



MOISTURE CONTENT & DENSITY TEST OF SOIL
IS: 2720-1973(Part-II) (Reaffirmed 2007)



PROJECT: Geotechnical Investigation Works For Hapur - Meerut Section of DFCC Meerut JOB NO: 1342
 SITE REF: Muzaffarnagar to Saharanpur Test Report No: XPL/2015-16/02

MOISTURE CONTENT	CH-1980	CH-6550		CH-5322	CH-1790	
Borehole No./Pit no.	BH-1	BH-1	BH-2	BH-1	BH-1	
Sample No.	UDS-9	UDS-7	UDS-7	UDS-4	UDS-4	UDS-6
Depth (m)	26.00	20.00	20.00	11.00	11.00	17.00
Oven No.	XPL/OV-2	XPL/OV-2	XPL/OV-2	XPL/OV-2	XPL/OV-1	XPL/OV-2
Sample Extruder No.	XPL/SE-1	XPL/SE-1	XPL/SE-1	XPL/SE-1	XPL/SE-1	XPL/SE-1
Balance No.	XPL/EB-06	XPL/EB-06	XPL/EB-06	XPL/EB-06	XPL/EB-06	XPL/EB-06
Soil Type	Sandy SILT	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Sandy SILT
Container No.	ST-153	ST-39	ST-119	ST-107	ST-6	ST-116
Wt. Can. W1,g	23.70	21.21	22.91	20.20	20.47	24.53
Wt. Can.+ Wet Soil,(W2),g	52.19	56.5	59.94	57.01	48.75	65.40
Wt. Can.+ Dry Soil,(W3),g	46.00	48.45	52.11	50.35	42.53	58.02
Wt. Water (W2-W3),g	6.19	8.05	7.83	6.66	6.22	7.38
Wt. Dry Soil (W3-W1),g	22.30	27.24	29.20	30.15	22.06	33.49
Water Content, w, % = $\{(W2-W3)/(W3-W1)\} \times 100$	27.8	29.6	26.8	22.1	28.2	22.0

IN-SITU DENSITY						
Balance No.	XPL/EB-04	XPL/EB-04	XPL/EB-04	XPL/EB-04	XPL/EB-04	XPL/EB-04
Vernier Calliper No.	XPL/VC-1	XPL/VC-1	XPL/VC-1	XPL/VC-1	XPL/VC-1	XPL/VC-1
Steel Tape No.	XPL/ST-1	XPL/ST-1	XPL/ST-1	XPL/ST-1	XPL/ST-1	XPL/ST-1
Container No.	B-22	B-26	B-75	B-29	B-95	B-102
Wt. Tube+Soil, g	8973	10520	8800	9123	7971	9990
Wt. of Tube	6093	6894	6111	5780	3695	6642
Dia of Tube, g(Average) cm	9	10	10	10	10	10
Length of sample, cm	24.5	22.5	17.0	22.5	27.0	22.0
Wt Soil (W)	2880	3626	2689	3343	4276	3348
Vol. Soil (V), cm ³	1559	1768	1336	1768	2121	1729
In-Situ Density, $\rho_g = (W/V)$ g/cm ³	1.85	2.05	2.01	1.89	2.02	1.94
Dry Density, $\gamma_d = [g/(1+w)]$ g/cm ³	1.45	1.58	1.59	1.55	1.57	1.59

Tested by  Date: 15/3/2016	Choked By  Date: 23/3/16	Authorised Signatory  Date: 28/3/16
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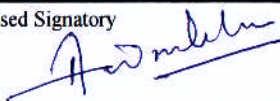
JOB NO: 1342

SITE REF: Muzaffarnagar to Saharanpur

Test Report No: XPL/2015-16/02

MOISTURE CONTENT	CH-1790				CH-3360	CH-8440
	BH-1		BH-2		BH-1	BH-1
Borehole No./Pit no.						
Sample No.	UDS-8	UDS-9	UDS-4	UDS-6	UDS-4	UDS-1
Depth (m)	23.00	26.00	11.00	17.00	11.00	2.00
Oven No.	XPL/OV-2	XPL/OV-2	XPL/OV-2	XPL/OV-2	XPL/OV-2	XPL/OV-1
Sample Extruder No.	XPL/SE-1	XPL/SE-1	XPL/SE-1	XPL/SE-1	XPL/SE-1	XPL/SE-1
Balance No.	XPL/EB-06	XPL/EB-06	XPL/EB-06	XPL/EB-06	XPL/EB-06	XPL/EB-06
Soil Type	Sandy SILT	Sandy SILT	Sandy SILT	Sandy SILT	Sandy SILT	Silty CLAY
Container No.	ST-138	ST-61	ST-140	ST-13	ST-146	ST-125
Wt.Can. W1,g	24.36	23.94	23.58	23.82	20.04	20.16
Wt.Can.+ Wet Soil,(W2),g	61.07	51.6	49.35	59.18	52.72	50.11
Wt.Can.+ Dry Soil,(W3),g	54.39	47.15	44.10	53.26	47.09	44.31
Wt.Water (W2-W3),g	6.68	4.45	5.25	5.92	5.63	5.80
Wt.Dry Soil (W3-W1),g	30.03	23.21	20.52	29.44	27.05	24.15
Water Content, w, % = $\{(W2-W3)/(W3-W1)\} \times 100$	22.2	19.2	25.6	20.1	20.8	24.0

IN-SITU DENSITY						
Balance No.	XPL/EB-04	XPL/EB-04	XPL/EB-04	XPL/EB-04	XPL/EB-04	XPL/EB-04
Vernier Calliper No.	XPL/VC-1	XPL/VC-1	XPL/VC-1	XPL/VC-1	XPL/VC-1	XPL/VC-1
Steel Tape No.	XPL/ST-1	XPL/ST-1	XPL/ST-1	XPL/ST-1	XPL/ST-1	XPL/ST-1
Container No.	B-65	B-408	B-101	B-41	B-76	B-117
Wt. Tube+Soil, g	8695	9150	9616	7213	10888	5471
Wt.of Tube	5830	6037	5851	4749	5944	3864
Dia of Tube, g(Average) cm	10	10	10.5	10	10.5	8
Length of sample, cm	18.0	19.0	20.0	15.5	29.0	16.0
Wt Soil (W)	2865	3113	3765	2464	4944	1607
Vol. Soil (V), cm ³	1414	1493	1733	1218	2512	805
In-Situ Density, $\rho_s = (W/V)$ g/cm ³	2.03	2.09	2.17	2.02	1.97	2.00
Dry Density, $\gamma_d = [\rho_s/(1+w)]$ g/cm ³	1.66	1.75	1.73	1.68	1.63	1.61

Tested by  Date: 16/3/2016	Cheked By  Date: 28/3/16	Authorised Signatory  Date: 28/3/16
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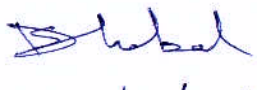

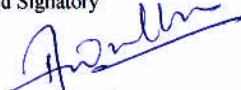
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MOISTURE CONTENT	CH-8440	CH-11+753	CH-15+800	CH-14+150	CH-13+260
Borehole No./Pit no.	BH-1	BH-1	BH-1	BH-1	BH-1
Sample No.	UDS-4	UDS-1	UDS-1	UDS-1	UDS-1
Depth (m)	11.00	2.00	2.00	2.00	2.00
Oven No.	XPL/OV-2	XPL/OV-2	XPL/OV-2	XPL/OV-2	XPL/OV-1
Sample Extruder No.	XPL/SE-1	XPL/SE-1	XPL/SE-1	XPL/SE-1	XPL/SE-1
Balance No.	XPL/EB-06	XPL/EB-06	XPL/EB-06	XPL/EB-06	XPL/EB-06
Soil Type	Sandy SILT	Sandy SILT	Sandy SILT	Sandy SILT	Silty CLAY
Container No.	ST-132	ST-92	ST-54	ST-145	ST-80
Wt.Can. W1,g	19.63	23.69	22.85	20.43	21.13
Wt.Can.+ Wet Soil,(W2),g	48.36	70.39	57.60	58.09	58.49
Wt.Can.+ Dry Soil,(W3),g	43.10	64.46	51.01	52.78	51.97
Wt. Water (W2-W3),g	5.26	5.93	6.59	5.31	6.52
Wt.Dry Soil (W3-W1),g	23.47	40.77	28.16	32.35	30.84
Water Content, w, % = $\{(W2-W3)/(W3-W1)\} \times 100$	22.4	14.5	23.4	16.4	21.1

IN-SITU DENSITY					
Balance No.	XPL/EB-04	XPL/EB-04	XPL/EB-04	XPL/EB-04	XPL/EB-04
Vernier Calliper No.	XPL/VC-1	XPL/VC-1	XPL/VC-1	XPL/VC-1	XPL/VC-1
Steel Tape No.	XPL/ST-1	XPL/ST-1	XPL/ST-1	XPL/ST-1	XPL/ST-1
Container No.	B-165	B-70	B-38	B-23	B-29
Wt. Tube+Soil, g	5605	7944	7736	8761	5502
Wt. of Tube	3801	4229	4867	5945	3862
Dia of Tube, g(Average) cm	8	10.5	10	10.5	8
Length of sample, cm	17.0	23.0	20.0	17.0	17.0
Wt Soil (W)	1804	3715	2869	2816	1640
Vol. Soil (V), cm ³	855	1992	1571	1473	855
In-Situ Density, $\rho_s = (W/V)$ g/cm ³	2.11	1.86	1.83	1.91	1.92
Dry Density, $\gamma_d = [gt/(1+w)]$ g/cm ³	1.72	1.63	1.48	1.64	1.58

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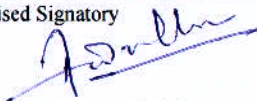
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MOISTURE CONTENT	CH-17+790				
Borehole No./Pit no.	BH-1				
Sample No.	UDS-1	UDS-8	UDS-9		
Depth (m)	2.00	23.00	26.00		
Oven No.	XPL/OV-2	XPL/OV-2	XPL/OV-2		
Sample Extruder No.	XPL/SE-1	XPL/SE-1	XPL/SE-1		
Balance No.	XPL/EB-06	XPL/EB-06	XPL/EB-06		
Soil Type	Sandy SILT	Sandy SILT	Sandy SILT		
Container No.	ST-99	ST-138	ST-61		
Wt.Can. W1,g	25.75	24.36	23.94		
Wt.Can.+ Wet Soil,(W2),g	61.49	61.07	51.60		
Wt.Can.+ Dry Soil,(W3),g	58.35	54.44	47.35		
Wt.Water (W2-W3),g	3.14	6.63	4.25		
Wt.Dry Soil (W3-W1),g	32.60	30.08	23.41		
Water Content, w, % = $\frac{(W2-W3)}{(W3-W1)} \times 100$	9.6	22.0	18.2		

IN-SITU DENSITY					
Balance No.	XPL/EB-04	XPL/EB-04	XPL/EB-04		
Vernier Calliper No.	XPL/VC-1	XPL/VC-1	XPL/VC-1		
Steel Tape No.	XPL/ST-1	XPL/ST-1	XPL/ST-1		
Container No.	B-40	B-65	B-408		
Wt. Tube+Soil, g	9463	8695	9150		
Wt.of Tube	6033	5830	6037		
Dia of Tube, g(Average) cm	10.5	10	10		
Length of sample, cm	20.0	18.0	19.0		
Wt Soil (W)	3430	2865	3113		
Vol. Soil (V), cm ³	1733	1414	1493		
In-Situ Density, $\rho_t = \frac{W}{V}$ g/cm ³	1.98	2.03	2.09		
Dry Density, $\rho_d = \frac{\rho_t}{(1+w)}$ g/cm ³	1.81	1.66	1.76		

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MOISTURE CONTENT	CH-18+900		CH-19+680	CH-24+269		CH-20+960
	BH-1		BH-1	BH-1		BH-1
Borehole No./Pit no.	BH-1		BH-1	BH-1		BH-1
Sample No.	UDS-1	UDS-2	UDS-2	UDS-1	UDS-5	UDS-1
Depth (m)	2.00	5.00	5.00	2.00	14.00	2.00
Oven No.	XPL/OV-2	XPL/OV-2	XPL/OV-2	XPL/OV-2	XPL/OV-2	XPL/OV-2
Sample Extruder No.	XPL/SE-1	XPL/SE-1	XPL/SE-1	XPL/SE-1	XPL/SE-1	XPL/SE-1
Balance No.	XPL/EB-06	XPL/EB-06	XPL/EB-06	XPL/EB-06	XPL/EB-06	XPL/EB-06
Soil Type	Silty CLAY	Silty CLAY	Sandy SILT	Sandy SILT	Sandy SILT	Sandy SILT
Container No.	ST-134	ST-152	ST-136	ST-160	ST-171	ST-49
Wt.Can. W1,g	23.98	22.31	20.93	20.01	21.69	21.53
Wt.Can.+ Wet Soil,(W2),g	64.22	52.83	48.46	43.51	54.12	57.04
Wt.Can.+ Dry Soil,(W3),g	57.88	45.95	43.92	41.34	50.96	50.50
Wt.Water (W2-W3),g	6.34	6.88	4.54	2.17	3.16	6.54
Wt.Dry Soil (W3-W1),g	33.90	23.64	22.99	21.33	29.27	28.97
Water Content, w, % = $\frac{(W2-W3)}{(W3-W1)} \times 100$	18.7	29.1	19.7	10.2	10.8	22.6

IN-SITU DENSITY						
Balance No.	XPL/EB-04	XPL/EB-04	XPL/EB-04	XPL/EB-04	XPL/EB-04	XPL/EB-04
Vernier Calliper No.	XPL/VC-1	XPL/VC-1	XPL/VC-1	XPL/VC-1	XPL/VC-1	XPL/VC-1
Steel Tape No.	XPL/ST-1	XPL/ST-1	XPL/ST-1	XPL/ST-1	XPL/ST-1	XPL/ST-1
Container No.	B-6	B-106	B-66	B-21	B-42	B-46
Wt. Tube+Soil, g	8835	10715	4994	6750	9703	4255
Wt.of Tube	5909	5658	3022	4404	5848	2422
Dia of Tube, g(Average) cm	10.5	10.5	8	10.5	10.5	8
Length of sample, cm	17.5	28.0	20.5	15.0	24.0	18.0
Wt Soil (W)	2926	5057	1972	2346	3855	1833
Vol. Soil (V), cm ³	1516	2426	1031	1299	2079	905
In-Situ Density, $\rho_t = (W/V)$ g/cm ³	1.93	2.08	1.91	1.81	1.85	2.03
Dry Density, $\rho_d = \frac{W}{V(1+w)}$ g/cm ³	1.63	1.61	1.60	1.64	1.67	1.65



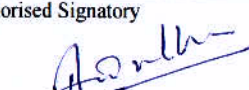
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MOISTURE CONTENT	CH-22+700		CH-25+800		CH-28+840	
	BH-1		BH-1		BH-1	
Borehole No./Pit no.	BH-1		BH-1		BH-1	
Sample No.	UDS-1	UDS-2	UDS-1	UDS-4	UDS-1	UDS-2
Depth (m)	2.00	5.00	2.00	11.00	2.00	5.00
Oven No.	XPL/OV-2	XPL/OV-2	XPL/OV-2	XPL/OV-1	XPL/OV-1	XPL/OV-2
Sample Extruder No.	XPL/SE-1	XPL/SE-1	XPL/SE-1	XPL/SE-1	XPL/SE-1	XPL/SE-1
Balance No.	XPL/EB-06	XPL/EB-06	XPL/EB-06	XPL/EB-06	XPL/EB-06	XPL/EB-06
Soil Type	Sandy SILT	Sandy SILT	Sandy SILT	Sandy SILT	Silty CLAY	Sandy SILT
Container No.	ST-88	ST-101	ST-90	ST-37	ST-145	ST-18
Wt Can. W1,g	19.51	19.81	20.74	24.18	20.44	25.10
Wt Can.+ Wet Soil,(W2),g	41.33	47.84	58.19	54.09	44.26	51.06
Wt Can.+ Dry Soil,(W3),g	39.64	45.28	53.00	49.02	42.16	48.68
Wt Water (W2-W3),g	1.69	2.56	5.19	5.07	2.10	2.38
Wt.Dry Soil (W3-W1),g	20.13	25.47	32.26	24.84	21.72	23.58
Water Content, w, % = $\frac{(W2-W3)}{(W3-W1)} \times 100$	8.4	10.1	16.1	20.4	9.7	10.1

IN-SITU DENSITY						
Balance No.	XPL/EB-04	XPL/EB-04	XPL/EB-04	XPL/EB-04	XPL/EB-04	XPL/EB-04
Vernier Calliper No.	XPL/VC-1	XPL/VC-1	XPL/VC-1	XPL/VC-1	XPL/VC-1	XPL/VC-1
Steel Tape No.	XPL/ST-1	XPL/ST-1	XPL/ST-1	XPL/ST-1	XPL/ST-1	XPL/ST-1
Container No.	B-68	B-83	B-12	B-125	B-79	B-96
Wt. Tube+Soil, g	3383	4023	10602	3740	9656	10207
Wt of Tube	2482	2081	5936	2006	6603	6068
Dia of Tube, g(Average) cm	8.3	8.2	10.3	8	9.5	10
Length of sample, cm	9.0	21.0	28.0	17.0	23.0	28.0
Wt Soil (W)	901	1942	4666	1734	3053	4139
Vol. Soil (V), cm ³	487	1109	2334	855	1631	2200
In-Situ Density, $g_i = \frac{W}{V}$ g/cm ³	1.85	1.75	2.00	2.03	1.87	1.88
Dry Density, $\gamma_d = \frac{g_i}{(1+w)}$ g/cm ³	1.71	1.59	1.72	1.68	1.71	1.71

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MOISTURE CONTENT	CH-28+840	CH-27+960		CH-30+236		CH-33+310
Borehole No./Pit no.	BH-1	BH-1		BH-1		BH-1
Sample No.	UDS-5	UDS-1	UDS-6	UDS-1	UDS-5	UDS-1
Depth (m)	14.00	2.00	17.00	2.00	14.00	2.00
Oven No.	XPL/OV-2	XPL/OV-1	XPL/OV-2	XPL/OV-2	XPL/OV-2	XPL/OV-1
Sample Extruder No.	XPL/SE-1	XPL/SE-1	XPL/SE-1	XPL/SE-1	XPL/SE-1	XPL/SE-1
Balance No.	XPL/EB-06	XPL/EB-06	XPL/EB-06	XPL/EB-06	XPL/EB-06	XPL/EB-06
Soil Type	Sandy SILT	Sandy SILT	Silty CLAY	Sandy SILT	Sandy SILT	Sandy SILT
Container No.	ST-154	ST-37	ST-145	ST-7	ST-94	ST-224
Wt Can. W1,g	26.50	24.17	21.13	24.63	20.46	24.28
Wt Can.+ Wet Soil,(W2),g	64.05	47.21	45.41	69.32	62.12	60.77
Wt Can.+ Dry Soil,(W3),g	60.34	45.23	42.97	65.50	54.76	54.51
Wt. Water (W2-W3),g	3.71	1.98	2.44	3.82	7.36	6.26
Wt.Dry Soil (W3-W1),g	33.84	21.06	21.84	40.87	34.30	30.23
Water Content, w, % = $\frac{(W2-W3)}{(W3-W1)} \times 100$	11.0	9.4	11.2	9.3	21.5	20.7

IN-SITU DENSITY

Balance No.	XPL/EB-04	XPL/EB-04	XPL/EB-04	XPL/EB-04	XPL/EB-04	XPL/EB-04
Vernier Calliper No.	XPL/VC-1	XPL/VC-1	XPL/VC-1	XPL/VC-1	XPL/VC-1	XPL/VC-1
Steel Tape No.	XPL/ST-1	XPL/ST-1	XPL/ST-1	XPL/ST-1	XPL/ST-1	XPL/ST-1
Container No.	B-94	B-105	B-94	B-4	B-20	B-127
Wt. Tube+Soil, g	9404	8854	9404	8539	8170	9216
Wt. of Tube	6158	6059	6158	5894	5242	5980
Dia of Tube, g(Average) cm	10.5	10.5	10.5	10	10	10.5
Length of sample, cm	20.0	17.0	20.0	18.0	20.0	21.0
Wt Soil (W)	3246	2795	3246	2645	2928	3236
Vol. Soil (V), cm ³	1733	1473	1733	1414	1571	1819
In-Situ Density, $\rho_s = (W/V)$ g/cm ³	1.87	1.90	1.87	1.87	1.86	1.78
Dry Density, $\gamma_d = [gt/(1+w)]$ g/cm ³	1.69	1.73	1.69	1.71	1.53	1.47

Tested by

[Signature]

Checked By

[Signature]
28/3/16

Authorised Signatory

[Signature]
28/3/16

Date:

18/3/2016

Date:

Date:






MOISTURE CONTENT & DENSITY TEST OF SOIL
IS: 2720-1973(Part-II) (Reaffirmed 2007)



PROJECT: Geotechnical Investigation Works For Hapur - Meerut Section of DFCC Meerut JOB NO: 1342
 SITE REF: Muzaffarnagar to Saharanpur Test Report No: XPL/2015-16/02

MOISTURE CONTENT	CH-34+920		CH-36+585	
	BH-1		BH-1	BH-2
Borehole No./Pit no.	BH-1		BH-1	BH-2
Sample No.	UDS-1	UDS-6	UDS-8	UDS-7
Depth (m)	2.00	17.00	23.00	20.00
Oven No.	XPL/OV-2	XPL/OV-2	XPL/OV-2	XPL/OV-1
Sample Extruder No.	XPL/SE-1	XPL/SE-1	XPL/SE-1	XPL/SE-1
Balance No.	XPL/EB-06	XPL/EB-06	XPL/EB-06	XPL/EB-06
Soil Type	Sandy SILT	Sandy SILT	Sandy SILT	Sandy SILT
Container No.	ST-135	ST-178	ST-153	ST-27
Wt. Can. W1,g	21.26	24.22	23.67	24.82
Wt. Can.+ Wet Soil,(W2),g	63.08	67.79	44.08	45.52
Wt. Can.+ Dry Soil,(W3),g	60.06	64.80	41.94	42.45
Wt. Water (W2-W3),g	3.02	2.99	2.14	3.07
Wt. Dry Soil (W3-W1),g	38.80	40.58	18.27	17.63
Water Content, w, % = $\{(W2-W3)/(W3-W1)\} \times 100$	7.8	7.4	11.7	17.4

IN-SITU DENSITY				
Balance No.	XPL/EB-04	XPL/EB-04	XPL/EB-04	XPL/EB-04
Vernier Calliper No.	XPL/VC-1	XPL/VC-1	XPL/VC-1	XPL/VC-1
Steel Tape No.	XPL/ST-1	XPL/ST-1	XPL/ST-1	XPL/ST-1
Container No.	B-3	B-002	B-97	B-107
Wt. Tube+Soil, g	9822	9689	7027	8864
Wt. of Tube	5461	5786	2841	5597
Dia of Tube, g(Average) cm	10.5	10.5	11	10.5
Length of sample, cm	27.0	24.0	24.0	20.0
Wt Soil (W)	4361	3903	4186	3267
Vol. Soil (V), cm ³	2339	2079	2282	1733
In-Situ Density, $\rho_t = (W/V)$ g/cm ³	1.86	1.88	1.83	1.89
Dry Density, $\rho_d = [\rho_t/(1+w)]$ g/cm ³	1.73	1.75	1.64	1.61

Tested by  Date: 18/3/2016	Cheked By  Date: 28/3/16	Authorised Signatory  Date: 28/3/16
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MOISTURE CONTENT & DENSITY TEST OF SOIL


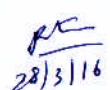
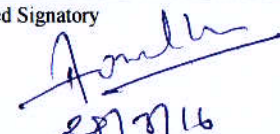
IS: 2720-1973(Part-II) (Reaffirmed 2007)



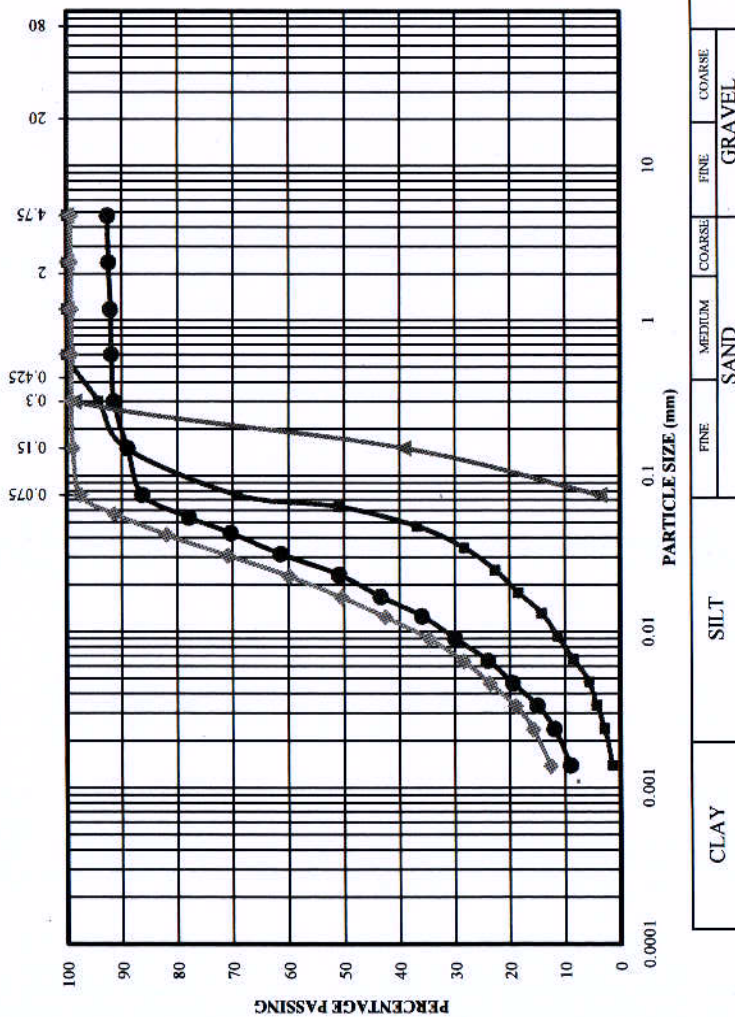
PROJECT: Geotechnical Investigation Works For Hapur - Meerut Section of DFCC Meerut JOB NO: 1342
 SITE REF: Muzaffarnagar to Saharanpur Test Report No: XPL/2015-16/02

MOISTURE CONTENT	CH-38+930				
Borehole No./Pit no.	BH-1				
Sample No.	UDS-1	UDS-4	UDS-5		
Depth (m)	2.00	11.00	14.00		
Oven No.	XPL/OV-2	XPL/OV-2	XPL/OV-1		
Sample Extruder No.	XPL/SE-1	XPL/SE-1	XPL/SE-1		
Balance No.	XPL/EB-06	XPL/EB-06	XPL/EB-06		
Soil Type	Sandy SILT	Sandy SILT	Silty CLAY		
Container No.	ST-153	ST-71	ST-125		
Wt.Can. W1,g	23.67	24.38	20.18		
Wt.Can.+ Wet Soil,(W2),g	44.08	55.00	58.64		
Wt.Can.+ Dry Soil,(W3),g	41.94	48.63	50.22		
Wt. Water (W2-W3),g	2.14	6.37	8.42		
Wt.Dry Soil (W3-W1),g	18.27	24.25	30.04		
Water Content, w, % = $\{(W2-W3)/(W3-W1)\} \times 100$	11.7	26.3	28.0		

IN-SITU DENSITY					
Balance No.	XPL/EB-04	XPL/EB-04	XPL/EB-04		
Vernier Calliper No.	XPL/VC-1	XPL/VC-1	XPL/VC-1		
Steel Tape No.	XPL/ST-1	XPL/ST-1	XPL/ST-1		
Container No.	B-97	B-36	B-34		
Wt. Tube+Soil, g	7027	5145	9926		
Wt.of Tube	2841	3644	7374		
Dia of Tube, g(Average) cm	11	7.5	9		
Length of sample, cm	25.0	18.5	22.0		
Wt Soil (W)	4186	1501	2552		
Vol. Soil (V), cm ³	2377	818	1400		
In-Situ Density, $g_s = (W/V)$ g/cm ³	1.76	1.84	1.82		
Dry Density, $\gamma_d = [g_s/(1+w)]$ g/cm ³	1.58	1.45	1.42		

Tested by  Date: 18/3/2016	Checked By  Date: 28/3/16	Authorised Signatory  Date: 28/3/16
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GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-2010	SPT-1	1.50	Brownish Sandy SILT (ML)	0	31	66	3
2	●	BH-1, CH-2010	UDS-3	8.00	Brownish Silty CLAY (CL)	7	7	75	11
3	▲	BH-1, CH-2010	SPT-10	15.00	Greyish Poorly Graded SAND	0	96	4	
4	◆	BH-1, CH-2010	UDS-8	23.00	Brownish Silty CLAY (CI)	1	2	82	15

Job No: 1342
Test Report No: XPL/2015-16/02

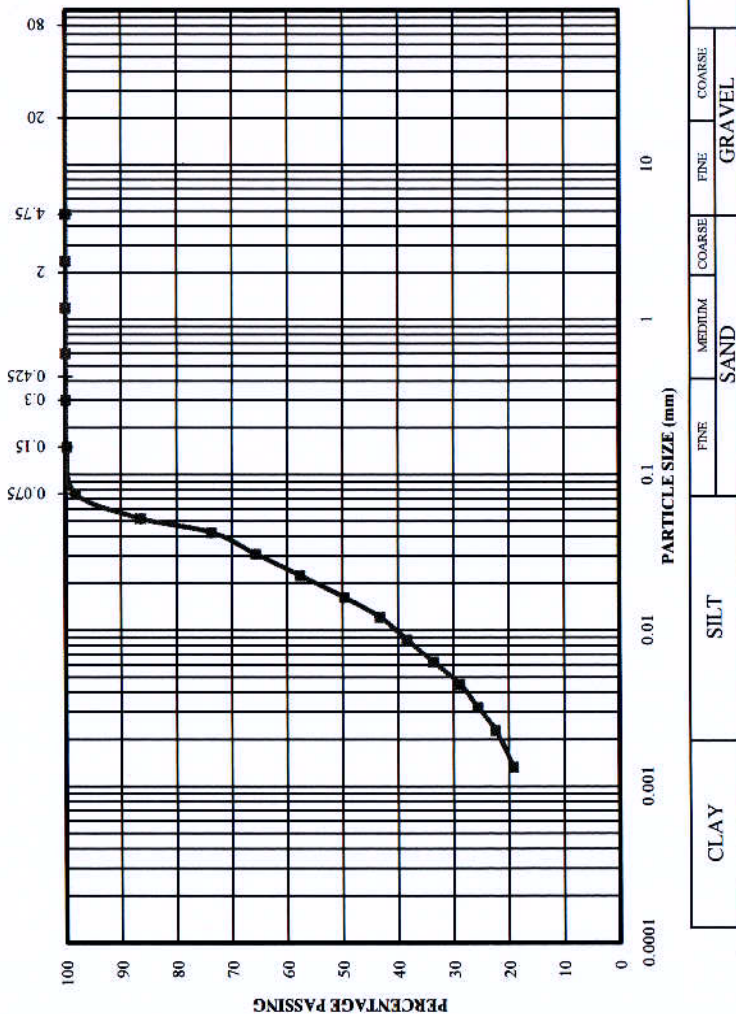
Date: 28/3/16
Authorised Signatory

Site Ref: Muzaffarnagar to Saharanpur

Date: 16/3/16
Operator: Bhojraj

GRAIN SIZE ANALYSIS (IS : 2720 : PART IV)

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL		SILT %	CLAY %
						FINE	COARSE		
1	■	BH-1, CH-2010	UDS-9	26.00	Brownish Silty CLAY (CI)	0	2	76	22

Job No: 1342
Test Report No: XPL/2015-16/02

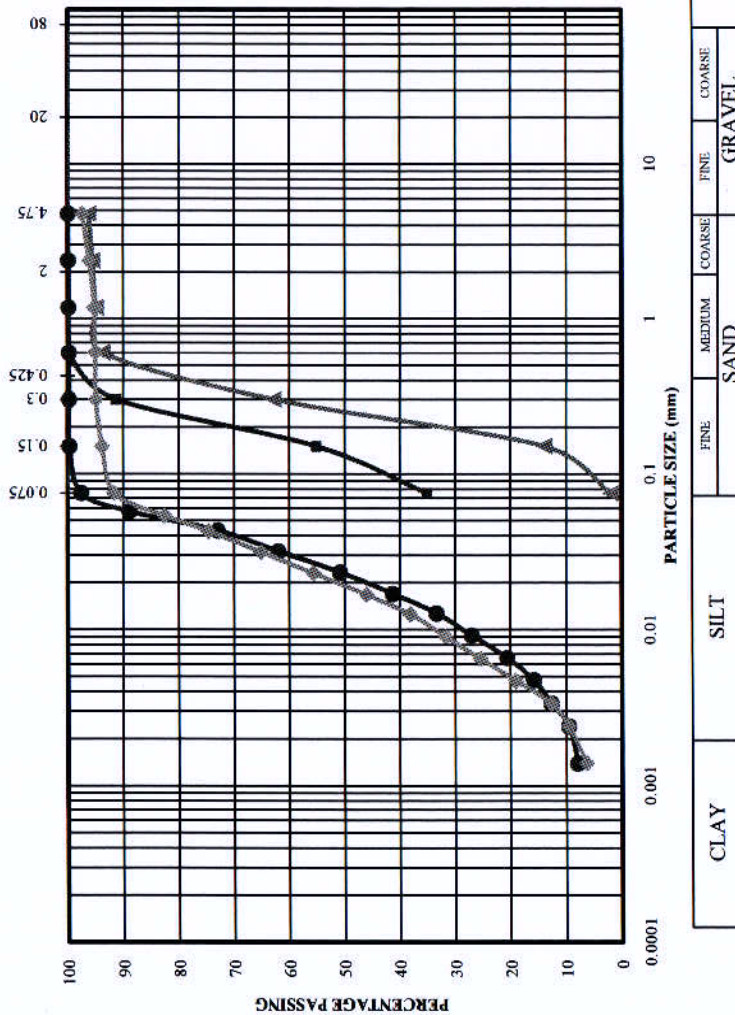
Date: 28/07/16
Authorised Signatory

Site Ref: Muzaffarnagar to Saharanpur

Date: 28/8/16
Checked: [Signature]

Operator: [Signature]

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-1980	SPT-1	1.50	Brownish Silty SAND (SM)	0	65	35	
2	●	BH-1, CH-1980	UDS-3	8.00	Brownish Sandy SILT (ML)	0	2	89	9
3	▲	BH-1, CH-1980	SPT-10	15.00	Poorly Graded SAND (SP)	4	94	2	
4	◆	BH-1, CH-1980	UDS-8	23.00	Brownish Sandy SILT (ML)	3	5	84	8

Job No: 1342
XPL/2015-16/02

Test Report No:

Date: 28/3/16
Authorised Signatory

Site Ref: Muzaffarnagar to Saharanpur

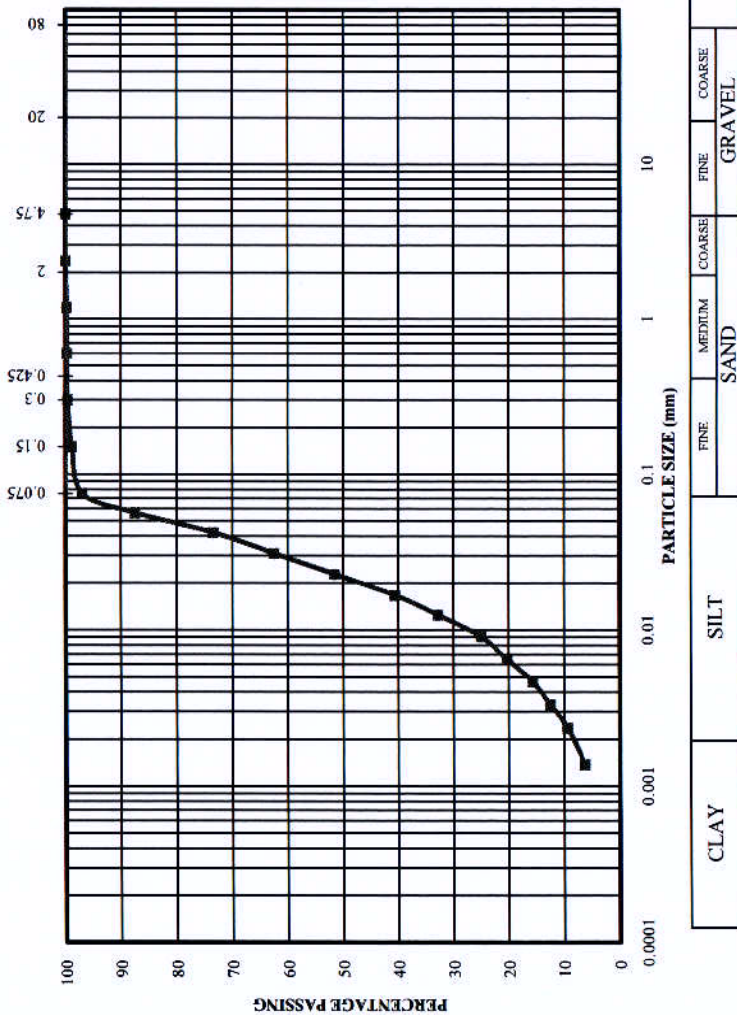
Date: 28/3/16

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Date: 16/3/16

Operator: Bhagyee

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL		SILT %	CLAY %
						FINE	COARSE		
1	■	BH-1, CH-1980	UDS-9	26.00	Brownish Sandy SILT (ML)	0	3	89	8

