APPENDIX F.3 – Soil Compaction Test Results - No Change for Rev. 4

ASTM D1557-12

Curve No.: TP-1,S-1

Project No.: 6464131072 **Date:** 10/20/13

Project: Clinch River SMR Project

Client: Bechtel Project No: 25847-601

Source of Sample: TP-1 **Depth:** 6-8' (Bulk)

Sample Number: S-1

Remarks: Specific Gravity is assumed
Hammer Type: Automatic

MATERIAL DESCRIPTION

Description: Brownish Red Fat CLAY with Sand

Classifications - **USCS:** CH **AASHTO:** A-7-6(30)

Nat. Moist. = 32.2 %

Liquid Limit = 61

Sp.G. = 2.700

Plasticity Index = 37

% < No.200 = 77.7 %

TEST RESULTS
Maximum dry density = 109.0 pcf
Optimum moisture = 16.7 %

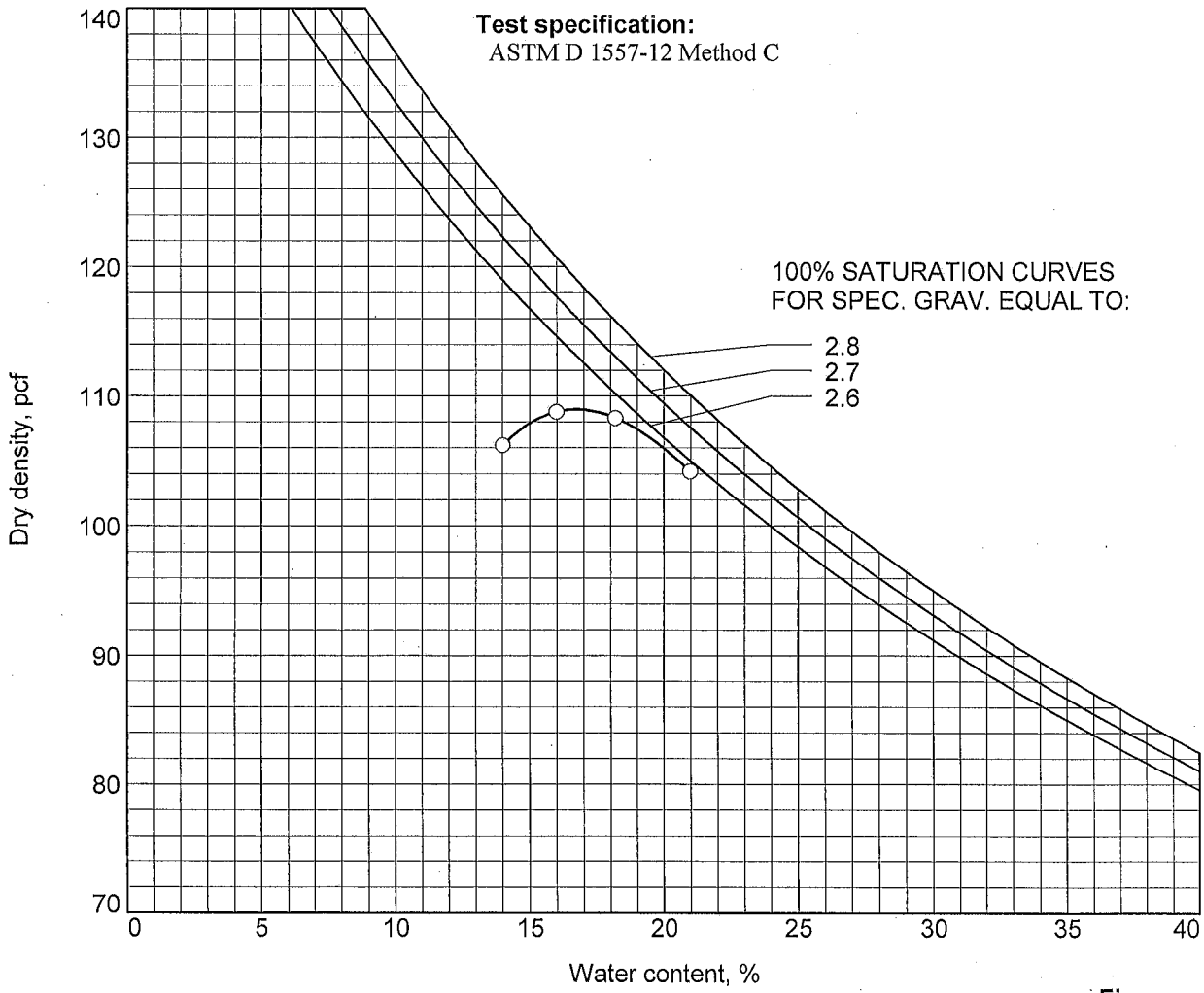


Figure TP-1,S-1

AMEC

Tested By: CS **Checked By:** LBJ

MOISTURE DENSITY TEST DATA

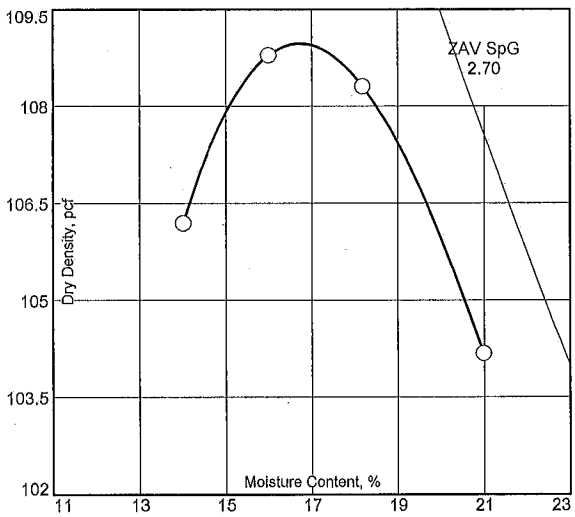
1/13/2014

Client: Bechtel Project No: 25847-601
Project: Clinch River SMR Project
Project Number: 6464131072
Location: TP-1
Depth: 6-8' (Bulk) **Sample Number:** S-1
Description: Brownish Red Fat CLAY with Sand
Liquid Limit: 61 **Plasticity Index:** 37 **Natural Moisture:** 32.2
Date: 10/20/13 **USCS Classification:** CH **AASHTO Classification:** A-7-6(30)
Testing Remarks: Specific Gravity is assumed
