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Titles of included records:

- 1, MSHA Program Policy Manual, 2014 (starts PDF page 3)
2. Coal Mine Safety and Health General Inspection Procedures Handbook, 2016 (starts PDF page 488)
3. Citation and Order Writing Handbook for Coal Mines and Metal and Nonmetal Mines, 2013 (starts PDF page 687)
4. Coal Mine Safety and Health Supervisor's Handbook, 2014 (starts PDF page 912)

Source of document:

Freedom of Information Act Request
U.S. Department of Labor - MSHA
FOIA Officer
201 12th Street South Room 4E401
Arlington, Virginia 22202-5450
Fax: 202- 693-9441
Email: foiarequest@dol.gov

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U.S. Department of Labor

Mine Safety and Health Administration
201 12th Street South
Arlington, Virginia 22202-5452



Re: Freedom of Information Act Request – Tracking No. 821798

This is the final response to your Freedom of Information Act (FOIA) request dated January 5, 2017. You requested:

MSHA Program Policy Manual
MSHA Coal General Inspection Procedures
MSHA Citation and Order Writing Handbook for Coal/Metal and Nonmetal Mines
MSHA Coal Mine Safety and Health Safety and Health Supervisor's Handbook

We conducted a thorough search for the records you requested and are providing all the documents you requested.

If you need any further assistance or would like to discuss any aspect of your request please do not hesitate to contact Belinda Taylor at 202-693-9608 or the DOL FOIA Public Liaison, Thomas Hicks, at (202) 693-5427 or by email at hicks.thomas@dol.gov.

Sincerely,

A handwritten signature in dark ink, appearing to read "Syed Hafeez", with a long horizontal stroke extending to the right.

Syed Hafeez
Director, Program Evaluation and Information Resources

Enclosures

**VOLUME I - THE 1977 ACT
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**INTERPRETATION AND GUIDELINES ON
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Section 3 Definitions

I.3-1 Definitions of "Operator" and "Mine"

Section 3(d) of the Act expands the definition of "operator" to include independent contractors. Regulations governing independent contractors are found in Part 45 of Title 30 CFR. MSHA policy regarding independent contractors is set forth in this Manual in Volume III, Parts 45 and 50.

Section 3(h)(1) of the Act defines the term "mine" and includes related milling operations within that definition. Mine development, rehabilitation activities, and exploration work at an established mine are within the Act's scope. All types of mining, including placer, dredge, and hydraulic operations must be inspected. Government owned or operated mines and mills, whether federal, state, county, or other, are included within the jurisdiction of the Act. All such operations located anywhere in the United States, as well as in any of its territories, protectorates, or commonwealths, must be inspected.

I.3-2 Jurisdiction Over Mine Roads

Section 3(h)(1)(B) of the Act defines MSHA's authority to assume jurisdiction of mine roads which pass through federal land administered by agencies that do not have responsibility for health and safety on those roads. The criteria or factors listed below will be used for determining jurisdiction. The presence of any of these factors should each weigh in favor of inclusion of the road under MSHA jurisdiction.

1. The road is owned by the mine operator;
2. The road is maintained by the operator;
3. The operator has the legal right to bring the road into compliance with MSHA regulations;
4. The road is used exclusively to provide access to the mine, or to other mines of the operator;
5. The road provides an exclusive or a major means of access for mine vehicles; or
6. The road was built by or for (by contractor) the mine operator.

I.3-3 Jurisdiction Over Alumina Refining Facilities

The United States District Court for the District of Columbia ruled in 1975 in Alumina Company of America v. Morton that the alumina refining process is milling. As such, it is subject to MSHA jurisdiction under Section 3(h)(1) of the Act.

I.3-4 Jurisdiction Over Coal Loading Facilities

Sections 3(h)(2) and 3(i) of the Act address coal loading facilities over which MSHA asserts jurisdiction. These facilities will be examined to determine the nature and purpose of the work that takes place there. If the facility prepares coal according to any specifications for benefit of either the operator or the consumer, MSHA will inspect the facility. MSHA will not inspect facilities where coal is prepared solely to facilitate loading and not to meet specifications or to render the coal for any particular use. Local OSHA authorities should be informed by MSHA district personnel of any determination to terminate jurisdiction over a loading facility.

I.3-5 Jurisdiction Over Coal Preparation Plants

Section 3(i) of the Act addresses jurisdiction over private or custom preparation plants and other related surface coal facilities not directly associated with a single mine or group of mines.

Section 4 Mines Subject to the Act**I.4-1 MSHA/OSHA Interagency Agreement**

MSHA and OSHA have entered into an agreement to delineate certain areas of inspection responsibility, to provide a procedure for determining general jurisdictional questions, and to provide for coordination between the two agencies in areas of mutual interest. MSHA has jurisdiction over operations whose purpose is to extract or to produce a mineral.

MSHA does not have jurisdiction where a mineral is extracted incidental to the primary purpose of the activity. Under this circumstance, a mineral may be processed and disposed of, and MSHA will not have jurisdiction since the company is not functioning for the purpose of producing a mineral. Operations not functioning for the purpose of producing a mineral include, but are not limited to, the following:

1. key cuts in dam construction (not on mining property or used in mining);
2. public road and highway cuts;
3. tunnels
 - a. railroad
 - b. highway
 - c. water diversion, etc.; and
4. storage areas
 - a. gas
 - b. petroleum reserves
 - c. high and low level radioactive waste.

The question of jurisdiction in these and similar types of operations is contingent on the purpose and intent for which the facility is being developed.

I.4-2 Jurisdiction Over Refractory Mills

The MSHA/OSHA Interagency Agreement provides that OSHA shall have jurisdiction over "brick, clay pipe, and refractory plants" (Section B.6.b). In these operations, both milling and manufacturing occur. The effect of Section B.6.b. is to grant to OSHA jurisdiction over plants that include a manufacturing process resulting in a product such as bricks, clay pipe, insulators, or other finished forms of refractories.

I.4-3 Jurisdiction Over Borrow Pits

Section 6(b)(7) in the MSHA/OSHA Interagency Agreement states:

'Borrow Pits' are subject to OSHA jurisdiction except those borrow pits located on mine property or related to mining. (For example, a borrow pit used to build a road or construct a surface facility on mine property is subject to MSHA jurisdiction.) 'Borrow Pit' means an area of land where the overburden, consisting of unconsolidated rock, glacial debris, or other earth material overlying bedrock is extracted from the surface. Extraction occurs on a one-time basis or intermittently as need occurs, for use as fill materials by the extracting party in the form in which it is extracted. No milling is involved, except for the use of a scalping screen to remove large rocks, wood and trash. The material is used by the extracting party more for its bulk than its intrinsic qualities on land which is relatively near the borrow pit.

Thus, if earth is being extracted from a pit and is used as fill material in basically the same form as it is extracted, the operation is considered to be a "borrow pit." For example, if a landowner has a loader and uses bank run material to fill potholes in a road, low places in the yard, etc., and no milling or processing is involved, except for the use of a scalping screen, the operation is a borrow pit. The scalping screen can be either portable or stationary and is used to remove large rocks, wood, and trash. In addition, whether the scalping is located where the material is dug, or whether the user of the material from the pit is the owner of the pit or a purchaser of the material from the pit, does not change the character of the operation, as long as it meets the other criteria.

District managers should contact headquarters regarding any questionable operations before final determinations are made.

Section 103 Inspections, Investigations and Recordkeeping**I.103-1 Assaulting, Intimidating or Impeding Inspectors**

Section 111 of Title 18 of the United States Code makes it a federal crime to forcibly assault, resist, oppose, impede, intimidate or interfere with any person designated in Section 1114 of Title 18 while such person is engaged in, or on account of, the performance of his/her official duties. It is a crime to assault, intimidate or impede MSHA employees who are assigned to perform investigative, inspection, or law enforcement functions. Thus, any person who assaults, intimidates or impedes an MSHA inspector, while the inspector is engaged in, or on account of, the performance of his/her official duties, is subject to investigation and arrest by the FBI, prosecution by the U.S. Attorney in the federal courts, and to a fine and/or imprisonment.

MSHA policy requires the inspector to leave the scene where a confrontation appears to be developing into a situation where an apparent violation of Section 1114 or 111 is about to occur. In order to avoid a confrontation, the inspector should inform the person(s) that an attack on an MSHA inspector is a federal crime, and that the person(s) may be subject to investigation and arrest by the FBI. If an inspector(s) believes that he/she may be subject to physical harm or assault, the inspector should leave the property immediately and promptly notify his/her supervisor.

If an inspector encounters harassment or delays during a mine inspection, the inspector should attempt to complete the inspection without further provoking the operator. Afterwards, the inspector's supervisor should be contacted.

In the event of an assault, intimidation, harassment, or the impeding of an inspection, the supervisor is responsible for collecting all the facts, reducing them to writing, and contacting the district or assistant district manager. Where the assistant district manager is contacted, the assistant district manager must then immediately contact the district manager. The district manager will notify the Technical Compliance and Investigations Office (TCIO) for further instructions. If the inspection is not the result of an imminent danger complaint, no inspection personnel should return to the mine without approval from headquarters. If it is an imminent danger complaint, an inspector and a supervisor should again attempt to conduct the inspection. No less than two inspection personnel should be sent to the mine property at this time.

I.103-2 Company Release Forms

An inspector shall not sign a responsibility release form when entering a mine to perform his duties. An inspector may sign a check-in and check-out book located at the mine, provided that it does not involve release of liability. Denial of "right of entry" for not signing a release shall be reported in accordance with Section 108 of the Act.

I.103-3 Performance of Work Other Than Inspections and Investigations

Other than providing technical or safety and health educational assistance, the inspector shall not assist any mine employee or official in the performance of work. An inspector's work at a mine shall include health and safety discussions related to the inspection.

I.103-4 Respirable Dust and Noise Sampling

Each underground coal mine operator develops a respirable dust control plan for maintaining compliance with the 2.0 milligram or lower standard. MSHA reviews and tests the operator's respirable dust control plan by taking samples in accordance with MSHA's Health Inspection Procedures Handbook. Once the plan is approved, inspectors measure the engineering parameters during each inspection to assure that all of the plan's elements are followed. If the plan is not being followed, the appropriate citation/order is issued. Respirable coal mine dust samples are collected during the four annual coal mine underground inspections for each active sampling entity.

Respirable coal mine dust samples are collected at surface mines in accordance with the Health Inspection Procedures Handbook. These samples will be collected during the two annual surface mine/facilities inspections for each active sampling entity.

Noise samples will be collected at locations in accordance with the Health Inspection Procedures Handbook. Noise samples will be collected one time per year on each active coal mine (surface/facilities and underground).

I.103-5 Reporting and Investigating Blocked Passage Through the Tailgate Side of Longwall Mining Operations in Coal Mines

See Part 50 in Volume III of this Manual.

103(a) Mandated Inspections

Section 103(a) of the Act requires a minimum of four inspections a year for underground mines and a minimum of two inspections a year for surface mines. Consistent with Section 103(a) of the Act,

the procedures for conducting the inspection of an underground mine in its entirety at least four times a year and a surface mine (including a facility) in its entirety at least twice a year are set forth in the respective General Inspection Procedures Handbooks for Coal and Metal and Nonmetal.

MSHA's interpretation is that this requirement applies to full-time producing mines operating for the entire fiscal year period. For mines which started operating in the middle of the fiscal year, fewer inspections are required. MSHA's policy for these mines is based on an average of one inspection every quarter for underground mines and an average of one inspection every six months for surface operations. Underground mines in an inspectable status for 45 days or more in a quarter require an inspection, and surface operations in an inspectable status for 90 days or more in a six month period require an inspection.

For intermittent surface mines, MSHA's policy requires one inspection a year.

If a coal mine has an ongoing re-opening inspection under 303(x) of the Mine Act, the number of days from the start date to the end date of that inspection will be excluded from the calculation of the time available for a regular inspection.

If a mine has received an Attempted Inspection (Denial of Entry) event during the inspection period, no inspection is required for that period.

If the status of a mine changes to abandoned, abandoned sealed, or temporarily idle before the end of the inspection period and remains in one of those statuses, no inspection is required. Inspection requirements for previous inspection periods remain in effect.

103(a) Authority to Inspect - Authorization for Representatives
Inspections and investigations under the Federal Mine Safety and Health Act of 1977 shall be conducted only by persons who have been authorized by the Secretary to conduct such inspections or investigations. The inspector's authorization shall be available during inspections and investigations.

103(a) Authority to Conduct Special Investigations - SI
Credentials

Section 103(a) of the Act authorizes MSHA to conduct special investigations as an integral part of the Agency's enforcement program. The Technical Compliance and Investigation Divisions (TCID) are responsible for overall administration and management of the special investigations program. In order to promote the consistent application and management of the program, TCID will develop statistical and management information based on special investigations activities in the field. This includes evaluating the effectiveness of each district's special investigation program, monitoring district compliance with national policies and procedures, and providing periodic updates on the status of cases. As part of the Agency's accountability program, accountability reviews of the special investigations program will be conducted by the national office on a recurring basis. TCID has responsibility for the following sections of the Act:

1. Section 105 complaints of discrimination filed by miners and other protected persons;
2. Section 108 injunctive actions; and
3. Section 110 civil and criminal violations of the Mine Act and/or mandatory safety and health standards.

The special investigations program does not have responsibility for nor does it conduct internal investigations. Any allegations of employee misconduct, including advance notification of inspections, should be referred to the appropriate Administrator.

Investigations of discrimination complaints and possible knowing and/or willful violations shall be conducted only by persons who have been authorized by the Secretary to conduct special investigations. Special investigator (SI) credentials will be issued by the Assistant Secretary for MSHA to those persons who have completed the specified investigator training. SI credentials will be carried at all times when conducting special investigations. Improper use or failure to safeguard SI credentials may result in disciplinary action. Only MSHA approved SI credentials may be used in the performance of any special investigation and may only be used by the authorized representative to whom the SI credentials have been issued.

103(a) Advance Notice

Section 103(a) of the Mine Act prohibits giving advance notice of inspections conducted by an authorized representative (AR) of the Secretary of Labor.

If an AR discovers that an operator, contractor, or any other person has given advance notice of an impending inspection, the AR shall issue a citation under Section 104(a) of the Act alleging a violation of Section 103(a) of the Act. As usual, inspector observations and notes (including the identity of who gave the advance notice, how the notice was provided, and any physical conditions of the mine or practices that may have been recently changed) will help support a citation.

Consistent with established agency policy, advance notice includes subtle forms of communication (such as coded references, like "company is here," or "visitors are on site") intended to disguise an announcement of MSHA's presence at a mine. Communications warning of pending inspection activity after a multi-day inspection has begun also constitute advance notice. All persons need to be aware of their legal obligations under the Mine Act. An individual or an operator does not have to be warned explicitly against providing advance notice for them to be found in violation of the Mine Act's advance notice provisions.

Advance notice has an inherent tendency to interfere with an inspection. Thus, to establish an advance notice violation, an AR need not demonstrate that mine conditions or practices were altered based on advance notice.

An implied exception to the prohibition against advance notice exists in Section 103(g)(1) of the Act. When a miner or miners' representative reports what is believed to be an imminent danger, the operator or agent must be notified "forthwith." Such notifications will usually have the effect of indirectly giving notice of an inspection. Likewise, the establishment of a date and time for abatement of a violation may provide indication of an impending inspection activity. This too is an implied exception to the prohibition against advance notice.

When MSHA personnel are engaged in inspection activities, it may be necessary to make arrangements with personnel at the mine when certain preparations are essential to carry out enforcement activities. In such situations, approval should be obtained from the inspector's supervisor before advance notice is given. Most important, unless the arrangement or notice is essential to carry out an enforcement activity; it is considered "advance notice" of inspection activity and prohibited by Section 103(a) of the Act. Examples of on-site activities requiring advance notice to mine operators and/or miners' representatives are described below:

1. When an inspector intends to include a routine second- or third-shift inspection or conduct personal health sampling, it may be necessary to designate a time and meeting place so representatives of the operator and miners can be given an opportunity to accompany the inspector and/or to enable miners to participate in sampling activities. Pre-selected meeting sites should not reveal the specific areas to be inspected. However, it is recognized that the normal progression of an inspection may, by process of elimination, reveal remaining areas to be inspected.
2. When preparations are needed during an inspection for an examination of a mine's power system, the inspector may arrange for the inspection of the electrical system during scheduled down time.
3. If it is necessary to interrupt an inspection for any cause, the inspector may inform the operator and, if applicable, the miners' representative, that the inspection is interrupted and will be resumed at the discretion of the inspector.
4. Advance notice may be given when a coal mine operator is afforded an opportunity to adjust respirable dust control measures and establish conditions that will prevail during a respirable dust technical inspection, which has the primary purpose of determining the adequacy of the operator's dust control plan.

The Act does not prohibit advance notice of investigative activities. However, notice of investigative activities shall only be given when such notice promotes an important investigative goal. Clearance and direction must be obtained from the investigator's and/or the inspector's supervisor before notice is given for investigative activities. Investigative activities include:

1. Obtaining information for health and safety research;
2. Technical assistance, including field certifications;
3. Obtaining information for petitions for modification;
4. Section 110 investigations;
5. Criminal investigations;
6. Education and training;
7. Investigation of miner discrimination complaints;
8. Accident investigations;
9. Preparation for health sampling activities during an ongoing inspection;
10. Demonstrations of research or prototype equipment; and
11. Investigations of hazard complaints.

The advance notice prohibition also applies to MSHA personnel

involved in inspection activities. As provided in the Mine Act, no advance notice shall be provided to any person concerning inspection activities undertaken to determine whether an imminent danger exists or to determine whether there is compliance with a mandatory health or safety standard or with any citation, order or decision issued pursuant to the Mine Act.

103(a) Denials of Entry

Any authorized representative of the Secretary shall have the right of entry to, upon or through any mine for the purpose of making any inspection or investigation under the provisions of the Act. In the event an inspector is refused entry to a mine, or is threatened or harassed while making an inspection, the inspector must be familiar with the terms, definitions and actions to be taken, as described below.

Denials of entry can be either: (a) direct denials involving confrontation; or (b) indirect denials involving interference, delay and/or harassment.

Upon being denied right of entry, the inspector should first attempt to determine the reason for the denial. Was it direct or indirect? Specific actions must be taken for the different types of denials:

1. Direct: Direct denials are those in which an operator or the operator's agent informs an inspector that an inspection of the mine will not be permitted.

The following situations are the most common reasons for direct denial: (1) the operator refuses to permit inspection based on the belief either that MSHA does not have the right or authority to inspect because the mine is not subject to the Act, or that a search warrant is required; (2) the operator chooses to be selective by denying entry to a specific inspector. The latter is to be considered a denial of entry to MSHA as a whole.

- a. Denials Not Involving MSHA's Statutory Authority
When the operator informs an inspector that an inspection of the mine will not be permitted, and no challenge is made concerning MSHA jurisdiction, the following actions should be taken if the inspector can safely do so:

- 1) The inspector should explain to the operator the mandatory inspection requirements in Section 103(a) of the Act and that a citation

will be issued and a penalty assessed for the denial of entry.

- 2) If, after explaining MSHA's position to the operator, the inspector is still denied entry to the mine, the inspector shall issue a 104(a) citation citing a violation of Section 103(a) and establishing a reasonable time for abatement. Suggested abatement time is 30 minutes unless circumstances necessitate other limits.
- 3) If, upon conclusion of the abatement period, the operator withdraws the denial and permits the inspection, the inspector should terminate the citation. However, if the operator still denies entry to the mine, the inspector should issue an order of withdrawal (define the area affected by the order as "no area affected") and notify the immediate MSHA supervisor so that an injunctive action may be considered.

b. Denials Involving MSHA's Statutory Authority

When the operator refuses to permit an inspection upon the belief that MSHA does not have the right or authority to inspect the mine, the inspector should explain to the operator the mandatory inspection requirements under Section 103(a) of the Act, and that there will be a citation and penalty assessed for the denial of entry. The inspector should first carefully note the operator's response as to why the operator believes that the mine is not subject to the Act, and then proceed as listed in a. above, "Denials Not Involving MSHA's Statutory Authority."

2. Indirect: Indirect denials are those in which an operator or his agent does not directly refuse right of entry, but takes roundabout action to prevent inspection of the mine by interference, delays, or harassment. There must be a clear indication of intent and proof of indirectly denying entry. For example, access to the mine is blocked by a locked gate or other means of blockage. However, a locked gate or other means of blockage, in and of itself, does not necessarily constitute a denial of entry. Mine management may have only closed the mine for the day and blocked the mine access road to prevent vandalism. However, when a locked

gate is accompanied by continued production and deliberate avoidance of communication with the inspector, the mine operator is denying MSHA right of entry to the mine property. Other examples are listed below. The list is not meant to be all-inclusive, and reference is made only to some of the situations that may constitute an indirect denial.

- a. Refusal to furnish available transportation on mine property when it is difficult or impossible to inspect on foot;
- b. Refusal to provide information regarding, or to accompany inspectors into, areas considered unsafe to travel without specific knowledge of the subject mine (e.g., knowledge of on-shift blasting schedules in metal mines);
- c. Withdrawing mine personnel when the inspector arrives;
- d. Removing power from the mine or the mine ventilation system when an inspector arrives (before or after production);
- e. Denying access to equipment or the immediate work area;
- f. Deliberately withholding vital information (ownership, responsible person, name of operator, disposition of product, ownership of equipment, etc.); and
- g. Denying entry for failure to have a search warrant. The Supreme Court, in the 1981 case of Donovan v. Dewey and Waukesha Lime and Stone Company, upheld the authority of MSHA to conduct warrant-less inspections.

When the mine has an I.D. number and the operator is known and present and does not verbally refuse right of entry, but takes indirect action to prevent inspection of the mine, the inspector should explain the particular actions which are considered to be a denial of entry, and then should proceed in accordance with the above instructions pertaining to Section 103(a) of the Act, Denials of Entry.

When a mine has an I.D. number and the operator is known but not

present, and access to the mine is indirectly denied, the inspector should return to the office, notify his/her immediate supervisor, issue a 104(a) citation for a violation of Section 103(a), and mail the citation to the operator by certified mail, return receipt requested. The inspector shall return to the mine site at the conclusion of the abatement period and terminate the citation if an inspection is allowed. If entry is still denied, the inspector shall issue a 104(b) order of withdrawal and notify the MSHA supervisor of the action taken so that injunctive action may be considered.

When a mine does not have an I.D. number and the operator is unknown, and access to the mine is indirectly denied, the inspector should return to the office, notify the supervisor, and assist in identifying the mine property and property owner in order to determine jurisdiction. When the property is identified and jurisdiction has been established, the inspector and the supervisor should meet with the operator or agent and request access.

The operator or the agent must be informed that he has been identified as the operator, owner, lessee, etc., and that MSHA has evidence that the operation is under the jurisdiction of the Act. The operator must be given a description of the circumstances which prevented access. The inspector should then explain the statutory right of entry and again attempt to gain entry to the mine property. Should a denial of entry again occur, the inspector and the supervisor should take appropriate action depending upon the nature of the denial, as previously discussed.

103(f) Rights of Participation in Inspection Activity

The intent of Congress was to provide an opportunity for both the representative(s) of the miners and the representative(s) of the operator to accompany inspectors during the physical inspection of a mine for the purpose of aiding enforcement and to participate in the pre-inspection and post-inspection conferences held at the mine. Accordingly, every reasonable effort is to be made to provide both parties with an opportunity to participate in the physical inspection of the mine and in all pre-inspection and post-inspection conferences. Additional information on the scope of miner's representatives' participation in inspections under Section 103(f) of the Act is published in an Interpretive Bulletin printed in the Federal Register on April 25, 1978 in Vol. 43, No. 80.

Miners' representatives have the right to accompany inspectors on any type of 103(a) inspection involving direct enforcement activities such as: regular inspections; spot inspections;

inspections conducted at the request of miners or their representatives; inspections of especially hazardous mines; and, inspections made in conjunction with accident investigations.

To carry out an orderly and thorough inspection, the inspector should not allow unusual conditions, such as unavailability of a miner representative or a representative of an operator, to delay the start of an inspection. An inspector may limit the number of participants in the inspection party and may require individuals with conflicting claims to reconcile their differences among themselves and to select a representative. The inspector shall determine the scope and number of participants which is reasonable during an inspection.

Representatives authorized by the miners who wish to exercise their rights under Section 103(f) of the Act are not required to meet the requirements of 30 CFR Part 40, Representative of Miners. If there is no authorized representative of miners, or if the inspector is unable to determine who is the representative, the inspector shall consult with a reasonable number of miners concerning matters of safety and health at the mine. These miners should be selected at random and should represent the various phases of mining operations at the mine. The inspector may accept anyone designated by the operator as the operator's agent. The review of citations and orders at the mine under 30 CFR 100.6(a) is covered under Section 103(f) of the Act. These reviews are an integral part of MSHA's mine inspections and constitute post-inspection conferences held at the mine. Section 103(f) of the Mine Act provides for the participation of a representative of the miners in safety and health inspections of the mine. This section also requires that the miners' representative participating in pre- and post-inspection conferences at the mine be compensated for the period of participation. However, this section limits the protection against loss of pay to one representative of miners who is "an employee of the operator."

When multiple operators are present at the mine and the work or activities of one operator may affect the safety and health of the miners of the other operator(s), representatives of miners of more than one operator have the right to accompany an MSHA inspector under Section 103(f). One representative of the miners of each operator is entitled to compensation for the time spent accompanying the MSHA inspector during the inspection. The inspector shall determine the scope and number of participants that is reasonable. This is consistent with the purpose of Section 103(f), which encourages miner participation in inspections, and which provides that a representative of miners

"...shall suffer no loss of pay during the period of his participation in the inspection"

103(g) Referrals of Hazardous Condition Complaints

This MSHA policy covers referrals of hazardous condition complaints to other federal and state agencies. It is intended to ensure the confidentiality of the identity of miners who seek our assistance.

Other state and federal agencies exercise concurrent jurisdiction with MSHA in matters of safety and health at mines. In addition, these agencies regulate them for other purposes. It is in the public interest that we be aware of these agencies and their responsibilities and that we share information with them to assist in achieving statutory goals. Unless a referral would interfere with ongoing MSHA activities, a miner's complaint which raises issues which are also within the province of another state or federal agency should be referred to that agency.

In situations where we find it appropriate to refer a miner's complaint to another agency for their potential action, we need to ensure, to the extent possible, that the receiving agency has a policy treating the identity of complainants with the same confidentiality we provide. Therefore, the referring MSHA office should consult with the receiving agency to ensure that agency's willingness to protect the name and identity of the complainant, unless disclosure is necessary in the course of litigation. If the confidentiality of the complainant's identity cannot be ensured by the receiving agency, the referring MSHA office may either refer the matter with the identity stricken (with a note of explanation) or it should advise the complainant that he/she may wish to bring the matter directly to the attention of the other agency.

103(g) Special Complaint Inspections

See Part 43 in Volume III of this Manual.

103(i) Required Hazardous Spot Inspections

Section 103(i) of the Act defines the conditions in mines under which spot inspections at various time intervals are to be conducted. Such a spot inspection shall not constitute a part of any other category of inspection, and the inspection is to be directed specifically to the problems, hazards, or conditions under which the mine was classified as a Section 103(i) mine. However, this does not prevent another category of inspection or investigation from being conducted during the same visit to the mine.

If a mine has experienced an ignition or explosion of methane or other explosive gases that resulted in a fatality or in a permanently disabling injury as defined under 30 C.F.R. § 50.20-6(b)(3)(i) or § 50.20-6(b)(3)(ii) at any time during the previous five years, the mine shall be placed in Section 103(i) status as directed by the Act regardless of total liberation, and a minimum of one Section 103(i) spot inspection of all or part of the mine during every five working days at irregular intervals shall be conducted. For example, a mine that is not in Section 103(i) status or a mine that has been on 10- or 15-day spot inspections at irregular intervals will be placed on 5-day spot inspections at irregular intervals if it experiences an ignition or explosion that results in a fatality or in a permanently disabling injury. A mine that is already on 5-day spot inspections at irregular intervals due to liberation will continue on the same 5-day spot inspection frequency.

The mine will remain in this status until five years have elapsed without recurrence of an ignition or explosion that results in a fatality or in a permanently disabling injury. Upon completion of five years without such recurrence, the Section 103(i) spot inspection frequency may revert back to that which is required by the Act for the liberation of methane or other explosive gases per 24 hours at the mine.

The District Manager will have discretion as to when a mine should be placed in Section 103(i) status for "some other especially hazardous condition" at the mine. Conditions in this context are generally related to natural conditions found in the mining environment. Such conditions may not require a specific Section 103(i) spot inspection if addressed through plan approvals, by operator actions to address the condition, or during regular inspection activities.

103(j) Mine Accident and Rescue, Recovery and Preservation of Evidence

In the event of a mine accident where rescue and recovery work is necessary, Section 103(j) of the Act grants the authorized representative broad authority to take whatever action, including the issuance of orders, that the representative deems appropriate to protect the life of any person. Where appropriate, the authorized representative(s) may supervise and direct the rescue and recovery activity.

Immediately upon arrival at the mine accident site, or later as mine rescue operations develop, the authorized representative may determine that direct control, either entirely or partially, is necessary, particularly in situations where a less hazardous

rescue procedure is desirable, instead of the planned or ongoing actions or procedures. Because of this broad authority, discretion and good judgment on the part of the authorized representative are imperative.

The term "accident" is defined in 30 CFR part 50.2(h). Under Sections 103(j) and 103(k) of the Act, the inspector can issue such orders as he/she deems appropriate to protect the life and/or insure the safety of any person. In addition, under Section 103(k), the operator is required to obtain the authorized representative's approval of any plan to recover any person in a mine or to recover the mine, or in order to return affected areas of the mine to normal.

When it is determined by the authorized representative that an order is appropriate to protect the life of any person or to preserve evidence, or that supervision and direction of rescue and recovery activities is appropriate, an authorized representative should issue a Section 103(j) order over the phone, including initial instructions, as soon as possible in the context of a mine emergency when he or she is not physically present at the mine. The order, including any instructions, should be reduced to writing and transmitted to the operator as soon as practicable. The order should be written so as to protect all persons engaged in the rescue and recovery operation, as well as any other persons onsite.

The order should also require the operator to prevent the destruction of evidence at the accident site. In the event that a mine accident is not a mine emergency (i.e. there are no ongoing rescue and recovery efforts), MSHA may issue a Section 103(j) order prohibiting activity at the accident site so as to prevent the destruction of evidence which would assist in investigating the cause or causes of the accident. Although 30 CFR 50.12 requires the operator to take appropriate measures to not alter an accident site or an accident related area (with certain exceptions applying), the use of a Section 103(j) order to preserve evidence may also be warranted, as it allows MSHA to restrict access to the accident site, thereby helping to ensure that the accident scene is not altered.

Upon MSHA's arrival on-site and following assessment of conditions, MSHA may modify the Section 103(j) order, including all instructions, to reflect that MSHA is now proceeding under the authority of Section 103(k) of the Mine Act. MSHA should inform parties on-site that any activities that are rescue or recovery related will be permitted through subsequent modifications of the Section 103(k) order.

Section 104 Citations and Orders**I. 104-1 Flagrant Citations and Orders**

The Mine Improvement and New Emergency Response Act of 2006 (MINER Act) provides for the assessment of a significant civil penalty for a flagrant violation. The MINER Act defines a flagrant violation as "a reckless or repeated failure to make reasonable efforts to eliminate a known violation of a mandatory health or safety standard that substantially and proximately caused, or reasonably could have been expected to cause, death or serious bodily injury."

Only violations of mandatory health or safety standards may be classified as flagrant. While most sections of the Mine Act are not mandatory health or safety standards, violations of interim mandatory health and safety standards found in Titles 2 and 3 of the Mine Act, which are not superseded by mandatory health and safety standards, may be classified as flagrant.

Any violation that meets either the reckless failure or the repeated failure screening criteria below must be evaluated for possible classification as a flagrant violation.

Reckless failure criteria:

1. Citation/order is evaluated as significant and substantial (S&S)
2. Expected injury/illness is evaluated as at least permanently disabling
3. Citation/order is evaluated as unwarrantable failure
4. Negligence is evaluated as reckless disregard

Repeated failure criteria:

1. Citation/order is evaluated as significant and substantial (S&S)
2. Expected injury/illness is evaluated as at least permanently disabling
3. Citation/order is evaluated as unwarrantable failure
4. Two prior "unwarrantable failure," S&S violations of the same health or safety standard were cited within the past 15 months. This includes violations cited previously on the same day or during the same inspection. Prior violations must be of the same subsection of the standard cited (e.g.

56/57.14201 (a). However, the prior violations need not cite the same distinct hazard. For example, an order asserting a violation of 75.220(a)(1) because entries were driven at widths exceeding the roof control plan minimum distance may be considered for flagrant classification with two prior 75.220(a)(1) violations cited because roof bolts were not inserted at distances specified in the roof control plan.

District Managers may recommend violations that do not meet the reckless or repeated failure criteria above, but which meet the broader statutory definition of a flagrant violation, for classification as flagrant.

104(a) Citations and Orders

Section 104(a) is a major tool for obtaining compliance with the Act, and the mandatory health or safety standards, rules, orders, or regulations. Violations shall be cited by the inspector, giving the operator time for abatement of the violation(s). The citations shall be issued under Section 104(a) or, as appropriate, under Section 104(d) of the Act. After the inspection, the inspector shall meet with the operator or his agent to discuss the violation.

Separate citations shall be issued for: violations of separate standards on one piece of equipment; violations of separate standards in a distinct area of a mine; identical violations on separate pieces of equipment; and, identical violations in distinct areas of a mine. For example, if two haul trucks each have the same violation, there will be two separate violations cited. Likewise, if two distinct areas of a mine have loose rock in the roof or back, there will be two separate violations cited.

However, where there are multiple violations of the same standard which are observed in the course of an inspection and which are all related to the same piece of equipment or to the same area of the mine, such multiple violations should be treated as one violation, and one citation should be issued. For example, "Loose roof or ground was observed in four places along the haulage-way between 3 switch and No. 4 x-cut" or, "At the crusher power control panel, insulated bushings were not provided where insulated wires entered five of the metal switch boxes."

When an inspector issues a Section 104(a) citation, the time for abatement should be determined, whenever practical, after a discussion with the mine operator or the operator's agent. The degree of danger to miners is the first consideration in determining a reasonable time for abatement. Upon expiration of the time fixed for abatement, the inspector should review the circumstances, and if circumstances so justify, extend the abatement period. If no extension of time is justified, and the violation is unabated, the inspector shall issue a withdrawal order under Section 104(b). Upon abatement of the violation, the 104(b) withdrawal order will be terminated.

The filing of a petition for modification by an operator shall be a consideration in determining the reasonableness of the time fixed for abatement of any violation which relates to the safety standard sought to be modified. However, when a petition for modification is found to be the appropriate basis for an extension of an abatement period, the inspector must expressly state in the extension the condition(s) under which the abatement period has

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been extended.

If an operator does not comply with an order, the inspector shall issue a Section 104(a) citation citing the appropriate section of the Act violated (e.g., 104(b), 107(a), 104(d) (1), 104(d) (2), 104(e) (1), etc.).

Actions to be taken in the case of a denial of entry (Section 103(a) of the Act) where a citation and order have been issued because of the denial are discussed in this Manual under Section 103(a).

104(d) Unwarrantable Citations and Orders

In 1988, the Federal Mine Safety and Health Review Commission adopted new language to describe operator conduct which constitutes an unwarrantable failure to comply for purposes of Section 104(d) of the Mine Act. The Commission held that a violation is caused by an unwarrantable failure if the operator has engaged in "aggravated conduct constituting more than ordinary negligence."

The Commission pointed out that its statement of the standard of conduct for unwarrantable failure "is fully consistent with the manner in which the Secretary enforces the Mine Act."

Accordingly, violations caused by a high degree of operator negligence or reckless disregard should continue to be evaluated by inspectors for findings of unwarrantable failure to comply. However, evidence of moderate negligence will generally not support unwarrantable failure findings.

Factors to look for when making an unwarrantable-failure-to-comply determination include the amount of time the violation has been left uncorrected, whether the hazard created by the violation is particularly serious thus warranting increased attention from the operator to prevent or correct it, whether the violation is repetitious of a previous violation, whether the violation was a result of deliberate activity by the operator, or whether the operator knew or had reason to know that its action(s) violated a mandatory standard. Citations and orders should clearly document the facts relied upon by the inspector in making the determination. Any one of the circumstances above may constitute sufficient grounds for an unwarrantable failure citation or order.

If an operator at a certain mine is under the 104(d) unwarrantable sequence, and if that operator sells that mine, the new mine owner does not normally inherit the previous owner's unwarrantable sequence. This is true for all cases, except where there has been a change in name only or where the ownership change is merely a

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paper change. If the new owner/operator is essentially the same as the previous owner/operator, then the unwarrantable sequence is to remain in effect.

104(d)(1)/(e)(1) Guidelines for Determining "Significant and Substantial" Violations

A violation of a mandatory health or safety standard is significant and substantial (AS&S@) if the violation "significantly and substantially contributes to the cause and effect of a coal or other mine safety or health hazard...."

The Federal Mine Safety and Health Review Commission (Commission) has held that to establish that a violation of a mandatory safety or health standard is AS&S@ the Secretary of Labor must prove: (1) the underlying violation of a mandatory safety or health standard; (2) a discrete safety or health hazard -- that is, a measure of danger to safety or health -- contributed to by the violation; (3) a reasonable likelihood that the hazard contributed to will result in an injury or illness; and (4) a reasonable likelihood that the injury or illness in question will be of a reasonably serious nature. All four of these findings must be made before a violation can be designated as AS&S.@

Finding 1: An Underlying Violation of a Standard

The first finding required by the Commission=s AS&S@ test, i.e., the underlying violation of a mandatory safety or health standard, is satisfied whenever there is a violation of a safety or health standard. Only violations of standards (requirements promulgated under 30 U.S.C. 811), as opposed to violations of regulations (requirements promulgated under 30 U.S.C. 957), can be designated as AS&S.@ Violations of 30 CFR Parts 46, 47, 48, 49, 56, 57, 58, 62, 70, 71, 72, 75, 77, and 90 are violations of standards that can be designated as AS&S.@

Finding 2: A Discrete Safety or Health Hazard

The second finding required by the AS&S@ test, i.e., a discrete safety or health hazard, that is, a measure of danger to safety or health contributed to by the violation, is generally satisfied whenever there is a violation of a standard.

Finding 3: A Reasonable Likelihood of Injury or Illness

The third finding required by the "S&S" test, i.e., a reasonable likelihood that the hazard contributed to will result in an injury or illness, is more difficult to establish. Factors such as the fatality and injury or illness frequency associated with the violation in the general industry are relevant but must be tied to an evaluation of the particular circumstances surrounding the violation at the mine in question.

If no miners were exposed to the hazard at the time of the violation, the violation still might be "S&S" if a miner was exposed to the hazard before the inspector observed the violation or if it was reasonably likely that a miner would be exposed to the hazard if normal mining operations were allowed to continue.

For violations involving the hazards of ignition or explosion, the Commission has developed an analytical approach for determining whether there is a "reasonable likelihood" of injury or illness. There must be a "confluence of factors" to create a reasonable likelihood of injury or illness. The Commission has upheld a judge's finding that a permissibility violation was not "S&S" because there was no reasonable likelihood that the low levels of methane detected would ever reach the explosive range.

In 1995, a court of appeals held that the presence of safety measures to deal with a fire, including a fire suppression system, did not mean that fires do not pose a serious safety risk to miners and rejected an argument that the presence of such redundant safety features negated an "S&S" finding. Since 1995, the Commission has adopted the reasoning in that case and has rejected an argument that an accumulations violation was not "S&S" because there was fire-fighting and fire detection equipment in the cited area.

