9	0.0026	55.2
1440.00	23.3	30.5	27.4	0.0129	31.5	11.1	0.0011	43.4

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 1.4 **(% coarse =** **% medium =** 0.1 **% fine =** 1.3**)**
% SILT = 35.4 **% CLAY =** 63.2

D_{85}= 0.02 D_{60}= 0.00 D_{50}= 0.00

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
O	0.0	0.0	0.0	0.0	0.4	93.6	2.3	3.7

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
O	B-306	UD-5	98'to 100'	2-16-07	SP-SM	Poorly graded sand with silt	24.4	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

O Tested by: JA Reviewed by: SS KAW 4/3/07
ASTM D422-63 (2002)e1
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-306
Sample No.: UD-5
Elev. or Depth: 98'to 100' **Sample Length(in./cm.):**
Location: B-306
Description: Poorly graded sand with silt
Date: 2-16-07 **Natural Moisture:** 24.4
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SP-SM
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial	After wash
Dry sample and tare=	116.56	0.00
Tare =	0.00	0.00
Dry sample weight =	116.56	0.00

Minus #200 from wash= 100.0 %
Sample split on number 10 **sieve**
Split sample data:
Sample and tare = 78.36 **Tare =** .00 **Sample weight =** 78.36
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
3 inch	0.00	100.0
# 10	0.00	100.0
# 20	0.01	100.0
# 40	0.33	99.6
# 60	4.72	94.0
# 100	53.52	31.7
# 140	70.39	10.2
# 200	73.62	6.0

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 78.36
Hygroscopic moisture correction:
Moist weight & tare = 49.00
Dry weight & tare = 48.95
Tare = 10.84
Hygroscopic moisture= 0.1 %
Calculated biased weight= 78.26
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1

Specific gravity of solids= 2.662
Specific gravity correction factor= 0.997
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

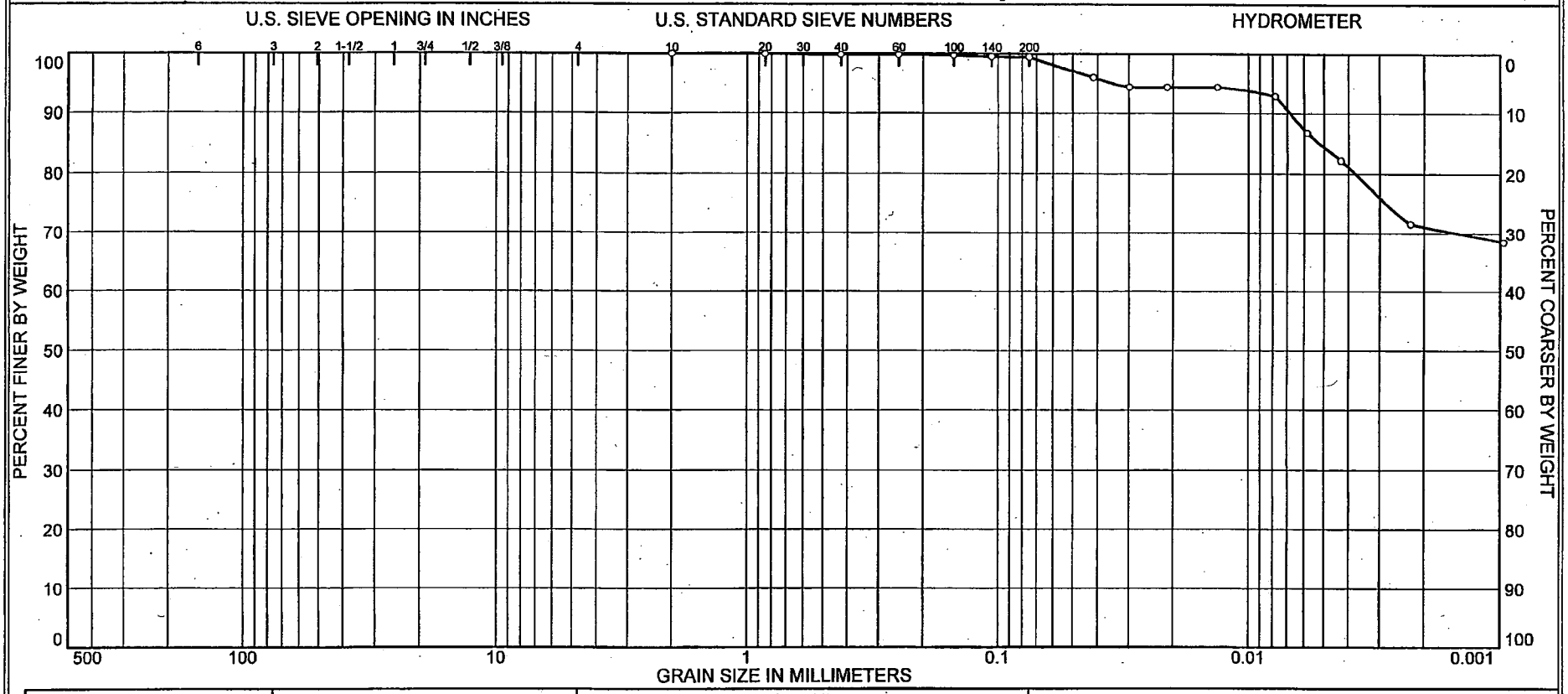
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.00	23.4	7.0	3.9	0.0130	8.0	15.0	0.0505	4.9
2.00	23.4	7.0	3.9	0.0130	8.0	15.0	0.0357	4.9
5.00	23.4	7.0	3.9	0.0130	8.0	15.0	0.0226	4.9
15.00	23.4	6.5	3.4	0.0130	7.5	15.1	0.0131	4.3
30.00	23.4	6.5	3.4	0.0130	7.5	15.1	0.0092	4.3
60.00	23.4	6.0	2.9	0.0130	7.0	15.1	0.0066	3.7
250.00	23.6	6.0	2.9	0.0130	7.0	15.1	0.0032	3.7
1440.00	23.1	6.0	2.8	0.0131	7.0	15.1	0.0013	3.6

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = 0.0 **% GRAVEL** = 0.0
% SAND = 94.0 (**% coarse** = 0.0 **% medium** = 0.4 **% fine** = 93.6)
% SILT = 2.3 **% CLAY** = 3.7

D_{85}= 0.23 D_{60}= 0.19 D_{50}= 0.18
D_{30}= 0.15 D_{15}= 0.12 D_{10}= 0.11
C_c= 1.0643 C_u= 1.836

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
O	0.0	0.0	0.0	0.0	0.2	0.4	15.0	84.4

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
O	B-306	UD-7	118' to 120'	2-20-07	CH	Fat clay	25.2	54	22

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

O Tested by: JA Reviewed by: SS KAW 4/3/07
ASTM D422-63 (2002)e1
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-306
Sample No.: UD-7
Elev. or Depth: 118' to 120' **Sample Length(in./cm.):**
Location: B-306
Description: Fat clay
Date: 2-20-07 **Natural Moisture:** 25.2
Liquid Limit: 54 **Plastic Limit:** 22 **USCS Class.:** CH
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	94.05
Tare =	0.00
Dry sample weight =	94.05

Sample split on number 10 **sieve**
Split sample data:
Sample and tare = 64.20 **Tare =** .00 **Sample weight =** 64.20
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.07	99.9
# 40	0.12	99.8
# 60	0.16	99.8
# 100	0.22	99.7
# 140	0.29	99.5
# 200	0.41	99.4

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 67.02
Hygroscopic moisture correction:
Moist weight & tare = 42.12
Dry weight & tare = 40.82
Tare = 11.03
Hygroscopic moisture= 4.4 %
Calculated biased weight= 64.22
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.744
Specific gravity correction factor= 0.980

Hydrometer type: 152H

Effective depth L= 16.294964 - 0.164 x Rm

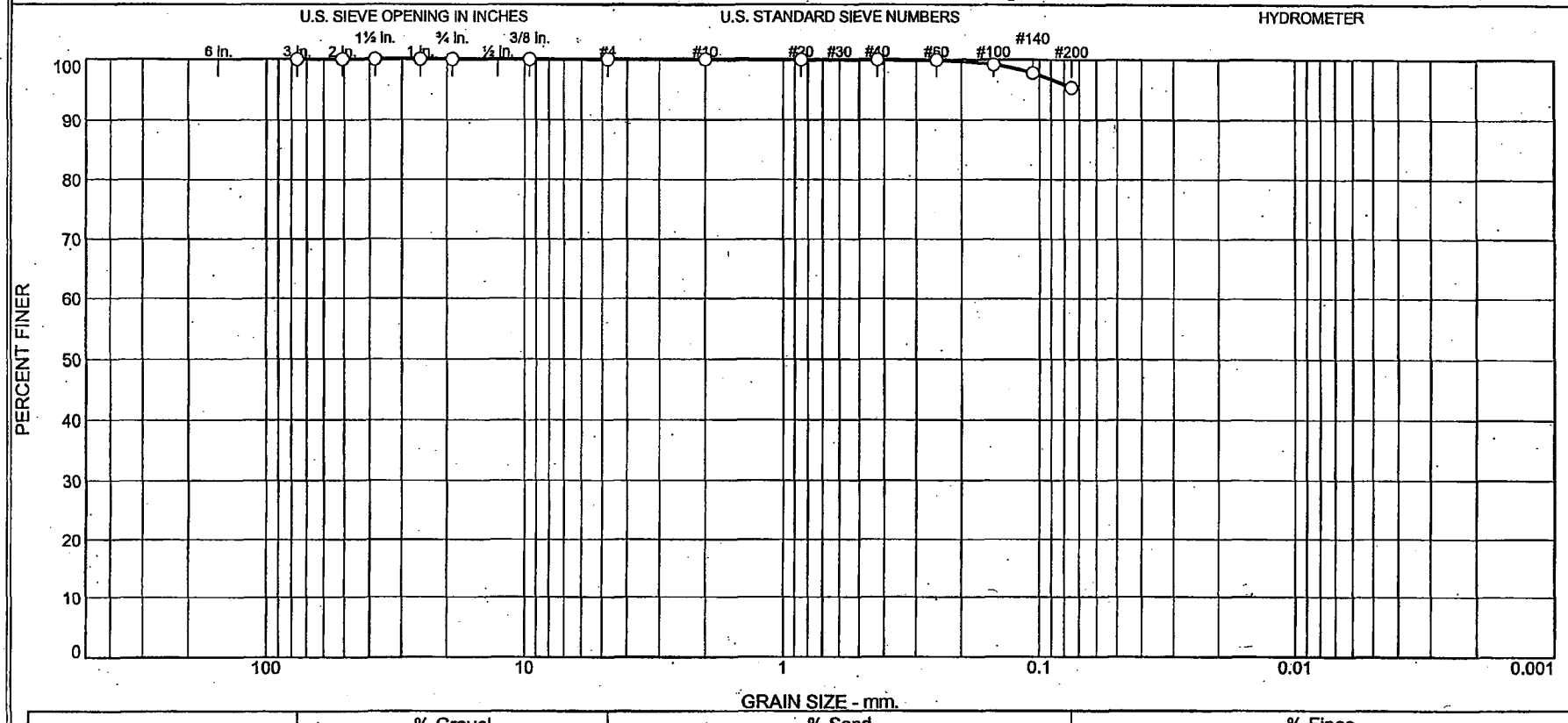
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
0.50	23.4	66.0	62.9	0.0127	67.0	5.3	0.0415	96.0
1.00	23.4	65.0	61.9	0.0127	66.0	5.5	0.0298	94.4
2.00	23.4	65.0	61.9	0.0127	66.0	5.5	0.0211	94.4
5.00	23.4	65.0	61.9	0.0127	66.0	5.5	0.0133	94.4
15.00	23.4	64.0	60.9	0.0127	65.0	5.6	0.0078	92.9
30.00	23.4	60.0	56.9	0.0127	61.0	6.3	0.0058	86.8
60.00	23.4	57.0	53.9	0.0127	58.0	6.8	0.0043	82.2
250.00	23.6	50.0	46.9	0.0127	51.0	7.9	0.0023	71.6
1440.00	23.1	48.0	44.8	0.0128	49.0	8.3	0.0010	68.4

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 0.6 **(% coarse =** **% medium =** 0.2 **% fine =** 0.4**)**
% SILT = 15.0 **% CLAY =** 84.4 **(% CLAY COLLOIDS =** 68.5**)**

D_{85}= 0.01

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.0	0.1	4.5	95.4	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 309	STP-001	1.5'-3.0'	11/13/2006	CH	Fat Clay	28.0	61	17
		(SS-2)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST

ASTM D6913-04e1

MA 4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 1.5'-3.0' **Sample Number:** STP-001 (SS-2)
Material Description: Fat Clay
Date: 11/13/2006 **Natural Moisture:** 28.0
Liquid Limit: 61 **Plastic Limit:** 17 **USCS Class.:** CH
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 3.84
Tare Wt. = 0.00
Minus #200 from wash = 95.4%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
82.90	0.00	0.00	3	0.00	100.0
			2	0.00	100.0
			1.5	0.00	100.0
			1	0.00	100.0
			3/4	0.00	100.0
			3/8	0.00	100.0
			#4	0.00	100.0
			#10	0.02	100.0
			#20	0.04	100.0
			#40	0.05	99.9
			#60	0.10	99.9
			#100	0.68	99.2
			#140	1.84	97.8
			#200	3.84	95.4

Fractional Components

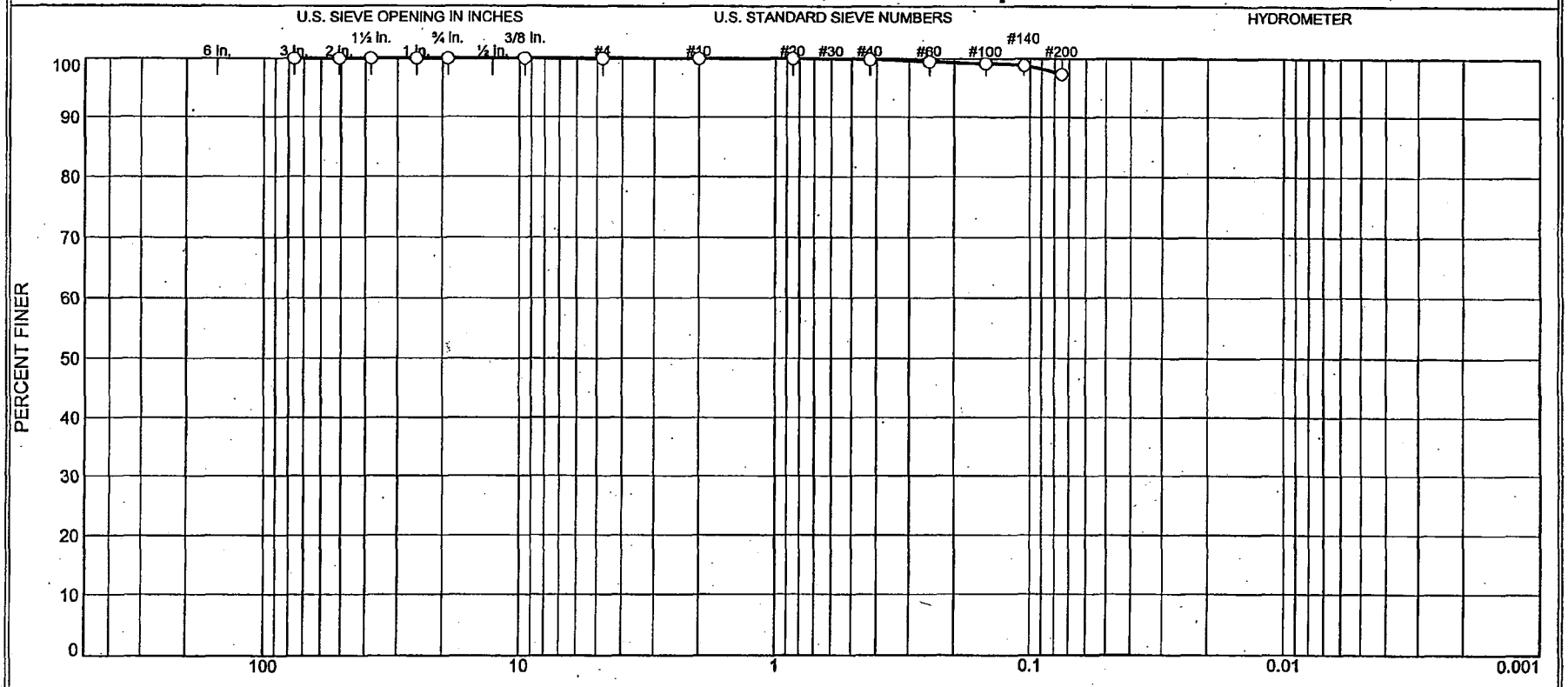
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.1	4.5	4.6			95.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}

Fineness Modulus
0.01

MA 4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.0	0.1	2.6	97.3	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 309	STP-002	6.0'-7.5'	11/13/2006	CL	Lean Clay	27.2	43	17
		(SS-5)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST
ASTM D6913-04e1

MA 4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 6.0'-7.5'
Sample Number: STP-002 (SS-5)
Material Description: Lean Clay
Date: 11/13/2006
Natural Moisture: 27.2
Liquid Limit: 43
Plastic Limit: 17
USCS Class.: CL
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D6913-04e1
Material specification: ASTM D 6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 2.20
Tare Wt. = 0.00
Minus #200 from wash = 97.3%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Lower Spec. Limit, %	Upper Spec. Limit, %	Deviation From Spec., %
258.40	175.90	0.00	3"	0.00	100.0			
			2"	0.00	100.0			
			1.5"	0.00	100.0			
			1"	0.00	100.0			
			3/4"	0.00	100.0			
			3/8"	0.00	100.0			
			#4	0.00	100.0			
			#10	0.00	100.0			
			#20	0.02	100.0			
			#40	0.12	99.9			
			#60	0.39	99.5			
			#100	0.69	99.2			
			#140	0.94	98.9			
			#200	2.20	97.3			

Proportional Components

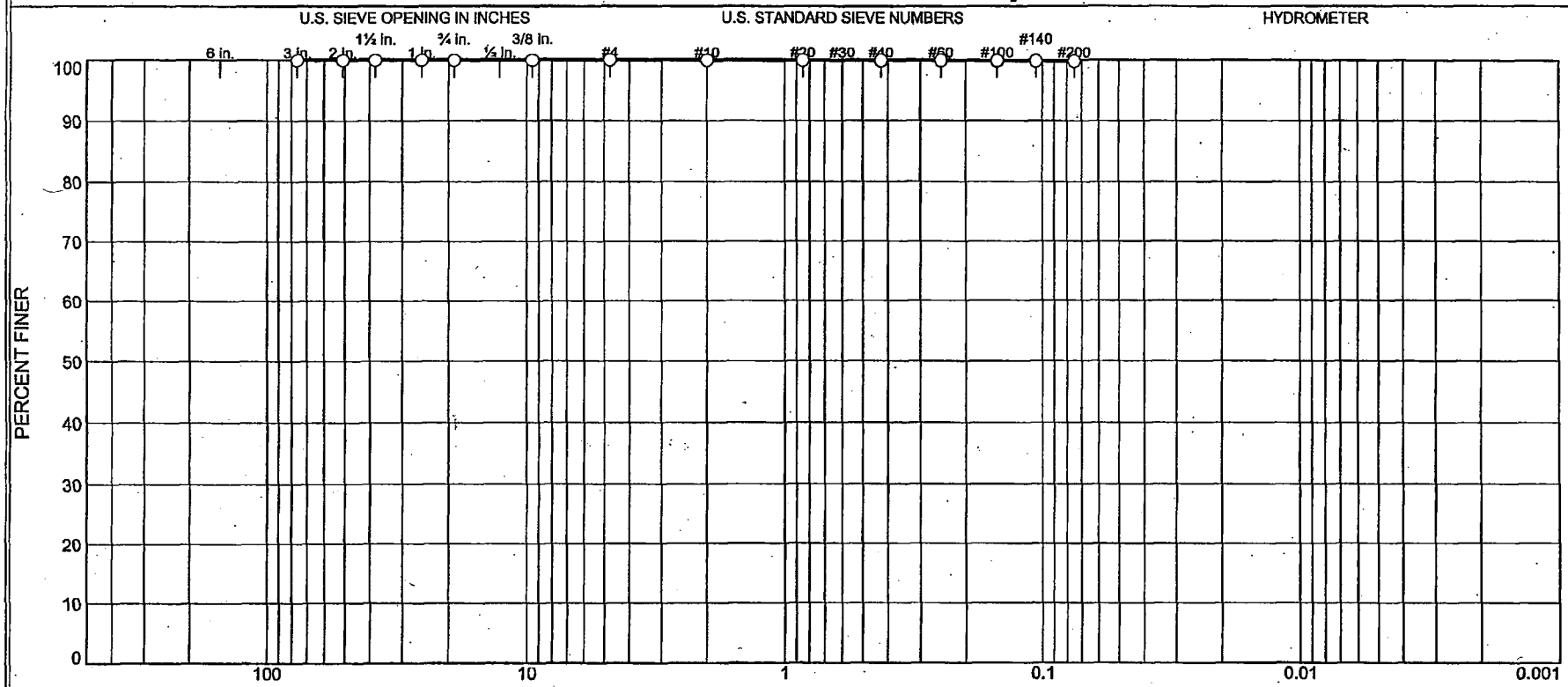
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.1	2.6	2.7			97.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}

