Form LABNJ 9-1

FLEXIBLE WALL TRIAXIAL PERMEABILITY
ASTM D 5084-90
METHOD C, FALLING HEAD W/INCREASING TAILWATER PRESSURE

PROJECT TITLE:	EMERY & GARRETT/LAB TESTING/NJ	TYPE:	TUBE	TECH:	JMP	CHECKED:	DMW
PROJECT NO.:	923-6079.001	BOARD #:	7	DATE:	8/26/92	DATE:	8/27/92
SAMPLE ID:	L-5 47'	CELL #:	7				

Sample Data, Initial

Height, cm	12.436	USCS	
Diameter, cm	6.144	B-Value,f	0.96
Area, cm^2	29.65	Cell Pres	92.0
Volume, cm^3	368.7	Bot. Pres.	90.5
Mass, g	660.1	Top Pres.	89.5
Moisture Content, %	21.5	Head, cm	70.3
Dry Density, pcf	91.9	Max. Grad.	4.98
Spec. Gravity	2.74	Min. Grad.	3.00
Volume Solids, cm^3	198.20	Tot. B.P.	90.0
Volume Voids, cm^3	170.50	Max. E.S.	2.5
Void Ratio	0.86	Min. E.S.	1.5
Saturation, %	68.6%		
Porosity	0.46		

Sample Data, Final

Height, cm	12.51
Diameter, cm	6.14
Area, cm^2	29.65
Volume, cm^3	370.9
Mass, g	708.1
Moisture Content	30.4
Dry Density, pcf	91.4
Volume Solids, cm^3	198.21
Volume Voids, cm^3	172.68
Void Ratio	0.87
Saturation, %	95.6%
Porosity	0.47

WATER CONTENTS		Trimmings Initial	Sample
Tare No.		N/A	2
Wt soil&tare, i	g	835.8	994.6
Wt soil&tare, f	g	718.8	829.6
Wt Tare	g	175.7	286.5
Wt Moisture Lost	g	117.0	165.0
Wt Dry Soil	g	543.1	543.1
Water Content	%	21.5%	30.4%

COMMENTS: Sample tested in brass sleeve.

DATE	DAY	HOUR	MIN	TIME FUNCTION,SECONDS dt (min)	dt, acc (min)	dt (sec)	dt, acc (sec)	READINGS Inflow (cc)	Outflow (cc)	Head (cm)	(H1/H2) (inc.)	Gradient	PERMEABILITY (cm/sec)
8/26/92	33842	13	37	0.0	0.0	0	0	29.40	21.20	61.98	0.00	4.98	0.0
8/26/92	33842	13	38	1.0	1.0	60	60	33.00	17.60	54.46	1.14	4.38	4.3E-04
8/26/92	33842	13	39	1.0	2.0	60	120	36.10	14.50	47.98	1.14	3.86	4.3E-04
8/26/92	33842	13	40	1.0	3.0	60	180	38.70	11.70	42.34	1.13	3.40	4.2E-04
8/26/92	33842	13	41	1.0	4.0	60	240	41.20	9.40	37.32	1.13	3.00	4.2E-04

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

Inflow Rate	4.92E-02
Outflow Rate	4.92E-02
Inflow/Outflow Ratio	1.00

PERMEABILITY REPORTED AS** 4.3E-04 cm/sec**

GOLDER ASSOCIATES INC.
MT.LAUREL, NJ

Form LABNJ 9-1

FLEXIBLE WALL TRIAXIAL PERMEABILITY
ASTM D 5084-90
METHOD C, FALLING HEAD W/INCREASING TAILWATER PRESSURE

PROJECT TITLE:	EMERY & GARRETT/LAB TESTING/NJ	TYPE:	TUBE	TECH:	JMP	CHECKED:	DWJ
PROJECT NO.:	923-6879.001	BOARD #:	8	DATE:	8/31/92	DATE:	9/5/92
SAMPLE ID:	L-6-67'	CELL #:	8				

