

**DEPARTMENT OF LABOR****Mine Safety and Health Administration****30 CFR Part 75**

RIN 1219-AA98

**Low- and Medium-Voltage Diesel-Powered Electrical Generators****AGENCY:** Mine Safety and Health Administration (MSHA), Labor.**ACTION:** Proposed rule.

**SUMMARY:** We propose to amend the existing regulations concerning protection of low- and medium-voltage three-phase circuits used underground to allow the use of low- and medium-voltage diesel-powered electrical generators as an alternative means of powering electrical equipment. The generators are portable and are used to power electrical equipment when moving the equipment in, out, and around the mine and when performing work in areas where permissible equipment is not required. The rule would eliminate the need for mine operators to file petitions for modification to use these generators to power electrical equipment while maintaining the existing level of protection for miners.

**DATES:** Comments on this proposed rule and on the information collection requirements must be received on or before August 24, 2004.

**ADDRESSES:** You may submit comments, by any of the following methods:

- Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments.
- E-mail: [Comments@MSHA.gov](mailto:Comments@MSHA.gov). Include RIN 1219-AA98 in the subject line of the message.
- Fax: (202) 693-9441.
- Mail/Hand Delivery/Courier:

MSHA, Office of Standards, Regulations, and Variances, 1100 Wilson Blvd., Room 2313, Arlington, Virginia 22201-3939.

**Instructions:** All submissions must reference MSHA and RIN 1219-AA98, (the Regulatory Information Number for this rulemaking).

**Docket:** To access comments received, go to <http://www.MSHA.gov> or MSHA, Office of Standards, Regulations, and Variances, 1100 Wilson Blvd., Room 2350, Arlington, Virginia. All comments received will be posted without change to <http://msha.gov>, including any personal information provided.

**Information Collection Requirements:** Comments concerning the information collection requirements must be clearly identified as such and sent to both the

Office of Management and Budget (OMB) and MSHA as follows:

(1) To OMB: All comments may be sent by mail addressed to the Office of Information and Regulatory Affairs, Office of Management and Budget, New Executive Office Building, 725 17th Street, NW., Washington, DC 20503, Attn: Desk Officer for MSHA; and

(2) To MSHA: Comments must be clearly identified by RIN 1219-AA98 as comments on the information collection requirements and transmitted either electronically to [comments@msha.gov](mailto:comments@msha.gov), by facsimile to (202) 693-9441, or by regular mail or hand delivery to MSHA, Office of Standards, Regulations, and Variances, 1100 Wilson Blvd., Room 2350, Arlington, Virginia 22209-3939.

**FOR FURTHER INFORMATION CONTACT:**

Marvin W. Nichols, Jr., Director, Office of Standards, Regulations, and Variances, MSHA, 1100 Wilson Boulevard, Room 2350, Arlington, Virginia 22209-3939. Mr. Nichols can be reached at [nichols.marvin@dol.gov](mailto:nichols.marvin@dol.gov) (Internet E-mail), (202) 693-9440 (voice), or (202) 693-9441 (facsimile). You may obtain copies of the proposed rule in a large print format by calling 202-693-9440. The documents also are available on the Internet at <http://www.msha.gov/REGSINFO.HTM>.

**SUPPLEMENTARY INFORMATION:****I. Background Information**

Currently, in mandatory safety standards § 75.701 (Grounding metallic frames, casings, and other enclosures of electric equipment) and § 75.901 (Protection of low- and medium-voltage three-phase circuits used underground), we specify the grounding requirements for electrical equipment and low- and medium-voltage three-phase circuits. These standards were introduced in 1970 (35 FR 17890) and have not been changed.

Power centers are the main means of supplying electricity underground. Power centers are placed underground to provide power to permanent or stationary electrical equipment such as belt conveyor drives and to provide power to working sections mining equipment. These power centers are often not located where they can be reached by the trailing cables used to supply power to mobile equipment being moved at the mine. Mine operators use various means to move electrical equipment and to perform work in areas where permissible equipment is not required. In these situations, they are unable to use power centers to energize the machines for the move because of the distances involved. If longer trailing cables are installed in

order to reach remote power centers, proper electrical protection for these low- and medium-voltage three-phase circuits may not be provided and overheating of, or damage to, the cables may occur.

Over the last 13 years, through MSHA's petition for modification process, mine operators have been using low- and medium-voltage diesel-powered electrical generators as an efficient means for providing a portable source of power to move electrical equipment. These portable diesel-powered electrical generators are easily taken to areas where power centers or other sources of electrical power are not available to move mobile equipment or to supply power to other electric equipment needed to do work in outby areas. Proper electrical protection for these low- and medium-voltage three-phase circuits can be provided by portable diesel-powered electrical generators since the source of power is within reach of the proper length trailing cables. However, when using these generators, the mine operators are unable to comply with the electrical protection requirements of existing § 75.901. Currently, § 75.901 requires a grounding circuit to originate from the grounded side of a grounding resistor located at a power center and does not address the use of a generator frame for the purpose of grounding.

To address their inability to comply with § 75.901, mine operators file petitions for modification (PFM) under Section 101(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act). During the time period January 1990 through October 2003, there were 63 PFMs filed and granted under § 101(c) requesting modification to §§ 75.701 and 75.901 affecting 56 mines. The first petition granted for a modification of § 75.901 was submitted to MSHA in 1990, requesting the use of a diesel-powered electrical generator. In 1996 we determined that it was necessary for a mine operator to petition both § 75.701 and § 75.901 to allow the use of a diesel-powered electrical generator in underground coal mines. Petitioning both standards resulted in additional expense and paper burden for mine operators. In an effort to reduce the expense and paper burden for mine operators, we conducted a review of both standards in 2003. We determined that only a PFM of § 75.901 was necessary since the conditions for grounding contained in the petition would satisfy the requirement of § 75.701 as an approved method of grounding.

