

# MATERIALS ANALYSIS REPORT

Bells Savoy Golf Course Sand



**DAKOTA**  
Analytical, Inc.

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Customer Name: **Nesse Materials** Date Sample Received: 12/13/2005  
Customer Address: 625 W Centerville, Suite 109 Sample Description: Golf Course Sand  
City, State, Zip Code: Garland, TX 75041 Sample Condition: Good 2.4 %M  
Customer Telephone: 972-278-1585 Customer Fax: 214-853-5943

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Sample Number	Lab Number	Ksat <sup>(1)</sup> (in/hr)	Porosity <sup>(1)</sup>			Bulk Density <sup>(1)</sup> (g/cm <sup>3</sup> )	Particle Density <sup>(1)</sup> (g/cm <sup>3</sup> )	% Organic Matter <sup>(3)</sup> (LOI)	Conductivity <sup>(2)</sup> (mmhos)	pH <sup>(4)</sup> (CaCl2 1:1)
			% Total	% Capillary <sup>(a)</sup>	% Air <sup>(a)</sup>					
USGA Values		≥ 6	35-55	15-25	15-30	---	---	---	---	---
Golf Course Sand	LR05-303A	38								
Within Range or Not		OK								

Particle Size Analysis <sup>(5)</sup>			Sand Size Distribution <sup>(5), (b)</sup>						D <sub>85</sub>	
% Sand	% Silt	% Clay	% Gravel (#10 sieve)	% Very Coarse (#18 sieve)	% Coarse (#35 sieve)	% Medium (#60 sieve)	% Fine (#100 sieve)	% Very Fine <sup>(c)</sup> (#140 sieve) (#270 sieve)		
>92 %	≤ 5%	≤ 3%	≤ 3% gravel ≤ 10% combined		≥ 60 %		≤ 20%	≤ 5%		---
98.5	0.92		0.55	3.41	23.6	56.4	13.4			1.63
OK	OK		OK	OK	OK	OK	OK			OK

Sample Number	Peat Analysis				Gravel Size Distribution <sup>(8),(b)</sup>					
	% Organic <sup>(6)</sup>	% Ash <sup>(6)</sup>	% Water <sup>(6)</sup>	pH <sup>(7)</sup>	% 1/2"	% 3/8"	% 1/4"	10 Mesh	18 Mesh	Pan
	≥ 85%	≤ 15%	---	---	---	---	---	---	---	---

Particle Shape <sup>(5)</sup>	
Angularity	Sphericity
sub-angular/sub-round	medium
OK	OK

(1) ASTM F1815, (2) Soil EC 1:2 soil H2O ratio method,  
(3) ASTM F1647, (4) ASTM D4972, (5) ASTM 1632,  
(6) ASTM D2974, (7) ASTM D2976, (8) ASTM C136,  
(a) determined at 30 cm tension, (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.

Member of the Putting Greens Materials Testing Technical Advisory Committee  
Member of USGA Proficiency Testing Program

ALL IN-HOUSE REFERENCE MATERIALS TESTED WITHIN LIMITS  YES  NO - EXPLAIN

A2LA Approved Methods: ASTM C136, D421, D2974, D2976, D4972, F1632, F1647, F1815

Ksat adjusted to 8%M. PS Prof. Test results are good.

Comment:

By: *Diane K. Rindt* Title: Lab Manager