Thus, it is doubtful that redundant safeguards should be considered in the "S&S" analysis -- particularly when analyzing fire and explosion hazards.

Finding 4: A Reasonable Likelihood of Serious Injury or Illness

The fourth finding required by the "S&S" test, i.e., a reasonable likelihood that the injury or illness in question will be of a reasonably serious nature, requires an independent determination that the injury or illness in question would be reasonably serious in the inspectors' judgement. A determination that the injury or illness is reasonably likely to result in lost workdays or

restricted duty and/or be permanently disabling or fatal is consistent with an "S&S" determination.

Except for violations of 30 CFR 56/57.5005 involving listed nuisance particulates and silver metal (other than soluble compounds of silver) between 0.01 mg/m³ and 0.1 mg/m³, violations of health standards establishing a threshold limit value or exposure limit are presumptively "S&S". However, when miners are not actually exposed to excessive concentrations because they are utilizing personal protective equipment in accordance with applicable MSHA standards, the violation usually should be considered Anon-S&S unless there is a reasonable likelihood that other miners were exposed, or would have been exposed in the future if the citation had not been issued and those miners were not, or would not have been, wearing personal protective equipment in accordance with applicable MSHA standards.

Specific Guidelines. A citation which involves a violation of the Act, and an order under the Act or a regulation, and not a mandatory health or safety Standard, cannot be designated as "S&S".

The plain language of Section 104(d)(1) of the Act indicates that only a violation of a "mandatory health or safety standard" can be designated as "S&S". Because Section 3(1) of the Act defines a "mandatory health or safety standard" as "the interim mandatory health or safety standards established by titles II or III of the Act, and the standards promulgated pursuant to title I of [the] Act," there is no statutory authority for violations of provisions of the ACT other than interim standards or violations of regulations to be designated as "S&S". See Cyprus Cumberland Resources v. FMSHRC, 195 F. 3d 43, 45-46 (D.C. Cir. 1999) (holding that an "S&S" finding is permissible only in a citation charging violation of a mandatory safety or health standard, and not in a citation charging a violation of a regulation). See also Lexicon, Inc. d/b/a/ Schueck Steel Co., slip op, FMSHRC Docket Nos. CENT 2001-370-M, 2002-49-M, 2001-13-M (ALJ) affirming a violation of Section 103(k) but finding that because this was "a violation of the Act" and not of a mandatory health or safety standard, it could not be designated "S&S").

MSHA Form 7000-3

If an inspector determines that a violation is "S&S," that determination should be given consistent with information recorded on the Inspector's Evaluation Section of MSHA Form 7000-3, Mine citation/Order form.

Finding that an injury or illness has occurred is consistent with an "S&S" finding as long as the injury or illness is the result of the violative condition. If it is not, the inspector must make an independent judgement as to the reasonable likelihood of an injury or illness resulting from the violative condition.

Finding that an injury illness is "highly likely" to occur or "reasonably likely" to occur is consistent with designating the violation as "S&S."

Finding that the injury or illness can be reasonably be expected to result in "lost workdays or restricted duty," and/or be "permanently disabling" or "fatal" is consistent with designating the violation as "S&S."

If an injury or illness has occurred but it is less serious than that which could reasonably be expected to occur as a result of the violation, the inspector may still determine that the violation is "S&S." the inspector must make an independent judgement as to whether the violation was reasonably likely to result in a serious injury or illness, even though it did not in this particular case.

104(d) (2) Unwarrantable Failure Orders

Section 104(d) (2) of the Act refers to unwarrantable failure withdrawal orders and requires that an inspection with no similar violations (clean inspection) be conducted before the 104(d) (2) order sequence is terminated. This "clean inspection" may be accomplished within the framework of a regular inspection of the mine in its entirety and/or within the framework of any other inspection conducted for enforcement purposes where there are no 104(d) (2) violations. The Federal Mine Safety and Health Review Commission has stated that when 104(d) (2) orders are issued, the burden of establishing that an intervening "clean inspection" has not occurred rests with MSHA.

104(f) Respirable Coal Dust Citations

All citations for exceeding the applicable limit on the concentration of respirable dust are issued under Section 104(a), Section 104(d), or Section 104(e) of the Act, as applicable.

104(g) (1) Orders of Withdrawal - Untrained Miners

Section 104(g) (1) of the Mine Act provides for the withdrawal of untrained miners from a mine until they receive the minimum training required by Section 115 of the Mine Act and 30 CFR Part 48. The purpose of a Section 104(g) (1) order is to eliminate the hazard that untrained or inadequately trained miners pose to themselves and others.

Sections 48.5, 48.6, 48.7, 48.8, and 48.11 are the only sections of Subpart A that may be cited under 104(g) for untrained miner violations occurring at underground mines. Sections 48.25, 48.26, 48.27, 48.28, and 48.31 are the only sections of Subpart B that may be cited under 104(g) for untrained miner violations occurring at surface mines and surface areas of underground mines.

Citations will not be issued in lieu of Section 104(g)(1) orders except if the miner cannot be trained because, for example, the miner is no longer employed at the mine, or the miner was fatally injured.

When miners have been trained, but there are violations, for example, involving training plans, cooperative training programs, records of training, compensation for training, or untimely training, an order of withdrawal is inappropriate.

The number and type of citations or orders to issue are as follows:

1. For Violations Involving More Than One Miner
When more than one untrained miner is to be withdrawn from a mine, a single 104(g)(1) order will be issued, provided that the training violation is the same for all of the miners. Where multiple miners are involved and different violations of the training requirements have occurred, separate orders of withdrawal will be issued. For example, if eight different underground miners did not receive requisite safety training, (three did not receive new miner training, two were not task trained, and three missed annual refresher training), three separate Section 104(g)(1) orders would be issued, one citing 30 CFR 48.5, one citing 30 CFR 48.7, and one citing 30 CFR 48.8. If all eight miners missed annual refresher training, a single 104(g)(1) order would be issued.
2. For Violations Involving Only One Miner
If only one miner is involved but two or more sections of Part 48 have been violated, the violations would be written under one order. For example: one underground miner was not task trained and also missed annual refresher training. One Section 104(g)(1) order would be issued citing 30 CFR 48.7 and 30 CFR 48.8. Two violation evaluations must be made; one to evaluate the task training violation and one to evaluate the annual refresher violation.

3. For Violations Involving Employees of Independent Contractors

An order will be issued under Section 104(g)(1) of the Act to the direct employer of any miner who has not received the required training. Care should be taken when issuing a Section 104(g)(1) order to an independent contractor when several contractors or subcontractors are present at the mine. If uncertainty exists as to whom the direct employer is, the order would be issued to the operator with the greatest physical presence at the mine. Any discrepancies that may arise after the miner has been withdrawn may be resolved through subsequent modification action.

Independent contractors may comply with the Part 48 requirements by either making arrangements to have their employees trained under an existing approved training plan and program, or by filing and adopting their own approved training plan.

Citations will not be issued in conjunction with Section 104(g)(1) orders for the same violation except in instances of overlapping compliance responsibility. This overlapping compliance responsibility means that there may be circumstances in which it is appropriate to issue citations or orders to both the independent contractor and the production-operator. For instance, if an untrained miner was the employee of an independent contractor and the production-operator had agreed to provide the training in accordance with the mine's approved training plan but failed to do so, a Section 104(g)(1) order would be issued to the independent contractor to withdraw the untrained miner and a citation under Section 104(a) or (d)(1) or an order under Section 104(d)(1) or (2), as appropriate, will be issued to the production-operator.

104(h) and 107(d) Vacating Citations and Orders

Care must be taken when issuing citations and orders so that subsequent corrective action by MSHA is seldom necessary.

However, citations or orders are occasionally issued in error and must be modified or vacated by either inspectors or district officials. Sections 104(h) and 107(d) of the Act state the legal authority of inspectors or their supervisors, acting in their capacity as authorized representatives of the Secretary, to modify or vacate citations and orders.

Section 104(h) authorizes modifying or vacating citations and orders issued under Sections 104(a), 104(b), 104(d)(1), 104(d)(2), 104(e)(1), 104(e)(2), 104(f), and 104(g) for violations of the Act, mandatory health or safety standards, rules, orders, and regulations. Section 104(h) provides:

"Any citation or order issued under this section [104] shall remain in effect until modified, terminated or vacated by the Secretary or his authorized representative, or modified, terminated or vacated by the Commission or the courts pursuant to Section 105 or 106."

Section 107(d) authorizes inspectors or their supervisors, acting in their capacity as authorized representatives of the Secretary, to modify, vacate or terminate imminent danger orders issued under Section 107(a). Section 107(d) provides:

". . . Any order issued pursuant to subsection (a) may be modified or terminated by an authorized representative of the Secretary. Any order issued under subsection (a) or (b) shall remain in effect until vacated, modified or terminated by the Secretary, or modified or vacated by the Commission pursuant to subsection (e), or by the courts pursuant to Section 106(a)."

Section 107(b) orders, however, are not to be issued, modified, terminated or vacated by inspectors or district officials without strict coordination with the appropriate Administrator for Coal or Metal and Nonmetal. Section 107(b) provides unique enforcement procedures and requirements to contend with the unusual circumstances of dangerous conditions that cannot be effectively abated through the use of existing technology. Accordingly, inspectors and district officials shall not take any action under Section 107(b) before consulting the Office of the Administrator.

When vacating a citation or order, Form 7000-3a must be completed, stating the reason for vacating the prior enforcement action. If possible, the authorized representative who issued the citation or order should be the person to issue the subsequent corrective action. Both the inspector and the supervisor must file, with the inspection report, notes which describe in detail the reasons and circumstances involved. Copies of the citation or order, along with the subsequent corrective action and notes, shall be sent to the appropriate district manager.

To ensure proper coordination and documentation, the vacating of all imminent danger orders shall be approved in writing by the appropriate district manager, and a copy of the approval shall be attached to the inspection report.

Section 105 Procedures for Enforcement**105(b) Additional Penalties for Failure to Abate Violations
Within Permitted Time**

Section 110(b) of the Federal Mine Safety and Health Act of 1977 states:

"Any operator who fails to correct a violation for which a citation has been issued under Section 104(a) within the period permitted for its correction may be assessed a civil penalty of not more than \$1,000 for each day during which such failure or violation continues."

Section 105(b) (1) (A) and (B) of the Mine Act provides:

"If the Secretary has reason to believe that an operator has failed to correct a violation for which a citation has been issued within the period permitted for its correction, the Secretary shall notify the operator by certified mail of such failure and of the penalty proposed to be assessed under Section 110(b) by reason of such failure ..."

"In determining whether to propose a penalty to be assessed under Section 110(b), the Secretary shall consider the operator's history of previous violations, the appropriateness of such penalty to the size of the business of the operator charged, whether the operator was negligent, the effect on the operator's ability to continue in business, the gravity of the violation, and the demonstrated good faith of the operator charged in attempting to achieve rapid compliance after notification of a violation."

As set forth above, MSHA is authorized to propose a civil penalty of not more than \$1,000 for each day that a failure to abate a cited violation continues after the time allotted to correct it has expired. The actual amount proposed will be determined by MSHA's Office of Assessments, Accountability, Special Enforcement and Investigations, based upon a consideration pursuant to the criteria in Section 105(b) (1) (B) of the Act which are the same criteria used to calculate Section 110(a) penalties.

It is MSHA's policy to implement Section 105(b)(1) of the Act against operators that fail to correct violations (cited pursuant to Section 104 of the Act) within the reasonable time permitted for such correction. Therefore, where an operator has failed to correct a cited violation within the time permitted for abatement, MSHA district managers may invoke the additional penalty procedure available under this Section, after consultation with the appropriate Administrator. However, it should be noted that the vast majority of cited violations are corrected within the time allowed for abatement. In those circumstances, Section 105(b) procedures cannot be utilized, and an additional penalty under Section 110(b) will not be assessed. The following are examples of some of the situations where it may be appropriate to propose additional penalties pursuant to Section 105(b)(1):

1. Where the imposition of a withdrawal order is ineffective to correct existing violations. For example, where an operator that has abandoned a mine has been issued a citation for failure to seal (or properly seal) it, and the operator has permitted the abatement time to expire without making any effort to properly seal the mine.
2. Operating in the face of an order. Where an operator refuses to comply with a valid Section 104(b) order (i.e., an order issued for failure to abate a Section 104(a) citation within the specific time allowed for abatement), a penalty may be proposed. Also, if the operator fails to comply with an order issued pursuant to Section 103(k), 104(d), 104(e), or 107(a), a penalty under Section 105(b)(1) may be proposed.
3. Unabated violation of Title I of the Act where time permitted for correction should not be extended. The district manager shall evaluate the situation and make a determination as to whether an action under Section 105(b)(1) should be initiated for the purpose of assessing a penalty under Section 110(b).

Section 105(b)(1)(B) of the Act specifies that in determining whether to propose the assessment of a penalty under Section 110(b), the Secretary shall consider six criteria. These are the same criteria used in the assessment process under Section 110(a).

Therefore, the district manager must consider these criteria before recommending this action, and he must submit his findings to the Administrator.

Mine operators will be given a "notice of intention" that MSHA is recommending that the Secretary propose additional penalties in accordance with Section 105(b)(1). This notice will be issued only by a district manager and not by individual mine inspectors. The Administrator's Office shall be informed prior to the issuance of this notice to the mine operator. The proposed penalty will begin to accrue from the day following receipt of this notice. When MSHA receives notification of abatement from the operator, the inspector should endeavor to determine the date of abatement as reported by the operator. If there is no evidence to dispute the operator's reported abatement date, that date should be the abatement date.

The date that the operator was notified by certified mail of its failure to correct the violation, the established date that the violation should have been corrected, the date the operator notifies MSHA of abatement, and the dates of any follow-up inspections, should be recorded in the district office.

If the violation is found to have continued for a period of more than 15 calendar days beyond the date that a letter of notice is sent, the Administrator's Office should be notified so that consideration may be given to the appropriateness of further enforcement proceedings. However, nothing in these instructions precludes the district manager from implementing these procedures while concurrently requesting other enforcement action, such as injunctive relief. Moreover, in appropriate cases, such concurrent action may be necessary to fully protect the health and safety of the miners.

105(c) Investigation and Processing of Discrimination Complaints

Under the provisions of Section 105(c)(1) of the Federal Mine Safety and Health Act (Mine Act), miners, representatives of miners and applicants for employment are protected from retaliation for engaging in safety and/or health related activities, such as identifying hazards, asking for MSHA inspections, or refusing to engage in an unsafe act. To encourage miners to exercise their rights under the Mine Act and maximize their involvement in monitoring safety and health conditions, MSHA vigorously investigates discrimination complaints. Particular attention is given to those operators who have repeatedly discriminated against miners. MSHA will seek more substantial civil penalties for discrimination violations as a deterrent to future instances of illegal discrimination.

Section 105(c)(2) provides that discrimination complaints are to be filed with the Secretary of Labor within 60 days of the alleged act of discrimination. The investigation, required to be conducted by the Secretary, is to commence within 15 days of receipt of a complaint. Discrimination complaints requesting temporary reinstatement will be investigated immediately.

Section 105(c)(3) provides that within 90 days of receipt of a complaint, the Secretary is to make a written determination as to whether a violation has occurred.

To meet these timeframes, MSHA policy is to complete the field investigation of a complaint of discrimination and submit a final report to TCIO within 45 days of the date of receipt of the complaint.

In order to comply with these timeframes and expedite the processing of discrimination complaints, all MSHA enforcement personnel shall be familiar with the provisions of Section 105(c) so they may receive complaints and handle them properly. In most circumstances, a designated person (complaints processor) will be available in each district and field office to receive complaints and respond to questions concerning Section 105(c). A signed document alleging discrimination must be received before an investigation of a discrimination complaint may begin. (For further guidance, see Special Investigations Procedures Handbook, Chapter 2, Section B.1.)

105(d) Handling of Contests of Citations and Orders

Section 105(d) of the Act provides that a mine operator is to notify the Secretary if he or she intends to contest a citation, order, or proposed assessment, or to contest the reasonableness of the length of abatement time. The Secretary, in turn, is then required to immediately advise the Commission of such notification.

Although not expressly provided by the Act, mine operators who wish to contest citations or orders within 30 days of issuance of such citations or orders should mail their notification of intent to contest directly to the Mine Safety and Health Review Commission, 601 New Jersey Avenue, N.W., Ste. 9500, Washington, D.C. 20001, 202-434-9900, email address is: info@fmshrc.gov (see 29 CFR 2700.18(b)), and mail a copy to the Office of the Solicitor, Division of Mine Safety and Health (MSH), 22nd floor, 1100 Wilson Boulevard, Arlington, Virginia 22209-3939. In addition, a copy should be given to all known representatives of miners at the affected mine.

When a district office receives an immediate contest of citations/orders (within 30 days of issuance) which has not been mailed directly to the Commission, the district manager should immediately contact the MSH Counsel for Trial Litigation in the Office of the Solicitor, telephone (202) 693-9333. A copy of the contest should be retained in the district office for future reference, and the original mailed to the MSH Counsel via express mail or special delivery. The MSH Counsel will advise the Commission of the mine operator's intention to contest, as required by Section 105(d) of the Act. In addition, the operator should be notified that future immediate contests of citations/orders are more properly filed with the Mine Safety and Health Review Commission.

The procedural rules of the Mine Safety and Health Review Commission concerning applications for review of citations and orders are published in 29 CFR 2700. Mine operators, miners, or miners' representatives requesting information on general rules applicable to proceedings before the Commission and its Administrative Law Judges should be referred to the Code of Federal Regulations or to the Office of the Solicitor.

Contests of proposed assessments are accomplished by following the procedures set forth in 30 CFR 100.7.

Section 107 Imminent Danger**107(a) Imminent Danger**

"Imminent danger" is defined in the Act as "the existence of any condition or practice in a mine which could reasonably be expected to cause death or serious physical harm before such condition or practice can be abated." The two important elements of an imminent danger are:

1. the existence of a condition or practice which could reasonably be expected to cause death or serious physical harm; and
2. the imminence of the danger is such that it may cause death or physical harm before it can be abated.

An imminent danger withdrawal order usually involves a violation of one or more mandatory standards, but such an order could also arise from natural or other causes without violation of a standard. The imminence of danger is a judgement to be made in light of all relevant circumstances. If the violative condition or practice is not an imminent danger, the proper action by the inspector is to issue a citation or order for the violation of the Act, mandatory health or safety standard, rule, order, or regulation(s), and to fix a time for abatement (if applicable).

In the absence of an imminent danger, an inspector cannot use Section 107(a) orders for "control purposes." The Act and applicable legal decisions spell out the need for an imminent danger to justify the issuance of a Section 107(a) order.

107(d) and (e) Vacating Imminent Danger Orders

See Section 104 of this Manual, Vacating Citations and Orders.

Section 108 Injunctions**108 Injunctive Actions**

Under the provisions of Section 108 of the Mine Act, the Secretary of Labor is authorized to initiate civil action (in United States District Court) for relief, including permanent and temporary injunctions, restraining orders, or any other appropriate order, for the following violations:

1. violating or refusing to comply with an order or decision issued under the Mine Act;
2. interfering with, hindering, or delaying the carrying out of provisions of the Mine Act;
3. denying entry onto a mine property;
4. refusing permission to conduct an inspection of a mine, or investigation of an accident or occupational disease occurring on a mine property;
5. refusing to provide information or reports requested in carrying out the provisions of the Mine Act; or
6. refusing to permit access to the mine property for the purpose of copying records determined to be necessary in carrying out the provisions of the Mine Act.

When any of these violations occur, appropriate enforcement action as prescribed in the General Inspection Procedures Handbook and in the Special Investigations Procedures Handbook shall be followed to cause compliance. If compliance does not occur after enforcement action, the district manager or their designee will notify TCIO immediately. This notification will contain all of the available facts pertaining to the violation.

TCIO will coordinate and facilitate as necessary the notification of the appropriate Regional Solicitor's Office to seek advice in proceeding with injunctive action. Each violation will be evaluated on the sufficiency of the available facts and the nature of the offense.

If injunctive action is sought, instructions will be provided by the Regional Solicitor's Office and the U.S. Attorney on securing injunctive action. Once injunctive relief has been granted by the Federal District Court, provisions of the court order will be followed as stated together with instructions from the U.S. Attorney and the Regional Solicitor.

Section 110 Penalties**110(c) Enforcement Problems or Hazardous Conditions
Identified During Special Investigations**

The Agency's special investigations workforce consists primarily of persons who are Authorized Representatives (AR) of the Secretary of Labor. If a hazardous condition, such as an imminent danger, is observed by a special investigator while on mine property, the special investigator is to initiate appropriate enforcement action. If the investigator is not an AR, the supervisory special investigator and the appropriate field office supervisor are to be contacted immediately and informed of the condition.

Information indicating an ongoing hazardous condition or enforcement problem may also come to light while interviewing witnesses. In such instance, the special investigator is to promptly notify the supervisory special investigator and the appropriate field office supervisor. As an integral part of the enforcement program within each district, the supervisory special investigator is to ensure that the district manager is promptly notified. A determination can then be made regarding the need for further enforcement action.

Likewise, if a review of a special investigation case file indicates that an ongoing enforcement problem may exist at a mine, the supervisory special investigator is to promptly bring the matter to the attention of the district manager.

Special investigation case files are also reviewed at headquarters by the Technical Compliance and Investigation Office (TCIO). If an ongoing enforcement problem is identified during the review of a case file, the matter should promptly be brought to the attention of the Assistant Director for TCIO. The Assistant Director will determine whether to refer the matter to the district manager, and to the Safety Division or Health Division, if appropriate.

In all of the above situations, required notification and response will be documented by a memorandum to the appropriate Agency official, with a copy to the investigation case file.

On rare occasions, it is possible for knowledge of ongoing hazardous conditions to be first encountered after the case is referred to the Department of Justice U.S. Attorney's Office.

When this happens, the time, manner, and extent of disclosure must be approved by the U.S. Attorney's Office assigned to the case.

110(c) and (d) Investigations of Possible Knowing/Willful Violations

The provisions of Sections 110(c) and 110(d) of the Mine Act are among the most stringent levels of enforcement action available to MSHA to ensure compliance with the Mine Act and related standards. Under these provisions, MSHA is authorized to propose the assessment of a civil penalty against a director, officer, or agent of a corporate operator who knowingly orders, authorizes, or carries out a violation of a mandatory safety or health standard, or to pursue criminal proceedings against an operator or a corporate director, officer, or agent who willfully violates a mandatory safety or health standard. MSHA conducts investigations under Sections 110(c) and 110(d) to establish the facts and circumstances surrounding certain violations of the Mine Act or of mandatory safety or health standards in order to determine whether the violations were knowing or willful in nature. The investigation of a possible Section 110 violation of the Mine Act is initiated at the request of the District Manager, usually as a result of one of the following circumstances:

- a. a mine accident;
- b. a complaint received, such as an allegation of a possible violation of Section 110(f) (false reporting), or 110(h) (equipment misrepresentation); or
- c. reviewing citations/orders for possible knowing or willful violations.

The following types of citations and orders will be reviewed for possible further action:

- a. each 104(a) citation issued which contributed to the issuance of a 107(a) imminent danger order of withdrawal;

- b. each 104(d) citation or order which is identified as being significant and substantial (S&S) and the Negligence has been marked "high" or "Reckless Disregard"; and
- c. each citation issued for working in violation of an Order of Withdrawal.

Only a violation of a mandatory health or safety standard or order issued under the Mine Act shall be reviewed for possible further action. This includes violations of 30 CFR, Parts 46, 47, 48, 49, 56, 57, 58, 62, 70, 71, 72, 75, 77, and 90.

The district review of a possible knowing/willful violation will be expedited and conducted within 30 calendar days from the date of issuance of the citation or order. The review is the responsibility of the issuing inspector and his or her supervisor, the assistant district manager, and the supervisory special investigator. A determination will be made by the district manager, with the assistance of the supervisory special investigator, whether to initiate a special investigation or take no further action. Documentation will be maintained to support whatever action is taken.

Criminal investigations may also result from reports of alleged violations of Section 110(f) (false reporting) or Section 110(h) (equipment misrepresentation). This would include but not be limited to violations of 30 CFR, Parts 5 through 50.

The district manager is authorized to close Section 110 cases where the district manager determines, based on a thorough investigation, that a knowing or willful violation has not occurred and there is no merit in pursuing further action. The district manager will also be responsible for sending the notification letter that officially closes the investigation directly to the operator and/or contractor identifying the citation(s) and order(s) involved, and indicate that MSHA has decided not to pursue further action. A copy of the notification letter shall be sent to TCIO along with a memorandum briefly stating the reasons for the district's determination.

The goal is to complete comprehensive investigations as expeditiously as possible. It is anticipated that the majority of investigative reports will be submitted to TCIO within 150 days from the date the subject citation or order was issued. In instances where the matter under investigation was identified without the issuance of a citation or order, i.e., falsification of records, the 150-day timeframe for case submission shall begin from the date that MSHA had actual notice of the subject incident. The 150-day timeframe applies to all Section 110 investigations. TCIO will monitor all special investigation cases to ensure compliance with the 150-day timeframe. When circumstances prevent the completion of the investigation within the 150-day timeframe, the maximum time for submission of the investigative report to TCIO is 365 days from the date of issuance of the citation or order or, if a citation is not issued, 365 days from the date when MSHA had actual notice of the subject incident. The 365-day timeframe allows for the timely assessment of 110(c) civil penalties and timely referral for criminal prosecution.

The district manager may, before submitting the investigative report to TCIO, offer the director, officer, or agent named in the investigative file an opportunity for a Part 100 safety and health conference (PPM Volume III, Part 100, "100.6 Safety and Health Conferences," and SI Handbook Chapter 7, Section C.2.b.).

Cases in which TCIO recommends either a civil penalty or criminal pursuit are referred to SOL for legal review and analysis must be done within 190 days to SOL-MSH from the date of the underlying violation.

SOL will independently review each case submitted for legal sufficiency and prepare a response to TCIO. This review and any consultations, discussions, or requests for additional information will be targeted for completion within a 30-day timeframe from the date SOL receives the case from TCIO.

On a case-by-case basis, review by the Department of Justice will also be sought in sensitive matters where there is agreement not to refer a matter for possible criminal prosecution.

When there is agreement that a 110(c) civil penalty will be pursued and the individual corporate agent has not yet been offered the opportunity for a safety and health conference pursuant to Part 100, TCIO will send a memorandum to the appropriate district manager requesting that a conference be offered to the named agent (PPM Volume III, Part 100, "100.6 Safety and Health Conferences" and SI Handbook Chapter 7, Section C.2.b.). After completion of the conference, or receipt of documentation regarding the agent's refusal or non-response regarding same, the district manager shall send a memorandum to TCIO outlining the conference results and recommendations.

110(c) Referral of 110(c) Civil Penalty Cases to the Office of Special Assessments

Investigative timeframes have been established to help ensure the timely assessment of civil penalties against corporate directors, officers, and agents. Normally, such assessments will be issued within 18 months from the date of issuance of the subject citation or order. However, if the 18 month timeframe is exceeded, TCIO will review the case and decide whether to refer it to the Office of Special Assessments for penalty proposal. In such cases, the referral memorandum to the Office of Special Assessments will be signed by the Administrator.

110(h) Use of Non-Approved Equipment

Compliance investigations conducted by the Quality Assurance Division on the Jabco Model JG107 Audio Alarm unit, Approval Nos. 9B-49-0 and 9B-49-1, revealed that the 8-track tape player approved for use in the alarm unit is being replaced by various types and models of 12-volt direct current tape players that are not approved for use in the formal approval. This situation is further complicated, since the original equipment manufacturer is no longer in business, and the 8-track tape player specified in the formal approval is no longer available for purchase. All JG107 Audio Alarm units equipped with a tape player other than the 8-track tape player specified in the formal approval must be removed from permissible service as they are no longer permissible. Compliance investigations also revealed that Model Jabco JG107 Audio Alarm units are in service bearing Approval No. 9B-49-2 which has never been issued. Therefore, all units bearing MSHA Approval No. 9B-49-2 must have the approval plates removed and be removed from permissible service.

To emphasize the importance of using only approved equipment in a mine, Section 110(h) of the Act provides penalties for the knowing distribution, sale, delivery, or introduction of equipment into mines that is represented as approved but is not in approved condition. Also, in accordance with 30 CFR Parts 57 and 75, it is the responsibility of the mine operator to ensure that the approved/certified equipment is maintained in a permissible condition. Failure to remove altered units and units with MSHA Approval No. 9B-49-2 from permissible service will result in appropriate enforcement action. All Jabco Model JG107 Audio Alarms bearing MSHA Approval Nos. 9B-49-0 and 9B-49-1 that exist and are maintained to the formally approved design may remain in service as permissible signaling devices.

Section 111 Entitlement of Miners

Section 111 is the statutory remedy for compensation to miners when a mine or mine area has been idled or closed by MSHA order. Miners or miners' representatives having a claim under this section of the Act must file with the Federal Mine Safety and Health Review Commission.

Section 111 creates a statutory right protected under the provision of section 105(c). If a miner or representative of the miners believes that a discriminatory act, as described in section 105(c), has been committed by a mine operator or anyone in authority because compensation under section 111 has been sought, a discrimination complaint under the provisions of section 105(c) may be filed. Such complaint will be processed in accordance with the policies pertaining to section 105(c) and related instructions in the Special Investigations Procedures Handbook.

Section 203 Medical Examinations**203(a) Chest X-rays**

Congress gave the Department of Health and Human Services (HHS) the responsibility for setting up and carrying out the chest x-ray program. Thus, MSHA Coal Mine Safety and Health enforcement of Section 203(a) of the Act and 42 CFR 37 will normally be in response to specific requests from HHS. However, if an MSHA coal inspector, during his or her normal work, concludes (after a thorough inquiry) that there is noncompliance with Section 203(a) or with 42 CFR 37, the inspector must issue a citation. Citations will specify the relevant section of the Act or of 42 CFR 37.

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INTERPRETATION, APPLICATION AND GUIDELINES
ON ENFORCEMENT OF 30 CFR

PART 5 FEES FOR TESTING, EVALUATION, AND APPROVAL
 OF MINING PRODUCTS

5.30 Fee Calculation

Waiver of Application Fee for Testing, Evaluation and Approval of
Mining Products

Title 30, Code of Federal Regulations, Part 5 requires applicants to submit an application fee for each product approval action listed in the fee schedule which is subject to an hourly rate. That application fee is no longer required by MSHA.

Waiver of the application fee eliminates any potential delay in the initiation of processing approval actions. The waiver of this application fee will not reduce the total cost to the applicants seeking product approval. The final invoice issued by MSHA will include all costs for time expended.

Fee Estimate Provisions for Approval Applications

The Approval and Certification Center offers several pre-authorization options that an applicant may consider when submitting applications under 30 CFR Parts 7, 15 through 29, 33, 35, and 36. Preauthorization provides a mechanism for MSHA to begin evaluating or testing of the applicant's product prior to the fee estimate process. Examples of preauthorization available to the applicant include:

1. A preauthorization notice, authorizing MSHA to expend a stated amount of money in evaluating or testing the applicant's product while the MSHA fee estimate process proceeds, is submitted with the application. This will allow immediate evaluation work to begin if there are no other applications awaiting initial actions.

After receipt of an application with attached pre-authorization, the Approval and Certification Center will provide an estimate of the total anticipated charges and continue with processing or cancel the action depending upon the applicant's response to the estimate letter. If the applicant chooses to cancel, fees will be charged for work performed up to the cancellation.

2. A statement authorizing MSHA to expend the necessary amount of money to process a specific application,

without a stated maximum, is submitted with the application. This statement permits work to begin immediately on the submitted application if there are no other applications awaiting initial action. The company will not receive an estimate letter for their application. At the conclusion of the investigation, the company will receive an invoice for the processing of the application.

3. A blanket authorization is a statement prepared by the applicant authorizing MSHA to expend the necessary amount of money to process all applications, without stated maximum, and is submitted with the application. This authorization permits work on all submitted applications to begin immediately if there are no others awaiting initial action. The company will not receive an estimate letter for any of their applications. At the conclusion of each investigation, the company will receive an invoice for processing that application.

PART 18 ELECTRIC MOTOR-DRIVEN MINE EQUIPMENT AND
ACCESSORIES

Subpart A General Provisions

18.4 Electrical Equipment For Which Approval Will Be Issued

Interconnection of MSHA Evaluated Mine-Wide Monitoring Systems
and MSHA-Approved Equipment

Section 18.4 of 30 CFR indicates that approval will be issued only for a complete electric machine. However, 30 CFR Section 18.20(b) indicates that all possible designs, circuits, arrangements, or combinations of components cannot be foreseen and that modifications to the requirements could be made to obtain the same degree of protection. Mine-Wide Monitoring System circuits connected to approved electric equipment in accordance with this policy are intrinsically safe. Therefore, the same degree of protection is provided for the approved machine with or without the interface to the MSHA-evaluated Mine-Wide Monitoring System.

When an electric cable(s) from an MSHA-classified barrier in an MSHA-Evaluated Mine-Wide Monitoring System terminates in an explosion-proof enclosure on MSHA-approved equipment, the following conditions shall be met:

1. The MSHA evaluation of the specified Mine-Wide Monitoring System shall include the condition of use that permits the system to be connected to MSHA-certified explosion-proof enclosures.
2. The interconnection of an MSHA-evaluated Mine-Wide Monitoring System and MSHA-approved electric equipment shall be documented on the drawings and specifications submitted by the applicant requesting approval of the electric equipment. When the interconnection results in a modification of existing permissible electric equipment and circuitry within the permissible electric equipment, such modification shall be documented by the operator under an acceptable Field Modification Application or by the manufacturer under an Extension of Approval Application or the Stamped Notification Acceptance Program (SNAP).
3. Electric cables (data transmission lines from a blue outstation) within MSHA-certified enclosures shall be terminated at a classified barrier with a

classification that matches the classified barrier at the blue outstation. A Power Circuit (P.C.) barrier with a voltage in the enclosure is required when power circuits are monitored or power is obtained from within the MSHA-Certified enclosure.

When electric cables leave an MSHA-certified enclosure and terminate in an MSHA-classified sensor, the following conditions shall be met:

1. The sensor shall have a classification label.
2. The electric cable shall be shielded and the shield grounded at the MSHA-certified enclosure. Classified barrier grounds shall be connected to ground within the enclosure using no less capacity than a No. 12 AWG copper wire.
3. The sensor classification shall have the same letter classification as the classified barrier located within the MSHA-certified enclosure and connected to each individual sensor cable. A barrier classification label shall be attached to the exterior of the MSHA-certified enclosure and in close proximity to each barrier cable entrance. The method of attaching the label shall not impair any explosion-proof feature of the equipment.
4. No connection shall be made to the data transmission line from the blue outstation between the matching letter-classified barriers. Also, where a P.C. barrier is required, connections to the classified sensor shall only be made between the P.C. barrier and the data transmission line letter-classified barrier at the MSHA-certified explosion-proof enclosure.

Physical isolation shall be provided within an MSHA-certified enclosure by means of an insulated or metallic shield around all barriers and associated electric cables.

Control functions of the monitoring system shall be capable of being manually overridden at the machine.

On approval applications incorporating MSHA-evaluated Mine-Wide Monitoring Systems, a one-line diagram shall show where the monitoring system cable is connected to the machine. The

documentation shall include all pertinent electric cable information (size, type, number of conductors, electrical rating, outside diameter). Notes indicating where the requirements above are met shall also be included.

18.6 Applications

Cable Splicing Requirements Specified in Caution Statement

Paragraph 18.6(j) of Part 18, 30 CFR, requires an applicant (equipment manufacturer) to submit a caution statement specifying the conditions for maintaining permissibility of the equipment. A sample statement is provided in Figure 3, Appendix II of Part 18. Paragraph 5 of this statement entitled Cable Requirements, includes a provision permitting no more than five temporary splices in a portable cable.

Part 75, 30 CFR, states that only one temporary splice may be made in any trailing cable. Such trailing cable may only be used for the next 24-hour period. Since this requirement is different from that referenced in the sample statement, all submitted sample caution statements specifying details on splicing are required to reflect this requirement, rather than the allowance for five splices.

18.20 Quality of Material, Workmanship, and Design

Paragraph 18.20(a) of Part 18, 30 CFR, requires equipment to be designed to facilitate inspection and maintenance.

Paragraph 18.20(b) of 30 CFR Part 18 requires equipment to be safe for its intended use.

Acceptance of Fiber Optic Cables and Cables Smaller than #14 AWG

The Mine Safety and Health Administration Approval and Certification Center has established a program for the evaluation of fiber optic cables and will include electrical signaling cables smaller than #14 AWG. This program establishes a mechanism that manufacturers may use to obtain acceptance of the subject cables for mine use.

The program affords MSHA an opportunity to evaluate the application of new technology as applied to the mining industry while providing manufacturers with a means to obtain MSHA evaluation of these products.

A fee will be charged for the evaluation and testing of these products as prescribed under Part 5, 30 CFR. This fee will be determined on an hourly basis similar to the present cable program. The major difference in the new program is that the test procedure has been modified by eliminating the electrical current requirements, changing the ignition time, and changing the pass/fail criteria.

Fiber Optic Cables Used on Approved Equipment

Fiber optic cable that does not contain current-carrying conductors will be acceptable for use on approved equipment, provided it:

1. is accepted by MSHA as flame-resistant unless totally enclosed within an MSHA flame-resistant hose conduit or other MSHA flame-resistant material, or is totally contained within an explosion-proof enclosure;
2. is provided with strain relief where it enters any explosion-proof enclosure when the fiber optic cable extends between enclosures not on a common frame;
3. has all conductive components, such as metallic strength members or metallic vapor barriers, grounded;

4. has the manufacturer, type, and outside diameter (including tolerances) for the fiber optic cable specified on the drawings submitted for approval; and
5. is installed in a gland arrangement when existing or entering a explosion-proof enclosure. The gland arrangement or a similar one must have been explosion tested in an MSHA test enclosure at approximately 150 psig.

Cables that contain both optical fibers and current-carrying conductors are considered electric cables and will be required to meet the existing requirements of 30 CFR Part 18.

Any manufacturer's request to use a fiber optic cable in an application that does not specifically meet these requirements will be evaluated on the merit of the request.

Longwall Motor and Shearer Cables

This policy addresses specific longwall cables, namely, motor cables that supply power to all longwall motors, except those on-board the shearer, and shearer cables that supply power to longwall shearers. This policy takes into account that these cables have characteristics of both trailing and intra-machine cables as follows.

1. Longwall motor cables and shearer cables shall be accepted by MSHA as flame-resistant or be totally enclosed in MSHA accepted flame-resistant hose conduit or other flame-resistant material, have adequate current carrying capacity and short circuit protection for the loads involved, have insulation compatible with the impressed voltage, and be protected from abrasive sharp edges. These requirements currently apply to all cables on permissible face equipment. The application to longwall motor cables and shearer cables is stated here for clarification.
2. The 30 CFR 18, Table 9 length restrictions do not apply to longwall motor and shearer cables. These cables are evaluated individually at each longwall installation to ensure there is sufficient available fault current to provide adequate protection for the length of the cable used.

3. Longwall motor and shearer cables with nominal voltages greater than 660 volts shall be of a shielded construction with a grounded metallic shield around each power conductor. Shielding in these longwall cables provides enhanced safety to miners whose normal work tasks place them in close proximity to the energized cables. Should these cables be physically damaged, the shielding would greatly reduce the possibility of exposure to severe phase-to-phase faults or any other type of electrical faults on the circuit.
4. Longwall motor and shearer cables, like trailing cables once in service may be spliced, provided the splices are properly constructed. Shearer cables, like trailing cables, are constantly moving during mining operations. This movement may bring the cable into contact with surfaces of the mine terrain, mining equipment, and other cables, that occasionally results in a damaged cable that requires repair. Similarly, motor cables, like trailing cables, can be subject to damage requiring repair as a result of falling material at or near the longwall installation.
5. Energized high voltage shearer cables may be held in place (trained) provided that the miners wear properly rated insulating gloves or use hot sticks. Use of properly rated insulating gloves or hot sticks is encouraged for low and medium voltage shearer cables. However, energized motor cables shall not be handled. The policy does not permit the handling of either shearer or motor cables, except that shearer cables may be trained with electrical gloves or hot sticks. Unlike trailing cables that require extensive handling in normal mining operations, the configuration of longwall installations is such that there is no need to handle these cables except to return the cable to the coursing trough where the cable occasionally has a tendency to slip out.