Site Ref: Muzaffarnagar to Saharanpur

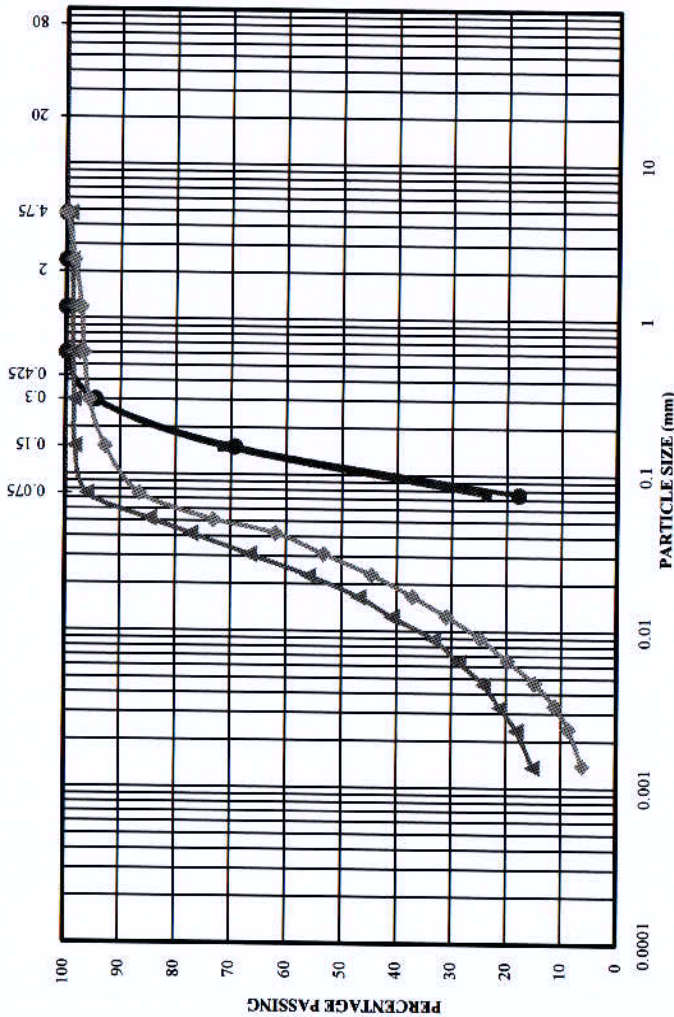
Operator: *Abhishek* Date: *16/8/2016* Checked: *AS*

Test Report No: XPL/2015-16/02

Job No: 1342

Date: *27/8/16* Authorised Signatory: *[Signature]*

GRADING CURVE BASED ON IS : 2720 : PART IV



CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE

S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-6550	SPT-1	1.50	Brownish Silty SAND (SM)	0	76	24	
2	●	BH-1, CH-6550	SPT-6	9.00	Brownish Silty SAND (SM)	0	82	18	
3	▲	BH-1, CH-6550	UDS-7	20.00	Brownish Silty CLAY (CI)	1	3	79	17
4	◆	BH-1, CH-6550	SPT-19	28.50	Brownish Sandy SILT (ML)	0	14	78	8

Site Ref: Muzaffarnagar to Saharanpur

Operator: *Bhujul* Date: 16/3/16

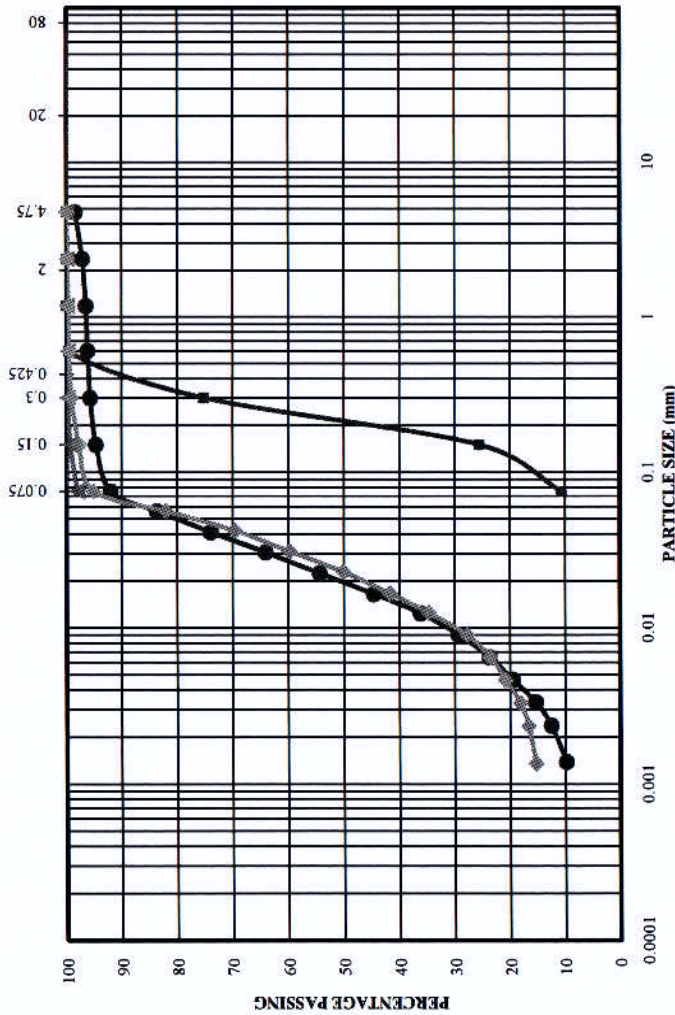
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Test Report No: XPL/2015-16/02

Authorized Signatory: *[Signature]* Date: 28/3/16

Job No: 1342

GRADING CURVE BASED ON IS : 2720 : PART IV



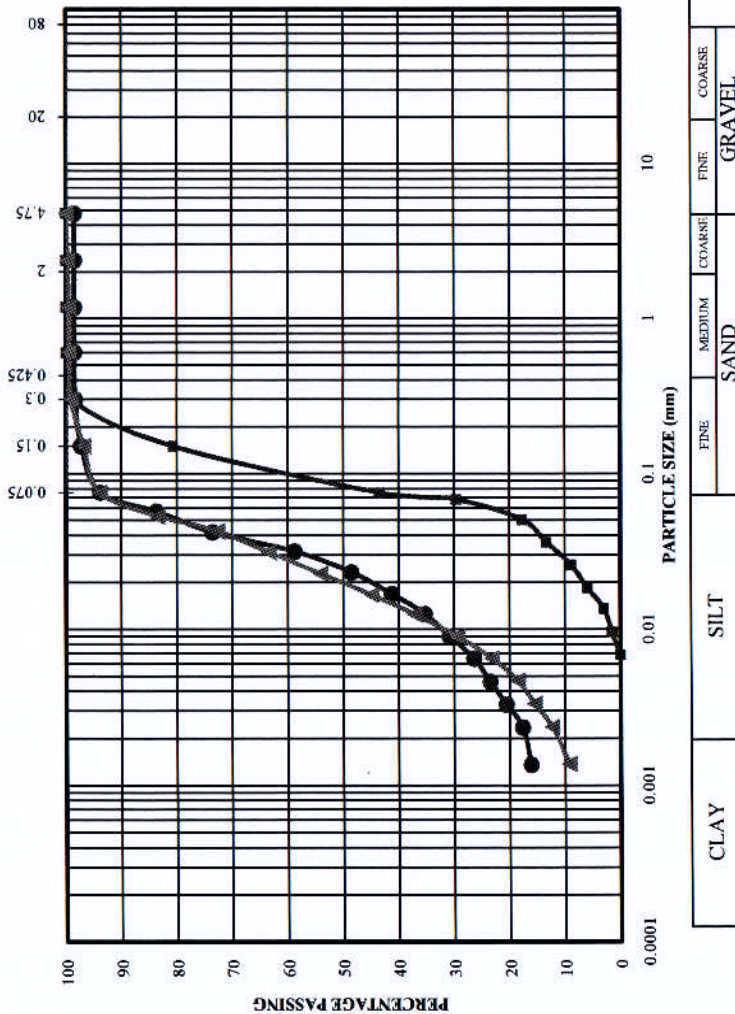
CLAY	SILT			GRAVEL		C
	FINE	MEDIUM	COARSE	FINE	COARSE	

S.NO.	SYMBOL	BH.NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-2, CH-6550	SPT-1	1.50	Brownish Silty SAND (SW)	0	89	11	
2	●	BH-2, CH-6550	SPT-6	9.00	Brownish Silty CLAY (CL)	2	6	80	12
3	▲	BH-2, CH-6550	UDS-7	20.00	Brownish Silty CLAY (CL)	0	2	84	14
4	◆	BH-2, CH-6550	SPT-19	28.50	Brownish Silty CLAY (CI)	0	5	79	16

Site Ref: Muzaffarnagar to Saharanpur
 Job No: 1342
 Test Report No: XPL/2015-16/02

Operator: *Bhagy* Date: 17/3/16
 Checked: *RS* Date: 28/3/16
 Authorised Signatory: *[Signature]* Date: 28/3/16

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-5322	SPT-1	1.50	Brownish Silty SAND (SM)	0	57	43	0
2	●	BH-1, CH-5322	SPT-4	6.00	Brownish Silty CLAY (CI)	2	4	77	17
3	▲	BH-1, CH-5322	UDS-4	11.00	Brownish Silty CLAY (CL)	0	6	82	12

Site Ref: Muzaffarnagar to Saharanpur

Job No: 1342

Test Report No: XPL/2015-16/02

Operator: Bhagney

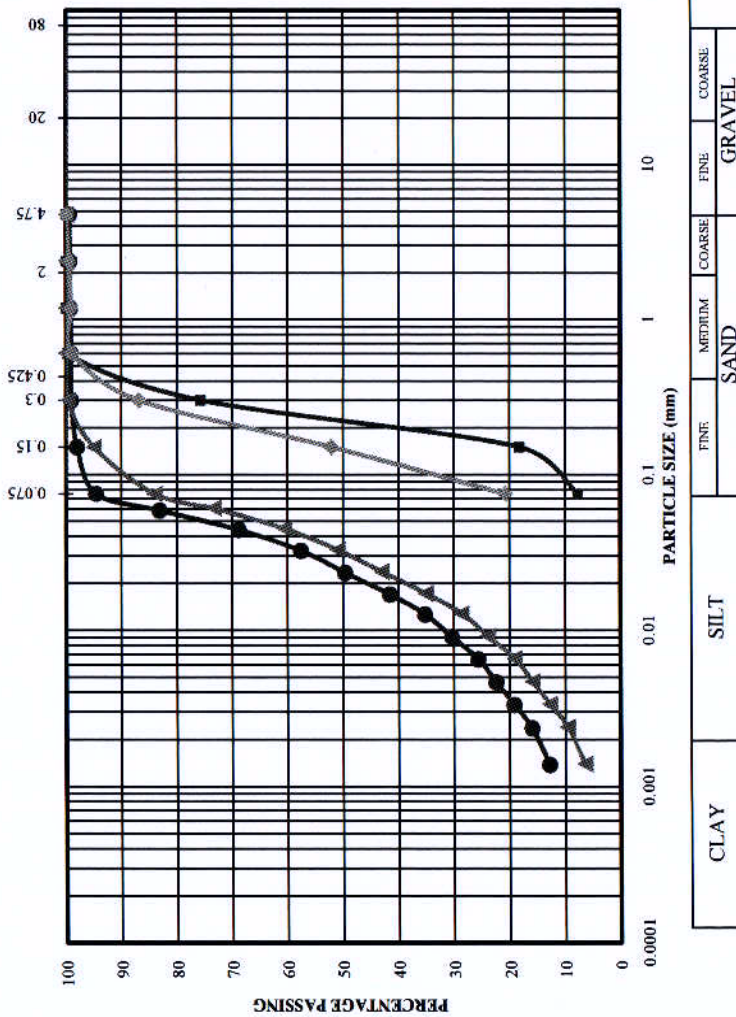
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Date: 17/3/16

Authorised Signatory: [Signature]

Date: 29/8/16

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-1790	SPT-1	1.50	Brownish Silty SAND (SW-SM)	0	92	8	
2	●	BH-1, CH-1790	UDS-4	11.00	Brownish Silty CLAY (CI)	1	4	80	15
3	▲	BH-1, CH-1790	UDS-6	17.00	Brownish Sandy SILT (ML)	0	16	76	8
4	◆	BH-1, CH-1790	SPT-18	27.00	Brownish Silty SAND (SM)	0	79	21	

Job No: 1342
Test Report No: XPL/2015-16/02

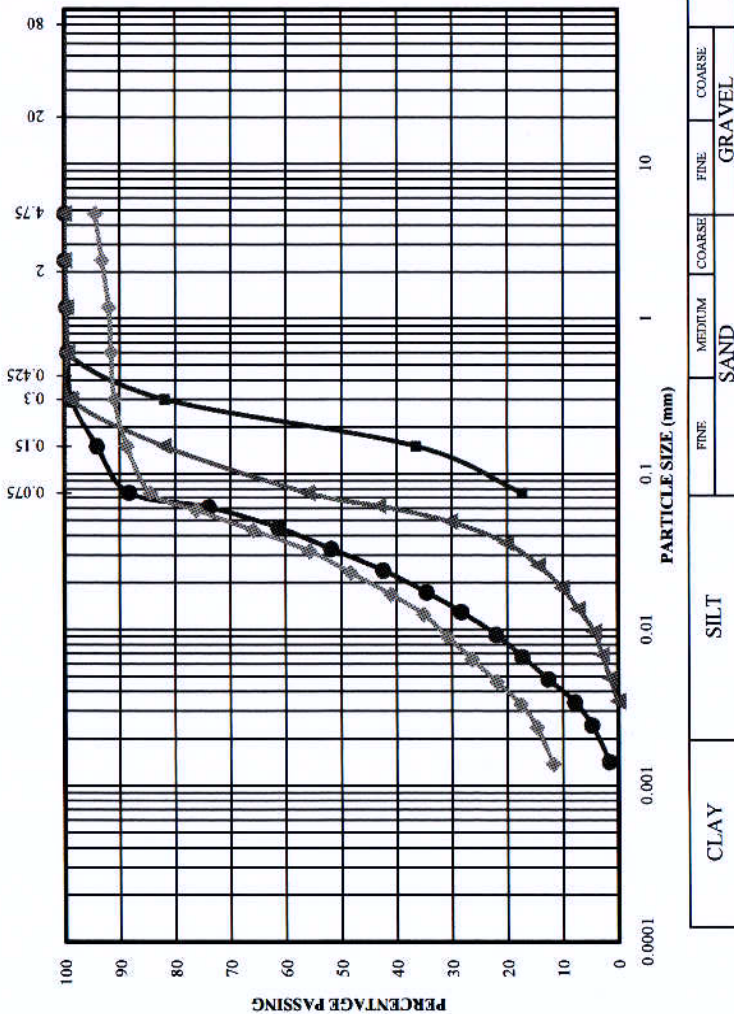
Date: 28/3/16
Authorised Signatory

Site Ref: Muzaffarnagar to Saharanpur

Operator: Bhopy
Date: 17/3/16
Checked:

Date: 28/3/16

GRADING CURVE BASED ON IS : 2720 : PART IV



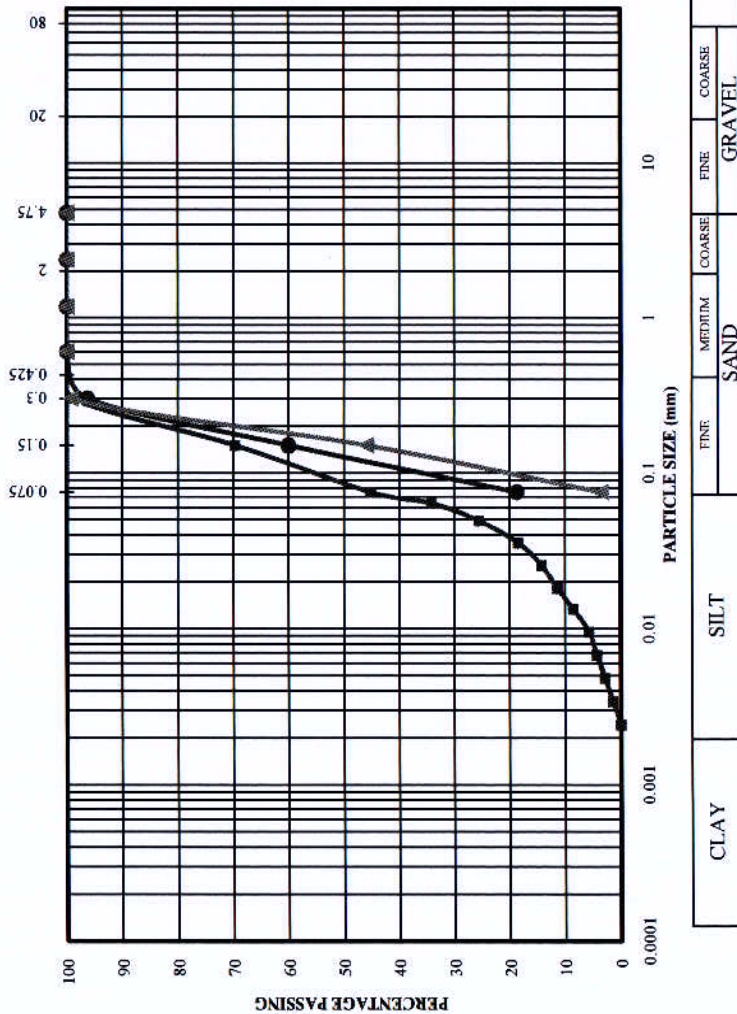
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1	■	BH-2, CH-1790	SPT-1	1.50	Brownish Silty SAND (SM)	0	83	17	
2	●	BH-2, CH-1790	SPT-4	11.00	Brownish Sandy SILT (ML)	0	12	84	4
3	▲	BH-2, CH-1790	UDS-6	17.00	Brownish Sandy SILT (ML)	0	44	56	0
4	◆	BH-2, CH-1790	SPT-18	27.00	Brownish Silty CLAY (CL)	6	10	70	14

Job No: 1342
Test Report No: XPL/2015-16/02

Site Ref: Muzaffarnagar to Saharanpur

Operator: *Shreyas* Date: 17/3/16
Checked: *KS* Date: 28/3/16
Authorised Signatory: *[Signature]* Date: 28/3/16

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-2286	SPT-1	1.50	Brownish Silty SAND (SM)	0	55	45	0
2	●	BH-1, CH-2286	SPT-4	6.00	Brownish Silty SAND (SM)	0	81	19	
3	▲	BH-1, CH-2286	SPT-7	10.50	Poorly Graded SAND (SP)	0	96	4	

Job No: 1342
Test Report No: XPL/2015-16/02

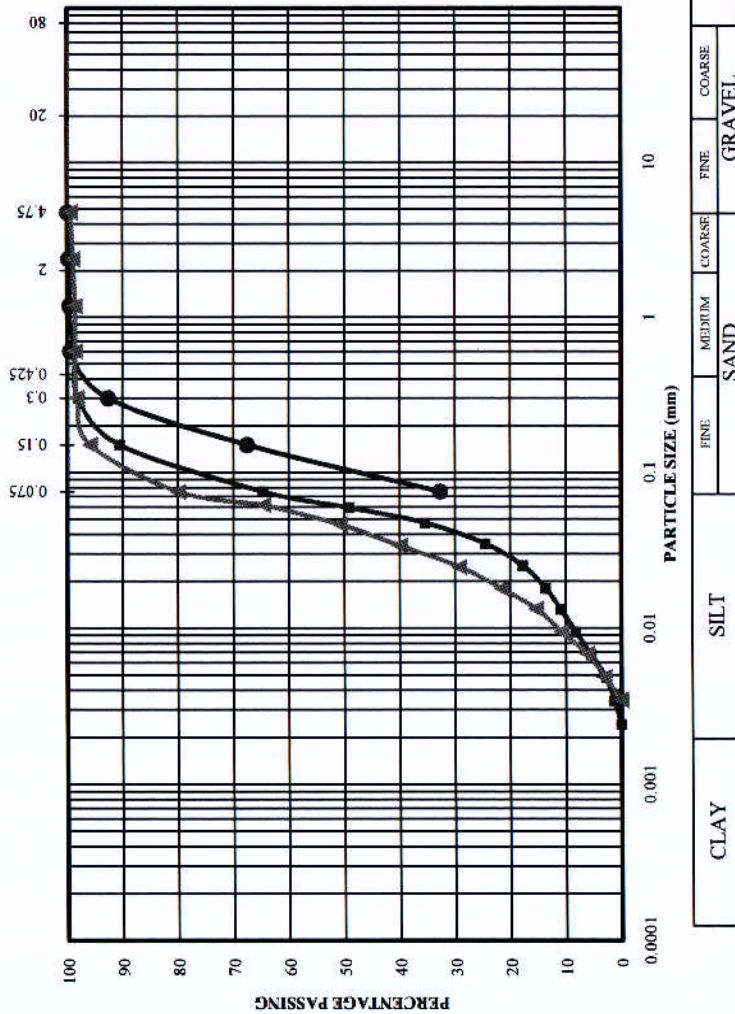
Site Ref: Muzaffarnagar to Saharanpur

Authorised Signatory: *[Signature]*
Date: 28/8/16

Checked: *[Signature]*
Date: 28/8/16

Operator: *[Signature]*
Date: 17/3/16

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL		SILT %	CLAY %
						GRAVEL %	SAND %		
1	■	BH-1, CH-3360	SPT-1	1.50	Brownish Silty SAND (SM)	0	35	65	0
2	●	BH-1, CH-3360	SPT-4	6.00	Brownish Silty SAND (SM)	0	67	33	0
3	▲	BH-1, CH-3360	UDS-4	11.00	Brownish Silty SAND (SM)	1	19	80	0

Job No: 1342
Test Report No: XPL/2015-16/02

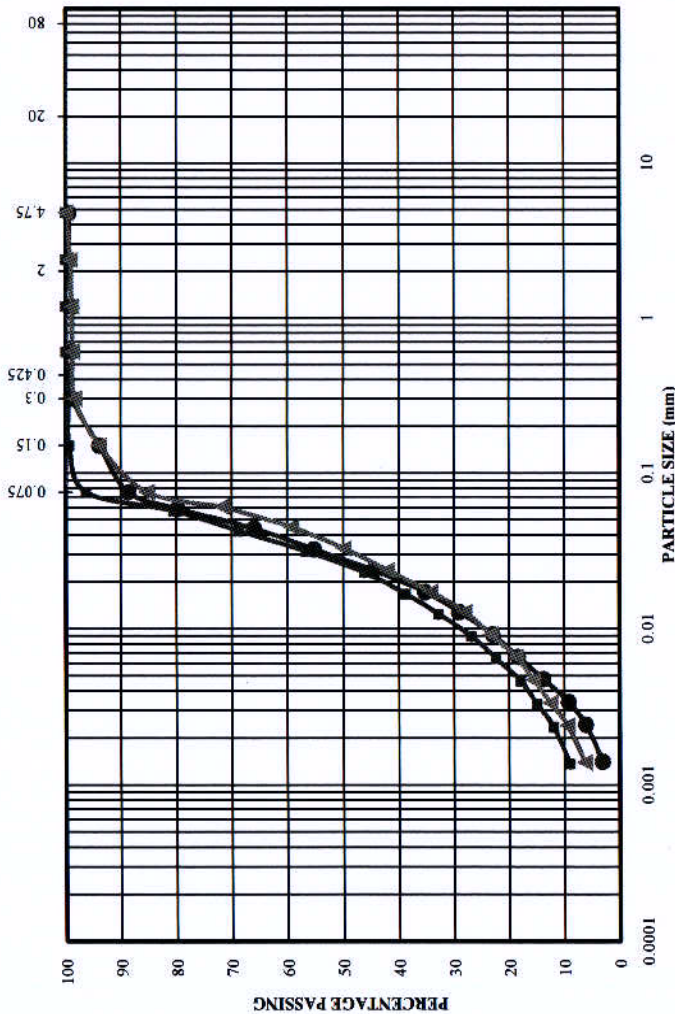
Date: 28/07/16
Authorised Signatory

Site Ref: Muzaffarnagar to Saharanpur

Date: 28/07/16

Operator: Bhajey
Date: 18/07/16
Checked:

GRADING CURVE BASED ON IS : 2720 : PART IV



CLAY	SILT	SAND		GRAVEL		C
		FINE	MEDIUM	COARSE	FINE	

S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-8440	UDS-1	2.00	Brownish Silty CLAY (CL)	0	4	85	11
2	●	BH-1, CH-8440	SPT-4	6.00	Brownish Sandy SILT (ML)	1	11	83	6
3	▲	BH-1, CH-8440	UDS-4	11.00	Brownish Sandy SILT (ML)	0	15	77	8

Site Ref: Muzaffarnagar to Saharanpur

Test Report No: XPL/2015-16/02

Job No: 1342

Operator: *Bhagat*

Date: 18/3/16

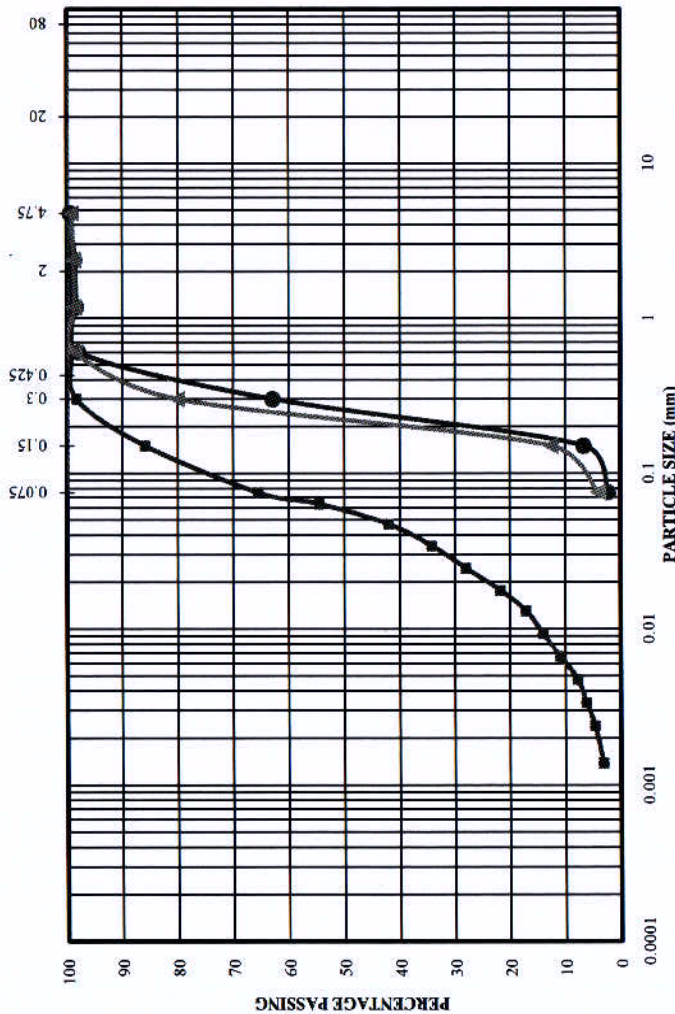
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Date: 20/3/16

Authorised Signatory: *[Signature]*

Date: 28/01/16

GRADING CURVE BASED ON IS : 2720 : PART IV



CLAY	SILT	SAND			GRAVEL		C
		FINE	MEDIUM	COARSE	FINE	COARSE	

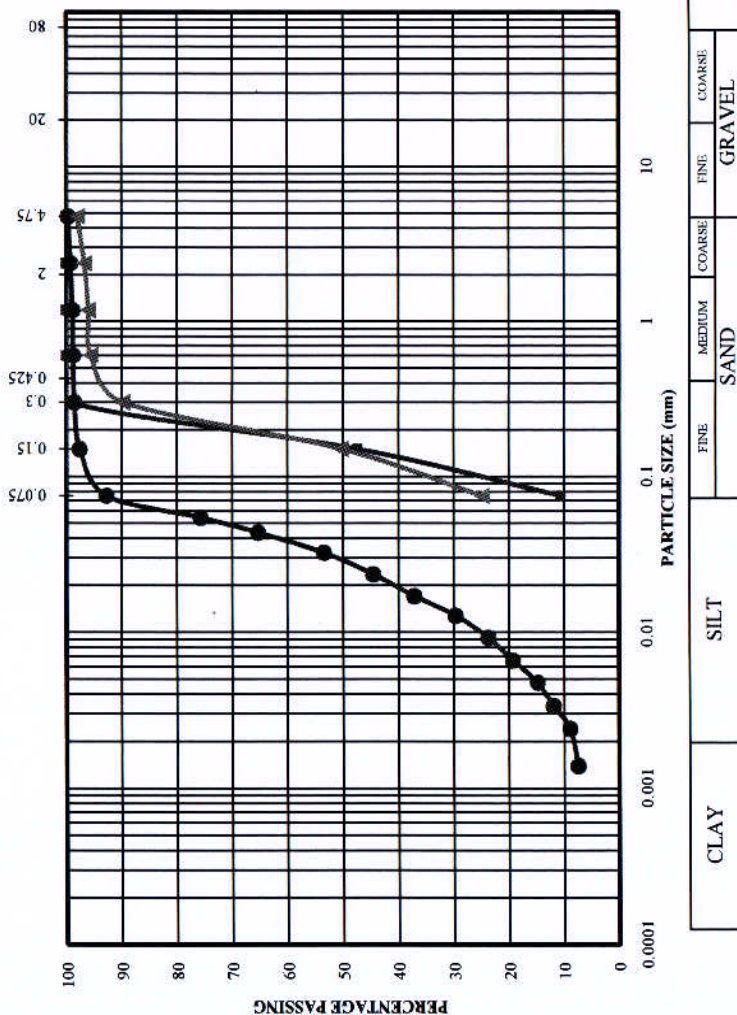
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1	■	BH-1, CH-11+753	UDS-1	2.00	Brownish Sandy SILT (ML)	0	34	61	5
2	●	BH-1, CH-11+753	SPT-8	12.00	Poorly Graded SAND (SP)	1	97	2	
3	▲	BH-1, CH-11+753	SPT-17	25.50	Poorly Graded SAND (SP)	1	95	4	

Job No: 1342
XPL/2015-16/02

Site Ref: Muzaffarnagar to Saharanpur

Operator: *Rheya* Date: 18/3/16
Checked: *KS* Date: 22/3/16
Authorised Signatory: *[Signature]* Date: 28/3/16

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL		SILT %	CLAY %
						GRAVEL %	SAND %		
1	■	BH-1, CH-10+540	SPT-1	1.50	Brownish Silty SAND (SW-SM)	0	89	11	
2	●	BH-1, CH-10+540	SPT-8	12.00	Brownish Sandy SILT (ML)	1	6	85	8
3	▲	BH-1, CH-10+540	SPT-17	25.50	Greyish Silty SAND (SM)	2	73	25	

Job No: 1342
XPL/2015-16/02

Site Ref: Muzaffarnagar to Saharanpur

Date: 20/3/16

Authorised Signatory

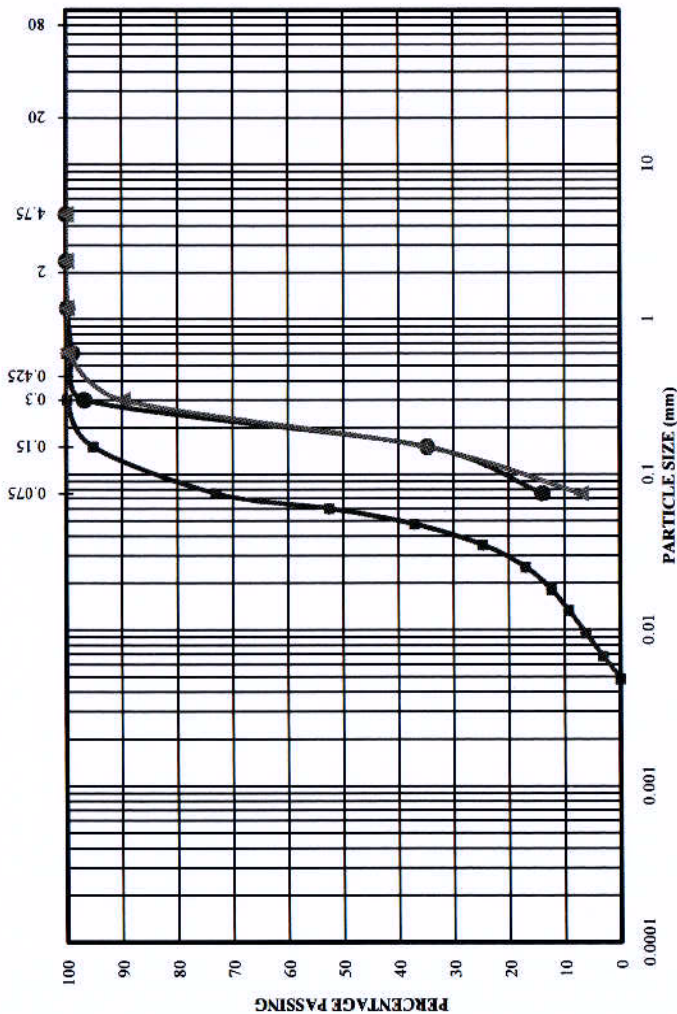
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Date: 20/3/16

Operator: Bhatnagar

GRADING CURVE BASED ON IS : 2720 : PART IV



CLAY	SILT			SAND		GRAVEL		C
	FINE	MEDIUM	COARSE	FINE	COARSE	FINE	COARSE	

S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-15+800	UDS-1	2.00	Brownish Sandy SILT (ML)	0	27	73	0
2	●	BH-1, CH-15+800	SPT-8	12.00	Greyish Silty SAND (SW-SM)	1	85	14	
3	▲	BH-1, CH-15+800	SPT-17	25.50	Greyish Silty SAND (SW-SM)	0	93	7	

Job No: 1342
Test Report No: XPL/2015-16/02

Authorised Signatory: *[Signature]*
Date: 28/3/16

Date: 28/3/16

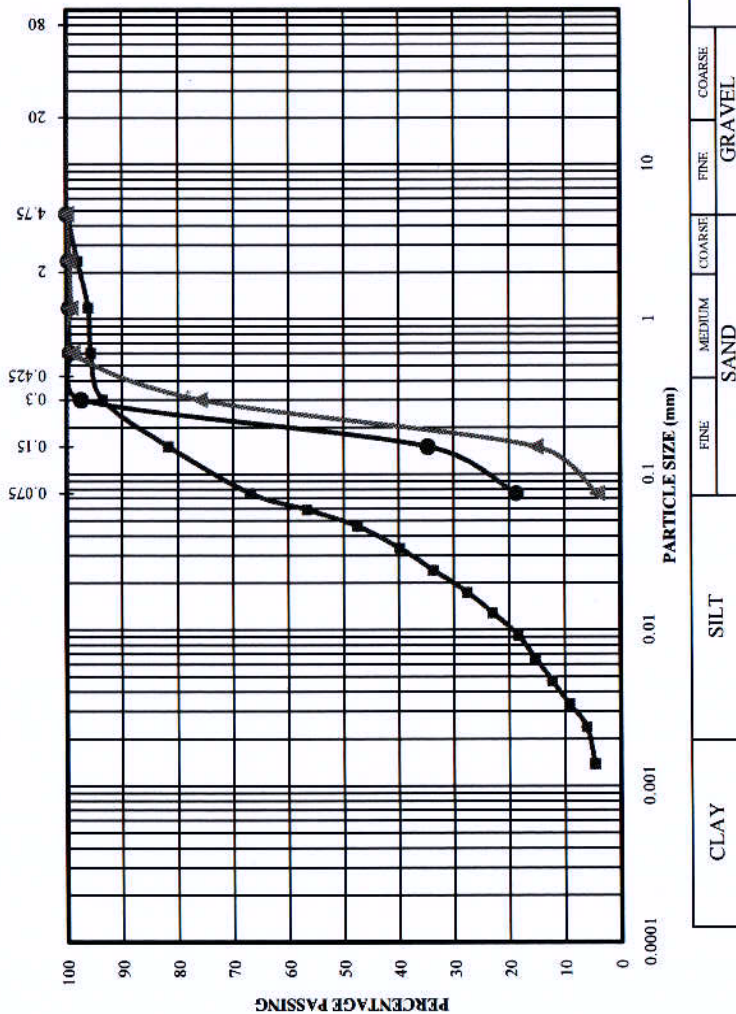
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Checked: 20/3/2016

Operator: *[Signature]*

Site Ref: Muzaffarnagar to Saharanpur

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-14+150	UDS-1	2.00	Brownish Sandy SILT (ML)	0	33	61	6
2	●	BH-1, CH-14+150	SPT-8	12.00	Brownish Silty SAND (SM)	1	80	19	
3	▲	BH-1, CH-14+150	SPT-17	25.50	Poorly Graded SAND (SP)	0	96	4	

