In the matter of: Petition for Modification
Pinnacle Mining Company
Pinnacle Mine
I.D. No. 46-01816 Docket No. M-2009-054-C

PROPOSED DECISION AND ORDER

On November 4, 2009, a petition was filed seeking a modification of the application of 30 C.F.R. § 75.507-1 to Petitioner's Pinnacle Mine, in Wyoming County, West Virginia. 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.

The applicable standard, 30 C.F.R. § 75.507-1 (a), states in pertinent part:

> All electrical equipment, other than power-connection points, used in return air outby the last open crosscut in any coal mine shall be permissible….

Petitioner requests that it be permitted to install 2,400- or 4160-volt alternating current submersible pumps in the return and/or bleeder entries and sealed areas in the Pinnacle mine.

MSHA personnel conducted an investigation of the petition at the Pinnacle Mine and filed a report of their findings with the Administrator for Coal Mine Safety and Health. After a careful review of the entire record, including the petition and MSHA's investigation report, this Proposed Decision and Order is issued.

Finding of Fact and Conclusion of Law

The Pinnacle mine is an underground coal mine in Wyoming County, West Virginia. The mine employs 352 underground employees, including supervisory personnel, on three production shifts. The Pinnacle mine has four sections utilizing continuous mining machines and a long wall section. The average mining height of the mine is 53 inches and the mine liberates 5,500,000 cubic feet of methane in a 24-hour period through 4 exhaust ventilating fan installations.

The petitioner requests the use of high voltage submersible pumps as an option to using the existing turbine pumps. The Petitioner stated that the first high voltage submersible

pump would be installed about 1,200 to 1,400 feet below the surface. The existing turbine pumps pump water at depths of 100 feet to 1,000 feet below the surface.

MSHA is requiring, for this petition only, that the surface submersible pump controls and power circuits be examined, tested and maintained in accordance with 30 C.F.R. § 77.502 since the control and power circuits that enter the underground portions of the mine cannot be examined in their entirety in accordance with the testing, examination and maintenance requirements of 30 C.F.R. § 75.512 and the weekly examination requirement of 30 C.F.R. § 75.364(b)(7).

The alternative method proposed by the petitioner together with the terms and conditions of this Order will at all times guarantee no less than the same measure of protection afforded the miners under 30 C.F.R. § 75.507.

On the basis of the petition and the findings of MSHA's investigation, Pinnacle Mining Company, LLC is granted a modification of the application of 30 C.F.R. § 75.507-1 to its Pinnacle 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. § 811(c), it is ordered that Pinnacle Mining, LLC's Petition for Modification of the application of 30 C.F.R. § 75.507-1 in the Pinnacle Mine is hereby:

GRANTED, for the use of three-phase, 2,400- or 4,160-volt alternating-current submersible pump(s) installed in boreholes in return and/or bleeder entries and sealed areas of the Pinnacle Mine, conditioned upon compliance with the following terms and conditions:

1. The three-phase, 2,400-volt or 4,160-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 wire, which must be grounded through a suitable resistor at the source transformer or power center and through a grounding circuit originating at the grounded side of the grounding resistor, which must extend along with the power conductors and serve as the grounding conductor for the frame of the pump and all associated electric equipment that may be supplied power from this circuit. 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 the values listed below.

i. For circuits of 2,400 volts or less: 6.5 amperes

ii. For circuits over 2,400 volts: 3.75 amperes

c. The grounding resistor(s) 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 high voltage pump circuit(s) shall be provided with a suitable circuit interrupting device of adequate interrupting capacity with devices to provide protection against undervoltage, grounded phase, short-circuit, and overload.

3. The under-voltage protection device must operate on a loss of voltage to prevent automatic restarting of the equipment.

4. The grounded-phase protection device must be set not to exceed 40 percent of the current rating of the neutral grounding resistor.

5. The grounded-phase protective circuits for the pump(s) shall be able to be tested by injecting a test current through the grounded-phase current transformer.

6. The pump motor control shall include a "look ahead" medium voltage ground fault relay to prevent starting into low ground resistance and to shutdown on high leakage ground current.

7. 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.

8. The power system must contain a disconnecting device located on the surface and installed in conjunction with the contactor to provide the following:

a. A means to provide visual evidence that the power is disconnected from the pump circuit(s) and be provided with a means to lock, tag-out, and ground the system(s).

b. The disconnecting device(s) shall be clearly identified and provided with warning signs stating, "Danger. Do not enter unless circuit is opened, tagged out, and grounded."

c. The "high-voltage" circuit must be designed to prevent entry into the pump controller unless the disconnect handle is in the off position and the circuit is grounded.

9. The incoming high-voltage three-phase alternating current system must be provided with a low resistance grounded medium for the grounding of the lightning arrestors for the pump power circuit(s) that is separated from the mine neutral grounding medium by a distance of not less than 25 feet.

10. The pump(s) electric control circuit(s) must be designed and installed so that:

a. The pump(s) cannot start and/or run in either the manual or the automatic mode if the water is below the low level indicator (probe or bubbler) level.

b. The low level (probe or bubbler) water level probe shall be located not less than 30 feet above the pump inlet and motor and electrical connections of the pump(s).

c. The low and high water probes must be suitable for submersible pump control application.

d. All water level probe circuits must be protected with MSHA approved, intrinsically safe barriers.

e. A remote control and monitoring system may be used with the pump system for condition monitoring and for remote start-up 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.

11. The surface pump(s) control and power circuits must be examined, tested, and maintained as required by 30 C.F.R. § 77.502.

12. The power cable(s) to the submersible pump motor must be suitable for this application and have a current carrying capacity not less than 125 percent of the full load current of the submersible pump motor and an outer jacket suitable for a "wet location." The power cable shall 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.

13. High-voltage type cables must meet the requirements of 30 C.F.R. § 75.804. Optional high voltage cable cabling to be used for deep well pump application shall include cabling that is armored jacketed with a continuous armor interlocking jacket. This armor shall make contact with the pump discharge casing in each area that it is banded to the casing. The armor shall be grounded to the grounded side of the neutral grounding resistor located at the source transformers. The pump discharge casing shall also be grounded to the-grounded side of the neutral grounding resistor.

14. Splices and connections made in submersible pump cables shall be made in a workmanlike manner and shall meet the requirements of 30 C.F.R. § 75.604.

15. The pump installations must comply with all other applicable 30 C.F.R. requirements.

16. Petitioner must at all times ensure compliance with 30 C.F.R. § 75.705-1 (a), (b), and (c).

17. The District Manager shall be notified when any submersible pump is installed in boreholes. The District shall have the opportunity to inspect the installation before the pump is put into operation.

18. Within 60 days after this Petition for Modification is granted, the Petitioner shall submit proposed revisions for their approved 30 C.F.R. 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 and monthly electric examinations, testing and maintenance as required by 30 C.F.R. § 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.

19. The procedures of 30 C.F.R. § 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 C.F.R. § 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 may 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.

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Charles J. Thomas
Acting Deputy Administrator for
Coal Mine Safety and Health