

Received 3/16/06
MSHA/OSRV

-----Original Message-----

From: Christopher Ptasnik [mailto:CPTasnik@go-mpsinc.com]
Sent: Thursday, March 16, 2006 12:34 PM
To: zzMSHA-Standards - Comments to Fed Reg Group
Subject: RIN 1219-AB44 Underground Mine Rescue

To whom it may concern:

Mine & Process Service, Inc. has been supplying the North American mining industry for nearly twenty-five years, concentrating on unique and specialized equipment. For the past year, we have been working with Guduza of South Africa (formerly Grintek) on introducing and reaching approval for their SC2000 radios for use in underground mines in the US. These radios work as a standalone communications system, and with the inclusion of further components become the RB2000 Mine Rescue System.

The below points are in response to Part E: Communications.

1. Low-frequency radio systems that are currently utilized in mines outside of the US.
2. Low-frequency radio systems, whose waves propagate on existing wires and pipes in a given driveage, and may be supplemented by a tunable antennae and direct-connect lifeline. Full systems include any number of portable radios (which may be used in day-to-day operations), Base Station, Remote Control Unit, and may be supplemented by tunable antennae and/or lifeline(s). The above system allows for communication from the RCU (situated in the Mine's control room) to the Base Station via a pair of dedicated wires. From here, an optional lifeline may be used (up to 1 km), as can the tunable antennae, though the nature of the radio allows its use without either, by the propagation of signal through existing pipes, cables, or rail systems.
3. The Low-frequency radio system seems to be superior to others as it allows voice communication with the surface as well as throughout a mine. Other systems may allow for direct surface to underground communication, but generally are one-way and via text-messages (PEDs). The greatest need for communication is within the mine itself and with the command center, which this system allows for.
4. Again, the low-frequency radio is a perfect example of a day-to-day communication system that allows for greater versatility when the need arises. Since these radios do not require a lifeline or any hard connection between radios, they can be used throughout a mine

section for day-to-day use. In the event of an emergency, a fresh-air Base Station can be established, and antennae may be erected, lifelines dispersed between rescue workers, and useable range greatly expanded.

5. Communication between the mine rescue Command Center and the rescue team can be established with the RB2000 system by setting up the RCU in the Command Center and the Base Station in a fresh air area as close as possible to where the rescue team will be and connecting the two via the dedicated wires. From the Base Station, an antenna and/or lifelines (or neither) can be used for communication within the mine.

6. The low-frequency radios allow for communication between the surface and underground with no human relay points to hinder messages. 7. The SC2000 radios could be used in conjunction with either a bone mic or throat mic and an earpiece speaker, in order to transmit vibrations as opposed to sound waves. This technology is currently available.

8. No comment.

9. No comment.

Further questions and comments may be directed to me by return email or by phone at 815-883-8468

Thank you,

Chris Ptasnik
Application Specialist
Mine & Process Service, Inc.
P.O. Box 484
Kewanee, IL 61443
800 852-6529
FAX 309 854-5206

Grintek Mining Electronics

COMMUNICATION

RB2000 RESCUE SYSTEM

Received 3/16/06
MSHA/OSRV



Rescue Base Station



SC2000 Portable MF Radio

Product Description

The Rescue System consist of a Rescue Base Station, a loop or LWA antenna, and one or more SC2000 portable radio's.

The system is fully portable, has everything required for radio communications in rescue operations integrated into the system and can be quickly deployed where required for rescue work.

The SC2000 is a Medium Frequency Inductive Radio, and has been designed for optimum communication distance.

Features

Quick Deployment

Self Contained, Portable Base either Battery or Externally Powered

Optimum Range ensured by:

- Medium Frequency operation
- ATU (Automatic Tuning Unit)
- High Power output

Robust, Field Proven

Call Button

Options

Lifeline Adapter

RCU (Remote Control Unit)

Connection to Fire Detection System



SOLUTION PROVIDER

AB44-COMM-48-A1

Portable Underground Radio

SC2000

Description:

The SC2000 is a new generation, portable, inductive radio for use in underground mining. The radio is intrinsically safe and special emphasis has been placed on design aspects affecting the following parameters:

- Reliability:

A single PCB design has been implemented using surface mount technology and a minimum of cables and connectors.

- Weight:

The SC 2000 with battery included weighs only 1.2 Kg.

- Performance:

The performance of the new generation radio has been enhanced by the use of a 2 Watt transmitter output and a fully automatic bandoleer antenna.

- Cost:

Cost of ownership has been lowered owing to automated assembly, simplicity of design and high reliability.

Fully compatible to SC 1000 series

2 Watt output power gives extended range; Low cost of ownership

DTMF option available; Pilot Tone squelch system; Automatic squelch and volume;

No on/Off switch

Frequency range:	100 kHz to 544 kHz
Frequency stability:	±10 ppm
Power Supply	7.2V, 0.8Ah
Selective call:	DTMF
Audio Processing:	Compondor
Power Output:	2 Watt p.e.p.
Receiver Sensitivity:	0.1 micro volt for 10 dB (S+N)/N
Output:	7.2 Volt IS
Capacity:	0.8 Ah



MPS MINE AND PROCESS SERVICE INC.

BOX 484 • KEWANEE, ILLINOIS 61443

Phone: 309-852-6529

Fax: 309-854-5206