Sample Data, Initial

Height, cm	12.817	USCS	
Diameter, cm	6.144	B-Value,f	0.91
Area, cm^2	29.65	Cell Pres	102.0
Volume, cm^3	380.0	Bot. Pres.	100.5
Mass, g	777.6	Top Pres.	99.5
Moisture Content, %	13.5	Head, cm	70.3
Dry Density, pcf	112.5	Max. Grad.	5.59
Spec. Gravity	2.78	Min. Grad.	4.10
Volume Solids, cm^3	246.40	Tot. B.P.	100.0
Volume Voids, cm^3	133.60	Max. E.S.	2.5
Void Ratio	0.54	Min. E.S.	1.5
Saturation, %	69.3%		
Porosity	0.35		

Sample Data, Final

Height, cm	12.64
Diameter, cm	6.14
Area, cm^2	29.65
Volume, cm^3	374.7
Mass, g	781.0
Moisture Content	14.0
Dry Density, pcf	114.1
Volume Solids, cm^3	246.41
Volume Voids, cm^3	128.31
Void Ratio	0.52
Saturation, %	74.8%
Porosity	0.34

WATER CONTENTS

		Trimmings Initial	Sample
Tare No.			ST
Wt soil&tare, i	g	988.9	992.2
Wt soil&tare, f	g	896.3	896.3
Wt Tare	g	211.3	211.3
Wt Moisture Lost	g	92.6	96.0
Wt Dry Soil	g	685.0	685.0
Water Content	%	13.5%	14.0%

COMMENTS: Test performed in brass cylinder.

DATE	DAY	TIME FUNCTION,SECONDS HOUR	MIN	dt (min)	dt, acc (min)	dt (sec)	dt, acc (sec)	READINGS Inflow (cc)	Outflow (cc)	Head (cm)	(H1/H2) (Inc.)	Gradient	PERMEABILITY (cm/sec)
9/3/92	33850	10	16	0.0	0.0	0	0	24.20	25.50	71.68	0.00	5.59	0.0
9/3/92	33850	10	17	1.0	1.0	60	60	26.80	23.00	66.27	1.08	5.17	2.7E-04
9/3/92	33850	10	18	1.0	2.0	60	120	29.10	20.50	61.18	1.08	4.77	2.7E-04
9/3/92	33850	10	19	1.0	3.0	60	180	31.30	18.40	56.63	1.08	4.42	2.6E-04
9/3/92	33850	10	20	1.0	4.0	60	240	33.20	16.40	52.49	1.08	4.10	2.6E-04

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

Inflow Rate	3.75E-02
Outflow Rate	3.79E-02
Inflow/Outflow Ratio	0.99

PERMEABILITY REPORTED AS ** 2.6E-04 cm/sec **

GOLDER ASSOCIATES INC.
MT.LAUREL, NJ

FLEXIBLE WALL TRIAXIAL PERMEABILITY
ASTM D 5084-90
METHOD C, FALLING HEAD W/INCREASING TAILWATER PRESSURE

Form LABNJ 9-1

PROJECT TITLE:	EMERY & GARRETT/LAB TESTING/NJ	TYPE:	TUBE	TECH:	MLM	CHECKED:	PMW
PROJECT NO.:	923-6079.001	BOARD #:	8	DATE:	8/22/92	DATE:	8/23/92
SAMPLE ID:	L-70-45 L-70 45'	CELL #:	8				

Sample Data, Initial		USCS	
Height, cm	13.151		
Diameter, cm	6.184	B-Value,f	0.95
Area, cm^2	30.04	Cell Pres	97.0
Volume, cm^3	395.0	Bot. Pres.	90.5
Mass, g	840.0	Top Pres.	89.5
Moisture Content, %	15.7	Head, cm	70.3
Dry Density, pcf	114.7	Max. Grad.	8.97
Spec. Gravity	2.76	Min. Grad.	8.67
Volume Solids, cm^3	263.13	Tot. B.P.	90.0
Volume Voids, cm^3	131.86	Max. E.S.	7.5
Void Ratio	0.50	Min. E.S.	6.5
Saturation, %	86.3%		
Porosity	0.33		

