

U. S. Department of Labor

Mine Safety and Health Administration
100 Bluestone Road
Mount Hope, WV 25880-1000



SEP 21 2010

Mr. Chris Blanchard
President
Performance Coal Company
P.O. Box 69
Naoma, WV 25140

Dear Mr. Blanchard:

**Subject: Revision to approved Emergency Response Plan submitted by
Performance Coal Company, Upper Big Branch Mine South, I.D.
No. 46-08436, dated September 20, 2010**

The Mine Safety and Health Administration (MSHA) has reviewed your revision to the approved Emergency Response Plan (ERP) submitted on September 20, 2010. **Based on this review, we have approved the revision.**

If you have any questions concerning the implementation of the ERP, please contact Larry E. Cook at (304) 877-3900/Ext. 169.

Sincerely,



Robert G. Hardman
District Manager
Coal Mine Safety and Health, District 4

Enclosure

LEC/def



Performance Coal Company

P.O. Box 69

Naoma, WV 25140

Phone: 304.854.3401

Fax: 304.854.3412

Robert Hardman, District Manager
Mine Safety & Health Administration, District 4
100 Bluestone Road
Mount Hope, WV 25880-1000

Ref: Performance Coal Company ERP Revision
Upper Big Branch South
46-08436

Dear Sir,

Performance Coal Company is submitting the above listed ERP revision that you requested changing the date of the current ERP plan use of outby refuge alternative from December 31, 2013 to December 31 to 2010 for your approval.

If you have any questions or need additional information, please contact this office at 304-854-3407.

Sincerely,

[Redacted Signature]

Berman Cornett
Safety Director
Performance Coal Company

MISHA
MOUNT HOPE, WV

SEP 20 2010

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Because MSHA approved refuge alternatives are not yet available, the refuge alternative in service is a prefabricated self-contained unit manufactured by *Strata Safety*, approved by the WV Office of Miners' Health, Safety & Training. This unit is permitted until December 31, 2018, or until replaced, whichever comes first. The refuge alternative is not located within direct line of sight of the working face. The refuge alternative is maintained within 1,000 feet of the nearest working face and from locations where mechanized mining equipment is being installed or removed. Also, where feasible the refuge alternative is not placed in areas directly across from, nor closer than 500 feet radially from, belt drives, take-ups, transfer points, air compressors, explosive magazines, seals, entrances to abandoned areas, and fuel, oil, or other flammable or combustible material storage. The rated capacity for this refuge alternative is for a maximum of 24 persons with life support for at least 96 hours. The maximum number of persons expected to use this refuge alternative is 20. The refuge alternative is stocked with the following: A minimum of 2,000 calories of food and 2.25 quarts of potable water per person per day in approved containers sufficient to sustain the maximum number of persons reasonably expected to use the refuge alternative for at least 96 hours; a manual that contains sufficient detail for each refuge alternative or component addressing in-mine transportation, operation, and maintenance of the unit; sufficient quantities of materials and tools to repair components; and first aid supplies. The refuge alternative provides sanitation facilities. Compressed oxygen cylinders and a soda lime CO₂ scrubbing system are utilized to provide 96 hours of breathable air. We will follow the manufacturer's procedures or methods for maintaining the refuge alternative. The maximum air temperature where the refuge alternative is placed shall not exceed the manufacturer's recommendation. The underground ambient air temperature where the refuge alternative is placed is 60 to 75 degrees F.

For outby workers: Refuge alternatives are available at one hour intervals (every second SCSR cache location) outby the working section to provide breathable air for outby personnel. Also, where feasible, the refuge alternatives are not placed in areas directly across from, nor closer than 500 feet radially from, belt drives, take-ups, transfer points, air compressors, explosive magazines, seals, entrances to abandoned areas, and fuel, oil, or other flammable or combustible material storage.

The breathable air, air monitoring, and harmful gas removal components of this unit is placed in a cross-cut or dead-end entry and stoppings create a secure area with an isolated atmosphere. The stoppings are constructed of 8X16 inch solid block, wet laid and plastered on both sides with approved mine sealant. These pre constructed refuge alternatives are permitted until *December 31, 2010*, or until replaced with prefabricated units whichever comes first. Incorporated into the wall is an airlock steel door. This airlock has an air hose used for purging and a pressure relief valve. The doors are sealed with high temperature silicone gaskets to minimize air leakage. Because MSHA approved refuge alternatives are not yet available, this refuge alternative contains a sled manufactured by *Mine Lifeline, LLC*. This unit provides oxygen, carbon dioxide scrubbing capabilities, food and potable water, first aid kits, blankets, multi-gas detectors, chemical light sticks or other effective permissible light sources and other supplies and equipment required. The unit also provides purge air in compressed cylinders equal to or greater than three times the volume of the enclosed area of the shelter. The rated capacity for this refuge alternative is for #1 to 10 persons with life support for at least 96 hours. The maximum number of persons expected to use this refuge alternative is 10. The refuge alternative provides at least 15 square feet of floor space per person and 30 to 60 cubic feet of volume per person according to the following chart:

U. S. Department of Labor

Mine Safety and Health Administration
100 Bluestone Road
Mount Hope, WV 25880-1000



AUG 30 2010

Mr. Chris Blanchard
President
Performance Coal Company
P.O. Box 69
Naoma, WV 25140

Dear Mr. Blanchard:

**Subject: Revision Required to Approved Emergency Response Plan,
Performance Coal Company, Upper Big Branch Mine - South,
ID No. 46-08436**

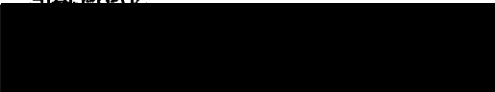
On June 10, 2010, you were mailed a letter stating that the approved Emergency Response Plan (ERP) for Performance Coal Company, Upper Big Branch Mine - South required a revision to address the outby refuge alternatives. Specifically, you were directed to change the date these pre-constructed refuge alternatives are permitted to be used from December 31, 2013, to December 31, 2010. To date, we have not received a response from you regarding this change.

Please submit a revision to your currently approved Emergency Response Plan within 5 days of receipt of this letter.

An additional revision to the Emergency Response Plan will be required to be approved before December 31, 2010 indicating what you will be installing as a replacement to the Mine Lifeline refuge alternatives in outby areas.

If you have any questions, you may contact Larry E. Cook of this office at (304) 877-3900, ext. 169.

Sincerely,


Robert G. Hardman
District Manager
Coal Mine Safety and Health, District 4

LEC/def

U. S. Department of Labor

Mine Safety and Health Administration
100 Bluestone Road
Mount Hope, WV 25880-1000



JAN 25 2010

Mr. Chris Blanchard
President
Performance Coal Company
P.O. Box 69
Naoma, WV 25140

Dear Mr. Blanchard:

Subject: Emergency Response Plan submitted by Performance Coal Company, Upper Big Branch South Mine, I.D. No. 46-08436, dated October 9, 2009

The Mine Safety and Health Administration (MSHA) has reviewed your Emergency Response Plan (ERP) submitted on October 9, 2009. This ERP, including the SCSR Storage Plan and the 75.1502 Mine Emergency Evacuation and Firefighting Program of Instruction has been reviewed to determine compliance with the provisions of Section 2 of the Mine Improvement and Emergency Response Act of 2006 (MINER Act), 30 U.S.C. § 876, and relevant Federal Mine Safety and Health Act standards and regulations. **Based on this review, we have approved the ERP.**

All portions of this ERP must be implemented immediately. The failure to implement all of the ERP provisions and/or to conduct miner training in a timely manner will result in a citation.

If you have any questions concerning the implementation of the ERP, please contact Larry E. Cook at (304) 877-3900/Ext. 169.

Sincerely,

A large black rectangular redaction box covering the signature of Robert G. Hardman.

Robert G. Hardman
District Manager
Coal Mine Safety and Health, District 4

Enclosure

LEC/def



Performance Coal Company

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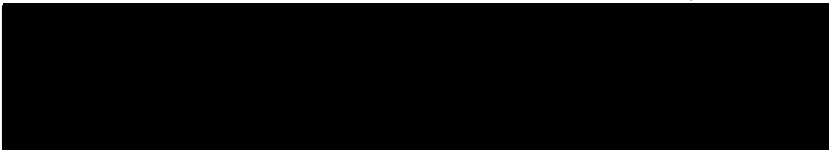
Robert Hardman
Manager District IV
Mine Safety and Health Administration
Mount Hope, WV

10-09-09

RE: ERP Plan
Upper Big Branch South
MSHA ID 46-08436

The attached Emergency Response Plan for the Upper Big Branch South Mine, MSHA ID 46-0436 is being submitted for your review and approval. A copy of this plan is being made available to the mine for posting at the time of submittal.

At this time Performance Coal Company has no miner's representative at this operation.



