

FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION

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October 16, 2009

MOUNTAIN COAL COMPANY, LLC,	:	CONTEST PROCEEDING
Contestant	:	
	:	Docket No. WEST 2007-409-R
v.	:	Citation No. 7291353; 3/26/2007
	:	
SECRETARY OF LABOR,	:	West Elk Mine
MINE SAFETY AND HEALTH	:	Mine Id. 05-03672
ADMINISTRATION, (MSHA),	:	
Respondent	:	
	:	
	:	
SECRETARY OF LABOR,	:	CIVIL PENALTY PROCEEDING
MINE SAFETY AND HEALTH	:	
ADMINISTRATION (MSHA),	:	Docket No. WEST 2008-129
Petitioner	:	A.C. No. 05-03672-128598
	:	
v.	:	
	:	West Elk Mine
MOUNTAIN COAL COMPANY, LLC,	:	
Respondent	:	

DECISION

Appearances: Laura E. Beverage, Esq., and Dana M. Svendsen, Esq., Jackson Kelly PLLC, Denver, Colorado, for Mountain Coal Company, LLC; Mary Forrest-Doyle, Esq., and Tracy B. Agyemang, Esq., Office of the Solicitor, U.S. Department of Labor, Arlington, Virginia, for the Secretary of Labor.

Before: Judge Manning

These cases are before me on a notice of contest filed by Mountain Coal Company, LLC (“Mountain Coal”) and a petition for assessment of civil penalty filed by the Secretary of Labor, acting through the Mine Safety and Health Administration (“MSHA”) pursuant to sections 105 and 110 of the Federal Mine Safety and Health Act of 1977, 30 U.S.C. §§ 815 and 820 (the “Mine Act”). An evidentiary hearing was held in Denver, Colorado. The parties introduced testimony and documentary evidence and filed post-hearing briefs. For the reasons set forth below, I find that the Secretary established a violation of the safety standard.

Mountain Coal operates the West Elk Mine, a large underground coal mine in Gunnison County, Colorado. The mine extracts coal in panels using a longwall system. As discussed

below, the parties settled several of the citations prior to the hearing, so only Citation No. 7291353 was at issue at the hearing.

I. BACKGROUND

A. The Citation and Stipulations.

On March 26, 2007, Inspector Brad Allen issued Citation No. 7291353 under section 104(a) of the Mine Act, alleging a violation of 30 C.F.R. § 75.1725(a), in part, as follows:

The mine operator failed to maintain mobile and stationary machinery and equipment in safe operating condition and machinery and equipment that was in unsafe condition was not removed from service immediately. Numerous hydraulic hoses on the support shields in MMU 010-0 at 20 headgate had rubber jacketing torn back and the wire braid shields were damaged with multiple broken strands on each hose. Both high pressure feed hoses and return line hoses were damaged along the rear walkway of the shields. Hose sizes ranged from #6 to #16 in size and hydraulic pressure was as high as 5000 pounds per square inch. Thirteen miners were working in the longwall area during this shift and the longwall was operating shearing coal on the previous shift. . . . Ruptured or broken high pressure hydraulic hoses can cause fluid injection, hose whip injuries, or compromise the operation of the support shields. . . .

The inspector determined that an injury was reasonably likely and that a fatal accident could occur. He determined that the violation was of a significant and substantial nature (“S&S”) and that the company’s negligence was moderate. Section 75.1725(a) provides that “[m]obile and stationary machinery and equipment shall be maintained in safe operating condition and machinery or equipment in unsafe condition shall be removed from service immediately.” The Secretary proposes a penalty of \$5,300.00 for this citation.

The parties filed joint stipulations, in which they agreed that the mine is subject to the Mine Act and that the Commission has jurisdiction to hear the case. Other facts were also stipulated to, including the following:

6. The 13 cited hoses are included within the meaning of the term “equipment” as used in § 75.1725(a).

7. Between November 2006 and the time the [citation] was issued in March 2007, Mountain Coal was operating one longwall section, Panel 20, which was approximately 1,000 feet wide.

12. Typically, a longwall crew at West Elk consisted of five miners and one supervisor, including a headgate operator, a headgate shearer operator, a tailgate shearer operator, two shield movers and a production supervisor. In addition, there were usually two mechanics and a maintenance supervisor assigned to each longwall production shift.

13. At the time of issuance of the [citation], Daniel Kunde was employed in the position of Longwall Maintenance Coordinator at . . . West Elk. At that time, [four other employees] were working in the position of Longwall Maintenance Supervisor at . . . West Elk. Daniel Kunde has 30 years of experience working in underground Mines. He has been employed at the West Elk Mine for over 19 years, all of the time spent on the longwall. In his position as the Longwall Maintenance Coordinator, he oversees daily maintenance and setups on the longwall, and is responsible for the direction of the front line Longwall Maintenance Supervisors. He has been a Longwall Maintenance Coordinator for five years

14. Miners typically travel along the longwall by walking in the “front walkway,” between the panline and the leg cylinders of the shields.

15. Miners typically do not enter the “back walkway,” except to perform inspections, repair, replace a hose, or if the front walkway is obstructed given the confined dimensions of the area.

16. None of the 13 cited hoses were located in the front walkway.

17. The 13 cited hoses were all inner-shield hoses, rather than shield-to-shield.

18. Failure of any of the 13 cited hoses would not result in shield failure.

19. The hydraulic fluid used in 12 of the cited hoses was comprised of approximately 95% water and 5% emulsion fluid.

20. The hose locations depicted in red in Respondent’s . . . Exhibit 17 are accurate.

II. SUMMARY OF THE EVIDENCE

This case raises technical issues concerning the safety of hydraulic hoses. As a consequence, I have included in this decision a detailed summary of the evidence presented.

A. Brad Allen

Inspector Brad Allen testified that he worked in the mining industry for 13 years prior to joining MSHA. (Tr. 9). Allen spent two of those years working on a longwall as a headgate operator, shield puller, longwall mover, and fill-in foreman. (Tr. 10-11). He has never worked on a longwall with a front and back walkway like the one at West Elk. (Tr. 67).

