



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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April 19, 2000

TO: Internal File

THRU: Pamela Grubaugh-Littig, Permit Supervisor
Daron Haddock, Permit Supervisor

FROM: Peter Hess, Reclamation Specialist III

RE: Additional Information Relative to N2000-46-1-2, 2 of 2, "Failure to Repair Damage to Surface Lands", Lodestar Energy, Inc, White Oak Mines, ACT/007/001

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As noted in a previous memo relative to the establishment of "good faith" points for N2000-46-1-2, 1 of 2, an inspection of culvert C-36-12 was made on April 18, 2000 to determine if same had been returned to full function. During the course of that inspection, Mr. John Walters and I discussed the other part of the violation, 2 of 2, "Failure to Repair Damage to Surface Lands". During the discussion, I informed Mr. Walters, as well as Mr. Dave Miller, that if sufficient evidence could be provided to determine adequate justification, the Division would consider vacating the violation.

Mr. Walters showed me a computer-generated warning notice which was meant to keep personnel from walking the path on the outslope of the interburden between the upper #1 Mine portals and the lower #2 Mine portals. Several mine maps were also reviewed which showed the location of the roof void inby the #8 portal of the #2 Mine, (none of which showed a date.) It appeared that Mr. Walters was trying to provide verification of the date of the occurrence, which would provide support for his discussion indicating that the permittee had been monitoring the slump which had been discovered on the surface.

He also indicated that this was a reportable incident to MSHA, but at that time he was unable to find the Company's copy of the MSHA reporting form. On April 19, 2000 a FAX of the MSHA report form relative to the occurrence was received and is attached. An analysis of this MSHA report form reveals that the incident was an unanticipated roof void/mud inflow in the #1 entry of the White Oak #2 (cave was 150 feet inby portal #8) Mine. Same was discovered by Larry Kulow on August 23, 1999 at 3 PM. It appears that the original surface opening was a "small subsidence crater (10 feet by 5 feet by 3 feet deep)".

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My inspection of April 11, 2000 revealed that this opening is now much larger than the original opening. When I queried Mr. Dave Miller while looking at the subsidence hole, he indicated that "a crack" had existed here before. The MSHA report indicates that the permittee "dangered area" to prevent personnel from getting too close to the void and falling in. The inspection of April 11, 2000 did indeed reveal that the area had been dangered off, but there was no barrier tape or roof bolts observed within the void, which would indicate that the smaller void had been dangered off. Orange flagging and bolts were observed about the large opening as it now exists. These was not a recent installation, as the flagging and bolts were in a disarray indicative of being under heavy volumes of snow.

I also asked Mr. Walters if he could provide documentation of the monitoring which he said was being performed relative to the slump. His answer indicated that nothing had been recorded.

An evaluation of the known facts plus the additional information which has been provided by the permittee indicates that there are some conflicting facts and/or statements which appear to have been made about the area. To elaborate they are:

- 1) The original void was 10' X 5' X 3' deep when first reported, on August 23, 1999. Rock and gravel flowed through the void into the mine roof onto the mine floor at a 15 degree angle of repose (quote from you on 4/18). There was a weak spot in the mine roof, which created a void which was showing up on the surface. The MSHA report form indicates that the void was "dangered off" on the surface, yet no flagging is observable about the original 10' X 5' void. A known weak spot in the mine roof should have been dangered off in mine as well, with additional support set to reduce the possibility of an extension of the area. This is common good sense mining practice,
- 2) I spoke with Mr. Pat Boyack of MSHA on April 19, 2000 and he offered the following information:

Steel beams had been set in the area as additional support for the area several years prior to the failure. When the flow of material occurred, it was saturated with water, and filled an area approximately ten feet wide by fifty feet long. Mr. Boyack queried the White Oak Mine's management at that time about the possibility of a broken water pipe in that area. According to Mr. Boyack, **no additional roof support was set** to prevent an extension of the weak area, even on the edges of the mud flow.
- 3) The "dangerring off" of the original void (described as ten feet by five feet) does not coincide with the size of the area which was dangered off as viewed by me on April 11, 2000 for two reasons:

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- a) No danger tape or roof bolts were observable at the bottom of the void. It is felt that at least some of this safety barrier should have been visible, and
 - b) The “dangered off” area as viewed on April 11, 2000 is three and a half to four times larger than the original void as it was reported on August 24, 1999. It is difficult to understand why a permittee would “danger off” an area three to four hundred percent larger than the original void and raises a question in the inspector’s mind, i.e. it appears that the permittee had a secondary slump of material into the #2 Mine entry. A second “dangling off” of the area then took place. If that is the case, the second “dangling off” of the area has not been mentioned up to this point. I asked Garon Hirata to reinstall a danger barricade around the void on April 11, 2000 to prevent further complications with MSHA, should one of their inspectors observe the slumped area.
- 4) As observed on April 11, 2000, snowmelt runoff was reporting into the void. The original problem was created by saturated ground conditions from an unknown source, and the weakness of the earth in this area continues to be enhanced by snow melt reporting to the exact same location as the original void. The upslope area of the original void is also becoming more saturated and weaker. This would help the slump area to further collapse.
 - 5) The initial slump was reported on August 23, 1999. The compliance action took place on April 11, 2000. This is a timeframe of approximately seven months, several months during the winter. It is felt that a sufficient amount of time passed for the area to stabilize if the permittee had taken measures to help it do so.

It is felt that sufficient justification has not been provided to vacate the violation. An analysis of the known facts leads one to determine the following conclusions:

- 1) The permittee knew that a weakened area existed over the mine entry, from the mud flow into same, and the 10 X 5 X 3 foot original void that appeared on the surface,
- 2) Soils had been weakened by water saturation, as shown by the mud inflow,
- 3) The permittee did not set additional support in the mine entry to prevent an extension of the weakened roof area, even though (based on the MSHA report form) the entry was seldom used for access or travel and did not restrict ventilation. A line of cribs down the middle of the entry or two timbers set under each steel beam might have prevented further caving and additional surface damage. Nothing was done to attempt to prevent an extension of the void from in-Mine,

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- 4) The permittee did nothing to prevent further weakening of the surface soils by preventing additional water percolation into the void and its surrounding area. The permittee should have been aware that the saturation of the soils adds to the adverse situation here, yet snow volumes and snow melt were heaped upon this area during the winter months, and

- 5) The permittee made no attempt to fill the original void by backfilling it from the bottom of the slope. A careful examination of the original void may have allowed the placing of fill material in that void by a trackhoe having an extended swing/bucket radius. Mixing of the fill with bentonite would have prevented further percolation of water into the void, thereby helping it to maintain its inherent strength.

The permittee's comment that same was waiting for the void to self stabilize is felt to be inadequate because nothing was done to help the natural ground conditions self stabilize. Approximately seven months passed prior to issuance of the violation. Hence, it is recommended that N2000-46-1-2, 2 of 2 stand as issued and modified on April 12, 2000.

If the permittee feels that I have erred in my interpretation of what I believe to be the facts, or if additional information pertinent to same can be provided, a further analysis may be in order.

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