REPORT OF TRIPLE FATAL COAL MINE RIB-FALL ACCIDENT

HARRIS NO. 2 MINE (ID NO. 46-01270)
EASTERN ASSOCIATED COAL CORP.
BALD KNOB, BOONE COUNTY, WEST VIRGINIA

JUNE 5, 1975

BY

PAUL E. MARGOCEE
FEDERAL COAL MINE INSPECTOR

INTRODUCTION

This report is based on an investigation made pursuant to the provisions of the Federal Coal Mine Health and Safety Act of 1969 (83 Stat. 742).

A rib-fall accident that occurred about 10:45 p.m., Thursday, June 5, 1975, in the No. 3 entry, approximately 160 feet inby survey station 1580, 1 North mains section, resulted in the deaths of Lloyd E. Dishmon, assistant mine foreman; Russell L. Nutter, loading machine operator; and Eddie E. Goodwin, service foreman. The rib-fall accident and resultant fatalities occurred when rehabilitation work was performed alongside a dangerous rib that had not been removed or adequately supported.

The Madison Field Office of the Mining Enforcement and Safety Administration was notified of the accident by Charles Johnson, company safety supervisor, at 12:30 a.m., Friday, June 6, 1975, and an investigation was started the same day.

GENERAL INFORMATION

The Harris No. 2 mine is located near Bald Knob, West Virginia. The mine utilizes 6 drift openings to facilitate extraction of the Campbells Creek coalbed and the total thickness of the coalbed and rock partings in the area varied from 8 to 10 feet. There are 244 men, 194 underground and 50 on the surface, employed at the mine on 3 coal-producing shifts a day, 5 days a week. The daily production averages 1,088 tons of coal, all loaded mechanically.

The accident occurred while roof fall removal or rehabilitation type work was in progress, and at the specific time of the accident, fallen roof materials were being loaded into a shuttle car with a conventional loading machine. Accounts of the conditions, practices and violations disclosed during the investigation of the occurrence have been included in the Description of Accident and in the Findings of Fact sections of this report.

The investigation was conducted by Mining Enforcement and Safety Administration personnel, and those persons present during the investigation were:

Company Officials and Employees

R. H. Freeman	President
John J. Higgins	Assistant Vice President of Production
J. R. Black	Assistant Vice President, Personnel and Safety
R. W. Thomas	Assistant Vice President, Harris Operation
L. P. Mokwa	Safety Director
Don L. Rector	General Safety Inspector
Charles Johnson	Safety Supervisor
James R. Browning	Safety Inspector
Troy E. Francis	Superintendent
Richard L. Smith	General Mine Foreman
W. Larry Cook	Assistant General Mine Foreman
Charlie Cook	Service Foreman (Construction Foreman)
John B. Pizzino	Maintenance Foreman
Leo R. Boggs	Maintenance Foreman
Randolph B. McGraw	Section Foreman
Ivan W. Puckett	Resident Engineer

United Mine Workers of America

Richard C. Cooper	Region 2 Inspector, District 17
Bart Lay, Jr.	Safety Coordinator, District 17
James Davis	Field Representative, District 17
Howard L. Green	Field Representative, District 17
Glenn Jarvis	President, Local Union 1503
Otto Walker	Chairman, Mine Health and Safety Committee
Millard Toler	Member, Mine Health and Safety Committee
Thomas Toler	Member, Mine Health and Safety Committee
Jerry L. Wilson	Shuttle-car operator (eyewitness)
Joseph E. Chambers	Roof-bolter (stoper operator)
William M. Harrison	Loading boom operator
Russell G. Webb	Electrician
Samuel A. Stewart	Loading-machine operator

West Virginia Department of Mines

J. W. Hatfield	Assistant Inspector-at-Large
W. C. Cook	District Inspector
William F. Sams	District Inspector

Mining Enforcement and Safety Administration

J. M. Krese	District Manager
Fred T. Casteel	Subdistrict Manager
Clifford E. Ellis	Coal Mine Safety Specialist, Arlington Office
Paul M. Chikos	Coal Mine Inspection Supervisor
Fred H. Ryan	Supervisory Coal Mine Technical Specialist (Roof Control)
Jesse P. Cole	Coal Mine Inspector
James E. Kaylor	Coal Mine Inspector (Special Investigator)
Darlie F. Anderson	Coal Mine Inspector
James H. Keffer	Coal Mine Inspector
William S. Pauley	Coal Mine Inspector
Paul E. Margocee	Coal Mine Inspector

