Attachment B

Mechanical Analysis of Samples

PROJECT: MATILIJA DAM

		CLASSIFICATION		ELASTIC SILT	SILT	SILT		SILI	SILT WITH SAND	SILT	LEAN CLAY	LEAN CLAY						SILI WITH SAND	SANDV SILT				L_18	LEAN CLAY			SILT WITH SAND		SILTY SAND		SANDY SILT					SILIT SAND SILTY SAND WITH GRAVE						SILI					SP-SM POORLY GRADED SAND WITH SILT AND GRAVEL	SW-SIM WELL GRADED SAND WITH SILT SP-SM POORLY GRADED SAND WITH SILT
		>	N N	₹	¥	₹ :	₫ 5	₹ ₹	₹ ₹	₹	겅	ರ	Z	ĭ	∑ :	₹ ;	∑ :	₹ ₹	<u> </u>	į	Ī	Ξ	Σ	ರ	Σ	ĭ	₫:	≦ ;	S	200	_ ₹	SM	ž	SS	200	2 2	5 ≥	S	S	₹ 8	S :		ก็∑	N S	¥	SM	က်	် က
	Field Data	Deneity																																														
	Fie	_	4731	64.6	47.5	47.1	42.6	442.U	38.5	57.5	39.0	48.7	48.2	53.2																																		
	perg	Limits	٦,,	38,	9	က	ი [_	2 <u>A</u>	5	. ∞	5	16	9	9	ď.	<u>d</u> .	ב מי	5	<u>}</u> «	, ₂	2 2	<u> </u>	9	2	d/u	d/u	<u>.</u>	d i	d/L	2 2	Ω	d/u	ا ر	∞ ¹	<u>d</u> 6	2 6	n/o	d/u	ď.	ا د		<u>م</u> د	2 6	2 2	. d	d/u	d d
	FINES Atterberg	<u>-</u> <u>-</u>	1	2 5	36	53	; <u>8</u>	4 4	‡	42	ဗ္ဗ	37	44	37	4			22	3	č	3		40	4	35			43						,	55 45						ç	54						
	FINES	200	3 2	97	85	66	96))	8 8	88	9	97	96	84	95	32	4 6	2 8	0 0	3 8	8 6	6	8 8	86	97	22	85	87	27	- ,	- 89	38	25	43	4 6	3 5	20	45	36	23	7.7	5 6	4 6	- %	3 8	22	თ (5 =
		5	_ } g	8 6	66	100	8 5	3 8	n &	8 6	66	9	9	68	66	9	9	S 8	8 6	t 6	; <u>5</u>	5 5	- 6	8	66	86	66	97	57	٠ ر	2 S	65	84	69	2	4 5	9 6	75	62	8	2 8	3 3 5 7	5 ¢	0 6	69	26	4 ;	32
	<u> </u>	Č,	3 5	8	9	100	8 5	3 5	<u>3</u> g	<u> </u>	9	8	9	8	တွ	9	8 8	8 8	6 6	t 0	3 5	3 5	6	9	9	86	66	g (3 3	5 6	ဥ တို	77	86	88	æ 8	S &	8 6	6	82	6	8	5 6	\$ 6 5 C	78	2 6	83	33	2 5 7
	(sieve no.)	5	36	8	100	9	8 5	3 5	3 g	<u>8</u> 2	9	9	100	95	8	9	6	35	3 5	ţ 5	3 5	5	98	9	100	66	66	66	86	3 3	4 6 6	89	66	95	8 8	2 4	- 6	95	93	92	g (2 5	<u>6</u> 6	t 6	8 8	8	54	9.6
	ID (sie	4	2 5	8	100	100	9 5	3 5	3 5	8	9	100	100	95	9	9	g (3 5	3 8	8 5				`					66		100					ф ф С			96			3 5						86
	SAND	α	٩	8 5	100	100	100	3 5	3 5	9 8	100	9	5	93	100	9	66	9 5					-																									2 6
es		_	1 6	8	9	9	9 5	3 5	3 5	8 8	100	9	100	9	9	5	9	9 5	3 5	3 5	3 5																											2 S
Number of samples	ju)	9/0		8	9	9	8 5	3 5	3 5	8 8	9 2		`	92	`	•		•			3 5										2 23								66					_				3 5 5
er of	GRAVEL (in)		֓֓֓֓֟֓֓֓֓֓֟֟֓֓֓֓֟֓֓֓֓֓֟֓֓֓֓֓֓֟֓֓֓֟֓֓֓֟		_	_	Ψ,	3 5	_ 、	•	5 6	•		66	-	•	•	8 8		•	•		•	•	`	4	•	•	8 5	•				9				-			•		3 5			-		196
q mn	GRA		ı.		-				3 5	3 5	9 2	100	9	100	100	9	9	9 9	3 5	3 5	3 5	•	•	•		•	-	8			3 5	•	•	•	_ `		3 5	•	•	`	•		2 5	•	58	-	•	38
, ,		,	2 5	8	100	100	9	8 8	3 5	3 6			$\overline{}$	$\overline{}$	~	_	•	~ -	3 5				38		· -	$\overline{}$	~	┰ .	5 5	_ ,	5 5		$\overline{}$		┰ ╵	35		٠.	~	_	~ ,	₹ 7	2 5	_ ~		-	-	2 6 5 6
83	Depth	† C	100	33.3	43.3	53.3	63.3	73.3	10.0	280	43.0	53.0	68.0	75.5	28.3	38.3	48.3	58.3	3.0	9 6	2 6	2 6	3 6	73.0	23.0	13.0	18.0	23.0	33.0	2 5	3 22	37.5	47.5	52.5	59.7	12.7	27.	37.7	42	47.(55.	62	64.	2. 5	7.8.7	27.8	37.8	52.8
83	De	- S	- C	28.3	38.3	48.3	58.3	68.3	2.5	23.0	3 6	48.0	63.0	73.3	23.3	33.3	38.3	53.3	7 0 0	5.0	0.00	200	5 6	089	18.0	8.3	13.0	18.0	28.0	x (20.0	32.5	42.5	47.5	57.5	7.7	72.7	32.7	37.7	42.7	52.7	57.7	7.79	4. L	12.8	22.8	32.8	37.8 47.8
TACORE .		Hole	NO.	MDH 01-01	MDH 01-01	MDH 01-01	MDH 01-01	MDH 01-01	MDH 01-01	MDH 02-01	MDH 02-01	MDH 02-01	MDH 02-01	MDH 02-01	MDH03-01	MDH03-01	MDH03-01	MDH03-01	MDH04-01	MDH04-01	MDH05-01	MD103-01	MDH05-01	MDH05-01	MDH06-01	MDH07-01	MDH07-01	MDH07-01	MDH07-01	MDH08-01	MDH08-01	MDH08-01	MDH08-01	MDH08-01	MDH08-01	MDH09-01	MDH09-01	MDH09-01	MDH09-01	MDH09-01	MDH09-01	MDH09-01	MDH09-01	MOTIO-01	MDH10-01	MDH10-01	MDH10-01	MDH10-01 MDH10-01
		Lab	. S	282 286 286	297	298	299	8 8	. SC 5	303	30.5	302	306	307	429	433	430	431	432	45.4	45. C 48.	430	438	439	4 6	441	442	443	444	445	446 447	448	449	450	451	452	5 4 5	455	456	457	458	459	460	461 763	463	464	465	466 467

PROJECT: MATILIJA DAM 83 <-- Number of samples

11 Cl		CLASSIFICATION		SW-GM WELL GRADED GRAVEL WITH SILT AND SAND	SILTY SAND WITH GRAVEL	WELL	-SM WELL				_	_	ĞΜ	_		-SM		SM		-GM			WELL GRADED GRAVEL WITH SILT AND	ΨĢ					_				ML SILT	ML SILT
	Data		Density	9	S	S	S	S	2	S	O	S	O	U	2	S	2	S	S	U	S	S	0	·	o	_O	2	2	O	2	2	2	2	2
	Field Data	ł	M.C.																															
	FINES Atterberg	Limits	IL PI	d/u	d/u	d/u	ď,	_	42 16	d/u	ď	d/u	d/u	d/u	d/n	d/u	38 13	d/u	ď/u	d/u	d/u	d/n	ď/u	d/n	d/n	d/u	d/u	38 10	58 28	41 14		34 6	38	47 7
	FINES		200	10	35	12	œ	52	95	13	9	12	7	4	64	12	86	10	9	7	48	47	7	6	4	17	83	26	96	9	93	96	66	66
			100	14	49	17	Ξ	25	86	4	ω	21	o	7	82	17	100	17	61	5	92	9/	15	13	S.	59	6	9	66	82	86	66	8	9
	÷		20	20	21	56	17	8	6	82	9	7	12	7	86	32	5	74	89	13	86	8	13	17	7	43	86	5	66	92	100	100	9	9
	ve no		9	52	22	45	28	92	5	92	16	3	5	9	5	22	100	32	75	9	66	93	17	22	9	29	66	100	100	100	9	8	9	100
	√D (sieve no.)		16	<u>۳</u>	62	29	45	6	9	6	23	42	9	16	8	62	5	4	92	25	9	92	23	5 8	4	<u>∞</u>	66	8	5	5	100	9	100	100
	SAN		ω	88	99	2	22	6	9	66	23	62	52	54	100	29	5	28	77	34	100	96	32	53	9	8	5	5	100	5	9	100	9	100
es			4	22	72	9/	89	86	5	66	32	78	56	33	9	73	5	69	7	44	100	86	33	35	52	8	5	8	100	5	9	9	9	100
amble	n)		3/8	61	2	88	85	66	9	66	44	9	33	ب	5	79	9	77	78	28	9	66	49	44	27	26	5	100	5	5	5	9	5	100
Number of samples	GRAVEL (in		3/4	73	88	95	83	9	9	5	22	6	29	73	9	9	9	86	79	78	5	9	26	25	8	9	100	100	100	100	5	100	100	100
awn	GRA		5.	68	6	6	5	100	5	9	9/	5	75	92	5	9	5	9	79	100	9	5	20	99	25	9	5	9	5	5	100	100	9	100
Z 					-	-																										100		
8	th St		Bot	54.3																												68.0		
	Depth		Top	52.8	4.7	8.0	13.0	23.0	28.0	30.3	31.5	33.0	4.7	13.0	21.2	23.0	33.8	10.0	13.5	18.0	23.0	26.5	10.0	11.9	13.5	18.0	0.0	18.0	28.0	38.0	48.0	58.0	68.0	78.0
		Hole	S	MDH10-01	MDH11-01	MDH11-01	MDH11-01	MDH11-01	MDH11-01	MDH11-01	MDH11-01	MDH11-01	MDH12-01	MDH12-01	MDH12-01	MDH12-01	MDH12-01	MDH13-01	MDH13-01	MDH13-01	MDH13-01	MDH13-01	MDH14-01	MDH14-01	MDH14-01	MDH14-01	MDH15-01							
		Lab	Š	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498

