



Fayette County Health Center  
100 New Salem Road, Room 167  
Uniontown, PA 15401  
October 22, 1997

Bureau of Deep Mine Safety

412-439-7469  
Fax 412-439-7324

Mr. Robert A. Bohach  
Manager Safety  
Cyprus Cumberland Resources Corp.  
R. D. #3, Box 184  
Waynesburg, PA 15370

Re: Technical Advisory Committee's Recommendation for Approval of Caterpillar  
3306 PCNA Engine with the DST Emission Control and Conditioning System

Dear Mr. Bohach:

The Bureau has evaluated the recommendation of the Technical Advisory Committee on Diesel-Powered Equipment (TAC) to approve the use of the Caterpillar 3306 PCNA diesel engine fitted with a Dry System Technology (DST) Management System™. This recommendation was contained in a letter from the TAC to the Bureau dated September 22.

The TAC's recommendation stipulated that their approval is contingent upon the adherence to the General Specifications of the Diesel-Powered Equipment Package (enclosed).

The information submitted by Cyprus on behalf of Brookville Mining Equipment Corporation describes the diesel particulate characteristics of the Caterpillar 3306 PCNA engine and mathematical calculation to demonstrate a particulate reduction efficiency to comply with Section 203-A(a)(3) of Act 182 of 1996. This data was extracted from a number of documents contained in the Cyprus September 22 submittal (Appendix 1 through 9).

The Bureau concurs with the recommendation of the TAC that the Caterpillar 3306 PCNA diesel engine utilizing a Fleetguard M30 dry filter, as referenced in the enclosed general specifications, meets the requirements of Act 182 for 95 percent reduction of diesel particulate matter and results in particulate matter emissions less than 0.12 mg/m<sup>3</sup> when diluted by 50 percent of the MSHA approval plate ventilation rate for that diesel engine.



Based on the TAC's evaluation and recommendation, the Bureau approves the Fleetguard M30 filter when used under the parameters, as specified in the enclosed general specifications sheet to meet the 95 percent reduction of diesel particulate matter and results in emissions of less than 0.12 mg/m<sup>3</sup> of particulate matter when diluted by 50 percent of the MSHA approval plate ventilation rate for that engine.

Should you have any questions about this letter, please feel free to contact me.


Sincerely,



Richard E. Stickler  
Director  
Bureau of Deep Mine Safety

Enclosure

cc: L. Saver, Brookville Mining  
G. Davis, TAC  
R. DuBreucq, TAC

bcc: J. Scaffoni   
D. Johnson  
BOTE File  
Cyprus File

RES:MAB:adt 

## General Specifications of the Diesel-Powered Equipment Package

Engine Manufacturer	Caterpillar
Engine Model	3306 PCNA
Horsepower	150 HP
Rated Speed	2200 RPM
Manufacturer's Recommended Exhaust Backpressure (Inwg)	34.2 Inches Water Gauge
Exhaust GAS Flow (SCFM)	345 SCFM
ISO 8178-1 Average DPM (gr/hr)	40.78 gr/hr
Emissions Control System	DST Management System™
Filter Model **	M30
Filter Size	Outer
	Inner
	Length
Filter Surface (in <sup>3</sup> )	16 x 12 in Diameter
Filter air Rating (CFM)	10 x 6 in Diameter
Filter Efficiency	20 in
Filter Recommended Exhaust Backpressure (Inwg)	42,231 in <sup>3</sup>
MSHA Engine Approval	2100 CFM
MSHA Certification No.	97.6%
Date Issued	25 in wg RB 9-22-97 *
Rated Speed	MSHA Part 32 Engine Certification
Rated Horsepower	24/dD103-0
Ventilation Rate (CFM)	June 1, 1981
Average Ambient DPM Level (mg/m <sup>3</sup> )	2200 RPM
	150 HP
	15,500 CFM
	0.0725 mg/ m <sup>3</sup>

\* Robert Bohach initialed 9-22-97

\*\* Fleetguard Filter

RB 9-22-97 \*

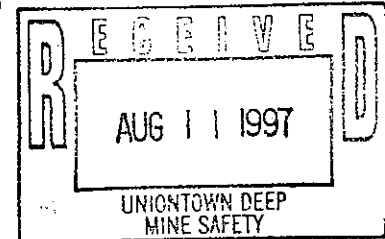
# Brookville Mining Equipment Corporation



20 PICKERING ST., P.O. BOX 130  
BROOKVILLE, PA 15825 U.S.A.  
TELEPHONE 814-849-2000  
FAX 814-849-2010

August 5, 1997

Mr. James C. Erlinger  
PA DEP  
Bureau of Deep Mine Safety  
Fayette County Health Center  
100 New Salem Road  
Uniontown, PA 15401



Dear Mr. Erlinger:

This is a letter of request for approval of a Brookville Mining Equipment Corporation Model Number BCC-20UP Underground Mining Diesel Locomotive for operation in the State of Pennsylvania.

Enclosed are four(4) copies of the following:

Hydraulic Schematics:

- ▶ 7-3641B Brake Cooling and Engine Cooling Fan Drive
- ▶ 7-3642B PTO/Jackwalker System
- ▶ 7-3648A Service Brake Actuation
- ▶ 7-3672B Transmission Plumbing Schematic

Diesel Engine Systems:

- ▶ 7-3647B Fuel System Schematic
- ▶ M85-004-01 Cooling Flow Schematic
- ▶ M85-005-01 Sensor and Probe Locations
- ▶ M85-006-01 Injection System

Pneumatic System M-0138B

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Electrical Systems

- ▶ 10-0853C General Electrical Schematic
- ▶ 10-0854B Jackwalker

Fire Suppression:

- ▶ 7-3670B Ansul Nozzle Location
- ▶ 7-3714B Fire Suppression System

General Arrangement 9-1308B

If you have any questions or need further information, please feel free to contact me.

Sincerely,

BROOKVILLE MINING EQUIPMENT CORP.



Larry J. Saver  
Engineer

Encl.

Cc: 8353 & 8354 Jacket