By issuing this proposed rule, we are responding to the requirements of the

Regulatory Flexibility Act and Executive Order 12866 that agencies review their regulations to determine their effectiveness and to implement any changes indicated by the review that will make the regulation more flexible and efficient for stakeholders and small businesses while maintaining needed protection for workers. This proposed rule would maintain the protection afforded by the existing standard.

## II. Discussion of Diesel-Powered Electrical Generators

Existing 30 CFR 75.901, *Protection of low- and medium-voltage three-phase circuits used underground*, does not allow mines to use diesel-powered electrical generators to move electrical equipment in, out, and around the mine and to perform work in areas where permissible equipment is not required. To allow mines to use diesel-powered electrical generators, we have granted PFMs to mine operators.

We grant PFMs after making one of two determinations: (1) That a mine operator has an alternative method that provides the same measure of safety protection at all times as the existing standard, or (2) that the existing standard would result in diminished safety protection for miners. After evaluating the use of diesel-powered electrical generators, we have concluded that they can be safely used, if certain conditions are met. Specifically, we have found that previous safety concerns such as explosion, fire, and shock hazards initially associated with their use have been sufficiently addressed by advances in new technology. In fact, we now recognize that diesel-powered electrical generator equipment and circuit design improvements in combination with sensitive electrical circuit protections actually reduce fire, explosion, and shock hazards.

Accordingly, we are proposing to revise existing § 75.901 to permit the mining industry to use diesel-powered electrical generators to move electrical equipment. This rule would eliminate the need to file PFMs to use diesel-powered electrical generators and would eliminate the costs and time associated with the petition process.

The PFM process allows a variance to an existing safety standard that results in safety procedures that are applicable only to an individual mine. Petitions granted to date contain conditions for the proper installation, electrical and mechanical protection, handling, and disconnecting of circuits and equipment. Since the proposed rule would include all the necessary requirements contained in granted

petitions, the revision of existing § 75.901 would not reduce the protection currently afforded to miners.

On the effective date of the final rule, all existing petitions for modification to permit the mining industry to use diesel-powered electric generators to move electrical equipment in, out, around the mine, and to perform work in areas where permissible equipment is not required would be superseded.

## III. Discussion of Proposed Rule

### *Section 75.901 Protection of Low- and Medium-Voltage Three-Phase Circuits Used Underground*

Proposed section 75.901(b)(1) through (b)(12) of this part are electrical safety standards applicable to low- and medium-voltage diesel-powered electrical generators and circuits.

Paragraph (b) would be added to § 75.901 to permit the usage of diesel-powered electrical generators as an alternative to power centers for the purpose of moving equipment in, out, around the mine, and to perform work in areas where permissible equipment is not required. When used, diesel-powered electrical generators would be required to comply with the following:

Paragraph (b)(1) would require the diesel engine powering the electrical generator to satisfy the requirements of 30 CFR Part 7, Subpart E. The regulations in part 7 set out the requirements for diesel engines intended for use in underground coal mines.

Paragraph (b)(2) would require a grounding resistor which is rated for the phase-to-phase voltage of the system to be provided to limit the ground-fault current to not more than 0.5 amperes. The grounding resistor required by (b)(2)(i) must be located between the wye connected generator neutral and the generator frame; or the grounding resistor required by (b)(2)(ii) must be located between the wye connected transformer secondary and the transformer frame, when an isolation transformer is used; or the grounding resistor required by (b)(2)(iii) must be located between the wye connected generator neutral and the generator frame when an auto-transformer is used.

Requiring a grounding resistor rated for the phase-to-phase voltage of the system would ensure that adequate insulating properties are provided for the grounding resistor. This is especially important when using autotransformers. When using an autotransformer, the grounding resistor would be required to be located between the neutral of the wye connected generator and the generator frame, and it must be rated for

the highest output voltage of the autotransformer. A wye connection provides a neutral grounding point in the system for the purpose of inserting a predetermined value resistor that would limit the current and voltage under a phase-to-ground fault condition. A phase-to-ground fault occurring on the secondary side of the autotransformer would subject the grounding resistor to the output voltage of the autotransformer. This is because autotransformers have only one winding-per-phase and do not provide the electrical isolation characteristics necessary to re-establish a different or new system voltage. A resistor that is subjected to a voltage higher than its rating can potentially explode, causing serious injury or death to persons nearby, or it can open from overcurrent, leaving the system ungrounded. Limiting the ground-fault current to not more than 0.5 amperes, and providing the sensitive ground-fault protection set forth in paragraphs (b)(3) and (b)(4) (discussed below), provides increased protection against explosion, fire, and electrical shock. Because the voltage from a diesel-powered electrical generator may need to be increased or decreased by an external transformer, an additional grounding resistor limiting the ground-fault current to 0.5 amperes would be required. The additional resistor is needed to re-establish the grounding circuit for the new power circuit derived by the isolation characteristics of the transformer.

