☐ Monitoring Fill or Backfill

☐ Monitoring Footing Excavations

DAILY FIELD REPORT

Job No. 14902

Page 1 of 1

Job Location: SAN BERNARDINO, CA	Client or Owner: EPA, CH2M HILL, SBMWD, URS	Report Sequence No.
General Location of Fill: DRIVEWAY BASE SECTION	Purpose of Fill or Nature of Structure to be Supported: 19TH STREET TREATMENT PLANT	Date: 12-15-04 / Day of Week: WED
General Contractor: EL-CO CONTRACTORS	Grading or Earthwork Contractor: AAA PAVING, CO	D & M Engineer: NICK REILEK / HRS Charged (SITE)
Contractor's Shift	Contractor's Superintendent or Foreman: JOHN WILES	HRS Charged (TRAVEL)
Source and Description of Fill Material: IMPORTED BASE MATERIAL	Superintendents Acknowledgment of Site Visit and Hours	Assistants / HRS Charged
Weather: CLEAR	APPROXIMATE YARDAGE: Total Required / Placed this Shift / Total To - Date	

Test Number	Test Location	Elevation	Required % of Maximum Dry Density	Maximum Dry Density lbs/cu. ft.	Fill Moisture %	Test Dry Density lbs/cu. ft.	% of Maximum Dry Density	Remarks
136	PER PLAN	1240		133.0	9.3	126.4	95	
137	" "	1237		133.0	8.9	129.1	97	
138	" "	1236		133.0	10.1	128.2	96	
139	" "	1236		133.0	9.0	130.7	98	
140	" "	1236		133.0	9.9	128.0	96	
141	" "	1237		133.0	10.7	126.8	95	
142	" "	1237		133.0	9.5	129.3	97	
143	" "	1237		133.0	10.2	127.5	96	

SUPPLEMENTARY REPORT (Describe equipment used for hauling, spreading, watering, conditioning and compacting, also report thickness of lifts, and number of roller trips.)

CONTRACTOR FINE GRADING BASE MATERIAL SECTION FOR DRIVEWAY AREA THE PLANT EXPANSION AREA.

CONTRACTOR USING A WATER TRUCK TO MOISTURE CONDITION THE BASE MATERIAL AND TO COMPACT BASE IN PLACE.

CONTRACTOR USED A MOTORGRADER TO FINE GRADE THE BASE MATERIAL BEFORE COMPACTING BASE SECTION IN-PLACE WITH STEEL DRUM VIBRATORY ROLLERS.

COPY SENT TO CLIENT ☐ CONTINUED ON NEXT PAGE ☐

DAILY FIELD REPORT

☐ Monitoring Fill or Backfill

☐ Monitoring Footing Excavations

Job No. 14902

Page 1 of 1

Job Location: SAN BERNARDINO, CA	Client or Owner: EPA, CH2MHILL, SBMWD, URS	Report Sequence No.	
General Location of Fill: NON-PAVED AREA	Purpose of Fill or Nature of Structure to be Supported: 19TH STREET TREATMENT PLANT	Date: 1-17-05	Day of Week: MON
General Contractor: EL-CO CONTRACTORS	Grading or Earthwork Contractor: AAA PAVING, CO	D & M Engineer: NICK KEYZER	HRS Charged (SITE)
Contractor's Shift	Contractor's Superintendent or Foreman: JOHN WILES	HRS Charged (TRAVEL)	
Source and Description of Fill Material: NATIVE SUBGRADE SOILS	Superintendents Acknowledgment of Site Visit and Hours	Assistants	HRS Charged
Weather: CLEAR	APPROXIMATE YARDAGE: Total Required / Placed this Shift / Total To - Date		

Test Number	Test Location	Elevation	Required % of Maximum Dry Density	Maximum Dry Density lbs/cu. ft.	Fill Moisture %	Test Dry Density lbs/cu. ft.	% of Maximum Dry Density	Remarks
144	PER PLAN	1237		120.0	11.6	109.3	91	
145	" "	1236		120.0	9.1	111.9	93	
146	" "	1236		120.0	10.5	110.6	92	
147	" "	1236		120.0	9.8	113.2	94	
148	" "	1236		120.0	12.0	111.7	93	
149	" "	1236		120.0	8.9	112.9	94	
150	" "	1235		120.0	10.3	110.5	92	
151	" "	1235		120.0	9.7	111.7	93	

SUPPLEMENTARY REPORT (Describe equipment used for hauling, spreading, watering, conditioning and compacting, also report thickness of lifts, and number of roller trips.)

CONTRACTOR FINE GRADING THE SUBGRADE SECTION ON THE NON-PAVED AREAS WITH A MOTORGRADER AND A SKID LOADER WITH A GANNON DRAG BOX.

CONTRACTOR CONTINUING TO MOISTURE CONDITION THE SUBGRADE SOILS WITH WATER TRUCKS.

CONTRACTOR USING VIBRATORY STEEL DRUM ROLLERS TO COMPACT THE SUBGRADE AFTER FINE GRADING OPERATION.

COPY SENT TO CLIENT ☐ CONTINUED ON NEXT PAGE ☐

DAILY FIELD REPORT

☐ Monitoring Fill or Backfill

☐ Monitoring Footing Excavations

Job No. 14902

Page 1 of 1

Job Location: SAN BERNARDINO, CA	Client or Owner: EPA, CH2MHILL, SBMWD, URS	Report Sequence No.	
General Location of Fill: NON-PAVED AREA	Purpose of Fill or Nature of Structure to be Supported: 19TH STREET TREATMENT PLANT	Date: 1-20-05	Day of Week: THUR
General Contractor: EL-CO CONTRACTORS	Grading or Earthwork Contractor: AAA PAVING CO.	D & M Engineer: NICK PEPER	HRS Charged (SITE)
Contractor's Shift	Contractor's Superintendent or Foreman: JOHN WILES	HRS Charged (TRAVEL)	
Source and Description of Fill Material: CMB - BASE MATERIAL	Superintendents Acknowledgment of Site Visit and Hours	Assistants	HRS Charged
Weather: OVERCAST	APPROXIMATE YARDAGE: Total Required / Placed this Shift / Total To - Date		

Test Number	Test Location: PER PLAN	Elevation	Required % of Maximum Dry Density	Maximum Dry Density lbs/cu. ft.	Fill Moisture %	Test Dry Density lbs/cu. ft.	% of Maximum Dry Density	Remarks
152	" "	1237		133.0	11.9	127.9	96	
153	" "	1237		133.0	12.5	126.0	95	
154	" "	1238		133.0	10.2	129.1	97	
155	" "	1237		133.0	9.1	126.8	95	
156	" "	1236		133.0	11.6	127.8	96	
157	" "	1237		133.0	8.6	127.5	96	
158	" "	1237		133.0	10.7	126.2	95	
159	" "	1236		133.0	9.4	129.4	97	

SUPPLEMENTARY REPORT (Describe equipment used for hauling, spreading, watering, conditioning and compacting, also report thickness of lifts, and number of roller trips.)

