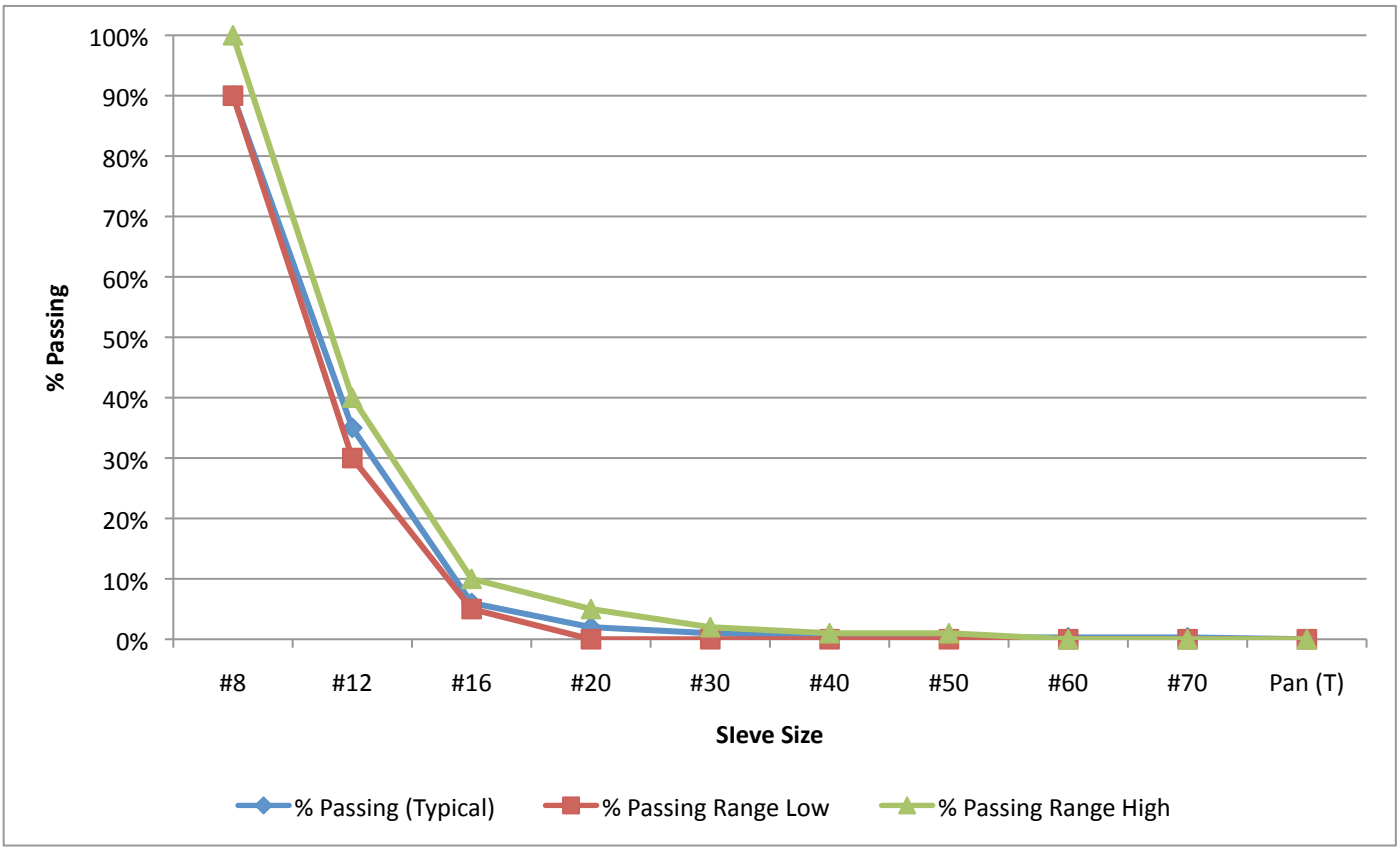
SAND EXPRESS

BLASTSAND (Coarse)

Typical Gradation Analysis			
Sieve Size	% Passing (Typical)	% Passing Range	% Retained (Individual)
		Low / High	
#8	90%	90% / 100%	10%
#12	35%	30% / 40%	55%
#16	6%	5% / 10%	29%
#20	2%	0% / 5%	4%
#30	1%	0% / 2%	1%
#40	0.5%	0% / 1%	0.5%
#50	0.3%	0% / 1%	0.2%
#60	0.3%	0% / 0%	0%
#70	0.3%	0% / 0%	0%
Pan (T)	0%	0% / 0%	0.3%