Fineness Modulus
0.01

MA
4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.0	0.0	0.2	99.8	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 309	STP-003	10.5'-12.0'	11/13/2006	CH	Fat Clay	27.0	75	22
		(SS-8)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST
ASTM D6913-04e1

MA 4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 10.5'-12.0' **Sample Number:** STP-003 (SS-8)
Material Description: Fat Clay
Date: 11/13/2006 **Natural Moisture:** 27.0
Liquid Limit: 75 **Plastic Limit:** 22 **USCS Class.:** CH
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 0.14
Tare Wt. = 0.00
Minus #200 from wash = 99.8%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
244.90	174.90	0.00	3"	0.00	100.0
			2"	0.00	100.0
			1.5"	0.00	100.0
			1"	0.00	100.0
			3/4"	0.00	100.0
			3/8"	0.00	100.0
			#4	0.00	100.0
			#10	0.00	100.0
			#20	0.02	100.0
			#40	0.03	100.0
			#60	0.04	99.9
			#100	0.07	99.9
			#140	0.09	99.9
			#200	0.14	99.8

Fractional Components

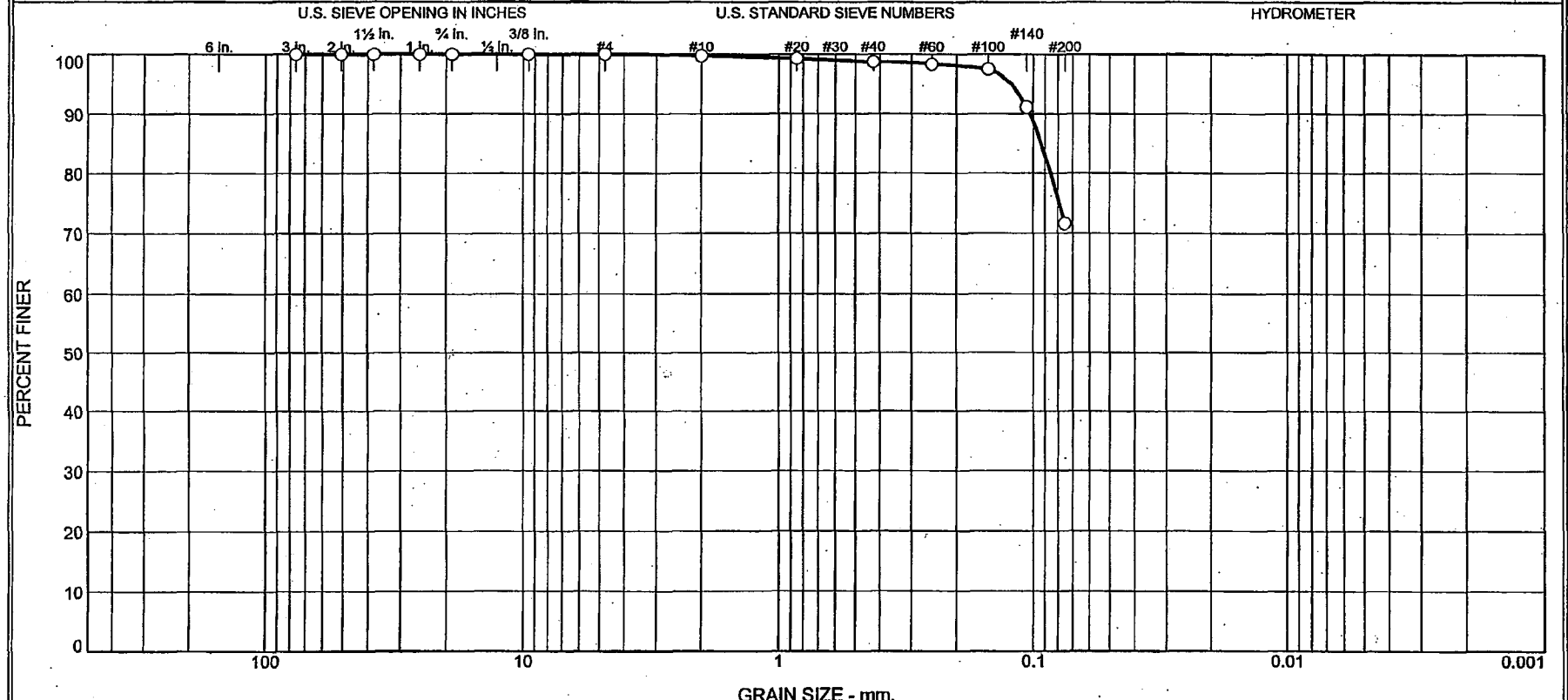
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2			99.8

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}

Fineness Modulus
0.00

MAK 4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.3	1.0	27.1	71.6	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 309	STP-004	13.5'-15.0'	11/13/2006	ML	Silt with Sand	23.6		
		(SS-10)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST
ASTM 6913-04e1

MA 4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 13.5'-15.0'
Sample Number: STP-004 (SS-10)
Material Description: Silt with Sand
Date: 11/13/2006
Natural Moisture: 23.6
USCS Class.: ML
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM 6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 21.75
Tare Wt. = 0.00
Minus #200 from wash = 71.6%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
249.70	173.10	0.00	3"	0.00	100.0
			2"	0.00	100.0
			1.5"	0.00	100.0
			1"	0.00	100.0
			3/4"	0.00	100.0
			3/8"	0.00	100.0
			#4	0.00	100.0
			#10	0.20	99.7
			#20	0.59	99.2
			#40	1.02	98.7
			#60	1.29	98.3
			#100	1.92	97.5
			#140	6.81	91.1
			#200	21.75	71.6

Fractional Components

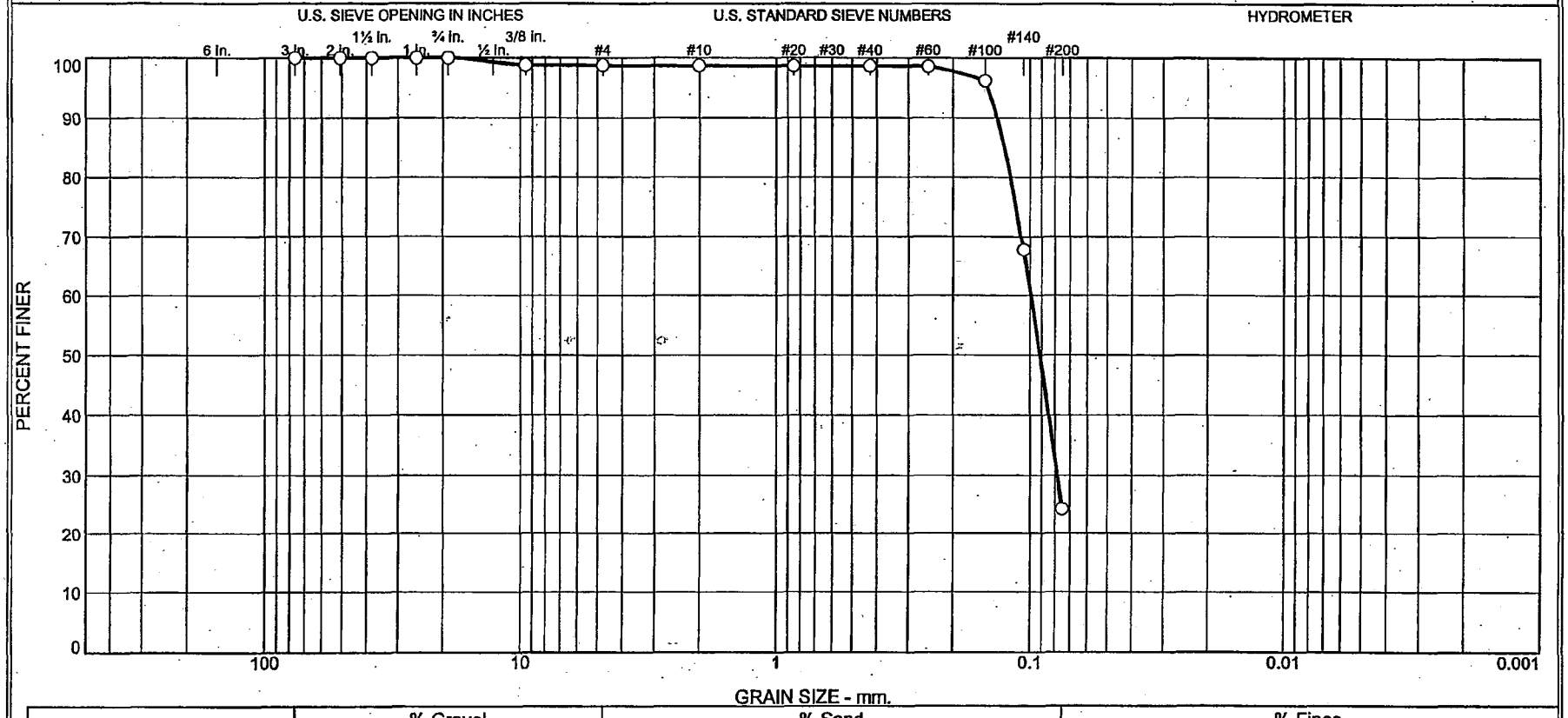
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.3	1.0	27.1	28.4			71.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
						0.0855	0.0931	0.1031	0.1214

Fineness Modulus
0.06

MA 4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	1.2	0.1	0.0	74.4	24.3	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 309	STP-005	18.5'-20.0'	11/13/2006	SM	Silty Sand	22.6		
		(SS-11)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST
ASTM D6913-04e1

NM
4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 18.5'-20.0'
Sample Number: STP-005 (SS-11)
Material Description: Silty Sand
Date: 11/13/2006
Natural Moisture: 22.6
USCS Class.: SM
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 138.58
Tare Wt. = 0.00
Minus #200 from wash = 24.3%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
359.80	176.80	0.00	3"	0.00	100.0
			2"	0.00	100.0
			1.5"	0.00	100.0
			1"	0.00	100.0
			3/4"	0.00	100.0
			3/8"	2.28	98.8
			#4	2.28	98.8
			#10	2.33	98.7
			#20	2.39	98.7
			#40	2.41	98.7
			#60	2.54	98.6
			#100	6.90	96.2
			#140	59.02	67.7
			#200	138.58	24.3

Fractional Components

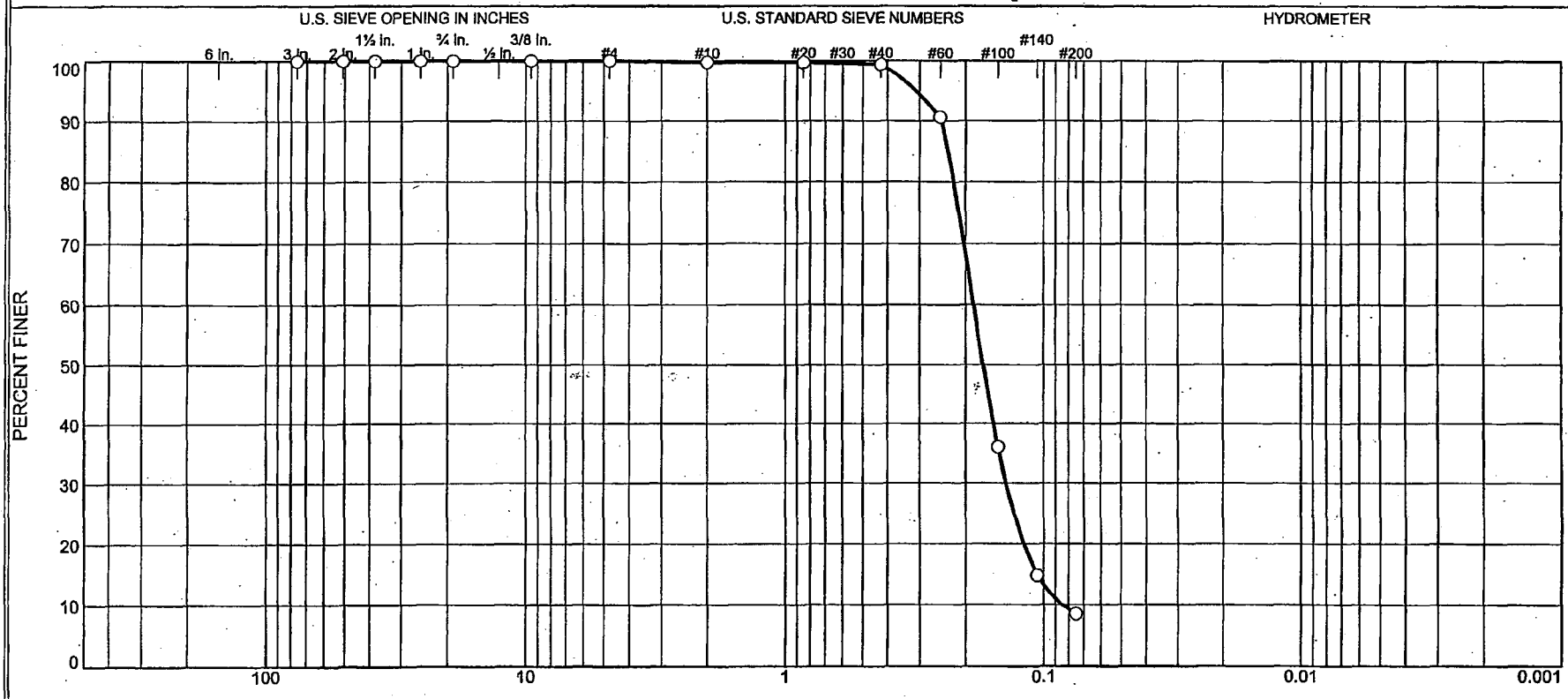
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	1.2	1.2	0.1	0.0	74.4	74.5			24.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0783	0.0913	0.0991	0.1194	0.1263	0.1347	0.1462

Fineness Modulus
0.11

MAK 4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.2	0.4	90.8	8.6	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 309	STP-006 (SS-13)	28.5'-30.0'	11/13/2006	SP-SM	Poorly Graded Sand with Silt	24.8		

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST
ASTM D6913-04e1

MT 4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 28.5'-30.0'
Sample Number: STP-006 (SS-13)
Material Description: Poorly Graded Sand with Silt
Date: 11/13/2006
Natural Moisture: 24.8
USCS Class.: SP-SM
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 86.96
Tare Wt. = 0.00
Minus #200 from wash = 8.6%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
271.40	176.30	0.00	3"	0.00	100.0
			2"	0.00	100.0
			1.5"	0.00	100.0
			1"	0.00	100.0
			3/4"	0.00	100.0
			3/8"	0.00	100.0
			#4	0.00	100.0
			#10	0.22	99.8
			#20	0.32	99.7
			#40	0.58	99.4
			#60	8.92	90.6
			#100	60.81	36.1
			#140	81.02	14.8
			#200	86.96	8.6

Fractional Components

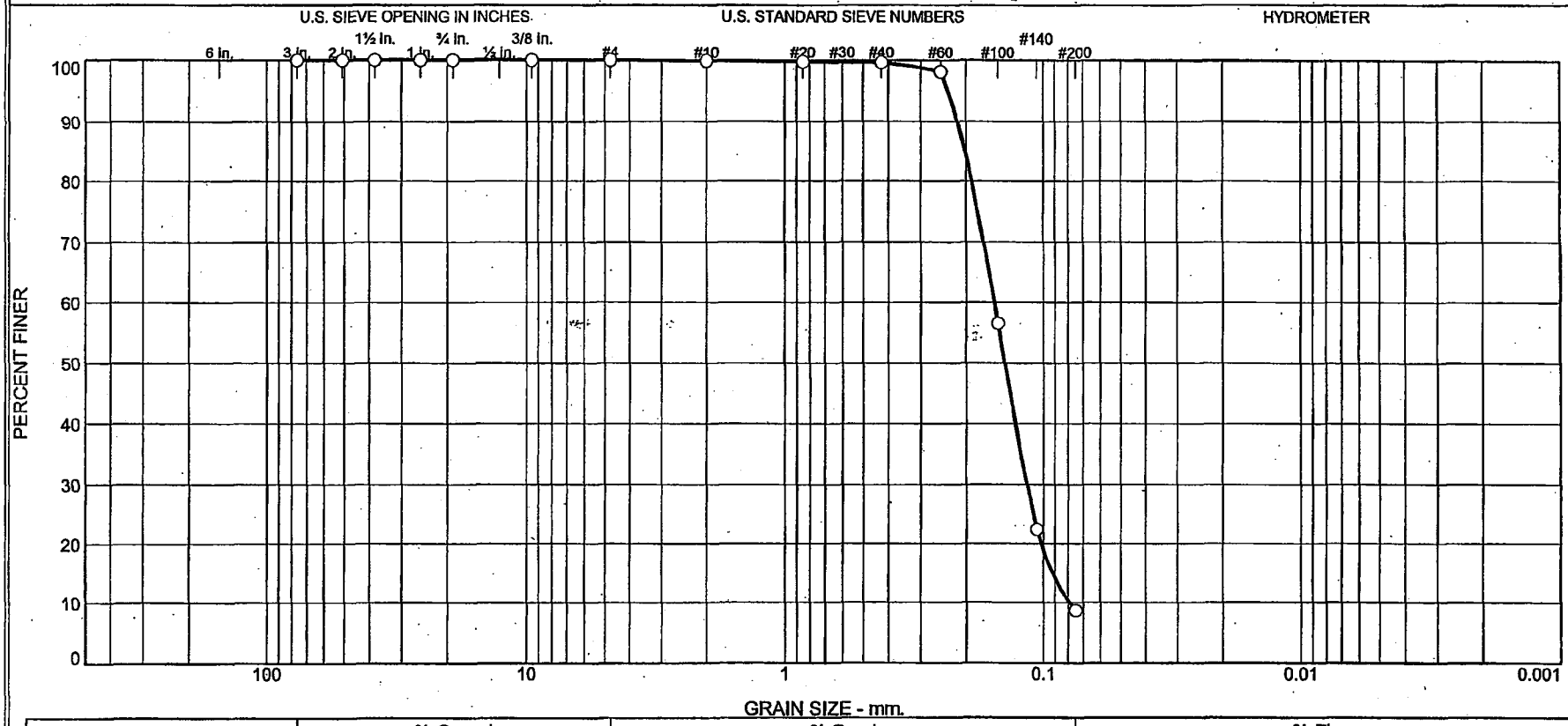
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.2	0.4	90.8	91.4			8.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0849	0.1066	0.1200	0.1400	0.1708	0.1859	0.2216	0.2333	0.2479	0.3088

Fineness Modulus	C_u	C_c
0.70	2.19	1.24

MAK 4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.1	0.3	91.0	8.6	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 309	STP-007 (SS-15)	38.5'-40.0'	11/13/2006	SP-SM	Poorly Graded Sand with Silt	23.3		

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST
ASTM D6913-04e1

MA 4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 38.5'-40.0'
Sample Number: STP-007 (SS-15)
Material Description: Poorly Graded Sand with Silt
Date: 11/13/2006
Natural Moisture: 23.3
USCS Class.: SP-SM
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare = 72.72**
Tare Wt. = 0.00
Minus #200 from wash = 8.6%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
256.60	177.00	0.00	3"	0.00	100.0
			2"	0.00	100.0
			1.5"	0.00	100.0
			1"	0.00	100.0
			3/4"	0.00	100.0
			3/8"	0.00	100.0
			#4	0.00	100.0
			#10	0.08	99.9
			#20	0.17	99.8
			#40	0.29	99.6
			#60	1.47	98.2
			#100	34.57	56.6
			#140	61.78	22.4
			#200	72.72	8.6