The Harris No. 2 mine is operated by Eastern Associated Coal Corp. The management structure for the mine consists of a president, an assistant vice president, a superintendent, a general mine foreman, an assistant general mine foreman, a chief electrician, section foremen and service foremen (construction foremen). Charles Johnson is the designated official in charge of health and safety for the mine and L. P. Mokwa is in charge of health and safety for the division of the company. The company is a member of the National Safety Council, and weekly safety meetings are conducted with employees. The company has established an approved employee training program, and a mine rescue team is maintained nearby.

A procedure of reporting and recording all accidents that resulted in injuries is followed at the mine and an injury frequency rate of 117.74 and a severity rate of 5,263 per million man hours of exposure were reported for the period of January through March of 1975.

Lloyd E. Dishmon (victim), Social Security No. 236-48-9125 and age 42, had 19 years mining experience with the company including the last 2 years at the Harris No. 2 mine as an assistant mine foreman. Dishmon was certified as a foreman by the State of West Virginia. Russell L. Nutter (victim), Social Security No. and age 23, had 15 months mining experience, all at this mine. Nutter was classified as a general laborer, but on the day of the accident, he was assigned to operate the loading machine. Eddie E. Goodwin (victim), Social Security No. 232-84-8144 and age 24, had 4 years mining experience, all at this mine. Goodwin had performed for the last 1-3/4 years as service foreman (construction foreman) and he was certified as a foreman by the State of West Virginia. Goodwin was Nutter's immediate supervisor and Dishmon was Goodwin's immediate supervisor.

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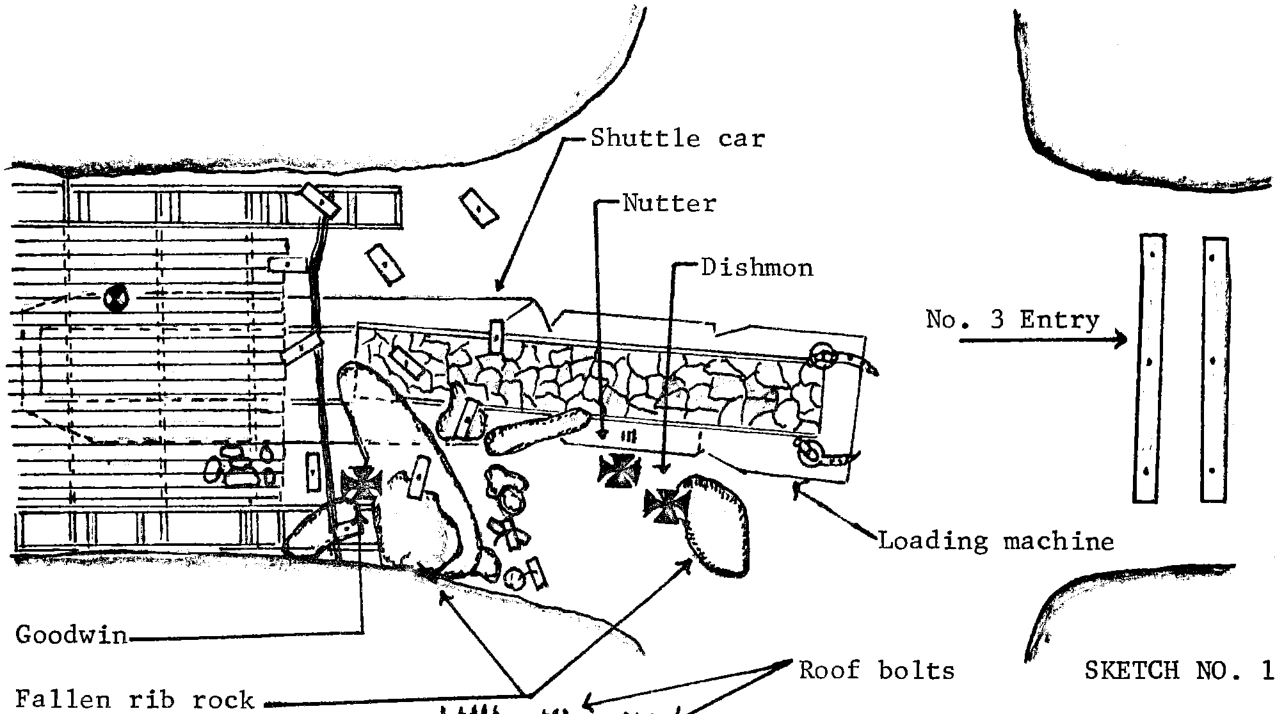