Allen testified that on March 26, 2007, he and two other MSHA inspectors were at West Elk to conduct a permissibility inspection. (Tr. 14, 49). The three MSHA inspectors were accompanied by three Mountain Coal employees, including Dan Kunde. (Tr. 14-15). During the inspection Allen noted that numerous hydraulic hoses on the longwall shields had torn and deteriorated outer jackets and broken wire braiding. (Tr. 15). Allen inspected the hoses from the front and back walkways. (Tr. 272). No deck plates were removed during the inspection and at no time did Allen climb down to look at the underside of the hoses. (Tr. 272, 274). Allen issued Citation Number 7291353 under section 75.1725(a) for the unsafe operating condition of multiple hoses.¹ (Tr. 15, 26). All of the cited hoses were located in the back walkway. (Tr. 45). None of the hoses were cited for deficiencies with their fittings. (Tr. 61).

Allen testified that he determines whether a hose is in a safe operating condition by looking at the manufacturer's recommendations for that specific hose, the overall physical appearance of the hose, whether there are exposed or broken wire strands, and the condition of the fittings. (Tr. 27-28, 62). Allen testified that MSHA puts "a lot of stock in manufacturer recommendations," but he could not remember the manufacturer of these particular hoses. (Tr. 27, 60). Additionally, he testified that manufacturers generally provide conservative product recommendations in order to protect the people working around the equipment, as well as to protect themselves from litigation. (Tr. 71-72).

Allen testified that, when examining a hose, he first looks for obvious external damage by performing a quick visual inspection. (Tr. 18-19). If he observes damage to the outer jacket of the hose, then he clears any debris from the damaged area to determine if the wire braiding under the outer jacket has been damaged. (Tr. 21). He looks for broken wire strands by running the flat edge of a screwdriver blade along the strands. (Tr. 21). If there are broken wire strands then those strands will move as the screwdriver passes over them. (Tr. 21). During his inspection, each cited hose had at least one broken wire strand, in addition to a damaged outer jacket. (Tr. 18-26). Allen believes that the outer jackets appeared to have been "torn" as opposed to "rubbed

¹ At the time of the citation, Allen mistakenly believed that if a hose were to fail, shield failure would be a possibility. He later determined that this was not likely given the presence of check valves that prevent the shield from collapsing if there is a hose failure. (Tr. 53)

through.” (Tr. 73). If there are broken wire strands, then the hose’s ability to contain the hydraulic fluid has been compromised. (Tr. 28). A violation exists if there is one broken wire strand on any hose. (Tr. 43, 49-50).

Allen testified that a hose failure could result in hydraulic injection or whipping hose injuries to the miners on the longwall. (Tr. 28-29; Ex. G-4). Falling roof rock, corrosive mine water, the moving of longwall components in close proximity to the hoses, and cutting and welding around the hoses could all exacerbate the risk of hose failure; however, Allen could not say whether these conditions exist at West Elk. (Tr. 30-31, 50, 67-68). Allen testified that, while he did not know the actual service pressures of the hoses, a hydraulic fluid injection injury could occur at a pressure of 100 psi, but the severity of the injury may be less at lower pressures or if the stream has been deflected off of another surface before hitting a miner. (Tr. 41-42, 45, 63-65). Hydraulic fluid could spray from the hoses in the back walkway to the front walkway. (Tr. 45, 76). Additionally, it is possible for a miner to be on the front walkway of an inactive shield and be in the direct line of sight of pressurized hoses on an activated adjacent shield that is being advanced. (Tr. 269-270). A miner could be in that position if he was using the controls on the inactive adjacent shield to advance the activated shield. (Tr. 271, 275-277). Allen could not say if this is the practice used at West Elk, but he did state that he had seen people making adjustments from adjacent shields, although he could not recall how often he had seen it. (Tr. 275-278).

Allen acknowledged that the West Elk miners do utilize personal protective equipment, such as Airstream helmets with face shields, rain suits, gloves, and safety glasses. (Tr. 68-70, 74-75, 78-79). However, he noted that not all of the miners wear all of this equipment, and some of the equipment, such as cotton backed gloves and rain suits, would probably not be adequate to protect against a hydraulic fluid injection injury. (Tr. 68-70, 74-75, 78-79).

Allen found that the violation involved a moderate degree of negligence on the part of Mountain Coal. (Tr. 33). Allen determined that 13 people had the potential to be injured, but he could not recall exactly how he arrived at that number. (Tr. 71-75). He found that an injury was “reasonably likely” to occur given the hoses’ location in the back walkway, and the location of the damage on the hoses. (Tr. 46-47). Allen testified that the MSHA website provides guidance materials and links to outside materials that discuss hose safety practices. (Tr. 36-37; Ex. G-5). Allen testified that his personal notes from the day of the citation indicate a conversation with Kunde, during which Kunde stated that the operator had not done a very good job with the hoses and agreed with the violation. (Tr. 41; Ex. G-2).

B. James Angel

James Angel is a mechanical engineer in the mechanical engineering safety division of MSHA in Triadelphia, West Virginia. (Tr. 80). He has a bachelor’s degree in mechanical engineering and has worked for MSHA for 26 years. (Tr. 80; Ex. G-9). He spends the majority of his time investigating accidents and providing technical assistance to inspectors and mine

operators. (Tr. 80-81). Angel is an active member of multiple professional organizations and is currently involved in setting safety standards for personal protection on machinery, fire protection standards for earth moving equipment, tire out-of-service guidelines, and tire fire handling guidelines. (Tr. 81-82).

Angel testified that his experience with hydraulic hoses is mainly in the areas of fire protection, and abrasion and failure of hoses on diesel-powered equipment. (Tr. 82). He has been involved in the approval of multiple regulations and rules utilized by MSHA. (Tr. 81). He has never been directly involved in investigating a hydraulic hose failure, but he has been indirectly involved with an investigation of a whipping hose injury. (Tr. 108-109).

Angel prepared a report on the hydraulic hoses. (Tr. 84; Ex. G-10). He did not see the actual hoses until after the report was prepared. (Tr. 96). He prepared the report using manufacturer literature, the cited safety standard, the citation, MSHA materials, and photographs of the hoses. (Tr. 81, 84-85, 126-127). Based on his analysis of these materials, Angel testified that once the structural component of the hoses, i.e., the wire braiding, has been compromised, the hoses are no longer fit for use and present a risk of injury. (Tr. 86). Angel described the hoses as all having exposed wire braiding, all with at least one broken wire strand, and some with areas of corrosion. (Tr. 97-101). Once the wire braiding is exposed it will start to deteriorate and eventually lead to hose failure; however, there is no way to tell how long it would take for a hose to fail. (Tr. 86, 129). Because hoses are “consumable items” they should be replaced when the structural integrity has been compromised. (Tr. 101). Additionally, Angel testified that one hose had a damaged ferrule, which could cause the hose to come loose while under pressure and whip around. (Tr. 98). A ferrule is the metal fitting at the ends of each hose.

