

**Fayette County Health Center  
100 New Salem Road, Room 167  
Uniontown, PA 15401**

March 30, 2007

**Bureau of Mine Safety**

724-439-7469  
Fax 724-439-7324

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

RE: Request for Deutz BF4M2012C turbo-charged diesel engine and emission system approval

Dear Mr. Shultz:

On December 23, 2005, Brookville submitted a diesel power package consisting of a Brookville Equipment Corporation Deutz BF4M2012C 138hp diesel engine with an M30 DST Management System for approval. This diesel-powered package was installed in a model 15S rubber tired tractor. The DST management system includes a Syncat Corporation M241-260-01 oxidation catalyst, a Pass technology M30-411-01 heat exchanger, and a Fleetguard M30 particulate filter.

Article II-A of the Pennsylvania Bituminous Coal Mine Act (Act) requires that an exhaust emissions control and conditioning system may be approved for multiple diesel engine applications through a single series of laboratory tests, known as the ISO 8178-1 test, only if data is provided to the Technical Advisory Committee on Diesel Powered Equipment (TAC) that reliably verifies that the exhaust emissions control and conditioning system will meet the in-laboratory diesel particulate matter standard established by this subsection for each diesel engine. Data provided to satisfy this provision should include diesel particulate matter production rates for the specified engine as measured during the ISO 8178-1 test, if available. If ISO 8178-1 test data for diesel particulate matter production is not available for a specified engine, comparable data may be provided to the TAC that reliably verifies that the exhaust emissions control and conditioning system will meet the in-laboratory diesel particulate matter standard established by this subsection for the specified diesel engine. This standard shall only be used for in-laboratory testing for approval of diesel-powered equipment for use underground.

The TAC and members of the PA Bureau of Mine Safety evaluated the equipment and tested the emission system on March 1, 2007, when the equipment became available. Exhaust gas monitoring showed a temperature of 55 degrees Fahrenheit, which is well below the 302 degrees as required in the Act. Extrapolation of emissions shows that the engine and emission control system produce a result of .013 mg per cubic meter when diluted by 100 percent of the MSHA plate ventilation rate for that engine. Emission tests showed that the engine and diesel

exhaust and emission control system was performing within MSHA's approval specifications. Based on the information provided and the TAC recommendation, the Department approves the Brookville Equipment Corporation Deutz BF4M2012C 138 hp diesel engine with an M30 DST Management System. The PA ventilation rate for this engine is 6000 cfm. The engine and emission system approval number is **BOTE-DEES 55-07**. The ventilation rate and the approval number are to be stamped on a plate attached to the engine in a place that is easily visible for inspection.

If you have any questions regarding the process, please contact my office at the above phone number.

Sincerely,

Joseph A. Scaffoni  
Director  
Bureau of Mine Safety

cc: Ron Bowersox/TAC  
Paul Borchick/TAC

bcc: A. Gaida  
W. Bookshar  
A. Martin  
M. McCaffrey  
S. Gaida  
R Ceschini  
P. Keruskin  
D. Tissue  
TAC file

JAS/WBB/adg