Jonah Bowles
Safety Director
Marfork Coal Company

MSHA
MOUNT HOPE, WV
OCT 09 2009
RECEIVED
ELECTRICAL

Performance Coal Company
P.O. Box 69
Naoma, WV 25140
Tel (304) 854-1761
Fax (304) 854-3528

EMERGENCY RESPONSE PLAN

MSHA ID Number: Upper Big Branch South

Mine Name: 4608436

Company Name: Performance Coal Company

Evacuation is the primary goal during any mine emergency. Sheltering or barricading should only be done as a last resort. This plan is developed to help save the life of miners who cannot escape during an emergency.

The miners' representative will be notified prior to submission of the ERP or any revisions and a copy of the plan will be provided.

1. POST-ACCIDENT COMMUNICATION

For alternatives to fully wireless post-accident communications, refer to Appendix A.

Until the new communication system is installed and functional, two independent hardwire redundant communication systems between surface and underground personnel will be maintained at all times. The communication system used currently is a mine pager system. At least one of the communication systems will be located in the primary escapeway. A secondary communication system will be located in an alternate entry.

2. POST-ACCIDENT TRACKING

For electronic tracking, refer to Appendix B.

Until the new tracking system is installed and functional, an employee will be on duty on the surface when anyone is underground. The Responsible Person on each shift will provide this employee with a roster of all persons underground and the proposed zone in which they will be working. A written log of each miner's location will be maintained by this employee. It is the responsibility of each worker to notify this employee when they move to another work zone. The tracking system will be able to determine the current or immediate pre-accident location of all underground personnel.

3. POST-ACCIDENT BREATHABLE AIR (PABA)

Maintenance of Individuals Trapped Underground

Refuge Alternatives

MSHA approved refuge alternatives will be obtained once they become commercially available.

Because MSHA approved refuge alternatives are not yet available, the refuge alternative in service is a prefabricated self-contained unit manufactured by *Strata Safety*, approved by the WV Office of Miners' Health, Safety & Training. This unit is permitted until December 31, 2018, or until replaced, whichever comes first. The refuge alternative is not located within direct line of sight of the working face. The refuge alternative is maintained within 1,000 feet of the nearest working face and from locations where mechanized mining equipment is being installed or removed. Also, where feasible the refuge alternative is not placed in areas directly across from, nor closer than 500 feet radially from, belt drives, take-ups, transfer points, air compressors, explosive magazines, seals, entrances to abandoned areas, and fuel, oil, or other flammable or combustible material storage. The rated capacity for this refuge alternative is for a maximum of 24 persons with life support for at least 96 hours. The maximum number of persons expected to use this refuge alternative is 20. The refuge alternative is stocked with the following: A minimum of 2,000 calories of food and 2.25 quarts of potable water per person per day in approved containers sufficient to sustain the maximum number of persons reasonably expected to use the refuge alternative for at least 96 hours; a manual that contains sufficient detail for each refuge alternative or component addressing in-mine transportation, operation, and maintenance of the unit; sufficient quantities of materials and tools to repair components; and first aid supplies. The refuge alternative provides sanitation facilities. Compressed oxygen cylinders and a soda lime CO₂ scrubbing system are utilized to provide 96 hours of breathable air. We will follow the manufacturer's procedures or methods for maintaining the refuge alternative. The maximum air temperature where the refuge alternative is placed shall not exceed the manufacturer's recommendation. The underground ambient air temperature where the refuge alternative is placed is 60 to 75 degrees F.

For outby workers: Refuge alternatives are available at one hour intervals (every second SCSR cache location) outby the working section to provide breathable air for outby personnel. Also, where feasible, the refuge alternatives are not placed in areas directly across from, nor closer than 500 feet radially from, belt drives, take-ups, transfer points, air compressors, explosive magazines, seals, entrances to abandoned areas, and fuel, oil, or other flammable or combustible material storage.

The breathable air, air monitoring, and harmful gas removal components of this unit is placed in a cross-cut or dead-end entry and stoppings create a secure area with an isolated atmosphere. The stoppings are constructed of 8X16 inch solid block, wet laid and plastered on both sides with approved mine sealant. These pre constructed refuge alternatives are permitted until December 31, 2013, or until replaced, whichever comes first. Incorporated into the wall is an airlock steel door. This airlock has an air hose used for purging and a pressure relief valve. The doors are sealed with high temperature silicone gaskets to minimize air leakage. Because MSHA approved refuge alternatives are not yet available, this refuge alternative contains a sled manufactured by *Mine Lifeline, LLC*. This unit provides oxygen, carbon dioxide scrubbing capabilities, food and potable water, first aid kits, blankets, multi-gas detectors, chemical light sticks or other effective permissible light sources and other supplies and equipment required. The unit also provides purge air in compressed cylinders equal to or greater than three times the volume of the enclosed area of the shelter. The rated capacity for this refuge alternative is for 1 to 10 persons with life support for at least 96 hours. The maximum number of persons expected to use this refuge alternative is 10. The refuge alternative provides at least 15 square feet of floor space per person and 30 to 60 cubic feet of volume per person according to the following chart:

Mining Height (inches)	Unrestricted Volume (cubic feet per person)*
36 or less	30
>36 -- <42	37.5
>42 -- <48	45
>48 -- <54	52.5
>54	60

*Includes an adjustment of 12 inches for clearances.

The refuge alternative is stocked with the following: A minimum of 2,000 calories of food and 2.25 quarts of potable water per person per day in approved containers sufficient to sustain the maximum number of persons reasonably expected to use the refuge alternative for at least 96 hours; A manual that contains sufficient detail for each refuge alternative or component addressing in-mine transportation, operation, and maintenance of the unit; Sufficient quantities of materials and tools to repair components; and first aid supplies. The refuge alternative provides sanitation facilities. We will follow the manufacturer's procedures or methods for maintaining the refuge alternative. The maximum air temperature for the refuge alternative is 80 degrees.

The outby refuge pre constructed refuge alternatives in use at this mine were installed prior to 03/02/2009. After 03/02/2009 when mining advances to a point where an additional outby refuge alternative is needed, a revision to this plan will be submitted in advance to address the need for these an additional outby refuge alternative.

As required by 30 C.F.R. § 75.1506(g), each refuge alternative is identified with a sign or marker made of a reflective material with the word "REFUGE" posted conspicuously at each refuge alternative. Directional signs made of a reflective material are posted leading to each refuge alternative location.

The locations of the breathable air areas will be shown on the mine map required by 30 C.F.R. § 75.1200 and the escapeway maps required by 30 C.F.R. § 75.1505. All persons going underground will be trained on the breathable air provisions in the ERP.

The manufacturer's recommendations for the Post-Accident Breathable Air systems for training, maintenance, routine examination, storage, transportation and retirement of the systems will be adopted and followed. Each miner will be trained quarterly in the activation and use of each type of refuge alternatives (i.e. commercial shelters, pre-built rooms, sleds) used in the mine, purging contaminants from the refuge alternatives and given expectation training annually in accordance with 30 C.F.R. § 75.1504. Miners will also be trained in the proper handling, usage and storage of compressed air, compressed oxygen cylinders, carbon dioxide scrubbing agents and other breathable air devices.

All refuge alternatives will be examined as required by 30 C.F.R. § 75.360(d).

Additional SCSRs

Additional SCSRs for miners on working sections, in escapeways and in remote areas are required by 30 C.F.R. § 75-1714-4.

If the one-hour SCSR required by 30 C.F.R. § 75.1714(a) is placed more than 25 feet from a miner, an SCSR storage plan will be submitted as an attachment to this Emergency Response Plan.

All miners on the working section will wear or carry a one-hour *CSE SR100 SCSR*. Additional one-hour CSE SCSR 100s will be stored within 10 minutes travel time of the deepest penetration of the section. At least one additional one-hour SCSR will be stored for each person on the section. Storage location on the section will be in the *Primary Escapeway and adjacent to the section power center*. The distance one-hour SCSRs will be stored from miners on the working section will not exceed 700 feet. Reflective location and directional signs will be provided as required by 30 C.F.R. § 75.1714-4(f). The average mining height on the working section is 60 inches.

SCSR storage location spacing required by 30 C.F.R. § 75.1714-4(c) provides a 30 minute travel distance between each outby SCSR storage location in each escapeway. This distance will be derived from the "Distances for SCSR Storage Locations" chart provided below (except for grades over 5 percent) or by a performance based functional test. There are no grades along the primary or secondary escapeway that exceed 5 percent in this mine.

Distances for SCSR Storage Locations	
Average Entry Height (inches)	Distance in Feet (30 minutes)
Crawl - less than 40	2,200
Duck Walk - 40 to 50	3,300
Walk Head Bent - 50 to 65	4,400
Walk Erect - more than 65	5,700

The SCSR storage locations will be established at 30 minute intervals determined by using the chart above or by functionality tests conducted at the mine site. The distance will vary, as needed, with changes in mine seam height, grade of travelway, and other mine specific criteria. The number of one-hour SCSRs located in storage caches in each escapeway will be equal to or greater than the number of persons located in by that location that may use the escapeway during an emergency.