Hammer Type: Automatic
Preparation Method: Dry
Tested by: CS **Checked by:** LBJ
Percent passing 3/4 in. sieve: 95.3

Test Data and Results For Curve TP-1,S-1

Test Specification:

Type of Test: ASTM D 1557-12 Method C
Mold Dia: 6.00 **Hammer Wt.:** 10. lbs **Drop:** 18" **Layers:** 5 **Blows per Layer:** 56



Point No.	1	2	3	4
Wt. M+S	9840.6	10014.8	10076.6	10010.2
Wt. M	5723.9	5723.9	5723.9	5723.9
Wt. W+T	889.5	1002.1	703.1	663.5
Wt. D+T	815.4	904.3	639.9	599.7
Tare	286.0	292.6	292.2	295.7
Moist.	14.0	16.0	18.2	21.0
Dry Den.	106.2	108.8	108.3	104.2

Test Results: Max. Dry Den.= 109.0 pcf Opt. Moist.= 16.7%

ASTM D1557-12

Curve No.: TP-2,S-1

Project No.: 6464131072 **Date:** 10/20/13

Project: Clinch River SMR Project

Client: Bechtel Project No: 25847-601

Source of Sample: TP-2 **Depth:** 1-2.5 (Bulk)

Sample Number: S-1

Remarks: Specifc Gravity is assumed
Hammer Type : Automatic

MATERIAL DESCRIPTION

Description: Brown Sandy Lean CLAY

Classifications - **USCS:** CL **AASHTO:** A-7-6(13)

Nat. Moist. = 16.5 %

Liquid Limit = 46

Sp.G. = 2.705

Plasticity Index = 27

% < No.200 = 59.1 %

ROCK CORRECTED TEST RESULTS	UNCORRECTED
Maximum dry density = 122.7 pcf	120.6 pcf
Optimum moisture = 10.3 %	10.9 %

