Coal Leader

COAL'S NATIONAL NEWSPAPER

Volume 41 Number 8-9 ISSN 0192-7329 AUGUST-SEPTEMBER 2008

A Red Letter Day for Coal

U.S. Representative Rick Boucher (D-VA), Chairman of the House Energy and Air Quality Subcommittee, introduced bipartisan federal legislation to advance the development and deployment of carbon capture and storage (CCS) technologies.

Boucher starts the Drill Rig

CCS is a method of reducing greenhouse gas emissions by capturing and injecting underground the carbon dioxide emitted from electricity generation plants that use fossil fuels.

August 18 was called a "red letter day" Boucher as the start of a carbon sequestration test was marked in Russell County, Virginia.

A producing coalbed methane well operated by CNX Gas was donated for the test project being conducted by Virginia Tech and Marshall Miller & Associates. The test will result in the injection of 1,000 tons of carbon dioxide into an unmineable coal seam at the test site in hopes of proving that unmineable coal seams are suitable for storing carbon dioxide.

At the same time, the injection of carbon dioxide into the well is also being monitored to determine its potential for creating enhanced coalbed methane recovery.

"It's a red letter day for Russell County, Virginia, but more importantly, it is a red letter day for the entire nation," Boucher said.

The $4.4 million test is funded by the U.S. Department of Energy, the Southern States Energy Board and is in cooperation with the Southeast Regional Carbon Sequestration Partnership (SECARB).

Boucher noted that coal will continue to be the primary fuel used in the United States and the test now underway in Virginia, he said, will be a key to the future of coal.

"Today we begin the process of demonstrating to the nation that coal seems can realize this potential," Boucher said.

In addition to Boucher, speakers at the event included U.S. Department of Energy Assistant Secretary for Fossil Energy Jim Slutz; Virginia Tech's Virginia Center for Coal and Energy Research Director, Dr. Michael Karmis; and CNX Gas Senior Vice President of Established Business Units, J. Michael Onifer.

Marshall Miller, Steve Walz, Rick Boucher, Mike Onifer, James Slutz, Mike Karmis, and Herbert Wheary

Among those in attendance at the event were representatives of the U.S. Department of Energy; Steve Walz, Virginia Gov. Tim Kaine's energy advisor; the Virginia Center for Coal and Energy Research; the Southeast Regional Carbon Sequestration Partnership (SECARB); the Southern States Energy Board; the Virginia Department of Mines, Minerals and Energy; members of the Russell County Board of Supervisors; the Russell County Industrial Development Authority; CONSOL Energy; Buckhorn Coal; Eastman Chemical; and the researchers for this historic project, Virginia Tech and Marshall Miller Associates.

Onifer welcomed visitors to the Russell County site, noting CNX is pleased to play a part in the project.

"CNX Gas' participation in the project is through the donation of the use of a coalbed methane gas well on this site in

Boucher Cont Page 6-A

Coal Leader
Education

From the Classroom to the Coalfields
Project Coal to Electricity: Teaching Environmental Issues

By Catherine J. Meechan, M.S.Ed.
Salem Middle School,
Virginia Beach, VA

Summer vacation for a teacher in Virginia Beach typically means catching up on housework, sunning at the beach, fishing on the Bay, and reading a few novels from the best sellers list. There is also a small requirement to obtain about fifteen hours of professional development in our subject area to maintain a high level of expertise in our discipline.

On Sunday, July 13th, I traveled with two other Beach teachers, Julia Foust and Paula Doyle, and we met other educators from around the region gathered at the University of Virginia-Wise campus to participate in the weeklong "Project Coal to Electricity – Teaching Environmental Issues: Coal + Power Plants + Technologies = Clean, Dependable Electricity" Energy Program presented by Virginia Tech's Powell River Project Research and Education Center and the Eastern Coal Council.

Most teachers are not particularly fond of losing a precious day of summer vacation to spend a day or two in a workshop let alone an entire week. However, the week spent in Southwestern Virginia's coalfields proved to be more than an opportunity to discover Virginia's natural resources – coal, natural gas, and rock.

Barbara Altizer, Executive Director of the Eastern Coal Council, was one of our hosts for the week. She greeted us as we checked into Martha Randolph Hall and provided us with our linens for our stay at the dormitory, which was much nicer than when I was an undergrad.

Dinner that evening was at the dining hall, where we met our other host for the week, Jon Rockett, Education Director for the Powell River Project Research and Education Center. He gave a brief talk on what to expect for the week, but he failed to mention the sheer exhaustion we would endure by the end of each day.

Monday morning began our weeklong adventure through the coalfields of Southwestern Virginia. Tony Scales, a geologist with the Virginia Department of Mines, Minerals, and Energy, was our first guest speaker and tour guide. My travel mates and I got the pleasure of riding with him for the day. He was a wealth of geological information and local history. I was elected to be the note-taker during the ride, which was not an easy task considering the winding roads that led to our first stop in Flag Rock Recreation Park and my affinity to motion sickness.

The area where we stopped for our lecture was breath taking. We overlooked several mountain ridges and the Kentucky border as the morning fog was slowly burning off in the valleys. Mr. Scales identified each mountain range and peak we could see, but I was so overwhelmed by the beauty of my state that I had never before realized until then because I was a "flat-lander." I just stood in amazement taking as many pictures as I could.

Virginia has three coal bearing regions – the Triassic Richmond and Farmville basins, the Mississippian coalfields near Blacksburg, and the Southwestern Virginia coalfields. By far, the Southwestern Virginia coalfields are the most important because of the coal's high energy content and low sulfur content.

We headed over to the Powell River Project Research and Education Center (PRP-R&EC) for a light lunch and a brief discussion on post-mining land use from Jon Rockett. The Powell River Project began reforestation research at the Education Center in 1980 among several other experimental techniques to effectively reclaim mine land. I was most impressed with the herd of cattle that lived on reclaimed pastureland. These cattle behaved much like Pavlov's dogs when Mr. Rockett honked the horn in the van. The entire herd sauntered down the hillside searching for the salt they thought we had brought them. When they realized we had brought nothing for them, they adamantly voiced their displeasure with our shenanigans.

The Red River Coal Company was our final field trip for the day, and the one that got us most excited about what to expect for the rest of the week. On our way to the mine site, which was adjacent to the PRP-R&EC, we made a few stops to familiarize ourselves with the efforts of the Red River Coal Company to reclaim their land and collect a few souvenirs on the side of the gravel road. We collected several samples of coal that had fallen from trucks and a few plant fossils. Perhaps we thought it was going to be our only opportunity to scoop up some coal. We were happily mistaken.

Mike Thomas, one of the owners of the family owned and operated company, met us at the top of one of his operating sites. He handed each of us a company baseball cap, which thrilled me as I was not prepared to be standing in the open sun for a long stretch of time. I also felt very welcomed and part of the team. He was very enthusiastic to share with us the operations of his company.

At first glance, the process of surface mining appeared to be an easy one as we stood atop an exposed coal seam. The front end loader would come along and scoop up the coal and drop it in the waiting dump truck. The dump truck would then take the coal to be processed while another truck would come in to be filled. This process would continue until all the coal from that seam had been extracted.

In order to remove the coal, the coal had to be exposed. This was where the hard work was done in order to reach the coal for pay off. Mr. Thomas took us further up the site to an area that was currently in the process of removing the surrounding rock to expose another coal seam. Tons of rock were being removed and hauled away by enormous Caterpillar dump trucks, called haulers, with a capacity of 150 tons. Mr. Thomas had the drivers stop and pick each one of us up to ride for a haul. Sitting in the hauler while it was being loaded and riding to the dump site to unload the rock was truly an unforgettable moment. I am certain the man driving while I rode won't forget me shouting to stop as I thought we were too close to the edge. He assured me everything was safe, and nothing would happen. Safety was a consistent theme throughout the week shared by every company we visited.

Mr. Thomas had also arranged for us to witness a rock blast at another location on the site. We arrived as two gentlemen were filling holes drilled by another man with ammonium nitrate to fuel the blast. As the men began to set the charge for each drilled hole, we were relocated to a safe viewing distance away from any possible flying debris.

As we waited for the horns to blow signaling the blast, we wandered around the site looking for fossils or other notable tokens of our visit. A few people managed to get some fossilized plant material in some discarded shale fragments. Once the horn sounded, we knew the blast would detonate in approximately thirty seconds. Because light travels faster than sound, the blast would have been just a huge dust ball if one had looked away briefly. The entire rock face upon which we had toured completely blasted to ruble within seconds. Debris was already falling to the ground

Meechan Cont on Page 3-A

Meechan Cont from Page 2-A

when the "kaboom" of the blast reached our ears.

Because the site needed to be re-secured for safety, we were unable to return to get an up close look at the blast area. Instead, we traveled back to the PRP-R&EC for a cookout dinner hosted by Alpha Natural Resources. We arrived to a feast of steaks, baked beans, corn on the cob, dinner rolls, and ice cream all cooked by Alpha representatives, Donnie Ratliff, Dan Helton, and John Schoolcraft. Even though we would have eaten just about anything at that point in the day, the meal certainly exceeded our expectations and our appetite.

While we were eating our ice cream dessert, Mike Abbott of the Department of Mines, Minerals, and Energy was our guest speaker. He discussed with us the hazards of abandoned mine, the extent Virginia's current coal resources, and natural gas production in the area. We received several valuable print resources to use in our classroom as well as the answers to our questions on energy related concerns from the government's point of view.

There was no rush to finish eating, but we all knew that Tuesday would offer the same rigorous schedule. We didn't want to end the informal dialog with Mr. Abbott and the gentlemen from Alpha; however, sleep was high on the list our of priorities.

After breakfast Tuesday morning, we headed out to visit Paramont Coal Corporation, Virginia, LLC for our first underground mining experience. We were escorted to the conference room where everything we needed for the day was laid out on the table. Next to a liability wavier and an acknowledgement form for safety training was a hard hat, safety glasses, gloves, boots, and a brass personal identification tag. I was besieged by everything and began to get a little nervous, but my enthusiasm for the day's events was not at all dampened.

Once we watched the safety video and demonstrated our understanding of the rescue breathers we were required to wear, we were divided into two small groups to begin our tours of the mining operations at Paramont's Deep Mine No. 35. My group was the first to head down in the mine. At the mine site office, we were outfitted with a light and had our breathers affixed to our belts. After one more safety check, we walk over to the mine entrance and boarded a vehicle, personnel carrier, that looked like something from the Flintstones to carry us down in the mine.

The ride took about twenty or thirty minutes to get to where the actual mining was taking place. The area is called the face. Larry, the mine foreman guiding us for the day, stopped the vehicle and had us all turn off our lights. He wanted us to experience what the mine would be like should there be a loss of light or power. We were engulfed in total darkness. Not a speck of light could be seen from any direction. A person could easily panic in a situation of total darkness without proper orientation. Once again, safety measures are in place in case of such an event. There were guide wires along one side of the ceiling with cones attached indicating the direction of the mine entrance. This appeared to be a very primitive safety measure but a very effective one.

Larry showed us everything about the mining operation from extraction to transport. Our visit was interrupted by government inspectors on site for the day checking the electrical lines. The underground miners are frequently visited by inspectors which slow production but are viewed as a necessary key to keeping the mining operation a safe one.

A continuous miner is a large machine that actually extracts the coal from the seam and places it on a flat transport vehicle to be dumped on a conveyor and taken to the surface. Once at the surface the coal is placed in dump trucks taken to the processing plant or placed in rail cars to be delivered to a manufacturing customer. Gone are the days where miners venture down in the mine by the dozens with picks and shovels to painstakingly extract the coal. With the large mining machines, there only needs to be a few operators to oversee the work that is done around the clock.

Once we returned to the light of day, my group went back to the main office for lunch and an overview of the laboratory operations at Paramont. Lunch needed to be quick as our tour was behind schedule due to the inspectors on site in the mine, and another presentation was awaiting us at the processing plant.

The processing plant was a multi-level facility that operates around the clock prepping coal for distribution. Coal is brought in and processed a various levels depending upon the size of the pieces. The entire operation is controlled from a single room filled with a variety of computers and monitors flashing, beeping, and signaling if there is trouble. There are two men in the main plant that oversee the monitors and the actual equipment. One employee will keep a close eye on the monitors while the other roams the building monitoring the machinery. The plant appeared to be an uncomplicated venture on the surface but was actually a very complex system operated by experienced employees.

Dinner that evening was certainly a treat at the MountainRose Vineyard, a family owned and operated winery situated on reclaimed mine land. David Lawson, owner and vintner of the winery, escorted us on a foot tour of the vineyard detailing the ups and downs of starting a winery on reclaimed land. As MountainRose is the only winery of its kind, Lawson has had to rely on trial and error in running the vineyard rather than seeking the help of experienced vineyard owners.

His mother, Suzanne Lawson, is partners with Lawson, and she hosted the tasting of the MountainRose wines back at the main winery building. The wine list included five whites and four reds with most of them appropriately named after local coal seams in honor of the land upon which the winery rests. Most of the wine produced is on the sweeter side in order to appear to the preference of the wine connoisseurs of the area. Lawson should be proud of his hard work as his wines are beginning to get noticed on the Virginia wine market through winning a few awards at major wine events in the state.

Tom Rappold, Assistant Vice President of Norfolk-Southern's Utility-South and Industrial Coal Marketing, was our guest speaker after the dinner. He gave an in depth overview of Norfolk-Southern's transportation services to the coal industry in the region as well as globally. Norfolk-Southern has been providing the world with high quality steam and metallurgical coal for over 100 years and continues to push forward as an industry leader.

Wednesday was another long day of witnessing mining operations in the region. Our first stop of the day was at CNX Gas in Tazewell County. We were presented with information on frac welling drilling to extract methane gas from the Pocahontas 3 coal seam, and then escorted to Consol Energy for our next underground tour.

Consol Energy's Buchanan Mine was mining the Pocahontas 3 coal seam, which is a longwall operation system. We entered the meeting room where our necessary equipment for the mine was neatly placed at our assigned seats. Like Paramont the day before, we had to participate in a safety training course and sign another liability wavier.

Access to the mine was via an elevator that descended 1583 feet down a very dark shaft. At the bottom, we all took a seat on a flat car secured to an extensive underground rail system that would carry us two and a half miles into the mine in order to

Meechan Cont on Page 4-A

www.coalleader.com

Coal Leader

COAL'S NATIONAL NEWSPAPER

Volume 41, Number 8 - 9 ISSN 0192-7329 AUGUST- SEPTEMBER 2008

Barbara F. Altizer ...barb@netscope.net .....Publisher & Managing Editor
C. E. Farmer .....cefarmer222@netscope.net ..Assistant to the Publisher
Ashley Thomson ...aathomson@netscope.net ....Assistant to the Publisher
Martin A. Snyder ...msnyder55@verizon.net .....Advertising Sales Manager
Robert Fields .....robertfields@netscope.net .....Web Master
Editorial Content.....Eastern Coal Council Directors

Published Monthly by: **COAL LEADER, Inc.**

Controlled circulation postage paid at Richlands, VA

Subscription Rate $28.00

The **COAL LEADER** (ISN#0192-7329) is published monthly by **COAL LEADER, Inc.**, P.O. Box 858, Richlands, VA 24641-0858, making a total of twelve issues per year. The cost for the twelve issues is $28.00 per year.

Second class postage paid at Richlands, VA 24641.

Postmaster: Send address changes to Coal Leader, Circulation Department, P.O. Box 858, Richlands, VA 24641-0858

Phone: 276-964-6363 or Fax: 276-964-6342

E-Mail: coalleader@netscope.net WEBSITE: www.coalleader.com

Meechan Cont from Page 3-A

reach the face of the seam.