Percent Components

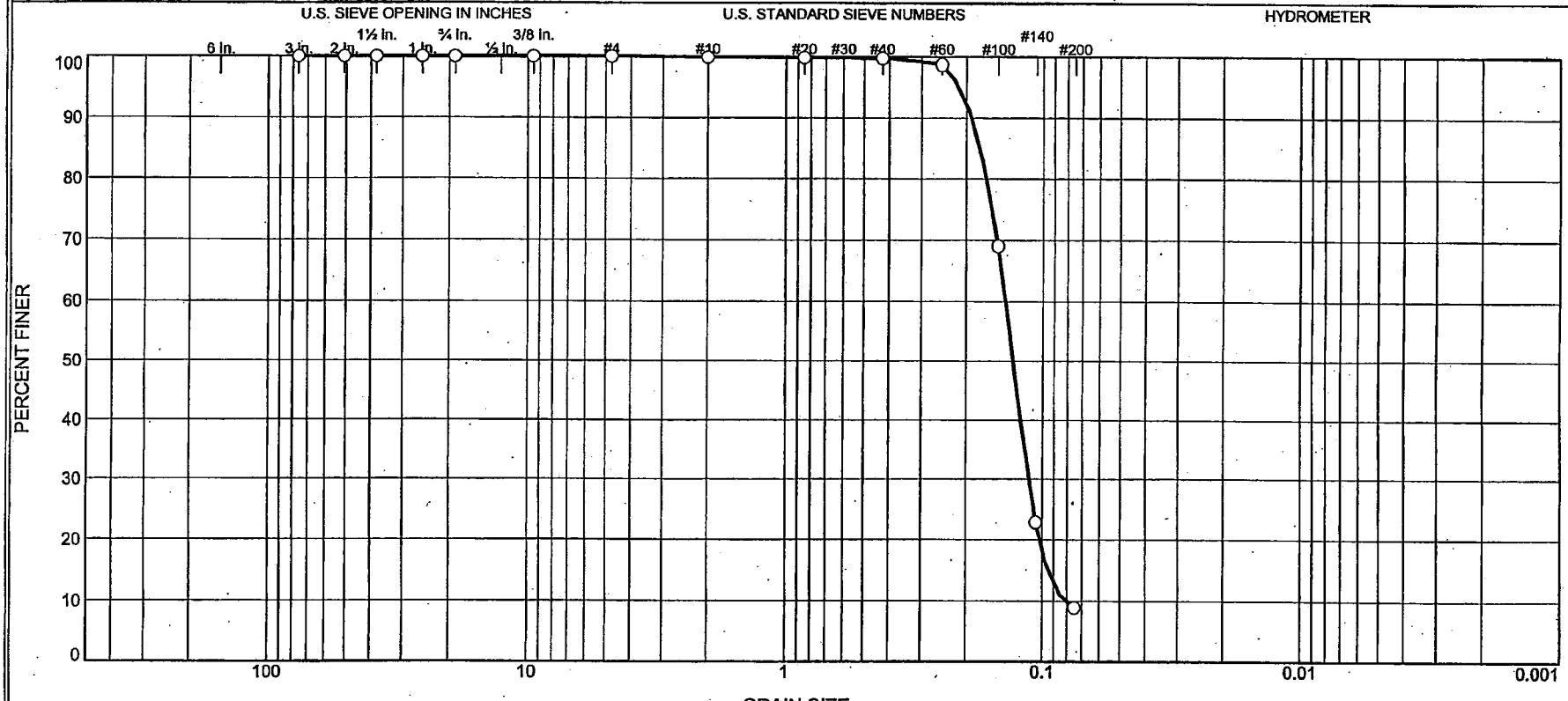
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.1	0.3	91.0	91.4			8.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0792	0.0926	0.1022	0.1164	0.1413	0.1549	0.1896	0.2013	0.2153	0.2335

Fineness Modulus	C_u	C_c
0.45	1.95	1.10

MAT 4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.2	0.1	90.8	8.9	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 309	STP-008	43.5'-45.0'	11/13/2006	SP-SM	Poorly Graded Sand with Silt	24.8		
		(SS-16)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST
ASTM D6913-04e1

MAT 4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 43.5'-45.0'
Sample Number: STP-008 (SS-16)
Material Description: Poorly Graded Sand with Silt
Date: 11/13/2006
Natural Moisture: 24.8
USCS Class.: SP-SM
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 52.49
Tare Wt. = 0.00
Minus #200 from wash = 8.9%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
233.50	175.90	0.00	3"	0.00	100.0
			2"	0.00	100.0
			1.5"	0.00	100.0
			1"	0.00	100.0
			3/4"	0.00	100.0
			3/8"	0.00	100.0
			#4	0.00	100.0
			#10	0.09	99.8
			#20	0.12	99.8
			#40	0.16	99.7
			#60	0.74	98.7
			#100	17.81	69.1
			#140	44.44	22.8
			#200	52.49	8.9

Fractional Components

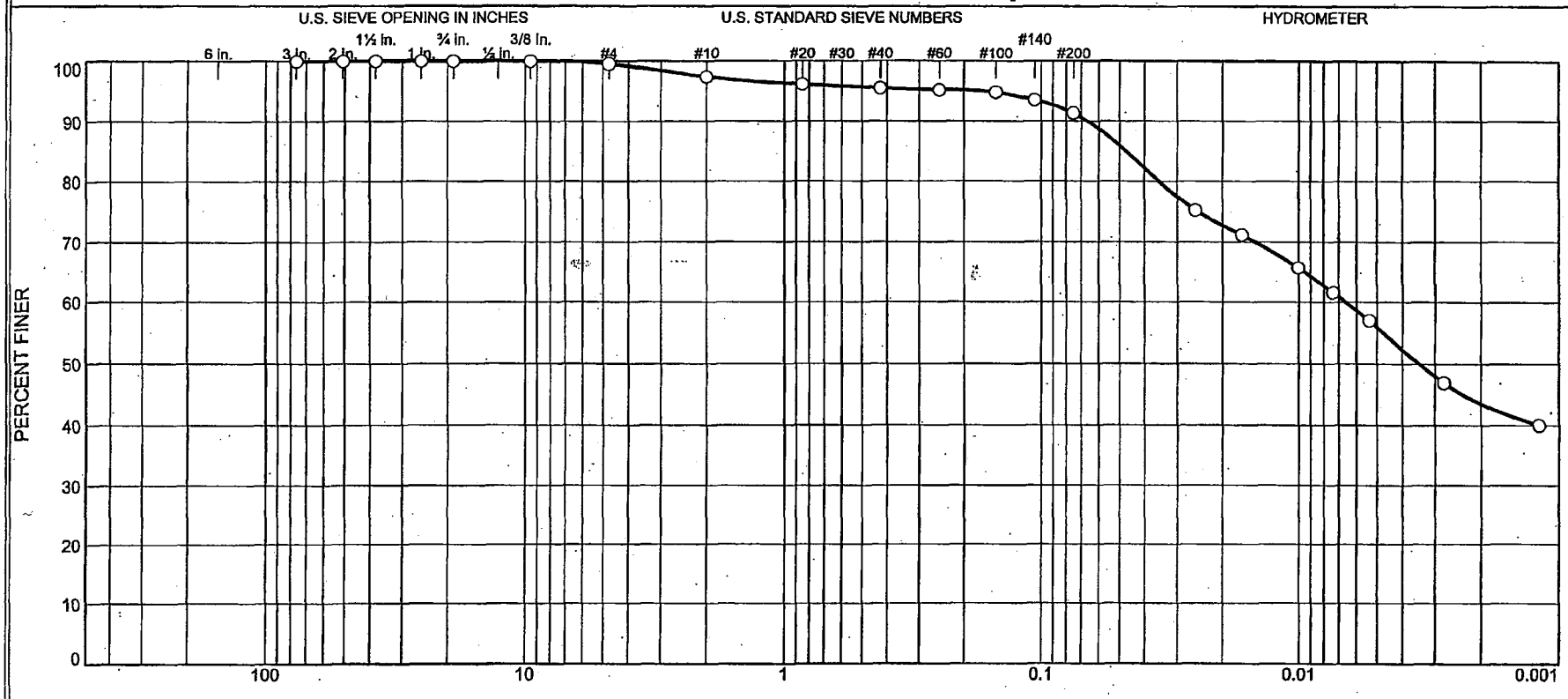
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.2	0.1	90.8	91.1			8.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0813	0.0952	0.1027	0.1131	0.1306	0.1400	0.1663	0.1768	0.1910	0.2138

Fineness Modulus	C_u	C_c
0.32	1.72	1.12

MAC 4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.5	2.1	1.9	4.1	35.5	55.9

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 309	STP-009 (SS-18)	53.5'-55.0'	11/13/2006	CH	Fat Clay	20.7	55	14

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST
ASTM D6913-04e1 / ASTM D422-63 (2002)e1
Specific gravity was estimated
Re-sieveing of the hydrometer specimen after drying was not performed.

NA 4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 53.5'-55.0' **Sample Number:** STP-009 (SS-18)
Material Description: Fat Clay
Date: 11/13/2006 **Natural Moisture:** 20.7
Liquid Limit: 55 **Plastic Limit:** 14 **USCS Class.:** CH
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D6913-04e1 / ASTM D422-63 (2002)e1
Specific gravity was estimated
Re-sieveing of the hydrometer specimen after drying was not performed.
Material specification: ASTM D 6913-04e1 / ASTM D 422-63 (2002)e1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 7.27
Tare Wt. = 0.00
Minus #200 from wash = 91.4%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Lower Spec. Limit, %	Upper Spec. Limit, %	Deviation From Spec., %
262.00	177.90	0.00	3	0.00	100.0			
			2"	0.00	100.0			
			1.5	0.00	100.0			
			1"	0.00	100.0			
			3/4"	0.00	100.0			
			3/8"	0.00	100.0			
			#4	0.38	99.5			
			#10	2.20	97.4			
			#20	3.25	96.1			
			#40	3.78	95.5			
			#60	4.05	95.2			
			#100	4.38	94.8			
			#140	5.46	93.5			
			#200	7.27	91.4			

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 97.4
Weight of hydrometer sample =65.4
Hygroscopic moisture correction:
Moist weight and tare = 189.00
Dry weight and tare = 188.60
Tare weight = 177.00
Hygroscopic moisture = 3.4%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

MAT 4-3-07

Hydrometer Results (continued)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.8	54.5	48.9	0.0133	54.5	7.4	0.0256	75.3
5.00	21.1	52.0	46.2	0.0135	52.0	7.8	0.0168	71.2
15.00	20.9	48.5	42.7	0.0135	48.5	8.3	0.0101	65.7
30.00	20.0	46.0	40.0	0.0136	46.0	8.8	0.0074	61.6
60.00	20.0	43.0	37.0	0.0136	43.0	9.2	0.0054	56.9
250.00	20.0	36.5	30.5	0.0136	36.5	10.3	0.0028	46.9
1440.00	20.0	32.0	26.0	0.0136	32.0	11.0	0.0012	40.0

Fractional Components

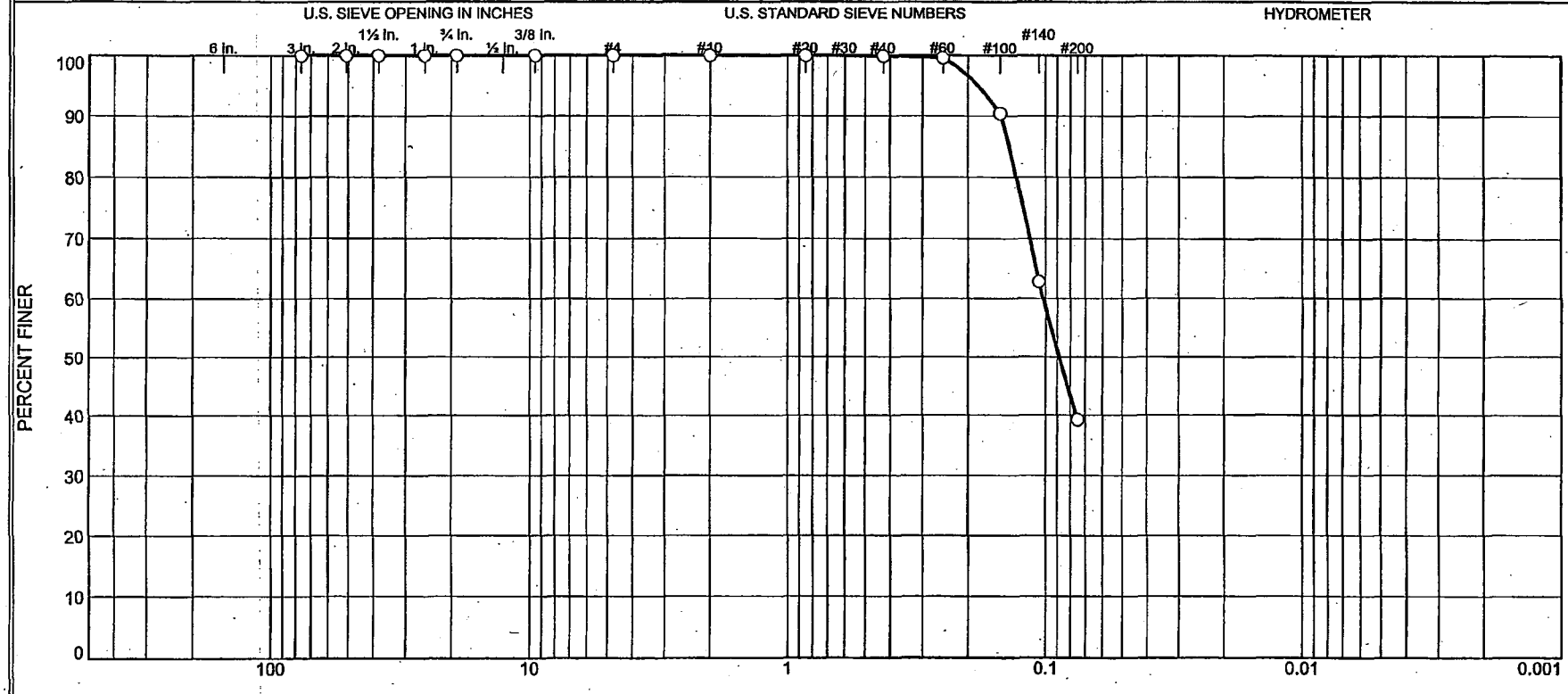
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.5	0.5	2.1	1.9	4.1	8.1	35.5	55.9	91.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0035	0.0066	0.0353	0.0473	0.0662	0.1680

Fineness Modulus
0.20

MK 4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.0	0.1	60.7	39.2	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 309	STP-010	63.5'-65.0'	11/13/2006	SM	Silty Sand	23.4		
		(SS-20)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST
ASTM D6913-04e1

4-3-07

KAW 4/30/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 63.5'-65.0'
Sample Number: STP-010 (SS-20)
Material Description: Silty Sand
Date: 11/13/2006
Natural Moisture: 23.4
USCS Class.: SM
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D6913-04e1
Material specification: ASTM D 6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 47.21
Tare Wt. = 0.00
Minus #200 from wash = 39.2%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Lower Spec. Limit, %	Upper Spec. Limit, %	Deviation From Spec., %
253.50	175.80	0.00	3"	0.00	100.0			
			2"	0.00	100.0			
			1.5"	0.00	100.0			
			1"	0.00	100.0			
			3/4"	0.00	100.0			
			3/8"	0.00	100.0			
			#4	0.00	100.0			
			#10	0.00	100.0			
			#20	0.00	100.0			
			#40	0.08	99.9			
			#60	0.28	99.6			
			#100	7.43	90.4			
			#140	28.87	62.8			
			#200	47.21	39.2			

Fractional Components

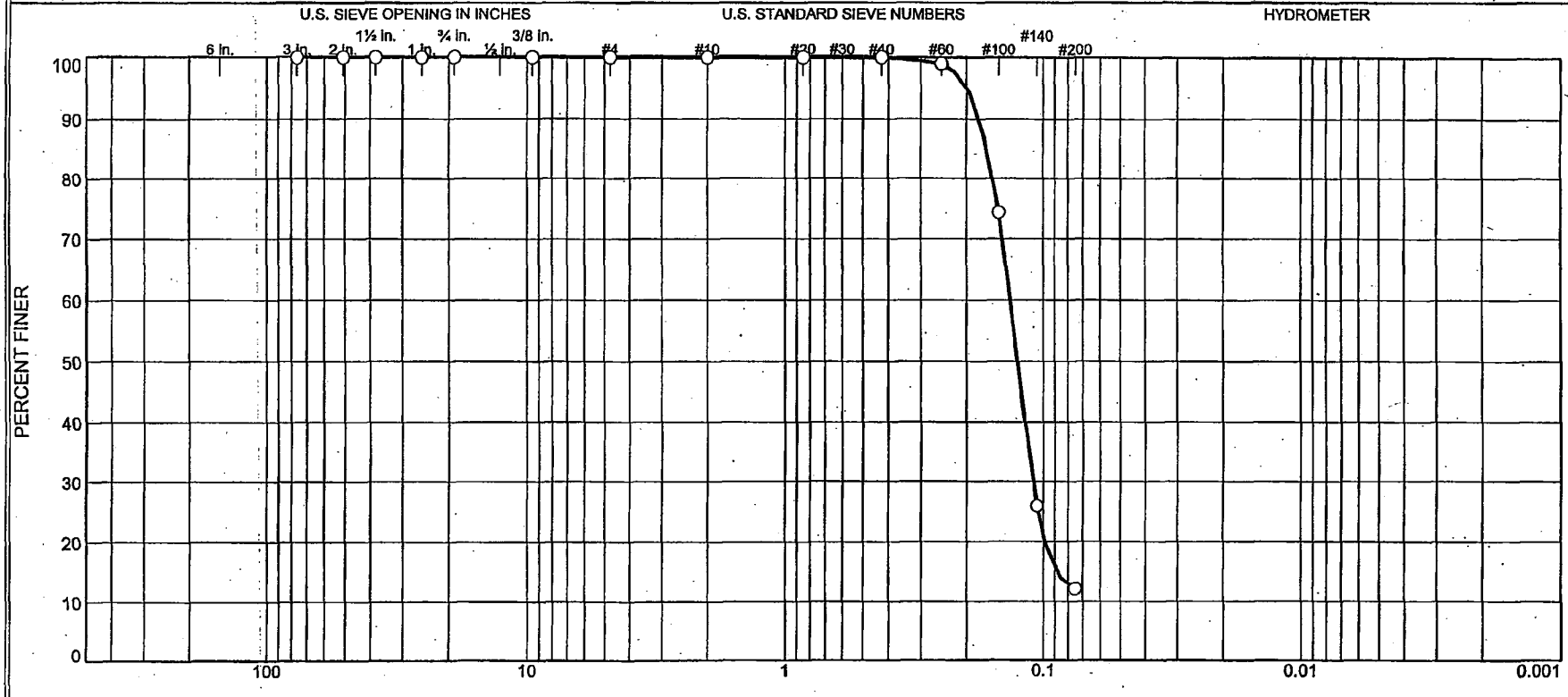
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.1	60.7	60.8			39.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0889	0.1022	0.1297	0.1383	0.1489	0.1824

Fineness Modulus
0.10

MWA 4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.0	0.0	87.9	12.1	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 309	STP-011	73.5'-75.0'	11/13/2006	SM	Silty Sand	24.2		
		(SS-22)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST
ASTM D6913-04e1
MH 4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 73.5'-75.0'
Sample Number: STP-011 (SS-22)
Material Description: Silty Sand
Date: 11/13/2006
Natural Moisture: 24.2
USCS Class.: SM
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D6913-04e1
Material specification: ASTM D 6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 78.04
Tare Wt. = 0.00
Minus #200 from wash = 12.1%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Lower Spec. Limit, %	Upper Spec. Limit, %	Deviation From Spec., %
264.20	175.40	0.00	3"	0.00	100.0			
			2"	0.00	100.0			
			1.5"	0.00	100.0			
			1"	0.00	100.0			
			3/4"	0.00	100.0			
			3/8"	0.00	100.0			
			#4	0.00	100.0			
			#10	0.02	100.0			
			#20	0.02	100.0			
			#40	0.03	100.0			
			#60	0.87	99.0			
			#100	22.80	74.3			
			#140	65.74	26.0			
			#200	78.04	12.1			