Pump Motor Cables

MSHA has determined that the length of cable between a starter/controller of an MSHA-approved pump assembly and the pump motor cable fits into the same category for splicing purposes as longwall motor and shearer cables. These pump motor cables can vary from less than 100 feet to more than 1,000 feet and, like trailing cables; they can be exposed to damage from contact with surfaces of the mine terrain and mining equipment.

Disconnecting Devices Installed On-Board Mine Equipment

Disconnecting devices installed on machines submitted for approval under 30 CFR Part 18 must meet Part 75 requirements in order to comply with the requirements of 30 CFR 18.4 and 18.20(b) so that the device is safe for its intended use. In addition, field modifications will be necessary if mine operators seek to install such devices on equipment with approvals that do not include these disconnecting devices.

Load Locking Valves

All hydraulic cylinders used to elevate cutting heads on conveyor booms of loading machines and continuous miners must have hydraulic load locking valves that meet the applicable MSHA criteria in order to be considered as approved under 30 CFR Part 18.

Enclosures Housing Energy Storage Devices

Therefore, to preclude a potential electrical shock hazard, energy storage devices (not including batteries) housed in explosion-proof enclosures are required to be provided with a means of being discharged before they are accessible to maintenance personnel. The maximum discharge time for such energy storage devices must be specified on the drawings on which they appear. The circuit design, a bleeding resistor, or a discharge switch are acceptable methods of satisfying this requirement. The circuit design or bleeding resistor is the preferred form of discharging the energy storage device.

If discharge switches are used, a caution tag shall be on the enclosure cover warning that the discharge switch must be activated before the cover or cover mounting bolts are loosened.

Potential Hazard on Machines Designed with Multiple Functions

Machines that are designed to perform multiple functions from a single drive unit, simultaneously or individually, are required to be of a design that automatically disengages any engaging mechanism drive when the mechanism is shut down.

Circuit Breakers Handle Position

Manufacturers of equipment incorporating circuit breakers are required to provide a means that will make it easily discernible to ascertain the "on-off" position of vertically mounted circuit breakers. The "on-off" position shall be identified both externally, i.e., with the cover of the enclosure that houses the breaker in place, and internally, i.e., with the cover removed.

Flame Resistant Conveyor Belting on Equipment

The subject paragraph requires electrical equipment to be constructed of suitable materials. Section 18.65 of Part 18, 30 CFR, specifies the test procedures and criteria for the acceptance of conveyor belting as flame-resistant (fire-resistant).

Therefore, conveyor belting used on equipment approved under Part 18, 30 CFR, shall be flame resistant (fire-resistant) in accordance with Section 18.65 Part 18, 30 CFR.

Use of Metal Halide or Mercury Vapor Bulbs with Polycarbonate Lenses

Polycarbonate has been accepted as a suitable material with physical characteristics equivalent to 1/2-inch thick tempered glass to be used for luminaire lenses (reference Paragraph 18.46(c) of Part 18, 30 CFR). However, the high levels of ultraviolet radiation and heat generation produced by a metal halide or mercury vapor bulb cause a degradation of the polycarbonate. The change in physical characteristics results in a weakened polycarbonate exhibiting cracking and crazing.

Therefore, the use of metal halide bulbs or mercury vapor bulbs in explosion-proof enclosures with polycarbonate lenses is not acceptable.

Electric Equipment Incorporating Methane Monitors

When methane monitors are incorporated in designs of electric equipment, the following conditions shall be met.

1. The methane monitor power shut-off relay shall be installed so that all electric motors (including auxiliary fan motors), all lighting circuits, and all electrical power takeoff receptacles (except intrinsically safe receptacles) on the equipment are automatically deenergized when the relay is activated. The methane monitor may remain energized and intrinsically safe lights may remain operational. Operation of these lights shall not require energization of any additional explosion-proof

enclosures. On longwall mining systems, approved permissible telephones may also remain energized.

2. On longwall mining systems, if an additional methane monitor is installed on the shearer, it shall be installed so that all electric motors and all electrical power takeoff receptacles (except intrinsically safe receptacles) on the shearer are automatically deenergized when the relay is activated. The methane monitor may remain energized.
3. The methane monitor power shut-off relay shall be connected into the control circuitry so that it is not possible to override the methane monitor by holding down or blocking any reset (start) switch in the start position.
4. The control circuitry shall be connected so that the electric motors will not restart automatically when the methane monitor power shut-off relay is deactivated.

Parking Brakes

Paragraph 18.20(f) of 30 CFR Part 18 requires that brakes be provided for each wheel-mounted machine, unless design of the driving mechanism will preclude movement of the machine when parked. Several fatal accidents have occurred involving electric face equipment when devices designed to trap hydraulic fluid in wheel cylinders were used as parking brakes. This design is deemed inadequate for use as a parking brake because the device might inadvertently cause the brake to release due to a number of factors such as fluid leakage, thermal contraction of brake fluid, or damage to hydraulic parts or brake lines.

To correct this problem, MSHA will not approve equipment with parking brake systems that depend upon locking a column of fluid within the braking system to maintain contact between the friction material and the braking surface. Pursuant to 30 CFR 18.20(b) and (f), the parking brake, when applied, shall hold the mining equipment stationary up to its maximum rated gradeability, despite any contraction of the brake parts, exhaustion of any nonmechanical source of energy, or leakage of any kind.

The majority of rubber-tired Part 18 equipment can comply with the policy. Approval and Certification Center engineers can provide technical assistance on the design of braking systems that need to be brought into compliance.

Red Light Reflecting Material

Paragraph 18.20(g) of 30 CFR Part 18 requires red light-reflecting material on both the front and rear of each mobile transportation unit that travels at a speed greater than 2.5 mph and recommends its use on each end of other mobile machines.

Reflectors or reflecting tape is an acceptable means of satisfying this requirement. However, reflecting paint is not acceptable to satisfy this requirement.

To be consistent with the requirements for Part 75.1719-4, 30 CFR, the reflecting material shall have a minimum area of 10 square inches.

Separate Terminations for Ground and Ground-Check Conductors

When a ground monitoring circuit employs a ground-check conductor to verify the continuity of the grounding conductor to the equipment frame(s), the ground-check and the equipment grounding conductors shall be separately terminated to the metallic frame(s) inside the enclosure(s) of the electrical equipment.

18.22 Boring-Type Machines Equipped for Auxiliary Face Ventilation

Paragraph 18.22 of 30 CFR Part 18 requires each boring-type continuous-mining machine submitted for approval to be constructed with an unobstructed continuous space(s) of not less than 200 square inches total cross sectional area on or within the machine to which flexible tubing may be attached to facilitate auxiliary face ventilation.

This unobstructed continuous space(s) may consist of two or more spaces, the combined area of which must total a minimum of 200 square inches.

18.26 Static Electricity

The subject section requires nonmetallic rotating parts, such as belts and fans, to be provided with a means to prevent an accumulation of static electricity.

When V-belts are used, V-belts that meet the static conducting criteria specified in the Rubber Manufacturers Association Bulletin No. 3, Edition 2, approved 1972, Power Transmission Belt Technical Bulletin, satisfy this requirement. This criteria requires a resistivity measurement of the new belt to be 6 megohms or less when measured using two 5/8" diameter flat contacts, 8-1/2" apart on centers, moistened with water, and pressed against the belt with a force of 12-1/2 pounds per contact. The measurement shall be with an ohmmeter operating at a potential of 500 volts and having a range from 0 to 10 megohms.

18.30 Windows and Lenses

Paragraph 18.30(b) of 30 CFR Part 18 requires windows or lenses, other than headlight lenses, having an exposed area greater than 8 square inches to be provided with guarding or equivalent.

The exception for headlight lenses is also applicable to lenses of all machine lighting fixtures. Therefore, lenses having an exposed area greater than 8 square inches on machine lighting fixtures are not required to be provided with guarding or equivalent to satisfy the requirements of this paragraph. When installed on a machine, protection from damage must be provided by guarding or location, in accordance with the requirements of Paragraph 18.46(b) of Part 18.

18.32 Fastenings - Additional Requirements

Part 18, 30 CFR, provides construction requirements for explosion-proof enclosures. However, the use of eye bolts in through holes in these enclosures is not specifically addressed.

When an eye bolt is installed as a plug in a through hole in an explosion-proof enclosure, it shall be secured by a continuous gas-tight weld (all around). Eye bolts used in through holes in conjunction with other devices where future access to the devices is desired, such as core pins in motor designs, shall be secured by spot welding, brazing, or equivalent.

18.36 Cables Between Machine ComponentsClamping of Hose Conduit

Paragraph 18.36(b) of Part 18, 30 CFR, requires cables between machine components to be protected from mechanical damage by position, flame-resistant hose conduit, metal tubing or troughs. To meet this requirement, when hose conduits are used, they should be clamped to a hose tube, gland extension, or equivalent, at both ends. Clamping the hose conduit directly to the cable is unacceptable.

18.37 Lead Entrances

The subject section specifies requirements for properly packed lead entrances. When the lead entrance is properly packed, a threaded packing nut shall have a minimum of a 3-effective (full) thread engagement with its mating part.

18.40 Cable Clamps and Grips

Section 18.40 of Part 18, 30 CFR, requires installation of insulated clamps or cable grips to prevent strain on both ends of each cable or cord leading from a machine to a detached or separately-mounted component. The requirement for strain relief

does not apply to intrinsically safe cables and cords where they enter nonexplosion-proof components.

Cable-grip-type strain relief devices are unacceptable as strain relief devices meeting the requirements of this section in situations where the cable is placed intermittently in tension. Under this condition, the strain relief device may creep along the cable until its use no longer prevents strain on terminals of the cable on which it is installed.

Additionally, each cable exiting a battery enclosure shall be provided with an insulated strain clamp installed to prevent strain on the cable connections at the battery terminals. Cable grips anchored to the cable are unacceptable for this application.

Where the subject strain relief device is acceptable, a section on proper installation is required to be added to the factory inspection form or other appropriate document. The directions should indicate that:

1. Sufficient slack in the cable shall be provided between the machine and the strain relief device.
2. A hose clamp shall be provided on the outby end of the strain relief device to prevent slippage along the cable jacket.

To enable MSHA to verify compliance with the requirements of 30 CFR 18.40, all applicants for approval of a machine or system shall fully identify on submitted documentation each cable clamp or grip used on the machine or system.

The following information shall be provided for insulated strain clamps on submitted or referenced drawings:

1. the flame-resistant insulation material and thickness;
2. the method of securing the clamp to the cable; and
3. the clamp dimensions with tolerances. The clamps shall be designed such that a minimum interference of 1/8 inch or 10 percent of the nominal cable outside diameter, whichever is smaller, is provided between the clamp and the minimum cable outside diameter.

If cable grips are used in lieu of insulated strain clamps, the submitted or referenced drawings shall specify:

1. that sufficient slack is provided in the cable between the machine and the strain relief device; and
2. that an integral clamp is provided at the outby end of the cable grip which can be tightened to secure the grip in place after the grip is properly positioned on the cable.

18.41 Plug and Receptacle-Type Connectors

Use of Padlocks on Battery Connectors

Paragraph 18.41(f) of Part 18, 30 CFR, allows for the use of a padlock in lieu of an interlock on connectors used on mobile battery-powered machines, provided the plug is held in place by a threaded ring or equivalent mechanical fastening in addition to the padlock.

An acceptable means for meeting this requirement is the use of a device that is captive and requires a special tool to disengage to allow separation of the connector, along with a caution tag that the connector must not be disengaged under load.

18.45 Cable Reels

Insulation of Cable Reel and Spooling Devices

Paragraph 18.45(e) of Part 18, 30 CFR, requires cable reels and spooling devices to be insulated with flame-resistant material. To satisfy the intent of this requirement, any part of the machine which the trailing cable normally contacts, such as the cable reel hub and flanges, cable guide, sheaves, and bar rollers, must be insulated to prevent voltage being placed on the machine frame from spot contact with a worn or damaged trailing cable. The insulating material shall be tested and accepted as flame-resistant by the A&CC.

Isolated components, insulated from the machine frame, are acceptable if they are inaccessible to personnel during normal operation of the machine. These components do not need to be insulated from the cable.

18.47 Voltage Limitation

The voltage of alternating-current control circuits shall not exceed nominal 120 volts line-to-line. This requirement will allow any appropriate control circuit wiring configuration, including those that allow or cause 120 volt line-to-ground control voltage levels to exist.

18.48 Circuit-Interrupting Devices

Clarification of Terms Used in 30 CFR 18.48

The following terms have been more specifically defined in order to clarify 30 CFR 18.48.

1. Circuit-interrupting device. A circuit-interrupting device is considered to be a single device designed and installed to disconnect all power conductors on a machine from the trailing cable. The device shall simultaneously open all phase conductors on an alternating-current or direct-current machine. The contacts of the device shall be either spring loaded and latched closed or held closed by a magnetic field.

The device shall be:

- a. Installed so that it can be operated (opened and closed) and reset without opening the enclosure in which it is mounted.
- b. Designed so that the interruption of all power conductors occurs in a single enclosure.
- c. Mounted in a manner so as to preclude the possibility of its closing by gravity.
- d. Capable of carrying and interrupting the full-load current of the machine.

In addition, if the device is intended to break short-circuit current, it shall have an interrupting capacity sufficient for the maximum short-circuit current available at the line-side terminals.

2. Power Conductor/Control Conductor. A power conductor is considered to be a conductor that supplies electric power to an electric component or device on a machine or to a related detached component of a machine. This definition includes conductors supplying electric power to motors, motor controllers, power resistors, power take-off receptacles, power transformers and lighting components (e.g., transformers, resistors, ballasts and fixtures).

Conductors not covered by this definition include:

- a. The trailing cable conductors.
- b. The conductors that supply electric power to control transformers provided that the control transformers are located in the same enclosure as the main circuit-interrupting device.

- c. Control circuit conductors.
- d. Conductors that supply electric power to a machine mounted methane monitoring system(s).

A control circuit is considered to be the circuit that carries the electric signals directing the function of the controller but does not carry the main power.

Note: The voltage of alternating-current control circuits shall not exceed 60 volt to ground.

Control circuit conductors are considered to be conductors used for control circuits and for connections between instrument transformer secondaries, instruments, meters, relays, or other similar equipment.

A motor controller is considered to be a device or group of devices that serves to govern, in some predetermined manner, the electric power delivered to the motor or group of motors of which it is connected.

- 3. Trailing Cable Termination. The trailing cable is considered to extend from the last short-circuit protective device which meets the requirements of 30 CFR 75.601 through 30 CFR 75.601-3 to the line side of the circuit interrupting device required by 30 CFR 18.48(a). When a connector or connection box is used to sectionalize the trailing cable on the machine, the portion of cable between the connector and/or connection box and the line side of the circuit interrupting device required by 30 CFR 18.48(a) will be considered to be part of the trailing cable provided the conductors in the on board portion of the trailing cable are not smaller than the minimum acceptable size of the conductors in the off board portion of the trailing cable. In addition, the on board portion of the trailing cable shall be protected in accordance with the requirements of 30 CFR 18.36(b). The on board portion of the trailing cable will not be required to be flame resistant if the cable is installed in flame resistant hose conduit.

When it is impracticable to mount the circuit interrupting device on board the machine as provided in 30 CFR 18.48(b), the trailing cable is considered to extend from the last short-circuit protective device which meets the requirements of 30 CFR 75.601 through

75.601-3 to its first point of connection on the machine.

4. Manually-Operated Controller. A "manually operated controller" as referenced in 30 CFR 18.48(a) is a rotary drum controller such as was used to control the traction motors of mining machine trucks, loaders and continuous mining machines.

These interpretations are based on current regulations and existing technology. It is recognized that these interpretations of 30 CFR, Part 18, could potentially have a significant impact on the design of mining machinery.

Deenergization of Lighting Conductors by Main Circuit-Interrupting Device

Paragraph 18.48(a) of Part 18, 30 CFR, requires that each machine be equipped with a circuit-interrupting device by means of which all power conductors can be deenergized at the machine.

Conductors to lighting components are considered power conductors and shall be deenergized by the main circuit-interrupting device.

Two-Pole Switches Required for Lighting Circuits

Paragraph 18.48(c) of Part 18, 30 CFR, requires that "separate two-pole switches shall be provided to deenergize power conductors for headlights or floodlights." These switches must be separate physical devices by which all power conductors for machine lights, headlights, or floodlights can be deenergized; i.e., a switch(s) which controls only the lighting circuit. Relay actuated contactors are not acceptable as the sole means of providing this function.

More than one separate two-pole switch may be used to satisfy this requirement. However, each switch must control only a lighting circuit. All other circuits must be controlled by a different switch(s). Three-phase lighting systems must have a separate three-pole switch to satisfy this requirement. A circuit breaker may be used as the required switch for the lighting circuit.

18.50 Protection Against External Arcs and Sparks Power Take Off Receptacles

Section 18.50 of Part 18, 30 CFR, requires the frames of components not on a common chassis to be maintained at safe voltages by means of diode grounding, actuation of a circuit interrupting device, or a separate grounding conductor within the input power cable. In order to ensure that the PTO adequately

provides means of fulfilling these requirements for any type of auxiliary mining equipment which it may power, each PTO receptacle is required to have an electrode which is separate from those used for power, connected to frame ground.

Grounding of Machine Components

The subject section requires that provisions shall be made for maintaining the frames of all off-track machines and enclosures of related detached components at safe voltages.

All metallic enclosures used on an electrical machine are required to have a common electrical ground with the frame of the machine by either the method of attachment or by use of a separate grounding conductor.

Grounding Conductors

To improve the safety afforded by permissible products, effective May 1, 1980, the Approval and Certification Center in applying Part 18 requires:

1. The cross-sectional area of the grounding conductor shall be at least 50 percent of one of the power conductors on No. 6 (AWG) or larger cables, and cables smaller than No. 6 (AWG) shall be required to have a grounding conductor at least the same size as one power conductor. This requirement eliminates the exception previously permitted concerning the use of a ground fault tripping relay.
2. In addition, all machine-mounted lighting fixtures shall be electrically grounded to the machine by a separate grounding conductor.

Grounding Through Cable Reels

Paragraph 18.50(a) of Part 18, 30 CFR, provides for maintaining the frames of off-track machines and the enclosures of related detached components at safe voltages by use of a separate conductor(s) by which the frame or enclosure can be connected to an acceptable grounding medium.

In order to satisfy the requirements of this paragraph, alternating current cable reels shall have at least one slip ring that will be used solely for the grounding circuit.

Acceptance of Silicon Diodes for Grounding

Paragraph 18.50(c) of Part 18, 30 CFR, contains provisions for acceptance of silicon diodes for maintaining the frames of off-track machines and the enclosures of related detached components at safe voltages.

The requirements contained in this paragraph are consistent with, but not as explicit as, the requirements of Paragraphs 75.703-3(d)(1) through 75.703-3(d)(10) of Part 75, 30 CFR. Therefore, the installation and rating of silicon diodes shall be consistent with the requirements for Part 75, 30 CFR, to satisfy the provisions of Paragraph 18.50(c) of Part 18, 30 CFR. The installation of silicon diodes shall meet the following minimum requirements:

1. Installation of silicon diodes shall be restricted to electric equipment receiving power from a direct-current system with one polarity grounded;
2. Where such diodes are used on circuits having a nominal voltage rating of 250, they must have a forward current rating of 400 amperes or more, and have a peak inverse voltage rating of 400 or more;
3. Where such diodes are used on circuits having a nominal voltage rating of 550, they must have a forward current rating of 250 amperes or more, and have a peak inverse voltage rating of 800 or more;
4. Where fuses approved by the Secretary are used at the outby end of a trailing cable connected to electrical equipment employing silicon diodes, the rating of such fuses must not exceed 150 percent of the nominal current rating of the grounding diodes;
5. Where circuit breakers are used at the outby end of a trailing cable connected to electrical equipment employing silicon diodes, the instantaneous trip setting shall not exceed 300 percent of the nominal current rating of the grounding diode;
6. Overcurrent devices must be used and installed in such a manner that the operating coil circuit of the main contactor will open when a fault current with a value of 25 percent or less of the diode rating flows through the diode;
7. The silicon diode installed must be suitable to the grounded polarity of the power system in which it is used and its threaded base must be solidly connected to the machine frame on which it is installed;
8. In addition to the grounding diode, a polarizing diode must be installed in the machine control circuit to

prevent operation of the machine when the polarity of a trailing cable is reversed;

9. When installed on permissible equipment, all grounding diodes, overcurrent devices, and polarizing diodes must be placed in explosion-proof compartments;
10. When grounding diodes are installed on a continuous miner, their nominal diode current rating must be at least 750 amperes or more.

Additionally, assemblies of multiple diodes combined to provide the required voltage and current ratings are acceptable in lieu of a single diode having the required ratings.

18.51 Electrical Protection of Circuits and Equipment
Circuit-Interrupting Device; External Operation Requirement

A circuit-interrupting device may be accepted without a method for external operation if the following criteria are met:

1. the circuit-interrupting device is not required by 30 CFR 18.51(a);
2. the circuit-interrupting device protects only control circuit wire(s) or device(s);
3. the circuit-interrupting device provides protection only for cables or components internal to the explosion-proof enclosure; and
4. the circuit-interrupting device can be reclosed without exposing personnel to any energized power circuit.

18.52 Renewal of Fuses
Criteria for Suitable Interlock Systems

The following criteria shall be applied to determine a suitable interlock system as required by 30 CFR, Part 18, Section 18.52:

1. The interruption of the electrical circuit must be accomplished in an explosion proof enclosure.
2. The electrical circuit will not automatically reenergize when the explosion proof integrity is reestablished.

Silicon Controlled Rectifier (SCR) Fuses

When Silicon Controlled Rectifier fuses are used, the following interpretation applies:

1. Fuses used to protect SCR's are power fuses and therefore, the enclosure housing them shall meet 30 CFR Section 18.52 interlock requirements.
2. A microswitch circuit may be used to satisfy the interlock requirements of Section 18.52 provided that the electrical circuit will not automatically reenergize when the explosion proof integrity of the enclosure is reestablished.

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18.61 Final Inspection of Complete Machine
Inspection of Longwall Lighting Systems

Longwall lighting systems shall be completely installed at the time the Approval and Certification Center conducts an inspection of a longwall mining system to be used in underground coal mines.

18.68 Tests for Intrinsic Safety
Requirements When Using Permissible Page Phones as a Longwall
Pre-Start Alarm

The face communication system typically used on longwalls is a page phone system that is electrically segregated from the longwall and any other phone system and consists of telephones previously approved as permissible under 30 CFR Part 23. When permissible page phones are used as the audio transducers of a pre-start alarm system, additional requirements must be met.

A pre-start alarm system may be accepted by the Approval and Certification Center as intrinsically safe if, in addition to the applicable requirements of 30 CFR Part 18, the following conditions are met:

1. the specified longwall face telephone system is electrically segregated from all other mine telephone systems;
2. the longwall face telephone system is a 12 volt D.C. system;
3. the longwall face telephone system is comprised of telephones approved under 30 CFR Part 23;
4. the approval numbers, with the extension levels of the telephones comprising the system are specified;
5. the output energy of the pre-start alarm signaling unit is not greater than the highest output energy of any telephone specified as part of the face telephone system; and
6. labels or plates are provided in accordance with one of the following options:
 - a. a label/plate shall be attached to the exterior of the MSHA-certified, explosion-proof enclosure at the pre-start alarm system cable exit that:

- (1) identifies the intrinsic safety evaluation number granted under Part 18;
- (2) identified the holder of the evaluation;
- (3) identifies the system model or type number;
- (4) identifies the telephones that may be a part of the system by approval number and extension level granted under Part 23;
- (5) warns that the system must not be connected to any other mine telephone system; and
- (6) is substantial and permanent in nature.

- OR -

- b. a label/plate shall be attached to the exterior of the MSHA-certified, explosion-proof enclosure at the pre-start alarm system cable exit and to each telephone on the system that:
 - (1) identifies the intrinsic safety evaluation number granted under Part 18;
 - (2) identifies the holder of the evaluation;
 - (3) identifies the system model or type number;
 - (4) warns that the system must not be connected to any other mine telephone system; and
 - (5) is substantial and permanent in nature.

Separation of Intrinsically Safe and Nonintrinsically Safe Conductors

Paragraph 18.68(c)(3) of 30 CFR Part 18 requires that cables and wires carrying intrinsically safe currents shall not be intermingled with nonintrinsically safe cables and wires. The following shall be regarded as intermingling:

1. Intrinsically safe wires included within the same cable or bundle with nonintrinsically safe wires.

2. Intrinsically safe wires included within the same conduit with nonintrinsically safe wires.
3. Intrinsically safe wires included within the same wiring tray with nonintrinsically safe wires unless separated by a solid noncombustible, physical barrier.
4. Any wires with excessive slack that may permit intrinsically safe wires and nonintrinsically safe wires to contact each other.

When intrinsically safe wires and nonintrinsically safe wires are housed within the same enclosure, separate terminal strips shall be used for the intrinsically safe circuit and nonintrinsically safe circuit conductors. In addition, terminals, terminal boxes, and plugs and receptacles of intrinsically safe circuits within these enclosures shall be clearly marked, such as with a label "Intrinsically Safe" and shall be clearly distinguishable.

To ensure compliance with this requirement, a note stating that "wiring for nonintrinsically safe circuits shall not be intermingled with wiring for intrinsically safe circuits" shall be required on all wiring and schematic diagrams depicting both intrinsically safe and nonintrinsically safe circuits.

Clarification of 30 CFR Section 18.68 and 30 CFR Section 18.41
Recent evaluations of intrinsically safe circuits using metallic conductors contained in the same cable with conductors on non-intrinsically safe circuits have determined that the specified intrinsically safe circuits cannot be considered by 30 CFR Section 18.68 to be intrinsically safe in this application. Therefore, the approval documentation should not identify these circuits as intrinsically safe. If the I.S. evaluation investigation is specified, a note must be included stating:

In this application the circuit is not
accepted as being intrinsically safe.

This implies, with reference to paragraph 18.41(a)(2)(ii), that inline non-explosion proof connectors which are dependent on an ISC pilot interlock circuit for permissibility will no longer be accepted. Box mounted non-explosion proof connectors may depend on an ISC pilot interlock circuit for permissibility if the interlock consists of only a short jumper wire between two pins of the plug which mates with the box mounted connector.

Control Circuit Wiring on Permissible Equipment

The Mine Safety and Health Administration (MSHA) has identified a potential hazard associated with start and stop switches and control circuit wiring on some permissible electric equipment. The problem involves sticking start switches on permissible machines that have start switches connected in parallel with stop switches.

When a stop switch operating shaft binds and holds in a stop switch, the function controlled by the switch cannot be performed and the problem is easily detectable and repairable. However, when a start switch operating shaft binds and holds in a start switch, the function controlled by the switch can usually be performed and the problem may not be easily detectable. When this condition occurs on a machine where start and stop switches are connected in parallel, one or more stop switches become ineffective. As a result, the machine could be operated with one or more stop switches incapable of performing the functions for which they were intended without the machine operator being fully aware of the problem. This condition would present a serious hazard if the switch that became ineffective was an emergency stop switch, panic bar switch, or any other stop switch that must perform properly in an emergency situation.

MSHA recommends that no start switch be connected in parallel with any stop switch. While most mining equipment control circuits are designed according to this recommendation, there are types of equipment that are designed so that a binding start switch will make one or more stop switches ineffective. These types of equipment are usually multiple operating station machines, such as roof bolting machines, which have start and stop functions at various positions around the machine.

At this time, MSHA does not propose to require immediate modification of this wiring as a condition of approval or to require immediate rewiring of equipment in the field. However, MSHA recommends that equipment manufacturers take appropriate action to ensure that the control circuits on newly manufactured machines are wired so that no stop switch can become ineffective if any start switch becomes stuck in the "on" position. To expedite the processing of wiring modifications to control circuits on previously approved equipment relating to this recommendation, MSHA will permit the original equipment manufacturer to document the modified circuit in place of the existing circuit via the Stamped Notification Acceptance Program (SNAP) administered by the Approval and Certification Center.

MSHA also recommends that operators take appropriate action to ensure that the control circuits on machines in the field are wired so that no stop switch can become ineffective if any start switch becomes stuck in the "on" position. Operators who seek to modify affected equipment in the field should contact the equipment manufacturer for assistance. Operators' field modification requests covering these changes will be processed by MSHA District Offices and the Approval and Certification Center on a priority basis. Pending any modification of affected machines, coal mine operators should check the machines, as part of the weekly examinations required by 30 CFR 75.512, to ensure that start switches are not binding and sticking in the "on" position. In addition, if a machine operator detects a binding start or stop switch, the condition should be reported immediately so it can be corrected by cleaning and lubricating the operating shaft or other appropriate means.

18.69 Adequacy Tests

Sintered Metallic Friction Materials Used for Brakes on Permissible Equipment

The Mine Safety and Health Administration (MSHA) has identified a potential hazard associated with the use of sintered metallic friction materials as brake linings on permissible electric equipment. The problem is during normal braking, considerable amounts of hot, glowing particles may be thrown from the friction material/brake disc mating surfaces into the surrounding mine environment. Friction materials of this type have been used on both the service and emergency brakes, as new and replacement linings. No sintered metallic friction materials are permitted for such use, unless they are housed in explosion-proof enclosures or other enclosures that prohibit the outside atmosphere from entering the enclosure.

Subpart E Construction, Performance, and Testing
Requirements

28.40 Construction and Performance Requirements

The Approval and Certification Center has provided clarification of the phrases: (1) "initial current interruption," (2) "evidence of restriking," and (3) "superficial damage," as stated in Paragraphs 28.40(e) and (f). In an effort to eliminate confusion and ensure uniform interpretation the following definitions are provided for your information:

1. Initial Current Interruption (Paragraph 28.40(e))
The phrase "initial current interruption" shall be defined as the point at which the current reaches zero value for the first time during a fuse test.
2. Evidence of Restrike (Paragraph 28.40(e))
The test voltage shall be applied across the fuse, uninterrupted, for 30 seconds after completion of the circuit interruption. The test voltage and current shall be monitored continuously using an oscillographic recorder with a total deflection of no less than 1 inch for each signal.
3. Superficial Damage (Paragraph 28.40(f))
The tested fuse would be considered to be damaged in excess of superficial if:
 - a. The tested fuse has one or more openings greater than 1/16 inch in any direction, in any metal part of the fuse.
 - b. The tested fuse has one or more openings greater than 1/8 inch in any direction, in any nonmetal part of the fuse.

Acceptable performance is indicated if during that time interval there is no oscillographic and visual evidence of a tendency to restrike (excessive smoking, excessive venting of gasses, etc.). Any such evidence would constitute failure. If there is oscillographic evidence of any restriking during the first 30 second time interval, the test voltage must continue to be applied, without

interruption, for a second 30 second time interval during which no restriking (as indicated on an oscillograph) must be in evidence.

Neutral Start Methods on MSHA Approved Equipment

Equipment submitted for approval under Part 36 must be equipped with a neutral start method that ensures that the engine cranking torque will not be transmitted through the powertrain and cause machine movement.

75.1719 Illumination

Use of Alternate Lights on Statement for Test and Evaluation
(STE) Application

This policy establishes requirements for the evaluation of alternate lighting fixtures specified in STE applications whose requirements are identified in Federal Register Volume 41, No. 64, Thursday, April 1, 1976, page 14108.

Photometric data is not required to be submitted with an STE application for a lighting system using alternate lighting fixtures that have been found to have similar photometric patterns. On the following page is a list of headlights and machine lights that are considered photometrically interchangeable. The headlight fixtures use 50 watt, 12 volt, type MR-16 (EXN) and the machine lights use 100 watt, 120 volt, type A-19 incandescent bulbs.

Presently, only certain pairs of lights have been evaluated and found to have similar photometric patterns. Because of this similarity, the Approval and Certification Center will accept both fixtures to be listed on an STE application, while requiring actual photometric data on only one lighting system. The other lighting fixture of the pair may be listed as an alternate on the machine layout drawing. This policy does not limit the number of lighting fixture alternates that may be specified in an STE application. However, if the alternate fixture is not part of a pair, the actual photometric data is required for each system.

This policy does not authorize interchanging the lights on machines indiscriminately. When the STE contains a set of lights that are alternate to each other, they may be interchanged on the machine to which the STE applies. No further paperwork or evaluation is then necessary.

If the STE for the machine lists only one of the lights of the pair, the appropriate field modification must be submitted to document the permissibility of the light. No photometric data is required.

HEADLIGHTS

(with bulb type 50 watt, 12 volt,
MR-16 (EXN) clear, incandescent)

<u>MANUFACTURER</u>	<u>MODEL #</u>	<u>CERTIFICATION # XP</u>
Mining Controls	30,000	3493-0
Huntington Brass	1,200	3579-0
- - - - -		
Koehler Mfg. Co.	2,200	3470-0
Joy Mfg. Co.	571390-1312	3581-0
- - - - -		
Ocenco, Inc.	HE 50	3221-0,-1,-2
Central States Ind.	CI 50	3612-0

MACHINE LIGHTS

(with bulb type 100 watt, 120 volt,
type A-19, inside frosted, incandescent)

<u>MANUFACTURER</u>	<u>MODEL #</u>	<u>CERTIFICATION # XP</u>
Ocenco, Inc.	AR 100	3190-0
Central States Ind.	CI 100	3609-0

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INTERPRETATION, APPLICATION, AND GUIDELINES
ON ENFORCEMENT OF 30 CFR.

PART 41 NOTIFICATION OF LEGAL IDENTITY

III.41-1 Assignment of Independent Contractor and
Mine Identification Numbers

These are general guidelines for the assignment of new identification numbers and will apply to the majority of operations. Individual circumstances may arise where district personnel will have to decide on a case-by-case basis whether operations are related or independent for the purpose of assigning identification numbers.

When assigning a new mine identification number, a check should be made to ensure that the number is being assigned to a new mine and not an existing mine that has only undergone a change of ownership, name, or status.

Preparation or milling plants that receive material from only one underground or surface mine, and are located on the same property as that mine, shall share the mine's identification number and shall not be assigned a separate number. Preparation or milling plants that share mine property with a surface or underground mine, but process material from other mines, are to be given separate identification numbers. Preparation or milling plants that are not located on the same property as a surface or underground mine are considered to be centrally located facilities and are to have separate identification numbers.

Each underground mine and each surface mine shall have separate identification numbers. However, a new mine identification number must not be assigned to a mine going from surface to underground mining, or vice versa.

For independent contractors: The last paragraph of Section 45.3 of this volume stipulates that "Each independent contractor who has an identification number uses it on all job sites." This means that each independent contractor is assigned only one identification number to be used on any and all job sites.

III.41-2 Portable Operations

When a mine operator has a portable plant which operates in several different locations, the mine identification number is to be assigned to the plant only and not to the pit. Mine

operators will need to submit only one legal identification form for each portable plant. Quarterly employment information will be reported on one Form 7000-2, regardless of the number of pits the plant may operate during the quarter. For administrative purposes, the portable plant will be given one permanent mine name (for example, ABC Plant #1) even though it might be operating in different locations during the course of the year. The operator will use the home office address on the legal identification form. This will be the address for all MSHA-related correspondence.

Consistent with other surface mining entities, the portable plant will receive inspections in accordance with the statutory schedule. Such inspections are expected to occur at locations where the portable plant is functioning.

Metal and nonmetal operators of portable plants should be reminded that 30 CFR 56.1000 requires notification to MSHA when a move is made from one pit to another. Since a number of the portable plants may move from the jurisdiction of one MSHA field office, subdistrict or district to another, it is important that MSHA personnel keep the receiving office advised of the location of the plant.

42.10 Tuition Fees

The Academy will charge tuition fees to all persons attending Academy courses except employees of Federal, State, or local governments and persons attending the Academy under a program supported through an MSHA state grant.

42.50 Charges for Room and Board

The Academy will charge room and board to all persons staying at the Academy except MSHA personnel, other personnel performing a direct service for MSHA, and persons attending the Academy under a program supported through an MSHA state grant.

Fees may be waived for government and other organizations with direct involvement in mine health and safety. MSHA will waive tuition fees and room and board charges for up to 10 days per calendar year for mine rescue team members participating in team training activities at the Academy. The waiver is available only for team training activities. Waivers are not available for events such as local contests or rule interpretation meetings attended by mine rescue teams. Requests for waiver of fees and/or room and board charges must be made in advance and in writing.

Requests for group waivers will be approved by the Director of Educational Policy and Development and should be addressed to:

Director of Educational Policy and Development
Mine Safety and Health Administration
1100 Wilson Boulevard
Arlington, VA 22209-3939

Requests for individual waivers will be approved by the Superintendent of the Academy and should be addressed to:

Superintendent
National Mine Health and Safety Academy
1301 Airport Road
Beaver, WV 25813-9426

Persons staying at the Academy may have their spouses and immediate family as guests providing all appropriate fees are paid upon arrival. All guests are expected to obey Federal and Academy rules concerning use of Federal facilities and safety and health precautions. Children 12 years and under must be accompanied by an adult at all times. Advance reservations are required. MSHA's need for dormitory rooms will always take

precedence over guest occupancy even when advance reservations have been made. However, the Academy will strive to provide prior notice of a room shortage and assist, if feasible, in making alternate arrangements.

The fee schedule for lodging is recalculated each year and is based on MSHA's actual costs for housekeeping, maid services, laundry, security, recreation, utilities, maintenance, registration, and direct staff support. The current fee schedule may be obtained by calling (304) 256-3280.

Charges for guest accommodations will be determined based on the following:

Guests of MSHA Temporary Residents

When the temporary resident's room is paid by the Agency, adult guests and children over 12 will be charged the difference between the single and double rate. Children 12 and under stay at no cost.

Guests of Non-MSHA Temporary Residents

Temporary residents will be charged the double room rate when they share the room with an adult guest or child over 12 years. Children 12 years and under stay at no cost. All students wishing to reserve a separate dormitory room for a guest at the Academy must prepay the charge for the guest's first night.

The deposit for the first night will be retained if the guest does not arrive. If the Academy is notified in time for the room to be filled, the deposit will not be retained. The deposit will be returned in full if due to an Agency exigency, MSHA cancels the program or class.

Educational Policy and Development (EPD) gives first priority for use of all facilities at the Academy to mission-related, MSHA sponsored activities. The Academy will continue to permit other organizations who meet Agency guidelines to use the Academy meeting and residence facilities during times not reserved by priority clients. Every effort will be made to accommodate all parties. However, if an MSHA organization notifies the Academy of its desire to use meeting and residence facilities more than 60 days in advance, and that request conflicts with an existing non-MSHA sponsored group's reservation, EPD will require non-MSHA parties to relinquish meeting and residence space sufficient to accommodate MSHA's needs. When this occurs, outside accommodations will not be paid for by EPD.

In addition, the Academy will set aside a limited number of dormitory rooms on a continuous basis for exclusive use of MSHA personnel who are attending emergency meetings, or who are traveling to the Academy on other types of official business. If the number of rooms available is insufficient, MSHA personnel will be required to find outside accommodations. Outside accommodations will not be paid for by EPD. Unless otherwise notified, meeting facilities will remain available at the Academy.