At the time of his report, based on the information that he had, Angel believed that abrasion had caused the damage to the hoses. (Ex. G-10). Prior to the hearing, after viewing the hoses in person, he concluded that many of the hoses had actually been damaged by exposure to high temperatures.² (Tr. 96-97). Angel testified that this kind of damage could have been caused by exposure to a fire or oxy-acetylene cutting or welding, although he was not aware of either occurrence at West Elk. (Tr. 98, 111-112). The report did not include any analysis regarding the anticipated direction that the fluid would be ejected if a hose were to fail. (Tr. 147). Angel stated that all of the layers of wire braiding reinforcement would have to fail for the hose to fail. (Tr. 130). The only damage he viewed was to the outermost layer of wire braiding. (Tr. 126). If the rubber separating the layers of wire braiding remains intact, then, barring heat damage, you would not expect water or other corrosive materials to affect the inner levels of wire braiding. (Tr. 159, 161-162). Heat damage can penetrate into a hose and affect the strength of all layers of wire braiding, but Angel could not tell from viewing the hoses whether the inner layers of braiding had been affected. (Tr. 131-132). There is no field test for checking interior damage to a hose. (Tr. 157).

² Angel testified that the hose with the damaged ferrule was the only hose that presented anything more than a minimal risk of whipping hose injury. (Tr. 150).

Angel testified that hose failure can cause injuries such as fluid injection, fluid in the eyes, fluid on walking surfaces causing slippery conditions and leading to falls, and a minimal risk of whipping hose injuries. (Tr. 86-87). Fluid injection injuries can occur at pressures much less than what the cited hoses were operating at, but, to be injured, the individual must be within inches of the hose. (Tr. 145-147). Cloth gloves, leather gloves, and PVC rain suits do not provide adequate protection against fluid injection injuries, and safety glasses cannot totally prevent hydraulic fluid from getting into a miner's eyes. (Tr. 102-104). Additionally, he was not aware of any MSHA fatalities from fluid injection, or written materials regarding specific injuries that resulted from hoses that were in a similar condition to those at issue. (Tr. 119-120).

Angel testified that the testing conducted by Olof Jacobson, Mountain Coal's expert witness, can only determine if that specific hose would have failed under the test conditions. (Tr. 92-93). Pressure ratings and cycling impulses are internal factors that affect the strength of a hose. (Tr. 156). The actual hoses were not rendered unsafe by the pressures they were subjected to, but rather by external damage and environmental conditions that the hoses operated in. (Tr. 93-94). Outside factors that can affect the strength of a hose are addressed by the outer jacket or additional covers that make the hose more resistant to abuse. (Tr. 156). Jacobson's tests did not take into account any of the environmental factors that were present at the mine. (Tr. 93-94).

Angel also testified that while manufacturers do vary to some degree, they are "surprisingly uniform" in their recommendation that hoses be taken out of service once the wire braiding is exposed. (Tr. 107). Angel believes that manufacturers recommend that hoses be removed from service when the outer layer of wire braiding has been exposed because it is difficult to determine all of the factors that can affect a hose. (Tr. 157). Angel maintains that a prudent operator would follow these recommendations. (Tr. 122). A broken strand is confirmation that the structural integrity of the hose has been compromised. (Tr. 124).

Angel testified that "safety factors" and "percentage of service ratings" relied upon by Mr. Jacobson are irrelevant once a hose has been damaged to the point that the safety guidelines issued by hose manufacturers suggest that the hose be taken out of service. (Tr. 106, 136, 144). Safety factors are intended to protect against unknown factors that the manufacturer cannot predict, rather than known factors like visible damage to the outer jacket and wire braiding, as is the case here. (Tr. 105-106).

C. Dan Kunde

Dan Kunde, who has worked in longwall maintenance at the West Elk mine for 19 years, has been the maintenance longwall coordinator since 2005 and is in charge of purchasing equipment, supervising maintenance personnel, and looking after the general maintenance of the longwall system. (Tr. 165-66). Kunde testified that he works with hydraulic hoses on a daily basis. (Tr. 167).

The hoses on the longwall are examined on a weekly and monthly basis, in addition to being examined on an ongoing basis by the production crews. (Tr. 184-185). The deck plates that the hoses pass under are situated such that you can see underneath the plates on one edge. (Tr. 192). Most of the hoses in the back walkway can be viewed and examined from the front walkway. (Tr. 201). It is Mountain Coal's policy that no one may be on a shield while it is activated or being moved. (Tr. 181). While Mountain Coal has no written criteria for what is considered a safe or unsafe hose, factors that are considered include the location of the hose, and the pressures, cycles, and operating conditions of the hose. (Tr. 170, 186, 202).

Kunde testified that all of the cited hoses were intrashield³ hoses located in the back walkway and that all of the worn areas were either under the deck plates or facing downward into the floor rather than facing the front walkway. (Tr. 171-180, 185). Given that the back walkway is a confined area where it is hard to move around and that equipment is never moved through it, the only reason anyone would be in the back walkway would be for permissibility inspections. (Tr. 181, 200). The hoses are fixed in a staple-lock fitting and cannot spin. (Tr. 195). Fluid from a pinhole perforation could ricochet off of something and be redirected toward the front walkway where miners work. (Tr. 205). Most miners on the longwall wear personal protective equipment such as Airstream helmets with impact resistant face shields, safety glasses with side shields, leather gloves, shin guards, and rain jackets. (Tr. 182-183).

Kunde testified that it is highly unlikely that high temperatures caused the damage to the hoses since there had been no fires, cutting, or welding in the back walkway. (Tr. 180-181). The wear on the hoses is a result of the hoses rubbing against the deck plates. *Id.* Many of the hoses are extremely overrated for their application and operate at only 2% to 3% of their rated capacity. (Tr. 186). The hoses that operate at a pressure closer to their rated capacity are given additional attention by mechanics, who make mental notes about the condition of the hoses. (Tr. 188). All of the hoses have a burst rating of 20,000 psi so that there is no chance a hose will be mistakenly put into service at a pressure beyond its pressure capacity. (Tr. 202). The feed side hoses are only pressurized for three seconds when a shield is moved. (Tr. 170). Mountain Coal has used hoses in a similar condition to those cited and has never had an injury or been cited by MSHA for their use. (Tr. 188-189). Kunde testified that, based on these factors, the wear on the hoses presented no danger and it was reasonable and prudent for Mountain Coal to continue to have the cited hoses in service. (Tr. 187).