Paragraph (b)(3) would require each three-phase output circuit of the generator to be equipped with a sensitive ground fault relay set to cause the circuit interrupting device that supplies power to the primary windings of each transformer to trip and shut down the diesel engine when a phase-to-frame fault of not more than 90 milliamperes occurs. When a transformer is used to increase or decrease the voltage provided by the diesel-powered generator, the circuit between the generator and the transformer would be required to be provided with grounded-phase protection. When used in conjunction with the grounding resistor address in paragraph (b)(2), the increased protection against electrical shock assists in providing a grounding system that satisfies the requirements of § 75.701. This maximum voltage of 90 milliamperes reduces the amount of current that an individual is exposed to under a ground fault condition because the individual is in parallel with the grounding circuit conductors. If we limit ground fault current to a lesser

value, the charging currents at start up in a resistance grounded system would cause false tripping.

The proposed rule would require a single window-type current transformer to encircle the three-phase conductors for ground-fault protection. The equipment safety grounding conductors would be prohibited from being passed through or connected in series with ground-fault current transformers. This configuration could defeat ground-fault protection and result in hazardous voltage on equipment frames which could cause potentially fatal electrical shocks.

Paragraph (b)(4) would require each three-phase output circuit that supplies power to equipment to be equipped with an instantaneous sensitive ground-fault relay that will cause its respective circuit interrupting device(s) to trip and cause shutdown of the diesel engine when a phase-to-frame fault occurs. The proposed rule would require the grounded-phase protection to be set at not more than 90 milliamperes. This protection would be provided for all three-phase equipment circuits. This applies to equipment receiving power directly from the diesel-powered electrical generator and from transformers used to change the generator voltage. When used in conjunction with the grounding resistor(s) addressed in paragraph (b)(2), the increased protection against electrical shock provides a grounding system that satisfies the requirements of § 75.701. Paragraph (b)(4) requires a single window-type current transformer to encircle the three-phase conductors for ground-fault protection. The equipment safety grounding conductors would be prohibited from being passed through or connected in series with ground-fault current transformers. This prohibition ensures that ground-fault protection is not defeated, which could result in hazardous voltage on equipment frames.

Paragraph (b)(5) would require each three-phase output circuit interrupting device to have a means to provide short-circuit, overcurrent, grounded-phase, undervoltage, and ground wire monitoring protection. When connected to a piece of equipment, the instantaneous trip unit for the circuit interrupting device in use must be adjusted to trip at not more than 75 percent of the minimum available short circuit current at the point where the cable enters the equipment or the maximum allowable instantaneous settings specified in § 75.601–1, whichever is less. To determine the available short circuit current, calculations would be required which

take into account all circuit parameters, including the size and length of the equipment cable. The minimum available short circuit current would be at the end of the cable where it enters the equipment. Small capacity generators may cause the available short circuit current at the end of the cable to be lower than the maximum allowable settings specified in § 75.601–1. The requirements of this paragraph will ensure that proper protection is provided for all three-phase output circuits, whether at the generator, distribution box, or at a separate power center that receives its primary power from a diesel-powered electrical generator.

Paragraph (b)(6) would require that the equipment portable cable length(s) not exceed the length(s) specified in 30 CFR Part 18, Appendix I, Table 9, *Specifications for Portable Cables Longer than 500 Feet*. The purpose of this requirement is to limit the cable length, which ensures that the short circuit capacity of the generator is great enough to cause the circuit interrupting device to open, thereby preventing damage to the cables.

Paragraph (b)(7) would require that a permanent label(s) listing the maximum circuit interrupting device setting(s) and maximum portable cable length(s) be installed on each instantaneous trip unit or be maintained near each three-phase circuit interrupting device. The proposed rule requires that the permanent label(s) be maintained legibly. Because the maximum short circuit current is calculated using the maximum length of cable allowed, the label would ensure that adequate short circuit protection for each circuit is provided.

Paragraph (b)(8) would require that only one circuit at a time be used when equipment is being moved in, out, and around a mine. This does not prevent the use of more than one circuit when equipment is used to perform work in areas where permissible equipment is not required. When multiple pieces of equipment are used, care must be taken to ensure that the circuit interrupting device settings are properly adjusted to protect both the generator and the equipment being operated.

Paragraph (b)(9) refers to existing 30 CFR 75.902 (Low- and medium-voltage ground check monitor circuits). Section 75.902 requires the grounding system to include an MSHA accepted ground wire monitor system, or other no less effective device approved by the District Manager, to assure ground continuity between the frame of the generator and the equipment being moved or used; or have a No. 1/0 or larger external

grounding conductor to bond and ground the frames of all equipment to the frame of the generator. This would require bonding the frame of transformers and metallic cable coupler shells back to the frame of the generator. Grounding equipment in this manner limits the amount of voltage and current that an individual would be exposed to under an electrical fault condition and also provides a good path for current flow to activate protective devices.

Paragraph (b)(10) would require all trailing cables extending from the generator to equipment to comply with § 75.907 (Design of trailing cables for medium-voltage circuits). Section 75.907 specifies the trailing cable design requirements for medium voltage circuits and also specifies that on equipment employing cable reels, cables without shields may be used if the insulation is rated 2000 volts or more. Both type cables have been used in the coal mining industry for over 30 years and have been proven to provide the required protection when properly maintained.

Paragraph (b)(11) would require a strain relief device on each end of the trailing cable(s) that extends between the generator and the piece of equipment being powered. Although requirements for strain relief or clamping of cables are covered by other regulations, they are specifically required here since there is a reasonable likelihood that cables may be pulled to the extent of their length during movement of equipment. This also applies to the cable(s) between the diesel-powered generator and a distribution box or separately mounted transformer. Some mobile equipment may be capable of pulling the distribution box or transformer when the limit of the cable has been reached and further pulling would strain connections of the generator cable. This could result in electrical arcs and faults which may result in flash burns.