Additional SCSRs for outby crews, examiners, pumpers, remote workers, etc., will be provided as required by 30 C.F.R. § 75.1714-4(a)(2). This will ensure that all persons will have access to the required SCSRs. In addition, SCSR storage location signs will be provided as required by 30 C.F.R. § 75.1714-4(f).

The manufacturer's instructions for all SCSR devices in use at the mine will be followed. On a yearly basis, 1% but not more than 5 of the SCSRs at the mine will be opened and donned during an evacuation drill to assure their reliability. Units at the end of their service life, if available; will be used for this purpose. The results of the tests will be maintained at the mine for a period of one year that will be made available to the Secretary and miners working at the mine.

Manufacturer's recommendations for SCSR maintenance, routine examinations, storage, and retirement will be followed. Outdated and/or defective SCSRs will be taken out of service and replaced with new SCSRs. The retired SCSRs will be replaced with technologically advanced SCSRs as they become commercially available and are approved for use in the mines. Daily examination by the wearer, weekly examination for outby storage caches and every 90 days a check will be made according to manufacturer's recommendation. Storage compartments will be according to State and Federal law and manufacturer's recommendations.

4. POST-ACCIDENT LIFELINES

Flame-resistant, directional lifelines will be installed in each escapeway for its entire length with standardized directional signals installed, per 30 C.F.R. § 75.380(d)(7). Lifelines will be installed according to manufacturer's specifications.

5. TRAINING

The attached Mine Emergency Evacuation and Firefighting Program of Instruction will be used for training in proper evacuation procedures and will be provided to all persons, before going underground. This provision does not apply to Federal and State government officials or to short-term visitors who have appropriate SCSR and hazard training and are taking a tour accompanied by knowledgeable operator officials. This training will be conducted quarterly as part of the mine emergency evacuation training required by 30 C.F.R. § 75.1504.

Quarterly SCSR hands on training in donning and transferring from one SCSR to another for each type of SCSR carried or stored in the mine will be conducted in accordance with 30 C.F.R. § 75.1504. This training will demonstrate the proper insertion of the mouthpiece and emphasize the importance of keeping the mouthpiece inserted until reaching fresh air. This training will be recorded.

6. LOCAL COORDINATION

An up-to-date list of emergency contact phone numbers to be used during mine emergencies will be posted in a conspicuous location in the mine office. The list will contain telephone numbers for the Mine Safety and Health Administration and State Agency, the mine rescue team or teams assigned to the mine, appropriate mine management personnel, pertinent emergency services such as rescue squads and fire departments, and local police agencies.

We will familiarize local emergency responders with surface functions that they may be required to perform in the course of mine rescue work. The mine will schedule an annual on-site mine visit by local emergency responders to familiarize them with the surface facilities.

MSHA will be provided advance notice, either by phone or fax, of all on-site activities related to local emergency response coordination so they have the opportunity to observe or participate.

7. ADDITIONAL PLAN CONTENT PROVISIONS

The following post-accident logistics have been established.

1. Security and traffic control at the mine site will be implemented by mine personnel in combination with Company Security, WV State Police, and the County Sheriff's Department.
2. Designated location of a command and communication center with security, telephone and all necessary equipment provided will be at the *Mine Superintendent's Office*.
3. Designated location for staging and briefing mine rescue teams will be at the *Mine Bath House*.
4. Designated location for emergency medical services will be at the *Waiting Room* at the mine site.
5. Designated location for privacy, shelter, accommodations and briefing of families of the affected miners will be at the *Pettus Grade School*. Security will be provided by the WV State Police.
6. Designated location for the press will be at the *Parking area located at the entrance to Brushy Eagle off Route 3*.

EMERGENCY SUPPLIES

United Central 304-855-5800	General mine supplies.
Jabo 304-864-3601	General mine supplies and safety equipment.
CSE 304-255-0541	General mine supplies and mine rescue equipment.
Jennmar 304-864-3601	General mine supplies, Roof Bolts and supports.

In accordance with the MINER Act, at least once every six months, MSHA will review this ERP to determine whether it could be amended to enhance miners' ability to evacuate or otherwise survive in an emergency. In addition, we will periodically update this ERP to reflect changes in mining operations that may affect the content of this plan. MSHA approval will be obtained before any changes to this ERP are implemented.

Appendix A

POST-ACCIDENT COMMUNICATION

Because fully wireless communications technology is not sufficiently developed at this time, this mine has installed a *Minecom Communications System* approved by MSHA. This system will provide two-way communication between surface and miners in escapeways and coverage zones both inby and outby strategic areas where miners are required to work or likely congregate in an emergency.

Table 1: Communication System			
Type:	<i>UHF Leaky Feeder</i>		
Vendor:	<i>Pyott Boone Electronics</i>		
Equipment Manufacturer	Model Number	MSHA Approval Number	Component Description
<i>Minecom</i>	<i>MCA 2000 UHF Leaky Feeder System</i>	<i>23-A090001-0</i>	<i>UHF Leaky Feeder Communication System</i>
<i>Motorola</i>	<i>HT750</i>	<i>23-A080007-0</i>	<i>Hand Held Two-Way Radio</i>

General Considerations

The alternative system will:

- a. Have an untethered device that miners can use to communicate with the surface. The untethered device will be readily accessible to each group of miners working or traveling together and to any individual miner working or traveling alone.
- b. Provide communication in the form of two-way voice and/or two-way text messages. If used, pre-programmed text messages will be capable of providing information to the surface necessary to determine the status of miners and the conditions in the mine, as well as providing the necessary emergency response information to miners.
- c. Provide an audible, visual, and/or vibrating alarm that is activated by an incoming signal on each untethered device. The alarm will be distinguishable from the surrounding environment.
- d. Be capable of sending an emergency message to each of the untethered devices.
- e. Be installed to prevent interference with blasting circuits and other electrical systems. All untethered devices and communication components will be maintained at a minimum safe distance of 50 feet from explosives, detonators, and blasting circuits. Shot-firers and other persons directly involved in blasting operations will leave untethered devices at a designated location, which complies with the minimum safe distance, before conducting blasting operations. After completing work, the shot-firer will notify a person on the surface that work has been completed and will return immediately to the storage location and retrieve the untethered device.

Coverage Area

- a. The system will provide coverage throughout each working section in a mine.
- b. The system will also provide continuous coverage along the escapeways and a coverage zone of 200 feet inby and outby strategic areas of the mine. Strategic areas are those locations where miners are normally required to work or likely congregate in an emergency and include belt drives and transfer points, loading points, SCSR caches and refuge alternatives.
- c. Miners will follow an established check-in/check-out procedure or an equivalent procedure when working/traveling in bleeders or other areas of the mine that are not provided with communications coverage. An acceptable time will be established by the Responsible Person for the check-in/check-out system to ensure miners' safety.
- d. Communications for refuge alternatives must be provided as required under 30 C.F.R. § 75.1600-3. The two communication systems to be provided are the wireless alternative system and a hardwired system.

Permissibility

The communication system will be approved by MSHA and will comply with 30 C.F.R. Part 23 and applicable policies. Current approvals of components are listed in Table 1.

Standby Power for Underground Components and Devices

- a. Stationary components (infrastructure) will be equipped with a standby power source capable of providing sufficient power to facilitate evacuation and rescue in the event the line power fails or is cut off. At least 24 hours of standby power based on a 5% transmit time, 5% receive time, and 90% idle time duty cycle (denoted as 5/5/90) will be provided.
- b. Untethered devices, such as hand-held radios, will provide sufficient power to facilitate evacuation and rescue following an accident. At least 4 hours of operation in addition to the normal shift duration (12-hour minimum total duration) based on a 5/5/90 duty cycle will be provided.

Surface Considerations

- a. The surface portion of the communication system will be equipped with standby power to ensure continuous operation in the event the line power is interrupted. A supplemental generator in addition to the computer battery power is providing backup power for the surface portion of the communication system.
- b. The communication system will be configured to allow communication between underground personnel and the communication facility required under 30 C.F.R. § 75.1600-1 where a person who is always on duty, when miners are underground, can receive incoming messages and respond immediately in the event of an emergency. This person will be trained in the operation of the communication system and will be knowledgeable of the mine's Emergency Response Plan.

Survivability

- a. The post-accident communication system will provide redundant signal pathways to the surface component.
- b. Redundancy can be achieved by two or more systems installed in two or more entries, or one system with two or more pathways to the surface; provided that a failure in one system or pathway does not affect the other system or pathway. Redundancy at this mine will be achieved by two lines in separate entries.