CONTRACTOR USING DUMP TRUCKS TO IMPORT CMB TO JOBSITE.

CONTRACTOR USING A SCRADER TO HELP SPREAD THE CMB OUT IN THIN EVEN LIFT ON THE SUBGRADE IN THE NON-PAVED AREAS.

CONTRACTOR USING A WATER TRUCK TO MOISTEN THE CMB DURING PLACEMENT.

CONTRACTOR USING A MOTOR GRADER TO FINE GRADE THE CMB AND VIBRATORY STEEL DRUM ROLLERS TO COMPACT THE CMB IN PLACE.

COPY SENT TO CLIENT ☐ CONTINUED ON NEXT PAGE ☐

DAILY FIELD REPORT

☐ Monitoring Fill or Backfill

☐ Monitoring Footing Excavations

Job No. K902

Page 1 of 1

Job Location: SAN BERNARDINO, CA	Client or Owner: EPA, CH2MHILL, SBMWD, URS	Report Sequence No.	
General Location of Fill: ELECTRICAL TRENCH	Purpose of Fill or Nature of Structure to be Supported: 5TH STREET TREATMENT PLANT	Date: 1-21-05	Day of Week: FRI
General Contractor: EL-CO CONTRACTORS	Grading or Earthwork Contractor: EL-CO CONTRACTORS	D & M Engineer: NICK REVEK	HRS Charged (SITE)
Contractor's Shift	Contractor's Superintendent or Foreman: JOHN WILES	HRS Charged (TRAVEL)	
Source and Description of Fill Material: NATIVE ONSITE SOILS	Superintendents Acknowledgment of Site Visit and Hours	Assistants	HRS Charged
Weather: CLEAR	APPROXIMATE YARDAGE: Total Required	Placed this Shift	Total To - Date

Test Number	Test Location: PER PLAN	Elevation	Required % of Maximum Dry Density	Maximum Dry Density lbs/cu. ft.	Fill Moisture %	Test Dry Density lbs/cu. ft.	% of Maximum Dry Density	Remarks
160	" "	1234		125.0	11.4	116.6	93	

SUPPLEMENTARY REPORT (Describe equipment used for hauling, spreading, watering, conditioning and compacting, also report thickness of lifts, and number of roller trips.)

ELECTRICAL CONDUIT TRENCH FOR CLA-VAL NO.3 ON WEST SIDE OF CHLORINE CONTROL ROOM. CONTRACTOR CONTINUING TO BACKFILL TRENCH BY-HAND IN THIN EVEN LIFTS, MOISTURE CONDITIONING BACKFILL MATERIAL WITH 3/4" WATER HOSE. CONTRACTOR USING A HAND WACKER TO COMPACT EACH LIFT PLACE IN TRENCH LINE.

COPY SENT TO CLIENT ☐ CONTINUED ON NEXT PAGE ☐

☐ Monitoring Fill or Backfill

☐ Monitoring Footing Excavations

DAILY FIELD REPORT

Job No. 14902

Page 1 of 1

Job Location: SAN BERNARDINO, CA	Client or Owner: EPA, CH2MHILL, SBMWD, URS	Report Sequence No.	
General Location of Fill: ELECTRICAL TRENCH	Purpose of Fill or Nature of Structure to be Supported: 19TH STREET TREATMENT PLANT	Date: 2-8-05	Day of Week: TUE
General Contractor: EL-CO CONTRACTORS	Grading or Earthwork Contractor: EL-CO CONTRACTORS	D & M Engineer: NICK REREK	HRS Charged (SITE)
Contractor's Shift	Contractor's Superintendent or Foreman: JOHN WILES	HRS Charged (TRAVEL)	
Source and Description of Fill Material: NATIVE SOILS	Superintendents Acknowledgment of Site Visit and Hours	Assistants	HRS Charged
Weather: CLEAR	APPROXIMATE YARDAGE: Total Required	Placed this Shift	Total To - Date

Test Number	Test Location	Elevation	Required % of Maximum Dry Density	Maximum Dry Density lbs/cu. ft.	Fill Moisture %	Test Dry Density lbs/cu. ft.	% of Maximum Dry Density	Remarks
161	PER PLAN	1237		120.0	12.6	113.0	94	

SUPPLEMENTARY REPORT (Describe equipment used for hauling, spreading, watering, conditioning and compacting, also report thickness of lifts, and number of roller trips.)

CONTRACTOR BACKFILLING THE ELECTRICAL TRENCH BY HAND IN LIFTS AND COMPACTING EACH LIFT WITH A HAND WACKER UNTIL REACHING FINISH GRADE, AT THE NORTH HIGHLAND AVE. GATES.

COPY SENT TO CLIENT ☐ CONTINUED ON NEXT PAGE ☐

DAILY FIELD REPORT

☐ Monitoring Fill or Backfill

☐ Monitoring Footing Excavations

Job No. 14902

Page 1 of 1

Job Location: SBM BERNARDINO, CA	Client or Owner: EPA, CH2M HILL, SBMWD, URS	Report Sequence No.	
General Location of Fill: EFFLUENT DIP TRENCH	Purpose of Fill or Nature of Structure to be Supported: 19TH STREET TREATMENT PLANT	Date: 2-24-05	Day of Week: THURS.
General Contractor: EL-CO CONTRACTORS	Grading or Earthwork Contractor: EL-CO CONTRACTORS	D & M Engineer: NICK REYES	HRS Charged (SITE):
Contractor's Shift	Contractor's Superintendent or Foreman: JOHN WILES	HRS Charged (TRAVEL)	
Source and Description of Fill Material: BASE MATERIAL	Superintendents Acknowledgment of Site Visit and Hours	Assistants	HRS Charged
Weather: CLEAR	APPROXIMATE YARDAGE: Total Required	Placed this Shift	Total To - Date

Test Number	Test Location	Elevation	Required % of Maximum Dry Density	Maximum Dry Density lbs/cu. ft.	Fill Moisture %	Test Dry Density lbs/cu. ft.	% of Maximum Dry Density	Remarks
	STATION NO.							
162	2+65	1235		137.0	5.0	134.3	98	
163	4+25	1234		137.0	6.3	131.6	96	

SUPPLEMENTARY REPORT (Describe equipment used for hauling, spreading, watering, conditioning and compacting, also report thickness of lifts, and number of roller trips.)