Paragraph (b)(12) would require that, prior to moving each piece of equipment or performing work, a functional test of each ground fault and ground wire monitor system be performed by a qualified electrician who meets the requirements of § 75.153 (Electrical work; qualified person). The ground-fault circuit would be required to be tested without subjecting the circuit to an actual grounded phase condition. The proposed rule requires a record of each test, maintained by the mine operator, and made available to authorized representatives of the Secretary and to the miners in the mine. This paragraph would require that functional tests be performed before the

equipment begins its move from the surface to underground, or from underground to the surface, or movement from one part of a mine to another, or before work is performed by equipment in other areas of the mine where permissible equipment is not required. It would not require a functional test after momentary or incidental stoppage during the moving process, or repositioning of equipment while performing work. Manufacturers of ground fault relay devices already provide circuitry and test methods for their devices that allow testing to be conducted without subjecting the power system to an actual ground fault condition. This method of testing enhances safety by preventing individuals from being exposed to energized circuits while performing the test. The functional tests required by this paragraph do not relieve the operator of responsibility for performing examinations and tests required by other sections of 30 CFR Part 75.

#### **IV. Executive Order 12866 (Regulatory Planning and Review and Regulatory Flexibility Act)**

This proposed rule amends 30 CFR 75.901, concerning the use of low- and medium-voltage diesel-powered electrical generators as an alternative for moving electrical equipment in, out, around a mine, and to perform work in areas where permissible equipment is not required. This proposed rule would allow the use of diesel-powered electrical generators and eliminate the need for the mine operator to file petitions for modification to use diesel-powered electrical generators.

Executive Order (E.O.) 12866 as amended by E.O. 13258 requires that regulatory agencies assess both the costs and benefits of intended regulations. We have fulfilled this requirement for the proposed rule, and have determined that the proposed rule would not have an annual effect of \$100 million or more on the economy. Therefore, it is not an economically significant regulatory action pursuant to section 3(f)(1) of E.O. 12866.

The proposed rule would eliminate the need for underground coal mine operators who choose to use diesel-powered electrical generators to file PFMs and thereby would generate cost savings.

From January 1990 to October 2003, 63 petitions were filed to modify §§ 75.701 and 75.901 (Grounding requirements and protection of low- and medium-voltage three-phase circuits used underground). On average, approximately 5 petitions were filed during each of these years.

#### **Mining Sectors Affected**

This proposed rule applies to all underground coal mines. However, based on already filed PFMs under § 75.901 and § 75.701, MSHA estimates that an average of five underground coal mines per year would choose to use diesel powered electrical generators in their mines.

#### **Benefits**

Using diesel-powered electrical generators provides an efficient portable source of power to move electrical equipment. These diesel-powered electrical generators are easily taken to areas where power centers or other sources of electrical power are not available to move mobile equipment or to supply power to other electric equipment needed to do work in outby areas. The likelihood of electrical accidents will be decreased by (1) the more stringent criteria and design features associated with the diesel-powered electrical generator protective devices, such as requiring the grounding resistor to limit ground fault current to 0.5 ampere under a ground fault condition; (2) requiring the sensitive grounded phase protection device to cause the circuit interrupting device protecting the electrical circuits to open and shut down the diesel-powered generator when not more than 90 milliamperes of fault current is detected by the system; and (3) equipment testing devices and procedures that are designed to facilitate safe testing of the diesel-powered electrical circuit. Miner safety is increased with the protective systems and testing procedures required by the rule because they limit the amount of voltage and current that miners can be exposed to under a ground fault condition and also because they reduce the possibility of a fire, shock, or burn hazard. Finally, the rule contains all the necessary electrical safety requirements developed in the petitions for modification to use diesel-powered electrical generators.

#### **Compliance Cost Savings**

Annual cost savings from the proposed rule would accrue to underground coal mines that choose to use diesel-powered electrical generators because they would no longer have to file a PFM. Annual cost savings from this rule are estimated to be \$2,377. The annual cost savings are based upon the elimination of the filing of an average of five petitions per year. We project that all five mines would employ 20 to 500 workers.

The annual cost savings of \$2,377 for mines that employ 20 to 500 workers

was derived in the following manner. On average, a mine supervisor earning \$58.96 per hour would take 8 hours to prepare a petition (5 petitions × 8 hours × \$58.96 per hour = \$2,358). In addition, a clerical worker earning \$20.39 per hour would take 0.1 hours to copy and mail a petition (5 petitions × 0.1 hours × \$20.39 per hour = \$10). Furthermore, we estimate that, on average, each petition is five pages long, photocopying costs are \$0.15 per page, and postage is \$1 [5 petitions × ((5 pages × \$0.15 per page) + \$1) = \$9].

Although this rule applies to any underground coal mine, there are no substantial changes in the proposed rule that apply to mines that choose not to use diesel-powered electrical generators. Thus, such mines would not incur costs nor generate cost savings as a result of the proposed rule.

#### **V. Regulatory Flexibility Act Certification**

Pursuant to the Regulatory Flexibility Act (RFA) of 1980 as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA), we have analyzed the impact of the proposed rule on small businesses. Further, we have made a determination with respect to whether or not we can certify that the proposed rule would not have a significant economic impact on a substantial number of small entities that are covered by this rulemaking. Under the SBREFA amendments to the RFA, we must include in the rule a factual basis for this certification. If the proposed rule would have a significant economic impact on a substantial number of small entities, we must develop a regulatory flexibility analysis.

