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Office of Administrative Law Judges
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Issue Date: 23 May 2017

CASE NO.: 2016-MSA-8

IN THE MATTER OF:

CANYON FUEL COMPANY, LLC

Petitioner

v.

MINE SAFETY & HEALTH ADMINISTRATION (MSHA)

Party Opposing Petition

APPEARANCES:

R. HENRY MOORE, ESQ.

For The Petitioner

JASON S. GROVER, ESQ.

For The Party Opposing Petition

Before: LEE J. ROMERO, JR.
Administrative Law Judge

DECISION AND ORDER

This matter arises pursuant to the Mine Safety and Health Administration's Safety and Health Standards for Underground Metal and Non-Metal Mines, 29 C.F.R. Part 57, and the modification procedures for these standards set forth in Section 101 of the Federal Mine Safety and Health Act of 1977, U.S. Code, Title 30, § 951 et seq. (herein the Act) and the regulations issued thereunder. The purpose of the foregoing regulations is "the protection of life, the promotion of health and safety, and the prevention of accidents." 30 C.F.R. § 57.1.

In the present matter, Canyon Fuel Company, LLC (Petitioner) seeks modification of the application of the safety regulation codified at 30 C.F.R. § 75.1713-1(b), which is opposed by the Mine Safety and Health Administration (Party Opposing Petition).

I. PROCEDURAL HISTORY

On June 7, 2016, Timothy R. Watkins, Deputy Administrator for Coal Mine Safety and Health, issued a Proposed Decision and Order denying Canyon Fuel Company's Petition for Modification of the application of 30 C.F.R. § 75.1713-1(b) to Petitioner's Sufco Mine in Sevier County, Utah. More specifically, the Deputy Administrator determined Petitioner's proposed alternative method did not guarantee no less than the same level of protection afforded the mines by the applicable standard. In addition, the Deputy Administrator found Petitioner failed to show that application of the requirement to provide for 24-hour emergency transportation for any person injured at Petitioner's Sufco Mine pursuant to Section 75.1713-1(b) resulted in a diminution of safety.¹ (CFX-14).

On June 21, 2016, Petitioner timely requested a formal hearing on the matter before an administrative law judge, and the case was referred to the Office of Administrative Law Judges for a formal hearing on July 8, 2016. On July 20, 2016, the case was referred to the Covington, Louisiana District Office for hearing and assigned to the undersigned.

On August 18, 2016, the undersigned issued a Notice of Hearing and Pre-Hearing Order, notifying the parties that a formal hearing would be conducted on December 13, 2016, in Salt Lake City, Utah, and subsequently on December 7, 2016, the parties were notified the hearing would be held on February 6, 2017.

The undersigned held a formal hearing in Salt Lake City, Utah, beginning on February 6, 2017, and going through February 7, 2017, at which Petitioner and the Mine Safety and Health Administration (herein MSHA) were represented by counsel. All parties were afforded a full opportunity to adduce testimony, offer documentary evidence and submit post-hearing briefs.

¹ References to the transcript and exhibits are as follows: Transcript: Tr.____; Petitioner's Exhibits: CFX-____; MSHA's Exhibit's: MX-____; and Joint Exhibits: JX-____.

Petitioner offered 12 exhibits, MSHA proffered one exhibit which were admitted into evidence along with one Joint Exhibit.²

On March 31, 2017, MSHA requested an extension of time to April 12, 2017, within which to submit post-hearing briefs, and subsequently on April 10, 2017, the undersigned issued an Order Extending Deadline for Post-Hearing Briefs to April 12, 2017. Thereafter, the parties timely filed their post-hearing briefs. Based upon the stipulations of Counsel, the evidence introduced, my observations of the demeanor of the witnesses, and having considered the arguments presented, I make the following Findings of Fact, Conclusions of Law and Order.³

II. ISSUES

The unresolved issues presented by the parties are:

1. Whether Petitioner's proposed alternative on modification will guarantee no less than the same measure of protection at Petitioner's Sufco Mine afforded by the safety standard set forth at 30 C.F.R. § 75.1713-1(b).
2. Whether Petitioner's proposed modification would achieve a net gain or at least equivalence in **overall** mine safety, taking into account both advantages and disadvantages of the alternative method, including those that are unrelated to the original standard.
3. Whether the application of 30 C.F.R. § 75.1713-1(b) results in a diminution of safety for the miners at the Sufco Mine.

² In total, Petitioner had 14 exhibits, however, exhibits eleven and twelve were not offered or admitted into evidence. (Tr. 146). Nevertheless, for purposes of simplicity, the designation of Claimant's exhibits CFX-13 and CFX-14 will remain the same despite there only being 12 exhibits admitted into evidence.

³ Pursuant to 30 C.F.R. § 44.22(a), an Administrative Law Judge presiding over a hearing "shall have all powers necessary or appropriate to conduct a fair, full, and impartial hearing," and to make decisions in accordance with the Federal Mine Safety and Health Act. Id. The Administrative Law Judge's authority extends to "findings of fact and conclusions of law, with reasons therefor, upon each material issue of fact, law, or discretion presented on the record." 30 C.F.R. § 44.32(a)(1).

III. STATEMENT OF THE CASE

A. Factual Findings

The instant case involves an underground coal mine known as the Sufco Mine (herein the Mine) which is owned and operated by Petitioner. The Mine is located in Sevier County, Utah, and is a "mine" as defined by Section 3(h) of the Act. In addition, the Mine employs 375 people, with 261 employees working underground. The Mine operates seven days per week with overlapping shifts including one 10-hour and one 8-hour production shift, along with one 8-hour maintenance shift. The mine annually produces 5.4 million tons of coal. A continuous miner cuts the coal at the face, and thereafter shuttle cars transport the coal to a conveyor system which carries the coal to the surface of the Mine. Rubber-tired diesel equipment is used for cleanup and transportation of material and workers in and out of the Mine. Following Petitioner's request for modification, MSHA conducted an investigation at the Mine during which the Mine's methane liberation average rate was "zero." (JX-1).

The Mine is comprised of three continuous miner sections and one longwall section that operate on a regular basis. The northern portion of the Mine, the portion at issue in the present matter, contains two out of the three continuous miner sections. The principal travel route to the continuous miner sections is by way of entries from the "North Mains Portal." There is another portal designated as the Four East Portal, which was constructed in 1991, from within the Mine and exits into a canyon. Two entries, an intake entry and a return entry, exit the Mine at the Four East Portal.⁴ The Four East Fan Portal is used as a terminus of an escapeway for the Four East Portal. Escapeway maps are posted in each working section, as well as outside the Mine. (JX-1).

Currently, the Four East Portal is designated by Petitioner as an "alternate escapeway." (Tr. 47). The immediate area of the Four East Fan Portal terminus contains a flat area of land that is estimated to be approximately 50 feet by 200 feet in size, and contains a fan and motor building as well as other

⁴ Air is introduced into the Mine by use of large fans located on the surface which pull air through the Mine. Entries which carry air into the Mine are known as "intake" entries. Entries that carry air out of the Mine are known as "return" entries. Intake and return entries are separated by concrete block or metal "permanent" stoppings. In the face areas where coal is mined, temporary curtains are used to control air flow. (JX-1).

buildings housing a diesel generator and spare parts for the "fan." (Tr. 40, 54-58). However, there is no direct road access to the Four East Fan Portal terminus. (Tr. 59-60). The Four East Portal alternate escapeway is the shortest, most direct route to exit the mine, measuring 2.34 miles in distance. Further, the Four East Portal escapeway has five overcast crossings, and two SCSR change-outs would be required.⁵ (CFX-5; CFX-6). On the other hand, MSHA's proposed West Lease Portal alternate escapeway is 5.88 miles to the surface of the Mine, with 12 overcast crossings, and five SCSR change-outs would be required. (JX-1; CFX-5).

There are approximately 401 MSHA inspection days at Petitioner's Mine every year, including at least four inspections per year of the Four East Fan Portal. (JX-1; Tr. 45). Initially, in July 2014, MSHA District 9 Manager Russell Riley visited the Mine and questioned the use of the Four East Fan Portal as the terminus of the Four East Portal alternate escapeway. On March 16, 2015, at the direction of Mr. Riley, Mr. Russell Bloome from MSHA's Price, Utah office issued Citation No. 8483766, pursuant to Section 104(a) of the Act, alleging a violation of 30 C.F.R. § 75.380(d)(5) because the surface area of the Four East Fan Portal did not have a roadway for land-traveling vehicles to access the area from the surface or any other dependable evacuation methods in the event of a mine emergency.⁶ (JX-1).

Thereafter, on May 26, 2015, Petitioner was issued Citation No. 8480766, again at the direction of MSHA District 9 Manager Russell Riley, for failing to comply with 30 C.F.R. § 75.1713-1(b) in regard to the designated alternate escapeway exiting the Mine at the Four East Fan Portal terminus. In particular, Petitioner's designated alternate escapeway was deemed insufficient because Petitioner could not provide 24-hour emergency service transportation for any injured person at the Mine using the Four East Fan Portal escapeway.⁷

⁵ See infra note 11, describing an SCSR. An "overcast" is a ventilation control device that is built to separate two splits of air, generally to permit one to cross over the other without the air mixing. (JX-1).

⁶ Petitioner's petition for modification does not pertain to Citation No. 8483766, nor does it include any request to modify the standards set forth in 30 C.F.R. § 75.380(d)(5). Accordingly, any further discussion regarding the same will not be included in the Decision and Order that follows.

⁷ Following MSHA's issuance of the citations, Petitioner filed Notices of Contest with the Federal Mine Safety and Health Review Commission (herein the FMSHRC). On August 18, 2016, on behalf of the FMSHRC, Administrative Law Judge Richard Manning issued a Decision finding Petitioner violated Section 75.1713-1(b), but he modified the citation, reducing Petitioner's negligence

On June 30, 2015, Petitioner filed a petition under Section 101(c) of the Act requesting modification of the application of 30 C.F.R. § 75.1713-1(b) to the Sufco Mine. (CFX-13). On July 22, 2015, in accordance with 30 C.F.R. § 44.13(a), MSHA personnel investigated Petitioner's petition for modification. Following the investigation, on June 7, 2016, the Deputy Administrator denied Petitioner's petition to modify the application of Section 75.1713-1(b), and in doing so, Petitioner appealed the denial, and requested that the undersigned determine whether modification is appropriate in the instant case. (CFX-14).

B. Testimonial Evidence

Gary W. Leaming

Mr. Leaming testified at the formal hearing that he has worked at Petitioner's Sufco Mine since 1974. (Tr. 29). He currently works at the Mine as a Safety Manager, and has done so since 1995. (Tr. 30). Prior to being a Safety Manager, Mr. Leaming worked as a "shot firer, underground front end loader operator, cutting machine operator, continuous miner operator, fire boss, foreman, [and] assistant to the production superintendent." He explained that a "fire boss" inspects the mine to ensure a safe work environment and it requires certification from the State of Utah. He is certified as a "fire boss" and "underground mine foreman," and until recently, he was a certified Emergency Medical Technician (herein EMT). He also is a certified "mine safety professional" with the International Society of Safety Professionals. (Tr. 31). Mr. Leaming stated he held the EMT certification for twenty-one years until September 2016. To become a certified EMT it requires 130 hours of education and passing an examination proffered by the State. (Tr. 32).

Mr. Leaming testified he has experience in mine rescue which included working on Sufco's Mine Rescue Teams, training the rescue teams, and ensuring the teams have all necessary equipment and supplies. (Tr. 32-33). He confirmed the Mine has two "fully equipped" rescue teams, that being, eight trained

designation from moderate to low. Canyon Fuel Co., LLC v. MSHA, 38 FMSHRC 2205 (ALJ Aug. 18, 2016); (JX-1; MX-1, p. 17). Petitioner has appealed Judge Manning's August 16, 2016 Decision to the FMSHRC, regarding Citation No. 8480766, in addition to other citations issued to Petitioner. The parties aver the FMSHRC has not yet rendered a decision on appeal. (JX-1). That notwithstanding, the instant case is wholly unrelated to Petitioner's appeal to the FMSHRC as it only concerns Petitioner's request to modify the application of the regulation codified at 30 C.F.R. § 75.1713-1(b).

certified miners that possess self-contained breathing apparatuses and transportation equipment. (Tr. 33). In the past, he participated in several mine emergencies including the "Des Bee Dove" event where a tractor caught fire, and the "Walburg Mine" fire where 27 people perished due to carbon monoxide poisoning. (Tr. 33-34).