Fineness Modulus: 6.65

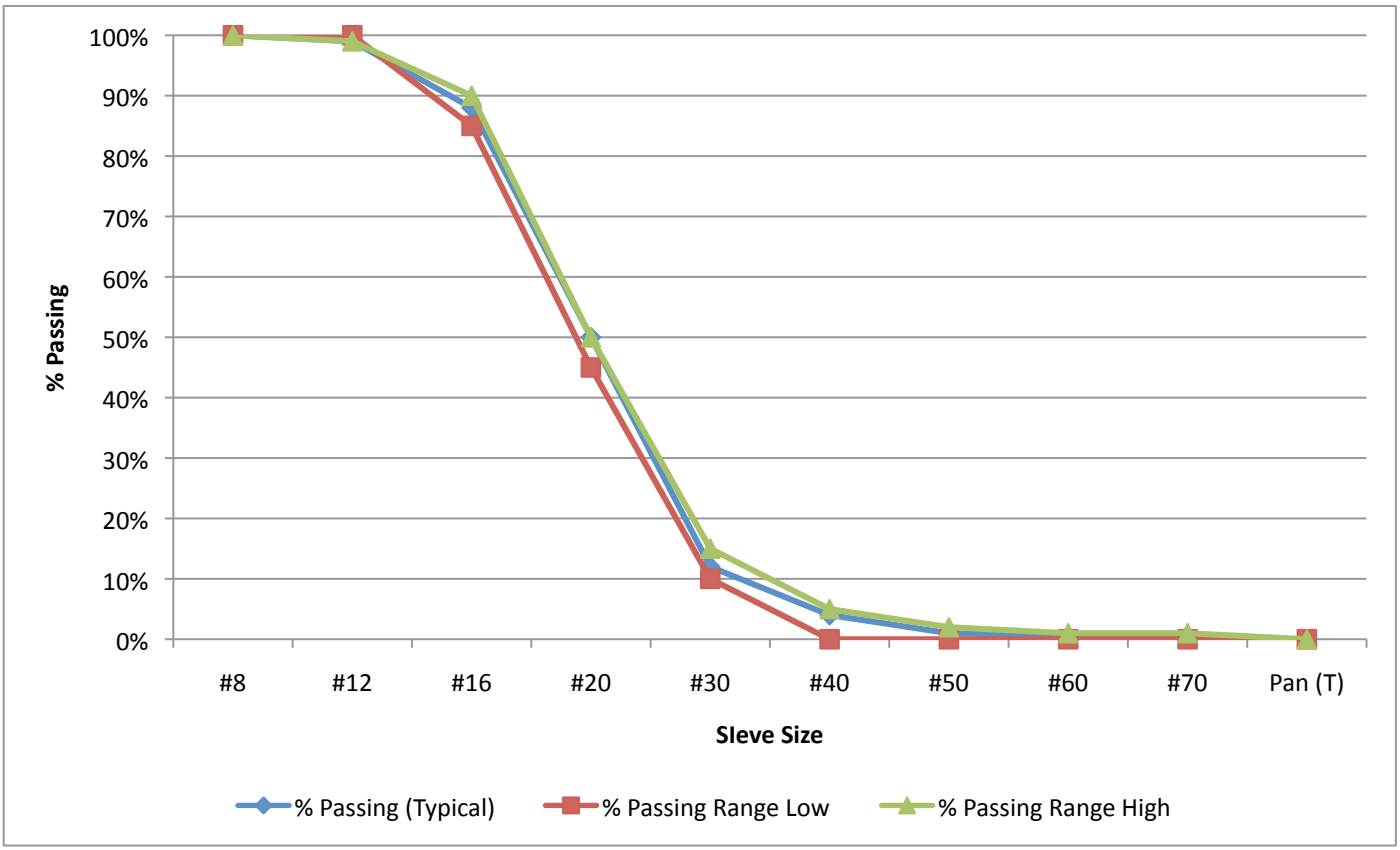


SAND EXPRESS

BLASTSAND (Medium)

Typical Gradation Analysis			
Sieve Size	% Passing (Typical)	% Passing Range	% Retained (Individual)
		Low / High	
#8	100%	100% / 100%	0%
#12	99.0%	100% / 99%	1.0%
#16	88.0%	85% / 90%	11.0%
#20	50.0%	45% / 50%	38.0%
#30	12.0%	10% / 15%	38.0%
#40	4.0%	0% / 5%	8.0%
#50	1.0%	0% / 2%	3.0%
#60	0.5%	0% / 1%	0.5%
#70	0%	0% / 1%	0%
Pan (T)	0%	0% / 0%	0.5%