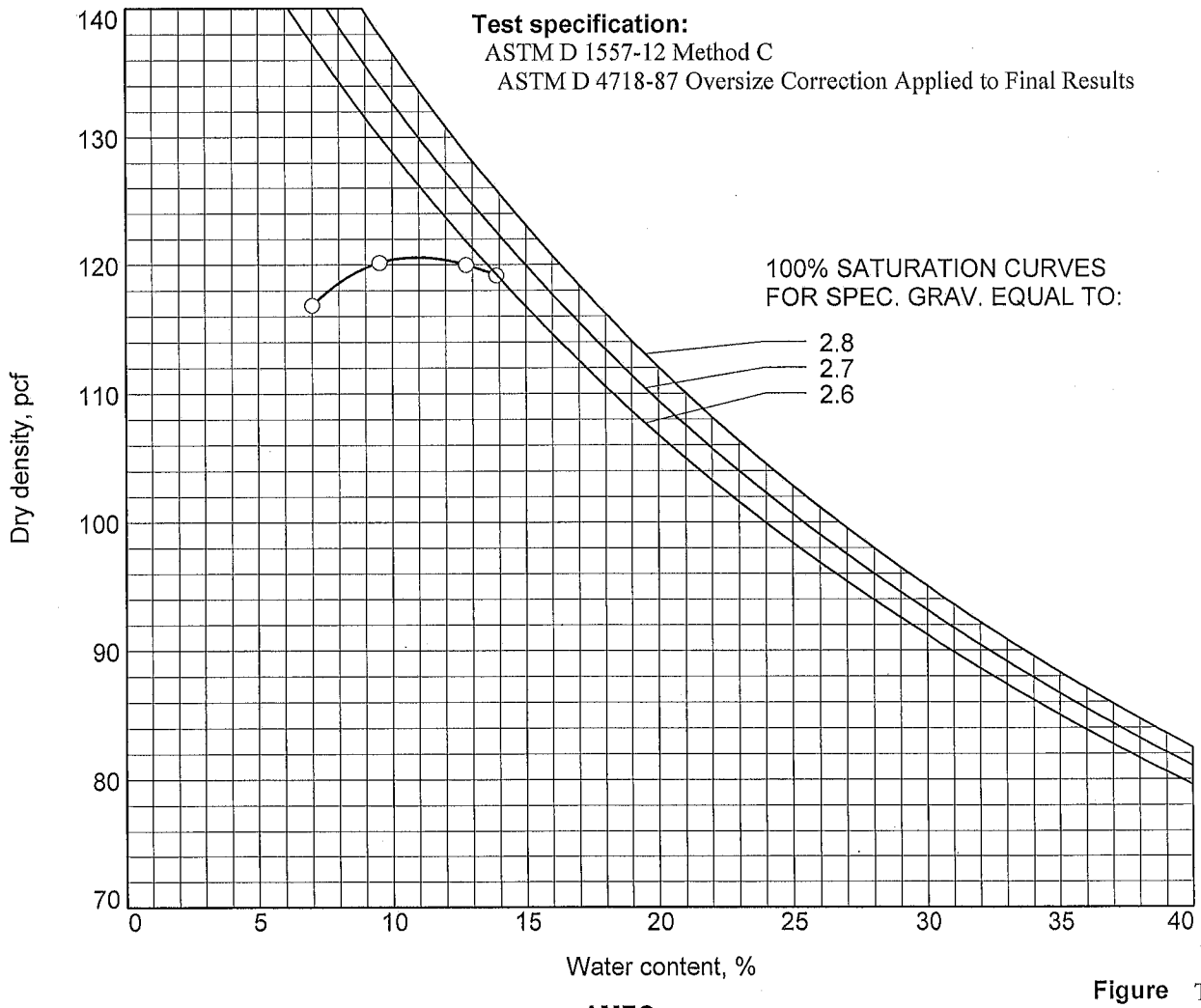


Figure TP-2,SS-1

AMEC

Tested By: CS **Checked By:** LBJ

MOISTURE DENSITY TEST DATA

1/13/2014

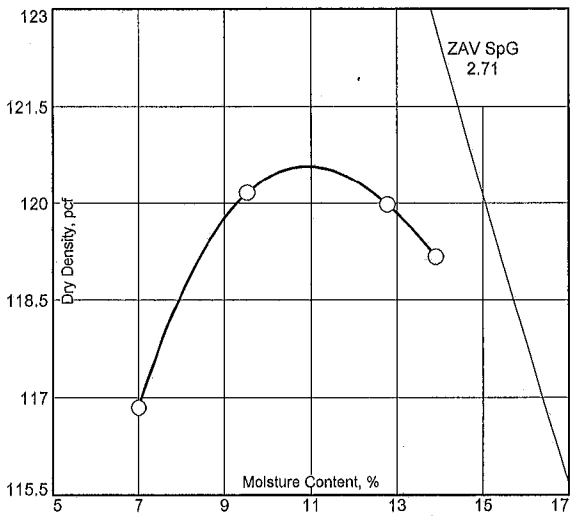
Client: Bechtel Project No: 25847-601
Project: Clinch River SMR Project
Project Number: 6464131072
Location: TP-2
Depth: 1-2.5 (Bulk) **Sample Number:** S-1
Description: Brown Sandy Lean CLAY
Liquid Limit: 46 **Plasticity Index:** 27 **Natural Moisture:** 16.5
Date: 10/20/13 **USCS Classification:** CL **AASHTO Classification:** A-7-6(13)
Testing Remarks: Specifc Gravity is assumed
Hammer Type : Automatic
Preparation Method: Dry
Tested by: CS CD **Checked by:** LBJ

