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PUBLIC HEARING

ON THE

SAGO MINE DISASTER

May 2, 2006 - May 4, 2006

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May 4, 2006

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West Virginia Wesleyan College

Rockefeller Physical Education Center

Buckhannon, West Virginia

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P R O C E E D I N G S

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CHAIR:
I'd ask us to stand for a moment of silence followed by a prayer and the pledge of allegiance.
MOMENT OF SILENCE
PRAYER RECITED
PLEDGE OF ALLEGIANCE RECITED
CHAIR:
We'll begin. We'll begin with our sixth panel today, and this is the combined MSHA and West Virginia Miners' Health, Safety & Training investigative panel of the Sago Mine explosion, led by Richard Gates and Brian Mills, respectively, who's accompanied by John Urosek and Monte Hieb and Mike Rutledge from the state. And I need to swear --- ask this panel to be sworn in again. Ms. Elkins, please. If you would stand. Thank you.

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WITNESSES SWORN EN MASSE

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CHAIR:
I think, Richard you're going to go first.
MR. GATES:
Okay. Good. Mr. Chairman, panel members, Sago families and other distinguished guests. My name is Richard Gates, and I am an MSHA district manager in Birmingham, Alabama. I'm also the chief investigator assigned to the Sago mine investigation. I'm a mining engineer, originally from a small farming and coal mining community in southern Illinois, where I started my career.
I've worked in mine safety matters for MSHA at field locations throughout the United States, as well as at MSHA's headquarters in Arlington, Virginia. I have over 20 years of mine safety & health experience.
As some of you know, the Mine Safety & Health Administration is a U.S. Department of Labor agency



charged by Congress to inspect mines, promulgate and enforce mine safety standards and to investigate mine accidents, such as the explosion at the Sago Mine.
Under that authority, MSHA conducts interviews, physical investigations and inspections of mines, issues mine safety & health violations and accident reports to inform miners, their families and the mining industry about mine accident investigation findings that will assist in preventing future accidents and in protecting the safety and health of the nation's miners.
We at MSHA appreciate the difficulty of the families and friends of the miners who lost their lives, or were injured in this explosion. I've spoken to many family members and appreciate the concerns and comments that they have expressed to me. I assure you that the MSHA investigation team working jointly with the team from

the West Virginia Office of Miners' Health, Safety & Training, is doing everything we can to determine the root cause of what happened and what might prevent such a tragedy from happening again.

We welcome the opportunity to tell you about our investigation and our progress so far, as well as our plans for the future.

To accomplish this, we have prepared a PowerPoint presentation for you.

As I mentioned, my name is Richard Gates, and I am the accident team leader, a team of individuals, highly-trained individuals and specialists from throughout the United States was put together to investigate this accident. John Urosek, who is on the panel here to my right. Clete Stephan from the ventilation division and tech support. Richard Stoltz, Dennis Swentosky, Joseph O'Donnell, Gary Harris and Russell Dresch.

The team's also been



assisted by the Office of the Solicitor, James Crawford, Tim Williams and Robert Wilson.

The team's also been assisted by many other MSHA engineers and specialists from various districts throughout the country and our technical support groups in Triadelphia, West Virginia and Bruceton, Pennsylvania.

MR. MILLS:

Mr. Chairman, I'm Brian Mills, inspector at large of Region One of the West Virginia Office of Miners' Health, Safety & Training. With me today are Monte Hieb, chief engineer, and Mike Rutledge, safety instructor, Region Four, Oak Hill.

Former director Doug Conaway created an investigation team to represent the West Virginia Office of Miners' Health, Safety & Training. The initial team consisted of Doug Conaway, former director, myself; Monte Hieb, chief engineer; Mike Rutledge,



mine safety instructor; John Scott, electrical inspector, mine rescue team member; John Hall, electrical inspector, mine rescue team member; John Collins, district inspector; Jeff Bennett, district inspector, mine rescue team member; Barry Fletcher, roof control inspector, mine rescue team member, and Robert True, Jr., district inspector.

Additional West Virginia Office of Miners' Health, Safety & Training personnel have been --- have participated in the investigation, are Bennie Comer, electrical inspector; Phil Adkins, safety instructor; Jim Hodges, safety instructor, Region Three; John Cruse, technical analyst, Region Four; Dave Stuart from the Attorney General's office, and James Dean, the acting director.

Mr. Rutledge's initial set assignment was to provide photographic support for the investigation team. He later was



assigned to conduct the interviews of persons called to testify.

Mr. Hieb's primary responsibility is to provide technical assistance throughout the investigative effort. To date, approximately 320 inspection shifts by the West Virginia Office of Miners' Health, Safety & Training employees have been committed to the Sago Mine recovery and the investigation of the accident.

Sago Mine is located approximately 5.9 miles from Buckhannon, West Virginia.

MR. GATES:

Twenty-nine (29) miners were in the mine when the explosion occurred at approximately 6:26 a.m. on January 2nd, 2006. All of the miners, with the exception of one, appeared to have initially survived the explosion. Sixteen (16) miners exited the mine safely, including the One Left crew, examiner and pumpers, who were in various parts of the mine. You can see

the arrows are showing the locations in the mine where the miners were when the accident occurred and how they --- where they were at when they exited the mine.

One miner was found near the Two Left switch in direct line of the forces and gases from the explosion, and the 12 miners from the Two Left crew did not exit but barricaded themselves near the face of the Number Three entry in the Two Left section.

The old Two Left main seals were installed to isolate the active area from the sealed area. This was accomplished by the construction --- or with the construction of ten Omega block seals.

Sealing is and has been a common practice in the mining industry. When mining is discontinued in an area of the mine, mine operators often construct permanent seals to isolate this area.



An explosive concentration of fuel was ignited in the sealed area inby the Two Left section. And these seals were totally, totally destroyed from the forces of the explosion. And as you can see from the arrow, the arrow's depicting the seals blown in an outward direction from within the sealed area.

The investigation activities began on January 2nd, 2006, and some members of the investigation team were onsite and involved in the rescue and recovery efforts. Information and evidence gathering began immediately.

The underground portion of the investigation was delayed due to recovery efforts at the mine. They began on Thursday, January 26th, 2006.

There were several things that had to take place to make the mine safe for the investigation team to enter. Water was pumped, the mine was



subsequently ventilated, explored and examined before the teams, the accident investigation teams entered the mine.

In the time frame between the event and between the underground portion of the investigation beginning, interviews of miners, mine rescue team members and officials began on January 17th, 2006. The last interview to date was completed on April 5th, 2006. The interview of Randal McCloy has not yet been completed, and additionally there will be officials or some of the consultants from ICG will also be interviewed in the future.

To date 74 interviews of 70 individuals had occurred, and we continue to read and research through the several thousand pages of transcripts. As some of you have had, there are a lot of you who have had access to those --- to those documents. You've realized that there is, in fact, some conflicting information contained in the --- in the



transcripts, and the investigation team continues to compare that information to other information that we've obtained from other sources to try to determine what's accurate and what is not.

Of the 74 --- or the 70 individuals who have been interviewed includes 16 of the 17 survivors who were in the mine at the time of the accident. I'm not going to read all of that to you, but there were three MSHA inspectors with inspection activities at the seals, two MSHA mine rescue team personnel, nine industry mine rescue team personnel, medical professional, six members of the West Virginia Office of Miners' Health, Safety & Training, a former miner now employed by Massey who worked on the seals, two miners who worked in the old Two Left section while it was inactive --- while active mining was going on to try to obtain some information from them as to the conditions when the mining was going on

in that area.
The owner of an engineering firm responsible for surveying and mapping, an electrical contractor, and the four individuals who had the --- had the most knowledge and the most exposure to the seal building --- seal building in the old Two Left were called back for additional information.
We'll talk a little bit about a series of tests that we are conducting with the --- in conjunction with NIOSH, at their Lake Lynn laboratory, and it involves construction of seals. And once we started that process, we found that there was, in fact, some additional information, or more questions that needed to be asked to try to determine exactly how those seals were built.
Some of the major issues that the accident investigation team continues to look at were --- and I guess that's one thing I'd like to say



now, is to emphasize --- and I'll reiterate a time or two as we go through today, that the accident investigation is, in fact, ongoing. As I said, we started on January 2nd, we're still analyzing the data that we have, still looking at the evidence, performing tests. So some of the things that we may talk about today, are what we know to date, but that's not any --- not any promise that what we say today won't be affected by --- down the road when we obtain more information or when we've had a chance to digest some of the information that we have now.
As I said, issues concerning the explosion include, what were the activities of the miners, who were they, where were they, what were they doing, where did the explosion start, what was the fuel for the explosion, what was the ignition source, why did the seals fail.
Other issues that the



team continues to look at are the gas detection equipment, including the detectors that were carried by the miners in the mine at Sago, and also the atmospheric monitoring system that was in place along the belt line in the mine. The self-contained self-rescuers that the miners carried, and the overall training that was provided to the miners at the mine.
As you've seen in some of the earlier panel presentations, some layouts of the Sago Mine, and you have been told and have seen that it's approximately two miles from the portal of the mine into the sealed --- where the seals were constructed. And just a little bit farther than that, to the One Left section and the Two Left working section.
Prior to the accident on January 2nd, pre-shift examiners entered the mine to conduct their examination. At approximately 6:00 a.m., the One Left and Two Left crews



entered the mine. And what we have here is a little video clip of an actual mantrip that's used in the mine, it's a battery-powered mantrip that operates on rail. And we'll show it as it enters the mine, just to give the folks who have not had --- not had the experience of traveling underground, a feel for --- a feel for what it looks like and feels like to proceed into the mine.
VIDEO SHOWN
MR. GATES:
The Two Left crew entered the mine at approximately 6:00 a.m., followed by the One Left crew. And there was a slight delay --- a slight delay for the One Left crew, as they had to obtain another mantrip with additional room for a few extra people who were traveling into the mine on that particular day.
And a little animation clip just to show the relation of the two mantrips as they entered into the

mine.
At approximately 6:14 a.m. the First Left crew drops off John Boni at the One Right switch.
At about 6:19 a.m. the One Left crew drops off Pat Boni near the Four belt head.
At approximately 6:26 a.m., the First Left crew arrives at the section switch, which is a device on the track that enables the mantrip to make the turn to go into the section.
Flip the switch, and got back in the mantrip. At approximately 6:26 an explosion occurred in the old Two Left seals, damaging all the seals as well as ventilation controls for approximately 1,000 feet in the Second Left and Two north mains.
Multiple lightning strikes also occurred near the mine around this time. As you can see on the mine map, the ventilation controls that are damaged are depicted with



arrows showing the direction of the forces that caused them to be damaged.
After the explosion, at about 6:28 a.m., the First Left crew gets out of their mantrip and begin to travel outby in heavy dust and smoke.
And what we've put together here is based on the testimony that we have from the interviews, how the miners from the One Left crew proceeded out the mine. And it's using --- again, using the best information that we had available to us.
Crosscut 37, at 6:35 a.m., the One Left crew hears the pager phone, and Owen Jones tells the dispatcher of the events. The One Left crew with the exception of Jones, travels through a door into the primary escapeway where the air is clear and continued traveling outby.
Misters Grall and Abington advance ahead of the group. And while this is going on, some of the miners in the One Left crew have donned



the SCSRs that they were carrying with on their belt, others have not.
The miners continue to travel outby in a group. Again, you can see the timeline or the clock depicted on the lower left-hand corner of the screen.
At crosscut 27 the miners hear a mantrip that's coming in from the portal, and at about 7:05 a.m. all of the One Left crew, with the exception of Misters Grall and Abington hear the trip coming, and traveled through a door at 27 crosscut into the track entry. Misters Wilfong, Boni and Hofer start to take the One Left crew outside on the mantrip. Misters Toler and Schoonover, who were on the mantrip coming into the mine, remained underground to assess the situation.
Mr. Grall and Abington waited at the Number Nine crosscut until the mantrip arrives and then exit the mine in the mantrip with the rest of the One Left crew.



The One Left crew with Mrs. Wilfong, John Boni and Hofer continued traveling outby, arriving at the surface at approximately 7:30 a.m.
At about 7:50 a.m. Misters Wilfong and Hofer re-enter the mine on a mantrip with supplies. Additional SCSRs, additional gas detectors and supplies, as far as curtains, spads, nails, hammers to assist --- to assist, as I say here.
At 8:10, they come back into the mine with these supplies and meet, Toler, Schoonover and Jones at 32 crosscut. They repair regular --- repair stoppings with curtains and proceed inby with the mantrip to the 42 crosscut.
At the 42 crosscut, Wilfong, Hofer, Toler, Schoonover and Jones disconnect the batteries of the mantrip and travel into the intake with supplies. They repair stoppings with curtain and start methodically traveling inby in the intake entries,

repairing the stoppings between the intake and belt as they travel inby. As you can see, depicted with the single black line, as the miners are traveling inby repairing the damaged ventilation controls. On the way inby at 49 crosscut, Toler crosses into the track entry and enters into the belt entry to retrieve the mine phone at the belt head. He observes a reading of approximately 700 parts per million carbon monoxide in the track entry. Mr. Toler extends the phone line into the intake entry and re-attaches the phone. Wilfong, Hofer, Toler, Schoonover and Jones make it to 57 crosscut by hanging ventilation curtain. Misters Jones and Hofer are sent outby to retrieve more supplies and to check for stoppings or controls that may have been missed on the way in. One of the issues with



using the animation is, if you --- it's hard to stop and start. If you get a little ahead of yourself, you have to go back and run through a little --- run through some things again. So I apologize for the repetition. As I mentioned, once they arrived at the 57 crosscut, Jones and Hofer are sent outby for more supplies and to check for controls that may have been missed on the way in. Toler, Wilfong and Schoonover attempt to make it to Number 58 crosscut, but are unsuccessful due to the amounts of smoke and high levels of carbon monoxide. They try to contact the Two Left crew for about 20 minutes by shouting and yelling and received no response. Then they make a decision to leave the mine by the intake entry, because of the dense smoke and carbon monoxide inby the 57 crosscut. There were also some discussions about the possibility of a



second explosion occurring, and the problems that they were having trying to clear the smoke in that area. So the decision was made to exit the mine. And at approximately 10:35 a.m., Toler, Wilfong, Jones, Schoonover and Hofer exit the mine. Just to give you an idea of what we were talking about or what I was talking about when we showed the miners going --- proceeding inby and fixing or dressing the ventilation controls, what you can see in the upper left-hand corner are the permanent stoppings, and this is an actual picture from inside the mine that shows --- shows the damaged stopping. This particular stopping was constructed of concrete block, and you can see, as Chris is showing with the cursor, the piece of the stopping that's left in place. And the blocks that have been displaced by the forces of the explosion. When the gentlemen were



proceeding inby, they were repairing or attempting to repair this damage by installing curtains. And just to give you an idea, I mean, the curtains are a temporary means of directing the air and can be used in temporary situations. So where did the explosion start? In order to determine that, the investigators continue to look at the activities of the miners, as we just showed earlier, who were they, where were they and what were they doing? The physical evidence that was gathered inby and outby the sealed area, the testimony from the 70 persons that were interviewed, the likelihood of fuel for the explosion, both inby and outby the seals, as well as the likelihood of ignition sources, both inby and outby the seals. And one thing, as I mentioned early on in the first couple of slides, that, in fact, the investigation did begin on January 2nd.

We didn't get into the mine until January 26th. And in the interim, there was a lot of --- a lot of speculation about what had happened, a lot of media attention and a lot of --- I guess a lot of unconfirmed reports about things at the mine.

One thing that myself, as well as all the accident investigation team members, we made a commitment to ourselves not to be unduly influenced by some of the speculation that was there and form our own opinions based on the observations that we made in the mine, and based on the information that we had gathered firsthand.

The results of the investigation indicate that the explosion was initiated inby the seals in the old Two Left section. How do we arrive at this? We showed a slide earlier that, in fact, all of the seals were blown in an outby direction, indicating that the forces came from within. That methane accumulated inby



the seals, and that any methane accumulations that may have occurred outby the seals would have been diluted by the ventilation currents in the mine.

What are the possible sources of fuel for the explosion? Methane and coal dust are the two. Methane is a colorless, odorless gas that's lighter than air and explosive in methane air concentrations in 5 to 15 percent.

Coal dust is very explosive, and can, in fact, propagate explosions when suspended. The final two seals of the ten were completed on January --- or excuse me, on December 11th of 2005. For the next 22 days, methane accumulated inby the seals. And we are continuing to evaluate the accumulation in the sealed area.

One bit of information that was necessary to determine the percentages, or the concentrations of



methane was to determine the volume of the area inby the seals. And this was done by taking survey data that was obtained while the mining was going on in the old Two Left section, as well as survey information that was taken during the investigation.

As we had talked --- and some of the other panels had discussed, the parts of the old Two Left section were bottom mined, and this, in fact, made determining the volume a bit more difficult, as some of the areas had accumulated water, some were up to probably 18-feet high.

The volume of the sealed area was determined to be a bit over four million cubic feet.

Methane --- the methane is continuing to be evaluated. We continue to look at the examination records of the concentrations that were in the atmosphere while mining was occurring inby the old Two Left seals. We looked at the gas wells that were



in that area. Those have been discussed in some of the earlier panels to see if they could have contributed to the methane accumulation.

And the team also conducted two liberation investigations of the sealed area. One on February 7th through the 9th, and the second on March 2nd and 3rd. And the preliminary information from those two investigations indicates a daily liberation rate of approximately 14,000 cubic feet.

And just to put this in a bit of perspective, I guess, the mine is --- as you heard earlier, averaged approximately 100,000 cubic feet per day liberation. The area inby the seals we looked at is approximately 14,000. Some mines throughout the country, in some of the gasier coal seams have a tendency or do, in fact, liberate methane in excess of 10 to 100 times this liberation. So just to put it in a bit of perspective, as I

mentioned, some mines may, in fact, liberate more than ten million cubic feet of methane per day.
Coal dust as a contributor to the explosion, we looked at the testimony and information that was gathered during the interviews, looked at the mine records while mining was ongoing in that area, then we conducted a mine dust survey to determine the incombustibility content in areas inby and outby the seals.
An alcohol coke test was also --- was also completed, and results indicate that the flame from the explosion ended somewhere in the vicinity of the old Two Left seals.
To kind of summarize the --- summarize the fuel category, we do have the information from the liberation studies, and looking at that as well as the volume inby the sealed area does indicate the potential for explosive mixtures. And also indicates that methane was the primary fuel for



the explosion, although coal dust may have, in fact, participated in the event.
The investigation, as I mentioned, determined that the explosion was initiated inby the old Two Left seals, and that the forces within the sealed area all appear to propagate in directions from an area near spads 4010, 4011, 4047 and 4048, as you see depicted by the red circle in the arrow.
MR. HIEB:
The square pans, which are also called spider plates are commonly used for supplemental roof support. As shown here, they are basically a thin metal plate that provides additional passive support to the area immediately around the bolt. They prove to be an important tool, as well, in attributing the blast forces back in the various areas behind the seals during the explosion.
A typical configuration



of this roof support system at Sago Mine consists of a roof bolt used in conjunction with an eight-inch bolt plate, and a 16-inch square pan or spider plate. Roof mesh, as shown here under the spider plate is also frequently used, but primarily limited to the belt entry, the track entry and the primary escapeway.
The direction and intensity of the spider plate and bolt plate bending assisted the flames and forces, investigation team in interpreting the direction and intensity of the blast forces.
You can see the bottom picture has a bent corner, and some of these were bent less, some were bent more. So from that, you can infer velocity of the blast that came by this plate, and also, you can infer the blast direction. This slide shows one bend, many plates showed multiple bends. By looking at the sequence of bending and which bends were over the



top of other bends, you can reconstruct a sequence of blast forces.
Because this is rather subjective, care had to be taken to not base too much on one isolated plate. So populations of plates were examined together to make judgments about forces.
Other information to interpret the patterns of a single and multiple force direction were used, such as pockets of compacted coal and soot and clay pins and spaces between pans and the roof.
As discussed yesterday, the deformations and deflections of L-shaped steel belt hangers were recorded in seal location --- selected locations in and around the sealed area during the investigation in order to make some empirical determinations about the degree of bending, and estimate pressures and velocities of forces.
The illustration here was in the Number Five entry in the vicinity of blown

Omega seal Number Six, and includes both a plan view and a profile view of the orientation of the belt hangers showing the three dimensional information necessary to calculate four spectors and assess the amount of inflicted structural deformation.

