

Case Narrative

WO#: 1303094

Date: 3/20/2013

Specialty Analytical

CLIENT: Florence Sand Ranch Inc.

Project: Dune Sand

Particle size determination was performed on the submitted "play sand" material. No respirable particles less than 75 microns were present in the material.

Specialty Analytical

Date Reported: 20-Mar-13

CLIENT: Florence Sand Ranch Inc.

Collection Date: 3/13/2013 10:45:00 AM

Project: Dune Sand

Lab ID: 1303094-001

Client Sample ID: Play Sand

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP METALS- TOTAL RECOVERABLE		SW6010C				Analyst: CT
Aluminum	3010	4.63		mg/Kg	1	3/14/2013 12:48:03 PM
Barium	8.07	0.926		mg/Kg	1	3/14/2013 12:48:03 PM
Beryllium	0.184	0.0926		mg/Kg	1	3/14/2013 12:48:03 PM
Calcium	802	4.63		mg/Kg	1	3/14/2013 12:48:03 PM
Chromium	6.86	0.463		mg/Kg	1	3/14/2013 12:48:03 PM
Cobalt	1.44	0.463		mg/Kg	1	3/14/2013 12:48:03 PM
Gold	5.15	4.63		mg/Kg	1	3/14/2013 12:48:03 PM
Iron	3840	1.85		mg/Kg	1	3/14/2013 12:48:03 PM
Magnesium	893	9.26		mg/Kg	1	3/14/2013 12:48:03 PM
Manganese	30.5	0.0926		mg/Kg	1	3/14/2013 12:48:03 PM
Nickel	3.16	0.463		mg/Kg	1	3/14/2013 12:48:03 PM
Phosphorus	110	4.63		mg/Kg	1	3/14/2013 12:48:03 PM
Potassium	231	18.5		mg/Kg	1	3/14/2013 12:48:03 PM
Sodium	51.6	9.26		mg/Kg	1	3/14/2013 12:48:03 PM
Strontium	5.33	2.31		mg/Kg	1	3/14/2013 12:48:03 PM
Titanium	182	0.463		mg/Kg	1	3/14/2013 12:48:03 PM
Vanadium	7.66	0.926		mg/Kg	1	3/14/2013 12:48:03 PM
Zinc	7.25	0.926		mg/Kg	1	3/14/2013 12:48:03 PM
ICP METALS- TOTAL RECOVERABLE		SW6010C				Analyst: CT
Silica	2930	4.55		mg/Kg	1	3/14/2013 10:57:00 AM
GRAIN SIZE		D422				Analyst: AT
Particle Size <75 uM	ND	0		wt%	1	3/19/2013 3:30:00 PM

QC SUMMARY REPORT

WO#: 1303094
04-Apr-13

Specialty Analytical

Client: Florence Sand Ranch Inc.
Project: Dune Sand

TestCode: 6010_S

Sample ID: ICV	SampType: ICV	TestCode: 6010_S	Units: mg/Kg	Prep Date:	RunNo: 8815						
Client ID: ICV	Batch ID: 4675	TestNo: SW6010C	SW3050A	Analysis Date: 3/14/2013	SeqNo: 110518						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silica	3960	5.00	4278	0	92.5	90	110				

Sample ID: MB-4675	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date:	RunNo: 8815						
Client ID: PBS	Batch ID: 4675	TestNo: SW6010C	SW3050A	Analysis Date: 3/14/2013	SeqNo: 110519						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silica	ND	5.00									

Sample ID: LCS-4675	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date:	RunNo: 8815						
Client ID: LCSS	Batch ID: 4675	TestNo: SW6010C	SW3050A	Analysis Date: 3/14/2013	SeqNo: 110520						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silica	2620	5.00	2674	0	98.1	75	120				

Sample ID: LCSD-4675	SampType: LCSD	TestCode: 6010_S	Units: mg/Kg	Prep Date:	RunNo: 8815						
Client ID: LCSS02	Batch ID: 4675	TestNo: SW6010C	SW3050A	Analysis Date: 3/14/2013	SeqNo: 110521						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silica	2530	5.00	2374	0	107	75	120	2622	3.40	20	

Qualifiers: B Analyte detected in the associated Method Blank
R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded
S Spike Recovery outside accepted recovery limits