#### **Definition of a Small Mine**

Under the RFA, in analyzing the impact of a rule on small entities, we must use the SBA definition for a small entity or, after consultation with the SBA Office of Advocacy, establish an alternative definition for the mining industry by publishing that definition in the **Federal Register** for notice and comment. MSHA has not taken such an action and hence is required to use the SBA definition.

The SBA defines a small entity in the mining industry as an establishment with 500 or fewer employees. All mines affected by this rulemaking fall into this category and hence can be viewed as sharing the special regulatory concerns which the RFA was designed to address.

We have looked at the impacts of our rules on a subset of mines with 500 or fewer employees—those with fewer than 20 employees, which we and the mining community have traditionally

referred to as "small mines." These small mines differ from larger mines not only in the number of employees, but also in economies of scale in material produced, in the type and amount of production equipment, and in supply inventory. Therefore, their costs of complying with MSHA rules and the impact of MSHA rules on them would also tend to be different. It is for this reason that "small mines," as traditionally defined MSHA, are of special concern to us.

This analysis complies with the legal requirements of the RFA for an analysis of the impacts on "small entities" while continuing our traditional definition of "small mines." We conclude that we can certify that the proposed rule would not have a significant economic impact on a substantial number of small entities that are covered by this rulemaking. We have determined that this is the case both for mines affected by this rulemaking with fewer than 20 employees and for mines affected by this rulemaking with 500 or fewer employees.

#### *Factual Basis for Certification*

Our analysis of impacts on "small entities" begins with a "screening" analysis. The screening compares the estimated compliance costs of a rule for small entities in the sector affected by the rule to the estimated revenues for those small entities. When estimated compliance costs or savings are less than one percent of the estimated revenues, we believe it is generally appropriate to conclude that there is no significant economic impact on a substantial number of small entities. When estimated compliance costs exceed one percent of revenues, it tends to indicate that further analysis may be warranted. Using either MSHA's or SBA's definition of a small mine, the proposed rule results in yearly cost savings to affected mines equal to less than once percent of their yearly revenues.

The average estimated 2002 production for underground coal mines operating within the last five years with a petition to use diesel-powered electrical generators was approximately 3,387,871 tons per mine. Using a 2002 price of underground coal of \$25.97, the average 2002 revenues for such mines was approximately \$87,983,000.<sup>1</sup> Based on five underground coal mines per year

using diesel-powered electrical generators, the annual estimated revenues of mines affected by this rule would be \$449,915,000. The proposed rule cost savings are substantially less than 1 percent of estimated revenues (\$2,377/\$449,915,000 or 0.0005 percent).

#### **VI. Paperwork Reduction Act of 1995**

The amendments to § 75.901 do not introduce new paperwork requirements on the mine operator; however, the existing information collection requirements are still subject to Office of Management and Budget (OMB) approval under the Paperwork Reduction Act (PRA), 44 U.S.C. 3502(13)(A). As a result of this rule, all petitions for modification for § 75.901 will be superceded and the information collection request for petitions for modification approved by OMB under 1219-0065 will be reduced. MSHA will submit a new information collection request for this rule and transfer the recordkeeping paperwork burden hours and costs.

#### *Burden Reduction*

Due to this rulemaking, mine operators would no longer have to petition for modification of existing 30 CFR § 75.901 in order to use diesel-powered electrical generators. Existing OMB paperwork package 1219-0065 includes annual burden hours and costs related to the time it takes mine operators to prepare and file petitions with MSHA, including petitions for modifications to use diesel-powered generators. As a result of this rulemaking, the burden hours and costs in OMB paperwork package 1219-0065 that relate to the time it takes operators to prepare and file petitions would need to be reduced to reflect the fact that petitions for modifications to use diesel-powered electrical generators would no longer be needed. Therefore, the burden hours and costs in OMB paperwork package 1219-0065 should be reduced by 40.5 hours and \$2,377 annually. This reduction was derived in the following manner.

On average, five underground coal mines are estimated to begin to use diesel-powered electrical generators annually. A mine supervisor, earning \$58.96 per hour, is estimated to take 8 hours to prepare a petition. On average, a clerical worker, earning \$20.39 per hour, is estimated to take 0.1 hours to copy and mail a petition. Each petition is estimated to be five pages in length, photocopy costs are \$0.15 per page, and postage is \$1 for each petition. The annual burden hour reduction and cost

savings related to preparing and filing petitions are:

<b>Burden Hours:</b>			
5 petitions × 8 hrs. per petition.	=	40 hours	
5 petitions × 0.1 hrs. per petition.	=	0.5 hours	
			40.5 hours
<b>Burden Costs:</b>			
40 hours × \$58.96 wage per hr.	=	\$2,358	
0.5 hrs. × \$20.39 wage per hr.	=	10	
5 petitions × ((5 pgs. × \$0.15 per page) + \$1 postage)).	=	9	
			2,377

#### *Burden Transfer*

Also included in existing petitions for modification of 30 CFR § 75.901 to use diesel-powered electrical generators are operators' recordkeeping requirements related to performing ground fault and ground wire monitor system tests and making a record of such tests. Such tests must be conducted and records made prior to moving each piece of equipment or performing work. The burden hours and costs related to such tests and records are also included in OMB paperwork package 1219-0065. There are 38 burden hours and \$1,130 of burden costs in the first year, 42 burden hours and \$1,249 of burden costs in the second year, and 46 burden hours and \$1,367 of burden costs in the third year that would be related to these tests and records which would need to be removed from OMB paperwork package 1219-0065 and transferred to the paperwork package related to this rule. The burden hours and costs were derived as follows.