Again, federal inspectors were on site making sure the mine was operating within the strict governmental regulations for underground mining operations. The longwall miner needed to be stopped in order for the inspectors to complete their assessment of the mine. To halt the production of the longwall miner for just a few minutes costs the company thousands of dollars in profit, but it is a required hurdle in order to maintain the company's high standard for job safety.

While the longwall miner was stopped, we were escorted to the center of the machine to see firsthand exactly how the equipment shredded the coal from the seam. Standing amidst this powerful machine while it was performing its duty was spectacular. I stood in amazement and came to the realization that humans are using coal as fast as it is being extracted.

Just as fast, we had to surface to return to the meeting room for lunch. We all enjoyed our lunch and managed to ask several questions concerning the operations of the mine. Asking questions while in the mine was rather difficult due to the high noise levels of the operating machinery.

After our questions were answered and our bellies full, we raced off to Jewell Resources Training Center to witness how coal was processed for coke, a product used in the production of steel. At Jewell, Dallas Sizemore of the Virginia Department of Environmental Quality delivered a presentation on air monitoring. This was an area of concern for several of the teachers as environmental hazards are a part of the science curriculum in many districts. The standard assumption by most people is the burning of fossils fuels is very bad for the environment through the production of waste products such as sulfur dioxide, carbon monoxide, nitrogen dioxide, and ozone. Mr. Sizemore's presentation, although very technical, was extremely informative. Mr. Sizemore agreed with the concerns, but assured us that the industries we have toured were well within compliance of current regulations.

We suited up once again, and after a short safety briefing we tour the grounds of the coke ovens. The process of making coke appeared to be very routine and repetitive. The coal is brought in and dumped into the ovens to "cook" for 48 hours. Two days later the coke is pushed out onto a rail car that carts the coke to a water cooling tank where water is poured over the burning coal to quickly cool it to be dumped into a processor that prepares the coke for delivery to Jewell's customers. This process, like most other coal industry operations, runs around the clock.

Time never seemed to be on our side as we promptly had to end our tour to rush over to Breaks Interstate Park for a dinner engagement with the Honorable Phillip Puckett of the Virginia State Senate. Before we arrived at the restaurant, we stopped at Stateline Overlook in Breaks to watch the sunset and view several geological features on both the Virginia and Kentucky sides of the park.

Senator Puckett did not seem to be at all concerned that we arrived late to dinner. In fact he was delighted that we were all enjoying our excursions in his region. He certainly represented himself as a man committed to his family, faith, and community through his compassionate words he delivered to us that evening.

With little sleep again, we eagerly prepared to begin Thursday's trip to the Appalachian Power Carbo Plant. Visiting the plant certainly put everything we had seen and done that week into a greater perspective. Energy is something we all need and use on a daily basis. The plant showed us exactly how it is done from bringing in the coal to moving power through the lines. As teachers we tried to ask the tough questions that are on the minds of our students, and the representatives from the plant not only gave us an answer but showed us how things were done.

Environmental issues are of major interest to citizens as fears of global warming rise. We were escorted throughout the facility and shown exactly how the plant handles various aspects of pollution produced by the plant. While the facility is an aging one, it certainly did not show any signs of causing harm to the surrounding community or environment.

That evening we were treated to dinner at the John Fox Jr. House in Big Stone Gap where our guest speaker Herbert Wheary from Dominion Energy met us. Before we sat down to dinner, we roamed the historic home of John Fox, Jr. author of *Trail of the Lonesome Pine*. Everything was immaculate and accurate to the time period.

Energy is something we all need and use on a daily basis, but environmental issues are of major interest to citizens as fears of global warming rise.

Mr. Wheary began his presentation soon after dessert was finished. Having Dominion as my energy provider, I was particularly interested in his discussion. He covered Virginia's rising demand for power and the need for conservation. We were all very anxious for him to discuss the construction of the Virginia City Hybrid Energy Center as we had ridden past the construction site several times during the week, and many of the coal companies we visited had talked about the controversies surrounding the construction.

The positive impacts of the Virginia City Hybrid Energy Center to the surrounding community and industry appear to outweigh any negative impacts opponents consistently proclaim. The plant is under strict guidelines to be environmentally responsible, and the data we were presented demonstrated the company's commitment cognizant of their environmental impact.

The night was capped with the outdoor drama, *Trail of the Lonesome Pine*. We sat in the outdoor theater and enjoyed the cool summer evening while watching the production of John Fox's novel.

Friday was the final day of our coal experience, and everything had come full circle. Our first stop was at the Joy Mining Machinery's Re-build Facility in Duffield, VA. The company built and repaired the enormous machines we saw down in the mines. Not only was the company committed to the quality of their products but also to the education of students concerning mineral resources. One supervisor, Kenny Bowling, mentioned how he visits schools and informs students about our natural resources and how they can conserve. He was also quick to volunteer to speak in Virginia Beach provided the school is near a golf course.

A tour of the facility showed every employee carefully attending his assigned job. When a machine is brought in from the coal mines to be repaired, it leaves looking brand new. Each employee has an assigned area of expertise for a particular job. The machine travels through various stations through the overhaul process, and every inch of the machine is inspected to have parts repaired or replaced. The company provides customers with a timeline for return on the machines, and each employee must maintain a high work ethic to ensure that timeline. Without these machines, the coal miners would be back to the old pick and shovel days of mining.

We left Joy Mining and headed for Natural Tunnel State Park, where we met up with Tony Scales again. He had written a book, Natural Tunnel: Nature's Marvel in Stone, so the day would not have been complete without him giving us a tour of the tunnel. We rode a chairlift down to where the tunnel could be accessed. While actually walking through the tunnel was not an option, Mr. Scales stood at the end of the wooden trail and discussed the massive geological wonder while we snapped plenty of photos for our classrooms.

Eastman Chemical Company's Coal Gasification Plant in Kingsport Tennessee was our last stop before heading home. After lunch we all drive our own vehicles to Kingsport as we would not return to Wise. Eastman was a facility of colossal proportions. We first had to check-in at a building outside the actual facility. We were then escorted to a waiting tour bus that drove us on to the island where the plant was situated. During the ride, the driver spoke about the facility much like a tour guide would at Disneyworld.

Once inside the building, we were escorted to a small room that was filled with a scaled model of the entire plant. Ronald Smith, Senior Technical Associate, met us in the room and gave us an overview on what Eastman manufactures and markets from coal. While none of the products were readily known to us, we actually discovered that we use many of them on a daily basis. Though our time at Eastman was brief, we got a broader picture of just how important the role of coal plays in our daily lives.

The experience of "Project Coal to Electricity" certainly widened my perspective on the coal industry and gave me valuable resources to share with my students to enhance their understanding as well. In a time where energy resources and the environment are of great concern to our nation, there is a great deal of responsibility for everyone to become more conscious of their energy habits in order to prepare or the future. "Project Coal to Electricity" not only corrected my misconceptions about coal energy but also prepared me to answer the tough questions on coal usage and reserves my students might ask. Though I left Kingsport absolutely exhausted from the week's rigorous schedule, I felt energized to get back into the classroom to share my experiences and findings with my colleagues and students.

cl

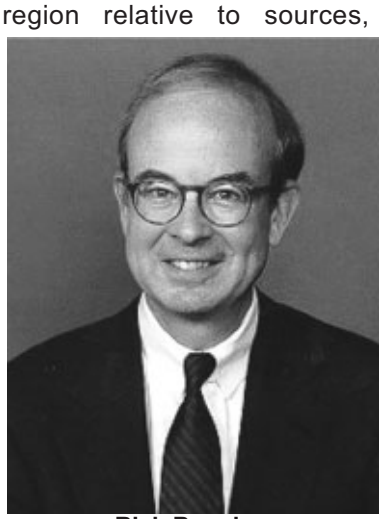
Eastern Coal Council Announces Dates for its 30th Annual Conference & Exposition

Mark Your 2009 Calendar!

Attend 30th annual energy conference and exposition May 19 and 20, 2009. The event is sponsored by Eastern Coal Council, Southern States Energy Board, Virginia Tech's Research Center for Coal & Energy, Kentucky Coal Academy, COAL LEADER, U. S. Congressman Rick Boucher.

John Zachwieja
Chair-ECC

Hear experts from the Southeast Regional Carbon Sequestration Partnership (SECARB), led by Southern States Energy Board of Norcross, GA, represents 11 southeastern states (Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia). SECARB is one of seven partnerships created by the U.S. DOE to help determine the best approaches for capturing and storing carbon dioxide (CO_2), thought to contribute to global climate change. SECARB is addressing point source CO_2 emissions in the southeastern United States by geographically linking sources with potential sequestration sinks. SECARB will accomplish its objectives by defining similarities in the 11 state region; characterizing the region relative to sources, sinks, transport, sequestration options, and existing and future infrastructure requirements; identifying and addressing issues for technology deployment; developing public involvement and education mechanisms; identifying the most promising capture, sequestration, and transport options; and developing action plans for implementation and technology validation.



Rick Boucher
U. S. House of Representatives

The meeting will continue to highlight the need for America to become energy independent through clean coal technologies, coal to liquids, carbon capture and storage, and other critical opportunities and issues facing the coal industry. Limited exhibit space is available. For more information contact Eastern Coal Council 276-964-6363 or 276-964-9088 or visit www.easterncoalcouncil.org

cl

Kenneth Nemeth
SSEB Executive Director

2008 MINExpo Has Nearly 1300 Exhibitors

2008 MINExpo is sponsored by the National Mining Association (NMA). This year's event will be the largest show ever held. More than 1,200 exhibitors will be showcased throughout approximately 600,000 square feet of space and will attract some 30,000 visitors from around the world. MINExpo INTERNATIONAL® will highlight state-of-the-art equipment and services to the international mining community.

Attendees will be able to see everything from the industry's largest equipment to hand tools; the latest in automation and robotics; safety and communications equipment; longwall mining equipment; engines and parts; materials, and much, much more. We anticipate that a whole range of new products will be introduced at the show.

A key theme of this year's show will be the record global demand for the coal, minerals and equipment needed to sustain growing economies and populations.

Following the Sept. 22 ribbon cutting, industry leaders will participate in a state-of-the industry press conference. On Sept. 23 and 24, the U.S. Departments of the Interior and Labor will honor U.S. mining operations for outstanding environmental and safety efforts.

The 20 education sessions will be held the mornings of Tuesday, September 23 and Wednesday, September 24 from 8 a.m. – 12:15 p.m. All sessions will be held at the Las Vegas Convention Center. The education sessions are included in the registration fee and professional development hours will be available to individuals attending each session.

The show is September 22 – 24, 2008 in the Las Vegas Convention Center – Las Vegas, Nevada USA

Advance registration is highly recommended

• Register for MINExpo® On-Line…it is easy, quick, and you receive an immediate e-mail registration confirmation. Individuals paying by check must register by mail. NMA will not invoice your company. Go on the Internet to http://www.minexpo.com/attendeeregister.shtm

• Fax the Advance Registration form to 708-344-4444.

• Mail your registration to: MINExpo INTERNATIONAL 2008, c/o CompuSystems Inc., 2805 S. 25th Avenue, Broadview, IL 60153.

The National Mining Association (NMA) is the voice of the American mining industry in Washington, D.C. NMA is the only national trade organization that represents the interests of mining before Congress, the Administration, federal agencies, the judiciary and the media.

Our membership includes more than 325 corporations involved in all aspects of the mining industry including coal, metal and industrial mineral producers, mineral processors, equipment manufacturers, state associations, bulk transporters, engineering firms, consultants, financial institutions and other companies that supply goods and services to the mining industry. *cl*

Arch Coal Acquires Interest in DKRW Advanced Fuels

Arch Coal, Inc. (NYSE:ACI) recently announced that it has acquired a 25% equity interest in DKRW Advanced Fuels, LLC. In exchange, Arch has agreed to extend its existing option agreement with DKRW Advanced Fuels, to work with DKRW Advanced Fuels to secure coal reserves for two additional coal-to-liquids projects outside of the Carbon Basin, and to invest $25 million in the company.

DKRW Advanced Fuels is a subsidiary of Houston-based DKRW Energy LLC and the principal developer of the Medicine Bow Fuel and Power coal-to-liquids project in the Carbon Basin of southern Wyoming.

The Medicine Bow project is being planned as a mine-mouth coal-to-liquids facility that will use coal from Arch's Carbon Basin reserves in southern Wyoming as a feedstock. The project already has licenses in place from leading

Steve Leer

technology providers, as well as a site with nearby access to a liquids pipeline network that supplies a large and underserved refined products market. In addition, DKRW Advanced Fuels has signed a letter of intent with a regional oil and gas producer that plans to use carbon dioxide generated by the facility for enhanced oil recovery.

"We believe that our strategic partnership with DKRW Advanced Fuels positions Arch to play a significant role in the emerging coal-to-liquids industry," said Steven F. Leer, Arch Coal's chairman and chief executive officer. "DKRW Advanced Fuels is widely recognized as a leader in the coal conversion field, and it has made excellent progress in assembling the core components of a successful facility in southern Wyoming. We look forward to working with DKRW to move this project forward in the months ahead."

"Arch Coal is an industry leader in the United States coal market," said Robert C. Kelly, co-managing partner of DKRW Advanced Fuels. "Arch complements our development efforts with both coal resources and strategic thinking on coal-to-liquids. They are an excellent partner for us."

As part of the transaction, Arch and DKRW Advanced Fuels completed an extension of the existing option agree-

Robert Kelly

ment on approximately 180 million tons of Carbon Basin coal reserves relating to the Medicine Bow coal-to-liquids project, and entered into a new agreement whereby Arch and DKRW Advanced Fuels will explore potential reserves and project opportunities of similar size to Medicine Bow in two other coal basins.

"We believe coal conversion technologies hold tremendous potential for serving America's future energy needs," Leer said. "By converting its vast and highly economic domestic coal reserves into transportation fuels and synthetic natural gas, the United States can reduce its reliance on foreign sources of energy. At the same time, coal conversion facilities that employ gasification - such as the proposed Medicine Bow plant - have exceptionally low emissions and are capable of producing an extraordinarily clean-burning product slate."

Coal conversion technologies are generally viewed as economic when crude oil is trading at prices above $35-$40 per barrel and natural gas is trading at prices above $5 per million Btus. Light sweet crude oil for October delivery most recently traded at approximately $72 per barrel on the New York Mercantile Exchange. Natural gas for October delivery most recently traded at approximately $7 per million Btus. *cl*

Boucher Cont from Page 1

which carbon dioxide will ultimately be stored to demostrate the ability of unmineable coal seams to store CO2," Onifer noted. "It's important research related to clean coal technologies for the future and it is research that CNX Gas is proud to play a role in advancing."

Onifer said that CNX Gas views its participation in the project as another aspect in its own greenhouse gas reduction efforts. CNX Gas, through its methane capture program, is recognized as having the second largest methane capture program of any company in the United States.

Slutz stated that the Virginia test project celebrated in mid-August is part of the world's largest carbon capture and storage programs underway.

"This is the number one technology we have to solve," Slutz said of the importance and the on going research.

Boucher noted in his remarks that in addition to the benefits which may be discovered related to enhanced coalbed methane recovery as a result of the injection process, the ability of unmineable coal seams to store the carbon dioxide could also improve the Southwest Virginia region's ability to attract new coal-to-liquids plants.

"Our region would also enjoy the prestige that accompanies the contribution our region will make to solving one of our nation's most pressing energy needs," Boucher said.

Soil monitoring on the Russell County well site started in late April and monitoring points were established to gather data regarding the current carbon dioxide soil flux. Two core holes to monitor the actual storage test have also been identified and were drilled in August, including one that Boucher flipped the switch to start at the August 18 groundbreaking for the project.

The timetable for the project calls for the actual test of placing the carbon dioxide in the coal seams to occur in the November 2008 – May 2009 timeframe, with measuring, monitoring, verifying and site closure to occur from May to September 2009. When the test is complete, the well will be returned to CNX Gas.