Well, I would just recognize that this data does not provide 100 percent reliable information. It does serve its purpose in helping quantify and document the direction and magnitude of forces in a way that when viewed statistically can be used to supplement our understanding of the sequence and magnitude of explosion forces.

After this sample study area was compiled and distributed, ICG kindly provided the survey personnel and equipment necessary to continue this work. And so this mapping has been performed over most of the remainder of the sealed area where the belt hangers were present.



Other clues used to determine blast direction and magnitude include wire mesh breakdown areas. And the severity of damage in post-explosion geometry of ventilation controls, such as this cinder block stopping.

MR. GATES:

The minimum temperature to ignite an explosive methane air mixture is approximately 1,000 degrees Fahrenheit. It can easily be ignited by weak electrical spark, frictional spark, heated surface or an open flame. And I know one of the panels yesterday mentioned that the amount of energy required to do this is approximately .3 millijoules. Just to put that .3 millijoules in perspective, it's --- .3 --- you can generate .3 very easily by --- with a person walking across carpet on a dry day. The static electricity that may be generated due to that walking across the dry carpet. This would put the .3 millijoules into



perspective.

Lightning strikes on the surface may have been conducted under --- conducted underground through the mine electrical system, including the high voltage cable, the equipment and structures. It would also include the conveyor belt, the mine track, as it proceeded from the outside to the portal inby to Two --- a stopping just outby the old Two Left seals. The surface mine telephone communication, gas wells and interconnected piping between the wells, the mine watering system and also, as was discussed yesterday, the possibility of lightning proceeding through this track.

Again, as we discussed in great detail yesterday, it was a possibility of lightning as an ignition source. And one of the other sources that the MSHA and West Virginia investigation teams continue to explore is a possibility of roof falls as an ignition source to the event.



Other ignition sources were looked at early on. As I mentioned, we came into the investigation without any preconceived notions, started looking at the equipment starting on the surface, and as we worked our way into the mine, examined all of the electrical equipment, all of the mining equipment as we moved in to determine whether or not it may have had an impact on the event.

The two sources that we continue to investigate are lightning and roof falls.

MR. HIEB:

Okay. What I'll briefly address is the information we have about the possible role of lightning in the explosion. This information is preliminary and is being shared at this time at the request of the parties present here today. It is not meant to exclude consideration of other ignition scenarios.

As discussed earlier, the explosion appears to have originated in a particular part of the sealed area. And this is some distance back from the seals themselves. This area is approximately under 300 feet depth of cover. That's distance to the surface, and almost two miles away from the closest known lightning strike.
The primary questions which beg answers are, number one, what makes lightning a persistent suspect in the explosion. And two, how could lightning enter the mine?
The first piece of evidence is the timing between the explosion and the lightning. And this is the most important one. On this illustration the --- on this illustration, a little note tag pointing to the red line is pointing at the Omega seals. The big tag is pointing to the location of the CO monitor at 57 block. The CO monitors are linked to a computer outside in the



mine dispatcher's office.
The CO monitor log shows that at 6:31 and 31 seconds on the morning of January 2nd an alarm tripped at a CO monitor at this location. Within seconds, this monitor and others nearby red lined at 107 parts per million then went offline.
The explosion is believed to have occurred at the beginning of this sequence. As part of our investigation, the accuracy of the clock for the CO monitor computer was tested, comparing it to a GPS clock. An independent consultant was hired to perform this work on January 14th, 2006. At this time, a discovery was made that the computer clock was running four minutes and 56 seconds fast. This places the actual corrected time of the 51 part per million CO spike at 57 block at approximately 6:26 and 35 seconds on the morning of January 2nd.
And independent analysis



of a subtle seismic event recorded by Martin Chapman, as it was mentioned yesterday of Virginia Tech, was from the seismograph station near Morgantown, West Virginia. This was also pegged through the GPS clock time run by the folks that maintain that piece of equipment.
And it apparently showed a disturbance, which could have been from Sago between one to five seconds later. Next slide.
At least two, perhaps three lightning strikes were recorded by companies that examine and document that information near Sago Mine at that time. These strokes are shown in this slide as locations one, two, three. Next slide.
The first stroke was recorded at 6:26:35.522 seconds, and is located approximately 1.2 miles south of the Sago Mine portal. It registered a positive 38.8 killiamps on the National Lightning Detection Network,



as interpreted by Vaisala. Next one.
The second stroke occurred a fraction of a second later, approximately one mile northwest of the Sago Mine portal. It registered a very large 101 killiamps on the National Lightning Detection Network.
The third strike location was recorded by the U.S. Precision Lightning Network, and interpreted by WeatherBug at a location approximately one half mile south of the Sago Mine portal. Its timing appears to be precisely the same as strike number two, and very close to the same magnitude or amperage.
On January 6th, 2006, physical evidence of a direct lightning strike was discovered and documented at strike location number two. This is the large 101 killiamp hit. A large Poplar tree showing obvious lightning damage was found very close to coordinates supplied by Vaisala, and was quickly located in the field using

a handheld GPS unit. This is a photograph of this tree taken on January 6th. A spiral gash runs from the base of the tree to what is left of the top of its trunk. A debris field of wood, which splintered away from this tree strike covers a radius of approximately 150 feet.

No physical damage due to lightning has been found at strike, locations one or three, despite multiple field searches. Because the time corrected 51 part per million CO monitor event is so close to the time of the confirmed lightning strike, literally to the nearest second, we found this circumstantial evidence significant and difficult to dismiss.

Subsequently, an inventory of utility and transmission lines was begun to determine if metallic conductors exist between the confirmed lightning strike and Sago Mine, specifically, the sealed area at Sago Mine.



But with the cooperation of the overlying oil and gas operators in the area, we began compiling a map of the network of active gas lines and all known gas wells, both active and abandoned, in the area to determine if any connection exists with the Poplar tree strike.

While several active and abandoned gas wells occurred near the sealed area, there are no casings known at this time which actually penetrate the mine works. So far no other boring, such as coreholes, boreholes or water wells are known to have penetrated into the sealed mine works at the time of the explosion.

We have also looked at conductors leading from the vicinity of the Poplar tree to the Sago Mine portals.

This is the 12.4 killivolt private power line, leading from the substation at French Creek to the preparation plant and Sago Mine.



This line passes within 300 feet or so of the Poplar tree.

Likewise, a public telephone line passes very near the Poplar tree and extends to the mine office at Sago Mine.

Investigations are ongoing into the possibility that voltage or current may have entered the electrical conductors or grounding systems of one or both of these utility lines, either as A, the result of direct transfer of electrical energy from the lightning strike, or B, the result of induced electrical energy due to the magnetic flux of the lightning discharge in close proximity.

Once at the portal, this electrical energy could have been transferred into the mine via belt structure or track. This, too, is being investigated at this time.

The possibility that voltage may have entered the mine directly over the sealed area by other



means is also being investigated.

Wire roof mesh is used at Sago Mine as a supplemental roof support in the track, belt and primary escapeway entries. However, at the far end of the sealed area, wire mesh was installed universally over a sizeable area, whereby the roof and all entries and all crosscuts were covered in continuous wire mesh with a few exceptions.

This represents several miles of contiguous eight-gauge wire bound together with the supporting roof bolts, plates and pans in a sizeable concentrated metal mass.

Areas inby the seals where the roof was wire meshed are shown here in green and blue. The blue shaded area at the top end was under water at the time of the explosion.

A dewater pump remains abandoned at the end of this water pool. Approximately 1,350 feet of one-inch cable runs from this pump outby

along the old track entry where it terminates at a cathead or coupler near spad 4011. Where this cable terminates at the coupler is in the vicinity of where the explosion is believed to have originated. Because the pump control box is believed to have been underwater at the time of the explosion, the cable is likely to have been electrically common with the wire mesh at that time. It is currently being investigated, whether this arrangement of wire mesh could have been an attractive target for stray lightning penetrating the earth through geologic fracture zones, or perhaps by an abandoned well casing that so far has gone undetected. Alternately, the possible role of electromagnetically-induced currents and voltage into the wire mesh, pump and cable remains to be investigated.



In addition, we continue to evaluate the other potential ignition causes besides lightning.

MR. GATES:

An anomaly in the mine roof was discovered near spad 4010 in the sealed area. And this is the area where the direction of forces indicate it could have been near the source of the event. On two different occasions, samples from this mine anomaly were removed from the mine roof and sectionalized for analysis. And this was discussed a little bit yesterday from one of the other panels.

The MSHA analysis of the pin section samples that were collected, revealed fossil-like characteristics and no signs of re-crystallization, or any other effects that could have been contributed to lightning or could have contributed to the event. And I know



there was a picture that was shown yesterday, and just another characterization of that area.

MR. HIEB:

As indicated, roof falls are still under investigation. And indicated here are a cluster of roof falls that occurred at different times. Actual timing is rather subjective, and a matter of interpretation, but these are currently under review.

MR. UROSEK:

I'd like to talk to you a little bit about the seals and some of the work that we're conducting in that area. As we all know, the seals failed catastrophically in this event. A little history is that the federal regulations do require that all areas of a coal mine either be ventilated or sealed. The regulations also state that to seal an area off, it can be constructed of solid concrete blocks. And it specifies in the



regulations how that method can be accomplished. It also states that there's alternative methods that can be used to seal up an area. And in '92, a program was started with the Bureau of Mines to actually evaluate different methods, alternative methods that are acceptable. And this was conducted through a series of tests at the Lake Lynn Mine of these various different types of seals. And it was actually tested with explosions to actually determine how these seals would hold up. The actual 40-inch Omega block seals that were used at the Sago Mine were tested as a separate program in 2001 as part of a rapid sealing program developed by NIOSH. Now, where did the 20 psi come from that we currently use to test these seals? That's based on research that was done by the U.S. Bureau of Mines from back into the early '70s and

previous to that. They provided the guidance, and that was the information that MSHA used to make the determination that the 20 psi was appropriate.

It's also based on explosion experience. Explosions that had actually occurred within the mining industry since that time in the investigation of those accidents.

Some of the things that we're doing, we have a number of plans to actually determine what happened to these seals. We're actually going to conduct laboratory analysis of the blocks, not only from the Sago Mine, but from blocks --- Omega blocks located at the various plants at various mines throughout the country. We're going to do compressive strength testing and other evaluations of those.

We're going to do an analysis of the mortar joints, especially the mortar at the bottom where the seals were first started,



along the floor. We're going to be doing some further testing in the mine and evaluating that.

A major focus, however, will be on full-scale explosion testing. Now, some of the things that we need to determine by this explosion testing, did, indeed, the explosion pressure at the Sago Mine exceed 20 psi and cause the failure. Were the seals properly constructed? Were the construction materials used to build those seals made of substandard materials? The cribs that were located inby the seals, did they contribute to the failure? Or a combination of any these are what we're looking at.

Currently we've conducted one of the tests at the Lake Lynn Mine. It was conducted on April the 15th. The first test was primarily to retest the Omega block seal that was first approved in 2001 in the same manner that it was approved then.

That test is complete,



and it shows that that seal, as tested in 2001, did pass the test in 2006. It was exposed to a pressure of 23 psi, and it did pass the leakage test prior to that.

As part of that, a second seal was also tested. We called it a hybrid seal. Some of the construction methods used at the Sago Mine were different than was specified in the 2001 approval for this type of method. We used some of those differences in this test, but we did not use all of them.

As we were constructing the hybrid seal, we learned a lot about how the seal could be constructed and the way it was constructed at the Sago Mine. So what we did is, we went back and we re-interviewed some of the folks that actually built that seal to get specific information, or more specific information on how those seals were constructed.

Future tests will include



all of the methods that we were able to obtain from those interviews. We hope to have the next tests scheduled for some time in May.

It's going to take a series of tests to complete this. And after each time we build the seals, we need to let the seals cure for a period of time before we do the tests. So we anticipate that the testing program is going to take throughout the summer, depending on the results of the information we get from each test.

One of the other areas that we're looking at is some of the gas detection equipment, and self-contained, self-rescuers. We're looking at the handheld gas detectors that were used by the miners. We've done some testing on that to date, and we continue to do more.

We're looking at the AMS system that was used at the mine. We're looking at some of the information that's going to come out on the

printouts from there, and we're also looking at the computer, itself, to get some of the data to better understand the results of some of that information from that system.
We're also looking at the SCSRs that were used by both the Two Left crew and the One Left crew. As you all know, the information provided by Mr. McCloy in his note to the families has provided us a lot of good information.
We're looking forward and hope to soon be able to interview Mr. McCloy and get additional information so that we know more about exactly what happened to these SCSRs.
We did do some testing to date on the SCSRs. The testing that we've completed so far does indicate that they did react when they --- they did start when the miners tried to do that. Exactly what happened, we don't know at this point. We need to talk to Mr. McCloy and find more about that.



We know that a percentage of the chemical that's in these units were used. Some of them as low as 25 percent, some of them as high as 72 percent. We're continuing to evaluate that. We're continuing to evaluate what effect and how long these self-rescuers last when they're under heavy usage and when they're idle.
The map that you see here is some of the information that we have of the self-rescuers. You can see where the self-rescuers were deployed where we found the 12 cap --- the tops and the bottoms for those rescuers. It indicates most likely where they did start to put the SCSRs on.
We also know that they had the self-rescuers with them at the barricade. So some of the questions we need to answer is, is did they operate, how did they operate, what problems did they have. And again, Mr. McCloy is going to be a key to understand that.



Once the information is obtained from that, then we'll be able to take the proper steps as far as these SCSRS.
One of the things we are going to do in the future, next week, MSHA and the State of West Virginia will initiate a joint program to ensure that all miners are properly trained in the procedures for donning and exchanging SCSRs. They're going to take a special focus in this effort during their regular inspection process and make sure the SCSR training requirements are implemented. West Virginia will be doing that in the State of West Virginia, and MSHA will be doing that across the United States.
We will also actively monitor coal mine operators. Their testing of the functionality of these SCSRs to make sure that they are doing the testing that's required, and to make sure that they are checking them to make sure that they're not too old,



or that they are working properly. So we're going to be doing that. But we do anticipate doing future things, depending on what we learn from Mr. McCloy.
As Richard said, our investigation's ongoing. We have much work to do. We have much work to determine the cause, and especially the failure of these seals. We continue to look at the ignition sources. We have some more interviews to do.
We'll be evaluating the evidence we do have to date and analyzing that data. Thank you, Mr. Chairman.
CHAIR:
That completes your presentation?
MR. GATES:
Right. That completes the presentation. We'll be happy to address any questions that the panel may have.
QUESTIONS OF PANEL SIX

CHAIR:
Just one question for Mr. Hieb. Could you speak to the anomaly in the roof? I know you're a fossil man. With your expertise, can you address that as well?
MR. HIEB:
Yes. We had looked at that, and the appearance of it was something that warranted looking at it as hard as we have. It has been examined both from the standpoint of materials testing and from the standpoint of, is it possibly a track for plant fossils.
I can't speak to the results of the first testing, because that's not been made available to us yet, but as to the preliminary information regarding its association with the plant fossil, there does appear to be an association with the carbon films that are found on the surface of the anomaly, with what's consistent with what you would find



with a plant fossil. And that's preliminary. We've not seen a report on that yet. But that's the status on that currently.
CHAIR:
What's the plant that you suspect it might be?
MR. HIEB:
It appears that Sigilaria is the primary correlation that it would be placed with, and that's due to a couple of reasons. One is the morphology of its long, straight, parallel thoroughs that have in some places a suggestion of equally spaced circular structures that resemble plant scars. That's consistent with the morphology of the Sigilaria.
In addition, we have confirmed Sigilaria plant parts in the roof of other locations within the sealed area.
CHAIR:
Thank you. Questions from the families? There's a request



for a brief break, which we'll do --- which we can do. We also brought up an Omega block, which people can examine here. This is from the Sago Mine. ICG sent it around, and we can take a look at it during the break.
SHORT BREAK TAKEN
CHAIR:
We have a demonstration today with the Omega block. ICG sent in one of their Omega blocks. Dan and Russell, if you could pick it up. It is --- the advantage that it has over cinder blocks, obviously, is it's much lighter and easier to cut and to deal with.
A disadvantage is that the --- it tends to break off easily, as was done by Dan here using his strength. But what it leaves is a priable or a rough edge. And that --- the problem there is that you --- it's more difficult to get a seal and to get a --- when you put the bond on, it's more difficult to get that sealed



area, thus permitting on occasion, the block to allow methane to go through. And that's a concern that you have when you use Omega block types.
And all seals breathe in and out and that's expected when you have barometric pressure change. That's one of the reasons, for example, that -- Mr. Roberts referred to the NIOSH report yesterday. And that is --- they asked --- in mines that create a lot of methane and have experience with lightning, they asked for heavier amounts of blocks to be put in and larger numbers of blocks to be put in. And so that you have with this and then a bond coating that will coat the front --- on the front and the back and between the blocks as well as on the floor.
And on top of this at the --- at the mine roof, there is a, what do they call it, fly board that's put in to make certain that you close that area up between the seal, between the

Omega block and the roof itself. And that has to be also bonded and glued or put together --- not glued but put a seal on it. Did I miss anything?
UNIDENTIFIED SPEAKER:
How about the way they are installed?
CHAIR:
Well, the way they are installed, I couldn't address here, but the installation is --- follows a plan that is submitted by the company and that needs to be followed pretty rigorously in order to make the blocks work because of some of these limitations on it. All right.
UNIDENTIFIED SPEAKER:
One family member is concerned about the crack that's in the block and would like that to be pointed out.
CHAIR:
Identify yourself on the record.
MR. MEREDITH:



My name is Dan Meredith, the son-in-law of Jim Bennett. When these blocks are built, nobody knows how many cracks or how many bubbles are going through these, because they're not pressure checked. When there's a crack going from one side the other, when these guys are putting these together, when they're only putting the mortar on with bare hands, on the face and sides and whatever, they're just throwing it on there, what's keeping that methane gas from pushing all the way through and knocking out what mortar they had on there?
MR. UROSEK:
I think one of the things that we mentioned that we're looking at, we actually have a number of these blocks. We are going to be doing some testing in that area to determine, you know, what happens with these blocks. And we do --- we have heard similar stories to the one that you just mentioned, and that's part of the



evaluation we're undergoing.
CHAIR:
Thank you, Russell and Dan. and we'll leave the block up for the remainder of the day. And now what we'll do is, Celeste can you make a block part of the record? That was a joke. In order to coordinate the timing between the seismic clock in Morgantown and the company clock of the CO monitor at 57 block, was the seismic clock tested using the same atomic clock device or method? I'll direct that to Mr. Hieb.
MR. HIEB:
The clock was not re-correlated by us, but it is maintained by the West Virginia Geological Survey and I believe it's actually a station that is owned by the U.S.G.S. And I did contact somebody in Denver to confirm that it was on GPS clock time, which is universal time, the same time as atomic clock. And so the assumption was made that they were



properly maintaining their clock to GPS time. CHAIR:
This question is directed to MSHA. Were there other miners that were interviewed that reported a failure of their SCSRs? And how many actual SCSRs that were in the mines were tested following the revelation that Mr. McCloy made?
MR. UROSEK:
We did test other SCSRs that, you know, were provided to the mine. The exact number escapes me at the moment, but some of those, on the testing of those and also from the information we received from the interviews, that the SCSRs that were deployed, other than what we've heard from Mr. McCloy did work and properly, and they didn't have any problems. We did hear yesterday the information on the SCSRs during the rescue attempt and the air and the concerns and problems that they had.
MR. GATES:

I think, Davitt, I'll add just a little bit to John's response. If I recall correctly, I do think that there was a --- one gentleman from the One Left crew who donned the SCSR. The gentleman had false teeth and said without his teeth that he did have some difficulty with the mouthpiece. I think I recollect that from one of the --- one of the transcripts. There were also several --- several comments from miners from the One Left crew who had donned their SCSRs, who indicated that they worked, worked as they were designed to and that they had no problems with them. I do recall that from some of the --- some of the transcripts as well.

