Facility Name: <u>Fort</u>	Hill High School	_ CCB Tonnage Report – 200	8
----------------------------	------------------	----------------------------	---

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: Fort Hill High School Name of Permit Holder: Facility Address: 500 Greenway Avenue Street Facility Address: Cumberland MD State County: <u>Allegany</u> Contact Information (Person filing report or Environmental Manager) Facility Telephone No.: 301-722-4968 Facility Fax No.: 301-722-4985 Contact Name: Larry Lancaster Contact Title: Supervisor of Operations Contact Address: 211 Market Street Street Contact Address: <u>Cumberland</u> MD City State Contact Email: <u>larry.lancaster@acps.k12.md.us</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.

Contact Telephone No.: <u>301-722-4968</u> Contact Fax No.: <u>301-722-4985</u>



[m] 20 200 m

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

Date: January 16, 2009 TTY Users: 800-735-2258

Facility Na	me: <u>Fort Hill High School</u>	ССВ	Tonnage Report – 2008
type of coal	iption of the process that ger l or other raw material that g insufficient, please attach ac	enerates the coal combustic	byproducts, including the on byproducts. If the space
Two (2) st	oker coal boilers, firing bitu	minous coal, are used to pro	ovide steam water for building
coal combusin subsequence year.) If the	rst Annual Report you submuring the last 5 calendar yeastion byproducts generated ant years you need only proving space provided is insufficient the space of CCBs Generated for the space of CCBs Generated for the space provided is insufficient.	rs, including an identification of the volume of each type ide the information in this part, please attach additional	on of the different types of generated. (Please note that
Reporting	Volume of CCB Type:	Volume of CCB Type:	Volume of CCB Type:
Year	Bottom Ash (ft³)	N/A	N/A
2008	2,942.71	11111	IV/A
2007	2,446.64		
2006	1,469.18		
2005	2,842.94		
2004	3,717.47		
Additional n	otes:		
The volumes used by the f	of CCBs generated from the acility and the ash values from	is facility were estimated uom the corresponding testir	sing the quantities of coal

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

Facility Name: Fort Hill High School	CCB Tonnage Report – 2008
D. Descriptions of any modeling or risk assessment combustion byproducts or their use, that were performed reporting year. Please attach this information to the	ormed by you or your company during the
E. Copies of all laboratory reports of all chemical byproducts. Please attach this information to the re-	characterizations of the coal combustion eport.
F. In this first Annual Report you submit, a descriptional combustion byproducts in the last 5 calendary need only provide the information in this paragraph	ears (Please note that in subsequent years you
(a) The types and volume of coal combustion than described in Paragraph C above), the location and the type and volume of coal combustion bypro	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 combustion byproducts (CCBs) generated	by this facility are listed in Table I.
The CCBs generated by this facility during the past Coal Company blending yard located near Lonaco to this site are listed in Table I.	five years were transported to the Phillips ning, MD. The volumes of CCBs transported
and (b) The different uses by type and volume of co	pal combustion byproducts:
	·
If the space provided is insufficient, please attach ac note that in subsequent years you need only provide calendar year).	dditional pages in a similar format (Please 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: _Fort Hill H	igh School	CCB Tonnage	Report – 2008			
G. A description of how you 5 years, identifying:	ı intend to dispose	of or use coal combustion bypr	oducts in the next			
used, the location of intended	d disposal, mine red	nstion byproducts intended to be clamation and use sites, and the isposed of or used at each site:	e disposed of or type and volume			
Based on the past five calend generate approximately 2,700 years. The CCB's generated	<u>0 ft° of coal combu</u>	t is estimated that this facility version products (CCBs) each yearsified as bottom ash.	vill continue to ar for the next five			
All CCB's from this facility will be transported to a CCB mine reclamation site in Allegany or Garrett County Maryland, or to the Waste Management Mountain View landfill.						
		nd volume of coal combustion	byproducts.			
Bottom Ash – Approximately	$\frac{0}{10}$ ft ³ to 2,700 ft ³ p	er year - Mine Reclamation				
Bottom Ash – Approximately	<u>/ 0 ft³ to 2,700 ft³ p</u>	er year – Landfill Facility				
			·			
If the space provided is insuff	icient, please attac	h additional pages in a similar i	format.			
report, and certify as to the ac report:	curacy and comple	d official of the generator must teness of the information conta	ined in the annual			
This is to certify that, to the beany attached documents are tr	est of my knowledgue, accurate, and c	ge, the information contained in omplete.	this report and			
		Supervisor of Operations	, ,			
Janus Janus Signature	77.1 0.5	301-722-4968	2/23/09			
Signature	Name, Title, & T	elephone No. (Print or Type)	Date			
		er@acps.k12.md.us				
	Y ou	r Email Address				

