Facility Name: Allegany High School CCB Tonnage Report - 2008

B. Applicability. If you or your company meet the definition of a generator of CCBs as defined above, you must provide the information as required below. For the purposes of this report, "you" shall hereinafter refer to the generator defined above. Please note that COMAR 26.04.10.08 requires generators of CCBs to submit an annual report to the Department concerning the disposition of the CCBs that they generated the previous year.

III. Required Information. The following information must be provided to the Department by March 1, 2009: A. Contact information: Facility Name: Allegany High School Name of Permit Holder: _____ Facility Address: 616 Sedgwick Street Street Facility Address: <u>Cumberland</u> MD City State Zip County: Allegany Contact Information (Person filing report or Environmental Manager) Facility Telephone No.: <u>301-722-4968</u> Facility Fax No.: <u>301-722-4985</u> Contact Name: <u>Larry Lancaster</u> Contact Title: Supervisor of Operations Contact Address: 211 Market Street Street Contact Address: <u>Cumberland</u> MD State Contact Email: larry.lancaster@acps.k12.md.us Contact Telephone No.: <u>301-722-4968</u> Contact Fax No.: <u>301-722-4985</u> For questions on how to complete this form, please call Mr. Tariq Masood, Head of the Office of Reports and Data Management, Solid Waste Program at 410-537-3326.

NEW REVEN

173 135 70%

Form Number: MDE/WAS/PER.033 Date: January 16, 2009

TTY Users: 800-735-2258

PRINCIPLE PRINCIPLE TO

Facility Nam	ne: _Allegany High Schoo	CCB 7	Гоппаде Report – 2008
type of coal	otion of the process that ge or other raw material that g nsufficient, please attach a	nerates the coal combustion because the coal combustion dditional pages:	oyproducts, including the a byproducts. If the space
Three (3) st	oker coal boilers, firing bit	uminous coal, are used to pro	ovide hot water and/or steam
for building l	heat.		
		·	
in subsequen year.) If the	tion byproducts generated a t years you need only prov	ars, including an identification and the volume of each type ride the information in this parent, please attach additional parent.	generated. (Please note that pragraph for the last calendar
Reporting	Volume of CCB Type:	Volume of CCB Type:	Volume of CCB Type:
Year	Bottom Ash (ft ³)	N/A	N/A
2008	4,354.85		
2007	4,349.08		
2006	3,138.77		
2005	4,466.14		
2004	4,978.41		
Additional no		ain facility was actionated	
used by the fa	cility and the ash values fr	his facility were estimated us come the corresponding testing	ing the quantities of coal reports

Additional notes:		
The volumes of CCBs generated from used by the facility and the ash value	m this facility were estimated using the quanties from the corresponding testing reports.	ties of coal
	·	
	A was a superior of the superior	
	·	
	FEB 2011	

Form Number: MDE/WAS/PER,033 Date: January 16, 2009 TTY Users: 800-735-2258

PENCENT COMMON TO AND ADMINISTRATION OF THE PERCENT AND ADMINISTRATION OF

- D. Descriptions of any modeling or risk assessments, or both, conducted relating to the coal combustion byproducts or their use, that were performed by you or your company during the reporting year. Please attach this information to the report.
- E. Copies of all laboratory reports of all chemical characterizations of the coal combustion byproducts. Please attach this information to the report.
- F. In this first Annual Report you submit, a description of how you disposed of or used your coal combustion byproducts in the last 5 calendar years (Please note that in subsequent years you need only provide the information in this paragraph for the last calendar year), identifying:
- (a) The types and volume of coal combustion byproducts disposed of or used (if different than described in Paragraph C above), the location of disposal, mine reclamation and use sites, and the type and volume of coal combustion byproducts disposed of or used at each site:

The coal combustion byproducts (CCBs) generated by this facility are listed in Table I.

The CCBs generated by this facility during the past five years were transported to the Phillips Coal Company blending yard and to the Pine Mountain Coal Company, both located near Lonaconing, MD.

The following is the estimated volume of CCBs transported to each of these facilities for the past five years.

	Phillips Coal Company	Pine Mountain Coal Company	
2008	$3,959.69 \text{ ft}^3$	395.16 ft ³	
2007	$3,953.92 \text{ ft}^3$	395.16 ft ³	
2006	$2,743.61 \text{ ft}^3$	395.16 ft ³	
2005	4,070.98 ft ³	395.16 ft3	
2004	4,583.25 ft ³	395.16 ft ³	

and (b) The different uses by type and volume of coal combustion byproducts:

If the space provided is insufficient, please attach additional pages in a similar format. . (Please note that in subsequent years you need only provide the information in Section F for the last calendar year).

120 99 7 7

Form Number: MDE/WAS/PER.033 Date: January 16, 2009 TTY Users: 800-735-2258

Page 4 of 5

Facility Name:	Allegany High School	CCB Tonnage I	Report – 2008
G. A description 5 years, identify:	n of how you intend to dispose ng:	of or use coal combustion bypro	oducts in the next
used, the location	ppes and volume of coal combune of intended disposal, mine reconstructs intended to be d	estion byproducts intended to be clamation and use sites, and the isposed of or used at each site:	disposed of or type and volume
generate approxi	t five calendars years of data, i mately 4,300 ft ³ of coal combu 's generated at the facility are c	t is estimated that this facility we stion products (CCBs) each year classified as bottom ash.	ill continue to r for the next five
All CCB's from Garrett County N	this facility will be transported Maryland, or to the Waste Mana	to a CCB mine reclamation site agement Mountain View landfill	in Allegany or l.
	ifferent intended uses by type a opproximately 0 ft ³ to 4,300 ft ³	and volume of coal combustion by per year - Mine Reclamation	oyproducts.
	oproximately 0 ft ³ to 4,300 ft ³ p		
f the space provi	ded is insufficient, please attac	h additional pages in a similar f	ormat.
eport, and certify eport:	as to the accuracy and comple	d official of the generator must eteness of the information contains	ined in the annual
This is to certify any attached docu	that, to the best of my knowled iments are true, accurate, and c	ge, the information contained in omplete.	this report and
1 4		, Supervisor of Operations	
Kary Kan Signatu	re Name, Title, & T	301-722-4968 Telephone No. (Print or Type)	2/23/09 Date
	l	ter@acps.k12.md.us r Email Address	

Form Number: MDE/WAS/PER.033 Date: January 16, 2009 TTY Users: 800-735-2258

PINE MOUNTAIN COAL CO. INC.

15615 Rayner Hill Drive SW Frostburg, MD 21532 Phone: 301-463-6518

Fax: 301-463-2572

To: Board of Education of Allegany County

From: Pine Mountain Coal Company Inc.

Date: July 28, 2008

COAL ANALYSIS REPORT

3333333

CLIENT:

PINE MT.COAL

DESCRIPTION:

AHS STOKER

SAMPLED BY:

CLIENT

SAMPLE DATE: 5-20-08

ANALYSIS DATE: 5-22-08

CODE: DS

LAB NUMBER: L 728

AS RECEIVED

DRY COAL

MOISTURE:

1.88

ASH:

8.65

8.82

VOLATILE MATTER:

19.59

19.97

FIXED CARBON:

69.88

71.21

100.00

100.00

SULFUR:

0.69

0.70

BTU:

13932

14199

MAF: 15572

ASTM FREE SWELLING INDEX #:

LBS SULFUR/MILLION BTU: 0.50

OTHER: SCREEN - 2 X 1/4 = 96.9% $1/4 \times 0 = 3.1\%$

OTHER:

GEOCHEMICAL TESTING

a division of Energy Center, Inc.

P.1

2005 N Center Ave Somercot PA 15,01

814/473-1571 014/445-0000 FAX: 814/445-67:19

COAL ANTI-VETS BEFORE

Client: SUMMIT TECHNICAL LABS

Sampled by: PM

Sampling Date:

Analyzed on:

Description: Pine Mt. AHS Stoker #728

LAB NO. 98-C058945

Ash Pusion (Reducing Atmosphere)
Initial D. Softening T.

Temp o F

Hemi T.

Fluid T.