Mr. Leaming identified CFX-1 as a map of the Sufco Mine that shows the location of the Main Portal, the longwall, and continuous mining sections, among other things. (Tr. 35-37). He identified Link Canyon as a portion of the Mine that was operational in the 1940s and 1950s, but it has since been "mined out" and "sealed off." (Tr. 38-39). He further identified the Quitchupah Portal as an area of the Mine that is primarily used to discharge water into a creek, while the Three East Portal is used to bring air into the Mine, but neither portal has a fan that acts as an exhaust system. (Tr. 40). He confirmed the Four East Fan Portal contains a fan that draws the air out of the Mine and exhausts it through vents. (Tr. 40-41).

Mr. Leaming testified there are two types of escape routes in the Mine, the primary and alternate escape routes. He explained the primary escape route is ventilated with fresh air and can be driven by "non-permissible schedule 24 type diesel equipment." On the other hand, the alternate escape routes connect to various sections within the Mine and collect dust from the mining process which is pulled out of the Mine by exhaust fans. (Tr. 42).

In regard to fire detection, Mr. Leaming stated the Mine contains carbon monoxide detectors on the belt lines, and fire extinguishers are located throughout the Mine at the power centers, transformer stations, water pumps, and diesel fuel storage areas. Fire extinguishers are also attached to underground hauling equipment and diesel pickup trucks. (Tr. 42-43).

Mr. Leaming testified MSHA inspectors come to the Mine every day, but in the past year there were "482 MSHA inspector days" at the Mine. He explained an "inspector day" occurs when an inspector comes to the Mine for inspection. (Tr. 44). The MSHA inspectors inspect and approve ventilation, roof control plans, and escape routes for the Mine. (Tr. 44-45).

In the event of an emergency in the continuous miner section of the Mine, Mr. Leaming stated miners will either use the primary escape or the "intake air escape" route. The miners

can evacuate the Mine using "diesel man-trucks" which can transport 10 to 12 miners, or diesel trucks that can carry up to three miners. There is also an alternate escapeway (i.e., the Four East Portal) for the north end of the Mine that terminates at the Four East Fan Portal. (Tr. 47). Mr. Leaming testified the alternate escapeway terminates at the Four East Fan Portal because it is the shortest, most direct route out of the Mine. When using the alternate escapeway during an emergency, miners have to walk because it is physically impossible to drive a truck on this route due to "overcasts and regulators." (Tr. 48). He explained that an "overcast" is an eight to ten foot tall airtight structure made of metal and concrete blocks that facilitate the movement of the intake and return air, and may only be traversed by ladder or stairway. (Tr. 48-49).

Mr. Leaming testified, in 1992, the Four East Fan Portal became the terminus for the alternate escapeway. (Tr. 49). He confirmed MSHA inspectors must complete four "full inspections" of the Mine each year, and in doing so, they inspect and travel the Four East Portal alternate escapeway and the Four East Fan Portal terminus. (Tr. 49-50). He also confirmed MSHA inspectors verify that maps containing the alternate escapeways are posted in each section of the Mine. Mr. Leaming testified the Four East Portal has never been utilized as an alternate escapeway for an emergency at the Mine. (Tr. 50).

Mr. Leaming identified CFX-2 as an enlarged map of escapeways within the Mine, including the Four East Portal, that has red arrows indicating the "return air," blue arrows showing "intake air ventilation," symbols enclosed in a bow-tie indicating "overcasts," and a red-dotted line demonstrating the alternate escapeways from the continuous miner sections in the northern portion of the Mine. (Tr. 51-52). He also identified CFX-3 as a plan view drawing of the Four East Fan Portal that shows the fan location in the Portal and the building that houses the diesel generator. (Tr. 53). Mr. Leaming explained that the diesel generator will automatically turn on to ensure the exhaust fan continues working in the event of a power outage at the Mine. He described the building just to the left of the diesel generator as "parts storage." (Tr. 56). Mr. Leaming described the immediate area when exiting the Mine by the Four East Fan Portal as "flat," and confirmed that this area is designated by an orange dashed-line on the map. (Tr. 56-57). Mine personnel inspect the "fan area" by the Four East Fan Portal on a daily basis and arrive by pick-up truck. (Tr. 57). However, this area is not designated as a "permissible pickup" area because it is used for intake air. Nevertheless, Mr.

Leaming stated a vehicle can park between the generator and fan buildings, and mine personnel can enter the buildings. He estimated the area just outside the Four East Fan Portal terminus to be approximately 200 feet long and 50 feet wide. (Tr. 58). Mr. Leaming stated that just beyond the buildings there is a livestock trail which can be traveled on foot. The trail is approximately 100 to 200 feet in length and goes down into the bottom of a canyon. (Tr. 59).

Mr. Leaming identified CFX-4 as superimposed views of the entry ways leading up to the Four East Fan Portal. (Tr. 59-60). One area contains a forest service road which can be walked on foot, but is not maintained during the winter. (Tr. 60).

Mr. Leaming testified Petitioner's petition for modification proposes building a "safehouse" in the flat area just outside the Four East Fan Portal terminus, next to the parts storage building. (Tr. 63). He described the safehouse as being a stick-built unit that houses up to 24 persons, wired for electricity, and would contain a wood-burning stove, water, and food. (Tr. 63-64). In the event there were more than 24 persons seeking refuge, Mr. Leaming stated they would be placed in the fan and diesel generator buildings, both of which are heated due to the running equipment. (Tr. 64). However, he stated the safehouse would not have a "purge chamber" because it would be located outside the Mine in fresh air.⁸ (Tr. 65). The safehouse would also contain various medical supplies mandated by federal regulations, along with additional first aid supplies that the Mine has located at each "working" section. Mr. Leaming confirmed CFX-8 is a list of Petitioner's proposed medical supplies for the safehouse. (Tr. 66). One of the listed medical supplies is "Kerlix," which Mr. Leaming described as a "fluid absorbing bandage wrap" that is easily applied and may slow or stop bleeding of wounds. (Tr. 67).

Mr. Leaming confirmed the East Four Portal has communication capabilities such as the "communication and tracking system," along with handheld digital phones, and a pager phone. (Tr. 67). He further explained the safehouse would be stocked with other medical supplies including a "traction splint" for broken bones, "Sam splints" for broken or dislocated bones, "spider straps" to immobilize a person on a backboard, "oxygen non-rebreather masks," and a "bag valve mask"

⁸ Mr. Leaming explained that a purge chamber is an area located in a refuge alternative where miners go in the event of an emergency if there is no other way to exit the Mine. The purge chamber contains equipment to test the air quality. (Tr. 65).

that may be used to artificially resuscitate a person who needs assistance breathing. (Tr. 68-69). Mr. Leaming confirmed that one of the listed medical items is "Follie," an ointment applied to burns, but he stated it was no longer recommended because it is counterproductive to healing despite it being required by law.⁹ (Tr. 70).

Mr. Leaming confirmed that it was not until late 2014, when MSHA initially expressed concern with the Four East Portal's designation as an alternate escapeway. (Tr. 71). MSHA District Manager, Russell Riley, was the first MSHA personnel to conclude the Four East Portal was an insufficient alternate escapeway. Mr. Leaming identified CFX-5 as a document Petitioner provided to Mr. Riley identifying other possible alternate escapeways within the Mine. (Tr. 72). He also identified CFX-6 as a larger version of the chart contained within CFX-5 that includes the calculation of the mileage traveled to exit each identified alternate escapeway. Each distance was calculated by Petitioner's engineering department. (Tr. 73). Mr. Leaming confirmed the "Link Canyon" Portal alternate escapeway is seven miles to the surface of the Mine with a road going to the Portal, but it is not regularly maintained. (Tr. 73-74). The "West Lease Fan" Portal alternate escapeway is located at the southern end of the Mine and is 5.88 miles to exit the Mine. Mr. Leaming stated Mr. Riley suggested the possibility of using the "Three East Breakout" Portal as an alternate escapeway. However, although the Three East Breakout escapeway is a shorter distance (3.52 miles) to exit the Mine, Mr. Leaming confirmed there is no road going to the portal, no buildings, or a "flat" surface area. (Tr. 74-75; CFX-5).

During the Federal Mine Safety and Health Review Commission hearing, Mr. Leaming confirmed that MSHA identified the "Three East Breakout" portal as the preferred alternate escapeway. (Tr. 75). He explained the Three East Breakout¹⁰ escapeway would require miners to walk on foot 5.88 miles, traverse twelve overcast crossings, and requires more SCSR change-outs.¹¹ On the other hand, Mr. Leaming stated the Four East Portal escapeway is

⁹ CFX-8 was offered and received into evidence without objection. (Tr. 71).

¹⁰ Mr. Leaming refers to the Three East Breakout portal as MSHA's suggested alternate escapeway. However, it appears that he mistakenly refers to the Three East Breakout Portal (which is 3.52 miles to the surface) instead of the West Lease Fan Portal which is 5.88 miles to the surface.

¹¹ An SCSR is a "self-rescuer" device carried by each miner that provides oxygen to a miner in the event of gases being released or a fire. In addition, the SCSRs are cached throughout "mine-seams" and are rated to last one hour. These SCSRs are spaced throughout the mine at one half-hour intervals. (Tr. 20, 70).

a lesser distance to exit the Mine, and it contains only five overcast crossings, and would require less SCSR change-outs. Mr. Leaming described the overcast crossings as steep stairways with a handrail and stated there are typically "three overcasts placed in a row."¹² Consequently, he expressed concern over miners having to cross-over additional overcasts when carrying an injured miner. Mr. Leaming estimated the SCSRs will provide oxygen for approximately 5,700 feet depending on the physical condition of the miner. (Tr. 77). He testified that he has worn a SCSR and he described it as "uncomfortable" because the air is provided through a chemical process which causes the air to heat up. He stated the faster a person walks, the warmer the air becomes. The SCSR also contains a "breathing bag" that holds the available air. (Tr. 78). Mr. Leaming explained that if a person is moving too fast, the air in the breathing bag depletes and it becomes more difficult to breathe. (Tr. 78-79).

Mr. Leaming confirmed Petitioner is proposing to build a "safehouse" at the Four East Fan Portal terminus, along with providing emergency medical transportation by helicopter. (Tr. 79-80). Petitioner spoke with Intermountain Life Flight (herein Intermountain), a commercial helicopter service, about evacuating people from the Four East Fan Portal. However, Intermountain stated they could not operate during storms or at night because they would be hoisting people into the air by basket. (Tr. 80). Mr. Leaming also spoke with Mr. Luke Bowman, a helicopter pilot with the Utah Department of Public Safety. Mr. Bowman is the captain who oversees the Department's helicopter services. (Tr. 81). Mr. Leaming testified that Mr. Bowman suggested building a helipad where the helicopter could land, pick up people, and transport them for medical treatment. (Tr. 82). Mr. Leaming stated it was Petitioner's intention to

¹² Notably, the record evidence is devoid of any pictures of "overcasts" that provide information as to their construction (i.e., height, depth, or width), nor do Petitioner's "Sufco Mine Maps" show where the overcast crossings are located (i.e., the locale of each overcast and the distance between each overcast) in regard to the Four East Portal and West Lease Portal escapeways. See CFX-1 through CFX-10. Indeed, Mr. Leaming testified there are typically "three overcasts placed in a row." (Tr. 77). However, it is unclear from the record evidence whether the "three" overcasts span the width of the escapeway, or are constructed in sequential order, one overcast in front of the other. Also unclear, is whether the overcasts span the entirety of the escapeway such that there is no space on either side of the overcasts to allow for passage "around" the overcasts. Nevertheless, on the basis of Mr. Leaming's testimony, that miners must traverse the overcast by ladder or stairway, the undersigned assumes there is insufficient space on either side of the overcasts, for passage around the overcasts. (Tr. 48-49). Moreover, if three overcasts are placed in a row, as explained by Mr. Leaming, it is unclear what the distance is between the three overcasts.

equip the helipad with a radio-activated light system to assist an approaching helicopter in landing. (Tr. 83). According to Mr. Leaming, Mr. Bowman stated he could fly at night and would only be unable to fly during severe storms. (Tr. 84). It was also suggested by Mr. Bowman that he could transport people to an ambulance at a location close to Interstate 70. Mr. Leaming confirmed the nearest hospital is 50 miles away from the Mine. (Tr. 85). Mr. Leaming was not under the impression that a helicopter could land by the Main Portal escapeway due to various structures and overhead wiring. He estimated that a helicopter could land one mile from the Main Portal escapeway, where a road had recently been installed. (Tr. 86).