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

TY 2018 - 69

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	Adiatinic				·		
				ESSROC	-MARTINSB	URG & FREDER	RICK WK OF 6-9-08
Date:	Maist.	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>2</u>				15333	Other:	
TRI-STAR M	INING			#3 FRAN	KLIN (RAW)		7 · 10 · 10 · 10 · 10 · 10 · 10 · 10 · 1
Date:	Moist.	Ash .	Vol.	Sulfur		Coker.	Lbs. Sul.
6/6/2008	2.64	13.09		1.46	12957	9	1.12
	Dry	13.46		1.50	13308	. 🕶	1.12
# <u>3</u> 08 <u>8</u> <u>-</u> C		<u> </u>			15376	Other:	
TRI-STAR MI	NING			WAYNES	BURG (RAW		
Date:	Moist.	Ash	Vol.	Sulfur	UTB		u su
6/6/2008	17.37	12.79	• 01.	0.67	9354	Coke 0.5	Lbs. Sul.
	' Dry	15.47		0.81		0.3	0.72
		10,71	•	0.01	11321		
~#T 3088 - C	: - -			. No. 2 All 1984 Aug	13394	Other:	
TRI-STAR M	NING			REDSTO	VE (RAW) JC		The second secon
Date:	Moist.	Ash	Vol.	Sulfur	BTU	Coke	Lbs. Sul
6/6/2008	3.17	17.15	•	7.11	12089	9	5.88
	Dry	1 <i>7</i> .71		7.34	12484		0.00
#_ 3090 - C	·			_	15171	Other:	· ·
TRI-STAR MIL	VING		<u> </u>	-U RFRANK	IN (PANA)	PIT) JOB #434	
Date:	Molst,	Ash	Vol.	9 Sulfur		Coke	the out
6/6/2008	2.49	10.97	,-		13483	9	Lbs. Sul.
	Dry	11.24		2.68	13827		1.94
# 2004 ~	•	. , ,		2.04	d Press		
# <u>3091 - C</u>					15579	Other:	

1- 31 SLAK
1/2- #4
1/2- #3
1- CROP

A 3 + 1

CORPORATE RESEARCH & DEVELOPMENT SCHENECTADY, N. Y. 12305



491

BITUMINOUS CDAL DUST

f	 				Date .
		IDENTIFICATION			
structures v as a "coal m SOURCE: Minim	Includes co tile matter" <75 µm (th Coal consist with hetrocy molecule". ng, handling	cles containing , and pulverizin	O,N, and S. C ₁₀₂ H	78 ⁰ 10 ^N 2	"fixed carbon" e ASTM D388 & D3172) of primary saturated) ring as been suggested
		ITS AND HAZARD			HAZARO DATA
		ome air-dried bi	tuminous coals:	·	ACGIH TLV 3
Source	"Moisture"	"Volatiles"	"Fixed Carbon"	"Ash"	8-hr IWA 2 mg/m or OSHA PEL 2.4 mg/m ³
West Virginia Pennsylvania Illinois Wyoming	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 wit <5% quartz*
Respirable du	(0.9-1.5%), st is partic S #71) if gu	depending on so ulate <5 \mu in s artz_content is	ize. Use quarta		
ppearance & Oc	dor: Black p	Negligible			
SECTION IV	CIDC AND C	VOLOCIOU DATA			
Flash Point a	nd Method	140861 States	np. Flammability	٠	
(avoid raisin irefighters sh	g dust). It ould have se	is a fire and ex lf-contained bre	ide, steam, water wet down coal dus xplosion hazard w eathing equipment	, ammoniu t to help nen expose and prote	m biphosphate powder prevent ignition
al dust is fai slowly at room a slow heat bu	trly stable , temperature ild-up and ;	DATA at 25 C, but it and faster whe	can react with ox	ygen from	the air, very od heat retention
and pyrolysis.	When these	burn, they can	al releases combu heat the solid c	stibles b arbon; ho	

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

oxidized hydrocarbons, soot and fly ash.

HEALTH HAZARD INFORMATION SECTION VI.