Kunde testified that Allen never looked at the hydraulic schematic for the longwall. (Tr. 169). Kunde denies ever telling Allen that Mountain Coal had not done a good job maintaining the hoses. (Tr. 189). Kunde was not present when the hoses were removed from their fittings, but, having seen other hoses removed, he recognized that the damage to the ferrule was most likely the result of having to "smack" the hose a number of different directions to release it from the fitting. (Tr. 178-179, 197).

³ The stipulations used the term "inner-shield" hoses. These terms simply mean that both ends of each hose were connected to the same longwall shield so that each hose was confined to a single shield.

D. Olof Jacobson

Jacobson testified for Mountain Coal as an expert witness in mechanical engineering with expertise in hydraulic hoses. (Tr. 221). Jacobson is currently employed by Jacobson Forensic Engineering as a forensic engineer. (Tr. 211). He has a bachelor's degree in mechanical engineering and a master's degree in applied mechanics, although he has taken no courses on mining engineering. (Tr. 212, 252). Jacobson is an active member of multiple professional organizations and is involved in setting standards for vehicle accident reconstruction engineering, engineering practice, and guidelines for standard engineering practice. (Tr. 212). Jacobson has taught engineering classes and occasionally still lectures at local universities regarding failure analysis, forensic engineering, and ethics. (Tr. 212). He has worked for Public Service Company of Colorado, Samsonite, and various power plants. (Tr. 215-216). In those positions he has designed retrofits for coal-fired power plants that utilized hydraulic hose systems, implemented a hydraulic preventative maintenance program, dealt with hydraulic equipment during the construction and operation of power plants, been involved in the selection of hoses during the design of equipment, and worked on failure analysis issues associated with hydraulic hoses. (Tr. 215-216, 220; Ex. R-23).

Jacobson testified that he examined the mechanical wear on the hoses. (Tr. 223). He stated that the damage to the hoses was restricted to the outer jacket and outermost layer of wire braiding, and that none of the inner layers of wire braiding were damaged. (Tr. 238, 248). Jacobson testified that, in the past, he has assessed heat damage to hydraulic hoses during investigations of fires in mechanical equipment. (Tr. 224). Additionally, he has looked at technical literature on what fire and heat can do to hoses, and has studied standards and standard protocols for investigating fires. (Tr. 224). Using this background, he determined that there was no evidence of heat damage in this instance. (Tr. 224).

Jacobson testified that as part of his investigation he visited the West Elk Mine to see the location of the hoses, how the hoses were bent, how accessible the hoses were, the source of the mechanical wear, and other general service conditions. (Tr. 223, 225). Jacobson stated that the West Elk longwall is designed with relief valves to prevent the hydraulic system from exceeding its maximum service pressure. (Tr. 228-229; Ex. R-21). The hoses utilized by Mountain Coal are "overdesigned" for their application in order to account for the wear and tear that they will be subjected to by the service conditions. (Tr. 235-236). Most of the hoses operate at only a small percentage of their overall pressure rating. (Tr. 229). Based on this information, using "one broken braid . . . [as] the criteria for removing a hose is incredibly overly cautious[,] [and]. . . [i]t is not realistic." (Tr. 237). All of the service conditions need to be considered. (Tr. 236).

Jacobson testified that he often reviews manufacturer literature, and agrees that it should be considered when evaluating the condition of a hose; however, in order for the manufacturers to protect themselves from civil liability, the literature is often very conservative. (Tr. 256-257, 259, 263). Organizations like the International Organization of Standardization ("ISO") and SAE include representatives from hose manufacturers, manufacturers of machinery that use the

hoses, purchasers of the hoses, people who maintain the hoses, and the designers of the hoses. (Tr. 213-214, 263). The SAE standards say nothing about one broken braid being enough to require a hose to be removed from service. (Tr. 264).

Jacobson testified that all of the hoses used at the West Elk mine have a safety factor of four, meaning they are not expected to fail until the actual pressure reaches 400% of the rated pressure. (Tr. 245). The damage to the cited hoses will not eliminate the safety factor, but rather, will cause the safety factor to degrade as more and more braids are broken. (Tr. 235).

Jacobson testified that in order to determine the strength and service life left in the cited hoses, he conducted pressure tests on similar hoses that he purchased (the “exemplar hoses”) and on the cited hoses. (Tr. 222). In order to account for continuing environmental factors, the hoses were subjected to higher pressures than what they were subjected to while in service at West Elk. (Tr. 251).

For the exemplar hose testing, he purchased from Mountain Coal’s supplier two new hoses of each size that was cited. (Tr. 222, 239; Ex. R-25). Jacobson and a coworker intentionally damaged one exemplar hose in each size in an effort to recreate as closely as possible the most damaged cited hose in that size. (Tr. 222, 239). Jacobson took the three remaining exemplar hoses and removed three to four inches of the outer jacket and first layer of wire braiding reinforcement. (Tr. 222-239). All of the exemplar hoses were then pressurized for approximately ten minutes at 50%, ten minutes at 100%, ten minutes at 150% and twenty minutes at 200% of their rated pressures. (Tr. 241, Ex. R-26). Five of the six exemplar hoses did not fail. (Tr. 241-245). The one hose that did fail had been accidentally damaged during test preparation when the innermost layer of wire braiding was “nicked.” (Tr. 239-240, 243-244). In spite of the damage, the hose did not fail until the pressure approached 10,000 psi. (Tr. 244). That failure resulted in a large hole that allowed a low velocity, high volume release of fluid, and not a fine spray. (Tr. 248-249). The exemplar tests revealed that even if the outer jacket and outermost layer of wire braiding were totally removed, the pressure on all the hoses could still go to at least twice the rated pressure, and therefore the safety factor would be no lower than two. (Tr. 245).

Jacobson created the testing protocol for the cited hoses based on the information obtained from the exemplar testing. (Tr. 245-246; Ex. R-27). Not wanting to destroy the cited hoses, he pressure tested all of them for ten minutes at 120% and ten minutes at 140% of their maximum service pressure. (Tr. 245-246). He testified that, based on this testing and analysis, “the hoses in the mine were perfectly safe.” (Tr. 246-247; Ex. R-28).

Jacobson testified that based on the information he obtained from the two sets of tests, there was not a threat of imminent failure, the hoses were in a safe working condition, and all of the hoses still had a fairly long service life remaining. (Tr. 246-248). He based his opinion on the fact that the hoses were tested at a much higher pressure than what they would ever see while in service. (Tr. 249-250). None of the cited hoses had been damaged to the extent of the

exemplar hose that failed. (Tr. 250) The exemplar hose that failed still had a safety factor of approximately two. (Tr. 250) This is evidence that the cited hoses would have to be damaged more than the failed exemplar hose for there to be any risk of hose failure at the service pressures used at the mine. (Tr. 250).