Mr. Leaming testified the current arrangements for medical transportation are offered by Petitioner's EMT service which is associated with Sevier County Medical Center in Richfield, Utah. (Tr. 86). Depending on the severity of an injury, a miner may be transported to Gunnison Valley Hospital as well. Both hospitals are approximately 50 miles from the Mine. (Tr. 87). Mr. Leaming identified Petitioner's CFX-5 as a letter dated April 20, 2015, that was sent from Petitioner to Mr. Riley regarding potential alternate escapeways. Similarly, CFX-6 is an enlarged image of a chart that compares the Mine's potential alternate escapeways which is also included in CFX-5.¹³ (Tr. 88).

Mr. Leaming identified CFX-7 as a written agreement for ambulance transportation dated November 21, 2016, between Petitioner and the Emergency Medical Services of Sevier County.¹⁴ The Mine has its own ambulance, which they bought from Sevier County. (Tr. 89). Mr. Leaming stated that if a person is sufficiently hurt and is in need of an ambulance, Petitioner transports the person in its ambulance and meets the county ambulance at the end of the mine road by Interstate 70. (Tr. 90).

Mr. Leaming testified that MSHA's primary issue with Petitioner using the Four East Portal as an alternate escapeway is the inability to transport persons by ambulance from the Portal. (Tr. 91). He confirmed MSHA suggested the West Lease Portal be designated as an alternate escapeway rather than the Four East Portal. Mr. Leaming, along with Ms. Sydel Yeager from MSHA, both traveled the West Lease Portal escapeway. (Tr. 92). He stated the West Lease Portal escapeway cannot be driven by vehicle due to the "overcasts." (Tr. 93). When he walked the

¹³ CFX-5 and CFX-6 were offered and received into evidence. (Tr. 88).

¹⁴ Petitioner's CFX-7 was offered and received into evidence. (Tr. 89-90).

West Lease escapeway it took him approximately three hours without using an SCSR or carrying an injured worker on a stretcher. (Tr. 93-94). As a result, Mr. Leaming expressed concern about the distance of the West Lease Portal escapeway. In particular, he stated that during prior training simulations he practiced carrying people on stretchers with the assistance of four to six people. Mr. Leaming stated he was not sure if he could carry a person on a stretcher for two miles, let alone the six mile West Lease Portal escapeway which includes several overcast crossings. He stated "I am not sure they [the miners] would all make it out, that is my worry." (Tr. 94). Mr. Leaming testified it is "very possible" that additional fatalities beyond the injured person(s) may occur due to the added distance of exiting the Mine by way of the West Lease Portal escapeway. (Tr. 95).

Mr. Leaming testified the Four East Portal was the best alternate escapeway based solely on its shorter distance to the surface, and the ability of the miners to quickly reach fresh air. Mr. Leaming concluded that if Petitioner has to comply with Section 75.1713-1(b) by not using the Four East Portal escapeway, it will cause a diminution of safety for the miners. (Tr. 96). Mr. Leaming also concluded Petitioner's proposed modification would provide an equal measure of protection to the miners because they would be able to expeditiously exit the Mine, and obtain first aid treatment, water, food and heat in the safehouse, before being evacuated by helicopter. Mr. Leaming acknowledged that as part of Petitioner's emergency planning, they would consider calling the helicopter service in advance if there is a potential need for such services. (Tr. 97).

Mr. Leaming confirmed that after the ruling by the Federal Mine Safety and Health Review Commission, Petitioner has been working on the West Lease Portal, performing a considerable amount of construction including roof control measures, and building overcast crossings to ensure it is an acceptable escapeway. (Tr. 98).

On cross-examination, Mr. Leaming confirmed Petitioner's proposed safehouse would provide space for 24 miners. (Tr. 99). He also confirmed the safehouse has not yet been built. He agreed the Four East Fan Portal terminus opens into a remote area, but he stated the area does not receive a lot of snow. (Tr. 100).

Mr. Leaming testified Mr. Bowman was of the opinion that a helipad could be placed at the Four East Fan Portal terminus. (Tr. 101). Mr. Leaming did not know what make or model of helicopter Mr. Bowman flies, nor did he know the specific weather conditions in which Mr. Bowman could operate. Mr. Bowman communicated to Mr. Leaming that "it would be very easy to come in and pick up a person and transport a person either on hoist or picking them up and moving them to various locations." Mr. Leaming confirmed the initial "Life Flight" helicopter service was more limited in the services they offered because they could not fly in winds over 45 miles per hour, nor could they fly at night. (Tr. 102).

Mr. Leaming confirmed Petitioner maintains its own ambulance that is available seven days per week, 24 hours per day, but he acknowledged that an ambulance cannot access the Four East Fan Portal terminus. He further confirmed the Four East Portal escapeway requires the miners to exit the Mine in "return air." (Tr. 104). Nonetheless, Mr. Leaming stated in the event the primary escapeway is blocked, the miners have the ability to drive a vehicle through the "intake air" portion of the Four East Portal, and thereafter, walk the remainder of the Portal to the surface of the Mine. Mr. Leaming acknowledged the "intake air" portion of the Four East Portal is not designated by Petitioner as an alternate escapeway. (Tr. 106). On the other hand, he confirmed the proposed West Lease Portal escapeway, along with the "North Mains" primary escapeway, is in "return air." He agreed the West Lease Portal escapeway could be "[pre-]staged with vehicles." (Tr. 107).

Mr. Leaming testified the "overcast" crossings have steps with railings in compliance with Section 75.380, that satisfy the "stretcher test." (Tr. 107-08). He explained the stretcher test requires overcast crossings be suitable to move an injured miner on a stretcher over the overcast. He confirmed the Four East and West Lease Portals have overcasts that are structurally sound and satisfy the stretcher test. (Tr. 108). He agreed that miners may suffer many injuries including burns, losing consciousness, carbon monoxide poisoning, broken limbs, head injuries, broken backs, and cardiac arrest. Mr. Leaming also agreed that EMTs have limitations on medical care they can provide and medications they can administer. (Tr. 109).

Mr. Leaming stated the Mine's communication system is a new fiberoptic system. Therefore, if there is an explosion at the Mine, the system should still be operable because it is "redundant" and will "heal itself." However, should the

communication system not work, the Mine also maintains satellite phones. (Tr. 110).

Mr. Leaming confirmed the primary escapeway is a similar distance to that of the proposed West Lease Portal alternate escapeway. He acknowledged it is "possible" for miners to die using the shorter Four East Portal alternate escapeway. (Tr. 112). He confirmed the primary escapeway provides 24-hour emergency transportation access, while the Four East Portal escapeway can only be accessed by helicopter. (Tr. 114). However, Mr. Leaming stated Petitioner has never performed evacuations by helicopter. In the event of an emergency, he acknowledged miners are not required by regulations to only utilize the primary or designated alternate escapeways, but rather they can exit the Mine using any accessible exit. (Tr. 115). Mr. Leaming further acknowledged miners would have to remain in the safehouse and wait until a helicopter arrived, or re-enter the Mine if they used the Four East Portal escapeway. (Tr. 116).

On re-direct examination, Mr. Leaming confirmed that as the mining operations advance at the Mine, the distance to reach both the Four East and West Lease Portals will become greater. Mr. Leaming explained that MSHA suggested vehicles be "pre-staged" at designated points in the proposed West Lease Portal escapeway, allowing miners to drive the route once they are beyond the overcast crossings. (Tr. 117). Nevertheless, he expressed concern regarding how to determine the requisite number of pre-staged vehicles and whether distressed miners would wait for others to reach the vehicles during an emergency before leaving the area.¹⁵ (Tr. 117-18). He indicated that on prior occasions, miners have not waited for fellow miners before they have evacuated an area using vehicles. Despite the West Lease Portal being designated as the alternate escapeway, Mr. Leaming stated miners may choose to exit by way of the Four East Portal escapeway. (Tr. 118).

Mr. Leaming testified the Mine does not contain methane gas at levels sufficient to cause an explosion. Considering the Mine's history, Mr. Leaming stated it was more likely the roof

¹⁵ See supra note 12. As discussed above, the record evidence does not indicate the location or the distance between overcasts in the Four East Portal or the West Lease Portal escapeways. Also devoid from the record evidence, is any information regarding how many "pre-staged vehicles" would be placed throughout the West Lease Portal escapeway, and more specifically, how many vehicles would be placed at each pre-staged area between overcast crossings.

of the Mine may fall or a miner may experience cardiac arrest, rather than an explosion occurring. (Tr. 119). Mr. Leaming confirmed the Mine currently employs 32 miners who are certified EMTs and three who are paramedics. (Tr. 120).

Mr. Leaming was not familiar with the "1968 Farmington disaster," which involved an explosion, but he confirmed the fans located in each portal within Petitioner's Mine have "explosion doors" that will open to prevent fans from becoming useless in the event of an explosion. (Tr. 120-21).

On re-cross examination, Mr. Leaming corrected his earlier estimation of the Mine's 32 EMTs and three paramedics, and estimated the Mine employs approximately 27 EMTs, two intermediates and three paramedics.¹⁶ (Tr. 122). He acknowledged the Mine does not stock every possible drug that may be administered by paramedics. He also acknowledged that, although MSHA has suggested the West Lease Portal as an alternate escapeway, MSHA does not dictate which escapeway Petitioner must use. Rather, MSHA provides a standard that Petitioner must satisfy for any selected escapeway. (Tr. 123).

Mr. Leaming confirmed the proposed safehouse by the Four East Fan Portal terminus would have medical supplies, but would not be manned by an EMT, intermediate, or paramedic. (Tr. 124).

Jacob D. Smith

Mr. Smith testified he works at Petitioner's Sufco Mine as an Engineering Manager and oversees "operation and support." (Tr. 126-27). In particular, he oversees the ventilation, water and dust systems, along with the belt, the underground conveyor systems, and other technical services. He has worked as the Engineering Manager for the past 15 months. He also worked as the Ventilation Engineer for two years and was responsible for modeling the ventilation system, designating the intake and return entries, determining the timing of the fan operations, and constructing the ventilation structures. Prior to working for Petitioner, he worked in Denver, Colorado, as a geotechnical engineer for three years. (Tr. 127). Mr. Smith has a Bachelor's degree in Civil and Environmental Engineering, and a Master's degree in Geotechnical Engineering. (Tr. 128).

Mr. Smith testified Petitioner sends maps of the Sufco Mine, indicating all designated escapeways, to "District 9" who

¹⁶ Mr. Leaming explained that "intermediates" are persons with more education than EMTs, but are not paramedics. (Tr. 122).

in turn sends the maps to MSHA. (Tr. 129). Once MSHA reviews the submitted maps it will indicate by letter any deficiencies detected. He confirmed MSHA carefully reviews the submitted maps. (Tr. 130). Prior to Mr. Riley's appointment as a MSHA District Manager, Mr. Smith was not aware of any problem with the Four East Portal's designation as an alternate escapeway. (Tr. 130-31).

Mr. Smith regularly travels to the Four East Fan Portal terminus to inspect the fan and make sure it is operating correctly. (Tr. 131). He was aware Petitioner proposed building a safehouse by the Four East Fan Portal and he anticipated Petitioner would re-locate the parts storage building to make room for the safehouse. (Tr. 132). Mr. Smith was also familiar with Mr. Bowman's suggestion to build a helipad. He confirmed Petitioner met with Mr. Bowman and a consulting engineer, during which Mr. Bowman indicated he landed on helipads in similar terrain that were constructed by the Utah Department of Transportation (herein UDOT) for avalanche prevention. Mr. Smith confirmed Petitioner conducted a feasibility study in preparation for building the proposed helipad. (Tr. 133). During the meeting with Mr. Bowman, Mr. Smith, along with the geotechnical engineer, went to the Four East Fan Portal site to discuss the location of the helipad and identify "suitable foundation material" at the site. (Tr. 133-34). Mr. Smith stated it was his intent to mimic the construction design he obtained from the UDOT helipad drawings. He stated Petitioner's helipad would be close in proximity to the safehouse and noted its location on CFX-3 as being in the "bottom left-hand corner" of the map. (Tr. 134).

Mr. Smith identified CFX-9 and CFX-10 as photographs supplied by Mr. Bowman of helipads installed by the UDOT in similar terrain to that of the Four East Fan Portal terminus. (Tr. 135-36). Mr. Smith stated Petitioner's proposed helipad would likely extend beyond the level surface area over the slope, similar to the picture shown in CFX-10.¹⁷ (Tr. 136). He confirmed the helipad would not be built unless Petitioner's petition for modification was granted with a requirement that the helipad be constructed. (Tr. 137).