Job No: 1342
Test Report No: XPL/2015-16/02

Authorized Signatory: *[Signature]*
Date: 28/12/16

Date: 28/12/16

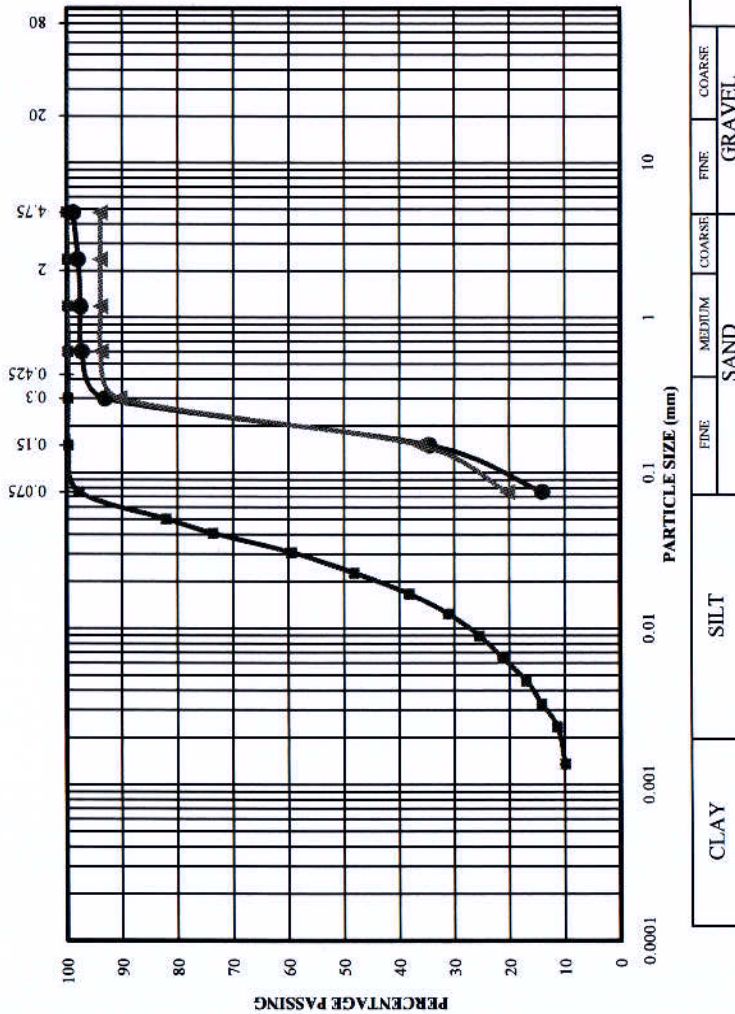
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Date: 21/03/2016

Operator: *[Signature]*
Checked:

Site Ref: Muzaffarnagar to Saharanpur

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-13+260	UDS-1	2.00	Brownish Silty CLAY (CL)	0	2	87	11
2	●	BH-1, CH-13+260	SPT-8	12.00	Brownish Silty SAND (SM)	1	85	14	
3	▲	BH-1, CH-13+260	SPT-17	25.50	Brownish Silty SAND (SM)	6	74	20	

Job No: 1342
XPL/2015-16/02

Test Report No:

Date: 28/8/16

Authorised Signatory

Site Ref: Muzaffarnagar to Saharanpur

Date: 28/8/16

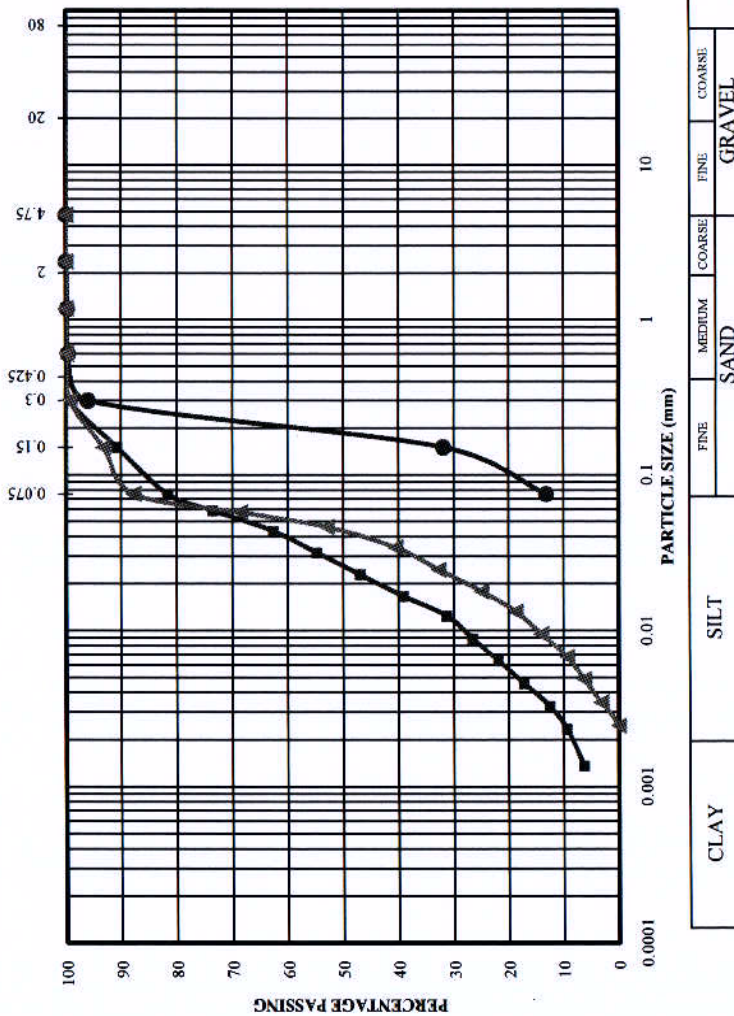
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Date: 21/3/16

Operator: Ghayur

GRAIN SIZE ANALYSIS (IS : 2720 : PART IV)

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-17+790	UDS-1	2.00	Brownish Sandy SILT (ML)	0	18	77	5
2	●	BH-1, CH-17+790	SPT-8	12.00	Brownish Silty SAND (SM)	1	86	13	
3	▲	BH-1, CH-17+790	UDS-8	23.00	Brownish Sandy SILT (ML)	0	12	88	0

Job No: 1342
Test Report No: XPL/2015-16/02

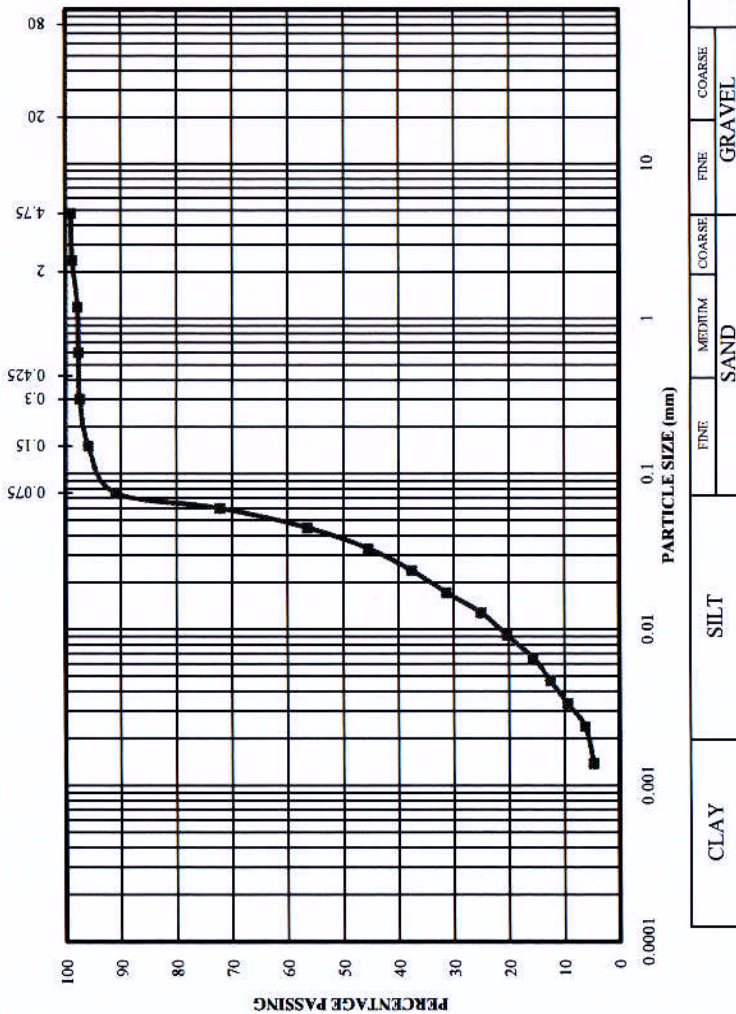
Date: 22/3/16
Authorized Signatory: [Signature]

Date: 28/3/16

Site Ref: Muzaffarnagar to Saharanpur

Operator: [Signature]
Date: 22/3/16
Checked: [Signature]

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-17+790	UDS-9	26.00	Brownish Sandy SILT (ML)	1	8	85	6

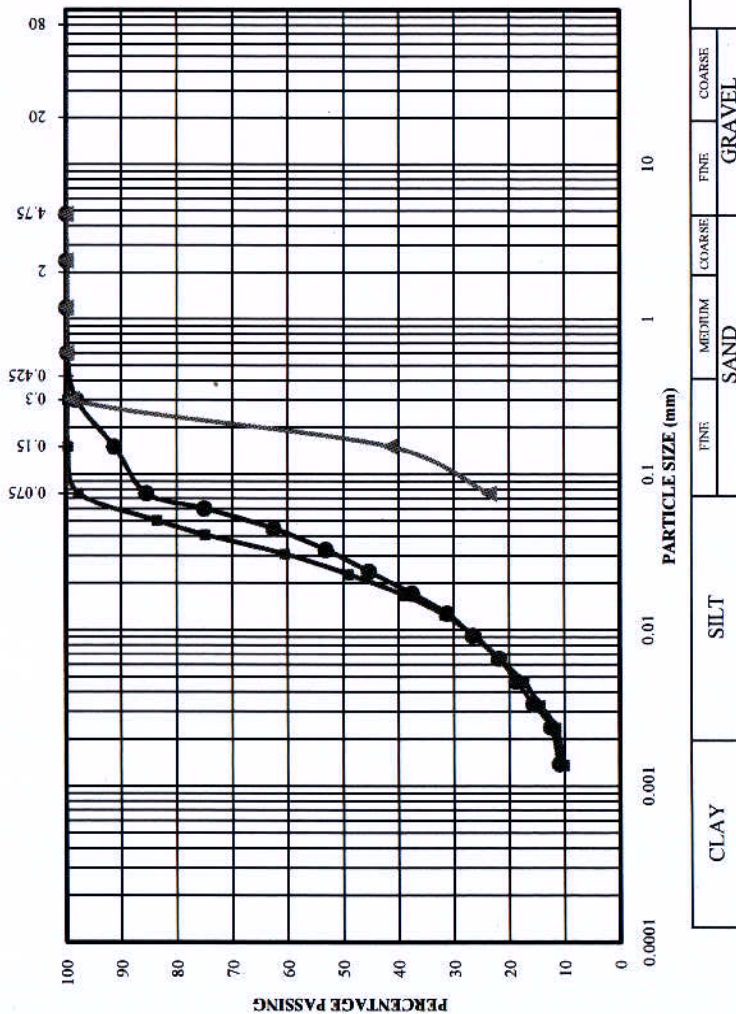
Job No: 1342
Test Report No: XPL/2015-16/02

Authorised Signatory: *[Signature]*
Date: 28/11/16

Site Ref: Muzaffarnagar to Saharanpur

Operator: *[Signature]*
Date: 22/3/2016
Checked: *[Signature]*

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-18+900	UDS-1	2.00	Brownish Silty CLAY (CL)	0	2	87	11
2	●	BH-1, CH-18+900	UDS-2	5.00	Brownish Silty CLAY (CL)	1	14	73	12
3	▲	BH-1, CH-18+900	SPT-6	9.00	Brownish Silty SAND (SM)	0	76	24	

Site Ref: Muzaffarnagar to Saharanpur

Test Report No: XPL/2015-16/02

Job No: 1342

Operator: *Bhagy*

Date: 22/8/2016

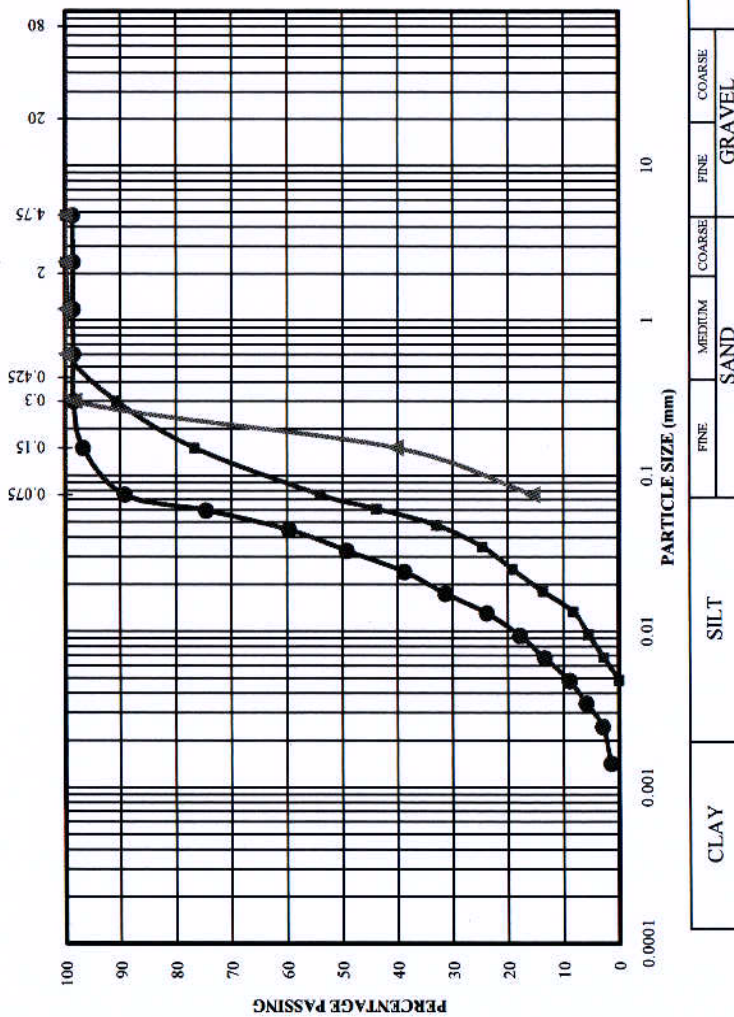
Checked: *RS*

Date: 22/2/16

Authorised Signatory: *Ashwini*

Date: 22/2/16

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-19+680	SPT-1	1.50	Brownish Sandy SILT (ML)	0	46	54	0
2	●	BH-1, CH-19+680	UDS-2	5.00	Brownish Sandy SILT (ML)	1	10	86	3
3	▲	BH-1, CH-19+680	SPT-6	9.00	Brownish Silty SAND (SM)	0	84	16	0

Job No: 1342
XPL/2015-16/02

Test Report No:

Date: 28/8/16

Authorised Signatory

Site Ref: Muzaffarnagar to Saharanpur

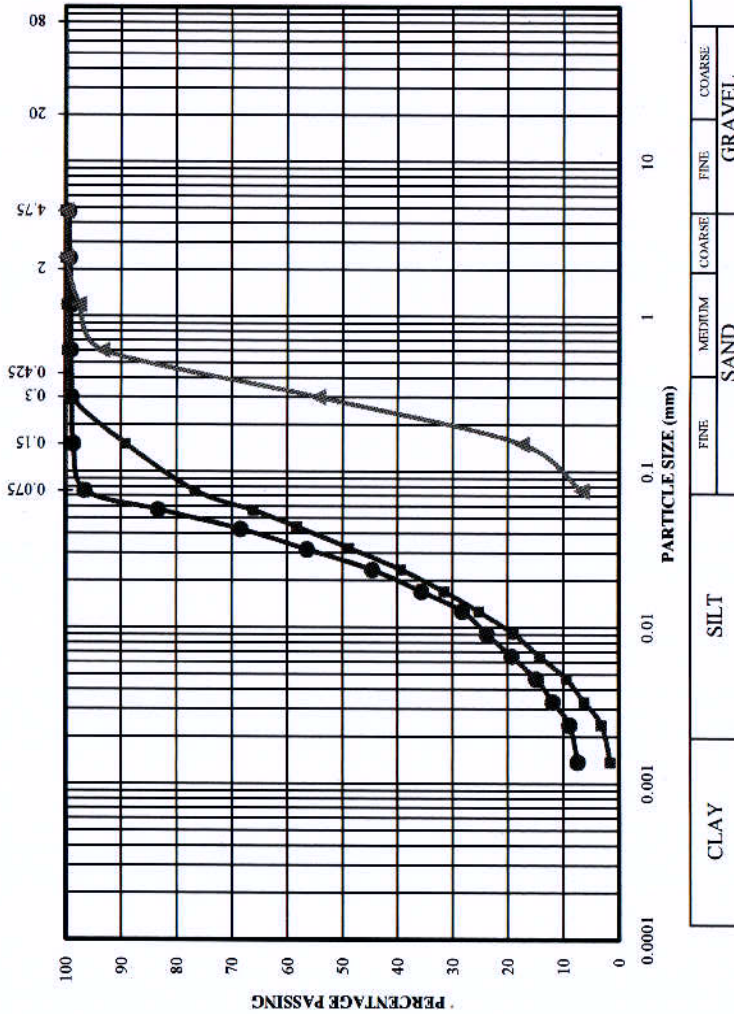
Date: 28/3/16

Checked:

Date: 23/3/2016

Operator: Bhagprey

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-24+269	UDS-1	2.00	Brownish Sandy SILT (ML)	0	23	74	3
2	●	BH-1, CH-24+269	UDS-5	14.00	Brownish Silty CLAY (ML)	1	2	89	8
3	▲	BH-1, CH-24+269	SPT-17	25.50	Greyish Silty SAND (SW-SM)	0	93	7	

Site Ref: Muzaffarnagar to Saharanpur

Job No: 1342
Test Report No: XPL/2015-16/02

Operator: *Bhagya*

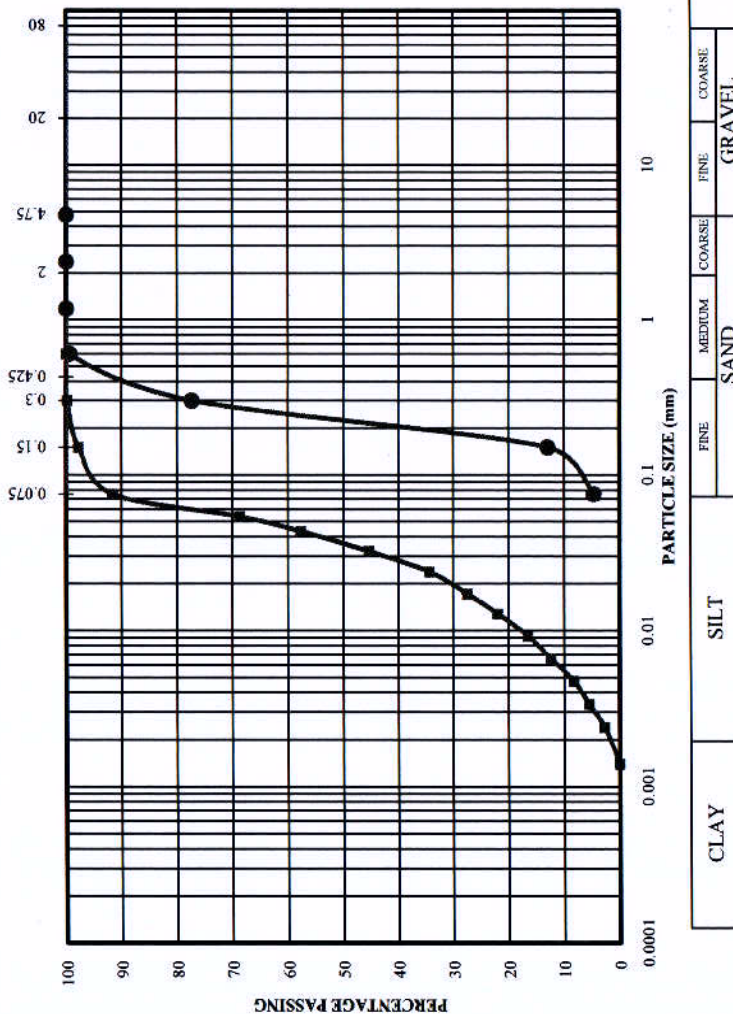
Date: 28/3/2016
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Date: 28/01/16
Authorised Signatory: *[Signature]*

Date: 27/1/16

GRAIN SIZE ANALYSIS (IS : 2720 : PART IV)

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL		SILT %	CLAY %
						GRAVEL %	SAND %		
1	■	BH-1, CH-20+960	UDS-1	2.00	Brownish Sandy SILT (ML)	0	8	90	2
2	●	BH-1, CH-20+960	SPT-6	9.00	Brownish Silty SAND (SW-)	1	94	5	
	▲								
	◆								

Job No: 1342
Test Report No: XPL/2015-16/02

Date: 28/3/16

Authorised Signatory

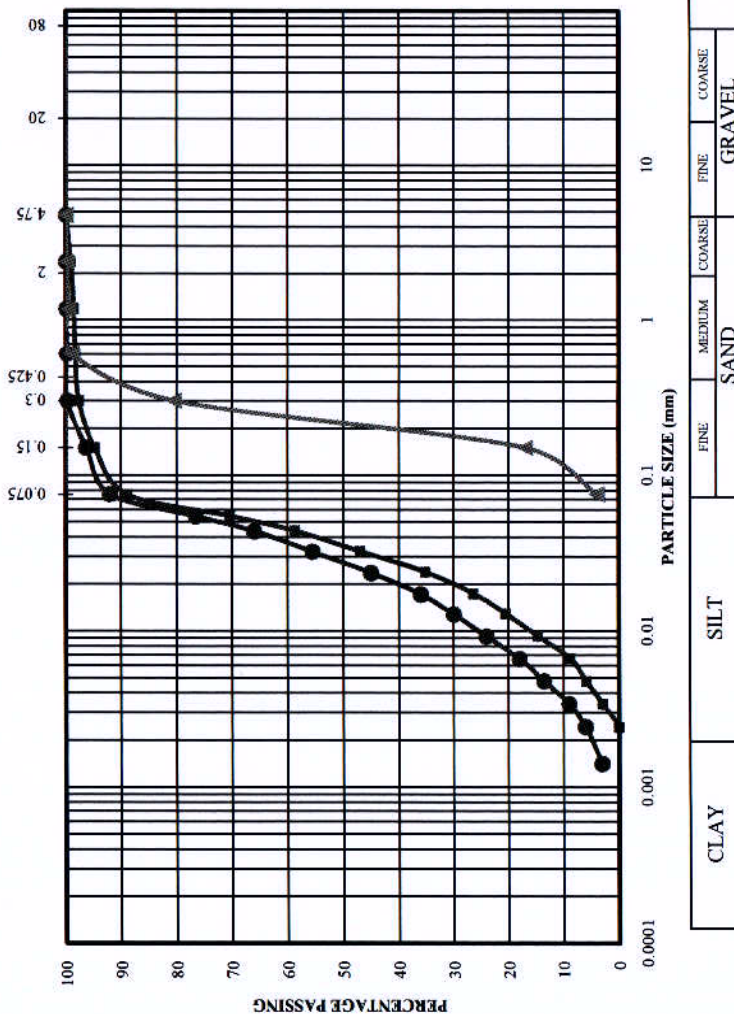
Site Ref: Muzaffarnagar to Saharanpur

Date: 25/3/2016

Checked:

Operator: Bhopra

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-22+700	UDS-1	2.00	Brownish Sandy SILT (ML)	0	11	89	0
2	●	BH-1, CH-22+700	UDS-2	5.00	Brownish Sandy SILT (ML)	1	7	87	5
3	▲	BH-1, CH-22+700	SPT-8	12.00	Poorly Graded SAND (SP)	0	96	4	0

Job No: 1342
Test Report No: XPL/2015-16/02

Date: 28/8/16
Authorised Signatory

Date: 29/3/16

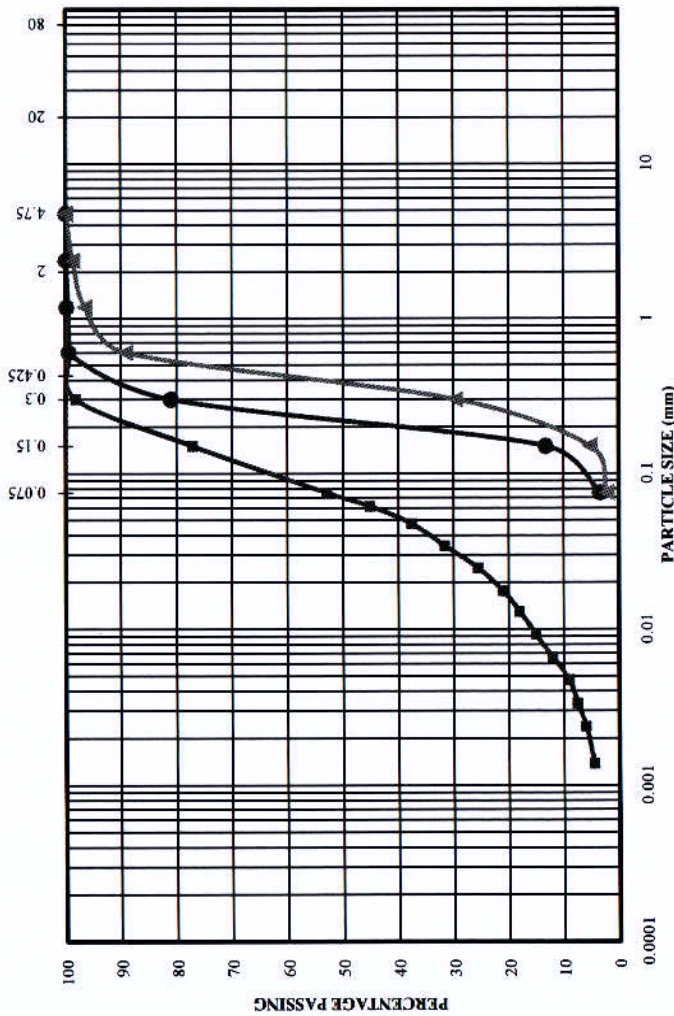
Checked: [Signature]

Date: 25/3/16

Operator: [Signature]

Site Ref: Muzaffarnagar to Saharanpur

GRADING CURVE BASED ON IS : 2720 : PART IV



CLAY	SILT		SAND		GRAVEL	
	FINE	MEDIUM	COARSE	FINE	COARSE	C

S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-25+880	UDS-1	2.00	Brownish Sandy SILT (ML)	0	47	47	6
2	●	BH-1, CH-25+880	SPT-8	12.00	Poorly Graded SAND (SP)	1	96	3	
3	▲	BH-1, CH-25+880	SPT-17	25.50	Poorly Graded SAND (SP)	0	98	2	

Job No: 1342
Test Report No: XPL/2015-16/02

Authorised Signatory: *[Signature]* Date: 28/07/16

Date: 28/3/16

[Signature]

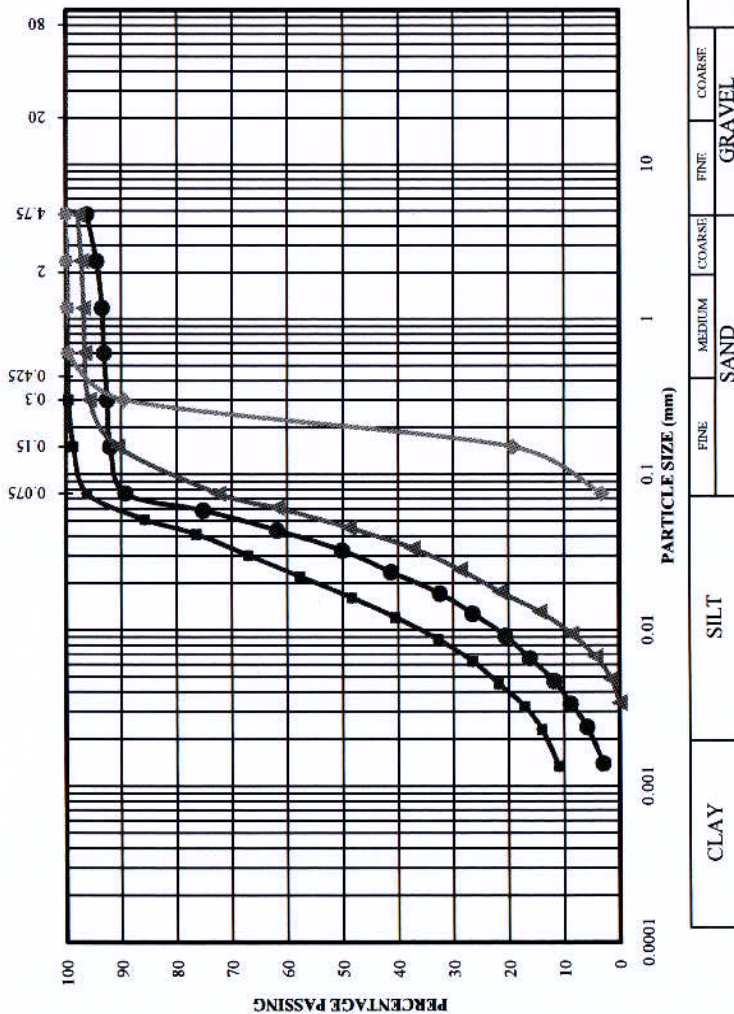
Checked:

Date: 25/3/2016

Operator: *Bhopy*

Site Ref: Muzaffarnagar to Saharanpur

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-28+840	UDS-1	2.00	Brownish Silty CLAY (CL)	0	4	82	14
2	●	BH-1, CH-28+840	UDS-2	5.00	Brownish Sandy SILT (ML)	1	10	84	5
3	▲	BH-1, CH-28+840	UDS-5	17.00	Brownish Sandy SILT (ML)	2	26	72	0
4	◆	BH-1, CH-28+840	SPT-17	25.50	Poorly Graded SAND (SP)	0	97	3	0

Job No: 1342
Test Report No: XPL/2015-16/02

Date: 28/8/16
Authorised Signatory

Date: 28/3/16

Checked: RNS

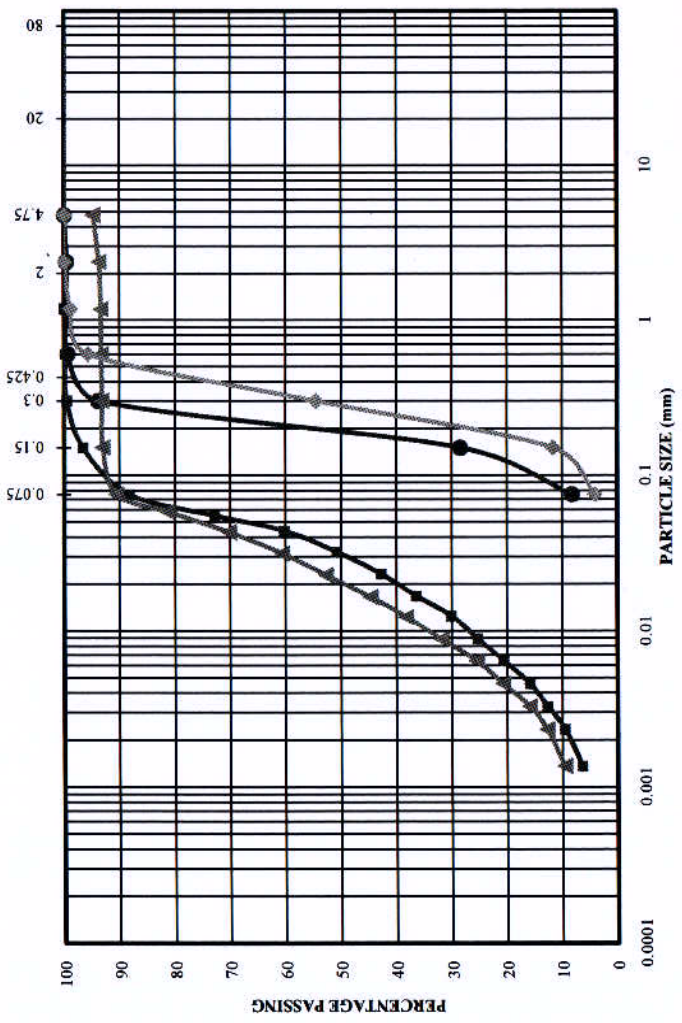
Date: 26/3/16

Operator: Bhargava

Site Ref: Muzaffarnagar to Saharanpur

GRAIN SIZE ANALYSIS (IS : 2720 : PART IV)

GRADING CURVE BASED ON IS : 2720 : PART IV



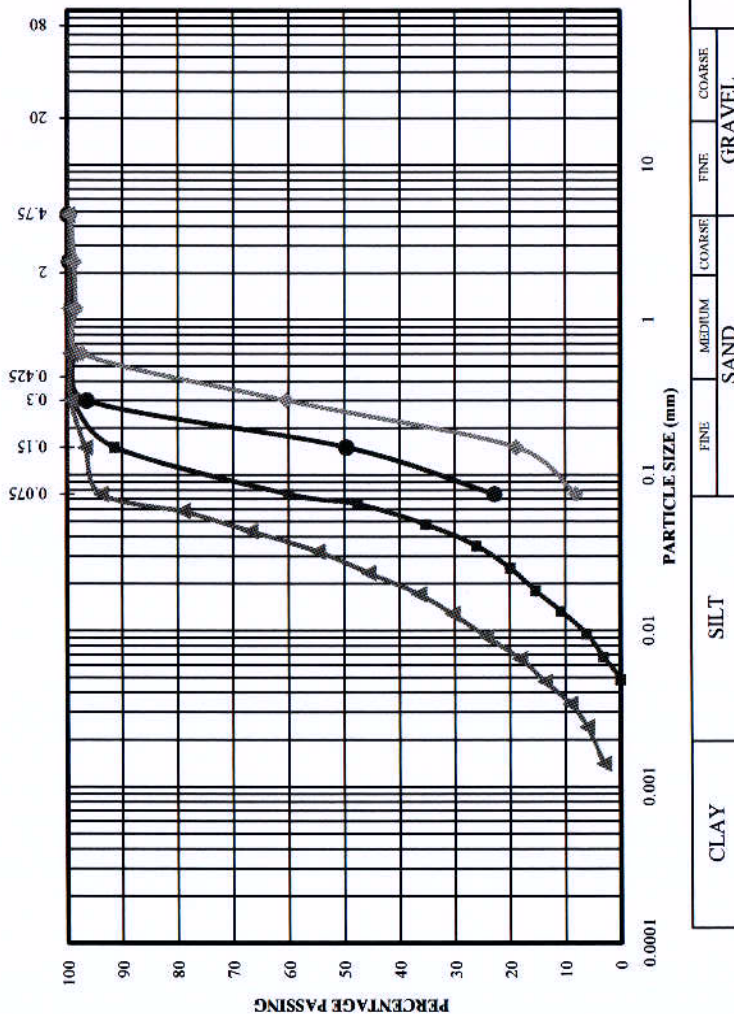
CLAY	SILT			SAND			GRAVEL		C
	FINE	MEDIUM	COARSE	FINE	COARSE	GRAVEL			

S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-27+960	UDS-1	2.00	Brownish Sandy SILT (ML)	0	12	80	8
2	●	BH-1, CH-27+960	SPT-8	12.00	Brownish Silty SAND (SW-CLAY (CL)	1	91	8	
3	▲	BH-1, CH-27+960	UDS-6	17.00	Brownish Silty SAND (SW-CLAY (CL)	5	4	79	12
4	◆	BH-1, CH-27+960	SPT-17	25.50	Poorly Graded SAND (SP)	0	96	4	4

Site Ref: Muzaffarnagar to Saharanpur
 Test Report No: XPL/2015-16/02
 Job No: 1342

Operator: *Pragya* Date: 26/3/16
 Checked: *RS*
 Authorised Signatory: *Amit* Date: 28/3/16
 Date: 28/07/14

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL		SILT %	CLAY %
						COARSE	FINE		
1	■	BH-1, CH-30+236	UDS-1	2.00	Brownish Sandy SILT (ML)	0	40	60	0
2	●	BH-1, CH-30+236	SPT-8	12.00	Brownish Silty SAND (SM)	1	76	89	23
3	▲	BH-1, CH-30+236	UDS-5	14.00	Brownish Sandy SILT (ML)	0	6	89	5
4	◆	BH-1, CH-30+236	SPT-17	25.50	Brownish Silty SAND (SW-SM)	1	91	8	8

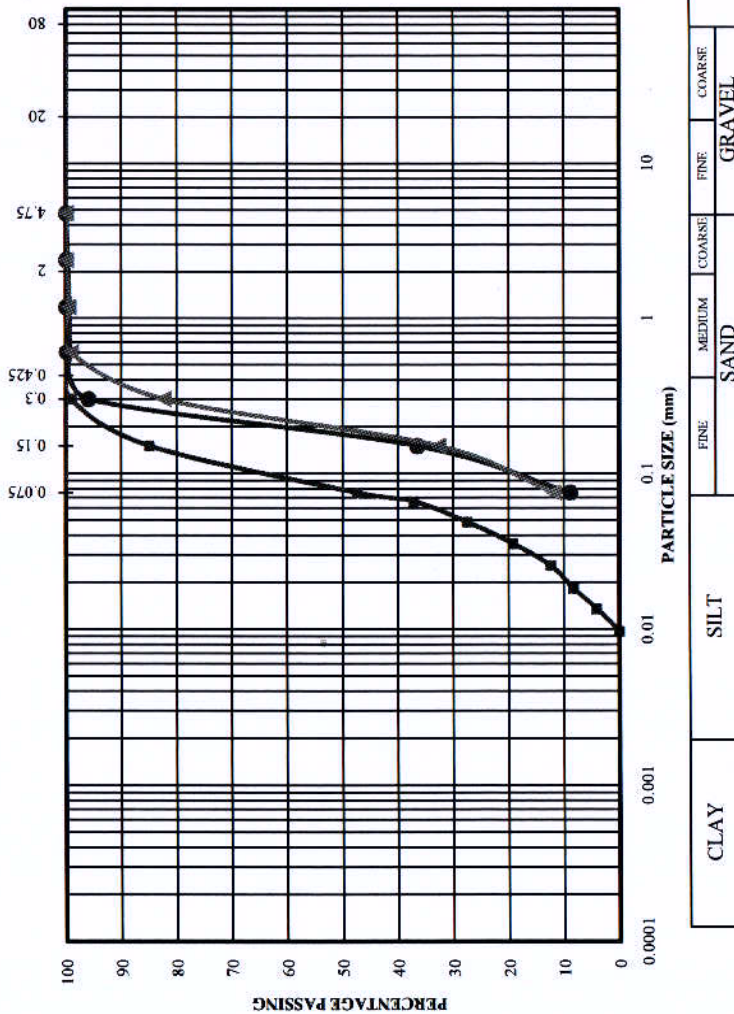
Job No: 1342
Test Report No: XPL/2015-16/02