ND Not Detected at the Reporting Limit

QC SUMMARY REPORT

WO#: 1303094
04-Apr-13

Specialty Analytical

Client: Florence Sand Ranch Inc.
Project: Dune Sand

TestCode: 6010_S

Sample ID: CCV	SampType: CCV	TestCode: 6010_S	Units: mg/Kg	Prep Date:	RunNo: 8815						
Client ID: CCV	Batch ID: 4675	TestNo: SW6010C	SW3050A	Analysis Date: 3/14/2013	SeqNo: 110523						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Silica	3900	5.00	4278	0	91.2	90	110				
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Sample ID: ICV	SampType: ICV	TestCode: 6010_S	Units: mg/Kg	Prep Date:	RunNo: 8816						
Client ID: ICV	Batch ID: 4674	TestNo: SW6010C	SW3050B	Analysis Date: 3/14/2013	SeqNo: 110524						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aluminum	260	5.00	250.0	0	104	90	110				
Barium	53.4	1.00	50.00	0	107	90	110				
Beryllium	5.17	0.100	5.000	0	103	90	110				
Calcium	2720	5.00	2500	0	109	90	110				
Chromium	25.4	0.500	25.00	0	102	90	110				
Cobalt	26.3	0.500	25.00	0	105	90	110				
Gold	258	5.00	250.0	0	103	90	110				
Iron	55.0	2.00	50.00	0	110	90	110				
Magnesium	508	10.0	500.0	0	102	90	110				
Manganese	5.02	0.100	5.000	0	100	90	110				
Nickel	26.7	0.500	25.00	0	107	90	110				
Phosphorus	2670	5.00	2500	0	107	90	110				
Potassium	998	20.0	1000	0	99.8	90	110				
Sodium	2640	10.0	2500	0	106	90	110				
Strontium	131	2.50	125.0	0	105	90	110				
Titanium	26.0	0.500	25.00	0	104	90	110				
Vanadium	50.6	1.00	50.00	0	101	90	110				
Zinc	52.1	1.00	50.00	0	104	90	110				

Qualifiers: B Analyte detected in the associated Method Blank
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QC SUMMARY REPORT

WO#: 1303094
04-Apr-13

Specialty Analytical

Client: Florence Sand Ranch Inc.
Project: Dune Sand

TestCode: 6010_S

Sample ID: ICV	SampType: ICV	TestCode: 6010_S	Units: mg/Kg	Prep Date:	RunNo: 8816						
Client ID: ICV	Batch ID: 4674	TestNo: SW6010C	SW3050B	Analysis Date: 3/14/2013	SeqNo: 110524						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: MB-4674	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 3/14/2013	RunNo: 8816						
Client ID: PBS	Batch ID: 4674	TestNo: SW6010C	SW3050B	Analysis Date: 3/14/2013	SeqNo: 110525						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aluminum	ND										
Barium	ND										
Beryllium	ND										
Calcium	ND										
Chromium	ND										
Cobalt	ND										
Gold	ND										
Iron	ND										
Magnesium	ND										
Manganese	ND										
Nickel	ND										
Phosphorus	ND										
Potassium	ND										
Sodium	ND										
Strontium	ND										
Titanium	ND										
Vanadium	ND										
Zinc	ND										

Qualifiers: B Analyte detected in the associated Method Blank
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QC SUMMARY REPORT

WO#: 1303094
04-Apr-13

Specialty Analytical

Client: Florence Sand Ranch Inc.
Project: Dune Sand

TestCode: 6010_S

Sample ID: LCS-4674	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 3/14/2013	RunNo: 8816
Client ID: LCSS	Batch ID: 4674	TestNo: SW6010C	SW3050B	Analysis Date: 3/14/2013	SeqNo: 110526

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	251	5.00	250.0	0	100	80	120				
Barium	51.3	1.00	50.00	0	103	85.7	110				
Beryllium	4.99	0.100	5.000	0	99.8	89.2	112				
Calcium	2570	5.00	2500	0	103	88.3	108				
Chromium	24.5	0.500	25.00	0	98.1	84	113				
Cobalt	25.4	0.500	25.00	0	102	80	120				
Gold	254	5.00	250.0	0	101	80	120				
Iron	50.5	2.00	50.00	0	101	87.7	113				
Magnesium	492	10.0	500.0	0	98.5	80	120				
Manganese	4.88	0.100	5.000	0	97.6	80	120				
Nickel	25.5	0.500	25.00	0	102	85.5	112				
Phosphorus	2530	5.00	2500	0	101	80	120				
Potassium	973	20.0	1000	0	97.3	87.3	115				
Sodium	2520	10.0	2500	0	101	80	120				
Strontium	125	2.50	125.0	0	100	80	120				
Titanium	25.0	0.500	25.00	0	99.9	80	120				
Vanadium	49.2	1.00	50.00	0	98.4	80	120				
Zinc	50.2	1.00	50.00	0	100	86.8	112				