SUMMARY OF PHYSICAL PROPERTIES TEST RESULTS

Ventura River PROJECT

PARTICLE - SIZE FRACTION

IN PERCENT

IDENTIFICATION

MDH-1-1 to 15-1

Number

FEATURE Matilija Dam

CONSISTANCY LIMITS

PLUS NO. 4

Water Content U. P

Max. Unit ₹

> Weight lbs/ft³ Appar- Absorpent tion %

> > Bulk

ture

%

%

%

18.4

물

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0.0

0.0

0.0

9.4

61.6

29.0

₫

38.3-43.3

9.2

12.5

42.8

0.0

0.0

0.0

4.7

51.1

44.2

Ħ

23-28

MDH-2-1

MDH-1-1

15.2

0.0

0.0

2.7

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0.0

17.7 60.3

SM ML

39-47

10.0 Ŗ ď

36.8

0.0 0.0

0.0 0.0 0.0

0.0

6.6 85.9 10.0

62.5

30.9 3.0 29.7

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33.3-34 34-38

MDH-3-1 MDH-3-2 MDH-3-3 18.8 21.9 30.4 12.5 28.1

NP. Ā Ŗ

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0.0

0.0 0.0 0.0 0.0 0.0 0.0 0.0

0.0

3.2

74.0

22.8

₹

30.8-31.7

Mois- Minus No. 4

Plasti-city Index

Liquid

Sand Gravel bles Over-#200 #4 3 inch size Lic to to to > Lir #4 3 inch 5 inch 6 inch

075

^ .005

CATION

LAB CLASSIFI-

DEPTH

SAMPLE NUMBER

(feet)

Cop

Limit

Moist-Opti-mum

% nue

UNIT WT.

LACE	1, , , , , ,
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2	1
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COMPACTION TEST

DATE December 28, 2001 SHEET 1 OF

SPECIFIC GRAVITY

 Additional lab tests were performed to:
 A. Evaluate samples of discrete silt (ML) and silty sand (SM) layers from intervals where composite
samples of an entire 5-foot core run had originally been submitted for testing (MDH-08-01 and MDH-09-01).
 B. Resolve differences between field visual and lab classifications (MDH-01-01, MDH-02-01 and MDH-03-01). Materials tests performed by Reclamation's Mid Pacific Construction Office Materials Laboratory in Willows, California.

31.9

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₹

0.0 0.0 0.0 0.0

26.9 15.0

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0.0 0.0

18.6 65.0

64.6 30.2

16.8 4.8 3.4

(ML)s

SM

SM

40.5-41.5

MDH-9-5

MDH-9-4

67.8 14.4 42.1

17.8

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26.2-26.8 31.2-31.7 37.7-38.7

MDH-9-2 MDH-9-3

MDH-9-1

5.0

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0.0

2.7

82.0

11.9

22.0

20.2

49.3

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1.2

49.0

49.8

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78-85

MDH-15-1

NOTES

24.9

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0.0 0.0 0.0 0.0

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51.5

6.4

S(ML)

24-25

14.9

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0.0

0.0

31.2

12.7

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0.0

0.0

77.8 62.5

18.4

S S

44-44.5

MDH-8-5

MDH-8-6 MDH-8-7

MDH-8-4

46-47

50.2-51.2

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0.0

0.0

75.3

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0.0 0.0 0.0

0.0

59.0 31.0

10.0 24.0

S(ML)

29.5-30.8

MDH-8-2 MDH-8-3

MDH-8-1

33.9-34.3 34.4-35.4

0.0 2.6

64.8 11.2

9.92 6.7

15.8

5.0 18.0 3.8 6.3

SM ML 물

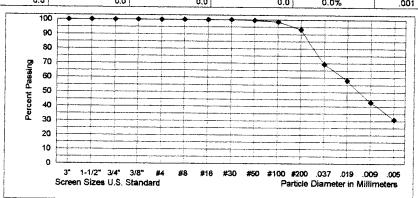
03/07/2002

MDHSS.WK4

SAMPLE NO.			SAMPLE PREP	ARATION		DEPTH (ft)	· · · · · · · · · · · · · · · · · · ·
MDH-1-1			GRADATION A			38.3-43.3	
TEST BY	Townley	1				Date Prepared	12-14-01
AREA	1	PROJECT		FEATURE		EXC. No.	12-14-01
}		Ventura River		Matilija Dam		0	
			TEST PIT OR AUG	ER HOLE OVERSIZE	BY VOLUME	<u> </u>	
MAX SIZE	#8	PLUS 12"	0.0%	1	0.0%	3" TO 5"	0.0%
P. INDEX	0.0	CLASS OF FINES =	0.070	ML	+ OR - A LINE	3 703	0.00
		102-00 01 1 11425	GRADATION OF GR		TON-ALINE		0.00
Moisture + #4	0.0%	Sample Weight	102.10		0.0%	Dry Weight	102.10
		(75 MM)	(37.5 MM)	(19.0 MM)	(9.5 MM)	(4.75 MM)	Total Mass
SIEVE SIZE		3"	1 1/2"	3/4"	(5.5 MM)	NO.4	
WET MATL & PAN A	ACC		1112	34	3/6	140.4	Passing
MASS OF PAN	100	0.00	0.00	0.00	0.00	0.00	4.75 mm Sieve
WET MASS RET		0.00	0.00	0.00			1
DRY MASS RET		0.00	0.00			0.00	Sample Weight
DRY MASS PASSING	^			0.00	0.00	0.00	in Grams
% OF TOTAL PASSI		102.10	102.10	102.10	102.10		Dry Weight
% OF TOTAL PASSI	NG	100.0%	100.0% GRADATION OF SA	100.0%	100.0%	100.0%	102.10
DRY WT MATL GRA	MS			IND SIZE SS NO#4 / TOTAL W		NACE OF THE PARTY OF	
BEFORE WASHING		68.90	, ACTON-ATOT PA	WINDHAL IN	1	_	4 4514
DISH NO.		50.90		DRY MASS OF SAM	DI E (SIEVEN)		1.4514
DIOT NO.	60			DRT MASS OF SAM	IPLE (SIEVED)	2.0	
SIEVING TIME	10 Minutes					8.0	· · · · · · · · · · · · · · · · · · ·
SIEVE	MASS	MASS	FACTOR X	% TOTAL	PARTICLE	DEMARKS	
NO.	RET (GR)	PASS (GR)	MASS PASS	PASSING		REMARKS	
8	0.2				DIAMETER		
16		68.7	= % OF	99.7%	2.36 MM	CDAVE:	0.00/
	0.3	68.6	TOTAL	99.6%	1.18 MM	GRAVEL	0.0%
30	0.4	68.5	PASSING	99.4%	.600 MM	SAND	9.4%
50	0.5	68.4		99.3%	.300 MM	-200	90.6%
100	1.0	67.9	1	98.5%	.150 MM	.075 TO	
200	6.5	62.4		90.6%	.075 MM	.005 =	61.5%
PAN	8.0	TESTED BY	Townley	DATE	12-20-01	CU =	0.00
TOTAL	68.9					CC =	0.00
HVDDO NO	0010		HYDROMETER ANA				
HYDRO NO.	2212			DISPERSING AGEN	<u>r</u>	SODIUM HEX	
START TIME		DATE	12-19-01			AMOUNT	125 ML
INC	TEMP C	HYD READ	HYD CORR	COR READ	% TOT PAS	PART DIA.	REMARKS
1 MIN	10.5	51.0		45.0			Moisture Total
	19.5	51.0	6.0	45.0	65.3%	.037 MM	Sample
4 MIN	19.5	42.0	6.0	36.0	52.2%	.019 MM	18.4
19 MIN 60 MIN	19.5	33.0	6.0	27.0	39.2%	.009 MM	Liquid Limit
7HR 15MIN	20.0	26.0	6.0	20.0	29.0%	.005 MM	NA
25H 45MIN	0.0	0.0	0.0	0.0	0.0%	.002 MM	Plastic Limit
ACT HOMIN	0.0	0.0	0.0	0.0	0.0%	.001 MM	NA NA
	101						
	90 gs 70						
	griss 60						
	86 50 87 50						
	Percent Passing						
	g 30		+		<u> </u>		
	20	 					
	10						
		3" 1-1/2" 3/4" 3 Screen Sizes U.S. St			1200 .037 .019 .000 ticle Diarneter in Millir		