Sample Data, Final	
Height, cm	13.09
Diameter, cm	6.21
Area, cm^2	30.25
Volume, cm^3	395.9
Mass, g	857.9
Moisture Content	13.6
Dry Density, pcf	119.1
Volume Solids, cm^3	273.70
Volume Voids, cm^3	122.17
Void Ratio	0.45
Saturation, %	83.9%
Porosity	0.31

WATER CONTENTS		Trimmings Initial	Sample
Tare No.		M-1	R-35
Wt soil&tare, i	g	60.5	1054.9
Wt soil&tare, f	g	55.3	952.4
Wt Tare	g	22.1	197.0
Wt Moisture Lost	g	5.2	102.5
Wt Dry Soil	g	33.2	755.4
Water Content	%	15.7%	13.6%

COMMENTS:

DATE	DAY	HOUR	MIN	TIME FUNCTION,SECONDS dt (min)	dt, acc (min)	dt (sec)	dt, acc (sec)	READINGS Inflow (cc)	Outflow (cc)	Head (cm)	(H1/H2) (inc.)	Gradient	PERMEABILITY (cm/sec)
8/22/92	33838	13	32	0.0	0.0	0	0	2.50	47.50	118.00	0.00	8.97	0.0
8/22/92	33838	13	43	11.0	11.0	660	660	3.00	47.00	116.94	1.01	8.89	2.8E-06
8/22/92	33838	13	53	10.0	21.0	600	1260	3.50	46.50	115.88	1.01	8.81	3.1E-06
8/22/92	33838	14	3	10.0	31.0	600	1860	4.00	46.00	114.82	1.01	8.73	3.2E-06
8/22/92	33838	14	13	10.0	41.0	600	2460	4.40	45.60	113.97	1.01	8.67	2.5E-06

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

Inflow Rate	7.72E-04
Outflow Rate	7.72E-04
Inflow/Outflow Ratio	1.00

PERMEABILITY REPORTED AS ** 2.9E-06 cm/sec **

GOLDER ASSOCIATES INC.
MT.LAUREL, NJ

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FLEXIBLE WALL TRIAXIAL PERMEABILITY
ASTM D 5084-90
METHOD C, FALLING HEAD W/INCREASING TAILWATER PRESSURE

PROJECT TITLE:	EMERY & GARRETT/LAB TESTING/NJ	TYPE:	TUBE	TECH:	MLM/JMP	CHECKED:	MLM CGM
PROJECT NO.:	923-6079.001	BOARD #:	7	DATE:	11/02/92	DATE:	11/30/92 11/30/91
SAMPLE ID:	L-11D 10'	CELL #:	7				

Sample Data, Initial		USCS	
Height, cm	6.805		
Diameter, cm	6.144	B-Value,f	0.97
Area, cm^2	29.65	Cell Pres	97.0
Volume, cm^3	201.8	Bot. Pres.	90.5
Mass, g	401.3	Top Pres.	89.5
Moisture Content, %	16.4	Head, cm	70.3
Dry Density, pcf	106.6	Max. Grad.	15.67
Spec. Gravity	2.66	Min. Grad.	14.16
Volume Solids, cm^3	129.58	Tot. B.P.	90.0
Volume Voids, cm^3	72.17	Max. E.S.	7.5
Void Ratio	0.56	Min. E.S.	6.5
Saturation, %	78.5%		
Porosity	0.36		

