In the matter of
Midland Trail Energy, LLC
Blue Creek No. 1 Mine
I.D. No. 46-09297 and
Blue Creek No. 2 Mine
I.D. No. 46-09296

Petition for Modification

Docket No. M-2008-057-C

PROPOSED DECISION AND ORDER

On December 22, 2008, a petition was filed seeking a modification of the application of 30 C.F.R. § 75.1002 to Petitioner's Blue Creek No. 1 and No. 2 Mines located in Kanawha 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.

MSHA personnel conducted an investigation of the petition 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, comments, and MSHA's investigative report, this Proposed Decision and Order is issued.

Finding of Fact and Conclusion of Law

30 C.F.R. § 75.1002 states, in part,

> (b) Electric conductors and cables installed in or inby the last open crosscut or within 150 feet of pillar workings or longwall faces must be...(4) Cables and conductors supplying power to low- and medium-voltage permissible equipment.

Midland Trail Energy, LLC sought a modification of the application of the petitioned standard to allow the use of high-voltage continuous mining machines in and inby the last open crosscut of the Blue Creek No. 1 and No. 2 Mines.

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 C.F.R. § 75.1002.

On the basis of the petition and the findings of MSHA's investigation, Midland Trail Energy, LLC is granted a modification of the application of 30 C.F.R. § 75.1002 to its Blue Creek No. 1 and No. 2 Mines.

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 Midland Trail Energy, LLC's Petition for Modification of the application of 30 C.F.R. § 75.1002 in the Blue Creek No. 1 and No. 2 Mines is hereby:

GRANTED, for the 2,400-volt continuous miners used in the Blue Creek No. 1 and No. 2 Mines, conditioned upon compliance with the following terms and conditions:

1. The nominal voltage of power circuits shall not exceed 2,400 volts.

2. The nominal voltage of the control circuits shall not exceed 120 volts.

3. Trailing cable protection
The trailing cable extending to the high-voltage continuous mining machine shall be protected against short-circuits, overloads, ground faults, and undervoltage by a circuit-interrupting device of adequate interrupting capacity and voltage as follows:

   a) A short-circuit device set at either the setting specified in the approval documentation or 75% of the minimum available phase-to-phase short-circuit current, whichever is less. The time delay setting of the device shall not exceed 0.050 second.

   b) A ground-fault device set at not more than 0.125 ampere. The time delay setting of the device shall not exceed 0.050 second. A single window-type current transformer that encircles all three-phase conductors must be used to activate the ground-fault device. The equipment grounding conductor(s) must not pass through the current transformer.

   c) The ground-fault current shall be limited by a neutral grounding resistor to not more than 0.5 ampere.

d) The ground-fault protection device shall be equipped with an impedance-measuring feature, "Look-Ahead" circuit, to guard against closing the circuit breaker on a circuit that has an existing ground-fault condition.

e) The neutral grounding resistor shall be provided with backup ground-fault protection that will de-energize the primary of the transformer at not more than 40% of the voltage developed across the neutral grounding resistor when a ground fault occurs with the grounding resistor open. A time delay for coordination with downstream ground-fault protection devices shall be set at the lowest practical value that permits reliable coordination; however, in no case shall the time delay exceed 0.25 second.

f) Each ground-fault current device shall be provided with a test circuit that will inject no more than 50 percent of the current rating of the grounding resistor through the test circuit. When the test circuit is activated, the circuit- interrupting device shall open. The test circuit shall not subject the equipment to an actual phase-to-ground fault condition.

g) The neutral grounding resistor shall be provided with thermal protection that will de-energize the incoming high-voltage circuit supplying power to the power center if the grounding resistor is subjected to a sustained ground-fault. The thermal protection shall operate at either 50 percent of the maximum temperature rise of the grounding resistor, or 150° C (302° F), whichever is less. The thermal protection shall not be dependent upon control power and may consist of a current transformer and overcurrent relay in the grounding resistor circuit.

h) The undervoltage protection device must operate on loss of voltage, de-energize the circuit, and prevent the equipment from automatically restarting.

4. All components that provide short-circuit protection shall have an interruption rating in accordance with maximum short-circuit currents available inby that circuit-interrupting device(s), and shall be rated for the maximum phase-to-phase voltage of the circuit.