CHAIR:

And a follow-up to that with regard to that, how many --- subsequent to Mr. McCloy's testimony --- letter, how many SCSRs have been tested in the field?

MR. GATES:



I'm not sure what you mean by tested --- tested in the field. I guess I can't --- I guess I could only answer that, that I really don't know how many have been tested across the country. As John had mentioned to the Panel and to the audience a little earlier, there are, in fact, some things ongoing jointly with MSHA as well as the State of West Virginia and other states to take a closer look at the functionality of the SCSRs as well as some of the requirements of the new ETS.

CHAIR:

I think the --- maybe you could put that in record --- question in the record, to see how many of the devices actually physically have been tested, those that are in mines, that we tested a number of those devices to get a sample of to --- so as to address Mr. McCloy's statement. Okay.

Mr. Hieb, did you consult or compare notes with Mr. Sawyer's for



the --- for your report?

MR. HIEB:

No. No, I did not.

CHAIR:

Thank you. This is for Mr. Gates. Please explain the pumping of water before the explosion occurred and how much water was pumped after the explosion was ---occurred. That is the pumping, I think, that we're talking about in the sealed area, the pumping of water process and then how much water was pumped and where was it pumped to at the --- after the explosion as well.

MR. GATES:

I guess I would answer that prior to the event on January 2nd, I really --- I really could not tell you how much water was, in fact, being pumped from behind the --- behind the sealed area. You know, prior to --- prior to the in-mine investigation --- portion of the investigation beginning, there were boreholes that were drilled.



And some water was, in fact, pumped from those boreholes. As far as how many gallons were --- specifically were pumped, I couldn't answer that question.

I do know --- and I guess I'll follow up a little bit. I had understood that there was some concern about how was the water behind the seals or behind what had been the seals planned to have been dealt with as it accumulated. And the regulations require that each set of seals contain a water trap. And if, in fact, the water had began to accumulate behind that set of seals would come out through the water trap and then I would anticipate that the company would have installed a pump --- pump around that area to address the water --- address the water. But I --- that's speculation on my part.

CHAIR:

Thank you. Is that a sufficient answer? Was there pumping -

-- after the item was sealed, to your knowledge, was there pumping from the outside to de-water the area, after the area was sealed?
MR. UROSEK:
To our knowledge, there was no pumping after the area was sealed.
CHAIR:
Okay. Now, let me ask Mr. Hieb, and as well, John, yourself, the pump that was described, I believe you described it, Mr. Hieb, the de-watering pump that is in the sealed area currently, that has not been retrieved, then you describe a cable that goes from that water pump, out to an area close to where we believe, or you believe, the explosion occurs. Can you talk a little bit about that, and perhaps John as well, what that pump was for, how that pump was connected to power and what is the condition of that cable and the pump as far as you know?



MR. HIEB:
Okay. The pump was originally for de-watering that part of the mine, that's the lowest elevation in the sealed area, which is the reason the pump was set there. There was no power to it. The power was all withdrawn before the seals were constructed. The pump cable with the coupler was just at --- the cable ran from the pump approximately 1,350 feet to the coupler and terminated there. There was no power connected to it. The condition of the cable is it's broke in three places. These three breaks appear to be where it was not submerged under water. In other words, it was in open air at the --- believed to be in open air at the time of the explosion. And the condition of the pump is something we haven't ascertained at this time, because it's partially submerged and we have not been able to retrieve it yet.
CHAIR:



Did the breaks in the cable appear to be prior to the accident or post accident?
MR. HIEB:
The preliminary evidence from the forensics done on the cable ends is that they were pulled apart longitudinally in a way that may have been caused either by equipment before the explosion or could have been pulled apart during the explosion itself.
CHAIR:
Mr. Hieb, I know you to be a person that doesn't engage in speculation. But for us, is there a possibility that this pump and the cable had some connection to this explosion?
MR. HIEB:
Because of the circumstantial evidence of the termination of the pump cable at the location of the explosion, or that the explosion is believed to have occurred, and due to the large amount of



continuous metal, both in the roof mesh, the plates, the bolts, all connected together into one mass and the fact that we also have some evidence to believe this was all common to the pump and cable at the time of the explosion, we're --- we can't rule it out as a possibility. And it was brought up today because it is one avenue that we're seriously investigating.
CHAIR:
You explained that the cable was common with the wire mesh. Can you explain that?
MR. HIEB:
The cable is connected to a control box several feet before it -- - the cable runs from the control box to the pump. That control box was hanging close to the roof and being submerged at the time of the explosion, both the wire mesh in that location, the pump and the control box would have been underwater. Because of

preliminary water samples that we took indicated conductivity in the water due to dissolved minerals, and due to the preliminary forensics indicating that there was water in the control box, and also testimony from one of the inspectors that was affiliated with recovery of that control box, we believe that any electrical charge or induced charge to the wire mesh would have been common through those conduits with the cable, because ---. I left out one part, the pump control box does not have gasket, as most of them do not, so it was not waterproof.

CHAIR:

And were the water ---
you said that water samples were taken from the area near the pump, and water samples were taken from the area in the rock itself. And could you tell us what the results of those were?

MR. HIEB:

I don't have those in front of me, but I believe the relevant



numbers are the specific conductivity, which was between 400 and 460.

CHAIR:

Mr. Hieb, in law school they didn't teach me much about what the means. Could you put that into context?

MR. HIEB:

Yes. Those units are basically the inverse of ohms, so if you wanted to convert that to resistivity, I may be incorrect about that, but it would be similar to just taking the reciprocal of that number to determine the resistivity.

CHAIR:

Is that highly resistive or low resistive?

MR. HIEB:

It's fairly low resistive.

CHAIR:

Can we get copies of those test results?

MR. HIEB:



Yes.

CHAIR:

Thank you.

MR. DEAN:

Could I ask MSHA to please bring up that slide with the pump box shown, and the cable?

CHAIR:

Mr. Hieb, while they're doing that, how big was this pump and how much did it pump and where was it supposed to pump to?

MR. HIEB:

I'm afraid I don't have those details. I have not seen the pump, and I am not familiar with where the discharge of that pump was.

CHAIR:

John, do you know?

MR. UROSEK:

No, I don't.

CHAIR:

Okay. Where was it supposed to pump to? I mean, what is supposed to pump out --- out of the



mine or ---?

MR. HIEB:

Yes, its purpose would have been to pump water through the mine works to a main discharge line that would lead outside.

CHAIR:

And back through the mine works?

MR. HIEB:

Yeah.

CHAIR:

And it's down in the bottom where the water would be expected to collect, in that area; correct?

MR. HIEB:

Yes.

CHAIR:

Do you intend to seek out and extract the pump from underground?

MR. HIEB:

We made the attempt at one point and we may make another attempt later, but so far that pump

remains at the face.
CHAIR:
I know that Mr. Urosek is an expert on small boats and perhaps he could --- perhaps we could make another effort at trying to retrieve that pump. I understand it's difficult, but I think the Committee feels --- certainly the Legislators feel that this is an important factor for our investigation. And perhaps we can make the same request to ICG to help us with --- to make that recovery. Okay. Thank you.

This goes to the Omega blocks. What is the psi of concrete blocks as compared to Omega blocks?
MR. UROSEK:
I might make an error in the exact strength, but I can tell you that a concrete block is much stronger. And I'm going to guess here that it's somewhere in the neighborhood of 1,000 psi versus the Omega blocks are somewhere in the neighborhood between



80 and 200.
CHAIR:
That 1,000 for concrete block versus ---?
MR. UROSEK:
I may be in error of that.
CHAIR:
Maybe, John, if you could go back and get that information?
MR. UROSEK:
I can.
CHAIR:
I doubt that you're in error, as I've found you to be so factual in the past, but maybe if you could ---.
MR. UROSEK:
I'm just not that familiar with that.
OFF RECORD DISCUSSION
CHAIR:
The question is, is the psi that we're talking about for the block standing alone or --- the



concrete or Omega, or for the seal itself?
MR. UROSEK:
No. That's for the block, the compressive strength of the block, yes.
CHAIR:
And the requirement for the seal is 20 psi?
MR. UROSEK:
That's correct.
CHAIR:
John, to your knowledge, when did that --- when was that adopted?
MR. UROSEK:
I believe the actual work came from a publication by the Bureau of Mines and was published in about 1971. And it was based on work that had been done for a number of decades before that, that they had done explosion testing.
CHAIR:
Have you had an



opportunity to review that?
MR. UROSEK:
I did.
CHAIR:
And do you have a conclusion or any comment about the tests, particularly in light of the fact that some other countries require a higher test --- higher level?
MR. UROSEK:
Well, what I can say is that, you know, the document does indicate that an explosion can generate pressures greater than 20 psi. But based on their research, what they're saying as --- that some --- that is in the very close proximity of the origin of the explosion. And they say that you get some-200 feet away from that, it's very unusual to get pressures greater than 20 psi. As long as the area is well rock dusted and an abundance of coal dust does not get involved in the explosion, I think that was what their research indicated that

--- why the 20 psi was the appropriate number.
Since that time, of course there's been a number of accidents that have been investigated and explosions. And we were --- we have not been able to see a number greater than 20 psi up until what we're currently looking at. And we're unsure at this point as to the exact pressure that was at the Sago Mine.
CHAIR:
I understand you haven't completed your conclusion, but do you think that the pressures were close to 20 or above 20 or in the range of 20 here or ---?
MR. UROSEK:
At this point, as Richard said, one of the things that important to us is to keep an open mind.
CHAIR:
That's fine.
MR. UROSEK:
And I think the testing



that we're doing at Lake Lynn is going to lead us to that determination.
CHAIR:
And are we going to --- are we going to have tests that mimic or duplicate the situation at Sago? I know the test that was done duplicated a 1993 test of the --- to arrive at their approval. Are we going to duplicate the test as it's structured -- was structured in Omega or roughly so?
MR. UROSEK:
Currently the testing that we've done is basically a side-on testing or a static pressure where the seals are actually in the crosscut. The future testing that we have planned is to actually install not only the seals in the crosscut, but as in Sago, we're going to put them in the main entry, direct in line with the explosive forces and do that testing.
CHAIR:
Thank you. That would be



good.
MR. GATES:
And I think I'll add a little bit to that. We understand that we will --- will never be able to exactly duplicate or replicate the conditions at the Sago Mine. Lake Lynn is a limestone mine and the dimensions are different, but we hope to replicate it as closely as we can.
CHAIR:
Okay. Yesterday the query was posed that the trolley line or the power line could have been one way that the lightning traveled underground. Aren't phone lines grounded where the trolley line or power line --- were the trolley line or power line tested at Sago for proper grounding? Also if there was any way of travel, how did it get --- also if this is a way of travel, how did it get into the sealed area? That is how did it get --- how did it go from outby to inby the seals? And I pose that to



John and to Monte.
MR. UROSEK:
Davitt, I guess that's one of the things that we're continuing to evaluate. We've heard some information from Mr. Novak yesterday. I know one of the things that we had not had the opportunity to receive up until this week was that actual information from him. So we have done some testing. Our electrical folks have evaluated that and continue to do that, and I'm sure they're going to take the information Mr. Novak has supplied and also evaluate that. So I guess the answer is, we're still in the process of looking if that's possible and what could have occurred.
CHAIR:
Before I go to Monte on that. I know you took a sample of the steel rail to see if there was any connection there. Have you made any results from that test?
MR. UROSEK:

As a matter of fact, that's one of the tests that we have planned in the very near future. It just came across my desk ---

CHAIR:

All right.

MR. UROSEK:

--- actually, about a week ago.

CHAIR:

Is the test for the Omega blocks --- are you going to cure them the same length of time that the others --- the Sago Omega blocks were cured and put up?

MR. UROSEK:

Yes, we're going to try to do that. Eight of the ten blocks -- - or eight of the ten seals were in place, we believe at this time, for at least 28 days.

CHAIR:

Right.

MR. UROSEK:

So we do believe that



these next series of tests will include a curing period of 28 days.

CHAIR:

And I could go back to the water trap, that you talked about, behind the seals. Could you explain how that works and could methane travel through the water trap?

MR. UROSEK:

The water trap is located typically in the seal with the lowest elevation and what is required is that the water trap is just like the trap in your house. The trap is supposed to be contained with some type of liquid, whether it's a water or some type of oil or something to maintain it. So water should --- or gas should not migrate from one side of the seal to the other side through the water trap.

CHAIR:

If you know, John or Richard, who made the decision not to dispatch the seismograph unit to the Sago Mine? And when was that decision



made? The seismograph.

MR. GATES:

I can't respond to that, Davitt. I was not on the mine site during the rescue and recovery efforts.

CHAIR:

John, do you know?

MR. UROSEK:

I didn't respond there until that --- I wasn't able to get there until that evening. Apparently that decision was made prior to that.

CHAIR:

Okay. Maybe what we can do is make that one part of the record and we'll try to find an answer out for that.

Perhaps I skipped over -- - were the trolley lines and the power --- and the phone lines found to be grounded during your investigation?

MR. GATES:

There were, in fact, some issues that were observed during the inspection of the trolley lines, or



I'll just say of the mine --- mine system that dealt with grounding. And also with the installation of lightning arrestors was discussed in, I think, one of the questions from one of the Panels yesterday. There have, in fact, been some enforcement actions taken on the lightning arrestors. There have been some citations issued, non-contributory citations issued on grounding --- grounding issues within the mine. And the team continues to look at the possibility of additional enforcement actions in the future.

CHAIR:

I think the thrust of the question is whether your findings, vis-à-vis grounding or failure to have ground properly, would be part of a track of the power entering the mine? In other words, if there were grounding issues that were in One Left, it probably wouldn't be as relevant or somewhere that just didn't connect. But if we have a theory that the power

--- that the energy is going up the main line or up the trolley line or up the phone line, do those two connect? Do your findings connect to that question?

MR. GATES:

I'm sorry. Could you ---?

CHAIR:

Not a good one. I worked on it for an hour and a half last night. Let me try again. I understand the citations, and that's one issue. But the second question that we've heard very much about, the potential, from Doctor Novak, of the power coming into and through the trolley or the telephone line up toward the sealed areas from the face --- from the face of the mine into and up to where, perhaps, getting down into the seals and exploding. That's the hypothesis that he has. Does your finding with regard to the failure to properly ground, or anything else, lead you to



believe that those two might be connected, that that grounding would have something to do with the transmission of that energy up to the sealed area?

MR. GATES:

I guess I'm not exactly sure but I understand but I know we are --- the folks, the electrical folks who are a part of the team, do continue to look at some of the possibilities that --- how lightning may have entered or how that electrical charge may have came from the surface and into the mine.

CHAIR:

John, are you on the electrical team?

MR. UROSEK:

No, I'm not.

CHAIR:

Well, perhaps we could get --- you know, we could pose that as a question that we need to have answered. Because I think the issue



that we're trying to connect here is, does the failure to be grounded properly have anything to do with the passage of the energy to get through the mine into the sealed area, if that's the theory that we accept. During the interviews with those who built the seals, was it determined if the mortar was placed at all the joints as specified --- at each of the joints as specified in the approved plans?

MR. UROSEK:

That's one of the areas that we're looking into. The area --- from the information we've received so far, it appears that the method to actually apply the mortar to the vertical joints of the blocks was by laying the blocks down dry and then by putting mortar on top of the blocks and pushing the mortar actually down into the cracks to get it onto the vertical joints. That actual construction method will be part of the next testing



--- or maybe not the very next one, but in the very near future, the testing process that we'll be doing.

CHAIR:

And the method that was used, did that comport with the plan as was approved?

MR. UROSEK:

Well, the plan specifies that all joints, both horizontal and vertical are to be mortared.

CHAIR:

Right.

MR. UROSEK:

And it's the method that was used. Now, was it adequate or not, is just part of what the testing program will determine.

CHAIR:

But in your experience with mortaring of blocks, does that method comport with standard mortaring procedures?

MR. UROSEK:

I can tell you that it is

different than the way that it was built by the actual Bureau of Mining product folks that built the 2001 seal. When they constructed the 2001 seal and the one that was retested in 2006, they put mortar on all the vertical joints on the block themselves before they had actually installed them.

CHAIR:

As far as you have been able to determine, either for Monte or John, what's the highest psi that you've seen in an explosion up until this point?

MR. UROSEK:

The highest pressure that I've seen has been at the Blacksville Mine. It's a different scenario than we have here. It was a shaft explosion.

CHAIR:

Right.

MR. UROSEK:

And the actual --- it was a detonation rather than what we have



in a normal coal mine. And the pressures there reached well over a thousand psi. But again, that's an odd situation, it was in a shaft.

CHAIR:

I think the question goes more to, in this mine, at the Sago, have you gotten any pressure ---- psi measurements so far that you --- not that you've concluded, not that you've finished, but have you gathered any numbers?

MR. UROSEK:

Well, at this point, we're still evaluating that. There are things that we're looking at that have some conflicting information. For example, the seals themselves, the way they were destroyed is unlike any method that we've seen in the explosion tests that we've don't at Lake Lynn. They were --- they're not typically destroyed in that fashion. So that does indicate that they were hit with something different than we've gotten,



our high pressure. But yet outby the seals where the miners in the One Left were located, they were --- they survived the blast of the explosions.

So that doesn't ---

that's some conflicting information of higher pressure versus lower pressures. Some of the damage to the stoppings that we saw are indicative of pressures of less than five psi in the general area. So there is some conflicting information and that's part of the process that we're going through.

CHAIR:

Okay. Mr. Hieb?

MR. HIEB:

The State has not gotten to the point of performing those calculations yet.

CHAIR:

Okay. The question was, what's the highest psi in underground explosions that you've seen? Is that not shaft but underground? Underground. Yeah.



MR. UROSEK:

I know that it has been less than 20 psi. I think the highest that I can recall might have been in the 10 to 15 range.

CHAIR:

Okay. If the lightning theory is proven to be correct and it is proven that we had as high as 92 psi forces, what would be your recommendation to do --- what would be done for all of the existing seals in the mines in the country today? In effect, raising the question as if this kind of force can happen, aren't we at risk in the other mines in the country where we have sealed areas?

MR. UROSEK:

Well, I think that's correct. If we do find that the pressures were to that level or even greater than the 20 psi. I think we need to evaluate our seal testing program. We'll need to evaluate the seals that are out there. And I'm not

exactly sure at this point, how that could be done. It could be a combination of evaluating the seals themselves, evaluating the atmosphere behind the seals, some method to determine that an instance similar to this could not happen.

CHAIR:

Mr. Hieb, do you have a comment on that?

MR. HIEB:

I think I might add to that that we may need to think about looking at the condition of the entry heights behind the seals. We know that --- where there were areas that were bottom mined, that the room heights were about double of what the heights were at the seals. And there's some thought currently that perhaps the concentration of those flows necking down from those high heights to the lower heights might have created a Venturi effect, which could have increased velocities of the blast at



the seals. So I think perhaps there might be some recommendations later on incorporating considerations like that in seal designs.

CHAIR:

Mr. Hieb, I know you're undertaking a survey of the sealed area to determine where the heights were. Has that been completed?

MR. HIEB:

That survey was performed by some consultants for ICG. And it's in the form of two AutoCAD layers, one for the bottom surface and one for the roof surface. Yes, we are analyzing that currently.

CHAIR:

And can we get a copy of that for the record?

MR. HIEB:

Yes.