Sample Data, Final	
Height, cm	6.80
Diameter, cm	6.14
Area, cm^2	29.65
Volume, cm^3	201.6
Mass, g	408.5
Moisture Content	25.7
Dry Density, pcf	100.6
Volume Solids, cm^3	122.18
Volume Voids, cm^3	79.46
Void Ratio	0.65
Saturation, %	105.1%
Porosity	0.39

WATER CONTENTS		Trimmings Initial	Sample
Tare No.		E-30	E-3
Wt soil&tare, i	g	121.8	599.9
Wt soil&tare, f	g	109.2	516.4
Wt Tare	g	32.5	191.4
Wt Moisture Lost	g	12.6	83.5
Wt Dry Soil	g	76.7	325.0
Water Content	%	16.4%	25.7%

COMMENTS: NO FINAL HEIGHT READINGS TAKEN USED INITIAL MEASUREMENTS. TESTED IN TUBE.

DATE	DAY	HOUR	MIN	dt (min)	dt, acc (min)	dt (sec)	dt, acc (sec)	READINGS Inflow (cc)	Outflow (cc)	Head (cm)	(H1/H2) (inc.)	Gradient	PERMEABILITY (cm/sec)
11/02/92	33910	14	55	0.0	0.0	0	0	7.90	42.40	106.60	0.00	15.67	0.0
11/02/92	33910	14	56	1.0	1.0	60	60	9.20	41.00	103.78	1.03	15.25	4.9E-05
11/02/92	33910	14	57	1.0	2.0	60	120	10.40	39.90	101.38	1.02	14.90	4.3E-05
11/02/92	33910	14	58	1.0	3.0	60	180	11.60	38.60	98.77	1.03	14.51	4.8E-05
11/02/92	33910	14	59	1.0	4.0	60	240	12.80	37.50	96.36	1.02	14.16	4.5E-05

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

Inflow Rate	2.04E-02
Outflow Rate	2.04E-02
Inflow/Outflow Ratio	1.00

PERMEABILITY REPORTED AS** 4.6E-05 cm/sec**

GOLDER ASSOCIATES INC.
MT.LAUREL, NJ

FLEXIBLE WALL TRIAXIAL PERMEABILITY
ASTM D 5084-90
METHOD C, FALLING HEAD W/INCREASING TAILWATER PRESSURE

Form LABNI 9-1

PROJECT TITLE:	EMERY & GARRETT/LAB TESTING/NJ	TYPE:	TUBE	TECH:	MLM
PROJECT NO.:	923-6079.001	BOARD #:	5	DATE:	11/24/92
SAMPLE ID:	L-11D 18'	CELL #:	5		

CHECKED: MZM. DATE: 11/24/92 RH

Sample Data, Initial

		USCS	
Height, cm	14.234		
Diameter, cm	6.144	B-Value,f	0.93
Area, cm ^ 2	29.65	Cell Pres	97.0
Volume, cm ^ 3	422.0	Bot. Pres.	90.5
Mass, g	854.5	Top Pres.	89.5
Moisture Content, %	15.5	Head, cm	70.3
Dry Density, pcf	109.4	Max. Grad.	5.68
Spec. Gravity	2.74	Min. Grad.	4.02
Volume Solids, cm ^ 3	269.97	Tot. B.P.	90.0
Volume Voids, cm ^ 3	152.04	Max. E.S.	7.5
Void Ratio	0.56	Min. E.S.	6.5
Saturation, %	75.5%		
Porosity	0.36		

Sample Data, Final

Height, cm	14.23
Diameter, cm	6.14
Area, cm ^ 2	29.65
Volume, cm ^ 3	422.0
Mass, g	892.1
Moisture Content	20.3
Dry Density, pcf	109.7
Volume Solids, cm ^ 3	270.73
Volume Voids, cm ^ 3	151.28
Void Ratio	0.56
Saturation, %	99.4%
Porosity	0.36

WATER CONTENTS

		Trimmings Initial	Sample
Tare No.		E-9	X-1
Wt soil&tare, i	g	171.3	1084.4
Wt soil&tare, f	g	152.9	934.1
Wt Tare	g	34.2	192.3
Wt Moisture Lost	g	18.4	150.3
Wt Dry Soil	g	118.7	741.8
Water Content	%	15.5%	20.3%

COMMENTS: NO FINAL HEIGHT READINGS TAKEN USED INITIAL MEASUREMENTS.