5. Circuit-interrupting devices shall not re-close automatically.

6. Any on-board ungrounded, three-phase power circuit must be equipped with a light that will indicate a grounded-phase condition. The indicator light must be installed so that it can be observed by the continuous mining machine operator from any location the machine is normally operated. The machine must have a test circuit for the indicator light circuit to ensure that the circuit is operating properly. The test circuit must be designed so that when activated, it does not require removal of any electrical enclosure cover or create a double-phase to ground fault.

7. Trailing cable design
The high-voltage trailing cable shall be designed to have the following:

   a) A 100 percent semi-conductor tape shielding over each insulated power conductor;

   b) A grounded metallic braid shielding over each insulated power conductor;

   c) A ground-check conductor not smaller than a number 10 A.W.G.; or if a center ground-check conductor is used, not smaller than a number 16 A.W.G. stranded conductor; and

   d) Either a double-jacket or single-jacket as follows:

      i. A double-jacketed cable consisting of reinforced outer and inner protective layers. The inner layer must be a distinctive color from the outer layer. The color black shall not be used for either of the two protective insulation layers. The tear strength must be more than 40 pounds per inch thickness and tensile strength must be more than 2,400 pounds per square inch.

      ii. A single-jacketed cable. The cable jacket must not be black. The tear strength must be more than 100 pounds per inch thickness and tensile strength must be more than 4,000 pounds per square inch.

8. Trailing cable guarding
The high-voltage trailing cable shall be guarded as follows:

a) From the power center cable coupler for a distance of 10 feet inby the power center;

b) From the entrance gland for a distance of 10 feet outby the last strain clamp on the continuous mining machine;

c) At any location where the cable could be damaged by moving equipment;

d) Guarding must be constructed using grounded metal or nonconductive flame-resistant conduit material.

9. Splicing and repair of trailing cables

Splices and repairs to high-voltage trailing cables shall comply with the following:

a) Splice means the mechanical joining of one or more severed conductors in a single length of cable including replacement of: insulation, semi-conductive tape, metallic shielding, and outer jacket(s).

b) Repair means to fix damage to any component of the cable other than the conductor.

c) Splices and repairs to high-voltage trailing cables must be made:

i. Only by a qualified person as provided in 30 C.F.R. § 75.153;

ii. In a workman-like manner;

iii. In accordance with § 75.810; and

iv. Using only MSHA- approved high-voltage kits that include instructions for outer-jacket repairs and splices.

d) Splicing of the high-voltage trailing cable within 35 feet of the continuous miner is prohibited.

e) Only four (4) permanent splices will be allowed at any one time for the portion of the high-voltage trailing cable that extends from the continuous miner outby for a distance of 300 feet.

10. Handling trailing cables

a) Cable Handling

i. Miners must not handle energized trailing cables unless they are wearing high-voltage insulating gloves, which include the rubber gloves and leather outer protector gloves, or are using insulated cable handling tools that meet the requirements of paragraphs (c) or (d) of this section.

ii. Miners must not handle energized high-voltage cables with any parts of their bodies except by hand in accordance with paragraph (i) above.

b) *Availability of cable handling equipment*
Each mine operator must make high-voltage insulating gloves or insulated cable handling tools available to miners handling energized high-voltage trailing cables.

c) *High-voltage insulating gloves.*
High-voltage insulating gloves must meet the following requirements:

i. The rubber gloves must be designed and maintained to have a voltage rating of at least Class 1 (7,500 volts) and tested every 30 days in accordance with publication ASTM F496-06.

ii. The rubber glove portion must be air-tested at the beginning of each shift to ensure its effectiveness.

iii. Both the leather protector and rubber insulating gloves must be visually examined before each use for signs of damage or defects.

iv. Damaged rubber gloves must be removed from the underground area of the mine or destroyed. Leather protectors must be maintained in good condition or replaced.

d) *Insulated cable handling tools*
Insulated cable handling tools must be:

i. Rated and properly maintained to withstand at least 7,500 volts;

ii. Designed and manufactured for cable handling;

iii. Visually examined before each use for signs of damage or defects; and

iv. Removed from the underground area of the mine or destroyed if damaged or defective.

11. The section power center shall be equipped with a main disconnecting device installed to de-energize the primary of all transformers supplying high-voltage power when the device is in the open position.

12. The high-voltage trailing cable extending to section equipment shall be equipped with a disconnecting device and/or cable couplers installed to provide a visual means to de-energize the trailing cable when the device is in the open position.