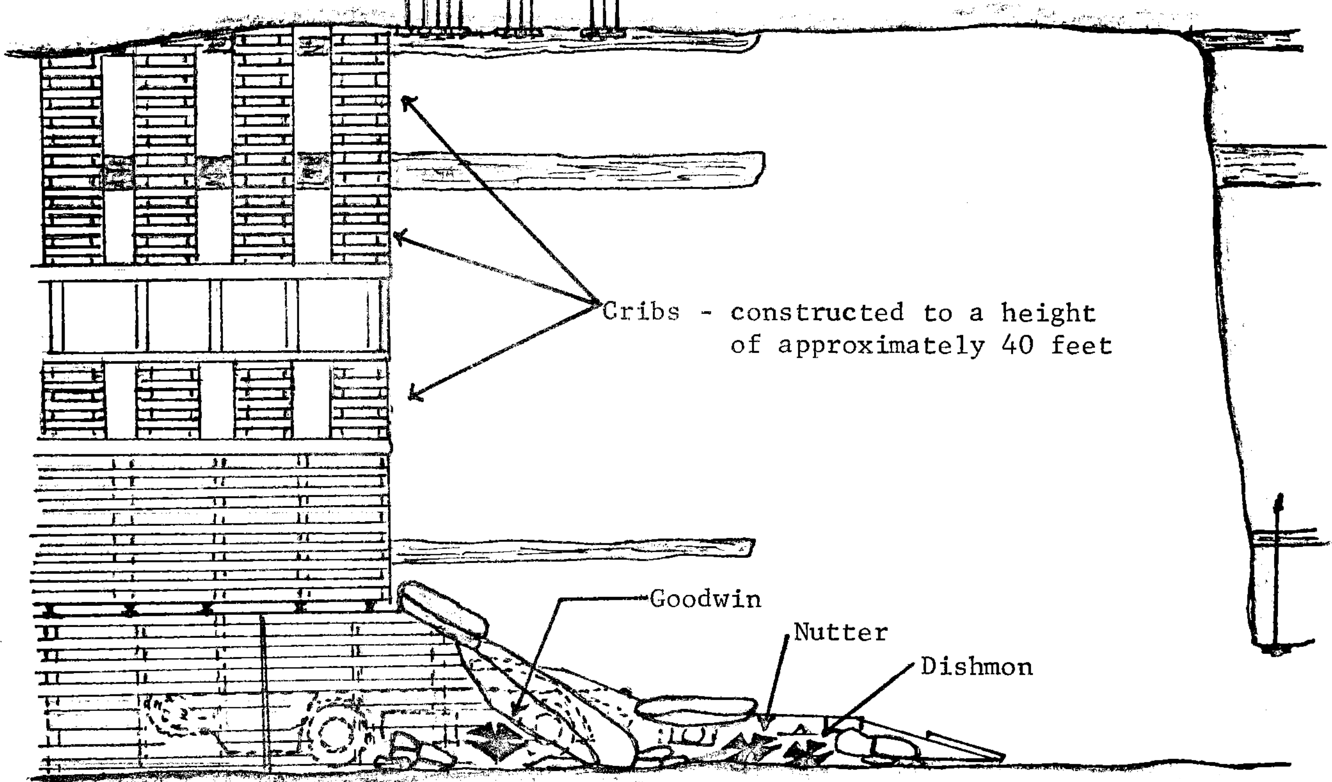

SKETCH NO. 2

Because of the adverse conditions in the accident area, some dimensions and the locations of some items were estimated.

Scale 1" = 10'

The last complete Federal health and safety inspection of the mine was concluded March 27, 1975. Accident prevention inspections are conducted at the mine on a daily basis.

