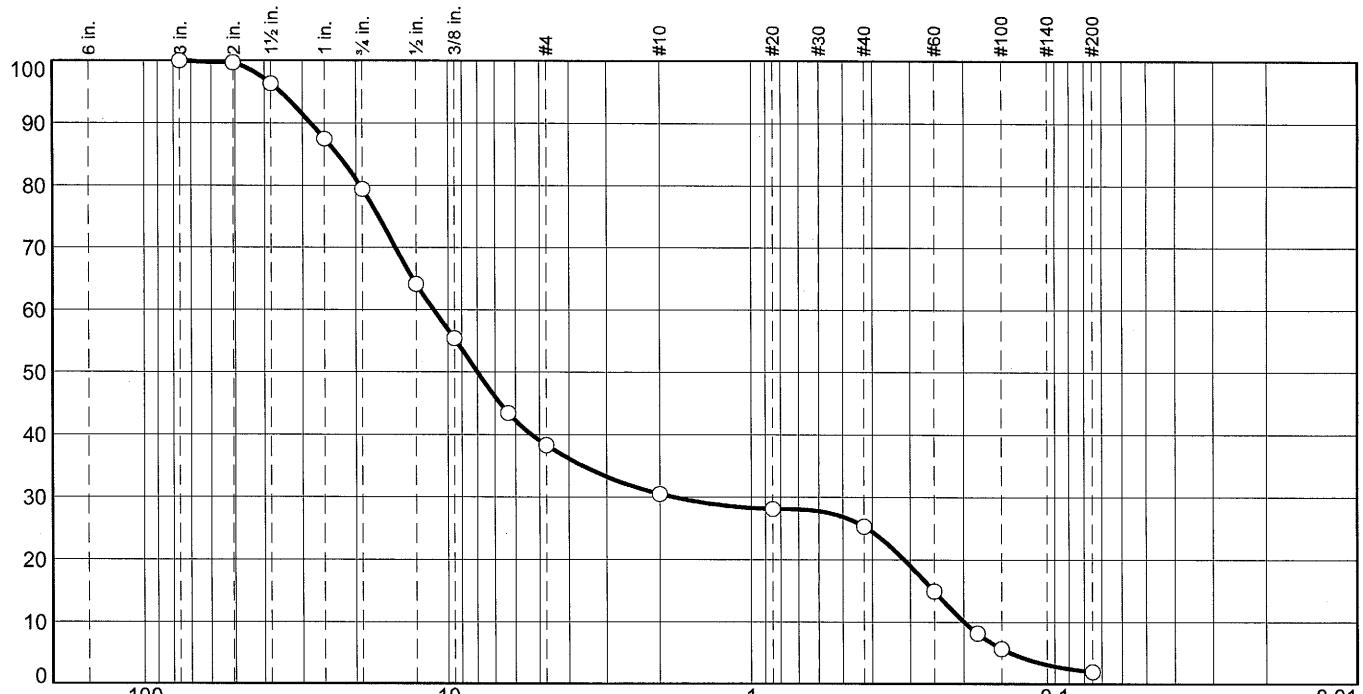


Doyon Utilities J101395, J101396, J101397
 Utility Service Extension to Aircraft Parts Storage-FTW336A
 Fort Wainwright, Alaska

SUBMITTAL CERTIFICATION FORM			
CONTRACTOR'S NAME:	TAR/TBI Construction LLC		
PROJECT NAME:	Utility Service Ext APS 336A		
DU JOB NO:	J101395, J101396, and J101397		
As Prime Contractor, we checked this submittal and we certify it is correct, complete, and in compliance with Contract Drawings and Specifications. All affected Contractors and suppliers are aware of, and will integrate this submittal into their own work.			
SUBMITTAL NUMBER	4	DATE RECEIVED	8-8-10
REVISION NUMBER		DATE RECEIVED	
SPECIFICATION SECTION NUMBER /PARAGRAPH NUMBER	02200 1.3 B 1a		
DRAWING NUMBER			
SUBCONTRACTOR'S NAME	HC Construction		
SUPPLIER'S NAME			
MANUFACTURER'S NAME			
NOTE: DEVIATIONS FROM CONTRACT DOCUMENTS ARE PROPOSED AS FOLLOWS (Indicate "NONE" if there are no deviations)			
None			
CERTIFIED BY	Kris Manke		