III. BRIEF SUMMARY OF THE PARTIES' ARGUMENTS

A. Secretary of Labor.

The Secretary argues that Mountain Coal violated the safety standard by failing to maintain the cited hydraulic hoses in a safe operating condition. The dictionary definition of "safe" is instructive. "Safe" can be defined as "secure from threat of danger, harm or loss." (Sec'y Br. 12). As a consequence, an operator must maintain equipment "in a condition free from the potential for danger." (Sec'y Br. 12-13). The overwhelming weight of the evidence shows that Mountain Coal failed to meet this requirement. The cited hoses displayed obvious and significant damage. Materials available at MSHA's website, the literature of hose manufacturers, and professional engineering organizations all advise against the use of hoses with exposed or damaged wire braiding. *Id.* at 13-14. The damaged braiding presented a risk of hose failure. Moreover, environmental conditions can affect hoses being used at pressures below the rated capacity. The conditions found in the mine environment exacerbate the risk of hose failure and can lead to further damage. *Id.* A hose failure in this instance could have injured a miner in the front walkway. *Id.* at 15-16. Because Angel has actual experience with underground coal mining, his testimony should be given more weight than Jacobson's testimony. Jacobson's testing is of little value in predicting whether a hose will fail in an underground mine. In cases involving broadly worded safety standards, the Commission has applied the "reasonably prudent person" test. The evidence establishes that Mountain Coal failed to act as a reasonably prudent person when it did not remove the cited hoses from service.

B. Mountain Coal.

Mountain Coal argues that the citation should be vacated because the subject hoses were not unsafe. The Secretary's criteria for determining when a hose should be removed from service are unreasonable, imprudent, overly cautious, unrealistic, and fail to account for numerous factors that the reasonably prudent person would consider. (Resp. Br. at 13, 17, 18). The evidence establishes that the hoses did not pose a safety hazard to miners. Instead, the Secretary presented theoretical conclusions and assumptions that the hoses would degrade instantaneously or that they would be continued to be used until they failed, neither of which is supported by the evidence. The Commission has rejected allegations of unsafe equipment where the equipment was operating at only a fraction of its capacity and the allegations were not supported by evidence of impending equipment failure or subsequent safety hazard. *Id.* at 16. Mountain Coal argues that its witnesses have extensive experience with and knowledge of hydraulic hoses, and that the Secretary's witnesses failed to understand the importance of considering a wide range of factors when evaluating the safety of hoses. *Id.* at 22. Angel's testimony regarding heat damage

to the hoses and the cut in the ferrule should not be credited. The objective test data obtained by Jacobson established that the subject hoses had considerable service life remaining and would have to suffer damage to the inner layer of wire braiding before there was a risk of failure at the service pressures used at the mine.

IV. DISCUSSION WITH FINDINGS OF FACT AND CONCLUSIONS OF LAW

A. Background.

At the time the citation was issued, there were 165 shields on the longwall face and each shield contained 71 hoses, for a total of about 11,715 hoses. The cited hoses were in the back walkway and miners do not normally travel in that area. The primary reason for someone to be in the back walkway is to perform weekly permissibility inspections. When a certified electrician performs this task, the supply hydraulic hoses are not pressurized.

During production shifts, miners advance the longwall by moving the individual shields forward. It takes about three seconds for each shield to advance. The shields are moved electronically by remote control. The supply hoses for each shield are pressurized for about three seconds as the shield moves. Once the pressure is released, check valves lock the shield in place. During normal production, the shearer makes about one pass per hour, during which the supply hoses are pressurized for about three seconds. Miners generally stand about four shields away when a shield is advanced and they wear personal protective equipment.

Mountain Coal has an examination and maintenance program in place at the mine. There are two mechanics and a maintenance supervisor assigned to each longwall production shift. The condition of the hydraulic hoses is continually monitored by maintenance personnel. The hoses are also thoroughly inspected when the longwall equipment is moved to a new panel, which occurred about every six months at the time the citation was issued. Maintenance personnel make the decision to replace a hose by considering the properties of the hydraulic hose, operating conditions and pressures, and the location and extent of the wear. (Tr. 184-188). Hoses that operate under higher pressure receive additional attention.

All of the hoses on the longwall have a pressure rating of 5,000 to 5,800 pounds per square inch ("psi"). The cited hoses were of various lengths and were either 3/8 inch, 1/2 inch, or 1 inch in diameter. All of the hoses on the longwall had a manufacturer-designed safety factor of four and a minimum burst pressure of 20,000 psi. Hydraulic hoses are comprised of multiple alternating layers of synthetic rubber and woven material. The hoses have a center rubber tube to contain the hydraulic fluid. There is a layer of wire reinforcement around the outside of this rubber tube that is wound in an alternating braided diagonal pattern. Depending on the particular hose design, there is at least one additional layer of rubber and wire reinforcement. The hose is covered with a thick rubber protective jacket. The one inch diameter hoses have four alternating layers of rubber and wire reinforcement, while the smaller hoses have two layers. (Tr. 232-233).

The cited hydraulic hoses can be divided into two types: supply and return hoses. The supply hoses on each shield are pressurized only when that shield is moved. These hoses are either ½ inch or 3/8 inch in diameter. Inspector Allen cited seven supply hoses. The normal service pressure for four of these hoses was under 1,000 psi, while three of these hoses experienced pressure up to 5,000 psi. The return hoses are one inch in diameter, remain pressurized during the production shift, and experience service pressures between 100 and 200 psi. Inspector Allen cited six return hoses. As stated above, the return hoses are rated for service pressure of up to 5,000 psi. All of the hydraulic hoses are protected by check valves with relief points, which prevent the hydraulic system components from being subject to pressures greater than the pressure rating of the hoses.

B. Analysis.

The issue in this case is whether the 13 cited hydraulic hoses were in “safe operating condition” as required by section 75.1725(a) of the Secretary’s safety standards. The Commission has long held that, under section 75.1725(a), in deciding whether machinery or equipment is in an unsafe operating condition, the alleged violative condition is measured against the standard of whether a reasonably prudent person familiar with the factual circumstances surrounding the allegedly hazardous condition, including any facts peculiar to the mining industry, would recognize a hazard warranting corrective action within the purview of the applicable safety standard. *Alabama By-Prods. Corp.*, 4 FMSHRC 2128, 2129 (Dec. 1982).

