



U.S. Department of Labor
Mine Safety and Health Administration
Protecting Miners' Safety and Health Since 1978



SAFETY ALERT

Proximity Detection System Installations, Maintenance and Checks

On February 11, 2016 a scoop equipped with a proximity detection system (PDS) was tramming through a line curtain toward a miner located on the opposite side. The miner was wearing a miner wearable component (MWC) and was on his knees, in the process of “spadding down” the curtain. The scoop bucket was in the raised position above the miner, who was able to roll out of the way without being contacted. The scoop operator heard the miner and stopped the scoop.



The miner received a broken leg and was immediately transported to the hospital for treatment.

On May 19, 2016 MSHA traveled to another mine where a similar PDS was installed on a continuous mining machine and observed that the PDS was operating erratically. Shutdown zones were found to be set too close to the machine. The machine mounted components would only indicate a warning zone infraction when the MWC was properly indicating that it was within the shutdown zone. This allowed the machine to move.

In both of these instances MSHA found that the warning and shutdown zones were not set properly and that pre-operational checks of the PDS were not being conducted in the manner recommended by the manufacturer.

Best Practices

- **Ensure that Proximity Detection Systems are installed and maintained in proper operating condition by a trained person.**
- **Conduct pre-operational checks by following procedures provided by Proximity Detection System manufacturers.**
- **Proximity Detection System software is updated periodically by manufacturers. Contact Proximity Detection System manufacturers to ensure that these updates are installed regularly.**
- **Verify that the warning and shut down zones are set as recommended by the Proximity Detection System manufacturer and according to company policy to stop the machine before a miner is contacted.**
- **Ensure that both the Miner Wearable Component and the Machine Mounted Components indicate corresponding warning and shut down zone status.**
- **Reference the video on General Inspection Procedures for Proximity Detection Devices - <https://www.msha.gov/news-media/special-initiatives/2015/09/27/final-rule-proximity-detection-systems-continuous-mining>**
- **If technical issues arise contact the Proximity Detection System manufacturer and your local MSHA District Office.**