CONTRACTOR USING A WATER TRUCK TO MOISTEN THE BASE MATERIAL SECTION BEFORE COMPACTION OPERATION.

CONTRACTOR COMPACTED BASE IN-PLACE WITH A HYDRO HAMMER THEN RUBBER TIRE ROLLING WITH THE WATER TRUCK FULL.

COPY SENT TO CLIENT ☐ CONTINUED ON NEXT PAGE ☐

DAILY FIELD REPORT

☐ Monitoring Fill or Backfill

☐ Monitoring Footing Excavations

Job No. 14902

Page 1 of 1

Job Location: SAN BERNARDINO, CA	Client or Owner: EPA, CH2M HILL, SBMWD, URS
General Location of Fill: EXISTING SERVICE YARD	Purpose of Fill or Nature of Structure to be Supported: 19TH STREET TREATMENT PLANT
General Contractor: EL-CO CONTRACTORS	Grading or Earthwork Contractor: EL-CO CONTRACTORS
Contractor's Shift	Contractor's Superintendent or Foreman: JOHN WILES

Report Sequence No.

Date: 2-28-05 Day of Week: MON

D & M Engineer: NIK REYLEK HRS Charged (SITE)

HRS Charged (TRAVEL)

Assistants | HRS Charged

Source and Description of Fill Material: NATIVE SOILS

Superintendents Acknowledgment of Site Visit and Hours

Weather: OVERCAST

APPROXIMATE YARDAGE

Total Required	Placed this Shift	Total To - Date

Test Number	Test Location	Elevation	Required % of Maximum Dry Density	Maximum Dry Density lbs/cu. ft.	Fill Moisture %	Test Dry Density lbs/cu. ft.	% of Maximum Dry Density	Remarks
164	PER PLAN	1234		125.0	11.3	121.7	97	
165	" "	1235		125.0	10.7	118.6	95	
166	" "	1236		125.0	12.0	119.1	95	

SUPPLEMENTARY REPORT (Describe equipment used for hauling, spreading, watering, conditioning and compacting, also report thickness of lifts, and number of roller trips.)

CONTRACTOR BACKFILLING ON THE OUTSIDE (PAVEMENT AREA) ON THE NEW CONCRETE "A" TYPE CURB, ALONG THE EAST SIDE IN THE EXISTING SERVICE YARD AT 19TH STREET PLANT.

CONTRACTOR BACK-FILLING BY HAND SHOVEL THEN MOISTURE CONDITIONING THE SUBGRADE SOILS WITH A WATER TRUCK.

CONTRACTOR USING TWO HAND WACKERS TO COMPACT THE SUBGRADE SOILS IN THE PAVEMENT AREA.

COPY SENT TO CLIENT ☐ CONTINUED ON NEXT PAGE ☐

☐ 781 East Washington Boulevard
Los Angeles, California 90021
(213) 745-5333
(213) 746-0744 FAX

TABLE I ~ SOILS TESTING

☒ 1195 N. Tustin Ave.
Anaheim, California 92807
(714) 238-6133
(714) 238-6144 FAX

PROJECT I.D. 19TH ST. WATER TREATMENT PLANT (ELCO) **PROJECT NO.** 34763-1 **OFFICE REPORT NO.** _____

LOCATION KEY

BF	-Backfill	SD	-Storm Drain
BP	-Building Pad	SW	-Sewerline
ELC	-Electrical	TR	-Trench
EXC	-Excavation	WL	-Wall
FTG	-Footing	WTL	-Waterline

N. end of Access Rd

ELEVATION KEY

(SG) - Subgrade	(FSG) - Finish Subgrade
FG - Finish Grade	(FAB) - Finish Agg. Base
AB - Aggregate Base	BTM - Bottom

METHOD KEY

SC - Sandcone
(NG) - Nuclear Gage
DT - Drive Tube

DATE	TEST NO.	LOCATION	ELEV.	~~% MOIST.~~	~~DRY~~ WET DENSITY	SOIL TYPE	% REL. COMPACTION FIELD	% REL. COMPACTION SPECIFIED	TECH	METHOD
3/2/05	1	N. end of Access Road to Plant	FSG	N/A	1.96	1	96	95	A.O	NG
	2	N. end of Access Road to Plant	FAB	N/A	2.20	2	99	"	"	"

LABORATORY STANDARD: CAL TRANS 231

SOIL TYPE	% OPTIMUM MOISTURE	MAXIMUM ~~DRY~~ WET DENSITY, ~~PCF~~ pcc
1 - grayish Brown SAND (w) silt		2.04
2 - CAB		2.21

SMITH-EMERY LABORATORIES
The Full Service Independent Testing Laboratory
Established 1904

SMITH-EMERY LABORATORIES

The Full Service Independent Testing Laboratory, Established 1904

FIELD DAILY REPORT

Job No.: 34763-1 **Report No.:** _____ **Date:** 3/2/05 **SECo Representative:** MARK DUNN

PROJECT I.D.: 19TH STREET WATER ~~REDUCTION~~ TREATMENT ELCO CONST
BETWEEN CALIFORNIA & MEDICAL CENTER DR, SAN BERNARDINO CALIF.

The following services were provided this date: DENSITY TESTING CALTRANS 231 & A/C LAYDOWN 375

Equipment Working: SKIP LOADER, 4X4 ROLLER, MNUL TRUCKS, WATER TRUCK, PAVER ~~CEDAR RAPIDS~~ BOB CAT, CAT VIBRATORY DOWN ROLLER

Description of Work: I ARRIVED ON SITE AT 9:00 AM, I MET WITH DON (ELCO) I'LL BE TESTING FINISH SUBGRADE AND BASE ON A PIECE OF ACCESS ROAD THAT LEADS TO THE WATER TREATMENT PLANT #19. ON ARRIVAL DON WITH ELCO INFORMED ME THAT THEY WILL ALSO BE PAVING THE SAME AREA TODAY.