Two factual issues raised by the parties can be disposed of at the outset. First, I reject the Secretary’s argument that the cut ferrule demonstrates Mountain Coal’s lack of reasonable care. Angel speculated that it was likely that the ferrule was damaged when that particular hose was installed. In response, Kunde testified that it was more likely that the damage occurred when the hose was removed from service. There is no reliable evidence to show that this condition existed at the time Inspector Allen issued the citation and he did not include this condition in his citation. As a consequence, this allegation is rejected and I have not considered the damaged ferrule in rendering my decision. Second, Angel testified that, after looking at the hoses, he came to the conclusion that the hoses had been damaged, at least in part, by heat. I credit the testimony of Kunde that there were no sources of heat on the longwall that could have damaged the outer jacket of the hoses. I also credit the testimony of Jacobson on this issue. I find that the conditions cited by the inspector were a result of mechanical damage caused by abrasion with components of the longwall system.

Page two of the citation lists the damage found by Inspector Allen on the 13 hoses. The outer jacket of the hose was split open in each instance and the inspector listed the extent of the damage to the outer layer of wire braiding. The damage can be summarized as follows:

- Shield 16 – #6 hose, 1 broken wire strand at one location;
- Shield 19 – #6 hose, 1 broken wire strand at two locations;
- Shield 22 – #6 hose, 2 broken wire stands at one location;

Shield 26 – #6 hose, 70 to 80 broken wire strands in a 12 inch span;
Shield 35 – #6 hose, 16 broken wire strands at one location;
Shield 37 – #8 hose, 3 broken wire strands at one location;
Shield 54 – #6 hose, 40 broken wire strands at one location;
Shield 16 – #16 hose, 6 broken wire strands at one location;
Shield 39 – #16 hose, 56 broken wire strands at one location;
Shield 40 – #16 hose, 26 broken wire strands at one location;
Shield 44 – #16 hose, 7 broken wire strands at one location;
Shield 45 – #16 hose, 46 broken wire strands at one location; and
Shield 49 – #16 hose, 16 broken wire strands at one location.

The #6 hoses are 3/8 inch supply hoses, the #8 hose is a 1/2 inch supply hose, and the #16 hoses are one inch return hoses. Mountain Coal does not dispute the description of the condition of the hoses in the citation, as summarized above. However, it contends that the damaged areas were under the deck plates. The parties stipulated that the location of each hose is accurately shown on Mountain Coal's Exhibit 17.

Angel prepared a report containing his analysis. (Ex. G-10). Based on Angel's analysis, the Secretary contends that the hazard to be protected against in this case is the accidental release of pressurized hydraulic fluid. Such a release can cause a variety of injuries to miners. Angel listed the potential injuries in his report as "burns from hot fluid, fluid injections, chemical injuries of the eyes, and slips and falls from slippery surfaces." (Ex. G-10 p. 3). Angel also said that someone could be injured or killed by a whipping hose. *Id.* Finally, he stated that miners working "in close proximity to damaged hoses are exposed to these hazards." *Id.*

Angel is concerned that, because the outer jacket had been abraded, the outer wire braiding was exposed and was susceptible to further degradation, especially from acidic mine water and further abrasion. *Id.* at 4. As the wire braiding continues to deteriorate, more wires will be broken and a pin hole spray may develop. If even more wires break, a larger area of failure could develop causing more hydraulic fluid to spray out. Finally, a complete failure of the hose could cause the pressurized end of the hose to whip about.

Angel relied to a considerable extent on literature published by hydraulic hose manufacturers in reaching his conclusions. He states:

Hose manufacturers typically warn the hose user that exposure of the reinforcement wire significantly increases the likelihood of failure of the hoses and increases the safety risk of personnel working with or near the hose. Most manufacturers recommend routine inspection of hoses and that hoses found with exposed reinforcement be immediately removed from service.

Id. For example, the “Safety Guide” put out by Alfagomma Hydraulic Hose states that “[e]xposure of the reinforcement will significantly accelerate hose failure” and “[a]ny of the following conditions require immediate shutdown and replacement of hose assembly . . . [d]amaged, cut or abraded cover (any reinforcement exposed).” *Id.*; Ex. G-10 attachment S. Alfagomma and Semperflex manufactured the cited hoses.

Mountain Coal argues that the Secretary’s reliance on manufacturers’ guides is misplaced. These guides are inconsistent because some recommend that a hose be replaced whenever there is any damage to the hose and other guides do not. Moreover, these guides are very conservative because the manufacturers do not know what operating conditions their hydraulic hoses will be subjected to once they are sold. This case must be judged by the reasonable prudent person standard set forth in *Alabama By-Products* rather than manufacturers’ safety guides. Mountain Coal maintains that the recommendations of the ISO and SAE are more instructive. (Exs. C-8, C-30). The ISO recommends regular visual inspections of hydraulic hoses for conditions such as exposed reinforcement, damaged, cut or abraded outer protective layer, and leaks. The ISO provides that factors such as the nature and severity of the application, past experience at the work site, and information provided by manufacturers should be taken into account. (Ex. C-30).

I agree with Mountain Coal that the manufacturers’ guidelines were written to cover all situations and customers, including installations where hoses are not regularly inspected for damage and are subjected to a wide variety of environmental conditions. I have taken these guidelines into consideration but they do not establish a violation of the safety standard.

MSHA has posted “safety ideas” concerning hydraulic hoses at its website. The posting on hydraulic hose maintenance advises mine operators to regularly inspect hydraulic hoses and to routinely change out hoses. (Ex. G-5). There are photographs of hoses that have been damaged. The web page also has links to websites of hydraulic hose manufacturers. A section of a training manual for MSHA inspectors, which has not been posted, discusses safety precautions for longwall shields. (Ex. G-3). The section on visual inspections of hydraulic hoses provides, in part, that “[w]hen a hose shows signs of damage, such as scrapes or cuts, to the extent that the wire braids are broken, a replacement shall be installed during the shift.” *Id.* This language is consistent with the Secretary’s position in this case. Although I have taken this material into consideration in evaluating this case, these documents do not by themselves establish a violation of the safety standard.

Angel does not dispute the results of the laboratory testing performed by Jacobson and he acknowledges that the hoses are manufactured with a safety factor of four. Angel stated, however, that the safety factor designed into hydraulic hoses is “not intended as a reason to permit a known, damaged hose to continue in operation.” (Ex. G-10 at 6).