DATE	DAY	TIME FUNCTION, SECONDS HOUR	MIN	dt (min)	dt, sec (min)	dt (sec)	dt, sec (sec)	READINGS Inflow (cc)	Outflow (cc)	Head (cm)	(H1/H2) (inc)	Gradient	PERMEABILITY (cm/sec)
11/23/92	33931	17	42	0.0	0.0	0	0	19.70	30.00	80.92	0.00	5.68	0.0
11/23/92	33931	17	43	1.0	1.0	60	60	22.80	26.90	74.38	1.09	5.23	3.2E-04
11/23/92	33931	17	44	1.0	2.0	60	120	25.80	23.90	68.05	1.09	4.78	3.3E-04
11/23/92	33931	17	45	1.0	3.0	60	180	28.40	21.30	62.56	1.09	4.40	3.2E-04
11/23/92	33931	17	46	1.0	4.0	60	240	30.90	18.80	57.29	1.09	4.02	3.3E-04

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

Inflow Rate	4.67E-02
Outflow Rate	4.67E-02
InFlow/Outflow Ratio	1.00

PERMEABILITY REPORTED AS** 3.2E-04 cm/sec**

GOLDER ASSOCIATES INC.
MT.LAUREL, NJ

Form LABNJ 9-1

FLEXIBLE WALL TRIAXIAL PERMEABILITY
ASTM D 5084-90
METHOD C, FALLING HEAD W/INCREASING TAILWATER PRESSURE

PROJECT TITLE:	EMERY & GARRETT/LAB TESTING/NJ	TYPE:	TUBE	TECH:	MLM	CHECKED:	MYM
PROJECT NO.:	923-4071.001	BOARD #:	10	DATE:	11/10/92	DATE:	11/30/92
SAMPLE ID:	L-11D 25'	CELL #:	10				GCK 11/30/92

Sample Data, Initial

Height, cm	11.415	USCS	
Diameter, cm	6.144	B-Value,f	0.95
Area, cm^2	29.65	Cell Pres	97.0
Volume, cm^3	338.4	Bot. Pres.	90.5
Mass, g	696.6	Top Pres.	89.5
Moisture Content, %	12.4	Head, cm	70.3
Dry Density, pcf	114.2	Max. Grad.	10.71
Spec. Gravity	2.75	Min. Grad.	3.02
Volume Solids, cm^3	225.32	Tot. B.P.	90.0
Volume Voids, cm^3	113.11	Max. E.S.	7.5
Void Ratio	0.50	Min. E.S.	6.5
Saturation, %	68.0%		
Porosity	0.33		

Sample Data, Final

Height, cm	11.42
Diameter, cm	6.14
Area, cm^2	29.65
Volume, cm^3	338.4
Mass, g	733.8
Moisture Content	16.6
Dry Density, pcf	116.0
Volume Solids, cm^3	228.80
Volume Voids, cm^3	109.63
Void Ratio	0.48
Saturation, %	95.4%
Porosity	0.32

WATER CONTENTS

		Trimmings: Initial	Sample
Tare No.		D-22	R-31
Wt soil&tare, i	g	158.9	931.3
Wt soil&tare, f	g	145.1	826.7
Wt Tare	g	34.0	197.5
Wt Moisture Lost	g	13.8	104.6
Wt Dry Soil	g	111.1	629.2
Water Content	%	12.4%	16.6%

COMMENTS: NO FINAL HEIGHT READINGS TAKEN USED INITIAL MEASUREMENTS. TESTED IN TUBE.