Mr. Smith testified it was his preference the Four East Portal alternate escapeway terminate at the Four East Fan Portal due to its shorter distance to the surface. He stated it takes him approximately "15 to 20 minutes" to walk the Four East

¹⁷ Petitioner's CFX-9 and CFX-10 were offered and received into evidence. (Tr. 136-37).

escapeway, and he estimated that if he had to carry someone it may take one hour to reach the surface.¹⁸ (Tr. 138). In addition to the shorter distance, Mr. Smith noted there would be a safehouse, medical supplies, fresh air, and absent severe weather, a helicopter would be available for emergency transportation. (Tr. 138-39). On the other hand, Mr. Smith estimated it would take him three to four hours to reach the surface using the West Lease Portal escapeway, and if he had to carry another miner it would double the traveling time. Upon comparing both alternate escapeways, Mr. Smith concluded it was his preference to use the Four East Portal escapeway because the West Lease Portal escapeway would require being underground for up to nine hours before exiting the Mine, in a stressful situation with unknown environmental factors. (Tr. 139).

On cross-examination, Mr. Smith agreed the safehouse is not a substitute for an emergency room or hospital. (Tr. 140). He acknowledged the key factors he considered in determining that the Four East Portal escapeway was superior to that of the proposed West Lease Portal escapeway were helicopter access and the time it takes to travel to the surface of the Mine. (Tr. 140-41). Mr. Smith agreed there are scenarios in which the helicopter could be waiting on miners before they even reach the surface of the Mine, but there is also a possibility the helicopter would be unable to immediately reach miners due to unfavorable weather conditions. (Tr. 142).

On re-direct examination, Mr. Smith acknowledged that using the Four East Portal escapeway would potentially allow miners to reach the safehouse in one hour and be transported by helicopter, as opposed to the West Lease Portal escapeway where it could take up to nine to ten hours before the miners could reach the surface for medical care. (Tr. 143).

On re-cross examination, Mr. Smith acknowledged it was possible to exit the Mine using the West Lease Portal escapeway in less than nine hours depending on whether a miner was carrying another injured miner. (Tr. 144-45).

On re-direct examination, Mr. Smith testified last year an ambulance could not access the Mine due to snow. (Tr. 145).

¹⁸ Petitioner indicated that to exit the Mine using the Four East Portal escapeway, miners would have to travel 2.34 miles. (CFX-5). Mr. Smith testified it takes him approximately "15 to 20 minutes" to walk the Four East Portal escapeway. (Tr. 138). However, assuming Mr. Smith walked the entirety of the Four East Portal escapeway, it would require him to walk one mile in less than ten minutes.

Peter Saint

Mr. Saint testified he is currently the Electrical and Ventilation Supervisor for MSHA in Denver, Colorado. (Tr. 147). He has worked for MSHA for 22 years, serving in various positions including General Inspector, Health and Electrical Specialist, and Assistant District Manager. (Tr. 147-48). Prior to working for MSHA, he worked in Colorado coal mines for twenty years. Specifically, he worked at the Golden Eagle, New Elk, and Allen coal mines in Trinidad, Colorado. During his time in the coal mines, Mr. Saint "ran just about every piece of equipment that is utilized in the coal environment." He also worked as an electrician and fire boss, he supervised the mining section and longwall, and was an on-call EMT. (Tr. 148). Additionally, he worked as part of the "rescue team" since 1979, but stopped working on the team a couple of years ago when he fractured his neck. (Tr. 148-49). However, he currently serves as MSHA's administrator for the Western Mine Rescue Competitions and assists in creating rescue scenarios for training and competition purposes. (Tr. 149).

Over the course of the years, Mr. Saint responded to several mine emergencies including the "Dugout" fire incident, the "Willow Creek and San Juan" fires, and "Crandall Canyon" where a massive "cave-in" occurred, trapping several miners. He recalled an explosion that occurred at the Golden Eagle Mine, stating miners exited the mine with their glasses melted to their faces, while other miners suffered bone fractures and concussions. (Tr. 149). He further noted the explosion "devastate[d] the ventilation." (Tr. 149-50). Mr. Saint explained that when "cave-ins" occur at a mine, the roof falls, which triggers a compression of energy to be released into a "major fault," and in turn, will cause miners to suffer broken bones, burns, and internal injuries due to the displacement of energy within a confined area. (Tr. 150). Mr. Saint stated that such injuries could not be adequately treated with first aid equipment, bandages, or splints, but instead requires immediate attention from physicians. (Tr. 150-51).

In comparing treatment at a medical facility to Petitioner's proposed safehouse, Mr. Saint stated the supplies that would be at Petitioner's proposed safehouse would treat scrapes, burns, and cuts, but would not be sufficient for internal injuries and broken bones which require immediate medical care that can only be received at hospitals. (Tr. 152).

On cross-examination, Mr. Saint confirmed the "Crandall Canyon" incident involved a massive roof fall that buried miners as a result of the "ribs" being "blown out" due to the release of energy within the mine. (Tr. 153-54). He acknowledged that the bodies of the rescue team were recovered, but many of the miner's bodies were not retrieved. He also confirmed some of the injured rescue team members were taken to the Price, Utah hospital by helicopter following the Crandall Canyon roof fall. (Tr. 154). Mr. Saint confirmed Mr. Bordea, an Electrical Inspector with MSHA, conducted a portion of the "in-mine investigation" following the roof fall at Crandall Canyon. (Tr. 155).

Mr. Saint acknowledged that, as an inspector, before he goes into an underground mine he verifies the locations of the designated escapeways. (Tr. 156). He agreed an evacuation from the Four East Fan Portal by way of a helicopter may provide faster access to a hospital than the proposed alternate West Lease Portal escapeway. (Tr. 157).

Mr. Saint confirmed the first "Willow Creek" mining incident was caused by an explosion, but the escapeways were not compromised, nor was anyone injured. (Tr. 157). On the other hand, he stated the second "Willow Creek" incident involved an explosion at the face and it caused two fatalities. (Tr. 157-58). The explosion at the Golden Eagle Mine was due to methane gas, and according to Mr. Saint, it devastated all ventilation devices and neutralized the primary and secondary escapeways "up to the mouth of the section." (Tr. 158-59). He agreed when there is an explosion and/or fire due to methane gas, toxic gases will be present and thus, a mine should be evacuated as quickly as possible. (Tr. 159-60). He further agreed there are new regulations in place requiring "additional SCSRs, life-lines, and gas detectors" as a result of past mining incidents involving explosions, fires, and carbon monoxide poisoning. (Tr. 160-61).

Mr. Saint testified he carried a "jump bag" with him when he worked as an EMT in the coal mines. (Tr. 161). The jump bag contained Sam splints, an oxygen bottle, activated charcoal, and an automatic defibrillator, and was the size of a medium suitcase weighing approximately 40 to 45 pounds. He explained the automatic defibrillator determines whether or not to deploy a shock to a person's body. (Tr. 162).

Charles W. Bordea

Mr. Bordea testified he works for MSHA as an Electrical Specialist out of the Price, Utah field office, and has done so for the past ten and one-half years. In addition, he worked as an electrical mechanic in the coal mines for approximately 30 years. (Tr. 164). In particular, he worked at the West Ridge, Cypress Plateau and Willow Creek Mines, but he began his mining career working for Westmoreland Coal Company. (Tr. 164-65).

Like Mr. Saint, Mr. Bordea experienced mining disasters and emergencies. While working for MSHA, he assisted in the "Crandall Canyon" incident. He also experienced mine fires while working underground as a mechanic at the Cypress Plateau and Willow Creek Mines. He described the feeling during each incident as a state of "panic." During one incident, Mr. Bordea stated there was "thick billows of black smoke" coming through the intake air system along with an alarm signaling high amounts of carbon monoxide in the atmosphere. (Tr. 165). He explained there is always a presence of carbon monoxide in Utah mines (usually 5 parts per million ambient), but if the carbon monoxide levels go beyond 10 parts per million ambient an alarm will signal. (Tr. 166). Mr. Bordea stated he has witnessed fatalities, lacerations, broken bones, extreme burns, and amputations of body parts during his time working in the underground coal mines. (Tr. 167-68).

On cross-examination, Mr. Bordea testified he investigated Petitioner's modification request on behalf of MSHA, which included interviewing approximately 18 miners (two mining crews) who would be affected by the proposed change to the designated alternate escapeway. After speaking with the miners, it is Mr. Bordea's impression that the miners were unanimously in favor of Petitioner's petition to maintain the Four East Portal as the designated alternate escapeway. (Tr. 168, 170).

Mr. Bordea confirmed the Willow Creek Mine emitted tremendous amounts of methane gas at a rate of "17 million cubic feet per day," along with emitting hydrocarbons. (Tr. 170). He stated there was a "combination of nearly 100 different chemicals involved." He also confirmed that one of the explosions he witnessed likely involved methane gas and hydrocarbons which caused injuries by the "longwall section and the face" of the mine. After the explosion, as well as on other occasions, he witnessed miners not waiting on fellow miners to arrive before they jumped into trucks to exit the mine. (Tr. 171).

Mr. Bordea testified he performed electrical inspections at Petitioner's Sufco Mine from 2012 through 2015. When he arrives for an inspection, he will typically glance at the map indicating the designated escapeways. He also knew the Four East Portal was the designated alternate escapeway for the northern part of the Sufco Mine, but he did not recall going to the Four East Fan Portal terminus prior to his modification investigation. (Tr. 172). Mr. Bordea explained he did not inspect the Four East Fan Portal area because, in the past, it was an isolated portion of the Mine. Instead, he primarily inspected equipment in the "working sections" of the Mine, including the conveyor belt drives and power centers. (Tr. 173). He testified other MSHA inspectors oversaw the Four East Fan Portal terminus when they took air readings and checked fan units. (Tr. 174).

Mr. Bordea confirmed Randy Gunderson, another MSHA inspector who worked with Mr. Bordea at the Willow Creek Mine, also inspected the Sufco Mine. Mr. Bordea stated Mr. Gunderson worked in MSHA's safety department, and he agreed that Mr. Gunderson likely gave much of his attention to Petitioner's designated escapeways due to Mr. Gunderson's disaster experience at the Willow Creek Mine. (Tr. 175).

Mr. Bordea acknowledged he never expressed concern about the location of Petitioner's Four East Fan Portal terminus prior to Mr. Riley expressing his concern. (Tr. 175). Mr. Bordea again confirmed the 18 miners he interviewed at Petitioner's Sufco Mine were in favor of using the Four East Portal as an alternate escapeway. He agreed the Four East Portal escapeway is the shortest, quickest route to the surface.¹⁹ (Tr. 176).

Luke Bowman

Mr. Bowman testified he is the chief pilot for the Utah Department of Public Safety (herein UDOPS) and has held this position for six years. He stated the UDOPS operates two helicopters in support of local, federal, and county agencies to primarily perform search and rescue missions and assist with law enforcement operations. He stated the helicopters are stationed at the Salt Lake City International Airport in Salt Lake City, Utah, and are responsible for servicing the entire State. Mr. Bowman has flown helicopters for approximately 14 years. (Tr. 187).

¹⁹ MSHA's Exhibit 1 ("MX-1"), a copy of the August 18, 2016 Decision rendered by Administrative Law Judge Manning on behalf of the FMSHRC, was offered and accepted into evidence with no objection. (Tr. 177-78).

Mr. Bowman described the UDOPS helicopters as "A-Stars or Airbus" helicopters, which are "pretty capable aircraft" with a service ceiling of 23,000 feet. Each helicopter carries one pilot and up to five passengers. (Tr. 187-88). He confirmed that he met with Petitioner and discussed rescue operations at its Sufco Mine. Mr. Bowman also visited the Sufco Mine. He discussed with Petitioner various options for facilitating the evacuation of miners out of the Four East Fan Portal terminus area, and in doing so, recommended building a helipad for helicopter access. However, Mr. Bowman testified a helipad is not a necessity to rescue people, stating "we operate quite a bit without them." Nevertheless, he stated if numerous people have to be removed from an area, a helipad would help facilitate a safe evacuation. (Tr. 188).

Mr. Bowman testified severe thunderstorms, lightning, heavy snowstorms, and low clouds or fog may limit his ability to fly. Specifically, during the day he can fly with an 800-foot ceiling and a one-half mile visibility range. At night Mr. Bowman can fly with a 1,000-foot ceiling and a one-mile visibility range. He explained that when flying in remote areas there may not be sufficient weather reports, thus he uses an "en route decision point" which means, if weather conditions deteriorate or visibility lessens en route to the destination, he will terminate the mission. He confirmed the pilot makes the final determination regarding the en route decision point. (Tr. 189). He explained there are only one helicopter pilot and one tactical flight officer (who is a member of the Highway Patrol) on each mission. On a search and rescue operation, the pilot will land the helicopter and the flight officer will load people into the helicopter. Thereafter, the tactical flight officer remains on the ground while the pilot flies the rescued people to a safe location. Mr. Bowman stated the helicopters can fly in sustained winds up to 35 knots. (Tr. 190).

Mr. Bowman explained that "inversion" occurs in the Salt Lake City, Utah area when there is snow in the valley, making the valley colder than the air above it. He further explained that in a normal weather pattern the air cools as it rises, but with "inversion" a layer of cold air becomes trapped below warmer air, and in turn the air stops moving, causing low visibility. (Tr. 191).

Mr. Bowman testified the UDOPS' newest helicopter has hoisting capabilities. He explained the hoist comes out of the side of the helicopter, with 150 feet of usable cable, and can carry one person at a time. He stated different devices may be

attached to the hoist to accommodate people who are injured. (Tr. 191). Mr. Bowman could land a helicopter at the Four East Fan Portal location in its current condition, but a helipad would be helpful when extracting multiple people from the area. (Tr. 192).

On cross-examination, Mr. Bowman confirmed he visited the physical site of the Four East Fan Portal terminus to examine the feasibility of landing a helicopter and/or building a helipad. (Tr. 192-93). He confirmed CFX-9 and CFX-10 are viable examples of helipads for the Four East Fan Portal area. He stated lights can be placed on the helipad as well, but lights are not necessary for landing during the day or at night because he flies with night vision goggles that allow him to see in remote, dark areas. Landing in remote, dark areas does not "bother him." (Tr. 193). He explained that lights on a helipad may be activated by "VHP radio frequency" or by someone on the ground. (Tr. 194).

Mr. Bowman testified the UDOPS helicopters have a GPS navigation system that provide the coordinates for any location, including the Four East Fan Portal. (Tr. 194-95). He confirmed it is "very rare" that he cannot take off from or land at the Salt Lake City International Airport. He stated there may be one to two days during January or February that he cannot fly. However, he stated the UDOPS is working on being able to fly during inversion by using an "instrument take-off" which is utilized by commercial airlines. (Tr. 195). Mr. Bowman was not under the impression that inversion occurs by the Four East Fan Portal area, rather he stated it usually is restricted to the Salt Lake City area. (Tr. 196).

Mr. Bowman discussed with Petitioner various rendezvous points to drop off rescued miners and meet with the local ambulance service. He discussed one possible rendezvous point on Interstate 70, approximately a two to three minute flight from Petitioner's Mine. (Tr. 196). He also stated it was possible to fly-in medical personnel (i.e., paramedics or first responders) to the Four East Fan Portal site. (Tr. 197). He confirmed he can land at night in low visibility conditions, and the helicopter's typical cruising speed is 120 knots or 138 miles per hour. (Tr. 197-98).

Mr. Bowman estimated the Sufco Mine is a one hour flight from Salt Lake City, Utah, which includes time to maneuver to the Four East Fan Portal site. He confirmed the Sufco Mine's main entrance contains overhead wires and cars parked in the

area, but he could still land there if given a 35-foot cleared area. (Tr. 198). However, Mr. Bowman could land by the Four East Fan Portal area in its current state, which is 200 feet by 50 feet wide in size. (Tr. 199).

Mr. Bowman testified the local Sheriff's office would contact him for search and rescue assistance at the Sufco Mine. (Tr. 199-200). Due to his search and rescue work, Mr. Bowman is familiar with the terrain surrounding the Sufco Mine. He confirmed that he would be able to perform search and rescue at the Sufco Mine as long as the visibility is sufficient. In addition, cold temperatures do not prohibit him from flying. (Tr. 200). In regard to conflicting rescue assignments, Mr. Bowman stated the UDOPS has two full-time pilots and one part-time pilot, and there are often multiple requests from various counties in the State. (Tr. 202). Furthermore, the Sheriff in Sevier County, where the Sufco Mine is located, would have to initially decide what resources are deployed in the event of a mine emergency. Only after receiving a request from the Sheriff would Mr. Bowman be permitted to respond to the request for assistance at Petitioner's Mine. (Tr. 202-03).

Gary W. Leaming

Mr. Leaming was recalled as a witness. He testified there are 29 counties in the State of Utah. He explained the automatic defibrillator as described by Mr. Saint is referred to as an "automatic external defibrillator" (herein AED) and is used to adjust the rhythm of the heart when afibrillation occurs. Mr. Leaming confirmed Sufco Mine has AEDs on the surface at various locations and at each working section underground, one of which is the northern working section. (Tr. 204).

Mr. Leaming confirmed he has worked at Petitioner's Sufco Mine for 42 years and during his time at the Mine "inversions" have not occurred. He also confirmed he spoke with a commercial Life Flight helicopter service and found the service to be more restrictive in their flying capabilities than that of Mr. Bowman with the UDOPS. However, at the time he spoke with the commercial helicopter service, the use of a helipad was not discussed. (Tr. 205). He confirmed Petitioner would not only contact the local Sheriff, but they would also call the commercial Life Flight service in the event of an emergency. (Tr. 205-06).

On re-cross examination, Mr. Leaming confirmed the Sufco Mine is in Sevier County. (Tr. 206). He also confirmed CFX-8, which lists the medical supplies to be placed in Petitioner's proposed safehouse, does not include an AED. (Tr. 206-07).

On re-direct examination, Mr. Leaming explained the Sufco mine has AEDs located where people actually work because medical experts suggest there is only four to five minutes to regain proper heart rhythm before permanent damage ensues. (Tr. 207-08). He confirmed that AEDs may be applied by someone other than an EMT because the AEDs have instructions and the AEDs will not shock an individual unless necessary. Furthermore, he explained CFX-8 does not list an AED as a safehouse medical supply because MSHA does not require it. Instead, CFX-8 lists all the supplies required by MSHA. However, Mr. Leaming stated Petitioner could place an AED inside the safehouse. (Tr. 208).

Mr. Leaming admitted Petitioner has not spoken with the Sheriff of Sevier County in regard to whether he would authorize Mr. Bowman to fly to the Mine in the event of an emergency. Nonetheless, he stated the Mine is the largest source of employment in Sevier County, and Petitioner has a good working relationship with the County and the Sheriff's Department. He noted Petitioner meets with the Sheriff annually for emergency planning. He also noted Sevier County has a small population. (Tr. 209). He stated that when there has been an emergency in the past, "911" has been called or the Mine has paged an ambulance. Mr. Leaming was under the impression that an emergency call may go through the Sheriff's dispatching system, but he did not believe the Sheriff had to approve emergency services for the Mine. (Tr. 210).

C. Contentions of the Parties

Petitioner contends its petition for modification of the standard set forth in 30 C.F.R. § 75.1713-1(b) should be granted. Specifically, Petitioner asserts the safety regulation codified in Section 75.1713-1(b) results in a diminution of safety because it precludes Petitioner's use of the Four East Portal alternate escapeway in the northern portion of the Mine. Petitioner contends the regulations require that escapeways be located to follow the "most direct, safe and practical route to the nearest mine opening suitable for the safe evacuation of miners."²⁰ 61 Fed. Reg. 9764, 9812-13 (Mar. 11, 1996). On this

²⁰ Petitioner notes that in 1992, the regulations required escapeways to "follow the most direct, safe and practical route to the surface." 57 Fed. Reg. 20,868; 20,926 (May 15, 1996). However, in 1996, the wording changed

basis, Petitioner avers the Four East Portal is the shortest, most direct (alternate escapeway) route to the outside of the Mine, with the fewest number of overcast crossings and SCSR change-outs. Petitioner further avers the Four East Portal escapeway allows miners to more expediently remove themselves from underground mine hazards such as toxic gases, fires, and explosions. Therefore, Petitioner argues that by not allowing it to utilize the Four East Portal as an alternate escapeway, it prevents a ready escape from the Mine, and as a result, creates a diminution of safety. See Rosebud Mining Co. v. MSHA, 827 F.3d 1090, 1092 n. 2 (D.C. Cir. 2016).

Similarly, Petitioner argues MSHA's proposed alternate escapeway to the West Lease Fan Portal also creates a diminution in safety. Petitioner maintains the West Lease Portal is twice the distance to exit the Mine (5.8 miles), as compared to the 2.84 miles to exit the Mine by way of the Four East Portal. In addition, the entirety of the West Lease Portal cannot be driven by vehicle, it requires miners to cross-over 12 overcasts and change-out up to five SCSRs, and contains a number of turns and changes in direction, all of which make it more difficult for miners to exit the Mine, especially if carrying an injured person. Consequently, Petitioner asserts MSHA's proposed West Lease Portal escapeway is the most difficult to travel out of all four proposed options by MSHA, and would result in a diminution of safety for the miners.

In the alternative, Petitioner contends pursuant to the "equal measure of protection test," that its petition for modification should be granted. First, Petitioner asserts its proposed alternative on modification, that being a safehouse, a helipad, and use of the UDOPS's helicopter service, will guarantee no less than the same measure of protection afforded by the safety regulation set forth in Section 75.1713-1(b).

requiring escapeways to not only follow the most direct, safe and practical route, but it had to be "to the nearest mine opening suitable for the safe evacuation of miners." 61 Fed. Reg. 9764, 9812-13 (Mar. 11, 1996). However, Petitioner further argues that MSHA's discussion in the preamble confirms that a quick escape is better, which in part stated the following:

A question arose during an informational meeting as to whether MSHA intended that the existing rule eliminate the requirement that escapeways be routed to the "nearest mine opening." It was not MSHA's intent to change this requirement from the previous standard. The existing requirement that the escapeway follow the most direct route to the surface would, in fact, require the route to go to the nearest mine opening.

61 Fed. Reg. 9764, 9812-13 (Mar. 11, 1996).

Petitioner argues that under Section 75.1713-1(b)'s standards there is no guarantee the Mine will always have access to 24-hour emergency transportation because there are times that road-access to the Mine is unavailable due to precarious weather conditions.²¹ Moreover, it will take any emergency vehicle transportation one hour or more to reach the Mine. Petitioner avers its proposed use of the safehouse, helipad, and UDOPS's helicopter service will allow miners an equal measure of protection because they will have access to a safe refuge with extensive medical supplies located in the safehouse, and the UDOPS helicopter can quickly reach the Mine via the helipad and efficiently transport up to five miners at a time for medical treatment.

Secondly, weighing the advantages and disadvantages of the proposed alternative method, Petitioner asserts modification would achieve a net gain or at least equivalence in **overall** mine safety. Petitioner argues that application of Section 75.1713-1(b)'s standard results in significant safety disadvantages because it prevents Petitioner's utilization of the Four East Portal as the alternate escapeway. Without use of the Four East Portal escapeway, Petitioner argues the miners will not be able to travel the shortest, most direct path to the surface, and thus, will be at greater risk to inhale toxic gases, suffer injury due to fire, or remain trapped underground due to an inability to quickly reach the surface by themselves or carrying other injured miners. On the other hand, Petitioner avers its proposed modification to Section 75.1713-1(b) would result in several advantages such as the possibility that miners may be able to more quickly evacuate the Mine to a safehouse with medical supplies, with up to five miners being transported by helicopter, which Petitioner argues may be faster than ground transportation, and consequently, allow for more expedient medical care.

Conversely, MSHA asserts Petitioner has failed to meet its burden of demonstrating its petition for modification of the standard requiring 24-hour emergency transportation pursuant to 30 C.F.R. § 75.1713-1(b) is proper. More specifically, MSHA argues Petitioner has failed to show that its proposed alternative is at least as safe as the standard or that application of the standard would result in a diminution of safety to miners. MSHA contends the plain language of the

²¹ In brief, Petitioner avers Section 75.1713-1(b) only requires that it provide the "availability" of 24-hour emergency transportation for any injured person at the Mine, but not immediate treatment of injuries. Petitioner's Brief, pp. 17-18.