Fractional Components

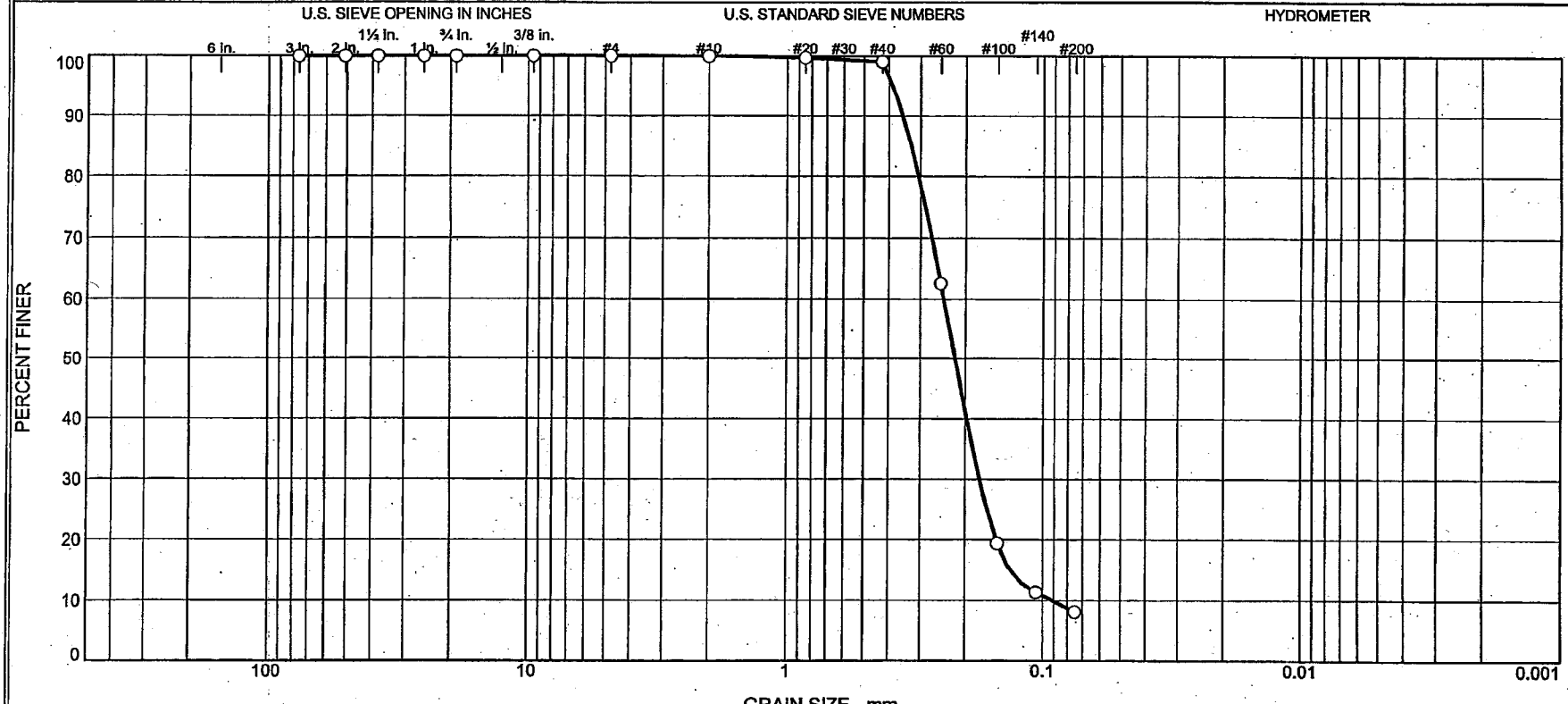
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.0	87.9	87.9			12.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0890	0.0987	0.1099	0.1267	0.1353	0.1578	0.1666	0.1788	0.1989

Fineness Modulus
0.26

MAK 4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.0	0.9	91.0	8.1	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 309	STP-012 (SS-23)	78.5'-80.0'	11/13/2006	SP-SM	Poorly Graded Sand with Silt	20.8		

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST
ASTM D6913-04e1

MH 4-3-07

KAW 4/9/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 78.5'-80.0'
Sample Number: STP-012 (SS-23)
Material Description: Poorly Graded Sand with Silt
Date: 11/13/2006
Natural Moisture: 20.8
USCS Class.: SP-SM
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D6913-04e1
Material specification: ASTM D 6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 60.00
Tare Wt. = 0.00
Minus #200 from wash = 8.1%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Lower Spec. Limit, %	Upper Spec. Limit, %	Deviation From Spec., %
245.30	180.00	0.00	3"	0.00	100.0			
			2"	0.00	100.0			
			1.5"	0.00	100.0			
			1"	0.00	100.0			
			3/4"	0.00	100.0			
			3/8"	0.00	100.0			
			#4	0.00	100.0			
			#10	0.00	100.0			
			#20	0.19	99.7			
			#40	0.61	99.1			
			#60	24.41	62.6			
			#100	52.64	19.4			
			#140	57.87	11.4			
			#200	60.00	8.1			

Fractional Components

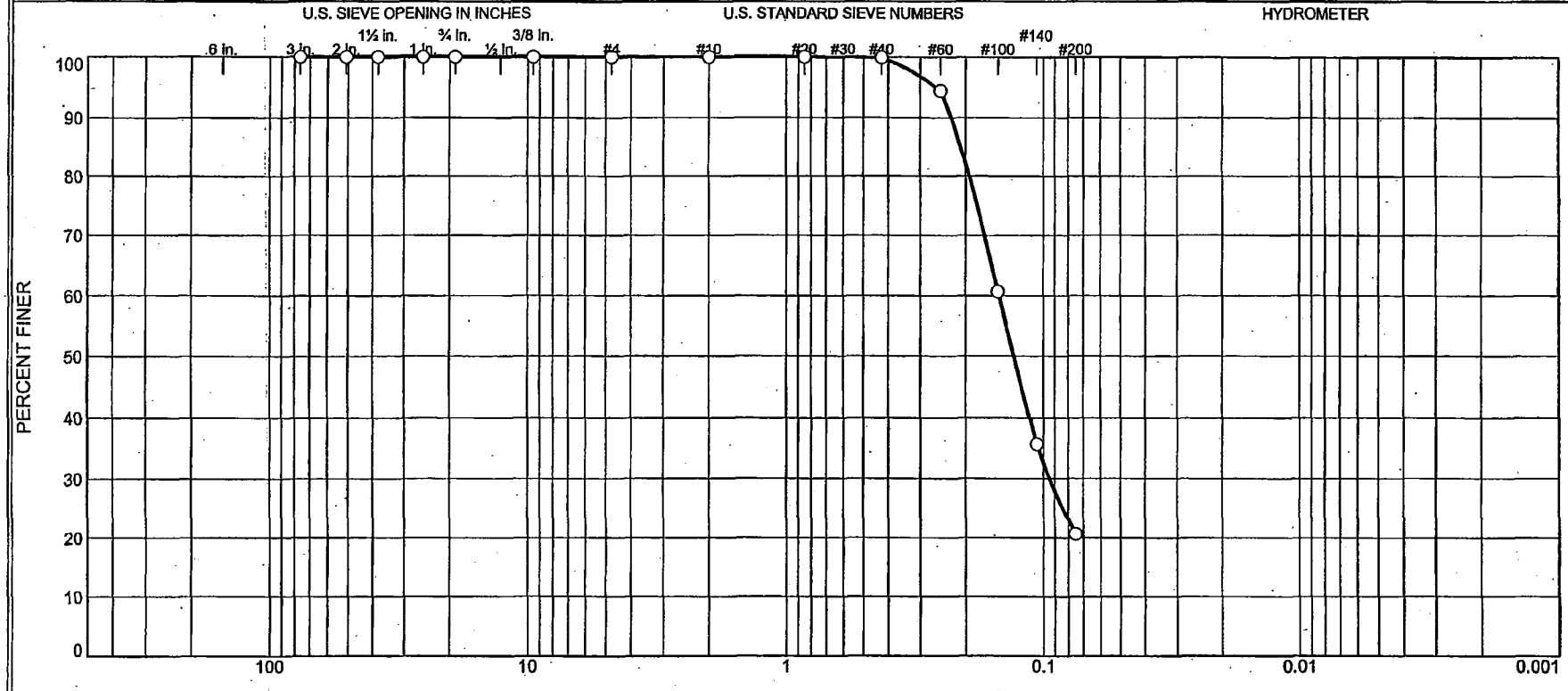
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.9	91.0	91.9			8.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0916	0.1337	0.1518	0.1760	0.2193	0.2432	0.3056	0.3269	0.3525	0.3857

Fineness Modulus	C_u	C_c
1.03	2.65	1.39

NWA 4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.0	0.1	79.3	20.6	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 309	STP-013 (SS-25)	88.5'-90.0'	11/13/2006	SM	Silty Sand	21.5		

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST
ASTM D6913-04e1

MH 4-3-07

KAW 4/13/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 88.5'-90.0'
Sample Number: STP-013 (SS-25)
Material Description: Silty Sand
Date: 11/13/2006
Natural Moisture: 21.5
USCS Class.: SM
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D6913-04e1
Material specification: ASTM D 6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 61.43
Tare Wt. = 0.00
Minus #200 from wash = 20.6%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Lower Spec. Limit, %	Upper Spec. Limit, %	Deviation From Spec., %
257.00	179.60	0.00	3"	0.00	100.0			
			2"	0.00	100.0			
			1.5"	0.00	100.0			
			1"	0.00	100.0			
			3/4"	0.00	100.0			
			3/8"	0.00	100.0			
			#4	0.00	100.0			
			#10	0.00	100.0			
			#20	0.02	100.0			
			#40	0.09	99.9			
			#60	4.30	94.4			
			#100	30.45	60.7			
			#140	49.73	35.7			
			#200	61.43	20.6			

Fractional Components

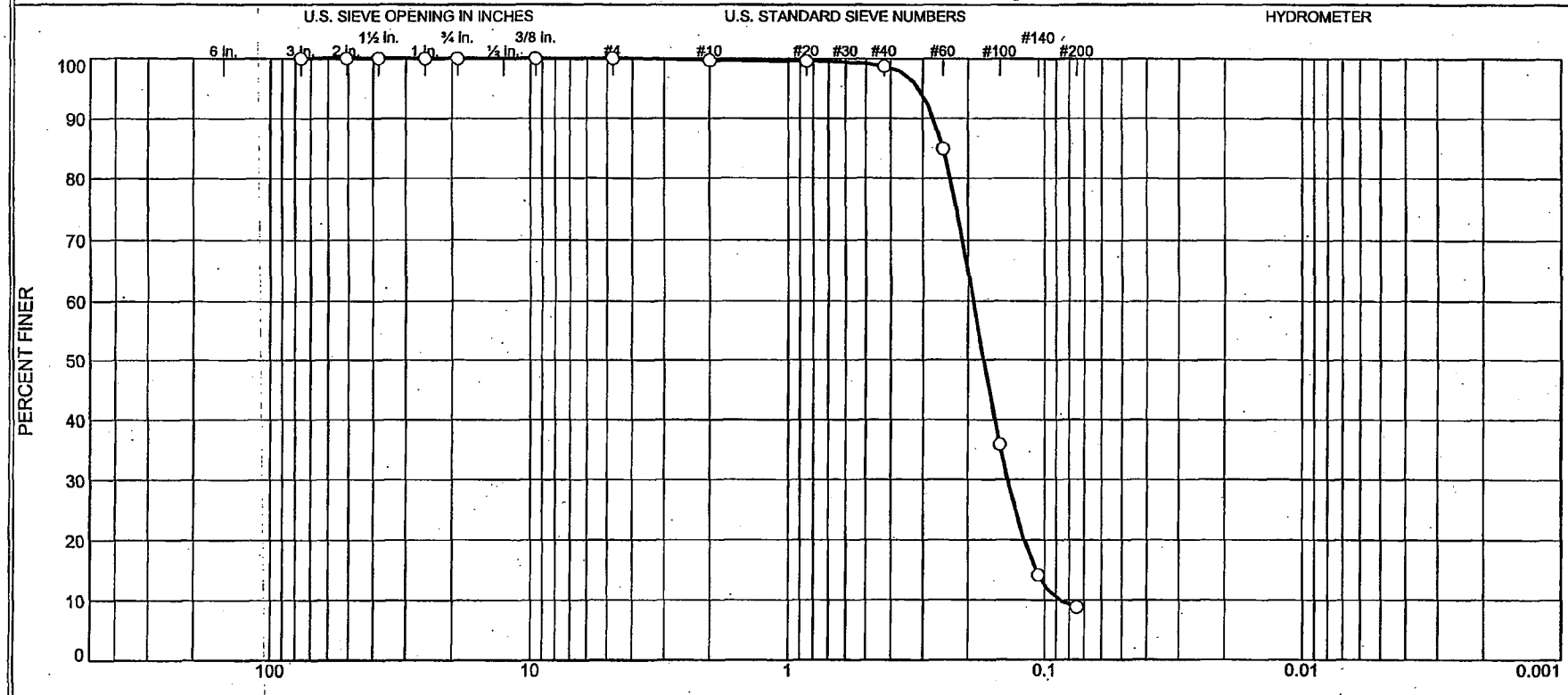
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.1	79.3	79.4			20.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0948	0.1308	0.1488	0.1932	0.2082	0.2269	0.2599

Fineness Modulus
0.43

MA 4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.3	1.0	89.9	8.8	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 309	STP-014 (SS-27)	98.5'-100'	11/14/2006	SP-SM	Poorly Graded Sand with Silt	23.6		

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O tested By:TH Reviewed By:ST
ASTM D6913-04e1

4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 98.5'-100'
Sample Number: STP-014 (SS-27)
Material Description: Poorly Graded Sand with Silt
Date: 11/14/2006
Natural Moisture: 23.6
USCS Class.: SP-SM
Testing Remarks: tested By:TH Reviewed By:ST
ASTM D6913-04e1
Material specification: ASTM D 6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 86.90
Tare Wt. = 0.00
Minus #200 from wash = 8.8%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Lower Spec. Limit, %	Upper Spec. Limit, %	Deviation From Spec., %
273.60	178.30	0.00	3"	0.00	100.0			
			2"	0.00	100.0			
			1.5"	0.00	100.0			
			1"	0.00	100.0			
			3/4"	0.00	100.0			
			3/8"	0.00	100.0			
			#4	0.00	100.0			
			#10	0.31	99.7			
			#20	0.44	99.5			
			#40	1.23	98.7			
			#60	14.36	84.9			
			#100	61.11	35.9			
			#140	81.77	14.2			
			#200	86.90	8.8			

Fractional Components

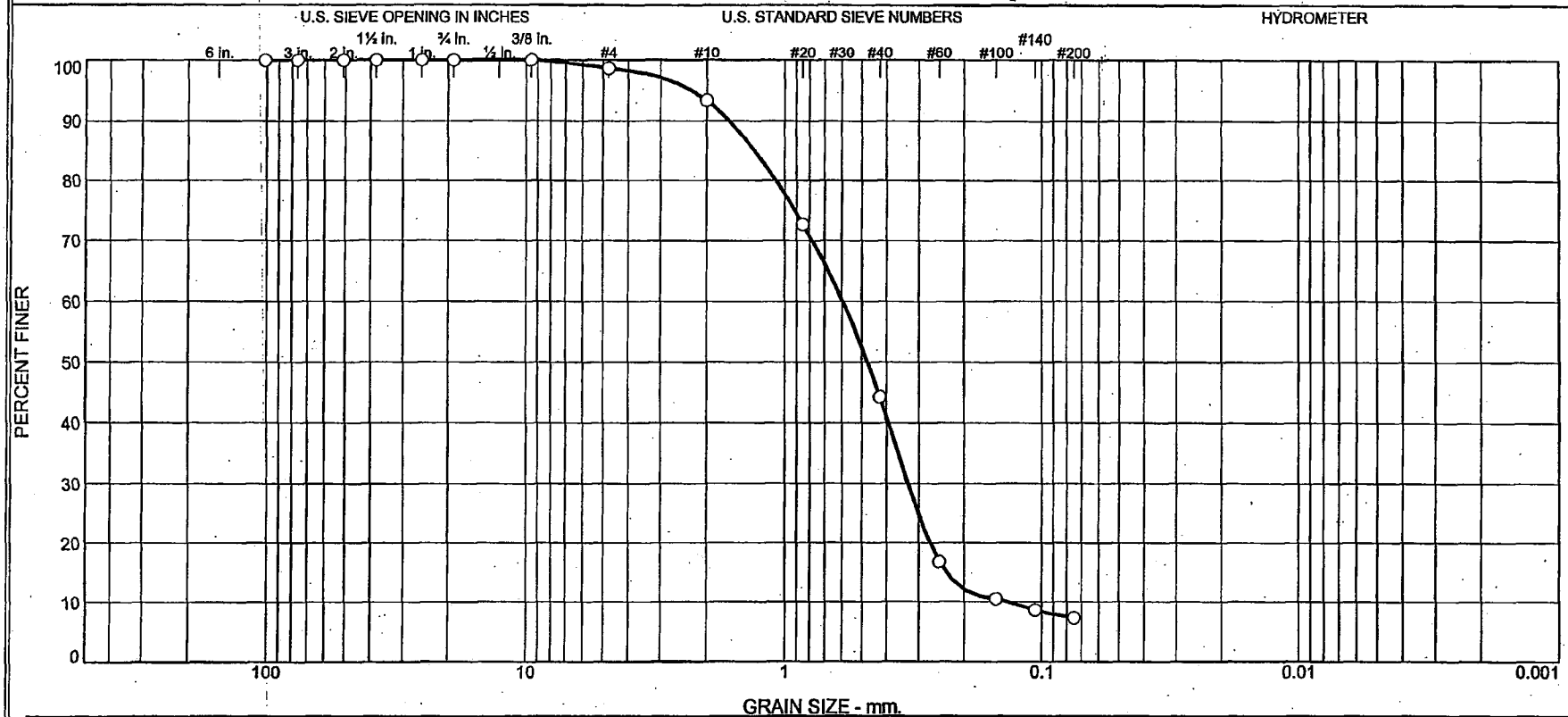
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.3	1.0	89.9	91.2			8.8

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0872	0.1084	0.1206	0.1399	0.1732	0.1904	0.2343	0.2502	0.2724	0.3106

Fineness Modulus	C_u	C_c
0.71	2.18	1.18

MAK 4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	1.3	5.3	49.2	36.9	7.3	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 309	STP-015 (SS-28)	108.5'-110'	11/13/2006	SP-SM	Poorly Graded Sand with Silt	17.6		

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST
ASTM D6913-04e1

4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 108.5'-110'
Sample Number: STP-015 (SS-28)
Material Description: Poorly Graded Sand with Silt
Date: 11/13/2006
Natural Moisture: 17.6
USCS Class.: SP-SM
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D6913-04e1
Material specification: ASTM D 6913-04e1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 205.46
Tare Wt. = 0.00
Minus #200 from wash = 7.3%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Lower Spec. Limit, %	Upper Spec. Limit, %	Deviation From Spec., %
398.20	176.60	0.00	4	0.00	100.0			
			3	0.00	100.0			
			2	0.00	100.0			
			1.5	0.00	100.0			
			1	0.00	100.0			
			3/4	0.00	100.0			
			3/8	0.00	100.0			
			#4	2.97	98.7			
			#10	14.69	93.4			
			#20	60.60	72.7			
			#40	123.61	44.2			
			#60	184.40	16.8			
			#100	198.36	10.5			
			#140	202.47	8.6			
			#200	205.46	7.3			

Fractional Components

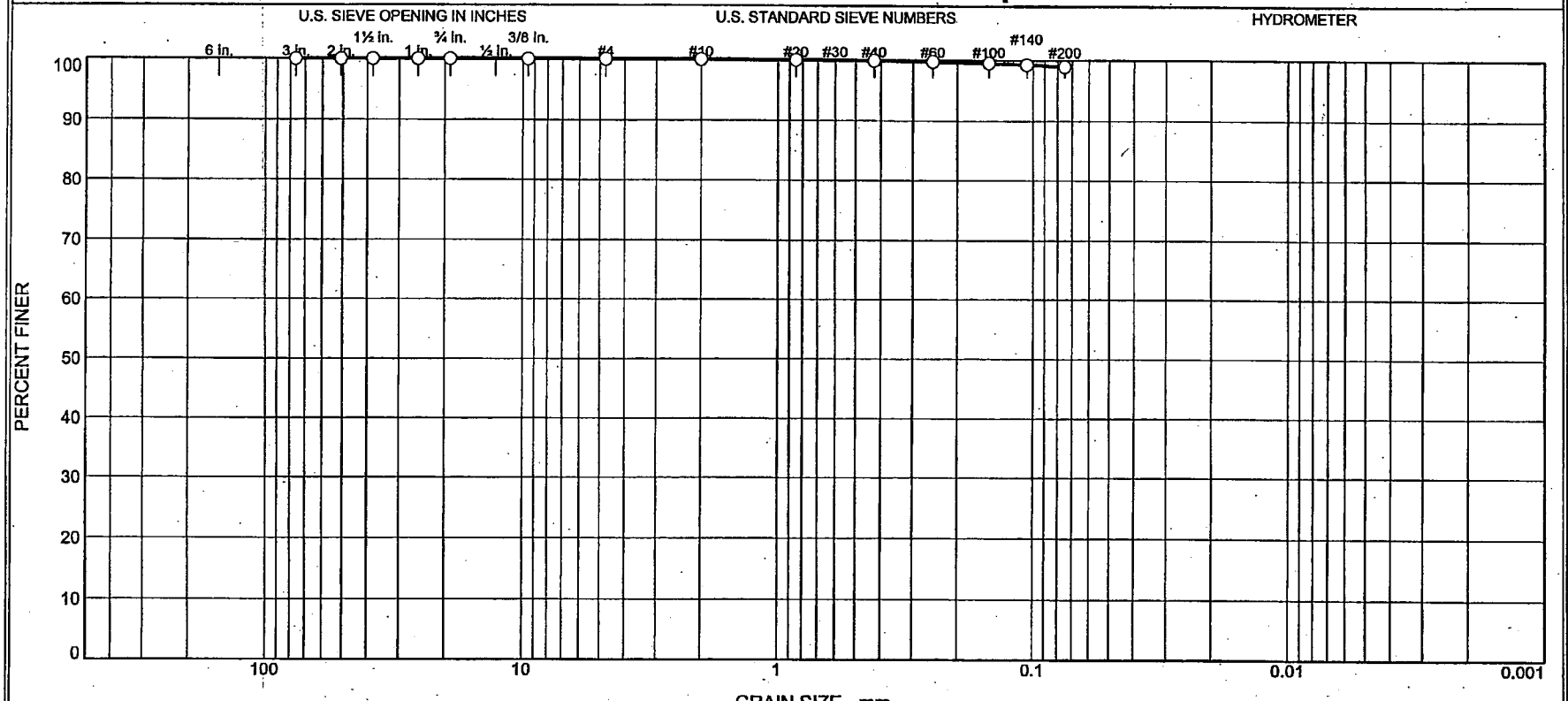
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	1.3	1.3	5.3	49.2	36.9	91.4			7.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1354	0.2352	0.2719	0.3312	0.4754	0.5957	1.0833	1.3077	1.6385	2.2803

Fineness Modulus	C_u	C_c
2.28	4.40	1.36

MAK 4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.0	0.1	0.9	99.0	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 309	STP-016	118.5'-120'	11/14/2006	CH	Fat Clay	27.1	80	22
		(SS-29)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST
ASTM D6913-04e1 / ASTM D422-63 (2002)e1
First five hydrometer readings were greater than 60, therefore a plot for the hydro data could not be generated. Specific Gravity was estimated. Re-sieveing of the hydometer specomen after drying was not performed.

