

**ATTACHMENT 22**  
**Statement of J. Patrick Droppleman, CEO, Ocenco Incorporated**  
**Before the Senate Subcommittee on Employment and Workplace Safety**  
**February 15, 2006**

**COMMENTS TO PROPOSED RULE ON APPROVAL TESTS AND**  
**STANDARDS FOR CLOSED-CIRCUIT ESCAPE RESPIRATORS**

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**Prepared by Ocenco, Incorporated**

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**Statement of J. P. Droppleman**  
**CEO, Ocenco Incorporated**  
**Before the Senate Subcommittee on Employment and Workplace Safety**  
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Ocenco, Incorporated is pleased to have the opportunity to participate in this important discussion about coal mine safety and the use and deployment of Self-Contained Self-Rescuers (SCSRs) in underground mines.

Ocenco manufactures SCSRs, or EEBDs (Emergency Escape Breathing Apparatus), for military, marine, industrial, aviation and mining applications. In addition, we manufacture sophisticated rebreathers for military mine clearance work and Self-Contained Breathing Apparatus (SCBA) for professional firefighters. Ocenco's Erie Medical Division manufactures a wide variety of oxygen valves and regulators for medical oxygen therapy applications. Ocenco's Interspiro Division has been the leader in CBRN (Chemical, Biological, Radiological and Nuclear) hardened SCBAs for the first responder market, and our ABMS-3 (Automated Breathing Metabolic Simulator) is used by NIOSH, Aberdeen Proving Ground and the US Navy for both apparatus approval and research.

**Mine Worker Safety Objectives**

Our nation's goals for mine workers, as they relate to respiratory protection during escape from fires and or explosions, must be to get all underground workers to a place of safety – preferably the outside.

**Technology of SCSRs**

There are two basic technologies currently being used to provide oxygen to miners for escape from fires and or explosions – **1) compressed oxygen** and **2) chemical oxygen generators**.

In all applications, mine escape, underwater mine clearance, fighter aircraft bailout systems, firefighting apparatus and medical oxygen therapy, Ocenco, Incorporated has chosen to use compressed oxygen technology because it offers the greatest flexibility and reliability in terms of design and performance.

Ocenco does not recommend that Congress or MSHA select only one of these technologies for use in underground mines. In fact, we believe it is essential to allow mines to choose among competing technologies, not only those available on the market

today but those that may be developed. *However, it is essential that any system be evaluated based on performance under realistic conditions.*

### **Successful Escape Factors**

There are four (4) factors that must be met to effect a successful self rescue from a mine fire or explosion.

1. Accessibility – the miner must have access to an oxygen supply device.
2. Training – the miner must know how to use the device.
3. Performance -- the device must work.
4. Duration – the devices must provide enough oxygen to get the miner to a place of safety – *preferably the outside.*

It is essential that policymakers and the public understand that the performance of breathing devices varies dramatically. There is a tendency to assume that the usefulness of a device can be measured simply based on the rated duration of the oxygen supply. For example, one might assume that a one-hour breathing device mounted on the miner's belt is better for the miner than a ten-minute device on the belt. That is not true. The issue is what is available to the miner when disaster occurs – not simply the device on his belt, but the reliability of the device and the proximity and performance of breathing devices stored nearby. In making this determination, policy-makers must be realistic about what miners do every day. Large and heavy devices interfere with the ability to work and encourage the miner to remove the bulky device from his belt. In addition, large devices are subject to damage from shock and impact when worn on the belt.

### **Current Regulations**

The current regulations for approved SCSRs are found in 30 CFR §§ 75.1714-1 through 75.1714-3. Today, MSHA regulations provide mines with three (3) choices to protect miners from loss of oxygen:

1. A 1-hour SCSR. Providing a sixty-minute breathing device to be carried by each miner; once this device is provided, the mine needs to provide no additional protection.
2. A SCSR of not less than 10 minutes and a 1-hour canister. The 10 minute device shall be carried by the miner at all times and the 1-hour canister shall be available at all times to all persons when underground in accordance with a plan submitted by the operator of the mine and approved by the District Manager. (30 CFR § 75.1714-2)
3. Any other self-contained breathing apparatus which provides protection for a period of 1 hour or longer and which is approved for use by MSHA as a self rescue device when used and maintained as prescribed by MSHA.

## **Weaknesses in the Current Regulations**

There are two fundamental problems with the current regulations:

**1. The current regulations do not recognize the significant performance differences among approved 60 minute SCSRs.**

The regulations have been implemented based on the assumption that a 60 minute breathing device will necessarily and completely protect the miner. That is not true. The regulations, regardless of the device used, should focus on performance and the benefits for the miner, not arbitrary breathing times.

Example: One 60 minute approved SCSR supplies 157 liters of oxygen while another 60 minute approved SCSR supplies 82 liters. Clearly, there is a significant difference in performance for these two SCSRs. The 157 liter compressed oxygen device will last over 7 hours at rest.

There must be performance testing in realistic conditions.

**2. The current regulations do not require each mine to have an approved plan that ensures the miner will have enough oxygen to reach a place of safety - preferably the outside.**

Every mine should be required to submit a plan for protecting the miner from loss of breathable air – regardless of the type of SCSR used. MSHA should review and approve each plan to ensure that the miner is protected. This is not the case now.

The bottom line is that miners must have an approved plan and equipment that allows them to survive a disaster. The regulations should not force a “one size fits all” solution.

## **Ocenco's Recommendations**

Ocenco recommends the following:

- Neither Congress nor MSHA should mandate that a particular SCSR technology be used.
- The regulations should require all mines to submit a storage and escape plan that gets the miner to the surface. This requirement should apply regardless of the duration or technology of SCSR used.
- The storage and escape plan should be verified using in mine escape trials with mine personnel. The test should be designed to demonstrate that SCSRs will perform under real-life underground mining conditions and get the miner to the surface.

Enclosures: Ocenco, Incorporated EBA 6.5 SCSR and M-20 SCSR Brochures