

KIF bottom ash



# COMMERCIAL TESTING & ENGINEERING CO.

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Member of the SGS Group (Société Générale de Surveillance)

May 30, 2002

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RENEE B. MERRELL

SAMPLE No.: 257754  
SAMPLE TYPE: BOTTOM ASH  
REMARKS: BOT

Date Received March 5, 2002  
Analysis report no. 72-470151

### PROXIMATE ANALYSIS

### ULTIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	0.28	xxxxxxx
% Ash	87.03	87.27
% Volatile	1.08	1.08
% Fixed Carbon	<u>11.61</u>	<u>11.65</u>
	100.00	100.00
Btu/lb	1397	1401
% Sulfur	5.51	5.53
MAF Btu/lb	11005	

	As Received	Dry Basis
% Moisture	0.28	xxxxxxx
% Carbon	6.91	6.93
% Hydrogen	0.20	0.20
% Nitrogen	0.07	0.07
% Sulfur	5.51	5.53
% Ash	87.03	87.27
% Oxygen	<u>0.00</u>	<u>0.00</u>
	100.00	100.00

### ANALYSIS OF ASH

### % Weight Ignited Basis

Silica, SiO <sub>2</sub>	51.04
Alumina, Al <sub>2</sub> O <sub>3</sub>	22.19
Titania, TiO <sub>2</sub>	1.04
Ferric Oxide, Fe <sub>2</sub> O <sub>3</sub>	20.27
Lime, CaO	1.21
Magnesia, MgO	0.82
Potassium Oxide, K <sub>2</sub> O	2.26
Sodium Oxide, Na <sub>2</sub> O	0.25
Sulfur Trioxide, SO <sub>3</sub>	0.23
Phosphorous Pentoxide, P <sub>2</sub> O <sub>5</sub>	0.35
Strontium Oxide, SrO	0.09
Barium Oxide, BaO	0.19
Manganese Oxide, Mn <sub>3</sub> O <sub>4</sub>	0.06
Undetermined	0.00
Alks. as Na <sub>2</sub> O, Dry Coal Basis	1.52
Base:Acid Ratio	0.33
T250 Temperature	2502

### Silica Value

69.59

### Type of Ash

BITUMINOUS

### Fouling Index

0.08

### Slagging Index

1.82

### % MAF Fixed Carbon

91.52

### % MAF Volatile

8.48

### lb SO<sub>2</sub>/mm Btu

78.88

### lb Sulfur/mm Btu

39.44



Certificate No. 7061/1

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.

Denver Laboratory