AT 1:10 PM SUBGRADE AND CA-3. HAVE BOTH BEEN COMPACTED TO 95% OR BETTER.

I TESTED 5 LOCATIONS ON THE A/C LAYDOWN AND TOOK A SAMPLE OF THE MIX TO OUR ANAHEIM LAB TO RUN A HVEEM DENSITY. WHEN THE RESULTS COME IN I'LL CALCULATE THE RELATIVE COMPACTION AND FAX THE RESULTS TO ELCO

PAVERS- AAA — WEATHER - OVERCAST & COOL
PLANT - ~~VULCAN~~ HOLIDAY — LOADS 1 — TONS 25.55
MIX - TYPE B 3/4" MAX MEDIUM PG 64-10 — ARRIVED - 2:11 PM — LAST 2:11 PM
LIFT - 4" SURFACE COURSE — AVG TEMP - 295°
TACK - APPLIED TO ALL EDGES

(X) **Work was conducted in accordance with project requirements.**
( ) **Work was NOT conducted in accordance with project requirements.**

( ) 781 East Washington Boulevard
Los Angeles, California 90021
(213) 745-5333
(213) 746-0744 FAX

(X) 1195 N. Tustin Ave.
Anaheim, CA, 92807
(714) 238-6133
(714) 238-6144 FAX

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AUTHORIZATION FOR PUBLICATION OF OUR REPORT, CONCLUSION, OR EXTRACTS FROM OR REGARDING THEM IS RESERVED PENDING OUR WRITTEN APPROVAL AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES.

791 East Washington Boulevard
Los Angeles, California 90021
(213) 745-5333
(213) 746-0744 FAX

Hunter's Point Shipyard
Bldg. 114 Box 880550
San Francisco, California 94188-0550
(415) 330-3000
(415) 330-3030 FAX

22796 Savi Ranch Pkwy., Suite B
Yorba Linda, California 92687
(714) 921-8938
(714) 921-4284 FAX

2527 Del Monte Street
West Sacramento, California 95691
(916) 374-0754
(916) 374-0835 FAX

TABLE I ~ A. C. TESTING

PROJECT I.D. 19th ST WATER TREATMENT PLANT PROJECT NO. 34763-1 OFFICE REPORT NO.

LOCATION KEY
PL - Parking Lot HW - Highway
DW - Driveway PS - Public Streets

COURSE KEY
BC - Base Course TL - Third Lift
SL - Second Lift SC - Surface Course

METHOD KEY
NG - Nuclear Gage
CO - Cores

DATE	LOT TEST NO.	LOCATION	COURSE	DENSITY	A. C. TYPE	% REL. COMPACTION FIELD	% REL. COMPACTION SPECIFIED	TECH	METHOD
3/24/05	1	N END OF ACCESS ROAD TO PLANT	SC	2.32	1	96	95	MD	NG

LABORATORY STANDARD: HVEEM CAL TRANS

A. C. TYPE: 1 - Type B 3/4" MAX medium AR4000

MAXIMUM DRY DENSITY, PCF: 2.41

SMITH-EMERY COMPANY
The Full Service Independent Testing Laboratory
Established 1904

03-07-'05 04:12 FROM-SE/ES T-186 P02/02 U-216 714-238-6444

DAILY FIELD REPORT

☐ Monitoring Fill or Backfill
☐ Monitoring Footing Excavations

Job No. 14902
Page 1 of 1

Job Location: SAN BERNARDINO, CA	Client or Owner: EPA, CH2MHILL SBMWD UKS	Report Sequence No.	
General Location of Fill: EXISTING SERVICE YARD	Purpose of Fill or Nature of Structure to be Supported: 19TH STREET TREATMENT PLANT	Date: 3-15-05	Day of Week: TUE
General Contractor: EL-CO CONTRACTORS	Grading or Earthwork Contractor: AAA PAVING, CO.	D & M Engineer: NICK REYLEK	HRS Charged (SITE):
Contractor's Shift:	Contractor's Superintendent or Foreman: JOHN WILES	HRS Charged (TRAVEL):	
Source and Description of Fill Material: CLASS II BASE MATERIAL	Superintendents Acknowledgment of Site Visit and Hours	Assistants:	HRS Charged:
Weather: CLEAR			

APPROXIMATE YARDAGE

Total Required	Placed this Shift	Total To - Date

Test Number	Test Location	Elevation	Required % of Maximum Dry Density	Maximum Dry Density lbs/cu. ft.	Fill Moisture %	Test Dry Density lbs/cu. ft.	% of Maximum Dry Density	Remarks
167	PER PLAN	1234		137.0	6.2	132.0	96	
168	" "	1235		137.0	5.5	129.9	95	
169	" "	1234		137.0	6.1	134.4	98	
170	" "	1235		137.0	5.7	133.0	97	

SUPPLEMENTARY REPORT (Describe equipment used for hauling, spreading, watering, conditioning and compacting, also report thickness of lifts, and number of roller trips.)

CONTRACTOR USING MOTOR GRADER TO FINE GRADE THE BASE MATERIAL SECTION IN THE EXISTING SERVICE YARD AREA AT THE 19TH STREET PLANT.

CONTRACTOR USING A WATER TRUCK TO MOISTEN THE BASE MATERIAL DURING GRADING OPERATION.

CONTRACTOR USING THE WATER TRUCK AND A DUAL STEEL DRUM VIBRATORY ROLLER TO COMPACT THE BASE MATERIAL IN-PLACE.

