

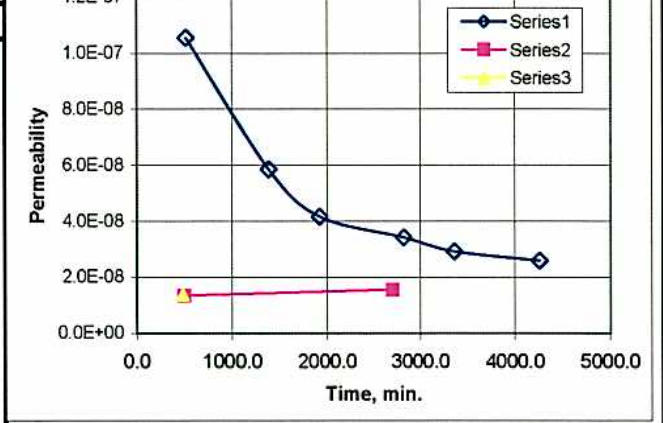


Hydraulic Conductivity
ASTM D 5084
 Method C: Falling Head Rising Tailwater

Job No: 179-191 Boring: P212004 Date: 11/18/02
 Client: Harding ESE Sample: 15A By: DC
 Project: 55596.000123 Depth: Remolded:
 Visual Classification: grayish brown CLAY w/sand

Max Sample Pressures, psi:				B: = >0.95 ("B" is an indication of saturation)
Cell:	Bottom	Top	Avg. Sigma 3	Max Hydraulic Gradient: = 25
44	40	38	5	

Date	Minutes	Head, (in)	K,cm/sec
12/16/03	0.00	74.38	Start of Test
12/16/03	515.00	73.03	1.1E-07
12/17/03	1380.00	72.53	5.8E-08
12/17/03	1920.00	72.43	4.2E-08
12/18/03	2820.00	72.23	3.4E-08
12/18/03	3360.00	72.08	2.9E-08
12/19/03	4260.00	71.98	2.6E-08
12/19/03	495.00	74.23	1.3E-08
12/26/03	2700.00	73.48	1.6E-08
12/26/03	480.00	74.23	1.4E-08



Average Permeability: 2.E-08 cm/sec

Sample Data:	Initial	Final
Height, in	3.00	3.04
Diameter, in	1.93	1.95
Area, in ²	2.93	2.99
Volume in ³	8.78	9.08
Total Volume, cc	143.82	148.78
Volume Solids, cc	78.43	78.43
Volume Voids, cc	65.39	70.35
Void Ratio	0.83	0.90
Porosity, %	45.47	47.28
Saturation, %	96.65	99.65
Specific Gravity	2.80	2.80
	Assumed	
Wet Weight, gm	282.8	289.7
Dry Weight, gm	219.6	219.6
Tare, gm	0.00	0.00
Moisture, %	28.8	31.9
Dry Density, pcf	95.3	92.1

Remarks:



MP-BW-38 (277-277.5 feet bgs) Permeameter Test
 OU CTP Remedial Investigation/Feasibility Study
 Former Fort Ord, California

FIGURE
E8-1

DRAWN CLH	JOB NUMBER 55596.001701	APPROVED <i>MST/CLH</i>	DATE 01/05	REVISED DATE
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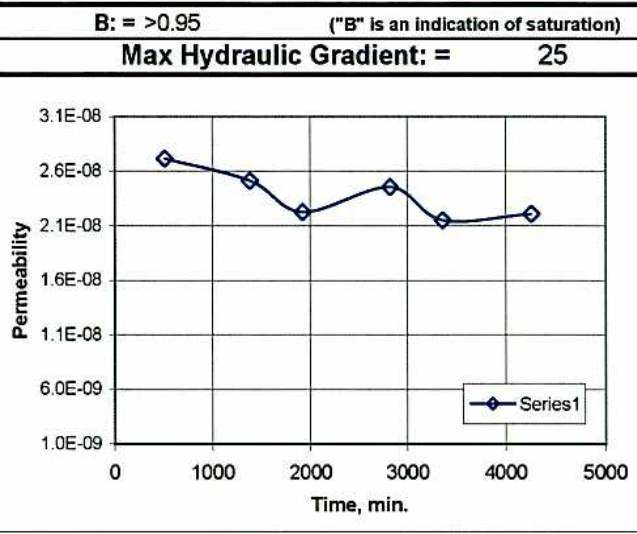
Hydraulic Conductivity