Particle Size Distribution Report



% +3"	% Gravel		% Sand		% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt
	0	21	41	7	6	23

Test Results (ASTM C 136 & ASTM C 117)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3	100		
2	100		
1.5	96		
1	87		
¾	79		
½	64		
3/8	55		
1/4	43		
#4	38		
#10	31		
#20	28		
#40	25		
#60	15		
#80	8		
#100	6		
#200	2.0		

* (no specification provided)

<u>Material Description</u>			
Pit Run			
PL=	<u>Atterberg Limits (ASTM D 4318)</u>		
	LL=	PI=	
<u>Classification</u>			
USCS (D 2487)=	GW	AASHTO (M 145)=	
<u>Coefficients</u>			
$D_{90}=28.1689$	$D_{85}=23.0351$	$D_{60}=11.1387$	
$D_{50}=8.0001$	$D_{30}=1.8046$	$D_{15}=0.2506$	
$D_{10}=0.1992$	$C_u=55.93$	$C_c=1.47$	
<u>Remarks</u>			
Max Dry Density = 143.4 pcf @ 6.3% moisture			
Date Received: 6/5/10	Date Tested: 6/7/10		
Tested By: CM			
Checked By: SM			
Title: Engineer			

Source of Sample: Dennis Rd Pit
Sample Number: 10-585

Depth: Stockpile

Date Sampled: 6/5/10

Mappa TestLab

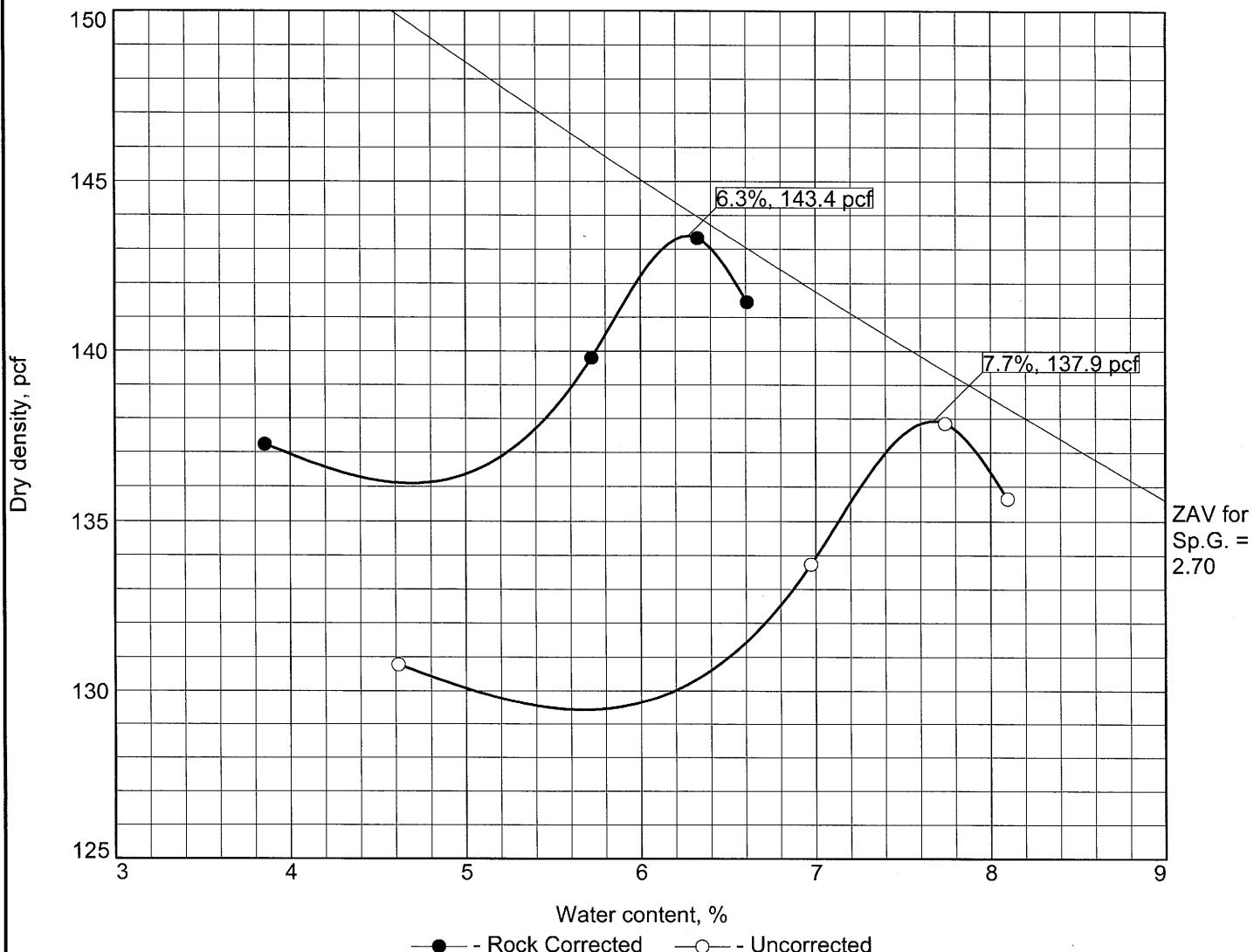
North Pole, Alaska

Client: HC Contractors
Project: 2010 QC Testing

Project No: 2010-032

Figure

COMPACTION TEST REPORT For Curve No. 10-585



Test specification: ASTM D 1557-09 Method C Modified
ASTM D 4718-87 Oversize Corr. Applied to Each Test Point

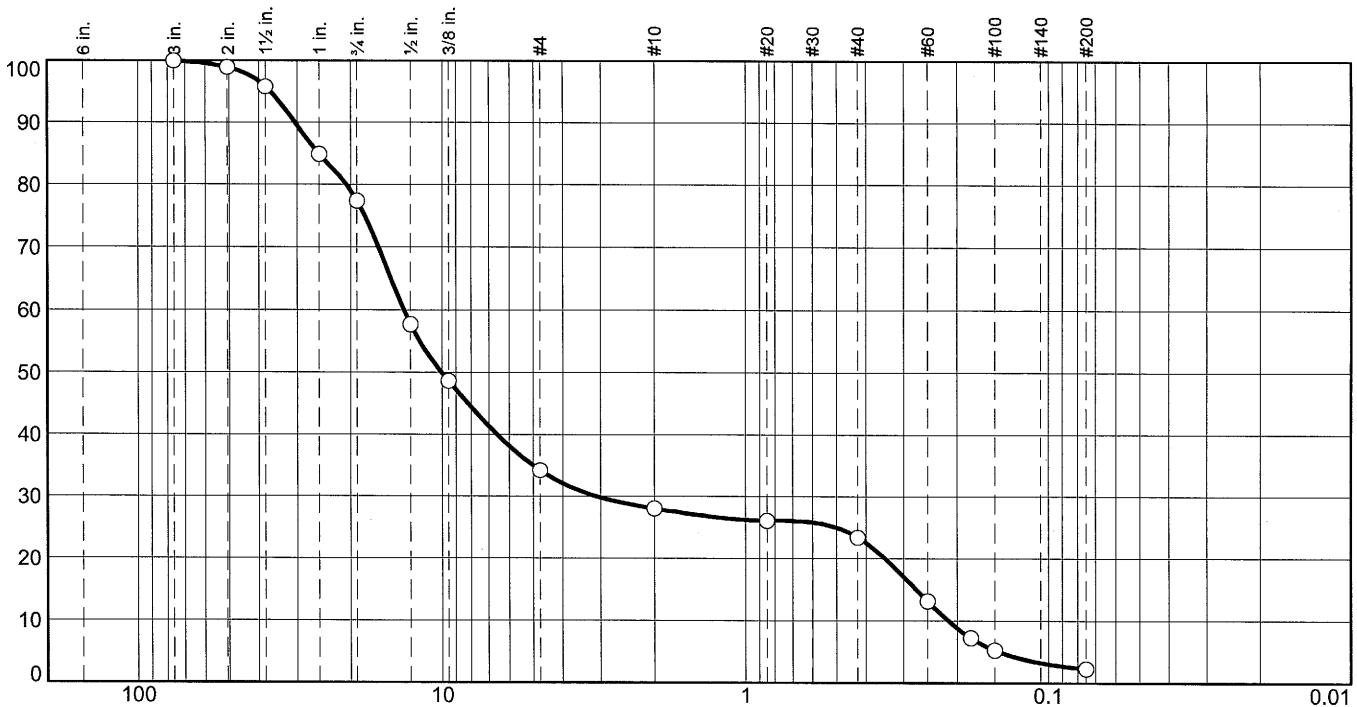
Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/4 in.	% < No.200
	USCS	AASHTO						
Stockpile	GW		4.6	2.7			21	2.0

