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Safety Improvement Technologies for Mobile Equipment at Surface Mines, and for Belt Conveyors at Surface and Underground Mines.

Comment On: MSHA-2018-0016-0001

Safety Improvement Technologies for Mobile Equipment at Surface Mines, and for Belt Conveyors at Surface and Underground Mines.

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Comment from Charles Rea, NA

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General Comment

Attached are comments from CalcIMA.

Attachments

CalcIMATechnologyLtr

AB 91-COMM-8

December 20, 2018

Sheila A. McConnell, Director
Office of Standards, Regulations, and Variances
Mine Safety & Health Administration
201 12th Street South, Suite 4E401
Arlington, Virginia 22202-5452.

Re: RIN 1219-AB91 - Technology Information Request for Mobile Equipment

Dear Ms. McConnell:

The California Construction and Industrial Materials Association (CalCIMA) thanks MSHA for this initiative to seek ideas from mine operators on technologies to improve safety.

CalCIMA is the trade association for aggregate and industrial mineral producers in California. California provides over two dozen minerals that are important to agriculture, manufacturing, and construction. California is the top producer nationally of construction aggregates, diatomite, boron, and rare earth elements, and a leading producer of industrial sand, cement, clays, gypsum, agricultural limestone, specialty limestone, pumice, soda ash, gold, and silver.

These are a few ways mine operators are implementing technologies to reduce the potential for equipment running over or striking other equipment or persons on the ground.

- CalCIMA members have installed backup cameras on large front end loaders and haulage trucks where visibility to the rear is absent. These camera systems have evolved over the past 20 years from black and white screens that were subject to washout from glare in the cabs to color LCD displays with infrared night vision. These have been effective when there is sufficient room in the cab to place the backup camera display screen in a location that can be readily seen by the operator and not interfere with other areas that affect the visibility in the cab. The cameras work well when the equipment design allows for the screen to be easily viewed by the operator. CalCIMA members have also used these backup cameras on other pieces of equipment and are standard equipment on most of the newer models of pickups and passenger vehicles.
- CalCIMA members have also explored the use of camera systems that provide 360° views around the equipment. This technology is not perfect as the location of the display screen and the distortion of the display images makes the use of the system less than perfect.
- CalCIMA members have also installed rear proximity sensors on front end loaders and other pieces of equipment and vehicles where visibility to the rear is absent or limited. The early versions of these systems were rendered ineffective by the build up of mud. Later versions have been more forgiving in the mining environment. These systems work well in open areas and when they are adjusted properly. In tight areas with stockpiles and other nearby obstructions, the proximity sensors are alarming continuously causing alertness fatigue by the operator. Like the backup camera, the sensors only work when the operator uses it.

CALCIMA

California Construction and
Industrial Materials Association

- Finally, some CalcIMA members have explored the use of RF technology to alert the operator to the presence of an RF tag on a person. This technology is relatively new and has not been fully developed for use on surface mine equipment. Demonstrations have shown that the operator can be alerted to the presence of a person wearing the tag in a limited area near the RF unit. The unit provides a warning in the cab for the operator, as well as an audible warning for the person wearing the tag. CalcIMA members believe that this technology has not been developed to the point that it can be a reliable and effective safety device at this stage of development.

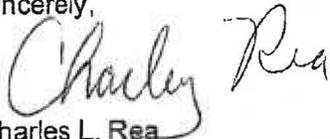
We also believe MSHA enforcement policy can serve as an incentive or disincentive to adoption of technology. If enforcement policy is not carefully crafted, addition of newer technologies can generate citations. The concern is that inspectors may require 100% perfection for a new technology, without the context of how the technology is a vast improvement for safety.

One example is where a technology may be applied where it is not required, yet is helpful for safety purposes. An example might be a back-up alarm added to a golf cart. If the alarm is not functioning then the mine operator may be cited for not maintaining the alarm, even though the potential hazard is much less than from a non-functioning alarm on a loader, where it is required.

Another example is that older equipment with less technology may be viewed more favorably by enforcement than modern equipment with more technology. For example, a 2012 pick-up truck with standard equipment (three brake lights, no AC, and no power windows) may pass an inspection. But, a well-equipped 2016 pick-up truck (AC, power door, power windows, anti-lock brakes, anti-skid brakes, power steering, rear facing camera, strobe/blink lights, a roof mounted light bar on top, and a two way radio) may receive a citation if even one piece is not working, even if overall it is a much safer vehicle.

We have provided examples of how operators are adding technology to improve safety and the experiences with that. We encourage MSHA's efforts to expand and adopt technology. However, we also think that enforcement policy should not be a disincentive to adoption of technologies. We support efforts to ensure that technologies are recognized and given consideration in the broader context of how they are advancing safety.

Sincerely,



Charles L. Rea
Director, Communications & Policy