Angel recognized that miners must be in close proximity to the hose for a safety risk to exist. Indeed, he testified that a miner would have to be “within inches” of a broken hose in

order to sustain an injury from the resulting spray. (Tr. 145-146). He believed that the miners in the longwall section were put at risk because the confined area in which they must work put them in close proximity to the hoses. He was especially concerned that a pin hole leak could develop in a high pressure hose that would spray several feet. This fluid could be injected under the skin of a miner if the force of the spray were strong enough.

Jacobson stated that he determined that the hoses were safe based on his laboratory testing, which took into consideration normal service pressures, the safety factor inherent in the hose design, and the multi-layer construction of the hoses. He also took into account the service conditions he observed in the mine, including the location of the hoses on the back walkway of the longwall, the isolation of the hoses under deck plates, the short duration that the service hoses are pressurized, the ongoing maintenance program, and the personal protective equipment worn by miners. Mountain Coal contends that the court should take into consideration Jacobson's years of professional experience working with hydraulic hoses and Kunde's years of on-the-job experience working with and replacing these hoses at the mine.

Mountain Coal also maintains that the Secretary failed to consider factors that establish that the hoses were fit and safe for their purpose and, instead, relied upon theoretical assumptions that the hoses would either degrade quickly or that they would be kept in service until they sustained sufficient wear to fail. The Secretary ignored the safety features of the longwall system in use at the mine, the location of the wear, the pressures to which the hoses are subjected, and the frequent examinations made by the maintenance crew. Mountain Coal contends that it has safely used these types of hydraulic hoses for years using the same replacement practices without any accidents or injuries. Indeed, Mountain Coal's principal argument in this case is that it intentionally uses hydraulic hoses that are significantly over designed for their purpose at the mine so that the hoses can take some wear and tear and not present a hazard to miners. Frequently replacing hoses presents its own dangers and challenges and the company uses hoses that are designed for considerably higher pressures in order to avoid these hazards.

1. Fact of Violation.

Based on a preponderance of the evidence presented at the hearing, I find that Mountain Coal violated section 57.1725(a). In analyzing the risk of failure, I considered the construction specifications of the hoses, safety features built into the longwall system, the damage present on the hoses and their location, the pressures in the hoses and the duration of these pressures, the nature of the work performed on the longwall, and the regular examinations of the hoses performed by the maintenance crew.

I find that the testing performed by Jacobson was helpful in understanding the capacity and strength of the hoses. However, the pressure tests did not directly take into consideration the mine environment or the continued exposure to the forces that damaged the hoses. Jacobson testified that he accounted for the continued exposure to the mine environment by testing the exemplar hoses at extremely high pressures. Based on these pressures, Jacobson concluded that

there was no risk of hose failure even assuming some degree of continued degradation. I credit Jacobson's testing procedures and find that they were a reliable indication of the safety factor built into the hoses.

The forces that created the abrasion of the cited hydraulic hoses would have continued to further degrade the hoses until such time as the company determined that they should be replaced. I cannot assume that the hoses would have been replaced the day of the inspection. The photographs introduced as exhibits at the hearing show damaged areas on the hoses that were no longer protected from the mine environment by the outer protective layer of rubber. (Ex. G-10 attachments K and P). I was also able to examine the worn areas because Mountain Coal brought the cited hoses to the hearing as a demonstrative exhibit. Water, dirt, and dust could have easily entered the damaged areas and accelerated the rate of deterioration of the wire reinforcement. A number of the hoses were quite badly damaged. For example, the hose on Shield 26 had about 75 broken wire strands. Other hoses were also badly damaged, as shown on page two of the citation. The damage on these hoses was quite evident upon examination and it closely resembled the damage shown on MSHA's Hydraulic Hose Maintenance Guideline. (Ex. G-4).

I credit the testimony of Kunde that the hoses are regularly examined by maintenance personnel and are regularly replaced. Angel was of the opinion that the company would have allowed the hoses to remain in operation until they failed, but he admitted that he had no idea how long that would take. (Tr. 129). There is nothing in the record to support this opinion and I have not given it any weight.

I find that Mountain Coal violated the safety standard for a number of reasons. First and foremost, as stated above, a number of the cited hoses were severely damaged. The gashes in the outer jackets and damage to the wire reinforcement was significant in some cases. (Ex. G-10, attachment K). This damage presented a risk of hose failure. Second, I agree with Angel that the safety factor designed into the hoses is not intended as a reason to permit hoses with significant damage to continue in service. This fact is reflected in the manufacturers' safety guidelines that advise consumers to replace damaged hoses. Third, although Jacobson's testing provided useful information, the tests did not adequately take into account the fact that the damaged outer jackets and wire braids on the hoses were exposed to further wear and corrosion. Fourth, the mining environment is harsh and unforgiving. Events can quickly unfold that will cause a damaged hydraulic hose to fail notwithstanding the company's hose inspection and replacement program. Kunde testified that the damaged areas were under the deck plates or were otherwise on the underside of the hoses. (Tr. 171-180, 185). Because the wear was from abrasion, it is only logical that the worn areas were in places where the hoses rubbed against the deck plates or other components of the longwall shields. The abrasion of the hoses would continue and the additional damage would not be easy to detect. Coal dust and water would likely enter the outer

layers of the hoses and continue to corrode the outer braids. The severely damaged hydraulic hoses were not in safe operating condition and should have been removed from service.⁴

I also find that Mountain Coal had reasonable notice of the requirements of the safety standard as applied to hydraulic hoses. The recommendations of the hose manufacturers and the material published by MSHA put the operator on notice that badly damaged hoses must be removed from service. Previous MSHA inspectors may not have examined hoses closely enough or the hoses may not have been in the same condition.

One of Mountain Coal's principal arguments is that this court should reject the Secretary's position that one broken wire strand renders a hose unsafe. This case does not present such a theoretical issue. As stated above, the issue is whether the hoses cited by MSHA were in safe operating condition. Most of these hoses had more than 10 broken wire strands and five hoses had more than 20 broken strands. This court must base its decision on the facts presented. I do not have the authority to develop a generally applicable test for determining how much wear a hydraulic hose can sustain before it violates section 75.1720(a) and must be replaced. I note that, based on the evidence presented, I may well have vacated the citation if all of the hoses had only sustained slight damage, such as a worn spot with a few broken strands on the outer layer of reinforcement. I base my finding of violation on the condition of the hoses that showed more significant damage and wear than a few broken outer wire strands.