13. Disconnecting devices
Disconnecting devices shall comply with the following:

a) Disconnecting devices shall be rated for the maximum phase-to-phase voltage of the circuit in which they are installed, and shall be rated for the full load current of the circuit that is supplied power through the device.

b) Each disconnecting device shall be designed, installed and maintained so that:

i. It can be determined by visual observation that the contacts are open without removing any cover;

ii. All load power conductors can be grounded when the device is in the "open" position; and

iii. The device can be locked in the "open" position; and,

iv. If a cable coupler is used as the disconnecting device, connect the load power conductor in the high-voltage cable to the grounded frame of the enclosure by means of the grounding receptacle provided and place the dust cover on the receptacle from which the cable was disconnected.

c) Disconnecting devices, except those installed in explosion-proof enclosures, shall be capable of interrupting the full-load current of the circuit or designed and installed to cause the current to be interrupted automatically prior to the opening of the contacts of the device.

d) Disconnecting devices installed in explosion-proof enclosures shall be maintained in accordance with the approval documentation.

e) A sign shall be located near each visible disconnecting device that clearly identifies the circuit it disconnects.

14. The control circuit for each power center shall be interlocked with the main disconnecting device in the power center so that:

a) When the primary disconnecting device is in the "open" position, the control circuit can only be powered through an auxiliary switch in the test position; and

b) When the primary disconnecting device is in the "closed" position, the control circuit can be powered only through an auxiliary switch in the normal position.

15. All compartments that provide access to high-voltage circuits must have barriers and/or covers to prevent miners from contacting energized high-voltage conductors or parts.

16. Each cover or removable barrier providing access to high-voltage conductors or parts must be equipped with at least two interlock switches. Except when troubleshooting and testing, removal of any cover or barrier that exposes energized high-voltage conductors or parts must cause the interlock switches to de-energize the incoming high voltage to the power center automatically.

17. The power center must be equipped with an externally accessible emergency stop switch hard wired into the incoming ground-wire monitor circuit that de-energizes the incoming high-voltage power circuit to the section power center in the event of an emergency.

18. The power center must be equipped with a grounding stick to be used prior to performing electrical work to ensure that high voltage capacitors are discharged and circuits are de-energized. The power center must have a label readily identifying the location of the grounding stick. The grounding stick must be stored in a dry location.

19. All compartments providing access to energized high voltage conductors or parts shall be provided with caution label(s) to warn miners against entering the compartment(s) before de-energizing and grounding the high-voltage circuits.

20. Each output circuit from the section power center shall be quipped with a MSHA approved ground-wire monitoring system. Each receptacle shall be interlocked with the ground wire monitor circuit so that the circuit-interrupting device will open when the trailing cable is disconnected from the power center receptacle.

21. When the ground-fault indicator light indicates a ground-fault on any of the ungrounded circuits, the following maintenance procedures shall be implemented:

    a) The continuous miner shall be trammed immediately to a location with a properly supported roof; and

    b) The ground-fault shall be located and corrected prior to placing the continuous miner back into operation.

22. <u>Electrical work</u>

    a) Prior to performing electrical work, other than troubleshooting and testing, on the high-voltage trailing cable or the continuous mining machine, a qualified person must de-energize the power center circuit and comply with paragraph (i) or (ii):

        i. If a trailing cable disconnecting switch is provided:

(1) Open and ground the power conductors, lock out and tag the disconnecting switch; and

(2) Lock out and tag the plug to the power receptacle.

ii. If a trailing cable disconnecting switch is not provided and a cable coupler is used as a disconnecting device:

(1) Remove the plug from the power receptacle and connect it to the grounding receptacle;

(2) Lock out and tag the plug to the grounding receptacle; and

(3) Place a dust cover over the power receptacle.

b) Before any work is performed inside any compartment of the power center, except for troubleshooting and testing energized circuits as specified in item 23, a qualified person must:

i. De-energize the affected circuits in accordance with § 75.509;

ii. Open the corresponding disconnecting switch, lock it out, and tag it to ensure the circuit is isolated;

iii. Visually verify that the contacts of the disconnecting switch are open and grounded; and

iv. Discharge all high-voltage capacitors and circuits.

c) Locking out and tagging responsibilities

i. When more than one qualified person is performing work as specified in this section, each person must install an individual lock. Each lock and tag must be removed only by the persons who installed them.

ii. If the person who installed the lock and tag is unavailable, the lock and tag may be removed by a person authorized by the operator, provided that:

iii. The authorized person is a qualified person; and

iv. The mine operator ensures that the person who installed the lock and tag is aware that the lock and tag have been removed.