NM 4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 118.5'-120' **Sample Number:** STP-016 (SS-29)
Material Description: Fat Clay
Date: 11/14/2006 **Natural Moisture:** 27.1
Liquid Limit: 80 **Plastic Limit:** 22 **USCS Class.:** CH
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D6913-04e1 / ASTM D422-63 (2002)e1
First five hydrometer readings were greater than 60, therefore a plot for the hydro data could not be generated
Specific Gravity was estimated. Re-sieveing of the hydometer specomen after drying was not performed.
Material specification: ASTM D 6913-04e1 / ASTM D 422-63 (2002)e1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 0.76
Tare Wt. = 0.00
Minus #200 from wash = 99.0%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Lower Spec. Limit, %	Upper Spec. Limit, %	Deviation From Spec., %
248.70	175.50	0.00	3"	0.00	100.0			
			2"	0.00	100.0			
			1.5"	0.00	100.0			
			1"	0.00	100.0			
			3/4"	0.00	100.0			
			3/8"	0.00	100.0			
			#4	0.00	100.0			
			#10	0.01	100.0			
			#20	0.05	99.9			
			#40	0.09	99.9			
			#60	0.20	99.7			
			#100	0.37	99.5			
			#140	0.54	99.3			
			#200	0.76	99.0			

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =66.2
Hygroscopic moisture correction:
Moist weight and tare = 188.20
Dry weight and tare = 187.50
Tare weight = 177.20
Hygroscopic moisture = 6.8%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

MA 4-3-07

Hydrometer Test Data (continued)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.2	>60						
5.00	21.2	>60						
15.00	20.6	>60						
30.00	20.0	>60						
60.00	20.0	>60						
250.00	20.0	55.0	49.0	0.0136	55.0	7.3	0.0023	79.0
1440.00	20.0	48.0	42.0	0.0136	48.0	8.4	0.0010	67.7

Fractional Components

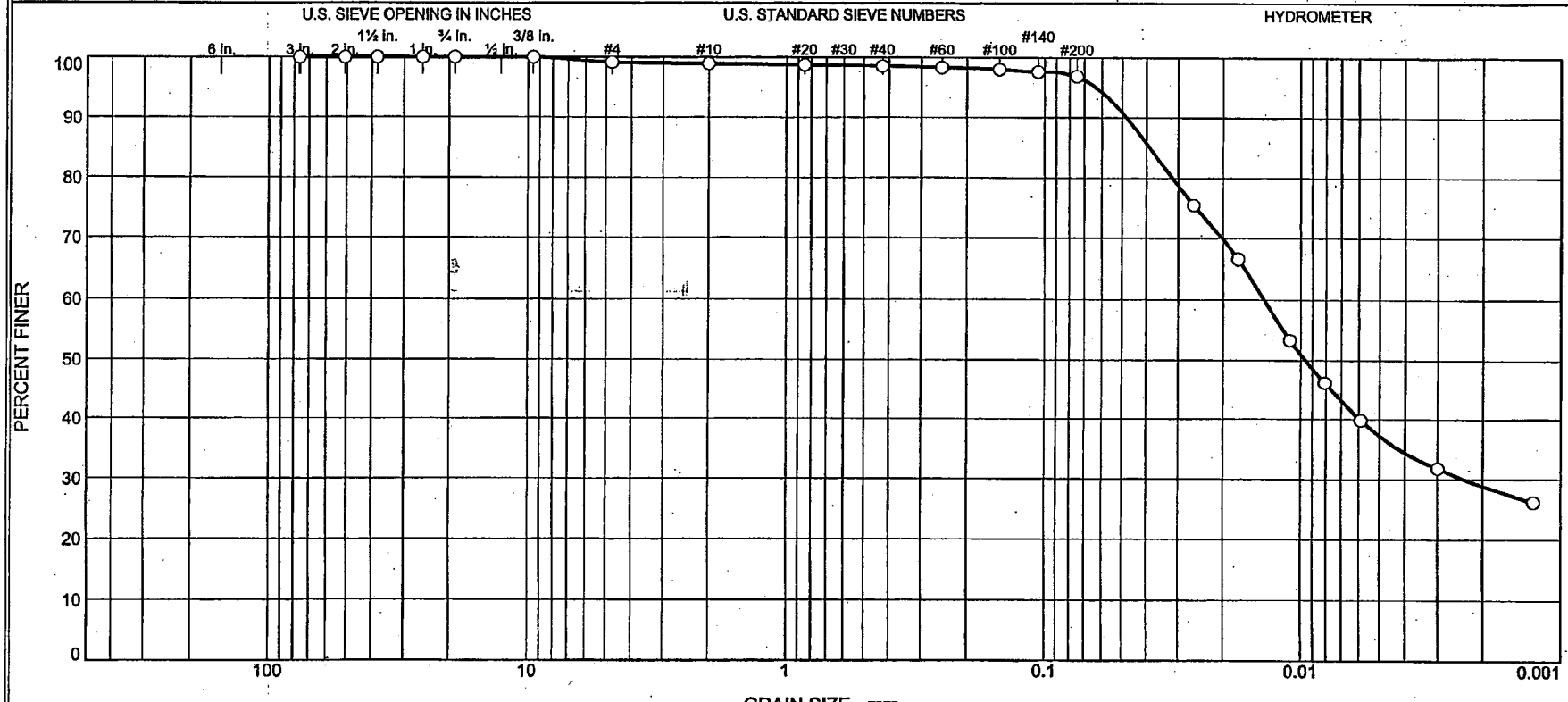
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.1	0.9	1.0			99.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}

Fineness Modulus
0.01

MAT 4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.9	0.2	0.4	1.6	59.7	37.2

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 309	STP-020	158.5'-160'	11/13/2006	CL	Lean Clay	23.9	37	16
		(SS-33)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST
ASTM D6913-04e1 / ASTM D422-63(2002)e1
Specific gravity was estimated
Re-sieveing of the hydrometer specimen after drying was not performed.

4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 158.5'-160'
Sample Number: STP-020 (SS-33)
Material Description: Lean Clay
Date: 11/13/2006
Natural Moisture: 23.9
Liquid Limit: 37
Plastic Limit: 16
USCS Class.: CL
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D6913-04e1 / ASTM D422-63(2002)e1
Specific gravity was estimated
Re-sieveing of the hydrometer specimen after drying was not performed.

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 2.91
Tare Wt. = 0.00
Minus #200 from wash = 96.9%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
270.80	177.40	0.00	3"	0.00	100.0
			2"	0.00	100.0
			1.5"	0.00	100.0
			1"	0.00	100.0
			3/4"	0.00	100.0
			3/8"	0.00	100.0
			#4	0.82	99.1
			#10	1.03	98.9
			#20	1.22	98.7
			#40	1.37	98.5
			#60	1.58	98.3
			#100	1.89	98.0
			#140	2.23	97.6
			#200	2.91	96.9

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 98.9
Weight of hydrometer sample =64.9
Hygroscopic moisture correction:
Moist weight and tare = 190.90
Dry weight and tare = 190.30
Tare weight = 177.10
Hygroscopic moisture = 4.5%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

MA
4-3-07

Hydrometer Test Data (continued)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.7	53.0	47.3	0.0134	53.0	7.6	0.0261	75.4
5.00	21.5	47.5	41.8	0.0134	47.5	8.5	0.0175	66.6
15.00	20.2	39.5	33.5	0.0136	39.5	9.8	0.0110	53.4
30.00	20.0	35.0	29.0	0.0136	35.0	10.6	0.0081	46.1
60.00	20.0	31.0	25.0	0.0136	31.0	11.2	0.0059	39.8
250.00	20.0	26.0	20.0	0.0136	26.0	12.0	0.0030	31.8
1440.00	20.0	22.5	16.5	0.0136	22.5	12.6	0.0013	26.2

Fractional Components

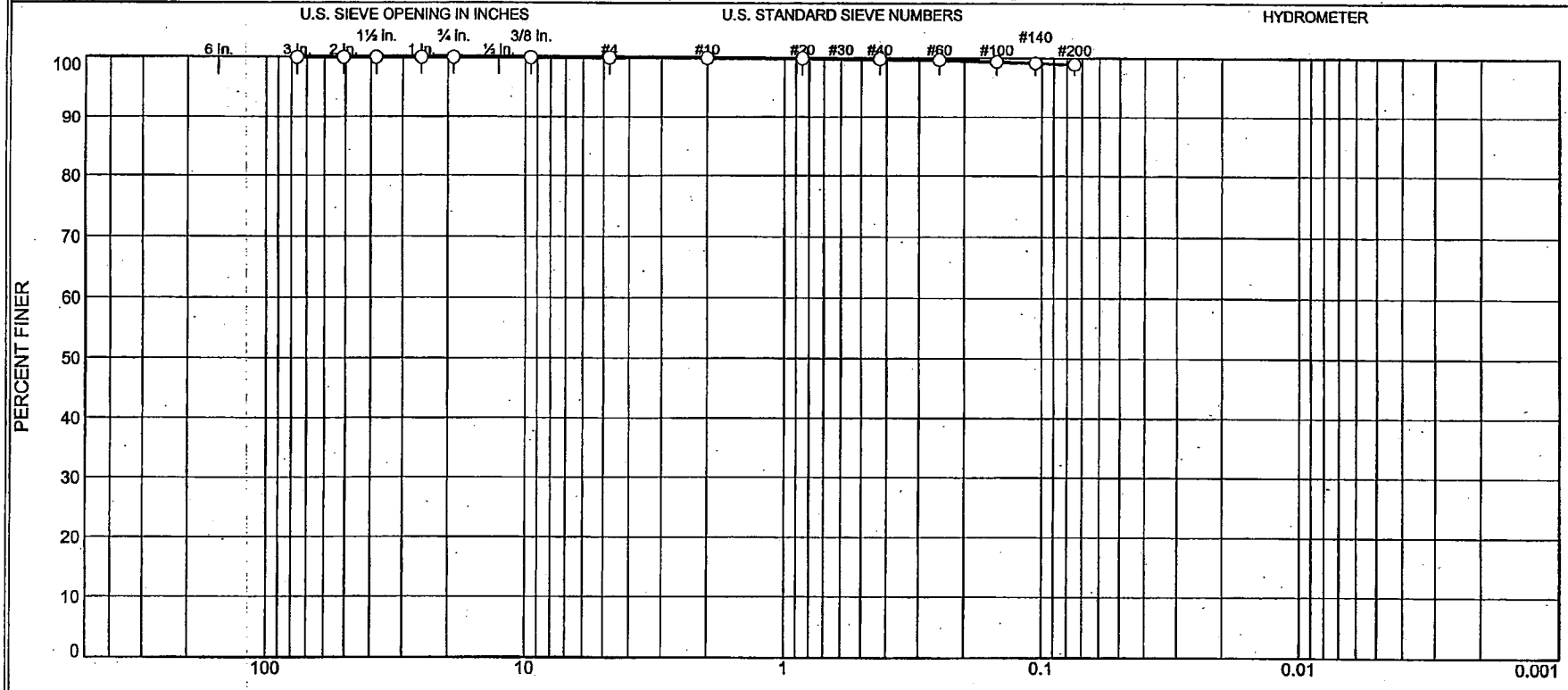
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.9	0.9	0.2	0.4	1.6	2.2	59.7	37.2	96.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0024	0.0096	0.0139	0.0317	0.0387	0.0480	0.0630

Fineness Modulus
0.08

MA
4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.1	0.2	0.7	99.0	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 309	STP-022 (SS-35)	178.5'-180'	11/15/2006	CH	Fat Clay	24.6	64	21

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST
ASTM D6913-04e1 / ASTM D422-63 (2002)e1
First two hydrometer readings were greater than 60 therefore, a plot for the hydro data could not be generated
Specific Greavity was estimated Re-sieveing of the hydrometer specimen after drying was not performed.

MNT 4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 309
Depth: 178.5'-180'
Sample Number: STP-022 (SS-35)
Material Description: Fat Clay
Date: 11/15/2006
Natural Moisture: 24.6
Liquid Limit: 64
Plastic Limit: 21
USCS Class.: CH
Testing Remarks: Tested By:TH Reviewed By:ST
ASTM D6913-04e1 / ASTM D422-63 (2002)e1
First two hydrometer readings were greater than 60 therefore, a plot for the hydro data could not be generated
Specific Greavity was estimated Re-sieveing of the hydrometer specimen after drying was not performed.
Material specification: ASTM D 6913-04e1 / ASTM D 422-63 (2002)e1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 0.91
Tare Wt. = 0.00
Minus #200 from wash = 99.0%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Lower Spec. Limit, %	Upper Spec. Limit, %	Deviation From Spec., %
266.50	179.20	0.00	3"	0.00	100.0			
			2"	0.00	100.0			
			1.5"	0.00	100.0			
			1"	0.00	100.0			
			3/4"	0.00	100.0			
			3/8"	0.00	100.0			
			#4	0.00	100.0			
			#10	0.08	99.9			
			#20	0.13	99.9			
			#40	0.22	99.7			
			#60	0.31	99.6			
			#100	0.53	99.4			
			#140	0.74	99.2			
			#200	0.91	99.0			

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.9
Weight of hydrometer sample =65.8
Hygroscopic moisture correction:
Moist weight and tare = 189.60
Dry weight and tare = 189.00
Tare weight = 178.00
Hygroscopic moisture = 5.5%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

MK 4-3-07

Hydrometer Test Data (continued)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	>60						
5.00	20.2	>60						
15.00	20.0	58.5	52.5	0.0136	58.5	6.7	0.0091	84.0
30.00	20.0	56.5	50.5	0.0136	56.5	7.0	0.0066	80.8
60.00	20.0	53.0	47.0	0.0136	53.0	7.6	0.0049	75.2
250.00	20.0	47.0	41.0	0.0136	47.0	8.6	0.0025	65.6
1440.00	20.0	40.0	34.0	0.0136	40.0	9.7	0.0011	54.4

Fractional Components

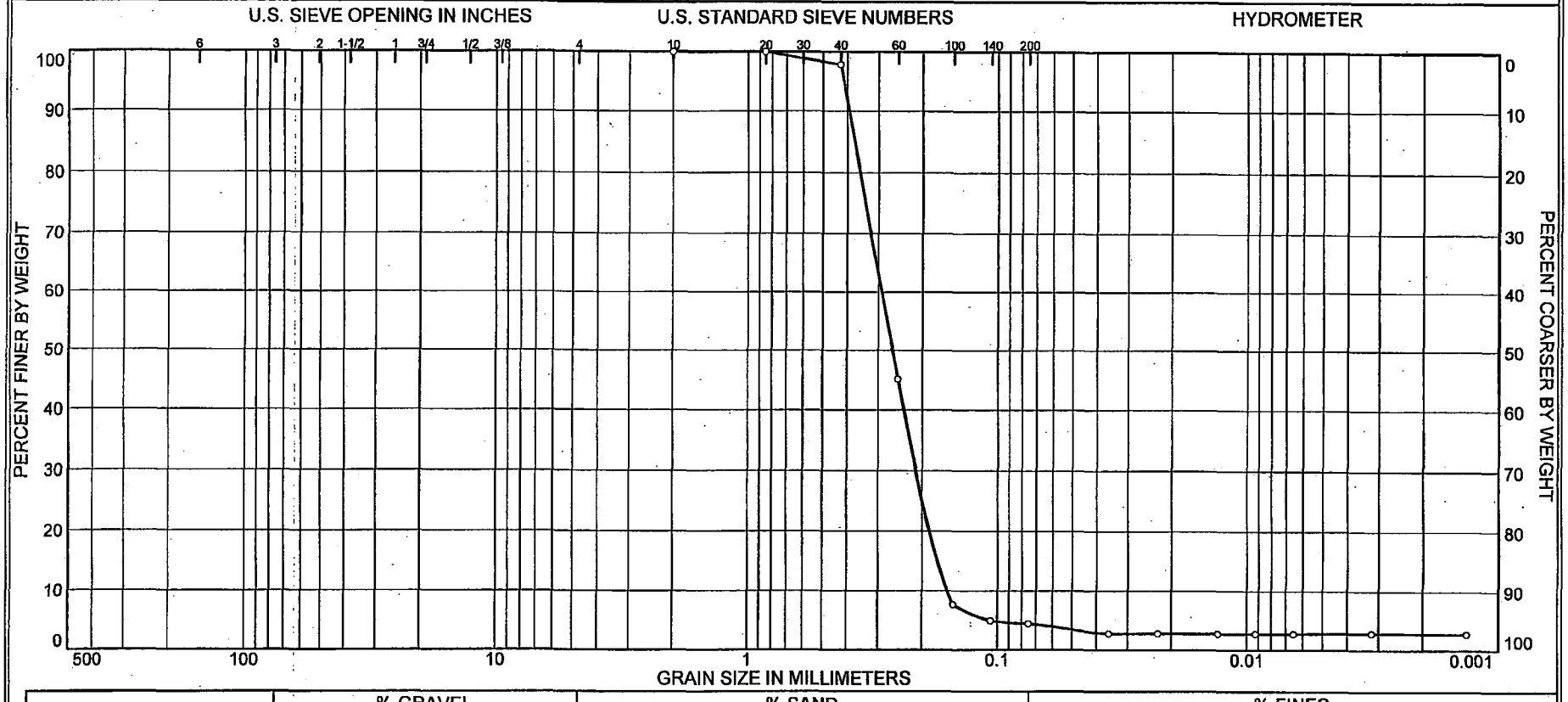
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.1	0.2	0.7	1.0			99.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}

Fineness Modulus
0.01

MWL 4-3-07

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
O	0.0	0.0	0.0	0.0	2.1	93.5	1.6	2.8

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
O	B-314	UD-1	83' to 85'	2-16-07	SP	Poorly graded sand	20.9	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

O Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1 KAW 4/3/07
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-314
Sample No.: UD-1
Elev. or Depth: 83' to 85' **Sample Length(in./cm.):**
Location: B-314
Description: Poorly graded sand
Date: 2-16-07 **Natural Moisture:** 20.9
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SP
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial	After wash
Dry sample and tare=	108.42	0.00
Tare =	0.00	0.00
Dry sample weight =	108.42	0.00

Minus #200 from wash= 100.0 %
Sample split on number 10 **sieve**
Split sample data:
Sample and tare = 67.83 **Tare =** .00 **Sample weight =** 67.83
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.01	100.0
# 40	1.42	97.9
# 60	37.26	45.1
# 100	62.65	7.6
# 140	64.51	4.9
# 200	64.87	4.4

