

Fayette County Health Center
100 New Salem Road, Room 167
Uniontown, PA 15401
January 27, 2004

Bureau of Deep Mine Safety

724-439-7469

Mr. Eli Schmader
Brookville Equipment Corporation
175 Evans Street
P. O. Box 130
Brookville, PA 15825

Re: Approval of Alternate Test Procedure for Carbon Monoxide (CO) Sampling requested for the Cummins QSB C 240 5.9 190 HP Diesel Engine Powering the Brookville Model 20T240D Locomotive

Dear Mr. Schmader:

Article II-A of the Pennsylvania Bituminous Coal Mine Act (Act) establishes the standards and procedures for using diesel-powered equipment in Pennsylvania's underground bituminous coal mines. Section 224-A of the Act establishes the Technical Advisory Committee on Diesel-Powered Equipment (TAC) whose duties include reviewing requests to use alternative technologies or methods to comply with the requirements of the Act. Any alternative technology or methods recommended by the TAC and approved by the Secretary shall not reduce or compromise the level of health and safety protection afforded by Article II-A.

On-site tests confirmed that the alternate test procedure is required. Torque stall was maintained in the field for the required 90 seconds with overheating occurring shortly thereafter. The TAC has provided the results of the alternate test procedure for carbon monoxide sampling for the Brookville Model 20T240D locomotive powered by the Cummins QSB C240 5.9 190 HP turbo charged diesel engine. The TAC recommended that the Secretary approve the alternate test procedure for the Brookville Model 20T240D locomotive. If the torque stall cannot be maintained in the field for the required 90 seconds, it will be necessary for Brookville to make necessary adjustments to the equipment. A revised alternate test procedure would then be required.

The Cummins QSB C240 5.9 diesel engine is the first turbo-charged diesel engine to be operated in Pennsylvania's underground coal mines. In order to verify that the gaseous emissions recorded during preliminary tests accurately represent the emissions for this engine, in-mine field tests will be required. It is recommended that "turbo-charged" engine operating instructions be incorporated into the mine's training plan for diesel equipment operators and diesel mechanics. Additionally, "turbo lag" is not considered a steady state condition of operation; therefore CO emission tests should not be conducted during the "turbo lag" time period.

Based on the information provided and the TAC recommendation, the Secretary approves the 90-second alternate test procedure for the Cummins QSB C240 5.9 190 HP diesel engine and Brookville Model 20T240D locomotive. The Secretary approves the TAC recommendations because the alternative method will not reduce or compromise the level of health and safety protection afforded by Article II-A of the Act. A copy of the approved alternate test procedure is enclosed.

Should you have any questions concerning this, please contact me at the above number or e-mail me at jsbaffoni@state.pa.us.

Sincerely,

Joseph A. Sbaffoni
Director
Bureau of Deep Mine Safety
Enclosure

cc: G. Ellis, PCA
R. DuBreucq, TAC
G. Davis, TAC

bcc: M. Bertovich
D. Smicik
W. Bookshar
A. A. Martin
S. Gaida
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