MOUNTAIN COAL COMPANY'S PUBLIC COMMENTS TO THE BELT AIR TECHNICAL STUDY PANEL JUNE 20 – 21, 2007

On behalf of Mountain Coal Company, I would like to thank the panel for the opportunity to provide comments related to the use of belt air to ventilate working faces in underground coal mines. Mountain Coal Company is a subsidiary of Arch Western Bituminous Group, a subsidiary of Arch Coal. My name is Bill Olsen and I am the Safety Director at Mountain Coal Company's West Elk Mine in Somerset, Colorado.

In addition to my comments, Mountain Coal Company supports previous comments to the Belt Air Technical Study Panel by the National Mining Association, the Colorado Mining Association, the Utah Mining Association and their related companies.

The West Elk Mine faces many geological challenges, specifically deep cover, high horizontal stress, faults, spars, and multi seam mining. Based on the current mine plan, cover will reach depths of 2,300 feet. Horizontal stress reaches approximately 3,500 PSI. Fault displacements range up to 23 feet, which also serve as conduits for increased methane and water inflows. Rock spar, typically composed of sandstone, ranges in thickness from several inches to 8 feet thick with a hardness of greater than 15,000 PSI. Our multi-seam mining involves three different seams with approximately 200 feet of interburden between the active seams. Two of the most difficult challenges at West Elk are related to maintaining the methane concentrations at acceptable levels, and reducing the potential for spontaneous combustion throughout the mine.

For the methane history of the mine, room and pillar mining began in the F-Seam, the upper most mineable seam, in 1982. Fortunately, we did not encounter any methane. In fact, it was rare to detect even 0.1%. In 1992 when longwall mining began in the B-Seam, the lower most mineable seam, we encountered large quantities of methane. The majority of the methane was stored in the roof rock and was liberated by caving on the longwall. Methane in the continuous miner sections was typically associated with the faults and spars that we frequently encounter. As mining progressed in the B-Seam, methane liberation exceeded 1,000,000 cubic feet per day, putting us on MSHA's 5-day spot inspection program in September, 2001.

With the increased methane liberation in the working sections, Mountain Coal Company filed a Petition for Modification to allow the use of belt air to ventilate working faces in May 1990. The primary purpose for filing the Petition was to provide an increased air volume to the working face, thereby safely diluting the methane encountered as well as reducing respirable dust and diesel emissions in the section. MSHA approved the Petition for Modification in May 1991 and the Petition was implemented in the continuous miner sections and the longwall section in June 1992. The stipulations in the Petition were fairly close to the requirements of the current belt air regulations, published in June 2004.

Using VNET PC for modeling our ventilation system over the past several years, we compared predicted air volumes in the working sections, both with and without the use of belt air. In a typical three entry longwall headgate, the volume of air provided to the working face is increased by nearly 30% when belt air is utilized to ventilate the working section. In mines with elevated

methane liberation, the additional air provided in the belt entry is absolutely necessary for methane dilution purposes.

We have continuously and safely utilized belt air in every working section since implementation in 1992. Through a combination of vertical degasification holes and a high volume mine ventilation system, we have been able to safely control a methane liberation of between 10 and 20 million cubic feet per day. Without the use of belt air to the working sections, we would have struggled to maintain methane concentrations within the legal limits. From this aspect alone, the use of belt air has actually enhanced miner safety in the working sections.

In regards to dust generated in the belt entry, Mountain Coal Company agrees with a previous statement made by NIOSH when they provided input on MSHA's proposed rule on belt air that stated "... The use of belt air may have a positive effect on reducing dust levels in the face area." In reviewing MSHA's data base on valid operator respirable dust samples that are required to be submitted for designated areas at the section loading points due to the use of belt air, the data base indicates 173 samples were submitted by the West Elk Mine from January 1, 2000 to May 18, 2007. Grouping of the sample results is indicated in the following table:

SAMPLE RESULTS (mg/m^3)	NUMBER OF SAMPLES	PERCENT OF SAMPLES
0.1 to < 0.3	60	34.7%
0.3 to < 0.6	71	41.0%
0.6 to 0.9	25	14.5%
1.0 to < 1.3	13	7.5%
1.3 to < 1.6	1	0.6%
> 1.6	3	1.7%
TOTAL	173	100%

Seven of the initial samples required additional sampling due to exceeding the 1.0 mg/m^3 standard. The average of all five subsequent samples for each sampling location was in compliance with the 1.0 mg/m^3 standard. When reviewing the samples above 1.0 mg/m^3, several were attributed to a damaged transfer point that has since been replaced. Several of the samples were also the result of the belt entry being rockdusted. This has also been corrected by modifying the shift schedule to allow rock dusting of the conveyor belts between shifts.