There are 16 mines operating in 2003 that have petitions to use diesel-powered electrical generators. MSHA assumes that although five mines annually are estimated to begin using diesel-powered generators, there would, on average, be three existing mines using such equipment that would close. Thus, each year there would be a net of two more mines using diesel power electrical generators. A mine electrician earning \$29.73 per hour, is estimated to take 0.25 hours to perform the ground fault and ground wire monitor system tests. Such tests are estimated to be conducted six times annually. On average, it is estimated to take the mine electrician 0.1 hours to make a record each time tests are conducted.

The first year burden hours and costs related to performing ground fault and ground wire monitor system tests and making a record are:

<sup>1</sup> The 2001 underground coal price of \$25.37 found in Table 29 of the Department of Energy/ Energy Information Agency, *Annual Coal Report 2001* is multiplied by 2002 and 2001 December Consumer Price Indexes found at <ftp://ftp.bls.gov/pub/special.requests/cpi/cpiiai.txt> [\$25.97 = (\$25.37 × (180.9/176.7))].

18 mines  $\times$  (0.25 hrs. + 0.1 hrs. for tests and record)  $\times$  6 times per year. = 38 hours  
 38 hours  $\times$  \$29.73 wage per hr. = \$1,130

The second year burden hours and costs related to performing ground fault and ground wire monitor system tests and making a record are:

20 mines  $\times$  (0.25 hrs. + 0.1 hrs. for tests and record)  $\times$  6 times per year. = 42 hours  
 42 hours  $\times$  \$29.73 wage per hr. = \$1,249

The third year burden hours and costs related to performing ground fault and ground wire monitor system tests and making a record are:

22 mines  $\times$  (0.25 hrs. + 0.1 hrs. for tests and record)  $\times$  6 times per year. = 46 hours  
 46 hours  $\times$  \$29.73 wage per hr. = \$1,367

## VI. Other Regulatory Considerations

### A. The Unfunded Mandates Reform Act

This proposed rule does not include any Federal mandate that may result in increased expenditures by State, local, or tribal governments, nor would it increase private sector expenditures by more than \$100 million annually, nor would it significantly or uniquely affect small governments. Accordingly, the Unfunded Mandates Reform Act of 1995 requires no further agency action or analysis.

### B. National Environmental Policy Act

MSHA has reviewed this proposed rule in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 *et seq.*), the regulations of the Council on Environmental Quality (40 U.S.C. part 1500), and the Department of Labor's NEPA procedures (29 CFR part 11). Since this proposed rule would impact safety, not health, the rule is categorically excluded from NEPA requirements because it would have no significant impact on the quality of the human environment (29 CFR 11.10(a)(1)). Accordingly, MSHA has not conducted an environmental assessment nor provided an environmental impact statement.

### C. Assessment of Federal Regulations and Policies on Families

This proposed rule would have no effect on family well-being or stability, marital commitment, parental rights or authority, or income or poverty of families and children. Accordingly,

Section 654 of the Treasury and General Government Appropriations Act of 1999 requires no further agency action, analysis, or assessment.

### D. Executive Order 12630: Government Actions and Interference With Constitutionally Protected Property Rights

This proposed rule would not implement a policy with takings implications. Accordingly, Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights, requires no further agency action or analysis.

### E. Executive Order 12988: Civil Justice Reform

This proposed rule was drafted and reviewed in accordance with Executive Order 12988, Civil Justice Reform. This proposed rule was written to provide a clear legal standard for affected conduct and was carefully reviewed to eliminate drafting errors and ambiguities, so as to minimize litigation and undue burden on the Federal court system. MSHA has determined that this proposed rule would meet the applicable standards provided in Section 3 of Executive Order 12988.

### F. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

This proposed rule would have no adverse impact on children. Accordingly, Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks, requires no further agency action or analysis.

### G. Executive Order 13132: Federalism

This proposed rule would not have "federalism implications," because it would not "have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government." Accordingly, Executive Order 13132, Federalism, requires no further agency action or analysis.

### H. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This proposed rule would not have "tribal implications," because it would not "have substantial direct effects on one or more Indian tribes, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes."

Accordingly, Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, requires no further agency action or analysis.

### I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy, Supply, Distribution, or Use

In accordance with Executive Order 13211, MSHA has reviewed this proposed rule for its impact on the supply, distribution, and use of energy. Because this proposed rule would result in yearly cost savings to the coal mining industry, this proposed rule would neither reduce the supply of coal nor increase its price.

This proposed rule is not a "significant energy action," because it would not be "likely to have a significant adverse effect on the supply, distribution, or use of energy" "(including a shortfall in supply, price increases, and increased use of foreign supplies)." Accordingly, Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use, requires no further agency action or analysis.

### J. Executive Order 13272: Proper Consideration of Small Entities In Agency Rulemaking

In accordance with Executive Order 13272, MSHA has thoroughly reviewed this proposed rule to assess and take appropriate account of its potential impact on small businesses, small governmental jurisdictions, and small organizations. MSHA has determined and certified that this proposed rule would not have a significant economic impact on a substantial number of small entities.

## VIII. Petitions for Modification

On the effective date of the final rule, all existing petitions for modification for diesel-powered electrical generators will be superseded.

### List of Subjects in 30 CFR Part 75

Mine safety and health, Underground coal mining.

Dated: June 18, 2004.

