



Analytical, Inc

January 22, 2010

Robert Cobbs
TXI
PO Box 380

Savoy, TX 75479
Phone (903) 513-3457
Fax: (903) 965-4368

Dear Robert,

The result from the Saturated Hydraulic Conductivity (Ksat) tests for Gate 3 is listed in the table below.

Lab Number	Sample Description	Ksat (in/hr)
10-007Bu1	Gate 3, Bunker Sand	20.7

ASTM F1815

Please call or email me if you have any questions.

Sincerely,

Jessica L. Beard
Laboratory Director

**833 Gateway Drive NE
East Grand Forks, MN 56721
(701) 746-4300 Fax: (218) 773-3151**

Report Number: LR10-007-Bu1

MATERIALS ANALYSIS REPORT

BUNKER SAND*

Customer Name: TXI
 Customer Address: P.O. Box 380
 City, State, Zip Code: Savoy, TX 75479
 Customer Telephone: 903-513-3457

Date Sample Received: 1/21/2010
 Sample Description: Bunker sand
 Sample Condition: Good Air Dry
 Customer Fax: 903-965-4368

Sample Number	Particle Size Analysis ⁽⁵⁾			Sand Size Distribution ^{(5), (b)}						pH ⁽⁴⁾ (CaCl2 1:1)	
	% Sand	% Silt	% Clay	% Gravel (#10 sieve)	% Very Coarse (#18 sieve)	% Coarse (#35 sieve)	% Medium (#60 sieve)	% Fine (#100 sieve)	% Very Fine ^(c) (#270 sieve)		Coefficient of Uniformity D60/D10
	>92%	≤ 5%	≤ 3%	≤ 3% gravel ≤ 10% combined		≥ 60 %		≤ 20%	< 5%	---	---
10-007Bu1	99.19	0.90		0.10	0.88	19.05	58.57	15.60	4.78	2.11	7.9

Sample Number	Bunker Test ^(c)				Particle Shape ⁽⁵⁾		
	Fried egg kg/cm2	Set-up	Crusting	Munsell Color	Hue/Value/Chroma	Angularity	Sphericity
10-007Bu1	2.7****		none	light yellowish brown	2.5Y 6/3 (moist)	Sub-Angular/Subrounded	Medium

- **** Very low tendency to bury
- *** Slight tendency to bury
- ** Moderate tendency to bury
- * High tendency to bury

(4) ASTM D4972, (5) ASTM 1632
 (b) % retained on sieve
 (c) as defined by USGA specifications

This report applies only to the sample(s) tested. Samples are maintained a maximum of thirty days before disposal. This test report contains confidential information and shall not be reproduced except in full, and with the express written approval of DAKOTA. All tests are performed according to USGA guidelines and ASTM methods. DAKOTA is not responsible for the accuracy of these test methods and makes no claims about their ability to predict performance in actual use.

*This test result is not covered by our current A2LA accreditation.

Member of USGA Proficiency Testing Program
 ASTM Methods: C136, D421, D2974, D2976, D4972, F1632, F1647, F1815
 ALL IN-HOUSE REFERENCE MATERIALS TESTED WITHIN LIMITS YES NO - EXPLAIN

Member of the Putting Greens Materials Testing Technical Advisory Committee

Ksat - adjusted to 8%M
 Comments:



By: Jessica L. Beard Title: Laboratory Director



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