- c. Redundancy means that the system can maintain communications with the surface when a single pathway is disrupted. Disruption can include major events in an entry or component failure.
- d. If system components must be installed in areas vulnerable to damage (such as in front of seals), protection against forces that could cause damage will be provided by location to minimize damage, hardening of lines or other acceptable means.

Maintenance

Communication systems will be maintained in a functional manner when miners are underground. To continue mining operations, the mine will establish and follow a procedure to provide communications during system or component failures in the event that an accident occurs before the failure can be corrected. This procedure includes restoring at least 24 hours of standby power for the infrastructure. A hard-wired mine phone system is used as a backup to the wireless alternative communication system.

The infrastructure will be examined to verify on a weekly basis that the communication system is maintained in proper operating condition. A record of the examination will be kept and made available to an authorized representative of the Secretary and miners.

The untethered devices will be examined on a daily basis to verify that they are maintained in proper operating condition.

The manufacturer's maintenance recommendations will be followed.

If the communication system or a component of the system fails, appropriate corrective actions will begin immediately and continue until it is repaired, and the back-up communication procedure will be initiated immediately in the affected area. Communication system failures or component failures will be recorded in a record book for MSHA's inspection along with other examinations conducted. The record book will, at minimum, identify the date and time of system failure, the date and time the system was restored to full operational capacity, the nature of the failure, the extent of the system affected by the failure, and the manner in which the failure was corrected.

The MSHA Hotline will be notified of system failures that extend longer than 12 consecutive hours. A system failure is not a failure of one individual node or reader but is when an entire entry or section is without communication.

Appendix B

POST-ACCIDENT TRACKING

This mine is in the process of installing the *Pyott Boone Tracking System* approved by MSHA. The tracking system will be able to determine the current or immediate pre-accident location of all underground personnel.

Type:	<i>RFID</i>		
Vendor:	<i>Pyott Boone Electronics</i>		
Equipment Manufacturer	Model Number	MSHA Approval Number	Component Description
<i>Pyott Boone Electronics</i>	<i>Model 1980 Tracking Tag</i>	<i>23-A080004-0</i>	<i>Tracking Tag</i>
<i>Pyott Boone Electronics</i>	<i>Tracking Boss</i>	<i>23-A090011-0</i>	<i>RFID Tracking System</i>

Performance

- a. The approved electronic tracking system will:
 - i. Determine the location of miners on a working section to within 200 feet. (Typical installation configuration attached)
 - ii. Determine the location of miners in escapeways at intervals not exceeding 2000 feet.
 - iii. Determine the location of miners within 200 feet of strategic areas. Strategic areas are those locations where miners are normally required to work or likely congregate in an emergency and include transfer points, loading points, SCSR caches and refuge alternatives.
 - iv. Determine the direction of travel at key junctions in escapeways. (Typical installation configuration attached)
 - v. Determine the location of miners in the belt entry within 4000 feet or at each belt drive if the distance between the drives is less than 4000 feet, unless the belt entry is part of a designated escapeway. (Typical installation configuration attached)
 - vi. Determine the location of miners traveling within the section return airway. At a minimum, the tracking system will identify miners as they leave the section traveling the return airway and identify them when they reach the mouth of the section.
 - vii. Miners, such as outby crews, examiners, pumpers, remote workers, etc., will follow an established check-in/check-out procedure or an equivalent manual tracking procedure when working/traveling in bleeders, remote return airways or other areas of the mine that are not covered with electronic tracking. An acceptable time will be established by the Responsible Person for the check-in/check-out system to ensure miners' safety.
- b. The electronic tracking system will be installed to prevent interference with blasting circuits and other electrical systems. Electronic tracking devices will be maintained

at a minimum safe distance of 50 feet from explosives, detonators, and blasting circuits. (An individually-worn/carried tracking tag does not apply.) Shot-firers and other persons directly involved in blasting operations will leave tracking devices at a designated location, which complies with the minimum safe distance, before conducting blasting operations. After completing work, the shot-firer will notify a person on the surface that work has been completed and will return immediately to the storage location and retrieve any required tracking device.

Permissibility

The electronic tracking system will be approved by MSHA under 30 C.F.R. Part 23 and applicable policies. Current approvals of components are listed in Table 2.

Standby Power for Underground Components and Devices

- a. The Stationary components (infrastructure) will be capable of tracking persons underground during evacuation and rescue efforts, even upon loss of mine power. The capacity to provide a minimum of 24 hours of continuous tracking operation after a power loss will be provided.
- b. An individually-worn/carried tracking device (e.g., a tag) will provide a low power warning. To facilitate evacuation and rescue efforts, the individually-worn/carried tracking device will provide at least 4 hours of operation in addition to the normal shift duration (12 hour total minimum duration).

Capacity

The tracking system components (readers) will be capable of tracking the maximum number of persons, including visitors, expected to be in a coverage area.

Scanning Rate

The tracking system will be capable of updating (refreshing) location data at least every 60 seconds.

Surface Considerations

- a. The surface portion of the tracking system will be equipped with standby power to ensure continuous operation in the event the line power is interrupted.
- b. The tracking system will be configured to allow monitoring the location of miners underground from the communication facility required under 30 C.F.R. § 75.1600-1 where a person is always on duty when miners are underground and should include the capability to display the location of all miners underground. The person on duty on the surface will be trained in the operation of the tracking system.
- c. The tracking system interface will display the last known location of a miner when the tracking device is not communicating with the system.
- d. Each miner will be uniquely identified.
- e. Location data will be associated with a time stamp.
- f. Location data will be stored for two weeks so that it will be available for evacuation and rescue of persons underground, as well as for accident investigations.

Survivability

- a. If system components must be installed in areas vulnerable to damage (such as in front of seals), protection against forces that could cause damage will be provided by location to minimize damage, hardening of lines or other acceptable means.

- b. Data storage will not be impacted by interruption of the data link between underground and surface components.

Maintenance

Tracking systems will be maintained in a functional manner when miners are underground. To continue mining operations, the mine will establish and follow a procedure to provide tracking (*a written log*) during system or component failures in the event that an accident occurs before the failure can be corrected. This procedure includes restoring at least 24 hours of standby power for the infrastructure.

The infrastructure will be examined to verify on a weekly basis that the electronic tracking system is maintained in proper operating condition. A record of the examination will be kept and made available to an authorized representative of the Secretary and miners.

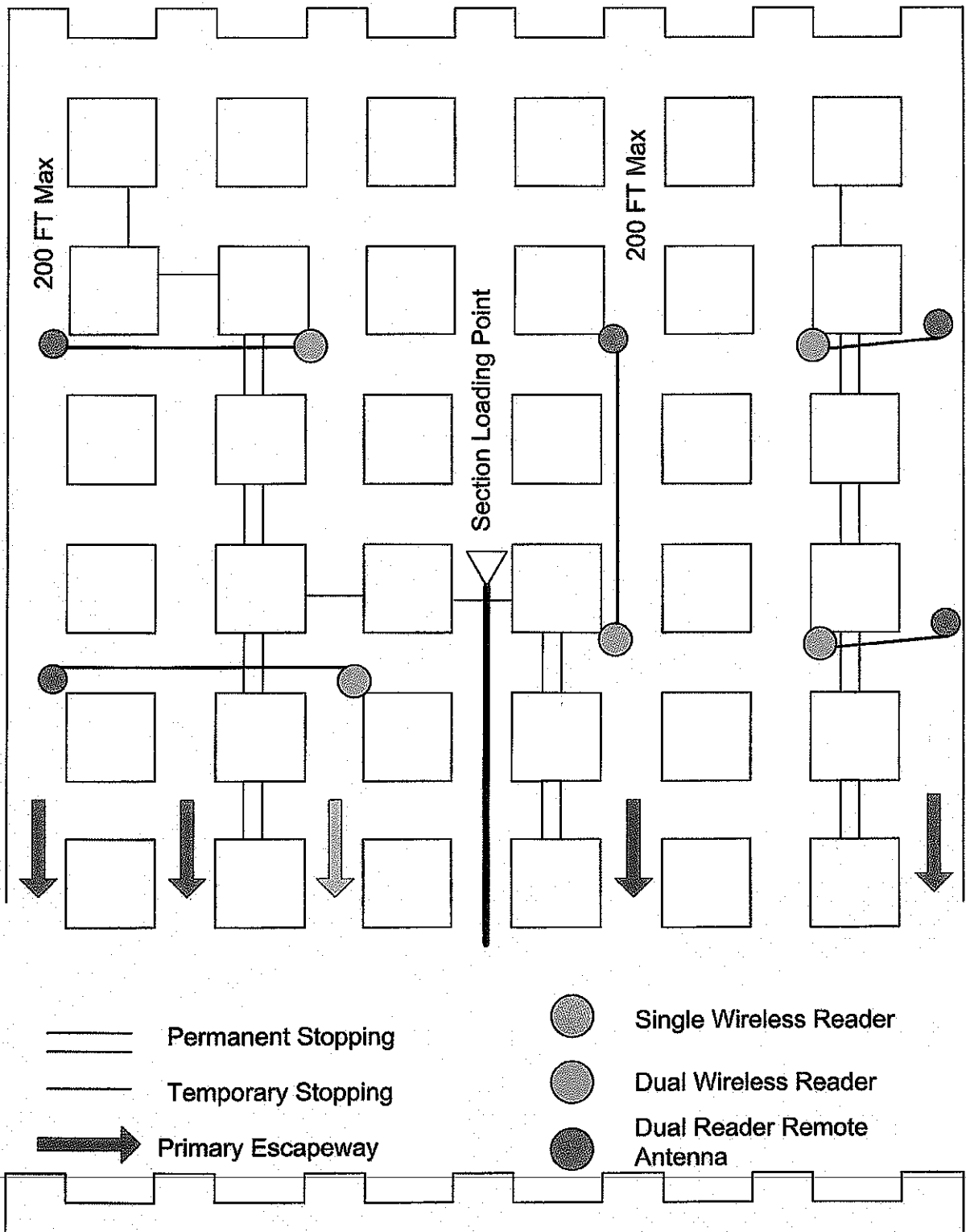
The tracking devices worn/carried by miners will be examined on a daily basis to verify that they are maintained in proper operating condition.

