

In the matter of:
Oak Grove Resources, LLC
Oak Grove Mine
I.D. No. 01-00851

Petition for Modification

Docket No. M-2004-019-C

PROPOSED DECISION AND ORDER

On May 4, 2004, a petition was filed seeking a modification of the application of 30 CFR 75.507 to Petitioner's Oak Grove Mine, located in Jefferson County, Alabama. 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.

MSHA personnel conducted an investigation of the petition with its attached diagrams for the pump installations at the Oak Grove Mine 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 diagrams, comments and MSHA's investigative report and recommendation, this Proposed Decision and Order is issued.

Finding of Fact and Conclusion of Law

The alternative method proposed by the Petitioner (as amended by the recommendations of MSHA investigators) will at all times guarantee no less than the same measure of protection afforded the miners under 30 CFR 75.507.

MSHA is requiring, for this 30 CFR 75.507 petition only, that the surface pump installations and control and power circuit(s) be examined under the 30 CFR 77.502 requirements because the circuit(s) that enter into the underground areas of the mine cannot be examined in their entirety to satisfy the requirements of 30 CFR 75.512 or the 30 CFR 75.364(b)(7) weekly examination requirement.

MSHA received comments from the United Mine Workers of America (UMWA) regarding the wording of Petition M-2004-019-C in the following items:

1. Item 5b on page 2 – The UMWA believes the low water probe should be located greater than three (3) feet above the water pump.

The District 11 Investigation Report of Petition for Modification of Section 30 CFR 75.507, dated August 16, 2004, indicates that at no time will the water level above the pump inlet be less than the manufacturer's recommendation or 30 feet, whichever is greater. In addition, the manufacturer of the pump unit has stated that the pump(s) will cavitate when the water is less than 30 feet above the pump inlet. Based on this information, MSHA, in Item 4(b) of this

petition, requires the low water probe to be located not less than 30 feet above the pump inlet and motor and electrical connections of the pump(s). When the water level reaches the low water probe, the pump(s) will cease operation and the pump(s) must not start in either the manual or the automatic mode.

2. Item e(i) on page 3 – The UMWA believes that the pump should not start if the low water probe is malfunctioning.

The District 11 Investigation Report of Petition for Modification of Section 30 CFR 75.507, dated August 16, 2004, indicates that at no time will the water level above the pump inlet be less than the manufacturer's recommendation or 30 feet, whichever is greater. In addition, the manufacturer of the pump unit has stated that the pump(s) will cavitate when the water is less than 30 feet above the pump inlet. Based on this information, MSHA, in Item 4(b) of this petition, requires the low water probe to be located not less than 30 feet above the pump inlet and motor and electrical connections of the pump(s). When the water level reaches the low water probe, the pump(s) will cease operation and the pump(s) must not start in either the manual or the automatic mode.

3. Item e(iii) on page 3 – The UMWA objects that no action plan is included in this section and that this section does not require the process to be monitored.

The District 11 Investigation Report of Petition for Modification of Section 30 CFR 75.507, dated August 16, 2004, indicates that the comments submitted by the UMWA were not clear as to what "action plan" would be required. As stated by the pump manufacturer, the high water probe is the upper limitation of the water level that signals the pump(s) to start. The start and operational aspects of the system is continuously monitored to assure that the pump(s) and component(s) are operating properly.

4. Item g on page 4 – The UMWA believes that language should read "will" instead of "can."

The District 11 Investigation Report of Petition for Modification of Section 30 CFR 75.507, dated August 16, 2004, states that management has indicated that the remote control system can and will be used. It was further understood that the remote control system would not be designed to start the pump system if a grounded phase, short circuit, or overload condition is present. In addition to the terms and conditions spelled out in this petition, the mine operator is required by other 30 CFR Standards to regularly inspect and maintain the equipment in a safe operating condition at all times after it is installed.

5. Item j on page 4 – The UMWA objects to this language in that they believe that action should be taken to develop these revisions now, so that they may be reviewed by the "Representative of the Miners", and the revision should be in place once the Modification is approved.

The District 11 Investigation Report of Petition for Modification of Section 30 CFR 75.507, dated August 16, 2004, indicates that management agreed to prepare the revisions of the training plan and provided copies of such revisions to representatives of the UMWA before the petition was approved.

6. The UMWA does not believe that the proposed Modification provides enough information about the cables to be used in the deep well installations.

The District 11 Investigation Report of Petition for Modification of 30 CFR Section 75.507, dated August 16, 2004, indicates that when no other provisions are indicated in the proposed Petition for Modification, the installation of the power cables will be in accordance with the National Electric Code. In addition to the requirements of this petition, the 30 CFR Standards require the mine operator to provide the required protections for high voltage cables used in these types of installations.

7. The UMWA believes that these cables should not be repaired or spliced, but should always be replaced in their entirety in the event of damage or failure.

The District 11 Investigation Report of Petition for Modification of 30 CFR Section 75.507, dated August 16, 2004, indicates that the petition wording allows splices to be made in accordance with the requirements of 30 CFR 75.604. This requirement specifies how permanent splices must be made in trailing cables and are based on studies conducted by MSHA to determine their durability and conductivity when made in the manner prescribed by the standard. These permanent-type splices are durable enough for use on high-voltage continuous miners and high-voltage longwalls that are presently used in the mining industry and are subjected to much more physical abuse than cables used for stationary pump installations.

8. The UMWA believes that the proposed Petition for Modification, in order to at all times guarantee no less than the same measure of protection afforded Miners by the present application of such standard, must include the following:

- (1) The diameter of the borehole and casing
- (2) The diameter of the discharge pipe
- (3) The depth of the rat hole
- (4) The distance from the bottom of the casing to the bottom of the rat hole
- (5) The location of the pump, pump motor, and electrical connections
- (6) The location of the water inlets
- (7) The location of the high water and low water probes
- (8) The well head
- (9) The surface electrical installations and enclosure

The District 11 Investigation Report of Petition for Modification of Section 30 CFR 75.507, dated August 16, 2004, indicates that the mine operator and the pump manufacturer provided this information to the miners at the mine.

9. The proposed Petition for Modification should also include the following:
- (1) The surface locations of all projected deep well installations and present boreholes
 - (2) The elevations of surface locations
 - (3) The depth of each borehole (present and projected)
 - (4) The elevations of the mine floor at all present and projected boreholes

The District 11 Investigation Report of Petition for Modification of Section 30 CFR 75.507, dated August 16, 2004, indicates that the mine operator provided this information to the UMWA and mine maps showing this information were submitted by the mine operator as part of this petition.

10. Due to the possibility of the electrical components being exposed to an explosive mixture of methane in the borehole and rat hole, the UMWA requests that electrical examinations of the pump controls and power circuit be made at least once every seven (7) days and the results recorded in a book approved by the Secretary.

The District 11 Investigation Report of Petition for Modification of Section 30 CFR 75.507, dated August 16, 2004, did not address this statement. Because the power and control circuits supply stationary equipment located on the surface, MSHA required a monthly examination of these circuits. This is the same examination requirement for all surface electrical circuits and equipment as required by 30 CFR 77.502, which includes record keeping requirements.

11. The UMWA is very concerned that these deep wells could provide a path for lightning to enter sealed areas.

The District 11 Investigation Report of Petition for Modification of Section 30 CFR 75.507, dated August 16, 2004, indicates that the length of the casing (1,200 feet plus/minus) should allow dissipation of the electrical charge into the earth. In addition, the mine operator, to further reduce the risk of lightning strike at an abandoned well site, proposed to remove five (5) feet of the pipe (after filling the remainder of the pipe with concrete) and to cover the area with earth. In May 2001, the National Institute for Occupational Safety and Health (NIOSH) issued Circular 489 in response to a joint request from the UMWA and MSHA for NIOSH to identify techniques that would reduce the probability of gob gas explosions. NIOSH recommended, among other things, minimizing the pressure differentials across seals in order to reduce the air leakage through the seal. This reduces the formation of large flammable methane-air volumes in the gob. Minimizing the pressure differentials can best be accomplished using seals in accordance with 30 CFR 75.335, and by maintaining balance across the sealed areas with the mine ventilation system in accordance with 30 CFR 75.370. If the mine complies with these two standards, methane levels within the sealed areas will remain above the flammable limit and lightning or other potential ignition sources will not create a hazard.

On the basis of the petition and the findings of MSHA's investigation, Oak Grove Resources, LLC is granted a modification of the application of 30 CFR 75.507 to its Oak Grove 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 Oak Grove Resources, LLC's Petition for Modification of the application of 30 CFR 75.507 in the Oak Grove Mine is hereby:

GRANTED, for the use of three-phase, alternating current, submersible pump(s) installed in return and bleeder entries and in sealed areas in the Oak Grove Mine, conditioned upon compliance with the following terms and conditions:

1. The three-phase, 2,400-volt, alternating-current electric power circuit(s) for the pump(s) shall be designed and installed to:
 - (a) Contain either a direct or derived neutral, which shall be grounded through a suitable resistor at the source transformer or power center. A grounding circuit originating at the grounded side of the grounding resistor must extend along with the power conductors and serve as the grounding conductor for the frame of the pump(s) and all associated electric equipment that may be supplied power from this circuit(s). The borehole casing shall be bonded to the system grounding medium.
 - (b) Contain a grounding resistor that limits the ground-fault current to not more than 6.5 amperes. The grounding resistor must be rated for the maximum fault current available and must be insulated from ground for a voltage equal to the phase-to-phase voltage of the system.
2. The following protection(s) for the pump power circuit(s) shall be provided by a suitable circuit interrupting device of adequate interrupting capacity with devices to provide protection against undervoltage, grounded phase, short-circuit, and overload.
 - (a) The under-voltage protection device shall operate on a loss of voltage to prevent automatic re-starting of the equipment.
 - (b) The grounded phase protection device shall be set not to exceed 50 percent of the current rating of the neutral grounding resistor.
 - (c) The short circuit protection device shall not be set to exceed the required short circuit protection for the power cable or 75 percent of the minimum available phase-to-phase short circuit current, whichever is less.

- (d) Each power circuit shall contain a disconnecting device located on the surface and installed in conjunction with the circuit breaker(s) to provide visual evidence that the power is disconnected.
 - (e) The disconnecting device(s) shall include a means to visually determine the pump power circuit(s) is/are disconnected and be provided with a means to lock, tag-out, and ground the system(s).
 - (f) The disconnecting device(s) shall be designed to prevent entry unless the disconnect handle is in the “off” position and the circuit is grounded.
 - (g) The disconnecting device(s) shall be clearly identified and provided with warning signs stating, “Danger. Do not enter unless the circuit is opened, locked, tagged-out, and grounded.”
3. The three-phase, alternating-current system(s) shall be provided with a low resistance grounding medium for the grounding of the lightning/surge arresters for the high-voltage pump power circuit(s) that is separated from the neutral grounding medium by a distance of not less than 25 feet.
4. The electric control circuit(s) for the pumps shall meet the following requirements:
- (a) The control circuit shall be equipped with a probe circuit that determines a high and low water level.
 - (b) The low water probe shall be located not less than 30 feet above the pump inlet and motor and electrical connections of the pump(s). When the water level reaches the low water probe, the pump(s) will cease operation and the pump(s) shall not start in either the manual or automatic mode.
 - (c) When the water level reaches the high water probe, the pump will start operation.
 - (d) The high and low water probes must consist of redundant electronic pressure transducers that are suitable for submersible pump control application.
 - (e) All probe circuits shall be protected by MSHA-approved, intrinsically safe barriers.

- (f) The grounded-phase protective circuit for pump(s) shall be able to be tested by injecting a test current through the grounded-phase current transformer.
 - (g) A remote control and monitoring system can be used with the pump system for condition monitoring and for remote startup and shutdown control of the pumps. The remote control and monitoring system shall not allow remote reset of the pump power system when fault conditions (e.g. grounded phase, short circuit, or overload) exist on the system.
 - (h) Splices and connections made in submersible pump cables shall be made in a workmanlike manner and shall meet the requirements of 30 CFR 75.604.
5. The surface pump control and power circuit(s) shall be examined as required by 30 CFR 77.502.
 6. The power cable to the submersible pump motor(s) must be suitable for this application, have a current carrying capacity not less than 125 percent of the full load motor current of the submersible pump motor, and have an outer jacket suitable for a wet location.

The power cable must be supported at the entrance to the borehole and throughout its length by securing it with clamps, spaced approximately 25 feet apart, affixed to the discharge pipe casing.

7. The pump installations must comply with all other applicable 30 CFR requirements.
8. Within 60 days after this Petition for Modification is granted, the Petitioner shall submit proposed revisions for their approved 30 CFR Part 48 training plan to the Coal Mine Safety and Health District Manager. These proposed revisions shall specify task training for all qualified mine electricians who perform electric work, monthly electric examinations as required by 30 CFR 77.502, and refresher training regarding the alternative method outlined in the petition and the terms and conditions stated in the Proposed Decision and Order.

The procedures of 30 CFR 48.3 for approval of proposed revisions to already approved training plans shall apply.

Any party to this action desiring a hearing on this matter must file in accordance with 30 CFR 44.14, within 30 days, a request 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