Date: 28/3/16
Authorised Signatory

Site Ref: Muzaffarnagar to Saharanpur

Date: 28/3/16
Checked: [Signature]

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL		SILT %	CLAY %
						GRAVEL %	SAND %		
1	■	BH-1, CH-31+820	SPT-1	1.50	Brownish Sandy SILT (ML)	0	53	47	0
2	●	BH-1, CH-31+820	SPT-8	12.00	Brownish Silty SAND (SW-)	1	90	9	
3	▲	BH-1, CH-31+820	SPT-17	25.50	Brownish Silty SAND (SW-)	0	88	12	

Job No: 1342
XPL/2015-16/02

Site Ref: Muzaffarnagar to Saharanpur

Test Report No:

Date: 28/3/16

Authorised Signatory

Date: 28/3/16

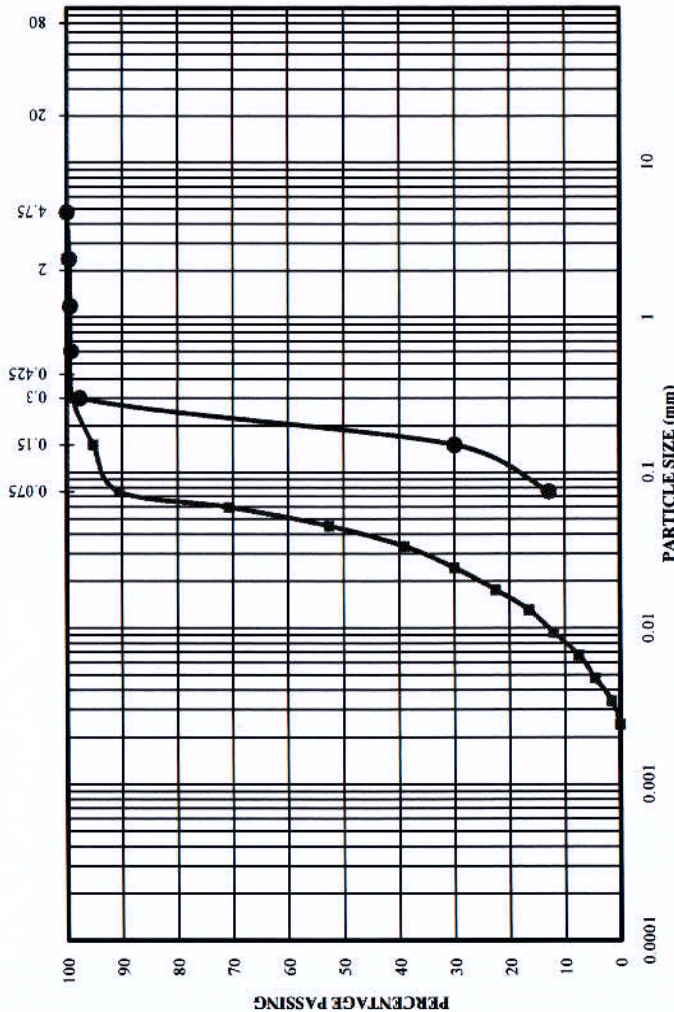
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Date: 28/3/16

Operator: Bhojraj

Date: 28/3/16

GRADING CURVE BASED ON IS : 2720 : PART IV



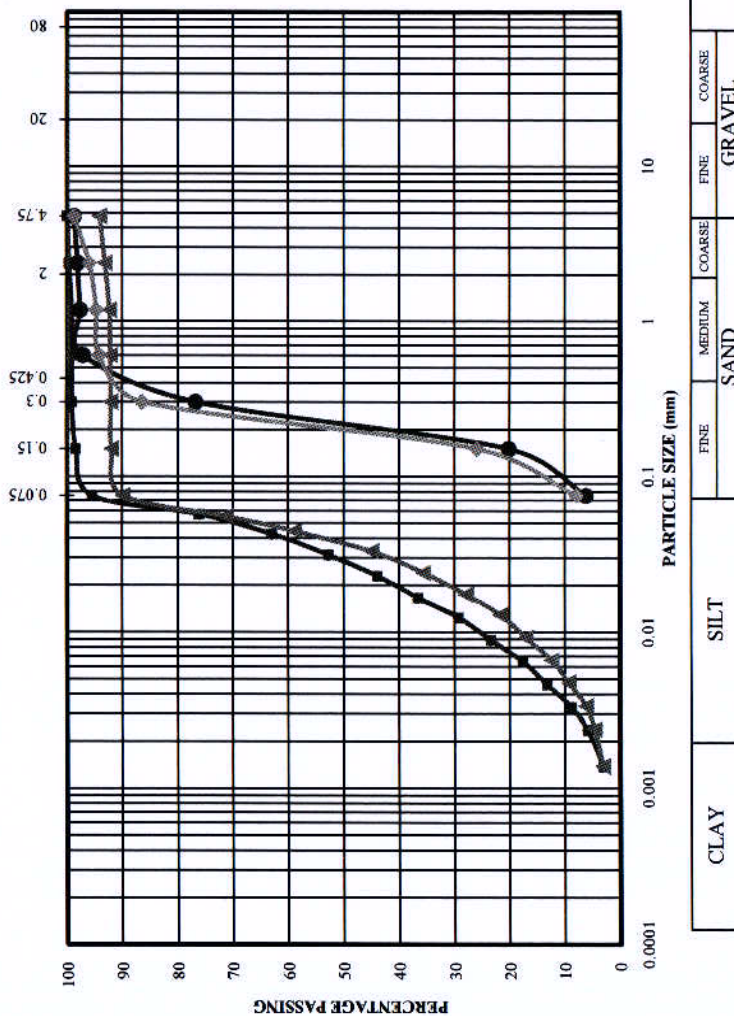
CLAY	SILT	SAND		GRAVEL		C
		FINE	COARSE	FINE	COARSE	

S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-33+310	UDS-1	2.00	Brownish Sandy SILT (ML)	0	9	91	0
2	●	BH-1, CH-33+310	SPT-6	9.00	Brownish Silty SAND (SM)	1	86	13	

Site Ref: Muzaffarnagar to Saharanpur
 Job No: 1342
 Test Report No: XPL/2015-16/02

Operator: *Bhopu*
 Date: 26/3/2016
 Checked: *RS*
 Authorised Signatory: *[Signature]*
 Date: 22/3/16

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-1, CH-34+920	UDS-1	2.00	Brownish Sandy SILT (ML)	0	4	91	5
2	●	BH-1, CH-34+920	SPT-8	12.00	Brownish Silty SAND (SW-SM)	1	93	6	
3	▲	BH-1, CH-34+920	UDS-6	17.00	Brownish Sandy SILT (ML)	6	4	86	4
4	◆	BH-1, CH-34+920	SPT-17	25.50	Brownish Silty SAND (SW-SM)	1	91	8	

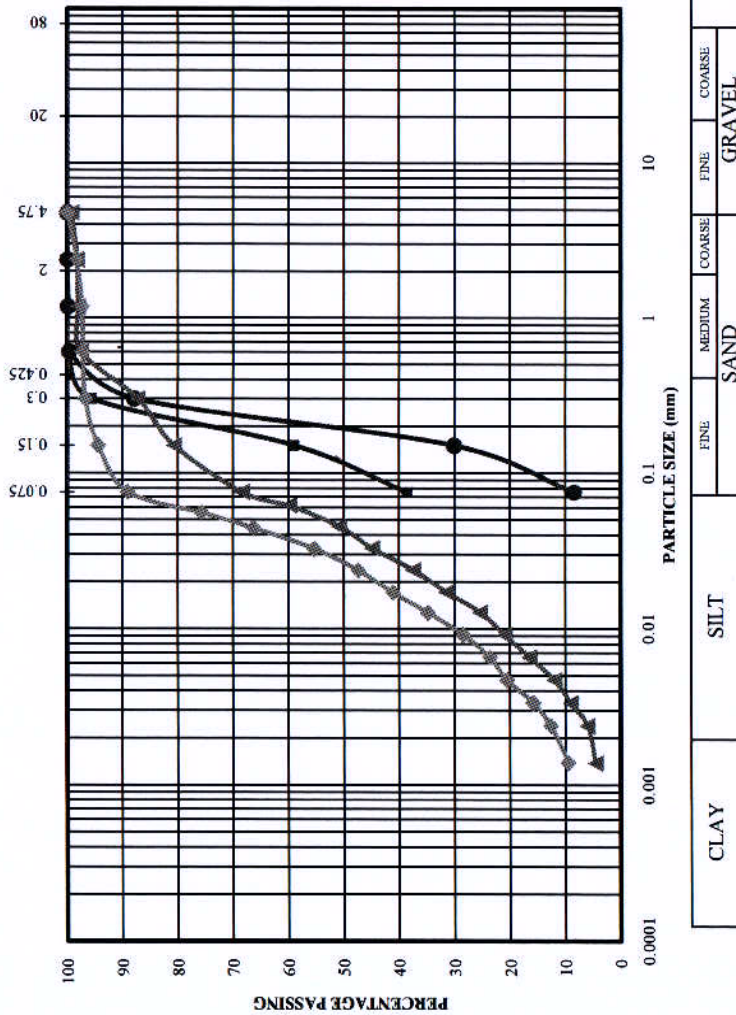
Job No: 1342
Test Report No: XPL/2015-16/02

Date: 28/3/16
Authorised Signatory

Site Ref: Muzaffarnagar to Saharanpur

Operator: *Blaney*
Date: 27/3/2016
Checked:

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL			SILT %	CLAY %
						GRAVEL %	SAND %	CLAY %		
1	■	BH-1, CH-36+585	SPT-1	1.50	Brownish Silty SAND (SM)	0	61	39		
2	●	BH-1, CH-36+585	SPT-8	12.00	Silty SAND (SW-SM)	1	91	8		
3	▲	BH-1, CH-36+585	UDS-8	23.00	Brownish Silty SAND (ML)	1	31	62	6	
4	◆	BH-1, CH-36+585	SPT-17	25.50	Brownish Silty CLAY (CL)	0	11	77	12	

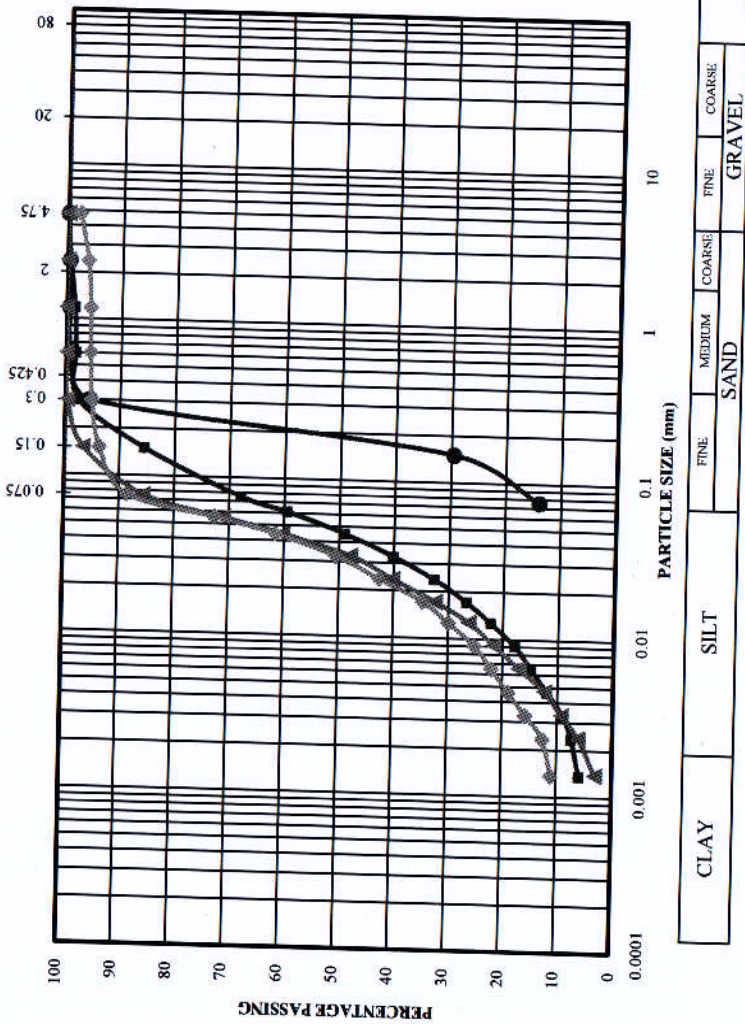
Job No: 1342
Test Report No: XPL/2015-16/02

Date: 28/3/16
Authorised Signatory

Site Ref: Muzaffarnagar to Saharanpur

Date: 27/3/2016
Checked: [Signature]

GRADING CURVE BASED ON IS : 2720 : PART IV



S.NO.	SYMBOL	BH NO./CHAINAGE	SAMPLE NO	DEPTH (M)	DESCRIPTION	GRAVEL %	SAND %	SILT %	CLAY %
1	■	BH-2, CH-36+585	SPT-1	1.50	Brownish Sandy SILT (ML)	0	32	61	7
2	●	BH-2, CH-36+585	SPT-8	12.00	Brownish Silty SAND (SM)	1	85	14	
3	▲	BH-2, CH-36+585	UDS-7	20.00	Brownish Sandy SILT (ML)	0	14	81	5
4	◆	BH-2, CH-36+585	SPT-17	25.50	Brownish Silty CLAY (CL)	2	9	77	12

Site Ref: Muzaffarnagar to Saharanpur

Operator: *Bhaskar*

Date: 27/3/2016

Checked: *RF*

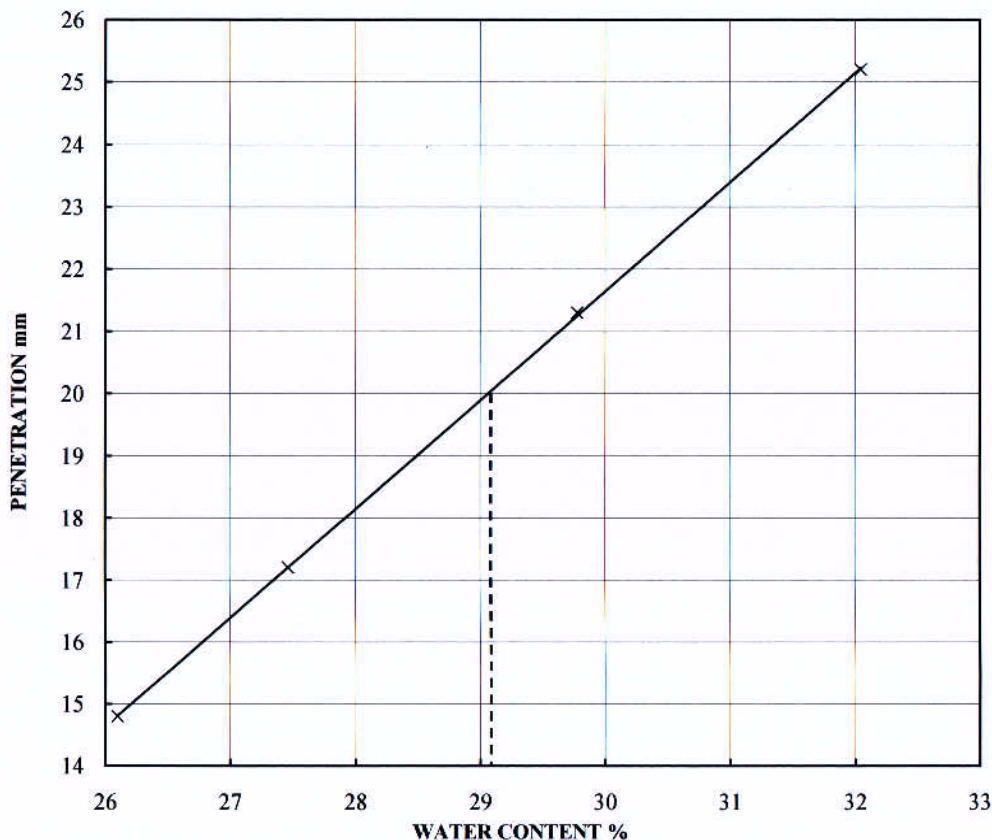
Test Report No: XPL/2015-16/02

Job No: 1342

Authorised Signatory: *[Signature]*

Date: 28/3/16

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

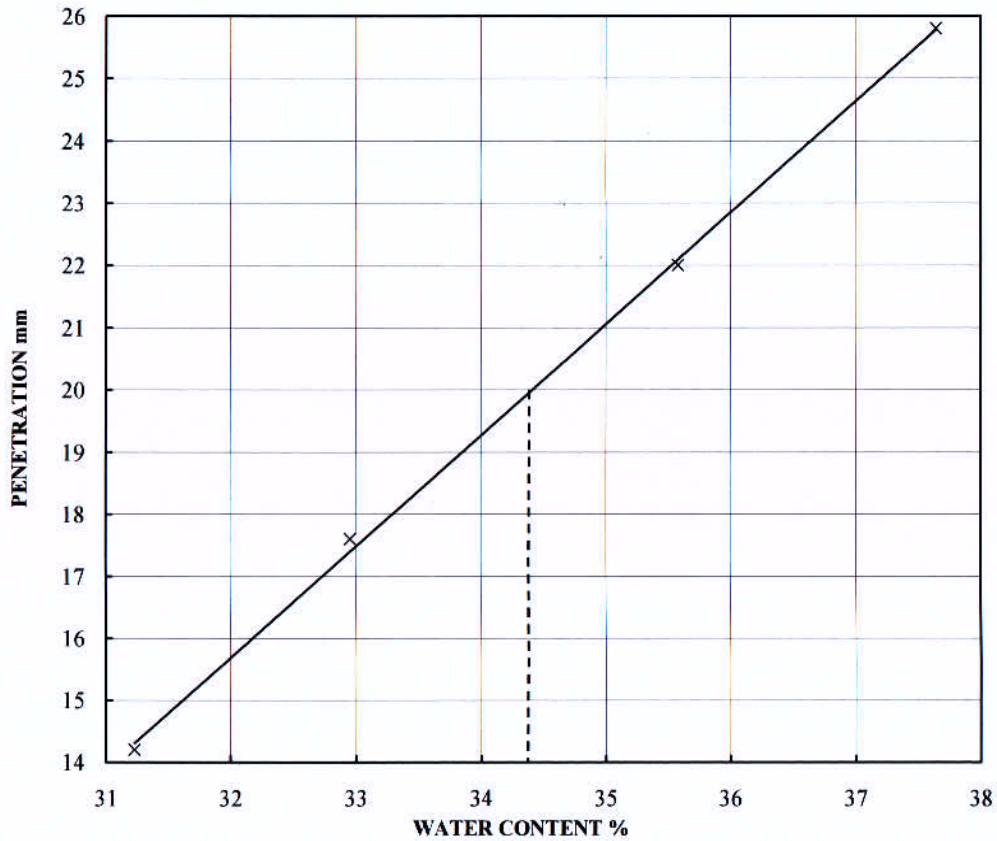
Percentage of passing 0.425mm B.S.Sieve = 91%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	22.93	27.22	29.96	29.98	
Dry Weight + Tare (g)	20.20	23.46	25.38	25.09	
Tare Weight (g)	9.74	9.77	10.00	9.83	NP
Water Content (%)	26.10	27.47	29.78	32.04	
Penetration (mm)	14.80	17.20	21.30	25.20	

LIQUID LIMIT (%) 29
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : SPT	
Borehole No. BH-1, CH-2010	Sample No: SPT-1
Depth (m): 1.50	
XPLORER	Site Ref: Muzaffarnagar to Saharanpur
Job No : 1342	
Test Report No: XPL/2015-16/02	
Operator : <i>[Signature]</i>	Checked : <i>[Signature]</i>
Authorised Signatory <i>[Signature]</i>	
Date : 15/3/2016	Date: 28/3/16
Date: 28/3/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

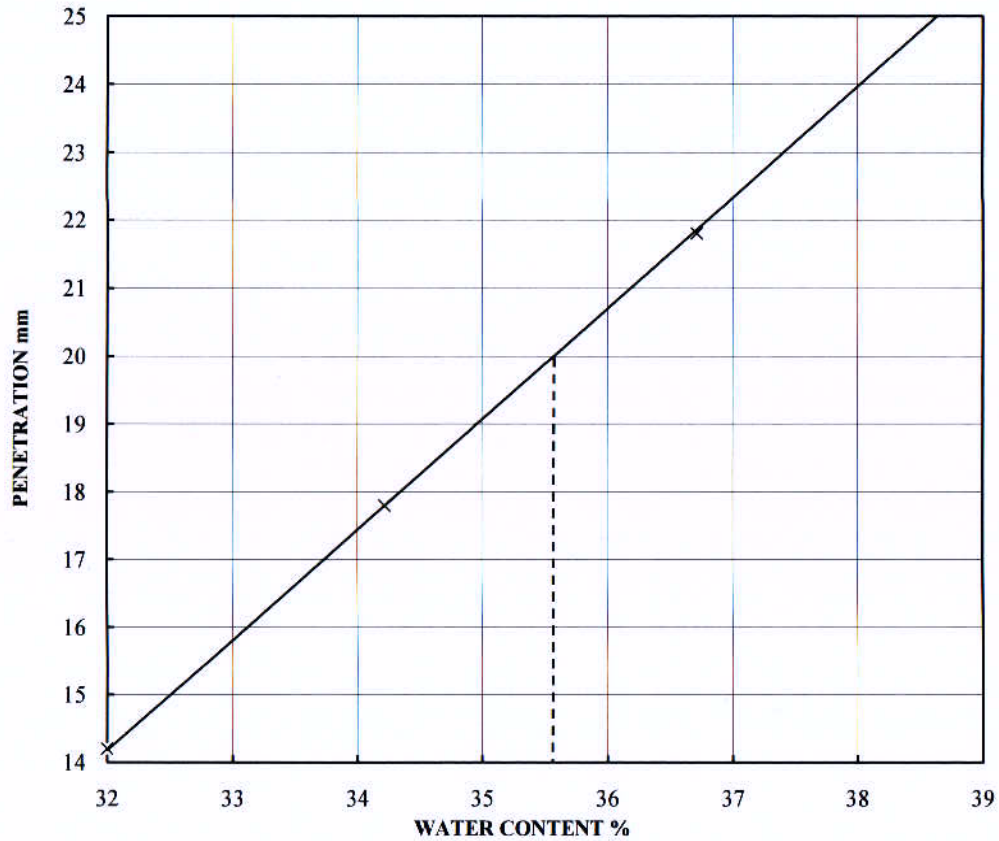
Percentage of passing 0.425mm B.S.Sieve = 92%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	28.30	31.26	35.29	38.25	21.26	23.18
Wet Weight + Tare (g)	28.30	31.26	35.29	38.25	21.26	23.18
Dry Weight + Tare (g)	23.90	25.71	28.74	30.50	19.22	20.43
Tare Weight (g)	9.81	8.87	10.33	9.91	10.05	8.22
Water Content (%)	31.23	32.96	35.58	37.64	22.23	22.52
Penetration (mm)	14.20	17.60	22.00	25.80		

LIQUID LIMIT (%) 34
 PLASTIC LIMIT (%) 22
 PLASTICITY INDEX (%) 12

Sample Type : UDS	
Borehole No. BH-1, CH-2010	Sample No: UDS-3
Depth (m): 8.00	
XPLORER	Site Ref: Muzaffarnagar to Saharanpur
Job No: 1342	
Test Report No: XPL/2015-16/02	
Operator : <i>Bhupay</i>	Checked : <i>RS</i>
Authorised Signatory <i>[Signature]</i>	
Date : 15/3/2016	Date: 28/3/16
Date: 28/3/16	

I.S. : 2720 : PART 5



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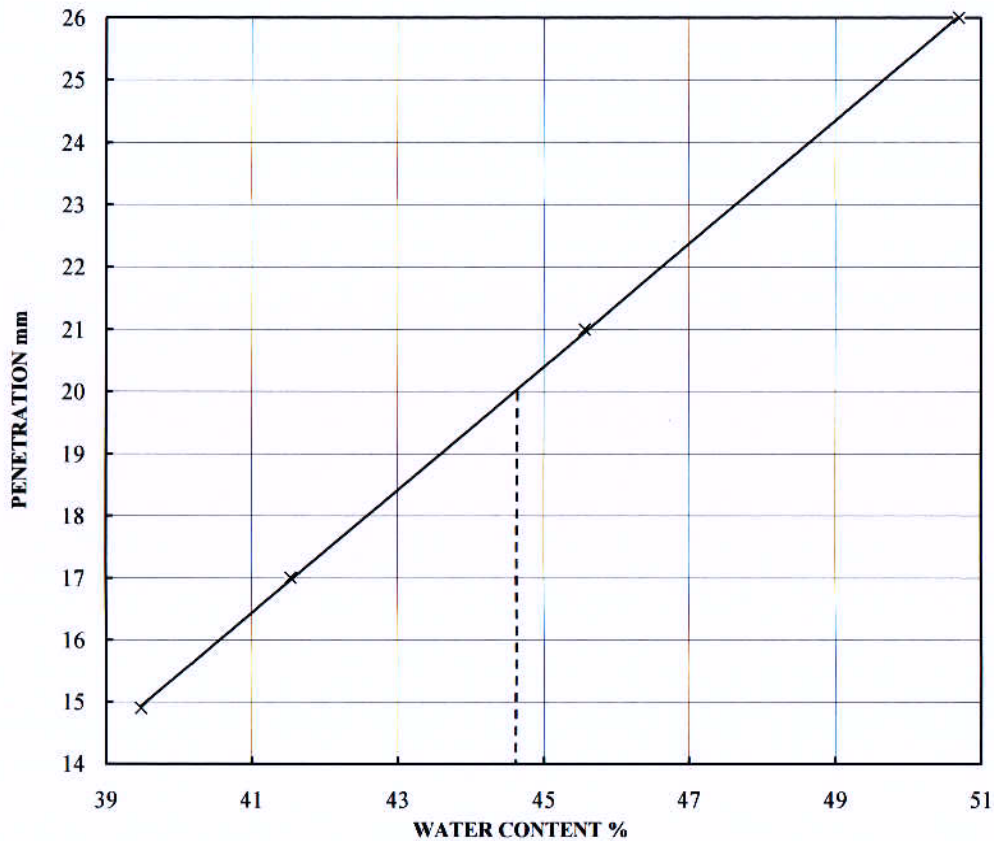
Percentage of passing 0.425mm B.S.Sieve = 92%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	23.27	23.31	23.30	25.00	20.66	19.69
Wet Weight + Tare (g)	23.27	23.31	23.30	25.00	20.66	19.69
Dry Weight + Tare (g)	20.14	19.84	19.35	20.80	18.62	17.57
Tare Weight (g)	10.36	9.70	8.59	9.99	9.90	8.42
Water Content (%)	32.00	34.22	36.71	38.85	23.39	23.17
Penetration (mm)	14.20	17.80	21.80	25.40		

LIQUID LIMIT (%) 36
 PLASTIC LIMIT (%) 23
 PLASTICITY INDEX (%) 13

Sample Type : UDS	
Borehole No. BH-1, CH-2010	Sample No: UDS-8
Depth (m): 23.00	
XPLORER	Site Ref: Muzaffarnagar to Saharanpur
Job No : 1342	
Test Report No: XPL/2015-16/02	
Operator :	Checked :
Authorised Signatory	
Date : 15/3/2016	Date: 28/3/16
Date: 28/3/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

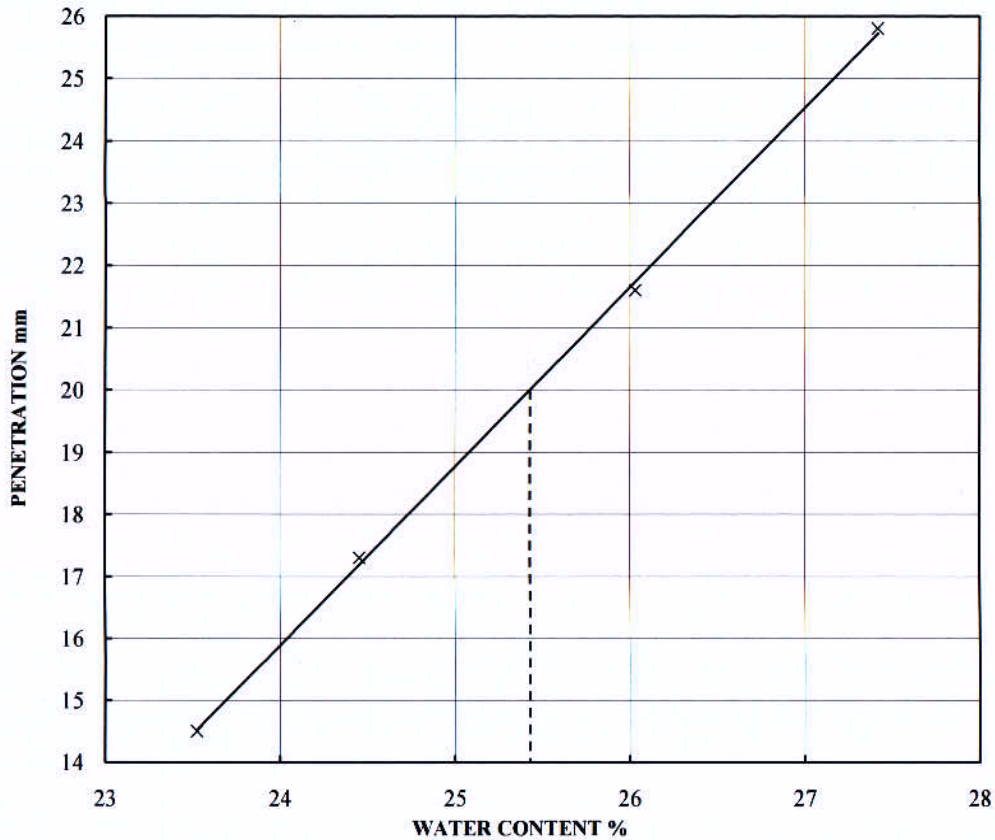
Percentage of passing 0.425mm B.S.Sieve = 92%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	25.09	22.10	26.45	28.81	21.15	21.63
Wet Weight + Tare (g)	25.09	22.10	26.45	28.81	21.15	21.63
Dry Weight + Tare (g)	20.66	18.05	21.41	22.64	18.85	19.24
Tare Weight (g)	9.44	8.30	10.35	10.47	8.94	9.00
Water Content (%)	39.48	41.54	45.57	50.70	23.21	23.34
Penetration (mm)	14.90	17.00	21.00	26.00		

LIQUID LIMIT (%) 45
 PLASTIC LIMIT (%) 23
 PLASTICITY INDEX (%) 22

Sample Type : UDS	
Borehole No. BH-1, CH-2010	Sample No: UDS-9
Depth (m): 26.00	
XPLORER	Site Ref: Muzaffarnagar to Saharanpur
Job No : 1342	
Test Report No: XPL/2015-16/02	
Operator : <i>[Signature]</i>	Checked : <i>[Signature]</i>
Authorised Signatory <i>[Signature]</i>	
Date : 15/3/2016	Date: 28/3/16
Date: 28/3/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

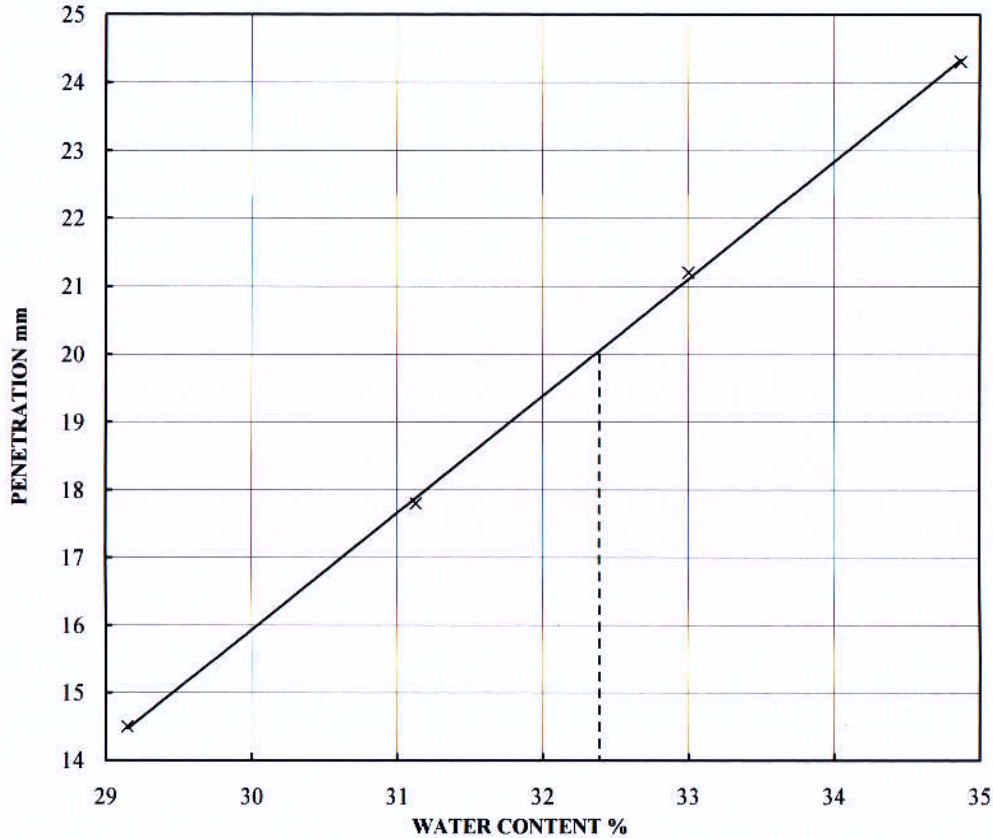
Percentage of passing 0.425mm B.S.Sieve = 91%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	23.03	27.36	30.18	30.11	
Dry Weight + Tare (g)	20.52	23.90	26.02	25.74	
Tare Weight (g)	9.85	9.75	10.04	9.80	NP
Water Content (%)	23.52	24.45	26.03	27.42	
Penetration (mm)	14.50	17.30	21.60	25.80	

LIQUID LIMIT (%) 25
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : SPT	
Borehole No. BH-1, CH-1980	Sample No: SPT-1
Depth (m): 1.50	
XPLORER	Site Ref: Muzaffarnagar to Saharanpur
Job No : 1342	
Test Report No: XPL/2015-16/02	
Operator : <i>[Signature]</i>	Checked : <i>[Signature]</i>
Authorised Signatory <i>[Signature]</i>	
Date : 15/3/2016	Date: 28/3/16
Date: 28/3/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

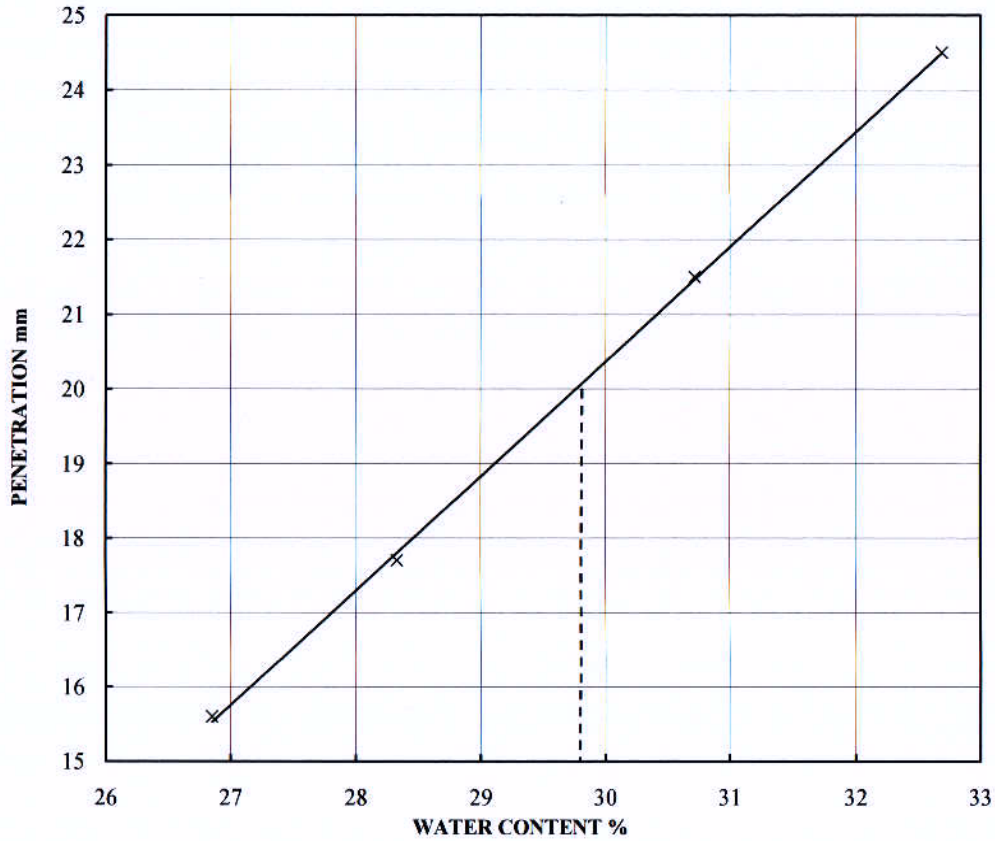
Percentage of passing 0.425mm B.S.Sieve = 103%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	32.05	28.70	33.36	33.49	
Dry Weight + Tare (g)	27.03	24.08	27.41	27.36	
Tare Weight (g)	9.81	9.24	9.38	9.77	NP
Water Content (%)	29.15	31.13	33.00	34.87	
Penetration (mm)	14.50	17.80	21.20	24.30	

