

September 3, 2010

Julianne Venezia
Jersey Soil Blending
PO BOX 525
Nutley, NJ 07110

Re: Soil Sample Results

Julianne,

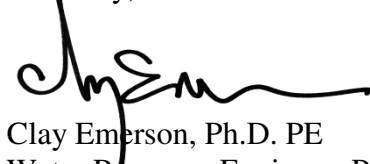
We received the soil samples on August 31th, and have completed the requested testing in conformance with applicable ASTM standard testing techniques including ASTM F1632 (Standard Test Method for Particle Size Analysis and Sand Shape Grading of Golf Course Putting Green and Sports Field Rootzone Mixes. At your request we have compared the grain size analysis results to the guidelines for fairway topdressing, athletic field construction, and USGA Guidelines for greens construction. A summary table of the results and guidelines is provided below.

Sample/Reference	USDA Textural Designations			Dry Sieve Sand Size Distribution					
	Sand	Silt	Clay	No. 10 Gravel (2mm)	No. 18 Very Coarse (1mm)	No. 35 Coarse (0.5mm)	No. 60 Medium (0.25mm)	No. 100 Fine (0.15mm)	No. 270 Very Fine (0.05mm)
"Q" Sample	99.6	0.2	0.2	0.0	0.0	53	38	12	3.3
"P" Sample	99.5	0.1	0.1	0.3	10	35	38	13	3.4
USGA Greens Const.		<5	<3	<3% Gravel and <10% Gravel and V.Coarse		>60%		<20%	<5%
Fairway Topdress Guidelines			<3	<5% Gravel and <20% Gravel and V.Coarse		>60%		<20%	<5%

Both the "Q" and "P" meet the USGA guidelines for greens construction for all size classes and are in full compliance with fairway topdress guidelines. Both samples displayed very similar grain size distributions.

Should you have any questions, please feel free to contact me. We look forward to working with you again in the near future.

Sincerely,



Clay Emerson, Ph.D. PE
Water Resource Engineer, Princeton Hydro, LLC

Encl: Grain Size Analysis Results
Invoice

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■ 1200 Liberty Place
□ 120 East Uwchlan Avenue
□ 20 Bayberry Road

Princeton Hydro, LLC
Ringoes, NJ 08551
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Laboratory Testing Program

Project Name:	Jersey Soil Blending		
Project Number:	1088.005	Task No.:	1
Location:	New Jersey		
Client:	Jersey Soil Blending		
Owner:			
Client Address 1:	Box 525		
Client Address 2:			
Client City:	Nutley		
Client State:	New Jersey		
Client Zip:	07110		
Block:			
Lot:			

Sample Information

Laboratory Number	108800520100901-1	108800520100901-2		
Exploration Number	1	1		
Sample Number	Q Sand	P Soil		
Depth Range (ft)	NA	NA		

Requested Testing

ASTM D 2216 -05	x	x		
ASTM C 117 – 04				
ASTM C 136 – 06	x	x		
ASTM D 422 – 63 (2002)				
ASTM D 2318				
ASTM D 2937 – 04				
ASTM D 2974				
ASTM D 4318 – 05				
ASTM D 2488				

C 136 – 06
Sieve Analysis of Fine and Coarse Aggregates

Laboratory Number	108800520100901-1	108800520100901-2
Exploration Number	1	1
Sample Number	Q Sand	P Soil
Depth Range	NA	NA
ASTM C 117 Data Available:	Yes	Yes
(§ 7.7) Use C 117 Info?	n	n
(§ 8.5.1) No. 10 Split?	n	n
Total Sample, g	1147.6	705.3
Mass Retained on No. 10, g	0	0
Mass Used in Testing, g	1147.6	705.3
Mass Retained on Sieves, g		
3 in	0.00	0.00
2 in	0.00	0.00
1.5 in	0.00	0.00
1.0 in	0.00	0.00
0.75 in	0.00	0.00
0.375 in	0.00	0.00
4	0.00	0.00
6	0.00	0.00
8	0.00	0.00
10	2.10	0.90
12		
16		
18	141.40	70.10
20	86.30	51.40
30		
35	314.20	196.40
40	98.00	62.80
50		
60	331.40	206.60
80		
100	132.80	89.10
140	31.70	19.30
200	5.10	3.80
270	1	0.70
Pan	2.3	2.50
Test Results		
Mass Passing Sieves, %		
3 in	100.00	100.00
2 in	100.00	100.00
1.5 in	100.00	100.00
1.0 in	100.00	100.00
0.75 in	100.00	100.00
0.375 in	100.00	100.00
4	100.00	100.00
6	100.00	100.00
8	100.00	100.00
10	100.00	100.00
12	--	--
16	--	--
18	88.00	90.00
20	80.00	83.00
30	--	--
35	53.00	55.00
40	44.00	46.00
50	--	--
60	15.00	16.00
80	--	--
100	4.00	4.00
140	1.00	1.00
200	0.00	0.00
270	0.00	0.00
Fineness Modulus, %, fm	1.73	1.68
ASTM D 2487?		
USC System Symbol	SP	SP
USDA USC Description	Poorly graded sand	Poorly graded sand
QA/QC		
Weight Consistency (§8.7):	Ok	Ok
Tested by:	GA	GA
Data Entry By:	GA	GA
Data Entry Date:	09/01/10	09/01/10
Checked By:	KJM	KJM
Checked Date:	09/01/10	09/01/10

D 2216 - 05
Moisture Content

Test Method: Method A
 Method B

Laboratory Number	108800520100901-1 108800520100901-2	
Exploration Number	1	1
Sample Number	Q Sand	P Soil
Depth Range	NA	NA
Container/ Lid Number	A2	2
Container Mass, g (Mc)	14.3	18.7
Container + Moist Specimen Mass, g (Mcms)	1169	733.6
Date / Time in oven	07/28/2010 00:00	
Initial Container+Oven Dry Specimen Mass, g	1161.9	724
Date / Time out of oven	07/29/2010 00:00	
Secondary Container+Oven Dry Specimen Mass, g	1161.9	724
Date / Time out of oven	07/29/2010 02:00	
Final Container+Oven Dry Specimen Mass, g, (Mcfs)	1161.9	724
Date / Time out of oven	07/29/2010 02:00	
Mass of Water, g, Mw = Mcms - Mcfs	7.10	9.60
Mass of Solids, Ms = Mcfs-Mc	1147.60	705.30
Water Content, %, w = (Mw/Ms)x100	1.00	1.00
Unified Soil Classification Group (Visual)	Sand	Sand
Unified Soil Classification Group (Tested)	poorly graded sand	poorly graded sand
Approximate maximum Grain Size		
3in		
1½ in		
¾ in		
3/8 in		
#4		
#10	x	
< #10		x
Tested Maximum Grain Size		
Oven Temperature	110	110
Remarks		
QA/QC		
Sample Size Check: (grams less)	Adequate	Adequate
Tested by:	GA	GA
Data Entry By:	GA	GA
Data Entry Date:	09/01/10	09/01/10
Checked By:	KM	GA
Checked Date:	09/01/10	09/01/10