



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BUREAU OF MINE SAFETY

919

January 10, 2013

Mr. Jim Coe
BUCYRUS
4041 Wurno Road
Pulaski, Virginia 24301

RE: CAT Diesel Fuel Pod

Dear Mr. Coe:

Chapter 4 of the "Bituminous Coal Mine Safety Act" (the Act) provides for the use of diesel-powered equipment in underground bituminous coal mines. Section 424 of the act created a Technical Advisory Committee ("TAC") for the purpose of advising the Department regarding implementation of Chapter 4 and evaluation of alternative technology or methods for meeting the requirements of Chapter 4.

On April 11, 2012, the TAC, DEP, and CAT met after the quarterly TAC meeting to discuss the concept and design of the Diesel Fuel POD, and how it would be evaluated as to whether it complied with the ACT.

The TAC gave recommended approval in the enclosed report with several stipulations on November 29, 2012. This recommendation is specifically for the CAT Diesel Fuel POD as a piece of equipment only. All stipulations must be adhered to in operation of this equipment. They recommended final approval at the meeting on January 9, 2013.

If you have any questions on this request, please contact Joseph Scaffoni at jscaffoni@pa.gov or at 724-439-7469.

Sincerely,

Joseph A. Scaffoni
Director
Bureau of Mine Safety

cc: Bowersox
Borchick

Enclosure(s)

916

**Pennsylvania Technical Advisory Committee
On Diesel Powered Equipment**

Paul Borchick

(412) 736-9105 (Cell)
(724) 485-4414 (Office)
Email: paulborchick@consolenergy.com

Ron Bowersox

(724) 726-8987 (Home)
(724) 479-8692 (Office)
Email: umwarbowersox@yahoo.com

December 19, 2012

Joseph Sbaffoni, Director
Bureau of Mine Safety
Fayette County Health Center
100 New Salem Road, Room 167
Uniontown, Pa. 15401

RE: CAT Diesel Fuel POD

Dear Mr. Sbaffoni:

Chapter 4 of the "Bituminous Coal Mine Safety Act" (the Act) provides for the use of diesel-powered equipment in underground bituminous coal mines. Section 424 of the act created a Technical Advisory Committee ("TAC") for the purpose of advising the Department regarding implementation of Chapter 4 and evaluation of alternative technology or methods for meeting the requirements of Chapter 4.

Background

In 2011, CAT and BMX Mine approached the TAC and DEP with a concept to design and utilize a Diesel Fuel POD to be able to store diesel fuel closer to the section or areas where off track diesel equipment is used. This concept was a hybrid design to incorporate a diesel fuel storage tank inside a POD that served as the facility, meeting the requirements of all pertinent sections of the ACT including Sections 405, 406, 407, 409 and 411.

The ability to store diesel fuel closer to the worksite would reduce the frequency of transporting diesel fuel throughout the mine to the work area, and thus enhance the level of safety for the Miners by reducing the opportunity for accidents involved in transporting the diesel fuel buffalo.

On March 5, 2012 the Director requested that the TAC should investigate and give a recommendation regarding the concept and design approval of the CAT Diesel Fuel POD. The TAC and DEP met with CAT to discuss their design and to evaluate the concept regarding meeting the requirements of the ACT.

On July 10, 2012 the TAC recommended approval of the plan submitted by BMX Mine for a "Plan to Fuel Diesel Equipment in the Primary Intake Escapeway" which included the procedures to use a CAT Diesel Fuel POD once approved. The Director approved the BMX plan on July 12, 2012. This BMX plan was a separate stand-alone TAC recommendation and was not used in considering the CAT Diesel Fuel POD recommendation.

This TAC recommendation regarding the CAT Diesel Fuel POD is to evaluate whether the POD meets all requirements of the pertinent sections of the ACT, and does not reduce or compromise the level of safety to the Miners as provided by the ACT.

Investigation

On April 11, 2012 the TAC, DEP and CAT met after the quarterly TAC meeting to discuss the concept and design of the Diesel Fuel POD, and how it would be evaluated as to whether it complied with the ACT. It was agreed that this was not a diesel fuel transportation unit, and would not be used to transport diesel fuel throughout the mine. The interpretation was that it was a diesel fuel transportation unit enclosed in a diesel fuel storage facility, where the outer shell of the fuel pod would serve as the "diesel storage facility". This would require that for the Diesel Fuel POD to be approved, it must meet all pertinent parts of the ACT, including Sections 405, 406, 407, 409 and 411.

The TAC traveled to the CAT facility in Pulaski, VA on November 29, 2012 to inspect the unit when it became available. The TAC met with Jim Coe and Mike Gais from CAT to go over the drawings and inspect the POD.

The Pod was very well built of substantial steel material to ensure that it could not be easily damaged and make it comply with Section 405(e). It used a rapid attachment system to secure it to a scoop, it had tie down clevises on each corner, it had slots for forks to lift it, and had wheels to be able to pull the unit if needed, thus complying with Section 405 (c). The POD had a vent pipe on top to be utilized once it is set in place to be vented directly to the return air course. It also had self-closing doors, automatic fire suppression and was marked with a conspicuous sign as required in Section 405 of the ACT. CAT agreed to modify their design so that all doors were self-closing and install a swing limiter on all doors so this protection could not be bypassed with the fused link self-closing system.

The fuel transfer system utilized an air operated diesel fuel pump with a one piece 50 foot hose on a reel, along with a nozzle and shut off switches which comply with Section 406. It also had redundant safety features such as a timer on the fuel pump, air pressure regulator to the fuel pump, an emergency stop on the fuel pump and a pump stop on the nozzle return valve.

The diesel fuel tank inside the outer POD was less than 500 gallons capacity. It was provided with fire extinguishers and a fire suppression system inside the POD. The fuel tank had a sight gage and self-closing caps. The diesel fuel tank complied with Section 407 of the ACT.

The fire suppression system which was installed inside the POD with additional nozzles outside the POD met all requirements of Sections 408 and 409 of the ACT. There were two manual actuators, one of which could be extended away from the POD for easy access in the case of an emergency. CAT agreed to mount the audible and visible alarms on the outside of the POD and to install a more visible strobe light for the fire detection system. All doors were marked as "keep doors closed when not in use".

Recommendation

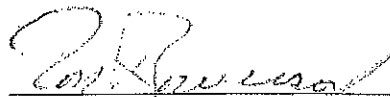
Our recommendation is based upon the data supplied by CAT as well as the data acquired and observations made during our investigation on November 29, 2012.

The TAC has determined that the CAT Diesel Fuel POD meets all requirements of all pertinent Sections of Chapter 4 of the Pennsylvania Bituminous Coal Mine Safety Act. The redundant safety features installed on the diesel fuel transfer pump system add an additional level of safety. The ability to store diesel fuel closer to the work area and thus require less frequent trips from the fuel buffalo reduces the possibility of a fuel transportation accident. The TAC has determined that this CAT Diesel Fuel POD technology does not reduce or compromise the level of health and safety protection afforded by the Pennsylvania Bituminous Coal Mine Safety Act.

As such, we are recommending approval of the CAT Diesel Fuel POD. This recommendation is specifically for the CAT Diesel Fuel POD as a piece of equipment only. The TAC recommends that any mine requesting to use this POD for fueling in the primary intake escapeway must submit a plan for fueling in the intake escapeway to be reviewed by the TAC and approved by the Director, as required by Section 411(a) of the ACT.



Paul Borchick



Ron Bowersox