COPY SENT TO CLIENT ☐ CONTINUED ON NEXT PAGE ☐

SIGNET Testing Labs

SIEVE ANALYSIS

(ASTM C136)(CT 202)

Client:	URS	Project No.:	14902
Project:	19th Street Water Treatment Plant	Date Received:	3/4/2004
Lab No.:	S12208	Date Tested:	3/12/2004
Sample ID:	None	Tested By:	D. Luce
Material Description:	Grey-Brown Silty Sand	Reviewed By:	P. DeSilva

Wet Weight: Dry Weight: 520.1 g

Sieve Size	Weight Retained Gramms	Percent Retained %	Percent Passing %		Specification
3" (75mm)					
2" (50mm)			100		100
1" (25mm)			100		95-100
3/4" (19mm)					
5/8" (15.5mm)			100	*	75-95
3/8" (9.5mm)			100	*	55-85
#4 (4.75mm)	1.10	0.2	100	*	35-60

Wet Weight: Dry Weight: 520.1 g

Sieve Size	Weight Retained Gramms	Percent Retained %	Percent Passing %		Specification
#10 (2.36mm)	7.6	1.5	98		
#16 (1.18mm)	20.7	4.0	96	*	15-35
#40 (600um)	93.3	17.9	82	*	10-25
#100 (150um)	292.4	56.2	44		
#200 (75um)	410.6	78.9	21	*	5-10

Remarks: * Does not meet specifications

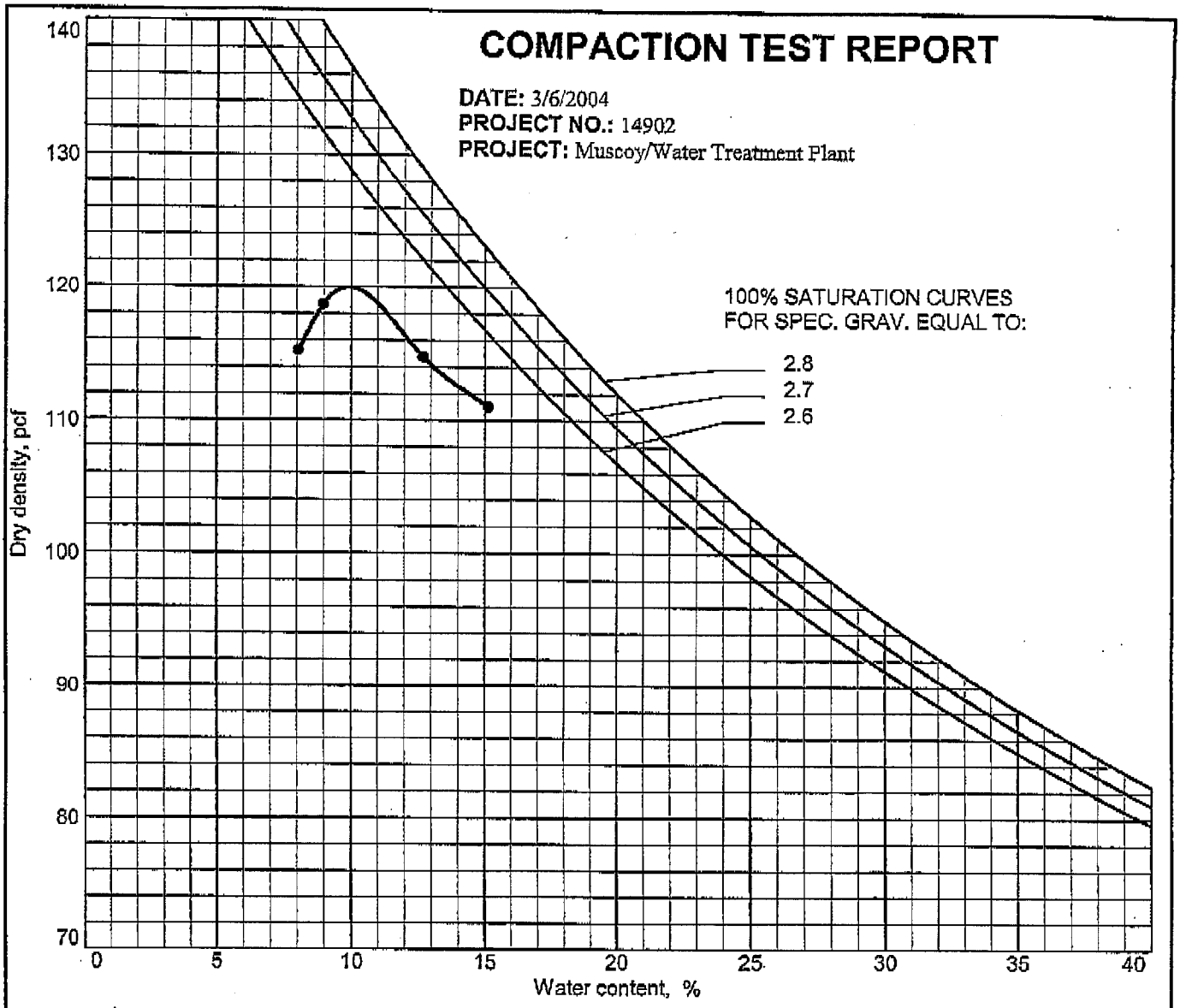
SIGNET TESTING LABORATORIES, INC.

Pri DeSilva, PE
Sr. Engineer

3811 S. Main Street, Santa Ana, CA 92707 Phone (714) 957-9512 Fax (714) 957-9515

COMPACTION TEST REPORT

DATE: 3/6/2004
PROJECT NO.: 14902
PROJECT: Muscoy/Water Treatment Plant



	No.	LOCATION AND DESCRIPTION	TEST SPECIFICATION
●		**Location:** 19th Street Lt. Brown Sandy Silt	ASTM D 1557-91 Procedure A Modified

	No.	USCS	LL	PI	NAT. MOIST.	%> No.4	%< No.200	MAX. DRY DEN.	OPT. MOIST.
●								120 pcf	10 %

Plate

SIGNET TESTING LABS, INC.

C·H·J·

Job No. 04065-7

LABORATORY TEST RESULTS

Production Facility: Dan Copp Crushing - CPC Colton
Date Received: March 16, 2004
Sample: Crushed Aggregate Base Material

Sieve Analysis (Caltrans 202)
Percent Passing

Sieve Size	Class 2 Base	Caltrans Class II Base
1 1/2" (37.5 mm)	100	
1" (25 mm)	100	100
3/4" (19 mm)	97	90 - 100
1/2" (12.5 mm)	82	
3/8" (9.5 mm)	73	
No. 4 (4.75 mm)	53	35 - 60
No. 8 (2.36 mm)	39	
No. 16 (1.18 mm)	30	
No. 30 (600 µm)	23	10 - 30
No. 50 (300 µm)	17	
No. 100 (150 µm)	11	
No. 200 (75 µm)	7	2 - 9
Sand Equivalent (Caltrans 217)	43	25 minimum
R-Value (Caltrans 301)		
By Exudation	78	78 minimum

C·M·J·

Job No. 04065-7

LABORATORY TEST RESULTS

Production Facility: Dan Copp Crushing - CPC Colton
Date Received: March 16, 2004
Sample: Crushed Aggregate Base Material