Test Data and Results For Curve TP-2,S-1

Test Specification:

Type of Test: ASTM D 1557-12 Method C

Mold Dia: 6.00 **Hammer Wt.:** 10. lbs **Drop:** 18" **Layers:** 5 **Blows per Layer:** 56



Point No.	1	2	3	4
Wt. M+S	9975.6	10199.2	10325.0	10339.5
Wt. M	5723.9	5723.9	5723.9	5723.9
Wt. W+T	826.9	930.9	795.7	844.6
Wt. D+T	781.7	875.4	739.1	777.2
Tare	136.2	292.5	296.0	292.2
Moist.	7.0	9.5	12.8	13.9
Dry Den.	116.8	120.2	120.0	119.2

Rock Corrected Results: Max. Dry Den.= 122.7 pcf Opt. Moist.= 10.3%
Uncorrected Results: Max. Dry Den.= 120.6 pcf Opt. Moist.= 10.9%

Rock Correction Data:

Correction Method: ASTM D 4718-87

Percentage of Oversize Material (%> 3/4 in.): 6.1 **Bulk Specific Gravity of Oversize Material:** 2.700

Oversize Material Moisture Content: .7

Note: the rock correction was applied to the calculated max. density and opt. moisture values.

ASTM D1557-12

Project No.: 6464131072 **Date:** 10/18/13
Project: Clinch River SMR Project
Client: Bechtel Project No: 25847-601
Source of Sample: TP-3 **Depth:** 3-6' (Bulk)
Sample Number: S-1
Remarks: Hammer Type: Automatic
Preparation Method: Dry

MATERIAL DESCRIPTION

Description: Brownish Red Clayey SAND

Classifications - **USCS:** SC **AASHTO:** A-7-6(7)
Nat. Moist. = 20.9 %
Liquid Limit = 58
Sp.G. =
Plasticity Index = 31
% < No.200 = 41.0 %