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**PART 43 PROCEDURES FOR PROCESSING HAZARDOUS CONDITIONS
COMPLAINTS**

III.43-1 Processing Hazardous Conditions Complaints
Section 103(g) (1) of the Mine Act stipulates procedures and requirements for a representative of the miners, or a miner, to request an immediate inspection of a mine if there are reasonable grounds to believe that a violation of a mandatory standard or an imminent danger exists in the mine. Under Section 103(g) (1), the notice must be in writing, signed by the representative of miners, or a miner, and a copy must be given to the operator by MSHA in a manner that withholds the identity of the person giving, or involved in, the notice. MSHA instructions and regulations, under 30 CFR Part 43, exist for responding to such notices received under Section 103(g) (1), or by code-a-phone messages. These instructions and regulations also address MSHA response to a notice of alleged violation or imminent danger given under Section 103(g) (2). These requests or notices have normally been investigated and handled in an expeditious manner.

A different situation exists when an inspector receives information about violations or hazards in a mine, and the information is given in an informal manner that does not meet the requirements of Sections 103(g) (1) or 103(g) (2) in that the notice is not in writing. In these situations, the inspector receiving the information must evaluate and determine a course of action, which in some cases may result in an immediate inspection, but in other cases may not.

Inspectors should be willing to listen to all interested parties alleging violations, imminent dangers or hazards. Otherwise, the trust and cooperation that are the foundation of an effective safety effort will not be maintained. Depending upon the circumstances, the inspector may make an immediate inspection, or may incorporate the area or practices into his or her inspection schedule for attention at a later date. Likewise, the inspector may determine that the area in question has been inspected since the alleged occurrence and, consequently, the situation does not warrant further investigation. Any subsequent action by an inspector on information received outside the context of Section 103(g) should not be considered a 103(g) inspection; therefore, the procedures of Part 43 would not apply.

Information received about violations or hazardous conditions should be brought to the attention of the mine operator without disclosing the identity of the person(s) providing the information.

Furthermore, any written notification of an alleged violation or of an imminent danger received from a miner at a mine shall receive the same consideration and attention as that of a notification received from a representative of miners.

If a 103(g) complaint is received, and if it is determined that a special inspection is not warranted, a written notice of such determination shall be issued as soon as possible to the representative of the miner(s) or to the complainant.

If a special inspection is conducted, the MSHA inspector will notify the operator of the complaint pursuant to 30 CFR 43.4(c), but the inspector must not divulge to the operator the name of the complainant or the names of any individuals referred to in the complaint.

If the inspector finds that the alleged violation or danger exists, he or she shall issue the proper citation(s) or order(s). However, if, before leaving the mine, the inspector finds that no violation(s) or imminent danger connected with the complaint exists, he/she shall verbally convey this finding both to appropriate company and union officials. In addition, upon completion of a 103(g)(1) inspection in which a negative finding of violation is made, the inspector shall provide written notification of that fact to the operator and to the representative of miners or to the miner, before the inspector leaves the mine property. This notification will be written in longhand on the appropriate MSHA form. Any violation observed that does not specifically relate to the complaint shall be so identified in the investigation report.

Where the representative of miners or the miner invokes the procedures in Part 43, but disagrees with the inspector's conclusion(s), including, for example, the inspector's failure to issue an "unwarrantable" citation or order, the review procedures in Section 43.7 may be utilized.

43.7 Informal Review

Where a written complaint under Section 103(g) of the Act has been submitted to MSHA, and the authorized representative refuses to issue a citation with respect to the alleged violation or imminent danger, the representative of miners or the miner may obtain review of the refusal in accordance with the procedures outlined in 30 CFR Section 43.7(b).

This informal review procedure also applies to complaints by representatives of miners or miners for failure on the part of the authorized representative to issue a 104(d) "unwarrantable" citation or order, even though a 104(a) citation or order was issued.

After receipt of the written request for review, the district manager will follow the procedures in 30 CFR 43.7(c) and (d). The district manager's determination in the matter shall be final.

PART 45**INDEPENDENT CONTRACTORS****III.45-1 General Enforcement Policy for Independent Contractors**

MSHA's policy is to issue citations and, where appropriate, orders to independent contractors for violations of applicable provisions of the Act, standards or regulations. This policy is based on the Mine Act's definition of an "operator," which includes "independent contractors performing services or construction" at mines.

MSHA's enforcement policy regarding independent contractors does not change production-operators' basic compliance responsibilities. Production-operators are subject to all provisions of the Act, and to all standards and regulations applicable to their mining operations. This overall compliance responsibility includes assuring compliance by independent contractors with the Act and with applicable standards and regulations. As a result, both independent contractors and production-operators are responsible for compliance with all applicable provisions of the Act, standards and regulations.

This "overlapping" compliance responsibility means that there may be circumstances in which it is appropriate to issue citations or orders to both the independent contractor and to the production-operator for a violation. Enforcement action against a production-operator for a violation(s) involving an independent contractor is normally appropriate in any of the following situations: (1) when the production-operator has contributed by either an act or by an omission to the occurrence of a violation in the course of an independent contractor's work; (2) when the production-operator has contributed by either an act or omission to the continued existence of a violation committed by an independent contractor; (3) when the production-operator's miners are exposed to the hazard; or (4) when the production-operator has control over the condition that needs abatement. In addition, the production-operator may be required to assure continued compliance with standards and regulations applicable to an independent contractor at the mine.

Inspectors should cite independent contractors for violations committed by the contractor or by its employees. Whether

particular provisions apply to independent contractors or to the work they are performing will be apparent in most instances. However, some provisions of the Act, standards or regulations may not be directly applicable to independent contractors or their work; or independent contractor compliance with certain standards or regulations may duplicate the production-operator's compliance efforts. As questions regarding such matters arise, the inspector's supervisor shall contact the district manager, who shall consult with the Administrator's Office.

The following guidelines cover the responsibility of independent contractors for compliance with 30 CFR Parts 41, 48 and 50.

1. Filing of Legal Identity Reports Under 30 CFR Part 41
Independent contractors working at mines are not required to file legal identity reports under Part 41. Procedures for the identification of independent contractors are explained below under 45.3, MSHA Identification of Independent Contractors.
2. Training of Independent Contractors and Their Employees Under 30 CFR Part 48
 - a. Construction Workers
See Part 48 in this Manual, Paragraphs 48.2(a)(1)/48.22(a)(1) - "Miner."
 - b. Comprehensive and Hazard Training
See Part 48 in this Manual.
 - c. Production of Training Records
Independent contractors required to provide training are also required to promptly produce training records to show that training has been provided. The location where the records are maintained, such as at a mine site, or at the contractor's office, is up to the independent contractor.
 - d. Enforcement Action for Training Violations
 - 1) General
An order should be issued under Section 104(g) of the Act to the direct employer of

any miner who has not received the required training under Part 48. This means that a 104(g) order should be issued to the independent contractor for any persons who are directly employed by the independent contractor and who are not properly trained. Similarly, a 104(g) order should be issued to the production-operator for any untrained persons directly employed by the production-operator. See also Item 3), below. In addition, it is the policy of Coal Mine Safety and Health to issue a corresponding citation to the independent contractor or production operator for failure to provide the miner with the requisite training.

- 2) Violations Involving Production-Operators
Each production-operator is required to have an approved training plan under Part 48 and to comply with the provisions of that plan in training each of the miners it employs. As discussed in Item 3), below, where it cannot be determined who employs an untrained person, the production-operator should be issued a 104(g) order for that person.
- 3) Violations Involving Independent Contractors
Independent contractors are not required to have an approved training plan under Part 48. However, as discussed, independent contractors and their employees must be trained in accordance with Part 48. Independent contractors may comply with the training requirements by either making arrangements to have their employees trained under an existing approved training plan and program, or by filing and adopting their own approved training plan.

In either event, the independent contractor should be issued a 104(g) order for any of his/her employees who are not trained in accordance with a plan approved under Part

48. Care should be taken when issuing a 104(g) order to an independent contractor when several contractors or subcontractors are present at the mine. The inspector must be sure that the untrained person is directly employed by the independent contractor to whom the 104(g) order is issued. If it cannot be determined who employs the untrained person, the production-operator should be issued the 104(g) order.

The foregoing enforcement guidelines for 30 CFR Part 48 are consistent with the training standard's purpose to assure that all persons at mines are effectively trained in matters affecting their health and safety, thereby reducing the number and severity of injuries.

These guidelines recognize that not all independent contractors are able to practically implement their own Part 48 training programs. Accordingly, independent contractors may comply with the training requirements in the manner most suitable for their size and type of business by making arrangements to have their employees trained under an existing approved plan or by filing and adopting their own approved plans.

3. Notification, Investigation, Reporting and Recordkeeping Requirements Under 30 CFR Part 50

Independent contractors working at mines are required to comply with all provisions of Part 50 pertaining to their employees. In order to assure accurate reporting and recordkeeping and to avoid duplication, it is important that production-operators and their independent contractors carefully coordinate their Part 50 responsibilities.

For detailed information on the reporting responsibilities and obligations of independent contractors, see Part 50 in this Manual.

45.2(c) Definition of Independent Contractor

The Mine Act defines an independent contractor as "any person, partnership, corporation, subsidiary of a corporation, firm, association or other organization that contracts to perform services or construction at a mine." If the "person,

partnership, ... or other organization" contracts for the production of a mineral, the "person, partnership, ... or other organization" is classified as a mine operator, and it is required to file a Legal Identity Report. In addition, it will be assigned a mine identification number, and it is subject to all requirements applicable to a mine operator.

45.3 MSHA Identification of Independent Contractors

Any independent contractor that requests an identification number will receive one from MSHA. However, unless cited for a violation, only those independent contractors performing work at mine sites, or with contracts to perform at a mine(s) any of the nine types of services or construction listed below, are required by MSHA to have identification numbers:

1. Mine development, including shaft and slope sinking;
2. Construction or reconstruction of mine facilities; including building or rebuilding preparation plants and mining equipment, and building additions to existing facilities;
3. Demolition of mine facilities;
4. Construction of dams;
5. Excavation or earthmoving activities involving mobile equipment;
6. Equipment installation, such as crushers and mills;
7. Equipment service or repair of equipment on mine property for a period exceeding five consecutive days at a particular mine;
8. Material handling within mine property; including haulage of coal, ore, refuse, etc., unless for the sole purpose of direct removal from or delivery to mine property; and
9. Drilling and blasting.

MSHA does not require independent contractors to have identification numbers as a precondition to bidding for work contracts on mine property. If an independent contractor becomes a successful bidder and if the contract to be performed covers any of the nine types of service or construction listed above, the contractor must obtain an identification number.

MSHA identification numbers have no effect on the compliance responsibility of either the mine operator or the independent contractor. Mine operators have compliance responsibility for all activities at the mine, regardless of whether or not the independent contractor in question has an MSHA identification number. The mine operator's overall compliance responsibility includes assuring each independent contractor's compliance with the Act and with MSHA's standards and regulations. Independent contractors are responsible for compliance with applicable provisions of the Act, standards and regulations, regardless of whether or not they have an MSHA identification number.

Whenever an independent contractor submits a written request for an identification number, the contractor must furnish the information listed under 30 CFR 45.3(a). If an independent contractor cited for a violation does not have an MSHA identification number, the inspector should obtain the information required by 30 CFR 45.3(a) from the independent contractor. Information required under 30 CFR 45.3(a)(1), (2) and (3) may also be obtained from the production-operator (see 30 CFR 45.4(b)).

Each independent contractor who has an identification number uses it on all job sites. In the event of a change in ownership (but same trade name), a new identification number should be assigned. This means that each independent contractor is assigned only one identification number to be used on any and all job sites.

45.4 Independent Contractor Register

30 CFR 45.4(a) requires independent contractors to provide production-operators with minimal information necessary to the conduct of an MSHA inspection. 30 CFR 45.4(b) requires production-operators to maintain this information in written form at the mine, and to make the information available to an inspector upon request.

In order to accomplish this purpose, both the independent contractor and the production-operator have responsibilities under Section 45.4(a). In the event that an independent contractor refuses to provide the production-operator with the necessary information, the contractor is subject to citation for failure to comply with Section 45.4(a). In addition, if a production-operator refuses to make the necessary information available to the inspector, he or she is subject to citation for violation of Section 45.4(b).

However, there may be instances where the information required by Section 45.4 is not immediately available due to an inadvertent omission which is quickly corrected. For example, where contracts are kept at the mine's central or headquarters office, and a particular independent contractor has begun work on the mine property without the knowledge of the local mine, the inspector should consider all factors relevant to the particular case. If the necessary information can be secured in a reasonable time, no violation for failure to keep an accurate register should be found to exist.

In all cases, it should be kept in mind that Section 45.4 is intended to give the inspector sufficient information so that a fair and efficient inspection can be made. If that information promptly is made available to the inspector so that this goal can be accomplished, then there is no violation of Section 45.4.

PART 46 Training and Retraining of Miners Engaged in Shell Dredging or Employed at Sand, Gravel, Surface Stone, Surface Clay, Colloidal Phosphate, or Surface Limestone Mines

III 46.1 Scope

General

Section 115 of the Federal Mine Safety and Health Act of 1977 (Mine Act) and 30 CFR Part 46 require operators to have an approved training plan under which miners are provided training. Part 46 training plans are considered "approved" if they contain, at a minimum, the information listed in § 46.3(b). Plans that do not contain the minimum information listed in § 46.3(b) must be submitted to MSHA for approval.

Compliance Responsibility

Each mine operator is responsible for complying with all applicable provisions of Part 46. Therefore, operators are required to provide all required miner training.

Independent contractors working on mine property must comply with the requirements of Part 46 (see "§ 46.12 Responsibility for Independent Contractor Training"). This includes developing their own training plan that meets the minimum requirements of Part 46 and providing appropriate training.

Industries Affected by Part 46

Part 46 applies to miners working at surface shell dredging, sand, gravel, surface stone, surface clay, colloidal phosphate, surface limestone, marble, granite, sandstone, slate, shale, traprock, kaolin, cement, feldspar, and lime mines.

Surface Areas of Underground Mines

Underground mines and their surface areas are covered by Part 48. The Part 46 regulations do not apply to training for miners who work at surface areas of underground mines. Miners who work in such areas must continue to receive training that complies with the Part 48 training regulations.

Government Officials on Part 46 Properties

Government officials visiting a mine site are not required to receive Part 46 training. However, MSHA expects those government agencies whose personnel visit mine sites will ensure that their employees are provided with appropriate personal protective equipment, and receive adequate instruction and training. Where training is not provided, such government officials should be accompanied by an experienced miner.

Satisfying both Part 46 and Part 48 requirements

MSHA will allow independent contractors who work at both Part 46 and Part 48 surface mining operations to comply with the training requirements of Part 48, instead of complying with both training rules. This will eliminate the need for developing two training plans and complying with two record-keeping requirements. These contractors may choose to comply with the New Miner, Experienced Miner, Task, and Annual Refresher Training programs of Part 48 to satisfy the training requirements for both regulations. Independent contractors who choose to follow this policy must have their own Part 48 training plan approved by MSHA.

Part 46 defines construction workers who are exposed to hazards of mining operations as miners. Independent contractors that perform construction work on Part 46 properties may train under their own approved Part 48 training plan to satisfy the Part 46 requirement for training construction workers who are exposed to hazards of mining operations.

Operators, at Part 46 operations, remain responsible for ensuring that Site-specific Hazard Awareness Training (§ 46.11) is provided to these contractors.

46.2 Definitions46.2(b) "Competent Person"

Part 46 does not require that "competent persons" be approved by MSHA. A "competent person," is a person who is designated by the production-operator or independent contractor who has the ability, training, knowledge, or experience to provide training to miners in his or her area of expertise. The competent person must be able to effectively communicate the training subject to miners, and evaluate whether the training given to miners is effective.

A competent person may be credited for receiving any training they provide toward their own training requirements.

46.2(c) "Equivalent Experience"

"Equivalent experience" is defined in Part 46 as work experience where the person performed duties similar to duties performed in mining operations at surface mines. "Equivalent experience" includes such things as working at a construction site or other types of jobs where the miner has duties similar to the duties at the mine. These duties could include working as a heavy equipment operator, truck driver on a highway construction site, skilled craftsman, or plant operator.

To determine equivalent experience, production-operators and independent contractors must evaluate the work history of newly-hired employees in determining whether the employees are "experienced" miners. This determination is subject to review by MSHA as part of our verification that production-operators and independent contractors have complied with the training requirements of Part 46.

46.2(d) "Experienced Miner"

Part 46 lists four ways to become an experienced miner.

1. Employed as a miner on April 14, 1999; or
2. Twelve months of cumulative surface mining or equivalent experience on or before October 2, 2000; or
3. Began employment as a miner after April 14, 1999, but before October 2, 2000 and who has received new miner training under § 48.25 or under the proposed requirements published April 14, 1999; or
4. Employed as a miner on or after October 2, 2000 and completed 24 hours of new miner training under § 46.5 or under § 48.25 and has at least 12 cumulative months of surface mining or equivalent experience.

Once a miner has received new miner training under Part 46 or Part 48 and has accumulated 12 months of mining experience within 36 months of receiving new miner training, MSHA considers that miner to be experienced for life for training purposes at all Part 46 mines.

46.2(g) "Miner"

A miner is a person, including any operator or supervisor, who works at a mine and who is engaged in mining operations. This definition includes independent contractors and employees of independent contractors who are engaged in mining operations; and construction workers who are exposed to hazards of mining operations for frequent or extended periods.

The definition of "miner" does not include scientific workers; delivery workers; customers (including commercial over-the-road truck drivers); vendors; or visitors.

Commercial over the road truck drivers are required to have Site-specific Hazard Awareness Training. Part 46 affords operators the discretion to tailor Site-specific Hazard Awareness Training to the unique operations and conditions

at their mines. However, the training must in all cases be sufficient to alert affected persons to site-specific hazards. Under Part 46, Hazard Awareness training is intended to be appropriate for the individual who is receiving it and that the breadth and depth of training vary depending on the skills, background, and job duties of the recipient.

This definition of "miner" also does not include maintenance or service workers who do not work at a mine site for frequent or extended periods.

"Frequent" exposure is defined as a pattern of exposure to hazards at mining operations occurring intermittently and repeatedly over time. **"Extended"** exposure means exposure to hazards at mining operations of more than five consecutive work days.

46.2(h) "Mining Operations"

Mining operations means mine development, drilling, blasting, extraction, milling, crushing, screening, or sizing of minerals at a mine; maintenance and repair of mining equipment; and associated haulage of materials **within** the mine from these activities.

46.2(k) "Normal Work Hours"

Normal working hours is defined as "a period of time during which a miner is otherwise scheduled to work." For example, if miners on occasion work on Saturday, they can be trained on Saturday. Part 46 also requires that miners who are being trained be paid at a rate of pay they would have received had they been performing their normal work tasks.

46.3 "Training Plans"

All mining operations which fall under Part 46 must develop and implement a written training plan. Independent contractors who employ "miners" are also primarily responsible for providing comprehensive training to their employees. This requires independent contractors to develop a training plan containing effective programs for providing this training. If arrangements are made to receive training from the production-operator, it must be indicated in the independent contractor's training plan.

A training plan can be used for more than one mine. The plan must list all mine names and MSHA mine identification numbers and must cover all the appropriate training requirements, including Site-specific Hazard Awareness Training, at each mine listed on the plan.

A training plan is considered approved by MSHA if it contains, at a minimum, the following information:

1. The name of the production-operator or independent contractor, mine name(s), and MSHA mine identification number(s) or independent contractor identification number(s).

MSHA does not require independent contractors to get an MSHA identification number for purposes of Part 46. However, if an independent contractor wants to obtain an MSHA identification number, please contact the local MSHA district office, or to file online go to the MSHA Internet Home Page (www.msha.gov) and click on the tab titled "Forms & On-line Filings."

2. The name and position of the person designated by the operator who is responsible for the health and safety training at the mine. This person may be the production-operator or independent contractor.

Some operators, particularly those that operate large facilities, may want the flexibility of having more than one person who can certify that training has been completed. These operators may list more than one person as being responsible for training.

3. A general description of the teaching methods and the course materials that are to be used in the training program, including the subject areas to be covered and the approximate time or range of time to be spent on each subject area.

"Approximate time" means the operator's reasonable estimate of the amount of time that will be spent on a particular subject. For example, the time listed for a particular subject may be "approximately 3 hours," recognizing that when the training is actually given it may require more or less time than is indicated in the training plan. This flexibility allows for adjustments based on changing mine conditions or operations, including the needs and experience of the individuals who receive the training.

When a range of time is used for each subject, the maximum times listed for each subject must be equal to or exceed the required hours for new miner (24) and annual refresher (8) training as required by the regulation. When stating a range it cannot start with a zero.

Remember: In all cases a miner must receive no less than 24 hours of new miner training and 8 hours of annual

refresher training annually.

4. A list of the persons and/or organizations that will provide the training, and the subject areas in which each person and/or organization is competent to instruct.

The training plan must include all "competent persons" who will instruct in all subjects, including the name of the person who will provide only one type of task training. It is acceptable to indicate the names of several potential instructors for one subject or course, where the operator may call on one of several competent persons to provide the training.

While it is acceptable to list the organizations who will instruct on the training plan, the certificates of training must list the specific competent person's name who provides the training.

5. The evaluation procedures used to determine the effectiveness of training.

Part 46 does not require a specific evaluation method. Instead the rule allows you to select the method that will best determine if training has been effective. Possible evaluation methods include administering written or oral tests, or a demonstration by the miner that he or she can perform all required duties or tasks in a safe and healthful manner.

In addition, periodic work observations can be used to identify areas where additional training may be needed and such observations, along with feedback from the miners, could be used to modify and enhance the training program.

If MSHA discovers that a plan does not meet the minimum requirements of Part 46 one of two actions must be taken.

1) The operator can amend the plan to comply with the requirements of Part 46.3(b) or

2) If you want to conduct training in accordance with the plan that does not meet the minimum information specified in § 46.3(b), the plan must be submitted and approved by the Regional Manager, Educational Field Services Division, for the region in which the mine is located. Until the plan is approved no training can be conducted under the plan. Their addresses are:

Eastern Regional Manager
Educational Field Services
National Mine Health and
Safety Academy
1301 Airport Road

Beaver, WV 25813-9426
Telephone: (304) 256-3223
FAX: (304) 256-3319
E-mail: [zzMSHA-EPD - EFS East
Group](mailto:zzMSHA-EPD - EFS East Group)

Western Regional Manager
Educational Field Services
P.O. Box 25367
Denver, CO 80225-0367
Telephone: (303) 231-5434
FAX: (304) 231-5474
E-mail: [zzMSHA-EPD - EFS West
Group](mailto:zzMSHA-EPD - EFS West Group)

A plan may also be voluntarily submitted to one of the Regional Managers for approval. MSHA has developed an online program to assist in developing a Part 46 training plan. The following link will open up the MSHA online advisor.

<http://www.msha.gov/forms/pt48train.htm>

Two weeks prior to implementing a new or revised plan, a copy of the plan must be provided to the miners' representative, if any. At mines where no miners' representative has been designated, the plan must be posted or provided to each miner at least 2 weeks before you implement the plan or submit it to the Regional Manager for approval.

If the competent person listed in the approved training plan cannot provide the training, and the training is scheduled within 2 weeks, the operator may substitute an unlisted competent person for the listed competent person without the 2 week advance notice, provided that the operator informs all miners to be trained and their representatives prior to substituting the competent person, and provided that no miners or their representatives object to the substitution.

Availability of Training Plan

Section 46.3(i) requires a copy of the training plan to be produced within one business day of a request by MSHA or the

miners or their representatives. The following example explains our policy for one business day.

If MSHA requests that an operator produce a training plan for examination on Tuesday at 1:00 p.m., the deadline for producing the plan would be 1:00 p.m. on Wednesday. If MSHA requests that an operator produce a plan at 2:00 p.m. on Friday at a mine that does not operate over the weekend, the deadline for producing the plan would be 2:00 p.m. on Monday.

46.4 "Training Plan Implementation"

46.4(a)(3) "Presented in language understood by the miners"

Training received by miners in Part 46 must be presented in a language they understand. In addition, if warning signs at the mine serve as a component of the Site-specific Hazard Awareness Training, the signs must be in a language or languages that are understood by the persons who come onto the mine site.

If a competent person is providing training to a group, and some individuals are not fluent in English, it is permissible to use a person who is not a competent person as a translator. When using a translator, the operator or contractor should ensure the translator has the ability to translate the information accurately and completely. Further, the translator should be familiar with the subject and terminology in the language being translated, not just in English.

46.4(c) "Crediting Training"

Health and safety training required by OSHA or other federal or state agencies may be credited to meet Part 46 requirements. The training must be relevant to the subjects required under Part 46, and documented accordingly.

Computer-Based Training

MSHA considers computer based or other interactive training technologies to be training "methods," to be used by a competent person effectively and appropriately. This would not necessarily require that the competent person be in the room at all times; however, the competent person must be available to evaluate the trainee's progress, and answer questions as they arise.

46.5 "New Miner Training"

A person who is beginning employment as a miner with a production-operator or independent contractor and who is not an experienced miner as defined in definitions under "Experienced Miner," is a new miner for training purposes.

A miner who has less than 12 cumulative months of surface mining or equivalent experience who has completed New Miner Training under Part 46 or Part 48 Subpart B, within 36 months before beginning work at a mine does not have to repeat new miner training (§ 46.5(f)). However, this miner must receive 4 hours of training covering the 7 initial subjects listed in § 46.5 (b).

For example, a miner completes 24 hours of New Miner Training and leaves the mine after working 6 months. The miner then begins work at another mine 6 months later or 12 months since receiving New Miner Training. Since the miner has not fulfilled the 12 months of mining or equivalent experience and begins work at another mine within 36 months, the miner must receive 4 hours of training in the 7 initial subjects listed in § 46.5 (b) before going to work.

Close Observation

Section 46.5(e) requires that new miners be under the "close observation" of a competent person when practicing as part of the health and safety aspects of an assigned task. "Close observation" means that the competent person must have the ability to observe a new miner's work practices during task training ensuring the miner is not jeopardizing his or her own health and safety or that of others. This does not mean that the competent person must completely abandon his or her normal duties, as long as the competent person can adequately monitor the work practice. However, in some situations, the competent person may have to cease normal work duties to ensure that this performance-based standard is met.

If the training for a specific task is completed, the miner no longer needs to be under the close observation of a competent person. However, since the miner has not completed the 24 hours of "New Miner Training," the miner is required to work where an experienced miner can observe his or her work practices until the 24 hours of training is completed.

A competent person may not be able in some instances to ride on a piece of mobile equipment with the trainee. When available, the passenger seat is the best location for a competent person providing training to a miner in safe operation of the equipment. However, when a passenger seat is not available, the competent person should be positioned in a safe location in close proximity to the equipment being operated. The competent person should closely observe and monitor the miner's actions from that location.

Hands-on Training

Hands-on training can be counted toward the training required for miners under § 46.5 and § 46.6. Part 46 allows practice under the "close observation of a competent person" to be used to fulfill the requirements for training on the health and safety aspects of assigned tasks required for new miners under § 46.5(b)(4) and newly hired experienced miners under § 46.6(b)(4). The time spent in training may be used to fulfill the training requirements as outlined in the training plan.

Location of Independent Contractor Training

Independent contractors with employees that are required to have 24 hours of new miner training under Part 46 are not required to provide this training on the mine property where their employees will be working. However, when an employee of an independent contractor goes to a mine site, he or she must receive appropriate Site-specific Hazard Awareness Training applicable to the miner's exposure to mine hazards (remember, independent contractors who have received New Miner Training, must also be current with their Annual Refresher Training requirements before working on a mine property).

This Site-specific Hazard Awareness Training could include site-specific health and safety risks, such as geologic or environmental conditions, recognition and avoidance of hazards such as electrical and powered haulage hazards, traffic patterns and control, and restricted areas; and warning and evacuation signals, evacuation and emergency procedures, or other special safety procedures.

46.6 "Newly Hired Experienced Miner Training"

Part 46 does not specify a minimum length of time that must be devoted to this training. The duration of the training needed by a newly hired experienced miner depends on the occupational experience of the miner, the work duties that the miner will perform, and the methods of mining and workplace conditions at the mine where the miner will be working. Except as explained below, the seven subjects listed in § 46.6(b) must be covered before assigning the miner to work.

A newly hired experienced miner who returns to the same mine, following an absence of 12 months or less, is not required to receive the Experienced Miner Training under § 46(b) and (c). Instead the miner must be provided with training on any changes at the mine that occurred during the miner's absence that could adversely affect the miner's health or safety. This training must be given before the miner begins work at the mine. If the miner missed any part of annual refresher training under § 46.8

during the absence, the miner must be provided the missed training no later than 90 calendar days after the returning miner begins work at the mine.

There are no specific requirements for tracking, recording or verifying the accumulation of experience. It is the operator's responsibility to determine the miner's experience based on the miner's work and training history.

When hiring a new experienced miner, Part 46 does not require any specific proof of experience or documentation. However, a reasonable effort should be made to justify previous experience. This may include talking to previous employers, reviewing a resume, pay records, training records, etc.

Experienced miners, who are current with their annual refresher training and the appropriate task training and who move from one mine site to another but remain employed by the same production-operator or independent contractor, are required to receive Site-specific Hazard Awareness Training at each mine where they work.

46.7 New Task Training

Part 46 does not specify the amount of time that must be spent on task training. The performance-oriented approach of Part 46 allows for the needs of individual miners to be taken into account when determining the amount of time. A reasonable amount of time must be allotted for training in each task, based on the individual needs of the miner and the complexity of the assigned task.

If an experienced miner is trained on a specific piece of equipment and is then assigned to operate a similar piece of equipment that is a different model or made by a different manufacturer, that miner is required to receive new task training on the new piece of equipment. Although there may be similarities among different types of equipment, each type of equipment has unique operational characteristics. Miners must be trained on the unique characteristics of each piece of equipment that they are assigned to operate.

Under Part 46 the written training plan must address each task for which training will be conducted. The training plan must include a general description of the teaching methods, course materials, evaluation methods and competent person(s) who will conduct the training. Additionally, the plan must list the approximate time or range of time to be spent on each task training.

The time spent conducting each type of task training must be recorded and listed on the certificate of training form. A "record" of task training must be made at the completion of new task training. New task training records must be "certified" at least once every 12 months or upon request by the miner.

Task training can be a part of new miner training. Although it has a slightly different name, new miners must receive instruction on the health and safety aspects of the tasks to be assigned, including the safe work procedures of such tasks, and the mandatory health and safety standards pertinent to such tasks.

Hands-on training can be used to complete task training. The regulation provides that; "practice under the close observation of a competent person may be used to fulfill the requirement for task training." While training under close observation may be done in a production mode, emphasis should be placed on the training and not the production.

46.8 Annual Refresher Training

Section 46.8 requires that annual refresher training include instruction on changes at the mine that could adversely affect the miners' health or safety. In addition, refresher training must also address other health and safety subjects that are relevant to mining operations at the mine. Section 46.8 includes an extensive list of recommended subjects for refresher training. The flexibility of the performance-based approach of Part 46 allows production-operators and independent contractors to determine the subjects to be covered in annual refresher training based on the needs of their workforce and their operations.

In the regulation, the section on annual refresher training lists recommended subjects that could be included in the training. It is not acceptable to list all these subjects on the training plan and choose different subjects from year-to-year. The training plan needs to accurately represent each subject which you plan to cover during annual refresher training.

As a reminder, if this list is modified, the miners' representative, if any, must be provided with a copy of the plan at least 2 weeks before the plan is implemented. If no miners' representative has been designated, post a copy of the plan at the mine or provide a copy to each miner at least 2 weeks before the plan is implemented.

Annual Refresher Training Anniversary Dates

Annual refresher training anniversary dates are tracked monthly. For example, if a miner completed annual refresher training some time in February, the next annual refresher training must be completed by the end of the following February.

46.9 Records of Training

Part 46 requires that operators record and certify the training that miners receive. Recording means creating a written record of the training. The record must include:

- the full name of the person trained;
- the type of training;
- duration of training;
- the date the training was received;
- the name of the competent person who provided the training;
- name of mine or independent contractor;
- MSHA mine identification or independent contractor number (if applicable); and
- location of training (if an institution, the name and address of institution).

Certifying means verifying, by signature, that the training listed on the written record was completed as indicated on the form. Part 46 requires that this certification be done by the person who has been designated by the operator as responsible for health and safety training at the mine and whose name appears on the training plan. Certifying is required at the completion of training, such as at the end of the 24 hours of new miner training.

Training records must be certified at:

- the completion of new miner training;
- the completion of newly hired experienced miner training;
- the completion of the 8 hours of annual refresher training;
- least once every 12 months for new task training or upon request by the miner; and
- the completion of Site-specific Hazard Awareness Training for miners

A training record or certificate may be maintained in any format, provided that it contains the information listed in § 46.9(b). A "Certificate of Training Form" (MSHA Form 5000-23) may also be used. If a MSHA Form 5000-23 is used it must list the competent instructor(s) who conducted the training, the duration of the training and that the training is for Part 46.

MSHA has developed a sample form which can be used. Both the sample form and the MSHA Form 5000-23 are available from MSHA's Internet Home Page (www.msha.gov), from MSHA's Educational Field Services Division, or from MSHA District and Field offices.

Under § 46.9(b), the records of training must include the name of the competent person who provided the training. If more than one competent person provided the training, the names of all persons must be included.

It is acceptable to list more than one miner on a record or certificate of training. Part 46 allows operators flexibility in choosing the appropriate form for records of training, provided that the form used includes the minimum information specified in § 46.9(b)(1) through (b)(5).

The person who has been designated by the operator or independent contractor as responsible for health and safety training is required to certify, by signature, that training has been completed. This should not be confused with the "competent person" who conducts the training. For example, a state, vocational school or cooperative instructor listed in a training plan may conduct the training and be recorded as the competent person for each subject they teach. The person, who is designated as the person responsible for Part 46 as indicated on the training plan, must certify that the training was completed.

Making Records Available to MSHA

A copy of each miner's training records and certificates must be made available for inspection by MSHA and for examination by miners and their representatives. This includes both certified training records and records that have not yet been certified.

Maintaining Training Plans and Records

Operators and contractors must make available for inspection by MSHA and by miners and their representatives training plans, training records and certificates (§ 46.9 (g)). If the training plan, training records or certificates are not physically kept at the mine site, they must be "produced upon request;" such as by having them sent from another location via fax machine or computer. Training plans must be made available within one business day, but training records, and certificates with the signature of the person responsible for health and safety training must be made available before inspection activity at the mine concludes for the day. The reason for the difference is a matter of urgency. If a miner is untrained or improperly trained, it is a hazard to the miner and to other miners.

Training records and certificates must be made available to the inspector at the mine site. The inspector may choose, as a matter of convenience, to inspect the records at the office or location where the records are maintained or have them faxed to an MSHA office for his or her inspection that day.

Training Certificates for People who are not Considered Miners

A record of training is not required for Site-specific Hazard Awareness Training for persons who are not miners under § 46.2.

However, operators must be able to provide evidence to us, upon request, that the training, when applicable, was provided. This evidence may include the training materials used, including appropriate warning signs, written information distributed to persons, or a visitor log book that reflects that Site-specific Hazard Awareness Training has been given.

46.10 Compensation for Training

Training under Part 46 must be conducted during normal working hours, and the miner must receive the same rate of pay he or she would have received if performing normal tasks at that time. For example, if a miner is paid at time and a half for working on Saturday, the miner must be paid at that same rate for receiving training on Saturday.

46.11 Site-specific Hazard Awareness Training

Part 46 provides that Site-specific Hazard Awareness Training may be provided through the use of written hazard warnings, oral instruction, signs and posted warnings, walkaround training, or other appropriate means that alert affected persons to site-specific hazards at the mine. Part 46 allows the flexibility to tailor hazard awareness training to the specific conditions and practices at the mine. In many cases, an effective Site-specific Hazard Awareness Training program will include a combination of different types of training. The training must be sufficient to alert affected persons to site-specific hazards.

Site-specific Hazard Awareness Training is not required for any person who is accompanied at all times by an experienced miner who is familiar with hazards specific to the mine site.

46.12 Responsibility for Independent Contractor Training

Section 46.12(a)(1) establishes that the production-operator has primary responsibility for ensuring that Site-specific Hazard Awareness Training is given to employees of independent contractors, while § 46.12(b)(1) establishes that each independent contractor who employs a miner under this Part has primary responsibility for complying with other required training. MSHA views § 46.12 as a regulatory indication of whom

the agency will cite for training violations under ordinary circumstances. Both the production-operator and the independent contractor share the responsibility that all miners receive all required training, and in extraordinary circumstances, MSHA may determine that both the production-operator and the independent contractor should be held liable for training violations.

Even though the production-operator has primary responsibility for ensuring that Site-specific Hazard Awareness Training is provided, there may be times where it is more practical for the independent contractor to provide the training. Production-operators may provide independent contractors with site-specific hazard awareness information or training materials and arrange for the independent contractors to provide the training to the contractors' employees. Where this arrangement is made, the production-operator must list the independent contractor by name and document in their training plan that the independent contractor identified will be providing Site-specific Hazard Awareness Training. Even under this arrangement, the production-operator is still responsible for ensuring that the appropriate training is provided.

Independent Contractor Training Records

Independent contractors who are miners as defined by Part 46, must make available at the mine site where they are working, a copy of each miner's training certificate for inspection.

PART 48 TRAINING AND RETRAINING OF MINERS48.1/48.21 ScopeGeneral

Section 115 of the Federal Mine Safety and Health Act of 1977 (Mine Act) and 30 CFR Part 48 require operators to submit and obtain approval of training plans under which miners are provided training. The training required by these plans must be provided to miners before they begin work at a mine, or before they receive new work tasks or assignments.

Requirements Related to Hiring and Recall Decisions

When making hiring and recall decisions, mine operators may consider the training persons will need under 30 CFR Part 48 before they begin work. Operators are permitted to require that applicants for employment and laid-off persons obtain this training initially on their own time and at their own expense.

Preemployment training for purposes of Part 48 may be available from cooperative sources, as described in Sections 48.4 and 48.24. If cooperative sources are used, portions of miner training must be mine-specific. Part 48.5 requires that approximately 8 hours of a new miners' underground training be given at the mine site. In addition, training requirements for new and experienced surface miners and experienced underground miners must also be provided mine-specific training. Some examples of these requirements include training in the provisions of the mine roof or ground control and ventilation plans, the use of the self-rescue devices provided at the mine, and the mine transportation and communication systems.

Compliance Responsibility

Each operator is responsible for complying with all applicable provisions of Part 48. Therefore, operators should be prepared to provide all required miner training. This compliance responsibility is not limited by training plans that do not provide for certain training, such as that required for a new miner.

Industries Affected by Part 48

Part 48 applies to coal mines, underground metal and nonmetal mines, surface metal mines, and certain surface nonmetal mines that are not in the following industries: surface stone, surface clay, sand and gravel, surface limestone, colloidal phosphate, and shell dredging mines and other surface operations that produce marble, granite, sandstone, slate, shale, traprock, kaolin, cement, feldspar, and lime. These mining industries must comply with the training requirements of Part 46.

48.2/48.22 Definitions48.2(a)(1)/48.22(a)(1) "Miner"

The determination of whether an individual is classified as a 48.2(a)(1)/48.22(a)(1) "miner" for purposes of comprehensive training or as a 48.2(a)(2)/48.22(a)(2) "miner" for purposes of hazard training must be made on a case-by-case basis. A specific job title does not necessarily determine how the individual is defined; neither does the fact that the worker is physically present on mine property. A determination must be made as to the kind and extent of mining hazard exposure.

Individuals engaged in the extraction or production process, or regularly exposed to mine hazards, or contracted by the operator and regularly exposed to mine hazards, must receive comprehensive training. "Regularly exposed" means either frequent exposure, that is exposure to hazards at the mine on a frequent rather than consecutive day basis (a pattern of recurring exposure), or extended exposure of more than 5 consecutive workdays, or both.

