COMMENTS

By

TOM MCNIDER

Concerning

ETS-SEALING OF ABANDONED AREAS

Jim Walter Resources, Inc. appreciates the opportunity to present comments concerning the Emergency Temporary Standard issued May 22, 2007 on Sealing of Abandoned Areas. We understand the reason MSHA feels the need to issue a Rule for the use of seals to isolate abandoned areas but are concerned that through pressure they have issued this rule in haste without thoroughly considering all the parameters. MSHA requested suggestions from industry concerning such things as monitoring of existing seals but when offered ignored them in the final rule. Industry met with MSHA in Arlington on June 12th to talk about the need for a proper sampling protocol and the need in industry for instruments that can accurately measure gasses from sealed areas but MSHA has ignored these requests. There have been numerous sampling errors in the field that have inadvertently caused problems and mines to be shut down when this was not warranted. We are shocked that MSHA is trying to evaluate the explosive nature of a sealed abandoned area but does not even recognize all the gasses that must be considered to determine the explosive nature of a gob. The Final Rule requires the operator to measure oxygen and methane but does not require measuring CO2, a gas derived from low temperature oxidation. CO2 is an inert gas and even though methane and oxygen might be in the action range of 3-20% methane and above 10% oxygen or even appear to be explosive with oxygen above 12% and methane in the 5-15% range it still may not be because of the inert nature of CO2 that may be present in the sample. Industry discussed with MSHA in Arlington on June 12th the use of a chromatograph to more accurately determine the constituent gasses of a sealed area when there was a question and that the true explosive nature of the sealed area needed to be determined. Industry discussed the benefits of having more accurate analysis and how these results could be evaluated using calculations to plot on the Zabetakis Nose Curve, a method that has been used throughout the industry for years to determine whether atmospheres are explosive or not when fighting fires. We were told this would be an accepted method by Mr. Stickler but when it became necessary to use it in the field MSHA attached such a large measure of safety to it that it became impractical to use. When methane is the only explosive gas the R value of the Zabetakis Nose Curve is 1. MSHA arbitrarily assigned an R value of .6, which when considering the area under the R curve of 1 to the R curve of .6 is a 130% safety factor. According to page 3 of IC 7901 there is already a small safety factor built in to the calculations when used at ordinary temperatures. I called Kevin Strickland on June 26th

to find out if this was a national guideline to use a R value of .6 and that did the sample result when plotted must be outside of this R value. He told me that this was correct and that would be their policy. I ask him where this originated from and he told me John Urosek. I called John on June 27th and ask him was there a mathematical way that this was derived to possibly relate it to the ETS or how was this value arrived at. He told me that this was an arbitrary safety factor that he had historically used when fighting fires. I related to him that there was quite a difference in a fire situation and one where the atmosphere is sealed and there is no fire. Industry was badly misled when we were told in Washington that we could use the Zabetakis Nose Curve by Mr. Stickler with Kevin Strickland and John Urosek in the room and a safety factor was never mentioned. Rather than using proper science and encouraging industry to use techniques that have been a standard since its development in 1959, MSHA has done nothing but discourage its use. If MSHA is concerned about the use of a chromatograph because it is not available to all operators, MSHA still could make a proper evaluation of atmospheres in sealed areas by requiring methane, oxygen, and CO2 to be measured with a handheld unit. The remainder of the gas will be nitrogen because these are the primary component gasses in sealed areas. Knowing this, Effective Inert which is the X axis of the Zabatakis Nose Curve can be calculated using the formulas on page 5 of IC 7901. The way the ETS is written to only measure methane and oxygen, miners are being withdrawn from the mine under false pretense when the atmosphere is not even explosive. Jim Walters No. 4 Mine was threatened to be withdrawn on June 6 when we had samples from seals that were within the ETS guideline and was withdrawn on June 26 when again we were within the ETS guideline but were not explosive in either case when properly evaluated using a chromatograph. Jim Walter Resources has an on site chromatograph and had the analysis before MSHA could get the second one hour sample. The ETS is too vague when left up to the discretion of interpretation by each District and miners are withdrawn unnecessarily. The ETS should require the sampling of all pertinent gasses and require a true analysis of the explosive nature of the sealed atmosphere. Jim Walter has offered to MSHA under the second protocol submission a safety factor of 17% when using a handheld monitor. This was derived from the ETS which sets an action level for oxygen at 10% when an ignition of methane in the 5-15% range requires 12%. The factor of safety determined by MSHA to be adequate is 17% (2 divided by 12= .17). Jim Walter has calculated that the 17% safety factor is much closer to the 0.9 nose curve and this is what was presented as the action level when using a handheld monitor.

