



Approval and Certification Center

MSHA -Technical Support

Vol. 9 No. 1 January 2008

From the Center Chief's Desk



Hello again and thanks for taking the time to learn more about the A&CC. We have some exciting news for you in this edition.

MSHA has introduced a new prototype mine emergency escape system to a large group of mining industry stakeholders. Dubbed "The Great Escape," the idea was conceived by Mr. Mark Skiles, Director of MSHA Technical Support. Prior to joining MSHA, Mr. Skiles ran some of the safest and most productive underground mines in the country. Mr. Skiles' innovative system provides a safe means of escape, clean breathable air, and a protected communications and tracking infrastructure. The A&CC moved the idea from concept to prototype demonstration in about three weeks and with a greater efficiency than I have seen in Fortune 500 Companies.

I am also pleased to report that the A&CC's hard-working employees have made excellent progress in approving new technology products more efficiently for the benefit of our nation's miners. The results of our more effective test equipment and process improvements are

beginning to show in our reduced approval turnaround times. The A&CC's total approval production is up 34% in FY 2007 compared to our five-year average.

In the spirit of continuous improvement, I met with a large group of our manufacturing customers last month to gain their perspectives for improving our processes. As always, we welcome and value your feedback on our processes and "The Great Escape" concept. Thank you for your continued interest in mine safety.

Best regards,

John

John P. Faini
A&CC: More, Better, Sooner for the Miners.

The Great Escape

MSHA unveiled a new concept in post-disaster escape and rescue on November 8, 2007. "The Great Escape" was demonstrated at the A&CC for mining company executives, United Mine Workers members, university leaders, state mining safety agencies, and West Virginia Governor Joe Manchin.

"The Great Escape" is a work product of

the A&CC's Applied Engineering Division (AED). One of the AED's functions is to take existing technologies from other industries and apply them to the mining industry to reduce accidents and improve safety.

"The Great Escape" is a complete system that provides a separate, constant, uncontaminated, positively pressured supply of breathable air, independent of whatever else is taking place in the mine. The system consists of a chain of steel reinforced concrete pipes with various points of access and a positive power fan located on the surface, which requires minimal ventilation. The system offers miners a potential alternative to refuge chambers and provides a safe means of egress through an isolated/uncontaminated/structurally protected escape path. The system also safely protects communication and tracking systems from fire and explosive forces.

The escape pipe can be supplied with personnel carriers pulled by a battery-powered primary carrier. Miners lie face down on the carriers and are transported either to a safe area or out of the mine. The tracking and communication system installed allows the command center to identify each miner by name as they pass certain locations and provides a constant means of communication.

MSHA will continue to receive industry feedback and address system durability questions and overall system enhancements. The escape system concept may be a possible next step in the evolution of underground mine safety,

which our most precious resource, the miner, deserves.

For more information visit MSHA's website:

<http://www.msha.gov/FocusOn/GreatEscape/GreatEscape.asp>



Communications and Tracking Update

The Electrical Safety Division continues to experience a dramatic increase in the number of submitted communications and tracking system approval applications. We received 26 applications for approval of communications or tracking products in 2006 and 57 such applications in 2007. Our investigators have focused their efforts on processing these applications and have issued MSHA approval for 12 communications or tracking products in 2006 and 23 such approvals in 2007.

MSHA has assigned high priority to the processing of these communications and tracking approval requests. Because of that, some of our other approval requests,

particularly intrinsically safe products, have been placed on a slower than normal track. We have refocused some internal resources to try to alleviate this increase and strive to process all applications in an acceptable period of time. During this time, we do ask for your patience, and if you have concerns about your particular project, please contact Dave Chirdon or Ken Porter to discuss options.

MSHA investigators have been working with the National Institute for Occupational Safety and Health (NIOSH) and industry personnel to introduce more advanced communications and tracking technology. Many great strides have been achieved in the last two years. The current communications and tracking product approval applications being processed at the A&CC include a variety of wireless technologies which should result in a much more technologically advanced communications environment in underground mines.