CHAIR:

If I might make a commercial announcement. Mr. Hieb, kindly worked with Jesse Wagner, who is



a colleague up in --- at Temple University in Philadelphia, to create the models that you see over here. It was Mr. Hieb's information that allowed Mr. Wagner to put those together so that they are replicas of the mine at Sago. And Mr. Wagner is gone, but I just want to publicly for the record, state how pleased we are with the work that he did and how much help it was and the help that we've received from Mr. Hieb on that.

MR. CLAIR:

Mr. Chairman, if I may? I'd also like to recognize Chris Weaver, who hasn't been identified yet on the Panel, but he is responsible for these PowerPoints that we've been using this morning and I think they're a very effect communication tool in helping all of us understand what happened. So thank you, Chris.

CHAIR:

We do recognize Mr. Weaver, and I understand he's from



Claremont, West Virginia ---

MR. WEAVER:

Yes.

CHAIR:

--- the center of the universe, as I am. I think this has been asked, but the testing that took place at Lake Lynn, the force of the blast was not --- was sent across the face of the seals, rather than from behind the seal?

MR. UROSEK:

Actually the force came down the entry from the explosion and the force would have hit the seals from the side. The seals were actually located in the crosscut.

CHAIR:

And the anticipated tests will have it come from the back?

MR. UROSEK:

The anticipated test will have it, I guess, inside the sealed area.

CHAIR:

Right. Okay. What is the time frame to complete the tests for both MSHA and the State? And what do your initial findings indicate caused the accident? And a comment that it is very important that the cause of the accident be determined by the facts. I believe this is a question from Mr. Eustace Frederick. If you could answer that?

MR. UROSEK:

If you're referring to testing from the seals ---.

CHAIR:

Right.

MR. UROSEK:

The seal testing, I wish I could give an end date on the seal testing, but actually each test is going to determine how much more testing we need to do, the results from each test. You know, some of the ones we have planned is to hit them with a higher pressure to see the results, also to have the seals enclosed with



the seal in the main entry and the same entry where the explosion occurs. And of course the results of those tests will determine whether we need to do additional tests. As I indicated, we're looking at the pressures, 20 psi or greater. We're looking at the influence of the crib blocks on the seals themselves. We're looking at the construction methods. So when you combine the different things we're looking at, it does make for a different amount of tests.

CHAIR:

Does your investigation reveal if a concrete footer was poured for the construction of the seals? And was that part of the approved plan?

MR. UROSEK

None of these seals had a --- although the mine did have a plan for a concrete footer for a larger height, none of these seals were constructed with a concrete footer.

CHAIR:



And are the seals supposed to be built in dry areas, not damp?

MR. UROSEK:

Dampness really wouldn't be a factor. They shouldn't be built in standing water.

CHAIR:

Okay.

MR. BENNETT:

Well, the first question I'd like to ask is, you guys are investigating ICG's mistake; is that or --- ICG; is that right? Who's investigating MSHA and the State? Is anybody doing that, to see if they made any mistakes throughout the whole process, or are you aware of anybody that's looking into ---?

CHAIR:

Maybe we could have Ed answer that question, because these fellows are on the investigation team and there is a mechanism for that to be done. Maybe you could answer it.



MR. CLAIR:

Yes. MSHA has convened and is conducting an internal review of its own performance relative to the events at Sago, both at looking at the performance of District Three prior to the explosion and the systems that are in place in MSHA for dealing with the whole range of issues that are at play here. Beyond the internal review that MSHA conducts, there's also Congressional oversight for the agency.

CHAIR:

And with regard to the State agency, I'm not familiar that there's an internal review. There is certainly Legislative oversight for the Office of Miners' Health, Safety & Training, but under the present operating procedures, there isn't a review by the State. Although the Governor's asked me, as part of my efforts, to review the conduct of the State, so that we will be addressing that overall question in our report.

MR. BENNETT:
So MSHA investigates MSHA and the State investigates the State? Do you have a plan for quality assurance?
MR. CLAIR:
I would just like the record to show that, in fact, does MSHA does investigate itself with people who are not directly involved with the work done by District Three. There's also Congressional oversight and an ongoing GAO investigation which is --- GAO is the Government Accountability Office, which is an arm of the Congress of the United States.
MR. BENNETT:
Is that your plan for quality assurance?
MR. CLAIR:
Yes, that is essential to ensuring that the agency continues to review its efforts and improve performance.
MR. BENNETT:



Just for the record, can you tell me what changed between the Sago mines and the Aracoma mines and why they didn't go in Sago, but they did Aracoma?
MR. DEAN:
No, sir. I joined the agency on February the 14th at the request of the Governor. And Director Conaway, who was here the other day, was involved in those, so I cannot answer that.
MR. UROSEK:
I can attempt to answer that for you. The situation at Sago and Aracoma were different. At Aracoma, we had a fire. We knew where the fire was. We knew where it was burning. We knew where the ventilation around the fire. In fact, that was very important to determine the extent of the fire and where the gasses were. Because one of the concerns, of course, with a fire is the fire can get out of control and get into an area



where there's methane gas, lead to an explosion. That wasn't the case at Aracoma. We did know where the situation was and where the fire was. So allowing teams to go underground with that knowledge is different than at --- than at Sago, where we didn't know if there was a fire and we didn't know the circumstances of what exactly the explosion --- what happened at the explosion.
It's been our experience in the past that oftentimes after an explosion, a fire does start and it's very difficult to detect that. At the Jim Walters Mine, which we talked about that, about the second explosion when the rescuers go in. But what we didn't talk about that a third attempt was made after that with a mine rescue team go into the mine. And when they did go into the mine, they did find a fire burning in a section adjacent to the section where the explosion occurred. They also found the area next to where



the fire was had excessive concentrations of methane in the explosive range, so it's a very delicate situation. That information actually caused them to withdraw from the mine before they were able to rescue --- get to the victims. So it's common that after an explosion, a fire can start.
MR. BENNETT:
Okay. So you're telling me that they had a fire. And with the possibility of a fire, there is a possibility of another explosion and you still went in immediately?
MR. UROSEK:
No, I'm sorry. At Aracoma, we knew where the fire was and we knew what the ventilation was around the fire. And there was no --- there was not a chance that that fire could come in contact with any methane in the area.
MR. BENNETT:
Five men was up there and

they told you what they encountered and you still didn't go to 57 block.
MR. UROSEK:
The indication that the five men had, again, comes back to tell us that there was high levels of CO, there was thick, dense smoke in the area, the ventilation current wasn't sufficient to move that out.
It's difficult to tell with that information --- it's impossible to tell from that information if there, indeed, was a fire burning somewhere else in the mine or what the methane levels were. We know that there was enough methane that --- there was an explosion, so obviously there was methane in there. How much of that was consumed by the explosion, we don't know. We know that there was also excessive methane concentrations coming out the fan, much higher than had normally been reported at the mine. You don't really know where that's coming from. And early on



in the event, you didn't know why it was there and why it wasn't going away.

MR. BENNETT:
Throughout your transcripts, the highest methane levels that I've seen was 1.5 and that's not explosive, nor did the carbon monoxide ever reach 125,000 parts per million.
MR. UROSEK:
What you're looking at is, we're trying to determine what's inby the mine by what's at the fan. We know from the men that went in that the ventilation controls were damaged. We also know that it's diluted to quite a degree. The amount of air that comes out of the mine compared to what's on the section when a mine is normal is generally 25 percent or less. So the concentration of methane that you have inby with damaged ventilation controls could very easily be well over the explosive range.
The CO, itself, is an



indicator of the fire. An explosion can --- I've seen numbers after an explosion of anywhere from 20,000 to 40,000 parts per million. After an explosion, that's typical. When a fire first starts, or in the early inception, the CO readings can be very low, can be five or ten parts per million, and that's why we have the CO's monitoring system. And then of course, as the fire gets bigger, that number gets larger.
But what you're looking at is initially at the Sago Mine, you're looking at the results of the CO from the explosion coming through the fan and it's being diluted out. But you would not be able to tell if a fire was beginning until all that explosion gas was already diluted out. And that was the information that the team that was onsite was trying to determine.
MR. BENNETT:
You would expect the COs to be high, or for that matter, your



gasses to be high coming out of the returns; right?
MR. UROSEK:
Yes, you would.
MR. BENNETT:
And as far as getting in the intake and going to Two Left switch, do you know, did they encounter CO levels --- high CO levels in the intake all the way to Two Left switch?
MR. UROSEK:
My understanding, in the intake, that they did not. We have the one piece of information, I believe, from Mr. Toler where he went into the track entry which would have been the return around the --- or would have been, not really a return, but it's --- it was at that point, because of the controls being damaged of 700 parts per million. Also in the transcripts, you'll see that they've said that many times the detectors either went off scale or higher than what they could reach. So we know we were in

concentrations well over a thousand parts per million.
MR. BENNETT:
But as much time as it took, those levels probably dropped from when you guys entered into the mines?
MR. UROSEK:
Well, we know when the borehole went through into Two Left, that the readings were still 1,200 to 1,300 parts per million. So it had taken quite a while for those CO readings to drop off.
MR. BENNETT:
And in my opinion, without the use of the seismograph, the borehole was --- it wasn't --- there wasn't even any use to drill. I mean, why did the seismograph not even be deployed? We're told that that will happen and every one of those men expects that to happen.
MR. UROSEK:
It's unfortunate that



that information is what's there. The seismic system, again, is a locating device. I think it's --- we've tried to explain that in this case, we didn't know where the miners were. It was really intended as part of a system that was developed in the '70s, to --- for a situation at a mine where there were subsequent explosions or the fire was such that the mine rescue teams could not get into the mine.
Mine rescue teams is the most efficient, fastest way to get to someone that's trapped. If it's unsafe or there's subsequent explosions and it's unable to get a mine rescue team into the mine, that's what the seismic system was designed for. It isn't a rapid deploy system. It couldn't have gotten to the mine early on that day. It's just not designed for that. It would have taken at least 12 hours to get there and to get set up before they would have been able to have the first signal.



MR. BENNETT:
I don't really --- I don't care how long it would take to get there, it didn't come and those men didn't get to hear those shots let off on the surface. Do you not feel that that would have gave them a peace of mind knowing that MSHA and their government upheld what they've told us throughout the years.
MR. UROSEK:
I can't address, I mean, what it would have meant to the miners at that --- at this point. I just know that we were doing everything that we could to try and get to those miners.
MR. BENNETT:
But you are aware that they was expecting that; correct?
MR. UROSEK:
I am now, yes.
MR. BENNETT:
Yeah. And what would that have meant to you, if you would have been one of them that was in



there, would you have expected to hear that?
MR. UROSEK:
It's a very difficult question to answer. But ---.
CHAIR:
Maybe if I could follow up on Mr. Bennett's question. I think what he's suggesting here is that the use of the seismograph and the thought that the seismograph comes in a system is --- as a model, that was designed in the 1969/70 period, early '70 period, following Farmington.
So I think the suggestion here, if I'm hearing correctly, is to say, look, we can set shots off to let people know we're trying something that we're, you know, on the way, even if the seismograph isn't there or is taking time to set up. And perhaps we need to be purchasing and using newer seismographs that don't take 8 or 12 hours to set up and that have been located around the countries some

places where we can get at them. Because even if it's not --- even if we're not concerned about the quote, location so much, perhaps the answer is to send messages back and forth to let people know efforts are underway.

MR. UROSEK:

I think that some means that we could get messages back and forth would be of the utmost importance, because one, the rescuers would know the situation in the mine. And Two, the miners would know that we're coming to get them and they could give advice on the best way to do that.

MS. HAMNER:

I would just like to say that my husband's note indicated that they were listening for you to give them some kind of response that you heard them and it didn't come.

MR. BENNETT:

And the government was saying lack of communication, lack of communication. That was these men's



communication to you all. And unfortunately, you wasn't listening. Should the water traps have been grounded in the seals?

MR. UROSEK:

I'm sorry?

MR. BENNETT:

Should the water trap have been grounded in the seals?

MR. UROSEK:

Should have it have been grounded?

MR. BENNETT:

Yeah.

MR. UROSEK:

I don't believe that that's something that is required, to have those grounded.

MR. BENNETT:

Okay. Should it be required?

MR. UROSEK:

I don't think we have any evidence to indicate, at this point, that that's necessary. But I can



assure you that's one of the things that we will be evaluating as part of this accident.

MR. GATES:

And this --- I would like to say one thing. I think you may be referring to the gas surveillance pipe that went through one of the seals. In this particular instance, the water trap that was installed was made of PVC --- PVC material. I'm not sure if that's ---.

MR. BENNETT:

There wasn't any metal at all in it or ---?

MR. GATES:

Not in the water trap itself, no.

MS. HAMNER:

I'd like to make a comment that I've been handed from the --- one of the family members. My dad, Jim Bennett, in his note said, they never heard anything from outside, it was in the note he left.



MR. BENNETT:

You described water traps in the seals to prevent gas from leaking from inby the seals to outby the seals. Have you determined whether the water traps were actually filled with water before the explosion?

MR. UROSEK:

My understanding at this point is that they were.

MR. BENNETT:

Are you referring that Randal McCloy's statement is not true, that the rescuers didn't work?

MR. UROSEK:

Absolutely not. I think we need to talk to Randal to find out what information he can provide to us. And we can evaluate that, and try to learn from it and do what we need to do as far as SCSRs from that information.

MR. BENNETT:

Can you provide us with the results and the reports of SCSRs?

MR. UROSEK:

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At some point, all the information that we have available will be released.
MR. BENNETT:
Can you tell me how you can prove that they wasn't activated on their belts or before --- or prior to opening the SCSRs?
MR. UROSEK:
My understanding of the testing that they did, there's an actuator inside the SCSRs and they can evaluate that to determine whether or not it was activated. And the results of the testing indicate that those activators were activated.
MR. BENNETT:
But you don't know how they can prove that, that it wasn't activated before they actually pulled their activation cord or ---?
MR. UROSEK:
I don't know the answer to that specific question as to when that would have been done.

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MR. GATES:
Right. I don't believe that the tests give any information as to the actual time that they were activated.
MR. BENNETT:
So it's a possibility they could have somehow activated on the belt at one time or another?
MR. UROSEK:
Well, I think the testing process will evaluate that because I think one of the things that they're looking into is what happens to an SCSR when it is activated and just left idle for a period of time, to see what it does.
MR. BENNETT:
The two indicators that we have on our rescuers, can they change from blue to pink and back to blue again? Have you ever encountered that?
MR. UROSEK:
I have not personally

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encountered that. I'm not familiar enough with the testing program to know if they ever have. I've never heard of that though.
MR. BENNETT:
Are any of you?
MR. GATES:
I'm not aware of any reversal. I mean, it is a chemical reaction that makes --- that provokes the color change and I'm not aware of any reversal of that.
MR. BENNETT:
As far as the chemicals that was used up to show how much the rescuer had been used, whether it was 75, 30, so on and so forth, whatever the numbers were, none of them was used up a hundred percent. And that should tell you that --- I mean, that's not -- - that's unacceptable. It all should have been used a hundred percent. And there was a reason that they wasn't. And that's NIOSH's job or your job or somebody's job to find that out.

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MR. UROSEK:
And I agree with you. I think that's a question in all of our minds as to why they wouldn't have been used fully and understand what the analysis actually means, you know, what that 70 percent means, what the 25 percent means. I think that's going to be very important to us, as well as to get the information from Mr. McCloy to have a better understanding of that.
MR. BENNETT:
And so you can't explain the exact procedures used to test the SCSRs?
MR. UROSEK:
I'm sorry, I'm not that familiar with the testing program that I could do that for you.
MR. BENNETT:
Again, how can they say that all the SCSRs worked when some of the people off of One Left crew say that they didn't work properly?
MR. UROSEK:

We could just go with the information they provide to us during the interviews and then correlate that also with the test results that we obtained.
MR. BENNETT:
And again, can you provide the serial numbers and manufacture numbers on the SCSRs and the dates --- the manufacturer dates? I'm sorry.
MR. UROSEK:
Yes.
MS. HAMNER:
Do you realize that some of the SCSRs that were manufactured before 1994 have been recalled?
MR. UROSEK:
That's my understanding, yes.
MS. HAMNER:
Were any of the SCS ---- any of the SCSRs in your possession from Sago, have they been manufactured before 1994?



MR. UROSEK:
I don't believe so.
MS. HAMNER:
You don't believe so? But we do want those dates.
MR. UROSEK:
Yes.
MR. BENNETT:
Earlier you spoke about the energy source traveling the wire mesh. I'm not sure which one of you was speaking about that --- okay. Would that energy source not have dissipated through the roof bolts?
MR. HIEB:
It should have followed mainly the path of least resistance, whatever that path was.
MR. BENNETT:
So you don't know what that path is?
MR. HIEB:
Not at this time. That's part of what we're looking at in the sealed area is not just the



conductivity of the wire mesh but conductivity of the formation around it.
MR. BENNETT:
So the anomaly on the roof, you don't feel had anything to do with the source of the ignition; is that correct?
MR. HIEB:
That conclusion has not been made yet.
MR. BENNETT:
Do you feel that it may have?
MR. HIEB:
There's still a possibility.
MR. BENNETT:
Okay. How did it get through the seals with the wire being cut?
MR. HIEB:
That's what we're working on.
MR. BENNETT:



And then --- I'm not sure exactly how far it was, but you had the screen in the belt entry and it traveled approximately, I want to say, 25 blocks to where the anomaly on the roof is. How did it get from the belt entry to where the anomaly on the roof is? There isn't any screen on the top where the anomaly on the roof is.
MR. HIEB:
You're saying coming up the belt through the seals ---
MR. BENNETT:
Right.
MR. HIEB:
--- that way? Yeah, that's correct, there are gaps in the wire mesh coming in that way.
MR. BENNETT:
And it had to go through a crosscut. I'm not even --- I'm not exactly sure what the anomaly is, but the anomaly isn't where they're screened; is that correct?
MR. HIEB:

No. The anomaly is really a feature in the roof that was probably about six feet of draw slate taken in that location. The roof was smooth at that spot. The anomaly is an imprint in the roof. We have a slide on that. Can I use your pointer? This double track here was a feature of greatest interest. They are two grooves that are parallel to each other across the entire entry on an angle, perfectly straight and parallel. It's just an unusual feature. Coming in at an angle is another linear feature, it's a single track. So that's basically the feature that was under investigation that's just being referred to as the anomaly.

MR. BENNETT:
Okay. So you feel that it propagated how many blocks inby the seals? Are you --- do you know exactly where it propagated?
MR. HIEB:



Actually I have not really heard propagation direction being referred to that way. I think most of the lines of inquiry have been directed from the surface straight down to it.
MR. BENNETT:
Okay. Why wouldn't it -- - why wouldn't an ignition source have been at the seals immediately inby the seals as soon as it ---?
MR. HIEB:
Yeah. Well, if you examine the details of all the forensic evidence of the plate bending and the force directions, compacted dust, things of that nature, they indicate the explosion was in the area that we showed in our presentation. So that's some distance back away from the seals.

MR. BENNETT:
And you really don't know why? I mean, if there was methane right behind the seals, why it didn't



start at the seal as soon as it went through the seal? Could the marks on the roof have been made by prior mine activities?
MR. HIEB:
That was the immediate thought when you see them, but it could not have been made by the equipment that was used there. Maybe a Wilcox miner if it was being used could possibly have done that. But that is speculation. That's not --- those marks did not appear to have been cut by any equipment or produced by the mining procedure.
MR. BENNETT:
Is there a possibility that there is any old gas wells, water wells or anything of that nature?
MR. HIEB:
Yes, we've actually gone through all the records available to us for locations of active and abandoned wells. We've conducted surface interviews of residents to determine



water wells and we've looked at all that information quite closely. But yet there's still a possibility that there's a casing that does not show up in those records. And we're looking -- - we're looking for that casing still.