DESCRIPTION OF ACCIDENT

On Thursday, June 5, 1975, at 3:45 p.m., the service crew (construction crew) under the supervision of Eddie Goodwin, entered the mine and traveled to the North mains rehabilitation area. Upon arrival in the area at 4:05 p.m., Goodwin assigned crew members, Jerry Wilson and William Harrison, to acquire the necessary air hose and drilling equipment for the purpose of drilling fallen roof material in the No. 3 entry, the area where the accident later occurred. Simultaneously, Goodwin assigned Russell Nutter, loading machine operator, and Joe Chambers, shuttle car operator, to load and remove some fallen roof materials from the No. 2 entry.

After drilling operations were completed in the No. 3 entry, Goodwin instructed Wilson to replace Chambers on the shuttle car so that Chambers, who was a certified shot firer, could charge and blast the rock materials in the No. 3 entry. The blasting operations were completed and the crew stopped to eat dinner at 8 p.m.

After the dinner break, the crew members resumed their tasks. Loading operations were concluded in the No. 2 entry and were commenced in the No. 3 entry with Nutter (victim) operating the loading machine, Wilson operating the shuttle car and Goodwin (victim) supervising the operations. At 10:30 p.m. Lloyd Dishmon (victim) assistant mine foreman, arrived in the No. 3 entry area. According to Wilson, shuttle car operator, Dishmon began operating the loading machine because Nutter was having some difficulty in loading the larger pieces of rock. Wilson stated that Dishmon loaded one shuttle car and he (Wilson) thereafter transported the load to the mine car loading station where Harrison, boom man, was working.

After dumping the load of rock, Wilson stated that he trammed the shuttle car back to the loading machine in the No. 3 entry and Dishmon began loading rock materials into the car to start his second load.

According to Wilson, suddenly the rib materials began falling on the opposite side of the shuttle car and Goodwin, who was standing near Dishmon and Nutter (See sketch No. 1) began shouting warnings to Dishmon and Nutter. Wilson stated that after the accident, he immediately ran to the locations of Dishmon, Nutter and Goodwin, and it was obvious, because of the size of the fallen rib materials, that he was going to need assistance to free the three men. Therefore, he notified the other crew members of the occurrence and then he ran to the telephone to call for help.

Shortly thereafter, crew members from the nearby 10 butt right section of the mine, as well as crew members from several other areas of the mine, arrived on the accident scene to assist in the recovery. Meanwhile, Chambers and Wilson had determined that Goodwin was alive and they, therefore, freed and removed him first from under the fallen rib materials and began first aid treatment. He was placed on a stretcher, transported to the surface, placed in an ambulance and transported to the Raleigh General Hospital, Beckley, West Virginia. He was transferred to the Charleston General Hospital, Charleston, West Virginia, where he remained a patient until he expired at 5:55 p.m., June 8, 1975.

Dishmon and Nutter were promptly removed from under the fallen materials and according to persons present at the scene, it was obvious from all indications that they were both dead. Thereafter, they were transported to the surface, placed in an ambulance and transported to the Raleigh General Hospital, Beckley, West Virginia, where they were pronounced dead on arrival.

The investigation of the accident revealed the following:

Coal production operations in the 1 North mains had been concluded in March 1973. According to mine officials, the mains had been developed a sufficient distance to permit the development of several sections; therefore, the mains were stopped. Furthermore, they were experiencing some problems in providing adequate ventilation for the area at that time.

Rehabilitation of the 1 North mains area had been in progress since November 1974. The rehabilitation work included the removal of fallen roof materials, additional roof and rib support, installation of haulage tracks, installation of loading stations, etc. The No. 3 entry (area where the accident occurred) was to be utilized as a mine car loading station for the proposed 11 butt right section. In addition the No. 3 entry had been utilized throughout most of the mine as the track haulage entry, and this required a certain amount of construction work.

The entries in the 1 North mains were restricted and/or blocked against travel with a number of massive roof falls which had occurred both during and after development, including the fall area in the No. 3 entry where the accident occurred. According to mine officials, two falls had occurred in the subject area of the No. 3 entry, and the second fall had occurred sometime near May 29, 1975.