More information regarding MSHA communications and tracking approval activities can be found at:
<http://www.msha.gov/techsupp/commoandtracking.asp>

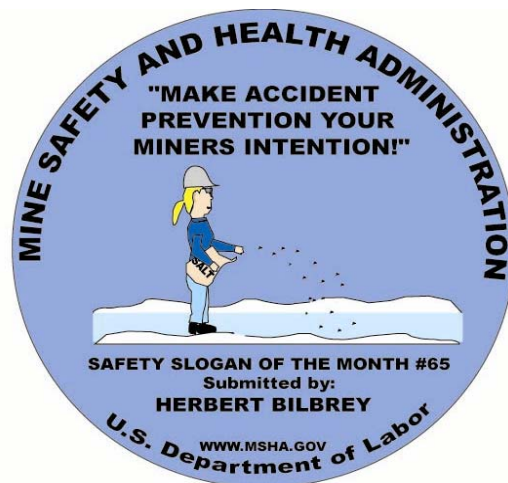
A&CC Saves Water and Taxpayers' Dollars

Today, more than ever, the natural resource of clean potable water has become an endangered species. Some regions - like the State of Georgia - measure their available water in days and have instituted strict conservation measures. In the State of West Virginia the situation is not as bleak; however, the water levels are below

average. A&CC took a proactive approach on water conservation with the installation of a water recovery system.

The A&CC operates a diesel engine and engine component laboratory. The laboratory incorporates the use of two water cooled dynamometers and a few other water cooled devices for their testing under Title 30, CFR. Water is piped into the laboratory equipment making a single pass through the equipment and then discharging down the drain.

It is anticipated that the new system will save 90% of the water previously used for laboratory operations and reduce water and sewage costs to the extent that it will recover the cost of the new equipment.



Small Mines Audit Program (SMAP)

The Quality Assurance and Materials Testing Division Field Audit Programs were developed to identify and correct nonconforming MSHA approved products in the field. The goal of the Small Mines Audit Program is to enhance miner

safety by eliminating potential safety hazards that might result from a nonconforming product that has been placed into service.

The Division's product audit strategy has been to primarily target larger mining operations. The rationale has been - the larger the mine, the larger the inventory and greater variety of permissible products, resulting in a greater number of quality audits.

MSHA has long recognized that smaller mining operations often have unique problems and has developed program areas to address them. The Small Mines Audit Program will typically target mining operations with fewer than 75 employees.

While at the mine site, the auditor will meet with mine personnel and emphasize both the importance of maintaining MSHA approved products in permissible condition and the mine operator's responsibility when contracting repair services on approved products. Auditors will field any questions the mine operators may have concerning MSHA approved products.

This program will provide the same service to small mines that has been primarily provided to larger operations. QA&MTD has visited hundreds of mining operations and conducted thousands of audits on MSHA approved products and machines. The SMAP effort will make a meaningful contribution to the MSHA mission of improving miners' safety.

For more information, please contact John Petrus at 304.547.2049 or petrus.john@dol.gov.



Proximity Detection

The A&CC continues to promote the use of proximity detection to make the operation of underground mining machinery safer. Since 1984, 29 underground miners have lost their lives to crushing or pinning accidents associated with remote controlled mining machines.

Two manufacturers have obtained MSHA approval for proximity detection systems, Geosteering Mining Services, LLC, and Nautilus International. Additional manufacturers have initiated efforts to develop similar technology. In addition to obtaining MSHA approval, the two approval holders have demonstrated the operation of their systems through MSHA facilitated field testing. These systems demonstrated the capability to warn miners when they enter the hazardous area around these machines and to initiate machine shutdown when the system

detects a suitably equipped miner within the programmed shutdown zone. The A&CC recently attended a demonstration of the Geosteering Tramguard™ Proximity Detection System in Huntsville, AL. This system was demonstrated for the benefit of visitors from South Africa who are evaluating systems with the intent of equipping all the underground mining machinery in their country with proximity detection. The demonstration included operating systems installed on two simulated shuttle cars and a simulated feeder/breaker. MSHA hopes to generate similar interest among mine operators within the United States.

Although the two MSHA approved systems were initially developed for use on continuous mining machines, the technology is also adaptable to other machinery such as roof bolters, shuttle cars, scoops and feeder/breakers. MSHA recently initiated a project to facilitate the modification of one system for use on surface mining equipment to provide collision avoidance protection.

For more information regarding the two MSHA approved systems, please contact Dave Chirdon at 304.547.2026 or chirdon.david@dol.gov.

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The MSHA A&CC Newsletter is published twice yearly in January and July and can be accessed at <http://www.msha.gov/techsupp/acc/newsletters/newsletters.asp>. You can subscribe to the “Safety and Health Information” mailing list <http://www.msha.gov/subscriptions/subscribe.aspx> to be notified when a new issue is published

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Individuals who wish to submit a suggestion to the Slogan of the Month Contest can do so at: <http://www.msha.gov/techsupp/safetycontests/safetycontests.htm>