The manufacturer's maintenance recommendations will be followed.

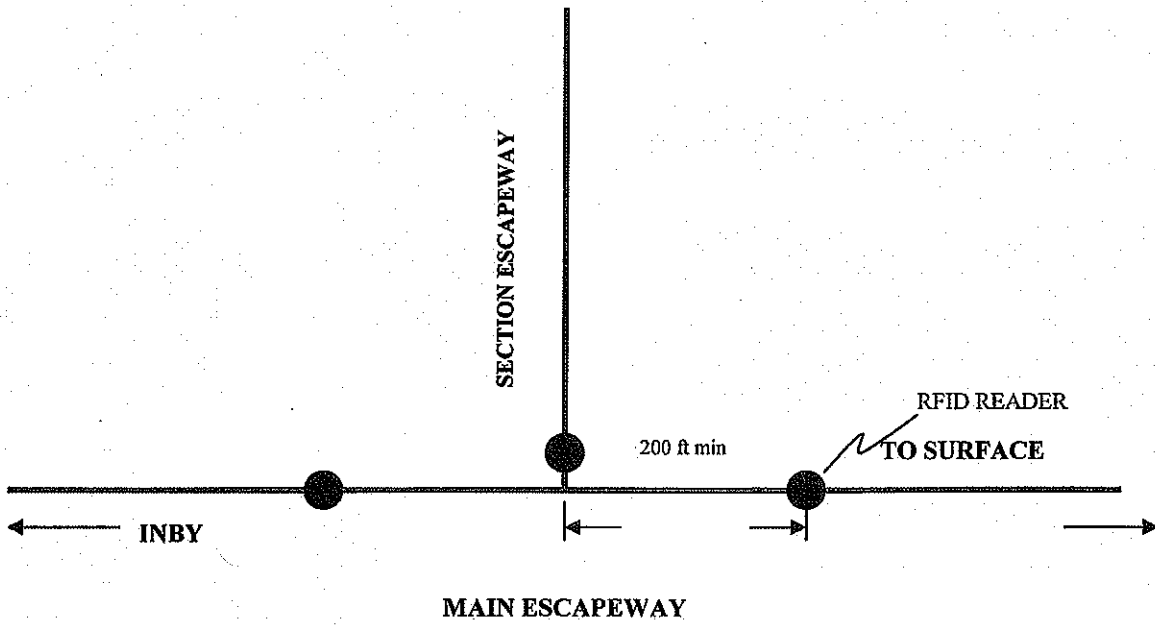
If the tracking system or a component of the system fails, appropriate corrective actions will begin immediately and continue until it is repaired, and the back-up tracking system will be initiated immediately in the affected area. Tracking system failures or component failures will be recorded in a record book for MSHA's inspection along with other examinations conducted. The record book will, at minimum, identify the date and time of system failure, the date and time the system was restored to full operational capacity, the nature of the failure, the extent of the system affected by the failure, and the manner in which the failure was corrected.

The MSHA Hotline will be notified of system failures that extend longer than 12 consecutive hours. A system failure is not a failure of one individual node or reader but is when an entire entry or section is without tracking.

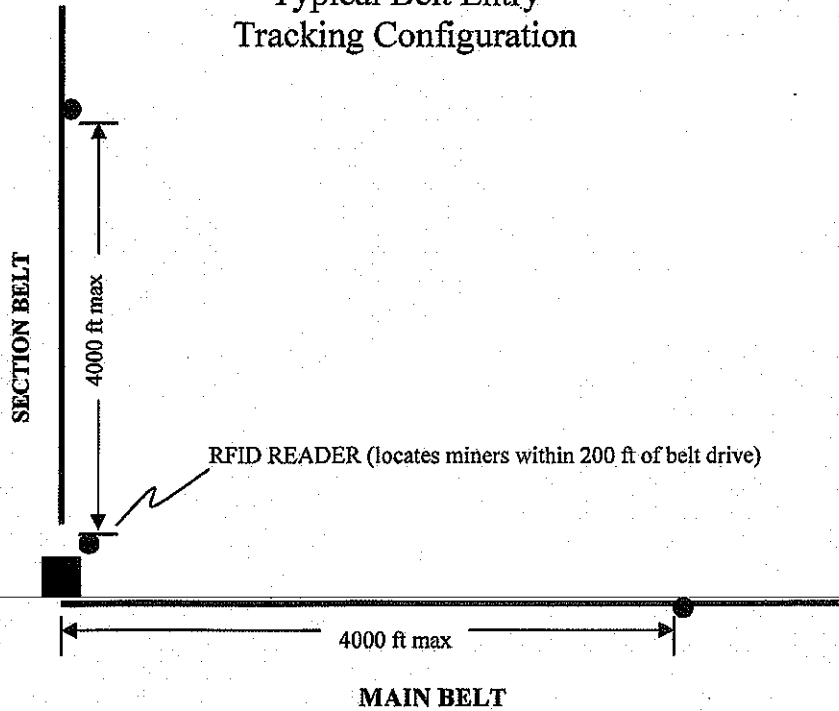
Typical Section Tracking Configuration
(Actual configuration will vary according to section layout)



Typical Escapeway Intersection Tracking Configuration



Typical Belt Entry Tracking Configuration



30 C.F.R. § 75.1502

MINE EMERGENCY EVACUATION AND FIREFIGHTING PROGRAM OF INSTRUCTION

(Within 30 days of approval, the operator shall conduct training in accordance with the revised program.)

Mine ID Number: 46-08315
Mine Name: Upper Big Branch South
Company Name: Performance Coal Company

1. RESPONSIBLE PERSON

The Mine Emergency Evacuation and Fire Fighting Program of Instruction is designed to instruct miners on all shifts the procedures for evacuating due to mine emergencies that present an imminent danger to miners due to fire, explosions, or gas or water inundations and to evacuate all miners not required for a mine emergency response. Before implementing any new or revised approved provision in this program of instruction, the miners shall be instructed in the change.

	Responsible Person (RP) (Title only)
Day Shift:	<u>Superintendent</u>
Day Shift Backup:	<u>Chief Electrician</u>
Evening Shift:	<u>Shift Foreman</u>
Evening Shift Backup:	<u>Electrician</u>
Midnight Shift:	<u>Shift Foreman</u>
Midnight Shift Backup:	<u>Maintenance Foreman</u>

For each shift that miners work underground, there shall be in attendance a Responsible Person designated by the mine operator to take charge in a mine emergency.

If there are any changes in the Responsible Person, then mine management will notify the underground miners through posting on the bulletin boards and through direct contact with shift meetings. If the Responsible Person must leave during the shift, miners underground will be notified by mine phone or direct communication that the identity of the Responsible Person has changed.

A list of Responsible Persons will be maintained at the mine office on the bulletin board. All miners will be notified of any changes before entering the mine.

Responsible Person will have current knowledge of the assigned location and expected movements of miners underground, the operation of the mine ventilation system, the location of the mine escapeways, refuge alternatives, the mine communications system, and any mine monitoring system if used, locations of fire fighting equipment, the mines Emergency Response Plan, the Mine Rescue Notification Plan and the Mine Emergency Evacuation and Firefighting Program of Instruction.

The Responsible Person shall initiate and conduct an immediate mine evacuation when there is a mine emergency which presents an imminent danger to miners due to fire, explosion or gas or water inundations.

2. LOCATION OF FIREFIGHTING EQUIPMENT

Miners will receive instruction quarterly on the following:

Location of all fire fighting hose and fittings.