Optimum Moisture - Maximum Density Relation (ASTM D 1557-91) Method C

Soil Type	Classification	Optimum Moisture (Percent)	Maximum Dry Density (Lbs./Cu. Ft.)
1	Sand, fine to medium With coarse to 3/4"; (GP)	7.5	137.0

SIGNET Testing Labs

SAND EQUIVALENT
(CT 217) / (ASTM D2419)

Client	URS	Project No.:	14902
Project:	19th Street WTP	Date Received:	3/19/2004
Lab No.:	S12211	Date Tested:	3/23/2004
Source:		Tested By:	A. Spalla
Material Description:	Lt. Brown Sand w/ Silt & Coarse Gravel	Reviewed By:	P. DeSilva

Specimen No.	Sand Reading (A)	Clay Reading (B)	Sand Equivalence (A)/(B)x100	Specification
1	6.9	43.4	44	
2	7.4	41.8	42	
3	7.5	42.6	43	
			43	

Remarks: _____

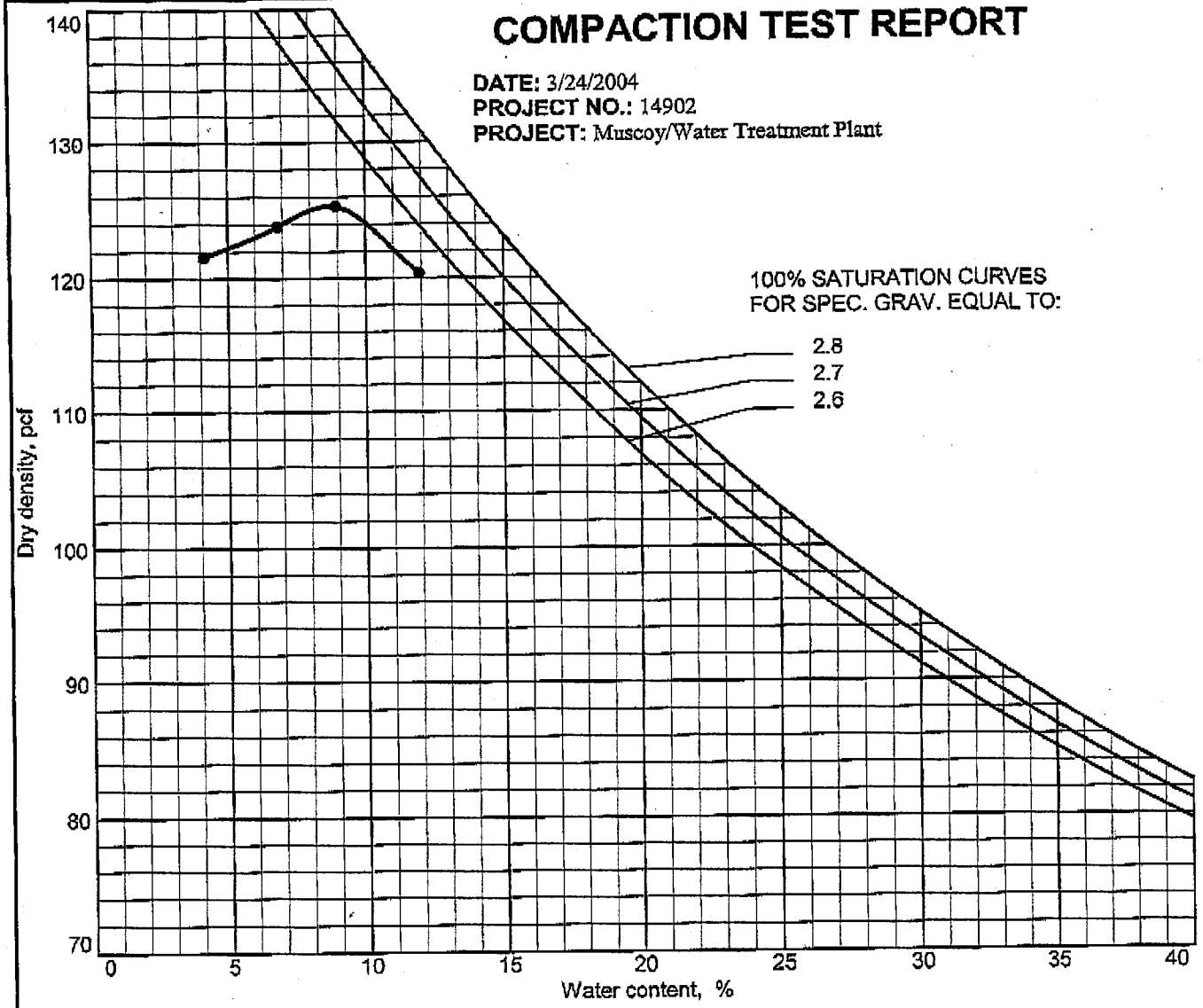
SIGNET TESTING LABORATORIES, INC.

Pri DeSilva, PE
Sr. Engineer

3811 S. Main Street, santa Ana, CA 92707 Phone (714) 957-9512 Fax (714) 957-9515

COMPACTION TEST REPORT

DATE: 3/24/2004
PROJECT NO.: 14902
PROJECT: Muscoy/Water Treatment Plant



	No.	LOCATION AND DESCRIPTION	TEST SPECIFICATION
●	2	**Source:** S12211 **Sample No.:** 2 Light brown sand w/ silt & coarse gravel	ASTM D 698-91 Procedure A Standard

