WCF Fly ash

# COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • TEL: 630-953-9300 FAX: 630-953-9306

SINCE 1908®

SGS Member of the SGS Group (Société Générale de Surveillance)

ADDRESS ALL CORRESPONDENCE TO:
4665 PARIS STREET
SUITE B-200
DENVER, CO 80239
TEL: (303) 373-4772
FAX: (303) 373-4791
www.comteco.com

May 30, 2002

TENNESSEE VALLEY AUTHORITY
1101 Market Street PSC 1A
Chattanooga TN 37402
RENEE B. MERRELL

SAMPLE No.: 257766
SAMPLE TYPE: PONDED FLY ASH
REMARKS: FLY

Date Received March 5, 2002
Analysis report no. 72-470163

**PROXIMATE ANALYSIS**

| | As Received | Dry Basis |
|---|---|---|
| % Moisture | 0.22 | xxxxxx |
| % Ash | 88.91 | 89.11 |
| % Volatile | < 0.01 | < 0.01 |
| % Fixed Carbon | 10.86 | 10.88 |
| | 100.00 | 100.00 |
| Btu/lb | 1292 | 1295 |
| % Sulfur | 0.02 | 0.02 |
| MAF Btu/lb | 11892 | |

**ULTIMATE ANALYSIS**

| | As Received | Dry Basis |
|---|---|---|
| % Moisture | 0.22 | xxxxxx |
| % Carbon | 10.30 | 10.32 |
| % Hydrogen | 0.16 | 0.16 |
| % Nitrogen | 0.38 | 0.38 |
| % Sulfur | 0.02 | 0.02 |
| % Ash | 88.91 | 89.11 |
| % Oxygen | 0.01 | 0.01 |
| | 100.00 | 100.00 |

| ANALYSIS OF ASH | % Weight Ignited Basis |
|---|---|
| Silica, $SiO_2$ | 58.97 |
| Alumina, $Al_2O_3$ | 29.11 |
| Titania, $TiO_2$ | 1.44 |
| Ferric Oxide, $Fe_2O_3$ | 5.25 |
| Lime, CaO | 0.92 |
| Magnesia, MgO | 0.87 |
| Potassium Oxide, $K_2O$ | 2.65 |
| Sodium Oxide, $Na_2O$ | 0.30 |
| Sulfur Trioxide, $SO_3$ | 0.06 |
| Phosphorous Pentoxide, $P_2O_5$ | 0.14 |
| Strontium Oxide, SrO | 0.07 |
| Barium Oxide, BaO | 0.16 |
| Manganese Oxide, $Mn_3O_4$ | 0.06 |
| Undetermined | 0.00 |
| Alks. as $Na_2O$, Dry Coal Basis | 1.82 |
| Base:Acid Ratio | 0.11 |
| T250 Temperature | 2900+ |

| | |
|---|---|
| Silica Value | 89.33 |
| Type of Ash | BITUMINOUS |
| Fouling Index | 0.03 |
| Slagging Index | 0.00 |
| % MAF Fixed Carbon | 99.91 |
| % MAF Volatile | 0.09 |
| lb $SO_2$/mm Btu | 0.31 |
| lb Sulfur/mm Btu | 0.15 |

MQA ISO9002 REGISTERED COMPANY
Certificate No. 7061/1

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Denver Laboratory

MEMBER ACIL

F-465

Original Watermarked For Your Protection

TERMS AND CONDITIONS ON REVERSE