MDH-2-1 TEST BY AREA			SAMPLE PREP	ARATION		DEPTH (ft)	
!			GRADATION A			23.0-28.0	
AREA	Townley					Date Prepared	12-14-01
		PROJECT		FEATURE		EXC. No.	12-14-01
İ		Ventura River		Matilija Dam		0	
		· · · · · · · · · · · · · · · · · · ·	F TEST PIT OR AUGI		BY VOLUME	· · · · · · · · · · · · · · · · · · ·	
MAX SIZE	#16	PLUS 12"	0.0%	5" TO 12"	0.0%	3" TO 5"	0.0%
P. INDEX	12.5	CLASS OF FINES =	0.070	ML	+ OR - A LINE	3 703	T
	1	TODAGG OF THEST	GRADATION OF GR	*	TON - A LINE		0.00
14-1	0.0%	T***			T	T	T
Maisture + #4	0.0%	Sample Weight	109.20	Moisture - #4	0.0%	Dry Weight	109.20
SIEVE SIZE		(75 MM)	(37.5 MM)	(19.0 MM)	(9.5 MM)	(4.75 MM)	Total Mass
SIEVE SIZE		3"	1 1/2"	3/4"	3/8"	N0.4	Passing
WET MATL & PAN	ACC	0.00	0.00	0.00	0.00	0.00	4.75 mm Sieve
MASS OF PAN		0.00	0.00	0.00	0.00	0.00	(No. 4)
WET MASS RET		0.00	0.00	0.00	0.00	0.00	Sample Weight
DRY MASS RET		0.00	0.00	0.00	0.00	0.00	in Grams
DRY MASS PASSIN	NG	109.20	109.20	109.20	109.20	109.20	Dry Weight
% OF TOTAL PASS	ing	100.0%	100.0%	100.0%	100.0%		109.20
			GRADATION OF SA	ND SIZE	here a to a cold the	dana and in the same of the sa	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
DRY WT MATL GR	AMS		FACTOR=%TOT PA				
BEFORE WASHING		60.00		30 NO#47 101AE VI	' '	=	4.0007
DISH NO.	-	00.00		DDV MACC OF CAM			1,6667
5.577 140.	55			DRY MASS OF SAM	INTE (PIENED)		
CIEVING TIME						3.1	
SIEVING TIME	10 Minutes						
SIEVE	MASS	MASS	FACTOR X	% TOTAL	PARTICLE	REMARKS	
NO.	RET (GR)	PASS (GR)	MASS PASS	PASSING	DIAMETER		
8	0.0	60.0	= % OF	100.0%	2.36 MM		
16	0.1	59.9	TOTAL	99.8%	1.18 MM	GRAVEL	0.0%
30	0.1	59.9	PASSING	99.8%	.600 MM	SAND	4.7%
50	0.2	59.8		99.7%	.300 MM	-200	95.3%
100	0.6	59.4		99.0%	.150 MM	.075 TO	
200	2.8	57.2		95.3%	.075 MM	.005 =	51.2%
PAN	3.1	TESTED BY	Townley	DATE	12-21-01	CU =	0.00
TOTAL	60.0					CC =	0.00
			HYDROMETER ANA	LYSIS			
HYDRO NO.	2212			DISPERSING AGENT	r	SODIUM HEX	
START		DATE	12-19-01			T	125 ML
TIME	TEMP C	HYD READ	HYD CORR	COR READ	% TOT PAS	1	
	7.2.3.1	MIDTICAD	TITO CORR	CON NEAD	76 TOT PAS	PART DIA.	REMARKS
1 MIN	19.5	E2 E	60		70.00		Moisture Total
4 MIN		53.5	6.0	47.5	79.2%	.037 MM	Sample
	19.5	48.5	6.0	42.5	70.8%	.019 MM	9.2
19 MIN	19.5	40.0	6.0	34.0	56.7%	.009 MM	Liquid Limit
BO MIN	20.0	32.5	6.0	26.5	44.2%	.005 MM	42.8
7HR 15MIN	20.5	21.0	6.0	15.0	25.0%	.002 MM	Plastic Limit
25H 45MIN	20.0	16.5	6.0	10.5	17.5%	.001 MM	30.3
	100	+ + + +	+ + +	+++			
	90						
	80						
	<u>p</u> 70						
	Percent Passing						
	호 50 -						
	<u>9</u> 40						
	₫ 30 <u> </u>					7	
	20				-		
	20						ſ
	10			1			
	10						
	10		#4 #8 #16 #30		037 .019 .009 .005		
	10	" 1-1/2" 3/4" 3/8" Screen Sizes U.S. S			037 .019 .009 .005 ticle Diameter in Milli		
	10 3		tandard				

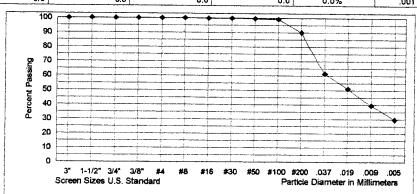
SAMPLE NO.			SAMPLE PREF	PARATION	**************************************	DEPTH (ft)	** · · · · · · · · · · · · · · · · · ·
MDH-3-1			GRADATION A			33.3-34.0	
TEST BY	Townley					Date Prepared	12-14-01
AREA		PROJECT		FEATURE	TIT II	EXC. No.	12-14-01
		Ventura River		Matilija Dam		MDH-3	
		PERCENT OF	F TEST PIT OR AUG	ER HOLE OVERSIZE	E BY VOLUME	, MDIFO	
MAX SIZE	#50	PLUS 12"	0.0%		0.0%	3" TO 5"	0.0%
P. INDEX	10.0	CLASS OF FINES =		ML	+ OR - A LINE	1 0 10	0.00
			GRADATION OF G				
Moisture + #4	0.0%	Sample Weight	122.20		0.0%	Dry Weight	122,20
		(75 MM)	(37.5 MM)	(19.0 MM)	(9.5 MM)	(4.75 MM)	Total Mass
SIEVE SIZE		3"	1 1/2"	3/4"	3/8"	NO.4	1
WET MATL & PAN	ACC				- 40	140.4	Passing
MASS OF PAN		0.00	0.00	0.00	0.00	0.00	4.75 mm Sieve
WET MASS RET	***	0.00	0.00		<u> </u>	0.00	1
DRY MASS RET		0.00	0.00	† · · · · · · · · · · · · · · · · · · ·		0.00	1
DRY MASS PASSIN	iG	122.20	122,20		· · · · · · · · · · · · · · · · · · ·		1
% OF TOTAL PASS		100.0%	100.0%	+			Dry Weight
1.77		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	GRADATION OF SA	the Luckie and Luckie	100.078	100.0%	122.20
DRY WT MATL GRA	AMS			ASS NO#4 / TOTAL V	MT.		
BEFORE WASHING	; =	66.40			* 1	_	
DISH NO.		00.70		DRY MASS OF SAM	IDI E (CIEVED)	=	1.5060
	65			DAT MASS OF SAM	NPLE (SIEVED)		
SIEVING TIME	10 Minutes					5.0	
SIEVE	MASS	MASS	FACTOR X	% TOTAL	PARTICLE	DEMARKS	
NO.	RET (GR)	PASS (GR)	MASS PASS	PASSING	DIAMETER	REMARKS	
8	0.0	66.4	= % OF	100.0%	2.36 MM		
16	0.0	66.4	TOTAL	100.0%	1.18 MM	GRAVEL	0.0%
30	0.0	66.4	PASSING	100.0%	.600 MM	SAND	6.6%
50	0.2	66.2	· Abolita	99.7%	.300 MM	-200	93.4%
100	1.0	65.4		98.5%	.150 MM	.075 TO	93.4%
200	4.4	62.0		93.4%	.075 MM	.005 =	60 50/
PAN	5.0	TESTED BY	Townley	DATE	12-20-01	003 = CU =	62.5%
TOTAL	66.4		rowney	DAIL		CC =	0.00
		** · · · · · · · · · · · · · · · · · ·	HYDROMETER ANA	AI VCIC		00 -	0.00
HYDRO NO.	2212	***************************************		DISPERSING AGEN		CODEMANDE	
START	1	DATE	12-19-01	DIOI LINGING AGEN		SODIUM HEX AMOUNT	405.11
TIME	TEMPC	HYD READ	HYD CORR	COR READ			125 ML
		THE TICAL	IIIDCONN	CON NEAD	% TOT PAS	PART DIA.	REMARKS
MIN	19.5	52.0	6.0	46.0	60.09	0071111	Moisture Total
MIN	19.5	44.5	6.0	46.0 38.5	69.3%	.037 MM	Sample
9 MIN	19.5	34.5	6.0		58.0%	.019 MM	9.9
BO MIN	20.0	26.5	6.0	28.5 20.5	42.9%	.009 MM	Liquid Limit
THR 15MIN	0.0	0.0	0.0	20.5	30.9%	.005 MM	36.8
25H 45MIN	0.0	0.0	0.0		0.0%	.002 MM	Plastic Limit
			0.0	0.0	0.0%	,001 MM	26.8
	100				4		
	90						
	80	 	 				l
	5 70 19 60						ļ