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 67.83
Hygroscopic moisture correction:
Moist weight & tare = 51.22
Dry weight & tare = 51.13
Tare = 10.64
Hygroscopic moisture= 0.2 %
Calculated biased weight= 67.68
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.699

Specific gravity correction factor= 0.989
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

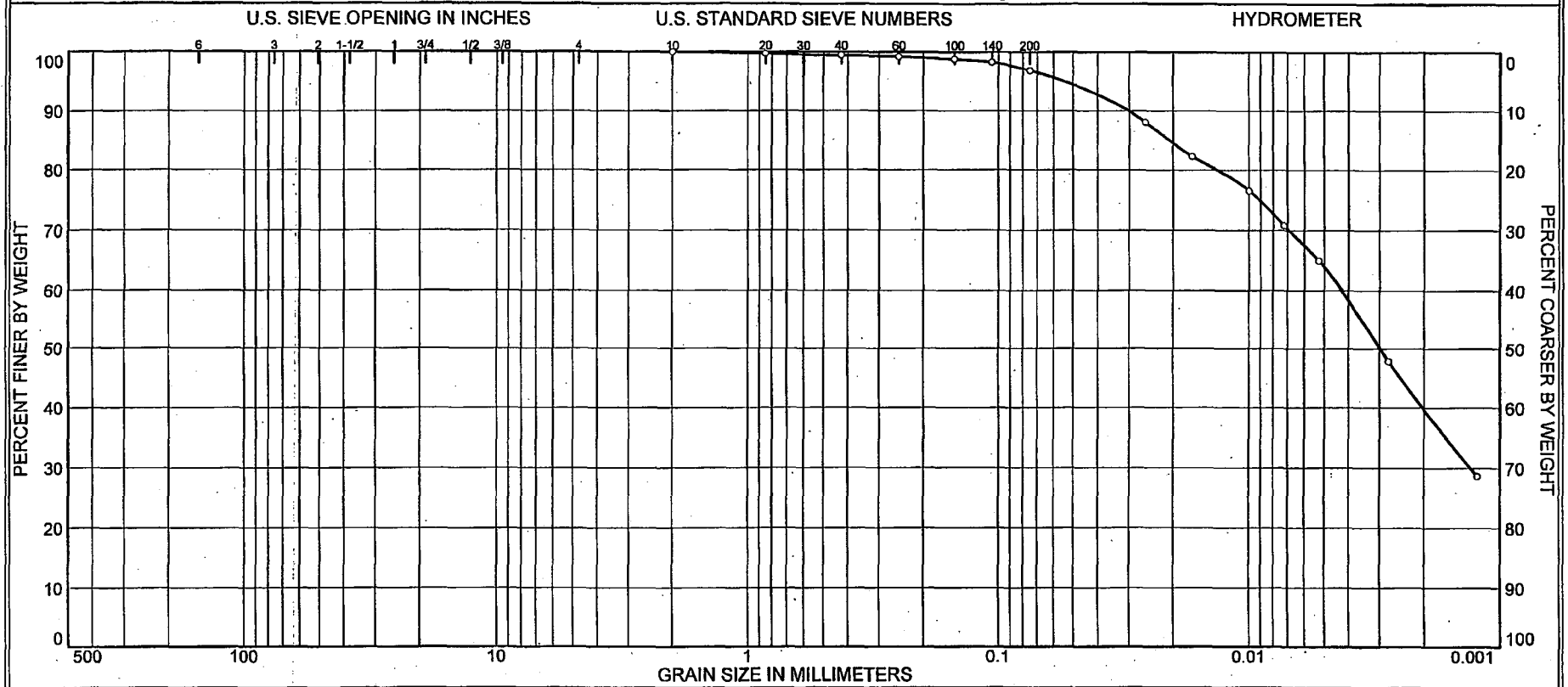
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	23.4	5.0	1.9	0.0129	6.0	15.3	0.0357	2.7
5.00	23.4	5.0	1.9	0.0129	6.0	15.3	0.0226	2.7
15.00	23.4	5.0	1.9	0.0129	6.0	15.3	0.0130	2.7
30.00	23.4	5.0	1.9	0.0129	6.0	15.3	0.0092	2.7
60.00	23.4	5.0	1.9	0.0129	6.0	15.3	0.0065	2.7
250.00	23.6	5.0	1.9	0.0129	6.0	15.3	0.0032	2.8
1440.00	23.1	5.0	1.8	0.0129	6.0	15.3	0.0013	2.7

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 95.6 **(% coarse =** **% medium =** 2.1 **% fine =** 93.5**)**
% SILT = 1.6 **% CLAY =** 2.8

D_{85}= 0.37 D_{60}= 0.29 D_{50}= 0.26
D_{30}= 0.21 D_{15}= 0.17 D_{10}= 0.16
C_c= 0.9722 C_u= 1.8271

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.0	0.6	2.5	33.0	63.9

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	B-314	UD-2	113' to 115'	2-20-07	CL	Lean clay	20.0	38	13

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

○ Tested by: JA Reviewed by: SS KAW 4/3/07
ASTM D422-63 (2002)e1
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-314
Sample No.: UD-2
Elev. or Depth: 113' to 115' **Sample Length(in./cm.):**
Location: B-314
Description: Lean clay
Date: 2-20-07 **Natural Moisture:** 20.0
Liquid Limit: 38 **Plastic Limit:** 13 **USCS Class.:** CL
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	87.34
Tare =	0.00
Dry sample weight =	87.34

Sample split on number 10 sieve
Split sample data:
Sample and tare = 51.31 Tare = .00 Sample weight = 51.31
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.16	99.7
# 40	0.29	99.4
# 60	0.41	99.2
# 100	0.60	98.8
# 140	0.89	98.3
# 200	1.60	96.9

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 52.08
Hygroscopic moisture correction:
Moist weight & tare = 47.55
Dry weight & tare = 47.02
Tare = 11.06
Hygroscopic moisture= 1.5 %
Calculated biased weight= 51.32
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.718
Specific gravity correction factor= 0.985

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

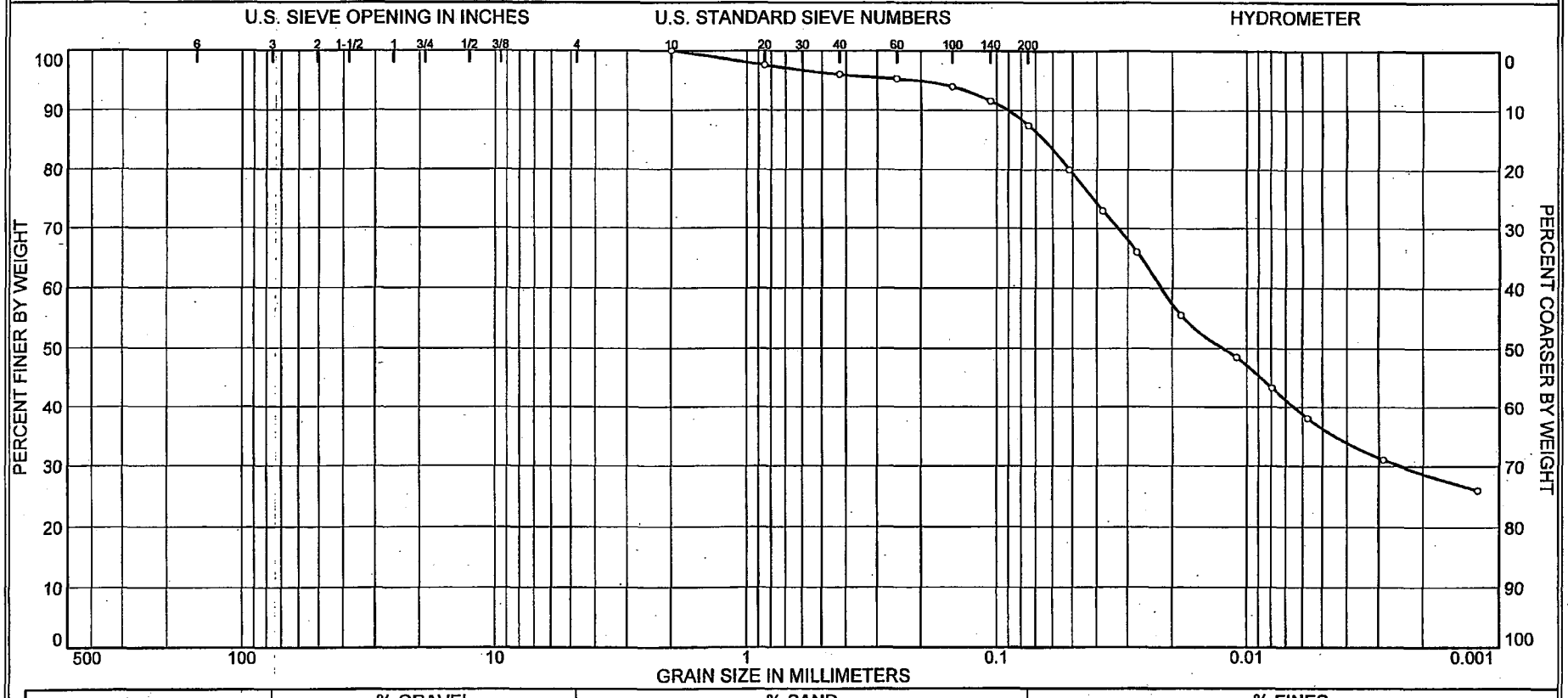
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	23.4	49.0	45.9	0.0128	50.0	8.1	0.0258	88.1
5.00	23.4	46.0	42.9	0.0128	47.0	8.6	0.0168	82.3
15.00	23.4	43.0	39.9	0.0128	44.0	9.1	0.0100	76.5
30.00	23.4	40.0	36.9	0.0128	41.0	9.6	0.0072	70.8
60.00	23.4	37.0	33.9	0.0128	38.0	10.1	0.0053	65.0
250.00	23.4	28.0	24.9	0.0128	29.0	11.5	0.0028	47.8
1440.00	23.4	18.0	14.9	0.0128	19.0	13.2	0.0012	28.6

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 3.1 (**% coarse =** **% medium** = 0.6 **% fine** = 2.5)
% SILT = 33.0 **% CLAY** = 63.9

D_{85}= 0.02 D_{60}= 0.00 D_{50}= 0.00
D_{30}= 0.00

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
O	0.0	0.0	0.0	0.0	4.0	8.5	51.2	36.3

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
O	B-314	UD-4	141' to 143'	2-20-07	CL	Lean clay	24.2	46	15

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 Figure

MACTEC, INC.

Charlotte, North Carolina

O Tested by: JA Reviewed by: SS KAW 4/3/07
ASTM D422-63 (2002)e1
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-314
Sample No.: UD-4
Elev. or Depth: 141' to 143' **Sample Length(in./cm.):**
Location: B-314
Description: Lean clay
Date: 2-20-07 **Natural Moisture:** 24.2
Liquid Limit: 46 **Plastic Limit:** 15 **USCS Class.:** CL
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	89.21
Tare =	0.00
Dry sample weight =	89.21

Sample split on number 10 sieve
Split sample data:
Sample and tare = 56.18 **Tare =** .00 **Sample weight =** 56.18
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	1.33	97.6
# 40	2.24	96.0
# 60	2.65	95.3
# 100	3.35	94.0
# 140	4.74	91.6
# 200	7.04	87.5

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 57.25
Hygroscopic moisture correction:
Moist weight & tare = 44.51
Dry weight & tare = 43.87
Tare = 10.90
Hygroscopic moisture= 1.9 %
Calculated biased weight= 56.16
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.742
Specific gravity correction factor= 0.980

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

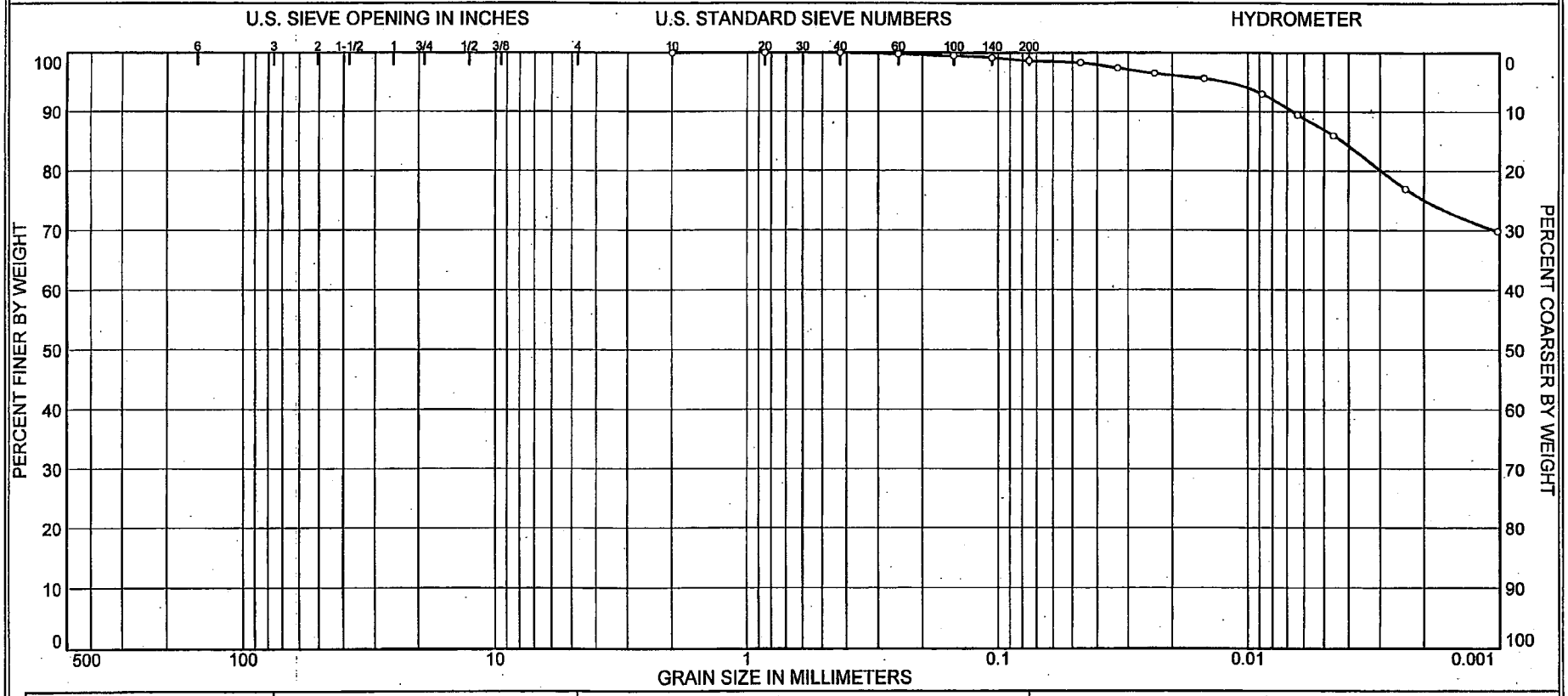
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
0.50	23.1	49.0	45.8	0.0128	50.0	8.1	0.0514	80.0
1.00	23.1	45.0	41.8	0.0128	46.0	8.8	0.0378	73.0
2.00	23.1	41.0	37.8	0.0128	42.0	9.4	0.0277	66.0
5.00	23.1	35.0	31.8	0.0128	36.0	10.4	0.0184	55.5
15.00	23.1	31.0	27.8	0.0128	32.0	11.0	0.0110	48.5
30.00	23.1	28.0	24.8	0.0128	29.0	11.5	0.0079	43.3
60.00	23.1	25.0	21.8	0.0128	26.0	12.0	0.0057	38.1
250.00	23.1	21.0	17.8	0.0128	22.0	12.7	0.0029	31.1
1440.00	23.4	18.0	14.9	0.0127	19.0	13.2	0.0012	26.0

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 12.5 (**% coarse =** **% medium** = 4.0 **% fine** = 8.5)
% SILT = 51.2 **% CLAY** = 36.3

D_{85}= 0.07 D_{60}= 0.02 D_{50}= 0.01
D_{30}= 0.00

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.0	0.0	1.3	11.8	86.9

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	B-314	UD-5A	183' to 185'	2-20-07	CH	Fat clay	20.3	72	24

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 Figure

MACTEC, INC.

Charlotte, North Carolina

○ Tested by: JA Reviewed by: SS KAW 4/13/07
ASTM D422-63 (2002)e1
ASTM D6913-04e1

KAW 4/13/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-314
Sample No.: UD-5A
Elev. or Depth: 183' to 185' **Sample Length(in./cm.):**
Location: B-314
Description: Fat clay
Date: 2-20-07 **Natural Moisture:** 20.3
Liquid Limit: 72 **Plastic Limit:** 24 **USCS Class.:** CH
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	82.93
Tare =	0.00
Dry sample weight =	82.93

Sample split on number 10 sieve
Split sample data:
Sample and tare = 54.51 **Tare** = .00 **Sample weight** = 54.51
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.00	100.0
# 40	0.01	100.0
# 60	0.11	99.8
# 100	0.25	99.5
# 140	0.43	99.2
# 200	0.70	98.7

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 56.25
Hygroscopic moisture correction:
Moist weight & tare = 40.74
Dry weight & tare = 39.84
Tare = 11.47
Hygroscopic moisture= 3.2 %
Calculated biased weight= 54.52
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.746
Specific gravity correction factor= 0.979

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

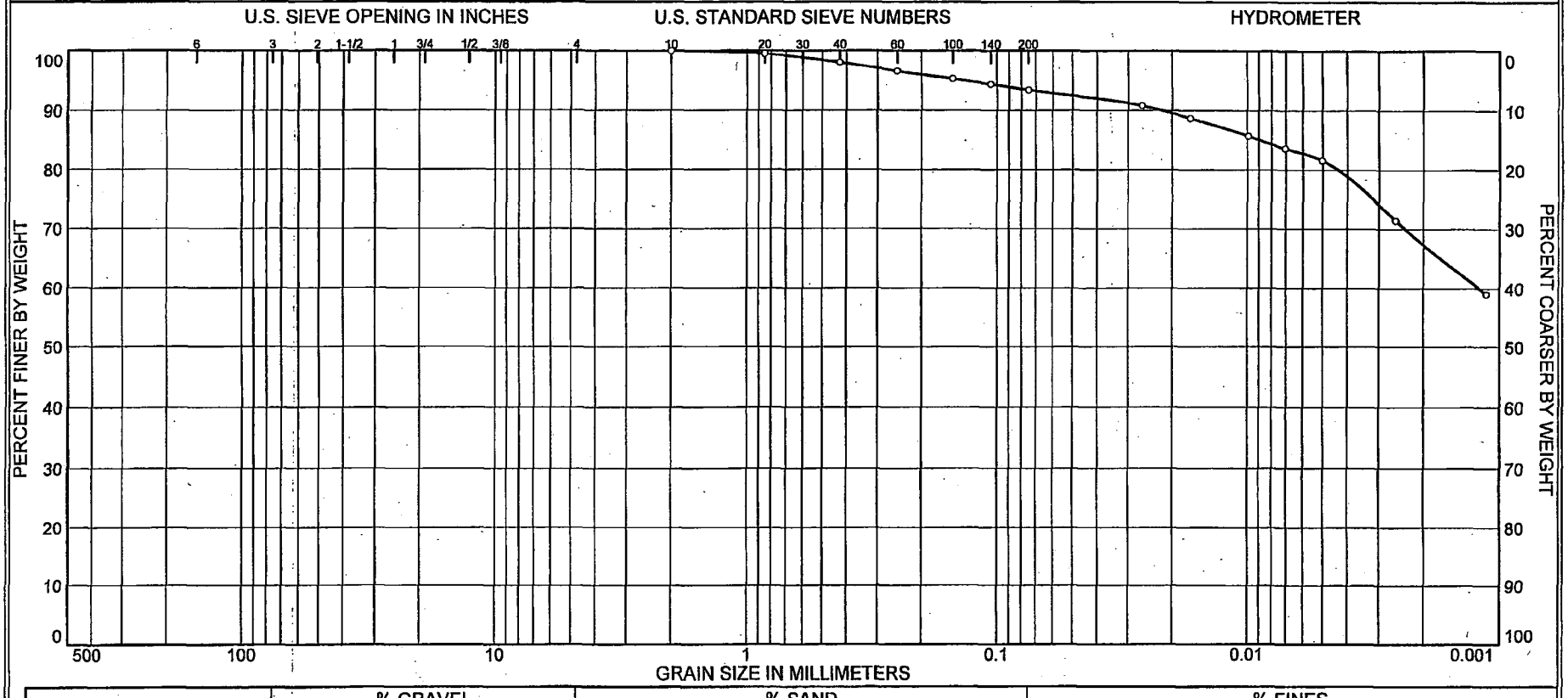
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
0.50	23.1	58.0	54.8	0.0128	59.0	6.6	0.0465	98.4
1.00	23.1	57.5	54.3	0.0128	58.5	6.7	0.0331	97.5
2.00	23.1	57.0	53.8	0.0128	58.0	6.8	0.0235	96.6
5.00	23.1	56.5	53.3	0.0128	57.5	6.9	0.0150	95.7
15.00	23.1	55.0	51.8	0.0128	56.0	7.1	0.0088	93.1
30.00	23.1	53.0	49.8	0.0128	54.0	7.4	0.0064	89.5
60.00	23.1	51.0	47.8	0.0128	52.0	7.8	0.0046	85.9
250.00	23.1	46.0	42.8	0.0128	47.0	8.6	0.0024	76.9
1440.00	23.4	42.0	38.9	0.0127	43.0	9.2	0.0010	69.8

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 1.3 (**% coarse =** **% medium =** 0.0 **% fine =** 1.3)
% SILT = 11.8 **% CLAY =** 86.9

D_{85}= 0.00

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
O	0.0	0.0	0.0	0.0	1.9	4.7	11.8	81.6

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
O	B-314	UD-6	191' to 193'	3-16-07	CH	Fat clay	26.5	64	24

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 Figure

MACTEC, INC.