Boucher recently introduced bipartisan federal legislation to advance the development and deployment of carbon capture and storage (CCS) technologies. CCS is a method of reducing greenhouse gas emissions by capturing and injecting underground the carbon dioxide emitted from electricity generation plants that use fossil fuels.

The legislation will establish a $1 billion annual fund, derived from fees on the generation of electricity from coal, oil and natural gas. Grants from the fund will be awarded to large-scale projects advancing the commercial availability of CCS technology.

Boucher stated "if severe emissions reduction requirements are imposed before the carbon capture and storage technologies are available, the result would be a rapid switch from coal to other fuels. Such fuel switching would significantly increase electricity prices to the detriment of both residential and industrial electricity consumers. Fuel switching from coal would most likely result in far greater uses of natural gas for electricity generation, severely stressing an already constrained natural gas supply and dramatically increasing natural gas prices."

"Coal is a valuable resource," noted John Murtha (PA-D).

"With this technology and legislation, we can enhance existing coal power plants by providing the resources they need to meet the federal requirements and reduce greenhouse gases."

"Energy prices drive our economy, as the price of gasoline has skyrocketed due, in part, to policies that limit access to American energy resources, it is critical that electricity rates do not follow suit. We must take advantage of our nation's vast coal reserves that have the promise to produce clean and affordable power for generations. In our quest to reduce greenhouse gas emissions and protect the environment, we must promote exciting new clean coal technologies that will not only keep costs down for consumers, but also foster new jobs and a strong economy. These technologies exhibit great promise, and in encouraging advancements in carbon capture, we'll be able to responsibly fortify our nation's energy supply with American-made energy and protect the pocketbooks of our nation's consumers as well," Fred Upton (MI-R) said.

"Carbon capture and sequestration is critically needed in order to continue providing sufficient supplies of affordable energy to American families in an era of increased climate change awareness. But we need to get this technology moving now. The small-scale work that we're currently doing is not going to cut it in time. This bill is essential to getting carbon capture and sequestration moving in the near-term, by starting up the large scale projects that so much of the electric power industry is waiting for," Chairman of the House Committee on Natural Resources Nick Rahall said.

"It is critical that the abundant coal resources we have in the United States be used in any national energy plans," John Shimkus (IL-R) said. "This technology can allow us to use coal to provide American jobs and spur the economy while capturing and storing carbon."

Major utilities are also supporting Boucher's legislation.

cl

CONSOL Energy Promotes Executives

Six CONSOL Energy Inc. (NYSE:CNX) executives have been promoted.

Albert Aloia, who currently serves as senior vice president, human resources, has been promoted to senior vice president, safety and human resources. In addition to his HR duties, he assumes responsibility for CONSOL's Safety Department.

Albert Aloia

Louis Barletta, vice president, coal operations support, assumes the title of vice president, safety and directs the overall safety efforts of the company.

Louis Barletta

In addition to his role as senior vice president, CNX Land Resources Inc., James McCaffrey becomes senior vice president, supply chain management.

Tommy Johnson, director, government affairs, has been promoted to vice president, government affairs.

John Zachwieja has been named vice president, coal operations support, with responsibility for engineering and production support for CONSOL coal mining operations.

James McCaffrey

Jack Richardson has been named vice president, Central Appalachian Operations. Richardson oversees all underground processes CONSOL conducts in its Central Appalachian Operations.

John Zachwieja

CONSOL Energy Inc., a high-Btu bituminous coal and coal bed methane company, is a member of the Standard & Poor's 500 Equity Index and has annual revenues of $3.7 billion. It has 15 bituminous coal mining complexes in six states and reports proven and probable coal reserves of 4.3 billion tons. In addition, the company is a majority shareholder in one of the largest U.S. producers of coalbed methane gas, CNX Gas Corporation. Additional information about the company can be found at its web site: www.consolenergy.com. *cl*

Jack Richardson

CONSOL ENERGY™

Raven™ Agitator Drive for Flue Gas Desulfurization

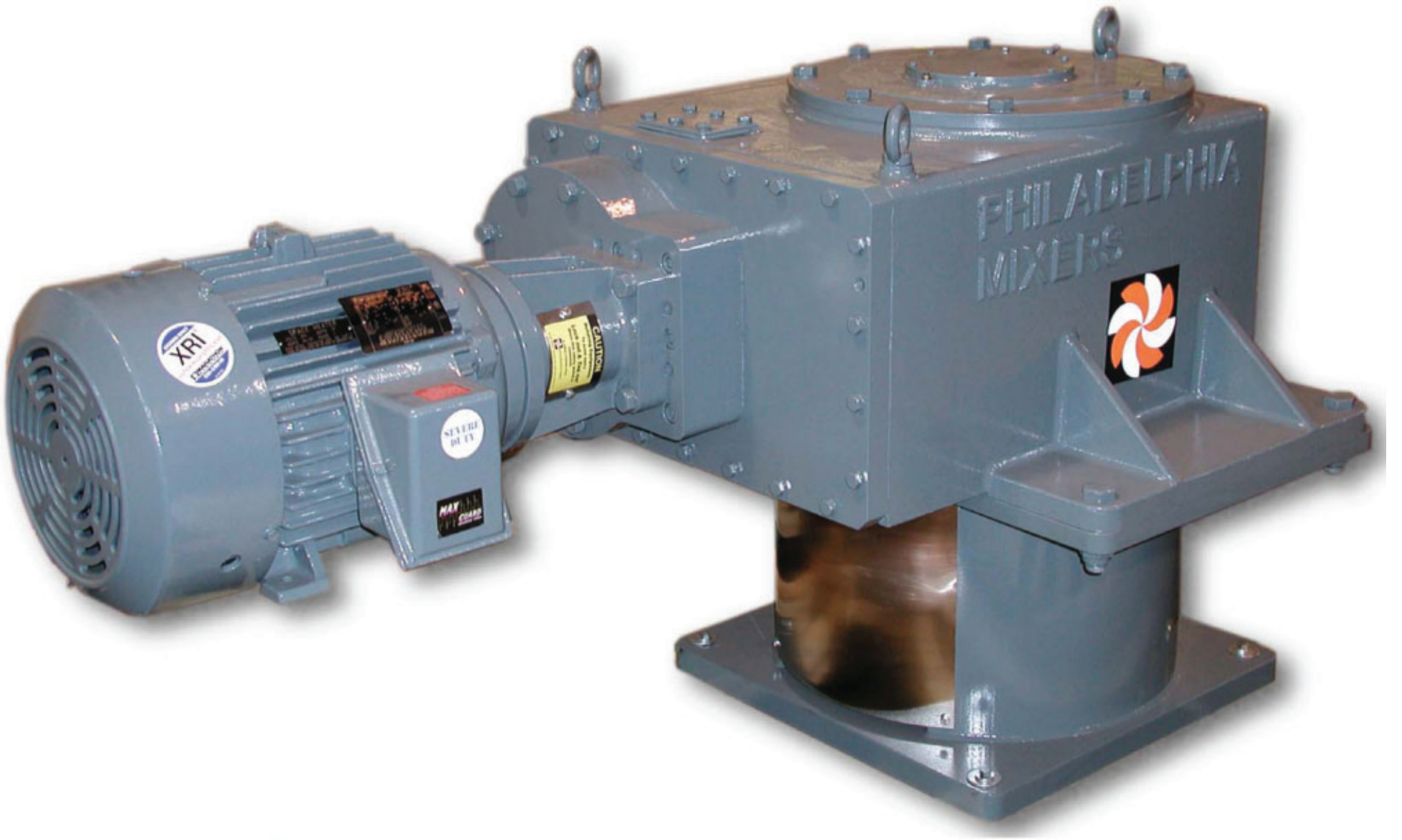
We are pleased to present the Raven™ Agitator Drive. This quality brand product is used in the flue gas desulfurization (FGD) process and designed to withstand heavy-duty loads.

This is a solid shaft design with a pedestal mount. Developed to handle the more rigorous tasks associated with FGD Agitators, this drive incorporates the latest design and advantages and improvements available to ensure proper yields for all agitation operations.

Known for its rugged construction, flexible, adaptable options, unmatched superior design, no leak drywell construction and long-life bearings the Raven™ stands strong as a quality design backed up by Philadelphia Mixing Solution's 100 years of expertise.

We offer a drive exchange program for all major brands. Go to www.philamixers.com to see our online "service chat."

For more information call 1-800-95-MIXER or 1-800-956-4937. You may visit the website at www.philamixers.com



PHILADELPHIA MIXING SOLUTIONS

Active Control Announces Second Commercial Installation of ACTIVEMINE at a Magnum Coal Mine

Active Control Announces Second Commercial Installation of Activemine at a Magnum Coal Mine

Active Control Technology Inc. (TSX-V:ACT) recently announced the second commercial installation of ActiveMineTM, the premier wireless communications and locating system for mines, at an underground coal mine in West Virginia.

The installation, at Magnum Coal Company's IO Coal Mine, began earlier this month. The deployment is part of a five-mine purchase order by Magnum announced last November.

"This is another major milestone for Active Control and for mining companies seeking a better communications and tracking solution," said Steve Barrett, President and CEO, Active Control.

ActiveMine provides excellent flexibility and value over the life of any mine. The system can be expanded and enhanced with additional features to meet changing demands as mine operations grow, while providing a profitable ongoing revenue stream for Active Control.

The IO Coal Mine installation follows an earlier ActiveMine deployment at Magnum's Winchester mine in West Virginia, under a separate purchase order.

"We are delivering on our promise to customers to install ActiveMine successfully and on-time," Barrett said. "At the same time, we are advancing discussions with many operators to secure additional purchase orders."

The IO and Winchester installations both include ActiveMine's new "StarfishTM" feature, which for the first time makes it possible for miners who become isolated due to an accident, explosion or other event to stay linked, even when they are distant from one another and cut off from the outside world.

Starfish operates on top of ActiveMine's 100 percent wireless Wi-Fi MESH network. The strategic placement of nodes creates multiple wireless paths, making it possible to maintain communication links in the event any node fails or is damaged.

With Starfish, even if a node or series of nodes becomes isolated from the main network, voice communications will automatically be re-established within an isolated area. The analogy in nature is that of a starfish: If a starfish's arm is severed, a complete new starfish is naturally regenerated by the severed section.

This capability is currently not possible with analog walkie-talkie radios used in leaky feeder systems.

ActiveMine's communications, data and tracking system enables monitoring of production, personnel and equipment in all types of surface and underground mining environments, including coal and base metal mines. The system is designed to:

• Operate on a 100 percent wireless Wi-Fi network backbone.

• Be less susceptible to water and mechanical damage of all sorts, including rock fall.

• Use open-standards technology.

• Meet federal MINER Act requirements for wireless systems as established in MSHA policies.

• Provide four-day intrinsically safe battery back-up and power supply.

• Provide a wireless communications and data network above-ground, linked seamlessly to underground networks.

ACT designs and markets wireless network control and communication systems for buildings and extreme environments. Located in Burlington, Ontario, Canada, the company trades publicly on the TSX Venture Exchange under the symbol ACT. For more information, visit the company's website at www.activecontrol.com.

Magnum Coal Company, based in Charleston, West Virginia, is one of the largest producers of coal in the U.S. Central Appalachian coal mining region. The company controls over 629 million tons of high Btu, low sulfur coal and operates 17 mines and seven preparation plants, all located in West Virginia. The company's strategy is focused on maintaining its leading cost position in the region and exploiting internal and external growth opportunities afforded by its considerable reserve base and market position.

cl

Mine Safety Continues to Improve

By: Chris R. Hamilton
WV Coal Association

The overall safety performance of the coal industry, which was brought into question as the result of tragic accidents in 2006, was the culmination of many years of gradual but continued improvement.

New advancements in mine extractive techniques and new safety technologies, together with an extraordinarily skilled and experienced work force have resulted in safer conditions, fewer accidents and overall safety improvements.

The industry has taken great pride in its safety record over the past couple of decades, and for good reason. In fact, most experienced miners throughout the industry and certified safety professionals maintain that mining has become much safer today than what was realistically believed possible a few short years ago.

By its very nature, mining is unique (unlike any other business or industry) in that it is dependent on natural conditions and geology. Through their skills, training and hard work, miners attempt to control and manage the challenges of their environment - and they are good at it! It requires a supreme vigilance every minute of every shift.

Unfortunately, the tragic events of 2006 overshadowed decades of improvement and did not accurately reflect how technologically advanced or how safe coal mining has become.

On a comparative basis, mining accidents are on a downward trend and more reflective of recent performance. However, one mining death is one too many, and despite all the progress charted over the years, the events of 2006 underscored the fact that much work remained, particularly in the post-accident phase so that the effect of an accident can be minimized or mitigated.

Hence, many improvements have been made at the mine level in this important area.

Since January 2006, there have been three major mine safety reform efforts; one on the federal level with the passage of the MINER Act and two comprehensive reforms of West Virginia's Mine Safety Act.

These reforms, coupled with an array of new administrative rules, have resulted in new requirements for needed improvements in the industry's safety efforts, including:

• Additional state and mine site mine rescue teams.

• Statewide immediate accident notification system.

• Wireless communication systems.

• Additional Self Contained Self Rescuers (SCSRs).

• Underground safety shelters.

• Revised mine emergency preparedness plans.

• Individual tracking devices.

• Additional lifelines.

• New mine seal design, construction and examination criteria.

• Mine seal remediation plans.

* Atmospheric testing requirements.

• Additional belt ventilation measures.

• Increased enforcement, inspections and higher penalties.

• Mine foreman continuing-education programs.

• Miner training and retraining programs.

In addition, increased state and federal budget dollars have been appropriated for more mine inspectors and important health and safety research.

So the lessons learned from Sago and other accidents of the last two years have already been transformed into enhancements for West Virginia's mine safety program. Additional safety enhancements and miner protections are imminent as ongoing investigative and accident analysis continue.

However, all the new laws and safety improvements alone will not necessarily produce greater benefits. Equal attention must also be directed at worker behavior and individual responsibility.

Although mine management is ultimately responsible for the safety performance of a particular mine, individual miners are not absolved from sharing in this responsibility.

Today's miner is incredibly experienced and masterful in his job. He knows the attendant dangers associated with mining and has all the tools and protections under law to carry out his daily job function in a safe manner.

The average miner is 55 years old and has 20 to 25 years of mining experience to boot. He represents a world-class journeyman within an industrialized work force. He must exercise daily vigilance while on the job and not allow carelessness or complacency to affect his individual job performance.

Daily routine and journeyman-level status often breed complacency, which has no place in a work environment that requires continuous personal attention and no room for error.

With the influx today of new apprentice-level miners into the work force, experienced miners should lead by example and counsel their younger colleagues.

The government must also accept responsibility beyond the enactment of new laws. It must work with mine management and the work force toward continuous improvement. It must also reject complacency within its own ranks as with abusive and uneven enforcement application.

A strong but fair and goal-oriented enforcement program is a healthy component of mine safety. The government should also strive to become a resourceful leader in mine safety and not merely function behind assigned power. Assigned power is basic and necessary, reverent power is desired. A helping hand and good solid advice are always welcome. In the aftermath of the tragic Sago and other accidents of 2006, management, labor and government have worked well together to identify and develop workable safety solutions to improve the overall safety performance of the coal industry. Additional improvements will only be realized if this unprecedented level of cooperation continues and the ultimate goal of creating a safe, secure and productive industry remains a shared responsibility. *cl*

Governor Tim Kaine Recognizes Efforts of CNX Gas to Reduce Greenhouse Gas Emissions in Virginia

CNX Gas Corporation (NYSE: CXG) recently announced the company's registration of greenhouse gas emission offsets with the Chicago Climate Exchange (CCXO).