On June 27 after the mine was shut down for being inside the ETS guideline for methane and oxygen a meeting was held with the District Manager to discuss the Zabatakis Nose Curve and other things such as how the overall atmosphere of the internal part of the sealed area could be determined using samples taken from degas holes. The results of samples taken from numerous degas holes from No. 4 Mine were reviewed with the District Manager to show how when you get further from the seal line the atmosphere in the sealed area becomes more inert. This was also discussed with Mr. Urosek on June 27th during conversation with him and during this discussion the question was asked how do you know that these results reflect what is in the atmosphere in the mine. I told him that many of these samples had CO2 in them which is derived from oxidation of the coal at the mine level and CO2 being a heavy gas had to be coming from the mine. I have

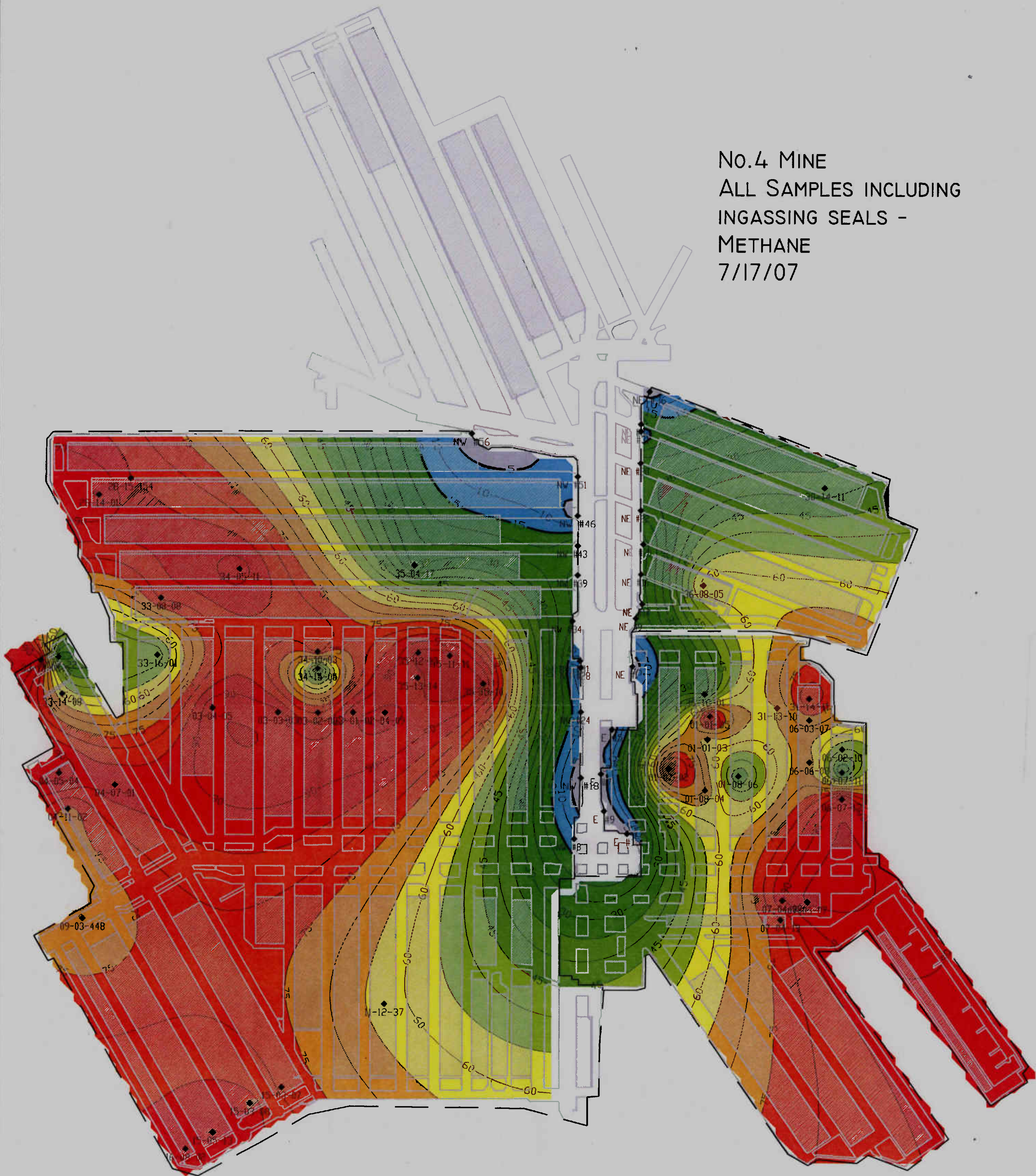
included as part of our comments two isopacts of the sealed atmosphere of No. 4 Mine. One of the isopacts is methane and the other is oxygen. These isopacts are intended only to demonstrate to MSHA how the vast majority of the sealed area is inert and it is only the very small fringe line where leakage gets into the sealed area where the sealed area may potentially get into the explosive range. These isopacts also show that sealed areas are not homogenous but vary in concentration. For MSHA to expect that no sample taken from a sealed area to ever be in the explosive range is too much to ask from any operator. Just from the fact that the area is sealed means that it reacts to barometric swings and will breath out on barometric lows and breaths in on barometric highs and at certain times if the samples are taken as the barometer swings from a low to a high this can be enough to shift a sample temporarily into an explosive zone. MSHA should recognize that these phenomena will happen and there are times that a sample may be in the explosive range but does not present a hazard to the miner. MSHA should lengthen the requirement for taking two additional one hour samples when in the action level. This is not reasonable because it does not give the sealed area adequate time to react to the barometer. A more realistic request would be to take additional samples once each shift over a twenty-four hour time period. MSHA should also consider a tiered approach to what action is expected from the operator based on the size of the zone that is in the action level and the potential hazard that it may represent to the mine. To withdraw miners any time an explosive sample is found without considering the history of this particular sample and the relation to the rest of the sealed area is impracticable. Why establish a baseline if MSHA only intents to look at one sample, surely a baseline is required to get a history of that particular sample.