DATE	DAY	HOUR	MIN	dt (min)	dt, acc (min)	dt (sec)	dt, acc (sec)	Inflow (cc)	Outflow (cc)	Head (cm)	(H1/H2) (inc.)	Gradient	PERMEABILITY (cm/sec)
11/10/92	33918	9	42	0.0	0.0	0	0	0.40	49.40	122.24	0.00	10.71	0.0
11/10/92	33918	9	43	1.0	1.0	60	60	16.50	33.30	88.11	1.39	7.72	9.9E-04
11/10/92	33918	9	44	1.0	2.0	60	120	27.90	21.90	63.94	1.38	5.60	9.7E-04
11/10/92	33918	9	45	1.0	3.0	60	180	35.90	13.90	46.98	1.36	4.12	9.3E-04
11/10/92	33918	9	46	1.0	4.0	60	240	41.80	8.00	34.47	1.36	3.02	9.3E-04

TIME FUNCTION, SECONDS — READINGS

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

Inflow Rate	1.73E-01
Outflow Rate	1.73E-01
Inflow/Outflow Ratio	1.00

PERMEABILITY REPORTED AS** 9.5E-04 cm/sec **

GOLDER ASSOCIATES INC.
MT.LAUREL, NJ

Form LABNJ 9-1

FLEXIBLE WALL TRIAXIAL PERMEABILITY
ASTM D 5084-90
METHOD C, FALLING HEAD W/INCREASING TAILWATER PRESSURE

PROJECT TITLE:	EMERY & GARRETT/LAB TESTING/NJ	TYPE:	TUBE	TECH:	MLM	CHECKED:	MZ.M
PROJECT NO.:	923-6079.001	BOARD #:	6	DATE:	11/24/92	DATE:	11/24/92
SAMPLE ID:	L-11D 35'	CELL #:	6				

Sample Data, Initial

		USCS	
Height, cm	15.161		
Diameter, cm	6.144	B-Value,f	0.94
Area, cm^2	29.65	Cell Pres	97.0
Volume, cm^3	449.5	Bot. Pres.	90.5
Mass, g	972.6	Top Pres.	89.5
Moisture Content, %	15.5	Head, cm	70.3
Dry Density, pcf	116.9	Max. Grad.	7.87
Spec. Gravity	2.58	Min. Grad.	6.77
Volume Solids, cm^3	326.41	Tot. B.P.	90.0
Volume Voids, cm^3	123.08	Max. E.S.	7.5
Void Ratio	0.38	Min. E.S.	6.5
Saturation, %	106.0%		
Porosity	0.27		

Sample Data, Final

Height, cm	15.16
Diameter, cm	6.14
Area, cm^2	29.65
Volume, cm^3	449.5
Mass, g	971.9
Moisture Content	17.1
Dry Density, pcf	115.2
Volume Solids, cm^3	321.63
Volume Voids, cm^3	127.86
Void Ratio	0.40
Saturation, %	111.1%
Porosity	0.28

WATER CONTENTS		Trimmings Initial	Sample
Tare No.		E-10	BL-13
Wt soil&tare, i	g	165.4	1172.7
Wt soil&tare, f	g	147.8	1030.6
Wt Tare	g	34.2	200.8
Wt Moisture Lost	g	17.6	142.1
Wt Dry Soil	g	113.6	829.8
Water Content	%	15.5%	17.1%

COMMENTS: NO FINAL HEIGHT READINGS TAKEN USED INITIAL MEASUREMENTS. STANDING WATER ON TOP OF THE TUBE. THIS EXPLAINS ELEVATED SATURATION %.