Based on the above, I find that a reasonably prudent person familiar with the factual circumstances surrounding the allegedly hazardous condition, including any facts peculiar to the mining industry, would have recognized that corrective action was required under the safety standard at the time the citations were issued. A reasonably prudent person would have recognized that the hoses with a significant degree of damage were not in safe operating condition. Mountain Coal would be well advised to take this opportunity to review its hydraulic

⁴ The Commission takes the mine environment into account when analyzing these types of alleged violations. For example, in *Otis Elevator Co.*, the operator was charged with a violation of section 75.1725(a) because the MSHA inspector believed that the ends of the governor rope for the elevator in the mine were improperly installed thereby creating an unsafe condition. The Commission judge affirmed the citation and his holding was affirmed on appeal. 9 FMSHRC 1933, 1942 (Nov. 1987); *aff'd* 11 FMSHRC 1896, 1906-08 (Oct. 1989); 921 F.2d 1285, 1293-94 (D.C. Cir. 1990). In preparation for the hearing, Otis Elevator obtained the services of a forensic expert who subjected a similarly configured wire rope to a stress test. The judge held that the testing conducted by the respondent's expert "demonstrated that the [rope] assembly as configured should withstand a force on the order of ten times as great as the force necessary" for the application at the mine. 9 FMSHRC at 1942. The judge, nevertheless, agreed with the Secretary that "the stress pull test performed under what might be considered laboratory or 'ideal' conditions is an entirely different situation than what actually exists in the mine given the environmental conditions that the equipment must operate in there." *Id.*

hose replacement policies to make sure that the policies are sound and are understood by its maintenance personnel. It also may want to consider reducing its policies to writing.

2. Significant and Substantial; Gravity; Negligence.

I find that the Secretary did not establish that the violation was of a significant and substantial nature. The hoses were in the back walkway, which is behind the leg cylinders. Miners do not work in that area. The back walkway is a confined area where it is difficult to move around.⁵ The most common reason for anyone to be in the back walkway is to conduct a permissibility inspection, when the supply hoses are not pressurized, or to replace a hose. As stated above, miners are generally not near the supply hoses when they are pressurized as the shields are moved. Angel testified that a miner would have to be within inches of a hose in order to sustain an injury from the resulting spray. The return hydraulic hoses, which are always pressurized during production, operate at 100 to 200 psi. The return hoses were rated at 5,800 psi and they have four layers of wire braiding. In addition, the miners working along the long wall typically wear protective clothing, as described above. This clothing would protect them from injury. I credit the testimony of Kunde on this issue.

A violation is classified as S&S “if based upon the facts surrounding the violation, there exists a reasonable likelihood that the hazard contributed to will result in an injury or illness of a reasonably serious nature.” *National Gypsum Co.*, 3 FMSHRC 822, 825 (April 1981). In *Mathies Coal Co.*, 6 FMSHRC 1, 3-4 (January 1984), the Commission set out a four-part test for analyzing S&S issues. Evaluation of the criteria is made assuming “continued normal mining operations.” *U. S. Steel Mining Co.*, 6 FMSHRC 1573, 1574 (July 1984). The question of whether a particular violation is S&S must be based on the particular facts surrounding the violation. *Texasgulf, Inc.*, 10 FMSHRC 498 (April 1988). The Secretary must establish: (1) the underlying violation of the safety standard; (2) a discrete safety hazard, a measure of danger to safety, contributed to by the violation; (3) a reasonable likelihood that the hazard contributed to will result in an injury; and (4) a reasonable likelihood that the injury in question will be of a reasonably serious nature. The Secretary is not required to show that it is more probable than not that an injury will result from the violation. *U.S. Steel Mining Co.*, 18 FMSHRC 862, 865 (June 1996). Although the Secretary established the first two elements, I find that the third and fourth elements of the *Mathies* test were not present in the case. Consequently, I modify the citation to delete the S&S determination. I also find that the violation was not serious because, if a hose did leak hydraulic fluid, it is unlikely that anyone would be seriously injured as a result. An injury from a fluid injection or from a whipping hose was unlikely. The most likely injury would be from a slip and fall on a deck plate that was covered with spilled hydraulic fluid.

I also find that Mountain Coal’s negligence was low. I credit the company’s evidence that it has been using the same criteria for determining when a hydraulic hose should be replaced

⁵ In a previous decision, I determined that “[e]ven a small individual would have difficulty walking along the ‘back walkway’ [in a longwall section at the West Elk Mine].” *Mountain Coal Co.*, 26 FMSHRC 853, 855 (Nov. 2004). That finding is equally applicable here.

for years. It has never been issued a citation for the condition of the hoses on the longwall and no accidents have occurred. (Tr. 188-89). A penalty of \$800.00 is appropriate for this violation.

C. Settled Citations.

The parties settled Citation Nos. 6684080 and 6684093 that were issued under section 104(a) of the Mine Act and were designated as non-significant and substantial. I have considered the representations and documentation submitted and I conclude that the proposed settlement is appropriate under the criteria set forth in Section 110(i) of the Act. The parties previously settled Citation No. 7291335 and I approved that settlement by order dated January 10, 2008.

V. APPROPRIATE CIVIL PENALTIES

Section 110(i) of the Mine Act sets forth the criteria to be considered in determining an appropriate civil penalty. The record shows that Mountain Coal had about 514 paid violations at the West Elk Mine during the two years preceding March 26, 2007. (Attachment to Reply Br. of Sec'y). Mountain Coal is a large mine operator as is Mountain Coal's parent company, Arch Coal, Inc. The violation was abated in good faith. The penalty assessed in this decision will not have an adverse effect on Mountain Coal's ability to continue in business. The violation was not serious and Mountain Coal's negligence was low. Based on the penalty criteria, I find that a penalty of \$800.00 is appropriate.

VI. ORDER

Based on the criteria in section 110(i) of the Mine Act, 30 U.S.C. § 820(i), I assess the following civil penalties:

6684080	75.400	\$5,504.00
6684093	75.400	1,412.00
7291353	75.1725(a)	800.00
	TOTAL PENALTY	\$7,716.00

For the reasons set forth above, Citation No. 7291353 is **MODIFIED** as set forth above. Mountain Coal Company, LLC, is **ORDERED TO PAY** the Secretary of Labor the sum of \$7,716.00 within 30 days of the date of this decision.⁶ Upon payment of the penalty, these proceedings are **DISMISSED**.

Richard W. Manning
Administrative Law Judge

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⁶ Payment should be sent to the Mine Safety and Health Administration, U.S. Department of Labor, Payment Office, P.O. Box 790390, St. Louis, MO 63179-0390.