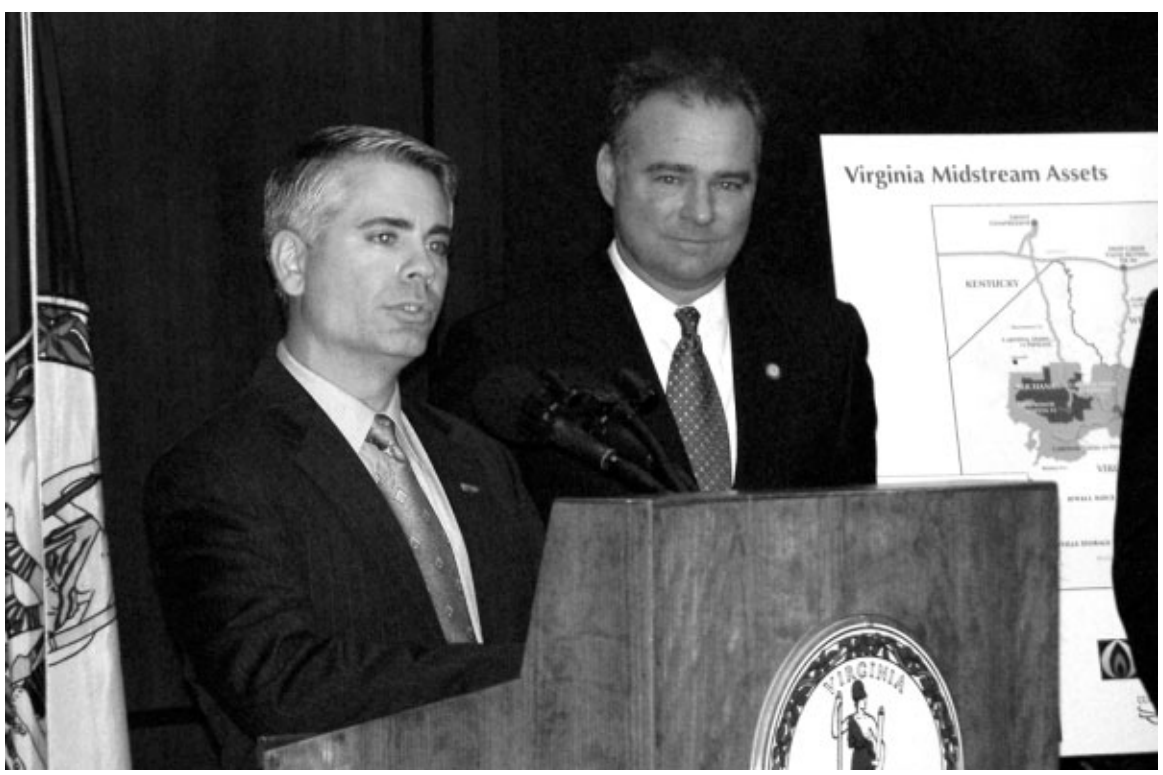
Governor Timothy M. Kaine joined the company and recognized CNX Gas Corporation for the significant impact its coalbed methane capture project in southwest Virginia is having on the reduction of greenhouse gas emissions in Virginia.

CNX Gas announced it has registered 8.4 million metric tons of emission offsets for trading on the CCX, a legally binding greenhouse gas reduction and trading exchange for emission sources and offset projects.

CNX Gas' offsets arose out of CNX Gas' coalbed methane capture project in Buchanan County, Virginia, for the years 2003 through September 2007. Additional offsets are expected to be generated in the future.

"This is a win-win-win situation for all parties involved here today," CNX Gas President and CEO Nicholas J. Deluliis said about the significance of the relationship between CNX Gas, the Chicago Climate Exchange and the Commonwealth of Virginia. "Not only are we creating value for our shareholders through the registration of emission offsets on the Chicago Climate Exchange, we are furthering the goals of Governor Kaine's 2007 Virginia Energy Plan, making Virginia a leader in addressing one of the most important issues in the country today."

Dr. Richard Sandor, Chairman and CEO of Chicago Climate Exchange, echoed Mr. Deluliis' thoughts: "The Chicago Climate Exchange facilitates private sector approaches to addressing the climate change issue and we are very pleased to partner with CNX Gas and to see the positive impact that our partnership is having on Virginia and the country."



"CNX Gas' methane capture project in Buchanan County is exactly the type of private sector initiative that will enable Virginia to achieve our goal of reducing the Commonwealth's total greenhouse gas emissions by 30% by 2025," remarked Governor Kaine. "Just to put it in perspective, the 8.4 million metric tons of CO2 equivalents being registered by CNX Gas today, is equivalent to the annual carbon emissions of 1.6 million automobiles. Moreover, because CNX Gas sells the methane it captures, we are simultaneously increasing the Commonwealth's indigenous energy production, which was one of the goals I laid out in my 2007 Virginia Energy Plan."

CNX Gas has a unique position in the natural gas industry relative to its peers by the nature of its primary asset, coalbed methane or "CBM." CBM is gas found naturally in coal seams and must be removed from the coal seam prior to mining coal. Historically, CBM was vented into the atmosphere. Today, CNX Gas captures the CBM in advance of mining, which improves the safety of coal mining and reduces the carbon footprint of coal. Methane is a greenhouse gas with a Global Warming Potential (GWP) more than 20 times that of carbon dioxide.

CNX Gas Registers 8.4 Million Metric Tons of Emission Offsets for Trading on the Chicago Climate Exchange

The capture of methane not only realizes an energy source from what was once a waste product, but it also increases energy efficiency by creating two products (coal and gas) from one given resource, coal. CNX Gas became a registered offset provider on the Chicago Climate Exchange in 2007.

CCX is a rules-based, greenhouse gas emission reduction and trading system. CCX emitting members make a voluntary but legally binding commitment to meet annual greenhouse gas emission reduction targets. Those emitting members who reduce their emissions below their targets have surplus allowances to sell or bank; those who fall short of their targets comply by purchasing allowances or offsets, which are traded on the CCX as Carbon Financial Instruments (CFI) contracts. CFIs represent 100 metric tons of emission reductions or offsets. As a CCX offset provider, CNX Gas is not bound to any emission reduction targets. An offset provider is an owner of an offset project, such as CNX Gas's methane capture project in Buchanan County, Virginia, that registers and sells offsets on its own behalf. In order to register and trade CFI's, the CCX Committee on Offsets must approve the project and the project must then be validated by an independent CCX verifier. Once verified, CCX then qualifies emission reduction offsets for each specific project.

Methane offsets are granted on the basis of avoiding methane emissions by diverting gas into gas pipelines for commercial sale. After an emission reduction project is qualified, offsets generated by the project can be registered and sold through CCX to emitting members that require offsets to meet their emission reduction targets.

CNX Gas has registered 8.4 million metric tons of offsets on CCX, but it has not determined whether or when it will sell its registered emission offsets. The decision to sell qualified offsets on CCX will depend on a number of factors including the market trading price for the offsets, CNX Gas' cash needs and the likelihood of legislation relating to greenhouse gas emissions. As of June 9th, 2008, the closing price for 2003 vintage CFI's was $5.50 per metric ton.

CNX Gas' ongoing methane capture activities in Virginia and elsewhere will result in further methane emissions capture that could result in offsets that qualify for registration on the CCX or other markets. CNX Gas and CONSOL Energy Inc. have agreed generally to split 50-50 all emission offsets generated by either of them or their respective subsidiaries. cl

CNX Gas Makes Tech 50 Awards Finals

CNX Gas is a finalist for this year's Tech 50 Awards in the Green Technology category. The awards are sponsored by the Pittsburgh Technology Council and recognize companies in the Pittsburgh region who exhibit excellence in technology.

The Green Technology category is new this year and is designed to focus on companies who use technology to create products that improve operations, increase efficiency and promote sustainability while reducing energy consumption, waste, pollution and operational costs.

Winners will be announced at a ceremony at Carnegie Music Hall on October 16th.

CNX Gas is a Pittsburgh-based independent natural gas exploration, development, production and gathering company operating in the Appalachian Basin of the United States. In particular, we are a leading producer of coalbed methane (CBM). Production in 2007 was 58.2 billion cubic feet (Bcf). Proved reserves at December 31, 2007 were 1.343 trillion cubic feet (Tcf). Only 50% of these reserves were developed at year end. Net unproved reserves at year end were 1.855 trillion cubic feet, giving us a total 3P (proved, probable, and possible) reserve base of 3.120 Tcf. The company has yet to assign any reserves to 640,000 acres out of its total of 2.46 million gross acres. Potential drill sites, again excluding the unevaluated acreage, exceed 9,500. With a 2007 drilling program of about 400 wells, we believe that we have decades of opportunity ahead of us.

CNX Gas currently has four active areas: Virginia Operations, a CBM play in southwestern VA; Mountaineer, a CBM and exploratory Marcellus Shale play in southwestern PA and northern WV; Nittany, a CBM play east of Pittsburgh; and Cardinal, a New Albany shale exploratory play in western KY. cl

Coal Leader Product News

Dura-Line MicroDuct Bracket Helps Protect Fiber Optic Cable

Dura-Line Corp., an A-D Technologies company, offers its MicroDuct Bracket, which secures and organizes MicroDucts to help avoid damage to the fiber optic cable housed inside the premise.

The MicroDuct Bracket is a modular system that can be customized and added onto as a network grows. Each bracket securely holds eight MicroDucts, with the first bracket already mounted to the base plate. No special tools are required to mount each MicroDuct Bracket.

Dura-Line MicroDuct Brackets are available in 12.7mm or 8.5mm, depending on the specific project application. The MicroDuct Bracket can be used with Riser- or Plenum-rated MicroDucts.

"The MicroDuct Bracket will securely hold the MicroDucts and fiber cables in place, providing the security, reliability and housekeeping that service providers are requiring in today's networks," said Tim Grimsley, vice president, telecom and CATV, sales and marketing, Dura-Line.

A-D Technologies is a leader in underground cable and cable installation systems with expertise in the electrical C&I/DOT, power utility, water, sewer and gas, data communications, telecom and CATV industries. For more information contact: A-D Technologies, 835 Innovation Dr., Knoxville, TN 37932. Phone: (865) 218-3460. Toll free: (800) 847-7661. Fax: (865) 218-3461. www.adtechnologies.com. E-mail: moreinfo@adtechnologies.com.

••••••••••

AMR's Tagging & Tracking Approved

AMR's Tagging and Tracking System has been approved under the State of WV Legislative Rule Title 56, Series 4.

The Tagging and Tracking System allows mine operators to track the movement of individuals and equipment in the mine continuously and receive messages from underground. The system design consists of an active tag attached to the miner's helmet or mine equipment and readers placed in selected zones throughout the mine. The miner can send coded messages to the surface through the smart tag.

The Two-Way Text Messaging Device will meet the 2009 requirements by allowing the miner to compose, send, receive, and save messages through a handheld RF device. Not only will this device provide two way communications but it will also provide memory for safety measures, mine directions, and contacts.

Both systems will work in conjunction with our existing atmospheric monitoring system or as a stand-alone system. We hope that our systems will provide a step forward in enhancing mine rescue efforts as well as become an essential in taking the safety of your miners to the next level.

AMR products and service offerings have expanded to satisfy the needs of surface mining, underground mining, and the aggregates industry over the pasty 25 years. Continuous improvements in feature content and product designs have broadened the scope of the products and their applications. Where applicable, many of these products are MSHA-approved. AMR offers the attractive combination of safety and productivity in its total product line.

AMR further diversified its offerings to include monitoring, control and automation services

to the water and wastewater industries recently.

For more information or to schedule a demonstration at your location, contact Amanda Ruble 276-928-1712 ext. 221 aruble@americanmineresearch.com or visit www.americanmineresearch.com.

••••••••••

Strata Safety Products Delivers Emergency Refuge Chambers

Strata Safety Products, LLC announces the commencement of delivery on their Emergency Refuge Chambers. Steel Walk-In Chambers and Portable, Inflatable Chambers are being delivered to customers nationwide. These chambers are Strata Safety's solution to meet the new State and Federal requirements of providing 96 hours of breathable air to miners trapped underground.

For more information, please contact Paula Gunnels or Rory Paton-Ash at 1-800-691-6601 or visit our website at www.strata-safety.com

••••••••••

Suspended Belt Magnets

Suspended Belt Magnets are constructed with an oversized Plate Magnet. They are designed for suspension above a belt conveyor and are engineered to remove ferrous contaminants from high volume deep burdens.. As product passes under the magnet, metal contaminants are drawn out of the material to the face of the magnet. This style of magnet should be installed at the discharge of the head pulley if possible.

Material will be flowing more freely and can be thrown into the face of the magnet increasing the separation results over an installation that has the magnet suspended over a troughed belt. This can be supplied with a wiper arm or stripper plate to simplify cleaning. For automated continuous cleaning, a POW-R CLEAN option can be selected which incorporates a set of pulleys, belt, motor, and reducer that travels around the Suspended Belt Magnet discharging metal contaminants automatically.

Suspended Belt Magnets can be installed in an in-line or cross belt configuration. For more information contact: Andrea Ezyk, Puritan Magnetics, Inc., 465 S. Glaspie St., Unit B, Oxford, MI 48371 Phone: 248-628-3808; Fax: 248-628-3844 Email: andrea@puritanmagnetics.com ow visit website: www.puritanmagnetics.com

••••••••••

Jennmar Offers Advanced Ground Control Engineering

Keystone Mining Services is the engineering affiliate company of Jennmar Corporation that oversees research and development. KMS conducts extensive ground control engineering for Jennmar. KMS has made improvements to its computer modeling packages, including primary and supplemental bolting, pillar design, optimum longwall orientation and mining sequence, and seam interaction stresses.

The ultimate goal of Keystone Mining Services and Jennmar is to utilize existing and new products and advanced ground control engineering to improve mine safety and productivity. For more information contact

KEYSTONE MINING SERVICES

••••••••••

Cat 854K Wheel Dozer Features New Engine with ACERT Technology

The Caterpillar® 854K wheel dozer incorporates innovations to lower engine emissions and boost fuel efficiency, improve reliability and serviceability, and optimize operator efficiency and comfort. Specifically, the 854K uses a highly efficient Cat C32 engine and a new radiator with improved heat transfer capabilities. A variable speed demand fan aids efficiency. For the operator, a new, larger cab includes a trainer's seat, and a new low-effort joystick controls all blade functions.

The 854K replaces the 854G and retains the best features, including the impeller clutch torque converter for superior operator control and optimum power to the ground, lockup clutch for direct drive efficiency, and STIC™ control system for reduced steering and transmission control effort.

The 854K is the largest wheel dozer in the Caterpillar line and is engineered for demanding work in large dozing applications, such as mining and bulk materials handling, where mobility increases productivity.

A combination of technologies makes the Cat C32 engine clean, quiet, fuel efficient and compliant with US EPA Tier 2 standards and EU Stage IIa standards.