DATE	DAY	TIME FUNCTION, SECONDS HOUR	MIN	dt (min)	dt, sec (min)	dt (sec)	dt, sec (sec)	READINGS Inflow (cc)	Outflow (cc)	Head (cm)	(H1/H2) (inc.)	Gradient	PERMEABILITY (cm/sec)
11/23/92	33931	18	2	0.0	0.0	0	0	2.40	48.20	119.33	0.00	7.87	0.0
11/23/92	33931	18	4	2.0	2.0	120	120	3.30	47.30	117.41	1.02	7.74	3.2E-05
11/23/92	33931	18	12	8.0	10.0	480	600	6.90	43.70	109.75	1.07	7.24	3.4E-05
11/23/92	33931	18	16	4.0	14.0	240	840	8.60	42.00	106.12	1.03	7.00	3.4E-05
11/23/92	33931	18	20	4.0	18.0	240	1080	10.30	40.40	102.61	1.03	6.77	3.4E-05

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

Inflow Rate	7.31E-03
Outflow Rate	7.22E-03
Inflow/Outflow Ratio	1.01

PERMEABILITY REPORTED AS** 3.3E-05 cm/sec**

GOLDER ASSOCIATES INC.
MT.LAUREL, NJ

FLEXIBLE WALL TRIAXIAL PERMEABILITY

ASTM D 5084-90

METHOD C, FALLING HEAD W/INCREASING TAILWATER PRESSURE

Form LABN3 9-1

PROJECT TITLE:	EMERY & GARRETT/LAB TESTING/NJ	TYPE:	TUBE	TECH:	MLM	CHECKED:	MLM
PROJECT NO.:	923-6079.001	BOARD #:	5	DATE:	11/25/92	DATE:	11/30/92
SAMPLE ID:	L-12 19'-21'	CELL #:	5				GCM 11/30/92

Sample Data, Initial		USCS	
Height, cm	14.801		
Diameter, cm	6.144	B-Value,f	0.95
Area, cm^2	29.65	Cell Pres	97.0
Volume, cm^3	438.8	Bot. Pres.	90.5
Mass, g	893.9	Top Pres.	89.5
Moisture Content, %	24.5	Head, cm	70.3
Dry Density, pcf	102.1	Max. Grad.	7.87
Spec. Gravity	2.69	Min. Grad.	7.66
Volume Solids, cm^3	266.82	Tot. B.P.	90.0
Volume Voids, cm^3	172.00	Max. E.S.	7.5
Void Ratio	0.64	Min. E.S.	6.5
Saturation, %	102.4%		
Porosity	0.39		

Sample Data, Final	
Height, cm	14.80
Diameter, cm	6.14
Area, cm^2	29.65
Volume, cm^3	438.8
Mass, g	903.0
Moisture Content	26.1
Dry Density, pcf	101.8
Volume Solids, cm^3	266.25
Volume Voids, cm^3	172.57
Void Ratio	0.65
Saturation, %	108.2%
Porosity	0.39

WATER CONTENTS		Trimmings Initial	Sample
Tare No.		N-3	X-11
Wt soil&tare, i	g	99.5	1100.3
Wt soil&tare, f	g	86.1	913.5
Wt Tare	g	31.5	197.3
Wt Moisture Lost	g	13.4	186.8
Wt Dry Soil	g	54.6	716.2
Water Content	%	24.5%	26.1%

COMMENTS: Sample tested in brass sleeve.

DATE	DAY	TIME FUNCTION, SECONDS HOUR	MIN	dt (min)	dt, acc (min)	dt (sec)	dt, acc (sec)	READINGS Inflow (cc)	Outflow (cc)	Head (cm)	(H1/H2) (inc)	Gradient	PERMEABILITY (cm/sec)
11/25/92	33933	14	43	0.0	0.0	0	0	2.80	46.80	116.47	0.00	7.87	0.0
11/25/92	33933	14	48	5.0	5.0	300	300	3.00	46.70	116.16	1.00	7.85	2.1E-06
11/25/92	33933	15	1	13.0	18.0	780	1080	3.40	46.20	115.21	1.01	7.78	2.5E-06
11/25/92	33933	15	15	14.0	32.0	840	1920	3.90	45.70	114.15	1.01	7.71	2.6E-06
11/25/92	33933	15	27	12.0	44.0	720	2640	4.30	45.30	113.31	1.01	7.66	2.4E-06

