



Fayette County Health Center
100 New Salem Road, Room 167
Uniontown, PA 15401
October 18, 2006

Bureau of Mine Safety

724-439-7469
Fax 724-439-7324

Mr. Jay Rafferty
Brookville Equipment Corporation
175 Evans Street: PO Box 130
Brookville, Pa 15825

RE: Brookville Equipment Corporation Daimler Chrysler OM904LA 174hp diesel engine with an M30 DST Management System installed in a 25 ton locomotive
Engine and emission system approval number – **BOTE-DEES-137-06**

Dear Mr. Rafferty:

On June 8, 2006, Brookville submitted a diesel power package consisting of a Brookville Equipment Corporation Daimler Chrysler OM904LA 174hp diesel engine with an M30 DST Management System for approval. This diesel-powered package installed in a DST management system includes a Syncat Corporation M113-210-02 oxidation catalyst, a Pass technology M115-105-01 heat exchanger, and a 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 (TAC) on Diesel-Powered Equipment that reliably verifies that the exhaust emissions control and conditioning system will meet, for each diesel engine, the in-laboratory diesel particulate matter standard established by this subsection. 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 advisory committee that reliably verifies that the exhaust emissions control and conditioning system will meet, for the specified diesel engine, the in-laboratory diesel particulate matter standard established by this subsection. 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 August 8, 2006. Exhaust gas monitoring showed a temperature of 204 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 .021 mg per cubic meter when diluted by 100% of the MSHA plate ventilation rate for that engine. During these evaluations, surface temperature measurements showed temperatures in excess of 302 degrees on some exhaust components. Brookville increased the HTI coatings on these surfaces from 3/8" to 3/4" in thickness and added an Advanced Thermo Products (ATP) thermal blanket. On September 22, 2006, the TAC reevaluated the exhaust temperatures on these components and found them in compliance with the Act. Based upon these



evaluations, the TAC confirmed that the diesel engine and exhaust emission and control system meets the requirements of the Act and recommended approval of the system provided the general Specification sheet dated June 8, 2006, is strictly complied with. Based on the information provided and the TAC recommendation, the Department approves the Brookville Equipment Corporation Daimler Chrysler OM904LA 174 hp diesel engine with an M30 DST Management System. The PA ventilation rate for this engine is 7,500 cfm. The engine and emission system approval number is **BOTE-DEES-137-06**. 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.

Should you have any questions regarding the process, contact my office at 724-439-7469.

Sincerely,



Joseph A. Scaffoni
Director
Bureau of Mine Safety

Enclosure – General Specifications Sheet

cc: Ron Bowersox/TAC
Michael A. Sinozich/Consol