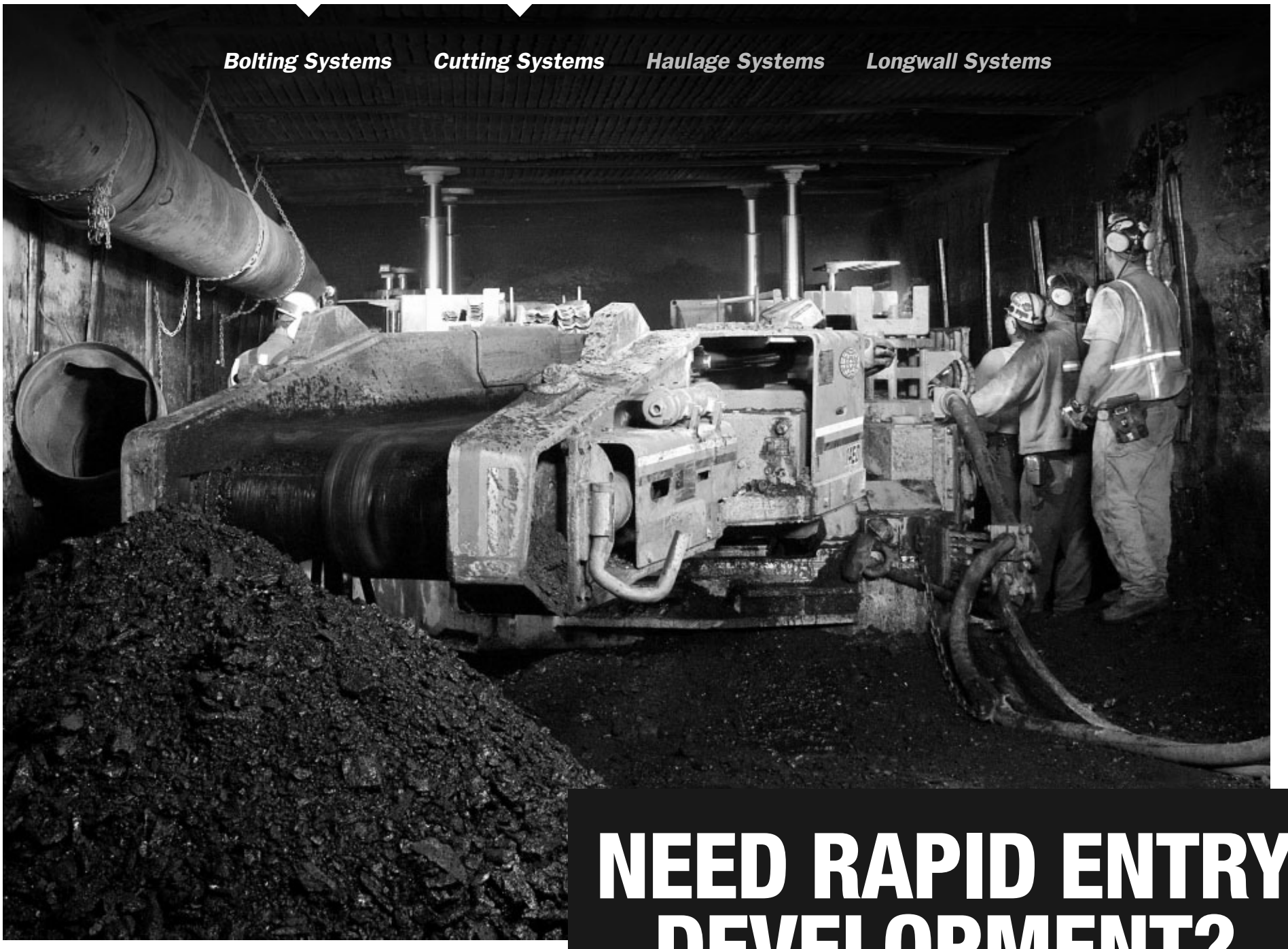
The next generation modular radiator (NGMR) is a Caterpillar technology that improves serviceability and increases cooling efficiency. The copper core provides greater heat transfer rates when compared to steel.

The 854K also features a true demand fan for enhanced fuel efficiency and quieter operation. The system adjusts the speed of the fan based on the coolant temperature.

The 854K drive train features the proven impeller clutch

torque converter (ICTC). The cab is spacious and provides superior visibility to the work area. Interior sound levels are low. The Comfort Series seat has an air suspension and is adjustable to fit the operator.

The new blade control is a low-effort, pilot-hydraulic joystick. To speed maintenance work, Cat Product Link is available from the factory. For more information contact the local Cat dealer or visit the Cat web site at www.cat.com. cl



NEED RAPID ENTRY DEVELOPMENT?

THE JOY SOLUTION: The JOY 14ED25 Entry Driver

The JOY Entry Driver (ED25) is a new entry development solution offering a rugged simultaneous cut-and-bolt entry driver with multiple roof and rib bolting equipment for use in low, mid and high-seam applications. The 14ED25 comes equipped with Joy's latest Drill Rig (AFX), OPTIDRIVE and FACEBOSS technology, ensuring efficient traction, power distribution and control. The Autobolter provides the next step in automation allowing multiple bolts and resin to be installed simultaneously.

Higher levels of automation and system integration equates to higher levels of safety, consistent performance and decreased manual labor.

The JOY 14ED25 Entry Driver: *Another reason why we are the industry leader for superior results and outstanding profitability.*

Learn more about our **Lowest Cost Per Ton Advantage** at **www.joy.com.**

COME VISIT US!
MINExpo 2008
Sept. 22-24, 2008
Las Vegas, NV
Booth #6211, 6511 & 8071

JOY MINING MACHINERY
A Joy Global Inc. Company

www.joy.com

Global Headquarters Warrendale, Pennsylvania, U.S.A.
Australia • China • India • Poland • Russia • South Africa • United Kingdom • United States

www.coalleader.com

Friends of Coal

Coal Leader
Section B

Friends of Coal

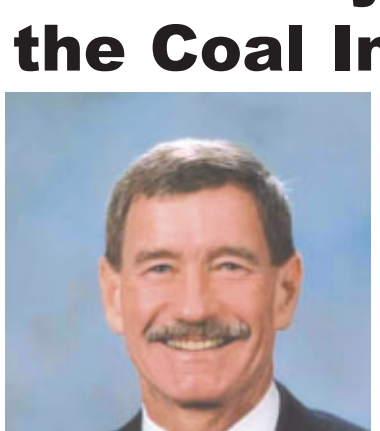
Volume 41 Numbers 8 - 9 ISSN 0192-7329 AUGUST - SEPTEMBER, 2008

Behavior-based Safety Programs Work in the Coal Industry

Behavior-based safety programs in the coal industry work, but they must have the full support of upper management to yield results, said Michael Quillen, Chairman and Chief Executive Officer of Alpha Natural Resources, Inc.

Quillen, speaking at the Bluefield Coal Symposium sponsored by the Greater Bluefield Chamber of Commerce, in August, said management must accept responsibility for protecting the company's investment in its people and property. "Management can accomplish this by demonstrating that safety is equal to production and profits," Quillen said.

Alpha Natural Resources' safety policy states Alpha will conduct business the safe way, the right way, everyday. All Alpha companies will provide



Mike Quillen

and maintain a safe work environment. Alpha's safety performance will be recognized as a model of excellence in the coal industry.

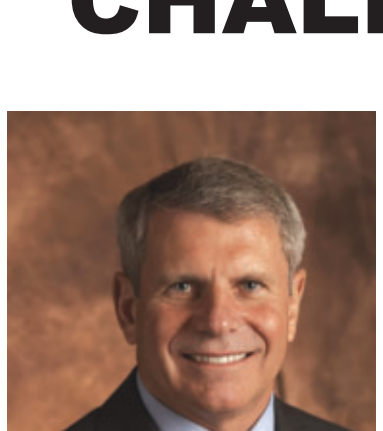
• Business excellence is achieved through safety and continuous improvement.
• All injuries are preventable.
• Any task that cannot be performed safely will not be performed.
• Working safely is a condition of employment.
• Every person is accountable for his or her own safety and the safety of those around them.
• Every person is expected to identify hazards and initiate corrective actions.
• All levels of the organization must be proactive in implementing safety processes that promote a safe and healthy work environment.

"Our safety policy is built upon the premise that the company will conduct its business the safe way, the right way, every day, Said Quillen.

• Alpha's safety program focuses on changing unsafe behav-

Quillen Cont Page 11-B

THE SAFETY CHALLENGE



Peter "Pete" Lilly

The rest of the decade offers great opportunities for the coal industry, despite safety, permitting, labor and climate change challenges that must be managed aggressively, Pete Lilly, President of CONSOL Energy said.

Speaking at the Bluefield Coal Symposium in August, Lilly said the coal industry will be in "an exceptionally strong position" as it moves into the next decade of the new millennium.

Safety is essential to the success of the industry, and all must share the goal of eliminating accidents in mines, he said.

"I believe we can get to zero," Lilly said. "It may be as simple as trying harder and making it a priority."

Coal operators, workforce representatives and industry regulators must realize that reaching zero will require more than just doing more of the same thing, he said. All must learn from each other and join in a common safety cause, he added.

Lilly said the industry also has more issues to examine in addition to safety. The demand for energy in the U.S. and the world will continue, but coal and traditional energy sources will confront a bevy of constraints to meet those growing demands, he said. Meeting the needs will get tougher when

Lilly Cont Page 9-B

Converting Coal to Liquids- So what is the Problem?

Dr. Richard "Dick" Wolfe

The Coal Leader has invited Dr. Richard Wolfe, a recognized coal scientist, to write a series of three articles discussing the future frontier of clean coal technologies. This article is the second in that series.

Dr. Wolfe earned his BS degree at Virginia Tech in Chemical Engineering and MS and Ph.D. degrees in Nuclear Engineering at the University of Cincinnati. He served as program manager with the U.S. Department of Energy before joining United Coal Company in Bristol, Virginia in 1979 as Vice President of Research and Development. In 1988, he formed Coal Technology Corporation in Bristol, Virginia. He was appointed by five different Governors of Virginia to the Virginia Coal and Energy Commission. He has served on the energy research staffs at the University of Kentucky, West Virginia University, Appalachian State University, and currently serves on the Advisory Board at the Virginia Tech's Center for Coal and Energy Research.

Germany's War Effort Was Fought Mostly From Liquid Fuels Made From Coal

Introduction

"Necessity, the Mother of Invention" is just as true today as it was when Plato spoke those first words around 400BC. However, I would add to that phase by saying necessity is also market driven. No matter how many good ideas are invented, if there is no need and the economics are not right, the invention will stay on the shelf. During the past five decades, cheap energy here in the United States has lead us to become complacent in our own society and dependent upon imported goods ranging from oil to shoes to cars. It is true we are becoming a world society, but we must never lose sight of maintaining our own capability to provide for our own country's needs; first and foremost.

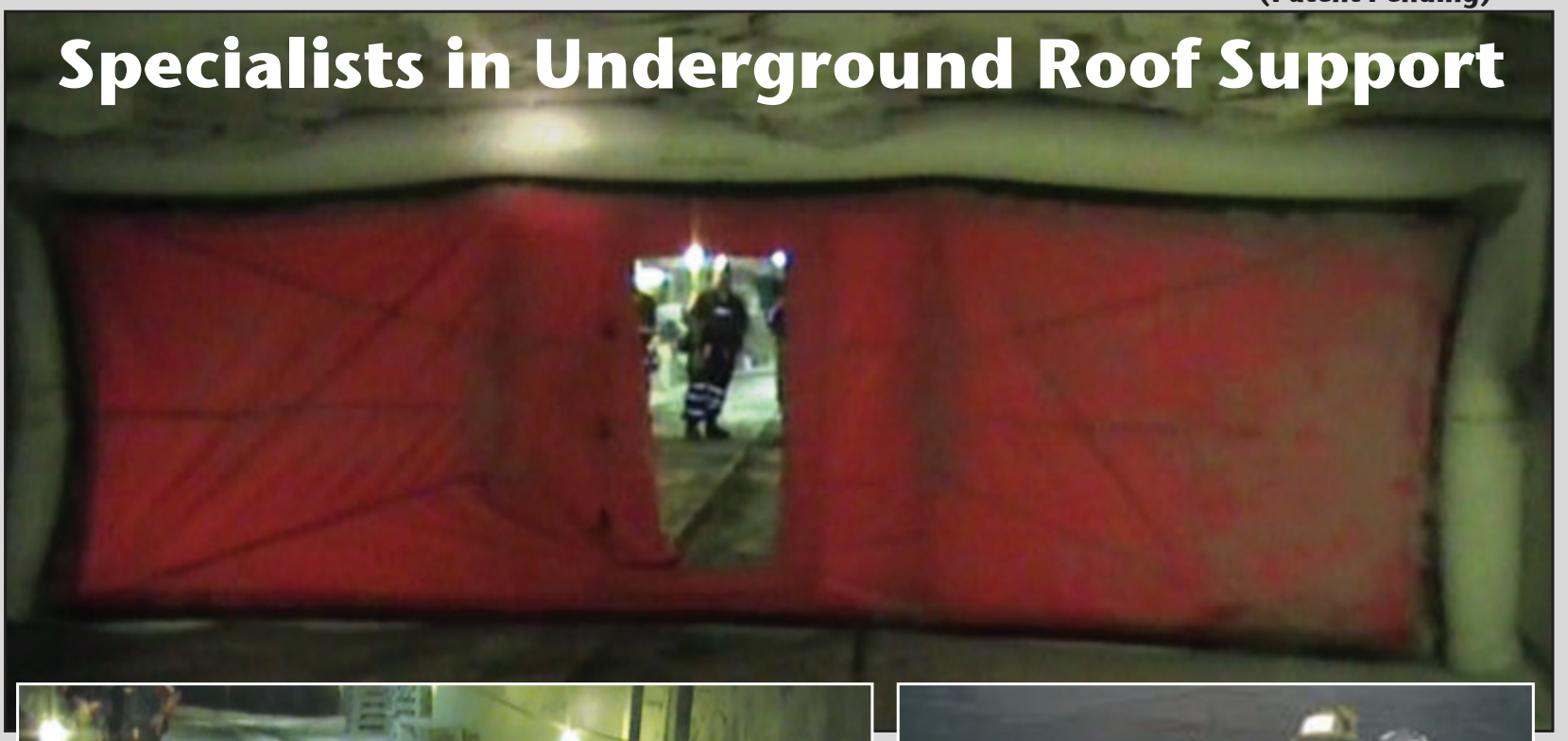
The United States is now first in the production of McDonald hamburgers where

Wolfe CTL Cont. Page 3-B

INFLATABLE LIFE and MINE RESCUE CURTAIN

(Patent Pending)

Specialists in Underground Roof Support



Certification:

The Life Curtain is composed of three different types of material. Each material has been tested and meets the requirements of Part 7, Subpart B of Title 30 Code of Federal Regulations (30 CFR).

Usage:

- Barricading
- Expedite Mine Rescue
- Temporary Ventilation Control
- Normal Mining Activities

Packaging:

- The curtain can be manufactured to customer specification
- Packaged for quick deployment
- CO_2 canister connected to curtain
- Packaged in a duffle type carrying case

Performance and Technical Information:

- Unit deploys in less than 30 seconds
- Has pressure relief valves which maintain control and consistent air pressure and also prevent over inflation. These valves control and maintain differential pressures of 3.5 PSI of the structure and 1.5 PSI of the outer sealing bladder.
- One person can deploy and install the curtain
- Not necessary to suspend the curtain prior to installation
- Has potential to be AIR TIGHT
- Sealing foam does not adversely affect the curtain's fabric
- CO_2 canister is treated with a rubber compound to prevent corrosion
- Depending on the ambient temperature, the curtain will maintain operating pressure for a long period of time.
- Unit has an entrance door accessible from both sides
- Curtain has a shelf life of approximately 10 years
- The curtain can be reused
- Unit has a quick disconnect for manual inflation

Heintzmann Corporation
P.O. Box 301 • Cedar Bluff, Va. 24609
Phone: 276/964-7413 Fax: 276/963-9389

E-mail: heico@netscope.net
Visit our website at: www.heintzmann.eu

Converting Coal to Liquids

Cont from Page 1-B

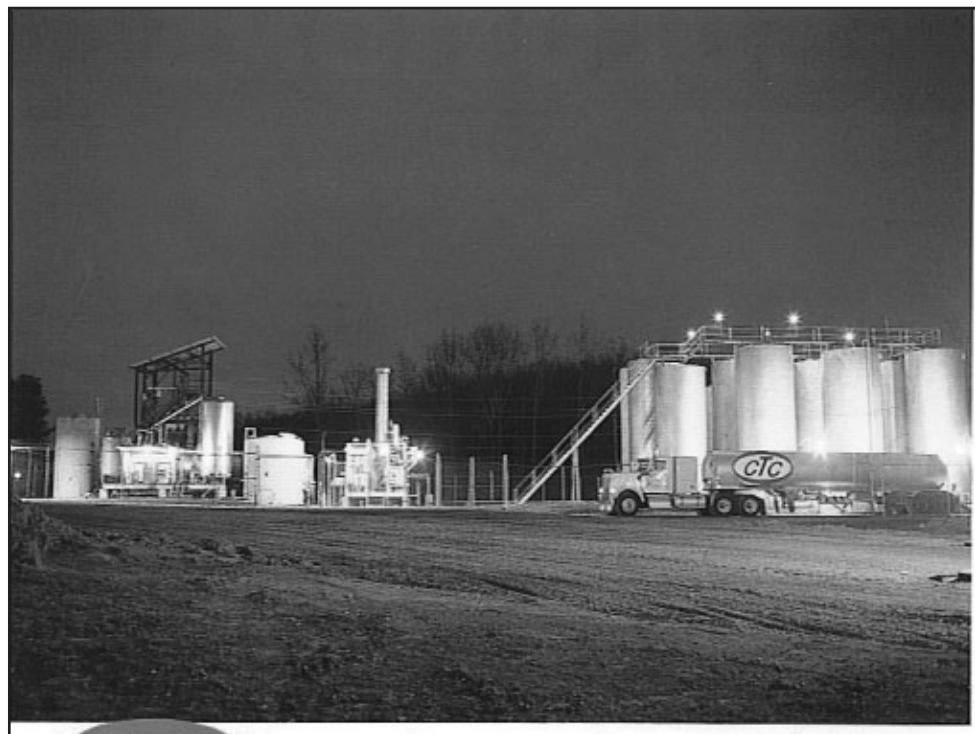
we were once first in car and steel production, chemicals, textiles, education and many other areas. It is time we once again "Reawaken the Sleeping Giant of America.". We need to establish an energy independence program with the same vigor that President Kennedy launched the space program.

In July, 2008, T.Boone Picken laid out a challenge to both Presidential Candidates to recognize the seriousness of our dependency upon imported oil that is financially bankrupting this country. Solving our energy problem is a national problem, one that requires an all American Solution, this is not Republicans vs Democrats. Last year, we paid over $145 billion dollars for imported oil and we have been importing oil for more than four decades. The economists tell us that a dollar earned in our country has a multiplying value of about four dollars. By losing this amount of financial wealth from our economy, it is no wonder the mid east countries are so wealthy, have funds to start wars, and now own so much of America.

We are at a great crossroads in American history. Our solutions to the energy and environmental challenges will define us as a country for the foreseeable future. The establishment of a comprehensive energy and environment plan is bigger than a single administration and must be met through the efforts of the private sector, be above political partisanship and supported by the society at large. The USA is unmatched in the caliber of academic institutions, research laboratories, entrepreneurs, and private industry. We need to stimulate those resources to help solve our energy and environmental challenges. To quote a line from Dr. Martin Luther King's famous speech; I have a dream, "NOW IS THE TIME". Now is the time to set this country on a path of energy independence and rebuild the industrial strength back in America. "NOW IS THE TIME".

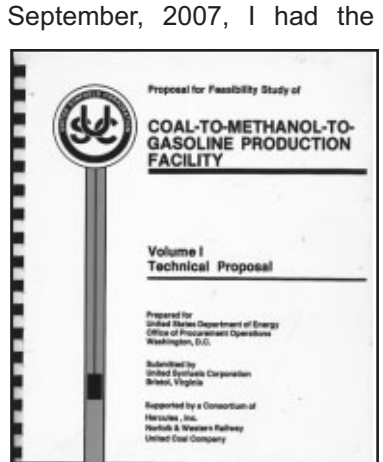
History of Coal Liquids

To understand our future, we must first understand our past. Converting coal into liquids for transportation purposes was first developed in the 1920's by German scientists because of "necessity". Germany had only limited amounts of oil but they had plenty of coal. Dr. Rudolph Diesel first developed an engine to run off of coal liquids and vegetable oil. In the late 1920's, the Fisher-Tropsch technology became the prominent method of combining crushed coal and steam with a catalyst to form gasoline and diesel fuel. German companies such as Lurgi and Krupp lead the way to designing and building coal conversion plants in record time. When Adolf Hitler came into power in the mid-1930's, he readily recognized the need for industrial growth and soon commissioned Dr. Porsche to design and build a Volkswagon called then the KdF car (The people's car) to run off of gasoline made from coal. The photograph shown below was obtained from the German Archives and is the first photograph of VW model.



Liquid Coal Processing Plant, Bristol Industrial Park

After the World War II, many of the German Scientist moved to South Africa and brought their coal to liquids technology with them. South Africa had plenty of coal and no oil and they had the "necessity" for supporting their transportation needs. The scientist soon formed the company called SASOL and once again began building a coal to liquids plant. For more than 60 years, South Africa has been running their country from gasoline and diesel fuel made from coal even when imported oil was tempting and inexpensive. That country had the wisdom to not become dependent upon cheap imported oil. Last September, 2007, I had the opportunity to meet with the top management of the SASOL Company and tour their plants in South Africa. These plants resemble a large chemical plant like the one existing at the Tennessee Eastman Coal Gasification Plant in Kingsport, Tennessee. SASOL is now expanding their own plants in South Africa, offering to build plants in USA and currently building two similar plants in China.


Proposal for Feasibility Study of

COAL-TO-METHANOL-TO-GASOLINE PRODUCTION FACILITY

Volume I
Technical Proposal

In the 1980 under President Carter's quest for energy independence, he established the Synthetic Fuels Corporation, a Quasi-Government agency, (very much like the Tennessee Valley Authority-TVA) to lead the charge to develop alternative fuels from coal, oil shale, tar sands, biomass, municipal waste and other organic materials. As Vice President of Research and Development for United Coal Company in Bristol, Virginia, we responded to the governments request for proposals to build a coal-to-gasoline plant. A company called United Synfuels Corporation was formed between United Coal, Norfork & Western, and Hercules. The Texaco Gasification Technology was selected and a 10,000 acre site located near the Radford Arsenal in Radford, Virginia. The Project was to be co-funded by both the company and government. The cover page of that historic proposal submitted 28 years ago on September 30, 1980, is shown in the following photograph.

When President Ronald Reagan came into office in January, 1981, 4 months after the submission of this Proposal to build a coal to gasoline plant in Virginia, he disbanded President Carter's Synthetic Fuels Corporation and stopped funding of all projects because the OPEC nations had reduced their price for oil and imported oil was once again below $15 per barrel. Such short sighted and political decisions made by our leaders in Washington is just another example of why we find ourselves today in this present energy situation. I wonder where we would be today if we had maintained that program 28 years ago of developing alternate fuels to imported oil.

Due to the vision, tenacity and financial strength of Tennessee Eastman, they continued to build the plant planned for Virginia in Kingsport, Tennessee converting coal into methanol without government funding. That plant stands today as the best example of a coal to liquid plant existing in our country. This plant has operated safely, profitably and within the environmental standards for over 20 years. The existence of this plant illustrates what is right about the American industry.

Also, United Coal Company continued to fund its own research team to produce a coal gasoline and diesel fuel without government funding. On June 16, 1988, seven years later, United dedicated the first crude oil refinery and coal gasoline plant in Bristol, Virginia. Approximately 300 barrels of crude oil from Lee County, Virginia was refined daily and blended with 10 percent of a refined methanol product obtained from the waste streams at the Tennessee Eastman's coal gasification plant. United tested and proved out the quality of these fuels in their own cars and trucks used in their mining operations in Virginia for nearly a year before going to the commercial market. In June, 1989 Coal Technology Corporation

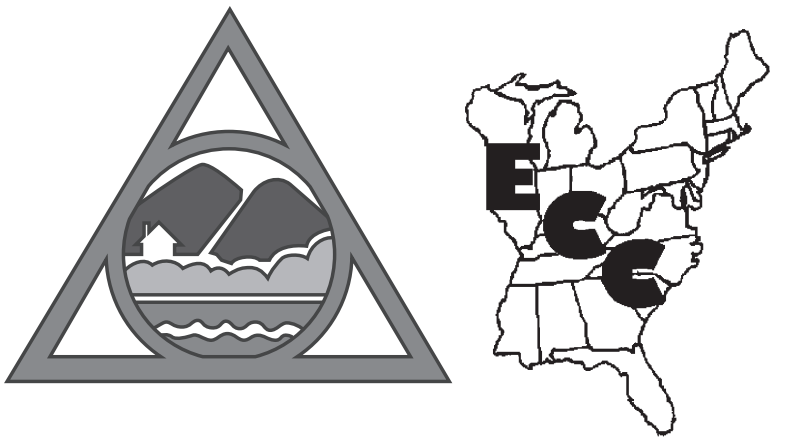
Wolfe CTL Cont. Page 4-B

Summer Education for Teachers

Virginia Tech's Powell River Project Research & Education Center and the Eastern Coal Council co-sponsored their 14th annual energy education program, "PROJECT COAL TO ELECTRICITY: TEACHING - ENVIRONMENTAL ISSUES. Coal + Power Plants + Technologies = Clean, Dependable Electricity", for fourth, fifth, sixth and Earth Science teachers. The program addresses the "Standards of Learning" which supports the teachers in their classroom programs. The program began on a Sunday afternoon and ran through Friday afternoon in Wise, VA at University of Virginia's College at Wise. The college is nestled in southwest Virginia in the heart of the Appalachian Mountains.

The program is for educators interested in teaching awareness and understanding of electricity, and its relationship to coal. There were presentations from educators, geologists, mining engineers, elected officials, regulators, and industry leaders. They learned about the formation of coal, development of mine sites, federal and state policy and regulatory enforcement, environmental monitoring, safety, mining engineering, land reclamation, power generation and transmission, coal transportation, clean coal technologies, such as the Carbon, Capture and Storage program, and the economic impact it has on the United States.

The program provided participants with hands-on activities. They explored the Powell River Project Research and Education Center and saw how mined land has been restored for a variety of post-mining land use options. They visited two underground mines (longwall and continuous mining operations), a surface mine, a coal preparation plant, a coal laboratory, and a coal-fired power plant. They toured Eastman Chemical Company's state-of-the-art Coal Gasification Facility and Joy Mining Machinery's manufacturing plant.



See Catherine Meechan's article about the week on Page2-A. . Catherine teaches at Salem Middle School, Virginia Beach, VA. *cl*

Converting Coal to Liquids

Cont from Page 3-B

was formed from the research division of United Coal and began operating the first Coal Powered Gasoline Station in Big Stone Gap, Virginia on August 30, 1989. The first coal powered gasoline was sold at a price of $1.24 per gallon with crude oil prices hovering about $20 per barrel. During a period of three years, a total of 15 stations were selling the CTC brand of Coal Powered Fuel in Virginia, West Virginia, Kentucky and Tennessee. The photograph below shows the CTC crude oil and coal methanol refinery plant that was operated in Bristol, Virginia

After the first Iraq war ended, crude oil prices came back down to less than $12 per barrel. With the price of gasoline offered by the oil companies less than $0.95 per gallon, CTC could no longer make its gasoline blend using coal derived and refined methanol at this low price and be competitive. Also, CTC did not have "deep-enough" pockets to sell fuel below its own cost, and was forced to shut down all of its 15 stations in May, 1992, three years after opening its first coal powered gasoline station.

What happened to CTC is just another good example of why it is so easy for the OPEC countries to manipulate the price of crude to a low level and shut down the development of alternative fuels around the world from either coal or other organic materials.

As stated at the beginning of this article, to solve our energy dependence upon imported oil, we need a national commitment supported by both political parties similar to our commitment to the Space Program established by President Kennedy.

Another problem standing in the way of energy independence today is the (NIMBY) Not in My Back Yard syndrome. We want electricity but not from coal no matter how clean. We want nuclear power but not nuclear waste and fuel recycling plants. We want cars but no carbon dioxide emissions. We want wind energy, but not the windmills. We want cheap gasoline but not the refineries. We want domestic oil, but not offshore drilling. We must be rational in our objectives and maintain our energy security and the environment at the same time, which we can do.

Energy production and a clean environment are intertwined. We can have both but the balance of compromises must be based on science and technology not on the emotional whims so vividly reflected in the environmental hearings held recently concerning the building of the new clean coal fired plant at Virginia City, Virginia. Members of the Sierra Club and the National Parks Conservation Associations traveled from all over the country to oppose this plant because it used coal. It made little difference that this plant will be meet the most stringent environmental emission standards ever established and provide jobs and electricity needed in the local communities.

The Science of Converting Coal to Liquids

Coal, petroleum and natural methane gas, are all hydrocarbons, varying chiefly in the ratio of carbon atoms to hydrogen atoms in each. Converting coal into a liquid or a gas requires merely that either hydrogen atoms are added to its constituent molecules or removed from the carbon atoms. This can be done under heat and pressure by nearly 50 different processes. Vary the process, and one can vary the end products, from synthetic heating oil to gasoline, diesel fuel, low-grade gas or high-grade "pipeline quality gas, not to mention a bevy of chemical byproducts such as ammonia, fertilizers, naphthalene, or methanol. The solid carbon products can also be made from coal ranging from coke to char to a new clean coal product called Carbonite that can meet the needs of both the steel and utility industry.

The technology of coal conversion to liquids ranges from coal gasification like used at Tennessee Eastman to make methanol to the SASOL plants in South Africa that use the Lurgi gasification technology combined with the Fisher-Tropsch technology. Newer and newer technologies are now being invented like the Carbonite process because the need exist to make our own liquid fuels and the market conditions are right. Most of these technologies can be profitable when imported oil is above about $50 per barrel. With today's price crude oil at over $100 per barrel, these technologies make alternative fuels profitable.

It should be stated clearly and unequivocally; the technology to convert coal and other organic materials into gasoline and diesel fuels is proven and examples exist around the world. That is the main mission of this article.

Our government must establish policies to protect the American investment of billions of dollar into these new plants to produce alternative fuels when all OPEC needs to do is open the values of their oil reserves, reduce the price of crude oil and lull this "Giant within America back to sleep". We need to force ourselves to be on an imported oil diet and not continue to be the "Bears of Yellowstone Park" begging for food (oil) on the side of the road. We in the USA, like the South Africans and Chinese, must also understand the importance of using our own natural resources to become independent of imported oil and kept our dollars here at home in order to preserve our Country as we now know it, FREE and PROSPERIOUS.

So, what do we need from our Government?

1. The Government needs to provide protection from the OPEC countries artificially opening the valves of their oil reserves to flood the world market with cheap oil in order to stop the development of alternative fuels. At $50 per barrel, most alternative fuels can be competitive. The government must establish a floor limit to protect the private sector's investment of the billions of dollars in new alternative fuel conversion plants.
2. The Government needs to establish laws that allow for the acceleration of the environmental permitting process.
3. The Government needs to establish reasonable environmental emission standards based upon today's science and tomorrow's technologies.
4. The Government needs to reduce overly burdensome regulations and opportunities for frivolous litigation.
5. The Government needs to significantly increase funding for research, development, and demonstration of advanced clean energy technologies.
6. And the Government needs to demonstrate global leadership on energy security and climate change. *cl*

Groundbreaking for Dominion's Coal-fired Power plant

James Martin, Vice President, Business Development, Dominion Energy recently welcomed a crowd of the more than 300 state and local officials, and supporters for the official ground breaking ceremonies for Dominion Energy's Virginia City Hybrid Energy Center, a 585 megawatt power station.