2800 + 2800 + 2800 + 2800 →

Robert L. Stull Director of Coal Services

COAL ANALYSIS REPORT

CLIENT:

PINE MT.COAL

DESCRIPTION: #1 STOKER

SAMPLED BY: CLIENT SAMPLE DATE: 5-20-03

ANALYSIS DATE: 5-22-08 CODE: OS LAB NUMBER: L 729

	AS RECEIVED	DRY COAL	
MOISTURE:	1.43		
ASH:	12.98	13.16	
VOLATILE MATTER:	19.77	20.06	
FIXED CARBON:	65.82	66.77	
	100.00	100.00	•
SULFUR:	1.45	1.48	
BTU:	13237	13429	MAF: 15465

ASTM FREE SWELLING INDEX #: 9

LBS SULFUR/MILLION BTU: 1.10

OTHER: SCREEN - 1 1/2 X 3/4 = 48.5% 3/4 X 1/2 ≈ 32.5%

OTHER: 1/2 X 0 = 19.0%



GEOCHEMICAL

a division of Energy Center, Inc.

P.2

2005 N Center Ave Somerset PA 15501

814/443-1871 814/445-6560 FAX: 814/445-0729

COAL ANALYSIS REPORT

Client: SUMMIT TECHNICAL LABS

Sampled by: PM

Sampling Date:

Temp o F

Analyzed on:

Description: Pine Mt. Stoker #1

#729

LAB NO. 98-C058946

Ash Fusion (Reducing Atmosphere)

Initial D. Softening T. 2500

Hemi T. 2580

Fluid T. 2630

Director of Coal Services



COAL ANALYSIS REPORT

CLIENT:

PINE MT. COAL

DESCRIPTION:

#2 STOKER

SAMPLED BY:

CLIENT SAMPLE DATE: 5-20-08

ANALYSIS DATE: 5-22-03

CODE: DS

LAB NUMBER: L 730

AS RECEIVED

DRY COAL

MOISTURE:

1.60

ASH:

13.27

13.48

VOLATILE MATTER:

20.00

20133

FIXED CARBON:

65.13

66.19

Labor 1

SULFUR:

1.40

100.00

1.43

100.00

8 T U:

13232

13447

MAF: 15542

ASTM FREE SWELLING INDEX #:

LBS SULFUR/MILLION BTU: 1.06

OTHER: SCREEN - 2 X 1/2 = 91.0%

 $1/2 \times 0 = 9.0%$

OTHER:



GEOCHEMICAL TESTING

a division of Energy Center, Inc.

P.3

2005 N Center Ave Somerset PA 15501

814/443-1671 617/17 77 77 3 FAX: 514/47, 177

COAL ANALYSIS REPORT

Client: SUMMIT TECHNICAL LABS

Sampled by: PM

Sampling Date:

Analyzed on:

Description: Pine Mt. Stoker #2 #730

LAB NO. 98-C058947

Ash Fusion (Reducing Atmosphere)

Initial D. Softening T.

Temp o F 2580 2630

Hemi T.

Fluid T. 2740

The second survival of the second

FED 25 23A

Color d. Itus

Robert L. Stull Director of Coal Services



MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT
SCHENECTADY, N. Y. 12305



No. ____ 491

BITUMINOUS . COAL DUST

SECTION I. MATERIAL IDENTIFICATION MATERIAL NAME: BITUMINOUS COAL DUST DESCRIPTION: Includes coals between lignites and anthracites with "fixed carbon" <36%, "volatile matter" >14% "calorific value" >10,500 BTU/lb (see ASTM D388 & D3172).
Particulate <75 µm (thru No. 200 sieve), dispersable in air, is of primary interest. Coal consists of conjugated poly(aromatic/unsaturated/saturated) ring structures with hetrocycles containing 0,N, and S. $C_{102}^{H}78_{010}^{N}_{2}$ has been suggested as a "coal molecule". as a "coal molecule" SOURCE: Mining, handling, and pulverizing processes with coal SECTION II. INGREDIENTS AND HAZARDS HAZARO DATA "Proximate Analysis" of some air-dried bituminous coals: 8-hr TWA 2 mg/m 3 or "Moisture" "Volatiles" "Fixed Carbon" "Ash" OSHA PEL 2.4 mg/m3 West Virginia 1.8 20.4 72.4 5,4 Respirable dust with Pennsylvania 1.2 34.5 58.4 5.9 <5% quartz* Illinois 8.4 35.0 48.2 8.4 Wyoming 11.0 38.6 40.2 10.2 Bituminous coals also contain trace metals, sulfur (0.4-3.5) and nitrogen (0.9-1.5%), depending on source and type. *Respirable dust is particulate <5 \mu in size. Use quartz formula (MSDS #71) if quartz content is >5% SECTION III, PHYSICAL DATA Boiling point ----- N/A Specific gravity (H_O=1) Vapor pressure at 25 C ----- Negligible Volatiles at 25 C ----Water solubility -----Negligible Appearance & Odor: Black powder; little or no odor. SECTION IV. FIRE AND EXPLOSION DATA LOWER UPPER Autoignition Temp. Flammability Limits In Air >0.05* Flash Point and Method (cloud) >1914 F bloud(10 jm Av.),50mJ spark Extinguishing Media: Nitrogen, carbon dioxide, steam, water, ammonium biphosphate powder A water spray can be used to cautiously wet down coal dust to help prevent ignition (avoid raising dust). It is a fire and explosion hazard when exposed to heat or flame. Firefighters should have self-contained breathing equipment and protective clothing. "Ca log/ft³gives max, flame energy; smallest 20% of particulate determines iquition characteristics; 10-50mJ spark needed at 0-5% moisture, respectively, to initiate combustion in 4.00 mech dust, **A pile of 2-7 µm Pittsburgh coal dust heated at 169 C in 317 man recent ATT 10 que by SECTION V. REACTIVITY DATA Coal dust is fairly stable at 25 C, but it can react with oxygen from the air, very slowly at room temperature and faster when heated. In piles with good heat retention a slow heat build-up and spontaneous ignition can occur. (Humid air can accelerate this familian of dry coal.) on heating coal releases combustibles by devolatization and pyrolymia. When theme burn, they can heat the solid carbon; hot carbon reacts with O2, CO2, and water vapor to produce combustible gases. exidation products of coal can include oxides of carbon, nitrogen and sulfur, partially oxidized hydrocarbons, soot, and fly ash.

this material is incompatible with strong exidizing agents, especially when heated.

FID 26 770

DINONS CERTIFICATION

SECTION VI. HEALTH HAZARD INFORMATION Coal workers pneumoconiosis (CWP) can occur after years of excessive exposure to respirable coal dust in the mining, handling and processing of coal. Respirable quartz particulate can be simultaneously present with the coal, especially in the mining. In general, coal dust is deposited in the lungs like quartz but requires over 10X as much for adverse effects. It does not kill macrophages; roticulin fibers form, but little collagen is generated. (That which forms is often attributed to quartz.)

The severity of CWP is directly related to the amount of coal dust in the lungs. In many 2 mg/m^3 TIV CWP does not progress beyond the simple stage, which is detectable by x-ray as round and irregular "coal macules" of 1-5 mm diameter, but which does not change lung function or shorten life. CWP is a precursor of progressive massive fibrosis (PMF) resulting in large masses of fibrous tissue development (mechanisms unclear). PMF impairs pulmonary function and shortens life. There is no evidence of association of CWP and

bronchogenic cancer.

Chronic bronchitis and emphysema are reported to result from excessive coal dust inhalation. Persons having rheumatoid arthritis in conjunction with simple CWP may have rapidly developing lung damage. (Caplan's Syndrome).

SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Remove ignition sources. Clean-up personnel may need dust repirators and eye protection. Coal dust should be cleaned up in manner that avoids dispersing particulate in air or into the environment.

Collect dust in a covered metal container for use as fuel or for disposal.

DISPOSAL: Use as fuel in a pulverized coal-burning furnace, or burn as slurry in water For other incineration, possible dust explosions or "puffs" and high temperature need to be considered. Scrap coal dust may be wet down thoroughly with water in a container and buried in landfill. Follow Federal, State, and Local regulations.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Provide explosion-proof general and local exhaust ventilation to meet TLV requirements. Approved filtration of exhausted air may be required to prevent excessive environmental dispersion of dust.

Where airborne dust is excessive in the workplace, dust respirators and eye protection are needed.

In working with coal dust, use good personal hygiene. Wear regularly cleaned work clothing. Showering and changing into street clothing after work may be desirable.