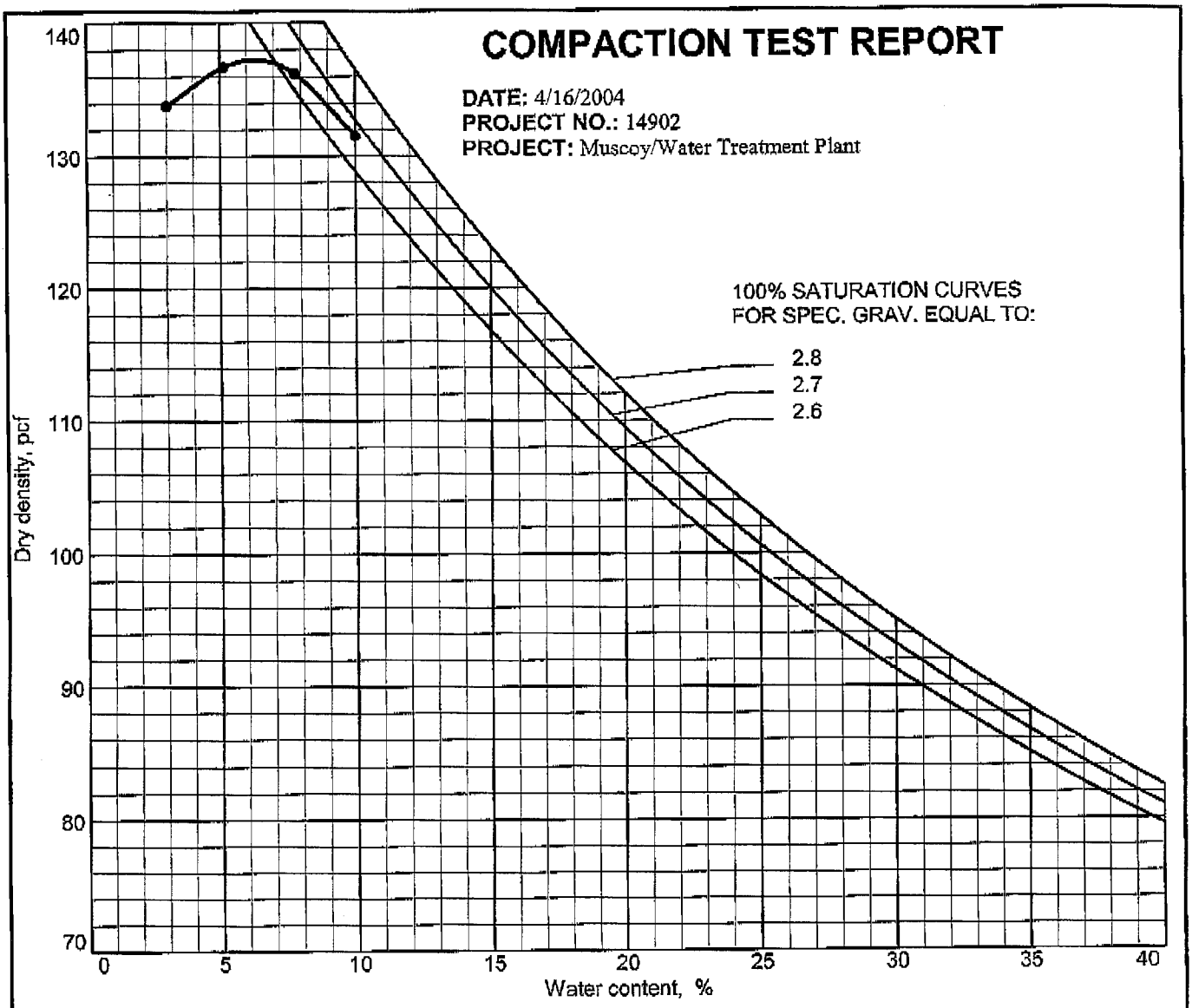
	No.	USCS	LL	PI	NAT. MOIST.	%> No.4	%< No.200	MAX. DRY DEN.	OPT. MOIST.
●	2							125 pcf	9 %

Plate

SIGNET TESTING LABS, INC.

COMPACTION TEST REPORT

DATE: 4/16/2004
PROJECT NO.: 14902
PROJECT: Muscoy/Water Treatment Plant



	No.	LOCATION AND DESCRIPTION	TEST SPECIFICATION
●	1	**Location:** Carbon Filter Vessel Pads / Elevation Sub-Grade Dark brown sand with coarse gravel	ASTM D 1557-91 Proccdure C Modified

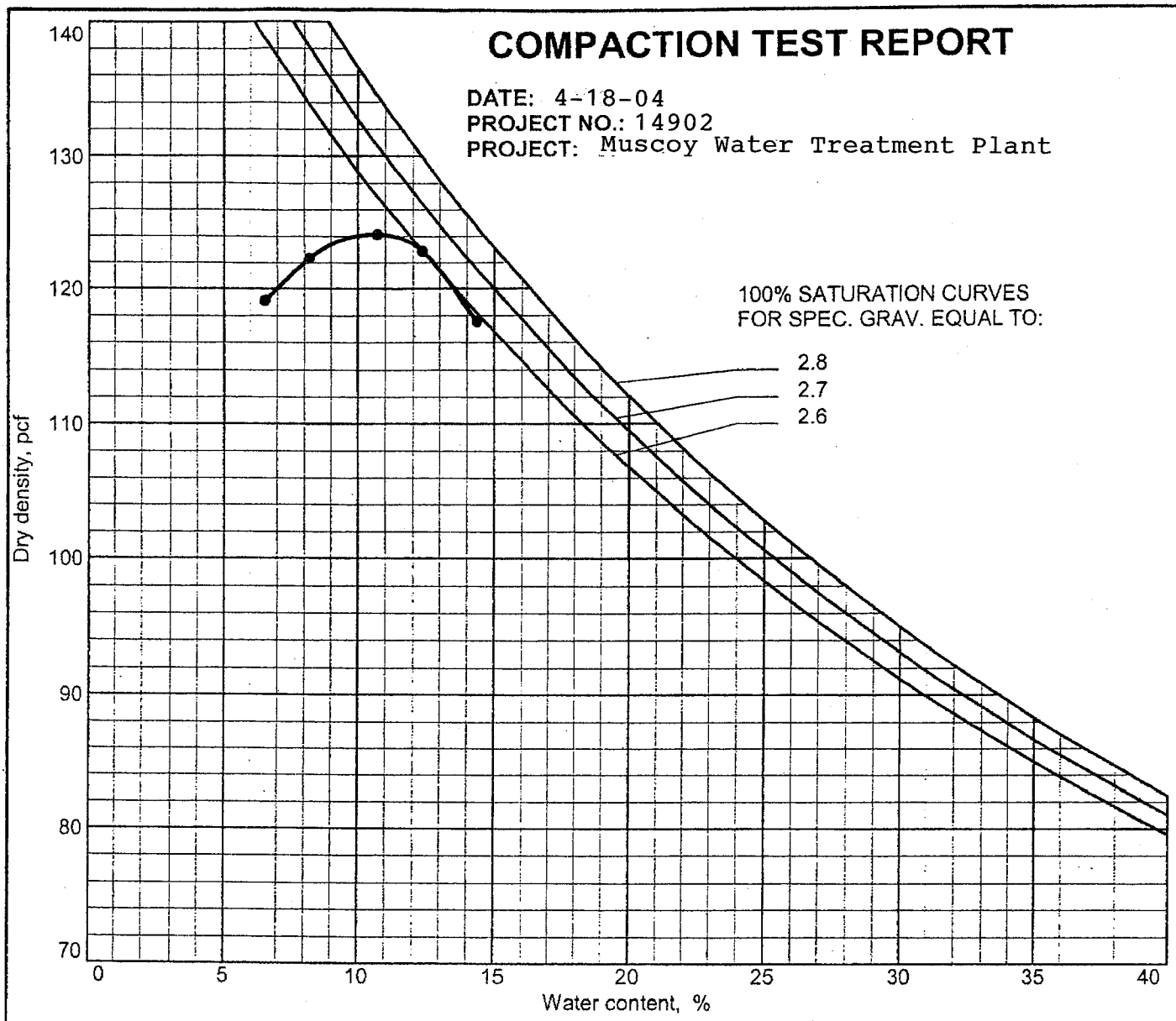
	No.	USCS	LL	PI	NAT. MOIST.	%> 3/4 in.	%< No.200	MAX. DRY DEN.	OPT. MOIST.
●	1							137 pcf	6 %