Charlotte, North Carolina

O Tested by: JA Reviewed by: MH KAW 4/3/07

ASTM D422-63 (2002)e1

ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-314
Sample No.: UD-6
Elev. or Depth: 191' to 193' **Sample Length(in./cm.):**
Location: B-314
Description: Fat clay
Date: 3-16-07 **Natural Moisture:** 26.5
Liquid Limit: 64 **Plastic Limit:** 24 **USCS Class.:** CH
Testing Remarks: Tested by: JA Reviewed by: MH
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	86.23
Tare =	0.00
Dry sample weight =	86.23

Sample split on number 10 sieve
Split sample data:
Sample and tare = 48.36 **Tare =** .00 **Sample weight =** 48.36
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.22	99.5
# 40	0.92	98.1
# 60	1.64	96.6
# 100	2.27	95.3
# 140	2.71	94.4
# 200	3.19	93.4

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 50.20
Hygroscopic moisture correction:
Moist weight & tare = 23.21
Dry weight & tare = 22.76
Tare = 10.92
Hygroscopic moisture= 3.8 %
Calculated biased weight= 48.36
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.695
Specific gravity correction factor= 0.990

Hydrometer type: 152H

Effective depth L= 16.294964 - 0.164 x Rm

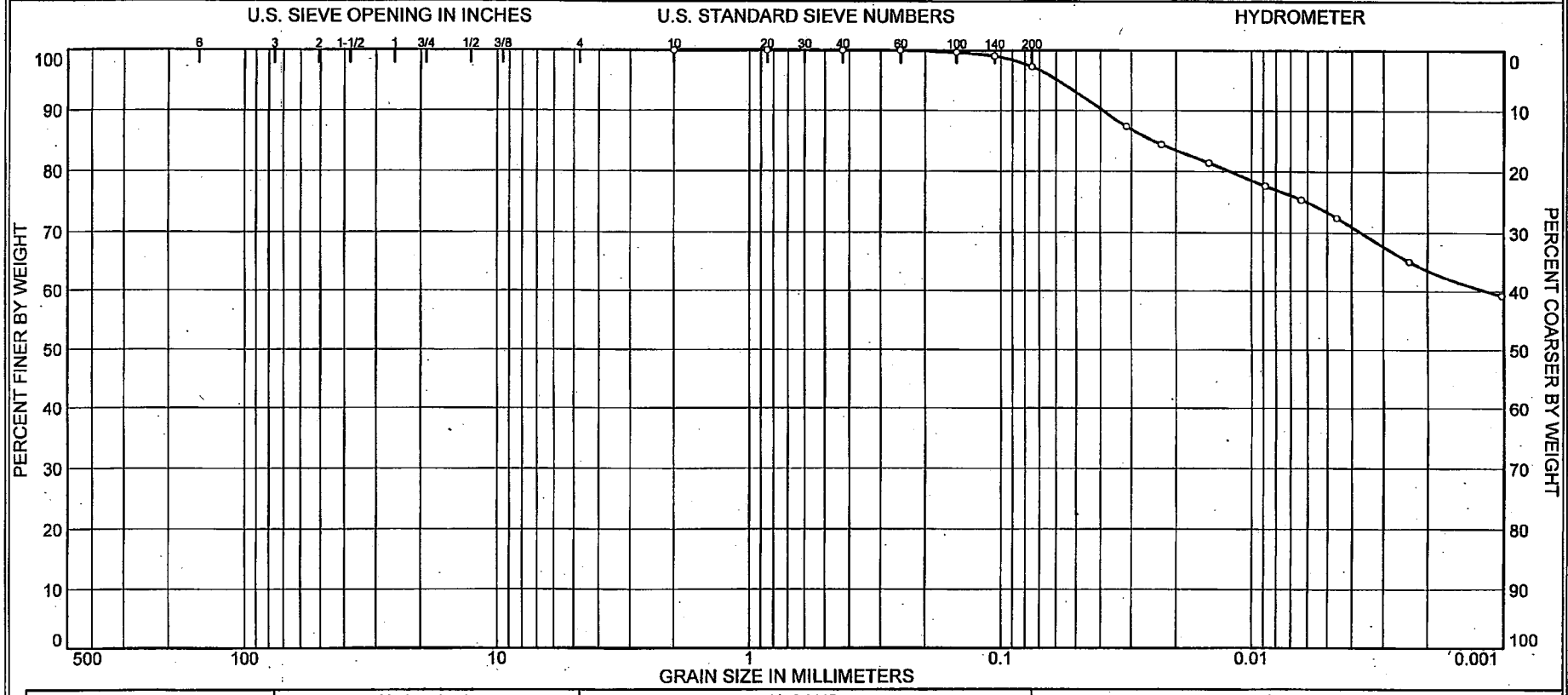
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	23.2	47.5	44.3	0.0129	48.5	8.3	0.0264	90.8
5.00	23.2	46.5	43.3	0.0129	47.5	8.5	0.0169	88.7
15.00	23.3	45.0	41.9	0.0129	46.0	8.8	0.0099	85.7
30.00	23.3	44.0	40.9	0.0129	45.0	8.9	0.0070	83.6
60.00	23.4	43.0	39.9	0.0129	44.0	9.1	0.0050	81.6
250.00	23.3	38.0	34.9	0.0129	39.0	9.9	0.0026	71.4
1440.00	23.2	32.0	28.8	0.0129	33.0	10.9	0.0011	59.0

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 6.6 **(% coarse =** **% medium =** 1.9 **% fine =** 4.7**)**
% SILT = 11.8 **% CLAY =** 81.6

D_{85}= 0.01 D_{60}= 0.00

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
O	0.0	0.0	0.0	0.0	0.0	2.6	24.0	73.4

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
O	B-319	UD-1	128' to 130'	2-19-07	CH	Fat clay	21.0	70	25

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

O Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1 KAW 4/3/07
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-319
Sample No.: UD-1
Elev. or Depth: 128' to 130' **Sample Length(in./cm.):**
Location: B-319
Description: Fat clay
Date: 2-19-07 **Natural Moisture:** 21.0
Liquid Limit: 70 **Plastic Limit:** 25 **USCS Class.:** CH
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	88.06
Tare =	0.00
Dry sample weight =	88.06

Sample split on number 10 sieve
Split sample data:
Sample and tare = 63.38 **Tare =** .00 **Sample weight =** 63.38
Cumulative weight retained tare= .00
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.00	100.0
# 40	0.00	100.0
# 60	0.02	100.0
# 100	0.19	99.7
# 140	0.59	99.1
# 200	1.63	97.4

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 67.96
Hygroscopic moisture correction:
Moist weight & tare = 36.83
Dry weight & tare = 36.22
Tare = 11.55
Hygroscopic moisture= 2.5 %
Calculated biased weight= 66.32
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.718
Specific gravity correction factor= 0.985

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

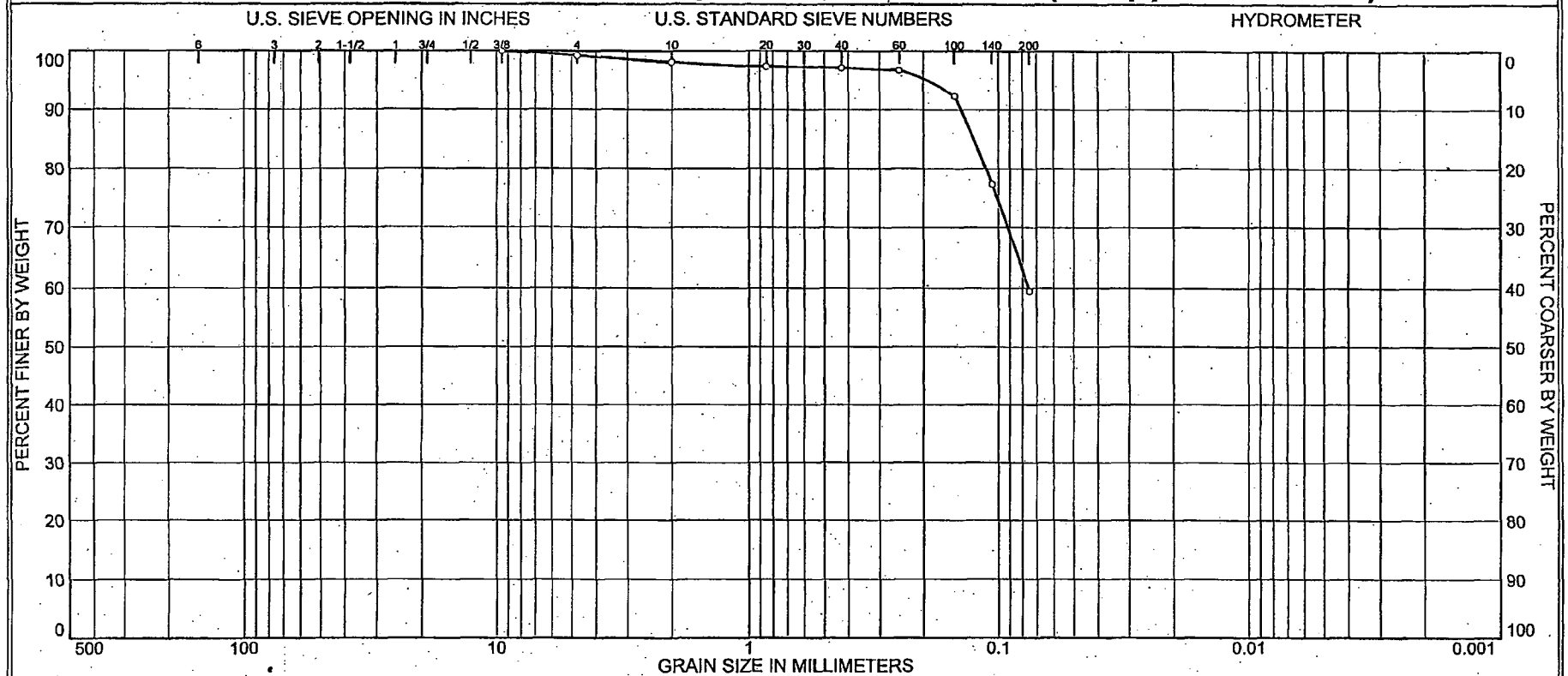
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1.00	23.1	62.0	58.8	0.0129	63.0	6.0	0.0314	87.4
2.00	23.1	60.0	56.8	0.0129	61.0	6.3	0.0228	84.4
5.00	23.1	58.0	54.8	0.0129	59.0	6.6	0.0148	81.4
15.00	23.1	55.5	52.3	0.0129	56.5	7.0	0.0088	77.7
30.00	23.1	54.0	50.8	0.0129	55.0	7.3	0.0063	75.5
60.00	23.1	52.0	48.8	0.0129	53.0	7.6	0.0046	72.5
250.00	23.1	47.0	43.8	0.0129	48.0	8.4	0.0024	65.1
1440.00	23.3	43.0	39.9	0.0128	44.0	9.1	0.0010	59.2

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 2.6 **(% coarse =** **% medium =** 0.0 **% fine =** 2.6**)**
% SILT = 24.0 **% CLAY =** 73.4

D_{85}= 0.02 D_{60}= 0.00

Particle Size Distribution Report ASTM D422-63 (Reapproved 2002)



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
O	0.0	0.0	0.8	1.1	0.9	37.7	59.5	

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
O	B-319	UD-2	143-145 ft.	4/4/07	ML	Tan Sandy silt	18.7	NV	NP

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050060486 Lab no. 6917

MACTEC ENGINEERING AND CONSULTING, INC.

O Test by: BM Reviewed by: HJ

HJ 4/5/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050060486

Sample Data

Source: B-319
Sample No.: UD-2
Elev. or Depth: 143-145 ft. **Sample Length(in./cm.):** 6917
Location: B-319
Description: Tan Sandy silt
Date: 4/4/07 **Natural Moisture:** 18.7
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** ML
Testing Remarks: Test by: BM Reviewed by: HJ 4/8/07

Mechanical Analysis Data

	Initial
Dry sample and tare=	117.70
Tare =	16.28
Dry sample weight =	101.42

Tare for cumulative weight retained= .00

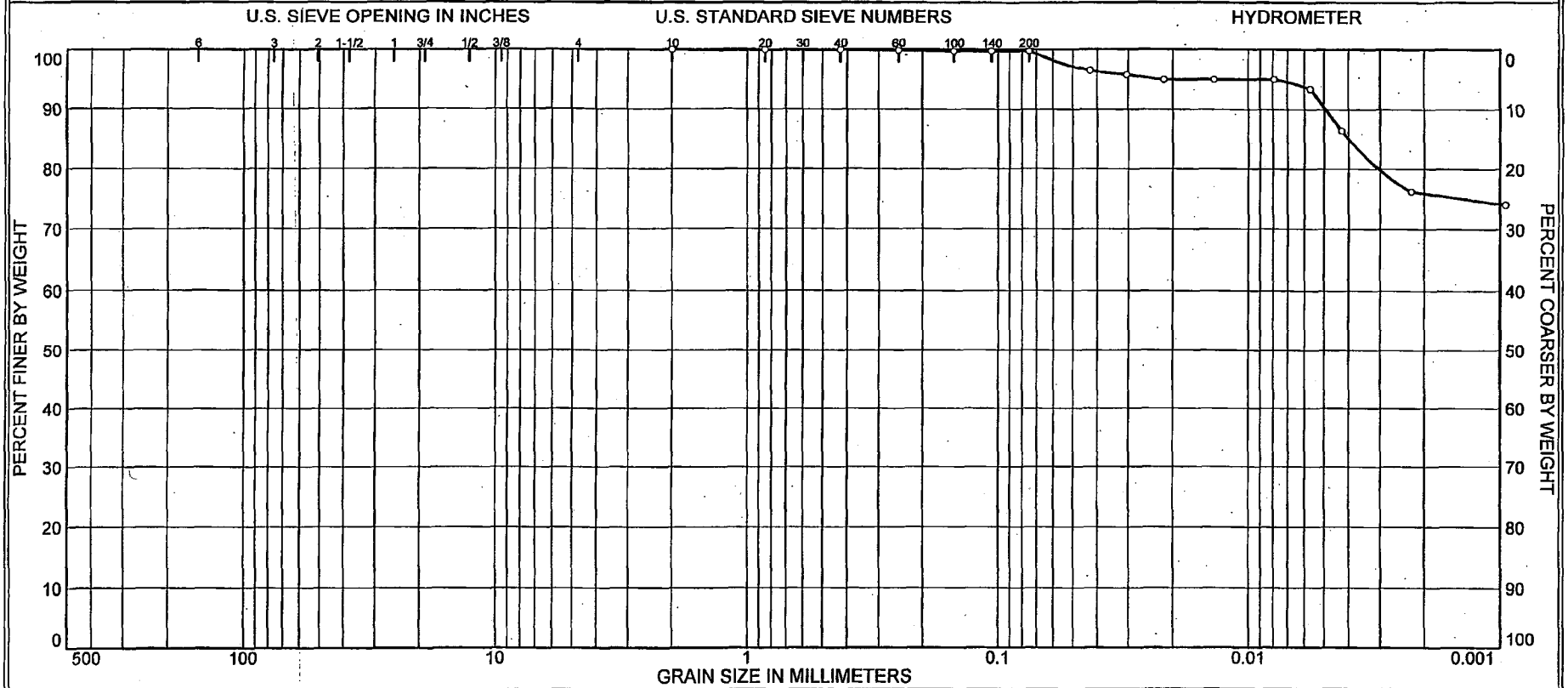
Sieve	Cumul. Wt. retained	Percent finer
.375 inch	0.00	100.0
# 4	0.85	99.2
# 10	1.97	98.1
# 20	2.59	97.4
# 40	2.86	97.2
# 60	3.27	96.8
# 100	7.82	92.3
# 140	23.04	77.3
# 200	41.04	59.5

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =** 0.8 **(% coarse =** **% fine =** 0.8)
% SAND = 39.7 **(% coarse =** 1.1 **% medium =** 0.9 **% fine =** 37.7)
% FINES = 59.5

D_{85}= 0.13 D_{60}= 0.08

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.0	0.1	0.2	9.4	90.3

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	B-319	UD-4	173' to 175'	2-19-07	CH	Fat clay	26.9	65	22

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 | Figure

MACTEC, INC.

Charlotte, North Carolina

○ Tested by: JA Reviewed by: SS KAW 4/3/07
ASTM D422-63 (2002)e1
ASTM D6913-04e1

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-319
Sample No.: UD-4
Elev. or Depth: 173' to 175' **Sample Length(in./cm.):**
Location: B-319
Description: Fat clay
Date: 2-19-07 **Natural Moisture:** 26.9
Liquid Limit: 65 **Plastic Limit:** 22 **USCS Class.:** CH
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	86.39
Tare =	0.00
Dry sample weight =	86.39

Sample split on number 10 sieve
Split sample data:
Sample and tare = 63.09 Tare = .00 Sample weight = 63.09
Cumulative weight retained tare= .00
e for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.04	99.9
# 40	0.09	99.9
# 60	0.13	99.8
# 100	0.18	99.7
# 140	0.20	99.7
# 200	0.22	99.7

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 64.98
Hygroscopic moisture correction:
Moist weight & tare = 35.16
Dry weight & tare = 34.46
Tare = 11.20
Hygroscopic moisture= 3.0 %
Calculated biased weight= 63.08
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1
Specific gravity of solids= 2.717
Specific gravity correction factor= 0.985

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

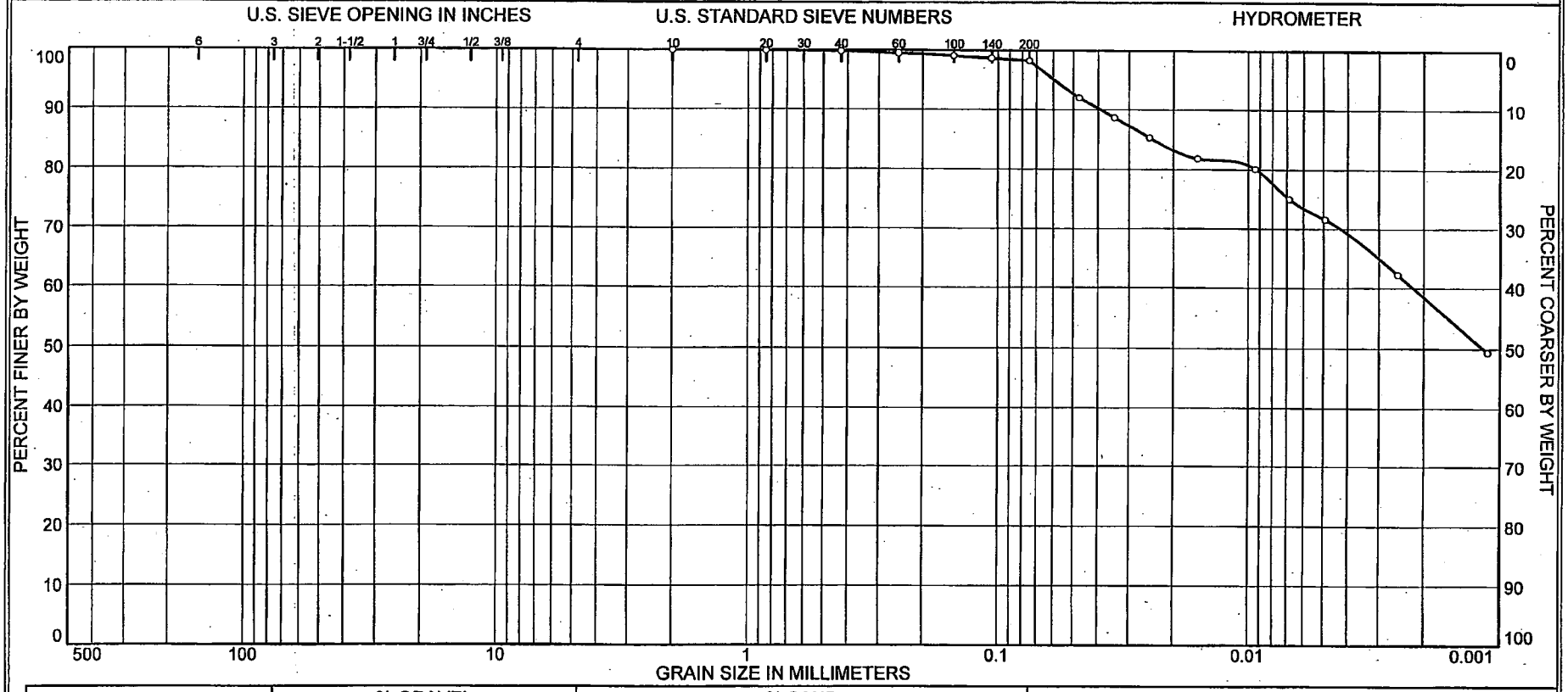
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
0.50	23.1	65.0	61.8	0.0129	66.0	5.5	0.0426	96.5
1.00	23.1	64.5	61.3	0.0129	65.5	5.6	0.0303	95.8
2.00	23.1	64.0	60.8	0.0129	65.0	5.6	0.0216	95.0
5.00	23.1	64.0	60.8	0.0129	65.0	5.6	0.0137	95.0
15.00	23.1	64.0	60.8	0.0129	65.0	5.6	0.0079	95.0
30.00	23.1	63.0	59.8	0.0129	64.0	5.8	0.0057	93.4
60.00	23.1	58.5	55.3	0.0129	59.5	6.5	0.0043	86.4
250.00	23.1	52.0	48.8	0.0129	53.0	7.6	0.0022	76.2
1440.00	23.3	50.5	47.4	0.0128	51.5	7.8	0.0009	74.0

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 0.3 (**% coarse =** **% medium** = 0.1 **% fine** = 0.2)
% SILT = 9.4 **% CLAY** = 90.3 (**% CLAY COLLOIDS** = 74.1)

D_{85}= 0.00

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.0	0.2	1.5	26.5	71.8

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	B-319	UD-5	188' to 190'	2-19-07	CH	Fat clay	23.9	62	21

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496 Figure

MACTEC, INC.