Section 75.1713-1(b) standard makes clear Petitioner is responsible for providing "round the clock" emergency transportation for miners. However, rather than meet the standard's guidelines, MSHA argues Petitioner offers a series of insufficient measures that, even when combined, falls short of providing an equivalent level of safety ensured by the regulatory standard. MSHA further contends Petitioner's proposed alternative method of employing the UDOPS helicopter service fails to provide 24-hour access to emergency transportation because the use of the helicopter is limited by various weather conditions including low clouds, fog, snow, severe thunderstorms, and high winds. Moreover, the UDOPS helicopter availability is limited due to there being only two helicopters, both of which are utilized by local, state, and federal agencies for search and rescue missions, as well as law enforcement operations for the entire 29 counties in the State of Utah.

In addition, MSHA argues Petitioner has likewise failed to demonstrate Section 75.1713-1(b)'s application results in a diminution of safety. MSHA concedes the suggested West Lease alternate escapeway is longer in distance to that of the Four East Portal escapeway, but MSHA contends Petitioner may pre-stage vehicles to allow for an expedited evacuation out of the mine.²² Furthermore, irrespective of the time it takes for miners to exit the Mine utilizing the suggested West Lease alternate escapeway, MSHA asserts that ultimately the Four East

²² In brief, MSHA avers the parties stipulated that the overcasts at Petitioner's Mine are high enough to permit the passage of vehicles under the overcasts which would provide a quick escape out of the Mine using pre-staged vehicles in the suggested West Lease Portal escapeway. MSHA's Brief, p. 9. Nevertheless, by submission of a letter dated April 17, 2017, which is not part of the record, Petitioner contested MSHA's claim stating "that is simply incorrect." Petitioner explained the overcasts placed throughout its Sufco Mine contain "air course[s]" that go over the overcasts, and as such, prevent any miner from driving under the overcasts because of the height of the overcasts. Thus, because the overcasts must be traveled "over" and not "under," Petitioner avers the only way to traverse the overcasts is by utilizing the stairs on each side of the overcasts. Given the foregoing, because Petitioner's April 2017 letter is not part of the record evidence in this matter the undersigned is not relying upon the statements contained in the letter. However, upon careful review of the parties' stipulations, the undersigned finds no statement to support MSHA's contention that the overcasts in Petitioner's Sufco Mine permit vehicles to pass underneath them. See (JX-1). In addition, Mr. Leaming testified the overcasts may only be traversed by ladder or stairway, but he did not state that vehicles were able to pass under the overcasts. (Tr. 48-49). Consequently, upon considering only the record evidence, I find MSHA's statement regarding the overcasts is not supported by such evidence and as a result, it will not be considered in the present matter.

Portal escapeway results in a diminution of safety because Petitioner cannot guarantee 24-hour access to emergency transportation.

IV. DISCUSSION

Under Section 101(a) of the Act, the Labor Secretary must promulgate "mandatory health or safety standards for the protection of life and prevention of injuries in coal or other mines." 30 U.S.C. § 811(a).

Nevertheless, pursuant to Section 101(c) of the Act, the Secretary may, upon petition by the operator or the representative of miners, modify the application of any mandatory safety standard to a coal or other mine. Modification is proper if the Secretary determines that an alternative method of achieving the result of such standard exists which will **at all times guarantee no less than the same measure of protection** afforded the miners of such mine by such standard, or that **the application of such standard to such mine will result in a diminution of safety** to the miners. 30 U.S.C. § 811(c). Consequently, modification is proper if an equally effective alternative exists or the regulatory standard itself negatively impacts mine safety. See id.

Petitions for modification must include a "concise statement of the modification requested, and whether the petitioner proposes to establish an alternate method in lieu of the mandatory safety standard or alleges that application of the standard will result in diminution of safety to the miners affected or requests relief based on both grounds." 30 C.F.R. § 44.11. In addition, the party petitioning for modification shall have the burden of proving its case by a **preponderance of evidence**. 30 C.F.R. § 44.30(b); see also 5 U.S.C. § 556(d); Rosebud Mining, 827 F.3d at 1093.

Accordingly, Section 101(c) of the Act permits modification of an application of a mandatory safety standard upon a showing that either:

- (1) An **alternative method** of achieving the result of the standard exists that will **at all times guarantee no less than the same measure of protection afforded by the standard**, or
- (2) Application of the standard will result in a **diminution of safety** to the miners.

30 U.S.C. § 811(c) (emphasis added); see 30 U.S.C. § 44.4(a).

Further, Section 101(c) of the Act has been interpreted by the Assistant Secretary to require a two-step analysis to determine whether the proposed modification of the application of a mandatory safety standard is proper, and is described as follows:

[T]his provision calls for a **two-step analysis** of any proposed modification. The first step, corresponding to Section 101(c)'s "**result**" clause, requires the Assistant Secretary to find that the **proposed alternative method will promote the same safety goals as the original standard with no less than the same degree of success**. The second step, keyed to Section 101(c)'s "**same measure of protection**" requirement, contemplates a more global inquiry into the net safety effect of the modification. **Taking into account both advantages and disadvantages of the alternative method, including effects unrelated to the goals of the original standard**, the Assistant Secretary must consider how the modification will affect the overall mine safety.

Int'l Union, United Mine Workers of Am. v. MSHA [S. Ohio Coal], 928 F.2d 1200, 1202 (D.C. Cir. 1991); see Rosebud Mining, 827 F.3d at 1093-94; see also Int'l Union, United Mine Workers of Am. v. MSHA [Cypress Emerald], 920 F.2d 960, 963 (D.C. Cir. 1990) (noting the "result" clause requires that the modification promote "the specific safety goals of the original standard with roughly comparable success." While the "same measure of protection" clause requires determining whether the modification achieves "a net gain in mine safety (or at least equivalence), taking all effects into account.").

However, the two-step analysis does not require the mine operator to show that the alternative method "utilize[s] the same method of protection provided for in the standard." Emerald Mines Co. v. Int'l Union, United Mine Workers of Am., 83-MSA-17, decision of Ass't. Secretary O'Neal, at 7-11 (Sept. 22, 1989), aff'd in part and rem. in part, 920 F.2d 960 (D.C. Cir. 1990); Int'l Union, United Mine Workers of Am. v. MSHA [Quatro Mining], 924 F.2d 340 (D.C. Cir. 1991).

If, after consideration of a petitioner's modification request, an administrative law judge determines modification is

appropriate, the modification of the applicable safety standard becomes an enforceable standard for the at-issue mine, unless an appeal is filed with the Assistant Secretary of Labor for Mine Safety and Health. 30 C.F.R. § 44.50; see Int'l Union, United Mine Workers of Am. v. MSHA [Utah Power & Light], 262 U.S. App. D.C. 200, 823 F.2d 608, 610 (1987). Only a decision by the Assistant Secretary shall be deemed final agency action for purposes of judicial review. 30 C.F.R. § 44.51.

Here, Petitioner's petition for modification is two-fold. Petitioner seeks modification on the basis of asserting it has provided an alternative method to achieve the same measure of protection afforded by the standard set forth in Section 75.1713-1(b). Alternatively, Petitioner contends the safety regulation codified in Section 75.1713-1(b) results in a diminution of safety at its Sufco Mine. Given the foregoing, the undersigned will address each of Petitioner's contentions in seriatim.

A. Alternative Method

The Four East Portal, which is at issue in the instant case, has been Petitioner's designated alternate escapeway for more than 24 years. (CX-5). Nevertheless, the Four East Portal escapeway terminates at the Four East Fan Portal which is located by a canyon and inaccessible to land-traveling vehicles, including that of emergency ambulance services.²³ That notwithstanding, the safety regulations pursuant to 30 C.F.R. § 75.1713-1 requires that mine operator's make arrangements for emergency medical assistance and transportation for injured persons, and, in part, states the following:

(b) Each operator of an underground coal mine shall make arrangements with an ambulance service, or otherwise provide, for 24-hour emergency transportation for any person injured at the mine.

30 C.F.R. § 75.1713-1(b) (emphasis added).

Consequently, given the Four East Fan Portal's inaccessibility to land-traveling vehicles, Petitioner seeks to modify the safety standard codified at 30 C.F.R. § 75.1713-1(b). In the alternative to compliance with Section 75.1713-1(b) at

²³ Indeed, Mr. Leaming, the Safety Manager at Petitioner's Sufco Mine, testified Petitioner has its own ambulance that is available seven days per week, 24 hours per day, but the ambulance cannot access the Four East Fan Portal area. (Tr. 104, 114).

the Four East Fan Portal terminus of the alternate escapeway, Petitioner proposes the following conditions:

1. Construct and maintain a safehouse at the 4 East Fan Portal with a capacity of 24 persons. The safehouse shall be supplied with electrical power from the Mine's electrical system with the ability to also receive power from the diesel generator located at the 4 East Fan Portal site. The safehouse will be provided with heat and lighting. The safehouse shall also have the ability to be heated with a source of heat independent of the supplied power.
2. There will be two methods of communication to the safehouse, one through the Mine's communication system and one through the satellite phone, or the equivalent.
3. The safehouse shall be supplied with food, water, and sanitary facilities equivalent to that of an underground refuge alternative.
4. The safehouse shall be supplied with the medical supplies listed in Exhibit CFX-8, or supplies of equivalent efficacy, as well as an Automated External Defibrillator (AED).
5. Construct and maintain a facility (helipad) at the 4 East Fan Portal that permits and facilitates the landing at the site of a helicopter with a capacity of 6 persons. The facility shall be equipped with landing lights that can be activated on the ground and by an approaching helicopter.
6. Be able to provide the landing coordinates of such helicopter landing facility to the Utah Department of Public Safety or a commercial helicopter service.
7. Coordinate on a no less than an annual basis with the Sheriff of Sevier County concerning the requirements for use of the helicopter of the Utah Department of Public Safety in the event it would become necessary.
8. The safehouse and helicopter landing facility shall not be put into service until MSHA has initially inspected it and determined that it is in compliance with all the above terms and conditions.
9. Within 60 days after the Proposed Decision and Order becomes final, Canyon Fuel shall submit proposed revisions

for its approved 30 C.F.R. Part 48 training plan to the Coal Mine Safety and Health District Manager. These proposed revisions shall specify initial and refresher training regarding the terms and conditions stated in the Decision and Order.

As discussed above, Section 101(c) sets forth a two-step analysis to determine whether Petitioner's proposed alternative method is sufficient. The first-step, also known as the "result" clause, requires a finding that the proposed alternative method will promote the **same safety goals as the original standard with no less than the same degree of success**. While the second step, the "**same measure of protection**" clause, requires the fact-finder to determine how the proposed modification will affect **overall** mine safety, **taking into account both advantages and disadvantages of the alternative method, including effects unrelated to the goals of the original standard**. See 30 U.S.C. § 811(c); see also S. Ohio Coal, 928 F.2d at 1202; Rosebud Mining, 827 F.3d at 1093-94; Cypress Emerald, 920 F.2d at 963.

1) Same Safety Goals With No Less Than The Same Degree of Success

Section 75.1713-1(b) makes clear that Petitioner either must make arrangements for an ambulance service, or otherwise provide for 24-hour emergency transportation for any injured person at the Mine. Because Petitioner is unable to provide road access for an ambulance service at the Four East Fan Portal terminus, it has proposed in lieu of roadside emergency transportation, a safehouse that will hold up to 24 miners, with communication capabilities, food, water, heat, lighting, and a plethora of medical supplies including an automated external defibrillator.²⁴ (CFX-8). Additionally, Petitioner proposes to build a helipad with landing lights located in the vicinity of the Four East Fan Portal terminus that would be accessible by helicopter. (CFX-9; CFX-10). Petitioner further proposes use of the UDOPS helicopter service to facilitate the transfer of evacuated miners from the Four East Fan Portal terminus to an area sufficient for emergency transportation.

²⁴ Significantly, the record evidence is devoid of any information regarding the number of miners that work each shift in the area of the Mine that would utilize the Four East Portal escapeway. Consequently, it is unclear whether the proposed "safehouse" that would hold "up to 24 miners" is adequate in size. (CFX-8).

In considering whether Petitioner's proposed alternative method **promotes the same safety goals as Section 75.1713-1(b) with no less than the same degree of success**, I find Petitioner's alternative method falls short. It is undeniable that Petitioner's proposed combination of a safehouse, helipad, and helicopter rescue service would be beneficial to miners working at Petitioner's Mine. Indeed, miners would have access to basic medical supplies, food, water, and heat in the safehouse once they exited the Mine, along with the **possibility** of receiving more expedient medical care if transported by helicopter. Nevertheless, irrespective of the potential benefits, Petitioner cannot guarantee **24-hour emergency transportation with no less than the same degree of success**. Although Petitioner's proposed safehouse would have a variety of medical supplies and provide protective shelter, it alone or in combination with the proposed helicopter service cannot provide 24-hour emergency transportation to any injured person at the Mine. Moreover, Mr. Leaming testified that, despite the safehouse being stocked with a wide variety of medical supplies, it would not be manned by any of the Mine's EMTs, intermediates, or paramedics, nor would it be capable of providing medical care for severe traumatic injuries.²⁵ (CFX-8; Tr. 124).

Similarly, Petitioner's proposed helipad and helicopter service with the Utah Department of Public Safety (UDOPS) is insufficient for Petitioner to meet its burden of showing the **alternative method promotes Section 75.1713-1(b)'s safety goals with no less than the same degree of success**. Initially, Petitioner proposed contracting with Intermountain Life Flight, a commercial helicopter service, but Intermountain's service capabilities were limited by conservative weather criteria, and it could not use a hoist at night or without its single hoist-equipped aircraft. Given Intermountain Life Flight's limitations, Petitioner proposed building a helipad with landing lights at the Four East Fan Portal terminus and working with the UDOPS helicopter service to safely evacuate miners for medical treatment.

Mr. Bowman, UDOPS's chief helicopter pilot, testified the UDOPS operates two helicopters in support of local, federal, and county agencies to primarily perform search and rescue missions

²⁵ Mr. Leaming testified Petitioner employs miners who have been trained as EMTs, intermediates, and paramedics. He confirmed the Mine employs 27 EMTs, two intermediates, and three paramedics. (Tr. 122). However, Mr. Leaming did not testify as to how many trained EMTs, intermediates, and paramedics work each shift, or if they work in the area of the mine that utilizes the Four East Portal alternate escapeway.

and assist with law enforcement operations. He stated the helicopters are stationed at the Salt Lake City International Airport in Salt Lake City, Utah, and are responsible for servicing the entire State which includes 29 counties. He confirmed it is "very rare" that he cannot take off from or land at the Salt Lake City International Airport. Specifically, he stated there may be one to two days during January or February that he cannot fly. Mr. Bowman met with Petitioner and discussed rescue operations at its Sufco Mine, and in doing so, recommended building a helipad for easier helicopter access.

Mr. Bowman estimated the Sufco Mine is a one hour flight from Salt Lake City, which includes time to maneuver to the Four East Fan Portal site. He described the UDOPS helicopters as "pretty capable aircraft" with a service ceiling of 23,000 feet and capable of flying in sustained winds up to 35 knots. Each helicopter carries one pilot and up to five passengers (i.e., miners). During the day, Mr. Bowman can fly with an 800-foot ceiling and a one-half mile visibility range. At night, he can fly with a 1,000-foot ceiling and a one-mile visibility range. Mr. Bowman stated landing in remote, dark areas does not "bother him" because he flies with night vision goggles that allow him to see in such conditions. Further, Mr. Bowman testified the helicopters have a GPS navigation system that provides the coordinates for any location, including the Four East Fan Portal at the Mine. Mr. Bowman confirmed he can land at night in low visibility conditions, and the helicopter's typical cruising speed is 120 knots or 138 miles per hour. Mr. Bowman also testified the UDOPS's newest helicopter has hoisting capabilities and can hoist one person at a time.

Mr. Bowman discussed with Petitioner various rendezvous points to drop off rescued miners and meet with the local ambulance service, one of which is along Interstate 70 and is approximately a two to three minute flight from Petitioner's Mine. He also stated it was possible to fly-in medical personnel (i.e., paramedics or first responders) to the Four East Fan Portal site.

However, Mr. Bowman testified that severe thunderstorms, lightning, heavy snowstorms, and low clouds or fog may limit his ability to fly. He explained that when flying in remote areas there may not be sufficient weather reports, thus he uses an "en route decision point" which means, if weather conditions deteriorate or visibility lessens en route to the destination, he will terminate the mission. He confirmed the pilot makes the final determination regarding the en route decision point. Mr.

Bowman testified the local Sheriff's office, not Petitioner, would first contact him for search and rescue assistance at the Sufco Mine. In regard to conflicting rescue assignments, Mr. Bowman stated the UDOPS only has two full-time pilots and one part-time pilot, and there are often multiple requests from various counties in the State. Furthermore, the Sheriff in Sevier County, where the Sufco Mine is located, would have to initially decide what resources are deployed in the event of an emergency. Only after receiving a request from the Sevier County Sheriff would Mr. Bowman be permitted to respond to a request for assistance at the Mine.

Given the foregoing testimony from Mr. Bowman, **arguably**, the UDOPS helicopter service is less limited than that of Intermountain Life Flight regarding the weather conditions in which it can operate. Nevertheless, the UDOPS helicopters are still limited by unpredictable weather conditions (i.e., fog, wind, snow, thunderstorms, and inversion). Perhaps most significant in regard to limitations, is the demand by other local, state, and federal agencies in search and rescue missions, as well as law enforcement operations. Mr. Bowman testified that only two helicopters service the entire State of Utah (29 counties), and there is often multiple requests for their helicopter services. Moreover, the UDOPS helicopter service is not automatically deployed in the event of an emergency at Petitioner's Sufco Mine. Instead, the Sheriff of Sevier County would initially have to determine whether it is appropriate to contact the UDOPS, and only after the Sheriff makes this determination would UDOPS be contacted. Thus, **assuming arguendo**, the weather conditions were perfect for flying, there is no guarantee the Sheriff would contact and request the UDOPS helicopter service, nor is it certain the UDOPS helicopters would be available to rescue and transport miners. Accordingly, I find the UDOPS helicopter service cannot provide 24-hour emergency transportation for any injured person at the Mine.

Finally, **assuming arguendo**, Petitioner contracted with both Intermountain Life Flight and the Utah Department of Public Safety for transportation services, either service would remain subject to uncontrollable and unpredictable weather conditions that may prohibit them from flying, and ultimately, from reaching Petitioner's Sufco Mine. Further, just as with UDOPS, Intermountain may not have helicopters, at any given time, which would be available to offer 24-hour emergency transportation.

Based on the foregoing facts and testimony, I find and conclude Petitioner has failed to meet its burden in demonstrating its proposed alternatives, of the safehouse, helipad, and helicopter service, **promotes the same safety goals as Section 75.1713-1(b) with no less than the same degree of success.**

2) Advantages and Disadvantages of the Alternative Method

Likewise, upon considering **both the advantages and disadvantages of the alternative method, including effects unrelated to the goals of the original standard,** I find it does not achieve a result that will **at all times guarantee no less than the same measure of protection afforded by the Section 75.1713-1(b).**

Petitioner avers the Four East Portal is the shortest, most direct escapeway to the outside of the Mine with the fewest number of overcast crossings and SCSR change-outs. Petitioner further avers the Four East Portal escapeway allows miners to more expediently remove themselves from underground mine hazards such as toxic gases, fires, and explosions. Conversely, MSHA concedes the suggested "West Lease Fan" alternate escapeway is longer in distance to that of the Four East Portal escapeway, but MSHA contends Petitioner may pre-stage vehicles to allow for an expedited evacuation out of the Mine. Furthermore, MSHA argues it does not mandate the use of any particular alternate escapeway, thus Petitioner is free to drive new entries and create entirely new escapeways in the Mine that comply with the applicable safety regulations.

In the instant case, Petitioner identified four possible alternate escapeways which included:

1. The **"Four East Fan"** Portal which is 2.34 miles to the surface of the Mine, requires crossing over five overcasts, with two SCSR change-outs, with no existing surface refuge facilities or available surface transportation. However, Petitioner avers a refuge facility and surface transportation can be provided. Petitioner characterized the degree of travel difficulty as "least [difficult]." (CFX-5).
2. The **"Link Canyon"** Portal which is 7.08 miles to the surface of the Mine, requires crossing over five overcasts, with six SCSR change-outs, with no existing surface refuge facilities or available surface transportation. Petitioner

characterized the degree of travel difficulty as "moderate." (CFX-5).

3. The "**West Lease Fan**" Portal which is 5.88 miles to the surface of the Mine, requires crossing over twelve overcasts, with five SCSR change-outs, but this escapeway does have existing surface refuge facilities and has available surface transportation. Petitioner characterized the degree of travel difficulty as "most [difficult]." (CFX-5).
4. The "**Three East Breakout**" Portal which is 3.52 miles to the surface of the Mine, requires crossing over eight overcasts, with three SCSR change-outs. Nonetheless, this escapeway has no electricity at the portal, and there is no possibility of building a surface refuge facility because there is no level ground in the immediate area outside the Mine, and it has no available surface transportation. Petitioner averred the immediate area outside of the Mine is by a canyon which is less open than any other option and is more susceptible to maintain "snowpack" due to its location. Petitioner characterized the degree of travel difficulty as "moderate." (CFX-5).

Upon examination of each potential existing escapeway, the Link Canyon and Three East Breakout Portals appear to be inadequate escapeways due to the distance of the Link Canyon Portal to the surface of the Mine, and the inaccessibility of the Three East Breakout Portal for land-traveling vehicles. Thus, in regard to potential alternate escapeways, Petitioner is left with its proposed Four East Fan Portal escapeway, or the West Lease Portal escapeway suggested by MSHA. Accordingly, I find it necessary to compare the Four East Fan Portal escapeway with the West Lease Fan Portal escapeway to identify the advantages and disadvantages of Petitioner's proposed alternative.

Taking into account **overall** mine safety, the primary advantage of Petitioner's proposed alternative method is that the Four East Portal would remain the designated alternate escapeway, and as such, would provide the shortest, most direct route to the surface of the Mine at 2.34 miles, in contrast to the West Lease Portal's 5.88 miles to the surface. Mr. Leaming, who has worked at the Mine since 1974, testified the Four East Portal was the best alternate escapeway based solely on its shorter distance to the surface, and the ability of the miners to quickly reach fresh air. Like Mr. Leaming, Mr. Smith, an

Engineering Manager at the Mine, testified it was his preference the Four East Portal remain the alternate escapeway due to its shorter distance to the surface. Mr. Smith stated it takes him approximately 15 to 20 minutes to walk the Four East Portal escapeway, and he estimated that if he had to carry an injured miner it would take approximately one hour to reach the surface. On the other hand, Mr. Smith estimated it would take him three to four hours to reach the surface using the West Lease Portal escapeway, and if he had to carry another miner it would double the traveling time. Upon comparing the Four East Portal escapeway to the West Lease Portal escapeway, Mr. Smith testified it was his preference to get out of the mine within one hour, and sit in the safehouse with fresh air and medical supplies, rather than remain underground for up to nine hours in a stressful situation with unknown environmental factors.

Additionally, the Four East Portal alternate escapeway contains only five overcast crossings along with two SCSR change-outs, while the West Lease Portal escapeway has 12 overcast crossings and five SCSR change-outs. Mr. Leaming described the overcast crossings as steep stairways with a handrail, and stated there are typically three overcasts placed in a row. Consequently, he expressed concern about miners having to cross over additional overcasts when carrying an injured miner. In regard to the SCSRs, Mr. Leaming estimated the SCSRs will provide oxygen for approximately 5,700 feet depending on the physical condition of the miner. He testified that he has worn a SCSR and he described it as "uncomfortable" because the air is provided through a chemical process which causes the air to heat up. He stated the faster a person walks, the warmer the air becomes. The SCSR also contains a "breathing bag" that holds the available air. Mr. Leaming stated that if a person is moving too fast, the air in the breathing bag depletes and it becomes more difficult to breathe.

Mr. Leaming, along with Ms. Sydel Yeager from MSHA, both traveled the West Lease Portal escapeway. He stated the West Lease Portal escapeway cannot be driven by vehicle due to the "overcasts." When he walked this route it took him approximately three hours without using an SCSR or carrying an injured worker on a stretcher. Mr. Leaming expressed concern about the distance of the West Lease Portal escapeway. In particular, he stated that during prior training simulations he practiced carrying people on stretchers with the assistance of four to six people. Mr. Leaming stated he was not sure if he could carry a person on a stretcher for two miles, let alone the six mile West Lease Portal escapeway (with several overcast

crossings). He stated "I am not sure they would all make it out, that is my worry." Mr. Leaming testified it is "very possible" that additional fatalities beyond the injured person(s) may occur due to the added distance of exiting the Mine by way of the West Lease Portal. Accordingly, given the foregoing testimony, the fact that the Four East Portal contains the least amount of crossovers and SCSR change-outs is also advantageous to its designation as an alternate escapeway because it would likely be less physically burdensome for miners to reach the surface (by themselves or carrying another injured miner) in the event of an emergency.