ASTM D 5084

Method C: Falling Head Rising Tailwater

Job No: 179-191d Boring: P212004 Date: 11/18/02
 Client: Harding ESE Sample: 16A By: DC
 Project: 55596.000123 Depth: Remolded:
 Visual Classification: grayish brown CLAY

Max Sample Pressures, psi:			
Cell:	Bottom	Top	Avg. Sigma 3
64	60	58	5
Date	Minutes	Head, (in)	K, cm/sec
12/16/03	0.00	74.38	Start of Test
12/16/03	515.00	74.03	2.7E-08
12/17/03	1380.00	73.58	2.5E-08
12/17/03	1920.00	73.33	2.2E-08
12/18/03	2820.00	72.83	2.5E-08
12/18/03	3360.00	72.68	2.2E-08
12/19/03	4260.00	72.33	2.2E-08



Average Permeability:		2.E-08	cm/sec
Sample Data:	Initial	Final	
Height, in	3.00	3.05	
Diameter, in	1.93	1.96	
Area, in ²	2.93	3.02	
Volume in ³	8.78	9.20	
Total Volume, cc	143.82	150.80	
Volume Solids, cc	78.32	78.32	
Volume Voids, cc	65.50	72.48	
Void Ratio	0.84	0.93	
Porosity, %	45.54	48.06	
Saturation, %	95.88	98.79	
Specific Gravity	2.80	Assumed	2.80
Wet Weight, gm	282.1	290.9	
Dry Weight, gm	219.3	219.3	
Tare, gm	0.00	0.00	
Moisture, %	28.6	32.6	
Dry Density, pcf	95.1	90.7	

Remarks:



MACTEC

MP-BW-38 (277.5-278 feet bgs) Permeameter Test
 OU CTP Remedial Investigation/Feasibility Study
 Former Fort Ord, California

FIGURE

E8-2

DRAWN
CLH

JOB NUMBER
55596.001701

APPROVED
MST / cm

DATE
01/05

REVISED DATE



Hydraulic Conductivity

ASTM D 5084

Method C: Falling Head Rising Tailwater

Job No: 179-191e Boring: P212004 Date: 11/18/02
 Client: Harding ESE Sample: 17A By: DC
 Project: 55596.000123 Depth: Remolded:
 Visual Classification: brown CLAY

Max Sample Pressures, psi:				B: = >0.95 ("B" is an indication of saturation)
Cell:	Bottom	Top	Avg. Sigma 3	Max Hydraulic Gradient: = 25
64	60	58	5	
Date	Minutes	Head, (in)	K, cm/sec	
12/16/03	0.00	74.38	Start of Test	
12/16/03	515.00	74.27	8.5E-09	
12/17/03	1380.00	73.91	1.5E-08	
12/17/03	1920.00	73.68	1.5E-08	
12/18/03	2820.00	73.38	1.6E-08	
12/18/03	3360.00	73.18	1.5E-08	
12/19/03	4260.00	72.98	1.5E-08	
12/19/03	435.00	74.18	2.0E-08	

Average Permeability: 2.E-08 cm/sec		
Sample Data:	Initial	Final
Height, in	3.00	3.05
Diameter, in	1.93	1.99
Area, in ²	2.93	3.11
Volume in ³	8.78	9.49
Total Volume, cc	143.82	155.45
Volume Solids, cc	78.98	78.98
Volume Voids, cc	64.84	76.47
Void Ratio	0.82	0.97
Porosity, %	45.08	49.19
Saturation, %	99.63	98.73
Specific Gravity	2.75 Assumed	2.75
Wet Weight, gm	281.8	292.7
Dry Weight, gm	217.2	217.2
Tare, gm	0.00	0.00
Moisture, %	29.7	34.8
Dry Density, pcf	94.2	87.2

Remarks:



MACTEC

MP-BW-38 (278-278.5 feet bgs) Permeameter Test
 OU CTP Remedial Investigation/Feasibility Study
 Former Fort Ord, California