Sample ID: LCSD-4674	SampType: LCSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 3/14/2013	RunNo: 8816
Client ID: LCSS02	Batch ID: 4674	TestNo: SW6010C	SW3050B	Analysis Date: 3/14/2013	SeqNo: 110527

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	253	5.00	250.0	0	101	80	120	251.2	0.754	20	

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QC SUMMARY REPORT

WO#: 1303094
04-Apr-13

Specialty Analytical

Client: Florence Sand Ranch Inc.
Project: Dune Sand

TestCode: 6010_S

Sample ID: LCSD-4674	SampType: LCSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 3/14/2013	RunNo: 8816						
Client ID: LCSS02	Batch ID: 4674	TestNo: SW6010C	SW3050B	Analysis Date: 3/14/2013	SeqNo: 110527						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	51.9	1.00	50.00	0	104	85.7	110	51.26	1.16	20	
Beryllium	5.03	0.100	5.000	0	101	89.2	112	4.992	0.758	20	
Calcium	2610	5.00	2500	0	104	88.3	108	2573	1.39	20	
Chromium	24.7	0.500	25.00	0	98.8	84	113	24.52	0.691	20	
Cobalt	25.5	0.500	25.00	0	102	80	120	25.44	0.118	20	
Gold	257	5.00	250.0	0	103	80	120	253.5	1.49	20	
Iron	51.2	2.00	50.00	0	102	87.7	113	50.45	1.44	20	
Magnesium	497	10.0	500.0	0	99.5	80	120	492.5	0.990	20	
Manganese	4.94	0.100	5.000	0	98.8	80	120	4.880	1.22	20	
Nickel	25.8	0.500	25.00	0	103	91.8	109	25.50	0.976	20	
Phosphorus	2560	5.00	2500	0	103	80	120	2528	1.41	20	
Potassium	978	20.0	1000	0	97.8	87.3	115	972.9	0.533	20	
Sodium	2570	10.0	2500	0	103	80	120	2525	1.69	20	
Strontium	127	2.50	125.0	0	102	80	120	125.4	1.43	20	
Titanium	25.4	0.500	25.00	0	102	80	120	24.98	1.86	20	
Vanadium	49.5	1.00	50.00	0	99.0	80	120	49.20	0.567	20	
Zinc	50.6	1.00	50.00	0	101	88.1	111	50.18	0.774	20	

Sample ID: CCV	SampType: CCV	TestCode: 6010_S	Units: mg/Kg	Prep Date:	RunNo: 8816						
Client ID: CCV	Batch ID: 4674	TestNo: SW6010C	SW3050B	Analysis Date: 3/14/2013	SeqNo: 110529						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	262	5.00	250.0	0	105	90	110				
Barium	53.3	1.00	50.00	0	107	90	110				

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Specialty Analytical

Client: Florence Sand Ranch Inc.
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TestCode: 6010_S

Sample ID: CCV	SampType: CCV	TestCode: 6010_S	Units: mg/Kg	Prep Date:	RunNo: 8816						
Client ID: CCV	Batch ID: 4674	TestNo: SW6010C	SW3050B	Analysis Date: 3/14/2013	SeqNo: 110529						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	5.24	0.100	5.000	0	105	90	110				
Calcium	2720	5.00	2500	0	109	90	110				
Chromium	25.5	0.500	25.00	0	102	90	110				
Cobalt	26.2	0.500	25.00	0	105	90	110				
Gold	256	5.00	250.0	0	102	90	110				
Iron	54.1	2.00	50.00	0	108	90	110				
Magnesium	519	10.0	500.0	0	104	90	110				
Manganese	5.06	0.100	5.000	0	101	90	110				
Nickel	26.7	0.500	25.00	0	107	90	110				
Phosphorus	2650	5.00	2500	0	106	90	110				
Potassium	1060	20.0	1000	0	106	90	110				
Sodium	2740	10.0	2500	0	110	90	110				
Strontium	131	2.50	125.0	0	105	90	110				
Titanium	26.3	0.500	25.00	0	105	90	110				
Vanadium	51.2	1.00	50.00	0	102	90	110				
Zinc	52.8	1.00	50.00	0	106	90	110				

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