

US EPA ARCHIVE DOCUMENT

October 22, 2013



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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

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.

RECEIVED

OCT 28 2013

WATER ENFORCEMENT & COMPLIANCE
ASSURANCE BRANCH, EPA, REGION 5



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

Very truly yours,

A handwritten signature in blue ink that reads 'Charles R. Leonard'.

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

COMPANY REQUESTING ANALYSIS: C. Reiss Coal/PO# 118-13 2525 Harrodsburg Rd., Suite 130 Lexington, KY 40504	Date Analyzed:	5/1/2013
	Lab No.	013024854
	Sampled By/Type:	Lab/Car Top

ID: Lancer: PO# 118-13: Permit# P105: LA# 142: TL# L342:

PROXIMATE ANALYSIS	As Received	Dry Basis
% Moisture (3302)	5.66	
% Ash (D3174)	5.86	6.21
% Volatile (D3175)	36.44	38.63
% Fixed Carbon (Calculated)	52.04	55.16
B.T.U (D5865)	13340	14140
M.A.F.B.T.U. (Calculated)	15076	
% Sulfur (D4239)	1.00	1.06
SO ₂ (lbs.)	1.50	
Ash lbs./btu	4.39	

ULTIMATE ANALYSIS (ASTM D6373)	As Received	Dry Basis
Moisture	5.66	
Carbon	75.00	79.50
Hydrogen	4.89	5.18
Nitrogen	1.46	1.55
Sulfur	1.00	1.06
Ash	5.86	6.21
Oxygen (diff.)	6.13	6.50

SULFUR FORMS (ASTM D2492)	As Received	Dry Basis
% Pyritic Sulfur	xxxxx	xxxxx
% Sulfate Sulfur	xxxxx	xxxxx
% Organic Sulfur	xxxxx	xxxxx
% Total Sulfur	xxxxx	xxxxx

MINERAL ANALYSIS (ASTM D4326)		% Wt. Ignited Basis
Silicon dioxide	SiO ₂	50.41
Aluminum oxide	Al ₂ O ₃	30.06
Titanium dioxide	TiO ₂	1.69
Iron oxide	Fe ₂ O ₃	7.67
Calcium oxide	CaO	1.69
Magnesium oxide	MgO	0.70
Potassium oxide	K ₂ O	1.51
Sodium oxide	Na ₂ O	0.38
Sulfur trioxide	SO ₃	0.97
Phosphorus pentoxide	P ₂ O ₅	0.11
Strontium oxide	SrO	0.27
Barium oxide	BaO	0.17
Manganese oxide	MnO	0.02
Undetermined		4.35

FUSION TEMPERATURE OF ASH (D1857)		
	Reducing (°F)	Oxidizing (°F)
Initial Temp.	2640	xxxxx
Softening Temp. H=W	2700+	xxxxx
Hemispherical Temp. H=1/2 W	2700+	xxxxx
Fluid Temp	2700+	xxxxx

T-250 Temp. of Ash	2800
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Base/Acid Ratio	0.1455
Fouling Factor	0.0557
Slagging Factor	0.1542

Beryllium ppm (ASTM D6357)	275
Chlorine ppm (ASTM D4208)	xxxxx
Mercury ppm (ASTM D6722)	0.04
Oxidation (ASTM D5263)	xxxxx
Selenium ppm (ASTM D6357;MOD)	xxxxx
Free Swelling Index (D720)	4
Equilibrium Moisture (ASTM D1412)	xxxxx
Grindability Index (D409)	xxxxx

WATER SOLUBLE ALKALIES (Reported in %)	
CaO	xxxxx
K ₂ O	xxxxx
Na ₂ O	xxxxx

Submitted By: *Shelinda Matthews*

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