- All belt transfer points.
- All section dumping points.

Location of all firefighting water outlets (hydrants).

- All belt drive areas and every belt tailpiece.
- Every 300 feet along belt lines.

Location of all fire extinguishers.

- Electrical installations.
- Oil storage locations.
- Supply warehouse on the surface.

Location and storage of any brattice material.

- Emergency material supply hole as designated in 30 C.F.R. § 75.1100-2(i)
- Section supply hole.

Location of all mine phones and communication devices.

- Belt transfer points.
- Section dumping points.
- Any area where mechanized mining equipment is being installed or removed.
- Until wireless communication is installed there will be a phone at the end of the primary escapeway.

Location of all escapeways, exits, routes to the surface.

- Each section or area where mechanized mining equipment is being installed or removed will have a primary and a secondary escapeway.
- The return entries in this mine are not designated, nor will they be designated as an escapeway to exit the mine in an emergency. The return should only be used as a last resort to exit the mine when all other entries are blocked.

Location of escapeway maps.

- All sections have two distinct escapeways indicated on maps.
- Escapeway maps are located on all sections and all areas where mechanized mining equipment is being installed or removed. Escapeway maps are located at all refuge alternatives and areas where miners congregate at the surface staging area.

Location of Mine Rescue Apparatus and the location of Mine Rescue Teams.

- Mine rescue apparatus is located at the mine office at the surface.
- Two mine rescue teams are available and located at *Performance Coal Company* and can be contacted by calling *304-854-3551* or Emergency Paging *304-854-6000*

Location of any additional fire fighting equipment stored on mine property.

- Rock dust is stored on each working section.
- Emergency materials required by 30 C.F.R. § 75.1100-2(i) will be located within 2 miles of each working section.

3. RESPONSE TO FIRE ALARMS

Miners will be instructed to evacuate when the following conditions occur:

In mines that utilize a CO detection system the following actions must be taken unless the mine operator determines that the signal(s) does not present a hazard to miners:

- If any sensor indicates a 10 parts per million carbon monoxide alarm warning appropriate personnel must notify miners in affected working sections or areas where mechanized mining equipment is being installed or removed.
- All miners in the affected areas, unless assigned emergency response duties, must be immediately withdrawn to a safe location in intake air outby the sensor(s) in alarm or to the surface.

In mines which utilize an Atmospheric Monitoring System the following actions must be taken unless the mine operator determines that the signal does not present a hazard to miners:

- If any two consecutive CO sensors indicate a 5 parts per million carbon monoxide alert warning at the same time, or if any CO sensor(s) indicates a 10 parts per million carbon monoxide alarm warning, appropriate personnel must notify miners in affected working sections or areas where mechanized mining equipment is being installed or removed.
- All miners in the affected areas, unless assigned emergency response duties must be immediately withdrawn to a safe location in intake air outby the sensor(s) in alert or alarm or to the surface.

4. USE OF FIREFIGHTING EQUIPMENT

The nearest person will call outside to report the location and nature of the fire. Foremen will account for their miners.

Responsible Person will call all affected miners and evacuate them outby the fire in intake air or to the surface.

If a mine emergency occurs that is considered an immediately reportable accident under 30 C.F.R. § 50.2, an agent of the operator or his designee shall notify without delay:

- MSHA 1-800-746-1553
- WVMHST 1-866-987-2338
- Mine rescue teams if miners are entrapped.

In the event of an emergency evacuation, the miners will use a pre-determined location as the assembly point on the section and contact the Responsible Person for instructions on the escape route and to report the nature of the emergency. This pre-determined location will be the section power center.

Rapid assembly and transportation of necessary miners, fire suppression equipment and rescue apparatus to the scene of the mine emergency will be dispatched from their location by the Responsible Person.

The assembly and transportation of fire extinguishers, rock dust, fire fighting hose and other rescue apparatus will be supervised by the Responsible Person.

Once the location and nature of an emergency is identified, if needed, the mine rescue teams will be notified by telephone.

Fire fighting instruction will be given to all miners quarterly.

All miners in each working section and all outby miners on each shift will be instructed on the location and in the use of firefighting equipment and fire suppression systems.

5. **ESCAPEWAY MAPS AND DRILLS**

A map shall be available at each working section, and in each area where mechanized mining equipment is being installed or removed. The map shall show the designated escapeways from the working section to the surface. A map showing the main escapeways shall be posted at the surface location of the mine where miners congregate, such as the mine bulletin board, or waiting room. All maps shall be kept up to date. Maps will be reviewed with miners quarterly. This review will include the escapeway system; the escape, firefighting, and emergency evacuation procedures in effect at the mine; and the location of refuge alternatives and abandoned areas in the mine. Any changes in route of travel, locations of any doors, location of SCSR caches, or locations of refuge alternatives shall be shown on the 30 C.F.R. § 75.1200 and 30 C.F.R. § 75.1505 maps by the end of the shift on which the changes are made. Any changes to the location of the communication or tracking components will be noted on the maps by the end of the next shift after the changes have been made. Affected miners shall be informed of the changes before entering the underground areas of the mine. There will be a copy of the escapeway map on each section.

Quarterly, but no less than four times per year, all miners working underground shall participate in practice escapeway drills. The drill will include traveling the primary or alternate escapeway in its entirety from the miner's working section or area where mechanized mining equipment is being installed or removed. During the drill, each miner will be instructed on the location and use of the directional lifeline, tethers and doors. During a quarterly drill all miners will be instructed on the location, quantity, types and use of stored SCSR devices as applicable. During quarterly drills, miners will be instructed in the deployment, use and maintenance of refuge alternatives. Outby miners shall also participate in these quarterly drills. An escapeway drill shall not be conducted in the same escapeway as the preceding drill.

Before or during practice escapeway drills, miners shall be instructed on the locations of escapeways, exits and routes of travel to the surface including the location of continuous directional lifelines or equivalent devices.

During the quarterly evacuation training and drills the miners will be instructed on the use, care and maintenance of self-rescue devices. The quarterly drills will include hands-on training in the donning and transferring of SCSRs.

Annually, each miner shall participate in expectations training that include donning and transferring SCSRs in smoke, simulated smoke, or an equivalent environment, and breathing through a realistic SCSR training unit that provides the sensation of SCSR airflow resistance and heat. A miner shall participate in expectations training within one quarter of being employed at the mine.

During the quarterly evacuation training and drill, each miner will be instructed in the importance of evacuating the mine during an emergency. All efforts must be made to exit the mine and only when all escapeways and alternate entries are blocked should using a refuge alternative be considered an option. This instruction will include discussing the limitations of "locating systems" such as seismic systems. The limitations include:

- Present systems are based on old technology.
- These systems take an extended period of time to arrive at the mine and be set up.
- These systems have never located a missing miner.

6. **MINING UNDER BODIES OF WATER**

6. **MINING UNDER BODIES OF WATER**

In the event that a plan for mining under bodies of water is approved for this mine, employees shall be given training in accordance with the approved 30 C.F.R. § 75.1716 Plan.

7. **LOCATION AND USE OF CONTINUOUS DIRECTIONAL LIFELINES OR EQUIVALENT DEVICES**

Primary and Secondary Escapeway

Lifelines are installed from the working section to the surface escape drift opening or continuous to the escape shaft/slope bottom in the Primary and Secondary Escapeways. The lifelines are attached to SCSR storage caches and refuge alternatives through branch lines. Reflective directional signs are provided to show where the SCSR caches and Refuge Alternatives are located. Miners will be instructed in the location and use of continuous directional lifelines, or equivalent devices and the directional indicators during quarterly evacuation drills.

8. **INSTRUCTORS**

- Superintendent
- Mine Foreman
- All Shift Foremen and Responsible Persons
- Safety Department Instructors

The above persons have the ability, training, knowledge or experience to conduct the mine emergency evacuation instruction and drills in his/her area of expertise. Persons conducting SCSR donning and transferring training are able to effectively train and evaluate whether miners can successfully don the SCSR and transfer to additional SCSR devices.

9. **SUMMARY OF THE PROCEDURES RELATED TO THE DEPLOYMENT AND USE OF THE STRATA REFUGE ALTERNATIVES**

Locate the fresh air bay

- Open the emergency and maintenance panels on the side by turning and pulling the handles.
- Open the three master control valves for the oxygen, fan drive and purge air.
- Pull the tent out by the yellow strap and grab the tent by the end and pull to fully extend it.
- Inflate the tent by pulling the inflation cord located on the right side of the tent compartment.
- Remove the gas detector and strobe light located in the maintenance panel and place the strobe light at the entrance door.
- After tent is fully inflated enter the outer compartment closing door behind you.
- Once inside perform a check with gas detector, if oxygen is at 19.5 % and CO is below 50 parts per million enter main bay. Leave gas detector and close inter door behind in purge chamber.
- If oxygen is below 19.5 % or CO above 50 parts per million purge outer chamber by using spring loaded purge valve located in outer chamber.
- When inside main bay remove the carbon dioxide scrubber from steel skid, turn on oxygen, place soda lime cartridges on scrubber, making sure they are even with the sides of scrubber box and sealed.
- Monitor atmosphere in chamber each two hours. If oxygen lever falls below 19.5% increase oxygen flow. If oxygen level increases above 22% decrease oxygen flow.