Observations in the accident area during the investigation revealed that work had been performed inby roof and rib supports. When mine officials and employees were questioned regarding this, they stated that the second fall (the May 29 fall) had destroyed many of the roof and rib supports that had been installed during the removal of

the first fall. According to officials, the procedures for installing roof and rib supports during the roof fall removal work in the No. 3 entry were as follows:

Prior to commencing removal of the fallen roof materials, persons would install temporary roof supports and follow up with permanent roof and rib supports, beginning at the edge of the fall and progressing across the fall. The fallen materials were then drilled and blasted, and thereafter loaded into shuttle cars with a 14BU10 Joy loading machine. The material was then dumped into mine cars and removed from the mine. As the upper levels of the fall decreased, exposing the ribs, rib supports were installed. In February 1975, the construction of wooden cribs for roof and rib support was started in the No. 3 entry area (See sketch No. 2).

Further observations in the accident area revealed the rib area that fell during the accident extended from a height of about 10 feet above the mine floor to a height of about 40 feet above the mine floor. The rib materials was 3 to 4 feet in thickness and extended 6 to 10 feet in width. The material broke into several pieces during the fall and the subsequent impact. By the positions of the victims after the accident, it could be readily recognized that they had been, prior to the accident, working alongside the dangerous rib.

During the investigation, crew members were questioned to establish if they were aware of the dangerous condition of the rib prior to the accident. According to Chambers, a crew member, the rib contained a large fracture or crack (about 4 to 6 inches in width) which was visible to both he and Goodwin, foreman, while they were performing blasting operations in the area. Furthermore, Chambers stated that Goodwin threw some explosives upon a ledge and/or into some cracks on the rib and detonated same. Chambers stated that Goodwin detonated the open or unconfined shot and he (Chambers) did not participate in such. Chambers stated that he prepared some blast holes that had been drilled into the fallen roof materials. Chambers stated that he and Goodwin were both aware of the dangerous rib. In addition, William Harrison, a crew member who had worked in the area, stated that he had informed Goodwin and other crew members about the condition of the rib. Harrison stated that they all were aware of the hazardous condition of the rib.

As the investigation continued, Charles Cook, day shift service (construction) foreman, and Richard Smith, general mine foreman, were questioned in an effort to determine why the ribs (and the roof) were not supported prior to permitting persons to perform roof fall removal operations in the accident area. According to Cook, he and his crew knew that the rib area involved in the accident was bad and he (Cook) had stood and watched the rib so that he could warn the crew if he saw the rib sluff or begin to

fall. Cook stated that he felt that the fallen roof materials had to be cleaned up before the roof and rib supports (wooden cribs and bolts) could be installed because of the prevailing conditions in the area. When Cook was questioned as to why he did not build work platforms, to facilitate roof and rib support, he stated that he felt the fallen materials had to be removed first and that Smith, general mine foreman, had instructed him as to the same. He stated that they knew there were hazards involved, but they were performing as safely as they could under the circumstances.

When Smith, general mine foreman, was questioned regarding the procedures for roof fall removal in the No. 3 entry area, he stated that he felt that they were performing the rehabilitation work as safely as they knew how, considering the extensive heights of approximately 40 feet and the other unusual conditions prevalent in the accident area. Smith stated that they knew there was a certain amount of dangerous exposure, but they felt that the fallen roof materials had to be removed before the wooden cribs, and subsequent work platforms, could be constructed to support the roof and ribs.

It is relevant to note that a plan for roof and rib support procedures was not posted at the site of the roof fall removal operations in the No. 3 entry. During the investigation, the company produced a set of procedures, which listed in very general terms, seven items or safety precautions to be followed regarding unintentional roof fall work. The entire set of procedures utilized only one-half of a sheet of 8-1/2 by 11 inch paper. The procedures included nothing regarding guidelines for the installation of rib supports, and they (the procedures) were obviously inadequate toward reducing and/or eliminating the dangerous conditions and practices associated with the work in the No. 3 entry area where the accident occurred.

The loading machine and the shuttle car involved in the accident were not provided with a cab or canopy, even though the electric face equipment being used on the coal producing sections of the mine was so equipped.

CAUSE OF ACCIDENT

The direct cause of the accident and the three subsequent deaths was the failure to provide rib support or equivalent protection for a known dangerous rib. The lack of a protective cab or canopy for the loading machine contributed to the seriousness of the accident.

Other factors contributing to the accident were:

1. The second fall (the May 29 fall) damaged and/or destroyed some roof and rib supports and hampered the installation of replacement roof and rib supports in the accident area.