**Dave D. Lauriski,**

*Assistant Secretary for Mine Safety and Health.*

For the reasons set out in the preamble, and under the authority of the Federal Mine Safety and Health Act of 1977, we are proposing to amend chapter I, subchapter O, part 75 of title 30 of the Code of Federal Regulations as follows:

## PART 75—MANDATORY SAFETY STANDARDS—UNDERGROUND COAL MINES

1. The authority citation for part 75 continues to read as follows:

Authority: 30 U.S.C. 811.

### SUBCHAPTER O—[AMENDED]

2. Section 75.901 is amended by adding paragraph (b) to read as follows:

#### **§ 75.901 Protection of low- and medium-voltage three-phase circuits used underground.**

\* \* \* \* \*

(b) Diesel-powered electrical generators used as an alternative to power centers for the purpose of moving equipment in, out, around the mine, and to perform work in areas where permissible equipment is not required, must comply with the following:

(1) The diesel engine powering the electrical generator must be approved under 30 CFR part 7, subpart E.

(2) A grounding resistor rated for the phase-to-phase voltage of the system must be provided to limit the ground-fault current to not more than 0.5 amperes. The grounding resistor(s) must be located:

(i) Between the wye connected generator neutral and the generator frame; (*see* figure I in appendix A to subpart J of this part) and

(ii) Between the wye connected transformer secondary and the transformer frame when an isolation transformer(s) is used; (*see* figure II in appendix A to subpart J of this part) or

(iii) Between the wye connected generator neutral and the generator frame when an auto-transformer is used. (*see* figure III in appendix A to subpart J of this part).

(3) Each three-phase output circuit of the generator must be equipped with a sensitive ground fault relay. The

protective relay must be set to cause the circuit interrupting device that supplies power to the primary windings of each transformer to trip and shut down the diesel engine when a phase-to-frame fault of not more than 90 milliamperes occurs.

(4) Each three-phase output circuit that supplies power to equipment must be equipped with an instantaneous sensitive ground-fault relay that will cause its respective circuit interrupting device(s) to trip and cause shutdown of the diesel engine when a phase-to-frame fault occurs. The grounded-phase protection must be set at not more than 90 milliamperes. Current transformers used for the ground-fault protection must be single window-type and must be installed to encircle all three phase conductors. Equipment safety grounding conductors must not pass through or be connected in series with ground-fault current transformers.

(5) Each three-phase circuit interrupting device must be provided with a means to provide short-circuit, overcurrent, grounded-phase, undervoltage, and ground wire monitoring protection. The instantaneous only trip unit for the circuit interrupting device(s) in use must be adjusted to trip at not more than 75 percent of the minimum available short circuit current at the point where the portable cable enters the equipment or the maximum allowable instantaneous settings specified in § 75.601–1, whichever is less.

(6) The equipment portable cable length(s) must not exceed the length(s) specified in 30 CFR part 18, appendix I, table 9, *Specifications for Cables Longer than 500 Feet*.

(7) Permanent label(s) listing the maximum circuit interrupting device setting(s) and maximum portable cable

length(s) must be installed on each instantaneous trip unit or be maintained near each three-phase circuit interrupting device. The permanent label(s) must be maintained legibly.

(8) The circuit interrupting device that supplies three-phase power circuit(s) to the equipment being powered must be limited to the use of only one circuit interrupting at a time when equipment is being moved in, out, and around the mine.

(9) The grounding system must include an MSHA accepted ground wire monitor system that satisfies the requirements of § 75.902; or have a No. 1/0 or larger external grounding conductor to bond and ground the frames of all equipment to the frame of the generator.

(10) All trailing cables extending from the generator to equipment must comply with § 75.907.

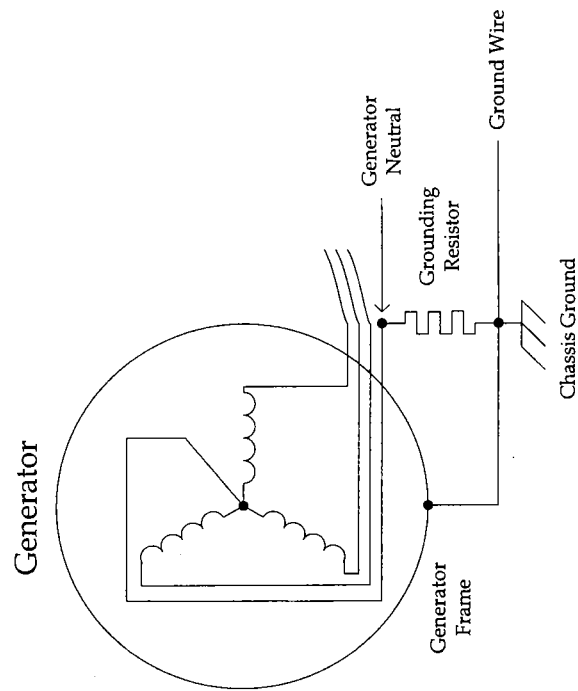
(11) A strain relief device must be provided on each end of the trailing cables that extend between the generator and the piece of equipment being powered.

(12) Prior to moving each piece of equipment or performing work, a functional test of each ground fault and ground wire monitor system must be performed by a qualified electrician who meets the requirements of § 75.153. The ground-fault circuit must be tested without subjecting the circuit to an actual grounded phase condition. A record of each test must be maintained and made available to authorized representatives of the Secretary and to the miners in such mine.