FIGURE

E8-3

DRAWN: CLH JOB NUMBER: 55596.001701 APPROVED: *MST/cun* DATE: 01/05 REVISED DATE:



Hydraulic Conductivity

ASTM D 5084

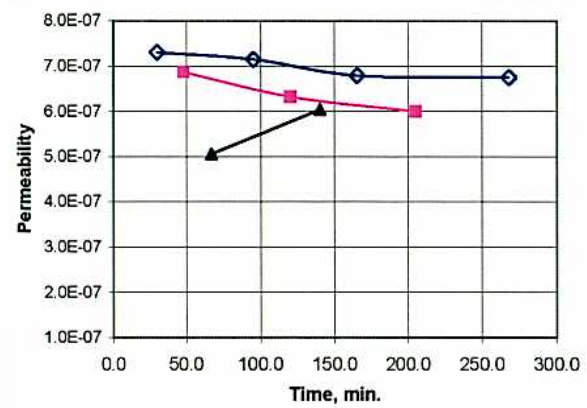
Method C: Falling Head Rising Tailwater

Job No: 179-191a Boring: P212004 Date: 11/18/02
 Client: Harding ESE Sample: 18A By: DC
 Project: 55596 Depth: Remolded:
 Visual Classification: olive brown fine sandy CLAY (silty)

Max Sample Pressures, psi: B: = >0.95 ("B" is an indication of saturation)

Cell: Bottom Top Avg. Sigma 3 Max Hydraulic Gradient: = 23
 64 60 58 5

Date	Minutes	Head, (in)	K, cm/sec
12/14/03	0.00	70.38	Start of Test
12/14/03	30.00	69.58	7.3E-07
12/14/03	95.00	67.93	7.1E-07
12/14/03	165.00	66.28	6.8E-07
12/14/03	268.00	63.88	6.8E-07
12/16/03	48.00	69.18	6.9E-07
12/16/03	120.00	67.58	6.3E-07
12/16/03	205.00	65.78	6.0E-07
12/16/03	67.00	69.08	5.1E-07
12/16/03	140.00	67.18	6.0E-07



Average Permeability: 6.E-07 cm/sec

Sample Data:	Initial	Final
Height, in	3.00	3.00
Diameter, in	1.93	1.93
Area, in ²	2.93	2.93
Volume in ³	8.78	8.78
Total Volume, cc	143.82	143.82
Volume Solids, cc	80.81	80.81
Volume Voids, cc	63.01	63.01
Void Ratio	0.78	0.78
Porosity, %	43.81	43.81
Saturation, %	99.20	99.83
Specific Gravity	2.70 Assumed	2.70
Wet Weight, gm	280.7	281.1
Dry Weight, gm	218.2	218.2
Tare, gm	0.00	0.00
Moisture, %	28.6	28.8
Dry Density, pcf	94.7	94.7

Remarks:



MACTEC

MP-BW-38 (286.5 feet bgs) Permeameter Test
 OU CTP Remedial Investigation/Feasibility Study
 Former Fort Ord, California

FIGURE

E8-4

DRAWN
CLH

JOB NUMBER
55596.001701

APPROVED
MBT/cw

DATE
01/05

REVISED DATE



Hydraulic Conductivity

ASTM D 5084

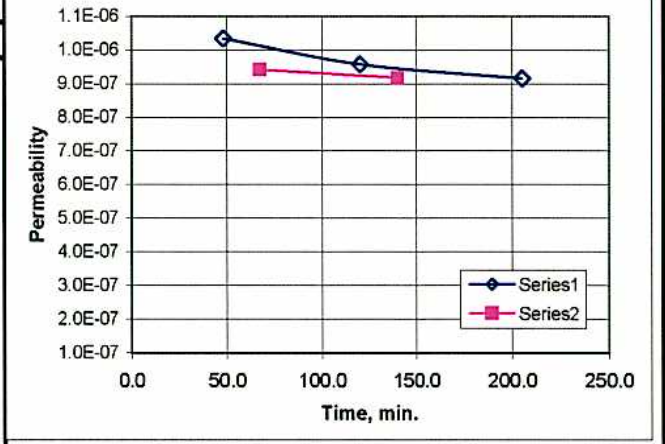
Method C: Falling Head Rising Tailwater

Job No: 179-191b Boring: P212004 Date: 11/18/02
 Client: Harding ESE Sample: 19A By: DC
 Project: 55596.0222123 Depth: Remolded:
 Visual Classification: olive brown CLAY, (silty)