ROCK CORRECTED TEST RESULTS			UNCORRECTED		MATERIAL DESCRIPTION			
Maximum dry density = 143.4 pcf			137.9 pcf		Pit Run			
Optimum moisture = 6.3 %			7.7 %					
Project No. 2010-032 Client: HC Contractors								
Project: 2010 QC Testing			Date: 6/6/10					
<input checked="" type="radio"/> Sample Source: Dennis Rd Pit Depth: Stockpile Sample No.: 10-585					Remarks: Specific Gravity Assumed			
Mappa TestLab								
North Pole, Alaska					Figure			

Tested By: MM

Checked By: SM

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	
	0	23	43	6	5	21	2

Test Results (ASTM C 136 & ASTM C 117)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3	100	100 - 100	
2	99		
1.5	96		
1	85		
3/4	77		
1/2	58		
3/8	49		
#4	34	0 - 60	
#10	28		
#20	26		
#40	23		
#60	13		
#80	7		
#100	5		
#200	2.3	0 - 5	

* COE Structural

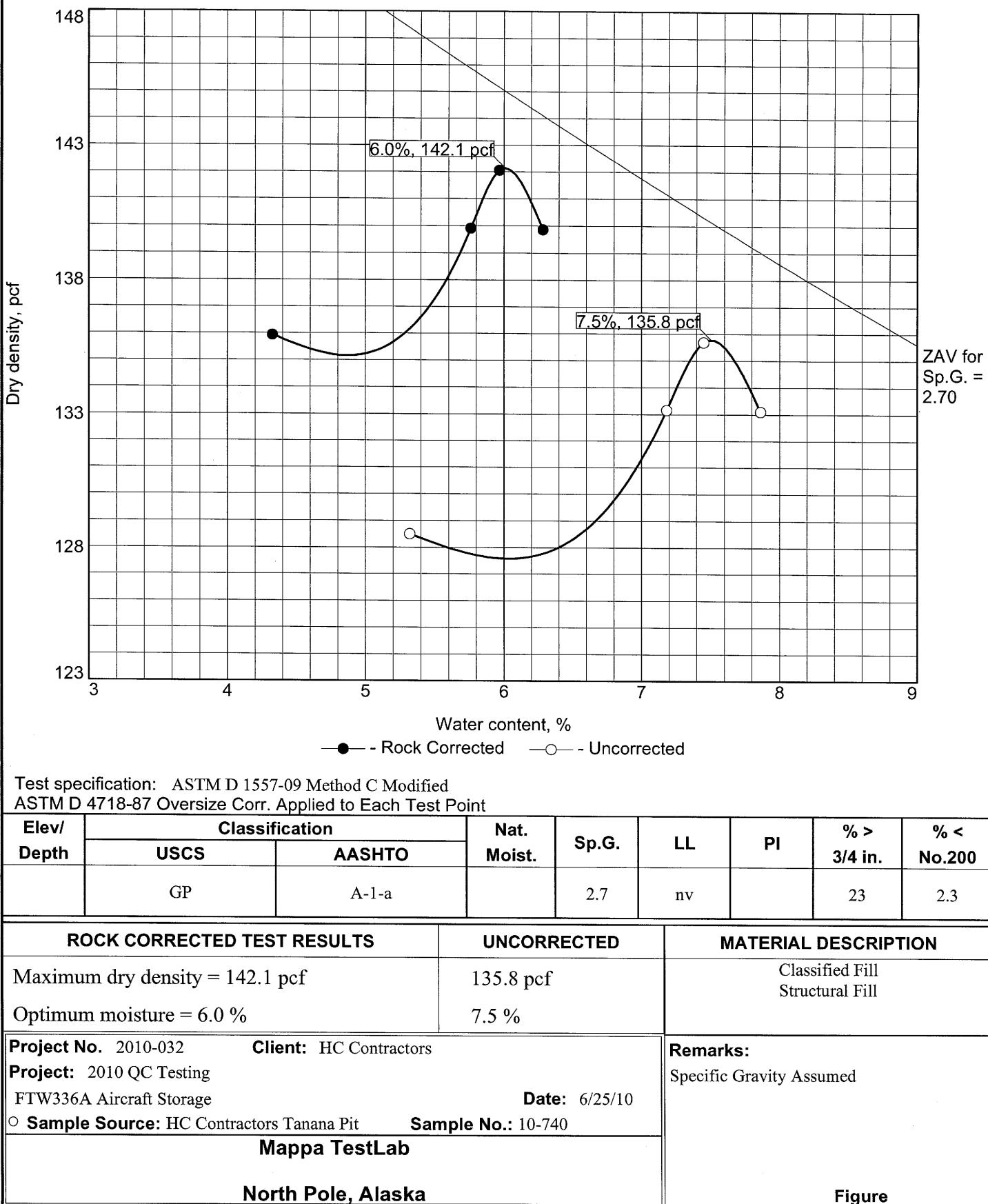
<u>Material Description</u>			
Classified Fill Structural Fill			
<u>Atterberg Limits (ASTM D 4318)</u>			
PL = np	LL = nv	PI =	
<u>Classification</u>			
USCS (D 2487) = GP	AASHTO (M 145) = A-1-a		
<u>Coefficients</u>			
D ₉₀ = 30.5005	D ₈₅ = 25.5504	D ₆₀ = 13.3696	
D ₅₀ = 10.0474	D ₃₀ = 3.1055	D ₁₅ = 0.2725	
D ₁₀ = 0.2137	C _u = 62.58	C _c = 3.38	
<u>Remarks</u>			
Max Dry Density = 142.1pcf @ 6.0% moisture			
% passing #200 base on -3/4" = 2.9%			
Date Received: 6/24/10	Date Tested: 6/25/10		
Tested By: MM			
Checked By: SM			
Title: Engineer			

Source of Sample: HC Contractors Tanana Pit
Sample Number: 10-740

Date Sampled: JT

Mappa TestLab	Client: HC Contractors
	Project: 2010 QC Testing
	FTW336A Aircraft Storage
North Pole, Alaska	Project No: 2010-032
	Figure

COMPACTION TEST REPORT For Curve No. 10-740



Tested By: LC

Checked By: SM