



Payne and Dolan of WI  
 Attention: T. Hackett  
 P.O. Box 781  
 Waukesha, WI 53187

Date Received: 02/25/2014  
 Date Reported: 03/06/14 18:01  
 Client Project: Sand  
 Client Project ID: Waukesha Line

Project #: Waukesha Line

**Certificate of Analysis**

This analytical test report shall not be reproduced, except in full, without written permission from SF Analytical Laboratories. All quality control samples and checks were within acceptance limits unless otherwise indicated. Test results pertain only to those items tested. All samples were in good condition when received by the laboratory unless otherwise noted. All LOD/LOQs are adjusted to reflect dilutions.

Analyte	Result	Units	LOD	Dilution Factor	Analyzed	Analyst	Method	Notes
<b>SXB0863-01 Barnlime</b>								
Date Sampled:	02/25/2014	Sample Type: Grab						
Aluminum Oxide	0.33	% Wt.	0.09	1	3/5/14	JTR	SW-846 6010B	
Silicon as SiO2	0.624	% Wt.	0.097	1	3/5/14	JTR	SW-846 6010B	
Calcium Carbonate	55.04	% Wt.	1.13	100	3/5/14	JTR	ASTM	
Sulfur as SO4	0.27	% Wt.	0.03	1	3/5/14	JTR	SW-846 6010B	
Sodium Oxide	<0.06	% Wt.	0.06	1	3/5/14	JTR	SW-846 6010B	
Phosphorus as P2O5	0.06	% Wt.	0.02	1	3/5/14	JTR	SW-846 6010B	
Magnesium Carbonate	45.2	% Wt.	1.6	100	3/5/14	JTR	SW-846 6010B	
Iron (II) Oxide	0.20	% Wt.	0.06	1	3/5/14	JTR	SW-846 6010B	
Titanium Dioxide	<0.08	% Wt.	0.08	1	3/5/14	JTR	SW-846 6010B	
pH	10.68		0.01	1	3/6/14	JTR	T 509 OM-88	
Acid Insoluble Matter	3.83	% Wt.	0.01	1	3/6/14	JTR	ASTM	
Potassium Oxide	0.2	% Wt.	0.05	1	3/5/14	JTR	SW-846 6010B	
Loss on Ignition	0.83	% Wt.	0.01	1	3/4/14	HTM	ASTM	

Matrix spike recoveries for Phosphorus and Sulfur were outside of acceptable range due to matrix effects (likely the high concentration of Mg and Ca). The results for Sulfur and Phosphorus, therefore are to be treated as qualitative. All metals data reflect analysis by ICP-OES.

This report was prepared and printed by:

Josh Rhein, Assistant Specialty and Investigative Manager