3. Appendix A to subpart J is added to read as follows:

### **Appendix A to Subpart J**

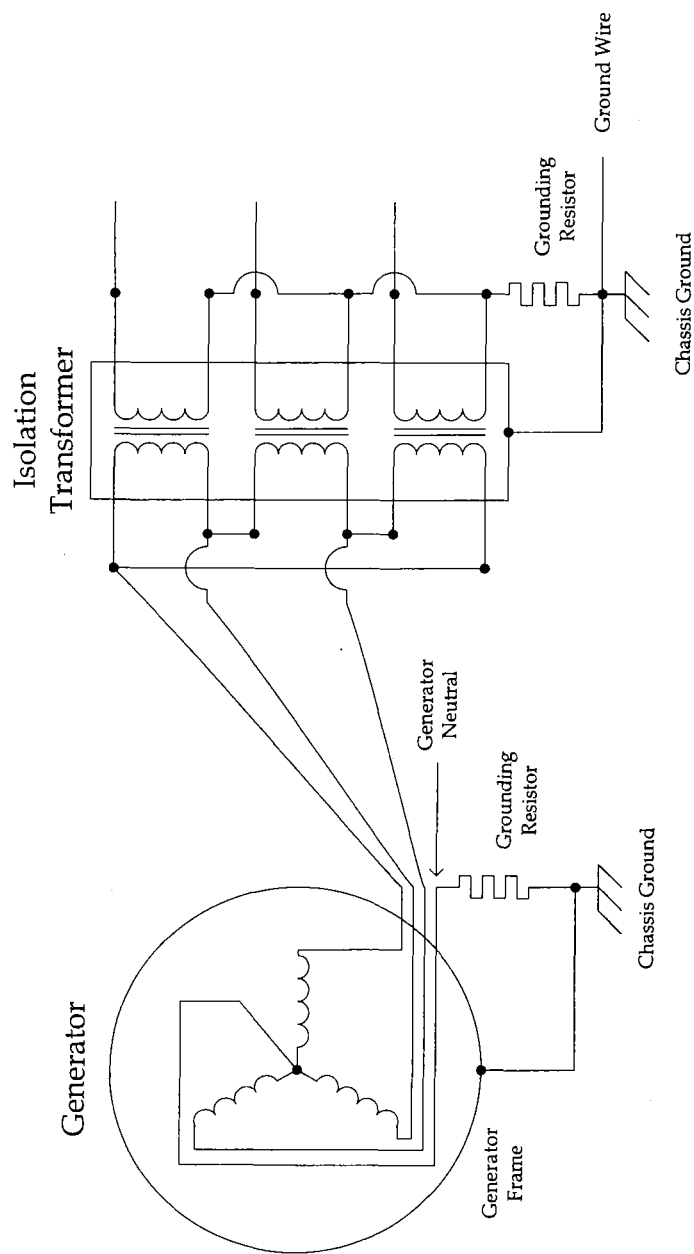
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Note that grounding resistor must be mounted on the same frame with the generator.

Figure I





Note that the grounding resistor must be mounted on the same frame with the generator.

Figure II

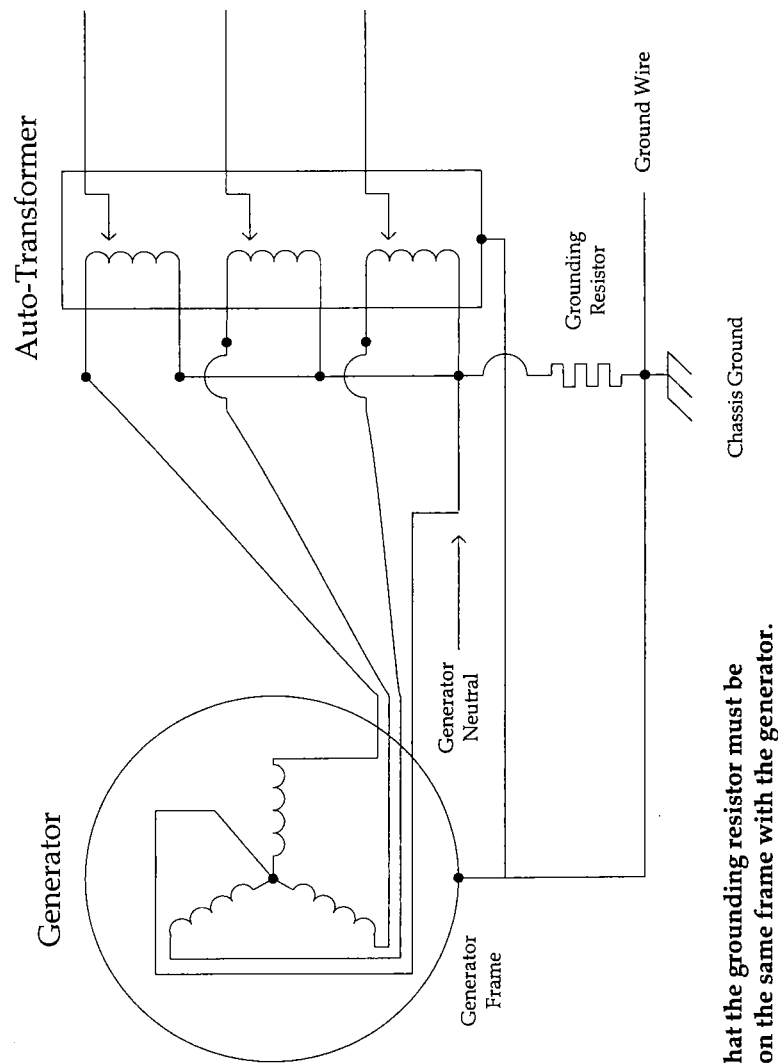


Figure III