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 10% 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 companies to progress beyond the simple stage, which is detectable by x-ray 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 fungtion 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

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

Promide explosion-proof general and local exhaust ventilation to meet TLV requirements. Ameroved 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 clathing. 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 smoression measures into processes. Meet explosion-proof code requirements for electrical services where coal dust may be present.

SPECIAL PRECAUTIONS AND COMMENTS SECTION IX.

Kensources of heat and ignition, flammable materials, and strong oxidizing agents from areas where coal dust may collect. Prevent static sparks. Inerting may be weirable, such as powdered CaCO₃ 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.

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

Agronts as to the sulfability of information herein for purchaser's purposes are sections as to me sometime, a minute therefore, although reasonable care has measuring personalizes responsibility, moreover, among a constance case not be a token in the proporation of such information. Governed Electric Company anxis no unrearries, makes no representations and assumes no responsibility ances no workerings, makes to representations and assumes no responsibility associate occurring a tuitobility of such information for application to purchases craded purposes or for consuquences of its upo.

APPROVALS: Industrial Hygiene and Safety · MEDICAL REVIEW: .

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

13046937897



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:

Cronda 21.3 KG

GROSS WEIGHT: OTHER ID:

CERTIFICATE OF ANALYSIS

	ASTM METHOD	AS RECEIVED	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
MOISTURE	D2961		DRY BASIS
ASH		3.53 %	XXXX
SULFUR	D3174	16,99 %	17.61 %
	D4239 (3.3)	3,73 %	
BTU/LB	D5865		3.87 %
MAF BTU/LB	D318Ø	12382	12835
			15578

SCHENECTADY, N. Y. 12305



No. 491

BITUMINOUS COAL DUST

Date ---SECTION I. MATERIAL IDENTIFICATION MATERIAL NAME: BITUMINOUS COAL DUST DESCRIPTION: Includes coals between lignites and anthracites with "fixed carbon" <96%, "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. Clo2^H78 10^N2 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: ACGIH TLV 8-hr TMA 3 mg/m 3 or "Moisture" "Volatiles" "Fixed Carbon" Source "Ash" OSHA PEL 2.4 mg/m³ West Virginia 1.8 20.4 72.4 5.4 Pennsylvania Respirable dust with 34.5 1.2 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 (H₂O=1) 1.3-1.6 Vapor pressure at 25 C ----- Negligible Volatiles at 25 C 2----Negligible Water solubility -----Appearance & Odor: Black powder; little or no odor. SECTION IV. FIRE AND EXPLOSION DATA LOWER Flash Point and Method Autoignition Temp." Flammability Limits In Air >0.05* (cloud) >1114 F cloud(10 jim Av.),50mJ spark 1 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 Jm Pittsburgh coal dust heated at 169 C SECTION V. REACTIVITY DATA Toal 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 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 O2, CO2, and water vapor to produce combustible gases.

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

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

oxidized hydrocarbons, soot and fly ash.

HEALTH HAZARD INFORMATION SECTION VI.

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 10% 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.)

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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

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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

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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 m 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

Promide explosion-proof general and local exhaust ventilation to meet TLV requirements. American be required to prevent excessive environmen-

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L.D. Smoot, et. al., "Pulvurized Coal Power Plant Fires and Explosions" Remunce: Parts I. II and V. Brigham Young University, Mechanical Engineering Dept., Prepared for Utah Power and Light Co., Salt Lake City, Utah 1979-1981. DARMURCE(S) CODE:2-4,14,38,43,47

Memoris as to the sulfability of information herein for purchaser's purposes are angularity to to me university of anomalous martin to personal a purpose a dra executify purchaser's responsibility. Therefore, although reasonable care has executify to the proparation of such information, General Electric Company seasons as the proportion of representations and assumes no responsibility easthe accuracy or evitability of such information for application to purchaser's क्वरतंत्रचे मध्यक्रवरका का रेका रकत्वस्थव्यक्तरताक को शेर una.

APPROVALS: CRD Industrial Hygiene and Safety MEDICAL REVIEW:

PHILLIPS COAL CO.

11 Front Street Lonaconing, Maryland 21539

Phones _____ 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

TRI-STAR DATE 08-11-06 #6323-C	MOIST.	#4 FRANK ASH 16.20 16.57	VOL.	#434 SULFUR 3.54 3.63	BTU 12430 12714 15239	COKE	LBS.SUL. 2.85
TRI-STAR DATE 08-11-06 #6324-C	MINING - MOIST. 2.03 DRY:	#3 FRANKI ASH 10.82 11.04	VOL. O.OO	#434 SULFUR 1.39 1.42	BTU 13532 13813 15527	COKE 9	LBS.SUL.

SUMMIT TECH LAB



491

BITUMINOUS CDAL DUST

Date -

CORPORATE RESEARCH & DEVELOPMENT SCHENECTADY, N. Y. 12305

SECTION I.	MATERIAL I	DENTIFICATION			
structures was a "coal n	Includes coatile matter" <75 µm (the Coal consists with hetrocycles molecule".	s of conjugated poles containing (ites and anthraci value" >10,500 g), dispersable in poly(aromatic/unso 0,N, and S. C 102 ^H g processes with	aturated/ 78 ⁰ 10 ^N 2 h	"fixed carbon" e ASTM D388 & D3172). of primary 'saturated) ring as been suggested
SECTION II.	INGREDIEN	ITS AND HAZARD	S		HAZARD DATA
"Proximate Ana	alysis" of so	ome air-dried bit	tuminous coals:		ACGIH TLV 3
Source	West Winds I I O				
West Virginia Pennsylvania Illinois Wyoming	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	OSHA PEL 2.4 mg/m ³ Respirable dust with <5% quartz*
Bituminous coa and nitroger *Respirable du	ls also cont (0.9-1.5%), st is partic	tain trace metals depending on so	s, sulfur (0.4-3.5 ource and type.	10.2	
SECTION III					
Appearance & O	dor: Black	powder; little o	r no odor.	•	-
SECTION IV.	FIRE AND	EXPLOSION DATA	\	····	LOWER UPPER
Flash Point a		Autoignition Te (cloud) >1114 F (laver) >392 F	cloud(10 um Av	1 50m7 c	n Air >0.05*
(avoid raising firefighters sh	ng dust). It nould have se	gen, carbon diox d to cautiously is a fire and e alf-contained bro	ide, steam, water wet down coal dus xplosion hazard w eathing equipment	, ammoniu t to help hen expos and prot	m biphosphate powder prevent ignition ed to heat or flame.
"Ca I oz/tt-qiv characteristic combustion in .hr.dr.can.rea	/es max, flar s; 10-50mJ s <200 mesh di cn_AIT_tn_c	ne energy; smalle spark needed at (ist, **A pile of	est 20% of partic 0-5% moisture, re 2-7 µm Pittsburg	ulate det spectivel gh coal d	ermines ignition y, to initiate ust heated at 169 C
SECTION V, F	REACTIVITY	DATA			
a slow heat be this ignition and pyrolysis with O2, CO2,	om comperator build-up and of dry coal . When thes and water v	e and faster who spontaneous igni .) On heating come burn, they can apor to produce	pal releases combustible cases	es with quality (Humid air (Humid air (Stibles) (Sarbon; he	ood heat retention r can accelerate by devolatization of carbon reacts
oxidized hydr	ocarbons, so	ot and fly ash.	de de carbon, hit	xogen and	sulfur, partially

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

SECTION VI. HEALTH HAZARD INFORMATION

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Menents as to the auticibility of information herein for purchaser's purposes are exmanily purchasor's reaponability. Therefore, although reasonable care has been taken in the proporation of such information, General Electric Company exists no warranties, makes no sepresentations and assumes no responsibility of such information for application so purchaser's

moded purpulses to for tankapuration of its use.

APPROVALS: Industrial Hygiene and Safety MEDICAL REVIEW:

FY2005-06

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

DATE RECEIVED: 07/16/05

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

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

301-777-7590

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

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

P.O. BOX 339 BARTON, MD 21521 #4 FRAIL

DATE: 07/14/04 STANDARD NO 1997-14273-1 (6.0)

SAMPLE ID: AES RAW

Jim. RRESTINA.

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

SCHENECTADY, N. Y. 12305



BITUMINOUS COAL DUST

Date -SECTION I. MATERIAL IDENTIFICATION MATERIAL NAME: BITUMINOUS COAL DUST NATERIAL 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 0,N, and S. C102H78 10 N 2 has been suggested Mining, handling, and pulverizing processes with coal. SECTION II. INGREDIENTS AND HAZARDS HAZARD DATA "Proximate Analysis" of some air-dried bituminous coals: 8-hr $\frac{ACGIH TLV}{TWA 2 mg/m}^3$ 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 8.4 <5% quartz* 35.0 48.2 8.4 Wyoming 11.0 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 m in size. Use quartz formula (MSDS #71) if quartz content is >5% SECTION III. PHYSICAL DATA Boiling point ----- N/A Specific gravity $(H_{\gamma}O=1)$ - 1.3-1.6 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 Flash Point and Method Autoignition Temp." Flammability Limits In Air >0.05* (cloud) 31114 F cloud(10 jim Av.),50mJ spark 1 oz/ft3 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 loz/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 Jm 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 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 O2, CO2, and water vapor to produce combustible gases.

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

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

oxidized hydrocarbons, soot and fly ash.

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 10% 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 does not progress beyond the simple stage, which is detectable by x-ray 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

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.

DISPISAL: 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 m 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

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

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

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

Follow good housekeeping procedures to control coal dust build up. Collect dust from serling 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.

SPECIAL PRECAUTIONS AND COMMENTS SECTION IX.

Kemsources of heat and ignition, flammable materials, and strong oxidizing agents from areas where coal dust may collect. Prevent static sparks. Inerting may be mirable, such as powdered CaCO3 or rock dust laid down over coal dust on mine floor ** 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.

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

Againsts or to the suitability of information herein for purchaser's purposes are austarily purchasor's responsibility. Therefore, although reasonable care has mentaling purchases a experimentally intermediate, General Electric Company course no worranslas, makes no representations and assumes no responsibility exame no worreness, makes no separation for opplication to purchasor's anded purposes or for consequences of its use.

MIS APPROVALS: CRD Industrial Hygiene and Safety MEDICAL REVIEW:

1-1-26664

PHILLIPS COAL CO.

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

#5930-C	DRY	ASH 30.82 32.61	SHAKER VOL. 0.00	JOB #16 SULFUR 0.78 0.83	BTU 9281 9819 14570	COKE 1	LBS.SUL.
TRI-STAR DATE 07-03-03 #5931-C	MOIST. 6.90 DRY:	- LITTLE PI ASH 12.43 13.35	TTSBURGI VOL. 0.00 0.00	H (RAW) JOB SULFUR 1.00	#434 BTU 11589 12448 14366	COKE 1	LBS.SUL.
07-03-03	MINING MOIST. 1.55 DRY:	FRANKLIN : ASH 16.98 17.25	#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 & DEVELOPMENT



491

BITUMINOUS COAL DUST

SCHENECTADY, N. Y. 12305

p-1					Date	
SECTION I.	MATERIAL 1	DENTIFICATION			**************************************	
structures was a "coal m	Includes contile matter" <75 µm (the Coal consister with hetrocymolecule".	cles containing	ites and anthracivalue" >10,500 B'), dispersable in poly(aromatic/unsolo,N, and S. C 102H	78 ⁰ 10 ^N 2 h	"fixed carbon" e ASTM D388 & D3172). Of primary saturated) ring as been suggested	
SECTION II. INGREDIENTS AND HAZARDS					HAZARD DATA	
"Proximate Analysis" of some air-dried bituminous coals: ACGIH TLV						
Source	"Moisture"	"Volatiles"	"Fixed Carbon"	"Ash"	8-hr TWA 2 mg/m or	
West Virginia Pennsylvania Illinois Wyoming	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	OSHA PEL 2.4 mg/m ³ Respirable dust with <5% quartz*	
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 \(\text{pm} \) in size. Use quartz formula (MSDS #71) if quartz content is >5%.						
SECTION III. PHYSICAL DATA						
Boiling point						
CECTION IN	CIDE AUD :			·		
Flash Point a	ind Method	XPLOSION DATA Autoignition Ter	np. Flammability	٠		
(avoid raising irefighters should be all oz/ft ³ give characteristic combustion in the dir can real SECTION V. R	ng dust). It nould have seres max. flam s; 10-50mJ s < 200 mesh duch AIT In or	gen, carbon diox of to cautiously of is a fire and experienced break needed at 0 st. **A pile of DATA	wet down coal dust kplosion hazard wheathing equipment est 20% of particu 0-5% moisture, res 2-7 \u00edm Pittsburg	, ammonium to help nen exposionand protestively and protestively he coal dispersional dispersion	m biphosphate powder prevent ignition ed to heat or flame. ective clothing. ermines ignition y, to initiate ust heated at 169 C	
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MIS APPROVALS:

Industrial Hygiene and Safety

29 May 1982