Distribution Below

Three issues have recently come to our attention that will require your attention as well. These issues concern West Virginia approved shelters currently deployed, as well as those that are yet to be shipped. None of these issues represent an imminent danger, but rather represent unnecessary risks that require mitigation.

Manufacturers of West Virginia Office of Miners’ Health, Safety and Training approved shelters will be required to submit to this office a detailed plan and schedule by February 23, 2009 on those steps to be taken to implement the modifications required to mitigate these concerns. These mitigation efforts must be completed by May 15, 2009. Your submitted schedule does not extend any approved delivery dates. All manufacturers of approved shelters must correct these deficiencies on all delivered shelters as well as those yet to be delivered. All Conditional Approvals are hereby modified to include these items as deficiencies that must be corrected prior to receiving final approval.

**Item One: Gas detector upgrade plan and schedule**

It was assumed that information provided by vendors and manufacturers that all electronic gas detectors, approved for inclusion in shelters, could be turned on and off to conserve battery life, or in the alternative that batteries could be changed to ensure compliance with the 96 hour requirement. It was recently brought to our attention that changing batteries or turning the units off created an unintended calibration problem. After discussion with meter manufacturers it seems that some MSHA approved electronic gas monitors, when powered, calibrate themselves, assuming they are in fresh air. Please provide manufacturers documentation that the models used in your shelter can function without manual recalibration if powered down. For those shelters in mines that do not currently contain such devices a plan and schedule is required from the approved manufacturer to bring those units into compliance, and a modification to any approval documents submitted documenting that all future deliveries will comply.

**Item Two: Slow leaking of delivered compressed air and oxygen cylinders**

There has been a recurring problem with some of the suppliers of compressed air and oxygen cylinders in that some have very slow leaks. These cylinders have been discovered during the required weekly and other inspections. However, the process of removing the cylinders may require the removal of the shelter from the mine. Not only is this expensive for all parties but it requires the movement of the
shelter to the surface, outside of its expected maintenance cycle, subjecting it to potential damage. It is therefore required that each manufacturer provide a procedure that allows for the weighing of each cylinder when delivered to their facility. Each cylinder must be maintained at such facility for at least 30 days before being installed. Additionally, prior to installation, a second measurement must be made and the rate of weight loss must be calculated on a per diem basis. This calculation must then be projected through the expected underground life of the cylinder. A determination made that cylinders contain less than sufficient gas to meet the 96 hour requirement throughout the expected maintenance schedule, will require that those cylinders be returned to the supplier.

**Issue Three: Pressurization of internal gas piping prior to occupancy**

Some of the models approved allow for the cylinder valves to be in the open position with the gas pressurizing a manifold system, which is controlled manually by the miners when deployed. Quarterly and semi-annual inspections have revealed that this manifold system can be a source of gas leakage. This has resulted in several shelters being removed from service in order to replace what appeared to be leaking cylinders, when it was later found that fittings had loosened and vented gas. Once again, these have all been detected prior to the point at which they would have jeopardized the 96 hour operation of the shelter. Nevertheless such discovery required the premature removal of the shelter for maintenance, subjecting it to unnecessary potential damage. Modifications to existing and future shelters must be made to the gas supply manifold system so that cylinder valves will not be opened until deployment.

While we do not believe that these issues represent an imminent danger, they do represent unnecessary risks that require the stipulated mitigation actions. If you have any questions, please contact Randall Harris at (304) 558-1425.

Sincerely,

Ronald Wooten, Director
Office of Miners' Health and Safety

Distribution:
Approved Manufacturers:
- ChemBio Shelter c/o Ed Roscioli 968 Postal Road, Suite 320, Allentown PA 18109
- Dräger Safety, Inc. c/o Rohan Fernando 101 Technology Drive, Pittsburgh PA 15275
- Jack Kennedy Metal Products c/o Bill Kennedy PO Box 138, Taylorville IL 62568
- MineARC Systems c/o James Rau 4730 Bronze Way, Dallas TX 75236-1902
- Modern Mine Safety Supply c/o Randy Tatton PO Box 480, Huntington UT 84528
- Strata Products Inc. c/o Rory Paton Ash 3939 Roswell Road NE Suite 100, Marietta GA 30062

Conditionally Approved Manufacturers:
- AL Lee c/o Leonard Utstoi 2075 Lester Highway, Lester WV 25865
- Carbonox c/o Gray Midkiff 314 Virginia Ave., St. Albans WV 25177

cc: OMHS&T Inspectors at Large
- MSHA District Managers
- West Virginia Underground Mine Permit Holders