Finally, also advantageous is the fact that the Four East Portal offers miners the "possibility" of receiving more expedient medical care, assuming, a helicopter would be on-site or close to the Mine's locale at the time of an emergency.

In contrast, the primary disadvantage of Petitioner's proposed alternative method, that being, the safehouse, helipad, and helicopter service is that it cannot **guarantee 24-hour emergency transportation for any injured person at the mine.** As discussed above, the safehouse, although stocked with a variety of medical supplies will not be manned with an EMT, paramedic, or physician. Moreover, while the UDOPS helicopter service is less limited by weather conditions and can rescue up to five miners at a time, there is no guarantee any UDOPS helicopter would be available or that the Sevier County Sheriff would request the UDOPS's assistance. Thus, even if the miners are able to exit the mine quickly, they likely are still left with no 24-hour emergency transportation, which is of the utmost importance when people are critically injured.

In assessing the advantages and disadvantages of the Four East Portal escapeway, I have also compared the advantages and disadvantages of the West Lease Portal as an alternate escapeway. Unlike the Four East Portal, the West Lease Portal's most significant advantage is 24-hour access to emergency transportation. Once the miners reach the surface, they will either be transported by Petitioner's ambulance or by the local ambulance service to the nearest hospital for medical treatment.

As discussed above, the disadvantages of the West Lease Portal escapeway are the distance to the surface, the number of overcast crossings (twelve) and SCSR change-outs (five). The longer distance of the West Lease Portal escapeway may require miners to remain in hazardous conditions for a longer period of time. However, Mr. Leaming confirmed the West Lease Portal can

be pre-staged with vehicles which would allow for a faster, easier escape from such conditions.²⁶ Nevertheless, Mr. Leaming also expressed concern regarding how to determine the number of vehicles to stage and whether distressed miners would wait for others to reach the vehicles during an emergency. He indicated that on prior occasions, miners have not waited for fellow miners to reach the vehicle before they have evacuated an area. Similarly, Mr. Bordea, an Electrical Specialist for MSHA, also testified he witnessed emergencies at mines, after which he saw miners not waiting on fellow miners to arrive before they jumped into trucks to exit the mine. In addition, the West Lease Portal's twelve overcast crossings and five SCSR change-outs make it more arduous for miners to reach the surface, especially when carrying an injured miner.

Given the foregoing discussion, the decision before the undersigned evolves into choosing one of the lesser of two options as the undersigned finds neither the Four East Portal nor the West Lease Portal to be ideal for the safety of the miners. On one hand, the Four East Portal represents the shortest, most direct route to the surface, but even with Petitioner's proposed alternative, the guarantee of 24-hour emergency transportation is not possible. Thus, while a miner may quickly escape the mine, there is a high probability the miner may not receive timely medical treatment. Conversely, if the Four East Portal is not used as an alternate escapeway, the only viable escapeway at this moment is the West Lease Fan Portal, which is a 5.88 miles to the surface of the Mine. In addition, the West Lease Fan Portal is more arduous to the extent it has more than double the amount of overcast crossings

²⁶ See supra notes 12 and 15. As discussed above, the record evidence is devoid of any information regarding the construction of the overcasts, their placement within the escapeways, and the distance between overcasts. In addition, absent from the record is any information regarding the number of pre-staged vehicles that could be placed in the West Lease Portal escapeway, as well as the frequency or regularity in which the vehicles could be staged (i.e., the distance between overcasts that could be driven by miners using pre-staged vehicles). It is undisputed that the West Lease Portal escapeway is 5.88 miles to the surface of the Mine, it has 12 overcast crossings, and requires five SCSR change-outs. (CFX-5). Hypothetically speaking, assuming three overcasts were placed in a row as described by Mr. Leaming, and the three overcast crossings were placed at one mile intervals throughout the West Lease Portal's 5.88 miles to the surface, pre-staged vehicles would significantly decrease a miner's travel time to the surface, despite the West Lease Portal's longer distance. Assuming the aforementioned is a proper characterization, the West Lease Portal escapeway is even more advantageous as an alternate escapeway. If, however, the West Lease Portal's 12 overcast crossings are located throughout the escapeway in such a way that pre-staged vehicles may only be driven every couple hundred feet, this would greatly diminish any advantage provided by pre-staged vehicles.

than that of the Four East Portal, along with five SCSR change-outs as opposed to the Four East Portal's two SCSR change-outs. Therefore, a miner may never reach the surface of the Mine due to the length and difficulty in traveling the West Lease Portal escapeway. Nevertheless, despite its longer distance, the West Lease Portal can be pre-staged with vehicles to help quickly expedite miners to the surface, and thus, mitigate the effects of its distance and difficulty. Perhaps most importantly, the West Lease Portal escapeway can provide 24-hour emergency transportation in accordance with Section 75.1713-1(b).

After considering the aforementioned evidence and testimony, I find that Petitioner has not met its burden by the preponderance of the evidence in showing its proposed alternative method provides a **net gain or at least equivalence in overall mine safety**. Notwithstanding the Four East Portal escapeway being the shortest, most direct route to the surface of the Mine, Petitioner cannot provide 24-hour emergency transportation from the Four East Fan Portal terminus. Cypress Emerald, 920 F.2d at 963. Accordingly, I find and conclude Petitioner has failed to meet its burden in demonstrating its proposed alternative method **at all times guarantees no less than the same measure of protection afforded by the standard**. 30 U.S.C. § 811(c); S. Ohio Coal, 928 F.2d at 1202.

B. Diminution of Safety

In contrast to the "alternative method" standard, the "diminution of safety" standard can be applied with relative ease. The "diminution of safety" standard requires the fact-finder **to ask only whether application of a particular mandatory safety regulation would be unsafe**; it is not necessary to balance the efficacy of the existing rule against the net benefits produced by the proposed modification. In sum, the "diminution of safety" standard **requires a comparison of only the safety level if the rule is applied with the safety level in the absence of the rule**. Moreover, the diminution in safety may not be directly related to purpose of the at-issue safety standard, but instead may result from the safety standard's effect on other aspects of mine safety. See Int'l Union, United Mine Workers of Am. v. MSHA [Quatro Mining], 924 F.2d 340, 344 (D.C. Cir. 1991) (Court affirmed the Assistant Secretary's finding that Section 75.326 resulted in a diminution of safety because compliance with the safety standard, its purpose being to limit contaminants in the air, inadvertently caused dead air flow in the belt entry which consequently created numerous safety hazards including volatile fires, methane accumulation,

risk of explosion, and endangering the escape route); see also Rosebud Mining, 827 F.3d at 1093 n. 2 (the Court hypothesized that a safety standard requiring all elevator shafts to be manually operated because elevators with electrical components may spark and cause a fire at a mine, could very well create an unrelated and unintended diminution in safety. On this basis, the Court explained that, for example, by requiring manual elevators in a mine with an especially deep shaft, the slower movement of a manual elevator could inadvertently prevent miners from surfacing quickly, thus creating an unintended diminution in other aspects of mine safety).

In the present matter, Petitioner asserts the safety regulation codified in Section 75.1713-1(b) results in a diminution of safety because it precludes Petitioner's use of the Four East Portal alternate escapeway in the northern portion of the Mine. Petitioner contends that because the Four East Portal is the shortest, most direct route to the surface of the Mine, it allows miners to more expediently remove themselves from underground mine hazards such as toxic gases, fires, and explosions. Therefore, Petitioner argues that by not allowing it to utilize the Four East Portal as an alternate escapeway, it prevents a ready escape from the Mine, and as a result, creates a diminution of safety. Conversely, MSHA argues Petitioner has failed to demonstrate Section 75.1713-1(b)'s application results in a diminution of safety. MSHA concedes the suggested West Lease Portal escapeway is longer in distance to that of the Four East Portal escapeway. However, MSHA contends Petitioner may pre-stage vehicles to allow for an expedited evacuation out of the Mine. Furthermore, irrespective of the time it takes for miners to exit the Mine utilizing the suggested West Lease escapeway, MSHA asserts that ultimately the Four East Portal escapeway results in a diminution of safety because Petitioner cannot guarantee 24-hour access to emergency transportation.

Thus, in the instant case, the issue remains whether the application of Section 75.1713-1(b) would diminish safety or negatively impact safety in Petitioner's Mine. Accordingly, the undersigned will compare **the safety level if Section 75.1713-1(b) is applied, with the safety level in the absence of the rule.**

On its face, Section 75.1713-1(b)'s application does not appear to be unsafe as it simply requires that Petitioner provide "24-hour emergency transportation for any person injured at the mine." However, like Quatro Mining and Rosebud Mining, application of the Section 75.1713-1(b) standard has the

potential to inadvertently effect other safety aspects at Petitioner's Mine, namely, limiting miners at the Mine from using the shortest, most direct alternate escapeway.

As discussed above, for approximately the past 24 years Petitioner has used as its alternate escapeway the Four East Portal. (CFX-5). Nevertheless, the terminus for the escapeway, that being, the Four East Fan Portal, is inaccessible to 24-hour emergency transportation because there is no roadway for land-traveling vehicles. Furthermore, while the UDOPS helicopter may be able to provide emergency transportation from the Four East Fan Portal area, it is limited by weather conditions and availability due to competing missions, and as a result it cannot guarantee 24-hour emergency transportation pursuant to Section 75.1713-1(b). Therefore, applying Section 75.1713-1(b) precludes Petitioner from "designating" the Four East Portal as an alternate escapeway.

The only remaining Portal that is in existence, and a viable alternate escapeway, is the West Lease Portal escapeway. This escapeway is a greater distance to the surface of the Mine, and contains more overcast crossings and SCSR change-outs. However, the West Lease Portal does provide access to 24-hour emergency transportation. In addition, vehicles can be pre-staged throughout the portal to help mitigate the amount of time it would take to reach the surface. Notably, Mr. Leaming acknowledged at the formal hearing that, if the West Lease Portal was designated as the alternate escapeway, miners may still choose to exit the Mine by way of the Four East Portal.

If, on the other hand, Section 75.1713-1(b) was not applied to Petitioner's Mine, it would be permitted to use the Four East Portal as an alternate escapeway. However, while the miners would have access to the shortest, most direct route to the surface, they would not have access to 24-hour emergency transportation.

Accordingly, I find and conclude that the application of 30 C.F.R. § 75.1713-1(b) does not result in a diminution of safety to the miners at the Sufco Mine. Although its application would require miners to use a longer, and arguably, more arduous alternate escapeway (i.e., the West Lease Portal), the miners would have access to 24-hour emergency transportation. Further, according to Mr. Leaming, even if the Four East Portal is not a "designated" alternate escapeway, the miners are not precluded from exiting the Mine at the Four East Portal in the event of an emergency. On the other hand, without application of Section

75.1713-1(b), Petitioner cannot guarantee 24-hour emergency transportation to the miners.

Given the foregoing discussion and analysis, I find and conclude Petitioner is not entitled to modification of the application of the safety regulation codified at 30 C.F.R. § 75.1713-1(b).

V. ORDER

IT IS HEREBY ORDERED that Petitioner's petition for modification under the **Federal Mine Safety and Health Act of 1977** is **DENIED**.

ORDERED this 23rd day of May, 2017, at Covington, Louisiana.

LEE J. ROMERO, JR.
Administrative Law Judge

NOTICE OF APPEAL RIGHTS: To appeal, you must file a Notice of Appeal ("Notice") with the Assistant Secretary of Labor for Mine Safety and Health within thirty (30) days after service of the "Initial Decision" of the Administrative Law Judge. See 30 C.F.R. § 44.33(a). The Assistant Secretary's address is: Assistant Secretary for Mine Safety and Health, U.S. Department of Labor, Room 2322, 1100 Wilson Blvd, Arlington, VA 22209. Once an appeal is filed, all inquiries and correspondence should be directed to the Assistant Secretary.

At the time you file the Notice with the Assistant Secretary, you must serve it on all parties. See 30 C.F.R. §§ 44.6 and 44.33(a). If a party is represented by an attorney, then service must be made on the attorney. See 30 C.F.R. § 44.6(c).

If no Notice is timely filed, then the administrative law judge's "Initial Decision" becomes the final decision of the Secretary of Labor. See 30 C.F.R. § 44.32(a).