LIQUID LIMIT (%) 32
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : UDS	
Borehole No. BH-1, CH-2010	Sample No: UDS-3
Depth (m): 8.00	
XPLORER	Site Ref: Muzaffarnagar to Saharanpur
Job No : 1342	
Test Report No: XPL/2015-16/02	
Operator : <i>Bhupat</i>	Checked : <i>RE</i>
Authorised Signatory <i>[Signature]</i>	
Date : 15/3/2016	Date: 28/3/16
Date: 28/3/16	

I.S. : 2720 : PART 5



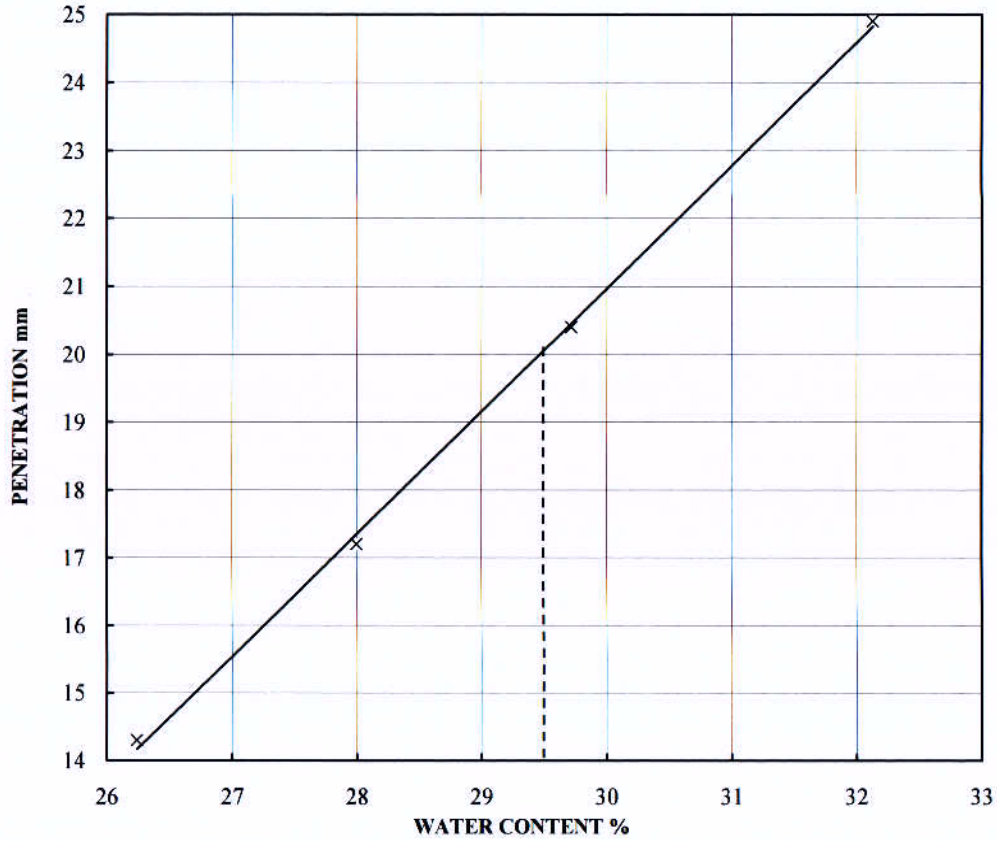
HISTORY OF SAMPLE :

Percentage of passing 0.425mm B.S.Sieve = 92%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	27.70	27.70	33.65	34.85	
Dry Weight + Tare (g)	23.64	23.47	28.05	28.80	
Tare Weight (g)	8.52	8.54	9.82	10.30	NP
Water Content (%)	26.85	28.33	30.72	32.69	
Penetration (mm)	15.60	17.70	21.50	24.50	
LIQUID LIMIT (%)	30				
PLASTIC LIMIT (%)	NP				
PLASTICITY INDEX (%)					

Sample Type : UDS	
Borehole No. BH-1, CH-2010	Sample No: UDS-8
Depth (m): 23.00	
XPLORER	Site Ref: Muzaffarnagar to Saharanpur
Job No : 1342	
Test Report No: XPL/2015-16/02	
Operator : <i>Bhagat</i>	Checked : <i>[Signature]</i>
Authorised Signatory <i>[Signature]</i>	
Date : 15/3/2016	Date: 29/3/16
Date: 28/3/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

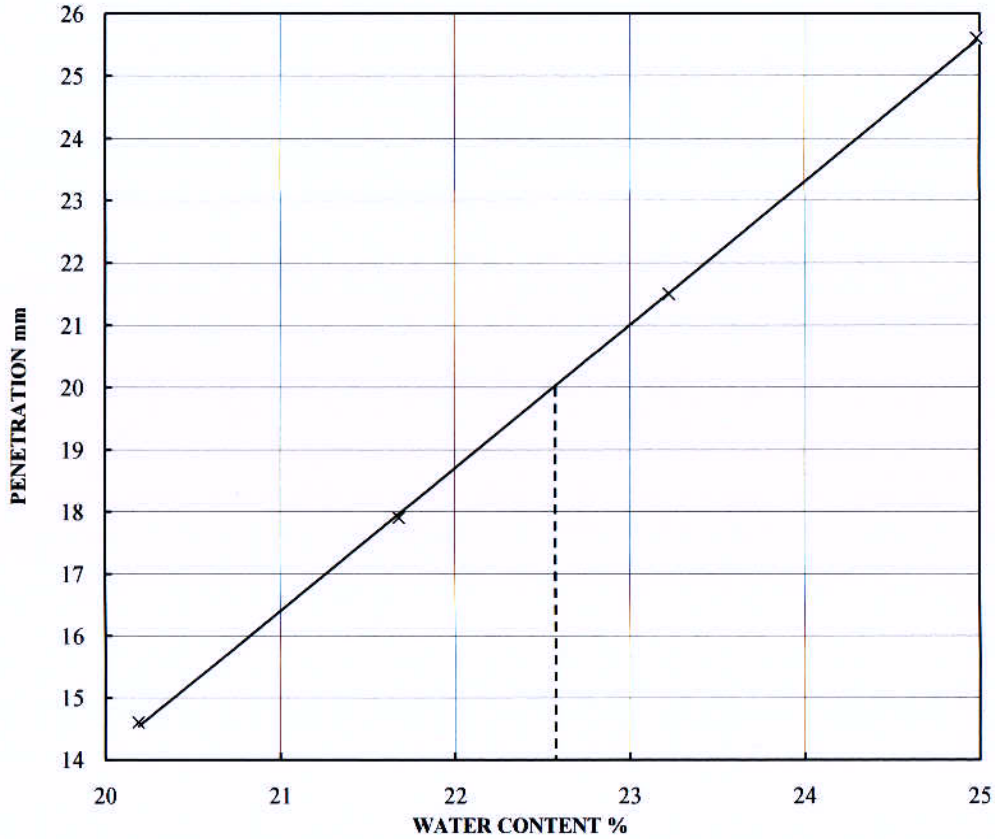
Percentage of passing 0.425mm B.S.Sieve = 92%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	32.45	40.54	26.38	28.91	
Dry Weight + Tare (g)	27.44	33.49	22.27	23.97	
Tare Weight (g)	8.37	8.32	8.44	8.59	NP
Water Content (%)	26.24	28.00	29.72	32.13	
Penetration (mm)	14.30	17.20	20.40	24.90	

LIQUID LIMIT (%) 29
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : UDS	
Borehole No. BH-1, CH-2010	Sample No: UDS-9
Depth (m): 26.00	
XPLORER	Site Ref: Muzaffarnagar to Saharanpur
Job No : 1342	
Test Report No: XPL/2015-16/02	
Operator : <i>Bhagwat</i>	Checked : <i>RS</i>
Date : 16/3/2016	Date: 28/3/16
Authorised Signatory: <i>[Signature]</i>	
Date: 28/3/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

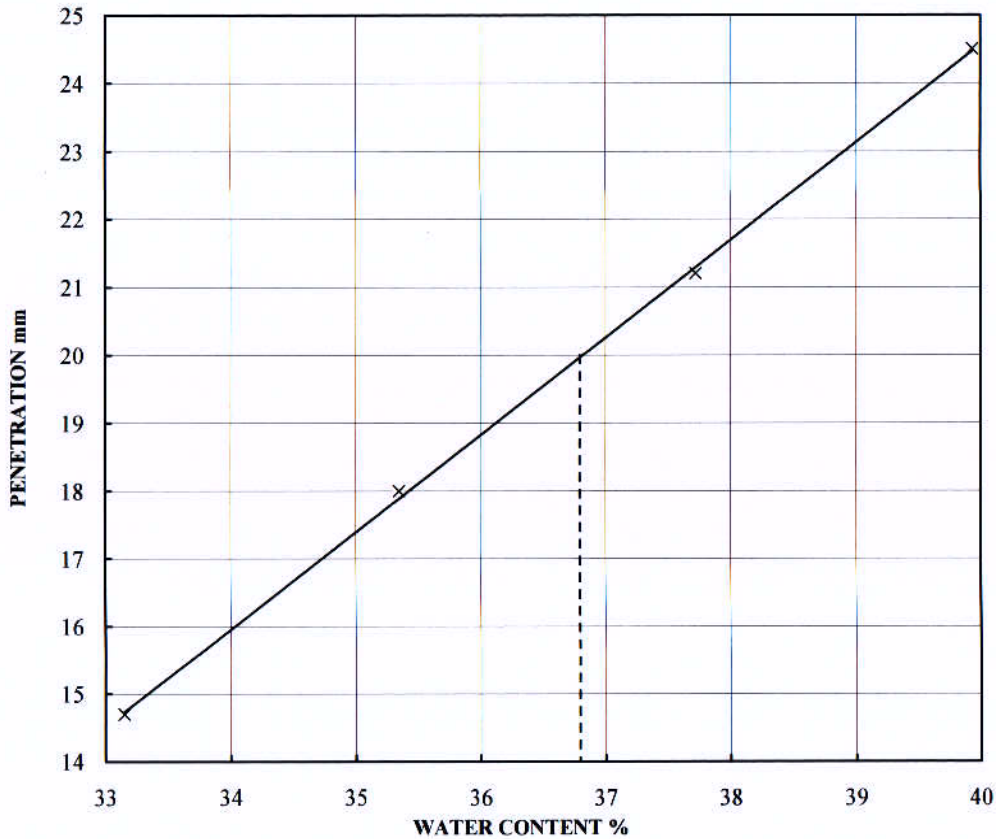
Percentage of passing 0.425mm B.S.Sieve = 90%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	30.63	29.29	28.62	28.41	
Dry Weight + Tare (g)	27.03	25.83	25.19	24.40	
Tare Weight (g)	9.20	9.87	10.42	8.35	NP
Water Content (%)	20.19	21.68	23.22	24.98	
Penetration (mm)	14.60	17.90	21.50	25.60	

LIQUID LIMIT (%) 23
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : SPT		Borehole No. BH-1, CH-6550		Sample No: SPT-1	Depth (m): 1.50
XPLORER		Site Ref: Muzaffarnagar to Saharanpur		Job No : 1342	Test Report No: XPL/2015-16/02
Operator : <i>Blaney</i>	Checked : <i>HE</i>	Authorised Signatory <i>[Signature]</i>			
Date : 16/3/2016	Date: 28/3/16	Date: 28/3/16			

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

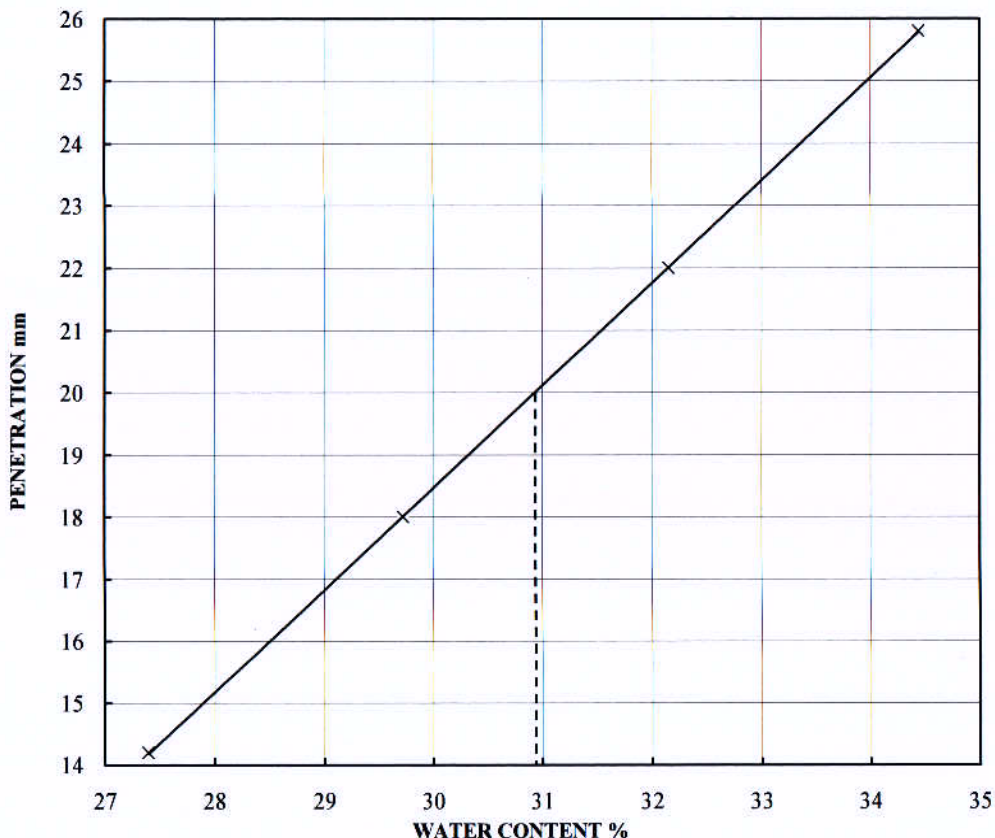
Percentage of passing 0.425mm B.S.Sieve = 92%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	23.52	23.74	24.90	26.76	20.38	20.29
Wet Weight + Tare (g)	19.89	20.12	20.66	21.88	18.15	18.36
Dry Weight + Tare (g)	8.94	9.88	9.42	9.66	8.62	10.05
Tare Weight (g)	33.15	35.35	37.72	39.93	23.40	23.23
Water Content (%)	14.70	18.00	21.20	24.50		
Penetration (mm)						

LIQUID LIMIT (%) 37
 PLASTIC LIMIT (%) 23
 PLASTICITY INDEX (%) 14

Sample Type : UDS		Borehole No. BH-1, CH-6550		Sample No: UDS-7		Depth (m): 20.00	
XPLORER		Site Ref: Muzaffarnagar to Saharanpur		Job No : 1342		Test Report No: XPL/2015-16/02	
Operator : <i>Bheem</i>		Checked : <i>[Signature]</i>		Authorised Signatory <i>[Signature]</i>			
Date : 16/3/2016		Date: 28/3/16		Date: 28/3/16			

I.S. : 2720 : PART 5



HISTORY OF SAMPLE : Natural

Percentage of passing 0.425mm B.S.Sieve =

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	21.49	24.10	23.71	24.32	
Dry Weight + Tare (g)	19.00	20.86	20.08	20.70	
Tare Weight (g)	9.91	9.96	8.79	10.19	NP
Water Content (%)	27.39	29.72	32.15	34.44	
Penetration (mm)	14.20	18.00	22.00	25.80	

LIQUID LIMIT (%) 31
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

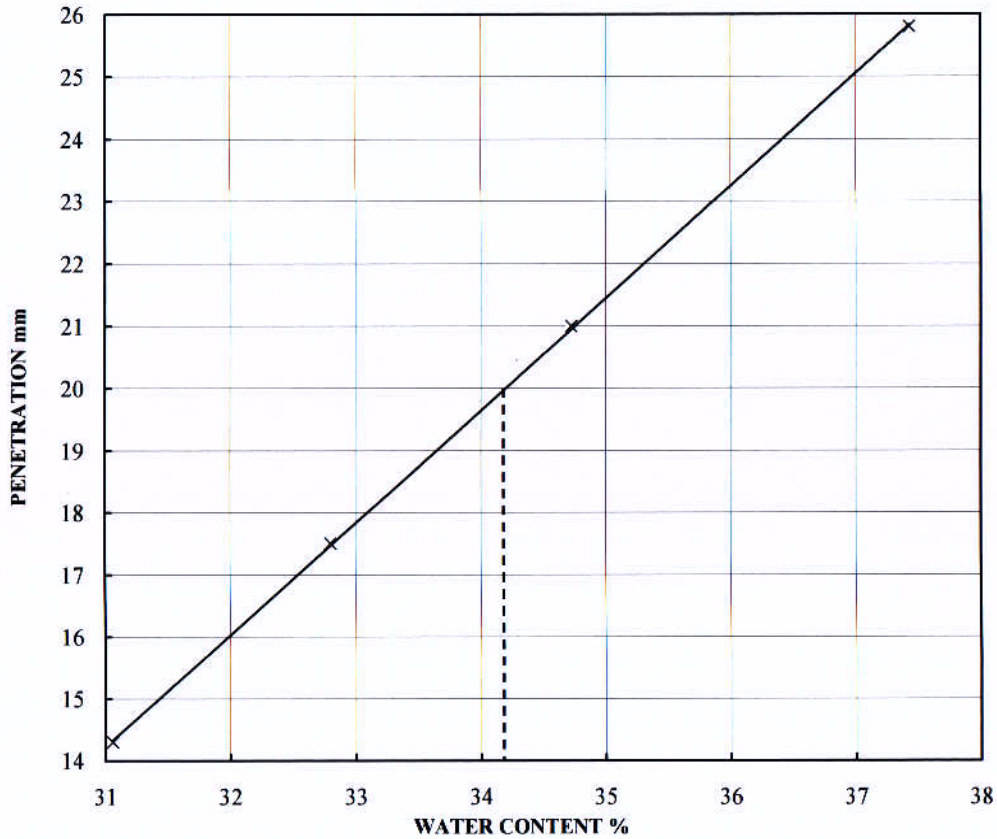
Sample Type : SPT

Borehole No. BH-1, CH-6550 Sample No: SPT-19 Depth (m): 28.50

XPLORER Site Ref: Muzaffarnagar to Saharanpur Job No: 1342
 Test Report No: XPL/2015-16/02

Operator : <i>Bhegwal</i>	Checked : <i>PS</i>	Authorised Signatory <i>[Signature]</i>
Date : <i>16/3/2016</i>	Date: <i>28/3/16</i>	Date: <i>28/07/13</i>

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

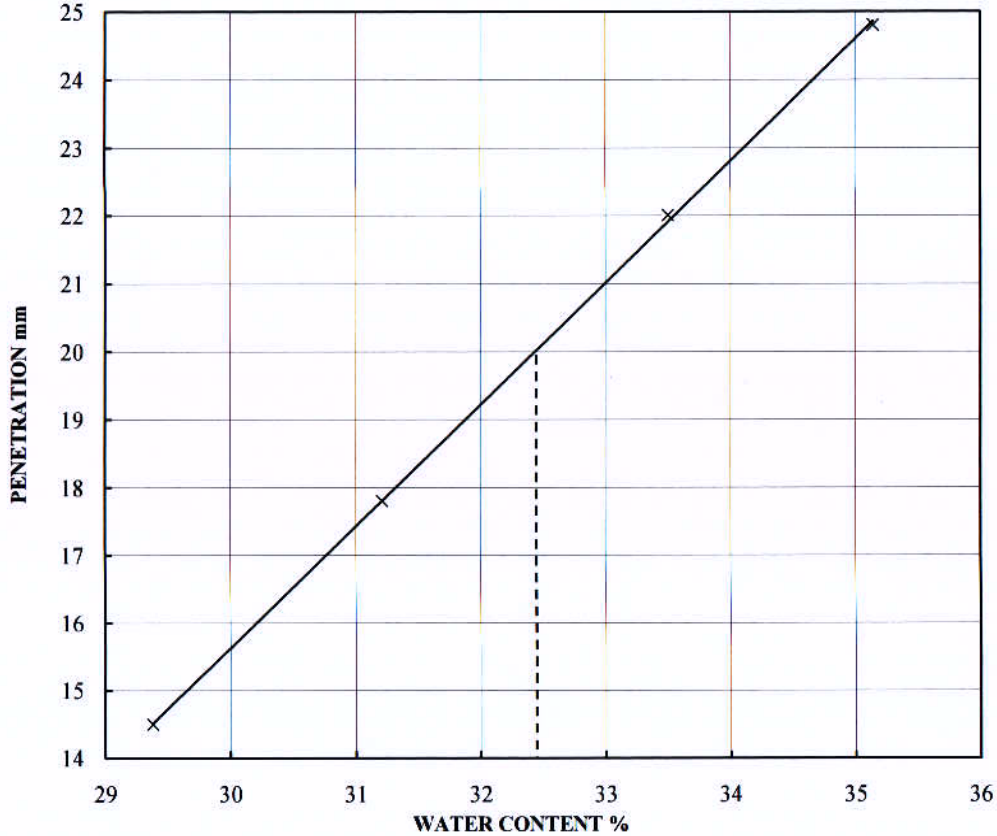
Percentage of passing 0.425mm B.S.Sieve = **84%**

	LIQUID LIMIT %				PLASTIC LIMIT %	
	28.12	29.35	30.18	32.25	20.14	19.87
Wet Weight + Tare (g)	28.12	29.35	30.18	32.25	20.14	19.87
Dry Weight + Tare (g)	23.43	24.44	24.70	26.32	18.00	18.05
Tare Weight (g)	8.33	9.47	8.92	10.47	8.40	9.98
Water Content (%)	31.06	32.80	34.73	37.43	22.30	22.48
Penetration (mm)	14.30	17.50	21.00	25.80		

LIQUID LIMIT (%) **34**
 PLASTIC LIMIT (%) **22**
 PLASTICITY INDEX (%) **12**

Sample Type : SPT		Borehole No. BH-2, CH-6550		Sample No: SPT-6	Depth (m): 9.00
XPLORER		Site Ref: Muzaffarnagar to Saharanpur		Job No : 1342	Test Report No: XPL/2015-16/02
Operator : <i>Bhagy</i>		Checked : <i>[Signature]</i>		Authorised Signatory <i>[Signature]</i>	
Date : 16/3/2016		Date: 28/3/16		Date: 28/07/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

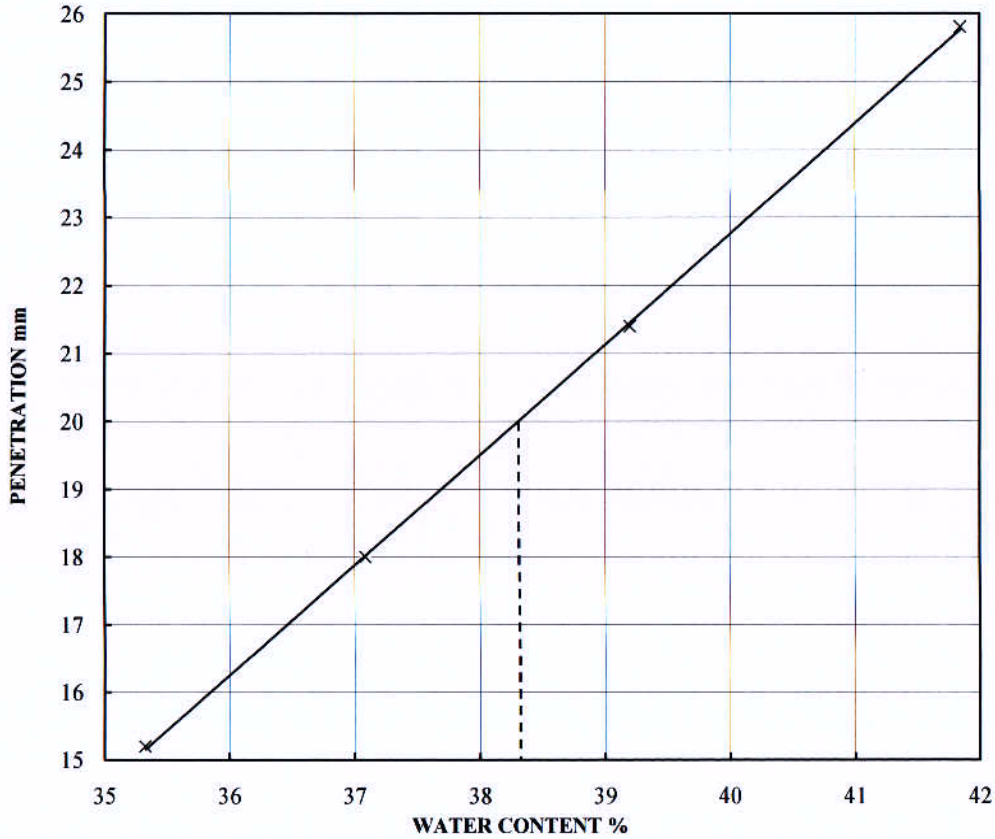
Percentage of passing 0.425mm B.S.Sieve = 92%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	30.18	29.84	31.25	32.25	19.52	18.63
Wet Weight + Tare (g)	30.18	29.84	31.25	32.25	19.52	18.63
Dry Weight + Tare (g)	25.49	25.13	25.88	26.43	17.79	17.04
Tare Weight (g)	9.54	10.04	9.85	9.87	9.65	9.66
Water Content (%)	29.38	31.21	33.50	35.14	21.25	21.54
Penetration (mm)	14.50	17.80	22.00	24.80		

LIQUID LIMIT (%) 32
 PLASTIC LIMIT (%) 21
 PLASTICITY INDEX (%) 11

Sample Type : UDS		Borehole No. BH-2, CH-6550		Sample No: UDS-7	Depth (m): 20.00
XPLORER		Site Ref: Muzaffarnagar to Saharanpur		Job No : 1342	Test Report No: XPL/2015-16/02
Operator : <i>Bhujay</i>		Checked : <i>KF</i>		Authorised Signatory <i>[Signature]</i>	
Date : 16/3/2016		Date: 28/3/16		Date: 28/07/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

Percentage of passing 0.425mm B.S.Sieve = 87%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	30.18	28.27	27.29	30.18	19.65	21.03
Wet Weight + Tare (g)	30.18	28.27	27.29	30.18	19.65	21.03
Dry Weight + Tare (g)	24.80	22.97	22.30	24.10	17.70	19.11
Tare Weight (g)	9.57	8.68	9.57	9.57	8.57	10.04
Water Content (%)	35.33	37.09	39.20	41.84	21.36	21.17
Penetration (mm)	15.20	18.00	21.40	25.80		

LIQUID LIMIT (%) 38
 PLASTIC LIMIT (%) 21
 PLASTICITY INDEX (%) 17

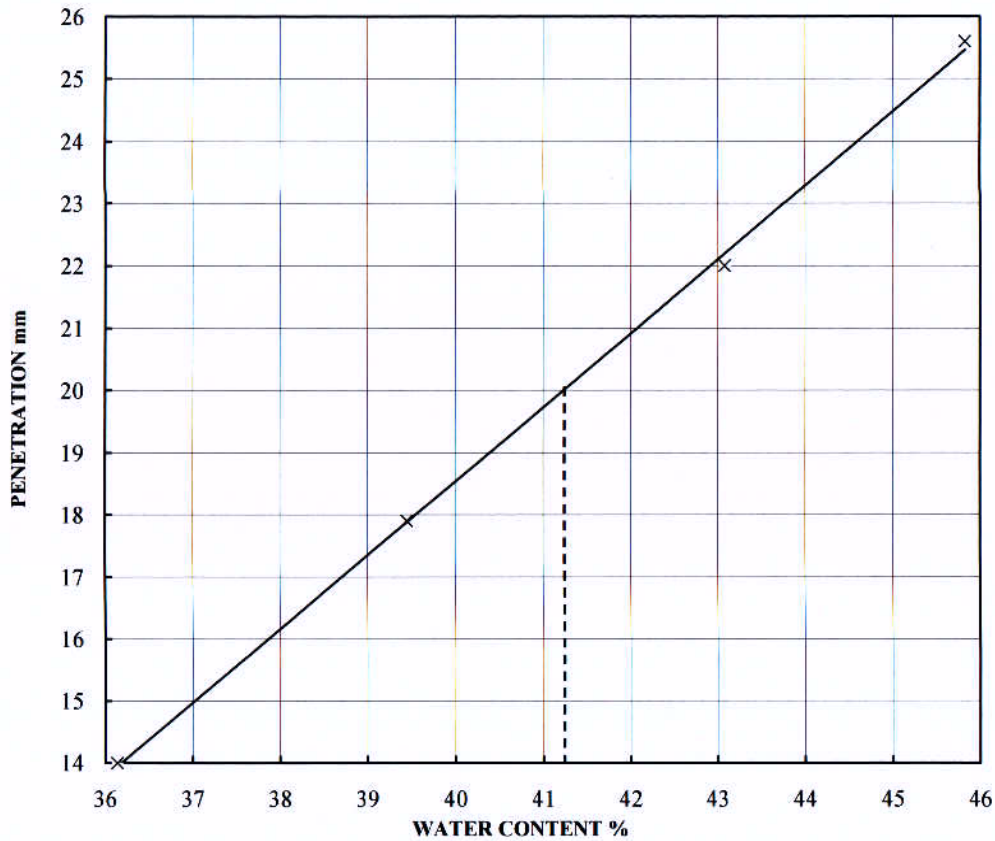
Sample Type : SPT

Borehole No. BH-2, CH-6550 Sample No: SPT-19 Depth (m): 28.50

XPLORER Site Ref: Muzaffarnagar to Saharanpur Job No : 1342
 Test Report No: XPL/2015-16/02

Operator : <i>Bhagat</i>	Checked : <i>[Signature]</i>	Authorised Signatory <i>[Signature]</i>
Date : 16/3/2016	Date: 28/3/16	Date: 28/8/16

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

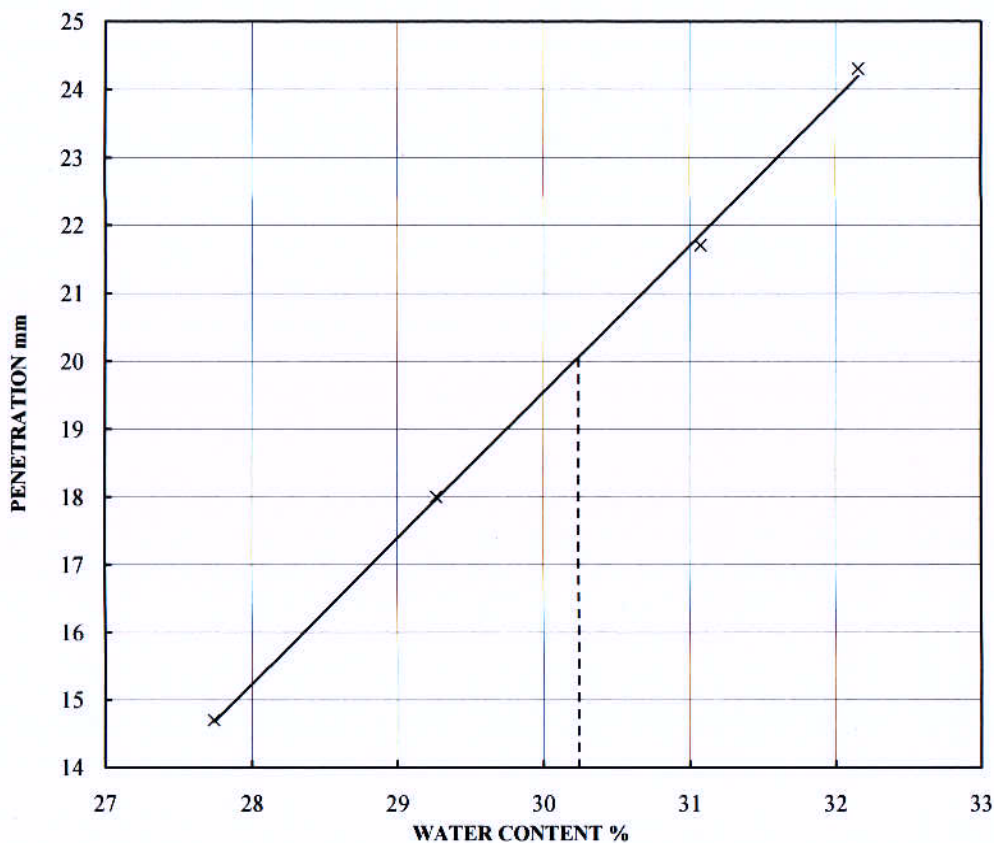
Percentage of passing 0.425mm B.S.Sieve = 87%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	22.14	21.22	23.09	25.88	23.84	21.66
Wet Weight + Tare (g)	22.14	21.22	23.09	25.88	23.84	21.66
Dry Weight + Tare (g)	18.92	17.63	18.73	20.83	21.80	19.66
Tare Weight (g)	10.01	8.53	8.61	9.81	10.54	8.77
Water Content (%)	36.14	39.45	43.08	45.83	18.12	18.37
Penetration (mm)	14.00	17.90	22.00	25.60		

LIQUID LIMIT (%) 41
 PLASTIC LIMIT (%) 18
 PLASTICITY INDEX (%) 23

Sample Type : SPT		Borehole No. BH-1, CH-5322		Sample No: SPT-4	Depth (m): 6.00
XPLORER		Site Ref: Muzaffarnagar to Saharanpur		Job No : 1342	Test Report No: XPL/2015-16/02
Operator : <i>Bhoney</i>		Checked : <i>RSE</i>		Authorised Signatory <i>[Signature]</i>	
Date : 16/3/2016		Date: 28/3/16		Date: 28/8/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

Percentage of passing 0.425mm B.S.Sieve = 92%

	LIQUID LIMIT %				PLASTIC LIMIT %	
Wet Weight + Tare (g)	31.07	29.18	28.65	30.38	18.58	18.68
Dry Weight + Tare (g)	26.44	24.52	24.34	25.09	17.19	17.28
Tare Weight (g)	9.75	8.60	10.47	8.64	10.32	10.30
Water Content (%)	27.74	29.27	31.07	32.16	20.23	20.06
Penetration (mm)	14.70	18.00	21.70	24.30		

LIQUID LIMIT (%) 30
 PLASTIC LIMIT (%) 20
 PLASTICITY INDEX (%) 10

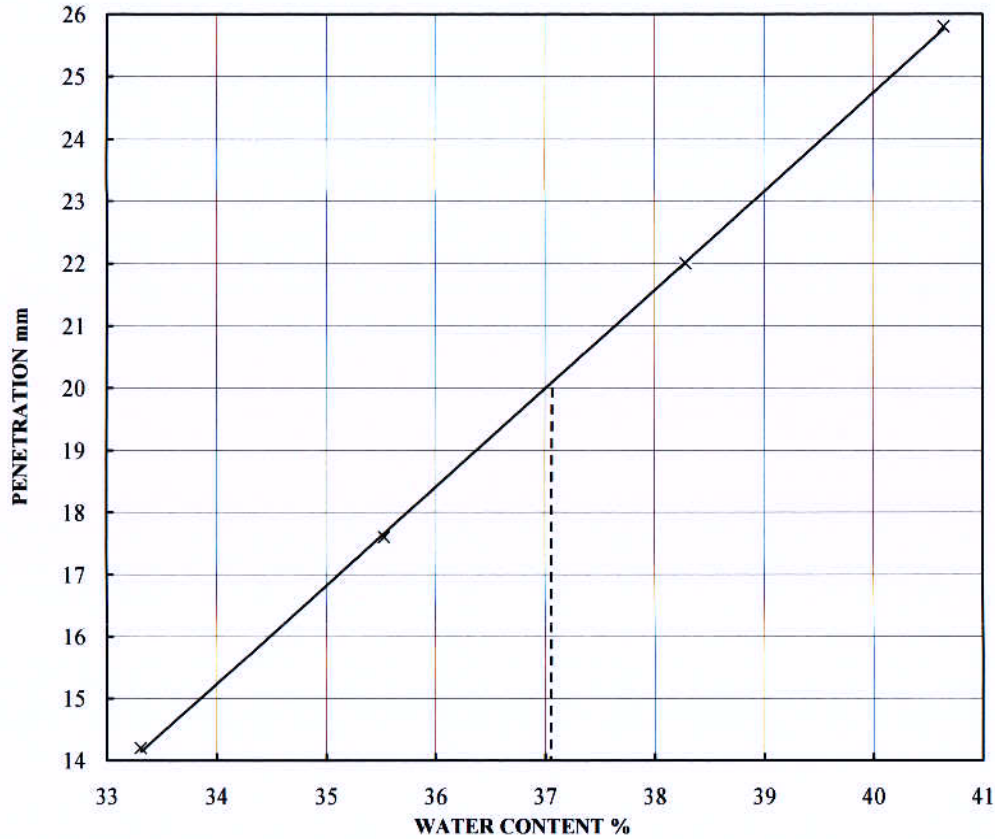
Sample Type : UDS

Borehole No. BH-1, CH-5322 Sample No: UDS-4 Depth (m): 8.00

XPLORER Site Ref: Muzaffarnagar to Saharanpur Job No : 1342
 Test Report No: XPL/2015-16/02

Operator : <i>Bhagat</i>	Checked : <i>ME</i>	Authorised Signatory : <i>[Signature]</i>
Date : 17/3/2016	Date: 28/3/16	Date: 28/3/16