Plate

SIGNET TESTING LABS, INC.

COMPACTION TEST REPORT

DATE: 4-18-04
PROJECT NO.: 14902
PROJECT: Muscoy Water Treatment Plant



No.	LOCATION AND DESCRIPTION	TEST SPECIFICATION
●	**Location:** STATION 13+00 BROWN SILTY SAND	ASTM D 1557-91 Procedure A Modified

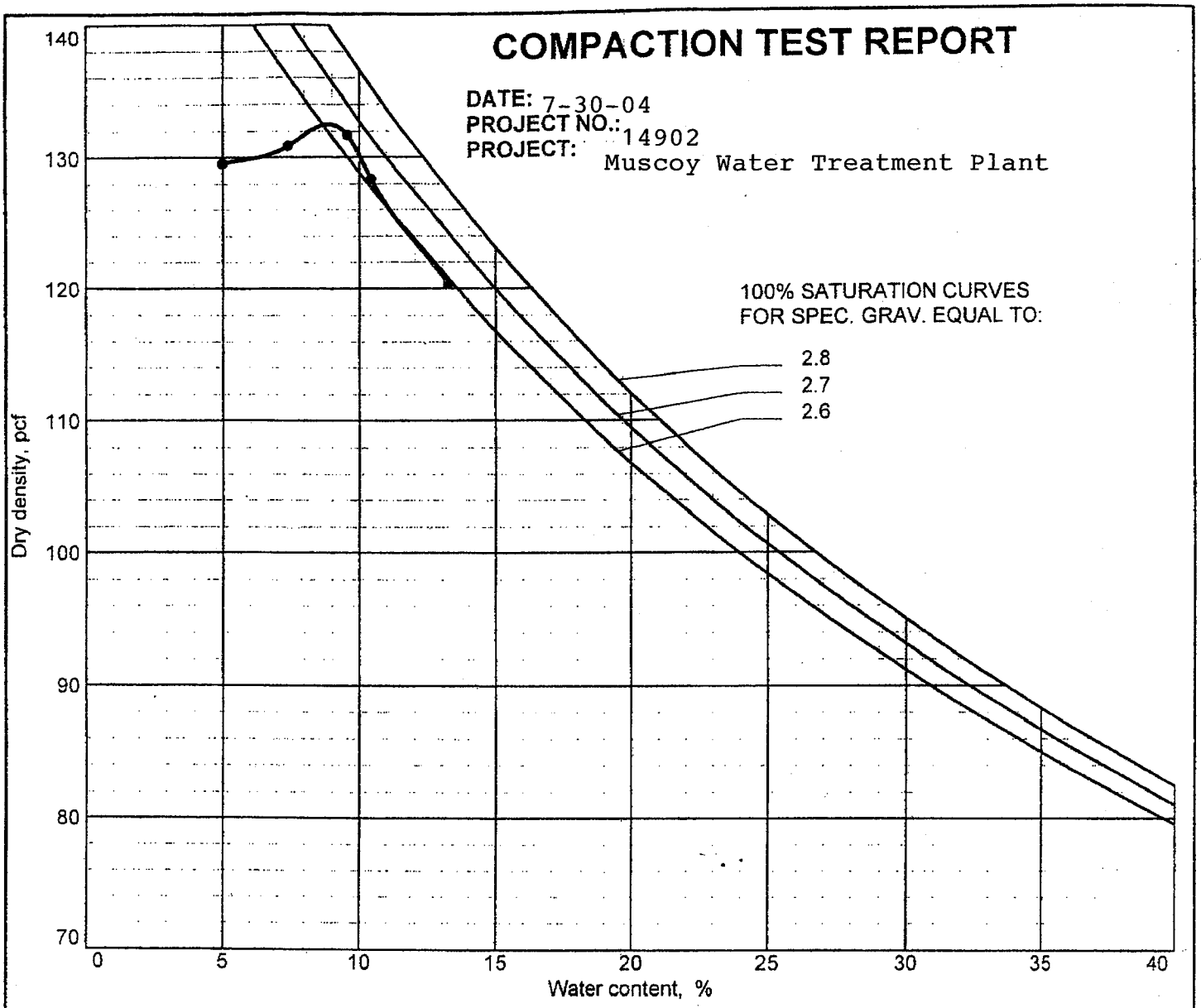
No.	USCS	LL	PI	NAT. MOIST.	%> No.4	%< No.200	MAX. DRY DEN.	OPT. MOIST.
●							124 pcf	11 %

Plate

SIGNET TESTING LABS, INC.

COMPACTION TEST REPORT

DATE: 7-30-04
PROJECT NO.: 14902
PROJECT: Muscoy Water Treatment Plant



	No.	LOCATION AND DESCRIPTION	TEST SPECIFICATION
●		**Location:** STOCKPILE CLASS II BASE	ASTM D 1557-78 Method C Modified

	No.	USCS	LL	PI	NAT. MOIST.	%> 3/4 in.	%< No.200	MAX. DRY DEN.	OPT. MOIST.
●								133 pcf	9 %

Plate

SIGNET TESTING LABS, INC.