MR. BENNETT:
Okay. Did you say that the coal dust could have been a factor in the ignition?
MR. HIEB:
The dust really would have been --- that was used for the determination of force direction would have been a combination of soot and fine dust material, a combination of rock dust, some coal dust, some floor dust.
MR. BENNETT:
So somebody referred to maybe coal dust being a factor?
MR. UROSEK:
I think that's one of the things that we mentioned in our

presentation as part of the evaluation of what we will do. And again, this is when it's completed and we're able to determine a final pressure that was developed. We'll be able to take that information, we'll be able to look at the amount of methane or fuel, that fuel that was available in the area, and we'll be able to evaluate was there sufficient fuel in that, of the methane that was there, to create the force necessary that we saw at the mine. That evaluation plus the samples that we've been able to take to make that determination if and how much coal dust may have been involved or played a factor.

MR. BENNETT:

And you have been in the mines; right?

MR. UROSEK:

Pardon me?

MR. BENNETT:

You have been in the mines?



MR. UROSEK:

Yes, sir.

MR. BENNETT:

And is it a wet mine?

MR. UROSEK:

Yes, it is. It's damp.

MR. BENNETT:

Can you prove that the belt hangers wasn't bent upon installation?

MR. HIEB:

I can't prove that, no.

MR. BENNETT:

Were there any bolts, plates, pans, that were blown directly out from the roof area, possibly showing the explosive force?

MR. HIEB:

At which location?

MR. BENNETT:

Let's say behind the seals.

MR. UROSEK:

Monte, I think I --- there were a number of the bolts and



the plates that were damaged, or I should say the pie pans that were damaged at the various places. And I think that was part of the information to develop --- try and determine where the forces were. As you know, we're trying to take that information and we're also installing pie pans and belt hangers at the Lake Lynn Mine to determine what happens to those plates and the hangers when they're exposed to forces that we know what the pressures are exposed against them.

MR. BENNETT:

And the wire mesh was also blown down, tore up? I mean, was it all going in one direction or ---?

MR. UROSEK:

It was damaged in different parts of the mine and it --- I won't say that it was one direction, because it would be in multiple directions, but the indications are that it did in the area of the seals, it did come from inby the



seals to the outby direction.

MR. BENNETT:

Another thing I'm having a hard time with. I was at Spruce One and my safety director talked to MSHA and tried to get a plan to store the belt wearable SCSRs. And they told him, there was no use to submit a plan, because they wasn't going to let him do that. If this had happened, all these men, except for one, would still be alive. And now, they're allowed to store those because of this accident. That's just absurd.

MR. UROSEK:

I'll try to address that one. When SCSRs first came out, the person wearable self-rescuers, there were some mines that rather than have the miner actually carry that on his belt, the miner would carry the old W-65 that doesn't contain oxygen. And they would caché these self-rescuers at certain locations throughout the mine. And that's ---

I'm sure that's what they're talking about, they wanted to do at that time.

By not getting that approved, what it meant, every miner had that SCSR on his belt and he knew right where it was. In this case, if the miners, when the accident happened, they would have had to don the W-65, which does not contain oxygen. They would have had to go to some location where they would have been stored to get them. I'm not sure where that would have been, but --- and I'm not exactly sure where they were. But we do know that they had them on their belt and they were able to get to them immediately.

And that is part of the information as to why they could have been cachéd rather than carried. And the decision was, it's better that the miner has it right with him to put it on immediately, rather than depend on the old W-65 that doesn't contain



oxygen.

MR. BENNETT:

But it was a storage plan for the belt wearables and they wouldn't allow it, but now they're being stored underground.

MR. UROSEK:

They are, in addition to what the miners ---

MR. BENNETT:

Right.

MR. UROSEK:

--- they still have it on their belt and there's additional ones stored.

MR. BENNETT:

And do you not agree if they would have had those on the section, they would have probably been with us today?

MR. UROSEK:

I think if they would have had additional oxygen devices, yes, they would have had a much greater chance of being here today.



MR. BENNETT:

That's a shame, isn't it?

MR. UROSEK:

Yes, it is.

MR. BENNETT:

Yes, it is. Did you have someone available to drill a 24-inch hole? If so, why was it not done instead of wasting time drilling a six-inch hole?

MR. UROSEK:

The six-inch hole was really put down for speed. It takes a lot longer to put down a 24-inch hole. The six-inch hole, the purpose of the six-inch hole was one, I think it was explained earlier, to determine the atmosphere in the area. Two, to --- when the drills first went through and there was a silent period, if the miners were in that area, they could signal to the people on the surface that they were there. That communication device could have been put down. The television camera was,



again, to do the same thing, to look in the area, to see the conditions, possibly see the miners. Once the small hole is down there, if the miners were in that area, a number of things could have been done, communications, air could have been put down to them, there's a lot of things with that. And then if the mine rescue teams would not have been able to get to them, I'm sure a larger diameter hole would have been immediately started to get to them, which would have taken, anyhow, quite a while.

MR. BENNETT:

Throughout the whole process, and I have lived it over and over again, I feel that there was not a sense of urgency until you guys drilled that hole and until you found out those men left that mantrip and then everything picked up from there. Can you --- do you have any explanations on that or ---?

MR. UROSEK:

I know I was in the command center and I arrived that night about nine o'clock? And I know that the people in the command center were very cognizant that the time was very precious. And I know they were doing everything they could do to get to the miners as fast as they could without risking the lives of the mine rescue teams or doing something that would cause ill effect to the miners if they were there.

MS. HAMNER:

We have a young grandchild, a grandson of one of the fallen miners in the audience and he has a heartfelt question that he'd like to ask. How do you explain that you did not do everything in your power to bring our men out?

MR. UROSEK:

I could just speak for the folks who were in the command center when I was there, and I know that we did everything in our power to



try to get to those miners.

MR. BENNETT:

If I'm --- correct me if I'm wrong, but in our other interviews, you've told us that there has been explosions over 20 psi. I'm not saying in West Virginia or the United States. Is that correct?

MR. UROSEK:

There has been information that we went back through. In fact, I think it was in '97 at the Oak Grove Mine where one of --- there was a series of seals that were damaged by an explosion. We went back through our records to try and determine what --- how that information got there and what was done to it. Upon evaluation of that what we learned is after that report was got out, MSHA did take that into consideration as to try and determine what needed to be done and if, indeed, that was. There was additional information obtained. The reason that particular explosion



indicated that it was over 20 psi was solely based on the construction of the seals. And they had a limited number of samples of --- it was a different type of seal than was used here at Sago. It was a cementatious foam. After they went back and relooked at that and revisited, they gathered additional information and additional number of samples. After they saw those samples, they realized that those samples were below the compressive strength that was required of those typos of seals. So therefore, the conclusion that it was over 20 psi was in error.

MR. BENNETT:

It was there?

MR. UROSEK:

It was in error, yes.

MR. BENNETT:

It was in error?

MR. UROSEK:

Yes.

MR. BENNETT:



Can you tell us how you can tell the difference between an old roof fall behind the seals and a new one?

MR. UROSEK:

There are other folks on our team that would have looked at that, but I can just give you some generalities. The amount of dust that would have been there, obviously there would have been --- on some of the falls, there would have been records from the company as to when that fall occurred. On some of the ones that would have occurred after the explosion, the amount of dust that would have been on those falls can give you some information, some insight into that.

MR. BENNETT:

Do you feel in your personal opinion that the Omega blocks are safe to use?

MR. UROSEK:

At this point in time,

the test that we just completed in 2006 indicates that the Omega block seals that if they're constructed as according to the way they were in 2001 and again in the 2006 tests, that they will withstand an explosion pressure of 20 psi.

MR. BENNETT:

Okay. Even though you know that you can drop that Omega block on the floor and it will bust and turn into dust, you feel that it's good to use those?

MR. UROSEK:

Our testing has shown that those blocks did withstand the pressure of up --- up to 26 psi with no ill effects at all.

MR. BENNETT:

But you are aware that these seals failed these men; correct? Not --- I'm not saying construction. I'm just saying they failed. Whether it was your 20 psi rating that you guys required or what, they failed.



MR. UROSEK:

I agree they did. And they failed catastrophically. That's one of the things that we're looking into. And obviously when we receive information or conclusions that we're able to determine whatever happened, whether it be something with the blocks, whether it be something with the cribs that were located behind it, whether it be located with excessive pressures, whatever that fact may be, I can tell you that MSHA will take appropriate action to ensure whatever needs to be done is done.

MR. BENNETT:

And you're currently letting coal mines install these seals in their mines?

MR. UROSEK:

Yes.

MR. BENNETT:

Yeah. In your testing these seals, you guys --- I mean, you didn't hit it with direct force. And I



don't understand why you're --- you done that in crosscuts; is that correct?

MR. UROSEK:

Yes, that's the testing method that was prescribed back in the 1971 testing or information that the regulations were based on. That was the method that was set up and that's why the testing was done as it was. And that's something also that we're looking into now with this latest program.

MR. BENNETT:

So you think that maybe your testing needs changed?

MR. UROSEK:

It very well may. That's something that we're looking into. And it if it needs changed, we will change it.

MR. BENNETT:

In your opinion, had the seals been built with concrete blocks and all stoppings been built with



concrete blocks as opposed to lightweight Omega blocks, do you feel it is possible that the seals and stoppings would have withstood the explosion?

MR. UROSEK:

Again, that's a pretty difficult question because we don't know what pressures that these seals were exposed to. When we learn that information, I might be able to better answer your question as to that.

MR. BENNETT:

You mentioned the curing time. What exactly do you mean by that?

MR. UROSEK:

Curing time is the time that the --- from the time that the concrete or the product or the seal was put together until the time that we put a force against them. In this case, any concrete product reaches the majority of its strength in 28 days.

MR. BENNETT:

Okay. There's been talk about green blocks. Is there a curing time on these blocks before they're sent to the mines?
MR. UROSEK:
That's something that we're looking into. I can tell you some of the early information we have from the manufacturer that the blocks are cured onsite at their plant for 14 days before they're even shipped out. We don't know exactly at this point, when the blocks that were used at Sago were shipped from the plant to the mine and what that time period would have been. But we do know that the seals were completed --- at least eight of the ten seals were completed 28 days before the event occurred. So the blocks would have been at least 28 days old.
MR. BENNETT:
Okay. And if these blocks wasn't cured from the factory, could that have played a role in this?



MR. UROSEK:
Again, that's something we're looking into. But since they were at the mine and the seals were completed for 28 days, the blocks would have been cured for those --- for that 28-day period.
MS. HAMNER:
Mr. Gates, if a State inspector is present at this hearing, why is the Sago Mine Federal inspector not here to address the hearing?
MR. GATES:
Why is a Federal inspector not here to address the hearing, is that the question?
MS. HAMNER:
Yes.
MR. GATES:
I mean, I am a, I guess, a member of MSHA as is John. There were two District Three personnel who were members of the previous Panels. This Panel here was designed to address the accident investigation and there



were no persons from District Three who were involved in the investigation.
MS. HAMNER:
Mr. Gates, did you ever inspect the Sago Mine prior to the explosion?
MR. GATES:
No, ma'am.
MS. HAMNER:
Davitt told the families that we would be able to request the witnesses that would be here today. I requested John Boni, Denver Wilfong and Al Schoonover. None of those people are present here today. From reading Mr. Toler's transcript from the MSHA hearings (sic), I understand from Jeff Toler's transcript that Jeff relied on a team of three management people, one being Carl Crumrine, the mine foreman who was here and has testified. The other two being Dick Wilfong, the maintenance foreman and Al Schoonover, the safety director. I've been told that MSHA requested that they not be



present to testify because you have them under investigation for possible criminal charges; is that correct?
MR. CLAIR:
Let me answer that. We did, in fact, request that those individuals not be present and testify at this hearing. There is another investigation. It is not a criminal investigation.
MS. HAMNER:
I'm sorry, I couldn't hear. What kind of investigation?
MR. CLAIR:
There is an additional investigation being conducted, but at this time, I just would prefer not to go into that.
MS. HAMNER:
And that is Denver Wilfong and Al Schoonover. Is Johnny Boni also included in that?
MR. CLAIR:
Ma'am, I'm not going to answer that question. It is an

extremely sensitive matter and I just am not prepared to address it.
MS. HAMNER:
For the record, I want to express my dissatisfaction that the hearings, the MSHA hearings, were not open to the public and the family members weren't allowed to attend. From reading the transcripts, there's too many I don't knows and there's enough follow-up. For instance, Johnny Boni --- first, I want to ask a question. Mr. Gates, did you seize the fire boss records immediately upon getting at this Sago Mine January 2nd? Were those seized? Do you have those in your possession right now?
MR. GATES:
I believe the District personnel who were onsite immediately on the day of January 2nd did, in fact, take the mine records, either on that day or possibly January 3rd.
MS. HAMNER:
When can we see those?



Can we see those?
MR. GATES:
The mine records have been requested on some occasions and I believe a decision has been made to, in fact, release those records, so yes, you can.
MS. HAMNER:
Is Johnny Boni's notes that he took from Terry Helms --- I understand Terry Helms called out his report that morning. And Johnny took those and supposedly wrote those down in the records. Are those there? Have you read those?
MR. GATES:
I think some of the records were provided to you yesterday, I believe. but ---.
MS. HAMNER:
I don't have them in my possession, someone might.
MR. GATES:
Okay. But we do, in fact, as I mentioned on --- shortly ---



while the rescue recovery was going in or immediately following that, those mine records were, in fact, gathered by MSHA. And we do have them and I believe the ones that you were referring to were provided yesterday, if I'm correct. Mr. Chairman?
CHAIR:
I believe they were provided yesterday and they are being made available.
MS. HAMNER:
Terry Helms called --- Johnny testifies that Terry Helms called out two small violations. Can you tell us what those two small violations were?
MR. GATES:
No, I can't.
MS. HAMNER:
My husband's dead. There's no small violation to me. As part of your investigation, was Terry Helms' notebook found with these notes from fire bossing?



MR. GATES:
I can't answer that question right now, but I will, in fact, try to get back with you, get that response to you.
MS. HAMNER:
Fred Jamison testified that he lost his notes, but you do have the books where he wrote down his notes that morning and you have reviewed those?
MR. GATES:
Again, I believe the examination, the results of the examination that you're referring to were, again, part of the information that was provided yesterday, I believe.
CHAIR:
Yes.
MR. GATES:
Yes.
MS. HAMNER:
As part of your investigation, did you find that his initials were at the face?

MR. GATES:
There were dates, times and initials on several locations on the Two Left section.
MS. HAMNER:
Mr. Gates, can you tell us when your report may be completed and when we can expect to receive that?
MR. GATES:
Unfortunately, I can't give you an exact date. I think John had mentioned a little earlier some of the testing that's ongoing with the --- with the seals at the Lake Lynn facility. And certainly the information that we'll gather --- gather from those tests will be crucial to finalizing the report. I know he mentioned that the length of time to conduct all those tests, one test will be dependent on the results of the previous one. But I guess I'm in hopes that within three to four months that those tests would be completed and that would give us ample time to finalize



the report.
MS. HAMNER:
Do you feel that your investigation was thorough, and what could you have done to make it better?
MR. GATES:
Well, as we've mentioned earlier, the investigation is still ongoing. And yes, I do believe it has been thorough to date and it will continue to be thorough as we explore the --- explore the test results, the records and the data that we have at present.
MS. HAMNER:
Were you the one that testified to the roof enormity (sic) that was found in --- the enormity that was found in the roof behind the sealed area? Or was that Mr. Dean? I'm not sure.
MR. GATES:
I think we both made a comment about the --- about the anomaly at one time this morning.



MS. HAMNER:
I'm confused about what you said about that. Did you say that? What did you feel that was caused from?
MR. GATES:
I believe I said that on two occasions there have been samples of the mine roof from that area that have been taken and that the thin sections of the samples have been examined under a microscope. And there's been no evidence to show that there was any re-crystallization of any of the rock and any that there were, in fact, fossil characteristics that were found.
MS. HAMNER:
Did you take those samples or were you given those samples from ICG?
MR. GATES:
We were --- I personally was not present, but there were several of the inspection parties who were



present when the first set of samples were taken. And to the best of my knowledge, once those samples were collected by a consultant that had been retained by ICG that they were --- that it was sometime after that before MSHA received a part of that sample. And subsequent to that, there has been additional samples taken from the area that, in fact, the --- MSHA and I believe as well as the State did take --- did take possession of those at the time the samples were taken.
MS. HAMNER:
This is a question for John. You referred to the Jim Walters Mine in Alabama. I've seen the UMW reports with their recommendations for changes in MSHA's laws. The Alabama widows feel that if these changes had been implemented by MSHA that Sago would not have occurred. Are you aware of this report? Have you read it?
MR. UROSEK:
I am aware of the report

and I did read it, but it's been a long time ago since I've read it. I'm not that familiar with their conclusions.
MS. HAMNER:
Were any of those ---
you're not familiar, so you don't know if any of those recommendations were implemented?
MR. UROSEK:
I do not.
MS. HAMNER:
And who would have been responsible for doing that?
MR. MCKINNEY:
I'll try to respond to that question. Can you hear me? The report came out, and I'm like John, I read the report sometime back when the investigation was there. We looked through it, and I'm going to the best of my recollection. There were comments in there about the communication systems and things like that and improvements in those areas. Those would have taken regulatory



changes ---
MR. BENNETT:
Yeah.
MR. MCKINNEY:
--- to mandate those.
And also there would have had to have been technology available for those. And I think that's one of the things we're doing today, that's to try to determine if technology's out there that would improve the communication system. So even at this point in time, I think we're looking forward to seeing, can we create a market and can we get better technology and communications. And that's what I remember being in the report, but there may have been something else, I can't recall.
MS. HAMNER:
Did Mr. McKinney answer the question? I'm sorry. I was interrupted and didn't hear all the answers. Does any of the family want to follow up on that?



MR. BENNETT:
You was talking about the communications; is that correct?
MR. MCKINNEY:
Excuse me?
MR. BENNETT:
The communications?
MR. MCKINNEY:
That's what I recall remembering in the report, was communication devices.
MR. BENNETT:
Do you plan on using communication?
MR. MCKINNEY:
Do I plan on using it?
MR. BENNETT:
Yeah. Are they going to use them? I mean, they had the seismograph and didn't use it. Why --- what's the ---?
MR. MCKINNEY:
I think the question is, is there communication out there, is technology available that can stand



explosion hazards with miners. That's what we're striving to look at right now. And there's been several committees and two or three seminars put together to explore that, not only the United States but what other countries may have that we're capable of using right now.
MR. BENNETT:
But our country had the seismograph and it didn't get used, so --- that's all we had, so ---.
MS. HAMNER:
Davitt's requested a short break.
CHAIR:
Thank you. We'll take five minutes and come back. Thanks very much.
SHOT BREAK TAKEN
CHAIR:
All right. Let's go back on the record. We'll continue with questions from Ms. Hamner and Russell. I think we can go ahead.

MS. HAMNER:
John, just one more question on the Jim Waters' report from Alabama. Did I understand you to say that technology is delaying the communications aspect?
MR. MCKINNEY:
I don't think John responded to that. I think I did.
MS. HAMNER:
Oh, I'm sorry, Mr. ---.
MR. MCKINNEY:
That's not a problem at all. We sort of had some information going back and forth. What I said was technology seems to be a challenge. And we're having meetings now in different areas throughout the United States to find if there are better communication systems where we can have a two-way communication system underground that would withstand an explosion and still be in existence in the aftermath so we could contact people who were trapped or they could



contact us.
MS. HAMNER
But other countries have this communication system, this technology, this communication system; is that right?
MR. MCKINNEY:
Well, we have people in our Tech Support Division that are traveling to other countries now to gather that information. And we also have some ongoing tests at a mine in West Virginia where we're examining communication systems. And to my knowledge, I don't know that there's one out there presently that will handle the explosion potential after a mine disaster. Now, there may be one I don't know about, but I'm not aware of one if there is.
MS. HAMNER:
Mr. Gates, the fire boss records, we do have those. We don't have any fire boss notes. Did I understand you to say that you weren't



going to give us any of those? Do you have any of those? Did I understand you to say you weren't going to give us any of those?
MR. GATES:
No, I don't believe that's what I said. And I'm not sure now, are you referring to the records from Mr. Helms' and Mr. Jamison's pre-shift. I'm not sure what notes maybe you're referring to. I'm sorry.
MS. HAMNER:
Did you find notes on Terry Helms ---?
MR. GATES:
As I mentioned to you, I would get back to you on that, with that response. I do not know if there were any that were recovered or not.
MS. HAMNER:
Jamison's notes, any notes from John Boni, if you have those, we'd like those.
MR. GATES:
Okay.