2. Mine management failed to develop, post and establish a plan outlining in detail the safety procedures in accordance with the hazardous rib (and roof) conditions that were prevalent in the accident area.

3. The open or unconfined explosives blast obviously contributed toward the unstableness of the rib involved in the accident.

FINDINGS OF FACT

1. Evidence indicated that persons had been working inby roof (and rib) supports while removing roof material in an unintentional fall area where the accident occurred, a violation of Section 75.200.

2. The roof control plan for cleaning up and supporting the roof in the unintentional fall area in 1 North mains, 600 feet inby the 10 butt belt conveyor drive (accident area) was not posted at the scene of the fall, a violation of Section 75.200.

3. Explosives were not used in a permissible manner in that open or unconfined shots were fired in the area where the accident occurred, a violation of Section 75.1300.

REQUIREMENTS

1. When rib and/or roof supports are damaged and rendered ineffective, the affected area shall be considered unsupported and no one, except persons required to replace or install required supports, shall be permitted to enter such area until it is resupported.

2. When dangerous conditions, such as the rib condition associated with this accident, are found, such conditions shall be corrected prior to performing other work in the affected area.

3. Where extensive working heights are encountered during the clean up of roof falls, suitable platforms shall be constructed, or otherwise provided, in the affected area to facilitate the installation of necessary rib and roof supports.

4. As specified in Section 75.1303, Title 30, Code of Federal Regulations, permissible explosives and associated equipment shall be used in a permissible manner in accordance with the provisions of said regulation.

5. Mine management shall devise a plan, on a fall-by-fall basis, which shall set forth in detail the procedures (including sketches) for supporting the roof and ribs in each area where roof fall removal work in proposed. Such plan, and any subsequent changes, shall be submitted to the District Manager for approval before such work is begun. The approved plan, and such changes, shall be posted at the work site. Persons affected or required to perform the above mentioned work shall be made familiar with said plan in accordance with the provisions set forth in the approved roof (and rib) control plan for the mine.

NOTICES AND ORDERS

Order - Section 103(f)

According to Richard Smith, mine foreman, two persons have been fatally injured and one person seriously injured, from a rock rib fall in the North mains construction area.

Action taken

Order No. 1 DFA was issued June 6, 1975, on Form 103(f), requiring all persons to be withdrawn from the North mains entries from the 10 butt right section inby, and all other construction areas where material is being removed, except those persons from the following agencies necessary to conduct the investigation: Representatives of the United Mine Workers of America, company officials, West Virginia Department of Mines and Mining Enforcement and Safety Administration. The Order was terminated on June 9, 1975.

Violation - Section 75.200

Notice No. 1 DFA, 104(b) citing a violation of Section 75.200, with regard to, not having a plan for cleaning up and supporting the roof in a fall area posted at the scene of the fall, was issued at 6:30 a.m., June 6, 1975, requiring that such plan be provided by 10 a.m., June 9, 1975.

Violation - Section 75.200

Notice No. 1 DFA, 104(c)(1) citing a violation of Section 75.200, with regard to persons working inby roof support was issued at 6:30 a.m., June 6, 1975, requiring that such practices be abated by 8 a.m., June 10, 1975.

Notice to Provide Safeguard - Section 75.1403

Notice to Provide Safeguard No. 1 DFA was issued on June 6, 1975, requiring that a cab or canopy be provided on the loading machine and on the shuttle car involved in the accident. The Notice to Provide Safeguards was modified on June 11, 1975, deleting the requirement that a cab or canopy be provided on the loading machine; however, management agreed to provide the subject loading machine with a cab.

Imminent Danger - Section 104(a)
An analysis of the findings of an investigation of the triple fatality rib fall accident revealed that imminent danger type practices and conditions, regarding the procedures for roof support and rib control, are in existence in the 1 North mains construction area of the mine where roof fall material removal is in progress.

Action taken
Order No. 1, Form 104(a), was issued June 9, 1975. Men had been withdrawn from the mine prior to the issuance of the Order.

Violation - Section 75.1300
Notice No. 1 WSP, 104(b) citing a violation of Section 75.1300, with regard to firing open or unconfined explosives shots was issued at 6:15 p.m., June 9, 1975, requiring that such practices be abated by 8 a.m., June 16, 1975.

Respectfully submitted,

/s/ Paul E. Margocee

Paul E. Margocee
Federal Coal Mine Inspector