Tom Farrell, Chairman, President and Chief Executive Officer, Dominion Energy told the audience "The Commonwealth of Virginia needs this station. Without the Virginia City facility and others like it, our state would become increasingly dependent on high-priced electricity produced elsewhere, and risk losing the economic strength that led Forbes Magazine to name Virginia the best state in the nation in which to do business for the third year in a row."

Joining Farrell on the speakers' platform were Virginia Lt. Governor William T. Bolling, Attorney General Robert F. McDonnell, Secretary of Commerce and Trade Patrick O. Gottschalk, State Senator William C. Wampler, State Senator Phillip P. Puckett, Delegate Clarence "Bud" Phillips, Delegate Dan Bowling, Chairman Robert R. Adkins, Wise County Board of Supervisors, Mark F. McGettrick, President and CEO, Dominion Generation, James K. Martin, Senior Vice President, Dominion Business Development and Generation Construction, Duane Akridge, President of Wise County Chamber of Commerce, Joyce Payne, Executive Director of the Wise County Chamber of Commerce and Jonathan Belcher, Executive Director of the Virginia Coalfield Economic Development Authority.

"Wherever Dominion does business, we make a concerted effort to be a good corporate citizen and neighbor. Giving back to the community is an integral part of our heritage and corporate culture. In keeping with these values, Dominion would like to donate $25,000 to Mountain Empire Older Citizens, Inc... Our gift will go to Mountain Empire's emergency fuel fund, which helps the region's elderly residents pay their heating and cooling bills," said Farrell.

Virginia City Hybrid Energy Center groundbreaking ceremony

"Wherever Dominion does business, we make a concerted effort to be a good corporate citizen and neighbor. Giving back to the community is an integral part of our heritage and corporate culture. In keeping with these values, Dominion would like to donate $25,000 to Mountain Empire Older Citizens, Inc... Our gift will go to Mountain Empire's emergency fuel fund, which helps the region's elderly residents pay their heating and cooling bills," said Farrell.

Joining Farrell on the speakers' platform were Virginia Lt. Governor William T. Bolling, Attorney General Robert F. McDonnell, Secretary of Commerce and Trade Patrick O. Gottschalk, State Senator William C. Wampler, State Senator Phillip P. Puckett, Delegate Clarence "Bud" Phillips, Delegate Dan Bowling, Chairman Robert R. Adkins, Wise County Board of Supervisors, Mark F. McGettrick, President and CEO, Dominion Generation, James K. Martin, Senior Vice President, Dominion Business Development and Generation Construction, Duane Akridge, President of Wise County Chamber of Commerce, Joyce Payne, Executive Director of the Wise County Chamber of Commerce and Jonathan Belcher, Executive Director of the Virginia Coalfield Economic Development Authority.

This facility will provide more than $440 million a year to Wise County Virginia's economy. The construction phase would create over 1,000 construction jobs over the next 4 years. The Virginia City Hybrid Energy Center would contribute over $6 million in tax revenues for Wise County and $750,000 to the Town of St. Paul.

Dominion will use the very latest working technology available to build the new power station, circulating fluidized bed (CFB) technology. CFB technology minimizes emissions such as sulfur dioxide, nitrogen oxide, and mercury. During the CFB process, most of the water will evaporate at the end of the cycle, the remaining water will be used in other areas of the power station. The plant is being designed to make it carbon-capture compatible, meaning that technology to capture carbon dioxide could be added to the station when it becomes commercially available. Dominion is sponsoring carbon capture and storage research at Virginia Tech to see if it is possible to sequester carbon dioxide in unmineable coal seams in Southwest Virginia. When this technology is commercially available, greenhouse gasses from the power station will be sequestered.

Dominion is one of America's leading energy companies, serving more than 5 million customers in the mid-Atlantic, Midwest and Northeast regions.Dominion employs 17,000 people. Among Dominion's assets are an electric generation portfolio of about 26,500 megawatts; 14,000 miles of natural gas transmission, gathering and storage pipeline; 6,000 miles of electric transmission lines; and 1.1 trillion cubic feet equivalent of natural gas and oil reserves.

The company also owns the nation's largest underground natural gas storage system, and operate more than 975 billion cubic feet of storage capacity. Dominion has retail energy customers in 11 states that depend on the company for energy and related products and services.

cl

Tom Farrell, Chairman, President and Chief Executive Officer, Dominion Energy

J & R Manufacturing,Inc.

"Connect with the BEST"

Serving the Mining Industry over a Quarter of a Century

J & R Manufacturing, Inc.

351 Industrial Park Road • Bluefield, VA 24605
PHONE: 276-322-5431 • FAX:276-322-5433
WEBSITE ADDRESS:www.jandrmfginc.com

WE MINE THE COAL THAT POWERS THE NATION.

Work with us and you'll help provide the coal that generates over half the nation's electricity.
Come visit us at www.consolcareers.com. An equal opportunity employer.

CONSOL ENERGY®
America's On Switch.™

DOE Seeks Applications for Third Round of Clean Coal Power Initiative

The U.S. Department of Energy (DOE) recently issued the final Funding Opportunity Announcement (FOA) for Round 3 of the Clean Coal Power Initiative (CCPI) which seeks to accelerate the commercial deployment of advanced coal technologies to help supply the United States with clean, abundant, and affordable energy. DOE anticipates making multiple awards under this FOA and, depending on fiscal year 2009 appropriations, may be able to provide up to $340 million to be distributed among selected recipients. The projects will be cost-shared, with the award recipient(s) providing at least 50 percent of funds for the project. The solicitation contemplates cooperative agreements between the Government and industry to demonstrate, at commercial scale, new technologies that capture carbon dioxide (CO2) emissions from coal-fired power plants and either sequester the CO2 or put it to beneficial use.

The Department of Energy is committed to increasing the Nation's energy security and addressing global climate change by developing the technologies that will ensure coal can be used to meet our growing energy demand in an environmentally responsible way," Acting Assistant Secretary for Fossil Energy Jim Slutz said. "This announcement brings clean, coal-derived energy, with no greenhouse gas emissions, one step closer to the commercial market and to the consumer."

The FOA, which is available at Grants.gov and the DOE e-Center, provides instructions for the preparation and submission of an application and outlines the mission need and background, project description, and the primary technical goals and functional performance requirements. The announcement also outlines the criteria by which applications will be evaluated, the terms and conditions of a model cooperative agreement, and the cost-sharing required for government-industry cooperation.

For Round 3, a draft FOA detailing the goals and requirements was released in October 2007 for comment. To garner input, a public workshop was held November 1, 2007, with 105 attendees representing utilities, technology vendors, and project developers. Changes to the final FOA include:

- Carbon capture technologies must operate at 90 percent carbon capture efficiency.
- At least 300,000 tons per year of CO2 must be captured and sequestered or put to beneficial use.
- Projects must show significant progress toward carbon capture and sequestration with less than 10 percent increase in electricity costs.
- Projects must use domestic mined coal or coal refuse for at least 75 percent of energy input.
- Projects must produce electricity as at least 50 percent of the gross energy output.
- Repayment of the Government's share of project costs is not required.

Applications are due to DOE on January 15, 2009, and selection announcements are anticipated for July 2009.

Initiated in 2002, the CCPI is a multi-year program that demonstrates advanced coal-based power generation technology at commercial scale. Eight projects are currently active from two previous rounds of competition. The goal of the initiative, which is being executed through a series of competitive solicitations, is to accelerate the readiness of advanced coal technologies for commercial deployment, ensuring that the United States has clean, reliable, and affordable electricity and power.

Coal is the Nation's most abundant energy resource, supplying more than 50 percent of domestic electricity. *cl*

DRESSTA NORTH AMERICA Introduces TV20M Dozer

Dressta NA has announced the introduction of the TD20M Extra crawler dozer and features big tractor performance coupled with ease of transportation.

The new series is available in three track versions: standard, long track (LT) and low ground pressure (LGP). These machines feature the fuel efficient Tier 3 Cummins engine to meet lower emission requirements. This powerful electronic control engine has a 8.3 liter displacement. It delivers 240 net horsepower (179 kW), an increase of 15 horsepower over the previous "H" series model. Maximum torque is now 870 lb-ft (1180 Nm). An air grid heater comes standard to aid in cold weather starting.

The TD20M Extra utilizes a new cooling module with replaceable sections consisting of a charge air cooler (CAC), transmission oil cooler, radiator, and hydraulic oil/fan drive oil cooler.

The TD20M Extra has a hydraulically driven, suction type, variable speed fan located between the radiator and the front engine grill for ease of service and greatly reduced abrasion to the cooling module by eliminating sand and other debris from being picked up by the fan blades and blasted against the radiator.

Operating the TD20M Extra is easy with the introduction of a left hand, single lever joystick control. The joystick replaces two left hand steering levers and one gear shift lever used on the previous model. The transmission allows the operator to pre-select travel speed and down shift functions from the joystick.

Great efforts have been made to eliminate or greatly reduce the need for on-board computer control and electronic systems. The TD20M Extra is a relatively easy tractor to troubleshoot and repair and with the exception of the engine does not require a computer to diagnose problems.

Several blade options are available from Dressta: a new 11.1 yd3 (8.45 m3) Full-U blade, a increased capacity Semi-U blade 9.2 yd3 (7.04 m3) and a angle blade – "C" frame combination of 5.1 yd3 (3.88 m3) for the standard and long track versions of the TD20M Extra. The Straight blade has a 7.9 yd3 (6.03 m3) capacity and is used on the LGP version.

Winches and rippers are available. The multi-shank ripper penetration depth has been increased to 27.6 in (700 mm).

The standard version of the TD20M Extra has an operating weight of 52,139 lb (23 650kg). The operating weight of the LT version is 53,373 lb (24 210 kg) and the LGP version is 54,410 lb (24 680 kg).

Dressta North America, a fully owned subsidiary of Dressta Company, Ltd., is headquartered in Buffalo Grove, Illinois, and markets the Dressta crawler dozer, wheel loader, and crawler loader lines of construction equipment. Additional information about Dressta products can be found at www.dresstanorthamerica.com

cl

Lilly Cont from Page 1-B

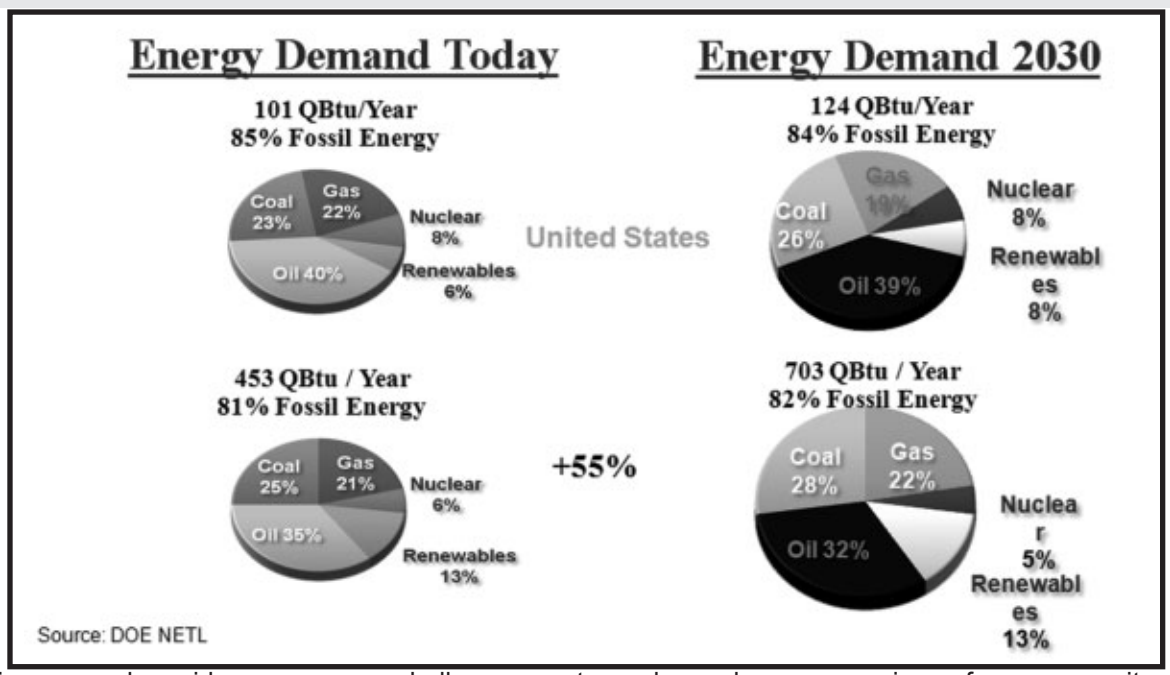
carbon bias is added to the mix, he added.

In the next five years, the world will build 300 GW coal-fired power plants, which adds 1 billion tons a year of permanent, new demand, he said. China will continue to feed its energy hunger, and coal accounts for nearly 70 percent of that nation's energy consumption.

China alone will build 200 new coal-fired plants by 2012, which translates into about 700 million tons of additional annual coal demand, he said.

"For the first time in many years, world coal demand and coal process are linked to the U.S. domestic coal market," Lilly said. "Growth in demand, particularly in Asia, has diverted some supply from traditional destinations, creating increased demand for U.S. coal in the Atlantic market."

U.S. energy demand will grow, but not as robust as the rest of the world, Lilly predicts. Fossil fuels show a slight decline in market share because of dips in oil and natural gas, but coal's share increases, he said.



However, he warned that the forecast does not assume carbon constraints.

"The result of the insatiable demand from around the globe for energy is that energy prices—oil, natural gas and coal—have risen dramatically," he said.

The U.S. faces two major challenges resulting from the demand surge, he said. The challenges are to produce adequate and reliable supplies and to overcome the current bias in the policy arena against the use of fossil fuels.

Increased labor constraints—especially with the aging workforce--will impact supplies as well, he said. The industry is already in fierce competition for workers.

Another challenge is permitting problems that delay the processing of new permits, especially for surface mines. However, he warned that underground mine permits are not immune from the delays.

"We estimate that a new underground mine will take seven to 10 years to develop, owing substantially to the extended time required for permitting," he said.

The biggest challenge will be the bias toward carbon given concerns about climate change. Congress will not approve climate change laws this year, but it is likely that carbon controls will be enacted within the next several years.

"While we all may have our views regarding the validity of the case that man is driving climate change, it seems to me that we should focus our attention on an analysis of the impacts of carbon regulation and how fuel producers and buyers can influence the process," he said.

Lilly said coal can continue to play a major role in the nation's energy mix, but technology is key. However, he said CO2 cannot be reduced from coal without the development of new technologies, including ones for using coal and capturing CO2 for safe storage.

"We need legislation to fund the development of technology at about $2 billion a year for 10 years," he said. "We need to do it now; not wait until climate legislation is enacted."

cl

Bucyrus at MINExpo 2008:
"Bottom line Boosting Mining Technology on Display"

Visitors to MINExpo 2008 will see a brand-new Bucyrus, not only featuring products for surface but also the full range of underground mining equipment.

Bucyrus exhibits reflect the Bucyrus claim of "Reliability at work", with the company continuing its tradition of technological leadership and engineering excellence to ensure the productivity and longevity of its comprehensive range of equipment. Reliability designed to "boost the customer's bottom line".

Bucyrus Dragline

Surface mining machines are some of the largest ever built – too big to bring on-site. So visitors can see models and displays of the 49 HD blasthole drill which drills at 50% faster propel speed than the competition. A model of a walking dragline featuring DΔ (Direct Drive for Draglines) – a highly efficient and low-maintenance AC drive – will also be on display.