MS. HAMNER:
What about electrical grounding records?
MR. GATES:
Grounding records from the --- company records, is that ---?
MS. HAMNER:
Yes. Uh-huh (yes).
MR. GATES:
I'm not really sure specifically what records you may be referring to.
CHAIR:
We can ask the company for those records, since we don't know what those records are.
MS. HAMNER:
We've focused a lot on the cause of the explosion. But as Cecil Roberts indicated yesterday, as it was brought out from his questioning, only one man perished from the explosion. We'd like to follow up on why our men couldn't walk out. Was there anything to physically prevent

our men from being able to walk out besides the malfunction of the SCSRs?
MR. UROSEK:
I think one of the things that's going to be important to answer that question fully is what information we can gain from Mr. McCloy. I mean, the mine rescue teams were able to get back in. There was some debris that needed to be moved. But the debris wasn't such that it would totally block the air courses. I'm not sure of how thick the smoke may have been in the area or the extent of that smoke. Again, that's some information hopefully we can get from Mr. McCloy.
MR. BENNETT:
But 40-some hours, the smoke was all cleared out and nice and clear so you guys could see to go in.
MR. UROSEK:
Yeah. The particulate matter that had risen is what creates the smoke. The CO still was there, but the smoke itself had dissipated.



MR. BENNETT:
Why were the surveyors called at 8:00 a.m. and told they would be transported by helicopter and police escort and then told at 6:00 to drive up on their own?
MR. GATES:
I'm not sure what particular surveyors you're speaking of or who they may have had the communications with.
MR. BENNETT:
But you'll find that out?
MR. GATES:
Yeah. If that's a request for information, we'll certainly try to track that down for you.
MR. UROSEK:
I can speak that that information has not come out in any of the interviews that I know of of that problem.
MR. BENNETT:
Maybe I can get you a



little more information on it, maybe, if I can figure out who this question came from.
MR. GATES:
Brian, do you have any recollection or any knowledge of ---?
MR. MILLS:
I believe the only person from the surveying or engineering crew was Gary Hartsog that we interviewed. And I don't remember him saying anything to that.
MR. UROSEK:
And the company may have information to answer that.
MR. BENNETT:
If lightning caused the charge in the electric distribution line, how many grounding systems failed between the point of initial charge from lightning and the point of ignition in the sealed area?
MR. HIEB:
I'm sorry. Repeat the question, please.



MR. BENNETT:
If lightning caused a charge in the electric distribution line, how many grounding systems failed between the point of initial charge from lightning and the point of ignition in the sealed area?
MR. HIEB:
I don't believe I can adequately answer that about this.
MR. BENNETT:
Do you agree that the butt grounds and --- do you not believe that it should have been dissipated before it traveled that far?
MR. HIEB:
Off which power line? The 12KV power line?
MR. BENNETT:
You tell me. Which one do you think it entered?
MR. HIEB:
Well, some of the structures on the 12KV line were butt grounded. Not all of them.

MR. BENNETT:
Should they have been?
MR. HIEB:
I'm not an electrician.
I'm not the one to answer that.
MR. BENNETT:
Who made the decision to start the rescue team at the portal instead of at the 57 block?
MR. GATES:
I believe that question has been asked on several of the earlier panels, and that's not really within the scope of the investigation team, per se. So I don't think we've got any information to add that hasn't been brought out in earlier discussions.
MR. BENNETT:
Are you not investigating these men's deaths?
MR. GATES:
That's correct.
MR. BENNETT:
Well, that's part ---



that should be part of the investigation team. We need to know that. I would like to personally know that. Because they were told they could by very good men. And later I'll thank them for that. And I would like to know who made that decision.
MR. GATES:
Again, Brian, do you or Mike have anything to add?
MR. RUTLEDGE:
As has been discussed in several earlier panels, that decision was made by the people in the command center at the time. I don't know who those people were at that particular time, but that was a decision that was made again by the state, by the federal, by the company, from those people that were in the command center at that time.
MR. BENNETT:
So far I've heard a state inspector stand up here and say --- I asked him why were we not



starting at 57 block. So far I heard Jeff Toler say, why are we not starting at 57 block. And I have also heard Dick Wilfong say, go to 57 block. I don't feel that there's a fire. And I personally know Dick Wilfong, and he is a very knowledgeable and intelligent man. And is --- these days, is a man not as good as his word?
CHAIR:
Russell, if I might, I think yesterday, in answer to a question similar to that, it was expressed by both the federal and the state agency that they would try to answer that. They didn't have the answer then. But I think the point is well taken. We need to try to get an answer to that question of how that decision was made. But we didn't have that answer. And I think for the record we can say we'd like to get an answer to that question.
MR. BENNETT:
Has anyone checked the



psi that it would take to turn an Omega block seal into dust?
MR. UROSEK:
As I indicated, that's one of the circumstances that we're evaluating in the testing that we're doing at Lake Lynn. The failures that we've seen at Lake Lynn have not been that catastrophic, so we have --- that's why we need to do the testing, both with higher pressures, with the crib blocks, to try and evaluate what happened.
MR. BENNETT:
And these tests will be done in a controlled environment. How do you feel about that as far as, I mean, being in a controlled environment and being at Sago?
MR. UROSEK:
Well, obviously, you know, we can't duplicate the exact conditions at Sago, but we can duplicate the pressures --- or not duplicate them, but actually try

different pressures, trying to evaluate the blocks as they are constructed to try to get a better understanding. I think at the completion of the tests, at least I'm hopeful that we'll have a better understanding and we will be able to come back and have some answers for you on that.

MR. BENNETT:

There was an article that stated that the Omega blocks, one time or another, failed at 17.5 psi. I was wondering if you was aware of any time that --- or where that came about or --.

MR. UROSEK:

In the testing done in the 1990s and I believe even part of this 2001 test, there were different configurations tried. For example, the one here was the 40-inch type that's not hitched. There are other types of Omega block seals that have been approved that will withstand to 20 psi. There have been other types of Omega



block seals, as well as other types of seals, that have been tried that did not pass.

MR. BENNETT:

With all the violations prior to the explosion, after the explosion how do you know that the Sago Mine is a safe mine and continue to operate?

MR. MILLS:

On behalf of the state, we have did a regular inspection there this year already. We've had two electrical inspectors on the property. I don't believe there are --- well, I know there's no conditions that we know of that say that the mine is not safe.

MR. BENNETT:

How could you be sure that any mines is safe to operate when possibly your 20 psi ratings failed, possibly your self-contained self-rescuers failed and possibly state and MSHA failed?

MR. UROSEK:



Well, as far as the failure of the seals and the SCSRs, I think if we do find --- when all the information is complete and we're able to analyze it, if we do find there are shortcomings, I'm sure that the agency will address those and improve whatever they need to do to ensure that those items are safe.

MR. BENNETT:

But yet we let our men go underground and risk their lives to produce coal, which ---?

MR. MCKINNEY:

I may be better to respond to that than this group since they're talking about the investigation itself. As Brian said, we've done multiple inspections at the mine, electrical and complete inspections, since the miners went back to work. We've had a lot of attention to that mine. Most of you heard from Ken Tenney. Ken was there from the day the mine went back into production. We



have a volume of regulations and policies that we enforce to ensure safety and health. There are things we test and we're looking at. Those regulations are still in place, as they were before. If the test shows something differently, we'll make evaluations of those things. But with the tools and components we have right now, I think we're working diligently to make sure the mine is safe.

MR. BENNETT:

Unfortunately, it's too late for that now, but I'm glad that you're going to make changes and try to make it as safe as possible.

The pie pans being bent in different directions, would it be possible that there were two blasts?

MR. UROSEK:

All indications that we have at this point, that there was just one blast.

MR. BENNETT:

How do you know that the

water traps were filled? What leads you to believe that?
MR. UROSEK:
If the water trap were not filled with water, then one would -- again, I'll have to speculate, but then one would speculate that gas would travel through the water trap. And if it did, then when the seals were examined, they would have picked up whatever concentration of gas was behind the seals, in front of the seals, in the general area. And that didn't occur, from my understanding.
MR. BENNETT:
So do you know where the two-tenths was coming from or ---? Could it have been through the water traps or ---?
MR. UROSEK:
Well, as mentioned earlier, the seals --- all seals do leak to some degree. It depends on the pressure differential across them. So it's not unusual to find small



concentrations of methane on the fresh air side of seals. So that wouldn't be an unusual thing. One would expect if the water trap did not have water in it, then a much greater volume of whatever is on the other side of the seals would come through the water trap, and one would find a higher concentration or possibly even an accumulation of methane there.
MR. BENNETT:
Were there any places where the rock had fell out and possibly a pocket of methane accumulated outby the seal?
MR. UROSEK:
The evidence that we've reviewed to date indicates that the forces all came from inby the seals. It's very unlikely, if not impossible, to have an ignition on the outby side of the seals propagate through the seals to the location inside.
MR. BENNETT:
I guess this is --- did



you guys hold up ICG from submitting the plan? I mean, ---.
MR. MCKINNEY:
Again, I may be best to answer that. I'm going from the information we had yesterday. I think Davitt --- although they hadn't said anything, I think Davitt put those in the record yesterday, didn't you all, the plans, ---
CHAIR:
Yeah.
MR. MCKINNEY:
--- so there'd be a tracking record of that? And I think that was a question we had yesterday. Exactly when did the plan start? You know, what was approved and what wasn't approved. So that should be a part of the record. And I heard Kevin Stricklin say very clearly yesterday that, you know, he didn't hold anything up. He reviewed. He went through the process to get things moving. And it wouldn't have behooved any of us to try



to put any kind of undue restrictions on those. I'm sure any review that was made was for safety purposes.
MR. BENNETT:
It also says, why did you not take over and make a plan?
CHAIR:
I think we went over that yesterday just for a minute. But the process that's been in place, as far as I can recall, is that the plan --- the mine company has the responsibility to develop the plan. The thinking is that the mine company is the most knowledgeable about the mine, and that the federal and state agencies, as well as the rescue teams, if they are just coming into the mine, won't have the knowledge, the information, the background on the mine. So the concept is that the mine company prepares a plan, and that plan is then reviewed by the state and federal agency. And a determination --- a joint determination is made how to go forward and what is

considered best by the people who are in the room. And then decisions are made --- based on a continuing basis, are made in that systematic way.

MR. MCKINNEY:

I don't want anyone to misunderstand my answer. I wasn't making an inference that they didn't submit plans. And I think the question was, did we impede the plan approval process. So my answer is, as I understand it, no.

MR. BENNETT:

And who from the state was in there? If I recall, John Collins was saying, let's start at 57 block.

MR. MILLS:

During the process, there were several people from the state in there, Director Conaway, Deputy Director C.A. Phillips, myself, John Collins, Robert True, Bill Takersly (phonetic), Mike Rutledge, several of our mine rescue guys were in the room



on occasion.

MR. BENNETT:

On occasions. But you don't know who made that call from your department?

MR. MILLS:

Who was ---?

MR. BENNETT:

You don't know who made that call from your department?

MR. MILLS:

Not to go to 57 block?

MR. BENNETT:

Right.

MR. MILLS:

I didn't know that that was even discussed.

MR. BENNETT:

Well, I think it should have been. That was a big role in the whole situation.

MS. HAMNER:

Who testified to the fact that there was ground --- problems with the grounding system at Sago?



MR. GATES:

You're referring to the transcripts?

MS. HAMNER:

No. Didn't --- am I wrong or didn't some of you talk about grounding problems?

MR. GATES:

I think I may have mentioned that during the course of the investigation there were some noncontributory citations that had been issued for grounding issues and that those have been --- have all, in fact, been addressed and been terminated.

MS. HAMNER:

Can we request a list of these problems?

MR. GATES:

You certainly can, yes. A list of --- a copy of the citations; is that the request?

MS. HAMNER:

Yes, a list of the problems.



MR. MILLS:

And if you would, I would make those available from the state. We also issued violations. If you would request that.

MS. HAMNER:

Can we request those now?

MR. MILLS:

Yes, ma'am.

MS. HAMNER:

From your investigation, did you determine whether any repairs were made to the ventilation controls that were damaged after MSHA and the state put the mine under a control order?

MR. GATES:

Is that all the question or do you ---?

MS. HAMNER:

Yeah. The question is, were repairs made to the ventilation controls that were damaged after MSHA and the state put the mine under a control order? And is it protocol to

leave the damaged area untouched until the mine --- isn't it protocol to leave the damaged area untouched until the mine rescue teams access the area?

MR. GATES:

Well, I guess to address the first part of the question, I think that we showed on one of the earlier animations that as some of the gentlemen were proceeding into the mine in the rescue efforts, that there were, in fact, some of the damaged ventilation controls that were repaired with curtain.

MS. HAMNER:

Could these changes to the ventilation system have resulted in putting our miners in more harm's way?

MR. UROSEK:

One of the things that we'll be trying to do is to evaluate what would have --- what those changes would have impacted the ventilation system and whether or not that would have forced some of the smoke and gases



further into Two Left.

MS. HAMNER:

There has been testimony that the flames reached the seals. Is there any indication as to how much heat was generated from the blast?

MR. UROSEK:

That information is based on the result of samples taken, the dust samples, the coke samples. And that's what gives you that indication as to how far the flame went, as to the size of the coke that's present in those particles.

MS. HAMNER:

In his interview, Denver Wilfong said that no lightning arresters were on the trolley line. Did your investigation determine if that were true?

MR. GATES:

Yes. In fact, that was true. That situation has been addressed at the mine. And we, as I mentioned earlier, are still



contemplating potential enforcement actions to be taken.

MS. HAMNER:

As a result of your investigation, did you find any other violations of electrical regulations?

MR. GATES:

There were --- and I don't recall the exact date, but there have been approximately 100, 118, I believe, citations that were issued as noncontributory. A large percentage of those did apply to electrical-related issues. And those will, in fact, be included in the request that you made earlier, if you'd like copies of those.

MS. HAMNER:

If you're looking into the pump and the wire mesh as an ignition source, shouldn't that have been removed from the section before sealing off the area?

MR. HIEB:

The suggestion ---.

MS. HAMNER:



The pump?

MR. HIEB:

I'm sorry.

MS. HAMNER:

The pump?

MR. HIEB:

If it was taken as a suggestion that that was the ignition source, that was not the intention. It was suggested that it was a possible conducting path.

CHAIR:

The area has not been sealed off.

MR. HIEB:

That's correct.

MS. HAMNER:

From your investigation, did you find any rock dusting behind the sealed area? Could you tell if there had been rock dusting behind this sealed area?

MR. UROSEK:

We did take samples from behind that area. And those samples,

we're still in the process of evaluating that information.
MS. HAMNER:
Because I believe I read in a NIOSH report that it's not a regulation, but they would highly recommend that a sealed-off area like that be rock dusted. How do you feel about that?
MR. UROSEK:
I think what you're alluding to is the information in one of their bulletins that suggests that in an area of approximately 200 feet inby and outby the seals, that a heavy application of rock dust be applied in those areas.
MR. GATES:
And I think there has been some testimony given here at the hearing that there were, in fact, applications of rock dust that had been made on the outby --- certainly on the outby side of the seals.
MR. BENNETT:



In the seal plan it says to build the seals ten feet inby the crosscut; is that correct?
MR. UROSEK:
Yes.
MR. BENNETT:
And it also says in case you have to build a seal in the future, on the outby side of it. Can you explain to me, why would you want to do that? I mean, is that because you're afraid that the seals would fail? Do you have an explanation for that?
MR. UROSEK:
I'm not really aware of that exact provision you're stating, but there has been incidents, for example, due to roof convergence or whatever that a seal may become comprised, where you do need to replace it with another seal in front of it. And that gives you some area to do that in.
MR. BENNETT:
So do all seal plans



state that or just Omega block?
MR. UROSEK:
I really don't know the answer to that, whether they do or do not.
MR. BENNETT:
We would like to know that, to see if it's just Omega block or ---. Why wasn't the borehole drilled at 57 or 58 block?
MR. UROSEK:
You mean during the rescue? I think that that borehole was started at one point. I'm not exactly sure. I know it was talked about. I'm not sure if it was started. But I believe the mine rescue teams were there before it could be completed.
MR. BENNETT:
What were the length of the bolts in the Two Left seals?
MR. GATES:
I'm not a hundred-percent certain, but I'm pretty sure they were six-foot --- six-foot



resin bolts, I think were the primary means of support in that area.
MR. BENNETT:
And cable bolts; is that correct?
MR. GATES:
As far as the cable bolt requirements in the plan, I don't really recall.
MR. BENNETT:
Did you not see any when you was up there?
MR. GATES:
There were some bolts there, yes. But whether or not they were required in a plan, I'm not certain.
MR. BENNETT:
So did you review these records, and was all the roof falls in the sealed area documented?
MR. HIEB:
Approximately 30 percent of the falls found were --- appeared on the mine map that we had prior to going

in. So some of them were documented and existed prior to the seals being installed, but there were several others that had occurred after that time.

MR. BENNETT:

How can you use the fact of soot, because isn't the explosion going to scatter soot and dust?

MR. HIEB:

Yeah. I think that's part of what I was alluding to when I said it's somewhat subjective on determining the timing from some of the criteria. That should not be the only criteria used.

MS. HAMNER:

In your field search, did you determine that the tree was hit by lightning?

MR. HIEB:

Visually, from the appearance of the tree, that was how the determination was made.

MS. HAMNER:



Visually?

MR. HIEB:

Visually.

MS. HAMNER:

Were there any transformers on the electrical poles damaged, and did any residents around this area report loss of power?

MR. HIEB:

We have spoken to a number of residents, and we haven't, to my knowledge, found any that had lost power at that time.

MS. HAMNER:

We were originally told that everything, cables, wires, were removed from the sealed area. Why was the cable still there?

MR. UROSEK:

There were no cables extending through the seals.

MS. HAMNER:

Have you looked at the fact that when the One Left crew flipped the switch, that then



immediately the blast happened?

MR. UROSEK:

From the information that we have, the blast happened --- the switch had already been thrown, and a gentleman had just gone back into the mantrip.

MS. HAMNER:

If a charge had entered the mine's telephone line, do you have any theories as to how that charge would have gotten underground? Do you understand the question?

MR. HIEB:

Uh-huh (yes). That's another question for, I think, a trained electrical expert. So I can't really speculate.

MS. HAMNER:

Is it possible that the lightning strike made the CO monitor go off by fault, since it went off line soon after?

MR. UROSEK:

I think that's one of the



things that we'll be evaluating when we review the records that's on the computer, as well as the data.

MS. HAMNER:

Can you tell the families what murdered our men? Nobody wants to respond to that?

MR. GATES:

Well, I think that's certainly the goal of the investigation, is to determine what the root cause of the event is, and that's certainly what we're working towards.

MS. HAMNER:

I think that finishes our questioning, unless Russell has something.

A couple comments the family members sent up. Maybe you should gather the men who constructed the seal at Sago to go build the seals at Lake Lynn. Another comment, perhaps maybe the seismograph needs to be scrapped, as it is too complicated.

