



October 22, 2013

VIA FIRST CLASS U.S. MAIL

Chief, Environmental Enforcement Section  
Environment and Natural Resources Division  
U.S. Department of Justice  
P.O. Box 7611, Ben Franklin Station  
Washington, D.C. 20044-7611

Director, Water Enforcement Division  
Office of Enforcement and Compliance Assurance  
U.S. Environmental Protection Agency  
Mail Code 2243A  
1200 Pennsylvania Ave., NW  
Washington, DC 20460

Director, Water Division  
U.S. Environmental Protection Agency, Region 5  
77 W. Jackson Blvd. (W-15J)  
Chicago, IL 60604

RECEIVED

OCT 28 2013

WATER ENFORCEMENT & COMPLIANCE  
ASSURANCE BRANCH, EPA, REGION 5

Re: *United States v. Lake Michigan Trans-Lake Shortcut, Inc., d/b/a Lake Michigan Carferry Service and S.S. Badger*, No. 1:13-cv-317, DOJ Case No. 90-5-1-1-10771 (W.D. Mich.)

Dear Sir or Madam:

Pursuant to Paragraph 43A of the Amendment to Consent Decree in the above captioned action, enclosed please find the lab analysis of the coal used by the S.S. Badger during the 2013 Operating Season. The lab analysis reports the ash, mercury, and sulfur content of the coal purchased and used during the 2013 Operating Season.

With this communication, Lake Michigan Trans-Lake Shortcut, Inc. has fulfilled the requirements set forth in paragraph 43A of the Amendment to Consent Decree.



Please do not hesitate to contact me if you have questions or require additional information.

Very truly yours,

Charles R. Leonard  
Vice-President, Navigation  
Lake Michigan Carferry Service



# MINERAL LABS INC.

Box 549

Salyersville, Kentucky 41465

Phone (606) 349-6145

Certificate of Analysis

<b>COMPANY REQUESTING ANALYSIS:</b>			<b>Date Analyzed:</b>		5/1/2013
C. Reiss Coal/PO# 118-13 2525 Harrodsburg Rd., Suite 130 Lexington, KY 40504			<b>Lab No.</b>		013024854
			<b>Sampled By/Type:</b>		Lab/Car Top
ID: Lancer: PO# 118-13: Permit# P105: LA# 142: TL# L342:					
<b>PROXIMATE ANALYSIS</b>		<b>As Received</b>	<b>Dry Basis</b>	<b>ULTIMATE ANALYSIS (ASTM D6373)</b>	
% Moisture (3302)		5.66		Moisture	
% Ash (D3174)		5.86	6.21	Carbon	
% Volatile (D3175)		36.44	38.63	Hydrogen	
% Fixed Carbon (Calculated)		52.04	55.16	Nitrogen	
B.T.U (D5865)		13340	14140	Sulfur	
M.A.F.B.T.U. (Calculated)		15076		Ash	
% Sulfur (D4239)		1.00	1.06	Oxygen (diff.)	
SO <sub>2</sub> (lbs.)		1.50			
Ash lbs./btu		4.39			
<b>SULFUR FORMS (ASTM D2492)</b>			<b>As Received</b>	<b>Dry Basis</b>	
% Pyritic Sulfur			xxxxx	xxxxx	
% Sulfate Sulfur			xxxxx	xxxxx	
% Organic Sulfur			xxxxx	xxxxx	
% Total Sulfur			xxxxx	xxxxx	
<b>FUSION TEMPERATURE OF ASH (D1857)</b>					
		<b>Reducing (°F)</b>	<b>Oxidizing (°F)</b>		
Initial Temp.		2640	xxxxx		
Softening Temp. H=W		2700+	xxxxx		
Hemispherical Temp. H=1/2 W		2700+	xxxxx		
Fluid Temp		2700+	xxxxx		
<b>T-250 Temp. of Ash</b>		2800			
<b>Base/Acid Ratio</b>		0.1455			
<b>Fouling Factor</b>		0.0557			
<b>Slagging Factor</b>		0.1542			
<b>MINERAL ANALYSIS (ASTM D4326)</b>					
				<b>% Wt. Ignited Basis</b>	
Silicon dioxide			SiO <sub>2</sub>		50.41
Aluminum oxide			Al <sub>2</sub> O <sub>3</sub>		30.06
Titanium dioxide			TiO <sub>2</sub>		1.69
Iron oxide			Fe <sub>2</sub> O <sub>3</sub>		7.67
Calcium oxide			CaO		1.69
Magnesium oxide			MgO		0.70
Potassium oxide			K <sub>2</sub> O		1.51
Sodium oxide			Na <sub>2</sub> O		0.38
Sulfur trioxide			SO <sub>3</sub>		0.97
Phosphorus pentoxide			P <sub>2</sub> O <sub>5</sub>		0.11
Strontium oxide			SrO		0.27
Barium oxide			BaO		0.17
Manganese oxide			MnO		0.02
Undetermined					4.35
<b>Beryllium ppm (ASTM D6357)</b>		275			
<b>Chlorine ppm (ASTM D4208)</b>		xxxxx			
<b>Mercury ppm (ASTM D6722)</b>		0.04			
<b>Oxidation (ASTM D5263)</b>		xxxxx			
<b>Selenium ppm (ASTM D6357;MOD)</b>		xxxxx			
<b>Free Swelling Index (D720)</b>		4			
<b>Equilibrium Moisture (ASTM D1412)</b>		xxxxx			
<b>Grindability Index (D409)</b>		xxxxx			
<b>WATER SOLUBLE ALKALIES (Reported in %)</b>					
CaO		xxxxx			
K <sub>2</sub> O		xxxxx			
Na <sub>2</sub> O		xxxxx			
Submitted By: <i>Shelinda Matthews</i>					