CONTENTS

Inspection Procedures

Training: Moving Chamber/Activation

Summary/Comments
The area where refuge alternatives are installed shall be fully bolted according to the latest Approved Roof Control Plan. This also applies to the areas where the refuge alternative will be deployed. **Supplemental support shall be installed as needed.**
When and how often do we inspect refuge chambers?

- The refuge chambers will be examined as part of the pre-shift examination.
- The scope of this examination covers what the manufacturer recommends on a weekly examination.
- Refuge chambers will be inspected each time they are moved. This includes opening the entrance, inspecting contents, door, and replacing the seal tag.
What is required during the pre-shift examination?

- Pressure Gauges need to be inspected.
- A chart will be posted on the chamber that indicates initial pressure readings and minimum pressure readings based on temp.
- Check for consistent loss or gain in pressure readings.
- In the event that a consistent loss or gain in pressure is discovered, notify the shift foreman immediately.
What is required during the pre-shift examination?

- Red zone is free of debris
- Tamper proof seals are intact and seal number is correct.
- Entrance door not damaged.
- No physical damage to unit.
- Life line clearly indicates location of refuge chamber.
- Communications / Tracking visual exam
To record the **Oxygen Pressure**, look in the right sight glass. There will be three gauges check the pressure on the right gauge and record it.

The thermometer will be in this glass also.
To record the Deployment Air Pressure, you will need to look in the left sight glass. It will be read on the far left gauge.
To record the **Purge Air** you will read it in the left sight glass on the far right gauge.
## Minimum Allowable Pressure Chart

**Oxygen**

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## Minimum Allowable Pressure Chart

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Red Zone

14 FEET

30 FEET
Red Zone

- The Red Zone must be kept clear at all times
- The Red Zone is not a parking lot or a supply area
- The Red Zone should be clearly marked for easy identification
Tamper Proof Seals

- The Tamper Proof Seals are numbered
- Take the number of the seal from the last inspection to insure that the numbers match
- Record the new seal number when you replace it
Tamper Proof Seals

- If tamper proof seal is damaged or missing:
  1. Notify the Shift Foreman.
  2. Check seal tape on supply box. Make complete inspection of supply box, and first aid contents inside.
  3. Upon finding required contents to be present and in good condition, replace seal and record new tamper proof seal number.
Check Entrance Door

- When you open the Entrance Door check it to insure proper latch and hinge operations
- Check the door seal for wear and tear
List of Shelter Contents

- Portable Dry Toilet
- Waste Kit
- Carbon Monoxide (CO) Monitor
- 2 Oxygen Monitors
- Repair Tape and Tube Repair Kit
- MSHA Approved First Aid Kit with Stretcher and Backboard
- Flashlights
- Food
- Gas Detector Tube Pump
- Carbon Dioxide (CO$_2$) Detector Tubes
- CO Detector Tubes
- Methane Detector Tubes
- Oxygen Detector Tubes
- CO$_2$ Scrubber Curtain Package Assembly
- Drinking Water and Cups
- Operating Instructions
Inspect Shelter Exterior

- Do a walk around of the Shelter to check for any damage to the exterior container
Inspect Deployment Door

- Visually check Deployment Door for any Damage of the door and hinge area
Any deficiencies found during the pre-shift exam that makes the unit inoperable requires immediate action including notifying the Shift Foreman.
Date Board located at each refuge chamber
Record pressure gage readings and tamper proof seal number in book provided at refuge chamber.
Make entry in pre-shift book that refuge chamber is ok.
Training

- All miners required to move refuge alternatives must have specialized task training completed and documented.
- All miners inspecting and performing repairs on refuge alternatives must have specialized task training completed and documented.
Refuge chambers must be located on the sections within 1000 feet of the working faces.

Refuge chambers cannot be located within direct line of sight of the working face (they must be located in a crosscut).
Rescue chambers cannot be across from, nor closer than 500 feet from the following:

1. Belt drives
2. Take-ups
3. Transfer points
4. Air Compressors
5. Explosive Magazines
6. Seals
7. Entrances to abandoned areas
8. Fuel, oil, or other flammable material storage
Activation Steps

1. Check **Red Zone**, Must be **Clear**
2. Pull pin and raise lever
3. Make sure TENT is off door, if not **Roll the tent off the door.**
4. Move **RED KNOB** down, Deployment of the TENT will begin.
5. After deployment, enter air lock, remove supplies and erect the **SCRUBBER CURTAINS** on designated areas. Go to **CONTROL PANEL.**
6. Turn **TUBE FILL** from **ON** to **OFF**. Turn Oxygen supply from **OFF** to **ON**.

7. Adjust Oxygen Flow Meter **Counter-Clock Wise** to the number of miners in Tent.

8. Monitor Oxygen levels with Oxygen Gas Monitor and keep between **19.5% and 22%**.
Maintaining and properly positioning the refuge chamber is imperative for proper deployment.

A responsible person, such as the section foreman should always oversee the movement of a refuge chamber.
Upon the completion of each and every move, a complete examination of the refuge chamber is required including opening of the entrance door and replacing the seal.

This examination after the move is to be conducted in the same manner as a pre-shift examination.
Accurate records should be kept both outside and at each refuge chamber location.

Training should be incorporated that includes both quarterly reviews and annual realistic training of deployment and use of the refuge chambers.
Mine ventilation and escapeway maps must include locations of all refuge chambers. Maps must be updated within 24 hours of moving a refuge chamber.

A six month inspection by the manufacturer is required.