Follow good housekeeping procedures to control coal dust build up. Collect dust from settling areas and surfaces in a manner to avoid generating airborne dust. Design dust suppression measures into processes. Meet explosion-proof code requirements for electrical services where coal dust may be present.

SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS

Keep sources of heat and ignition, flammable materials, and strong oxidizing agents away from areas where coal dust may collect. Prevent static sparks. Inerting may be desirable, such as powdered CaCO, or rock dust laid down over coal dust on mine floor or a nitrogen enriched atmosphere in a coal pulverizing machine.

L.D. Smoot, et. al., "Pulvurized Coal Power Plant Fires and Explosions" Reference: Parts I, II and V. Brighton Young University, Medhanical Engineering Dept., Prepared for Utah Power and Light Co., Eath Lake City, Utah 1979-1981.

The Classification: FLAMENBLE SOLID DATA SOURCE(S) CODE:2-4,14,38,43,47

automents as in the suitability of information herein for purchaser's purposes also necessarily purchases a responsibility. Therefore, although reasonable care hus hown taken in the preparation of such information. General (fective Cumpany extends no worranties, makes no representations and assumes no responsibility as to the occuracy or suitability of such information for application to purchaser's intended purposes or for consequences of its use.

HIS APPROVALS: CRD Industrial Hygiene and Safety MEDICAL REVIEW:

PINE MOUNTAIN COAL CO. INC.

15615 Rayner Hill Drive SW Frostburg, MD 21532 Phone: 301-463-6518 Fax: 301-463-2572

To: Board of Education of Allegany County

From: Pine Mountain Coal Company Inc.

Date: August 15, 2007

100 26 201 100 26 201

COAL ANALYSIS REPORT

CLIENT:

THE RESERVE OF THE PERSON.

PINE MT.COAL

DESCRIPTION:

AHS STOKER

SAMPLED BY:

CLIENT

SAMPLE DATE: 06 - 19 - 07

ANALYSIS DATE:

06-21-07

CODE: OS

LAB NUMBER: L 728

AS RECEIVED

DRY COAL

MOISTURE:

1.88

ASH:

8.65

8.82

VOLATILE MATTER:

19.59

19.97

FIXED CARBON:

69.88

71.21

100.00

100.00

SULFUR:

0.69

0.70

BTU:

13932

14199

MAF: 15572

ASTM FREE SWELLING INDEX #:

LBS SULFUR/MILLION BTU:

0.50

OTHER:

SCREEN - 2 X 1/4 = 96.9%

 $1/4 \times 0 = 3.11$ %

OTHER:

GEOCHEMICAL

a division of Energy Center, Inc.

P.1

2005 N Center Ave Somereot PA 15901

814/443-1671 014/445-0000 FAX: 814/445-6729

COAL ANTIVELS REPORT

Client: SUMMIT TECHNICAL LABS

Sampled by: PM

Sampling Date: \$6-19-07

Analyzed on: 06-21-07

Description: Pine Mt. AHS Stoker #728

LAB NO. 98-C058945

Ash Pusion (Reducing Atmosphere)
Initial D. Softening T.

2800 + 2800 + Temp o F

Hemi T.

Fluid T.

2800 +

2800 +

Robert L. Stull Director of Coal Services

COAL ANALYSIS REPORT

CLIENT:

PINE MT. COAL

DESCRIPTION:

#1 STOKER

SAMPLED BY:

CLIENT SAMPLE DATE: 06-19-07

ANALYSIS DATE: 06-21-07

CODE: DS

LAB NUMBER: L 729

	AS RECEIVED	DRY COAL	
MOISTURE:	1.43		
ASH:	12.98	13.16	
VOLATILE MATTER:	19.77	20.06	
FIXED CARBON:	65.82	66.77	
	100.00	100.00	
SULFUR:	1.45	1.48	
BTU:	13237	13429	MAF: 15465

ASTM FREE SWELLING INDEX #:

LBS SULFUR/MILLION BTU: 1.10

OTHER: SCREEN - 1 1/2 X 3/4 = 48.5% 3/4 X 1/2 = 32.5%

OTHER: $1/2 \times 0 = 19.0$ %



GEOCHEMICAL TESTING

a division of Energy Center, Inc.

2005 N Center Ava

P.2

Somerset PA 15501

814/443-1871 814/445-6563 FAX: 814/445-0720

COAL ANALYSIS REPORT

Client: SUMMIT TECHNICAL LABS

Sampled by: PM

Sampling Date: 06-19-07

Analyzed on: 06-21-07

Description: Pine Mt. Stoker #1 #729

LAB NO. 98-C058946

Ash Fusion (Reducing Atmosphere)

Initial D. Softening T.

Hemi T. Fluid T. Temp o F 2500 2550 2580 2630

Director of Coal Services



COAL ANALYSIS REPORT

CLIENT:

PINE MT.COAL

DESCRIPTION:

#2 STOKER

SAMPLED BY:

CLIENT SAMPLE DATE: 06-19-07

ANALYSIS DATE: 06-21-07 CODE: DS

LAB NUMBER: L 730

AS RECEIVED

DRY COAL

MOISTURE:

1.60

ASH:

13.27

13.48

VOLATILE MATTER:

20.00

20.33

FIXED CARBON:

65.13

66,19

100.00

100.00

SULFUR:

1.40

1.43

BTU:

13232

13447

MAF: 15542

ASTM FREE SWELLING INDEX #:

LBS SULFUR/MILLION BTU: 1.06

OTHER: SCREEN - 2 X 1/2 = 91.0% 1/2 X 0 = 9.0%

OTHER:



GEOCHEMICAL

a division of Energy Center, Inc.

2005 N Center Ave Somerset PA 15501

814/443-1071 61/4/45 - 551 Y FAX: 51/4/6/11 - 571

COAL ANALYSIS REPORT

Client: SUMMIT TECHNICAL LABS

Sampled by: PM

Sampling Date: 06-19-07

Analyzed on: 06-21-07

Description: Pine Mt. Stoker #2 #730

LAB NO. 98-C058947

Ash Fusion (Reducing Atmosphere)

Initial D. Softening T.

Temp o F 2580 Hemi T.

Fluid T. 2740

Robert L. Stull Director of Coal Services



MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT

SCHENECTADY, N. Y. 12305



No. ____ 49

BITUMINOUS COAL DUST

SECTION I. MATERIAL IDENTIFICATION MATERIAL NAME: BITUMINOUS COAL DUST DESCRIPTION: Includes coals between lignites and anthracites with "fixed carbon" <pre></pre>					
DESCRIPTION: Includes coals between lignites and anthracites with "fixed carbon" <36%, "volatile matter" >14% "calorific value" >10,500 BTU/lb (see ASTM D388 & D3172). Particulate <75 µm (thru No. 200 sieve), dispersable in air, is of primary interest. Coal consists of conjugated poly(aromatic/unsaturated/saturated) ring structures with hetrocycles containing O,N, and S. C ₁₀₂ H ₇₈ O ₁₀ N ₂ has been suggested as a "coal molecule". SOURCE: Mining, handling, and pulverizing processes with coal.					
SECTION 11 MODEL TO THE PROPERTY PROCESSES WITH COAL.					
SECTION II. INGREDIENTS AND HAZARDS					
"Providence of the state of the					
Source "Moisture" "Volatiles" "Fixed Carbon" "Ata" 8-hr TWA 2 mg/m or					
West Virginia 1.8 20.4 72.4 5.4 Respirable dust with 111inois 8.4 5.9 Standard 1.2 34.5 58.4 5.9 Standard 1.2 35.0					
Wyoming 11.0 38.6 40.2 8.4 10.2					
Bituminous coals also contain trace metals, sulfur (0.4-3.5) and nitrogen (0.9-1.5%), depending on source and type. *Respirable dust is particulate <5µm in size. Use quartz formula (MSDS #71) if quartz content is >5%.					
SECTION III. PHYSICAL DATA					
Appearance & Odor: Black powder; little or no odor.					
SECTION IV. FIRE AND EXPLOSION DATA LOWER UPPER					
Flash Point and Method Autoignition Temp. Flammability Limits In Air >0.05* (cloud) > 1114 F					
(Yaver) \$392 F bloud(10 mm Av.), 50mJ spark 02/fr carbon dioxide, steam, water, ammonium biphosphate powder					
(avoid raising dust). It is a fire and explosion hazard when exposed to heat or flame. Firefighters should have self-contained breathing equipment and protective clothing.					
Calloy/ft ³ gives max. flame energy; smallest 20% of particulate determines ignition combustion in 400 mean dust, **A pile of 2-7 µm Pittsburgh coal dust heated at 169 C					
SECTION V. REACTIVITY DATA					
slowly at room temperature and faster when heated. In piles with good heat retention a slow heat brild-up and spontaneous ignition can occur. (Humid air can accelerate this tenition of dry coal.) On heating coal releases combustibles by develoting to					
with O2, CO2, and water vapor to produce combustible gases. Ridation products of coal can include oxides of carbon, nitrogen and sulfur, partially oxidized hydrocarbons, sout, and fly ash.					
is material is incompatible with strong oxidizing agents, especially when heated.					

SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Remove ignition sources. Clean-up personnel may need dust repirators and eye protection. Coal dust should be cleaned up in manner that avoids dispersing particulate in air or into the environment.

Collect dust in a covered metal container for use as fuel or for disposal.

DISPOSAL: Use as fuel in a pulverized coal-burning furnace, or burn as slurry in water For other incineration, possible dust explosions or "puffs" and high temperature need to be considered. Scrap coal dust may be wet down thoroughly with water in a container and buried in landfill. Follow Federal, State, and Local regulations.

SECTION VIII. SPECIAL PROTECTION INFORMATION

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SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS

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Reference: L.D. Smoot, et. al., "Pulvurized Coal Power Plant Fires and Explosions"
Parts I, II and V, Brightum Young University, Mechanical Engineering Dept.,
Prepared for Utah Power and Light Co., Eath Lake City, Utah 1979-1981.

DATA SOURCE(S) CODE:2-4,14,38,43,47

tinforments as in the suitability of information herein for purchaser's purposes are non-estacily purchaser's responsibility. Therefore, although reasonable care has hever taken in the preparation of such information. General Electric Cumpany estends no warranties, makes no representations and assumes no responsibility as to the occuracy or suitability of such information for application to purchaser's intended purposes or for consequences of its use.

APPROVALS:	MIS CRD	J.M. Niew
Industrial and Safet		In 5.11.32
MEDICAL	REVIEW:	

FY 2006-07

PINE MOUNTAIN COAL CO. INC.

15615 Rayner Hill Drive SW Frostburg, MD 21532 Phone: 301-463-6518

Fax: 301-463-2572

To: Board of Education of Allegany County

From: Pine Mountain Coal Company Inc.

Date: August 21, 2006

COAL ANALYSIS REPORT

CLIENT:

PINE MT.COAL

DESCRIPTION:

AHS STOKER

SAMPLED BY:

CLIENT

ANALYSIS DATE: 06-07-06

SAMPLE DATE: 06-05-06

CODE: DS

LAB NUMBER: L 728

AS RECEIVED

DRY COAL

MOISTURE:

1.88

ASH:

8.65

8.82

VOLATILE MATTER:

19.59

19.97

FIXED CARBON:

69.88

71.21

100.00

100.00

SULFUR:

0.69

0.70

BTU:

13932

14199

MAF: 15572

ASTM FREE SWELLING INDEX #:

LBS SULFUR/MILLION BTU:

OTHER:

SCREEN - 2 X 1/4 = 96.9%

 $1/4 \times 0 = 3:1%$

OTHER:



GEOCHEMICAL TESTING

a division of Energy Center, Inc.

P.1

2005 N Center Ave Somerest PA (1500)

814/443-1571 014/445-0000 FAX: 814/445-6729

COAL AND VOIS REPORT

Client: SUMMIT TECHNICAL LABS

Sampled by: PM

Sampling Date: 06-05-06

Analyzed on: 06-07-06

Description: Pine Mt. AHS Stoker #728

LAB NO. 98-C058945

Ash Pusion (Reducing Atmosphere)
Initial D. Softening T. 2800 + Temp o F

2800 +

Hemi T. 2800 +

Fluid T. 2800 +

Robert L. Stull Director of Coal Services

COAL ANALYSIS REPORT

CLIENT:

PINE MT. COAL

DESCRIPTION:

#1 STOKER

SAMPLED BY:

CLIENT SAMPLE DATE: .06-05-06

ANALYSIS DATE: 06-07-06

CODE: OS

LAB NUMBER: L 729

AS RECEIVED DRY COAL MOISTURE: 1.43 ASH: 12.98 13.16 VOLATILE MATTER: 19.77 20.06 FIXED CARBON: 65.82 66.77 100.00 100.00 SULFUR: 1.45 1.48

13237

ASTM FREE SWELLING INDEX #:

LBS SULFUR/MILLION BTU:

BTU:

1.10

OTHER: SCREEN - 1 1/2 X 3/4 = 48.5% 3/4 X 1/2 = 32.5%

13429

OTHER: $1/2 \times 0 = 19.0$ %

LAB TECHNICIAN

MAF: 15465



GEOCHEMICAL

a division of Energy Center, Inc.

P.2

2005 N Center Ave Somerset PA 15501

814/443-1571 814/445-6563 FAX: 814/445-0723

COAL ANALYSIS REPORT

Client: SUMMIT TECHNICAL LABS Sampled by: PM

Sampling Date: 06-05-07

Analyzed on: 06-07-06

Description: Pine Mt. Stoker #1 #729

LAB NO. 98-C058946

Ash Fusion (Reducing Atmosphere)

Initial D. Softening T.

Hemi T. Temp o F Fluid T. 2500 2550 2580 2630

Robert L.

Director of Coal Services



COAL ANALYSIS REPORT

CLIENT:

PINE MT.COAL

DESCRIPTION:

#2 STOKER

SAMPLED BY:

CLIENT SAMPLE DATE: 06-05-07

ANALYSIS DATE: 06-07-06

CODE: DS

LAB NUMBER: L 730

13447

DRY COAL AS RECEIVED 1.60 MOISTURE: 13.48 13.27 ASH: 20.33 20.00 VOLATILE MATTER: 66.19 65.13 FIXED CARBON: 100.00 100.00 1.43 1.40 SULFUR:

ASTM FREE SWELLING INDEX #:

LBS SULFUR/MILLION BTU: 1.06

SCREEN - 2 X 1/2 = 91.0% 1/2 X 0 = 9.0% OTHER:

13232

OTHER:

BTU:

LAB TECHNICIAN

MAF: 15542

GEOCHENICAL

a division of Energy Center, Inc.

2005 N Center Avo Somerset PA 15501

814/443-1571 C14/647 (1515) FAX: \$14/6 (5.27)

COAL ANALYSIS REPORT

Client: SUMMIT TECHNICAL LABS

Sampled by: PM

Temp o F

Sampling Date: 06-05-06

Analyzed on: 06-07-06

Description: Pine Mt. Stoker #2

#730

LAB NO. 98-C058947

Ash Fusion (Reducing Atmosphere)

Initial D. Softening T. 2580 2630

Hemi T. 2680

Fluid T. 2740

Robert L. Stull Director of Coal Services



MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT

SCHENECTADY, N. Y. 12305



No. _ . 49

BITUMINOUS COAL DUST

parte to the same of the same				•			
SECTION I.	MATERIAL	DENTIFICATION		1 1 1 1 1 1 1 1 1	177		
structures as a "coal n	Includes contile matter" <75 µm (the Coal consister with hetrocymolecule".	s of conjugated cles containing	ites and anthraci value" >10,500 E), dispersable in poly(aromatic/uns 0,N, and S. C ₁₀₂ E g processes with	aturated/ 78 ⁰ 10 ^N 2 h	catur.	ated) ri	na
SECTION II.	INGREDIEN	ITS AND HAZARD	S		ı	HAZARD	DATA
"Proximate Ana	alysis" of so	ome air-dried bi	tuminous coals:		**************	ACGIH TI	LV .
Source	"Moisture"	"Volatiles"	"Fixed Carbon"	"Ash"		TWA 2 mg	g/m or
West Virginia Pennsylvania Illinois	1.8 1.2 8.4	20.4 34.5 35.0	72.4 58.4 48.2	5.4 5.9 8.4	Respi	rable du quartz*	st with
and nitrogen	(0.9-1.5%),	38.6 ain trace metals depending on so ulate <5 \(\text{pm} \) in s		5)			
	S <u>#71) if a</u> u	artz content is			·		·
Boiling point		N/A	Specific gravit			1.3-1.6	
	tydor: Black ;	Negligible powder; little o	r no odor.	5 C =	Neg	ligible	
		XPLOSION DATA					UPPER
Flash Point a		Autoignition Tercloud > 1114 F	mp." Flammability cloud(10 jm Av			1	
A water sprny (avoid raisin Firefighters sh	ledia: Nitro can be used ng dust). It nould have se	gen, carbon diox of to cautiously is a fire and e olf-contained bro	ide, steam, water wet down coal dus xplosion hazard w aathing equipment	, ammonium t to help hen expos and prot	n biph preve ed to ective	nosphate ent ignit heat or e clothin	powder tion flame. ng.
charactoristic combustion in in air can rea	10-50m3 g	park needed at (est 20% of partic 0-5% moisture, re 2-7 µm Pittsbur	spectively	ist ho	initiate ated at	169 C
SECTION V. R							
slowly at roo a slow heat b roos idmittion and pyrolymis	m temperatur mild-up and or dry coal . When then	e and faster who spontaneous igni .) On heating ec e huch, they car	can react with one heated, in pile tion can occur, all releases combined the solid combustible gases	es with go (Humid air estibles learbon; he	ood ho can	at reter accelera olatizat	ition ite ion
xidation produc oxidized hydro	ets of coal ecarbons, so	can include oxid at and fly ash.	es of carbon, nit	trogen and			
, 10 macci in 1;	, 411COM/21C2D	wren scrong o	vivirated adelics,	especiali	y wne	n nested	. 1

No. SECTION VI. HEALTH HAZARD INFORMATION Coal workers pneumoconiosis (CWP) can occur after years of excessive exposure to respirable coal dust in the mining, handling and processing of coal. Respirable quartz particulate can be simultaneously present with the coal, especially in the mine. In general, coal dust is deposited in the lungs like quartz but requires over 10x as much for adverse effects. It does not kill macrophages; reticulin fibers form, but little collagen is generated. (That which forms is often attributed to quartz.)

The severity of CWP is directly related to the amount of coal dust in the lungs. In many TIV CWP does not progress beyond the simple stage, which is detectable by x-ray as round and irregular "coal macules" of 1-5 mm diameter, but which does not change lung function or shorten life. CWP is a precursor of progressive massive fibrosis (PMF) resulting in large masses of fibrous tissue development (mechanisms unclear). PMF impairs pulmonary function and shortens life. There is no evidence of association of CWP and pulmonary function and short-description bronchogenic cancer.

Chronic bronchitis and emphysema are reported to result from excessive coal dust inhalation, Persons having rheumatoid arthritis in conjunction with simple CWP may have rapidly developing lung damage. (Caplan's Syndrome).

SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Remove ignition sources. Clean-up personnel may need dust repirators and eye protection. Coal dust should be cleaned up in manner that avoids dispersing particulate in air

Collect dust in a covered metal container for use as fuel or for disposal.

DISPOSAL: Use as fuel in a pulverized coal-burning furnace, or burn as slurry in water For other incineration, possible dust explosions or "puffs" and high temperature need to be considered. Scrap coal dust may be wet down thoroughly with water in a container and buried in landfill. Follow Federal, State, and Local regulations.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Provide explosion-proof general and local exhaust ventilation to meet TLV requirements. Approved filtration of exhausted air may be required to prevent excessive environmen-

Where airborne dust is excessive in the workplace, dust respirators and eye protection

In working with coal dust, use good personal hygiene. Wear regularly cleaned work clothing. Showering and changing into street clothing after work may be desirable.

Follow good housekeeping procedures to control coal dust build up. Collect dust from settling areas and surfaces in a manner to avoid generating airborne dust. Design dust suppression measures into processes. Meet explosion-proof code requirements for electrical services where coal dust may be present.

SECTION IX, SPECIAL PRECAUTIONS AND COMMENTS

Keep sources of heat and ignition, flammable materials, and strong oxidizing agents away from areas where coal dust may collect. Prevent static sparks. Inerting may be desirable, such as powdered CaCO3 or rock dust laid down over coal dust on mine floor or a nitrogen enriched atmosphere in a coal pulverizing machine.

Reference: L.D. Smoot, et. al., "Pulvurized Coal Power Plant Fires and Explosions" Parts I, II and V, Brigham Young University, Mechanical Engineering Dept., Prepared for Utah Power and Light Co., Mall Jake City, Utah 1979-1981. THAT CLASSIFICATION: FLAMEWHIE SOLID

DATA SOURCE(S) CODE:2-1,14,38,44,47

terforments as to the soutobility of information fratein for backpass, I bathases on a here executly purchaser's responsibility therefore, although reasonable care hus neversarily partners; responsibility interestics, associate variously care not have solven in the preposation of such information. General Electric Company extends no vortanties, makes no representations and assumes no responsibility as to the occuracy or systability of such information for application to purchaser's intended purposes or for consequences of its use.

APPROVALS: MIS	J.M. nieu
Industrial Hygiene	μ
and Safety	$\mathcal{O}_{\mathcal{A}}$.
MEDICAL REVIEW:	D/W 5.11.82
THOTOKE REVIEW:	29 May 1982

F42005-06

PINE MOUNTAIN COAL CO.



15615 RAYHER HILL DRIVE SW FROSTBURG, HD 21532 301-463-6518 RAYNER & SONS

Fax: 301-463-2572

SENSE S

Fed. ID # 51-0451537

To:

Board of Education of Allegany County

From:

Pine Mountain Coal Company Inc.

Date:

August 22, 2005

Subject: Coal bid for Allegany County Schools for 2005-2006

COAL ANALYSIS REPORT

CLIENT:

PINE MT. COAL

DESCRIPTION:

AHS STOKER

SAMPLED BY:

CLIENT

€-6-05 SAMPLE DATE:

ANALYSIS DATE: 6-8-05

CODE: DS

LAB NUMBER: L 728

AS RECEIVED

DRY COAL

MOISTURE:

1.88

ASH:

8.65

8.82

VOLATILE MATTER:

19.59

19.97

FIXED CARBON:

69.88

71.21

100.00

100.00

SULFUR:

0.69

0.70

BTU:

13932

14199

MAF: 15572

ASTM FREE SWELLING INDEX #:

LBS SULFUR/MILLION BTU: 0.50

SCREEN. - 2 X 1/4 = 96.9% 1/4 X 0 = 3.1% OTHER:

OTHER:

GEOCHEVICAL TESTING

a division of Energy Center, Inc.

P.1

2005 N Center Ave Somerest PA 15001

814/443-1671 614/449-0000 FAX: 814/445-6709

COAL ANTIVELS REPORT

Client: SUMMIT TECHNICAL LABS

Sampled by: PM

Sampling Date: 6-6-05

Analyzed on: 6-8-05

Description: Pine Mt. AHS Stoker

LAB NO. 98-C058945

Ash Fusion (Reducing Atmosphere)
Initial D. Softening T.

Hemi T.

Fluid T. 2800 +

2800 + 2800 + 2800 + Temp o F

Robert L. Stull Director of Coal Services

COAL ANALYSIS REPORT

CLIENT:

PINE MT.COAL

DESCRIPTION:

#1 STOKER

SAMPLED BY:

CLIENT SAMPLE DATE: 6-6-05

ANALYSIS DATE: 6-8-05

CODE: DS LAB NUMBER: L 729

	AS RECEIVED	DRY COAL	
MOISTURE:	1.43		
ASH:	12.98	13.16	
VOLATILE MATTER:	19.77	20.06	-
FIXED CARBON:	65.82	66.77	
	100.00	100.00	
CILLEND.	1.45	1.48	
SULFUR:			
BTU:	13237	13429	MAF: 15465

ASTM FREE SWELLING INDEX #: 9

L8S SULFUR/MILLION BTU: 1.10

OTHER: SCREEN - 1 1/2 X 3/4 ™ 48.5% 3/4 X 1/2 ™ 32.5%

OTHER: $1/2 \times 0 = 19.0$ %



GEOCHEMICAL TESTING

a division of Energy Center, Inc.

P.2

2005 N Center Ave

814/443-1871 814/445-6563 FAX: 814/445-8729

· Samerset PA 15501

COAL ANALYSIS REPORT

Sampled by: PM

Sampling Date: 6-6-05

Analyzed on: 6-8-05

Description: Pine Mt. Stoker #1 #729

LAB NO. 98-C058946

Client: SUMMIT TECHNICAL LABS

Ash Fusion (Reducing Atmosphere)

Initial D. Softening T.

Hemi T. Fluid T. Temp o F 2500 2550 2580 2630

Robert L. Stull Director of Coal Services



COAL ANALYSIS REPORT

CLIENT:

PINE MT.COAL

DESCRIPTION:

#2 STOKER

SAMPLED BY:

CLIENT

SAMPLE DATE:

6-6-05

ANALYSIS DATE: 6-8-05

CODE: OS

LAB NUMBER: L 730

AS RECEIVED

DRY COAL

MOISTURE:

1.60

ASH:

13.27

13.48

VOLATILE MATTER:

20.00

20.33

FIXED CARBON:

65.13

66.19

100.00

100.00

SULFUR:

1.40

1.43

BTU:

13232

13447

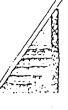
MAF: 15542

ASTM FREE SWELLING INDEX #:

LBS SULFUR/MILLION BTU: 1.06

OTHER: SCREEN - 2 X 1/2 = 91.0% 1/2 X 0 = 9.0%

OTHER:



GEOCHENICAL TESTING

a division of Energy Center, Inc.

Р.З

2005 N Center Ave Somerset PA 15501

> 814/443-1071 614/447-0010 FAX: 514/448-7703

COAL ANALYSIS REPORT

Client: SUMMIT TECHNICAL LABS

Sampled by: PM

Sampling Date: 6-6-05

Analyzed on: 6-8-05

Description: Pine Mt. Stoker #2 #730

LAB NO. 98-C058947

Ash Fusion (Reducing Atmosphere)

Initial D. Softening T.

Temp o F 2580 2630

Hemi T. 2680 Fluid T.

Robert Little



FY JECY-65

PINE MOUNTAIN COAL CO.

15615 RAYNER HILL DRIVE SW FROSTBURG, MD 21532 (III) 7355 301-463-6518

701-697-0009 H

RAYNER & SONS Fax: 301-463-2572

FED. ID # 51-0451537

TO:

Board of Education of Allegany County

From:

Pine Mountain Coal Company Inc.

Date:

August 23, 2004

Subject:

Coal Bid for Allegany County Schools for 2004-2005

COAL ANALYSIS REPORT

CLIENT:

PINE MT.COAL

OESCRIPTION:

AHS STOKER

SAMPLED BY: CLIENT

SAMPLE DATE:

ANALYSIS DATE: 6-8-94

COOE: DS

LAB NUMBER: L 728

AS RECEIVED

DRY COAL

MOISTURE:

1.88

ASH:

8.65

8.82

VOLATILE MATTER:

19.59

19.97

FIXED CARBON:

69,88

71.21

100.00

100.00

SULFUR:

0.69

0.70

BTU:

13932

14199

MAF: 15572

ASTM FREE SWELLING INDEX #:

LBS SULFUR/MILLION BTU: 0.50

OTHER: SCREEN - 2 X 1/4 = 96.9% 1/4 X 0 = 3.1%

OTHER:



GEOCHEMICAL TESTING

a division of Energy Center, Inc.

P. 1

2005 N Center Ave Somercot PA 13:04

> 814/463-1671 014/445-0000 FAX: 814/445-6709

COAL AND THE SERVE PORT

Client: SUMMIT TECHNICAL LABS

Sampled by: PM

Sampling Date:

Analyzed on: 6-11-04

Description: Pine Mt. AHS Stoker

#728

LAB NO. 98-C058945

Ash Fusion (Reducing Atmosphere) Initial D. Softening T.

2800 + 2800 + Temp o F

Hemi T.

Fluid T.

2800 + 2800 +

COAL ANALYSIS REPORT

CLIENT:

PINE MT. COAL

DESCRIPTION:

#1 STOKER

SAMPLED BY:

CLIENT

SAMPLE DATE:

ANALYSIS DATE:

5-3-94

CODE: OS

LAB NUMBER: L 729

AS RECEIVED DRY COAL MOISTURE: 1.43 ASH: 12.98 13,16 VOLATILE MATTER: 19.77 20.06 FIXED CARBON: 65.82 66.77 100.00 100.00 SULFUR: 1.45 1.48

ASTM FREE SWELLING INDEX #: 9

LBS SULFUR/MILLION BTU:

BTU:

1.10

OTHER: SCREEN - 1 1/2 X 3/4 = 48.5%

13237

 $3/4 \times 1/2 = 32.5\%$

13429

OTHER: $1/2 \times 0 = 19.0%$

LAB TECHNICIAN

MAF: 15465



a division of Energy Center, Inc.

P.2

2005 N Center Ave Somerset PA 15501

814/443-1871 814/445-6563 FAX: 814/445-0729

COAL ANALYSIS REPORT

Client: SUMMIT TECHNICAL LABS

Sampled by: PM

Sampling Date:

Analyzed on: 6-11-04

Description: Pine Mt. Stoker #1 #729

LAB NO. 98-C058946

Ash Fusion (Reducing Atmosphere)

Initial D. Softening T.

Temp o F 2500 2550 Hemi T. 2580

Fluid T. 2630

Robert L. Stull

Director of Coal Services



COAL ANALYSIS REPORT

CLIENT:

PINE MT.COAL

DESCRIPTION:

#2 STOKER

SAMPLED BY:

CLIENT SAMPLE DATE:

ANALYSIS DATE: 6-8-04

CODE: OS LAB NUMBER: L 730

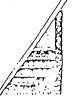
	AS RECEIVED	DRY COAL	
MOISTURE:	1.60		
ash:	13.27	13.48	
VOLATILE MATTER:	20.00	20.33	
FIXEO CARBON:	65.13	66.19	
	100.00	100.00	
		•	
SULFUR:	1.40	1.43	
вти:	13232	13447	MAF: 15542

ASTM FREE SWELLING INDEX #: 9

LBS SULFUR/MILLION BTU: 1.06

OTHER: SCREEN - 2 X 1/2 = 91.0% 1/2 X 0 = 9.0%

OTHER:



a division of Energy Center, Inc. -

2005 N Center Avo Somerset PA 15501

814/443-1071 C11/2 47 --- 3 FAX: \$14/670, 77%

COAL ANALYSIS REPORT

Client: SUMMIT TECHNICAL LABS

Sampled by: PM

Sampling Date:

Analyzed on: 6-11-04

Description: Pine Mt. Stoker #2 #730

LAB NO. 98-C058947

Ash Fusion (Reducing Atmosphere)

Initial D. Softening T.

Temp o F 2580 2630 Hemi T, 2680

Fluid T. 2740



MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT
SCHENECTADY, N. Y. 12305



No. _ . 491

BITUMINOUS COAL DUST

SECTION I. MATERIAL IDENTIFICATION MATERIAL NAME: BITUMINOUS COAL DUST DESCRIPTION: Includes coals between lignites and anthracites with "fixed carbon" <36%, "volatile matter" >14% "calorific value" >10,500 BTU/lb (see ASTM D388 & D3172). Particulate <75 µm (thru No. 200 sieve), dispersable in air, is of primary interest. Coal consists of conjugated poly(aromatic/unsaturated/saturated) ring structures with hetrocycles containing 0,N, and S. C102H78O10N2 has been suggested as a "coal molecule". SOURCE: Mining, handling, and pulverizing processes with coal. SECTION II. INGREDIENTS AND HAZARDS HAZARD DATA 'Proximate Analysis" of some air-dried bituminous coals: 8-hr ACGIH TLV TWA 2 mg/m 3 or "Moisture" Source "Volatiles" "Fixed Carbon" "Ash" OSHA PEL 2.4 mg/m3 West Virginia 1.8 20.4 72.4 5.4 Pennsylvania 1.2 Respirable dust with 34.5 58.4 5.9 Illinois <5% quartz* 8.4 35.0 48.2 8.4 Wyoming 11.0 38.6 40.2 10.2 Bituminous coals also contain trace metals, sulfur (0.4-3.5) and nitrogen (0.9-1.5%), depending on source and type. *Respirable dust is particulate <5 \mathcal{p} m in size. Use quartz formula (MSDS #71) if quartz content is >5% SECTION III. PHYSICAL DATA Boiling point ----- N/A Specific gravity (H_O=1) - 1.3-1.6 Vapor pressure at 25 C ----- Negligible Volatiles at 25 C ---- Negligible Water solubility ----- Negligible Appearance & Odor: Black powder; little or no odor. SECTION IV. FIRE AND EXPLOSION DATA LOWER UPPER Flash Point and Method Autoignition Temp." Flammability Limits In Air >0.05* (cloud) > 1114 F bloud(10 um Av.),50mJ spark Extinguishing Media: Nitrogen, carbon dioxide, steam, water, ammonium biphosphate powder A water spray can be used to cautiously wet down coal dust to help prevent ignition (avoid raising dust). It is a fire and explosion hazard when exposed to heat or flame. Firefighters should have self-contained breathing equipment and protective clothing. Ca log/ft³gives max, flame energy; smallest 20% of particulate determines iquition characteristics; 10-50mJ spark needed at 0-5% moisture, respectively, to initiate combustion in 600 mesh dust **A pile of 2-7 µm Pittsburgh coal dust heated at 169 C SECTION V. REACTIVITY DATA Coal dust is fairly stable at 25 C, but it can react with oxygen from the air, very slowly at room temperature and faster when heated. In piles with good heat retention a slow heat build-up and spontaneous ignition can occur. (Humid air can accelerate this familion of dry heal.) on healing coal releases combustibles by devolatization and pyrolysis. When these burn, they can heat the solid carbon; hot carbon reacts with O2, CO2, and water vapor to produce combustible gases. exidation products of coal can include exides of carbon, nitrogen and sulfur, partially oxidized hydrocarbons, soot and fly ash. This material is incompatible with strong oxidizing agents, especially when heated.

SECTION VI. HEALTH HAZARD INFORMATION

Coal workers pneumoconiosis (CWP) can occur after years of excessive exposure to respirable coal dust in the mining, handling and processing of coal. Respirable quartz particulate can be simultaneously present with the coal, especially in the mine. In general, coal dust is deposited in the lungs like quartz but requires over 10x as much for adverse effects. It does not kill macrophages; reticulin fibers form, but little collagen is generated. (That which forms is often attributed to quartz.)

The severity of CWP is directly related to the amount of coal dust in the lungs. In many CWP does not progress beyond the simple grage, which is detectable by years as round.

CWP does not progress beyond the simple stage, which is detectable by x-ray as round and irregular "coal macules" of 1-5 mm diameter, but which does not change lung function or shorten life. CWP is a precursor of progressive massive fibrosis (PMF) resulting in large masses of fibrous tissue development (mechanisms unclear). PMF impairs pulmonary function and shortens life. There is no evidence of association of CWP and

bronchary function and shortens like the property of the prope

SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Remove ignition sources. Clean-up personnel may need dust repirators and eye protection. Coal dust should be cleaned up in manner that avoids dispersing particulate in air

Collect dust in a covered metal container for use as fuel or for disposal.

DISPOSAL: Use as fuel in a pulverized coal-burning furnace, or burn as slurry in water For other incineration, possible dust explosions or "puffs" and high temperature need to be considered. Scrap coal dust may be wet down thoroughly with water in a container and buried in landfill. Follow Federal, State, and Local regulations.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Provide explosion-proof general and local exhaust ventilation to meet TLV requirements. Approved filtration of exhausted air may be required to prevent excessive environmen-

Where airborne dust is excessive in the workplace, dust respirators and eye protection

In working with coal dust, use good personal hygicne. Wear regularly cleaned work clothing. Showering and changing into street clothing after work may be desirable.

Follow good housekeeping procedures to control coal dust build up. Collect dust from settling areas and surfaces in a manner to avoid generating airborne dust. Design dust suppression measures into processes. Meet explosion-proof code requirements for electrical services where coal dust may be present.

SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS

Keep sources of heat and ignition, flammable materials, and strong oxidizing agents away from areas where coal dust may collect. Prevent static sparks. Inerting may be desirable, such as powdered CaCO, or rock dust laid down over coal dust on mine floor or a nitrogen enriched atmosphere in a coal pulverizing machine.

Reference: L.D. Smoot, et. al., "Pulvurized Coal Power Plant Fires and Explosions" Parts I, II and V, Brigham Young University, Mechanical Engineering Dept., Prepared for Utah Power and Light Co., Malt Lake City, Utah 1979-1981. Tem Classification: FLAMMABLE SOLID

DATA SOURCE(S) CODE: 2-4, 14, 36, 40, 47

histometric as in the suitability of information become for purchaser's purposes are accessfully purchasers responsibility. Therefore, although seasonable care hus have taken in the preparation of soch information, General Electric Company extends no warrantes, makes no representations and assumes no responsibility as to the accuracy or suitability of such information for application to purchaser's intended purposes or for consequences of its use.

MIS APPROVALS: CRD Industrial Hygiene

and Safety MEDICAL REVIEW:

14 20000

PINE MOUNTAIN COAL CO.



15615 RAYNER HILL DRIVE SW FROSTBURG, MD 21532 301-463-6518

RAYNER & SONS Fax: 301-463-2572



FED. ID # 52-2093182

TO:

Board of Education of Allegany County

From:

Pine Mountain Coal Company Inc.

Date:

August 11, 2003

Subject:

Coal Bid for Allegany County Schools for 2003-2004

COAL ANALYSIS REPORT

CLIENT:

PINE MT.COAL

DESCRIPTION:

AHS STOKER

SAMPLED BY:

CLIENT SAMPLE DATE:

ANALYSIS DATE: 6-3-03

CODE: DS

LAB NUMBER: L 728

14199

DRY COAL AS RECEIVED 1.88 MOISTURE: 8.82 8.65 ASH: 19.97 19.59 VOLATILE MATTER: 71.21 69.88 FIXED CARBON: 100.00 100.00 0.70 0.69 SULFUR:

ASTM FREE SWELLING INDEX #:

LBS SULFUR/MILLION BTU: 0.50

OTHER: SCREEN - 2 X 1/4 = 96.9% $1/4 \times 0 = 3.1\%$

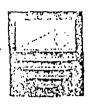
13932

OTHER:

BTU:

LAB TECHNICIAN

MAF: 15572



a division of Energy Center, Inc.

P. 1

2005 N Center Ave Somerset PA 15001

> 814/443-1674 814/440-0000 FAX: 814/445-6729

COAL AND VELS REPORT

Client: SUMMIT TECHNICAL LABS

Sampled by: PM

Sampling Date:

Analyzed on: 6-6-03

Description: Pine Mt. AHS Stoker #728

LAB NO. 98-C058945

Ash Fusion (Reducing Atmosphere)

Initial D. Softening T.

Hemi T. Fluid T. Temp o F 2800 + 2800 + 2800 + 2800 +

Robert L. Stull Director of Coal Services

COAL ANALYSIS REPORT

CLIENT:

PINE MT. COAL

DESCRIPTION:

#1 STOKER

SAMPLED BY:

CLIENT

SAMPLE DATE: .

ANALYSIS DATE: 6-3-03 CODE: DS

LAB NUMBER: L 729

	AS RECEIVED	DRY COAL	
MOISTURE:	1.43		
ASH:	12.98	13.16	
VOLATILE MATTER:	19.77	20.06	
FIXED CARBON:	65.82	66.77	
	100.00	100.00	•
SULFUR:	1.45	1.48	
BTU:	13237	13429	MAF: 15465

ASTM FREE SWELLING INDEX #:

LBS SULFUR/MILLION BTU: 1.10

OTHER: SCREEN - 1 1/2 X 3/4 = 48.5% 3/4 X 1/2 = 32.5%

OTHER: $1/2 \times 0 = 19.0$ %



GEOCHEMICAL TESTING

a division of Energy Center, Inc.

P.2

2005 N Center Ave Somerset PA 15501

814/443-1871 814/445-6563 FAX: 814/445-0723

COAL ANALYSIS REPORT

Client: SUMMIT TECHNICAL LABS

Sampled by: PM

Sampling Date:

Temp o F

Analyzed on: 6-6-03

Description: Pine Mt. Stoker #1 #729

LAB NO. 98-C058946

Ash Fusion (Reducing Atmosphere)

Initial D. Softening T. 2500

2550

Hemi T. 2580

Fluid T. 2630

Director of Coal Services



COAL ANALYSIS REPORT

CLIENT:

PINE MT. COAL

DESCRIPTION:

#2 STOKER

SAMPLED BY:

CLIENT

SAMPLE DATE:

ANALYSIS DATE:

6-3-03

CODE: DS

LAB NUMBER: L 730

AS RECEIVED

DRY COAL

MOISTURE:

1.60

ASH:

13.27

13.48

VOLATILE MATTER:

20.33

FIXED CARBON:

65.13

66.19

100.00

100.00

SULFUR:

1.40

1.43

BTU:

13232

13447

MAF: 15542

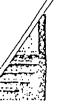
ASTM FREE SWELLING INDEX #:

LBS SULFUR/MILLION BTU: 1.06

SCREEN - 2 X 1/2 = 91.0%

1/2 X 0 = 9.0%

OTHER:



a division of Energy Center, Inc.

2005 N Center Ave Somerset PA 15501

814/443-1071 614/647 (711) FAX: \$14/640-076.0

COAL ANALYSIS REPORT

Client: SUMMIT TECHNICAL LABS

Sampled by: PM

Sampling Date:

Analyzed on: 6-6-03

Description: Pine Mt. Stoker #2 #730

LAB NO. 98-C058947

Ash Fusion (Reducing Atmosphere)

Initial D. Softening T. Temp o F 2580

2630 2680

Hemi T.

Fluid T. 2740



MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT
SCHENECTADY, N. Y. 12305



NO. ___ 491

BITUḤINOUS COAL DUST

Date May 1982 SECTION I, MATERIAL IDENTIFICATION HATERIAL NAME: BITUMINOUS. COAL DUST SECRIPTION: Includes coals between lignites and anthracites with "fixed carbon" <364, "volatile matter" >14% "calorific value" >10,500 BTU/1b (see ASTH D388 & D3172). Particulate <75 µm (thru No. 200 sieve), dispersable in air, is of primary interest. Coal consists of conjugated poly(aromatic/unsaturated/saturated) ring structures with hotrocycles containing 0,N, and S. Clo2^H78^O10^N2 has been suggested as a "coal molecule". DESCRIPTION: Mining, handling, and pulverizing processes with coal. SOURCE: SECTION 11. INGREDIENTS AND HAZARDS HAZARD DATA 'Proximate Analysis" of some air-dried bituminous coals: ACGIH TLV "Moisture" 8-hr TWA 2 mg/m or Source "Volatiles" "Fixed Carbon" "Ash" OSHA PEL 2.4 mg/m3 West Virginia 1.8 20.4 72.4 5.4 Pennsylvania 1,2 34.5 Respirable dust with 58.4 5.9 Illinois 8.4 <51 quartz* 35.0 48.2 8.4 Wyoming 38.6 40.2 10.2 Dituminous coals also contain trace metals, sulfur (0.4-3.5) and nitrogen (0.9-1.5%), depending on source and type. *Respirable dust is particulate <5 µm in size. Use quartz formula (MSDS #71) if quartz content is >5% SECTION III. PHYSICAL DATA N/A Specific gravity (H20=1) Boiling point Vapor pressure at 25 C ----- Negligible Volatiles at 25 C 2----1.3-1.6 Negligible · Water solubility ----- Negligible Appearance & Odor: Black powder; little or no odor. SECTION IV. FIRE AND EXPLOSION DATA UPPER LOWER Flash Point and Method Auroignition Temp." Flammability Limits In Air >0.05* (10) 31914 F bloud(10 lim Av.), 50mJ spark Excinguishing Media: Nitrogen, carbon dioxide, steam, water, ammonium biphosphate powder A water spray can be used to cautiously wet down coal dust to help prevent ignition (avoid raising dust). It is a fire and explosion hazard when exposed to heat or flame. Firefighters should have self-contained breathing equipment and protective clothing. "Calloy/ft3gives max, flame energy; smallest 20% of particulate determines iquition characteristics; 10-50mJ spark needed at 0-5% moisture, respectively, to initiate combustion in 4800 most dust "A pile of 2-7 Jm Pittsburgh coal dust heated at 169 C SECTION V. REACTIVITY DATA Don't dust is fairly stable at 25 C, but it can react with oxygen from the air, very slowly at room temperature and faster when heated. In piles with good heat retention a slow heat build-up and apontaneous ignition can occur. (Humid air can accelerate this ignition of dry coal.) On heating coal releases combustibles by devolutionation and pyrolymis. When theme burn, they can heat the solid carbon; hot carbon reagrs with O2, CO2, and water vapor to produce combustible gases. exidation products of coal can include exides of carbon, nitrogen and sulfur, partially oxidized hydrocarbons, soot and fly ash. this material is incompatible with strong oxidizing agents, especially when heated.

SECTION VI. HEALTH HAZARD INFORMATION

Coal workers pneumoconiosis (CWP) can occur after years of excessive exposure to respirable coal dust in the mining, handling and processing of coal. Respirable quartz pareral, coal dust is deposited in the lungs like quartz but requires over lox as much for adverse effects. It does not kill macrophages; roticulin fibers form, but little collagen is generated. (That which forms is often attributed to quartz.)

CWP does not progress beyond the simple stage, which is detectable by years as round. CWP does not progress beyond the simple stage, which is detectable by x-ray as round and irregular "coal macules" of 1-5 mm diameter, but which does not change lung func-

tion or shorten life. CWP is a precursor of progressive massive fibrosis (PMF) resulting in large masses of fibrous tissue development (mechanisms unclear). PMF impairs pulmonary function and shortens life. There is no evidence of association of CWP and Dronchogenic cancer.

Chronic bronchitis and emphysema are reported to result from excessive coal dust inhalation. Persons having rheumatoid arthritis in conjunction with simple CWP may have rapidly developing lung damage. (Caplan's Syndrome).

SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Remove ignition sources. Clean-up personnel may need dust repirators and eye protection. Coal dust should be cleaned up in manner that avoids dispersing particulate in air

Collect dust in a covered metal container for use as fuel or for disposal.

DISPOSAL: Use as fuel in a pulverized coal-burning furnace, or burn as slurry in water For other incineration, possible dust explosions or "puffs" and high temperature need to be considered. Scrap coal dust may be wet down thoroughly with water in a container and buried in landfill. Follow Federal, State, and Local regulations.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Provide explosion-proof general and local exhaust ventilation to meet TLV requirements. Approved filtration of exhausted air may be required to prevent excessive environmen-

Where airborne dust is excessive in the workplace, dust respirators and eye protection

In working with coal dust, use good personal hygiene. Wear regularly cleaned work clothing. Showering and changing into street clothing after work may be desirable. Follow good housekeeping procedures to control coal dust build up. Collect dust from settling areas and surfaces in a manner to avoid generating airborne dust. Design dust suppression measures into processes. Meet explosion-proof code requirements for electrical services where coal dust may be present.

SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS

Keep sources of heat and ignition, flammable materials, and strong oxidizing agents away from areas where coal dust may collect. Prevent static sparks. Inerting may be desirable, such as powdered CaCo, or rock dust laid down over coal dust on mine floor or a nitrogen enriched atmosphere in a coal pulverizing machine.

Reference: L.D. Smoot, et. al., "Pulvurized Coal Power Plant Fires and Explosions" Parts I, II and V, Brightum Young University, Medianical Engineering Dept., Prepared for Utah Power and Light Co., Each take City, Utah 1979-1981. Chasification: PLANNEL SOLID

DATA SOURCE(S) CODE:2-4,14,38,41,47

hydometric as to the soutopility of information person for barchoser, a finitesses are necessarily purchaser's responsibility. Therefore, although reasonable here taken in the preparation of such information, General Electric Company ods no varioniles, makes no representations and assumes no responsibility es se the occuracy or sustability of such information for application to purchase's intended purposes or for consequences of its use.

MIS APPROVALS:

and Safety

CRD

Industrial Hygiene

MEDICAL REVIEW: