

In the matter of
Warrior Coal, LLC
Cardinal Mine
I.D. No. 15-17216

Petition for Modification

Docket No. M-2003-089-C

PROPOSED DECISION AND ORDER

On November 5, 2003, a petition was filed seeking a modification of the application of 30 CFR 75.1700 to Petitioner's Cardinal Mine, located near Nebo, Hopkins County, Kentucky. The petitioner alleges that the alternative method outlined in the petition will at all times guarantee no less than the same measure of protection afforded by the standard.

On December 4, 2003, MSHA conducted an investigation of the petition and filed a report of their findings and recommendations with the Administrator for Coal Mine Safety and Health. After a careful review of the entire record, including the petition and MSHA's investigative report and recommendation, this Proposed Decision and Order (PDO) is issued.

Finding of Fact and Conclusion of Law

The alternative method proposed by the Petitioner (as amended by the recommendations of MSHA) will at all times guarantee no less than the same measure of protection afforded the miners under 30 CFR 75.1700.

The Cardinal Mine is operating in both the Kentucky Number 9 and Kentucky Number 11 coal seams. Three (3) continuous mining sections produce 14,400 tons of coal daily. There are twenty to twenty-five wells in the coal property that may be intersected.

On the basis of the petition and the findings of MSHA's investigation, Warrior Coal, LLC is granted a modification of the application of 30 CFR 75.1700 to its Cardinal Mine.

ORDER

Wherefore, pursuant to the authority delegated by the Secretary of Labor to the Administrator for Coal Mine Safety and Health, and pursuant to Section 101(c) of the Federal Mine Safety and Health Act of 1977, 30 U.S.C., sec. 811 (c), it is ordered that Warrior Coal, LLC, Petition for Modification of the application of 30 CFR 75.1700 in the Cardinal Mine is hereby:

GRANTED, for mining through or near (whenever the safety barrier diameter is reduced to a distance less than the District Manager would approve pursuant to Section 75.1700) plugged oil or gas wells penetrating the Kentucky Nos. 9 and 11 coal seams and other mineable coal seams using continuous miners, conventional mining or longwall mining methods, conditioned upon compliance with the following terms and conditions:

1. Procedures to be utilized when plugging oil or gas wells.
 - a. Cleaning out and preparing oil and gas wells.

Prior to mining within 150 feet of any well such well shall be plugged in accordance with this 101(c) petition or the operator shall obtain an approved permit to mine within 150 feet of such gas well. Such permits will be obtained from the District Manager. Prior to plugging an oil or gas well, the following procedures shall be followed:

 - (1) A diligent effort shall be made to clean the borehole to the original total depth. If this depth cannot be reached, the borehole shall be cleaned out to a depth that would permit the placement of at least 200 feet of expanding cement below the base of the lowest mineable coalbed.
 - (2) When cleaning the borehole, a diligent effort shall be made to remove all the casing in the borehole. If it is not possible to remove all casing, the casing which remains shall be perforated, or ripped, at intervals spaced close enough to permit expanding cement slurry to infiltrate the annulus between the casing and the borehole wall for a distance

of at least 200 feet below the base of the lowest mineable coal bed.

- (3) If the cleaned-out borehole produces gas, a mechanical bridge plug or cal seal plug shall be placed in the borehole in a competent stratum at least 200 feet below the base of the lowest mineable coal bed but above the top of the uppermost hydrocarbon-producing stratum. If it is not possible to set a mechanical bridge plug, an appropriately sized packer or a substantial brush plug may be used in place of the mechanical bridge plug.
- (4) A suite of logs shall be made available consisting of a caliper survey, and log(s) suitable for determining the top and bottom of the lowest mineable coalbed and potential hydrocarbon producing strata and the location for the bridge plug. A log will be maintained describing the depth, type, and number used of the plugs, length, type of material used to plug the well, length of casing removed, perforated or left in place, and other pertinent information concerning sealing of the well.
- (5) If the upper most hydrocarbon-producing stratum is within 200 feet of the base of the lowest mineable coalbed, properly placed mechanical bridge plugs, cal gel seal, or a suitable brush plug described in Subparagraph (a)(3) shall be used to isolate the hydrocarbon producing stratum from the expanding cement plug. Nevertheless, a minimum of 200 feet of expanding cement shall be placed below the lowest mineable coalbed.
- (6) The wellbore shall be completely filled and circulated with a gel that inhibits any flow of gas, supports the walls of the borehole, and increases the density of the expanding cement. This gel shall be pumped through open-end tubing run to a point approximately 20 feet above the bottom of the cleaned out area of the borehole, existing plug, cal seal plug, or bridge plug.

- b. Plugging oil or gas wells to the surface. The following procedures shall be utilized when plugging gas or oil wells to the surface:
- (1) A cement plug shall be set in the wellbore by pumping an expanding cement slurry down the tubing to displace the gel and fill the borehole to the surface. (As an alternative, the cement slurry may be pumped down the tubing so that the borehole is filled with Portland cement or a Portland cement-fly ash mixture from a point approximately 100 feet above the top of the lowest mineable coalbed to the surface with an expanding cement plug extending from at least 200 feet below the lowest mineable coalbed to the bottom of the Portland cement.) There shall be at least 200 feet of expanding cement below the base of the lowest mineable coalbed.
 - (2) A small quantity of steel turnings, or other small magnetic particles, shall be embedded in the top of the cement near the surface to serve as a permanent magnetic monument of the borehole. An acceptable alternative monument can be achieved by the use of a 4½ inch or larger casing set in cement extending at least 36 inches above the ground level with the API well number either engraved or welded in the casing will be provided to locate the plugged well.
- c. Plugging oil or gas wells using the vent pipe method. The following procedures shall be utilized when using the vent pipe method for plugging oil and gas wells.
- (1) A 4½ inch or larger vent pipe shall be run into the wellbore to a depth of 100 feet below the lowest mineable coalbed and swaged to a smaller diameter pipe, if desired, which will extend to a point approximately 20 feet above the bottom of the cleaned out area of the borehole or bridge plug.
 - (2) A cement plug shall be set in the wellbore by pumping an expanding cement slurry, Portland

cement, or a Portland cement-fly ash mixture down the tubing to displace the gel so that the borehole is filled with expanding cement.

The borehole and the vent pipe shall be filled with expanding cement for a minimum of 200 feet below the base of the lowest mineable coalbed. The top of the expanding cement shall extend upward to a point approximately 100 feet above the top of the highest mineable coalbed.

- (3) All fluid shall be evacuated from the vent pipe to facilitate testing for gases. During the evacuation of fluid, the expanding cement shall not be disturbed.
 - (4) The top of the vent pipe shall be protected to prevent liquids or solids from entering the wellbore, but permit ready access to the full internal diameter of the vent pipe when necessary.
- (d.) Plugging oil and gas wells for use as degasification boreholes. The following procedures shall be utilized when plugging oil or gas wells that are subsequently used as degasification boreholes:
- (1) A cement plug shall be set in the wellbore by pumping an expanding cement slurry down the tubing to displace the gel and provide at least 200 feet of expanding cement below the lowest mineable coal seam. If necessary, the hole must be redrilled or cleaned out to this level. The top of the expanding cement shall extend 50 feet above the top of the coal seam.
 - (2) The upper portion of the degasification will be protected by a suitable casing that is securely grouted into the bedrock. The remainder of this borehole may be cased or uncased.