Individuals not engaged in the extraction and production process, not regularly exposed to mine hazards, or inconsequentially exposed to mine hazards must receive the appropriate Sections 48.11/48.31 hazard training.

The training exemption for mining supervisors who are certified in accordance with MSHA-approved state certification requirements under Sections 48.2(a)(1)(ii)/48.22(a)(1)(ii) has been removed. Mining supervisors are now considered to be miners under Part 48 and are required to be trained.

Independent ContractorsA. Coverage and Training Requirements

Independent contractors working at a mine are miners for Part 48 training purposes, except as explained below.

This policy statement does not affect an operator's responsibility to ensure that all miners are appropriately trained. Part 48 requires training prior to performing work in or on mine property. This includes an operator's responsibility to conduct mine-specific training.

This policy does not cover independent contractors who are surface construction workers, or workers involved in underground mine construction work that causes the mine to cease operations. All other independent contractors must receive the appropriate Part 48 training.

Sections 48.2(a)(1) and 48.22(a)(1) define miners including independent contractors who are to receive comprehensive training. Sections 48.2(a)(2) and 48.22(a)(2) define miners including independent contractors who are to receive hazard training.

B. Independent Contractor Training

The appropriate training will be either the comprehensive training (new miner training, experienced miner training, task training, and annual refresher training) or hazard training.

1. Comprehensive Training

Independent contractors must receive comprehensive training if they perform extraction and production work or are regularly exposed to mine hazards.

a. Determination of Appropriate Comprehensive Training

Whether an independent contractor should receive the new miner training (Section 48.5 or 48.25) or the experienced miner training (Section 48.6 or 48.26) depends on whether the miner is an "experienced miner" under Section 48.2(b) or 48.22(b).

b. Extraction and Production

No work time minimum is associated with this provision. Independent contractors who perform extraction and production work must receive the appropriate comprehensive training. "Extraction and production" refers to the process of mining and removal of coal or ore from a mine. This process includes both the mechanical and chemical separating of coal from the surrounding rock and metal or valuable minerals from ore and concentrate; removal and milling of conglomerates or rocks by crushing, screening, or sizing; and haulage associated with these processes.

Short-term independent contractors who perform extraction and production work and have received experienced miner training may, instead of receiving experienced miner training for each subsequent mine, receive hazard training (see Sections 48.2(a)(1)/48.22(a)(1)).

The experienced miner training such contractors receive initially may be largely generic. The training must be of sufficient duration and content to cover the principles of mine safety and health, as well as the types of hazards they

Might encounter at the mines. Thorough hazard training satisfies the mine-specific training through the program approved as part of the approved training plan.

- c. Maintenance or Service Workers Who are Regularly Exposed to Mine Hazards
Independent contractors who are regularly exposed to mine hazards, or who are maintenance or service workers contracted by the operator to work at a mine for frequent or extended periods, must receive comprehensive training. "Regularly exposed" means either frequent exposure, that is exposure to hazards at the mine on a frequent rather than consecutive day basis (a pattern of recurring exposure), or extended exposure of more than 5 consecutive workdays, or both.
- d. Selection of Training Programs
Independent contractors may submit their own training plans and conduct their own MSHA-approved training program, use an MSHA-approved cooperative program, or use the MSHA-approved training program for the mine.

2. Hazard Training

Independent contractors not previously described who are exposed to mine hazards are to receive hazard training under Sections 48.11/48.31.

Independent contractor exposure to hazards varies from situation to situation. Hazard training must be tailored to fit the training needs of the particular contractor. Training these contractors receive must be of sufficient content and duration to thoroughly cover the mine-specific conditions, procedures, and safety devices. Training must include hazards incident to the performance of all job assignments by the contractor at the mine. An experienced miner must accompany independent contractors subject to hazard training at all times while underground (Section 48.11(e)).

Persons Performing Construction Work

Construction work includes the building or demolition of any facility, the building of a major addition to an existing facility, and the assembling of a major piece of new equipment, such as installing a new crusher or the assembling of a major piece of equipment such as a dragline.

A. Underground Mines

If construction work is of a major addition that causes the mine to cease operations, no training is required under Part 48.

However, Part 48 training is required if the:

1. construction work is not of a "major addition which requires the mine to cease operations;" or
2. mine is "operational" (that is, if the mine is producing material or if a regular maintenance shift is ongoing).

B. Surface Mines or Surface Areas of Underground Mines

No training is required under Part 48 if workers are performing construction work.

Persons Performing Maintenance or Repair Work

Maintenance or repair work includes the upkeep or alteration of equipment or facilities. Replacement of a conveyor belt would be considered maintenance or repair.

A person performing maintenance or repair work, whether or not the mine is operational, must receive the appropriate comprehensive or hazard training under Subpart A or B. The type of training depends upon whether the person is regularly exposed to mine hazards.

Miners Performing Work at More Than One Mine

If a miner is based at one mine or at a central shop and periodically works at other mines owned by the operator, the miner must receive comprehensive training under Subparts A and B, as appropriate, supplemented by additional hazard training, as under Section 48.11/48.31, at each of the other mines.

Underground and Surface Miners - Crediting Training

A miner who works in both an underground mine and a surface mine or surface area of an underground mine must have received comprehensive underground and surface training under Subparts A and B. Credit should be allowed for applicable training taken under one subpart to meet requirements of the other subpart.

48.2(a)(2)/48.22(a)(2) "Miner"

For hazard training (Sections 48.11/48.31), a "miner" is a person who is not an extraction and production worker and who is not regularly exposed to mine hazards. "Regularly exposed" means either frequent exposure, that is exposure to hazards at the mine on a frequent rather than consecutive day basis (a pattern of recurring exposure), or extended exposure of more than 5 consecutive workdays, or both.

Miners included within the definition must be accompanied by an experienced miner at all times while underground. The required training should be commensurate with the expected exposure to hazards.

48.2(b)/48.22(b) "Experienced Miner"

Under Section 48.2(b), an "experienced miner" is:

1. a miner who has completed MSHA-approved new miner training for underground miners or training acceptable to MSHA from a State agency and who has had at least 12 months of underground mining experience; or
2. a supervisor who is certified under an MSHA-approved State certification program and who is employed as an underground supervisor on October 6, 1998; or
3. an experienced underground miner on February 3, 1999.

An experienced underground miner on February 3, 1999 includes a miner:

- a. who was employed as an underground miner on October 13, 1978;
- b. who has received 40 hours of new miner training within 12 months prior to February 3, 1999; or
- c. who has had at least 12 months of underground mining experience during the 3 years preceding February 3, 1999.

Under Section 48.22(b), an "experienced miner" is:

1. a miner who has completed MSHA-approved new miner training for surface miners or training acceptable to MSHA from a State agency and who has had at least 12 months of surface mining experience; or
2. a supervisor who is certified under an MSHA-approved State certification program and who is employed as a surface supervisor on October 6, 1998; or
3. an experienced surface miner on February 3, 1999.

An experienced surface miner on February 3, 1999 includes a miner:

- a. who was employed as a surface miner on October 13, 1978;
- b. who has received 24 hours of new miner training within 12 months prior to February 3, 1999; or

- c. who has had at least 12 months of surface mining experience during the 3 years preceding February 3, 1999.

Once a miner has received new miner training and has accumulated 12 months of mining experience, MSHA considers that miner to be experienced for life for training purposes. MSHA also considers miners who are experienced miners under the old rule as described above to be experienced miners for life.

Miners included in any of the above categories need not be provided new miner training. However, experienced miner, annual refresher, and, when appropriate, task training are required.

After receiving new miner training, a miner will need to accumulate 12 months of mining experience to be considered an "experienced miner" for training purposes. If the miner leaves mining before accumulating the 12 months of mining experience and:

- A. less than 36 months has passed since receiving new miner training, the miner must receive experienced miner training before starting work.
- B. more than 36 months has passed since receiving new miner training, the miner must repeat new miner training.

There are no specific requirements for tracking, recording or verifying the accumulation of experience. It is the operator's responsibility to determine the miner's experience based on the miner's work and training history.

48.2(c)/48.22(c) "New Miner"

Persons who do not meet the criteria for experienced miners found in Sections 48.2(b)/48.22(b) must receive new miner training (Sections 48.5/48.25) when starting to work or returning to work after an absence of more than 3 years to obtain experienced miner status.

- A. Underground Mines
An experienced surface miner who begins work in an underground mine is, for training purposes, a new miner, and must be provided new miner training under Section 48.5. Credit is allowed for applicable surface training (Subpart B).
- B. Surface Mines or Surface Areas of Underground Mines
An experienced underground miner who begins work in a surface mine or surface area of an underground mine is for training purposes a new miner, and must be provided new miner training under Section 48.25. Credit is allowed for applicable underground training (Subpart A).

48.2(d)/48.22(d) "Normal Working Hours"

Training may only be conducted during "normal working hours." "Normal working hours" are determined on a case-by-case basis. Factors such as past practices and patterns of scheduling work should be considered.

Miners attending a Part 48 training session during "normal working hours" must be paid at the rate they would receive if they were working at the time. A reasonable rest period between training sessions and working shifts should be provided.

48.2(e)/48.22(e) "Operator"

Independent contractors are responsible for the Part 48 training of their employees (see 30 CFR Part 45 and this manual for more information). A contractor may have his/her own training plan or may utilize the mine operator's plan.

48.3/48.23 Training Plans; Time of Submission; Where Filed; Information Required; Time for Approval; Method for Disapproval; Commencement of Training; Approval of Instructors

Sections 48.3(a)(1)/48.23(a)(1), 48.3(a)(2)/48.23(a)(2), and 48.3(k)/48.23(k) are no longer applicable. These sections were intended to allow operators time for initial implementation of Part 48. Each operator now has ample time to prepare a training plan prior to opening a new mine or reopening a closed mine, and is, therefore, expected to provide training prior to assigning work duties.

Each operator must submit the information required by Section 48.3(c)/48.23(c), and may use a format that is logical and reasonable. There is an optional electronic version available on the MSHA Homepage (www.msha.gov).

Operators must indicate a predicted time that training will occur, such as the first week of each quarter. Specific days and times of the training can be obtained by MSHA, as needed, upon request.

If changes are made to the list of MSHA approved instructors, they are not required to be submitted to MSHA for approval, provided that the list of approved instructors is maintained with the approved plan at the mine and is made available for MSHA inspection and examination by the miners and their representatives. Mine operators are still responsible for notifying the miners and miners' representative of any revisions to their list of MSHA approved instructors.

If a change in mine ownership results in changes in procedures or conditions at the mine, a new training plan must be submitted to MSHA for approval. If conditions and procedures do not change, the new operator may continue to utilize the current plan with appropriate administrative changes, pending a review by the District Manager. If plan changes are required in

accordance with Sections 48.3(m)/48.23(m) (1,2,3), the District Manager will indicate in writing required changes and how the deficiencies can be corrected.

"Limited" Instructor Cards

Instructors designated by MSHA as approved instructors for surface operations (IS) or underground operations (IU) may be approved to teach all courses under the appropriate subpart of 30 CFR Part 48 or may be limited to teach only specific courses.

Effective August 1, 1988, those instructors who are approved to teach only specific courses under Part 48 must have the word "LIMITED" printed in the lower left corner of their MSHA Instructor Card.

No such designation will appear in the lower left corner of the MSHA Instructor Card for instructors who are approved without limitations.

Instructors for Task Training

Under Sections 48.3(g)/48.23(g), task training required by Sections 48.7/48.27 may be given by a qualified trainer, by an experienced supervisor, or by persons experienced in the particular task. Sections 48.3(c) (8) (ii)/48.23(c) (8) (ii) require listing in the training plan only the job titles of the persons conducting the task training, and not their names.

48.4/48.24 Cooperative Training Program

Training requirements for new miners and experienced miners (Sections 48.5/48.25 and 48.6/48.26) provide for mine specific training. Some examples of these requirements include: introduction to work environment; mine roof, ground controls, and ventilation plans; the use of self-rescue devices; escape and emergency procedures; mine transportation and communication systems; and the health control plan. Some subject matter may contain generic and mine-specific aspects. The mine-specific aspects may be addressed by the cooperative trainers or the mine operator. In all instances, new underground miner training given through a cooperative source must provide for approximately 8 hours of training to be given at the mine site where the miner is employed.

Annual refresher training (Sections 48.8/48.28) is required to cover such mine specific matters as the use of self rescuers, the review of roof or ground control plans, and health control plans. If the cooperative is to teach the annual refresher, the mine-specific aspects must be addressed.

48.5/48.25 Training of New Miners; Minimum Courses of Instruction; Hours of Instruction

A. Underground Mines

An experienced surface miner who begins work in an underground mine is, for training purposes, a new miner and must receive new miner training under Section 48.5. The MSHA district manager

may credit applicable surface training (Subpart B) toward the underground training (Subpart A) requirement.

B. Surface Mines and Surface Areas of Underground Mines

An experienced underground miner who begins work in a surface mine is, for training purposes, a new miner and must receive new miner training under Section 48.25. The MSHA district manager may credit applicable underground training (Subpart A) toward the surface training (Subpart B) requirements.

Job Site Training

Health and safety training may be conducted at the job site and may involve performance of actual job tasks. Job site training must be completed under close and continuous supervision of an approved instructor, with training, not production, as the primary goal. The training is acceptable if the following conditions are met:

1. Instructors must follow an outline in which each step of the job is broken down into instructional units. The students must demonstrate safe performance of each job step. Several units may be combined in the same instructional period.
2. All health and safety standards must be observed.

48.6/48.26 Experienced Miner Training

Health and safety training may be conducted at the job site and may involve performance of actual job tasks. Guidelines for job site training are set out under Sections 48.5/48.25 above.

When an experienced miner returns to the same mine following an absence of 12 months or less, the miner must be informed about major changes affecting safety or health that have occurred at the mine during the absence before the miner starts work. Also, the miner must complete annual refresher training as required in Section 48.8/48.28 before starting work, if the miner missed that training during the absence.

With one exception, there are no time requirements for experienced miner training. However, for miners returning to mining after an absence of 5 years or more, the returning "experienced miner" must receive at least 8 hours of experienced miner training.

48.7/48.27 Training of Miners Assigned to a Task in Which They Have Had No Previous Experience; Minimum Courses of Instruction

An appropriately completed Job Safety Analysis may be used as a training guide when conducting task training as long as it complies with the task training requirements of Part 48.

48.8/48.28 Annual Refresher Training of Miners; Minimum
Courses of Instruction; Hours of Instruction

Sections 48.8(c)/48.28(c) applied during the implementation of the regulation and are no longer applicable.

Operators may provide annual refresher training at any time during the last calendar month of the miner's annual refresher training cycle. To illustrate this policy, miners who began work in July 2001 must complete their annual refresher training any time in July 2002. Accordingly, training records and schedules may be maintained on a monthly basis, rather than tracking each miner's individual training date. Also, operators should be encouraged to schedule annual refresher training at the beginning of the month so that if for some reason a miner misses the regularly scheduled training, there will still be a reasonable opportunity for the training to be made up before the end of the month.

Annual refresher training is required to cover such mine-specific matters as the review of roof or ground control plans and health control plans in effect at the mine.

Refresher health and safety training may be conducted at the job site and may involve performance of actual job tasks. Guidelines for job site training are set out under Sections 48.5/48.25.

Refresher Training Following an Absence

The following training is required for experienced miners as defined in Sections 48.2(b)/48.22(b) who return to work following an absence:

1. When an experienced miner returns to the same mine following an absence of 12 months or less, the mine operator must provide annual refresher training based on the miner's original schedule before the absence. The miner must complete annual refresher training before starting work, if the miner missed that training during the absence. Also, the miner must receive training that covers major changes affecting safety or health that have occurred at the mine, before the miner starts work. This training may be credited toward the miner's annual refresher training.
2. When an experienced miner returns to the mine following an absence of more than 12 months, the operator must provide experienced miner training before the miner begins work. This starts a new annual refresher training date for this miner.

In either case, if the miner is assigned a new work task, the operator must provide new task training prior to having the miner perform that task.

The above does not apply to experienced miners assigned to work underground or on the surface for the first time. These miners are "new miners" under the training regulations and must receive new miner training. Credit can be given for applicable underground or surface training.

Extension of Time to Complete Annual Refresher Training

The unexpected return of miners after absences may create a strain between the completion of quality refresher training and prompt return of the miners to productive employment.

In order to accommodate unforeseeable events, district managers may consider requests for limited extensions of time to complete annual refresher training. Such requests will be considered on a case-by-case basis, and be granted only if:

1. The miners involved are experienced, as defined by Sections 48.2(b)/48.22(b).
2. Good faith efforts were made by the operator to train the miners before the annual refresher training anniversary date passed.
3. The miners, before returning to work, will be given any task training required by Sections 48.7/48.27, and will be thoroughly instructed in any changes in procedure at the mine or in the mining environment. In underground mines, these procedures must include changes in roof control, ventilation, emergency escapeways, and transportation controls.
4. The required annual refresher training will be promptly completed.

Subject to additional conditions that the district manager may require, a request for a limited extension of time to complete annual refresher training may be granted when these factors are met. In no case, however, should extensions be granted to correct poor scheduling practices or failure to anticipate foreseeable training needs, nor should provisions for an extension of time appear in an operator's approved training plan or otherwise be routinely granted.

When extensions of time to complete annual refresher training are granted, such extensions should be confirmed in writing to the operator, stating the conditions of the extension and the date that refresher training will be completed. The completion date of this refresher training cycle initiates a new anniversary date.

Annual Refresher Guidelines for Training Plans

An effective refresher training program must be adapted to changes in mining conditions, accident history, and other training concerns. Time spent for each course may vary to meet

specific needs. The following guidelines should be used to evaluate provisions for annual refresher training:

1. The required annual refresher training courses listed in Sections 48.8/48.28 that are not applicable to a particular mine may be omitted from that mine's training plan. A notation of which courses are not applicable should appear in the training plan.
2. An 8-hour minimum is required for the total annual refresher training program. However, the time spent on individual courses may vary from year to year or from one area of the mine to another depending on specific safety or health problems encountered. The mine's accident experience should significantly influence the amount and type of training miners receive throughout the year.
3. All applicable refresher training courses listed in the approved training plan are to be given during each 12-month cycle. However, two or more of the courses may be covered in one training session or safety meeting. For example, a well structured safety meeting may cover ground control, related safety standards, prevention of accidents, and other topics without the necessity of separate blocks of instruction.
4. Safety meetings of at least 30 minutes duration, conducted by an MSHA-approved instructor, and addressing appropriate course content are acceptable training sessions that satisfy the annual refresher requirements.

Training plans may be revised to reflect training needs. Requests for revisions should be submitted in accordance with Sections 48.3(j)(1)/48.23(j)(1).

48.9/48.29 Records of Training

Approved Forms

All Part 48 training must be properly recorded by the operator on an MSHA Form 5000-23 (Certificate of Training), or on an "MSHA Approved Alternate Form." Alternate forms must include at least as much information as the Form 5000-23, and should be labeled MSHA Approved Alternate Form 5000-23 (current month and year). Forms proposed by the operator must be sent for approval to the Director of Educational Policy and Development, MSHA, 1100 Wilson Boulevard, Arlington, Virginia 22209-3939.

Record-Keeping Requirements

Operators are required under Sections 48.9/48.29 to give a copy of the training certificate, MSHA Form 5000-23, or an approved alternate, to the miner upon completion of each MSHA approved training program. A "training program" is any miner training

(i.e., new miner, experienced miner, task, annual refresher or hazard training) completed during a 12-month training cycle.

In order to simplify record-keeping, all MSHA approved training programs completed within a miner's 12-month training cycle may be recorded on one Form 5000-23, provided the following procedures are used:

1. Each time a miner completes an MSHA approved training program, the operator must initial and date the form to certify that the miner has received the specified training. Initialing and dating can be done in the space on the form adjacent to the type of training. Also, the miner should be given an opportunity to sign or initial the form.
2. When a MSHA approved program is completed and recorded by the operator, a copy of the certificate must be given to the miner upon request.
3. At the end of the 12-month training cycle, or when the miner signs item 8 of the form, a copy of the completed form listing all completed training programs and signed by the operator or the operator's representative must be given to the miner.

For Cooperative Training Programs

Under Sections 48.4/48.24, the cooperative trainer may sign the training certificate upon "partial completion" of cooperative training. Final signature upon completion of the program must be by the operator or his representative.

For Surface Mines and Surface Areas of Underground Mines

Under Section 48.31 Hazard Training, the operator may use a Form 5000-23 for hazard training. The Form 5000-23 need not be used, however, if the following situations satisfy hazard training requirements:

1. Verbal instructions of mine hazard avoidance procedures are given by mine personnel, and the person receiving the instructions signs a log sheet indicating receipt of the instructions.
2. Written instructions of mine hazard avoidance procedures are supplied. The written instructions, signed by the person receiving them, or a log sheet signed by the recipient must be maintained as a record.

48.10/48.30 Compensation for Training

Sections 48.10/48.30 implement Section 115(b) of the Mine Act ("Miners shall be paid at their normal rate of compensation while they take such training"). Sections 48.2(d)/48.22(d), which define "normal working hours," state in part that:

"miners shall be paid at a rate of pay which shall correspond to the rate of pay they would have received had they been performing their normal work tasks."

The purpose of both the statute and the regulations is to assure that miners are not financially penalized when they receive training during work hours. For example, if a miner is "cross shifted," and the "cross shift" is considered normal working hours, the rate of pay the miner would receive if working is the rate the miner must receive while in training.

48.11/48.31 Hazard Training

The exposure to mining hazards varies according to the task. The greater the hazard exposure, the greater the need for training. Hazard training should be:

1. mine specific, so that persons are advised of the hazards they may encounter at a particular mine; and
2. conducted each time a person enters a different mine.

Examples of Appropriate Training

Although the amount of required training may vary, the following are examples of appropriate training:

1. Employees of Equipment Manufacturers

- a. Employees who are on the mine site in a service or maintenance capacity must be given training in accordance with their exposure to hazards. If the specific job will not entail frequent or extended exposure to hazards at the mine, they need only be given hazard training.

If the job assignment of a service or maintenance worker is contracted to work at a mine for frequent or extended periods, and they are exposed to mining hazards, comprehensive training must be given -- either new miner training or experienced miner training, as appropriate. In addition, if appropriate, the employees must be provided with and instructed in the use and location of the self-rescue device made available at the mine as required by 30 CFR 75.1714, or meet the requirements for self-rescue devices as provided under 30 CFR 57.15030 and 57.15031, and trained pursuant to 57.18028(b), as applicable.

- b. Manufacturers' field representatives, such as sales representatives, must be given training in accordance with their exposure to hazards at the mine. If they are regularly exposed to mine hazards, they must be given comprehensive

training either new miner training, or experienced miner training, as appropriate.

2. Labor, Management or Government Officials

- a. Labor, management, or government officials visiting the mine site need not be given training. However, such persons should be accompanied by experienced miners and be provided with appropriate safety equipment and self-contained self-rescuer (SCSR) training (see 30 CFR 57.15031 and 75.1714).
- b. Authorized representatives of the Secretary of Labor or Secretary of Health and Human Services need not be given any Part 48 training or be accompanied when carrying out duties required by 30 CFR or by the Mine Act.
- c. Contractors doing work for the government which requires their presence at the mine to observe conditions or to collect information must be given hazard training.

3. Customers and Delivery Persons

- a. For purposes of training, customers are individuals who are briefly on mine property to pick up mined materials.

The extent of customers' exposure to mine hazards varies. Training is not required if there is no exposure to mine hazards. Customers must receive hazard training commensurate to their exposure to mine hazards. In addition, they must be trained in the health and safety aspects and safe operating procedures of any mine machinery or equipment that they are required or allowed to operate while on mine property. Comprehensive training would apply to customers engaged in the extraction and production process.

- b. Delivery persons are individuals who enter mine property briefly to deliver supplies, who are not engaged in the extraction and production process, or do not perform maintenance and service work.

Delivery persons must receive hazard training commensurate to their exposure to mine hazards. MSHA expects a realistic appraisal by the mine operator of the hazards associated with such jobs.

4. Other Visitors

a. Underground Mines

Short-term visitors to mine sites who are not required to be provided Part 48 training must be provided with and instructed in the use and location of the self-rescue device made available at the mine as required by 30 CFR 75.1714, or meet the requirements for self-rescue devices as provided under 30 CFR 75.15030 and 57.15031, and trained pursuant to 30 CFR 57.18028(b), as applicable.

b. Surface Mines and Surface Areas of Underground Mines

Students on field trips and other short term visitors (1 day or less) need not be given Part 48 training. However, they should be accompanied by experienced miners and be provided with appropriate safety equipment.

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PART 49 **MINE RESCUE TEAMS**49.2(a) Mine Rescue Team Requirement

When a mine operator has more than two mine rescue teams located at a mine rescue station, only the teams that have been designated by the operator to satisfy this Section will be subject to the requirements of Part 49.

49.2(a) Mine Rescue Service Arrangements

When an operator enters into an arrangement with another entity to provide mine rescue services, that entity must have supervisory control over the members of the mine rescue teams so that the team members can be instructed to present themselves at the mine site in the event of an emergency.

Examples 1 through 5, attached at the end of this Part 49, illustrate some of the arrangements for mine rescue services that may be encountered, together with instructions on what is necessary to establish these arrangements.

49.2(c) Mine Rescue Team Qualification

Persons who became members on and after July 11, 1981, must satisfy the 1-year underground experience requirement in this rule. For the purposes of mine rescue work only, surface miners whose work regularly takes them underground qualify for the underground experience requirement and, therefore, are eligible for team membership. The underground experience requirement is waived only for those miners who were on established mine rescue teams as of July 11, 1981.

49.2(d) Advance Ground Transportation Arrangement

The operator must make arrangements in advance for ground transportation so that the teams and equipment can be dispatched to the mine with minimum delay in the event of a mine emergency. This does not mean, however, that the ground transportation must remain at the mine rescue station at all times.

49.2(h) Operator Statement

The statement submitted by the operator shall state that either the operator has independently provided mine rescue teams or that the operator has entered into an agreement with

another entity for this service. The name and the location of the entity providing the service shall also be included.

When mine operators make mine rescue services available through agreements with other mine operators or independent entities, such arrangements shall be reviewed by the district manager to assure that the mine rescue capability to be provided satisfies the requirements of Part 49.

49.3(a) Alternative Mine Rescue Capability for Small and Remote Mines

Where the total underground employment of the operator's mine and any surrounding mine(s) within 2 hours ground travel time is less than 36 persons, an operator may provide for alternative mine rescue capability under Section 49.3. However, it should be noted that compliance with Section 49.2 (Availability of Mine Rescue Teams) is required where a group of mines are located within 2 hours of ground travel time to each other and collectively employ 36 or more miners underground, unless the underground mine qualifies for alternative rescue capability for special mining conditions under Section 49.4.

49.5(a) Designation of Mine Rescue Stations

Every operator of an underground mine is required to designate, in advance, the location of the mine rescue station serving the mine.

49.5(b) Centralized Storage for Mine Rescue Equipment

All of the mine rescue equipment required by Section 49.6 (Equipment and Maintenance Requirement) must be stored at one location (see Example No. 5). MSHA recognizes that in certain circumstances the same protection provided by this requirement may also be achieved through different storage arrangements. However, storage of mine rescue equipment at more than one location may only be adopted through the petition for modification process (30 CFR Part 44).

49.5(d) Inspection of Mine Rescue Station¹

When a mine operator has more than one mine rescue station within 2 hours ground travel time of the mine or mines, only the designated rescue station and teams assigned to that station will be subject to the requirements of Part 49.

If, for example, three mines owned by different companies enter into an arrangement and designate a common mine rescue station, while still maintaining their own individual teams and stations, inspection activity for Part 49 compliance would be limited to the designated station and to teams assigned to that station only.

However, if the operator designates more than one mine rescue station, each station and teams assigned to those stations must meet the requirements of Part 49.

Mine rescue facilities and/or teams situated on the property of an underground mine and maintained by mine operators or independent contractors will be regularly inspected. If an independent contractor maintains mine rescue facilities and/or teams on mine property, citations or orders for Part 49 violations should be issued to the independent contractor under Part 45.

Mine rescue facilities and/or teams located off mine property which are maintained by independent contractors for purposes of Part 49, shall be examined at least twice each year. This examination shall be for purposes of determining whether the mine operators served by the independent contractors have arranged for the required rescue services. When independent contractors located off mine property are not equipped to provide the services required by Part 49, the mine operators served by these contractors shall be issued citations for failure to have arranged for the required rescue services. In each citation, the operator should be notified of the deficiencies in his/her contractor's mine rescue services. To abate the violation, the

¹ Nothing in these interpretations is intended to limit MSHA's jurisdiction over and authority to inspect independent contractors located off mine property who provide mine rescue team service to mine operators for purposes of Part 49.

operators must either make other arrangements which satisfy Part 49, or have the contractor correct the deficiencies.

Where independent contractors who provide rescue team services to operators are located off mine property, and they refuse or impede MSHA examination of their facilities, the mine operators served by the contractor shall be issued citations for failure to arrange for the rescue services required by Part 49. To abate the violation, the operators must make other arrangements which satisfy Part 49 or assure that examination of the contractor's facilities can be properly made.

These instructions do not apply to those state agencies who have entered into a Memorandum of Understanding with MSHA. The terms of the Memorandum of Understanding will govern the frequency of inspections and actions to be taken.

Inspection of Mine Rescue Stations Serving Both Coal and Metal/Nonmetal Mines

Where coal mining and metal/nonmetal mining are performed in the same geographical area, the mine operators for both types of mines may designate the same mine rescue station to serve their mines. If this situation exists, the mine rescue station shall be inspected by personnel from either Coal Mine Safety and Health or Metal and Nonmetal Mine Safety and Health, but not by personnel from both entities.

To avoid duplication of MSHA inspections and minimize confusion as to which entity should inspect mine rescue stations, the policy below shall be followed:

1. Mine rescue stations located on mine property that have been designated to serve coal mines and metal/nonmetal mines shall be inspected by the entity having jurisdiction over the mine.
2. Mine rescue stations located off mine property that have been designated to serve coal mines and metal/nonmetal mines shall be inspected by the entity having jurisdiction over the majority of mines being

served by the rescue station. If the station serves an equal number of coal and metal/nonmetal mines, the entity having jurisdiction over the majority of mines in the area shall make the inspection.

3. Questions as to which entity should inspect a mine rescue station shall be decided between the appropriate district managers of the two entities.

State Mine Rescue Stations

There are currently eight states which have entered into a Memorandum of Understanding with MSHA concerning mine rescue. They are:

Alabama	Indiana	Kentucky
Ohio	Illinois	Tennessee
Virginia	West Virginia	

These states provide mine rescue services to mines within their respective jurisdictions. According to each MSHA-State Agreement, inspections of rescue stations are to be conducted every 6 months by a designated MSHA representative in the district where the station is located.

Particular attention should be given to paragraph IID of the Agreement which sets out the procedures to be followed for cooperative correction of violations of 30 CFR Part 49. Under this paragraph, violations must be brought immediately to the attention of the appropriate state official so that the state may take prompt action to correct them. However, no citation or order should be issued to the state. Additionally, the following guidelines should be used in conducting inspections:

1. The inspection report is to be sent to the Department of Mines in the state where the station is located.
2. If an inspection discloses a violation of 30 CFR Part 49, and disagreement arises between the state and the MSHA district that prevents a cooperative resolution of the problem, a memorandum to the appropriate MSHA Chief, Division of Safety, is to be prepared that sets out the facts necessary for a determination of the appropriate action to be taken.

49.6 Equipment and Maintenance Requirements

In some instances, inspectors may find that operators exceed the minimum requirements for the equipment. If, for example, equipment for three teams is located at a mine rescue station and if sufficient equipment is maintained in operating condition for two teams, there would be no violation if the remainder of the equipment is not in operating condition. However, the inspector should recommend that the non-operational equipment be segregated or conspicuously identified to avoid the possibility of its use in an emergency.

49.8(a) Training for Mine Rescue Teams

Persons who become team members on and after July 11, 1981, must complete the initial 20-hour training course prescribed by MSHA's Office of Educational Policy and Development. The initial training requirement is waived only for those miners on established mine rescue teams as of July 11, 1981, because such miners would already be familiar with the use, care and maintenance of the selected breathing apparatus.

49.8(b)(2) Periodic Breathing-Apparatus-Wearing Requirement

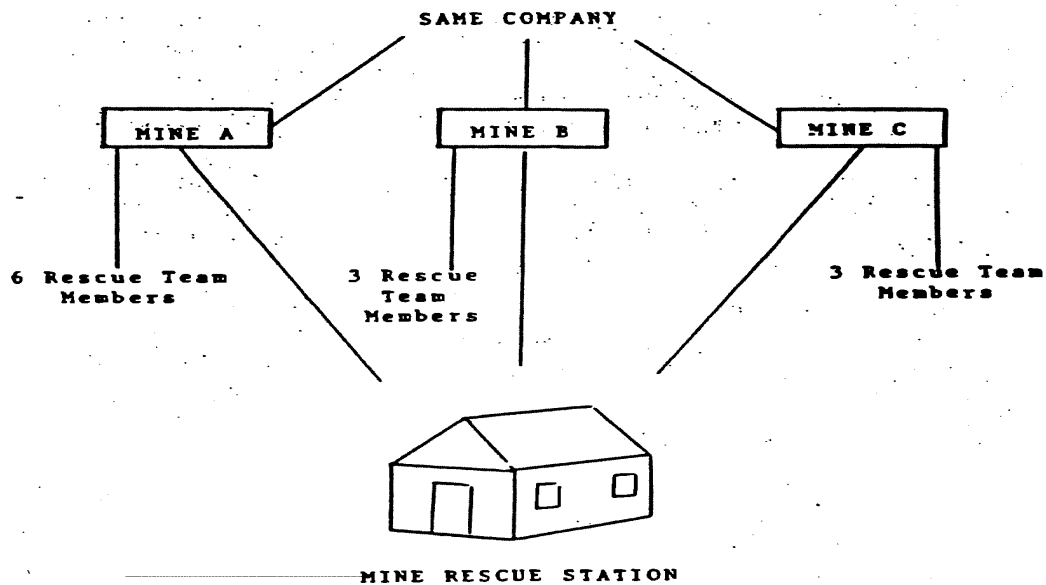
For training purposes, the wearing of the breathing apparatus by team members while under oxygen must total 2 hours every 2 months. This may be accomplished by wearing the apparatus continuously for 2 hours or in smaller increments which total 2 hours for the 2-month period.

Mine rescue team members who participate in a bonafide mine rescue contest will receive an 8-hour training credit which may be applied toward fulfilling the annual refresher training requirements of 30 CFR 49.8(b). The training credit must be used within 365 days following the date of the mine rescue contest in which it was earned. Only one 8-hour training credit will be granted and used during any one calendar year.

In order to receive such credit, it is necessary that preparation for and participation in the mine rescue contest include the following elements required by Section 49.8(b):

- the wearing and use of the breathing apparatus by team members for a period of at least 2 hours while under oxygen every 2 months;
- where applicable, the use, care, capabilities, and limitations of auxiliary mine rescue equipment, or a different breathing apparatus;
- any other advanced mine rescue training and procedures as prescribed by MSHA's Educational Policy and Development (EP&D); and
- mine map training and ventilation procedures.

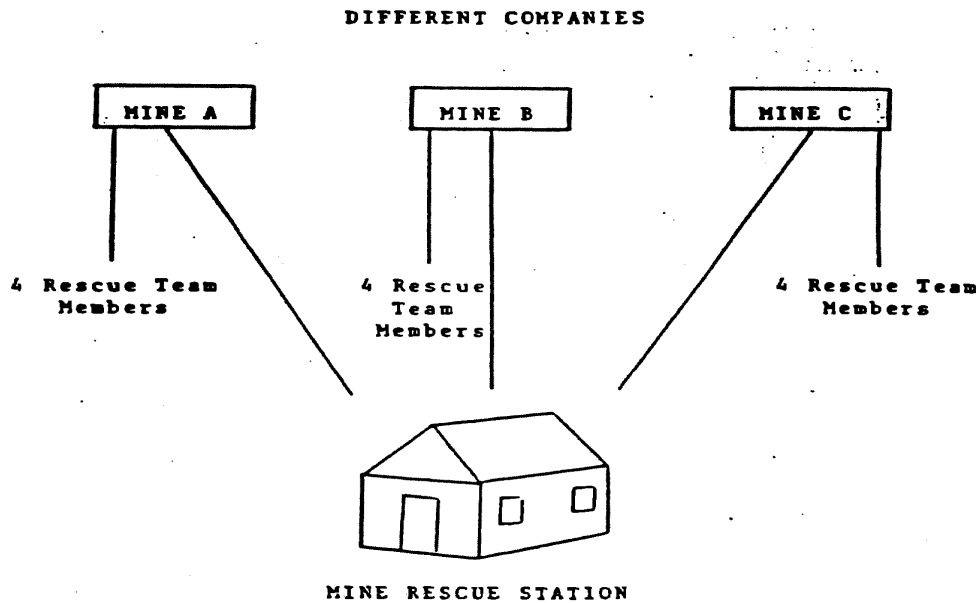
This credit will not satisfy the requirement that training sessions be conducted underground at least once each 6 months. In addition, team training conducted apart from the competition must satisfy all elements of Section 49.8(b).

Example 1

SITUATION: All three mines and the rescue station are owned by the same company. The two rescue teams are comprised of members from each mine.

QUESTION: Should each mine enter into an arrangement with the other mines to satisfy the requirements?

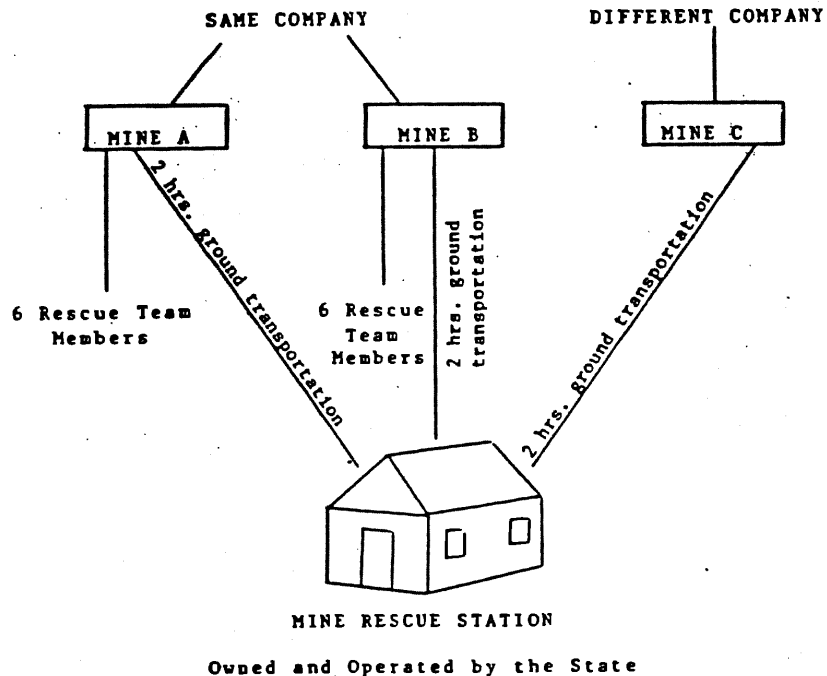
ANSWER: No arrangement is necessary because the company has supervisory control over the rescue teams and the rescue equipment.

Example 2

SITUATION: Each mine is owned by a different company; however, they jointly own the rescue station and equipment. The two rescue teams are comprised of members from each mine.

QUESTION: Should each company enter into an arrangement with the other two companies to satisfy the requirements?