Fineness Modulus: 4.46

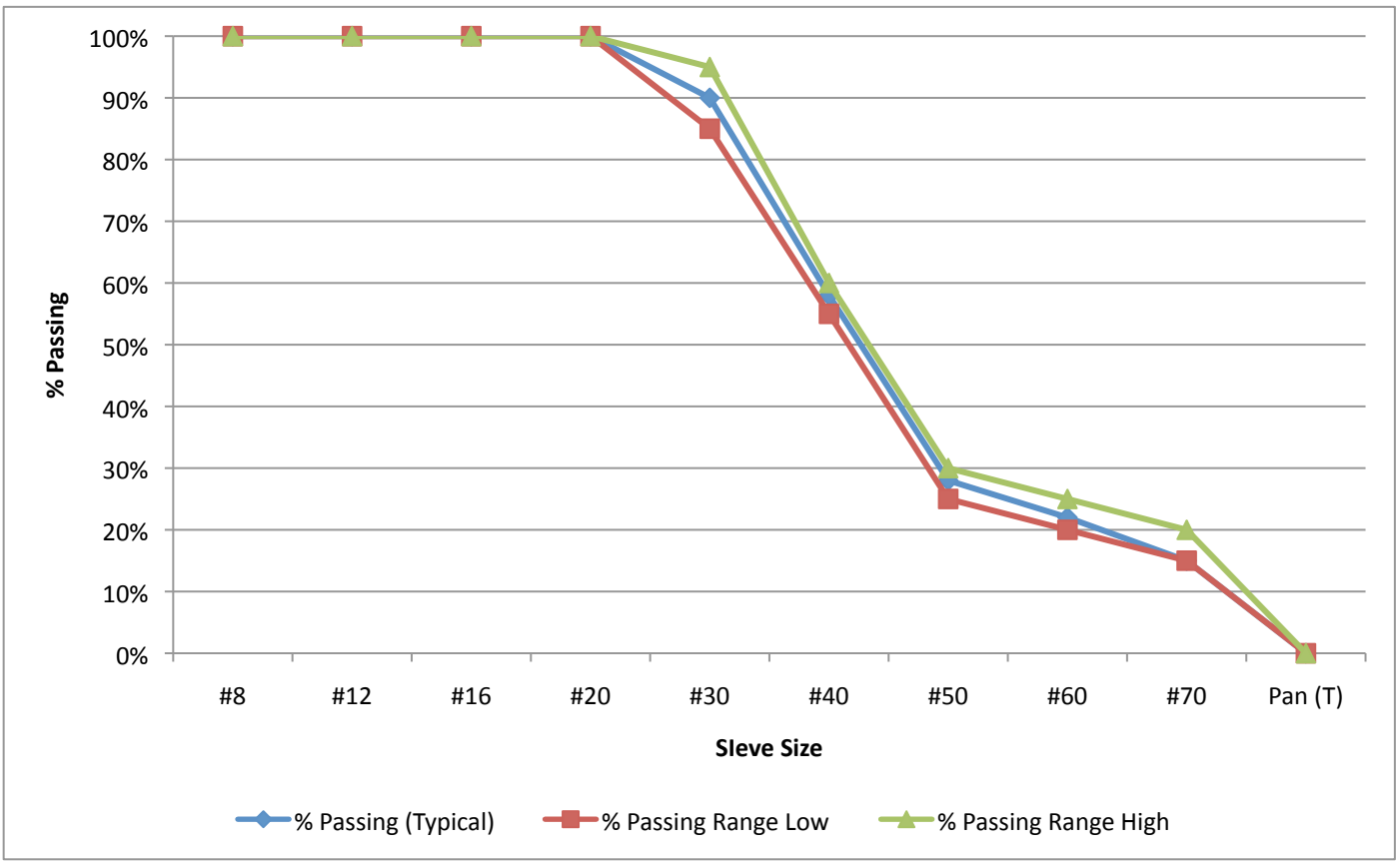


SAND EXPRESS

BLASTSAND (Fine)

Typical Gradation Analysis				
Sieve Size	% Passing (Typical)	% Passing Range		% Retained (Individual)
		Low	High	
#8	100%	100%	100%	0%
#12	100%	100%	100%	0%
#16	100%	100%	100%	0%
#20	100%	100%	100%	0%
#30	90%	85%	95%	10%
#40	58%	55%	60%	32%
#50	28%	25%	30%	30%
#60	22%	20%	25%	6%
#70	15%	15%	20%	7%
Pan (T)	0%	0%	0%	15%

Fineness Modulus: 2.02



SAND EXPRESS

Acid Solubility Report

SAND ANALYSIS REPORT

Terracon

Date of Service: August 4, 2011
Client No.:
Client: Quikrete
Attn: Wren Wickliffe
1083 Kleimann Lane
Columbus, TX 78934

Report No.: 92091371.0012
Project No.: 92091371
Project: Quikrete
Laboratory Analysis
Columbus, Texas

Sample I.D.: See Below
Sample Source: Unknown
Date Sampled: Various
Sampled By: Client