SAMPLE NO.		7					
			SAMPLE PREP	ARATION		DEPTH (ft)	
MDH-3-2			GRADATION A	NALYSIS		34.0-38.0	
TEST BY	Townley					Date Prepared	12-14-01
AREA		PROJECT		FEATURE		EXC. NO.	
İ		Ventura River		Matilija Dam		MDH-3	
			F TEST PIT OR AUG	ER HOLE OVERSIZE	BY VOLUME	#ID71-0	1
MAX SIZE	#8	PLUS 12"	0.0%		0.0%	3" TO 5"	0.00
P. INDEX	0.0	CLASS OF FINES =	· · · · · · · · · · · · · · · · · · ·	ML	1	3 103	0.0%
	1	TODAGO OF THEEST	GRADATION OF GR	4	+ OR - A LINE		0.00
Moisture + #4	0.0%	T		T			
Moisture + #4	0.0%	Sample Weight	81.50		0.0%	Dry Weight	81.50
		(75 MM)	(37.5 MM)	(19.0 MM)	(9.5 MM)	(4.75 MM)	Total Mass
SIEVE SIZE		3"	1 1/2"	3/4"	3/8"	N0.4	Passing
WET MATL & PAN A	ACC						4.75 mm Sieve
MASS OF PAN		0.00	0.00	0.00	0.00	0.00	(No. 4)
WET MASS RET		0.00	0.00	0.00	0.00	0.00	Sample Weight
DRY MASS RET		0,00	0.00	0.00	0.00	0.00	in Grams
DRY MASS PASSIN	G	81.50	81.50	81.50	81.50	81.50	Dry Weight
% OF TOTAL PASSI	NG	100.0%	100.0%	100.0%	100.0%	100.0%	81,50
			GRADATION OF SA	ND SIZE			
DRY WT MATL GRA	MS		FACTOR=%TOT PA	SS NO#4 / TOTAL W	Т		······································
BEFORE WASHING	=	50.30				=	1.9881
DISH NO.				DRY MASS OF SAM	DI E (SIEVED)		1.9001
	62			DITT MINOS OF SIAM	rez (Sicved)	44.0	
SIEVING TIME	10 Minutes					44.3	
SIEVE	MASS	MASS	FACTOR X	% TOTAL	DADTIOLE	DEMARKS	
NO.	RET (GR)		i	1	PARTICLE	REMARKS	
8		PASS (GR)	MASS PASS	PASSING	DIAMETER		
	0.2	50.1	= % OF	99.6%	2.36 MM		
16	0.6	49.7	TOTAL	98.8%	1.18 MM	GRAVEL	0.0%
30	1.4	48.9	PASSING	97.2%	.600 MM	SAND	85.9%
50	6.3	44.0	-	87.5%	MM 008,	-200	14.1%
100	26.1	24.2	}	48.1%	.150 MM	.075 TO	
200	43.2	7.1		14.1%	.075 MM	.005 =	11.1%
							0.00
PAN	44.3	TESTED BY	Townley	DATE	12-20-01	CU =	0.00
PAN TOTAL	44.3 50.3	TESTED BY	Townley	DATE	l l	CU = CC =	0.00
		· · · · · · · · · · · · · · · · · · ·	Townley HYDROMETER ANA		l l		
		· · · · · · · · · · · · · · · · · · ·	HYDROMETER ANA				
TOTAL	50.3	· · · · · · · · · · · · · · · · · · ·	HYDROMETER ANA	LYSIS		CC =	0.00
TOTAL HYDRO NO.	50.3		HYDROMETER ANA	LYSIS DISPERSING AGENT	T.	CC = SODIUM HEX AMOUNT	0.00 125 ML
TOTAL HYDRO NG. START	2212	DATE	HYDROMETER ANA	LYSIS		CC =	0.00 125 ML REMARKS
TOTAL HYDRO NG. START	2212	DATE	HYDROMETER ANA 12-19-01 HYD CORR	LYSIS DISPERSING AGENT COR READ	% TOT PAS	CC = SODIUM HEX AMOUNT PART DIA.	0.00 125 ML REMARKS Moisture Total
TOTAL HYDRO NO. START	2212 TEMP C	DATE HYD READ 10.0	HYDROMETER ANA 12-19-01 HYD CORR 6.0	LYSIS DISPERSING AGENT COR READ 4.0	% TOT PAS 8.0%	CC = SODIUM HEX AMOUNT PART DIA. .037 MM	0.00 125 ML REMARKS Moisture Total Sample
TOTAL HYDRO NG. START TIME	2212 TEMP C 20.0 20.0	DATE HYD READ 10.0 9.5	12-19-01 HYD CORR 6.0	LYSIS DISPERSING AGENT COR READ 4.0 3.5	% TOT PAS 8.0% 7.0%	SODIUM HEX AMOUNT PART DIA. .037 MM .019 MM	0.00 125 ML REMARKS Moisture Total Sample 2.7
TOTAL HYDRO NG. START TIME 1 MIN 4 MIN 19 MIN	2212 TEMP C 20.0 20.0 20.0	DATE HYD READ 10.0 9.5 8.5	12-19-01 HYD CORR 6.0 6.0	LYSIS DISPERSING AGENT COR READ 4.0 3.5 2.5	% TOT PAS 8.0% 7.0% 5.0%	SODIUM HEX AMOUNT PART DIA. .037 MM .019 MM	0.00 125 ML REMARKS Moisture Total Sample 2.7 Liquid Limit
TOTAL HYDRO NO. START TIME 1 MIN 4 MIN 19 MIN 80 MIN	2212 TEMP C 20.0 20.0 20.0 20.0	DATE HYD READ 10.0 9.5 8.5 7.5	12-19-01 HYD CORR 6.0 6.0 6.0	COR READ 4.0 3.5 2.5	% TOT PAS 8.0% 7.0% 5.0% 3.0%	SODIUM HEX AMOUNT PART DIA. .037 MM .019 MM .009 MM	0.00 125 ML REMARKS Moisture Total Sample 2.7 Liquid Limit NA
TOTAL HYDRO NG. START TIME 1 MIN 4 MIN 19 MIN 80 MIN 7HR 15MIN	2212 TEMP C 20.0 20.0 20.0 20.0 0.0	DATE HYD READ 10.0 9.5 8.5 7.5 0.0	12-19-01 HYD CORR 6.0 6.0 6.0 0.0	COR READ 4.0 3.5 2.5 1.5	% TOT PAS 8.0% 7.0% 5.0% 3.0% 0.0%	SODIUM HEX AMOUNT PART DIA. .037 MM .019 MM .009 MM .005 MM	0.00 125 ML REMARKS Moisture Total Sample 2.7 Liquid Limit NA Plastic Limit
TOTAL HYDRO NO. START TIME 1 MIN 4 MIN 19 MIN 80 MIN	2212 TEMP C 20.0 20.0 20.0 20.0 0.0	DATE HYD READ 10.0 9.5 8.5 7.5 0.0 0.0	12-19-01 HYD CORR 6.0 6.0 6.0	COR READ 4.0 3.5 2.5	% TOT PAS 8.0% 7.0% 5.0% 3.0%	SODIUM HEX AMOUNT PART DIA. .037 MM .019 MM .009 MM	0.00 125 ML REMARKS Moisture Total Sample 2.7 Liquid Limit NA
TOTAL HYDRO NG. START TIME 1 MIN 4 MIN 19 MIN 80 MIN 7HR 15MIN	2212 TEMP C 20.0 20.0 20.0 20.0 0.0 100	DATE HYD READ 10.0 9.5 8.5 7.5 0.0 0.0	12-19-01 HYD CORR 6.0 6.0 6.0 0.0	COR READ 4.0 3.5 2.5 1.5	% TOT PAS 8.0% 7.0% 5.0% 3.0% 0.0%	SODIUM HEX AMOUNT PART DIA. .037 MM .019 MM .009 MM .005 MM	0.00 125 ML REMARKS Moisture Total Sample 2.7 Liquid Limit NA Plastic Limit
TOTAL HYDRO NG. START TIME 1 MIN 4 MIN 19 MIN 80 MIN 7HR 15MIN	2212 TEMP C 20.0 20.0 20.0 20.0 0.0 100 90	DATE HYD READ 10.0 9.5 8.5 7.5 0.0 0.0	12-19-01 HYD CORR 6.0 6.0 6.0 0.0	COR READ 4.0 3.5 2.5 1.5	% TOT PAS 8.0% 7.0% 5.0% 3.0% 0.0%	SODIUM HEX AMOUNT PART DIA. .037 MM .019 MM .009 MM .005 MM	0.00 125 ML REMARKS Moisture Total Sample 2.7 Liquid Limit NA Plastic Limit
TOTAL HYDRO NG. START TIME 1 MIN 4 MIN 19 MIN 80 MIN 7HR 15MIN	2212 TEMP C 20.0 20.0 20.0 20.0 0.0 100 90 80	DATE HYD READ 10.0 9.5 8.5 7.5 0.0 0.0	12-19-01 HYD CORR 6.0 6.0 6.0 0.0	COR READ 4.0 3.5 2.5 1.5	% TOT PAS 8.0% 7.0% 5.0% 3.0% 0.0%	SODIUM HEX AMOUNT PART DIA. .037 MM .019 MM .009 MM .005 MM	0.00 125 ML REMARKS Moisture Total Sample 2.7 Liquid Limit NA Plastic Limit
TOTAL HYDRO NG. START TIME 1 MIN 4 MIN 19 MIN 80 MIN 7HR 15MIN	2212 TEMP C 20.0 20.0 20.0 20.0 0.0 100 90 80	DATE HYD READ 10.0 9.5 8.5 7.5 0.0 0.0	12-19-01 HYD CORR 6.0 6.0 6.0 0.0	COR READ 4.0 3.5 2.5 1.5	% TOT PAS 8.0% 7.0% 5.0% 3.0% 0.0%	SODIUM HEX AMOUNT PART DIA. .037 MM .019 MM .009 MM .005 MM	0.00 125 ML REMARKS Moisture Total Sample 2.7 Liquid Limit NA Plastic Limit
TOTAL HYDRO NG. START TIME 1 MIN 4 MIN 19 MIN 80 MIN 7HR 15MIN	2212 TEMP C 20.0 20.0 20.0 20.0 0.0 100 90 80	DATE HYD READ 10.0 9.5 8.5 7.5 0.0 0.0	12-19-01 HYD CORR 6.0 6.0 6.0 0.0	COR READ 4.0 3.5 2.5 1.5	% TOT PAS 8.0% 7.0% 5.0% 3.0% 0.0%	SODIUM HEX AMOUNT PART DIA. .037 MM .019 MM .009 MM .005 MM	0.00 125 ML REMARKS Moisture Total Sample 2.7 Liquid Limit NA Plastic Limit
TOTAL HYDRO NG. START TIME 1 MIN 4 MIN 19 MIN 80 MIN 7HR 15MIN	2212 TEMP C 20.0 20.0 20.0 20.0 0.0 100 90 80	DATE HYD READ 10.0 9.5 8.5 7.5 0.0 0.0	12-19-01 HYD CORR 6.0 6.0 6.0 0.0	COR READ 4.0 3.5 2.5 1.5	% TOT PAS 8.0% 7.0% 5.0% 3.0% 0.0%	SODIUM HEX AMOUNT PART DIA. .037 MM .019 MM .009 MM .005 MM	0.00 125 ML REMARKS Moisture Total Sample 2.7 Liquid Limit NA Plastic Limit
TOTAL HYDRO NG. START TIME 1 MIN 4 MIN 19 MIN 80 MIN 7HR 15MIN	2212 TEMP C 20.0 20.0 20.0 20.0 0.0 0.0 1000 900 800 20.0 20.0 40.0 40.0	DATE HYD READ 10.0 9.5 8.5 7.5 0.0 0.0	12-19-01 HYD CORR 6.0 6.0 6.0 0.0	COR READ 4.0 3.5 2.5 1.5	% TOT PAS 8.0% 7.0% 5.0% 3.0% 0.0%	SODIUM HEX AMOUNT PART DIA. .037 MM .019 MM .009 MM .005 MM	0.00 125 ML REMARKS Moisture Total Sample 2.7 Liquid Limit NA Plastic Limit
TOTAL HYDRO NG. START TIME 1 MIN 4 MIN 19 MIN 80 MIN 7HR 15MIN	2212 TEMP C 20.0 20.0 20.0 20.0 0.0 0.0 0.0 0.0 0.	DATE HYD READ 10.0 9.5 8.5 7.5 0.0 0.0	12-19-01 HYD CORR 6.0 6.0 6.0 0.0	COR READ 4.0 3.5 2.5 1.5	% TOT PAS 8.0% 7.0% 5.0% 3.0% 0.0%	SODIUM HEX AMOUNT PART DIA. .037 MM .019 MM .009 MM .005 MM	0.00 125 ML REMARKS Moisture Total Sample 2.7 Liquid Limit NA Plastic Limit
TOTAL HYDRO NG. START TIME 1 MIN 4 MIN 19 MIN 80 MIN 7HR 15MIN	2212 TEMP C 20.0 20.0 20.0 20.0 0.0 0.0 0.0 0.0 0.	DATE HYD READ 10.0 9.5 8.5 7.5 0.0 0.0	12-19-01 HYD CORR 6.0 6.0 6.0 0.0	COR READ 4.0 3.5 2.5 1.5	% TOT PAS 8.0% 7.0% 5.0% 3.0% 0.0%	SODIUM HEX AMOUNT PART DIA. .037 MM .019 MM .009 MM .005 MM	0.00 125 ML REMARKS Moisture Total Sample 2.7 Liquid Limit NA Plastic Limit
TOTAL HYDRO NG. START TIME 1 MIN 4 MIN 19 MIN 80 MIN 7HR 15MIN	2212 TEMP C 20.0 20.0 20.0 20.0 0.0 0.0 0.0 0.0 0.	DATE HYD READ 10.0 9.5 8.5 7.5 0.0 0.0	12-19-01 HYD CORR 6.0 6.0 6.0 0.0	COR READ 4.0 3.5 2.5 1.5	% TOT PAS 8.0% 7.0% 5.0% 3.0% 0.0%	SODIUM HEX AMOUNT PART DIA. .037 MM .019 MM .009 MM .005 MM	0.00 125 ML REMARKS Moisture Total Sample 2.7 Liquid Limit NA Plastic Limit
TOTAL HYDRO NG. START TIME 1 MIN 4 MIN 19 MIN 80 MIN 7HR 15MIN	2212 TEMP C 20.0 20.0 20.0 20.0 0.0 0.0 0.0 0.0 0.	DATE HYD READ 10.0 9.5 8.5 7.5 0.0 0.0	12-19-01 HYD CORR 6.0 6.0 6.0 0.0 0.0	LYSIS DISPERSING AGENT COR READ 4.0 3.5 2.6 1.5 0.0 0.0	% TOT PAS 8.0% 7.0% 5.0% 3.0% 0.0%	SODIUM HEX AMOUNT PART DIA. .037 MM .019 MM .005 MM .002 MM .001 MM	0.00 125 ML REMARKS Moisture Total Sample 2.7 Liquid Limit NA Plastic Limit
TOTAL HYDRO NG. START TIME 1 MIN 4 MIN 19 MIN 80 MIN 7HR 15MIN	2212 TEMP C 20.0 20.0 20.0 20.0 0.0 0.0 0.0 0.0 0.	DATE HYD READ 10.0 9.5 8.5 7.5 0.0 0.0	12-19-01 HYD CORR 6.0 6.0 6.0 0.0 0.0	LYSIS DISPERSING AGENT COR READ 4.0 3.5 2.5 1.5 0.0 0.0 #30 #50 #100 #	8.0% 7.0% 5.0% 3.0% 0.0%	SODIUM HEX AMOUNT PART DIA. .037 MM .019 MM .005 MM .002 MM .001 MM	0.00 125 ML REMARKS Moisture Total Sample 2.7 Liquid Limit NA Plastic Limit