One technological highlight debuting at MINExpo will be an electric shovel with the revolutionary "HydraCrowd" technology. The hydraulic crowd replaces rack-and-pinion and rope crowds in electric shovels, providing much higher availability, productivity and reliability, and extending the maintenance interval to two years. With this technological innovation the customer's bottom line can be boosted up to USD 120 million.

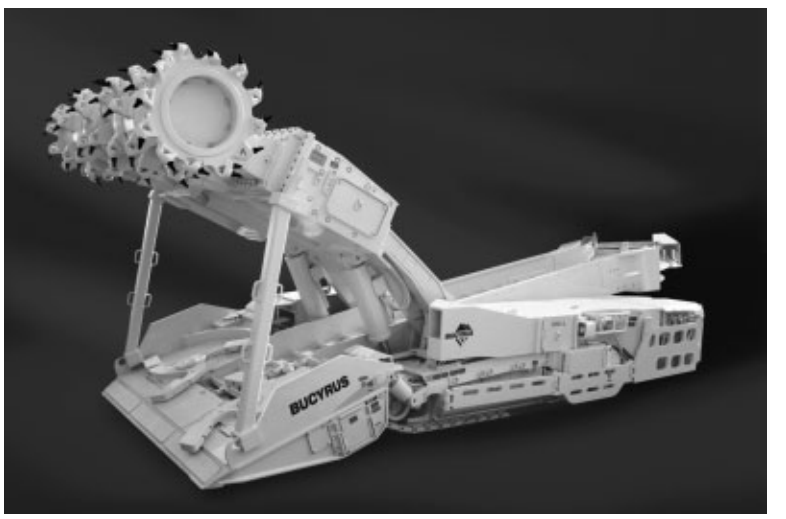
Some major pieces of underground mining equipment are actually displayed. Used by some of the highest producing longwall operations in the US and Australia, the EL3000 shearer with unique mainframe and advanced automation mines seams up to 5.5 m (216 in). With 2 x 850 kW (1140 hp) of cutting power and haulage motors up to 2 x 150 kW (201 hp), it mines over 5000 tonnes (5511 tons) per hour.

The Gleithobel® GH 1600 plow is the system of choice for seams with an average height below 1,8 m (3.28 ft). The cutting machine offers more installed power than any other plow on the market – up to 1600 kW (2146 hp). Developed specifically for high productivity in very hard coal, it mines seams from approx. 1 m (39 in) to 2.5 m (98.4 in) with a portal.

Other longwall equipment includes the latest line pans, which separate wear parts from structural parts, roof supports from the Bucyrus range covering mining heights from 550 to 7500 mm (1.8 to 24.6 ft) with widths up to 2 meters, and supporting more than 1,750 tonnes (1929 tons).

Plus automation products from the PMC® family for a broad range of underground and explosion-hazard applications.

The PMC® family – including the roof support control PMC®-R - is a new generation of programmable mining controllers for a whole range of applications in underground mining and explosion-hazard areas. The modular family integrates fully with Bucyrus longwall equipment for one-stop shopping, quick commissioning, and no interfacing problems.



Bucyrus Continous Miner

A CST drive system with condition monitoring and an innovative conveyor chain ("Power Chain") round out the longwall exhibits. Rated at 1200 kW (1950 hp) per gearbox, the CST 65 drive offers no-load motor startup and soft start of the face conveyor to minimize stress on the drive train. Synchronized startup and the use of motor kinetic energy ensure maximum torque for overfilled conveyors.

The new Bucyrus Power Chain moves coal away from the face faster by providing high-reliability, high-availability transportation with design features that ensure high capacity, low friction, wear and power consumption, and long service life.

The 30M3-L Continuous Miner – with total power in excess of 671 kW (900 hp) – is also on display. Lower, more compact and offering a higher power-to-weight than the competition, the 30M3-L is also shorter and more maneuverable.

Another record-breaking product on display is the Versa-Trac® VT650 battery-powered shield hauler offering an unaparalleled 45.4 tonnes (50 tons) of lift and tilt capacity 1.6 m (62") from the fork face. A model of the LHD vehicle Compact Loader for the US market also debuts at MINExpo. This diesel-driven multipurpose vehicle for low and narrow roadways sets the bar in size and carrying capacity in the sub-10-tonne (11.2 ton) market.

Powerfull belt drives, steel rolls, engineered class pulleys and the proprietary EXALON® high density PE rolls will also be shown.

Bucyrus offers custom-designed, heavy-duty, engineered belt conveyor solutions and conveyor products for the most demanding bulk material handling requirements above and below ground. A 4 x 447 kW (600 hp) belt drive with tailored drive output to the conveyor will be on display.

The new Bucyrus steel roll design is the result of over two years of design and engineering effort and represents new technology in idler design. A unique retrofit adaptor allows Bucyrus rolls to operate in virtually any competitor's frame.

EXALON® is a high molecular weight polyethylene conveyor roll of proprietary formulation, which is fully conductive and MSHA approved for flame resistance. EXALON® lasts significantly longer than conventional steel rolls in highly corrosive and/or abrasive environments.

Engineered Class Pulleys are custom-designed to meet the power and tension needs of the conveyor system. With features that eliminate welds and increase strength, they come with a standard 3-year warranty.

All in all, the Bucyrus booth 2603 in the North Hall offers an interesting selection of advanced mining products and exceptional customer service solutions to "boost the bottom line". *cl*

Updating Coal-Fired Plants is a Formidable Obstacle

By: Bill McMahon
Coal Logics

A coal industry renovation fueled by political pressure and environmental concerns has begun.

Historically, coal-fired power plants have been run as mechanical plants; now, plant managers need to understand complex chemistry and have the ability to manage networks of data both internally and externally. Coal fired power plants in the United States generate 50% of our power domestically and 40% worldwide. For close to two centuries, coal plant operators, maintenance workers, managers and engineers have been providing reliable, low cost energy by using one of the most challenging fuels to burn. However, this is changing because of political and environmental demands.

Now, plant managers need to add complex measures to comply with these environmental concerns and must understand complex chemistry and add scrubbers, SCRs and other air pollution control systems to their plants. This increased complexity requires additional layers of intelligence and planning, as there are more data and more moving parts that need to be managed. In order to produce steam reliably and cheaply while meeting environmental standards and varying coal characteristics, these parts must be balanced with precision.

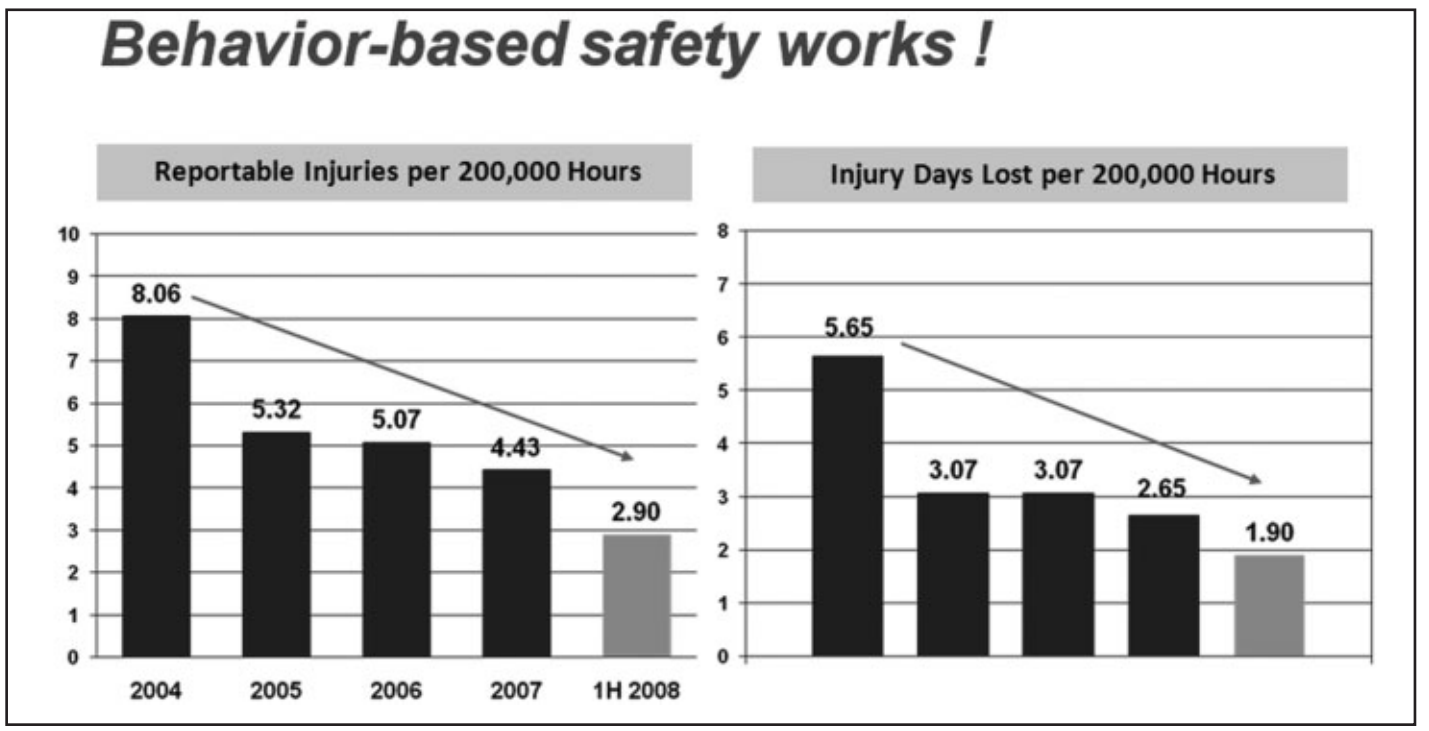
Updating coal-fired plants is a formidable obstacle the coal industry faces. Along with the renovation of the physical plant structures, a renovation of the personnel structure is required, as the people that have built, commissioned and run the equipment for years have either been promoted or retired, and, typically, recent graduates do not look to the utility industry to begin their careers in engineering. People qualified to manage the industry's complicated processes are increasingly difficult to find and recruit.

Very simply, we need to leverage scarce expertise if we are going to run the intelligent coal power plants that the future demands. Plant operators will have to deploy more computer-controlled systems, advanced technologies, and expert consultants to continue supplying reliable, low cost power. In any case, an advisor that has experience with multiple systems, OEMs, coal, compliance strategies and technologies should be a part of every compliance plan.

For the foreseeable future, it is difficult to imagine that coal-fired power plants will not be a part of the electricity supply mix. We owe it to our children and our environment to operate those coal plants in the most intelligent manner possible.

Catalytica Energy Systems, Inc. has appointed William J. McMahon to serve as president of its wholly owned subsidiary SCR-Tech LLC ("SCR-Tech"). cl

Quillen Cont. from Page 1-B



ior and is driven by participation of the hourly employees at all mine sites.

• Hourly employees volunteer to take part in the program and can remain involved as long as they wish.

• Employees utilize "Safety Observation Cards" as a method to document and correct unsafe behavior. (Cards also enable documentation of safe behaviors)

• Reporting is anonymous and focuses on behavior not individuals.

• Imminent hazards are confronted and dealt with immediately by mine foreman.

• "Employee Involvement Group" meets monthly and reviews all other cards. EIG is represented by hourly, salaried and management personnel.

• Vice President of Safety has total overall responsibility of safety program

• Alpha maintains a strict Drug & Alcohol policy - "Zero Tolerance" No second chances. Testing is random. 100% of workforce count is tested annually.

• "Lessons Learned" are shared across the company.

To illustrate, Quillen said Alpha has seen a 64 percent reduction in reportable injuries per 200,000 hours worked from 2004 to 2008. The injury days lost per 200,000 have dipped 66 percent in the same period.

"Detecting and correcting at risk behavior promptly is one of the basic principles of accident prevention.

Observations are an important tool for detecting at-risk behaviors."

Alpha's core values have served the company and its workers well, Quillen said. The company is committed to maintaining ethical behavior, safe practices, best practices, being environmentally sound, satisfying customers, using common sense and good judgment to make correct decisions and being a good neighbor, he said.

"We will run right in everything we do," he said.

The corporation views its safety policy the same way, he said.

"Alpha will conduct business the safe way, the right way, everyday," he said. "All our companies will provide and maintain a safe work environment. Our safety performance will be recognized as a model of excellence in the coal industry."

Alpha believes business excellence is achieved through safety and continuous improvement, he said. It starts with understanding that all injuries are preventable, he said.

To meet its safety goals, Alpha makes working safely a condition of employment, he said. Any task that cannot be carried out safely will not be performed at all, he said. Every worker is accountable for their own safety and the safety of those working near them, Quillen added.

All Alpha workers are expected to recognize hazards and take steps to correct those hazards, he said. In addition, all levels in the corporation are expected to be proactive in implementing the safety processes that build and maintain a safe and health work environment, he added.

The key is a safety program that focuses on changing unsafe behaviors, and hourly workers at all mine sites participate, he said.

In conclusion, Quillen said finding and correcting at-risk behavior quickly is a basic principle of accident prevention. Observation is an important tool to detect any at-risk behavior, he said.

Alpha makes the process employee friendly by using "Safety Observation Cards" to document and correct any unsafe behavior. The cards serve a dual role since they document unsafe behavior, he said.

And Alpha workers know they will remain anonymous if they report unsafe behavior, and the reporting focuses on the behavior, not individuals, Quillen said. Any hazards reported by workers are handled immediately, he said.

In addition, Alpha created an "Employee Involvement Group" which meets each month and examines all the Safety Observation Cards. The group also includes salaried, hourly and management, he said.

The corporation's stringent drug and alcohol policy, including a zero tolerance stance with no second chances, works, he said. All Alpha workers are tested randomly each year.

One of the most important aspects of Alpha's safety program is to share lessons learned at all operations with the rest of the corporation, he said. cl

A. L. LEE CORPORATION

LEADER IN SPECIALITY UNDERGROUND MINING EQUIPMENT

Mini-Trac Battery

Mini-Trac, Battery or Diesel

Visit Us at Booth #3363 North Hall

* 8,000 lb. Lift capacity
* Wet Park & Service Brakes
* Hydrostatic Driven
* Planetary Hubs
* 30" Minimum Height (Electric)
* Attachments - Bucket, Spot Drill, Scraper Arm
* WV Diesel Compliant Available

Mega-Trac, Diesel Powered

* 16,000 lb. Lift capacity
* Wet Park & Service Brakes
* Hydrostatic Driven
* Planetary Hubs
* 48" Height
* Attachments - Bucket, Spot Drill, Scraper Arm
* WV Diesel Compliant Available

Mega-Trac,
Diesel Powered

RailRunner, Battery or Diesel

* 9-17 Passenger Capacity
* Planetary Axles,
* With Liquid Cooled Service & Park Brakes
* Weight - 17,000 - 19,000 lbs.
* WV Diesel Compliant Available

255 Diesel Personnel Carrier

* On Demand 4 Wheel Drive
* 2-17 Passenger
* With Liquid Cooled Service & Park Brakes
* Four Speed Power-Shift Transmission

SERVING THE MINING INDUSTRY FOR 40 YEARS

Manufacturing facilities in Lester (Beckley) and Mabscott, WV and Mt Vernon, IL.

WEST VIRGINIA
P.O. BOX 99 · 2075 LESTER HWY
LESTER, WV 25865
PHONE: 304-934-5361
FAX: 304-934-5388
E-MAIL: wva@alleecorp.com

ILLINOIS
P. O. BOX 2370 · 2304 INDUSTRIAL DRIVE
MT. VERNON, IL 62864
PHONE: 618-242-6065
FAX: 618-242-6036
E-MAIL: ill@alleecorp.com

- WV COMPLIANT DIESEL EQUIPMENT
- DIESEL GENERATORS
- ROCKDUST PIPELINE SYSTEMS
- SERVICE VEHICLES
- BATTERY, TROLLEY OR DIESEL POWER