23. Troubleshooting and testing

During troubleshooting and testing, the de-energized high-voltage cable may be disconnected from the power center only for that period of time necessary to locate the defective condition. Prior to troubleshooting and testing trailing cables, a qualified person must comply with the following:

a) If a trailing cable disconnecting switch is provided:

i. Open and ground power conductors and lock out and tag the disconnecting switch;

ii. Disconnect the plug from the power receptacle;

iii. Lock out and tag the plug; and

iv. Place a dust cover over the power receptacle.

b) If a trailing cable disconnecting switch is not provided and a cable coupler is used as a disconnecting device:

i. Remove the plug from the power receptacle and connect it to the grounding receptacle to ground the power conductors;

ii. Remove the plug from the grounding receptacle and install a lock and tag on the plug; and

iii. Place a dust cover over the power receptacle.

24. Troubleshooting and testing limitations

Troubleshooting and testing energized circuits must be performed only:

a) On low- and medium-voltage circuits;

b) When the purpose of troubleshooting and testing is to determine voltages and currents;

c) By qualified persons; and

d) When using protective gloves in accordance with the following table:

Circuit voltage (nominal)	*Type of glove required*
Greater than 120 volts (not intrinsically safe)	Rubber insulating gloves with leather protectors
40 volts to 120 volts (both intrinsically safe and non-intrinsically safe)	Either rubber insulating gloves with leather protectors or dry work gloves
Greater than 120 volts (intrinsically safe)	Either rubber insulating gloves with leather protectors or dry work gloves

25. When equipment must cross any portion of the cable, the cable must either be suspended from the roof or protected by a cable crossover having the following specifications:

a) Have a minimum length of 33 inches;

b) Have a minimum width of 17 inches;

c) Have a minimum height of 3 inches;

d) Have a cable placement area that is a minimum of two and one half inches (2½″) high by four and one quarter inches (4¼″) wide;

e) Use nonconductive material for the crossover;

f) Made of material with a distinctive color. The color black shall not be used; and

g) Made of material that has a minimum compressive strength of 6,400 per square inch (psi)

26. Frequency of examinations

a) At least once every 7 days, a qualified person must examine each high-voltage continuous mining machine to verify that electrical protection, equipment grounding, permissibility, cable insulation, and control devices are properly installed and maintained.

b) At least once every 7 days, and prior to tramming the high-voltage continuous mining machine, a qualified person must activate the ground-fault test circuit required in item 3(f) to verify that it will cause the corresponding circuit-interrupting device to open.

c) At least once every 7 days, and prior to tramming the high-voltage continuous mining machine, a qualified person must examine and test each high-voltage continuous mining machine ground-wire monitor circuit to verify that it will cause the corresponding circuit-interrupting device to open.

d) *Trailing cable inspections:*

i. Once each day during the shift that the continuous mining machine is first energized, a qualified person must de-energize and inspect the entire length of the high-voltage trailing cable from the power center to the continuous mining machine. The inspection must include the outer jacket repairs, all splices, and areas where guarding is required.

ii. At the beginning of each shift that the continuous mining machine is energized, a person designated by the mine operator must de-energize and visually inspect the high-voltage trailing cable for damage to the outer jacket. This inspection must be conducted from the continuous mining machine to the following locations:

(1) The last open crosscut;

(2) Within 150 feet of the working place during retreat or second mining; or up to 150 feet from the continuous mining machine; and

(3) When the machine is used in outby areas.

e) When a grounded-phase test circuit is provided on a high-voltage continuous mining machine, a person designated by the mine operator must activate the test circuit at the beginning of each production shift to ensure that the detection circuit is functioning properly.

f) When examinations or tests of equipment reveal a risk of fire, electrical shock, ignition, or operational hazard, the equipment must be immediately removed from service or repaired.

27. Records of tests.
Record of tests shall be kept as follows:

a) After the completion of examinations and tests required under paragraphs a), b), and c) of item 26, the person conducting the examinations and tests must:

i. Certify by signature and date that the examinations and tests have been conducted.

ii. Make a record of any unsafe condition found.

b) Any corrective action(s) must be recorded by the person taking the corrective action.

c) The record must be countersigned by the mine foreman or equivalent mine official by the end of the mine foreman's or the equivalent mine official's next regularly scheduled working shift.

d) Records must be maintained in a secure book that is not susceptible to alteration or electronically in a computer system so as to be secure and not susceptible to alteration.

e) Certifications and records must be kept for at least 1 year, and must be made available for inspection by authorized representatives of the Secretary and representatives of miners.