- (3) The top of the degasification casing shall be fitted with a wellhead equipped as required by the District Manager in the approved ventilation plan. Such equipment may include check valves, shut-in valves, sampling ports, flame arrestor equipment, and security fencing.
- (4) Operation of the degasification well will be addressed in the approved ventilation plan. This may include periodic tests of methane levels and limits on the minimum methane concentrations that may be extracted.
- (5) After the area of the coal mine that is degassed by a borehole is sealed or the coal mine is abandoned, the mine operator will insert a tube to the bottom of the drill hole or 100 feet above the highest mineable coal seam. If this tube cannot be inserted to this depth, the hole should be cleaned or redrilled to this depth.
- (6) The wellbore shall be completely filled and circulated with a gel that inhibits any flow of gas, supports the walls of the borehole, and increases the density of the expanding cement. This gel shall be pumped through open-end tubing run to a point approximately 20 feet above the bottom of the cleaned out area of the borehole or bridge plug.
- (7) A cement plug shall be set in the wellbore by pumping an expanding cement slurry down the tubing to displace the gel and fill the borehole to the surface.
- (8) A small quantity of steel turnings, or other small magnetic particles, shall be embedded in the top of the cement near the surface to serve as a permanent magnetic monument of the borehole. An acceptable alternative monument can be achieved by the use of a 4½ inch or larger casing set in cement, extending at least 36 inches above the ground level with the API well number either engraved or welded

in the casing will be provided to locate the plugged well.

2. The well plugging in paragraph 1 and the following cut-through procedures (a-t) apply whenever the petitioner reduces the safety barrier diameter to a distance less than the District Manager would approve pursuant to Section 75.1700 or proceeds with an intent to cut through a plugged well:
 - a. Prior to reducing the safety barrier to a distance less than the District Manager would approve pursuant to Section 75.1700 or proceeding with an intent to cut through a plugged well, the operator shall notify the district Manager or his designee.
 - b. A representative of the operator, a representative of the miners, the appropriate State agency, or the MSHA District Manager or designee may request that a conference be conducted prior to mining through any plugged well to review, evaluate, and accommodate any abnormal or unusual circumstance(s) related to the condition of the well or surrounding strata when such conditions are encountered. The party requesting the conference shall notify all other parties listed above within a reasonable time prior to the conference to provide opportunity for participation.
 - c. Mining through a plugged well shall be done on a shift approved by the District Manager or designee. The District Manager or designee, the appropriate State agency, and the miners' representative shall be notified by the operator in sufficient time, but in no event less than 12 hours prior to the mining-through operation in order to provide an opportunity to have representatives present.
 - d. When using continuous mining methods, drivage sights shall be installed at the last open crosscut near the place to be mined to ensure intersection of the well. The drivage sites shall not be more than 80 feet from the well. When using longwall-mining methods, drivage sights shall be installed on 10-foot centers for a distance of 50 feet in advance of the well bore.

The drivage sights shall be installed in the headgate and tailgate.

- e. Fire-fighting equipment shall include fire extinguishers, rock dust, and sufficient fire hose to reach the working face area of the mine through when either the conventional or continuous mining method is used. The firehose shall be located near the working place. When the longwall mining method is implemented, the firehose shall be extended to the face area of the mine through. All firehose shall be ready for operation during the mine through. The water line will be maintained to the belt conveyor tailpiece along with a sufficient amount of firehose near the working place to reach the farthest point of penetration on the section.
- f. Sufficient supplies of roof support and ventilation materials shall be available and located at the last open crosscut. In addition, an emergency plug and/or plugs of the proper size shall be available in the immediate area of the mine through.
- g. The quantity of air required by the approved mine ventilation plan, but not less than 9,000 cubic feet per minute (cfm) of air, shall be used to ventilate the working face during the mine through operation using continuous mining or conventional mining methods. The quantity of air required by the ventilation plan, but not less than 30,000 (cfm), shall reach the working face of a longwall during the mine through operation.
- h. Equipment shall be checked for permissibility and serviced on the shift prior to mining through the well.
- i. The methane monitor(s) on the longwall, continuous mining machine, or cutting machine and loading machine shall be calibrated on the shift prior to mining through the well.
- j. When mining is in progress, tests for methane shall be made with a handheld methane detector at least every 10 minutes from the time that mining with the continuous mining machine is within 30

feet of the well until the well is intersected and immediately prior to mining through it. When mining with longwall mining equipment, the tests for methane shall be made at least every 10 minutes when the longwall face is within 10 feet of the well. During the actual cutting process, no individual shall be allowed on the return side until the mine through has been completed and the area has been examined and declared safe.

- k. When using continuous or conventional mining methods, the working place shall be free from accumulations of coal dust and coal spillages, and rock dust shall be placed on the roof, rib and floor to within 20 feet of the face when mining through the well. On longwall sections, rock dusting shall be conducted and placed on the roof, rib and floor up to both the headgate and tailgate gob.
- l. When the wellbore is intersected, all equipment shall be de-energized and the place thoroughly examined and determined safe before mining is resumed. Any well casing shall be removed and no open flame shall be permitted in the area until adequate ventilation has been established around the wellbore.
- m. After a well has been intersected and the working place determined safe, mining shall continue in by the well a sufficient distance to permit adequate ventilation around the area of the wellbore.
- n. No person shall be permitted in the area of the mine through operation except those actually engaged in the operation, company personnel, representatives of the miners, personnel from MSHA, and personnel from the appropriate State agency.
- o. The mine through operation shall be under the direct supervision of a certified official. Instructions concerning the mine through operation shall be issued only by the certified official in charge.

- p. MSHA personnel may interrupt or halt the mine through operation when it is necessary for the safety of the miners.
- q. A copy of this PDO shall be maintained at the mine and be available to the miners.
- r. The Petitioner shall file a plugging affidavit setting forth the persons who participated in the work, a description of the plugging work, and a certification by the Petitioner that the well has been plugged as described.
- s. Unless the existing records show that an abandoned well was plugged using techniques equivalent to this PDOs terms and condition, and that the information is submitted and accepted in accordance with Paragraph 2(r) as providing the required level of safety by the District Manager, the well shall be again be cleaned, inadequate plugging materials drilled out and the well plugged in accordance with the terms and conditions of this proposed decision and order before such wells may be cut through or approached with the allowed limits. Securing and interpreting the suite of drill logs required by Paragraph 1 (a)(4) is needed to ensure that, at a minimum, the expanding cement plug extends from at least 200 feet below the lowest mineable seam through 100 feet above the highest mineable seam, unless the seams are separated by an interval greater than 300 feet, in which case, each seam may be plugged individually.
- t. Within 60 days after this PDO becomes final, the Petitioner shall submit proposed revisions for its approved 30 CFR Part 48 training plan to the Coal Mine Safety and Health District Manager. These proposed revisions shall include initial and refresher training regarding compliance with the terms and conditions stated in the PDO. The miners involved in the mine through of a gas well will be provided with training pursuant to the proposed petition of modification prior to mining within 300 feet of the gas well intended to be mined through.

3. This petition for modification applies to all types of coal mining such as continuous mining sections utilizing mobile bridge, and longwall mining sections.

Any party to this action desiring a hearing on this matter must file in accordance with 30 CFR 44.14, within 30 days. The request for hearing must be filed with the Administrator for Coal Mine Safety and Health, 1100 Wilson Boulevard, Arlington, Virginia 22209-3939.

If a hearing is requested, the request shall contain a concise summary of position on the issues of fact or law desired to be raised by the party requesting the hearing, including specific objections to the proposed decision. A party other than Petitioner who has requested a hearing shall also comment upon all issues of fact or law presented in the petition, and any party to this action requesting a hearing may indicate a desired hearing site. If no request for a hearing is filed within 30 days after service thereof, the Decision and Order will become final and must be posted by the operator on the mine bulletin board at the mine.

John F. Langton
Deputy Administrator
for Coal Mine Safety and Health