Charlotte, North Carolina

○ Tested by: JA Reviewed by: SS KAW 4/13/07
ASTM D422-63 (2002)e1
ASTM D6913-04e1

KAW 4/13/07

GRAIN SIZE DISTRIBUTION TEST DATA

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496

Sample Data

Source: B-319
Sample No.: UD-5
Elev. or Depth: 188' to 190' **Sample Length(in./cm.):**
Location: B-319
Description: Fat clay
Date: 2-19-07 **Natural Moisture:** 23.9
Liquid Limit: 62 **Plastic Limit:** 21 **USCS Class.:** CH
Testing Remarks: Tested by: JA Reviewed by: SS
ASTM D422-63 (2002)e1
ASTM D6913-04e1

Mechanical Analysis Data

	Initial
Dry sample and tare=	81.75
Tare =	0.00
Dry sample weight =	81.75

Sample split on number 10 sieve
Split sample data:
Sample and tare = 57.55 Tare = .00 Sample weight = 57.55
Cumulative weight retained tare= .00
e for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 10	0.00	100.0
# 20	0.07	99.9
# 40	0.13	99.8
# 60	0.28	99.5
# 100	0.51	99.1
# 140	0.72	98.7
# 200	0.99	98.3

Hydrometer Analysis Data

Separation sieve is #10
Percent -#10 based upon complete sample= 100.0
Weight of hydrometer sample: 58.99
Hygroscopic moisture correction:
Moist weight & tare = 35.63
Dry weight & tare = 35.03
Tare = 10.83
Hygroscopic moisture= 2.5 %
Calculated biased weight= 57.56
Table of composite correction values:

Temp, deg C:	14.0	24.0	40.2
Comp. corr:	-5.0	-3.0	0.0

Meniscus correction only= 1.0
Specific gravity of solids= 2.716
Specific gravity correction factor= 0.985

Hydrometer type: 152H

Effective depth L= 16.294964 - 0.164 x Rm

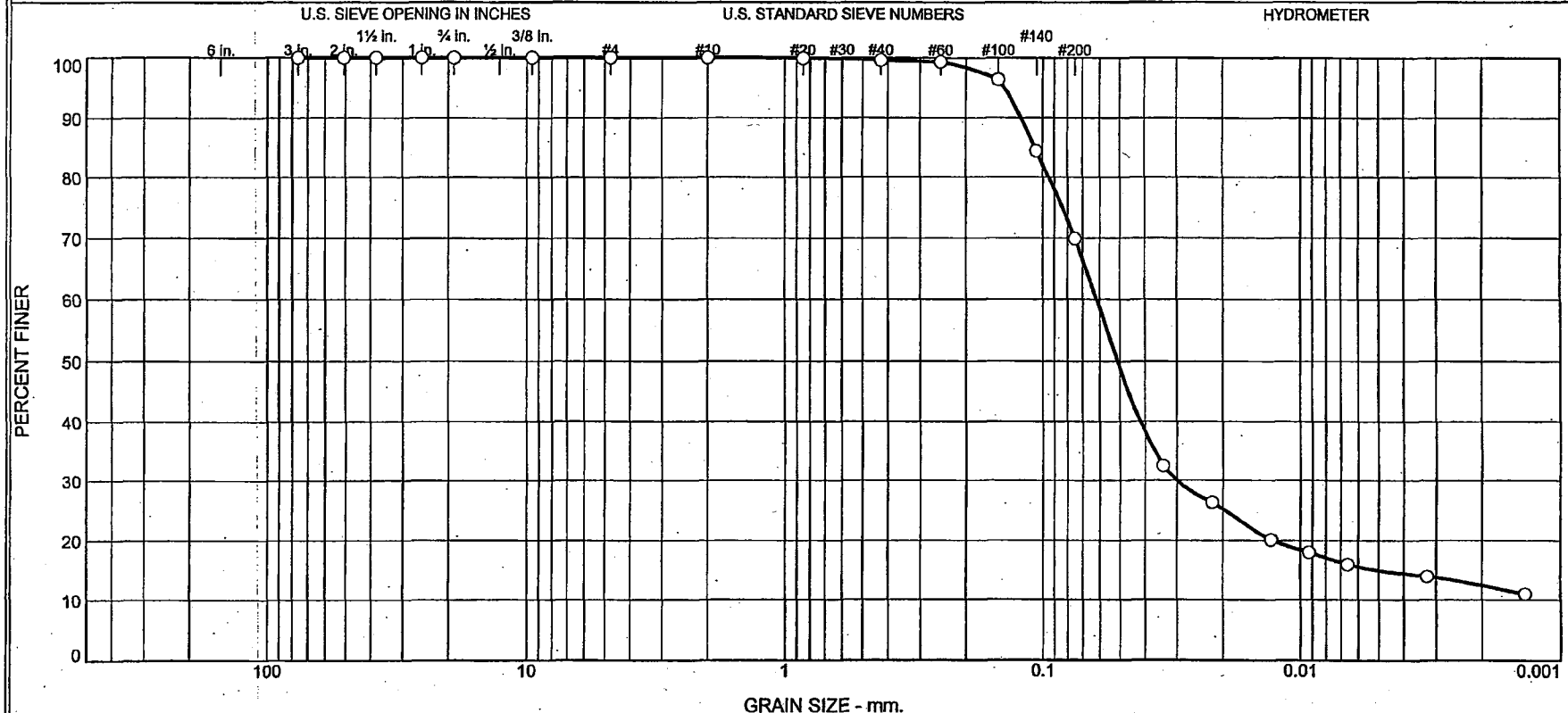
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
0.50	23.1	57.0	53.8	0.0129	58.0	6.8	0.0475	92.1
1.00	23.1	55.0	51.8	0.0129	56.0	7.1	0.0344	88.7
2.00	23.1	53.0	49.8	0.0129	54.0	7.4	0.0248	85.3
5.00	23.1	51.0	47.8	0.0129	52.0	7.8	0.0161	81.8
15.00	23.1	50.0	46.8	0.0129	51.0	7.9	0.0094	80.1
30.00	23.1	47.0	43.8	0.0129	48.0	8.4	0.0068	75.0
60.00	23.1	45.0	41.8	0.0129	46.0	8.8	0.0049	71.6
250.00	23.1	39.5	36.3	0.0129	40.5	9.7	0.0025	62.2
1440.00	23.3	32.0	28.9	0.0129	33.0	10.9	0.0011	49.4

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 1.7 **(% coarse =** **% medium =** 0.2 **% fine =** 1.5**)**
% SILT = 26.5 **% CLAY =** 71.8

D_{85}= 0.02 D_{60}= 0.00 D_{50}= 0.00

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	0.4	29.7	54.9	15.0

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
○	Boring 323	STP-121	23.5'-25.0'	12/3/2006	ML	Sandy Silt	22.5	NV	NP
		(SS-12)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

○ Tested By:TH/DK Reviewed By:ST
ASTM D6913-04e1 / ASTM D422-63(2002)e1
All S.G. values for hydro tests were estimated

NA
4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 323
Depth: 23.5'-25.0' **Sample Number:** STP-121 (SS-12)
Material Description: Sandy Silt
Date: 12/3/2006 **Natural Moisture:** 22.5
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** ML
Testing Remarks: Tested By:TH/DK Reviewed By:ST
ASTM D6913-04e1 / ASTM D422-63(2002)e1
All S.G. values for hydro tests were estimated

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 21.82
Tare Wt. = 0.00
Minus #200 from wash = 69.9%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
249.70	177.10	0.00	3	0.00	100.0
			2	0.00	100.0
			1.5	0.00	100.0
			1	0.00	100.0
			3/4	0.00	100.0
			3/8	0.00	100.0
			#4	0.00	100.0
			#10	0.00	100.0
			#20	0.06	99.9
			#40	0.30	99.6
			#60	0.47	99.4
			#100	2.57	96.5
			#140	11.34	84.4
			#200	21.82	69.9

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 198.90
Dry weight and tare = 198.80
Tare weight = 184.10
Hygroscopic moisture = 0.7%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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
2.00	20.9	22.0	16.2	0.0135	22.0	12.7	0.0340	32.5
5.00	20.6	19.0	13.1	0.0135	19.0	13.2	0.0220	26.4
15.00	20.2	16.0	10.0	0.0136	16.0	13.7	0.0130	20.1
30.00	20.0	15.0	9.0	0.0136	15.0	13.8	0.0093	18.0
60.00	20.0	14.0	8.0	0.0136	14.0	14.0	0.0066	16.0

MNK 4-3-07

Hydrometer Test Data (continued)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
250.00	20.0	13.0	7.0	0.0136	13.0	14.2	0.0032	14.0
1440.00	20.0	11.5	5.5	0.0136	11.5	14.4	0.0014	11.0

Fractional Components

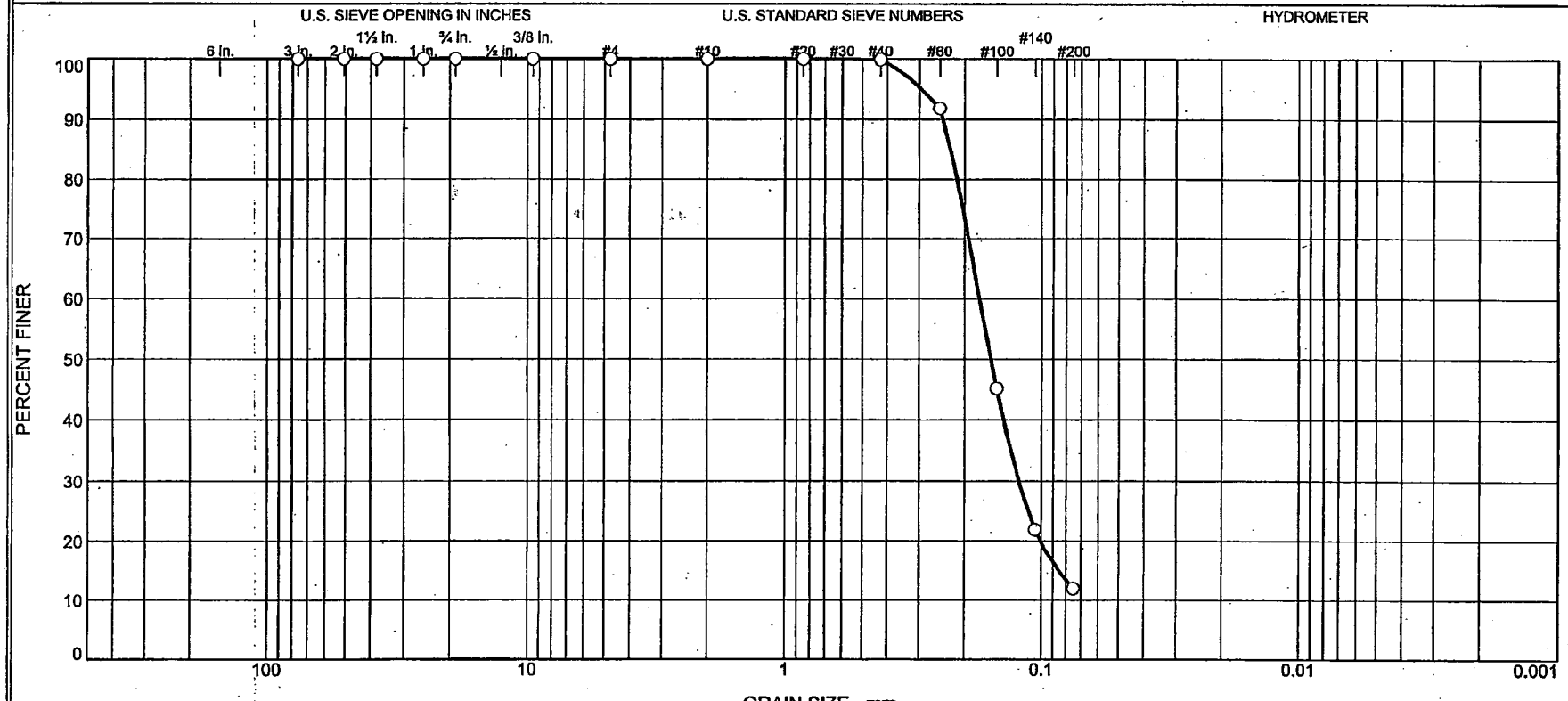
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.4	29.7	30.1	54.9	15.0	69.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0050	0.0128	0.0303	0.0512	0.0617	0.0949	0.1077	0.1222	0.1417

Fineness Modulus
0.04

MK 4-30-7

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.0	0.0	0.1	88.0	11.9	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 323	STP-131	73.5'-75.0'	12/3/2006	SP-SM	Poorly Graded Sand with Silt	20.0		
		(SS-22)							

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:RF
ASTM D 6913-04e1

4-3-07

KAW 4/3/07

GRAIN SIZE DISTRIBUTION TEST DATA

2/23/2007

Client: Bechtel Power Corporation
Project: Bechtel/STP/COL
Project Number: 5050-06-0496
Location: Boring 323
Depth: 73.5'-75.0'
Sample Number: STP-131 (SS-22)
Material Description: Poorly Graded Sand with Silt
Date: 12/3/2006
Natural Moisture: 20.0
USCS Class.: SP-SM
Testing Remarks: Tested By:TH Reviewed By:RF
ASTM D 6913-04e1

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
254.90	175.40	0.00	3	0.00	100.0
			2	0.00	100.0
			1.5	0.00	100.0
			1	0.00	100.0
			.75	0.00	100.0
			.375	0.00	100.0
			#4	0.00	100.0
			#10	0.00	100.0
			#20	0.02	100.0
			#40	0.08	99.9
			#60	6.47	91.9
			#100	43.60	45.2
			#140	62.07	21.9
			#200	70.02	11.9

Fractional Components

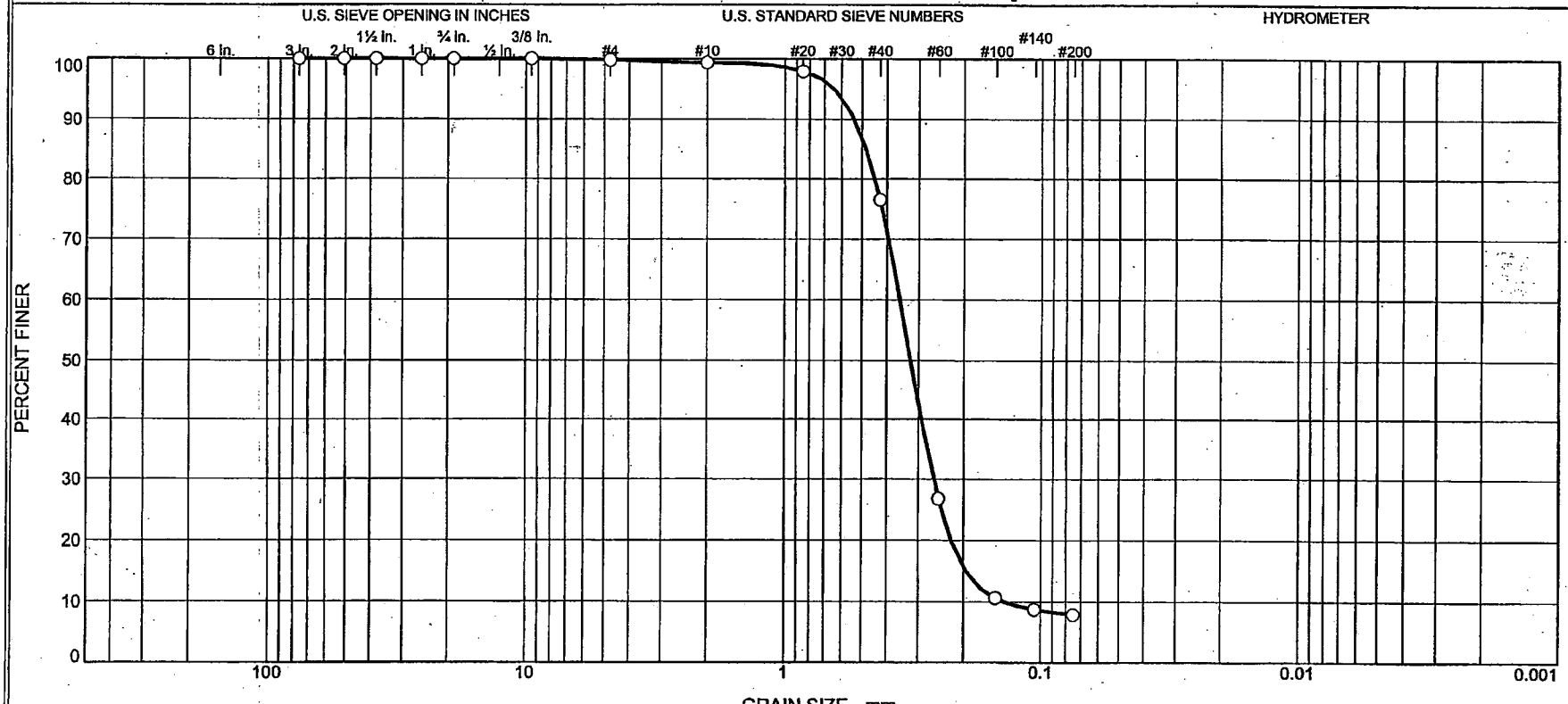
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.1	88.0	88.1			11.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0860	0.1011	0.1232	0.1580	0.1746	0.2139	0.2268	0.2427	0.2931

Fineness Modulus
0.60

MK 4-3-07

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
O	0.0	0.0	0.2	0.5	22.8	68.6	7.9	

	Source	Sample #	Depth/Elev.	Date Sampled	USCS	Material Description	NM %	LL	PL
O	Boring 323	STP-133 (SS-24)	83.5'-85.0'	12/3/2006	SP-SM	Poorly Graded Sand with Silt	18.3		

Client Bechtel Power Corporation

Project Bechtel/STP/COL

Project No. 5050-06-0496

MACTEC

O Tested By:TH Reviewed By:ST
ASTM D6913-04e1

MA
4-3-07

KAW 4/3/07