28. Tramming the mining machine

a) Tramming the continuous mining machine in and out of the mine, and from section to section, must be done in accordance with § 75.812 and as follows:

i. The power source must not be located in areas where permissible equipment is required;

ii. The continuous mining machine must not be used for mining or cutting purposes, except when powered by a power center.

iii. The energized high-voltage cable must be mechanically secured on-board the continuous mining machine, if applicable.

b) Prior to tramming the continuous mining machine:

i. A qualified person must activate the ground-fault and ground-wire monitor test circuits of the power sources to ensure that the corresponding circuit-interrupting device opens the circuit.

ii. Corrective actions and recordkeeping resulting from these tests must be in accordance with item 27.

iii. Where applicable, a person designated by the mine operator must activate the test circuit for the grounded-phase detection circuit on the continuous mining machine to ensure that the detection circuit is functioning properly. Corrective actions resulting from this test must be in accordance with item 27.

c) In addition to the power center, the following power sources may be used to tram the continuous mining machine:

i. Medium-voltage power source. A medium-voltage power source is a source that supplies 995 volts through a trailing cable (See Figure 1 of this section) to the continuous mining machine. The medium-voltage power source must:

(1) Not be used to back-feed the high-voltage circuits of the continuous mining machine; and

(2) Meet all applicable requirements for medium-voltage circuits in 30 C.F.R. § 75.

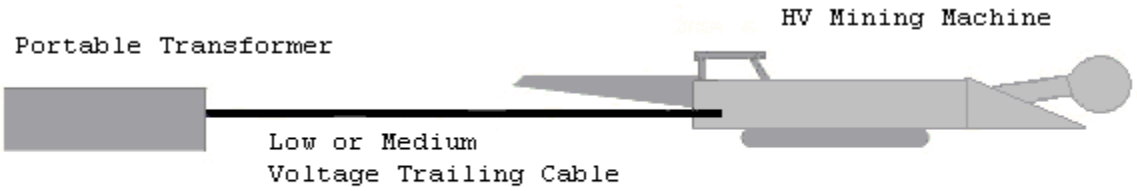

Figure 1 - Power Source - 995 volts used for tramming

ii. Step-up transformer is a transformer that steps up the low- or medium-voltage to high voltage (See Figure 2 in this section) and must meet the following requirements:

(1) The trailing cable supplying low-or-medium-voltage to the step-up transformer must meet the applicable requirements of 30 C.F.R. § 75;

(2) The high-voltage circuit output of the step-up transformer supplying power to the continuous mining machine must meet the applicable electrical protection specified in item 3;

(3) The step-up transformer enclosure must be:

(A) Securely mounted to minimize vibration on either the continuous mining machine or a sled/cart that must be connected to the continuous mining machine by a tow-bar and be in close proximity to the mining machine.

(B) Grounded as follows:

- Connected to the incoming ground conductor of the low- or medium-voltage trailing cable;
- Bonded by a No. 1/0 A.W.G. or larger external grounding conductor to the continuous mining machine frame;
- Bonded by a No. 1/0 A.W.G. or larger external grounding conductor to the metallic shell of each cable coupler; and
- Equipped with at least two interlock switches for each of the enclosure covers and an external emergency stop switch to remove input power to the step-up transformer.

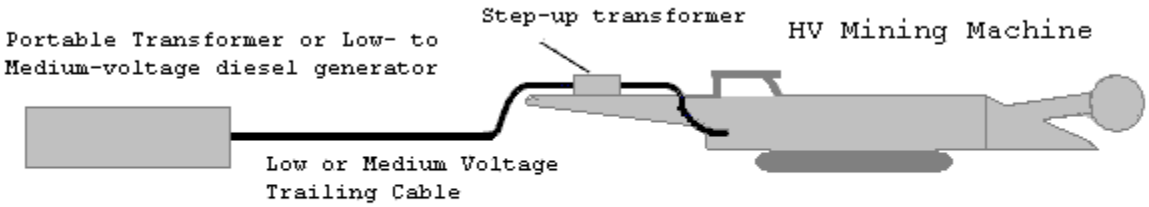

Figure 2 - Power source - 480 or 995 volts to a step-up transformer to 2300 volts for tramming

iii. High-voltage diesel-generator set. A diesel-generator set (See figures 3 or 4 in this section) that must meet the following requirements:

(1) Contain a neutral grounding resistor(s), rated for the maximum voltage created when ground-fault conditions occur, to limit the ground-fault current to no more than 0.5 ampere. The neutral grounding resistor(s) must be located and connected as follows:

(A) Between the wye connected generator neutral and the generator frame; and

(B) Between the wye connected step-up transformer secondary and the transformer frame, when a transformer is used.