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

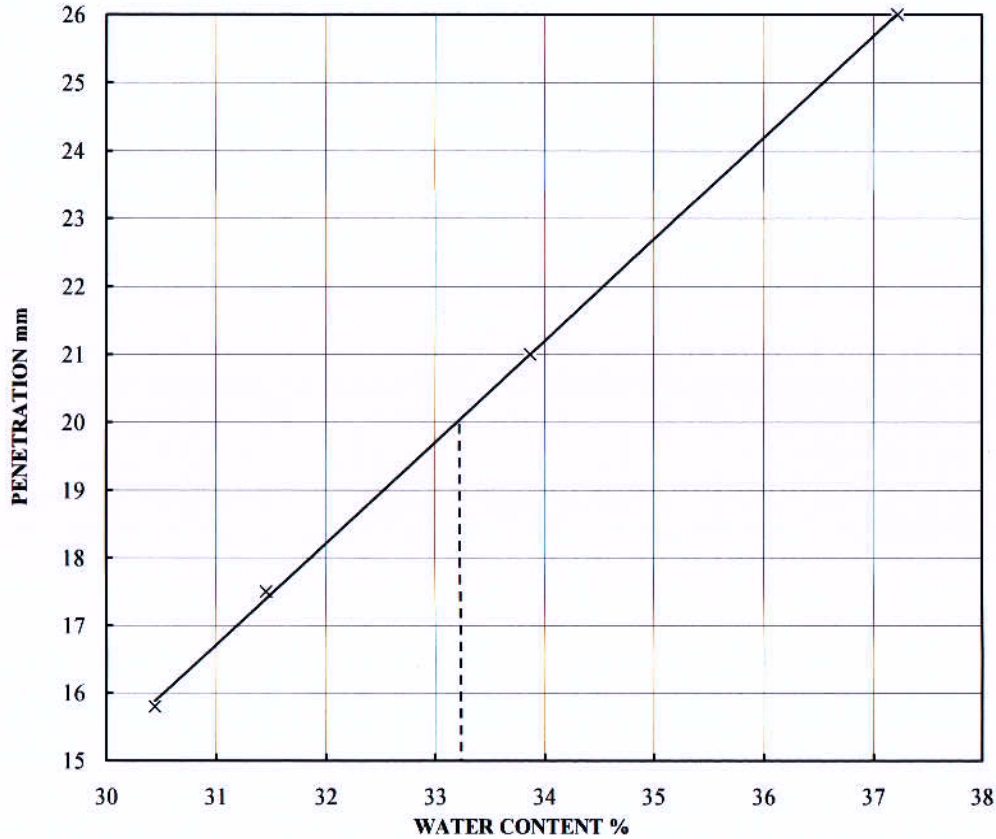
Percentage of passing 0.425mm B.S.Sieve = 92%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	28.30	31.26	35.29	38.25	21.26	23.18
Wet Weight + Tare (g)	28.30	31.26	35.29	38.25	21.26	23.18
Dry Weight + Tare (g)	23.68	25.39	28.38	30.06	19.22	20.43
Tare Weight (g)	9.81	8.87	10.33	9.91	10.05	8.22
Water Content (%)	33.31	35.53	38.28	40.65	22.23	22.52
Penetration (mm)	14.20	17.60	22.00	25.80		

LIQUID LIMIT (%)	37
PLASTIC LIMIT (%)	22
PLASTICITY INDEX (%)	15

Sample Type : UDS	
Borehole No. BH-1, CH-1790	Sample No: UDS-4
Depth (m): 8.00	
XPLORER	Site Ref: Muzaffarnagar to Saharanpur
Job No : 1342	
Test Report No: XPL/2015-16/02	
Operator : <i>Bhargava</i>	Checked : <i>[Signature]</i>
Date : 17/3/2016	Date: 28/3/16
Authorised Signatory <i>[Signature]</i>	
Date: 28/3/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE : Natural

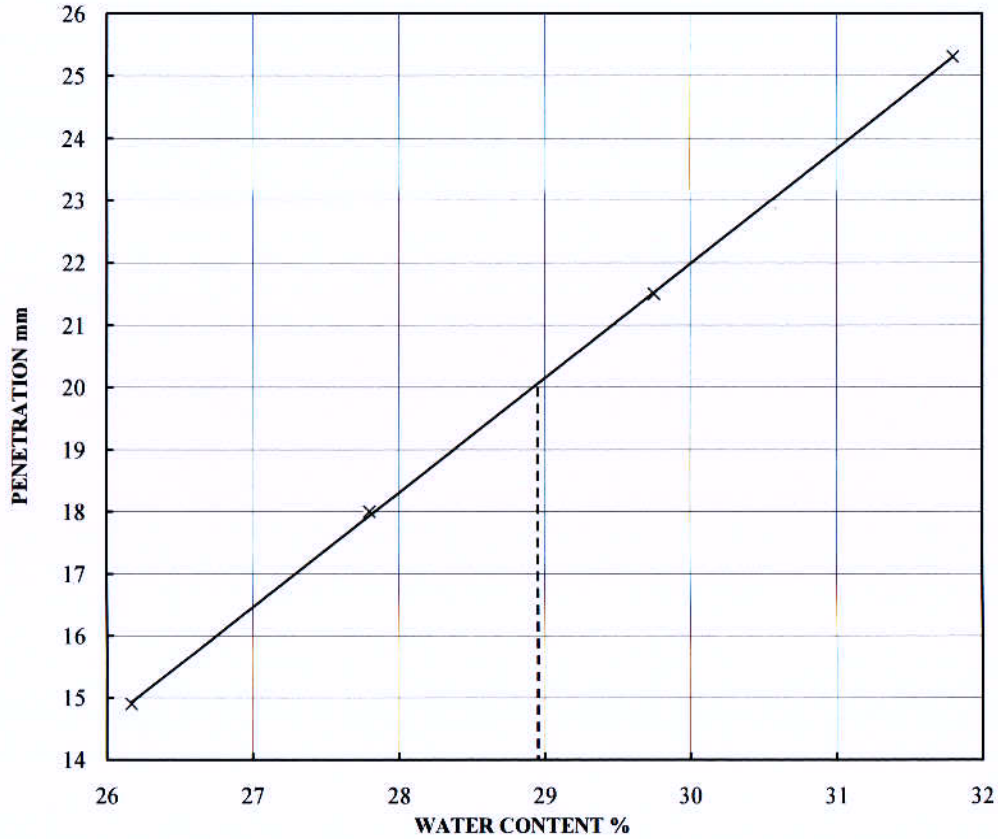
Percentage of passing 0.425mm B.S.Sieve =

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	23.44	23.29	26.77	27.06	
Dry Weight + Tare (g)	20.00	20.16	22.56	22.57	
Tare Weight (g)	8.70	10.21	10.13	10.50	NP
Water Content (%)	30.44	31.46	33.87	37.22	
Penetration (mm)	15.80	17.50	21.00	26.00	

LIQUID LIMIT (%) 33
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : UDS		Borehole No. BH-1, CH-1790		Sample No: UDS-6	Depth (m): 1.50
XPLORER		Site Ref: Muzaffarnagar to Saharanpur		Job No : 1342	Test Report No: XPL/2015-16/02
Operator : <i>Bhupat</i>		Checked : <i>[Signature]</i>		Authorised Signatory <i>[Signature]</i>	
Date : 17/3/2016		Date: 28/3/16		Date: 28/3/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

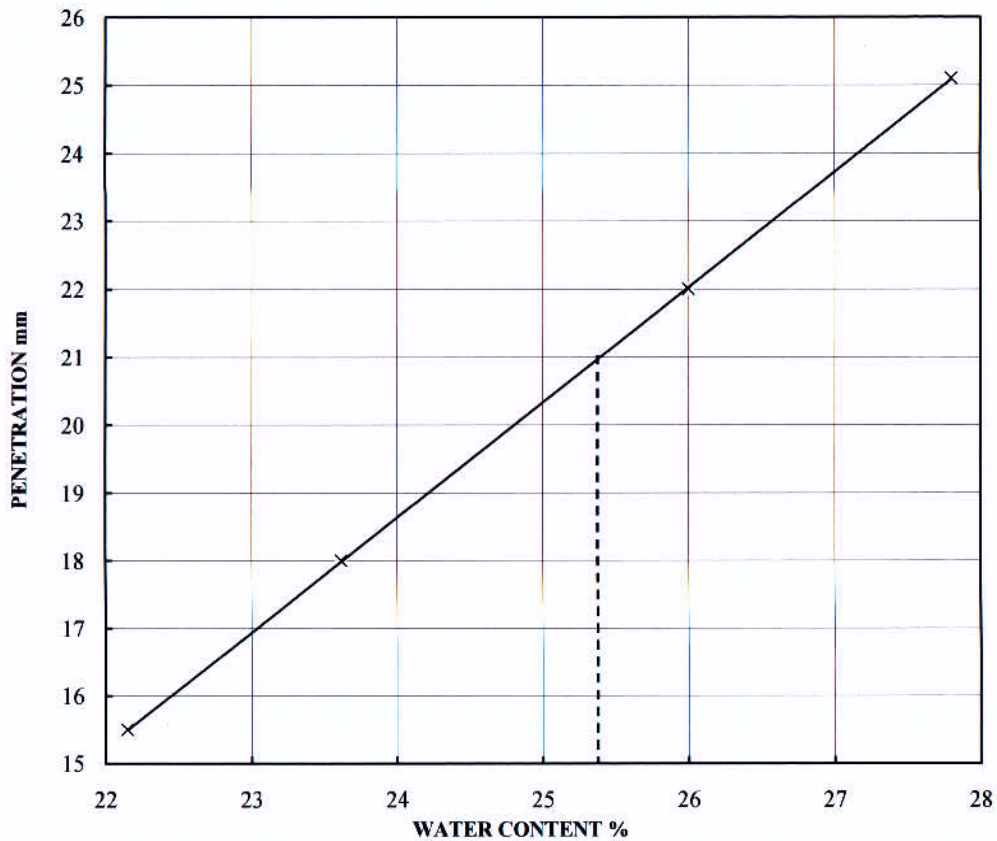
Percentage of passing 0.425mm B.S.Sieve = 86%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	30.15	29.87	28.25	30.22	
Dry Weight + Tare (g)	25.84	25.23	24.07	25.18	
Tare Weight (g)	9.37	8.54	10.02	9.35	NP
Water Content (%)	26.17	27.80	29.75	31.80	
Penetration (mm)	14.90	18.00	21.50	25.30	

LIQUID LIMIT (%) 29
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : UDS		Borehole No. BH-2, CH-1790		Sample No: UDS-4	Depth (m): 8.00
XPLORER		Site Ref: Muzaffarnagar to Saharanpur		Job No : 1342	Test Report No: XPL/2015-16/02
Operator : <i>Bhojraj</i>		Checked : <i>[Signature]</i>		Authorised Signatory <i>[Signature]</i>	
Date : 17/3/2016		Date: 28/3/16		Date: 28/07/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE : Natural

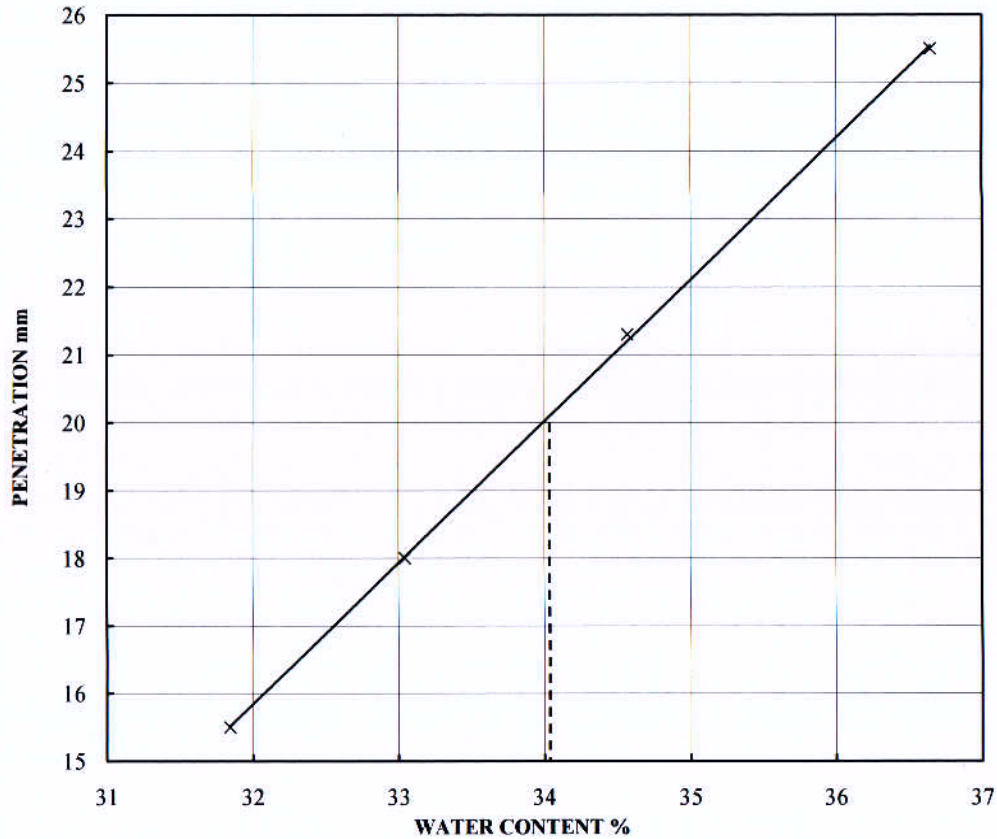
Percentage of passing 0.425mm B.S.Sieve =

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	30.82	27.87	29.12	29.92	
Dry Weight + Tare (g)	26.68	24.41	25.11	25.24	
Tare Weight (g)	7.99	9.76	9.71	8.40	NP
Water Content (%)	22.15	23.62	26.00	27.80	
Penetration (mm)	15.50	18.00	22.00	25.10	

LIQUID LIMIT (%) 25
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : UDS	
Borehole No. BH-2, CH-1790	Sample No: UDS-6 Depth (m): 17.00
XPLORER	Site Ref: Muzaffarnagar to Saharanpur Job No : 1342 Test Report No: XPL/2015-16/02
Operator : <i>Shrey</i>	Checked : <i>RE</i> Authorised Signatory <i>[Signature]</i>
Date : 17/3/2016	Date: 28/3/16 Date: 28/3/16

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

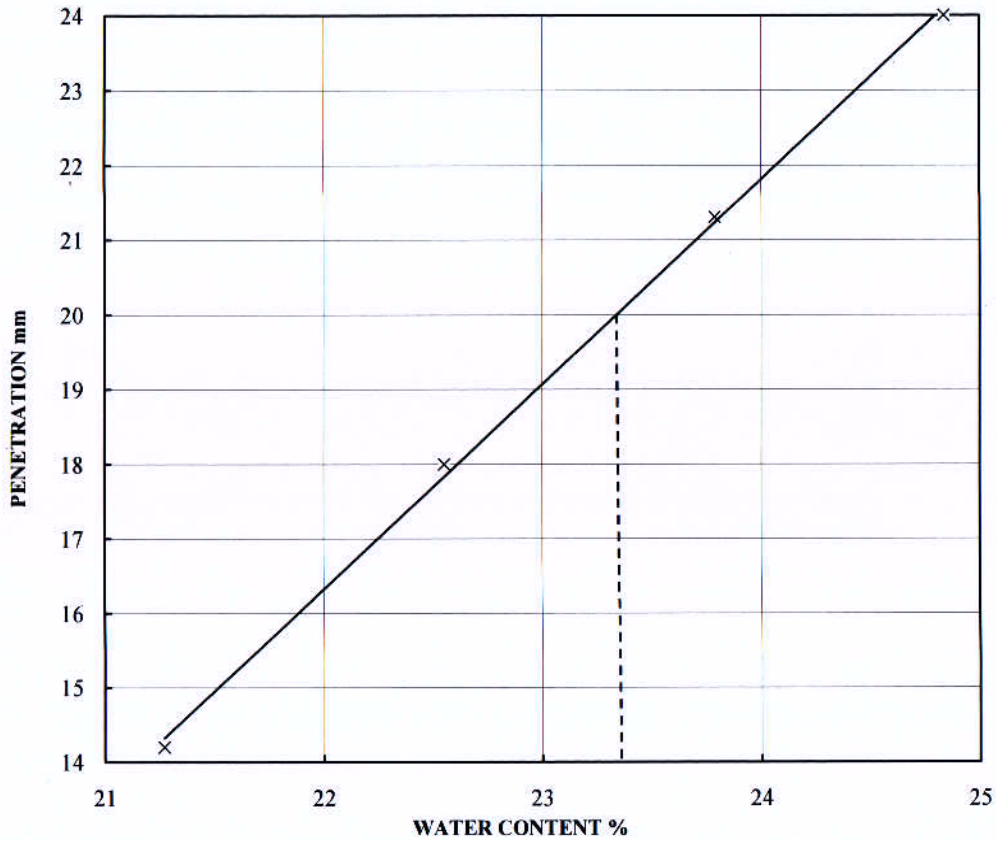
Percentage of passing 0.425mm B.S.Sieve = 83%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	26.52	27.28	30.06	32.89	18.31	18.65
Wet Weight + Tare (g)	26.52	27.28	30.06	32.89	18.31	18.65
Dry Weight + Tare (g)	22.60	23.08	25.02	26.70	16.35	16.92
Tare Weight (g)	10.29	10.37	10.44	9.81	8.00	9.52
Water Content (%)	31.84	33.04	34.57	36.65	23.47	23.38
Penetration (mm)	15.50	18.00	21.30	25.50		

LIQUID LIMIT (%) 34
 PLASTIC LIMIT (%) 23
 PLASTICITY INDEX (%) 11

Sample Type : UDS		Borehole No. BH-2, CH-1790		Sample No: SPT-18	Depth (m): 27.00
XPLORER		Site Ref: Muzaffarnagar to Saharanpur		Job No : 1342	Test Report No: XPL/2015-16/02
Operator : <i>Bhargava</i>		Checked : <i>RE</i>		Authorised Signatory <i>[Signature]</i>	
Date : 18/3/2016		Date: 28/3/16		Date: 28/3/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

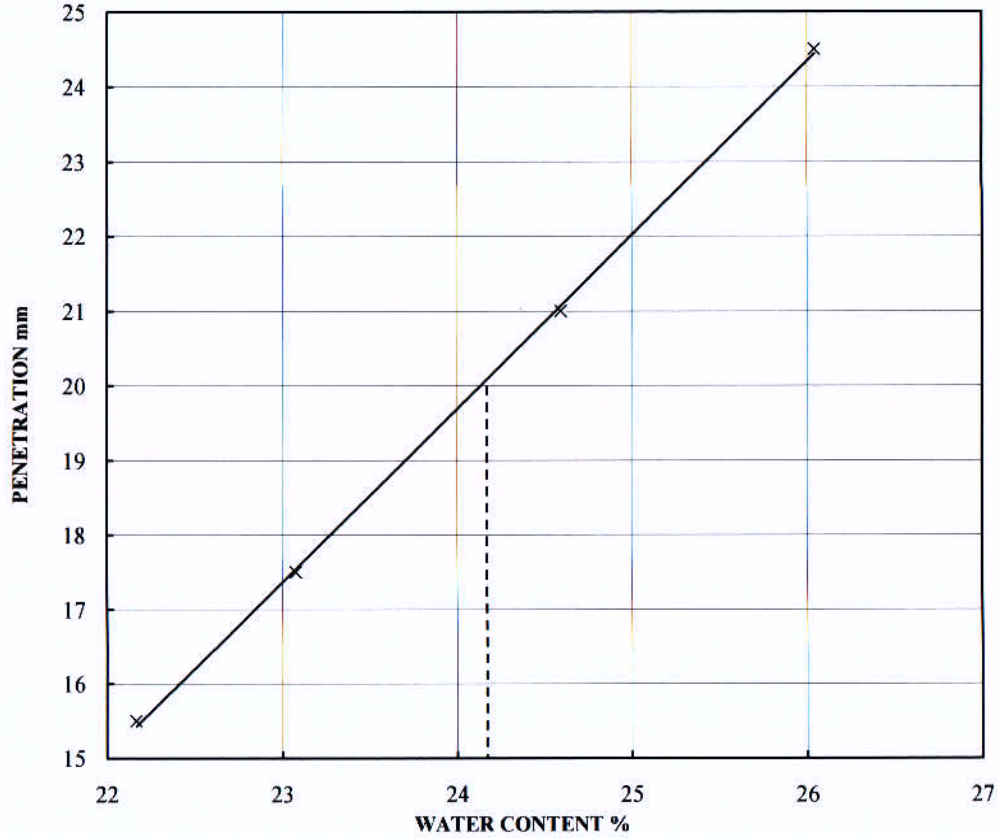
Percentage of passing 0.425mm B.S.Sieve = 82%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	29.63	28.29	27.62	27.41	
Dry Weight + Tare (g)	26.08	25.02	24.33	23.62	
Tare Weight (g)	9.39	10.52	10.50	8.36	NP
Water Content (%)	21.27	22.55	23.79	24.84	
Penetration (mm)	14.20	18.00	21.30	24.00	

LIQUID LIMIT (%) 23
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : SPT			
Borehole No. BH-1, CH-2286	Sample No: SPT-1	Depth (m): 1.50	
XPLORER	Site Ref: Muzaffarnagar to Saharanpur	Job No: 1342	Test Report No: XPL/2015-16/02
Operator : <i>Bhopley</i>	Checked : <i>PE</i>	Authorised Signatory <i>A. Sankar</i>	
Date : 18/11/2016	Date: 28/11/16	Date: 28/11/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE : Natural

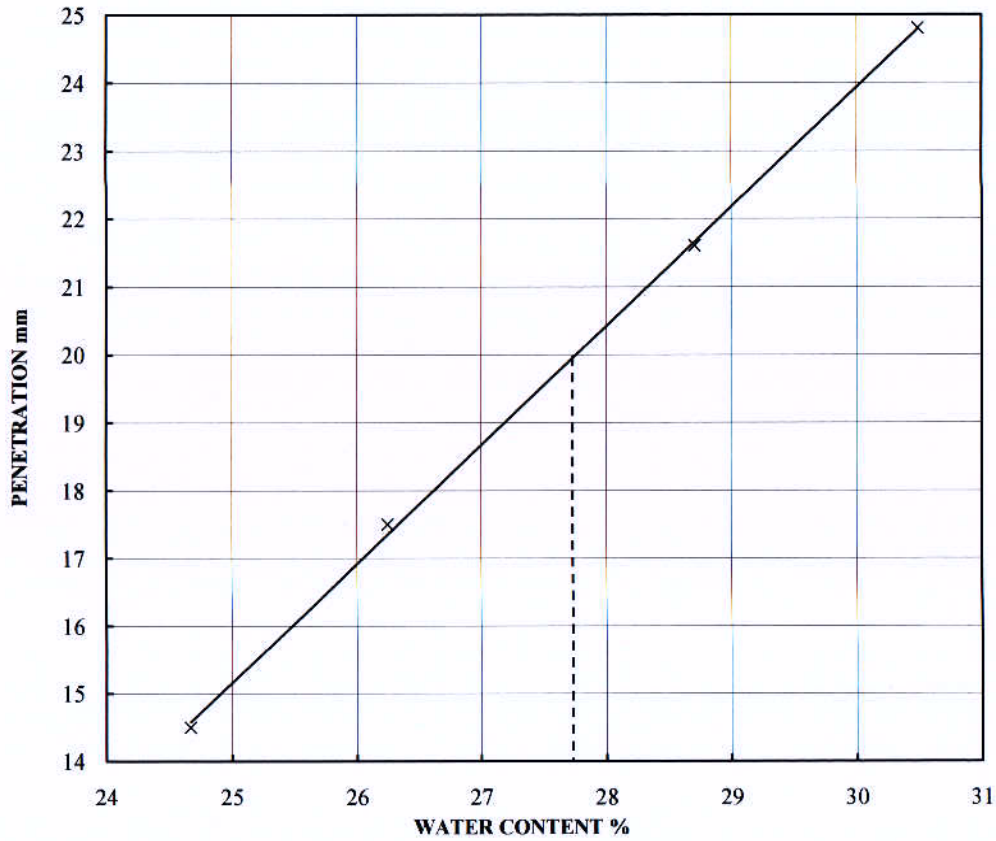
Percentage of passing 0.425mm B.S.Sieve =

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	23.02	21.19	23.20	28.10	
Dry Weight + Tare (g)	20.40	18.79	20.32	24.29	
Tare Weight (g)	8.58	8.39	8.61	9.66	NP
Water Content (%)	22.17	23.08	24.59	26.04	
Penetration (mm)	15.50	17.50	21.00	24.50	

LIQUID LIMIT (%) 24
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : SPT	
Borehole No. BH-1, CH-1980	Sample No: SPT-1 Depth (m): 1.50
XPLORER	Site Ref: Muzaffarnagar to Saharanpur Job No : 1342 Test Report No: XPL/2015-16/02
Operator : <i>Bhojraj</i>	Checked : <i>RE</i> Authorised Signatory <i>[Signature]</i>
Date : 18/3/2016	Date: 28/3/16 Date: 28/3/16

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

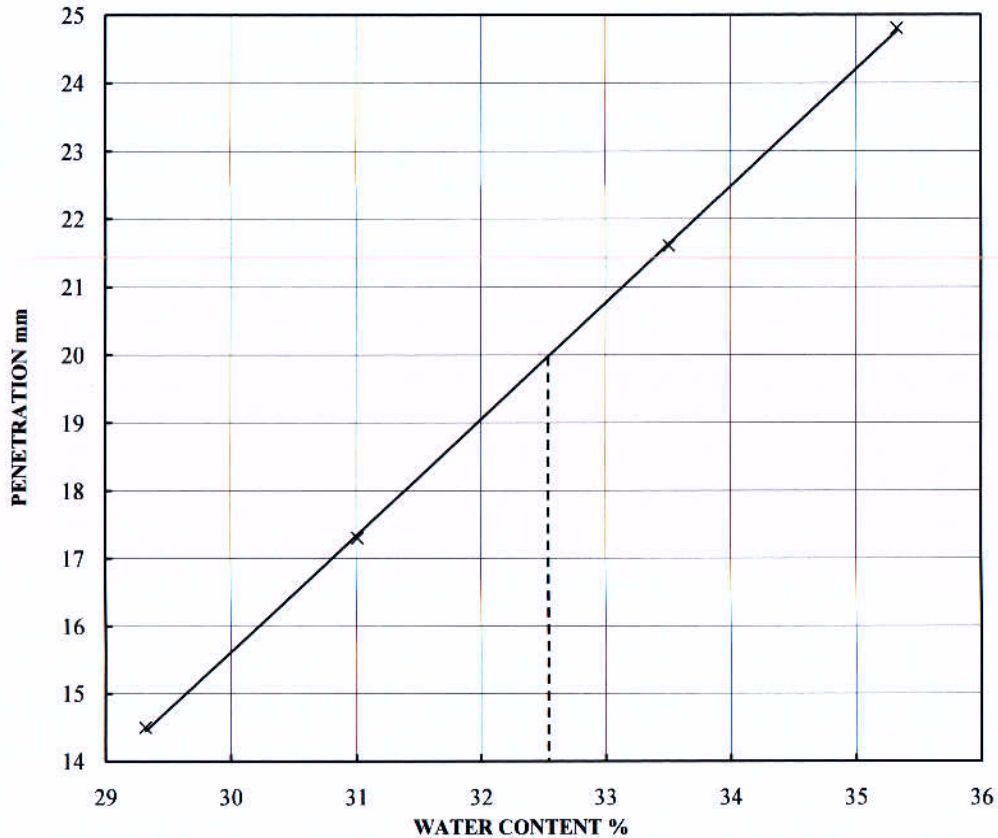
Percentage of passing 0.425mm B.S.Sieve = 92%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	25.35	25.13	25.30	30.15	
Dry Weight + Tare (g)	22.19	21.61	21.93	25.11	
Tare Weight (g)	9.38	8.20	10.19	8.58	NP
Water Content (%)	24.67	26.25	28.71	30.49	
Penetration (mm)	14.50	17.50	21.60	24.80	

LIQUID LIMIT (%) 28
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : UDS	
Borehole No. BH-1, CH-2010	Sample No: UDS-4
Depth (m): 11.00	
XPLORER	Site Ref: Muzaffarnagar to Saharanpur
Job No : 1342	
Test Report No: XPL/2015-16/02	
Operator : <i>Bhupay</i>	Checked : <i>AK</i>
Authorised Signatory <i>[Signature]</i>	
Date : 19/3/2016	Date: 29/3/16
Date: 28/07/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

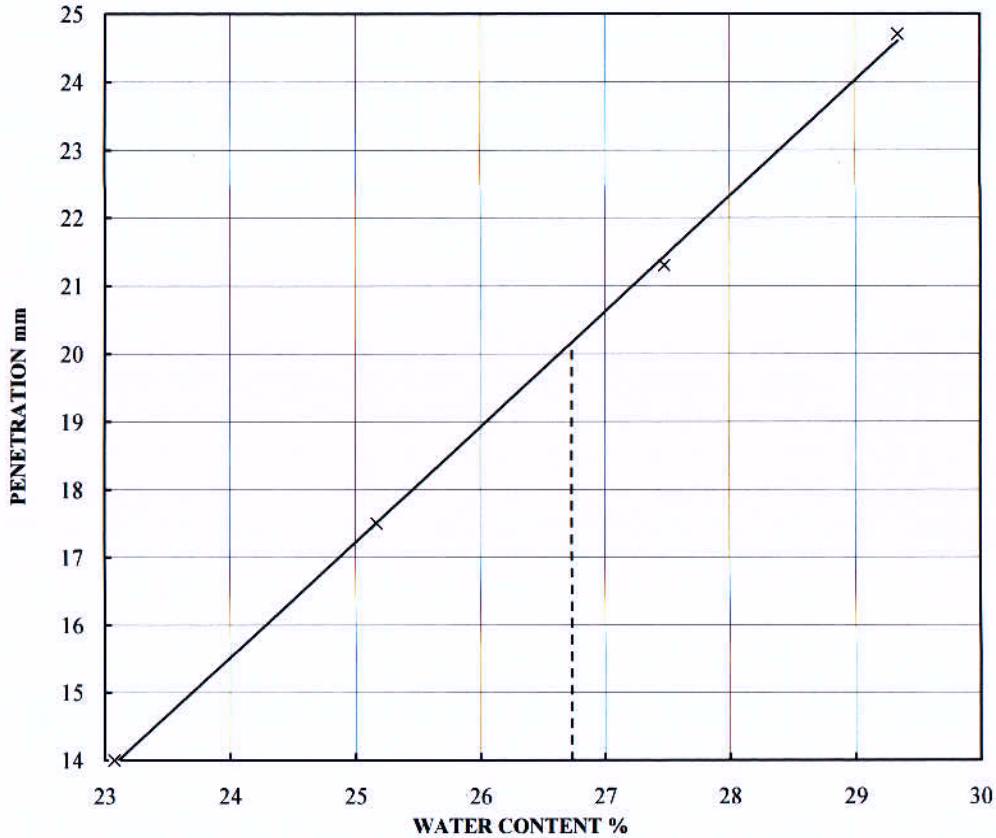
Percentage of passing 0.425mm B.S.Sieve = 91%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	26.10	24.59	22.32	32.04	21.72	19.32
Wet Weight + Tare (g)	26.10	24.59	22.32	32.04	21.72	19.32
Dry Weight + Tare (g)	22.15	21.16	19.11	25.92	19.58	17.66
Tare Weight (g)	8.70	10.10	9.53	8.59	9.12	9.46
Water Content (%)	29.32	31.01	33.51	35.33	20.46	20.24
Penetration (mm)	14.50	17.30	21.60	24.80		

LIQUID LIMIT (%) 33
 PLASTIC LIMIT (%) 20
 PLASTICITY INDEX (%) 13

Sample Type : UDS		Borehole No. BH-1, CH-8440		Sample No: UDS-1		Depth (m): 2.00	
XPLORER		Site Ref: Muzaffarnagar to Saharanpur				Job No : 1342	
						Test Report No: XPL/2015-16/02	
Operator : <i>Bhargav</i>		Checked : <i>[Signature]</i>		Authorised Signatory <i>[Signature]</i>			
Date : 19/3/2016		Date: 28/3/16		Date: 28/03/16			

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

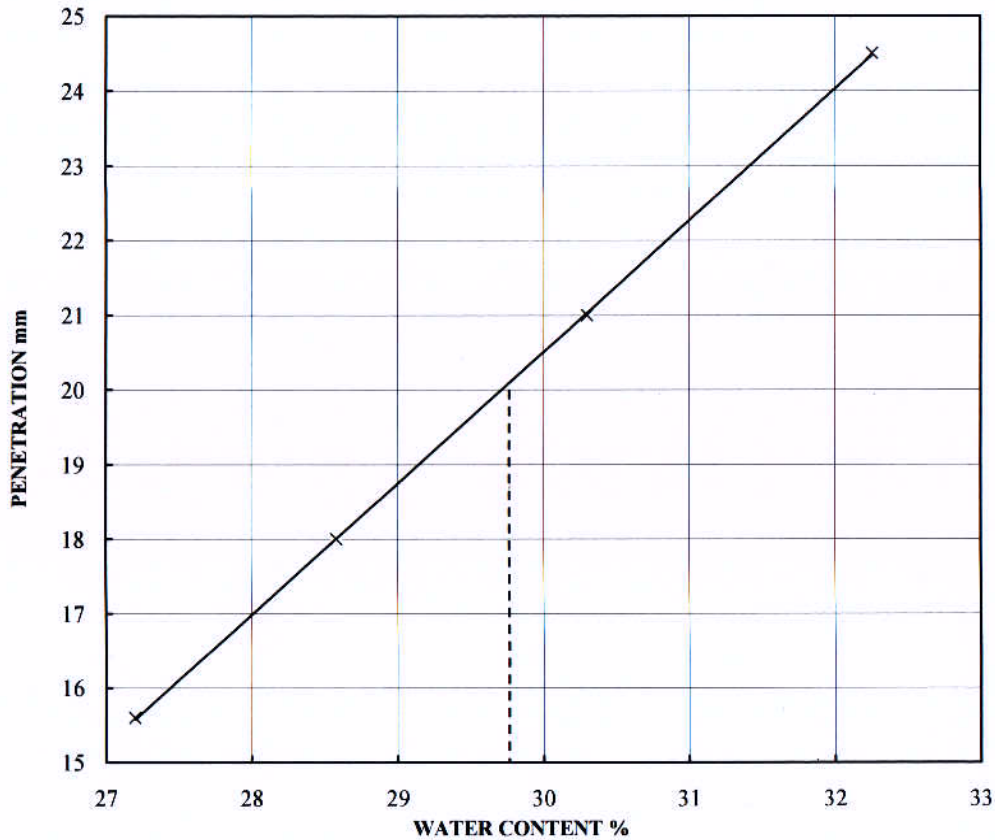
Percentage of passing 0.425mm B.S.Sieve = 91%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	29.04	30.22	26.41	26.39	
Dry Weight + Tare (g)	25.50	25.86	22.53	22.30	
Tare Weight (g)	10.16	8.54	8.41	8.36	NP
Water Content (%)	23.08	25.17	27.48	29.34	
Penetration (mm)	14.00	17.50	21.30	24.70	

LIQUID LIMIT (%) 33
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : UDS	
Borehole No. BH-1, CH-8440	Sample No: UDS-6
Depth (m): 1.50	
XPLORER	Site Ref: Muzaffarnagar to Saharanpur
Job No : 1342	
Test Report No: XPL/2015-16/02	
Operator : <i>Bhopley</i>	Checked : <i>RE</i>
Date : 19/3/2016	Date: 20/3/16
Authorised Signatory <i>[Signature]</i>	
Date: 20/3/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE : Natural

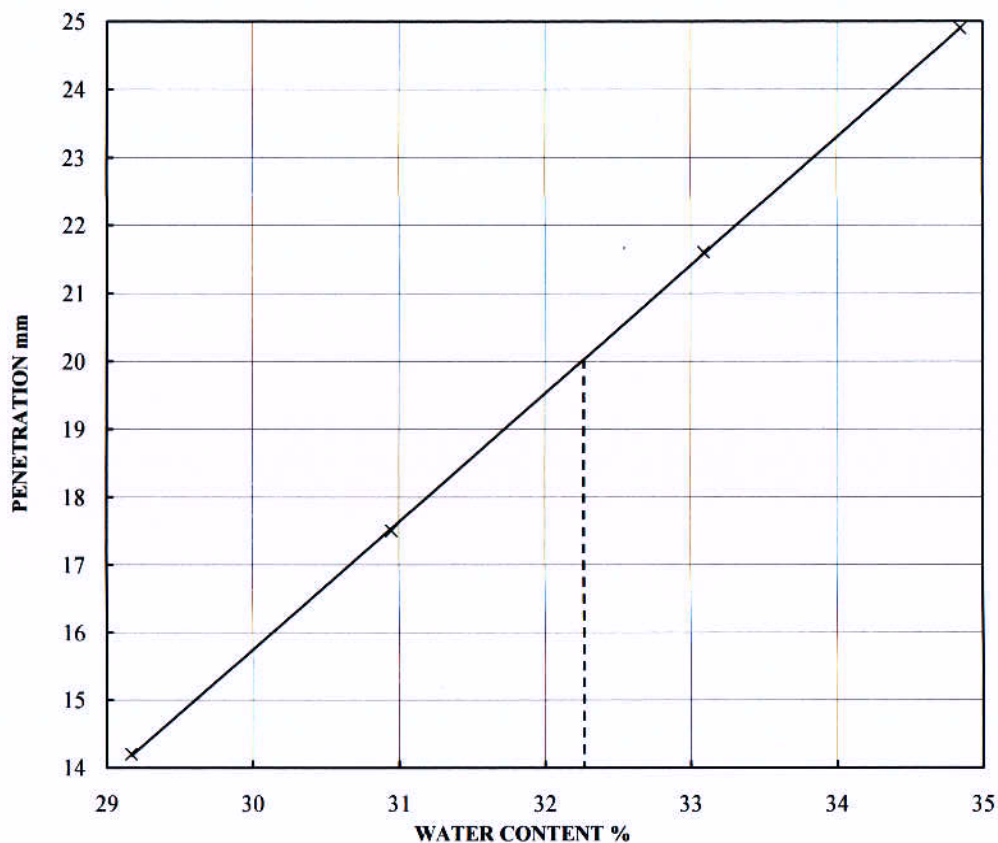
Percentage of passing 0.425mm B.S.Sieve =