- Change soda lime cartridges at 24 hour intervals if at full occupancy. If not at full occupancy change cartridges as directed by chart located on the side of scrubber box. It is normal for soda lime cartridges to turn purple.

10. SUMMARY OF THE CONSTRUCTION METHODS FOR REFUGE ALTERNATIVE STOPPINGS CONSTRUCTED PRIOR TO AN EVENT

- Thoroughly clean floor base of area on which stopping will be constructed.
- Construct stopping by wet laying 8" solid block.
- Set the airlock door in place after the first or second course is laid.
- Continue with the block until stopping is complete.
- Coat both sides of the stopping with an MSHA approved sealant.
- Use expandable foam or equivalent material to seal around edges of stopping and door.
- These construction methods are only for stoppings installed prior to 03-02-09. No other refuge alternative stoppings will be constructed using these methods.

11. SUMMARY OF THE PROCEDURES RELATED TO THE USE OF THE MINE LIFELINE REFUGE ALTERNATIVE

- Locate Alternative shelter and pull purge air handle provided on exterior of air lock door.
- Enter air lock making sure door closes behind you
- Continue to wear SCSR while using gas monitor to insure atmosphere inside air lock is at 19.5 Oxygen and below 25 parts per million of CO. Purge lever is provided if dilution is needed.
- Enter into main chamber while continuing to wear SCSR and check integrity of chamber. Should repairs be needed foam repair kit is located inside metal skid.
- Remove Carbon Dioxide Scrubbing Curtain Boxes from the skid open and hang curtains according to chart provided in skid.
- Open oxygen regulator and open oxygen tanks according to chart provided in skid
- Maintain oxygen above 19.5 percent, CO at or below 25 parts per million and Carbon Dioxide below 50 parts per million

Explosion Scenario for 30 C.F.R. § 75.1502

Location(s) of Event(s)	Location of Miners and Specific Circumstances of the Event	Best Option(s) for Evacuation	Conditions requiring immediate donning of self rescue device
<p align="center">Section Area</p>	<p align="center"><u>Miners - on Section</u></p> <ul style="list-style-type: none"> • Account for and assemble applicable personnel to prepare for evacuation. The responsible person will initiate and conduct immediate evacuation when imminent danger exists. • Report location and extent of explosion, if known, to surface personnel. • Evacuate all personnel not required for emergency response. • Evaluate status of ventilation and ventilation controls: altered, destroyed, removed, installed, etc. • Evaluate air qualities and quantities in areas of the mine. • Evaluate status/location of electrical and mechanical equipment/vehicles. • Evaluate extent of the explosion area. 	<p align="center"><u>Transportation Equipment Available</u></p> <p>Travel by transportation equipment the safest and most expedient entry (primary or alternate escapeway) to the surface, shaft/slope bottom, etc.</p> <p align="center"><u>Transportation Equipment Unavailable</u></p> <p>Travel (walk/crawl) the primary or alternate escapeway entry - whichever provides the safest and most expedient travelway to the surface, shaft/slope bottom, etc. Utilize the continuous lifeline or equivalent devices, tethers and doors during escape. Evaluate/execute best options to traverse undercasts or overcasts and switching escapeways as conditions require. Evaluate/execute best options while negotiating escapeway conditions such as smoke, dust, fire, water, adverse roof conditions, obstructions and other unique conditions. Consider using a refuge alternative only if escape is impossible.</p>	<p>Miners should don a self-rescue device when smoke, odor, fire, or any contaminated atmosphere is encountered. Miners are encouraged to don self-rescue devices whenever they believe they are exposed to a toxic or irrespirable atmosphere. Miners should don a self-rescue device when a hazardous atmosphere is identified by conducting/evaluating gas tests with a multi-gas detector.</p>
<p align="center">Outby Section</p>	<p align="center"><u>Miners - Located outby and on Other Sections</u></p> <ul style="list-style-type: none"> • Account for and assemble applicable personnel to prepare for evacuation. The responsible person will initiate and conduct immediate evacuation when imminent danger exists. • Report location and extent of explosion, if known, to surface personnel. • Evacuate all personnel not required for emergency response. • Evaluate status of ventilation and ventilation controls: altered, destroyed, removed, installed, etc. • Evaluate air qualities and quantities in areas of the mine. • Evaluate status/location of electrical and mechanical equipment/vehicles. • Evaluate extent of the explosion area. 	<p align="center"><u>Transportation Equipment Available</u></p> <p>Travel by transportation equipment the safest and most expedient entry (primary or alternate escapeway) to the surface, shaft/slope bottom, etc.</p> <p align="center"><u>Transportation Equipment Unavailable</u></p> <p>Travel (walk/crawl) the primary or alternate escapeway entry - whichever provides the safest and most expedient travelway to the surface, shaft/slope bottom, etc. Utilize the continuous lifeline or equivalent devices, tethers and doors during escape. Evaluate/execute best options to traverse undercasts or overcasts and switching escapeways as conditions require. Evaluate/execute best options while negotiating escapeway conditions such as smoke, dust, fire, water, adverse roof conditions, obstructions and other unique conditions. Consider using a refuge alternative only if escape is impossible.</p>	<p>Miners should don a self-rescue device when smoke, odor, fire, or any contaminated atmosphere is encountered. Miners are encouraged to don self-rescue devices whenever they believe they are exposed to a toxic or irrespirable atmosphere. Miners should don a self-rescue device when a hazardous atmosphere is identified by conducting/evaluating gas tests with a multi-gas detector.</p>

Fire Scenario for 30 C.F.R. § 75.1502

Location(s) of Event(s)	Location of Miners and Specific Circumstances of the Event	Best Option(s) for Evacuation	Conditions requiring immediate donning of self rescue device
<p align="center">Section Area</p>	<p align="center"><u>Miners - On Section</u></p> <ul style="list-style-type: none"> • Make a prompt effort to extinguish when specific conditions dictate. • Account for and assemble applicable personnel to prepare for evacuation. The responsible person will initiate and conduct immediate evacuation when imminent danger exists. • Report type, location and extent of fire, if known to surface personnel. • Evacuate all personnel not required for emergency response. • Evaluate status of ventilation and ventilation controls: altered, destroyed, removed, installed, etc. • Evaluate air qualities and quantities in areas of the mine. • Evaluate status/location of electrical and mechanical equipment/vehicles. • Evaluate extent of fire area. 	<p align="center"><u>Transportation Equipment Available</u></p> <p>Travel by transportation equipment the safest and most expedient entry (primary or alternate escapeway) to the surface, shaft/slope bottom, etc.</p> <p align="center"><u>Transportation Equipment Unavailable</u></p> <p>Travel (walk/crawl) the primary or alternate escapeway entry – whichever provides the safest and most expedient travelway to the surface, shaft/slope bottom, etc.</p> <p>Utilize the continuous lifeline or equivalent devices, tethers and doors during escape.</p> <p>Evaluate/execute best options to traverse undercasts or overcasts and switching escapeways as conditions require.</p> <p>Evaluate/execute best options while negotiating escapeway conditions such as smoke, dust, fire, water, adverse roof conditions, obstructions and other unique conditions.</p> <p>Consider using a refuge alternative only if escape is impossible.</p>	<p>Miners should don a self-rescue device when smoke, odor, fire, or any contaminated atmosphere is encountered. Miners are encouraged to don self-rescue devices whenever they believe they are exposed to a toxic or irrespirable atmosphere. Miners should don a self-rescue device when a hazardous atmosphere is identified by conducting/evaluating gas tests with a multi-gas detector.</p>
<p align="center">Outby Section</p>	<p align="center"><u>Miners – Located Outby and on Other Sections</u></p> <ul style="list-style-type: none"> • Make a prompt effort to extinguish when specific conditions dictate. 	<p align="center"><u>Transportation Equipment Available</u></p> <p>Travel by transportation equipment the safest and most expedient entry (primary or alternate escapeway) to the surface, shaft/slope bottom, etc.</p>	<p>Miners should don a self-rescue device when smoke, odor, fire, or any contaminated atmosphere is encountered. Miners are encouraged to</p>