In reviewing MSHA's data base on samples collected at the section loading points by MSHA, 97 samples were collected during the same time frame. Grouping of MSHA sample results is indicated in the following table:

SAMPLE RESULTS (mg/m^3)	NUMBER OF SAMPLES	PERCENT OF SAMPLES
0.1 to < 0.3	41	42.3%
0.3 to < 0.6	45	46.4%
0.6 to 0.9	8	8.2%
1.0 to < 1.3	2	2.1%
1.3 to < 1.6	1	1.0%
> 1.6	0	0.0%
TOTAL	97	100%

In reviewing available records at the mine, the last citation related to exceeding the designated area dust standard was in October, 1997 when the sample results averaged 1.1 mg/m^3. To Mountain Coal Company, this indicates that belt air can be safely used to ventilate the faces without contributing excessive dust to the working section.

The second difficult challenge at West Elk is spontaneous combustion. This is not unique to West Elk, but is common in the North Fork Valley with several other western mines having similar propensity for spontaneous combustion. The B-Seam and E-Seam currently being mined at West Elk indicate a "moderate" susceptibly to spontaneous combustion with a self-heating temperature ranging from approximately 120° Fahrenheit to 180° Fahrenheit. West Elk has incurred two major mine fires in the B-Seam as the result of spontaneous combustion. One occurred in 2000 with the second occurrence in 2005. As the result of these mine fires, we were out of the mine for a period of approximately 6 months and 3 months respectively. In addition, we have encountered minor heating events in pillars that did not result in mine outages.

The use of belt air at West Elk has allowed us to lower the main mine fan operating points and ventilation pressures. For the air volume needed to control methane liberation, our four main mine fans operate at pressures ranging from approximately 9.0 inches to 10.9 inches water gauge. However, if we were not utilizing belt air in the sections, the fan pressures would have to be increased to over 15 inches in order to maintain an equivalent air quantity in the section that is necessary to control methane liberation. We believe the increased pressure differential, specifically across our pillars and gobs increases the likelihood for spontaneous combustion to occur as the air passes through the natural cleats and fractures of the pillars and within the caved area where we unfortunately have a demonstrated history of spontaneous combustion. We believe that both of our mine fires were the result of significantly changing the pressure differential across the gob area.

To further reduce the likelihood of spontaneous combustion, we have reduced the sizes of our longwall districts, modified our mining plan such that we progressively seal the gob as we mine, and minimize the pressure differential across the gob. As we begin longwall mining in the E-Seam, we hope to further minimize the potential for spontaneous combustion in the gob by utilizing a modified bleederless system.

In addition to safely controlling the methane and reducing the potential for spontaneous combustion, the use of belt air provides additional protection including:

- Early detection, even prior to detection by the AMS (atmospheric monitoring system), of heatings such as hot conveyor rollers. Although this is very subjective for detection purposes, we have had several instances where employees detected such heatings with the sense of smell. Their quick investigation to the cause of the smell may have well prevented an escalation of a heating into a mine fire.

- The AMS carbon monoxide sensors are much better in detecting fires at the incipient stages when compared to point-type heat sensors still utilized in mines where belt air is not used. These sensors have proven to be protective for smoldering and flaming coal-type fires whereas point-type sensors rely on latent fire properties.

- Fire fighting capabilities in the belt entry are enhanced when belt air is utilized. This allows fire fighting to be conducted from the upwind side with the air flow and water flow in the same direction, minimizing the potential for damage to the water supply line. Although air changes could be made where belt air was not in use to provide similar protection in the event of a mine fire, such air changes could have detrimental effects on personnel trying to escape based on their knowledge of existing ventilation practices.

- Use of belt air in the working sections allows for the alternate escapeway to be on intake air, rather than using a neutral or return air split for escapeway purposes.

In closing, I again thank the Panel for the opportunity to provide comments on the use of belt air. Like many other underground coal mines, West Elk has safely utilized belt air for many years. We have been successful in controlling the methane and have reduced the potential for spontaneous combustion. We agree with MSHA, NIOSH, the Advisory Committee, and academia who universally state that belt air can be safely used to ventilate working faces, and in fact state that the use of belt air provides potential enhancement of miner safety. The use of belt air improves the overall quality and quantity of section ventilation, directly affecting methane control, dust control, diesel emission control, spontaneous combustion mitigation, and fire detection and fire fighting capabilities. We encourage the Panel to support its continued use.