Some requests. They're

asking for the complete PowerPoint presentation. Can we get that, Mr. Weaver?
MR. WEAVER:
Yes, ma'am. We'll provide that to you.
MS. HAMNER:
Can you provide the families with copies of the maps that show the bending of the belt hangers and pie pans by the explosion?
MR. HIEB:
Yes.
MS. HAMNER:
And I think we covered this. You will provide us with a list of the grounding failures that you identified in the electrical system?
MR. WEAVER:
Yes. I'll provide a copy of all the noncontributory citations that have been issued to date.
MS. HAMNER:
I guess that completes our questioning.



CHAIR:
Thank you very much. I have three quick questions. Was the pipe --- the sample pipe, was that metal or PVC?
MR. UROSEK:
It was metal.
CHAIR:
Who was the highest-ranking MSHA official on site at Sago during the mine rescue attempt?
MR. MCKINNEY:
I probably can answer that, Davitt. Just like the state was talking yesterday, it changed. Initially, it was probably Jim Satterfield, then Bill Ponceroff, Kevin Stricklin, then myself, then Bob Friend (phonetic). So as it progressed, it changed.
CHAIR:
And what about the state?
MR. MILLS:
Initially, it was John Collins, followed by several other



inspectors, until Mark Wilfong got on the property, then I got on the property, then Doug Conaway got on the property, then C.A. Phillips.
CHAIR:
Could you check the verification in Keith Stricklin's report on the Omega block seals that there is a reference that these seals should be built in a complete dry area and get back to me, John?
MR. UROSEK:
Yes.
CHAIR:
This is for Richard Gates. In your opinion, how much force were the seals subjected to? How much force would it take to deflect the belt hangers?
MR. GATES:
Again, that's something that we're certainly looking at as a result of the testing that's going on.
CHAIR:
And Monte, in your



opinion, how much force were the seals subjected to? And what force would it take to deflect the belt hangers?
MR. HIEB:
It's premature for me to speculate on that.
CHAIR:
If we have no more questions ---.
MS. HAMNER:
One more.
CHAIR:
Yes, ma'am.
MR. BENNETT:
Was there part of a seal that was still standing? I mean, not all of them was --- I mean, I know they were destroyed, but were there any remnants of a seal?
MR. UROSEK:
There were parts of some of the seals still there, yes.
MR. BENNETT:
And the mortar on them, were they --- could you tell how thick

it was or ---?
MR. UROSEK:
I personally didn't look at them, but I know that's some of the information that our team was looking at.
MR. BENNETT:
And you said there was a metal pipe going through the seals?
MR. UROSEK:
Yes.
MR. BENNETT:
Should it have been grounded?
MR. UROSEK:
It's my understanding that it was supported with the cribs in the area.
MR. BENNETT:
Do you guys require --- I mean, you don't require it to be grounded or ---?
MR. UROSEK:
No.
MR. BENNETT:



Should you?
MR. UROSEK:
Well, I guess that's one of the things that we'll continue to look at in this investigation. If that comes out to be, then yes, we will.
MR. BENNETT:
Some of the detectors the Two Left crew were wearing had capabilities to print off reports. Has this been done?
MR. UROSEK:
As a matter of fact, yes.
MS. HAMNER:
That will be part of your investigation in the report?
MR. UROSEK:
That information, yes.
MS. HAMNER:
I think we're finished, Davitt.
CHAIR:
Thank you. At this time I would like to give an opportunity for people to make a closing statement. We



will give members of the families an opportunity to make a closing statement. Let me begin by reading a statement of Chris Toler and Courtney Browning, son and daughter of Martin Toler, Jr.
First, I would like to thank all those who have anything to do with these hearings. When I was growing up, I had quite a bit of temper. I still do. But my father taught me how to harness my anger and turn it into something positive.
Since the burial of my father, I have tried to piece together my life, and my family has done the same. It has been hard to do. Each week in the papers or the news there is something else to open up the wounds. As time moves on, I allow myself to be consumed with --- as time moved on, I allowed myself to be consumed with anger and bitterness. That ends today. My father raised me better than that.
We captured the hearts of



millions around the world. I would like to thank all those who sent cards and letters after the loss of my father. Watching these hearings, I have seen the hurt of all in their eyes, the state, ICG, MSHA and all the families here today. No one had any intention to do what happened. All parties involved made the decisions they thought were best at the time. I hope and pray that this explosion and recovery effort will bring MSHA, the state and the company closer together to work for a safer tomorrow for our miners.
What saddens me most is that our family has been labeled pro-company throughout this time. We are not pro-company. We are pro-coal mining. My father died doing what he loved to do. No one forced him to go to work at Sago. He chose to.
I also respect and thank ICG for all they have done for our families. You don't read about that in

the papers. Particularly, I want to thank Mike Heims. Your visits and calls have meant a lot to my family. I have to move on. Nothing that is discovered, no amount of money will bring my father back. And I know that this disaster will forever change the coal mining industry for the good. I am not ignoring what went on, but I have a family who needs me. Holding onto this anger is not healthy. I remember my father as a good Christian man, a father, a friend, husband and grandfather and a good coal miner. He died in the Sago Mine, but that is not what he will be remembered for. Thank you. Now, if family members would like to come up, we can --- what's that? We can put a podium up, and then the members of the family can come up and make a statement, those who wish to.

MR. BENNETT:



My name is Russell Bennett. I am Marty Bennett's son. I need not say that I miss my dad with all my heart. And there hasn't been a day go by since this explosion that tears have not been shed from these eyes, but I would --- there's some people I would like to thank and let them know how much I respect them for what they tried to do and for the efforts that they made. I would like to thank Dick Wilfong, Jeff Toler, Al Schoonover, Vern Hofer and Owie Jones for the rescue attempt that they made. And as far as I'm concerned, that's the only attempt that was made. However, I would like to thank the mine rescue teams for the attempts that they made. And at the time that they was allowed to do what they was trained to do, they done all they could do. And I would like to thank them for that. I would also like to thank John Collins, Dick Wilfong, Jeff



Toler for recommending that they start at 57 block and for the world to know that if they had, there would have been one man dead and the rest would be with us today. That's all I have. Well, also I'd like to thank the family members for standing beside their family and standing beside us and supporting us. And I would also like to thank the world for their prayers and for everything that they've done, and just to let my mom know that I love her.

MS. CAMPBELL:

This is one time that I don't have much to say. I didn't prepare anything and it hasn't come from here. And I speak to you on behalf of my sister, Judy Bennett today. And I want to thank America and the fine people who sent cards, letters, donated money. We appreciate that from the bottom of our heart. I wish all of you could have known Marty Bennett. He was a



hard worker. He loved his family, he adored his son, and he cherished his wife. Our hearts today are just as broken as it was January 2nd. Marty Bennett was a member of mine rescue for 13 years. If he could have gotten those men out of that mine, I know he would have brought them out. I've told Davitt McAteer from the day I met him, and I think he'll tell you this himself, today MSHA is not working. It does not work. And in my opinion, and this is just my opinion, it failed us, as FEMA failed Hurricane Katrina victims. Technology is here. We need to use it to our advantage. We have lost 12 men, and their families grieve every day. But the family that I see grieve every day is my own. And I see my sister die just a little bit every day because she lost half of her heart. And I hoped that I could come up here and do this without crying, but I can't.

And I also want to thank those men who desperately tried to save their lives. You won't ever, ever know how much we appreciate that. And to the mine rescue, I know you did what you could do and what you were allowed to do. And I ask Mr. Hatfield and everyone at Sago Mine to please keep those miners safe and to do whatever it takes to ensure that no family ever goes through what we've been through. Thank you very much.

MS. HELMS:

My name is Amber Helms, and I'm Terry Helms' daughter. And before I even start, I want to say in response to Russell Bennett saying that if they would have started at 58 block there would have only been one miner dead, that's how that one miner would have wanted it.

I would like to first thank everybody who came and testified here today and came to ask questions and support to find out what happened.



I would like to thank Davitt for putting this together and also for putting together the symposium that happened a few weeks ago. And I would like to thank Governor Manchin for even making this an option for the families.

This hearing has uncovered some interesting information. I feel that it has opened many windows but not many doors. Seeing how much time MSHA has been using to get to their conclusions thus far, it is hard for me to believe that ICG did an adequate job in coming up with their lightning theory. But that's just my opinion.

Although I do not agree with some of the things that I've heard, I believe that this hearing has been an eye-opener and has reminded everyone in the world that just because this tragedy happened on January 2nd, it's not over, and it needs to be remembered.

Along with finding our



answers that we need as families, I hope that we can learn from this so we can put more safety measures in mines across America so we can try to save miners if this ever happens again. We don't want that to ever happen. But if it does, we need to try to protect these men and make sure the outcome isn't what we have to go through.

My uncle --- my aunt Judy, which is Terry's sister, wanted me to say for her that even though his body is gone, he is not really gone because, honestly, when I lost my dad, I didn't feel like I lost a part of my heart. It broke, but I didn't lose it. In fact, I almost feel closer to my dad now than I did before, but only because he is with me in spirit everywhere I go. He's not just a phone call away. He's not just a short drive away. He's right beside me right now. I think it's kind of ironic that I stand here and it seems like he's looking right over my shoulder; doesn't



it? That's because he is. And each one of these loved ones is looking over every family's shoulder. And he's with us all the time. And so I hope that others can try to fill that gap in their heart with the thoughts of their spirit being with you every second of every moment of every hour of every day for the rest of your life.

Please remember my father and every single one of these men because even through death, they remain extraordinary. Once again, I just want to thank everyone for being here. And I hope that we can continue to move forward, find the correct answers and heal and save some other miners. Thank you.

MS. COHEN:

My name is Peggy Ware Cohen. This is my mother, Brenda Newcomer. In closing, I would like to thank Davitt and Governor Manchin for making this public hearing possible. I don't feel all my questions were

answered, but some were. And to the investigators from MSHA and the State of West Virginia, I ask that you please continue your investigation and leave no stone unturned. I am not going to let these questions go without being answered.

I have a lot of trouble with ICG's lightning theory --- or should I say hypothesis. I just ask that our unanswered questions be followed up on. I, once again, want to express my gratitude and appreciation for the mine rescue workers. God bless you all for what you do. I thank you for your attempts at rescuing my dad.

Mr. Hatfield, Mr. Dunbar,

Mr. Kitts, I would like you to look at all 12 of these men's pictures. These were great men. You owe us answers and the truth, and we deserve the truth.

And when you go home to your families today, think about us not going home to our family members that were taken from us. I get to go home and continue to



look at my dad's picture. I only get to think about all the good memories we've had. I don't get to create any new memories with him.

My sons now have to grow up without their pap-pa. My brother's daughters now have to grow up without their pap-pa. My brother and I have lost the most important man in our lives, our dad. So you need to look at these pictures of these good men and make sure you make the required changes to keep all the other miners safe at your mines. ICG and other mine operators need to start paying more attention to safety than corporate profits.

I would ask MSHA and state inspectors to continue to investigate and find the cause of this terrible disaster. Get to the truth and the answers. Make necessary changes in the laws and regulations to keep the other miners safe. Make the fines more so it actually has an effect



on the operator of the mine. Most importantly, enforce these regulations. We have to get the updated technology and equipment to keep these miners safe.

I feel my dad was let down by all of you. He did what he was trained to do. Legislators, we ask your help in getting these laws and regulations changed. Please keep all of us families in your thoughts and prayers and continue to keep the faces of these 12 men in your thoughts. We cannot let this go by and not make changes. We have to prevent any other families from enduring the horrible pain.

Again, thanks to Davitt and Celeste for all your hard work in supporting us through this process. And once again, thanks to all the mine rescue workers. I appreciate everything you did in getting my dad out of the mine. I know you did everything you could, and thank you.



And thanks to everyone around the world for all your cards, prayers and gifts. We really appreciate them.

MS. MERIDETH:

As you all know by now, my name is Ann Meredith, and I am the daughter of Jim Bennett, one of the 12 that was killed in the Sago Mine accident.

First, I want to extend my utmost gratitude and appreciation to the mine rescue teams for doing everything and all you could do in the rescue of my dad and these other miners. May God bless each and every one of you.

As I stated in my opening statement on Tuesday, we had --- and when I say we had, I mean my husband and I had to tell five children that their grandfather wasn't coming home again. And now today we have three here of the five children. They have the question of why. They want to know why their grandfather was taken away

from them.
During this hearing I was able to get some information, but still I don't understand the delay. I got some information about what MSHA had done, but haven't got the answers as to why or what they have figured out. I still want them to continue to investigate.
And as for ICG, although they told us on the day before they re-opened the Sago Mine, where my dad and these 11 other innocent, wonderful men were killed, that lightning is what caused the disaster, but I'm still waiting on the answer to that. I don't believe that lightning had anything to do with it. And I ask that the state and MSHA continue to look into what actually really did cause the explosion, where these 12 men were killed. I'll never get the chance again or even have the time with my dad, Jim Bennett. There will always be a void in my life, my mother's life and



also in the lives of all who knew him. I'll always carry my dad right here in my heart. But you know it's not the same as having my dad alive and standing beside me today.
I want to take this time to thank Randal McCloy for giving us and the families the letter that he did, with some explanation as to what went on down inside that mine that January 2nd day. I am grateful for him, and I hope that his recovery will be a speedy one. And Randal, if you're going to watch any of this coverage, I want you to know that you and Anna and your children will always be in my heart and in my prayers. And to all of the miners' families, I want to say I love each and every one of you. I wish this never had happened. But you all will always be in my prayers as well. And once again, I want to say thank you to all of the rescue teams that was there during the Sago mining accident. I'll never forget what you all's done



for me and what you guys have done for these families. And to Davitt and to Celeste, thank you. Thank you very much.
MS. WINANS:
My name is Pam Winans. I am the wife of Marshall Winans. My husband worked for ten years in the coal mines. Marshall worked hard to support me and our three daughters. He loved to hunt, fish and, most especially, proud of his camp, which he had not --- had such short time to enjoy. Anyone who knew Marshall knew that if they needed help with anything, he would be there. He'd be the first in line to help. He was a father, a son, a brother and an uncle, who most of his nieces and nephews admired.
My family and I would like to thank all the rescue personnel who were there to help during this tragedy, from the emergency squad, fire department, police officials, and most especially, to the mine rescuers who



risked their lives to save our loved ones. Joe Manchin and his staff, Reverend Day and the Sago Baptist Church, Davitt McAteer and his staff and all the other organizations who helped. We hope from this meeting more safety and better communication, better equipment will come forth so that another family will not have to endure what all of us have went through.
My family does not blame the mine rescue team for the miscommunication, but rather asks MSHA, ICG to investigate how the information got from the command center to the family members at the church. Thank you.
MS. BAILEY:
My name is Sara Bailey. My father is George Junior Hamner. First I would like to say that we are grateful that state and federal officials allowed us the opportunity for this public hearing and allowing us to participate in the way we have, to

ask questions. We hope if there are other disasters in the future, that other families will get to participate the way we have. I would also like to thank Cecil Roberts and the UMWA for being a voice for Junior Hamner. Junior Hamner would be honored to know that Cecil Roberts and the UMWA spoke on his behalf.

I am here today hoping to learn why Dad died. I am disappointed that we didn't learn why. Six weeks ago, ICG told us they had the answer, lightning. Yesterday I learned that reports were not written six weeks ago, but were written a few days ago. Although ICG stated opinions six weeks ago, their experts said yesterday that their opinions were preliminary and subject to change, and they weren't sure how lightning got into the mine. The experts' reports were not believable. They did not answer the questions.

My father told my mother



and me that this mine was not well run. What I have heard the last three days confirms to me this is true. Number one, MSHA was concerned about safety at Sago, so concerned that they had a meeting scheduled with Ray McKinney around January 6th. And this meeting did not take place because of the explosion on January 2nd. Number two, the seals were not properly constructed, many built by inexperienced miners, some who were not Sago miners. Number three, there was electrical equipment without lightning arresters. Number four, ICG found methane outside seals a week before the explosion and did not continue to monitor it. Number five, they used the CO monitoring system to give people personal messages. Number six, the CO monitoring system reportedly malfunctioned so that ICG didn't know whether the alarm was true or false. Number seven, they sent in a fire boss who did not know about the methane at



the seals, and his notes of the fire bossing came up missing in the laundry. Number eight, ICG didn't notify MSHA for two hours after the explosion, despite the immediate notification requirement under the Mine Act. And number nine, we have been informed that four self-rescuers did not work, and I believe they did not work.

My father did not have to die. I hope that the federal and state government will take the steps and require coal companies to operate safely so that this won't happen to others.

My father, George Junior Hamner, was many things to me. Although mere words alone could not do him justice, I would like to speak about my father for a few minutes. I admired my father, for he was a man who was honest and enjoyed the simplicity of life. He was a strong, good-hearted person who loved people, a hard worker and a good provider, an intelligent, caring man.



He was everyone's rock. He was the life of the party and the civility in everyone's lives that were closest to him. I am an only child, and I loved my daddy very much. He was my hero, my guidance, my advisor, my teacher, my strength, and my heart. I guess I envisioned him to be immortal. I thought him a man not capable of death. ICG's neglect and lack of consideration for human life and safety has robbed me of a man that was dear to my heart and has taken my mother's life partner from her. Their actions have caused our house to be an empty space that can never be filled again. And because of this, I will never have peace. What was taken from us cannot be replaced. This disaster caused a wound in my heart that time will never heal. I will never know what a good peaceful night's sleep is as long as there is a breath in my body.

My father will never get to see or enjoy his grandchildren, as I

do not yet have children. He was taken away from his life in his prime, at a young age on the scale of a lifetime. Why was my mother widowed at age 51, after 32 years of marriage? And why will I have to explain to my future children their grandfather is gone? Why will we never lay eyes upon his face again? ICG's lack of consideration and its inability to be honest, that's why. Thank you.

DELEGATE CAPUTO:

Being a coal miner, I guess these few days has been about as emotional for me as anything I've ever went through in my life. And when I see you fine folks, I think of my family and what would have happened if I was in that position. And I admire you. I just got to say from the bottom of my heart I certainly admire your courage and your braveness and your honesty. And in these last few days we've talked about several things. And we've talked about the explosion and



why it happened and the search and rescue efforts and the communication or the lack thereof. But quite frankly, we have not gotten any answers. And I agree from the bottom of my heart with those families that think ICG was premature in the lightning theory. And I do believe that it is their intent to sway public opinion. And I can only hope and pray and trust that that premature release does not taint the process that's going to take place from the state and federal regulatory agencies. It is my hope that the testimony provided throughout these three days will provide the answers that we all deserve. And I would hope that the outcome of this would be safer mines for every coal miner in the world.

I want to thank Governor Manchin for this unheard of format, in allowing everybody to participate. And I want to thank all those who participated. But I would like to



offer a special thank you to you families. I think your testimony and questions, very hard questions that you were not afraid to ask, are most important toward this investigation. And I know while you come here for answers, you come here for another reason. I can see it in your hearts. You come here to assure that no other coal mining family has to endure what you've went through. And from coal miners all across this country, I thank you from the bottom of my heart for that.

But I must urge you, in closing, I must urge you all to stay together because if anyone or anything divides you families, we will never get the answers that you so deserve. You may have disagreements and you may have differences of opinion, and you have every right to do that, but do not let any one thing divide you. Coal miners are counting on you. May God bless each and every one of you. And thank



you for letting me be a part of your day.

SENATOR CARUTH:

As a member of the committee and on behalf of the West Virginia State Senate, I have just a very few remarks. The first is those of us who were here on the legislative panel didn't really contribute a lot to this process, except to help ask some of the questions. What our function will be maybe going forward from this point, because we do intend to continue to ask questions, with Mr. McAteer's help and guidance, the committee you've seen here today --- by the way, it was formed some months ago. And we've heard --- this wasn't our first session, our first involvement in this process. We've had quite a number of meetings and expect to continue to do so in the future. But the reason we're going to continue to ask those questions is to try to transform those answers into actions.

I think on behalf of myself and the Senate and this committee, I can tell you that we will commit --- we have committed to keep the focus and attention on anything and everything that could possibly make a difference and prevent this type of tragedy in the future.