Max Sample Pressures, psi: B: = >0.95 ("B" is an indication of saturation)

Cell:	Bottom	Top	Avg. Sigma 3	Max Hydraulic Gradient: =	23
64	60	58	5		

Date	Minutes	Head, (in)	K,cm/sec
12/16/03	0.00	70.38	Start of Test
12/16/03	48.00	68.58	1.0E-06
12/16/03	120.00	66.18	9.6E-07
12/16/03	205.00	63.48	9.1E-07
12/16/03	67.00	67.98	9.4E-07
12/16/03	140.00	65.58	9.2E-07



Average Permeability: 1.E-06 cm/sec

Sample Data:	Initial	Final
Height, in	3.00	2.98
Diameter, in	1.93	1.92
Area, in ²	2.93	2.90
Volume in ³	8.78	8.63
Total Volume, cc	143.82	141.39
Volume Solids, cc	77.02	77.02
Volume Voids, cc	66.80	64.37
Void Ratio	0.87	0.84
Porosity, %	46.45	45.53
Saturation, %	97.60	99.43
Specific Gravity	2.75	2.75
	Assumed	
Wet Weight, gm	277.0	275.8
Dry Weight, gm	211.8	211.8
Tare, gm	0.00	0.00
Moisture, %	30.8	30.2
Dry Density, pcf	91.9	93.5

Remarks:



MP-BW-38 (287 feet bgs) Permeameter Test
 OU CTP Remedial Investigation/Feasibility Study
 Former Fort Ord, California

FIGURE
E8-5

DRAWN: CLH JOB NUMBER: 55596.001701 APPROVED: *MDT / em* DATE: 01/05 REVISED DATE:



Hydraulic Conductivity

ASTM D 5084

Method C: Falling Head Rising Tailwater

Job No: 179-191 Boring: P212004 Date: 11/18/02
 Client: Harding ESE Sample: 20A By: DC
 Project: 55596.000123 Depth: Remolded:
 Visual Classification: olive brown CLAY w/fine sand, (silty)

Max Sample Pressures, psi:				B: = >0.95 ("B" is an indication of saturation)
Cell:	Bottom	Top	Avg. Sigma 3	Max Hydraulic Gradient: = 23
44	40	38	5	
Date	Minutes	Head, (in)	K, cm/sec	
12/13/03	0.00	70.38	Start of Test	
12/13/03	438.00	64.63	3.6E-07	
12/13/03	548.00	63.58	3.5E-07	
12/14/03	860.00	62.38	2.7E-07	
12/14/03	120.00	69.38	2.2E-07	
12/14/03	220.00	68.48	2.3E-07	
12/16/03	48.00	69.98	2.3E-07	
12/16/03	118.00	69.43	2.2E-07	

Average Permeability: 2.E-07 cm/sec		
Sample Data:	Initial	Final
Height, in	3.00	2.99
Diameter, in	1.93	1.95
Area, in ²	2.93	2.99
Volume in ³	8.78	8.93
Total Volume, cc	143.82	146.33
Volume Solids, cc	79.59	79.59
Volume Voids, cc	64.23	66.74
Void Ratio	0.81	0.84
Porosity, %	44.66	45.61
Saturation, %	99.95	97.55
Specific Gravity	2.70	2.70
	Assumed	
Wet Weight, gm	279.1	280.0
Dry Weight, gm	214.9	214.9
Tare, gm	0.00	0.00
Moisture, %	29.9	30.3
Dry Density, pcf	93.2	91.6

Remarks:



MP-BW-38 (287.5 feet bgs) Permeameter Test
 OU CTP Remedial Investigation/Feasibility Study
 Former Fort Ord, California

FIGURE
E8-6

DRAWN: CLH JOB NUMBER: 55596.001701 APPROVED: MDT / cmr DATE: 01/05 REVISED DATE: