

Facility Name:	Braddock Middle 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.

<u>III. Required Information.</u> The following information must be provided to the Department by March 1, 2009:

A. Contact information:		
Facility Name: Braddock Middle School		
Name of Permit Holder:		
Facility Address: 909 Holland Street Street		
Facility Address: <u>Cumberland</u> City	MD State	21502 Zip
County: <u>Allegany</u>	-	
Contact Information (Person filing report or Enviro	onmental Manager)	
Facility Telephone No.: 301-722-4968	Facility Fax No.: <u>301-722-4985</u>	
Contact Name: Larry Lancaster	- A F 40 C from From Print Inc.	
Contact Title: Supervisor of Operations		·
Contact Address: 211 Market Street Street		
Contact Address: Cumberland City	MD State	21502 Zip
Contact Email: <u>larry.lancaster@acps.k12.md.us</u>		
Contact Telephone No.: <u>301-722-4968</u>	_ Contact Fax No.: 301-722-4985	

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.

100 20 20

Form Number: MDE/WAS/PER.033

Date: January 16, 2009 TTY Users: 800-735-2258 Fig. 1. Page 1. Str. 1. American de la company

Page 2 of 5

Facility Nam	ne: Braddock Middle Scho	ool CCB To	onnage Report – 2008
type of coal provided is i	or other raw material that g nsufficient, please attach ac	nerates the coal combustion by enerates the coal combustion ditional pages: minous coal, are used to provi	byproducts. If the space
<u> </u>			
coal combus in subsequen year.) If the	tion byproducts generated and years you need only provided is insufficionate of CCBs Generated for		enerated. (Please note that agraph for the last calendar ages in a similar format:
Reporting	Volume of CCB Type:	Volume of CCB Type:	Volume of CCB Type:
Year	Bottom Ash (ft ³)	N/A	NI/A
0000			N/A
2008	3,115.46		N/A
2008	3,115.46 2,718.36		N/A
			N/A
2007	2,718.36		N/A
2007 2006	2,718.36 1,204.63		N/A
2007 2006 2005 2004 Additional not he volumes	2,718.36 1,204.63 2,657.91 3,232.97 otes:	nis facility were estimated using the corresponding testing	ng the quantities of coal

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

Facility Name:	Braddock Middle School	CCB Tonnage Report – 2008
combustion byp	•	ts, or both, conducted relating to the coal armed by you or your company during the report.
•	l laboratory reports of all chemical case attach this information to the re	characterizations of the coal combustion port.
coal combustion	byproducts in the last 5 calendar y	otion of how you disposed of or used your ears (Please note that in subsequent years you for the last calendar year), identifying:
than described i	n Paragraph C above), the location	on byproducts disposed of or used (if different of disposal, mine reclamation and use sites, ducts disposed of or used at each site:
The coal combu	astion byproducts (CCBs) generated	by this facility are listed in Table I.
	blending yard located near Lonacor	five years were transported to the Phillips ning, MD. The volumes of CCBs transported
and (b) The diff	Gerent uses by type and volume of co	oal combustion byproducts:
	· · · · · · · · · · · · · · · · · · ·	dditional pages in a similar format (Please e the information in Section F for the last

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

Facility Name:	Braddock Middle Scho	ool CCB Tonnage Re	port – 2008
G. A description 5 years, identify	<u>-</u>	dispose of or use coal combustion byprodu	cts in the next
ised, the location	n of intended disposal,	al combustion byproducts intended to be dismine reclamation and use sites, and the typed to be disposed of or used at each site:	•
generate approx	imately 2,600 ft ³ of coa	of data, it is estimated that this facility will combustion products (CCBs) each year follows are classified as bottom ash.	
-		nsported to a CCB mine reclamation site in ste Management Mountain View landfill.	Allegany or
and (b) The c	lifferent intended uses l	by type and volume of coal combustion by	products.
Bottom Ash – A	pproximately 0 ft ³ to 2,	,600 ft ³ per year - Mine Reclamation	
Bottom Ash – A	pproximately 0 ft ³ to 2,	,600 ft ³ per year – Landfill Facility	
If the space prov	vided is insufficient, ple	ease attach additional pages in a similar for	mat.
		authorized official of the generator must signal completeness of the information contained	-
This is to certify	that, to the best of my cuments are true, accura	knowledge, the information contained in the	his report and
any anached doc	differents are true, accura	ate, and complete.	
0	/ ,	Lancaster, Supervisor of Operations	
Karry San	neast	301-722-4968	2/23/09
/ Signat	ure Name,	Title, & Telephone No. (Print or Type)	Date
	<u>ları</u>	ry.lancaster@acps.k12.md.us	
		Your Email Address	

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

1242118 30

PHILLIPS COAL CO.

11 Front Street
Lonaconing, Maryland 21539
Phones

Office: 301-463-2066 Home: 301-463-5326

July 21, 2008

Coal Bids
Larry Lancaster, Supervisor of Operations
211 Market Street (Rear)
P.O. Box 1724
Cumberland, M.D. 21501-1724

COAL HILL N	IINING			ESSROC	-MARTINSBU	RG & FREDER	ICK WK OF 6-9-08	3
Date:	Moist.	Ash	Vol.	Sulfur	BTU	Coke	Lbs. Sul.	
6/6/2008	4,44	22.46		3.73	11209	, 8.5	3.33	
	Dry	23.50		3.90	11730	•		
#_ 3087 <u>-</u> C		. _			15333	Other:		
TRI-STAR MI	NING			#3 FRAN	KLIN (RAW) J	OB #434		e men
Date:	Moist.	Ash	Vol.	Sulfur	BTU	Coker	Lbs. Sul.	
6/6/2008	2.64	13.09		1.46	12957	9	1.12	
	Dry	13.45		1.50	13308	•		
# 3088 <u>-</u> C	·	·			15376	Other:		
TRI-STAR MI	NING			WAYNES	BURG (RAW)			
Date:	Moist.	Ash	Vol.	Sulfur	DTB	Coke	Lbs. Sul.	
6/6/2008	17.37	12.79		0.67	9354	0.5	0.72	
	' Dry	15.47		0.81	11321			
#_ 3089 <u>-</u> C					13394	Other:		_
TRI-STAR MI	NING			REDSTO	NE (RAW) JO	B #419		
Date:	Moist.	Ash	Vol.	Sulfur	BTU	Coke	Lbs. Sul.	
6/6/2008	3.17	17.15	•	7.11	12089	9	5.88	
	Dry	17.71	•	7.34	12484	•		
# <u>3090 - C</u>					15171	Other:		
TRI-STAR MIL			-pl	U FRANI		IT) JOB #434		
Date:	Moist,	Ash	Vol.	/ Sulfur	BTU	Coke	Lbs. Sul.	
6/6/2008	2.49	10.97		2.61	13483	9	1.94	
	Dry	11.24		2.68	13827			
# <u>3091 - C</u>				= # # # #	15579	Other:		

1/2 - #4 1/2 - #4 1/2 - #3 1 - CROP

CORPORATE RESEARCH & DEVELOPMENT SCHENECTADY, N. Y. 12305



BITUMINOUS COAL DUST

	•				Date .
SECTION I.	MATERIAL I	DENTIFICATION			
interest. (structures v as a "coal n	Includes coatile matter" <75 µm (the Coal consists with hetrocyclessis of the Coal coal coal coal coal coal coal coal c	s of conjugated poles containing (ites and anthraci value" >10,500 B'), dispersable in poly(aromatic/uns),N, and SC ₁₀₂ H g processes with	aturated/ 78 ⁰ 10 ^N 2	"fixed carbon" e ASTM D388 & D3172). of primary 'saturated) ring as been suggested
SECTION II.	INGREDIEN	ITS AND HAZARD	S		HAZ ARD DATA.
"Proximate Ana	lysis" of so	ome air-dried bit	tuminous coals:		ACGIH TLV 3
Source	"Moisture"	"Volatiles"	"Fixed Carbon"	"Ash"	8-hr TWA 2 mg/m or OSHA PEL 2.4 mg/m ³
West Virginia Pennsylvania Illinois Wyominq	1.8 ·1.2 8.4 11.0	20.4 34.5 35.0 38.6	72.4 58.4 48.2 40.2	5.4 5.9 8.4 10.2	Respirable dust with
and nitroger *Respirable du	(0.9-1.5%), st is partic	tain trace metals depending on so ulate <5 \(\mu\) m in s artz content is	size. Use quartz	5)	
SECTION III					* ;
Boiling point Vapor pressure Water solubili Appearance & O	at 25 C ty		Volatiles at 25	ty (H ₂ O=1 5 C) - 1.3-1.6 - Negligible
SECTION IV.	FIRE AND	EXPLOSION DATA	A		LOWER UPPER
Flash Point .	and Method	Autoignition Te {cloud} >1114F (layer) >392F			
A water spra (avoid raisi Firefighters s	y can be use ng dust). It hould have s	gen, carbon diox d to cautiously is a fire and e elf-contained br	ride, steam, water wet down coal dus explosion hazard w eathing equipment	t, ammoni st to hel when expo c and pro	um biphosphate powder p prevent ignition sed to heat or flame.

Oxidation 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.

with O2, CO2, and water vapor to produce combustible gases.

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 $^{\circ\circ}$ this ignition of dry coal.) On heating coal releases combustibles by devolatization and pyrolysis. When these burn, they can heat the solid carbon; hot carbon reacts

HEALTH HAZARD INFORMATION SECTION VI.

TLV

2 mg/m³ (See Sect II)

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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. humoved 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 zoe needed.

Irwarking with coal dust, use good personal hygiene. Wear regularly cleaned work cluthing. 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 ampression measures into processes. Meet explosion-proof code requirements for electrical services where coal dust may be present.

SPECIAL PRECAUTIONS AND COMMENTS SECTION IX.

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

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., Salt Lake City, Utah 1979-1981.

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

Agnores as to the sultability of information herein for purchaser's purposes are Manants as to the autiability of unformation retain to purchaser's purposes are auscarily purchaser's responsibility. Therefore, although reasonable care has had taken in the preparation of such information. Consent Electric Company saxeds no waveversias, makes to representations and evaluates no responsibility saxeha occuracy or suitability of such inferentian for application to purchaser's andod purposes or for consequences of its use.

APPROVALS:

MEDICAL REVIEW:

Industrial Hygiene

and Safety

F-12679-65

PHILLIPS COAL CO.

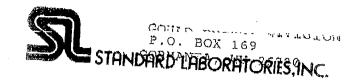
11 Front Street
Lonaconing, Maryland 21539
Phones

Office: 301-463-2066 Home: 301-463-5326

July 25, 2007

Coal Bids
Larry Lancaster, Assistant Supervisor of Operations
211 Market Street (Rear)
P.O. Box 1724
Cumberland, M.D. 21501-1724

CERTIFICATE NUMBER 7.02



Tri Star Mining P.O. Box 239 Barton, MD 21521

DATE: 07/07/07 STANDARD NO 1997-21069-4

SAMPLE ID:

#4 (RAW) JOB #434

OPERATING CO.: Tri Star Mining

SAMPLED BY:

CUSTOMER

MINE:

LOCATION:

DATE SAMPLED:

07/06/07

DATE RECEIVED: 07/06/07

WEATHER:

CLOUDY 21.3 KG

GROSS WEIGHT: OTHER ID:

CERTIFICATE OF ANALYSIS

	ASTM METHOD	AS RECEIVED	DRY BASIS
MOISTURE	D2961	3.53 %	•
ASH	D3174	16,99 %	XXXX
SULFUR	D4239 (3.3)		17.61 %
BTU/LB	·	3.73 %	3.87 %
MAF BTU/LB	D5865	12382	12835
WE BIOLE	D312Ø		1.55
			15578

CORPORATE RESEARCH & DEVELOPMENT

BITUMINOUS COAL DUST

Date 🕝

SCHENECTADY, N. Y. 12305

SECTION I.	MATERIAL I	DENTIFICATION			
interest. C structures w as a "coal m	Includes coatile matter" <75 µm (through the consists with hetrocycles of the color	>14% "calorific ru No. 200 sieve) s of conjugated p cles containing (ites and anthracity value" >10,500 BT of the processes with the proces	rU/IB (see air, is o aturated/: 78 ⁰ 10 ^N 2	e ASTM D388 & D31/2/. of primary saturated) ring
		TS AND HAZARD			HAZARD DATA
"Proximate Ana	alvsis" of so	me air-dried bit	tuminous coals:	_	ACGIH TLV 3
Source	"Moisture"	"Volatiles"	"Fixed Carbon"	"Ash"	8-hr IVA 3 mg/m or OSHA PEL 2.4 mg/m ³
West Virginia Pennsylvania Illinois Wyoming Bituminous coa	1.8 1.2 8.4 11.0	20.4 34.5 35.0 38.6	72.4 58.4 48.2 40.2	5.4 5.9 8.4 10.2	Respirable dust with <5% quartz*
and nitrogen *Respirable du	(0.9-1.5%), st is partic	depending on so Fulate <5 \(\mu \) in so eartz content is	ource and type.	-	
SECTION III	. PHYSICAL	DATA			
3	dor: Black	powder; little c	or no odor.		
		EXPLOSION DATA	A emp. Flammability		LOWER UPPER
Flash Point		(cloud) 31114 F	cloud(10 jim Av	/.),50mJ	spark l oz/ft3
A water spra (avoid raisi Firefighters s	y can be use ng dust). It hould have s	d to cautiously is a fire and e elf-contained br	wet down coal dus explosion hazard w ceathing equipment	t to help when expose and pro	um biplicaphiate powder prevent ignition sed to heat or flame. tective clothing. termines ignition by, to initiate clust heated at 169 C
			2-/ IM PIECSDU	du coar e	iust neated at 109 C
SECTION V.			can react with o		on blooming trans
slowly at room a slow heat this ignition and pyrolysis with 02, CO2 Oxidation production by the condition of	om temperatu build-up and n of dry coa s. When the , and water ucts of coal cocarbons, s	re and faster whe spontaneous igned in the spontaneous igned capor to produce can include oxicot and fly ash.	en heated. In pile nition can occur, coal releases comb n heat the solid combustible gase des of carbon, ni	les with of (Humid a) bustibles carbon; les carbon; le	good heat retention ir can accelerate by devolatization not carbon reacts

HEALTH HAZARD INFORMATION SECTION VI.

TLV

2 mg/m

(See Sect II)

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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 ne 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

Promide explosion-proof general and local exhaust ventilation to meet TLV requirements. Accroved 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

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

Adjuncts as to the suitabillity of information herein for purchaser's purposes are executify purchaser's responsibility. Therefore, although remanuable care has been solven in the proporation of such information, General Electric Company erads no warranties, makes no representations and assumes no responsibility example accuracy or suitability of each information for application to perchasar's example purposes or for consequences of its use.

APPROVALS: Industrial Hygiene and Safety

MEDICAL REVIEW:

F4 2866-67

PHILLIPS COAL CO.

11 Front Street Lonaconing, Maryland 21539

Office 301-463-2066 Home 301-463-5326

August 12, 2006

Coal Bids
Supervisor of Plant Operations
211 Market Street (Rear)
P.O. Box 1724
Cumberland, M.D. 21501-1724

		and the second s			And that they are they are they are they		
TRI-STAR							
DATE	MOIST.	ASH	VOL.	SULFUR	BTU	COKE	LBS.SUL.
08-11-06	2.23	16.20	0.00	3.54	12430	9	2.85
	DRY:	16.57	0.00 .	3.63	12714		
#6323-C		•.	•		15239		
							- and less or our
TRI-STAR	MINING -	#3 FRANKI	IN JOB 🛊	434			
DATE	MOIST.	ASH	VOL.	SULFUR	BTU	COKE	LBS.SUL.
08-11-06	2.03	10.82	0.00	1.39	13532	9	1.03
	DRY:	11.04	0.00	1.42	13813		
#6324-C					15527		

SCHENECTADY, N. Y. 12305



No. 491

BITUMINOUS

Date SECTION I. MATERIAL IDENTIFICATION MATERIAL NAME: BITUMINOUS COAL DUST MATERIAL NAME: BITUMINOUS COAL DUST
DESCRIPTION: Includes coals between lignites and anthracites with "fixed carbon"
<86%, "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. C₁₀₂H₇₈O₁₀N₂ has been suggested as a "coal molecule".

SOURCE: Mining, handling, and pulverizing processes with coal. HAZARD DATA SECTION 11. INGREDIENTS AND HAZARDS 8-hr TWA 2 mg/m 3 or "Proximate Analysis" of some air-dried bituminous coals: "Volatiles" "Moisture" "Fixed Carbon" "Ash" Source OSHA PEL 2.4 mg/m³ 20.4 72.4 5.4 West Virginia 1.8 Respirable dust with 1.2 34.5 58.4 5.9 Pennsylvania <5% quartz* 8.4 35.0 48.2 8.4 Illinois 11.0 38.6 40.2 10.2 Wyoming 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 µ m in size. Use quartz formula (MSDS #71) if quartz content is >5% SECTION III. PHYSICAL DATA N/A Specific gravity (H_O=1) - 1.3-1.6 Vapor pressure at 25 C ----- Negligible Volatiles at 25 C $\stackrel{?}{=}$ ----Negligible Water solubility ----- Negligible Appearance & Odor: Black powder; little or no odor. SECTION IV. FIRE AND EXPLOSION DATA UPPER LOWER Autoignition Temp. Flammability Limits In Air >0.05* Flash Point and Method (cloud) >1114F cloud(10 jim Av.),50mJ spark | 0z/ft 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 l oz/ft³gives max. flame energy; smallest 20% of particulate determines ignition characteristics; 10-50mJ spark needed at 0-5% moisture, respectively, to initiate combustion in <200 mesh dust. **A pile of 2-7 µm Pittsburgh coal dust heated at 169 C 10 Alr Can reach AIT in our hr SECTION V. REACTIVITY DATA

neurnal . A tienthin

This material is incompatible with strong oxidizing agents, especially when heated.

Oxidation products of coal can include oxides of carbon, nitrogen and sulfur, partially

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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., Salt Lake City, Utah 1979-1981. DUCTUASSIFICATION: FLAMMABLE SOLID

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

Mements as to the sulfability of information herain for purchaser's purposes are creatily purchasor's responsibility. Therefore, although reasonable can has been suken in the properation of such information, General Electric Company emads no workensies, makes no september of one and assumes the responsibility worth occurrecy or sellability of such information for application to purchasor's maximal purposass on for consequences of its use.

APPROVALS: CRD Industrial Hygiene and Safety MEDICAL REVIEW:

FY2065-06

PHILLIPS COAL CO.
11 Front Street
Lonaconing, Maryland 21539
Phones
Office 301-463-2066
Home 301-463-5326

August 8, 2005

Coals Bids Supervisor of Plant Operations 211 Market Street (Rear) P.O. Box 1724 Cumberland, M.D. 21501-1724

APPROVED BY

GOULD ENERGY DIVISION 11600 MEXICO FARMS RD. SE CUMBERLAND, MD 21502

DATE: 07/16/05

STANDARD NO 1997-15411-1

TRI-STAR MINING, INC. P.O. BOX 339 BARTON, MD 21521

SAMPLE ID: AES PITT

OPERATING CO.: TRI-STAR MINING, INC.

SAMPLED BY:

CUSTOMER

MINE:

LOCATION: BARTON MD

DATE SAMPLED: 07/16/05

DATE RECEIVED: 07/16/05

. :

WEATHER:

GROSS WEIGHT: 19.52 KG

CLEAR

OTHER ID:

CERTIFICATE OF ANALYSIS

		AS RECEIVED	DRY BASIS
MOISTURE	D2961	5.40 %	xxxx
ASH ·	D3174	12.83 %	13.56 %
SULFUR	D4239 (3.3)	2.35 %	2.48 %
BTU/LB	D5865	12738	13465
MAF BTU/LB	D3180		15577

FY 2004-05

PHILLIPS COAL CO.

11 Front Street
Lonaconing, Maryland 21539

Phones _____ Office 301-463-2066 Home 301-463-5326

August 13,2004

Coal Bids Supervisor of Plant Operations 211 Market St. (Rear) P.O. Box 1724 Cumberland, M.D. 21501-1724

.116.5

GOULD ENERGY DIVISION 11600 MEXICO FARMS RD. SE CUMBERLAND, MD 21502

TRI-STAR MINING, INC. P.O. BOX 339

BARTON, MD 21521

AES RAW

SAMPLE ID:

.DATE: 07/14/04 STANDARD NO 1997-14273-1 1970

DATE RECEIVED: 07/14/04

OPERATING CO.:

TRI-STAR MINING, INC.

SAMPLED BY:

CUSTOMER

MINE:

LOCATION:

BARTON, MC.

DATE SAMPLED:

07/13/04

WEATHER:

SUNNY

GROSS WEIGHT:

17.66 KG

OTHER ID:

CERTIFICATE OF ANALYSIS

		AS RECEIVED	DRY BASIS
MOISTURE	D2961	1.55 %	XXXX
ASH	D3174	13.95 %	14.17 %
SULFUR	D4239 (3.3)	2.86 %	2.91 %
BTU/LB	D1989	13178	13385
MAF BTU/LB	D3180		15595

CORPORATE RESEARCH & DEVELOPMENT



Vo.	_	491
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BITUMINOUS COAL DUST

Date ·

SCHENECTADY, N. Y. 12305

SECTION I. MATERIAL IDENTIFICATION										
MATERIAL NAME: BITUMINOUS COAL DUST DESCRIPTION: Includes coals between lignites and anthracites with "fixed carbon" <86%, "volatile matter" >14% "calorific value" >10,500 BTU/lb (see ASTM D388 & D3172). Particulate <75 Um (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 O ₁₀ N ₂ has been suggested as a "coal molecule". SOURCE: Mining, handling, and pulverizing processes with coal.										
		ITS AND HAZARD			HAZARD DATA					
				<u></u>						
"Proximate Ana	ACGIH TLV 8-hr TWA 2 mg/m or									
Source	"Moisture"	"Volåtiles"	"Fixed Carbon"	"Ash"	OSHA PEL 2.4 mg/m ³					
West Virginia	1.8	20.4	72.4	5.4	Respirable dust with					
Pennsylvania Illinois	.1.2 8.4	34.5 35.0	58.4 48.2	5.9 8.4	<5% quartz*					
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{I} m in size. Use quartz formula (MSDS #71) if quartz content is >5%.										
SECTION III					<u></u>					
Boiling point		N/F	Specific availe	/# 01	1 2 1 6					
	at 25 C	Negligible	<u> </u>							
Water solubili					,					
Appearance & Odor: Black powder; little or no odor.										
SECTION IV.	FIRE AND	EXPLOSION DATA	Α		LOWER UPPER					
Flash Point	and Method	Autoignition Te {cloud} > 114 F 1ayer > 92 F			In Air >0.05* spark 1 oz/ft ³					
Extinguishing	Media: Nitro	gen, carbon diox	cide, steam, water	, ammoni	um biphosphate powder					
A water spra	y can be use	d to cautiously	wet down coal dus	t 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 l oz/ft ³ gives max. flame energy; smallest 20% of particulate determines ignition characteristics; 10-50mJ spark needed at 0-5% moisture, respectively, to initiate combustion in <200 mesh dust. **A pile of 2-7 µm Pittsburgh coal dust heated at 169 C likelin can reach AIT in one hr										
SECTION V. REACTIVITY DATA										
Coal dust is f	airly stable	at 25 C, but it	can react with o	xygen iro	om 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 ignition of dry coal.) On heating coal releases combustibles by devolatization and pyrolysis. When these burn, they can heat the solid carbon; hot carbon reacts										
with On. COn	. and water	se burn, they ca vapor to produce	n near the so <u>ild</u> . Combustible asse	carbon; h	or carpon reacts					
with O2, CO2, and water vapor to produce combustible gases. Oxidation products of coal can include oxides of carbon, nitrogen and sulfur, partially										
oxidized hydrocarbons, soot and fly ash.										

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

HEALTH HAZARD INFORMATION SECTION VI.

TLV

2 mg/m (See Sect II)

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 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 no pe 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. have oved filtration of exhausted air may be required to prevent excessive environmental dispersion of dust.

Whene 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 elsthing. Showering and changing into street clothing after work may be desirable.

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

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

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

Migrants or to the suitability of information herein for purchasor's purposes are seasonly purchasor's responsibility. Therefore, although reasonable care has has taken in the preparation of such information, General Electric Company accords no worranties, makes no representations and assumes no responsibility scands accuracy as suitability of such information for application to purchasor's emilial purposes or for consequences of its use.

MIS APPROVALS: Industrial Hygiene and Safety MEDICAL REVIEW:

PHILLIPS COAL CO.

17 76 6 4 6 4

Lonaconing, Maryland 21539

Phones _____ Office 301-463-2066 Home 301-463-5326

August 13,2003

Coal Bids Supervisor of Plant Operations 340 Frederick Street P.O. Box 1724 Cumberland, M.D. 21501-1724

TRI-STAR MINING DATE MOIST. 07-03-03 5.47 DRY: #5930-C	ASH 30.82	SHAKER J VOL. 0.00	OB #16 SULFUR 0.78 0.83	BTU 9281 9819 14570	COKE 1	LBS.SUL. 0.84
TRI-STAR MINING DATE MOIST. 07-03-03 6.90 DRY: #5931-C	12.43	TSBURGH VOL. 0.00	(RAW) JOB SULFUR 1.00	#434 BTU 11589 12448 14366	COKE 1	LBS.SUL.
TRI-STAR MINING DATE MOIST. 07-03-03 1.55 DRY: #5932-C	ASH \ 16.98	4 (RAW) VOL. 0.00 0.00	JOB #429 SULFUR 3.40 3.45	BTU 12599 12798 15465	COKE 9	LBS.SUL. 2.70

CORPORATE RESEARCH & DEVÉLOPMENT
SCHENECTADY, N. Y. 12305



No. ____491

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*Ca l oz/ft³gives max. flame energy; smallest 20% of particulate determines ignition characteristics; 10-50mJ spark needed at 0-5% moisture, respectively, to initiate combustion in <200 mosh dust. **A pile of 2-7 pm Pittsburgh coal dust heated at 169 c the all can reach AIT in one hr. SECTION V. REACTIVITY DATA

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

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APPROVALS: Industrial Hygiene and Safety

MEDICAL REVIEW: