

Pennsylvania Technical Advisory Committee On Diesel Powered Equipment

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July 19, 2010

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

RE: Johnson Industries request for a 100 hour evaluation and test period for testing an ECS AZ 26 diesel exidation catalyst to use alternatively in the currently approved Johnson Industries Supersteer with a Deutz BF4L2011 74HP diesel engine with an ECS AZ 27 diesel exidation catalyst.

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

On June 29, 2010 Johnson Industries submitted a request to the Technical Advisory Committee ("TAC") for approval to use an ECS AZ 26 diesel oxidation catalyst alternatively in the currently approved Johnson Industries Supersteer with a Deutz BF4L2011 74HP (derated) diesel engine with an ECS AZ 27 diesel oxidation catalyst.

On July 17, 2010 Johnson Industries submitted a request to the TAC to conduct a maximum 100 hour evaluation and test period to evaluate the performance and maintenance requirements on the Johnson Industries Supersteer utilizing the ECS AZ 26 diesel oxidation catalyst (Attachment 1). The request is based on the concern that since the catalyst is a smaller physical size it may require frequent cleaning. The 100 hour test period would give an idea of the performance results and maintenance requirements.

Investigation

The alternate diesel oxidation catalyst (ECS AZ 26) is of the same washcoat as the approved ECS AZ 27, with the only change as being the physical size of the catalyst. This would translate into a smaller contact surface area of the washcoat in the catalyst which may or may not effect emissions, and may require more frequent cleaning.

Johnson Industries has requested to operate the Supersteer maintip with the ECS AZ 26 catalyst for a period not to exceed 100 hours to evaluate the performance results and maintenance requirements. During the evaluation period they will test the catalyst prior to the equipment going into service and at approximately 25, 50 and 75 hours of operation. Also during the evaluation period they will remove the equipment from service if any of the testing produces more than 100 ppm of CO as prescribed in Section 418 of the law.

Recommendation

The TAC will schedule to conduct emissions testing and inspect the Johnson Industries. Supersteer to evaluate the alternate ECS AZ 26 catalyst. Information obtained during the TAC investigation is obtained by conducting emissions tests and by information received by the manufacturer and operator. Additional information obtained from actual operating time is valuable for the TAC to consider in making a recommendation to the Director.

Based on the information provided by Johnson Industries for the alternate catalyst and conversations with Mr. Gene Davis, the TAC recommends approval of the maximum 100 hour evaluation period, with the following stipulations:

- Only one Johnson Industries Supersteer mantrip equipped with the alternate ECS AZ 26 diesel oxidation catalyst may be used for the evaluation.
- The TAC and Bureau of Mine Safety will be notified when the evaluation period begins.
- The evaluation period will be limited to not more than 100 hours of operation, at which time the TAC and Bureau of Mine Safety will be notified.
- Baseline testing, as required by Section 417, will be conducted prior to putting the
 equipment in service.
- Diagnostic testing, as required in Section 418, and catalyst inspections will be
 conducted on the Supersteer at approximately 25, 50, 75 and 100 hours of operation,
 and the results recorded as required by Section 414. These results will be available to
 the TAC when they do their investigation. Any cleaning or maintenance required to
 comply with Chapter 4 will be done before returning the equipment to service.
- The equipment will be removed from service and the evaluation period suspended if any of the testing produces more than 100 ppm of CO as prescribed by Section 418. The TAC will be notified if the equipment is removed from service for this reason.

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July 17, 2010

Re: Request for recommendation by the Technical Advisory Committee on Diesel Powered Equipment (TAC).

Dear Sirs:

Johnson Industries has previously requested your recommendation for approval of the ECS AZ 26 Diesel Oxidation Catalyst for use in our Super Steer Mantrip. It was agreed that you would test the catalyst and make your recommendation however since the catalyst is of the same washcoat and the only thing that is different than the approved model is physical size we would like to augment our request and ask if we could have some evaluation time for the catalyst prior to your testing. We would like to operate the equipment in question for 100 hours prior to your testing. This is being requested because our concern with the catalyst is that the smaller physical size may require frequent cleaning the 100 hour evaluation should give us a good idea if this concern is valid. During the evaluation period we will test the catalyst prior to the equipment going into service and at approximately 25, 50 and 75 hours of operation. We will then perform a test with you present for your final evaluation. Also during the evaluation period we will remove the equipment from service if any of the testing produces more than 100 ppm of CO as prescribed in Section 418 of the law. Also at the end of the evaluation period we will provide the CO concentration for each of the prescribed test. If this request is acceptable to your committee please contact me at 724-737-5213 or small to genedavis@atlanticbb.net.

Best Regards Gene Davis