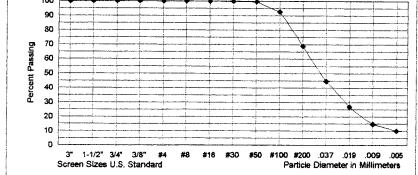
SM SILTY SAND

SAMPLE NO.			SAMPLE PREP	ARATION		DEPTH (ft)	
MDH-3-3			GRADATION A			39.0-47.0	
TEST BY	Townley	1				Date Prepared	12-14-01
AREA	······································	PROJECT		FEATURE		EXC. No.	12-14-01
}		Ventura River		Matilija Dam		MDH-3	
		PERCENT OF	TEST PIT OR AUG	ER HOLE OVERSIZE	RY VOLUME	19011-0	L
MAX SIZE	#16	PLUS 12"	0.0%	5" TO 12"	0.0%	3" TO 5"	0.00
P. INDEX	0.0	CLASS OF FINES =	1	ML	+ OR - A LINE	1 3 10 3	0.09
			GRADATION OF GR	*	1 On - A LINE		0.0
Moisture + #4	0.0%	Sample Weight	183.30	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	0.0%	T	T 400 0
		(75 MM)	(37.5 MM)	(19.0 MM)	(9.5 MM)	Dry Weight	183.3
SIEVE SIZE		3"	1 1/2"	3/4"	(9.5 MM) 3/8"	(4.75 MM)	Total Mass
WET MATL & PAN A	vcc		1 112	3/4	3/6	N0.4	Passing
MASS OF PAN		0.00	0.00	0.00			4.75 mm Sieve
WET MASS RET		0.00	0.00	0.00	0.00		(No. 4)
DRY MASS RET		0.00	· · · · · · · · · · · · · · · · · · ·	0.00	0.00	0.00	Sample Weight
DRY MASS PASSING	3	183.30	0.00	0.00	0.00	0.00	in Grams
% OF TOTAL PASSIN		100,0%		183.30	183.30	1	Dry Weight
70 OF POTAL PAGGI	1	*	100.0%	100.0%	100.0%	100.0%	183.30
DRY WT MATL GRA	Me		GRADATION OF SA				
BEFORE WASHING			FACTOR=%TOT PA	SS NO#4 / TOTAL W	T		
DISH NO.	-	77.50				***	1,2903
DISH NO.				DRY MASS OF SAME	PLE (SIEVED)		
CIEVANO TRUE	63					9,6	
SIEVING TIME	10 Minutes						· · · · · · · · · · · · · · · · · · ·
SIEVE NO.	MASS	MASS	FACTOR X	% TOTAL	PARTICLE	REMARKS	
	RET (GR)	PASS (GR)	MASS PASS	PASSING	DIAMETER		
8	0.0	77,5	= % OF	100.0%	2.36 MM		
16	0.1	77.4	TOTAL	99.9%	1.18 MM	GRAVEL	0.0%
30	0.2	77.3	PASSING	99.7%	.600 MM	SAND	10.1%
50	0.3	77.2	-	99.6%	.300 MM	-200	89.9%
100	8.0	76.7	+	99.0%	.150 MM	.075 TO	
200	7.8	69.7		89.9%	.075 MM	.005 =	60.3%
PAN	9,6	TESTED BY	Townley	DATE 1		CU =	0.00
TOTAL	77.5		_			CC =	0.00
		<u>-</u>	TYDROMETER ANA	LYSIS			
TYDRO NO.	2212		[DISPERSING AGENT		SODIUM HEX	
START		DATE	12-19-01			AMOUNT 1	25 ML
TIME	TEMPC	HYD READ	HYD CORR	COR READ	% TOT PAS	PART DIA.	REMARKS
							Moisture Total
MIN	19.5	53.5	6.0	47.5	61.3%	.037 MM	Sample
MIN	19.5	45.5	6.0	39.5	51.0%	.019 MM	15.2
9 MIN	19.5	36.5	6.0	30.5	39.4%	.009 MM	Liquid Limit
IO MIN	20.0	29.0	6.0	23.0	29.7%	.005 MM	NA
HR 15MIN	0.0	0.0	0.0	0.0	0.0%	.002 MM	Plastic Limit
5H 45MIN	0.0	0.0	0.0	0.0	0.0%	.001 MM	NA
	100 90 80						
	Duisse 60		1 1	1			



ISAMPLE NO.			SAMPLE PREP	ARATION		DEPTH (ft)	
MDH-8-1			GRADATION A			30.8-31.7	
TEST BY	Townley	1		1. C.		Date Prepared	12-14-01
AREA	····	PROJECT		FEATURE	······································	EXC. No.	
		Ventura River		Matilija Dam		MDH-8	
		PERCENT OF	TEST PIT OR AUG	ER HOLE OVERSIZE	BY VOLUME		1
MAX SIZE	#50	PLUS 12"	0.0%	5" TO 12"	0.0%	3" TO 5"	0.0%
P. INDEX	0.0	CLASS OF FINES =	I	ML	+ OR - A LINE	1 0 100	0.00
			GRADATION OF GR				1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Moisture + #4	0.0%	Sample Weight	117.30	Moisture - #4	0.0%	Dry Weight	117.30
		(75 MM)	(37.5 MM)	(19.0 MM)	(9.5 MM)	(4.75 MM)	Total Mass
SIEVE SIZE		3"	1 1/2"	3/4"	3/8"	N0.4	Passing
WET MATL & PAN	ACC					140.4	_
MASS OF PAN		0.00	0.00	0,00	0.00	0.00	4.75 mm Sieve
WET MASS RET		0.00	0.00	0.00	0.00	· · · · · · · · · · · · · · · · · · ·	(No. 4)
DRY MASS RET		0.00	0.00	0.00	0.00	0.00	Sample Weight
DRY MASS PASSIN	IG.	117.30	117.30	117.30	117.30	0.00	ìn Grams
% OF TOTAL PASS		100.0%	100.0%	100.0%			Dry Weight
NOT TOTAL TAGE		100.0%			100.0%	100.0%	117.30
DRY WT MATL GR	ALAC		GRADATION OF SA		·		
BEFORE WASHING			FACIUM=%IUI FA	SS NO#4 / TOTAL W	ſ		
DISH NO.		59.30		DD:///		=	1.6863
DISH NO.	24			DRY MASS OF SAME	PLE (SIEVED)		
CIENTINO TIME	64					2.5	
SIEVING TIME	10 Minutes			······································			
SIEVE	MASS	MASS	FACTOR X	% TOTAL	PARTICLE	REMARKS	
NO.	RET (GR)	PASS (GR)	MASS PASS	PASSING	DIAMETER		
8	0.0	59.3	≃ % OF	100.0%	2.36 MM		
16	0.0	59.3	TOTAL	100.0%	1.18 MM	GRAVEL	0.0%
30	0.0	59.3	PASSING	100.0%	.600 MM	SAND	3.2%
50	0.1	59.2		99.8%	.300 MM	-200	96.8%
100	0.3	59.0		99.5%	.150 MM	.075 TO	
200	1.9	57.4		96.8%	.075 MM	.005 =	74.0%
PAN	2.5	TESTED BY	Townley	DATE	1	CU =	0.00
TOTAL	59.3					CC =	0.00
			HYDROMETER ANA	LYSIS			
HYDRO NO.	2212]	DISPERSING AGENT		SODIUM HEX	
START		DATE	12-19-01	· · · · · · · · · · · · · · · · · · ·		AMOUNT	125 ML
TIME	TEMPC	HYD READ	HYD CORR	COR READ	% TOT PAS	PART DIA.	REMARKS
							Moisture Total
1 MIN	19.5	46.5	6.0	40.5	68.3%	.037 MM	Sample
		36.0	8.0	30.0	50.6%	.019 MM	18.8
4 MIN	19.5					.009 MM	Liquid Limit
4 MIN 19 MIN	19.5	25.0	6.0	19.0	32.0%	.505 10114	
		25.0 19.5	6.0 6.0	19.0	32.0% 22.8%	.005 MM	NA
19 MIN 60 MIN	19.5						NA Plastic Limit
19 MIN	19.5	19.5	6.0	13.5	22.8%	.005 MM	
19 MIN 60 MIN 7HR 15MIN	19.5 20.0 0.0	19.5 0.0 0.0	6.0 0.0	13.5	22.8% 0.0%	.005 MM .002 MM	Plastic Limit
19 MIN 80 MIN 7HR 15MIN	19.5 20.0 0.0 0.0	19.5	6.0 0.0	13.5	22.8% 0.0%	.005 MM .002 MM	Plastic Limit
19 MIN 80 MIN 7HR 15MIN	19.5 20.0 0.0 0.0	19.5	6.0 0.0	13.5	22.8% 0.0%	.005 MM .002 MM	Plastic Limit
19 MIN 80 MIN 7HR 15MIN	19.5 20.0 0.0 0.0 100 90	19.5	6.0 0.0	13.5	22.8% 0.0%	.005 MM .002 MM	Plastic Limit
19 MIN 80 MIN 7HR 15MIN	19.5 20.0 0.0 0.0 100 90	19.5	6.0 0.0	13.5	22.8% 0.0%	.005 MM .002 MM	Plastic Limit
19 MIN 80 MIN 7HR 15MIN	19.5 20.0 0.0 0.0 100 90	19.5	6.0 0.0	13.5	22.8% 0.0%	.005 MM .002 MM	Plastic Limit
19 MIN 60 MIN 7HR 15MIN	19.5 20.0 0.0 0.0 100 90	19.5	6.0 0.0	13.5	22.8% 0.0%	.005 MM .002 MM	Plastic Limit
19 MIN 80 MIN 7HR 15MIN	19.5 20.0 0.0 0.0 100 90 80 50 70 88 60 60 60 60 60 60 60 60 60 60 60 60 60	19.5	6.0 0.0	13.5	22.8% 0.0%	.005 MM .002 MM	Plastic Limit
19 MIN 80 MIN 7HR 15MIN	19.5 20.0 0.0 0.0 0.0 100 90 80 50 100 90 40	19.5	6.0 0.0	13.5	22.8% 0.0%	.005 MM .002 MM	Plastic Limit
19 MIN 80 MIN 7HR 15MIN	19.5 20.0 0.0 0.0 0.0 100 90 80 50 70 40 40 40 40 40 40 40 40	19.5	6.0 0.0	13.5	22.8% 0.0%	.005 MM .002 MM	Plastic Limit
19 MIN 80 MIN 7HR 15MIN	19.5 20.0 0.0 0.0 0.0 100 90 80 50 70 100 90 40 40 40 40 40 40 40 40 40 40 40 40 40	19.5	6.0	13.5	22.8% 0.0%	.005 MM .002 MM	Plastic Limit
9 MIN 80 MIN 7HR 15MIN	19.5 20.0 0.0 0.0 100 90 80 50 70 100 90 40 40 40 40 40 40 40 40 40 40 40 40 40	19.5	6.0 0.0 0.0	13.5 0.0 0.0	22.8% 0.0%	.005 MM .002 MM .001 MM	Plastic Limit

MOH -2	SAMPLE NO.			SAMO! E DOE!	PARATION		DEPTH (ft)	· · · · · · · · · · · · · · · · · · ·
TEST BY	1						1	
### PROJECT PEATURE EXC. NO. MOH-8		Townley		GHADATION	ANAL I SIG			10.14.04
		Towney	PPO IFOT		FEATURE		1	12-14-01
PERCENT OF TEST PTT OR AUGER HOLE CVERSIZE BY VOLUME	Anica		İ		1		1	
MAX SIZE			The second secon	TECT DE OR NIC	· · · · · · · · · · · · · · · · · · ·		MDH-8	
P. INDEX	MAY CIZE	#20	T	1	1	T		T
Service Serv		1	1	8.0%		1	3" 10 5"	
Monitor - FA	P. INDEX	0.0	CLASS OF FINES =			+ OR - A LINE		0.00
175 MM 1172" 34" 36" 75 MM 1172" 34" 36" 75 MM 75		T 000	T	1	1		T	T
SIEVE SIZE 3" 1 1/2" 3/4" 3/6" NO.4 Pausing WCT MATL & PAN ACC 0.00	Moisture + #4	0.0%						119.20
MASS OF PAN ACC 0.00								Total Mass
MASS OF PAN			3"	1 1/2"	3/4"	3/8"	N0.4	Passing
WET MASS RET		ACC					<u> </u>	4.75 mm Sieve
DRY MASS PASSING			0.00	0.00	0.00	0.00	0.00	(No. 4)
DRY MASS PASSING			0.00	0.00	0.00	0.00	0.00	Sample Weight
## OF TOTAL PASSING 100.0% 100.0% 100.0% 100.0% 100.0% 1100.0% 119.20 STATE I		1				0.00	in Grams	
GRADATION OF SAND SIZE	DRY MASS PASSIN	G	119.20	119.20	119.20	119.20	119.20	Dry Weight
PACTOR=#TOT PASS NO.#4 / TOTAL WT	% 0F TOTAL PASSI	NG	100.0%	100.0%	100.0%	100.0%	100.0%	119.20
BEFORE WASHING			W. T	GRADATION OF SA	AND SIZE			
DRY MASS OF SAMPLE (SIEVED) 23.8	DRY WT MATL GRA	MS		FACTOR=%TOT PA	ASS NO#4 / TOTAL V	VT		
SIEVING TIME 10 Minutes 1	BEFORE WASHING	=	65.10				*	1.5361
SIEVING TIME 10 Minutes 1	DISH NO.				DRY MASS OF SAM	APLE (SIEVED)		
SIEVE MASS NO. RET (GR) PASS (GR		54					23.8	
NO. RET (GR) PASS (GR) MASS PASS PASSING DIAMETER	SIEVING TIME	10 Minutes						
8 0.0 65.1 = % OF 100.0% 2.36 MM 1.18 MM GRAVEL 0.0% 30 0.1 65.0 PASSING 99.8% 6.00 MM SAND 31.0% 50 0.3 64.8 60.3 99.5% 3.00 MM -200 69.0% 100 4.8 60.3 99.5% 3.00 MM .075 TO 200 20.2 44.9 89.0% .075 MM .005 = 59.0% CC = 0.00 TOTAL 65.1 DISPERSING AGENT SORIUM HEX START DATE 12-19-01 AMOUNT 125 ML TIME TEMPC HYD READ HYD CORR COR READ % TOT PAS PART DIA. REMARKS Moisture Total 1 MIN 19.5 35.0 6.0 29.0 44.5% .037 MM Sample 4 MIN 19.5 23.5 6.0 9.5 15.5 6.0 9.5 10.0% .005 MM NA PIRSI Limit 100 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	SIEVE	MASS	MASS	FACTOR X	% TOTAL	PARTICLE	REMARKS	
16	NO.	RET (GR)	PASS (GR)	MASS PASS	PASSING	DIAMETER		
30 0.1 65.0 PASSING 99.8% 6.00 MM SAND 31.0% 50 0.3 64.8 60.3 99.5% .300 MM -200 69.0% 100 4.8 60.3 92.6% .150 MM .075 TO .075 TM .005 = 59.0% .075 MM .005 = 59.0% .075 MM .005 = 59.0% .075 MM .005 = 59.0% .075 MM .005 = 59.0% .075 MM .005 = 0.000	8	0.0	65.1	= % OF	190.0%	2.36 MM		
SO D.3 S4.8 99.5% 300 MM -200 69.0%	16	0.0	65.1	TOTAL	100.0%	1.18 MM	GRAVEL	0.0%
100	30	0.1	65.0	PASSING	99.8%	.600 MM	SAND	31.0%
200 20.2 44.9 89.0% .075 MM .005 = 59.0% PAN 23.8 TESTED BY Townley DATE 12-20-01 CU = 0.00 TOTAL 65.1 DISPERSING AGENT SODIUM HEX START DATE 12-19-01 AMOUNT 125 ML TIME TEMP C HYD READ HYD CORR COR READ % TOT PAS PART DIA. REMARKS I MIN 19.5 35.0 6.0 29.0 44.5% .037 MM Sample 19 MIN 19.5 15.5 6.0 9.5 14.8% .009 MM Liquid Limit 30 MIN 20.0 12.5 8.0 6.5 10.0% .005 MM NA PHR 15MIN 0.0 0.0 0.0 0.0 0.0 0.0 0.0% .002 MM Plastic Limit 25H 45MIN 0.0 0.0 0.0 0.0 0.0 0.0% .001 MM NA 100 90 880 100 100 0.0 0.0 0.0 0.0% .001 MM NA	50	0.3	64.8		99.5%	.300 MM	-200	69.0%
PAN 23.8 TESTED BY Townley DATE 12-20-01 CU = 0.00 TOTAL 85.1 HYDROMETER ANALYSIS HYDRONO. 2212 DISPERSING AGENT SODIUM HEX START DATE 12-19-01 TIME TEMP C HYD READ HYD CORR COR READ % TOT PAS PART DIA. REMARKS I MIN 19.5 35.0 6.0 29.0 44.5% .037 MM Sample 4 MIN 19.5 23.5 6.0 17.5 26.9% .019 MM 21.9 I MIN 19.5 15.5 6.0 9.5 14.6% .009 MM Liquid Limit 30 MIN 20.0 12.5 8.0 8.5 10.0% .005 MM NA PHR 15MIN 0.0 0.0 0.0 0.0 0.0 0.0% .002 MM Plastic Limit 25H 45MIN 0.0 0.0 0.0 0.0 0.0 0.0% .001 MM NA 100 90 80 80 100 100 100 100 1	100	4.8	60.3		92.6%	.150 MM	.075 TO	
TOTAL 65.1 CC = 0.00	200	20.2	44.9		69.0%	.075 MM	.005 =	59.0%
HYDROMETER ANALYSIS HYDRO NO. 2212 DISPERSING AGENT SODIUM HEX START DATE 12-19-01 AMOUNT 125 MIL TIME TEMP C HYD READ HYD CORR COR READ % TOT PAS PART DIA. REMARKS I MIN 19.5 35.0 6.0 29.0 44.5% .037 MM Sample 4 MIN 19.5 23.5 6.0 17.5 26.9% .019 MM 21.9 19 MIN 19.5 15.5 6.0 9.5 14.6% .009 MM Liquid Limit 30 MIN 20.0 12.5 6.0 6.5 10.0% .005 MM NA 7HR 15MIN 0.0 0.0 0.0 0.0 0.0 0.0 0.0% .002 MM Plastic Limit 25H 45MIN 0.0 0.0 0.0 0.0 0.0 0.0 0.0% .001 MM NA	PAN	23.8	TESTED BY	Townley	DATE	12-20-01	CU =	0.00
DISPERSING AGENT SODIUM HEX	TOTAL	65.1					CC =	0.00
START DATE 12-19-01 AMOUNT 125 ML				HYDROMETER AN	ALYSIS			
TIME TEMP C HYD READ HYD CORR COR READ % TOT PAS PART DIA. REMARKS Moisture Total I MIN 19.5 35.0 6.0 29.0 44.5% .037 MM Sample 3 MIN 19.5 23.5 6.0 17.5 26.9% .019 MM 21.9 19 MIN 19.5 15.5 6.0 9.5 14.6% .009 MM Liquid Limit 30 MIN 20.0 12.5 6.0 8.5 10.0% .005 MM NA 7HR 15MIN 0.0 0.0 0.0 0.0 0.0 0.0 0.0% .002 MM Plastic Limit 25H 45MIN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 MM NA	HYDRO NO.	2212			DISPERSING AGEN	T	SODIUM HEX	
Moisture Total Moisture Total Moisture Total 1 MiN 19.5 35.0 6.0 29.0 44.5% .037 MM Sample 4 MiN 19.5 23.5 6.0 17.5 26.9% .019 MM 21.9 19 MIN 19.5 15.5 6.0 9.5 14.6% .009 MM Liquid Limit 30 MIN 20.0 12.5 8.0 8.5 10.0% .005 MM NA 7HR 15MIN 0.0 0.0 0.0 0.0 0.0 0.0% .002 MM Plastic Limit 25H 45MIN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 MM NA	START		DATE	12-19-01			AMOUNT	125 ML
MIN	TIME	TEMPC	HYD READ	HYD CORR	COR READ	% TOT PAS	PART DIA.	REMARKS
MIN 19.5 23.5 6.0 17.5 26.9% .019 MM 21.9 19 MIN 19.5 15.5 6.0 9.5 14.6% .009 MM Liquid Limit 30 MIN 20.0 12.5 6.0 8.5 10.0% .005 MM NA 7HR 15MIN 0.0 0.0 0.0 0.0 0.0% .002 MM Plastic Limit 25H 45MIN 0.0 0.0 0.0 0.0 0.0% .001 MM NA 100 90 80 80 80 80 80 80								Moisture Total
9 MIN	1 MIN	19.5	35.0	6.0	29.0	44.5%	.037 MM	Sample
30 MIN 20.0 12.5 8.0 8.5 10.0% .005 MM NA PHR 15MIN 0.0 0.0 0.0 0.0 0.0 0.0% .002 MM Plastic Limit 25H 45MIN 0.0 0.0 0.0 0.0 0.0% .001 MM NA	4 MIN	19.5	23.5	6.0	17.5	26.9%	.019 MM	21.9
30 MIN 20.0 12.5 6.0 8.5 10.0% .005 MM NA .007 MIN .000 .000 .000 .000 .002 MM Plastic Limit .000 .000 .000 .001 MM NA .001 MM .000	19 MIN	19.5	15.5	5.0	9.5	14.6%	.009 MM	
7HR 15MIN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0% .002 MM Plastic Limit 25H 45MIN 0.0 0.0 0.0 0.0 0.0 0.0% .001 MM NA	60 MIN	20.0	12.5	6.0	6.5	10.0%	.005 MM	-
25H 45MIN 0.0 0.0 0.0 0.0 0.0% .001 MM NA	7HR 15MIN	0.0	0.0	0.0	0.0	0.0%	.002 MM	
100 90 80	25H 45MIN	0.0	0.0	0.0	0.0	0.0%	.001 MM	
90 80		100) 💠 🔸	* * * * * * *				
80		i						İ
			 					
15 60 60 60 60 60 60 60 60 60 60 60 60 60			- 					
E 50 E 40		<u>iss</u> 60	<u> </u>	1-1-1				Ì
2 40		£ 50				1 1 1 1		
		UB 40)					



s(ML) SANDY SILT

SAMPLE NO.			SAMPLE PREP	ARATION	·	DEPTH (ft)	
MDH-8-3			GRADATION A				
TEST BY	Townley	1	GRADATIONA	INACTOIS		32.5-33 Date Prepared	10.14.01
AREA	TOWNEY	PROJECT		FEATURE		EXC. No.	12-14-01
		Ventura River		Matilija Dam		MDH-8	
			F TEST PIT OR AUG	ER HOLE OVERSIZE	RY VOLUME	MIDITO	
MAX SIZE	#16	PLUS 12"	0.0%	1	0.0%	3" TO 5"	0.0%
P. INDEX	0.0	CLASS OF FINES =	0.0%	ML	+ OR - A LINE	1 3 .00	0.00
			GRADATION OF GR		, CORT ALINE	1	0.00
Moisture + #4	0.0%	Sample Weight	96.90	T	0.0%	Dry Weight	96,90
		(75 MM)	(37.5 MM)	(19.0 MM)	(9.5 MM)	(4.75 MM)	Total Mass
SIEVE SIZE		3"	1 1/2"	3/4"	3/8"	NO.4	Passing
WET MATL & PAN	ACC				 	1.5.7	4.75 mm Sieve
MASS OF PAN		0.00	0.00	0.00	0.00	0.00	(No. 4)
WET MASS RET		0.00	0.00	0.00	 	0.00	Sample Weight
DRY MASS RET	**· · · · · · · · · · · · · · · · · · ·	0.00	0.00	· · · · · · · · · · · · · · · · · · ·	1	0.00	in Grams
DRY MASS PASSIN	IG	96.90	96.90	96.90	· · · · · · · · · · · · · · · · · · ·	1	Dry Weight
% OF TOTAL PASS		100.0%	100.0%	100.0%		100.0%	96.90
		100,0%	GRADATION OF SA		700.078	100.078	30.30
DRY WT MATL GRA	AMS			SS NO#4 / TOTAL V	vr		
BEFORE WASHING		56.20		ac item at item at		=	1.7794
DISH NO.			<u> </u>	DRY MASS OF SAM	APLE (SIEVED)		1.7784
	82				(0.2 1 25)	7.5	İ
SIEVING TIME	10 Minutes						
SIEVE	MASS	MASS	FACTOR X	% TOTAL	PARTICLE	REMARKS	
NO.	RET (GR)	PASS (GR)	MASS PASS	PASSING	DIAMETER		
8	0.0	56.2	= % OF	100.0%	2.36 MM		
16	0.1	56.1	TOTAL	99.8%	1.18 MM	GRAVEL	0.0%
30	0.2	56.0	PASSING	99.6%	.600 MM	SAND	11.2%
50	0.3	55.9	.,	99.5%	.300 MM	-200	88.8%
100	1.2	55.0		97.9%	.150 MM	.075 TO	33.370
200	8.3	49.9		88.8%	.075 MM	.005 =	64.8%
PAN	7.5	TESTED BY	Townley	DATE	12-20-01	CU =	0.00
TOTAL	56.2		,		, , , , , ,	CC =	0.00
			HYDROMETER ANA	ALYSIS			
HYDRO NO.	2212			DISPERSING AGEN	Т	SODIUM HEX	
START		DATE	12-19-01	<u></u>		AMOUNT	125 ML
TIME	TEMPC	HYD READ	HYD CORR	COR READ	% TOT PAS	PART DIA.	REMARKS
							Moisture Total
1 MIN	19.5	43.5	6.0	37.5	66.7%	.037 MM	Sample
4 MIN	19.5	36.0	6.0	30.0	53.4%	.019 MM	30.4
19 MIN	19.5	25.5	6.0	19.5	34.7%	.009 MM	Liquid Limit
BO MIN	20.0	19.5	6.0	13.5	24.0%	.005 MM	NA
7HR 15MIN	0.0	0.0	0.0	0.0	0.0%	.002 MM	Plastic Limit
25H 45MIN	0.0	0.0	0.0	0.0	0.0%	.001 MM	NA
	100 90 20 20 20 30 40 50 50 50 50 50 50 50 50 50 50 50 50 50	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					
	20 20	0					