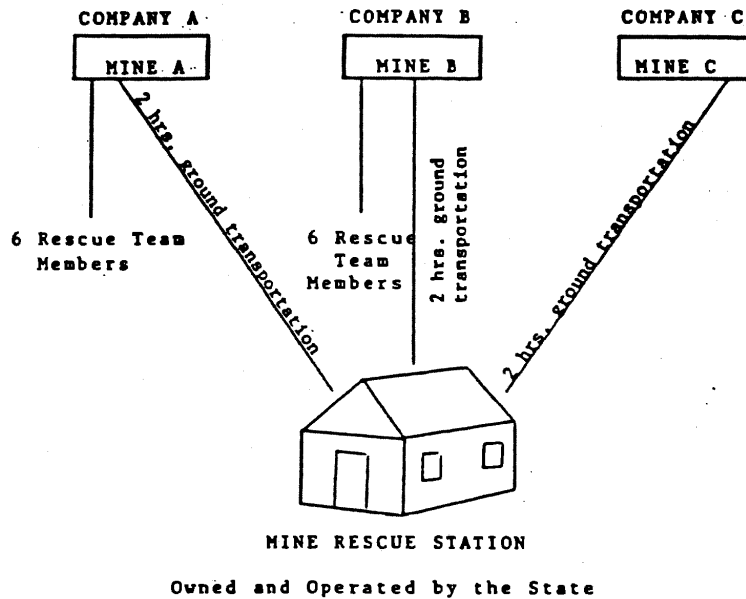
ANSWER: Yes, an arrangement must be made between each of the companies.

Example 3

SITUATION: The rescue teams from Mine A and B are maintained by the State; however, the State does not have the authority to cause the teams to respond to an emergency. The rescue station and equipment is owned and controlled by the State.

QUESTION: Who must Mine C make an arrangement with to provide rescue capability?

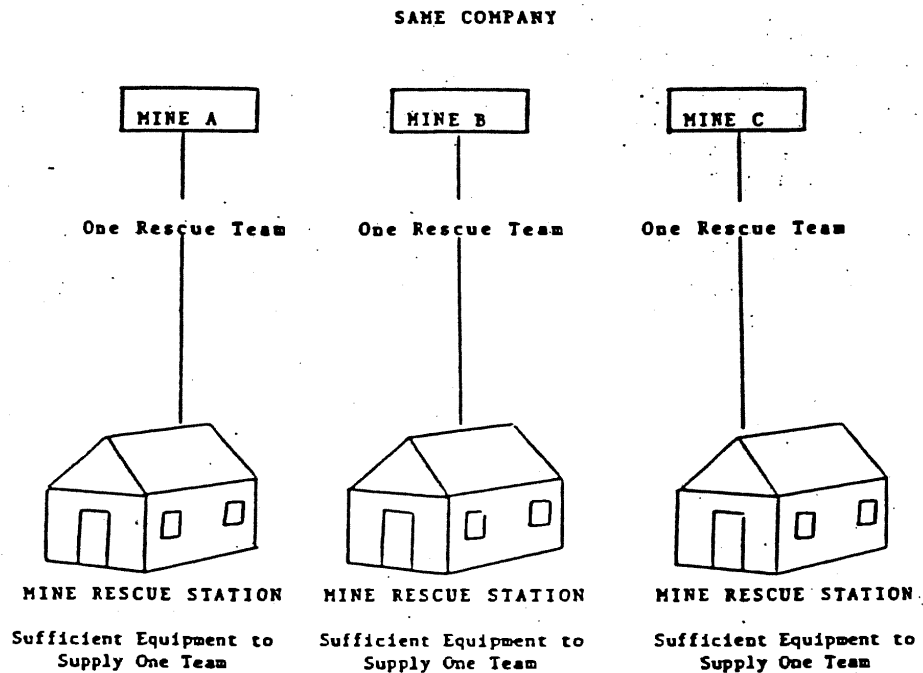
ANSWER: Mine C would be required to enter into an agreement with both the State who owns the equipment and the operator of Mines A and B who has supervisory control over the rescue teams. Additionally, the operator of Mines A and B would be required to enter into an agreement with the State to provide the equipment.

Example 4

SITUATION: The rescue teams from Mine A and B are maintained by the State. The State has statutory or contracted authority to cause the teams to respond to a mine emergency. The rescue station and equipment are owned by the State.

QUESTION: Would all three mines be required to enter into an arrangement with the State?

ANSWER: Yes, in this case the operators of each of these mines would be required to enter into an arrangement with the State.

Example 5

SITUATION: All three mines are owned by the same company, with a rescue team (6 members) and a rescue station at each mine. Each of these stations are sufficiently equipped for one team such as six breathing apparatuses, one extra O₂ bottle, etc. All three stations are within two hours of ground transportation of each mine.

QUESTION: Would this type of situation for rescue stations be acceptable?

ANSWER: No, all of the required equipment must be stored at one central location as indicated in the regulations. However, MSHA recognizes that there may be certain circumstances that MSHA would consider under a petition for modification.

PART 50 ACCIDENTS, INJURIES, ILLNESSES, EMPLOYMENT, AND
COAL PRODUCTION IN MINES

III.50-1 Citations for Failure to Report Under Part 50
An evaluation of operator compliance with reporting requirements under Part 50 shall be made at every regular inspection.

To ensure that the issuance and assessment of citations for failure to report as required by Part 50 is handled uniformly, inspectors will issue a citation for each separate instance of a failure to report an accident, injury or illness, or quarterly employment and production. Each such citation will be subject to a separate penalty.

Inspection personnel should carefully review the degree of negligence associated with all Part 50 citations. Any violation of Part 50 considered to be the result of a high degree of negligence or other unique aggravating circumstances may be referred for special assessment.

Where circumstances indicate that there has been flagrant conduct surrounding a failure to report, such as attempting to conceal the fact that an injury occurred, serious consideration should be given to a reckless disregard negligence evaluation. The facts involved in such a violation should be carefully documented and transmitted to the appropriate District Manager for use in determining whether a recommendation for special assessment is appropriate.

III.50-2 Reporting of Silicosis and Other Pneumoconioses
30 CFR Part 50 requires that operators report each accident, occupational injury, or occupational illness at the mine. An "occupational illness" is defined in 50.2(f) as:

...an illness or disease of a miner which may have resulted from work at a mine or for which an award of compensation is made.

30 CFR 50.20-6(b)(7)(ii) states:
Code 22 - Dust Disease of the Lungs
(Pneumoconioses). Examples: silicosis, asbestosis, coal worker's pneumoconiosis, and other pneumoconioses.

Diagnosis of an "occupational illness or disease" under Part 50 does not automatically mean a disability or impairment for

which the miner is eligible for compensation, nor does the Agency intend for an operator's compliance with Part 50 to be equated with an admission of liability for the reported illness or disease. MSHA views a disability as distinguishable from a reportable diagnosis of silicosis or other pneumoconioses. A diagnosis would be reportable to MSHA if there is evidence of exposure coupled with an x-ray reading of 1/0 or above, using the International Labor Office (ILO) classification system. On the other hand, states may require different or additional evidence in determining disability such as a physical examination, lung function test, etc.

MSHA's position is that any medical diagnosis of a dust disease or illness must be reported under Part 50. A medical diagnosis may be made by a miner's personal physician, employer's physician, or a medical expert.

If a chest x-ray for a miner with a history of exposure to silica or other pneumoconiosis-causing dusts is rated at 1/0 or above, utilizing the ILO classification system, it is MSHA's policy that such a finding is a diagnosis of an occupational illness, in the nature of silicosis or other pneumoconiosis and, consequently, reportable to MSHA.

An operator need not report to MSHA within 10 days any chest x-ray result if the operator is actively seeking a more definitive second opinion in a timely manner and has supporting documentation. MSHA will not take enforcement action for exceeding the 10 day reporting requirement in this situation. If a second opinion by a "B" reader substantiates the first diagnosis of 1/0 or above, then the illness must be reported to MSHA.

If the second opinion by a "B" reader does not rate the x-ray at 1/0 or above, using the ILO classification system, MSHA will continue to stay enforcement action if operators seek a third opinion by an additional "B" reader to determine a majority opinion. MSHA will accept this majority opinion as an accurate diagnosis for reporting purposes.

A "B" reader is a physician certified by the Center for Disease Control's (CDC) National Institute for Occupational Safety and Health (NIOSH) to interpret chest radiographs to detect pneumoconiosis using ILO guidelines.

III.50-3 Part 50 Audit After Fatal Accident

MSHA has the option to conduct a Part 50 reporting audit at a mine where a fatal accident occurs. Factors MSHA will consider in deciding whether to conduct a Part 50 audit after a fatality include the following:

- MSHA received complaints by miners or a miners' representative that reportable accidents were not being reported by the mine operator;
- MSHA otherwise has reason to believe there has been underreporting of accidents at a mine; or

MSHA may also conduct a Part 50 audit after a fatal accident if the mine's accident and injury rates vary substantially from the accident and injury rates for mines of a similar type.

A mine which has been audited within a year preceding a fatal accident need not be audited again, unless the district manager or the Administrator determines otherwise.

III.50-4 Part 50 Notification, Investigation, Reporting and Recordkeeping Requirements for Independent Contractors

Independent contractors who are performing any of the nine types of services or construction listed under Section 45.3, Part 45 of this Manual, must report accidents, injuries and illnesses under 30 CFR 50.20. In addition, these independent contractors must maintain records of such reports under 30 CFR 50.40; and they must file quarterly employment reports under 30 CFR 50.30. Except as otherwise determined by the district manager, other independent contractors are not required to comply with the above referenced regulatory sections.

Without regard to the type of work being performed, all independent contractors are required to comply with the notification, investigation and preservation of evidence requirements of 30 CFR Sections 50.10, 50.11 and 50.12 respectively, and they are required to comply with 30 CFR 50.41 regarding verification of reports.

To minimize the burden of quarterly employment reporting, for those contractors required to do so, only a single MSHA Form 7000-2 must be completed and filed for any calendar quarter in which a contractor has worked. Only the types of work listed under Paragraph 45.3, Part 45 of this Manual need to be reported. As in the case of mine production operators, the information necessary to complete a Form 7000-2 by an independent contractor is the average number of employees and the total employee hours involved in the work being reported. However, this employment

information must be developed separately for the surface mines and for the underground mines where the work being reported was performed.

In addition, in order to ensure compatibility of MSHA statistics, separate 7000-2 forms are to be used for work performed at metal and nonmetal mines and at coal mines. For work performed at underground mines, this information must be separated for work performed underground and for work performed on the surface of underground mines, and then entered on the appropriate line. For work performed at surface mines, employment information must be separated for the several types of surface mines indicated on the form (e.g., strip, open pit or quarry, auger mine, dredge, etc.), and then entered on the appropriate line. When work being reported on any particular line was performed at more than one site, the required employment information should be computed together.

The independent contractor and the production-operator may coordinate the submission of their quarterly reports so that the production-operator actually submits the report covering the contractor. When this is done, a separate Form 7000-2 must be filed for the operator and for each independent contractor. It should also be remembered that the independent contractor is individually responsible for complying with 30 CFR 50.30. Consequently, if the production-operator fails to submit the separate quarterly employment report covering the independent contractor, that contractor may be cited for a violation of its compliance responsibility.

III.50-5 Reporting and Investigating Blocked Passage Through the Tailgate Side of Longwall Mining Operations in Coal Mines

It is MSHA policy to promptly investigate any fall of roof or rib in a coal mine which blocks miners' travel off a longwall through the tailgate entries. Continued mining or any other action that may alter the site of the fall or any related area is not to be permitted until the MSHA's investigation is completed, except as recognized by 30 CFR 50.12.

Maintaining the entries that provide access into and out of longwall face areas is important to miner safety, particularly in the event of life-threatening circumstances. Accordingly, falls which block tailgate entries so that passage out of a longwall panel is limited to one side are to be promptly investigated.

Under 30 CFR Section 50.10, mine operators are required to immediately contact the local MSHA district or subdistrict

office if an accident occurs. The term "accident" is defined by 30 CFR Section 50.2(h)(8) to include any unplanned fall that occurs in active workings which impedes passage.

The purpose of this investigation is to evaluate the cause of the fall, including the roof support being used and the conditions that caused it to fail. To conduct a proper evaluation, it is important that the fall and the surrounding area not be disturbed. Therefore, under 30 CFR Section 50.12, mining or any other action that may alter the site of the fall, or the related area, is not to be permitted, except for the reasons identified in 30 CFR Section 50.12.

When a report is received that passage through the tailgate side of a longwall panel is blocked, every attempt should be made to expedite the investigation. To do so, the investigation should begin no later than the end of the shift following the shift on which the fall was reported to MSHA.

50.2 Definitions

Mine operators are required by 30 CFR Part 50 to report each accident, occupational injury, or occupational illness at a mine. A hoisting accident is defined in 50.2(h)(11) as:

Damage to hoisting equipment in a shaft or slope which endangers an individual or which interferes with use of the equipment for more than thirty minutes.

This definition covers hoisting equipment in a shaft or slope, such as elevators, cages, skips, slope cars, platforms and mechanical escape facilities, that is intended or used for the transportation of personnel, equipment, or material. Damage to such equipment meeting the definition in 30 CFR 50.2(h)(11) would, therefore, be reportable under 30 CFR 50.10 and 50.20.

50.20 Preparation and Submission of MSHA Form 7000-1
and

50.30 Preparation and Submission of MSHA Form 7000-2.

The Code of Federal Regulations requires mine operators and independent contractors performing certain types of work activity on mine property to submit reports of injuries, illnesses, and accidents, as defined in 30 CFR 50.2(e), (f), and (h), respectively, and worktime information as discussed in 30 CFR 50.30. Sections 50.20-1 and 50.30-1 contain general instructions for submitting these data on MSHA Forms 7000-1 and 7000-2, respectively.

In an effort to reduce the reporting burden and cost to operators and contractors, MSHA has provided a toll-free number connected to a facsimile machine in Denver. The number is (888) 231-5515. Operators and contractors may submit a facsimile via this number in lieu of mailing the original of MSHA Form 7000-1 or Form 7000-2 to the Office of Injury and Employment Information in Denver, formerly known as the Health and Safety Analysis Center.

Additionally, the toll-free number in Denver may be used to send the second copy (pink copy) of Form 7000-1 containing return-to-duty information. In order to differentiate it from the original, however, the word "**PINK**" must be printed at the top of the copy.

Experience has demonstrated that material prepared in pencil or in blue ink does not transmit legibly. If such forms are transmitted by "fax" and prove to be illegible, the sender will be contacted to resubmit by regular mail. To avoid duplication, however, do not send a copy of the same form through the mail unless requested to do so.

Problems with the receiving facsimile machine in Denver may be addressed by calling (303) 231-5453 during normal work hours. Section 50.20-1 also requires that the first copy (yellow copy) of Form 7000-1 be sent to the appropriate MSHA Coal or Metal and Nonmetal district office. The district offices also have facsimile machines with which to receive this document; however, the numbers are not toll free. A list of these fax machine numbers follows.

Coal Mine Safety and
Safety

Health District Offices

1	(717)	826-6207
2	(412)	925-6190
3	(304)	291-4196
4	(304)	877-3927
5	(540)	679-1663
6	(606)	437-9988
7	(606)	546-5245
8	(812)	882-7622
9	(303)	231-5553
10	(502)	825-0949
11	(205)	290-7389

Metal and Nonmetal Mine

and Health District Offices

Northeastern	(412)	772-0260
Southeastern	(205)	290-7299
North Central	(218)	720-5650
South Central	(214)	767-8405
Rocky Mountain	(303)	231-5468
Western	(707)	447-9816

50.20-3 Criteria - Differences Between Medical Treatment and
First Aid

The use of prescription medication alone for any treatment other than for an eye injury is not a reportable medical treatment for an occupational injury under Title 30, Code of Federal Regulations, Section 50.20-3. Use of prescription medication for eye injuries remains a reportable treatment under Paragraph 50.20-3(a) (5).

50.30 Preparation and Submission of MSHA Form 7000-2

See 50.20/50.30 above.

Starting in January 1998, mine operators and contractors also have the option to complete and submit MSHA Form 7000-2 to MSHA directly over the Internet through MSHA's homepage (<http://www.msha.gov>) or through the Department of Labor's homepage (<http://www.dol.gov>) under "elaws." To complete MSHA Form 7000-2, follow the instructions provided on the screen.

The system guides mine operators and contractors through the reporting process, taking into consideration the type of reporting operation. The system advises users to print a copy of the completed form for company files. This copy will document compliance with reporting requirements under 30 CFR 50.30. Companies filing electronically will also receive E-Mail confirmation that required information has been received by MSHA.

The system is designed for initial filings submitted for the preceding quarter only. Amended filings that correct information previously filed, or those submitted late, must continue to be mailed to the Office of Injury and Employment

Information (OIEI), P. O. Box 25367, Denver, Colorado, 80225 or
faxed toll-free to (888) 231-5515.

Part 62 Noise Enforcement Policy**62.1 Operator Noise Exposure Determination**

1. Can I still use the noise monitoring equipment I already have?

Yes, if it meets the criteria listed in Section 62.110(b) (2) which states that a miner's dose determination must:

- be made without adjustment for the use of any hearing protector;
- integrate all sound levels over the appropriate range;
- reflect the miner's full work shift;
- use a 90-dB criterion level and a 5-dB exchange rate; and
- use the A-weighting and slow response instrument settings.

Additional information is in MSHA's "A Guide to Conducting Noise Sampling" which is available from the MSHA web page at <http://www.msha.gov>. Copies were also distributed to mine operators.

2. If I determine, without physically sampling, that a miner's noise exposure equals or exceeds the action level (AL), or exceeds the permissible exposure level (PEL), maximum level, or dual hearing protection level (DHPL), am I still required to notify the miner?

Yes. Such notification is required regardless of the source of information that shows an overexposure. For example, you must provide the miner written notification that his or her exposure equals or exceeds the action level (or exceeds other specified levels) based on the noise level information from the equipment's manufacturer or other source. You must also notify the miner of the corrective actions you will implement.

3. Can I have to satisfy the requirement to notify a miner that his or her exposure exceed the action level (85 dBA) by posting a sign at the entrance to the mine site listing those areas at or above 85 dBA, or do I have to give the notices to each individual miner who is exposed to noise at or above 85 dBA?

Each miner must be provided with individual written notification. This will ensure that all miners are properly notified and informed of any additional

precautions necessary to protect their hearing.

4. What is the definition of "miner" for noise monitoring and who does this definition cover?

The noise standard does not include a separate definition of a miner. For purposes of the standard, the definition of "miner" is the same as in Section 3(g) of the Mine Act. It means any individual working in a coal or other mine.

5. A lot of questions have arisen regarding monitoring, and whether or not monitoring is specifically required. Please clarify my responsibilities regarding noise monitoring.

The standard requires that you establish a system of monitoring that evaluates each miner's noise exposure sufficiently to determine continuing compliance with all aspects of the standard. This means that whatever system you establish must keep you aware of when a miner is overexposed to sound levels, whether your exposure determinations are based on noise level information from the manufacturer, sampling conducted by an insurance carrier, or sampling conducted by MSHA.

6. If a miner's noise exposure is assessed using a personal noise dosimeter and does not equal or exceed the action level, how often does he or she have to be monitored?

The noise monitoring provision is performance oriented and does not specify the frequency of monitoring. The standard does require you to establish a system of monitoring that evaluates each miner's noise exposure sufficiently to determine continuing compliance with the standard.

7. When initially assessing miners' noise exposures under Section 62.110, may I use one miner's sampling results as representative of multiple miners who perform the same tasks on the same or another shift, such as operating similar equipment?

Yes, depending on the circumstances, you may monitor areas of the mine or representative job tasks in order to obtain sufficient information to determine compliance with the standard. Monitoring a representative number of the miners operating the same type of equipment is acceptable. However, the monitoring results for one miner operating a piece of equipment may not be consistent with noise exposures for other miners operating similar, but not the same, equipment.

8. If I voluntarily establish a hearing conservation program and enroll all miners at my mine, will I have to monitor for noise exposure at the action level?

If you can determine that a miner's noise exposure is at or above the action level without monitoring and you notify the miner according to the requirements of 62.110, then specific sampling for action level noise exposure is not necessary. However, notifying the affected miners that their exposures are at or above the action level is still required.

9. Can I cover the requirement for notifying a miner of exposure to excessive noise within 15 days by posting the notice on the bulletin board? How should I ensure that a miner received a copy of the results? Can I require the miner to date, time, and initial the document?

Section 62.110(d) specifically requires that you notify each miner of any overexposure to noise in writing within 15 calendar days. Posting the notification on a bulletin board will not meet this requirement. How you ensure that the miner received the notification is not covered by the standard.

10. How does MSHA expect mine operators to control the noise exposure of maintenance workers or examiners who have varying tasks and do not work at set locations, but travel throughout the mine, plant or mill?

MSHA's experience shows that administrative controls are effective in this situation, but you have the choice of using either engineering or administrative controls, or a combination of both, to reduce the miners' noise exposures. You must use feasible engineering and administrative controls to reduce the miners' exposures to allowable levels. If such controls do not exist or do not reduce the miners' noise exposures to the PEL, an operator must still comply with all other provisions of Part 62.

11. Does this standard eliminate the need for me to have qualified people conduct noise monitoring?

Part 62 does not require you to have persons "qualified" by MSHA to conduct noise monitoring. However, persons

conducting noise monitoring must be knowledgeable of how to measure noise exposures.

12. Will MSHA continue to qualify persons to conduct noise monitoring?

No, but MSHA will continue to conduct noise sampling courses for the industry.

13. What error factors will MSHA use for enforcing the four exposure levels (AL, PEL, DHPL, and maximum level)?

MSHA will continue to use a 2 dBA error factor. MSHA will issue citations for the following noise exposure doses: 66% for AL, 132% for PEL, and 1056% for DHPL.

62.2 Maximum Level

1. Can miners be exposed to sound levels exceeding the maximum level of 115 dBA for any period of time? Will MSHA permit any duration of exposure above 115 dBA before citing a mine operator? When will MSHA cite operators? Is the maximum level a 15-minute average of exposure? Will impact/impulse noise be considered as part of the maximum level?

MSHA will continue to enforce the maximum level in the same manner that it was enforced under its previous noise standards. In most cases MSHA noise exposure determinations will be based on full-shift surveys using a personal noise dosimeter. MSHA may issue a citation if sound levels exceed 117 dBA (115 dBA maximum level + 2 dBA error factor) for at least 30 consecutive seconds. When a miner is exposed to 117 dBA for more than 15 minutes, the 90 dBA PEL is also exceeded. In such cases, the Agency will cite operators for exceeding the 90 dBA PEL rather than for exceeding the maximum level if the operator has not installed and/or maintained all feasible controls.

The noise standard does not include a separate standard for impact/impulse noise. MSHA stated in the preamble to the standard that impact/impulse noise will be integrated along with continuous noise in determining a miner's exposure to the maximum level as well as to all other required levels.

Sampling of an individual miner's exposure in the hearing zone will be conducted with a noise dosimeter and a sound level meter using the A-weighting slow response setting for determining compliance with the maximum level.

2. What am I required to do if I exceed the maximum level?

As with exposure exceeding the 90 dBA PEL, if you exceed the maximum level you are required to use all feasible engineering and administrative controls, provide and ensure the use of hearing protection, enroll affected miners in an HCP, post any administrative controls that are being used on the mine bulletin board, and provide copies of those administrative controls to affected miners. All requirements of Section 62.130 apply.

62.3 Noise Controls

1. Where I have multiple pieces of the same type of equipment, how will MSHA address the other pieces while the first piece is being equipped with noise controls?

Compliance and feasibility are determined on a case-by-case basis. MSHA intends to give operators a reasonable amount of time to put controls on equipment. In some cases this may require a prolonged period of time, while in other instances it may not.

2. If a doctor fits a miner with hearing protection will this be permitted in lieu of installing expensive noise controls?

No. Personal hearing protection is not considered a noise control.

3. What if I have changed administrative controls and MSHA determines a miner is being overexposed?

If MSHA sampling shows that a miner is overexposed to noise and the administrative and/or engineering controls you have installed are not effective, MSHA will determine if additional feasible controls are available that would be effective. If so, a citation will be issued.

4. Will I be issued a 104(b) order for failure to install engineering and administrative controls which MSHA believes are feasible?

MSHA will first issue a 104(a) citation for failure to install feasible controls when required to do so under Section 62.130. If during a compliance inspection, MSHA finds that you failed to abate the citation within the specified time period, then MSHA may issue a 104(b) order.

5. What will MSHA do in a situation where I have determined that a miner is overexposed to noise and I am in the process of

installing controls?

MSHA will evaluate your efforts to attain compliance and a citation may not be warranted.

6. Will MSHA allow me to bring onto mine property older equipment that causes a miner's noise exposure to exceed the PEL?

The noise standard does not prevent you from bringing any equipment onto your property. However, the noise standard does require you to use both feasible engineering and administrative controls, if necessary, to reduce a miner's exposure to the PEL.

7. How will MSHA address labor/management agreements that affect the use of administrative controls?

MSHA policy regarding labor/management agreements will not be affected by the new noise standard.

62.4 Feasibility of Engineering and Administrative Controls

1. Will MSHA continue to apply its metal and nonmetal noise decisions as decided by the Federal Mine Safety and Health Review Commission as the basis for how it will determine feasibility of engineering controls?

Yes, the noise decisions will continue to be applicable to feasibility of controls.

2. In enforcement, how does MSHA apply the noise case factors?

Consistent with the Commission decisions, in enforcing the noise standard, MSHA will continue to consider three factors in determining whether engineering controls are feasible at a particular mine. These factors are: (a) the nature and extent of the exposure; (b) the demonstrated effectiveness of available technology; and (c) whether the committed resources are wholly out of proportion to the expected results.

2(a). The nature and extent of the exposure.

In considering the nature and extent of exposure as a factor in determining whether controls are feasible, MSHA will consider the following components: source(s) of noise, level (dose), and duration of exposure. For example, the exposure of miners, such as percussive drillers or

bulldozer operators, to high levels of noise on a continuous or daily basis would require the application of feasible controls.

2(b). The demonstrated effectiveness of available technology.

MSHA intends to continue its longstanding policy currently in effect for metal and nonmetal mine operators of determining what constitutes an effective control, i.e., where a control or a combination of controls could achieve at least a 3 dBA reduction in noise exposure. This represents a 50% reduction in sound energy. Where a single engineering control does not provide at least a 3 dBA reduction in a miner's noise exposure, you must consider the expected level of reduction from a combination of technologically available controls. We have many years of experience in achieving significant reduction in sound levels on most pieces of equipment in metal and nonmetal mines. Working together with metal and nonmetal operators and equipment manufacturers, MSHA has made great strides in significantly reducing noise exposure through the use of available noise controls.

MSHA has also gathered information on effective noise controls for coal mining equipment. The Office of Technical Support works closely with the inspectorate in providing information on effective noise controls. MSHA is available to assist operators and miners and has made available a comprehensive list of equipment manufacturers, suppliers of acoustical material and links to other Internet sites where lists of noise consultants may be obtained.

2(c). Whether the committed resources are wholly out of proportion to the expected results.

In considering this factor, MSHA will determine whether the cost of abatement is out of proportion to the expected reduction in noise exposure. If a control is extremely costly for the operator but the expected reduction in noise exposure is minimal, MSHA may determine that it is not economically feasible for you to install the control. For example, MSHA will not require rod and ball mills to be enclosed at costs that could reach hundreds of thousands of dollars. However, MSHA may require that control rooms and other practical controls be implemented to reduce noise exposure.

3(a). With respect to determining feasibility of engineering and administrative controls, does the "nature and extent of the overexposure" mean that controls which would be deemed feasible where noise exposures are 105 dBA might not be deemed feasible where the noise exposure is only 95 dBA? Or, does it mean that the feasibility of engineering controls may depend on how many miners are overexposed?

Engineering and administrative controls that are feasible to reduce a miner's noise exposure at a very high level will be considered feasible at lower levels above the PEL as well. For example, controls that are determined to be feasible where noise exposures are 105 dBA will also be considered feasible where noise exposures are 95 dBA. Because the noise standard is based on each miner's personal exposure to noise, feasibility does not depend on the number of miners overexposed.

3(b). Does the phrase "the demonstrated effectiveness of available technology" mean anything more than that a control or combination of controls must achieve at least a 3 dBA noise reduction in order to be deemed technologically feasible?

The phrase means that a single engineering control or a combination of controls which is likely to achieve at least a 3 dBA reduction in a miner's noise exposure is technologically feasible. In addition, a control or combination of controls that brings noise exposure down to compliance levels, but does not achieve a 3 dBA reduction,

may also be considered feasible. MSHA will, however, consider any adverse effects that the controls may have on the health and safety of the miner.

3(c). Does MSHA have some threshold of proportionality beyond which a control is deemed infeasible? Is there a value or range of values to guide the determination of whether costs are "wholly out of proportion to the expected results"? Does it depend on how many miners the reduction applies to?

Although neither MSHA nor the Commission has placed a value on the cost of a control per decibel of reduction or the number of miners affected, MSHA will not require an irrational expenditure to achieve a minimal noise

reduction.

4. How will MSHA determine the feasibility of administrative controls?

In determining the feasibility of administrative controls, MSHA will consider the same three factors that the Commission outlined for determining the feasibility of engineering controls, that is, nature and extent of the exposure, demonstrated effectiveness of available technology, and whether resources are wholly out of proportion to expected results. For example, MSHA will not require you to hire additional workers in order to "exhaust" all feasible administrative controls.

5. Will MSHA require an operator to use feasible engineering controls before implementing administrative controls?

No. A mine operator can choose to use either feasible engineering controls or feasible administrative controls, or a combination of both, as long as the controls reduce the miner's noise exposures to the PEL. When administrative controls are used, the mine operator must post the procedures for the controls and provide a copy to the affected miners.

62.5 P-Action Code

1. How is the P-action code used?

The P-action code is a type of action code used by an MSHA inspector in the entering of sampling data, collected from health surveys, on forms used to transfer required data to MSHA's health samples data base.

There are two scenarios involving a miner's overexposure to noise where the use of a P-action code would be appropriate.

In the first scenario, MSHA determines that a miner's full-shift exposure exceeded the PEL under Section 62.130(a) and (b). MSHA also determines that: (1) all feasible engineering and administrative controls have been used to reduce the miner's exposure to the PEL; (2) all affected miners have been enrolled in a Hearing Conservation Program in accordance with Section 62.150 which requires the mine operator to monitor under Section 62.110, provide and require the use of hearing protection under Section 62.160, provide audiometric testing under Sections 62.170 through

62.175, provide training under Section 62.180, and keep records under Section 62.190; and (3) if administrative controls are being used, the mine operator has posted on the mine bulletin board and provided affected miners with copies of any procedures used to reduce miners' exposure. In this scenario, no citation would be issued but a P-action code would be used as an indication that there were circumstances leading to the miner's overexposure. These circumstances could include the job or occupation that the miner was performing, the area where the miner worked, and the equipment that the miner was using or that was a source of the overexposure.

In the second scenario, MSHA determines that a miner's full-shift exposure exceeded the PEL under Section 62.130(a) and (b). However, unlike the first scenario, MSHA also determines that the mine operator failed to comply with the requirements of Section 62.130. In this scenario, a citation would be issued with an abatement period for the violation because the mine operator failed to: (1) use all feasible engineering and administrative controls to reduce the miner's exposure to the PEL; or (2) enroll all affected miners in a Hearing Conservation Program that complies with each requirement of Section 62.150; or (3) if administrative controls are being used, post on the mine bulletin board and provide affected miners with copies of any procedures used to reduce miners' exposure. If the violation is abated but the miner's exposure continues to exceed the PEL, the citation would be terminated and a P-action code would be used.

MSHA reviews and re-evaluates situations where the P-action code was used to see whether feasibility conditions have changed. If new technology becomes available that could affect feasibility determinations, MSHA will notify the mining community of the new technology by posting information about it on the MSHA web site. Thereafter, the local MSHA inspector will notify individual mine operators about the new technology if, at their mines, the P-action code was used for which the new technology is relevant. Any failure by MSHA to notify, however, does not relieve the mine operators from their responsibility to implement feasible controls whenever those controls become available.

MSHA will make a case-by-case determination of whether implementation of the new technology is feasible for each individual mine where the P-action code was used due to a noise source to which the new technology applies. There

may be reasons why the new technology may not be deemed feasible for a particular mine even though it is effective elsewhere. For example, because of the nature of the operation and the miners' activities, the new engineering control may not be capable of achieving a 3 dBA reduction in the miners' noise exposure at that particular facility, even if it has been shown to reduce the noise level from a particular piece of equipment by 3 dBA.

If MSHA deems the new technology to be feasible for the particular mine, the operator will be so informed and expected to implement it within a reasonable period of time to be determined by MSHA on a case-by-case basis. If the operator installs the new technology and still does not achieve the PEL, a citation would not be issued. If the operator does not do so, and a resample of the occupation determines a citeable overexposure still exists, a citation will be issued for failing to utilize all feasible controls to achieve the PEL. Of course, there would be no citation issued if the operator reduces miners' exposures to the PEL through the use of any combination of engineering and/or administrative controls, even if they differ from the new technology identified by MSHA.

2. How does MSHA expect that new technology will be developed?

MSHA's Office of Technical Support regularly reviews research on new control technology. In addition, MSHA expects the mining industry and equipment manufacturers to work together to develop new or improved noise reduction technology. MSHA will identify and disseminate information about new controls as we become aware of them.

62.6 Hearing Conservation Programs

1. Once a miner is enrolled in a hearing conservation program, is there a procedure for removing him or her from the program?

After a miner is enrolled in an HCP, the miner's noise exposure has been reduced to below the AL, and all requirements of Section 62.150 related to the HCP have been met, the miner can be removed from the program.

2. How will MSHA evaluate the effectiveness of my HCP?

Effectiveness will be based on factors such as the incidence of miners experiencing a Standard Threshold Shift (STS) or hearing loss as a result of noise exposures while working at the mine.

62.7 Personal Hearing Protection

1. How will MSHA enforce the requirements for hearing protectors, and do the requirements for mandatory use of hearing protectors or dual hearing protectors require a miner to wear the hearing protector(s) continually throughout the entire shift?

If the miner is exposed to sound levels at or above a TWA_8 of 85 dBA (the action level) and up to a TWA_8 of 90 dBA (the PEL), the use of hearing protectors is optional. The use of hearing protectors is required when a miner is exposed to noise at or above the action level and the miner has incurred a standard threshold shift or more than 6 months will pass before the miner can take a baseline audiogram. If exposure is above a TWA_8 of 90 dBA (the PEL), the operator must first use any combination of engineering and administrative controls that are feasible to lower the miner's exposure to a TWA_8 of 90 dBA. In addition to installation of feasible engineering and administrative controls, hearing protectors must be worn by a miner until the miner's exposure is reduced to the PEL, so long as the equipment responsible for the overexposure is operating. If exposure is above a TWA_8 of 105 dBA, the operator must also provide and ensure the use of dual hearing protectors. If a miner is not wearing the required hearing protector(s) in these circumstances, MSHA will issue a citation to the mine operator.

MSHA notes that hearing protectors do not necessarily need to be worn for an entire shift. For example, MSHA will not require hearing protectors to be worn in quiet places, or when the miner is no longer exposed to the excessive noise source(s) when the equipment is not running. Under those circumstances, MSHA will not issue a citation to the mine operator when a miner is not wearing a hearing protector.

This answer applies to dual hearing protection as well.

2. Must hearing protection devices have a noise reduction rating (NRR) to be acceptable?

Either an NRR rating or another scientifically accepted indicator of noise reduction is required.

3. Do miners who wear hearing aids also have to wear Hearing Protection Devices (HPDs)?

Yes. Hearing aids are not accepted as HPDs. MSHA's definition of a hearing protection device is defined as any device or material, capable of being worn on the head or in the ear canal that is sold wholly or in part on the basis of its ability to reduce the level of sound entering the ear. Not all devices or materials that are inserted in or that cover the ear to reduce the noise exposure, for example a hearing aid or cotton, meet the definition of a hearing protector under the standard.

4. Will deaf and other hearing impaired miners have to wear HPDs and do I have to reduce their noise exposure?

Yes, all provisions of the noise standard apply.

5. Will I be permitted to use noise canceling ear muffs?

You will be permitted to use noise canceling ear muffs for hearing protection, if they have a Noise Reduction Rating or another scientifically accepted indicator of noise reduction, but you cannot use them as an engineering control. In addition, they must be permissible to be used in by the last open crosscut in underground coal mines and in certain gassy metal and nonmetal mines.

6. What action will MSHA take if a miner for whom I provided hearing protection under my HCP is observed not wearing the HPD where the noise exposure exceeds the PEL?

You have the responsibility to make certain that required personal hearing protection is worn. If MSHA determines that a miner is overexposed to noise in this circumstance a citation will be issued.

7. Will a miner have to wear dual hearing protection if he or she leaves the area where dual hearing protection is required?

No.

8. If a miner does not participate in audiometric testing, does he or she have to wear hearing protection if his or her exposure is between 85 dBA and 90 dBA?

No. In this circumstance it would not be possible to determine if the person had a standard threshold shift. However, if the operator became aware that the individual had a standard threshold shift, for example, a letter from

the miner's personal doctor, the miner must wear hearing protection.

9. Is a miner required to wear dual hearing protection if he or she has a medical condition (for example, ear infection) that prevents him or her from wearing personal hearing protectors?

Section 62.140 of the standard requires a miner to wear dual hearing protection when working in an environment where dual hearing protection is required. For miners with a medical condition such as an ear infection, Section 62.160(a)(5) requires that the mine operator allow the miner to choose a different hearing protector.

10. What about miners who wear eyeglasses and are required to wear ear muff type hearing protection?

The standard does not exempt from its requirements miners who wear eyeglasses. MSHA believes that the proper selection and combination of hearing protectors should alleviate this concern. For example, newer models of ear muffs, which are readily available, are specifically designed to be used with safety glasses. Other models which were specifically designed for use with hard hats or welding shields are also readily available.

11. Are personal hearing protectors required for anyone traveling or working in areas above 90 dBA or just for those employees who are known to be overexposed?

All miners must wear hearing protection when the miner's full-shift noise dose exceeds the PEL or Dual Hearing Protection Level (DHPL); when the maximum level exposure exceeds 117 dBA; or, when the full-shift noise dose is between the AL and PEL and the miner has incurred an STS or it will be longer than six months to obtain a baseline audiogram. When such exposures occur, miners must wear their hearing protection whenever they are exposed to sound levels that could contribute to their dose (i.e., greater than or equal to 80 dBA for the AL, and greater than or equal to 90 dBA for the PEL and DHPL).

62.8 Audiometric Testing

1. How will MSHA enforce the 30-day time frame in Section 62.172(a)(4) in which the operator must obtain the results of hearing data from testing firms?

Although MSHA expects mine operators to comply with the 30-
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day time frame, if the operator can demonstrate that compliance was beyond its reasonable control, MSHA may allow the operator more time to obtain the audiometric test results. MSHA will make this determination on a case-by-case basis. Compliance is not beyond the operator's control when the physician, audiologist, or qualified technician is directly employed by the mine operator.

2. What factors should a physician or audiologist consider when making a determination that hearing loss is neither work-related nor aggravated by occupational noise exposure under the reporting requirements for reportable hearing loss?

Mine operators should inform physicians and audiologists to routinely ask about a miner's employment history and both occupational and non-occupational noise exposure in order to make a well-informed diagnosis. If there is evidence of non-occupational causes for the hearing loss, the physician or audiologist should look beyond the work place for the cause of the hearing loss. Unless the physician or audiologist can determine that the miner's hearing loss is neither work-related nor aggravated by occupational noise exposure, the mine operator must report the reportable hearing loss.

3. Will I have to make individual contact with miners about voluntary audiograms once I have implemented a hearing conservation program?

You must inform miners that audiograms are available. The standard does not specify how the miners are to be informed. You must offer miners the opportunity for audiometric testing of the miner's hearing sensitivity for the purpose of establishing a valid baseline audiogram to compare with subsequent annual audiograms. Posting of audiometric test dates and locations in areas where all affected miners can see them will be acceptable.