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	23.13	26.85	26.15	30.65	
Dry Weight + Tare (g)	20.04	23.22	22.09	25.55	
Tare Weight (g)	8.68	10.52	8.69	9.74	NP
Water Content (%)	27.20	28.58	30.30	32.26	
Penetration (mm)	15.60	18.00	21.00	24.50	

LIQUID LIMIT (%) 30
PLASTIC LIMIT (%) NP
PLASTICITY INDEX (%)

Sample Type : UDS		Borehole No. BH-1, CH-11+753		Sample No: UDS-1	Depth (m): 2.00
XPLORER	Site Ref: Muzaffarnagar to Saharanpur			Job No : 1342	Test Report No: XPL/2015-16/02
Operator : <i>Bhojuy</i>	Checked : <i>[Signature]</i>		Authorised Signatory <i>[Signature]</i>		
Date : 19/3/2016	Date: 28/3/16		Date: 28/3/16		

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

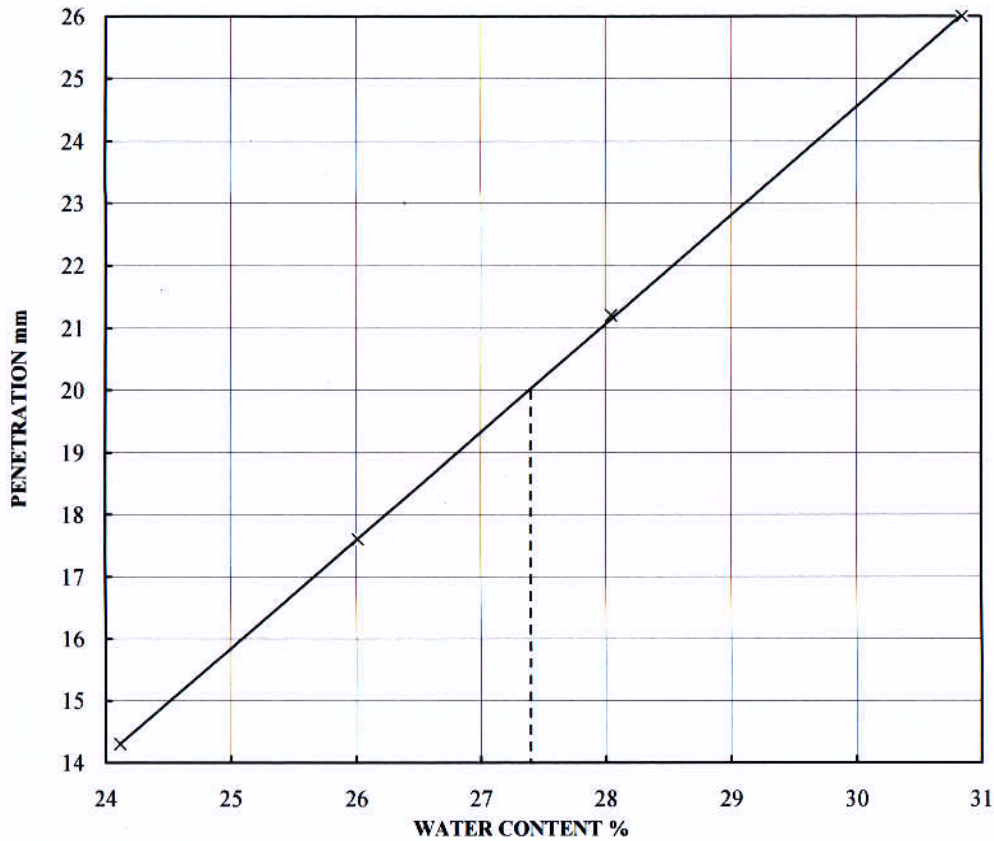
Percentage of passing 0.425mm B.S.Sieve = 90%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	23.13	26.85	26.15	30.65	
Dry Weight + Tare (g)	19.95	22.87	22.08	25.07	
Tare Weight (g)	9.07	10.01	9.78	9.05	NP
Water Content (%)	29.17	30.95	33.09	34.85	
Penetration (mm)	14.20	17.50	21.60	24.90	

LIQUID LIMIT (%) 32
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : SPT		Borehole No. BH-1, CH-10+540		Sample No: SPT-8	Depth (m): 12.00
XPLORER		Site Ref: Muzaffarnagar to Saharanpur		Job No : 1342	Test Report No: XPL/2015-16/02
Operator : <i>Bhojraj</i>		Checked : <i>RSE</i>		Authorised Signatory <i>[Signature]</i>	
Date : 19/3/2016		Date: 20/3/16		Date: 20/3/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE : Natural

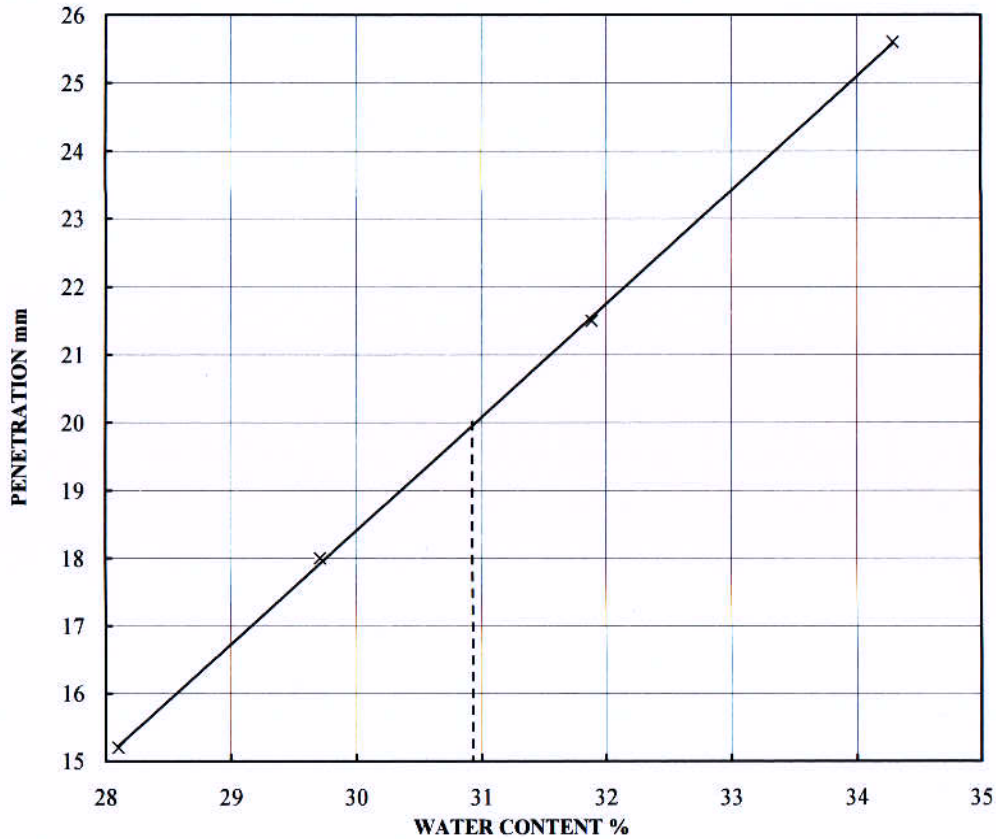
Percentage of passing 0.425mm B.S.Sieve =

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	27.22	22.10	22.56	29.16	
Dry Weight + Tare (g)	23.88	19.28	19.45	24.65	
Tare Weight (g)	10.03	8.44	8.36	10.03	NP
Water Content (%)	24.12	26.01	28.04	30.85	
Penetration (mm)	14.30	17.60	21.20	26.00	

LIQUID LIMIT (%) 27
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : UDS		Borehole No. : BH-1, CH-15+800		Sample No. : UDS-1	Depth (m) : 2.00
XPLORER		Site Ref: Muzaffarnagar to Saharanpur		Job No : 1342	Test Report No: XPL/2015-16/02
Operator : <i>Bhojey</i>		Checked : <i>RT</i>		Authorised Signatory <i>[Signature]</i>	
Date : 19/3/2016		Date: 28/3/16		Date: 28/3/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE : Natural

Percentage of passing 0.425mm B.S.Sieve =

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	30.18	32.25	29.84	29.88	
Dry Weight + Tare (g)	25.76	26.94	24.99	24.78	
Tare Weight (g)	10.01	9.07	9.78	9.91	NP
Water Content (%)	28.10	29.71	31.89	34.29	
Penetration (mm)	15.20	18.00	21.50	25.60	

LIQUID LIMIT (%) 31
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

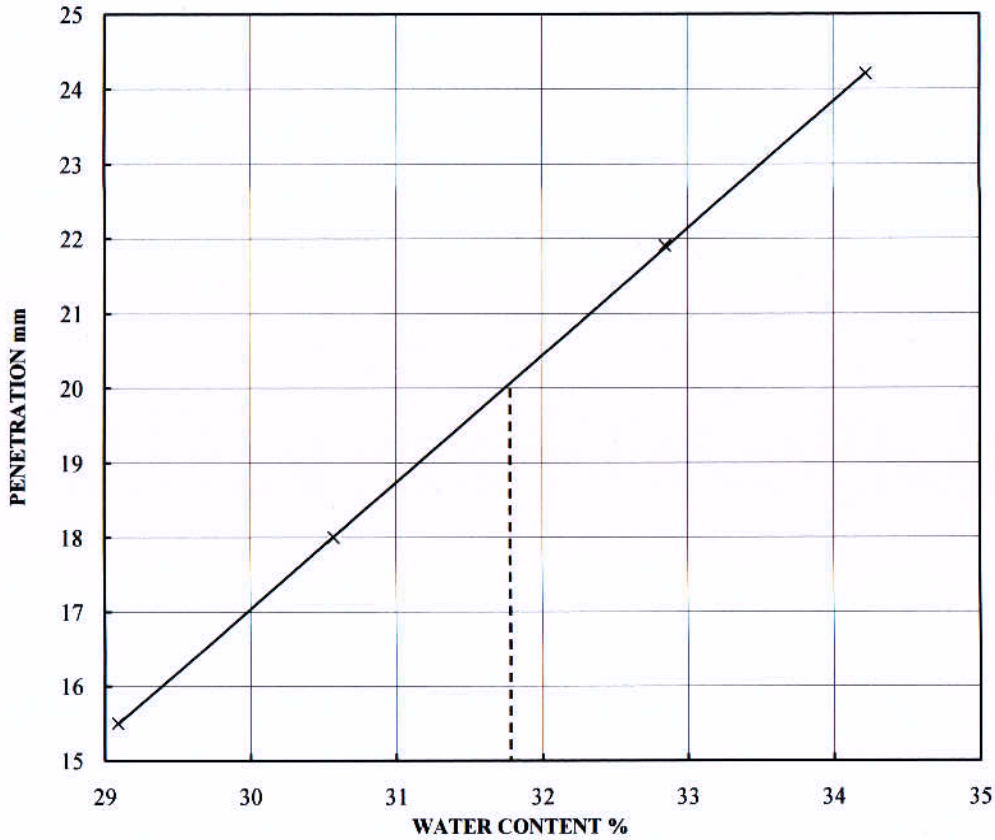
Sample Type : UDS

Borehole No. BH-1, CH-14+150 Sample No: UDS-1 Depth (m): 2.00

XPLORER Site Ref: Muzaffarnagar to Saharanpur Job No : 1342
 Test Report No: XPL/2015-16/02

Operator : <i>Bhojraj</i>	Checked : <i>RE</i>	Authorised Signatory <i>[Signature]</i>
Date : <i>20/3/16</i>	Date: <i>20/3/16</i>	Date: <i>20/3/16</i>

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

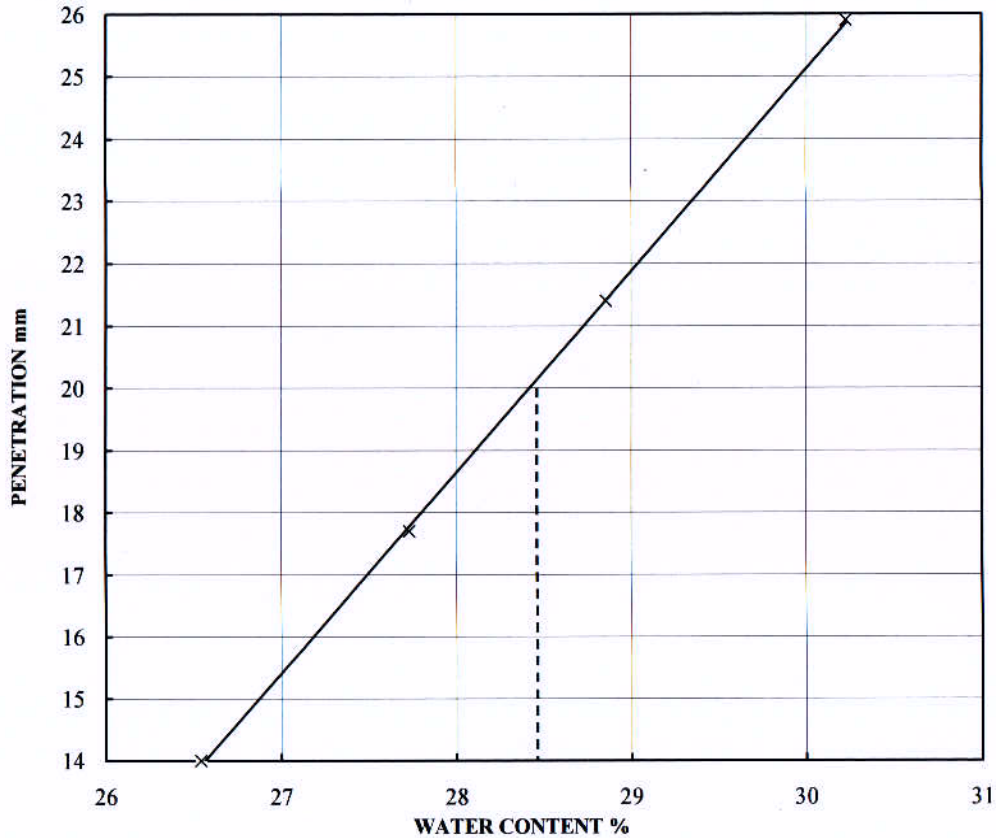
Percentage of passing 0.425mm B.S.Sieve = 92%

	LIQUID LIMIT %				PLASTIC LIMIT %	
Wet Weight + Tare (g)	29.15	21.35	26.28	25.96	20.18	21.50
Dry Weight + Tare (g)	24.83	18.36	22.25	21.98	18.21	19.35
Tare Weight (g)	9.98	8.58	9.98	10.35	9.44	9.72
Water Content (%)	29.09	30.57	32.84	34.22	22.46	22.33
Penetration (mm)	15.50	18.00	21.90	24.20		

LIQUID LIMIT (%) 32
 PLASTIC LIMIT (%) 22
 PLASTICITY INDEX (%) 10

Sample Type : UDS		Borehole No. BH-1, CH-13+260		Sample No: UDS-1	Depth (m): 2.00
XPLORER		Site Ref: Muzaffarnagar to Saharanpur		Job No : 1342	Test Report No: XPL/2015-16/02
Operator : <i>Bhargava</i>		Checked : <i>RSE</i>		Authorised Signatory <i>[Signature]</i>	
Date : 20/3/2016		Date: 28/3/16		Date: 28/3/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE : Natural

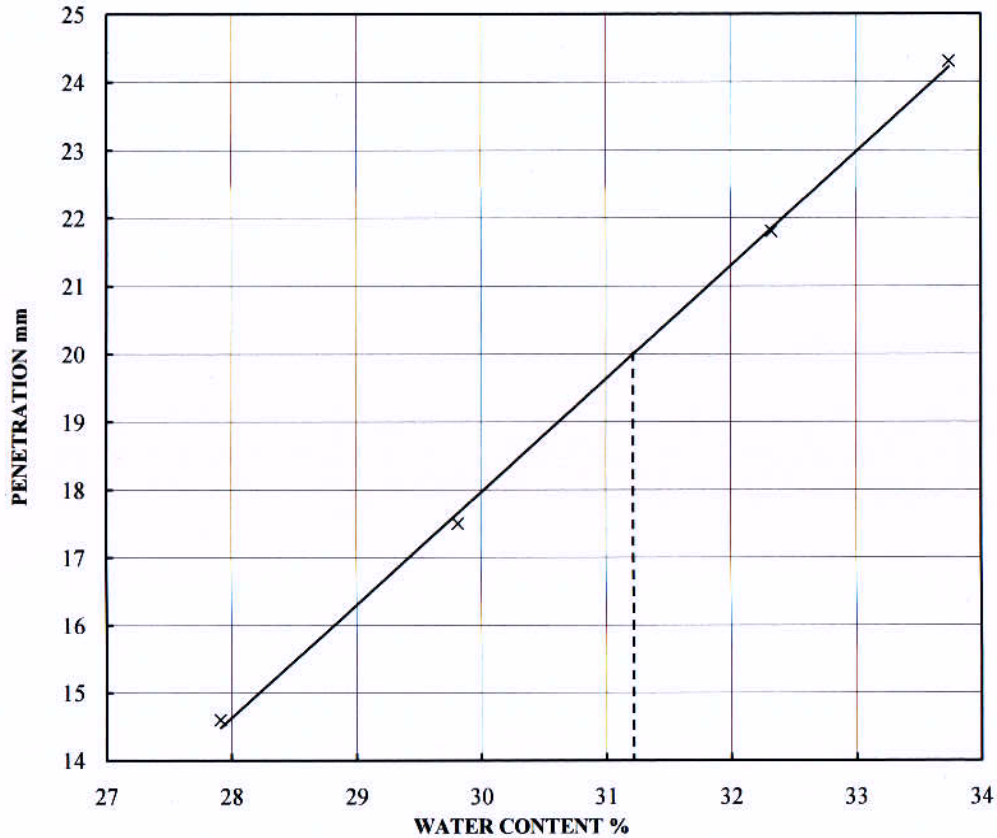
Percentage of passing 0.425mm B.S.Sieve =

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	22.64	19.89	26.58	30.65	
Dry Weight + Tare (g)	20.10	17.43	22.84	25.94	
Tare Weight (g)	10.53	8.56	9.88	10.36	NP
Water Content (%)	26.54	27.73	28.86	30.23	
Penetration (mm)	14.00	17.70	21.40	25.90	

LIQUID LIMIT (%) 28
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : UDS	
Borehole No. BH-1, CH-17+790	Sample No: UDS-1 Depth (m): 2.00
XPLORER	Site Ref: Muzaffarnagar to Saharanpur Job No : 1342 Test Report No: XPL/2015-16/02
Operator : <i>Bhagat</i>	Checked : <i>Ra</i> Authorised Signatory <i>Arun</i>
Date : 20/3/2016	Date: 28/3/16 Date: 28/07/16

I.S. : 2720 : PART 5



HISTORY OF SAMPLE : Natural

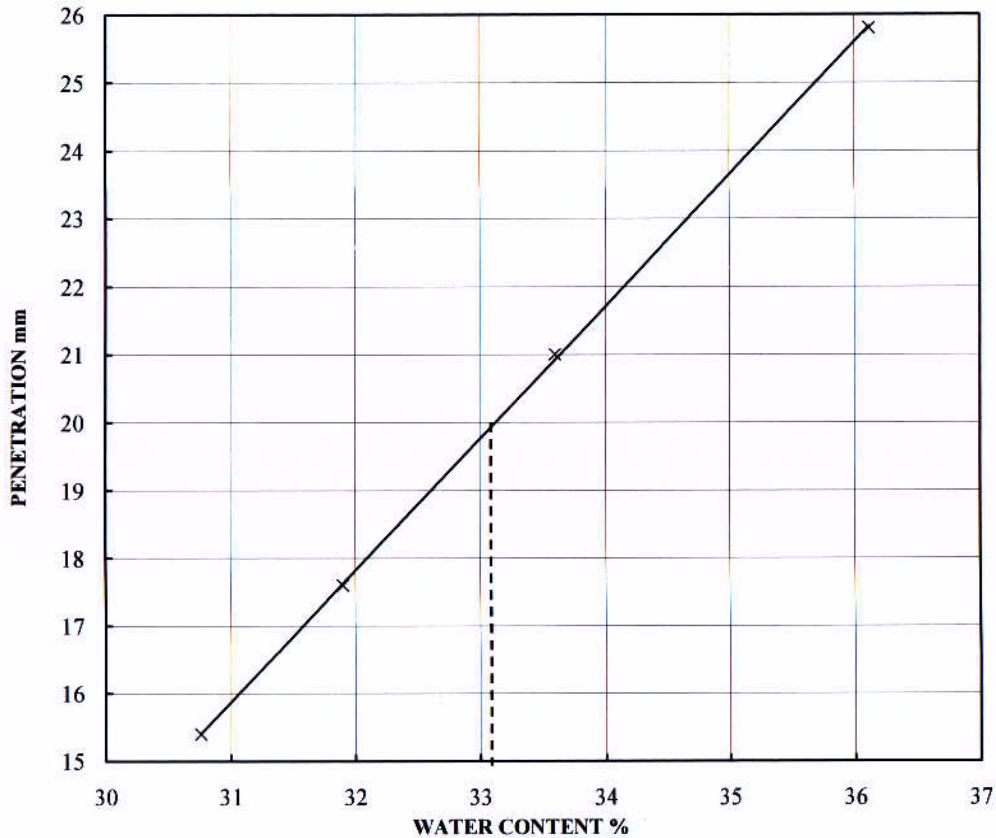
Percentage of passing 0.425mm B.S.Sieve =

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	28.65	27.98	30.05	29.11	
Dry Weight + Tare (g)	24.48	23.83	24.70	24.14	
Tare Weight (g)	9.56	9.91	8.15	9.41	NP
Water Content (%)	27.91	29.81	32.33	33.75	
Penetration (mm)	14.60	17.50	21.80	24.30	

LIQUID LIMIT (%) 31
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : UDS		Borehole No. BH-1, CH-17+790		Sample No: UDS-9	Depth (m): 26.00
XPLORER		Site Ref: Muzaffarnagar to Saharanpur		Job No : 1342	Test Report No: XPL/2015-16/02
Operator : <i>Bhagat</i>		Checked : <i>ME</i>		Authorised Signatory <i>[Signature]</i>	
Date : 20/3/2016		Date: 28/3/16		Date: 28/07/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

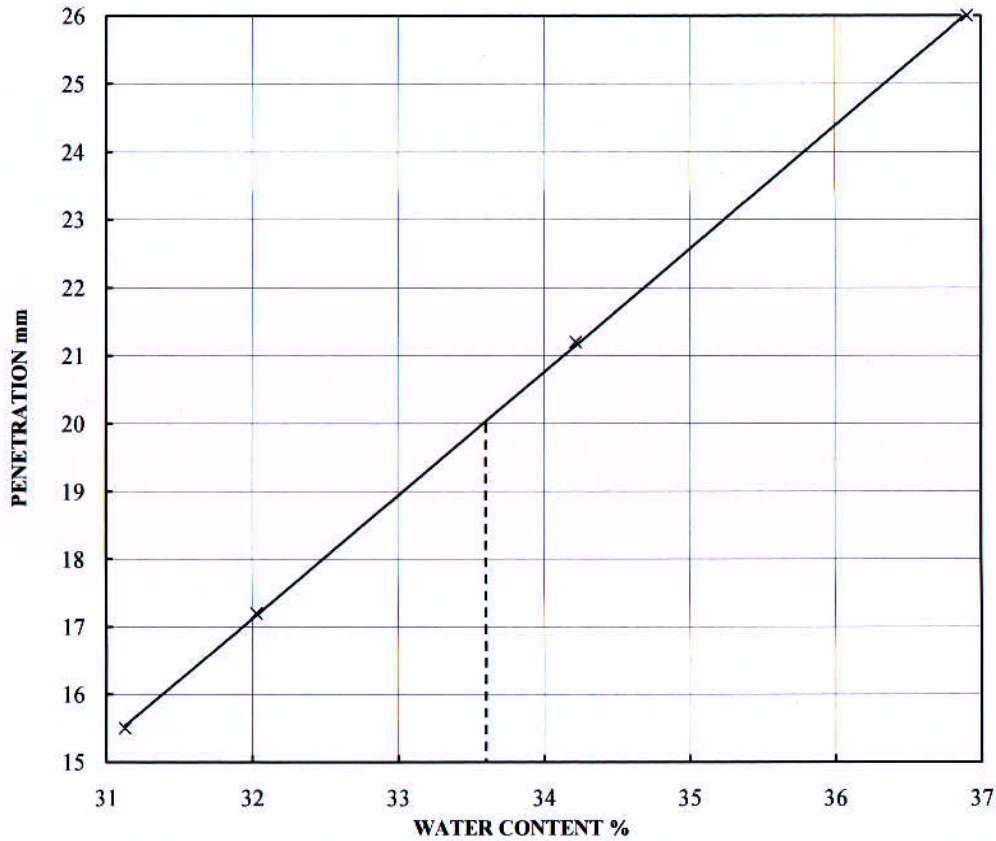
Percentage of passing 0.425mm B.S.Sieve = 91%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	22.24	23.79	27.39	24.64	20.18	20.33
Wet Weight + Tare (g)	22.24	23.79	27.39	24.64	20.18	20.33
Dry Weight + Tare (g)	19.25	20.45	23.55	20.49	18.55	18.54
Tare Weight (g)	9.53	9.98	12.12	9.00	10.47	9.56
Water Content (%)	30.76	31.90	33.60	36.12	20.17	19.93
Penetration (mm)	15.40	17.60	21.00	25.80		

LIQUID LIMIT (%) 33
 PLASTIC LIMIT (%) 20
 PLASTICITY INDEX (%) 13

Sample Type : UDS		Borehole No. BH-1, CH-18+900		Sample No: UDS-1		Depth (m): 2.00	
XPLORER		Site Ref: Muzaffarnagar to Saharanpur		Job No : 1342		Test Report No: XPL/2015-16/02	
Operator : <i>Bhoyar</i>		Checked : <i>[Signature]</i>		Authorised Signatory <i>[Signature]</i>			
Date : 20/3/2016		Date: 28/3/16		Date: 28/3/16			

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

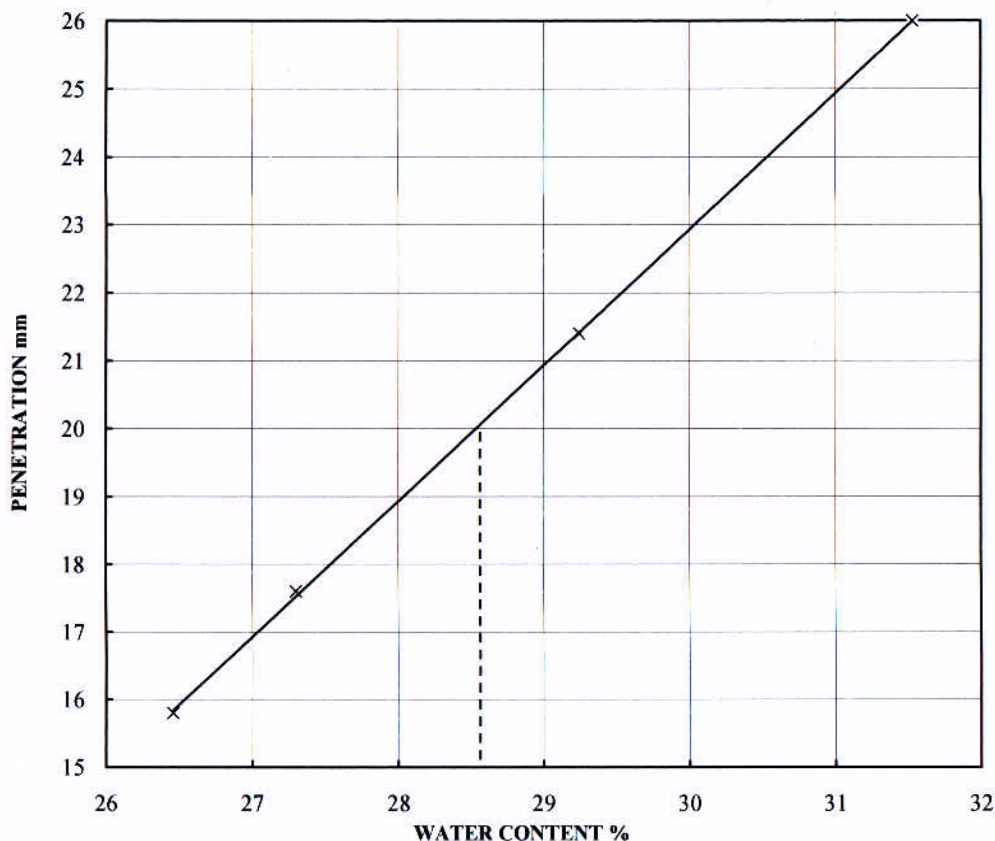
Percentage of passing 0.425mm B.S.Sieve = 90%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	20.10	23.76	24.55	26.94	20.58	19.67
Wet Weight + Tare (g)	20.10	23.76	24.55	26.94	20.58	19.67
Dry Weight + Tare (g)	17.70	20.08	20.81	22.50	18.63	17.80
Tare Weight (g)	9.99	8.59	9.88	10.47	9.47	8.92
Water Content (%)	31.13	32.03	34.22	36.91	21.29	21.06
Penetration (mm)	15.50	17.20	21.20	26.00		

LIQUID LIMIT (%) 34
 PLASTIC LIMIT (%) 21
 PLASTICITY INDEX (%) 13

Sample Type : UDS		Borehole No. BH-1, CH-18+900		Sample No: UDS-2	Depth (m): 5.00
XPLORER		Site Ref: Muzaffarnagar to Saharanpur		Job No : 1342	Test Report No: XPL/2015-16/02
Operator : <i>Bheeraj</i>		Checked : <i>AE</i>		Authorised Signatory <i>[Signature]</i>	
Date : 20/3/2016		Date: 28/3/16		Date: 28/3/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

Percentage of passing 0.425mm B.S.Sieve = 93%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	25.29	27.79	30.19	31.31	
Dry Weight + Tare (g)	21.80	24.08	25.66	26.06	
Tare Weight (g)	8.61	10.49	10.17	9.41	NP
Water Content (%)	26.46	27.30	29.24	31.53	
Penetration (mm)	15.80	17.60	21.40	26.00	

LIQUID LIMIT (%) 29
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

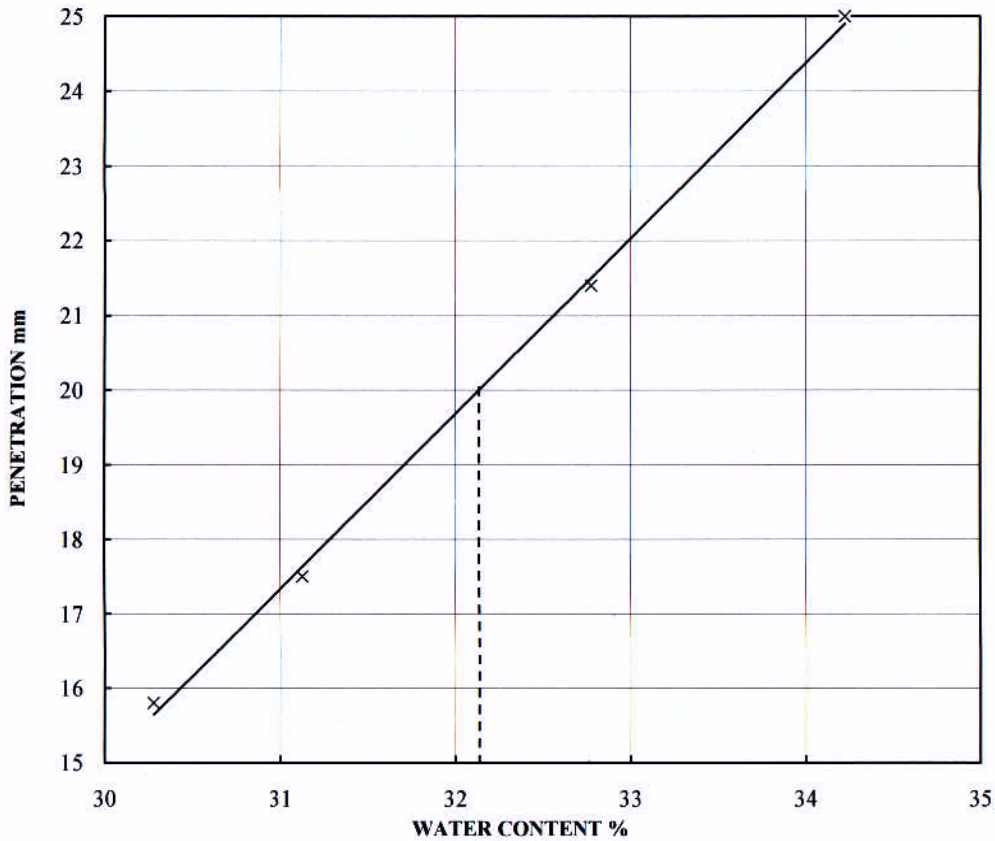
Sample Type : UDS

Borehole No. BH-1, CH-19+680 Sample No: UDS-2 Depth (m): 5.00

XPLORER Site Ref: Muzaffarnagar to Saharanpur Job No : 1342
 Test Report No: XPL/2015-16/02

Operator : <i>Bhargava</i>	Checked : <i>RSE</i>	Authorised Signatory <i>[Signature]</i>
Date : 20/3/2016	Date: 28/3/16	Date: 28/3/16

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

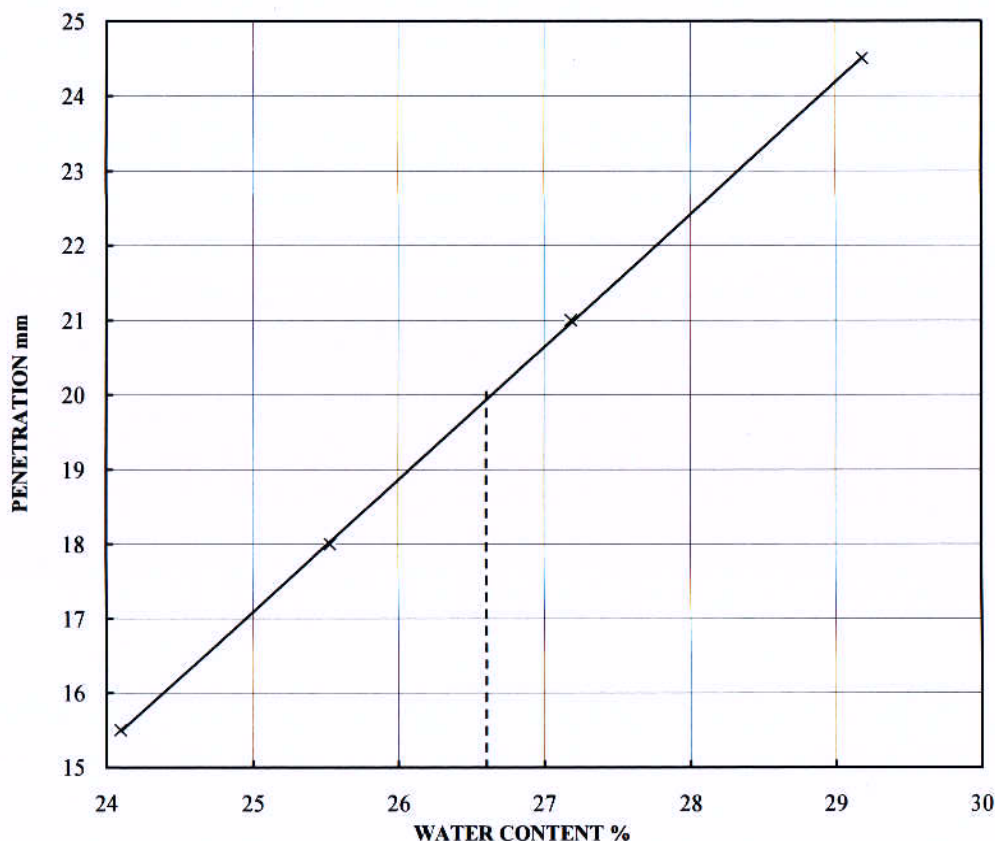
Percentage of passing 0.425mm B.S.Sieve = 93%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	22.01	21.52	23.56	25.74	
Dry Weight + Tare (g)	19.30	18.65	20.22	21.90	
Tare Weight (g)	10.35	9.43	10.03	10.68	NP
Water Content (%)	30.28	31.13	32.78	34.22	
Penetration (mm)	15.80	17.50	21.40	25.00	

LIQUID LIMIT (%) 32
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : UDS		Borehole No. BH-1, CH-24+269		Sample No: UDS-5	Depth (m): 14.00
XPLORER		Site Ref: Muzaffarnagar to Saharanpur		Job No : 1342	Test Report No: XPL/2015-16/02
Operator : <i>Bhargava</i>		Checked : <i>HC</i>		Authorised Signatory <i>[Signature]</i>	
Date : 20/3/2016		Date: 20/3/16		Date: 20/3/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE : Natural