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

Inflow Rate	5.68E-04
Outflow Rate	5.68E-04
Inflow/Outflow Ratio	1.00

PERMEABILITY REPORTED AS** 2.4E-06 cm/sec**

GOLDER ASSOCIATES INC.
MT. LAUREL, NJ

Form LABNJ 9-1

FLEXIBLE WALL TRIAXIAL PERMEABILITY
ASTM D 5084-90
METHOD C, FALLING HEAD W/INCREASING TAILWATER PRESSURE

PROJECT TITLE:	EMERY & GARRETT/LAB TESTING/NJ	TYPE:	TUBE	TECH:	MLM	CHECKED:	DJW
PROJECT NO.:	923-6079.001	BOARD #:	4	DATE:	10/20/92	DATE:	10/22/92
SAMPLE ID:	L-13 10'-12'	CELL #:	4				

Sample Data, Initial

Height, cm	6.027	USCS	
Diameter, cm	7.264	B-Value,f	0.95
Area, cm^2	41.44	Cell Pres	97.0
Volume, cm^3	249.8	Bot. Pres.	90.5
Mass, g	485.0	Top Pres.	89.5
Moisture Content, %	22.9	Head, cm	70.3
Dry Density, pcf	98.6	Max. Grad.	16.72
Spec. Gravity	2.61	Min. Grad.	14.55
Volume Solids, cm^3	151.23	Tot. B.P.	90.0
Volume Voids, cm^3	98.54	Max. E.S.	7.5
Void Ratio	0.65	Min. E.S.	6.5
Saturation, %	91.6%		
Porosity	0.39		

Sample Data, Final

Height, cm	6.03
Diameter, cm	7.26
Area, cm^2	41.44
Volume, cm^3	249.8
Mass, g	496.4
Moisture Content	26.1
Dry Density, pcf	98.3
Volume Solids, cm^3	150.80
Volume Voids, cm^3	98.97
Void Ratio	0.66
Saturation, %	103.9%
Porosity	0.40

WATER CONTENTS

		Trimmings Initial	Sample
Tare No.		E-21	E-3
Wt soil&tare, i	g	123.3	687.8
Wt soil&tare, f	g	106.9	585.0
Wt Tare	g	35.2	191.4
Wt Moisture Lost	g	16.4	102.8
Wt Dry Soil	g	71.7	393.6
Water Content	%	22.9%	26.1%

COMMENTS:

DATE	DAY	TIME FUNCTION,SECONDS HOUR	MIN	dt (min)	dt, acc (min)	dt (sec)	dt, acc (sec)	READINGS Inflow (cc)	Outflow (cc)	Head (cm)	(H1/H2) (inc.)	Gradient	PERMEABILITY (cm/sec)
10/20/92	33897	13	29	0.0	0.0	0	0	10.70	39.10	100.80	0.00	16.72	0.0
10/20/92	33897	13	30	1.0	1.0	60	60	12.30	37.40	97.28	1.04	16.14	4.0E-05
10/20/92	33897	13	31	1.0	2.0	60	120	13.90	35.80	93.87	1.04	15.58	4.1E-05
10/20/92	33897	13	32	1.0	3.0	60	180	15.40	34.30	90.68	1.04	15.05	3.9E-05
10/20/92	33897	13	33	1.0	4.0	60	240	16.80	32.90	87.70	1.03	14.55	3.8E-05

*TRANSCRIBED FROM ORIGINAL DATA SHEETS

Inflow Rate	2.54E-02
Outflow Rate	2.58E-02
Inflow/Outflow Ratio	0.98

PERMEABILITY REPORTED AS ** 4.0E-05 cm/sec **

GOLDER ASSOCIATES INC.
MT.LAUREL, NJ