Sample ID	*Result*	*Specification*
Blasting Sand #4 - Medium	1.2	*5% Maximum*
Dried Concrete Sand	*1.2*	*5% Maximum*
4H Ranch Concrete Sand	*1.2*	*5% Maximum*

Comments: Acid Soubility per AWWA B100.5.3.1

Terracon

Report Distribution:
(1) Wren Wickliffe / wwickliffe@quikrete.com

David J. Marsh, P.G.
Sr. Project Manager

October 13, 2011
Lab no. 211599

Mr. John Myers
Quikrete - Colorado
2660 West 64th Avenue
Denver, Colorado 80221

Dear Mr. Myer:

Enclosed are the x-ray fluorescence (XRF) and x-ray diffraction (XRD) results for your sample, “Blast Sand #4.” This report will be mailed to you and emailed to you and Don Winters.

A representative portion of the sample was ground to approximately -400 mesh in a steel swing mill and then analyzed by our standard XRF procedure for 31 major, minor and trace elements. The relative precision/accuracy for this procedure is ~5–10% for major–minor elements and ~10–15% for trace elements (those elements listed in ppm) at levels greater than twice the detection limit in samples of average geologic composition. A replicate sample and a standard reference material ("GSP-2" a USGS standard rock) were analyzed with the sample to demonstrate analytical reproducibility for your sample and analytical accuracy for a geologic standard, respectively. The accepted ("known") values for the quality control standard are listed with the XRF results.

A portion of the ground sample was packed into a well-type plastic holder and then scanned with the diffractometer over the range, 3-61°2θ using Cu-Kα radiation. The results of the scan are summarized as approximate mineral weight percent concentrations on the enclosed table labeled, “XRD Results.” Estimates of mineral concentrations were made using our XRF-determined elemental composition and the relative peak heights/areas on the XRD scan. The detection limit for an average mineral in this sample is ~1-3% and the analytical reproducibility is approximately equal to the square root of the amount. "Unidentified" accounts for that portion of the scan which could not be resolved.

Thank you for the opportunity to be of continuing service to Quikrete.

Sincerely,

Peggy Dalheim

Quikrete Colorado
XRF Results for Sample, "#4 Blast Sand"

October 10, 2011
Lab no. 211599

	Wt %											
IDENT	Na_2O	MgO	Al_2O_3	SiO_2	P_2O_5	S	Cl	K_2O	CaO	TiO_2	MnO_2	Fe_2O_3	BaO
SAMPLE	1.34	0.06	6.14	88.2	<0.05	<0.05	<0.02	2.89	0.28	0.04	<0.01	0.77	0.07
Quality Control - Replicate (R) sample and standard reference material (GSP-2) analyzed with sample													
SAMPLE(R)	1.35	0.06	6.15	88.3	<0.05	<0.05	<0.02	2.90	0.28	0.04	<0.01	0.77	0.07
GSP-2-XRF	2.97	1.17	15.5	67.6	0.29	<0.05	<0.02	5.68	2.10	0.66	0.04	4.84	0.15
GSP-2-known	2.78	0.96	14.9	66.6	0.29	----	----	5.38	2.10	0.66	0.04	4.90	0.15

	PPM											
IDENT	V	Cr	Co	Ni	W	Cu	Zn	As	Sn	Pb	Mo	Sr	U
SAMPLE	<10	42	<10	<10	<10	<10	<10	<20	<50	10	<10	95	<20
Quality Control													
SAMPLE(R)	<10	41	<10	<10	<10	<10	<10	<20	<50	11	<10	98	<20
GSP-2-XRF	61	21	<10	12	<10	52	134	<20	<50	48	<10	247	<20
GSP-2-known	52	20	7	17	--	43	120	--	--	42	--	240	2

	PPM				
Ident	Th	Nb	Zr	Rb	Y
SAMPLE	<20	<10	60	63	<10
Quality Control					
SAMPLE(R)	<20	<10	59	65	<10
GSP-2-XRF	91	26	587	217	33
GSP-2-known	105	27	550	245	28

Initial_____

Date_____

Analysis Performed By The Mineral Lab, Inc

Quikrete of Colorado
XRD Results for Sample, “Blast Sand #4”

October 13, 2011
Lab no. 211599

Mineral Name	Chemical Formula	Approx. Wt %
Quartz	SiO_2	70
K-feldspar	$KAlSi_3O_8$	15
Plagioclase feldspar	$(Na,Ca)Al(Si,Al)_3O_8$	12
Mica/illite	$(K,Na,Ca)(Al,Mg,Fe)_2(Si,Al)_4O_{10}(OH,F)_2$	<3
“Unidentified”	?	<5

Initial _____

Date _____

Analysis performed by The Mineral Lab, Inc