#8 #16 #30 #50 #100 #200 .037 .019 .009 .005 Particle Diameter in Millimeters

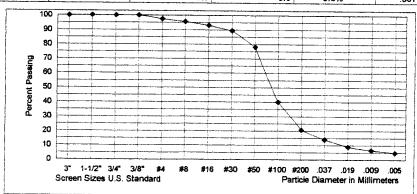
SOILS CLASSIFICATION AND COMMON NAME

3" 1-1/2" 3/4" 3/8" #4 Screen Sizes U.S. Standard

10 0

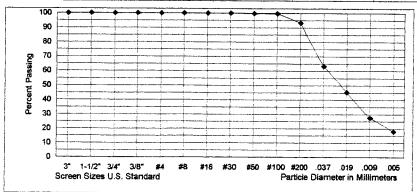
ML_SILT

SAMPLE NO.			SAMPLE PREF	PARATION		DEPTH (ft)	
MDH-8-4			GRADATION A	NALYSIS		34.4-35.4	
TEST BY	Townley					Date Prepared	12-14-01
AREA		PROJECT		FEATURE		EXC. NO.	
		Ventura River		Matilija Dam		MDH-8	
		PERCENT O	F TEST PIT OR AUG	ER HOLE OVERSIZE	E BY VOLUME		
MAX SIZE	#4	PLUS 12"	0.0%	5" TO 12"	0.0%	3" TO 5"	0.09
P. INDEX	0.0	CLASS OF FINES =		ML	+ OR - A LINE		0.0
			GRADATION OF G	RAVEL SIZE			
Moisture + #4	0.0%	Sample Weight	110.20	Moisture - #4	0.0%	Dry Weight	110.20
		(75 MM)	(37.5 MM)	(19.0 MM)	(9.5 MM)	(4.75 MM)	Total Mass
SIEVE SIZE		3"	1 1/2"	3/4"	3/8"	N0.4	Passing
WET MATL & PAN	ACC					2.90	4.75 mm Sieve
MASS OF PAN		0.00	0.00	0.00	0.00	0.00	
WET MASS RET		0.00	0.00	 		2.90	(No. 4)
DRY MASS RET		0.00	0.00	1		2.90	Sample Weight
DRY MASS PASSIN	NG.	110.20	110.20	1	1		in Grams
% OF TOTAL PASS	ING	100.0%	100.0%				Dry Weight
	20		GRADATION OF SA		100.0%	97.4%	107,30
DRY WT MATL GRA	AMS			ASS NO#4 / TOTAL V	VT		
BEFORE WASHING		59,60	1 401011-1617-1	433 NO#47 TOTAL V	V í		
DISH NO.		38.00		DOV MASS OF DA	401 F (01F) (FD)	=	1.6337
	83			DRY MASS OF SAM	APLE (SIEVED)		
SIEVING TIME	10 Minutes					47.9	
SIEVE	MASS	MASS	FACTOR X	W TOTAL	DARTINE		
NO.	RET (GR)	PASS (GR)	MASS PASS	% TOTAL	PARTICLE	REMARKS	
8	1.1	58.5	MA35 PA33 = % OF	PASSING	DIAMETER		
16	2.6		TOTAL	95.6%	2.36 MM	ODAVE!	0.00/
30	4.9	57.0		93.1%	T	GRAVEL	2.6%
50	11.7	54.7	PASSING	89.4%	.600 MM	SAND	76.6%
100		47.9		78.3%	.300 MM	-200	20.7%
200	35.1	24.5		40.0%	.150 MM	.075 TO	
PAN	46.9	12.7		20.7%	.075 MM	.005 =	15.8%
	47.9	TESTED BY	Townley	DATE		CU =	0.00
TOTAL	59.6					CC =	0.00
			HYDROMETER ANA				
HYDRO NO.	2212			DISPERSING AGEN	<u>T</u>	SODIUM HEX	
START		DATE	12-19-01			AMOUNT	125 ML
TIME	TEMPC	HYD READ	HYD CORR	COR READ	% TOT PAS	PART DIA.	REMARKS
							Moisture Total
MIN	20.0	14.5	6.0	8.5	13.9%	.037 MM	Sample
MIN	20.0	11.5	6.0	5.5	9.0%	.019 MM	12.5
9 MIN	20.0	10.0	6.0	4.0	6.5%	.009 MM	Liquid Limit
30 MIN	20.0	9.0	6.0	3.0	4.9%	.005 MM	NA
THR 15MIN	0.0	0.0	0.0	0.0	0.0%	.002 MM	Plastic Limit
25H 45MIN	0.0	0.0	0.0	0.0	0.0%	.001 MM	NA
	100	+++	•				
	90						i
	80	 					



SM SILTY SAND

SAMPLE NO.		7	SAMPLE PREP	ARATION		DEPTH (ft)	
MDH-8-5		GRADATION ANALYSIS				44.0-44.5	
TEST BY	Townley	1	GINDATIONA	1171 1313		Date Prepared	12-14-01
AREA		PROJECT		FEATURE		EXC. No.	12-14-01
		Ventura River		Matilija Dam		MDH-8	
		· · · · · · · · · · · · · · · · · · ·	E TEST DIT OR ALIG	ER HOLE OVERSIZE	DV VOLUME	MDU-0	L
MAX SIZE	#50	PLUS 12"	0.0%	1		07 TO 511	1
P. INDEX	0.0		0.0%	5" TO 12"	0.0%	3" TO 5"	0.09
P. HADEX		CLASS OF FINES =	00404T0110T0	ML	+ OR - A LINE		0.00
	0.00/		GRADATION OF GR		7	7	T#
Moisture + #4	0.0%	Sample Weight	113.70	Moisture - #4	0.0%	Dry Weight	113.70
OIE (E 013E		(75 MM)	(37.5 MM)	(19.0 MM)	(9.5 MM)	(4.75 MM)	Total Mass
SIEVE SIZE		3"	1 1/2"	3/4"	3/8"	N0.4	Passing
WET MATL & PAN	ACC						4.75 mm Sieve
MASS OF PAN		0.00	0.00	0.00	0.00	0.00	(No. 4)
WET MASS RET		0.00	0.00	0.00	0.00	0.00	Sample Weight
DRY MASS RET		0.00	0.00	0.00	0.00	0.00	in Grams
DRY MASS PASSIN	·····	113.70	113.70	113.70	113.70	113.70	Dry Weight
% OF TOTAL PASS	ING	100.0%	100.0%	100.0%	100.0%	100.0%	113.70
			GRADATION OF SA	ND SIZE			
DRY WT MATL GR	AMS		FACTOR=%TOT PA	SS NO#4 / TOTAL W	π		
BEFORE WASHING) =	64.00				=	1.5625
DISH NO.				DRY MASS OF SAM	PLE (SIEVED)		
	78				, ,	5.8	
SIEVING TIME	10 Minutes						
SIEVE	MASS	MASS	FACTOR X	% TOTAL	PARTICLE	REMARKS	
NO.	RET (GR)	PASS (GR)	MASS PASS	PASSING	DIAMETER	TIEMPI (CO	
8	0.0	64.0	= % OF	100.0%	2.36 MM		
16	0.0	64.0	TOTAL	100.0%		GRAVEL	0.0%
30	0.0	64.0	PASSING	100.0%	.600 MM	SAND	6.7%
50	0,1	63.9	1 Addition	99.8%	.300 MM	-200	
100	0.3	63.7				.075 TO	93.3%
200	4.3	59.7		99.5%	.150 MM		75.00/
PAN				93.3%	.075 MM	.005 =	75.3%
	5.8	TESTED BY	Townley	DATE		CU =	0.00
TOTAL	64.0					CC =	0.00
DVDDO NO		 	HYDROMETER ANA			==:::::::::::::::::::::::::::::::::::::	
HYDRO NO.	2212			DISPERSING AGENT		SODIUM HEX	
START	T	DATE	12-19-01			AMOUNT	125 ML
TIME	TEMPC	HYD READ	HYD CORR	COR READ	% TOT PAS	PART DIA.	REMARKS
							Moisture Total
MIN	19.5	46.5	6.0	40.5	63.3%	.037 MM	Sample
4 MIN	19.5	35.0	6.0	29.0	45.3%	.019 MM	28.1
9 MIN	20.0	23.5	6.0	17.5	27.3%	.009 MM	Liquid Limit
30 MIN	20.0	17.5	6.0	11.5	18.0%	.005 MM	NA
7HR 15MIN	0.0	0.0	0.0	0.0	0.0%	.002 MM	Plastic Limit
25H 45MIN	0.0	0.0	0.0	0.0	0.0%	.001 MM	NA
	100	0 + + +	+ + + +	+ + +			
	90	0			*		
	80)					
	ga 70				 		
	50 70 50 70				 		į



SAMPLE NO. MDH-8-6			SAMPLE PRE	DEPTH (ft)	DEPTH (ft)		
			GRADATION	46.0-47.0			
TEST BY	Townley			Date Prepared	12-14-01		
AREA		PROJECT		FEATURE		EXC. NO.	
		Ventura River		Matilija Dam		MDH-8	
		PERCENT O	F TEST PIT OR AUC	GER HOLE OVERSIZE	E BY VOLUME		
MAX SIZE	#50	PLUS 12"	0.09	% 5" TO 12"	0.09	% 3" TO 5"	0.0%
P. INDEX	0.0	CLASS OF FINES =		ML	+ OR - A LINE		0.00
	·		GRADATION OF G	RAVEL SIZE			
Moisture + #4	0.0%	Sample Weight	152.70	0 Moisture - #4	0.0%	Dry Weight	152.70
		(75 MM)	(37.5 MM)	(19.0 MM)	(9.5 MM)	(4.75 MM)	Total Mass
SIEVE SIZE		3"	1 1/2"	3/4"	3/8"	N0,4	Passing
WET MATL & PAN	ACC						4.75 mm Sieve
MASS OF PAN		0.00	0.00	0.00	0.00	0.00	(No. 4)
WET MASS RET		0.00	0.00	0.00	0.00	0.00	Sample Weight
DRY MASS RET		0.00	0.00	0.00	0.00	0.00	in Grams
DRY MASS PASSIN	· · · · · · · · · · · · · · · · · · ·	152.70	152.70	152.70	152,70	152.70	Dry Weight
% OF TOTAL PASS	ING	100.0%	100.0%	100.0%	100.0%	100.0%	152.70
T 1.779			GRADATION OF S	AND SIZE			
DRY WT MATL GR			FACTOR=%TOT PA	ASS NO#4 / TOTAL V	VΤ		
BEFORE WASHING] =	78.70				=	1.2706
DISH NO.				DRY MASS OF SAN	MPLE (SIEVED)		
	58					63.8	
SIEVING TIME	10 Minutes	T					
SIEVE	MASS	MASS	FACTOR X	% TOTAL	PARTICLE	REMARKS	
NO.	RET (GR)	PASS (GR)	MASS PASS	PASSING	DIAMETER		į
8	0.0	78.7	= % OF	100.0%	2.36 MM		
16	0.0	78.7	TOTAL	100.0%	1.18 MM	GRAVEL	0.0%
30	0.0	78.7	PASSING	100.0%	.600 MM	SAND	77.8%
50	0.2	78.5		99.7%	.300 MM	-200	22.2%
100	21.0	57.7		73.3%	.150 MM	.075 TO]
200	61.2	17.5		22.2%	.075 MM	.005 =	18.4%
PAN	63.8	TESTED BY	Townley	DATE	12-20-01	CU =	0.00
TOTAL	78.7					cc =	0.00
			HYDROMETER AN	ALYSIS			
YDRO NO.	2212			DISPERSING AGENT	Т	SODIUM HEX	
TART		DATE	12-19-01			AMOUNT	25 ML
IME	TEMPC	HYD READ	HYD CORR	COR READ	% TOT PAS	PART DIA.	REMARKS
							Moisture Total
MIN	20.0	16.5	6.0	10.5	13.3%	.037 MM	Sample
MIN	20.0	12.5	6.0	6.5	8.3%	.019 MM	12.7
9 MIN	20.0	10.5	6.0	4.5	5.7%	.009 MM	Liquid Limit
0 MIN	20.0	9.0	6.0	3.0	3.8%	.005 MM	NA
HA 15MIN	0.0	0.0	0.0	0.0	0.0%	.002 MM	Plastic Limit
5H 45MIN	0.0	0.0	0.0	0.0	0.0%	.001 MM	NA
	100						
	90						1
	80		 				
	5 70 5 60	<u> </u>					
	Percent Passing						1
	50 40						1
	g 30	h					1
	20		+ +		¥		

#8 #16 #30 #50 #100 #200 .037 .019 .009 .005 Particle Diameter in Millimeters

SOILS CLASSIFICATION AND COMMON NAME SM_SILTY SAND

3" 1-1/2" 3/4" 3/8" #4 Screen Sizes U.S. Standard

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