MSHA, in haste, has developed a regulation that has made it virtually impossible for the operator to comply with. The regulation does not provide for proper sampling of gasses in sealed areas, proper analysis of these gasses to determine if the atmosphere is explosive, or consider the fact that sealed areas are not stable but change with adjustments to the ventilation and shifts to the barometer. MSHA has reacted to one sample that might be in the explosive range from one particular seal no matter how isolated it is from the active works and withdrawn the miners from the mine. Operators can not manage their mines effectively under such a regulation. Should a problem arise and an accurate assessment of the effected area is needed the internal nature of the gob should be evaluated (if possible), the location of sections in relation to the seals should be determined, and are there escape facilities available that can be utilized should there be a problem.

Sealing of abandoned areas in mines provides for operators to isolate older areas that are deteriorating. It eliminates dangerous areas that have to be maintained and traveled. It provides more effective ventilation to the active works and allows the operator to abandon older areas so that he can better manage the remaining active works. Operators need a regulation that allows them to continue this and when an area is sealed it is permanently sealed and does not have to be monitored and evaluated. We applaud MSHA for setting criteria for a seal that can be built by the operator that will allow this to be accomplished. The standard for the 120 psi seal is reasonable and will greatly enhance the safety of the mines but MSHA must continue to help industry come up with

construction techniques that can easily be placed in the mines. We need help evaluating ideas such as building two barriers some distance apart and pumping bulk materials such as rockdust or gypsum in between to provide the necessary strength. Research into construction techniques that can easily be done in remote areas of mines should be initiated. MSHA should consider removing the section requiring operators to remove cables before sealing. There can be miles of cables that might run to pumps or electrical installations that must run to within days or hours of doing the final sealing. It is impossible to remove these cables just prior to sealing an area. MSHA should look at some other way to safeguard these cables such as grounding the end of the cable.

No.4 Mine
All Samples including ingassing seals -
Methane
7/17/07



No.4 Mine
All Samples including
ingassing seals - Oxygen
7/17/07