We do take seriously that challenge that was offered to us on the first day when we first began by John Groves, I believe, to make sure it doesn't happen again. And our function will be to try to do all that we can to make sure it doesn't happen again. To those of you in the families, I know these gentlemen behind us, these pictures, we've been looking at them all day. And perhaps it was Amber that said that her father is looking over her shoulder. I can assure you from those of us who have been involved in a lot of things in the past and that are public type of things, the people who look over your shoulder here, your



fathers and brothers, are very proud of everyone in the family who's contributed to this process. And it's not always an easy thing to do.

And my final remark, again, on behalf of the committee and the State Senate, is for the family members. God bless all of you.

DELEGATE FREDERICK:

I come from a coal mining family. I was born into a coal mining family. And the Lord has allowed me to stay here 75 years and two-thirds. I feel and know what you're going through. And you've conducted yourself extraordinarily well. You've asked very, very good questions. And I do believe that all of us, including West Virginia legislature, ICG, MSHA, state employees, we owe it to you all that we turn every rock over possible and find the cause of this accident.

As I leave here --- I'm a graduate mining engineer. I've worked 40 years. I still don't know the cause



of this accident. And we must find out what that is. I challenge the coal mining industry that we set a goal and we work a year --- since we're from West Virginia, that we work a whole year without a fatality. And in my book, that's possible.

As I leave, I leave with sadness, deepest condolences, deepest sympathy for all of you. I pray for you. I will continue to pray that the Lord will allow you proper closure.

DELEGATE HAMILTON:

Well, we've had some of our questions answered, but a lot more that haven't been. But one thing I've learned in the last three days, and that's about the miners' families. I told them in a meeting last night that I was at, if you want to go see some backbone and some grit, come down here to Wesleyan. These families are sticking together. They're asking tough questions. It's a hard thing for them to do, and they're making history.



This is the first time we've ever --- that families have ever been able to participate in an investigation.

I'd like to make a remark about some of the youth in your family, Russell Bennett, Sara Hamner Bailey, Amber Helms. You know, people make comments today in this age about the youth and the troubles they have, but I'll take these, and I'll say kids, I'll take these kids any day.

Looking back on January 2nd, I remember in one of the mine briefings, at the church sanctuary with the families, a question was asked. I'm not sure who at ICG was answering the questions at that time. It basically doesn't make any difference now. But the question was asked, have you heard the miners pounding on anything. The answer, no. The second question from the same miner's family was, are you listening for sounds from the miners. Question answered, yes. But in testimony the last two days we

know that wasn't true. They weren't listening.

Junior Hamner and I were good friends through school. We were lockermates from junior high and high school, I guess because Hamilton and Hamner were always in the same homeroom. I don't think I ever saw in that man's lifetime without a smile, except one time, when he found out I was a Republican. But I'll take you back about six months. I was walking into the Buckhannon/Upshur high school football game, and who was in front of me in line was Junior and his brother-in-law, Billy. And they said, you want to sit together? And I said, well, sure. We were watching the game and halfway through that game, Junior started talking about the mine disaster in Pennsylvania. And I don't remember the whole conversation verbatim, but he made a comment about there's things those miners did on the inside that went against protocol and there's



things they did on the outside that went against protocol, and they're really --- well, his comment was, they're damn lucky to be alive. And he went on to tell me, and this is the first I'd ever heard because my dad was a coal miner, but it was years ago in his lifetime. He said, when you're trapped you're taught to signal. That's the code. And they're taught on the outside they're supposed to answer you. And it didn't happen And every one of these men, they believed in that code. But somewhere the system or somebody let them down. And I hope and I pray that we find an answer to this disaster. For God's sake, I hope it doesn't take 20-some years like it did at Farmington. I thank you and I appreciate you being in our --- and we are one family. Thank you.

CHAIR:

I would like to ask Ben Hatfield from ICG to come up and make a closing statement.



MR. HATFIELD:

Thank you. Ladies and gentlemen, I'm Ben Hatfield, president and CEO of International Coal Group. We agreed to come here this week to share information and answer questions to help further explain what we know and believe with respect to the Sago Mine accident.

Our understanding of this forum's purpose was to determine how the accident happened and for all of us to learn valuable lessons from it that will help prevent such an accident from ever happening again. For its part, ICG has never taken the position that the investigation into the Sago Mine accident has been finished or that we have made --- or that we have all the answers. Quite to the contrary, we have tried to make it clear in all our meetings with the families, with our employees and our statements to the media that the findings we have shared are preliminary, and our testing



continues.

However, we vowed in early January that we would keep our employees and the families of those who perished informed as to what we learned about the cause of the accident. Furthermore, we felt the moral obligation to inform our employees of what we knew and why we believed it was safe to restart the Sago Mine. Unlike the state and federal government agencies, neither the company nor its employees have the luxury of waiting a year or more for the release of formal government investigative reports. We needed to get our people back to work at their mine. ICG did exactly what they said in January that they would do.

You've all heard Cecil Roberts, the president of the UMWA, and others here criticize us for announcing our initial findings in March. We make no apologies for keeping our commitment to the families and to our employees.

Mr. Roberts' complaint that our announcement of initial findings is unprecedented reflects on an outdated attitude, an expectation that we should do only what has been done before without considering that perhaps new precedence should be established.

Indeed, ICG has voluntarily appeared before these hearings that are themselves unprecedented in recent times. We have approached this task with candor and cooperation. If the government agencies have physical evidence or other information that contradicts our findings, we are anxious to receive that input.

On a few occasions during this hearing we've been somewhat disappointed that the agencies have taken a somewhat defensive posture with respect to some important issues concerning the rescue efforts. One example is the discussion concerning the time it took to send the rescue



teams underground and where they were to start. To listen to the questions and commentaries from the agencies would imply that the regulatory authorities were not active participants or the lead participants and instead they were just waiting for ICG to submit a plan. All of us here today know better. Those regulatory agencies, those authorities, were the lead participants in a three-party rescue effort, as indeed they should be.

We've also heard conflicting accounts of what was said around 10:30 a.m. on January 2nd, when Mr. Toler and the others were debriefed --- when Mr. Toler and others were debriefed upon returning to the surface from their immediate rescue attempts. Sago Mine supervisors specifically recall stating to those MSHA and state inspectors that the rescue teams could move quickly to break 58 and begin rescue efforts. However, MSHA



testimony yesterday indicated no such recommendation during that discussion. Given the confusion and emotion and subsequent fatigue impacting those present in that meeting, we're not sure that issue will ever be resolved with certainty. However, we do acknowledge that Sago Mine management subsequently deferred to MSHA's superior experience in mine explosions and agreed with the plan to await the gas trending analysis before putting rescue teams into the mine.

We believe that it is now more productive to focus on a fundamental issue that needs to be addressed. Has the current methodology for executing a prompt mine rescue become too slow and conservative in the aftermath of painful disasters of recent years, where mine rescuers became victims of a secondary explosion? In our view, this is certainly an area that should be discussed further among seasoned



experts in mine rescue.

Despite some disagreements, I think we should also recognize some areas where we agree with the government agencies on what happened. The explosion occurred inby the seals. It initiated somewhere around spad 4010. There was no human activity or equipment in the area that initiated the explosion. There was only one explosion. The potential sources of ignition are either a roof fall or lightning. ICG firmly believes that lightning created the ignition. We can also state quite affirmatively that the miners lost at Sago appeared to do everything in accordance with their training. They attempted escape, as we see from the evidence by the attempt to drive the mantrip out, the footprints that were followed by the rescue teams and Randal McCloy's letter. They donned their self-rescuers. When all else failed, they barricaded and attempted to alert those

on the surface.
We believe that the men were properly trained in the use of their SCSRs. We don't know what happened underground or what they experienced. We only know that the feedback from the NIOSH and MSHA testing was that the SCSRs appeared to be in working order.
In any event, we fully agree that a longer-lasting, easy-to-wear and easy-to-use self-rescuer should be available in this modern era. Although it has not been addressed by the government officials in this hearing, we believe that the hours and days before the explosion contained no specific warnings. The existence of small levels of methane outby the seals is neither unusual nor unexpected and would signal nothing ominous to an experienced miner. Likewise, liberation of methane on a mining section from time to time is not



unusual. And the Second Left crew handled that liberation event on the working section a few weeks before the accident with the same training that they showed on January 2nd. They ceased operations, de-energized the equipment and plugged the leak in a customary manner.
We also believe, it is clear, that the carbon monoxide alarm on the sensor near the face of First Left at 6:05 that morning was a malfunction and that the mine dispatcher addressed that issue in accordance with his training. He did not ignore it. He saw that the normal computer system tests indicated high likelihood that the system had malfunctioned --- the sensor had malfunctioned, and he informed the inbound First Left crew, the crew traveling toward the face, to stop at the immediate outby sensor and conduct the appropriate repair protocol.
Despite erroneous media reports, the



required operator response is to evacuate only personnel that are inby the alarming sensor, not to evacuate the entire mine. On the morning of January 2nd, there were no personnel inby on the First Left section to evacuate.
Finally, we also know with firm conviction, and I can say this from the heart, that everyone at the mine that day, from ICG officials, to state and federal officials, to mine rescue team members, were all working tirelessly, using all resources available, to save your family members. We deeply regret that there was not a different outcome. We hope that our appearing here and answering the questions posed to us has in some small way helped in your search for understanding. Thank you.
CHAIR:
Cecil Roberts, please.
MR. ROBERTS:
You have to forgive me. A



few minutes ago, speaking to Sara, it was a difficult proposition. If I might just say to the families that we love you. More important than that, God loves you. He can give you comfort when no one else can, me or anyone else that's been on this podium.
Randal McCloy's letter did tell us one very important thing. We are in a position to see our loved ones again. And that's the greatest comfort anybody can give you, regardless of what happens with respect to these events of the past few days.
I want to thank you for the friendship that I have developed amongst all of you. If I've been a little too aggressive for some of you, I guess I should apologize. But that's the way I've been for 59 years, and I don't expect that's going to change any time soon.
Davitt, I want to thank you. We did have a conversation earlier today, Davitt and I, and I did

express to him --- I said, Davitt, I do appreciate how hard this is to make work. He's got so many competing interests coming here, and everyone wants something. And I think you've done a good job of trying to make this work, and I wanted to say that publicly.

To our members of the legislature, I said the first day they should be commended because they moved very quickly on your behalf when these issues were brought forward. And I believe it was unanimous support in both the House and the Senate. And we shouldn't forget that the Governor brought that legislation forward to them for consideration, so he's showing great leadership. And I think he's been a great comfort to these families as I've watched these events unfold from the very beginning.

In my position, I've --- someone said who looks --- who criticizes MSHA or who looks after it.



There's many people here to tell you that the UMWA is always raising issues with MSHA, and sometimes in a very critical manner. But I do want to say it took a great deal of courage for these people to come here from Arlington and try to answer questions, and I want to thank you for that. And probably tomorrow they're going to be frustrated with me again because I'm going to be raising other issues with them. But I do want them to leave here thinking that that's all I do. I do know that there are a lot of good men and women working for MSHA as federal inspectors and trying to keep the mines safe in this country. And sometimes I don't say that.

To the state folks who have been here, I want to thank them for being here and being honest to the extent that sharing information with us that they know. And the truth is, as we leave here today, they don't know everything, and you don't know



everything. But I do want to make a few points, from my perspective, if I might. And some of the positions I'm going to outline for you are not new for us. Some of the positions I'm going to outline for you do pertain to Sago mining, but they also pertain to every coal mine in the United States of America.

I said shortly after this disaster that these men shouldn't be dead right now, that these men should be sitting out here with us right now. They should be home with you right now. They should be giving comfort to you right now. They should be grandfathers, they should be husbands, brothers. They're your loved ones, and they ought to be with you right now. And it's a failure of the system that has given this disaster to us, and we shouldn't lose sight of that.

One of the things that frustrated me a little bit, and I know I went too long yesterday, but the



truth is we spent a long time talking about lightning yesterday. And I've got a position on that, and you know what it is. I don't believe for a moment that lightning was the result -- - or caused this disaster. I don't believe that was the ignition. And I'm not going to believe that in the morning. But understand something. Understand something. These men were alive when this explosion ended. And if you survive an explosion, you ought to be able to get out of a coal mine in the United States of America, and that's just fact.

And we've fought for this before this explosion. We said this after this explosion. And we all, I believe, are united in the fact that there ought to be enough oxygen in a coal mine for survival if you're a coal miner. Give these miners the best chance possible to be alive after something like this happens. Pray to God it doesn't. But if it does, they

ought to be able to go and get all the oxygen that they need to live. And that's not asking our government or anybody else too much. And the second point, and I'm going to continue to fight for this, and I hope we all can continue to fight for this, we need better communications in these mines. And the truth of the matter is, at the mine in Illinois that ICG owns, they have communications that they wear. That was testified to in Congress. We need that on every coal miner in the United States of America. I don't care if the technology is not advanced far enough. Whatever distance it will take us, put it on them and give them a chance to live and talk to us when they're trapped.

And the third point is, and we've known this since 1995, when Davitt was the director and he hosted an event in Beckley, West Virginia, we do not have enough mine rescue trained people in the United States of America.



And the truth is, and many of you saw these people when you came to Congress, they looked like me because they're all in their 50s. We have got to train the next generation of coal miners to understand what mine rescue is all about.

For years, since those Omega blocks first started making their way into a coal mine, we have objected to their use. They were not first approved to go in a coal mine to serve as seals. You may not know that. If you listened, you probably picked that up. You could take this --- if I can take my hand and pulverize that, what do you think is going to happen when an explosion occurs? We have failed the coal miners in this country. There oughtn't be another Omega block allowed in a coal mine for this kind of use ever again. Because if it is, the same thing is going to happen. We ought to take a position, no more Omega blocks being used as seals in this country.



And I don't want to leave here if --- I don't know if you've picked up on the seriousness of this question about lightning being able to hit a power line somewhere or be absorbed from a magnetic field somehow as a result of a lightning strike on the ground, the power line picking it up, carrying it for a long distance, going into a piece of equipment of some type, a transformer outside, traveling two miles underground, jumping across a space of eight feet, making its way past the seals. I'll submit this to you. It's one of two things here. Either we're going to have to close every coal mine in the United States of America every time there's a thunderstorm or this is an erroneous, ridiculous, preposterous position for anybody to be taking. And that's what I think.

In closing, I want to --- all I can say to everyone here is that we want to be a partner in finding



the answers here. We want to be a partner in making things better for all coal miners in the United States. And I know you share that. And as we leave here, I think I've made some friends. I hope I haven't made too many enemies. And I'll do better. God's not through with me yet. I'm not perfect, and we'll work on that. But if there's anything these families need or anything we can do, please let one of us know. Thank you, and God bless you.

MR. DEAN:

I just wanted to let everyone know, I mean, I first came to the West Virginia Office of Miners' Health Safety and Training on February the 14th, at the request of Governor Manchin. And I came from the West Virginia University Mining Extension Service that was a training organization and one that I believe --- you know, I've taught safety. I believed in safety. And I felt I would be a hypocrite if I did not, at this

point, try and bring whatever talent I could to this.

Since that time, I've been working with many people from MSHA, as well as the State of West Virginia and Office of Miners' Health Safety & Training, and we have many good people. And I believe that they did their honest best. And I also believe that we have been honest, straightforward and open to various causes during the investigation of this incident, and we will continue to do so. And I'm not much of a politician or much for speech making. I didn't have prepared remarks. And like many of the families, I believe that the best remarks are spoke from the heart.

In the time that I've been here, I've asked Mike Rutledge, who's our mine rescue coordinator, to work with our mine rescue team and also obtain input from any of the mine rescue team members that responded at Sago. And I believe that the state can



be better prepared in future events. And we have prepared and delivered to the Governor, when he was at Wheeling at the symposium on mine safety, what we believe is at least the first step in trying to improve the state's mine rescue capability. And we look forward to working and making sure that that happens. Thank you.

MR. MCKINNEY:

Thank you, Davitt. As most of you know, my name is Ray McKinney. And I came down here to represent the Mine Safety and Health Administration. First and foremost, I want to tell the families that I appreciate you being here and your patience in listening to us. As difficult as this has been, I know it's more difficult for you and your loss. And again, I want to extend my condolences to you and your families. And my thoughts and prayers will be with you forever. You can depend upon that.



I've worked for MSHA a long time. I've been in this industry 36 years, and I've been associated with mine rescue 33 years. It's been tough for me and difficult this week to listen to things said about the agency, but I'll take those, I'll learn, I'll grow, and the people I work with will do the same thing because we're committed. I think I've met with some of you individually, and I've told you very clearly I stand responsible for the things I'm responsible for. I've never tried to defer that to anybody else. That's a measure of who you are and your constitution.

I will tell you this very clearly, MSHA doesn't own Sago Coal Company. MSHA doesn't contract mine rescue teams for Sago Coal Company. And MSHA is not responsible if Sago Coal Company doesn't train their people to understand what to do in an emergency. And I'm real concerned if somebody thinks that's my



responsibility or my agency's responsibility, because it's not. And the things I'm saying right now are probably not acceptable, but I'm at the point of where you stand up and you take responsibility for things you're responsible for and you're accountable for.

Ben Hatfield made it very clear that he thought we had superior intelligence in a particular area. That's exactly right. When we go into a situation like that, we go in with a cooperative attitude. We're there to do everything we possibly can. We don't step backwards. We step forward and we try to help. I would ask that everybody else does the same thing. There may be another one tomorrow. I pray and hope not, but we're going to be there just like we were at Sago. We're going to be doing everything we possibly can at Sago. And when it's over with, we'll still be responsible for what we're accountable for.

By and large, this agency does a lot of good. I've worked in the industry before we had the mine loss and I've worked in it 30-some years since. It's a much better industry. Can we do better? Yes, we can. Are we going to do better? Yes, we're going to do better. But it starts with standing up and being accountable for what you're accountable for and moving forward constantly.

I appreciate the opportunity to be here. Davitt, I thank you for having us. And I think we have to look forward to what we can do in the future to make sure this never happens again, cooperatively. Thank you.

CHAIR:

Thank you, Ray. I just have a few people to acknowledge and then a very quick remark. Justin Meredith for the Lego crosses. Thank you, Justin, so much. Miranda Elkins and Aimee Adams are the court reporters



back there in the back. West Virginia Wesleyan and sound people and the people that made this happen, I want to thank them very, very, very much. And we have a little team of people that we've worked with through this last four months. I'm going to ask them to stand up. Beth, Celeste, Debbie, Joe Pavlovich, Tom Bethel (phonetic), Dave "Dan" Stuart. Pat McGinley and Susan had to leave earlier. Jessie Wagner had to leave earlier. Earl Dodder (phonetic) had to leave earlier. And last but not least, Catherine Grace, my bride.

Thank you, families. You've done something new here. We've tried a new thing. It seems to work. It helps out with the investigation. It will help, we think, improve the information that we're getting about this accident, about other accidents. It has helped pass the message on how important the work of the regulators are, both state and federal, how



important the work of safety is for the companies. And I want to thank ICG for coming and appearing here. And I want to thank Cecil Roberts for coming and appearing here. We have held together this rather complicated mix because of your efforts and because of your concern for the family.

These 12 fellows were, by all accounts, fine men. It is our job to see that their death is not in vain and that changes come about both in the Sago Mine and in the mines in this country and around the world that improve the chances of miners getting out and improve the chances of having safer workplaces in this country and abroad. Thank you.

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HEARING CONCLUDED AT 3:03 P.M.

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CERTIFICATE

I HEREBY CERTIFY THAT THE FOREGOING PROCEEDINGS WERE REPORTED BY ME AND THEREAFTER REDUCED TO TYPEWRITING AND THAT THIS TRANSCRIPT IS A TRUE AND ACCURATE RECORDING THEREOFF.

SARGENT'S COURT REPORTING SERVICE, INC.

Miranda D. Elkins
Court Reporter