TEST RESULTS
Maximum dry density = 105.4 pcf
Optimum moisture = 17.4 %

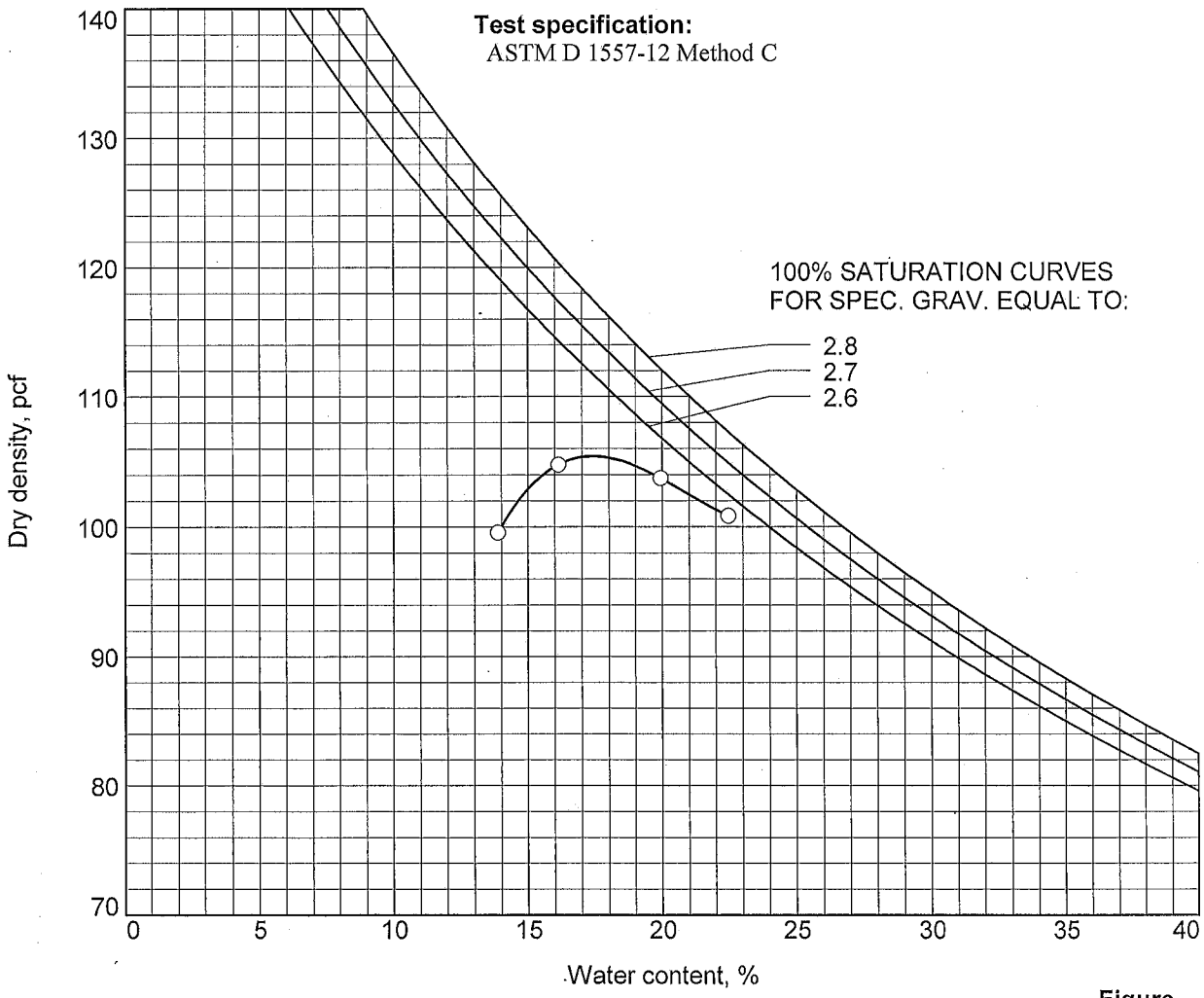


Figure TP-3,S-1

AMEC

Tested By: CS **Checked By:** LBJ

MOISTURE DENSITY TEST DATA

1/13/2014

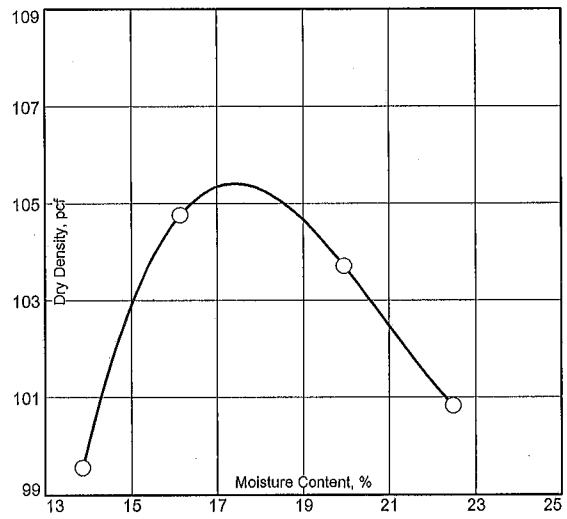
Client: Bechtel Project No: 25847-601
Project: Clinch River SMR Project
Project Number: 6464131072
Location: TP-3
Depth: 3-6' (Bulk) **Sample Number:** S-1
Description: Brownish Red Clayey SAND
Liquid Limit: 58 **Plasticity Index:** 31 **Natural Moisture:** 20.9
Date: 10/18/13 **USCS Classification:** SC **AASHTO Classification:** A-7-6(7)
Testing Remarks: Hammer Type: Automatic
Preparation Method: Dry
Specific Gravity is assumed = 2.700
Tested by: CS **Checked by:** LBJ
Percent passing 3/4 in. sieve: 95.8

Test Data and Results

Test Specification:

Type of Test: ASTM D 1557-12 Method C

Mold Dia: 6.00 **Hammer Wt.:** 10. lbs **Drop:** 18" **Layers:** 5 **Blows per Layer:** 56



Point No.	1	2	3	4
Wt. M+S	9579.2	9861.2	9954.3	9923.1
Wt. M	5723.9	5723.9	5723.9	5723.9
Wt. W+T	808.4	699.8	791.3	757.2
Wt. D+T	727.6	643.7	707.2	672.0
Tare	145.0	295.9	285.6	292.8
Moist.	13.9	16.1	19.9	22.5
Dry Den.	99.6	104.8	103.7	100.8

Test Results: Max. Dry Den.= 105.4 pcf Opt. Moist.= 17.4%