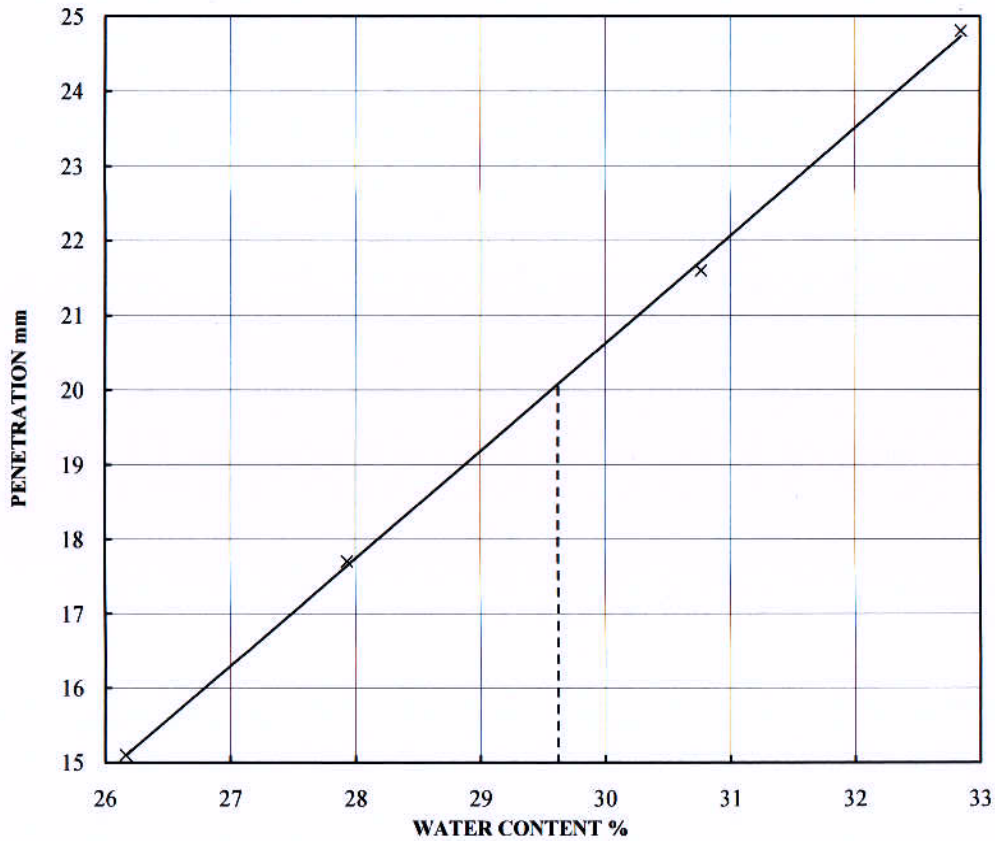
Percentage of passing 0.425mm B.S.Sieve =

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	20.46	21.56	24.27	21.16	
Dry Weight + Tare (g)	18.46	18.92	21.22	18.37	
Tare Weight (g)	10.16	8.58	10.00	8.81	NP
Water Content (%)	24.10	25.53	27.18	29.18	
Penetration (mm)	15.50	18.00	21.00	24.50	

LIQUID LIMIT (%) 27
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : UDS	
Borehole No. BH-1, CH-20+960	Sample No: UDS-1
Depth (m): 2.00	
XPLORER	Site Ref: Muzaffarnagar to Saharanpur
Job No : 1342	
Test Report No: XPL/2015-16/02	
Operator : <i>Bhajer</i>	Checked : <i>[Signature]</i>
Authorised Signatory <i>[Signature]</i>	
Date : <i>20/3/2016</i>	Date: <i>28/3/16</i>
Date: <i>27/7/16</i>	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE : Natural

Percentage of passing 0.425mm B.S.Sieve =

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	28.38	28.89	25.65	28.78	
Dry Weight + Tare (g)	24.28	24.63	21.58	23.80	
Tare Weight (g)	8.61	9.38	8.35	8.64	NP
Water Content (%)	26.16	27.93	30.76	32.85	
Penetration (mm)	15.10	17.70	21.60	24.80	

LIQUID LIMIT (%) 30
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

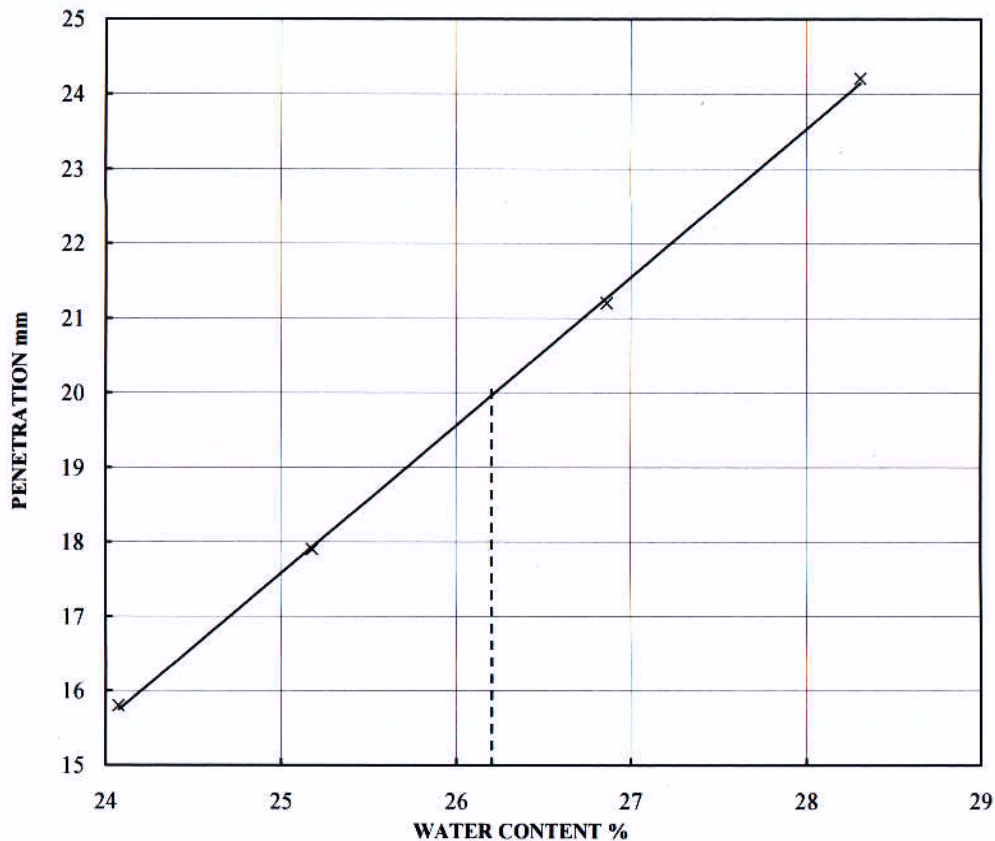
Sample Type : UDS

Borehole No. BH-1, CH-22+700 Sample No: UDS-1 Depth (m): 2.00

XPLORER Site Ref: Muzaffarnagar to Saharanpur Job No : 1342
 Test Report No: XPL/2015-16/02

Operator : <i>Bhopal</i>	Checked : <i>[Signature]</i>	Authorised Signatory <i>[Signature]</i>
Date : <i>21/3/2016</i>	Date: <i>28/3/16</i>	Date: <i>28/3/16</i>

I.S. : 2720 : PART 5



HISTORY OF SAMPLE : Natural

Percentage of passing 0.425mm B.S.Sieve =

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	21.00	20.26	20.79	20.61	
Dry Weight + Tare (g)	18.66	18.14	18.23	18.00	
Tare Weight (g)	8.94	9.72	8.70	8.78	NP
Water Content (%)	24.07	25.18	26.86	28.31	
Penetration (mm)	15.80	17.90	21.20	24.20	

LIQUID LIMIT (%) 26
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : UDS

Borehole No. BH-1, CH-25+880 Sample No: UDS-1 Depth (m): 2.00

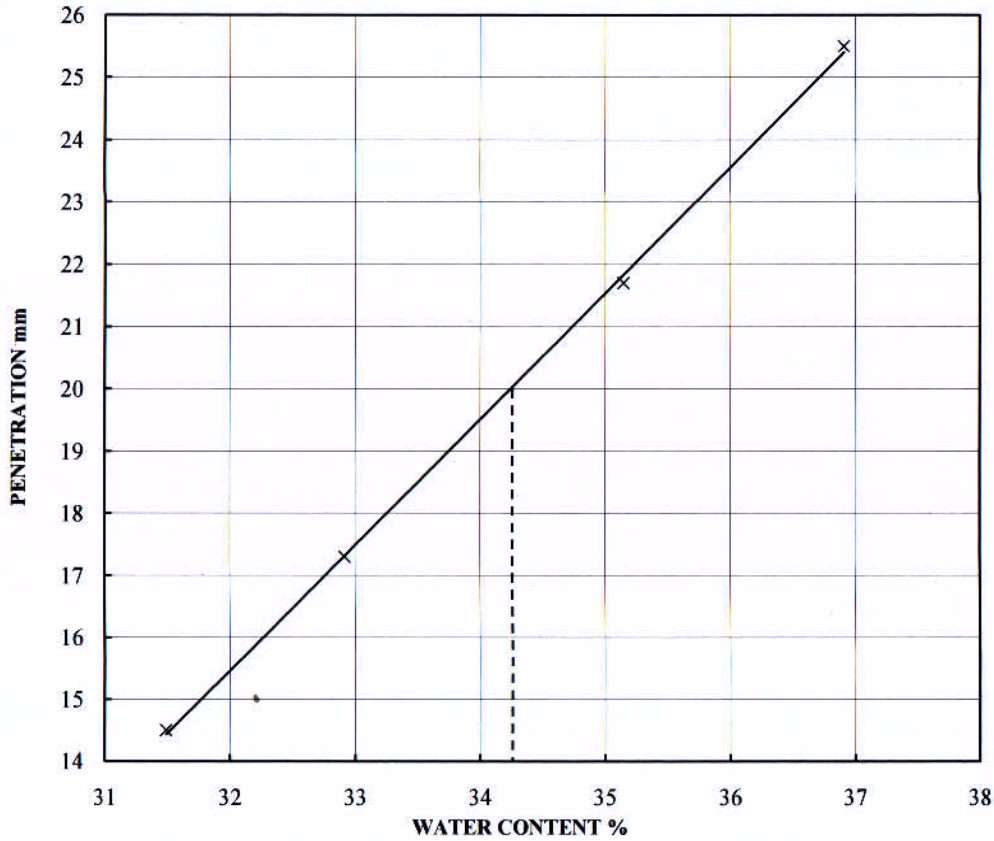
XPLORER Site Ref: Muzaffarnagar to Saharanpur Job No : 1342
 Test Report No: XPL/2015-16/02

Operator : *Bhayer*
 Date : 29/8/2016

Checked : *[Signature]*
 Date: 28/3/16

Authorised Signatory *[Signature]*
 Date: 28/8/16

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

Percentage of passing 0.425mm B.S.Sieve = 92%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	25.23	26.00	27.16	29.08	21.26	23.18
Wet Weight + Tare (g)	25.23	26.00	27.16	29.08	21.26	23.18
Dry Weight + Tare (g)	21.36	22.04	22.64	23.68	19.22	20.43
Tare Weight (g)	9.07	10.01	9.78	9.05	10.05	8.22
Water Content (%)	31.49	32.92	35.15	36.91	22.23	22.52
Penetration (mm)	14.50	17.30	21.70	25.50		

LIQUID LIMIT (%) 34
 PLASTIC LIMIT (%) 22
 PLASTICITY INDEX (%) 12

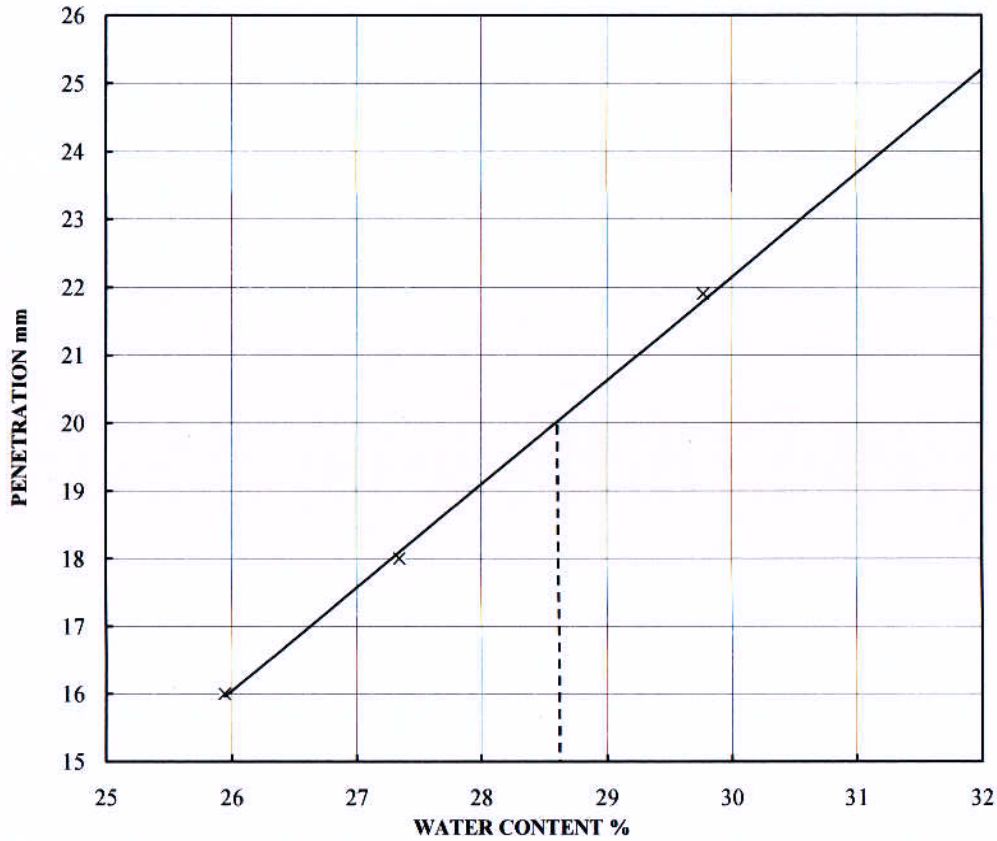
Sample Type : UDS

Borehole No. BH-1, CH-28+840 Sample No: UDS-1 Depth (m): 2.00

XPLORER Site Ref: Muzaffarnagar to Saharanpur Job No : 1342
 Test Report No: XPL/2015-16/02

Operator : <i>Bhagat</i>	Checked : <i>RAE</i>	Authorised Signatory : <i>[Signature]</i>
Date : 21/3/2016	Date: 23/3/16	Date: 28/3/16

I.S. : 2720 : PART 5



HISTORY OF SAMPLE : Natural

Percentage of passing 0.425mm B.S.Sieve =

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	24.06	26.23	24.55	31.92	
Dry Weight + Tare (g)	21.10	22.47	20.82	26.64	
Tare Weight (g)	9.69	8.72	8.29	10.22	NP
Water Content (%)	25.94	27.35	29.77	32.16	
Penetration (mm)	16.00	18.00	21.90	25.40	

LIQUID LIMIT (%) 29
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

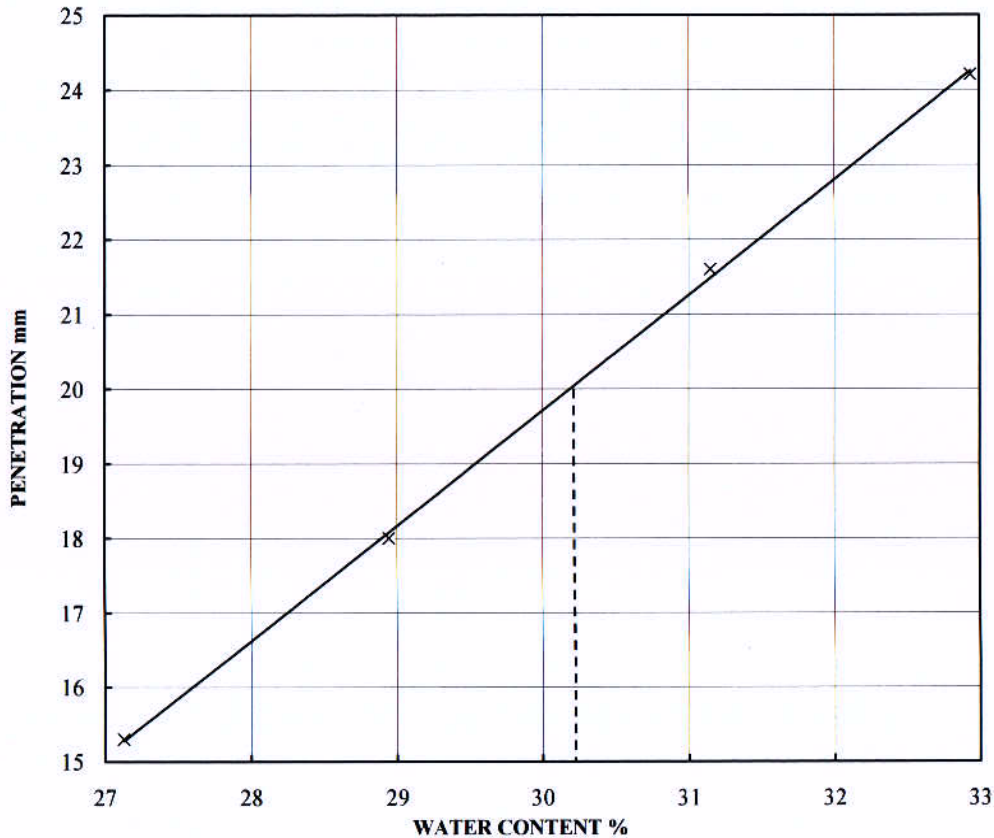
Sample Type : UDS

Borehole No. BH-1, CH-28+840 Sample No: UDS-2 Depth (m): 5.00

XPLORER Site Ref: Muzaffarnagar to Saharanpur Job No : 1342
 Test Report No: XPL/2015-16/02

Operator : <i>Bhojraj</i>	Checked : <i>RSE</i>	Authorised Signatory <i>[Signature]</i>
Date : <i>21/3/2016</i>	Date: <i>28/3/16</i>	Date: <i>28/3/16</i>

I.S. : 2720 : PART 5



HISTORY OF SAMPLE : Natural

Percentage of passing 0.425mm B.S.Sieve =

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	26.84	30.18	27.58	30.04	
Dry Weight + Tare (g)	23.12	25.63	23.30	24.62	
Tare Weight (g)	9.41	9.91	9.56	8.15	NP
Water Content (%)	27.13	28.94	31.15	32.94	
Penetration (mm)	15.30	18.00	21.60	24.20	

LIQUID LIMIT (%) 30
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : UDS

Borehole No. BH-1, CH-27+960 Sample No: UDS-1 Depth (m): 2.00

XPLORER Site Ref: Muzaffarnagar to Saharanpur Job No : 1342
 Test Report No: XPL/2015-16/02

Operator : *Bhojraj*

Checked : *RS*

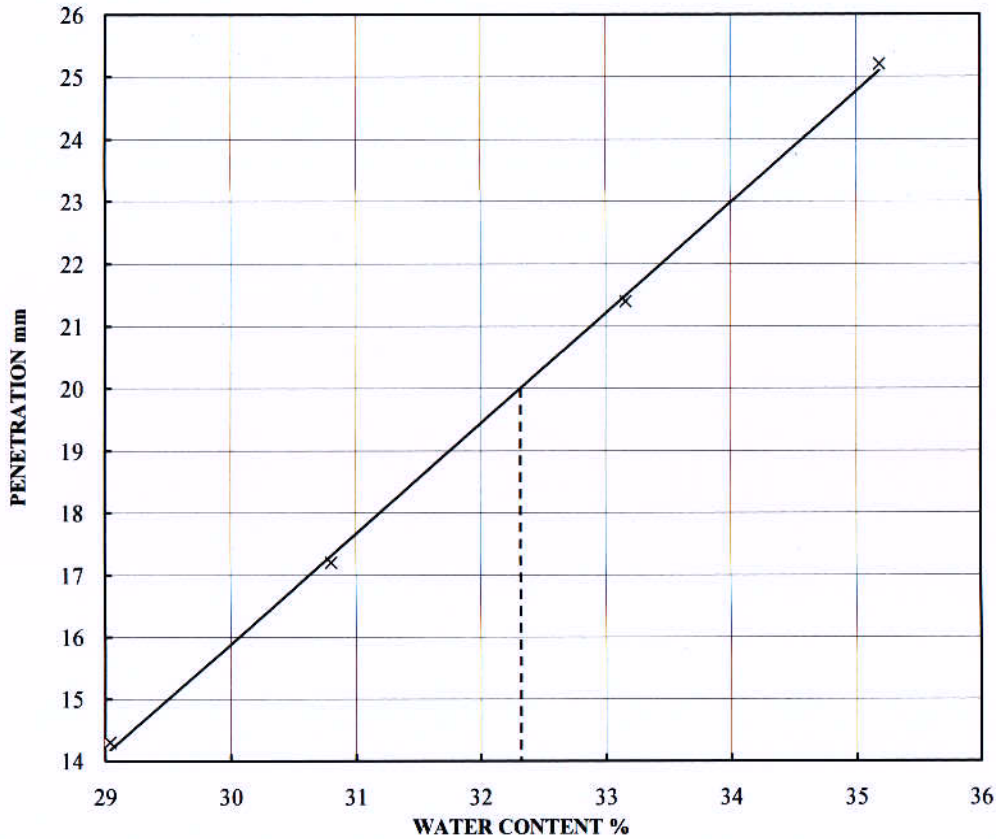
Authorised Signatory *[Signature]*

Date : *21/3/2015*

Date: *28/3/16*

Date: *28/3/16*

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

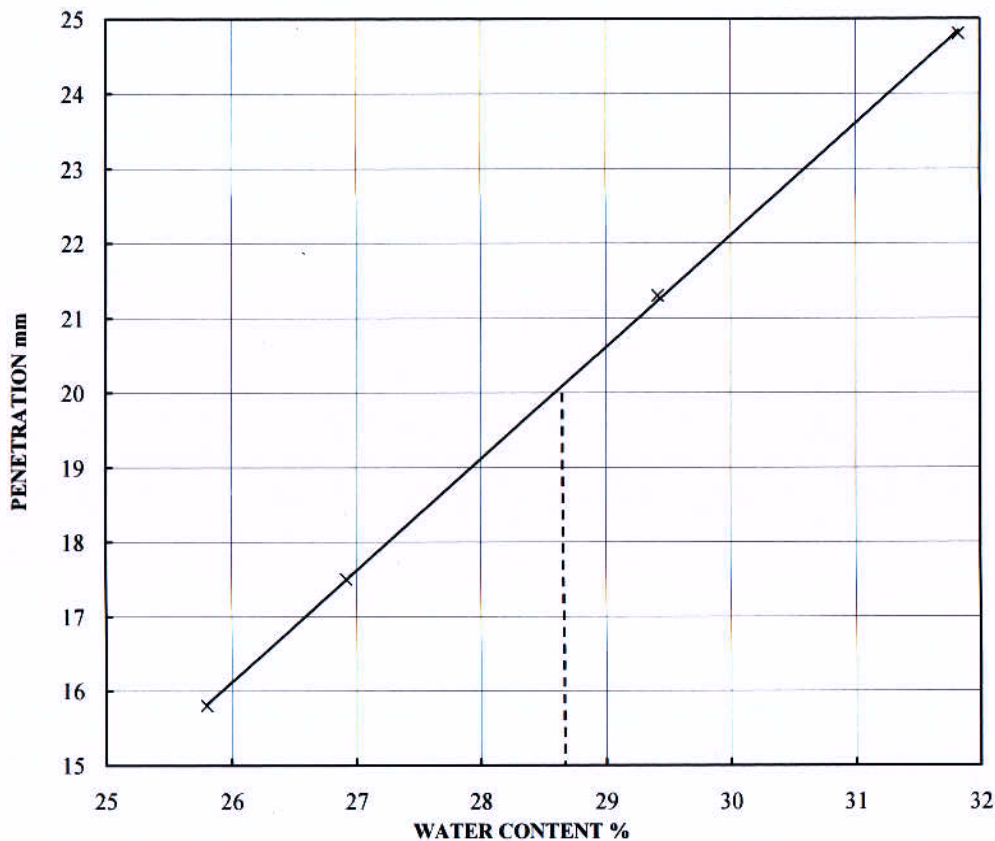
Percentage of passing 0.425mm B.S.Sieve = 87%

	LIQUID LIMIT %				PLASTIC LIMIT %	
	27.15	28.05	23.97	28.41	20.88	21.60
Wet Weight + Tare (g)	27.15	28.05	23.97	28.41	20.88	21.60
Dry Weight + Tare (g)	23.29	23.58	20.47	23.56	18.94	19.47
Tare Weight (g)	10.01	9.07	9.91	9.78	9.41	9.05
Water Content (%)	29.04	30.81	33.16	35.19	20.36	20.44
Penetration (mm)	14.30	17.20	21.40	25.20		

LIQUID LIMIT (%) 32
 PLASTIC LIMIT (%) 20
 PLASTICITY INDEX (%) 12

Sample Type : UDS		Borehole No. BH-1, CH-27+960		Sample No: UDS-6	Depth (m): 17.00
XPLORER		Site Ref: Muzaffarnagar to Saharanpur		Job No : 1342	Test Report No: XPL/2015-16/02
Operator : <i>Dugh</i>	Checked : <i>RA</i>	Authorised Signatory <i>[Signature]</i>			
Date : 21/3/2016	Date: 28/3/16	Date: 28/3/16			

I.S. : 2720 : PART 5



HISTORY OF SAMPLE : Natural

Percentage of passing 0.425mm B.S.Sieve =

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	30.55	26.25	25.87	26.81	
Dry Weight + Tare (g)	26.34	22.50	22.09	22.65	
Tare Weight (g)	10.04	8.57	9.24	9.58	NP
Water Content (%)	25.80	26.92	29.42	31.83	
Penetration (mm)	15.80	17.50	21.30	24.80	

LIQUID LIMIT (%) 29
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

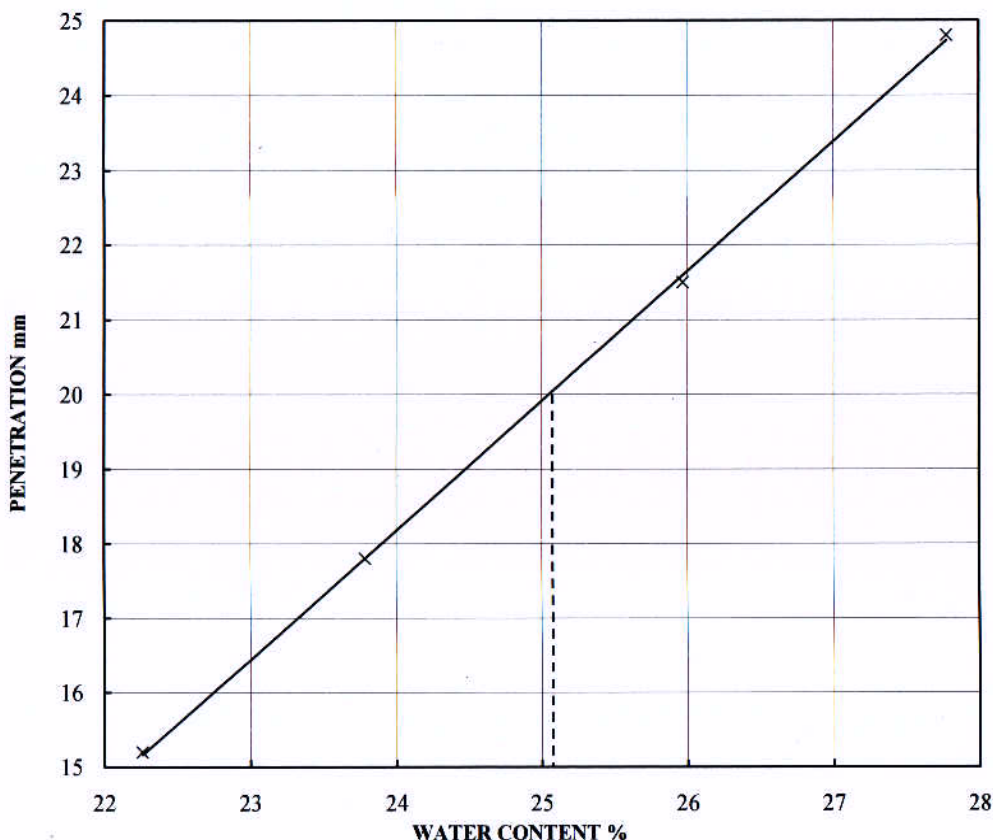
Sample Type : UDS

Borehole No. BH-1, CH-30+236 Sample No: UDS-5 Depth (m): 14.00

XPLORER Site Ref: Muzaffarnagar to Saharanpur Job No : 1342
 Test Report No: XPL/2015-16/02

Operator : <i>[Signature]</i>	Checked : <i>[Signature]</i>	Authorised Signatory <i>[Signature]</i>
Date : 21/3/2016	Date: 28/3/16	Date: 28/3/16

I.S. : 2720 : PART 5



HISTORY OF SAMPLE :

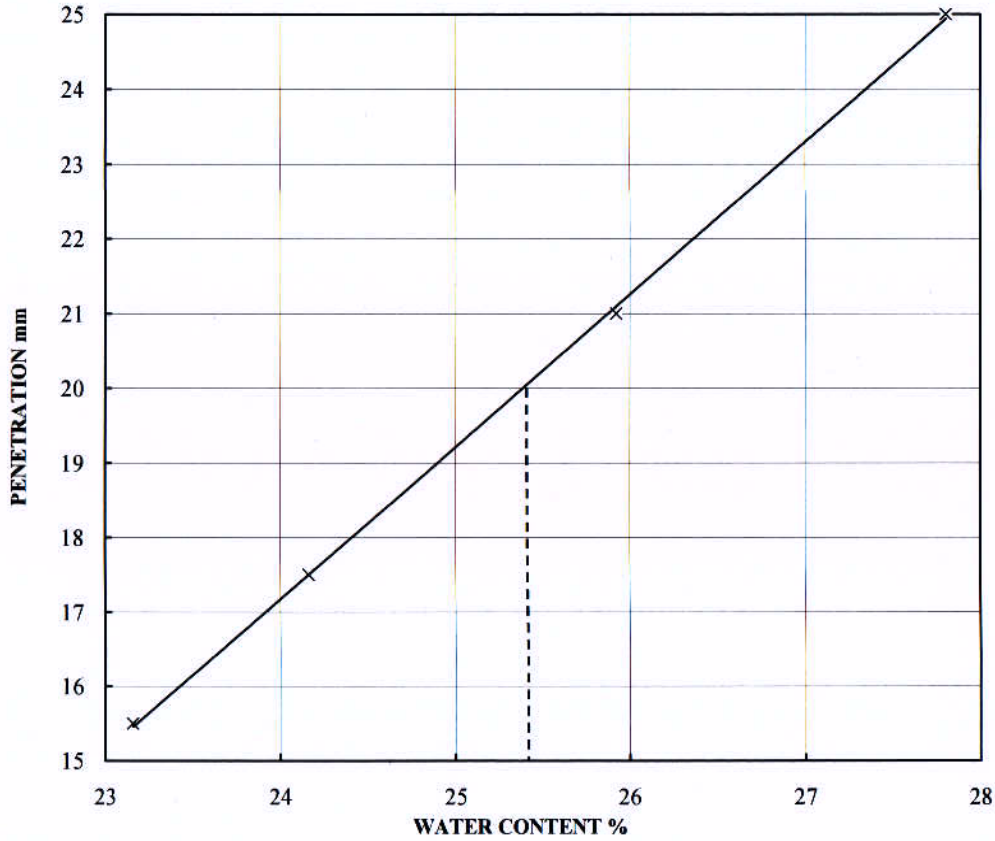
Percentage of passing 0.425mm B.S.Sieve = 88%

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	26.18	29.54	26.05	28.37	
Dry Weight + Tare (g)	23.13	25.43	22.72	24.28	
Tare Weight (g)	9.41	8.15	9.91	9.56	NP
Water Content (%)	22.26	23.78	25.97	27.78	
Penetration (mm)	15.20	17.80	21.50	24.80	

LIQUID LIMIT (%) 25
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : SPT		Depth (m): 1.50	
Borehole No. BH-1, CH-31+820	Sample No: SPT-1	Job No : 1342	Test Report No: XPL/2015-16/02
XPLORER	Site Ref: Muzaffarnagar to Saharanpur		
Operator : <i>[Signature]</i>	Checked : <i>[Signature]</i>	Authorised Signatory <i>[Signature]</i>	
Date : 21/3/2016	Date: 28/3/16	Date: 27/3/16	

I.S. : 2720 : PART 5



HISTORY OF SAMPLE : Natural

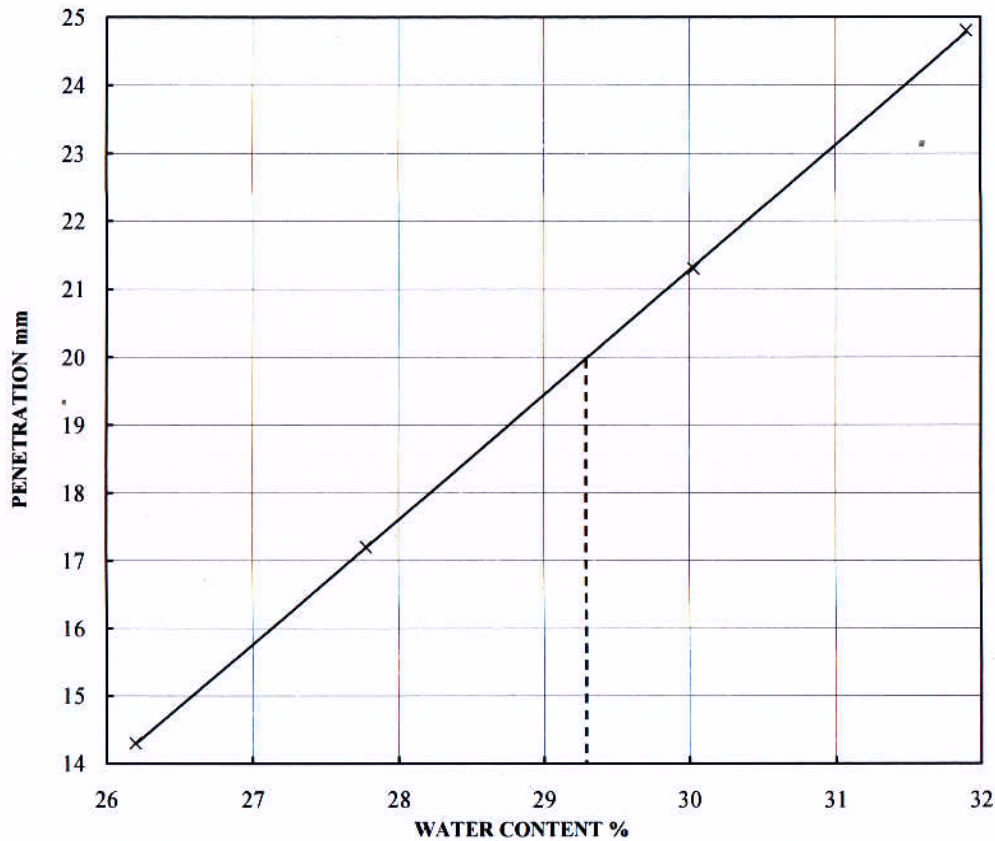
Percentage of passing 0.425mm B.S.Sieve =

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	21.30	22.70	23.52	24.20	
Dry Weight + Tare (g)	19.10	20.18	20.71	21.10	
Tare Weight (g)	9.60	9.75	9.87	9.95	NP
Water Content (%)	23.16	24.16	25.92	27.80	
Penetration (mm)	15.50	17.50	21.00	25.00	

LIQUID LIMIT (%) 25
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : UDS		Borehole No. BH-1, CH-33+310		Sample No: UDS-1	Depth (m): 2.00
XPLORER		Site Ref: Muzaffarnagar to Saharanpur		Job No : 1342	Test Report No: XPL/2015-16/02
Operator : <i>[Signature]</i>	Checked : <i>[Signature]</i>	Authorised Signatory <i>[Signature]</i>			
Date : 21/3/2016	Date: 28/3/16	Date: 28/3/16			

I.S. : 2720 : PART 5



HISTORY OF SAMPLE : Natural

Percentage of passing 0.425mm B.S.Sieve =

	LIQUID LIMIT %				PLASTIC LIMIT %
Wet Weight + Tare (g)	25.38	28.54	26.31	25.62	
Dry Weight + Tare (g)	22.06	24.49	22.44	21.39	
Tare Weight (g)	9.41	9.91	9.56	8.15	NP
Water Content (%)	26.20	27.78	30.03	31.90	
Penetration (mm)	14.30	17.20	21.30	24.80	

LIQUID LIMIT (%) 29
 PLASTIC LIMIT (%) NP
 PLASTICITY INDEX (%)

Sample Type : UDS		Depth (m): 2.00	
Borehole No. BH-1, CH-34+920	Sample No: UDS-1	Job No : 1342	
XPLORER Site Ref: Muzaffarnagar to Saharanpur		Test Report No: XPL/2015-16/02	
Operator : <i>Bhishu Sen</i>	Checked : <i>AS</i>	Authorised Signatory <i>[Signature]</i>	
Date : 22/3/2015	Date: 28/3/16	Date: 28/3/15	