(2) Have a No. 1/0 A.W.G. or larger external grounding conductor to ground the generator frame to the following:

(A) The frame of the continuous mining machine;

(B) The frame of the transformer, when used; and

(C) The metallic shell of each cable coupler.

(3) Be connected by a tow-bar in close proximity to the continuous mining machine;

(4) Have each three-phase output circuit equipped with a ground-fault device with no intentional time-delay, which causes the circuit breaker to trip and the diesel engine to shut down when the phase-to-frame current is 0.125 ampere or more. The ground-fault device must use a single window-type current transformer that encircles all three phase-conductors but not the grounding conductor(s);

(5) Have each three-phase output circuit supplying power to the continuous mining machine provided with short-circuit and undervoltage protection, in accordance with item 3;

(6) Have a test circuit for the ground-fault device specified in item 28(c)(iii)(4) that causes the circuit-interrupting device to open when no more than 50 percent of the current rating of the neutral grounding resistor is injected through the current transformer; and

(7) Have a legible label placed on each instantaneous trip unit or near each circuit-interrupting device showing the maximum circuit-interrupting device setting.

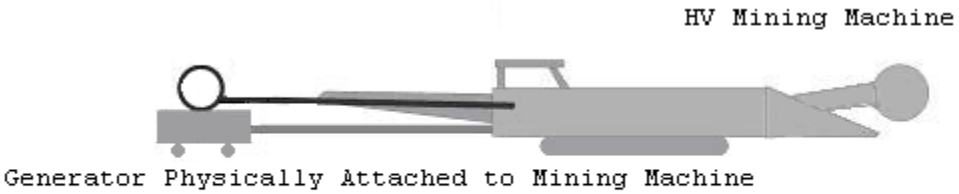

Figure 3 - Power Source - Generator used to supply 2300 volts for tramming

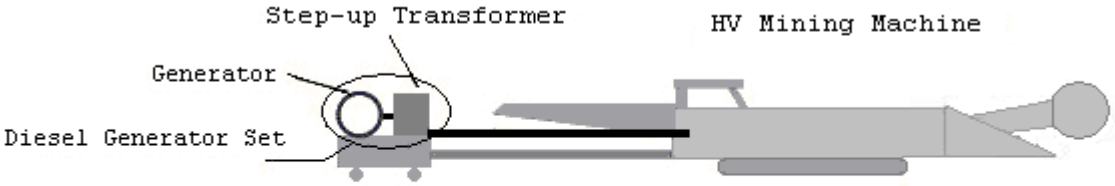

Figure 4 - Power Source - Generator Set with a Step-up Transformer - 480/995 to 2300 volts for tramming

29. The petitioner's alternative method shall not be implemented until all personnel who perform maintenance on the high-voltage continuous miner system have received training in high-voltage safety, testing, and maintenance procedures. In addition, all personnel who work in proximity of the high-voltage equipment or who move high-voltage equipment or cables shall be trained in high-voltage safety procedures. The training shall be "hands-on," specific, and shall be incorporated into the Part 48 training plan and in the annual refresher training plan for the mine. A record of this training shall be maintained and made available to authorized MSHA representatives and to other interested parties.

30. The high-voltage continuous mining system shall not be put into service until after MSHA has inspected the equipment and determined that it is in compliance with all the above terms and conditions.

31. Training
Within 60 days after this Proposed Decision and Order becomes final, the Petitioner shall submit proposed revisions for its approved 30 C.F.R. Part 48 Training Plan to the Coal Mine Safety and Health District Manager in

which the District the mine is located. In addition to existing Part 48 task training, hazard training, training for qualified persons under existing § 75.153, and annual refresher training, the following specialized training shall be provided and specified in the Part 48 plan:

a) Training for miners who perform maintenance on high-voltage continuous mining machines in high-voltage safety, testing, and repair and maintenance procedures; and

b) Training for personnel who work in the vicinity of high-voltage continuous mining machines in safety procedures and precautions for moving the high-voltage machines or the trailing cables.

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. The request for hearing must be filed with the Administrator for Coal Mine Safety and Health, 1100 Wilson Boulevard, Arlington, Virginia 22209.

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.

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