4. Can I use existing baseline audiograms?

Yes, you may use a current audiogram as a baseline audiogram for purposes of complying with Section 62.170(a) of the standard if it meets the test procedures specified in Section 62.171.

5. Can I wait a full year when using mobile test vans to get audiometric testing completed?

Section 62.170(a)(1) of the standard requires you to offer audiometric testing to miners within six months of their enrollment in your HCP. If a mobile test van is used, you are allowed up to 12 months from the miner's enrollment in your HCP to offer audiometric testing. However, you should schedule baseline audiometric testing as soon as possible after miners are enrolled in your HCP. Up to 12 months is allowed for those situations where getting access to a mobile testing facility is not possible during the initial six months.

6. Is a quiet period required prior to audiometric tests other than the baseline?

No, it is the mine operator's choice whether to implement a quiet period for tests other than the original baseline.

7. Does an audiologist or physician have to be present in the mobile van during audiograms?

No, but he or she must be directing or supervising the work of the qualified technician.

8. Must a new baseline be established for a miner who was previously enrolled in an HCP, was subsequently laid off from work for more than 12 months, and is called back to work at the same mine?

No, you may either use the prior baseline audiogram or establish a new baseline.

9. If a miner leaves my mine because I close the mine and takes a job at a different mine, can the new mine operator use the miner's last audiometric test as a baseline for that miner?

Section 62.190(c)(2) requires that a successor mine operator use the baseline audiogram, or revised baseline audiogram, as appropriate, obtained by the original mine operator to determine the existence of a standard threshold shift or reportable hearing loss. If the second mine where the miner is employed is owned by the same company, the operator of that mine must use the existing audiometric test record. If the mine is owned by a different company, the operator may choose to use the miner's existing audiometric test record if it meets the test procedures in Section 62.171, or the operator can establish a new baseline.

10. If an employee declined an audiogram when initially offered, but then changes his or her mind at a later date, do I have to provide the audiogram?

Yes, if the miner is still enrolled in a hearing conservation program. You would then have six months (up to 12 months if a mobile test van is used) from the date the miner opted back into the audiometric testing program to have the test conducted.

11. Must an audiogram of a miner who normally wears a hearing aid be conducted with or without the hearing aid?

It must be conducted without the hearing aid. The audiogram must determine the miner's current hearing ability without the use of the hearing aid.

12. Are audiograms conducted pursuant to OSHA's Hearing Conservation Amendment fully acceptable under MSHA's new standard?

Yes, they are.

13. Who pays for an evaluation or referral when a miner is referred to a physician for an evaluation and/or treatment due to a medical pathology of the ear prior to the mandatory audiogram being given, but the miner is in a Hearing Conservation Program?

If the physician believes that the medical pathology is due to workplace noise exposure or the wearing of hearing protectors while at the mine, then the mine operator has to pay for the evaluation or referral. On the other hand, if the physician believes that the medical pathology is not due to workplace noise exposure or the wearing of hearing protectors while at the mine, then the mine operator is not responsible for paying for the evaluation or referral. Whether the mine operator is responsible for paying for the evaluation or referral should be made clear to the miner.

62.9 Audiometric Test Records

1. I own multiple mines under the same company name and each mine has a separate MSHA ID number. If I close one mine and transfer the miners to a different mine within my company, what happens to the audiometric test records?

If the mine to which you transferred the miners is owned by the same company, you must use the existing audiometric

test records. In addition, you must maintain the audiometric test records for the duration of the affected miner's employment, plus at least six months.

2. What if a miner quits my mine and returns five months later requesting copies of his or her records?

You must provide him or her a copy of the audiometric test records. Section 62.171(c) requires that you retain audiometric test records for the duration of the affected miner's employment, plus at least six months. In addition, Section 62.190(a)(3) gives the former miners access to records which indicate their own exposure.

3. What if a former miner has not been employed at my mine for the past eight months, and he or she requests a copy of his or her audiometric test records from me?

You are only required to maintain audiometric test records for the duration of the affected miner's employment, plus at least six months. However, if you still have the record, it should be provided to the miner upon request.

62.10 Hearing Loss

1. A miner's audiometric records for a company show no hearing loss. The miner quits the mine and goes to work for another company and later takes an audiometric test with the new company which shows a reportable hearing loss. What are the previous company's responsibilities under Part 62?

The previous company does not have any responsibilities regarding this miner's hearing loss under Part 62. However, the previous company may have responsibilities for workers' compensation claims under State law.

2. The standard defines a reportable hearing loss as a 25 dB shift from the employee's baseline audiogram or revised baseline audiogram. What happens if a worker has successive 10-dB shifts with revision of the baseline? Is it possible that a 25 dB shift would never be identified? Could a worker have progressive hearing loss well above 25 dB and this not be a reportable event?

The definition of "reportable hearing loss" specifies that only an original baseline or a revised baseline audiogram which shows a significant improvement in hearing are to be used for reporting purposes.

3. How should I deal with hearing loss due to aging?

Tables 62-3 and 62-4 of the standard include correction factors for both males and females. However, any such adjustment must be made to both the baseline and annual audiograms.

4. Must I still report hearing loss diagnosed by a physician or for which compensation has been awarded?

Yes, it is required to be reported under 30 CFR Part 50.

5. When and how soon will I have to report a hearing loss under 30 CFR Part 50?

All hearing loss, including hearing loss diagnosed by a physician, or for which compensation has been awarded is reportable under Part 50 within 10 working days from when the operator becomes aware of the hearing loss, diagnosis of hearing loss, or award of compensation.

62.11 Training

1. Must I pay miners for the training required once they are enrolled in a hearing conservation program?

Yes.

2. I plan to have my audiometric testing service provider conduct the required training. Will MSHA accept their certification that the training was conducted?

No. Mine operators must certify that the training was provided under Section 62.180(b). However, the audiometric test provider can conduct the training.

3. Has MSHA developed a generic training program to assist me in complying with the requirements of a hearing conservation program?

Yes. MSHA developed a video that, when shown to miners enrolled in an HCP will meet the training requirements of Section 62.180. This video is available to the industry through the National Mine Health and Safety Academy.

4. Will MSHA provide me with a guide to set up a noise training program?

In addition to a training video, training materials related to noise are available through the National Mine Health and Safety Academy and from various sources including the National Institute for Occupational Safety and Health and through the Internet.

MSHA's web site at <http://www.msha.gov> has a section on noise that contains links to several organizations that can provide useful information on evaluating noise exposures, controlling sound levels, and hearing testing and conservation including:

- National Institute for Occupational Safety and Health
- Occupational Safety and Health Administration
- American Conference of Governmental Industrial Hygienists
- American Industrial Hygiene Association
- American Speech-Language-Hearing Association
- Council for Accreditation in Occupational Hearing Conservation
- National Council of Acoustical Consultants
- National Hearing Conservation Association

5. Can any or all of the Section 62.180 noise training requirements be included with 30 CFR Parts 46 and 48 training requirements?

Yes, as long as all required elements of Parts 46, 48, and 62 are covered.

6. How will MSHA expect me to make audiometric testing records available to MSHA personnel?

Records do not need to be provided immediately to authorized representatives of the Secretaries of Labor and Health and Human Services. Authorized representatives of the Secretaries must have access to records within a reasonable amount of time that does not hinder the authorized representatives' conduct of business. In most cases MSHA expects that this will be no longer than one business day.

7. What is MSHA's definition of a "successor operator?"

A successor operator is an operator who has taken over a mine from another company. The transfer of HCP,

audiometric testing and training records applies.

62.12 MSHA Monitoring

1. Will MSHA continue to perform noise monitoring under the new standard?

Yes. For example, during mandatory mine inspections and technical noise investigations, MSHA will continue to evaluate miners' noise exposures to ensure the operator's compliance with the noise standard. Whether an operator's system of monitoring is effective will be based on how well the monitoring system protects miners. MSHA intends to evaluate the effectiveness of a mine operator's monitoring system by how well the system achieves the specified goals of the standard. Overexposure may indicate deficiencies in the mine operator's noise monitoring system and may result in close scrutiny of the program by MSHA.

2. How will MSHA measure the nature and extent of potential overexposure to noise at a particular mining operation?

MSHA will measure the nature and extent of noise exposure at a particular mine using a personal noise dosimeter. Personal noise dosimeters are designed to measure a miner's personal noise exposure and shall be worn over the course of a full shift to get an accurate picture of the employee's noise exposure. Personal noise dosimeter results can show whether or not a miner's noise exposure exceeds the PEL.

62.13 Citations and Orders

1(a). If noise is "emanating" from one piece of equipment and the result is overexposure to more than one miner, will MSHA issue separate citations for each miner?

If there is a single noise source causing an overexposure to numerous miners and its control would bring all exposed miners into compliance, then only one citation will be issued, provided all of the other requirements of the standard are met. The total number of miners overexposed will be indicated on a single citation. For example, one citation will be issued if an air track drill exposes both the driller and the drill helper to similar noise exposures above the PEL with the number of affected miners indicated on the citation.

1(b). How will MSHA address situations where multiple machines or pieces of equipment are the source of the overexposure?

The operator will be cited separately for each overexposed miner. For example, at mills and preparation plants, where there are multiple noise sources, such as chutes, crushers, and screens, separate citations will be issued for each miner found to be overexposed. Likewise, at surface and underground mines where there are multiple noise sources such as dozers, loaders, haul trucks, etc., separate citations will be issued for each miner found to be overexposed.

2. There are many provisions of the standard, which, if violated, could result in a citation. (Example: I used the wrong threshold setting on a miner's personal noise dosimeter when monitoring his/her exposure.) Will MSHA cite violations of such provisions?

For each miner found overexposed, a single citation of either Sections 62.120, 62.130, or 62.140 will be issued with all other Part 62 provisions violated grouped as part of the citation. For example, if a miner's exposure exceeds the PEL and you failed to provide training and offer audiometric testing, a single citation of Section 62.130 will be issued and provisions of the HCP that were violated will be stated in the body of the citation. Where a citation is pending abatement by either retiring or replacing a piece of equipment that is the source of noise, failure to maintain any controls implemented or to comply with requirements of an HCP will result in a 104(b) order or a 104(a) citation. At a mine where a P-action code was

used, an operator must continue to abide by all of the requirements of 30 CFR Part 62, including provisions of an HCP. Failure to comply with any of the requirements of 30 CFR Part 62 will result in a separate citation for each miner affected. For example, if three miners exposed to the noise generated from a single piece of equipment, where it was determined all feasible controls have been implemented, are observed not wearing hearing protection, three separate citations will be issued.

3. How will MSHA determine if an overexposure under the new standard is a significant and substantial (S&S) violation?

If miners are overexposed to the PEL, a citation will not be S&S if you provide miners with proper hearing protection and it is being worn. However, a citation will be S&S if proper hearing protection is not worn by miners.

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**PART 100 CRITERIA AND PROCEDURES FOR PROPOSED ASSESSMENT OF
CIVIL PENALTIES**

MSHA will periodically review its assessment policy to promote the effectiveness of the civil penalty assessment program. Headquarters representatives from the Office of Assessments, Accountability, Special Enforcement and Investigations (OAASEI), Coal Mine Safety and Health (Coal), and Metal and Nonmetal Mine Safety and Health (Metal/Nonmetal) will conduct the reviews.

100.3 Determination of Penalty Amount; Regular
Assessment

The penalty amount for a regular assessment is computer-generated utilizing the Part 100 point system.

100.3(b) Appropriateness of the Penalty to the Size of the
Operator's Business

The primary source of size data is MSHA's Information Technology Center (ITC). The ITC maintains these data as reported by mine operators and contractors on the Quarterly Mine Employment and Coal Production Report (MSHA Form 7000-2). The business size calculations are based on production/employment during the calendar year preceding the occurrence date of the violation. When no data are available from the ITC, the secondary source of size data is an estimate of the average daily tons produced or hours worked. This estimate is obtained from the information entered into the MSHA Standardized Information System (MSIS) from the Mine Information Form by the enforcement office responsible for inspecting the mine and is converted to an annual estimate.

100.3(c) History of Previous Violations

Overall history is based on the number of citations/orders issued to the mine operator at the applicable mine that became final orders of the Federal Mine Safety and Health Review Commission (Commission) in the 15 months preceding the occurrence date of the violation being assessed. For assessment purposes, this 15-month period is defined as ending the day before the date the citation or order occurred, and beginning on the day 15 months prior to the date the citation or order occurred. For example: the 15-month period used to calculate history for a violation that occurred on July 16, 2012, would be April 16, 2011, through July 15, 2012. If the day 15 months prior does not exist (e.g. the 31st), the last day of that month is used.

Repeat violation history is based on the number of repeat violations of the same citable provision of a standard that

became final orders of the Commission in the 15-month period preceding the occurrence of a violation. The "same citable provision of a standard" means that exact section of either 30 C.F.R. or the Mine Act was previously cited. For example, a previous violation of 30 C.F.R. 75.213(a)(1) is not counted as a repeat for a violation of 30 C.F. R. 75.213 (a)(2), although they are both violations of 30 C.F.R 75.213.

For production operators, assessment history is based on Violations per Inspection Day (VPID). Inspection days are derived by totaling the MSHA on-site inspection hours entered by Authorized Representatives of the Secretary (AR) for certain inspection activities and task codes and dividing by five. A remainder amount greater than zero increases the count by one. All of the inspectors' time at the mine site is included when calculating inspection days. Travel time to and from the mines is not included.

The following list shows the types of MSHA inspection activities that are counted in the operators' inspection day counts. MSHA Supervisor and Inspector Trainee hours are not counted.

- E01 Regular Safety and Health Inspection
- E02 103(i) Spot Inspection
- E03 103(g) Written Notification Hazard Complaint Inspection
- E04 Verbal Hazard Complaint Inspection
- E06 Fatal Accident Investigation
- E07 Non-Fatal Accident Investigation
- E08 Non-Injury Accident Investigation
- E15 Compliance Follow-up Inspection
- E16 Spot Inspection
- E17 Special Emphasis Programs
- E18 Shaft, Slope or Major Construction Spot Inspection
- E19 Electrical Technical Investigation
- E20 Roof Control Technical Investigation
- E21 Ventilation Technical Investigation
- E22 Health Technical Investigation
- E23 Impoundment Spot Inspection
- E24 Other Technical Compliance Investigations
- E25 Part 50 Audit
- E27 Attempted Inspection (Denial of Entry)
- E28 Mine Idle Activity
- E33 Non-Chargeable Accident Investigation

Assessment history for independent contractors is based on total violation counts.

100.3(f) Demonstrated Good Faith of the Operator in Abating
the Violation

A 10 percent reduction in the base penalty amount of a regular assessment is granted for timely abatement of a citation issued under Section 104(a) or 104(d) of the Mine Act. The 10 percent reduction does not apply to any orders, citations issued in conjunction with orders, or citations issued for violations of the Mine Act.

Where a citation is assessed prior to being terminated, the 10 percent reduction will initially be granted. Should a 104(b) order subsequently be issued, an amended proposed assessment will be issued.

100.3(h) Effect of the Civil Penalty on the Operator's
Ability to Continue in Business

Within 30 days of receipt of a proposed assessment, an operator may submit a written request to the District Manager for review of its financial status. The request should include an explanation of how payment of the civil penalty would affect the operator's ability to continue in business. Upon receipt of such request, MSHA will suspend processing of the case until a determination is made as to whether a financial reduction is warranted. The District Manager will advise the operator to submit complete financial information including tax returns, income statements, and balance sheets for the most recent 2-year period.

The District Manager will forward this information to the Office of Assessments, Accountability, Special Enforcement and Investigations with a memorandum outlining any additional information and comments concerning the operator's financial condition and compliance history.

The OAASEI will review the submitted information, the operator's outstanding civil penalties and payment history, and decide whether any penalty adjustments will be made.

The OAASEI will notify the operator of the final decision via certified mail or equivalent. Upon receipt of the decision, the operator will have 30 days to either pay the proposed assessment or notify MSHA in writing of an intention to contest the proposed penalty.

100.5 Determination of Penalty; Special Assessment

Special assessment is the process for determining an appropriate civil penalty without using the penalty tables in 30 CFR 100.3.

Special assessment is mandatory for the following types of violations.

- Violations for which the daily penalty has been invoked under Section 110(b) of the Mine Act
- Violations cited to miners for smoking or carrying smoking materials under Section 110(g) of the Mine Act
- Flagrant violations as defined in Section 8 of the Mine Improvement and New Emergency Response Act of 2006 (MINER Act)
- Violations involving discrimination under Section 105(c) of the Mine Act and violations involving personal liability under Section 110(c) of the Mine Act.

District Managers may recommend any other violation for special assessment if circumstances warrant.

The following violations are required to be **reviewed** for special assessment.

- Section 104(a) citations issued for violations of Sections 103(a), 103(f), 103(j), 103(k), 104(b), 104(d), 104(e), 104(g) (1), 107(a), and 110(j) of the Mine Act
- violations that contributed to a fatal or serious injury
- violations of the standards identified as "Rules to Live By." These are violations of standards frequently cited as causing/contributing to the cause of fatal accidents.
- Potentially flagrant violations.

Note: special assessment is not mandatory for the above categories of violations, as mitigating circumstances may be involved. In such cases, special assessment is not warranted.

The following matrix is intended to assist enforcement personnel in determining whether a violation is required to be special assessed or reviewed for special assessment.

**Violations Requiring Submission of an
MSHA Special Assessment Review Form**

	Negligence Evaluation				
Category	None	Low	Moderate	High	Reckless Disregard
Fatality / Serious Injury	Yes	Yes	Yes	Yes	Yes
Section 104(a) citations issued for violations of Sections 103(a), 103(f), 103(j), 103(k), 104(d), 104(b), 104(e), 104(g) (1), 107(a), and 110(j) the Mine Act	Yes	Yes	Yes	Yes	Yes
Flagrant Violations*	N/A	N/A	N/A	Yes	Yes
110(b) Daily Penalty for Failure to Abate*	Yes	Yes	Yes	Yes	Yes
110(g) Smoking or Smoking Materials Violations Cited to Miners*	Yes	Yes	Yes	Yes	Yes
"Rules to Live By" violations	Yes	Yes	Yes	Yes	Yes
Any other violation involving circumstances warranting special assessment	Yes	Yes	Yes	Yes	Yes
*Special assessment required					

Completion of a Special Assessment Review (SAR) Form (MSHA Form 7000-32) **is mandatory** for each violation that is reviewed for special assessment. When the District Manager determines that a special assessment is warranted, an SAR package shall be prepared and submitted directly to the Office of Assessments, Accountability, Special Enforcement and Investigations. For violations contributing to a fatal or serious injury accident

(inspection codes E06/E07), an SAR package shall be prepared and submitted to the OAASEI **whether or not** special assessment is recommended. For potential violations under the flagrant violation provision of the MINER Act, whether recommended for special assessment or not, the District Manager must submit the SAR package including all supporting documentation to the Administrator for review and approval. The Administrator will transmit the SAR packages for violations recommended for flagrant violation assessment to the OAASEI.

All SAR packages shall include a copy of the relevant citation or order; the Special Assessment Review form; copies of inspector notes, sketches, or photographs; relevant portions of required plans; accident investigation reports, data sheets, and/or memoranda; and other information that would assist the Office of Assessments, Accountability, Special Enforcement and Investigations in determining an appropriate civil penalty. The SAR form must describe the facts and circumstances justifying the recommendation for special assessment. For flagrant violations, a memorandum from the appropriate Regional Solicitor is also required to be included in the SAR package.

When a violation is being reviewed for special assessment or flagrant determination, the district office must ensure that the violation is immediately placed on hold for special assessment review in MSHA's Standardized Information System (MSIS). This action prevents the violation from being automatically assessed until the special assessment/flagrant review process has been completed. Violations that are not placed on hold will automatically be marked assessment ready for regular assessment 30 days after issuance. District offices should not mark violations that are recommended for special assessment or violations contributing to a fatal or serious injury accident as assessment-ready in MSIS. The Office of Assessments, Accountability, Special Enforcement and Investigations will mark these violations assessment ready upon receipt of the SAR package. Excluding fatal or serious injury accident-related violations, District offices should release the hold status in MSIS for any violation reviewed and not recommended for special assessment.

Excluding flagrant and fatal or serious injury accident-related violations, violations with recommendations for special assessment shall be reviewed and forwarded to the Office of Assessments, Accountability, Special Enforcement and Investigations within 30 days of their issuance. An SAR package, as described earlier in this policy, will be included with the violation.

Flagrant violations are required to be specially assessed. The SAR form check box shall be marked to identify all flagrant violations. Flagrant violations shall be reviewed and forwarded to the Office of Assessments, Accountability, Special Enforcement and Investigations within 90 days of their issuance. An SAR package, as described earlier in this policy, will be included with the violation.

Violations contributing to a fatal or serious injury accident are required to be reviewed for special assessment and forwarded to the Office of Assessments, Accountability, Special Enforcement and Investigations whether recommended for special assessment or not. Accident-related violations shall be reviewed and forwarded to the OAASEI within 90 days of their issuance. An SAR package, described earlier in this policy, will be included with the violations. All violations associated with the accident shall be forwarded to the OAASEI at the same time.

All violations will automatically be marked assessment ready for regular assessment 182 days after issuance regardless of any hold status.

The Office of Assessments, Accountability, Special Enforcement and Investigations will review each recommendation for special assessment and make the final decision, conferring with the Coal or Metal and Nonmetal Mine Safety and Health program areas as necessary.

District personnel should regularly review the ***Assessable Violations Not Marked Report (R-119 Report)*** and *"Potential Flagrant Violations Not Assessed"* oversight report to ensure violations recommended for special assessment or otherwise included in SAR packages have been processed by the Office of Assessments, Accountability, Special Enforcement and Investigations.

100.6 Safety and Health Conferences

The safety and health conference is a scheduled meeting of a mine operator or miners' representative with MSHA district personnel to discuss the facts surrounding a citation or order. The purpose of the conference is to provide an opportunity to submit additional information regarding the violation. At this meeting, questions regarding the issuance of a citation or order, including the inspector's evaluation of negligence, gravity, and good faith may be discussed. Types of issues that might be discussed in a pre-penalty safety and health conference include

potential Pattern of Violation (POV) orders, S&S citations issued during a POV program assessment period, statutory violations, flagrant violations, and accident-related violations. A conference must be requested in writing by the operator or other party within 10 calendar days of notification by MSHA of the opportunity for a safety and health conference. Generally, an operator should be notified of the right to request a safety and health conference at the time the inspector issues a citation or order or at the inspector's closeout conference. This notification starts the 10-calendar-day period during which operator or other parties may request a safety and health conference or submit additional information. The request or additional information should be submitted to the District Manager or designee. A conference request must be in writing and must include a brief statement of the reason why each citation or order should be conferenced. Requests for safety and health conferences will be considered based on the postmark date of mailing.

The decision to grant an operator's request for a safety and health conference is within the District Manager's discretion. Upon receiving a written request, MSHA will evaluate the circumstances in deciding to grant or deny the request and notify all affected parties. If granted, MSHA will notify in writing all affected parties including the mine operator, miners' representative, contractor, issuing inspector, and the inspector's supervisor of the conference, i.e., subject, date, time, and location of the conference. MSHA maintains the right to limit the conference parties.

Once the conference has been granted, the Conference Litigation Representative (CLR) or designated MSHA representative (DMR), e.g. field office supervisor, shall ensure that citations/orders being conferenced are not processed by the Office of Assessments, Accountability, Special Enforcement and Investigations (OAASEI). Any violation for which a conference is scheduled prior to a civil penalty assessment should be placed on hold in MSIS to prevent it from receiving an automatic regular assessment before the conference is conducted.

The issuing inspector shall be notified of the time and location of the conference. If not present, the inspector will be informed of the results of the conference.

In the case of Section 110(c) violations where an opportunity for conference has not been previously offered, the Headquarters Office will notify the District Manager by memorandum that an operator or agent is to be given the opportunity for a safety and health conference. The memorandum will include a review and recommendation from the Office of the Solicitor, the name of the agent against whom a penalty is proposed to be assessed, the specific violation allegedly knowingly authorized, ordered or carried out, and the reference to the MSHA special investigation file. The District Manager, or designee, will promptly notify the operator or agent of the opportunity for a conference and the specific matters to be discussed. The notice may be either in person or by telephone. This notice from the District Manager is the first formal notice to the operator or agent of MSHA's decision to assess an individual civil penalty against the agent.

During the safety and health conference, the investigative file shall not be shown to the operator or agent, nor in any instance may the information contained in the file be released. The scope of the conference will not be whether a violation exists.

Instead, the conference will focus on the facts and circumstances relating to the statutory criteria, and any facts in mitigation will be considered. The District Manager must provide the conference results to Headquarters, and the agent's correct home address, so that the Office of Assessments, Accountability, Special Enforcement and Investigations can transmit the proposed penalty assessment to the agent.

100.6(d) Referral of Citations/Orders for Assessment

Section 105(a) of the Mine Act requires that a proposed civil penalty be issued for all violations "...within a reasonable time after the termination of such inspection or investigation" For proposed assessment purposes, "reasonable time" is normally defined as within 18 months of the issuance of a citation or order or, in the case of a fatal accident, within 18 months of the issuance of the accident report. However, citations and orders may be assessed more than 18 months after they are issued if circumstances so warrant.

Upon closure of a pre-penalty safety and health conference, expiration of the conference request period, or the District Manager's decision not to schedule a pre-penalty conference, all citations and orders will be referred for civil penalty assessment, unless they are being held for special assessment or flagrant review. The District Manager will ensure that all violations, including citations that have not been terminated

and those that are held for special assessment or flagrant review, are referred for civil penalty assessment no later than 6 months from the date of issuance. MSIS will automatically mark citations, whether terminated or not, and orders assessment-ready 30 days after issuance unless they have been placed on hold for a pre-penalty conference or special assessment review. MSIS will also automatically mark all citations and orders assessment-ready 182 days after issuance, regardless of a hold for conference or special assessment review. Citations and orders automatically marked assessment-ready by MSIS will receive regular formula assessments.

Citations/orders pending the outcome of a Petition for Modification or Pre-penalty Notice of Contest will be assessed a civil penalty in the interim and therefore should be forwarded for civil penalty assessment as described above. Should a decision be made in favor of the operator, the civil penalty for that citation/order will be eliminated.

100.7(a) Notice of Proposed Penalty

Notice of the issuance of a proposed assessment will be provided to the mine operator and miners' representative.

Amended proposed assessments will be issued where the proposed assessment is found to be incorrect. When a proposed assessment has been timely challenged by the operator for sufficient reason, collection of the civil penalty will be suspended, pending review and a decision as to whether an amended proposed assessment will be issued. If a proposed assessment is amended, the amended proposed assessment will appear on a subsequent billing statement, and the operator will have 30 days from receipt of that statement in which to pay or contest the penalty. If an amended proposed assessment is not issued, the 30-day period to pay or contest will begin on the date the operator receives notice that the proposed assessment will not be changed.

An amended proposed assessment that increases the amount of the penalty will generally be issued only if the mine operator is notified of MSHA's intent within 30 days of the operator's receipt of the initial proposed assessment. However, where an amended assessment is needed because a 104(b) order was issued after the assessment of a citation that was not terminated at the time, such notification is not required.

A contested citation or order that is subsequently modified will not receive an amended proposed assessment. If the citation or order has not been adjudicated, the appropriate Regional

Solicitor or Conference Litigation Representative will be provided with a copy of the modification.

In the event a citation or order is vacated after a proposed assessment has been sent to the operator, the Office of Assessments, Accountability, Special Enforcement and Investigations will advise the operator, if appropriate, to disregard the proposed assessment.

100.8(a) Service

Proposed assessments returned to the Office of Assessments, Accountability, Special Enforcement and Investigations, by the mailing service will be researched once for a more current or more appropriate address. If such an address is found, the proposed assessment will be re-mailed once in an attempt to effect service. Returned proposed assessments marked refused or unclaimed are considered served. Returned proposed assessments to individuals (agents) will be hand-delivered by MSHA district personnel. A refusal to accept hand-delivered proposed assessments is considered service.

PART 104 PATTERN OF VIOLATIONS

On October 1, 1990, regulations to identify mine operators who meet the criteria for a Pattern of Violations as outlined in 30 CFR Part 104 became effective. These regulations include procedures for initial screening of mines that may be developing a Pattern of Violations; criteria for determining whether a Pattern of Violations exists at a mine; procedures for issuance of potential pattern notice and final pattern notice; and procedures for termination of a Notice of Pattern of Violations.

104.2 Initial Screening

At least once every year, District personnel are to complete an initial screening of each mine in their respective districts to determine whether there is sufficient cause to apply the pattern criteria for possible issuance of a potential Pattern of Violations notice. At the discretion of the District Manager, screenings may be conducted more frequently.

The final rule does not specify the period of a mine's compliance history to be examined during the initial screening. Generally, a mine's 2-year compliance history will provide sufficient information for an evaluation of the health and safety conditions. In some cases, however, other factors such as interruption of mining activities or changes in mine ownership may suggest that a longer or shorter compliance history be reviewed.

Persons conducting the initial screening should use sources such as computer printouts identifying the mine's compliance history relative to the types of enforcement action noted in 30 CFR 104.2(a); information in mine files such as prior inspection reports and inspector's notes; special assessment and enhanced assessment action; special investigation activities; and other relevant information resulting from inspector debriefings. Only violations and orders issued after October 1, 1990, can be considered in the initial screening process.

The legislative history of Section 104(e) of the Federal Mine Safety and Health Act of 1977 does not support a distinction between large and small operations in establishing a pattern. Also, 30 CFR Part 104 avoids triggering the pattern notice based on a predetermined number of violations of particular standards. Therefore, a quantity of violations that might constitute a pattern at one mine may be insufficient to trigger a pattern notice at another mine. Accordingly, the initial screening criteria in 30 CFR 104.2 are to be applied on a mine-by-mine basis. This screening procedure shall also apply to each independent contractor's compliance history at a specific mine site. Each independent contractor at a mine site shall be screened as a separate entity. An independent contractor's compliance history shall not be collectively screened based on district or national data.

Mitigating circumstances, as referenced in 30 CFR 104.2(b)(4), means causes or circumstances resulting in repeated violations that are beyond the control of the operator, even though the operator has made a diligent effort to comply with the regulations. For example, a severe geological condition may present complex mining problems and should be given full consideration where operators have undertaken methods to control the condition but nevertheless failed to maintain compliance.

A record of the initial screening process for each mine is to be kept in the District until the next screening is conducted.

104.3 Pattern Criteria

The pattern criteria shall be applied to mines identified in the initial screening process as having a compliance problem to determine if these mines demonstrate a potential Pattern of Violations. The objective will be to identify those operators who habitually allow the recurrence of violations. This review shall focus on the mine's history of repeated significant and substantial (S&S) violations of a particular standard, of standards related to the same hazard, or caused by an unwarrantable failure to comply. A pattern evident in any one of these categories may provide a sufficient basis for the issuance of a potential Pattern of Violations notice. It should be noted that violations used for pattern criteria are only those S&S citations/orders issued after October 1, 1990, that have become final either through the assessment process or through litigation.

104.4 Issuance of Notice

30 CFR 104.4 addresses two different notification processes. Section 104.4(a) relates to a District Manager's notification of a potential Pattern of Violations. Section 104.4(c) relates to the Administrator's decision on whether to issue a notice of a Pattern of Violations.

The reasons for placing a mine in a potential Pattern of Violations category must be clearly stated in a notice to the mine operator in accordance with 30 CFR 104.4(a). Factors considered in the initial screening process and Pattern of Violations criteria application should be specified in the notice. For example, merely stating that a history of repeated S&S violations of a particular standard exists may not adequately explain to the operator why the mine may be placed on a pattern. The specific standard and the number of times it has been cited should be clearly defined in the notice along with all other supporting information. Furthermore, the District Manager should advise the operator in this notice that if the operator implements a program as specified in 30 CFR 104.4(a)(4), the operator must provide a written program to the District Manager within 20 calendar days or less from receipt of the notice. The notice of potential Pattern of Violations is to be sent to the mine operator by certified mail or hand delivered. The mine operator is required to post this notice on the mine bulletin board. Additionally, a copy of the notice must be sent to the representative of miners and the Pattern of Violations coordinator in headquarters.

If a program is implemented in accordance with 30 CFR 104.4(a)(4), the District Manager may allow additional time to evaluate the effectiveness of the program. This timeframe cannot exceed 90 days, and the District Manager can terminate the evaluation period at any time if the program's purpose is not being achieved.

When notice of a potential Pattern of Violations has been sent to a mine operator, any subsequent action taken by the District Manager to rescind this notice is to be stated in a letter sent to the mine operator, representative of miners, and Pattern of Violations coordinator.

If an operator resumes the practice that gave rise to the original notification of potential Pattern of Violations, a new notice can be issued to the operator based on the circumstances that resulted in the original notice, as well as the operator's most recent conduct. Under such circumstances, the District Manager would also take into consideration the operator's

performance following the previous notification in determining whether to allow the operator another 90-day period to implement a program to reduce S&S violations.

When the District Manager receives a decision from the Administrator to issue a Notice of Pattern of Violations, the District Manager is to send by certified mail, or hand deliver, the Notice of Pattern of Violations to the mine operator. This notice must be posted on the mine bulletin board. A copy of this notice also is to be provided to the representative of miners and the Pattern of Violations coordinator. Following notification to the operator, the District Manager should initiate appropriate inspection activities to ensure that the mine is inspected in its entirety during the following 90-day timeframe.

104.5 Termination of Notice

When a Notice of Pattern of Violations is terminated in accordance with 30 CFR 104.5, an authorized representative is to issue a notice of termination to the mine operator and is to provide a copy to the representative of miners and the Pattern of Violations coordinator.

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IV.G-1 Applicability of 30 CFR 36 to Oil Shale Mines

Permissible equipment for gassy metal and nonmetal mines is approved by MSHA under criteria in 30 CFR Part 36. Certain MSHA mandatory standards in 30 CFR Part 57, Subpart T, require special safeguards for equipment used in gassy mines. Standards 57.22302, .22303, .22304 and .22305 specifically require that only permissible equipment be used in designated portions of such mines. Oil shale mines shall be considered within the scope of Part 36 and shall be guided by appropriate standards relative to Part 36.

IV.G-2 Cameras as Part of Inspection Equipment

Frequently, photographs of the scene of an alleged violation, imminent danger or accident are of great assistance in verifying and correcting the conditions or practices resulting in a violation, danger, or accident. Photographs may also be of great assistance in subsequently resolving differences of opinion between the mine operator and the inspector as to the conditions present at the time of citation. Such photographs may benefit both parties by expediting assessment and review proceedings by providing a pictorial illustration of a violation. Accordingly, when the use of a camera would be necessary or helpful in an inspection, the district manager or subdistrict manager may authorize such use subject to the following special restrictions:

1. All non-gassy metal and nonmetal mines. There are no restrictions on camera use.
2. All gassy metal and nonmetal mines. Tests for methane must be performed prior to any use of a camera. If methane is present at levels in excess of 1%, or if the inspector has reason to believe methane is present, only photographic equipment approved for use in gassy mines by the Approval and Certification Center shall be used.
3. All gilsonite mines. Cameras are prohibited.

The inspectors should make a record of the physical conditions under which the photographs are taken and the date, time and place of each photograph.

A refusal to permit the inspector to carry a camera into the mine will be considered to be a violation of Section 103(a) of the Act and could also be considered an interference or hindrance of the inspector in carrying out the provisions of the Act. If there is a refusal to allow an inspector to take a camera into the mine, an appropriate citation should be issued, and a record should be made of the reason(s) for taking the camera into the mine. The inspection should then be completed.

IV.G-3 Compliance Assistance Visit (CAV)

Under the CAV program for metal and nonmetal mines, MSHA inspectors may make visits to mines in certain situations listed below to point out potential violations without monetary civil penalties being proposed, based on Section 502(b) of the Act which directs the Secretary "...to the greatest extent possible, [to] provide technical assistance to operators in meeting the requirements of this Act and in further improving the health and safety conditions and practices in coal or other mines." A CAV would be conducted only after a request is made by an operator to the appropriate district or subdistrict manager. Such requests should be made at least one to two weeks in advance of the desired date of visit.

The situations where the CAV program is applicable are:

1. New mines not yet producing;
2. Seasonal, closed, or abandoned mines prior to reopening;
3. New facilities or new installations of equipment in an operating mine.

The CAV will cover one or more of the following areas as requested by the operator:

1. Miscellaneous iron installations (guards, walkways, stairways, etc.);
2. Equipment with moving parts (conveyor belts, crushers, screens, etc.);
3. Mobile equipment (trucks, loaders, etc.);
4. Proposed plans and designs;
5. Planned training; and,

6. Other areas as appropriate.

The inspector, while conducting a CAV, will issue notices of violations whenever he observes a potential violation or imminent danger situation. Each notice will be clearly marked "CAV-NONPENALTY" and will not be included in any fashion in the assessment process. Operators should be aware, however, that regular inspections will be made of the operations once they have begun and that during the regular inspections the inspector will look at all of the notices issued during the CAV to ensure that the conditions and practices noted have been corrected. If the correction has not been made, an appropriate citation or withdrawal order will be issued. No additional penalty, monetary or otherwise, will be proposed solely because of the previous CAV.

The inspector, in conducting a CAV, is to proceed directly to the site of the CAV and is not to conduct a regular inspection of the premises. However, should an imminent danger situation be observed, an appropriate order will be issued.

IV.G-4 RESERVED

IV.G-5 Inspection and Sampling Policy for Radiation at
Underground Mines

Underground metal and nonmetal mines shall be inspected and sampled for radiation hazards as follows:

1. Where radon daughters exceed 0.1 WL, sample quarterly at full-time producing (FTP) underground mines and whenever a regular inspection is conducted at intermittent (INT) underground mines.
2. Sample for radon daughters annually at all other underground metal mines and at other underground nonmetal and stone mines where radon daughters have occurred in the past.
3. Sample remaining underground nonmetal and stone mines for radon daughters every three years.
4. Monitor underground mines for other forms of radiation as warranted.

IV.G-6 Inspection of Mines on Idle Shifts

Inspection of mines or mills on idle shifts shall be limited to places where conditions are practically the same as they would be on working shifts. For instance, escapeways, travelways, explosive and material storage areas, would not be significantly different and could be inspected on idle shifts. At underground mines, shaft inspections could be conducted on an idle shift.

IV.G-7 Inspection of Small Mines

Small operations often do not have the resources normally available to larger mines, and operators or their agents in small mines are frequently themselves working miners. Time devoted to accompanying inspectors often must be subtracted from productive endeavors and may be a financial burden on the operator. In addition, while the Act entitles the operator to accompany the inspector there is no standard requiring the operator to do so.

However, if an inspection is to proceed unaccompanied by the operator or his agent, the inspector shall discuss with the operator or his agent the details of what the inspector may encounter during the inspection in order to ensure the inspector's safety.

To the extent possible, all issues will be addressed during a single inspection so that the number of follow-up inspections for compliance purposes can be reduced to an absolute minimum. This also includes assignment of electrical inspectors and specialists. As far as resources permit, MSHA shall try to avoid scheduling separate electrical, mechanical, or health inspections at small mines.

The close-out conference may be held at a location and time selected by the operator or the operator's agent so long as they are reasonable. Inspectors should make certain that all citations are explained and that the operator or operator's agent is aware of his/her rights to a safety and health conference with the district manager. Abatement dates on citations should be discussed with the operator.

IV.G-8 Jurisdiction Over Alumina Refining Facilities

See Section 3 Definitions, I.3-3, in Volume I of this Manual.

IV.G-9 Jurisdiction Over Mine Roads

See Section 3 Definitions, I.3-2, in Volume I of this Manual.