	<ul style="list-style-type: none">• Account for and assemble applicable personnel to prepare for evacuation. The responsible person will initiate and conduct immediate evacuation when imminent danger exists.• Report type, location and extent of fire, if known to surface personnel.• Evacuate all personnel not required for emergency response.• Evaluate status of ventilation and ventilation controls: altered, destroyed, removed, installed, etc.• Evaluate air qualities and quantities in areas of the mine.• Evaluate status/location of electrical and mechanical equipment/vehicles.• Evaluate extent of fire area.	<p style="text-align: center;"><u>Transportation Equipment Unavailable</u></p> <p>Travel (walk/crawl) the primary or alternate escapeway entry – whichever provides the safest and most expedient travelway to the surface, shaft/slope bottom, etc.</p> <p>Utilize the continuous lifeline or equivalent devices, tethers and doors during escape.</p> <p>Evaluate/execute best options to traverse undercasts or overcasts and switching escapeways as conditions require.</p> <p>Evaluate/execute best options while negotiating escapeway conditions such as smoke, dust, fire, water, adverse roof conditions, obstructions and other unique conditions.</p> <p>Consider using a refuge alternative only if escape is impossible.</p>	<p>don self-rescue devices whenever they believe they are exposed to a toxic or irrespirable atmosphere. Miners should don a self-rescue device when a hazardous atmosphere is identified by conducting/evaluating gas tests with a multi-gas detector.</p>
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Gas Inundation Scenario for 30 C.F.R. § 75.1502

Location(s) of Event(s)	Location of Miners and Specific Circumstances of the Event	Best Option(s) for Evacuation	Conditions requiring immediate donning of self rescue device
Section Area	<p style="text-align: center;"><u>Miners – On Section</u></p> <ul style="list-style-type: none"> • Account for and assemble applicable personnel to prepare for evacuation. The responsible person will initiate and conduct immediate evacuation when imminent danger exists. • Report location and extent of gas inundation, if known, to surface personnel. • Evacuate all personnel not required for emergency response. • Evaluate status of ventilation and ventilation controls: altered, destroyed, removed, installed, etc. • Evaluate air qualities and quantities in areas of the mine. • Evaluate status/location of electrical and mechanical equipment/vehicles. • Evaluate extent of the gas inundation area. 	<p style="text-align: center;"><u>Transportation Equipment Available</u></p> <p>Travel by transportation equipment the safest and most expedient entry (primary or alternate escapeway) to the surface, shaft/slope bottom, etc.</p> <p style="text-align: center;"><u>Transportation Equipment Unavailable</u></p> <p>Travel (walk/crawl) the primary or alternate escapeway entry – whichever provides the safest and most expedient travelway to the surface, shaft/slope bottom, etc.</p> <p>Utilize the continuous lifeline or equivalent devices, tethers and doors during escape.</p> <p>Evaluate/execute best options to traverse undercasts or overcasts and switching escapeways as conditions require.</p> <p>Evaluate/execute best options while negotiating escapeway conditions such as smoke, dust, fire, water, adverse roof conditions, obstructions and other unique conditions.</p> <p>Consider using a refuge alternative only if escape is impossible.</p>	<p>Miners should don a self-rescue device when smoke, odor, fire, or any contaminated atmosphere is encountered. Miners are encouraged to don self-rescue devices whenever they believe they are exposed to a toxic or irrespirable atmosphere. Miners should don a self-rescue device when a hazardous atmosphere is identified by conducting/evaluating gas tests with a multi-gas detector.</p>
Outby Section	<p style="text-align: center;"><u>Miners – Located Outby and on Other Sections</u></p> <ul style="list-style-type: none"> • Account for and assemble applicable personnel to prepare for evacuation. The responsible person will initiate and conduct immediate evacuation when imminent danger exists. • Report location and extent of gas inundation, if known, to surface personnel. • Evacuate all personnel not required for emergency response. • Evaluate status of ventilation and ventilation controls: altered, destroyed, removed, installed, etc. • Evaluate air qualities and quantities in areas of the mine. • Evaluate status/location of electrical and mechanical equipment/vehicles. • Evaluate extent of the gas inundation area. 	<p style="text-align: center;"><u>Transportation Equipment Available</u></p> <p>Travel by transportation equipment the safest and most expedient entry (primary or alternate escapeway) to the surface, shaft/slope bottom, etc.</p> <p style="text-align: center;"><u>Transportation Equipment Unavailable</u></p> <p>Travel (walk/crawl) the primary or alternate escapeway entry – whichever provides the safest and most expedient travelway to the surface, shaft/slope bottom, etc.</p> <p>Utilize the continuous lifeline or equivalent devices, tethers and doors during escape.</p> <p>Evaluate/execute best options to traverse undercasts or overcasts and switching escapeways as conditions require.</p> <p>Evaluate/execute best options while negotiating escapeway conditions such as smoke, dust, fire, water, adverse roof conditions, obstructions and other unique conditions.</p> <p>Consider using a refuge alternative only if escape is impossible.</p>	<p>Miners should don a self-rescue device when smoke, odor, fire, or any contaminated atmosphere is encountered. Miners are encouraged to don self-rescue devices whenever they believe they are exposed to a toxic or irrespirable atmosphere. Miners should don a self-rescue device when a hazardous atmosphere is identified by conducting/evaluating gas tests with a multi-gas detector.</p>

Water Inundation Scenario for 30 C.F.R. § 75.1502

Location(s) of Event(s)	Location of Miners and Specific Circumstances of the Event	Best Option(s) for Evacuation	Conditions requiring immediate donning of self-rescue device
Section Area	<p style="text-align: center;"><u>Miners - On Section</u></p> <ul style="list-style-type: none"> • Account for and assemble applicable personnel to prepare for evacuation. The responsible person will initiate and conduct immediate evacuation when imminent danger exists. • Report location and extent of water inundation, if known, to surface personnel. • Evacuate all personnel not required for emergency response. • Evaluate status of ventilation and ventilation controls: altered, destroyed, removed, installed, etc. • Evaluate air qualities and quantities in areas of the mine. • Evaluate status/location of electrical and mechanical equipment/ vehicles. • Evaluate extent of the water inundation area. 	<p style="text-align: center;"><u>Transportation Equipment Available</u></p> <p>Travel by transportation equipment the safest and most expedient entry (primary or alternate escapeway) to the surface, shaft/slope bottom, etc. while considering mine elevations.</p> <p style="text-align: center;"><u>Transportation Equipment Unavailable</u></p> <p>Travel (walk/crawl) the primary or alternate escapeway entry – whichever provides the safest and most expedient travelway to the surface, shaft/slope bottom, etc. Utilize the continuous lifeline or equivalent devices, tethers and doors during escape. Evaluate/execute best options to traverse undercasts or overcasts and switching escapeways as conditions require. Evaluate/execute best options while negotiating escapeway conditions such as smoke, dust, fire, water, adverse roof conditions, obstructions and other unique conditions. Consider using a refuge alternative only if escape is impossible.</p>	<p>Miners should don a self-rescue device when smoke, odor, fire, or any contaminated atmosphere is encountered. Miners are encouraged to don self-rescue devices whenever they believe they are exposed to a toxic or irrespirable atmosphere. Miners should don a self-rescue device when a hazardous atmosphere is identified by conducting/evaluating gas tests with a multi-gas detector.</p>
Outby Section	<p style="text-align: center;"><u>Miners - Located Outby and on Other Sections</u></p> <ul style="list-style-type: none"> • Account for and assemble applicable personnel to prepare for evacuation. The responsible person will initiate and conduct immediate evacuation when imminent danger exists. • Report location and extent of water inundation, if known, to surface personnel. • Evacuate all personnel not required for emergency response. • Evaluate status of ventilation and ventilation controls: altered, destroyed, removed, installed, etc. • Evaluate air qualities and quantities in areas of the mine. • Evaluate status/location of electrical and mechanical equipment/ vehicles. • Evaluate extent of the water inundation area. 	<p style="text-align: center;"><u>Transportation Equipment Available</u></p> <p>Travel by transportation equipment the safest and most expedient entry (primary or alternate escapeway) to the surface, shaft/slope bottom, etc. while considering mine elevations.</p> <p style="text-align: center;"><u>Transportation Equipment Unavailable</u></p> <p>Travel (walk/crawl) the primary or alternate escapeway entry – whichever provides the safest and most expedient travelway to the surface, shaft/slope bottom, etc. Utilize the continuous lifeline or equivalent devices, tethers and doors during escape. Evaluate/execute best options to traverse undercasts or overcasts and switching escapeways as conditions require. Evaluate/execute best options while negotiating escapeway conditions such as smoke, dust, fire, water, adverse roof conditions, obstructions and other unique conditions. Consider using a refuge alternative only if escape is impossible.</p>	<p>Miners should don a self-rescue device when smoke, odor, fire, or any contaminated atmosphere is encountered. Miners are encouraged to don self-rescue devices whenever they believe they are exposed to a toxic or irrespirable atmosphere. Miners should don a self-rescue device when a hazardous atmosphere is identified by conducting/evaluating gas tests with a multi-gas detector.</p>