IV.G-10 Jurisdiction Over Refractory Mills

See Section 4, Mines Subject to the Act, I.4-2, in Volume I of this Manual.

IV.G-11 MSHA/OSHA Interagency Agreement

See Section 4, Mines Subject to the Act, I.4-1, in Volume I of this Manual.

IV.G-12 Operator Responsibility Over Customer Vehicles

It is the responsibility of the operator of a mine to enforce mandatory safety standards on all vehicles entering the mine property. In the area of backup alarms on customer trucks, the requirement could be met in several ways, including the following:

1. Traffic patterns can be established to eliminate the need to backup.
2. Operator personnel can act as observers where trucks are required to backup.

If the loading of customer trucks is being done in a hard hat area, it is the responsibility of the operator to see that all persons in the area wear hard hats. If hard hats are not available to the customer personnel, the following options will meet the requirement of the standard:

1. Rules can be established that while loading, the customer truck drivers must stay in their truck cabs if the cabs are protected by canopies; or
2. If the customer truck drivers must get out of their cabs, designated safe areas must be provided.

IV.G-13 Portable Operations

See Part 41, III.41-2, in Volume III of this Manual.

IV.G-14 Regular Inspection After Fatal Accident

A regular inspection shall be conducted after the occurrence of a fatal accident, except that such an inspection becomes the judgement decision of the district manager if the mine has received a regular inspection within 60 days prior to the accident. The after-fatal inspection may be counted towards the mandated minimum inspection requirement. However, any mine may receive more than the mandated minimum inspections if dictated by underlying safety and/or health reasons.

IV.G-15 Reporting PCB Spills

Under the authority of the Toxic Substances Control Act, the Environmental Protection Agency (EPA) requires that spills of polychlorinated biphenyl (PCB) be reported whenever the incident poses a substantial risk to human health or to the environment. PCBs have been shown to cause chronic toxic effects in many species even when they exist in very low concentrations. Well documented tests show that PCBs cause, among other things, reproductive failures, gastric disorders, skin lesions, and tumors in laboratory animals.

Workers exposed to PCBs may show a number of symptoms and adverse effects including, but not limited to, chloracne and other epidermal disorders, digestive disturbances, jaundice, impotence, throat and respiratory irritations, and severe headaches.

Spills in mines most commonly result from damage to transformers or capacitors containing PCB dielectric fluid. EPA assumes that a transformer or capacitor contains PCBs if: (1) the nameplate indicates it contains PCB dielectric fluid; or (2) the owner or operator has any reason to believe that it contains PCB dielectric fluid. If a transformer or capacitor does not have a nameplate, and there is no information to indicate the type of dielectric fluid in it, the transformer or capacitor is assumed to contain PCB fluid. PCB dielectric fluids may be listed under the following trade names: Askarel, Aroclor, Pydraul, Thermanal, Pyroclor, Santotherm, Pyralene, Pyranol, Inerteen, Asbestol, Chlorextol, Diachlor, Dykanol, Elemex, Hyvol, No-Flamol, Saf-T-Kuhl, Aroclor B, Chorinol, Chlorphen, and Eucarel.

As a general rule, EPA does not require that spills involving a single capacitor be reported unless PCBs threaten to enter a water-course. Minor leaks in transformers, such as bushing leaks or weeping, also do not require reporting. However, such spillage or leaking should be stopped and repaired as soon as possible.

If a spill should occur at a mine, the mine operator's first priority should be to control the spread of the spill by damming or diking the leak. Any threat of contamination to water supplies should be given the highest priority. Appropriate personal protection (e.g., impermeable gloves, boots and aprons, goggles, and respirators) must be worn by persons cleaning up spills pursuant to applicable MSHA regulations.

Once the spill is contained, clean up measures can begin. All materials contaminated with PCBs, including soil and debris,

should be collected, stored and disposed of in accordance with EPA regulations.

Upon discovery of a PCB spill, the district manager shall be notified immediately. The district manager is responsible for reporting the spill immediately to the National Response Center operated by the U. S. Coast Guard at 800-424-8802 and the Metal and Nonmetal Division of Health. The Coast Guard will inform the appropriate EPA office. The Coast Guard and/or EPA will take steps to assure that the clean up of the spill is properly handled. Prompt reporting of the incident is necessary to prevent the spread of this toxic chemical into the environment. The district manager should offer to assist EPA or the Coast Guard if needed and should request that they keep him informed of the clean up activities.

EPA regulations and other publications are available in the districts. EPA's regulations on labeling are accepted by MSHA as being in conformance with mandatory standard 30 CFR 56/57.20012.

IV.G-16 Second- and Third-Shift Inspections

The inspector shall make sufficient inspections in multi-shift operations to determine that safe conditions exist and that proper work procedures and practices are applied on all shifts.

IV.G-17 Suspected "Foul Play" Felonies

It is MSHA's policy to cooperate with state and local law enforcement officials in all circumstances where a felony violating state or local law is suspected.

If, in the course of an inspection or investigation, there is reason to believe that foul play has occurred (for example, a death or an injury of suspicious cause or a fire of suspicious origin), the following procedures are to be followed:

1. The inspector or investigator should consult through normal channels with the district manager.
2. The district manager should contact the Administrator's Office and the appropriate Regional Solicitor's Office.
3. After consultation with the Administrator's Office and an attorney in the Regional Solicitor's Office, promptly report the matter to appropriate state or local law enforcement officials.

4. Cooperate with the state and local officials, but ensure that any evidence which may also be relevant to a possible Mine Act violation is preserved.
5. If state or local law enforcement officials wish to participate in MSHA's investigation, the matter first should be cleared with the Supervisory Special Investigator in the Headquarters Office.
6. If only evidence or other information is being shared with state or local law enforcement officials, advance clearance from Headquarters is not necessary, but the Supervisory Special Investigator should be promptly apprised of any such activities or contacts.

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PARTS 56/57 SAFETY AND HEALTH STANDARDS - SURFACE/UNDERGROUND
METAL AND NONMETAL MINESSubpart B Ground Control56.3130 Wall, Bank, and Slope Stability

This standard requires that mining methods that will maintain wall, bank, and slope stability shall be used in places where persons work or travel in performing their assigned tasks.

Consistent with this standard, MSHA requires that a bench located immediately above the area where miners work or travel be maintained in a condition adequate to retain material that may slide, ravel, or slough onto the bench from the wall, bank, or slope. However, there may be instances in which the ground conditions at a mine present a particular hazard. In such situations, more than one bench above the area where miners work or travel must be maintained in a condition adequate to retain material that may come onto the bench from the wall, bank, or slope. It is normally expected that one bench will be so maintained, but if more than one bench above the area where miners work or travel is necessary, only the number of benches necessary to provide adequate protection will be required to be maintained.

A bench may be considered adequate even if material has accumulated on the bench. In determining whether a bench with material accumulated on it is adequate, consideration shall be given, but not limited to the following factors: (a) the method of mining; (2) the amount of material on the bench; (3) the amount and rate of material coming onto the bench; (4) the angle of the bank, wall, or slope, particularly if it is close to the angle of repose; (5) the composition of the wall, bank, or slope; and (6) the configuration of the bench.

If the bench immediately above an area where miners work or travel is no longer adequate to catch material, and sending miners and equipment onto the bench to clean it presents a greater hazard than raveling or sloughing, cleaning is not appropriate. Examples of such circumstances may be where there are concerns about the stability of the bench itself, concerns that removal of material from the bench would destabilize the slope immediately above the bench, or concerns that the equipment could overtravel the edge of the bench. Where the bench cannot

be safely cleaned, other measures shall be taken to protect miners. Other measures may include placing a berm at the base of the wall, bank, or slope to prevent the overtravel of material into the area where miners work or travel or ceasing mining in the affected area.

56/57.3200 Correction of Hazardous Conditions

This standard prohibits work or travel, other than corrective work, in areas where hazardous ground conditions exist. Posting of a warning against entry is required until corrective work is completed if workers could enter the area inadvertently. In addition, barriers are required if the area is left unattended prior to the completion of the corrective work. The mode of travel in the area must be evaluated to determine what type of barrier is appropriate to "impede" unauthorized entry. Examples of barriers would be piles of muck, piles of large boulders or a timber barricade. These barriers would have openings to allow access for persons who are correcting the hazardous conditions. These posting and barrier requirements do not apply to underground face areas under development where the corrective work is performed on a continuing basis as a part of the mining cycle, and the only workers exposed are those engaged in the corrective activity.

56/57.3203 Rock Fixtures

This standard contains the requirements for installation and testing of all rock fixtures and accessories used for ground support. In all cases where rock fixtures are selected as the method used to support ground, they must meet the requirements of 56/57.3203.

All bolts tensioned by torquing must be within the torque range set out in paragraph (f)(1). Mine operators are required to test the first, tenth and last bolt installed in each work area during the shift as a check on whether or not the torquing requirements are being achieved. When the testing process reveals that a fixture is not properly torqued, steps must be taken to determine the extent of defective installation and to correct all improperly installed fixtures.

The ground conditions in many active face areas require the installation of only a few bolts during each blasting cycle. Testing of the first and last bolts in each work area will help ensure the integrity of the ground in these instances. Where large numbers of bolts are installed on a continuing basis, testing of the first, tenth and last bolt in each work area would normally provide the frequency of testing necessary to identify a

bolting problem and enable the operator to take corrective action.

The mine operator must certify that all tests required by this standard have been conducted. In the case of testing of the ASTM bolts and accessories by the manufacturer of the devices, the mine operator's certification responsibility is satisfied by obtaining a copy of the manufacturer's certification and making it available to the inspector.

The correction of improperly installed fixtures will also help to ensure compliance with standard 56.3130 which requires that wall, bank and slope stability be maintained at surface mines where miners are exposed, and standard 57.3360, which requires that ground support systems at underground mines be designed, installed and maintained to control the ground where miners are exposed.

56/57.3401 Examination of Ground Conditions

Under this standard the mine operator must designate the persons experienced in ground control who will examine and test the ground. These persons may be supervisors or miners. Mine management retains the responsibility for examination and testing of ground conditions. The standard also specifies when examinations and tests must be made.

The 57.3401 requirement for examination of travelways is not applicable to escape routes from underground mines. The examination and maintenance of underground escape routes are specifically addressed in 57.11051, Escape Routes.

56/57.3430 Activity Between Machinery or Equipment and the Highwall or Bank

This standard is applicable to surface mines and surface areas of underground mines. It addresses the hazards which exist when persons work or travel near a highwall or bank and their escape from a fall or slide of material could be hindered by the machinery and equipment in their escape path.

If escape could be hindered, no work or travel is permitted. If, however, the machinery or equipment poses no hindrance, the standard is not applicable. Consideration must be given to: the height of the wall or bank; the distance between the equipment and wall or bank; the size and positioning of the equipment; the location of the worker in relation to the escape route; and any surrounding noise levels or distractions which could prevent the detection of falling ground.

Where machinery or equipment becomes disabled near a highwall or bank, the equipment operator can often safely exit on the side away from the hazard. If this is not possible, exit on the wall side is permitted. Remounting on the wall side may also become necessary in order to reposition or move the equipment to a safe location for repairs. When the equipment is not removed for repair, it must be repositioned at the site so that workers will not be exposed to fall of ground hazards from which their escape is hindered.

57.3461 Rock Bursts

This standard requires mine operators to notify MSHA of a rock burst within twenty-four hours of occurrence. It also requires that a rock burst control plan be implemented within ninety days of the occurrence. The plan must be updated as conditions change or controls are altered. When innovations are added to an existing rock burst control program, the changes are considered an "update" in accordance with paragraph (c) of the standard and are to be included in the plan at that time.

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57.4057 Underground Flame-Resistant Trailing Cables

This standard requires that underground trailing cables be flame-resistant in accordance with 30 CFR 18.64. Section 18.64(f) specifies that an acceptance marking be imprinted on the cable for identification purposes.

The attached list, "Manufacturers of Cables with MSHA Acceptance Numbers," can be used to verify accepted cables. An approval number will be accompanied by letter designations which denote the governmental division granting approval -- MSHA, MESA, BM (Bureau of Mines), P (Pennsylvania Bureau of Mines), etc. Cables which are marked with the prefix "P" for Pennsylvania approval shall be considered acceptable if the number is followed by an MSHA, MESA or BM notation.

When a trailing cable is imprinted with a series of numbers or letters which do not appear on the attached list, the Approval and Certification Center (A&CC) at Triadelphia, West Virginia shall be contacted for assistance in determining the acceptability of the cable. This includes newly manufactured cables which may be determined to be acceptable subsequent to the printing of the attached list.

Inquiries regarding the approval of underground trailing cables should be directed to the MSHA Approval and Certification Center, Triadelphia, West Virginia (304) 547-0400.

Manufacturers of Cables with MSHA Acceptance Numbers

<u>COMPANY</u>	<u>MSHA ACCEPTANCE NUMBER</u>
Simplex Wire and Cable Company P.O. Box 397 North Berwick, ME 03906	101-MSHA
Anaconda Wire and Cable Company Marion, IN 46952	102-MSHA
Kaiser Aluminum and Chemical Corporation 500 Wood Street Bristol, RI 02809	103-MSHA
The Okonite Company P.O. Box 340 Ramsey, NJ 07446	104-MSHA
Rome Cable Company 421 Ridge Street Rome, NY 13440	105-MSHA
Collyer Insulated Wire Company, Inc. 100 Higginson Avenue Lincoln, RI 02865	107-MSHA
General Electric Company 1285 Boston Avenue Bridgeport, CT 06602	108-MSHA
General Cable Corporation Cornish Wire Products 800 Rahway Avenue Union, NJ 07083	110-MSHA
Reynolds Metals Company Front and Lloyd Streets Chester, PA 19013	111-MSHA

<u>COMPANY</u>	<u>MSHA ACCEPTANCE NUMBER</u>
Crescent Insulated Wire and Cable Co., Inc Trenton, NJ 08605	112-MSHA
Phelps Dodge Cable and Wire Company P.O. Box 391 Yonkers, NY 10702	114-MSHA
Cerro Wire and Cable Company 5500 Maspeth Avenue Maspeth, NY 11378	115-MSHA
Teledyne Western Wire and Cable Company 2425 East 30 Street Los Angeles, CA 90058	116-MSHA
General Cable Corporation Cornish Wire Products 101 Water Street Williamstown, MA 01267	117-MSHA
Whitney-Blake Company P.O. Box K New Haven, CT 06514	118-MSHA
Continental Copper and Steel Industries, Inc. CCS Hatfield 360 Hurst Street Linden, NJ 07036	120-MSHA
Diamond Wire and Cable Company Sycamore, IL 60178	121-MSHA
ITT Wire and Cable Division 95 Grand Avenue Pawtucket, RI 02862	122-MSHA
Carol Cable Company 249 Roosevelt Avenue Pawtucket, RI 02860	123-MSHA
Plastic Wire and Cable Corporation P.O. Box 486 Jewett City, CT 06351	124-MSHA

<u>COMPANY</u>	<u>MSHA ACCEPTANCE NUMBER</u>
Essex International, Inc. Power Conductor Division 2601 South Adams Street Marion, IN 46952	125-MSHA
Bell Northern Research Wire and Cable Laboratory P.O. Box 6122 Montreal, Canada	126-MSHA
Chester Cable Corporation Chester, NY 10918	127-MSHA
The Rockbestos Company 1910 Cochran Road Pittsburgh, PA 15220	128-MSHA
Narrangansett Wire Company 1125 Main Street Pawtucket, RI 02860	129-MSHA
Suprenant Wire and Cable 172 Sterling Street Clinton, MA 01510	131-MSHA
Packard Electric P.O. Box 431 Warren, OH 44482	132-MSHA
Silec 22, Rue Du General Foy Paris (8e) France	133-MSHA
Hackethal - Draht - und Kable - Werke A.G. Hanover West Germany	134-MSHA
Eastern Electric Wire and Cable Company Interstate Industrial Park Bellmawr, NJ 08030	135-MSHA

<u>COMPANY</u>	<u>MSHA ACCEPTANCE NUMBER</u>
American Insulated Wire Corporation Central Avenue and Freeman Street Pawtucket, RI 02862	136-MSHA
Boston Insulated Wire and Cable Company 55 Bay Street Boston, MA 02125	138-MSHA
Calco Electric Wire and Cable Corp. 1864 E. Marlton Pike Cherry Hill, NJ 08034	145-MSHA
Industrija Kablova Svetozarevo, Yugoslavia	152-MSHA
Manhattan Electric Cable Company Station Plaza Rye, NY 10580	155-MSHA
ExCel Wire and Cable Company 108 Elm Avenue P.O. Box D Tiffin, OH 44883	159-MSHA
Corona Insulated Wire Company, Inc. 101 Central Avenue Farmingdale, NY 11735	162-MSHA
Felten and Guillaume Post Fach 805001 5000 Koln 80	164-MSHA
Electrical Conductors, Inc. 2500 Commonwealth Avenue North Chicago, IL 60064	166-MSHA
Southwire Company Carrollton, GA 30117	168-MSHA

COMPANYMSHA ACCEPTANCE NUMBER

BICC General Cables Limited
Leigh Works, Leigh
Lancashire WN7 4HB England

177-MSHA

The Rochester Corporation
Electrical Products Division
Culpepper, VA 22701

178-MSHA

Trexon Products Company
P.O. Box 3880
Oak Park, MI 48237

179-MSHA

Communication and Control
Engineering Company, Ltd.
66 Dalairé Crescent
Richmond, Ontario, Canada KOA 2Z0

181-MSHA

Belden Corporation
2000 South Bataira Avenue
Geneva, IL 60134

182-MSHA

Canada Wire
147 Laird Drive
Toronto, Ontario
M4G 3W1

183-MSHA

Amercable
El Dorado Industrial Park
1200 Bailey Road
P.O. Box 1552
El Dorado, AR 71730

184-MSHA

The Kerite Company
49 Day Street
Seymour, CT 06483

186-MSHA

Sumitomo Electric Industries, Ltd.
606 South Olive Street
Los Angeles, CA 90014

187-MSHA

Phillips Cables, Ltd.
King Street West
Brockville, Ontario
Canada KGV 5W4

188-MSHA

COMPANYMSHA ACCEPTANCE NUMBER

Eickoff-Siemans
480 Manor Oak Two
Cochran Road
Pittsburgh, PA 15220

189-MSHA

Brand-Rex Company
Willimantic, CT 06226

191-MSHA

USBM
Pittsburgh Research Center
Cochrans Mill Road
P.O. Box 18070
Pittsburgh, PA 15236

192-MSHA

Pirelli Cable Corporation
800 Rahway Avenue
Union, NJ 07083

194-MSHA

Flygt Corporation
129 Glover Avenue
P.O. Box 857
Norwalk, CT 06856

198-MSHA

Hawker Siddeley Diesels and Electrics, Inc.
2690 Cumberland Parkway
Suite 412
Atlanta, GA 30339

199-MSHA

Laribee Wire, Inc.
101 Central Avenue
Farmingdale, NY 11735

204-MSHA

Prestolite Wire
3529 24th Street
Port Huron, MI 48060

205-MSHA

Pacific Electriccord Company
747 West Redondo Beach Blvd.
P.O. Box 10
Gardena, CA 90247

211-MSHA

<u>COMPANY</u>	<u>MSHA ACCEPTANCE NUMBER</u>
Pirelli Cables, Inc. 65 Richelieu St-Jean-Sur-Richelieu Quebec J3B 6X2 Canada	212-MSHA
Conspec 901 Furman Boulevard Buffalo, NY 14203	215-MSHA
Industria Venezolana de Cables Electricos, C.A. (Cabel) Apartado Chacao 62049 Caracus, Venezuela	216-MSHA
Walsin Lihwa Electric Wire and Cable Corp. The Walsin Building 219 Chung Hsiao East Road, Section 4 Taipei, Taiwan Republic of China	217-MSHA
Nacional de Conductores Electricos, S.A. de C.V. Poniente 140 No. 720 Industrial Vallejo Del. Atzacapotzalco 02300 Mexico, D.F. APDO. Postal 78-057	218-MSHA
Pacific Electric Wire and Cable Company, Ltd. Fourth & Fifth Floor, Pacific Commerical Bldg. 285 Chung, Hsiao East Road, Section 4 Taipei, Taiwan Republic of China	219-MSHA
Lynenwerk GmbH and Company POB 1240 D-5180 Eschweiler, West Germany (Eickhoff Corporation - USA Representative)	224-MSHA
M/A-COM COMM/Scope, Incorporated P.O. Box 199 Catawba, NC 28609	225-MSHA

<u>COMPANY</u>	<u>MSHA ACCEPTANCE NUMBER</u>
Pirelli, S.A. Companhia Industrial Brasileira Av. Alexandre de Gusmao, 487 Santo Andre S.P. CEP 09000 Caixa Postal 22 (Pirelli Cable Co. of NJ - USA Representative)	227-MSHA
Conductores Monterrey, S.A. APDO, 2039 Monterrey, N.L. 64000 Mexico JMC 1608 (Davies Associates International, Ltd., - USA Representative)	228-MSHA
Alpha Wire Corporation 711 Lidgerwood Avenue Elizabeth, NJ 07207	229-MSHA
Seoul Electric Wire Company, Limited 467 Jangjiri, Kwangju-Up, Kwangju-Kun, Kunggi-Do The Republic of Korea	230-MSHA
Essex Group, Incorporated East Union Street and Sagamore Parkway P.O. Box 7000 Lafayette, IN 47903	231-MSHA
Huber and Drutt of Austria c/o Kloeckner-Becorit North America, Inc. 225 Berry Road, P.O. Box 1286 Washington, PA 15301	233-MSHA

57.4460(b) Underground Storage of Vehicles Containing Gasoline
Gasoline-powered vehicles may be operated in underground mines under limited circumstances as defined in 30 CFR 57.4461. These vehicles and the gasoline in their tanks are considered to be "in use." The underground "storage" of gasoline is prohibited in any quantity by 30 CFR 57.4460(b).

The storage of any vehicle in an active underground mine having gasoline in its tank shall be considered a violation of 30 CFR 57.4460(b) and an appropriate citation shall be issued.

When a gasoline-powered vehicle is being operated underground as mining equipment in compliance with 30 CFR 57.4461, the vehicle and the gasoline in its tank are considered to be "in use" and are not in violation of part 57.4460(b).

56/57.4503 Conveyor Belt Slippage and Detection System

This standard requires that belt conveyors shall be equipped with a detection system capable of automatically stopping the drive pulley in the event of excessive slippage of the belt, where ignition of the belt could create a hazard to personnel. The detection systems required by this standard are available on an over-the-counter basis from several manufacturers.

For surface operations, areas that could create a hazard to personnel in the event of a fire include the following:

1. Surge tunnels.
2. Conveyor belts located in areas where other combustible or flammable materials are stored within 25 feet of the belt. This is to prevent a conveyor belt fire from spreading and becoming a large and more serious fire. The policy is consistent with distances used as safeguards in the electrical and explosives standards.
3. Any restricted area where a conveyor belt fire could hinder the escape of personnel who normally work in that area.

56/57.4530 Exits From Buildings or Structures

This standard requires that surface buildings or structures in which persons work shall have a sufficient number of exits to permit prompt escape in case of fire. The standard applies to buildings or structures where persons normally work.

Excluded from the requirements of this standard are those areas where persons work infrequently, e.g., change rooms, surge tunnels, toilet facilities, and cafeterias. "Exits" may be doorways, passageways, windows, or other openings that lead out of the building or structure. While the standard uses the word "exits", a single exit may be acceptable where it permits the prompt escape of persons in case of fire.

When considering what constitutes sufficient exits, the following factors should be considered: (1) the size of the exit(s); (2) the height of the exit(s) from the ground; (3) the size of the building; (4) the number of persons who normally work in the area serviced by the exit(s); (5) the nature of the operations; (6) the presence of potential fire hazards; (7) the type of materials with which the building is constructed, e.g., wood, brick, block,

stone, metal, concrete; and (8) the presence of fire suppression devices or the availability of fire extinguishers.

56/57.4531 Surface Buildings or Rooms for Flammable or
Combustible Liquid Storage

57.4533 Surface Buildings or Structures in Vicinity of
Mine Openings

Standard 56/57.4531 requires that certain ventilation and construction measures be included in buildings and rooms where flammable or combustible liquids are stored on the surface, if the storage is located within 100 feet of a work station. Standard 57.4533 requires that surface buildings and similar structures located within 100 feet of certain mine openings be constructed with specified fire protection characteristics.

Several compliance alternatives are permitted for achieving appropriate fire protection in both standards. If a mine operator chooses alternative (b)(1) of 30 CFR 56/57.4531 or alternative (b) of 57.4533, difficulty may be encountered in determining what types of construction meet a fire-resistance rating of at least one hour. MSHA enforcement personnel may also need assistance in recognizing one hour fire resistant construction due to the numerous combinations of techniques and materials which may be used.

Clarification in this regard is contained in the section on "Fire Safety in Building Design and Construction," pages 6-60 through 6-79 of the Fire Protection Handbook, 14th Edition, Section 6, Chapter 7 entitled Structural Integrity During Fire, published by the National Fire Protection Association (NFPA). This reference material provides fire resistance ratings for certain types of material and its related thickness for such structural components as beams, joists, trusses or girders, load-bearing walls, stud walls and partitions, various finishes over wood framing, and floor and roof construction. Additional information regarding fire resistant building materials and assemblies may be retrieved from Underwriters Laboratories Inc., The Factory Mutual System, The National Bureau of Standards, trade association publications, and various building codes.

57.4560 Fire-Retardant Timber in Mine Entrances

Standard 57.4560 provides mine operators with three alternative methods of compliance to deter the propagation of fire in certain mine openings when support timber is in place. One of those alternatives is the coating of timber with a fire-retardant which provides a flame spread rating of 25 or less.

Flame spread ratings may be established by a testing agency or by MSHA at the request of the manufacturer. Flame spread ratings may be indicated by a document from the testing agency, a written statement from the manufacturer or by product labels which specify the rating according to test results.

The attached list, "Mine Sealants Accepted From 1977 to 1985" (including mortar replacements), has been accepted by MSHA's Approval and Certification Center for compliance with this requirement. This list is updated by the Center regularly, and the Engineering and Testing Division, Materials and Explosions Testing Branch should be contacted on (304) 547-0400, when appropriate, to obtain the current list. Other products are also acceptable if evidence of a flame spread rating of 25 or less can be shown through test results.

MINE SEALANTS ACCEPTED FROM 1977 TO 1985

<u>COMPANY</u>	<u>ACCEPTANCE NUMBER</u>
American Energy Group 725 Brea Canyon Road Suite 4 Walnut, CA 91789 (714) 594-0015	IC-44
American Energy Products Corp. Raritan Center, Building 435 Edison, NJ 08837 (201) 225-0228	IC-58
Austin Industrial Coating Corp. 300 Mt. Lebanon Boulevard Pittsburgh, PA 15234 (412) 563-3300	IC-72 thru IC-72/3
B-Bond Industries, Inc. Washington & Ludwick Streets Greensburg, PA 15601 (412) 836-2160	IC-36 thru IC-36/3
W. R. Bonsal Company P.O. Box 127 Conley, GA 30027 (404) 361-0900	IC-30
Burrell Construction & Supply Co. One Fifth Street New Kensington, PA 15068 (412) 339-1011	IC-18 thru IC-18/3
Celtite Incorporated 150 Carley Court Georgetown, KY 40324 (502) 863-6800	IC-29

<u>COMPANY</u>	<u>ACCEPTANCE NUMBER</u>
CISCO Coal Industry Service Company P.O. Box 134 Pounding Mill, VA 24637 (703) 964-6755	IC-66 thru IC-66/9
Conproco Corporation P.O. Box 368 Hooksett, NH 03106 (603) 668-8810	IC-107
Energy Ventures Analysis, Inc. 1111 North 19th Street Arlington, VA 22209 (703) 276-8900	IC-120
Faswall, Incorporated P.O. Box 1705 Oak Hill, WV 25901	IC-96
Genstar Stone Products Company Executive Plaza IV Hunt Valley, MD 21031 (301) 628-4000	IC-93 thru IC-93/1
Harris Mining Company P.O. Box 628 Spruce Pine, NC 28777 (704) 765-4251	IC-13
INCA Company Stanton & Empire Streets Wilkes-Barre, PA 18702 (717) 822-2191	IC-1 thru IC-1/8
James River Limestone Company, Inc. Drawer 617 Buchanan, VA 24066 (703) 254-1241	IC-61
M&P Distributors, Inc. P.O. Box 187 Lesage, WV (304) 736-4046	IC-115 thru IC-115/3

COMPANYACCEPTANCE NUMBER

Michael-Walters Industries, Inc.
1000 Lincoln Income Center
Suite 103
P.O. Box 34066
Louisville, KY 40232
(502) 456-2100

IC-121

Nalco Chemical Company
2901 Butterfield Road
Oak Brook, IL 60540
(312) 887-7500

IC-102 thru IC-102/1

Ostler Rocky Mountain Refractories
2436 West Andrew Street
Salt Lake City, UT 84104
(801) 972-2776

IC-48

Package Cement Products, Inc.
P.O. Box 157
Highway 141 North
Sullivan, KY 42460
(502) 333-5745

IC-122 thru IC-122/5

Q-Bond Corporation of America
4770 Fox Street, No. 14
Denver, CO 80216
(303) 534-2171

IC-17

Qwikrete Companies
2250 Stephenson Road
Lithonia, GA 30058
(404) 482-7264

IC-9

Stone Mountain Manufacturing Co.
Lafayette Executive Center
Suite 34
P.O. Box 7320
5750 Chesapeake Boulevard
Norfolk, VA 23509
(804) 853-7451

IC-39

COMPANYACCEPTANCE NUMBER

Strataseal, Incorporated
163 Orchard Drive
McMurray, PA 15317
(412) 941-6444

IC-49 thru IC-49/7

Strong-Lite Products Company
P.O. Box 8029
Pine Bluff, AR 71611
(501) 536-3453

IC-87 thru IC-87/2

Thermocoat Incorporated
5910 Wellesley
Pittsburgh, PA 15206
(412) 661-4281

IC-35

Therm-O-Rock Incorporated
Division of Allied Block Chemical Co.
P.O. Box 455
New Eagle, PA 15067
(412) 381-4647

IC-16 thru IC-16/1

United States Mineral Products Co.
Furnace Street
Stanhope, NJ 07874
(201) 347-1200

IC-62

Wen-Don Corp.
P.O. Box 13905
Roanoke, VA 24038
(703) 982-0561

IC-116

Wolf-Pruf, Inc.
P.O. Box 9779
Atlanta, GA 30319
(404) 252-0757

IC-76

Woodruff Supply Co., Inc.
P.O. Box 426
Madisonville, KY 42431
(502) 821-3247

IC-99 thru IC-99/9

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Subpart D Air Quality, Radiation, and Physical Agents56/57.5001(a) Nuisance Particulates

The only nuisance particulates for which a citation can be issued are those that are listed specifically as nuisance particulates in Appendix E of the 1973 TLV Booklet and exceed the 10 mg/m³ TLV. At mines where the commodity produced is an unlisted nuisance particulate, and there is no silica hazard, continue to sample and analyze airborne dusts for listed toxic substances and take appropriate enforcement action.

56/57.5001(a) Issuing Citations on the Basis of Vacuum Bottle or Bistable Gas Samples

Vacuum bottle or bistable gas samples may be used as the principal determining factor in classifying a mine as gassy (30 CFR 57.22003). However, vacuum bottle and bistable gas samples cannot be used as the basis for the issuance of citations or orders unless arrangements for special sampling bottles are made. The principal use of vacuum bottles and bistables is for rough screening to determine if potential problems exist which require more thorough evaluation.

56/57.5001(a)/.5005 Issuing and Terminating Citations

Except where indicated, inspectors shall treat standards 56/57.5001 and 56/57.5005 as one standard when issuing citations. Issue one 56/57.5001(a)/.5005 citation for each miner whose exposure to airborne contaminant(s) exceeds the contaminant's enforcement level. The Metal and Nonmetal Health Inspection Procedures Handbook provides instructions on calculating the contaminant's enforcement level.

The body of the citation must contain all pertinent information, such as: the contaminant's permissible exposure limit (PEL) and error factor; the shift or time-weighted average (SWA/TWA); the date of the overexposure; the date of the citation; the miner's location and job description; whether an adequate respirator was provided and worn and a respiratory protection program was in place consistent with 56/57.5005; and the reason for the overexposure, such as obvious deficiencies or breakdowns in the operator's control system. The citation's initial abatement date should reflect the time needed to provide an appropriate respirator and develop a respiratory protection program consistent with 56/57.5005. Give less time if you can identify more expedient controls that will bring the miner's exposure into compliance. For highly toxic or dangerous contaminants, keep the abatement time to a minimum.

Once the operator's respiratory protection program is in place, extend the citation's abatement date to allow a reasonable time to utilize engineering or administrative controls. You do not need to modify the standard number, 56/57.5001(a)/.5005, when the operator has the respiratory protection program in place.

Initially write the citation to require feasible engineering or administrative controls provided the overexposed miner was already wearing an appropriate respirator and the operator had an appropriate respiratory protection program. The operator may use an appropriate respirator and respiratory protection program instead of such controls when the miner is installing controls or occasionally enters hazardous atmospheres to perform maintenance or investigation.

Terminate a citation when the use of administrative or engineering controls reduces the miner's exposure to the contaminant's enforcement level. If the miner's exposure exceeds the enforcement level, citations can only be terminated when the operator has used all feasible engineering and administrative controls, has an appropriate respiratory protection program, and the miner is wearing an appropriate respirator.

If the operator fails to provide an appropriate respirator and implement an appropriate respiratory protection program within the abatement time, and further extension of the abatement time is not warranted, a 104(b) order can be issued. The order can be modified, once an appropriate respirator and respiratory protection program are provided, to allow the operator to continue to operate until feasible administrative or engineering controls are established.

Where MSHA requires a respiratory protection program for compliance, inspectors can cite without resampling if the operator fails to follow the program's requirements. In such a case, cite 56/57.5005 alone as the standard violated.

56/57.5002 Dust, Gas, Mist and Fume Surveys by Mine Operators
These standards require mine operators to conduct dust, gas, mist and fume surveys as frequently as necessary to determine the adequacy of control measures. The purpose is to help assure that the miners are not exposed to harmful concentrations of airborne contaminants.

These standards apply to those air contaminants covered under 30 C.F.R. §§ 56/57.5001(a) and (b) and do not apply to standards for radon, diesel particulate matter, or noise since those standards contain specific monitoring requirements. Mine operators must demonstrate compliance with 56/57.5002 rather than relying on enforcement interventions. MSHA emphasizes that mine operators:

- Plan - A system to survey for dust, fume, gas, and mist to determine adequacy of control measures.
- Prevent - Miners' exposure to these hazards.
- Protect - Miners from adverse health effects due to exposures to airborne contaminants.

If the result of any samples taken during a survey under 30 C.F.R. §§ 56/57.5002 indicates that a miner's exposure to a dust, gas, mist, or fume is greater than the exposure limit, MSHA expects the operator to adjust control measures and conduct additional surveys to determine whether control measures are adequate in reducing exposures. Thereafter, the operator is required to survey as frequently as necessary to determine the adequacy of control measures.

During Agency inspections, MSHA will evaluate operator activities to verify evidence of surveys.

The term "survey" denotes any information collection method that:

- Yields information as to miners' exposures to harmful airborne contaminants, or
- Yields information as to the effectiveness of controls in reducing exposures to harmful airborne contaminants.

Sections 56/57.5002 do not specify the type of surveys that may be conducted. Surveys may be quantitative or qualitative. Quantitative surveys include exposure monitoring/sampling or wipe sampling as they provide a direct measure of potential exposures. Such surveys should be conducted in accordance with established scientific principles, such as NIOSH, OSHA, MSHA, or equivalent analytic methods. Qualitative surveys can include vehicle maintenance, ventilation system maintenance, dust control system maintenance and walk-through inspections. Other surveys can include miner input, results from medical surveillance, or information obtained from injury/illness/accident reports. MSHA will also determine whether the surveys being conducted are adequate for determining whether controls are effective in reducing exposures to airborne contaminants.

MSHA will determine whether the surveys being conducted are frequent enough for determining whether controls are effective in reducing exposures to airborne contaminants. Factors which may influence the frequency of inspections can include: sampling results approaching the Threshold Limit Value (TLV), changes in the mining operation (e.g., hazards or environmental agents; changes in control equipment used to reduce exposures), changes in the work schedule (e.g., if workers worked longer shifts), changes in work procedures, or whether controls need routine or special maintenance (e.g., vehicle cabs, ventilation systems, dust collection systems).

MSHA can verify whether surveys are being conducted by various means including reviewing any existing records maintained by the operator, interviewing miners and operators, or visually inspecting the work area.

56/57.5005 Respiratory Protection

Standard 56/57.5001(a) requires that a miner's exposure shall not exceed the permissible limit of any substance on the TLV list. When the TLV is exceeded, standard 56/57.5005 mandates that operators install all feasible engineering controls to reduce a miner's exposure to the TLV. Respiratory protection is required when controls are not feasible, as well as when establishing controls, and during occasional entry into hazardous atmospheres to perform short-term maintenance or investigations. Whenever respirators are required, operators must establish a respirator program containing all elements of the standard, which incorporates ANSI Z88.2-1969. The inspector must evaluate the effectiveness of the respiratory protection in order to determine whether miners are protected from overexposure. If the operator's respiratory protection program fails to include proper selection and fit testing, the .5001(a)/.5005 violation is significant and substantial ("S and S").

Respirator selection directly affects the efficiency of the respirator. Respirators are designed to protect wearers from inhalation of hazardous atmospheres. There are many different types of respirators but each is limited in protection and application. A respirator can only protect against atmospheres for which it is designed. Without proper selection a serious health hazard may occur. A serious hazard may also occur if the respirator, even though properly selected, is not fitted as required by the standard. Fit testing is essential in order to assign the correct model and size respirator to a miner. Otherwise, it is likely that the respirator will leak and the miner will be overexposed to the toxic substance.

There are other factors that should be considered by the inspector on a case-by-case basis when determining whether the violation should be "S and S" with regard to an operator's respiratory protection program. These factors include training, cleaning and sanitizing, and maintenance of respirators.

With regard to listed nuisance particulates and silver metal overexposures between 0.01 mg/m³ and 0.1 mg/m³, operators must use engineering controls to reduce exposure to the permissible limit and comply with the respiratory protection requirements of standard 56/57.5005. However, the .5001(a)/.5005 citation for overexposure to nuisance particulates and to silver metal in the above concentration range is not "S and S." Overexposures to soluble compounds of silver, such as silver nitrate, above 0.01 mg/m³ should be considered "S and S" if adequate protection was not worn.

56/57.5005(a) Use of Certified Mercury Respirators

For mercury vapor, the use of MSHA-NIOSH certified chemical cartridge respirators is required. This is the belt-mounted Comfo II respirator with Mersorb cartridges. The purpose of the beltmounted design is to allow the wearer to easily observe the saturation indicator on the mercury cartridge. The use of facemounted MSA Comfo II respirators with Mersorb cartridges is only acceptable in work situations where the breathing tube of the belt-mounted respirator can become a safety hazard, the work performed causes tension on the breathing tube which can break the seal, or the breathing tube is too short for the wearer and provided that visual checks of the cartridge indicators are made every half hour. The checks on the face-mounted respirator can be made by looking into a mirror or by checking the respirator in uncontaminated air. Because leakage of mercury vapor into the respirator cannot be detected by the wearer, it is critical that a good facepiece-to-face seal be maintained and that the indicator be monitored to prevent breakthrough through the cartridges.

56/57.5005(c) Definition of Immediately Harmful to Life

The definition of "immediately harmful to life" in this standard is the same as that of "immediately dangerous to life or health" (IDLH) as defined by NIOSH, which is acute respiratory exposure that poses an immediate threat of loss of life, immediate or delayed irreversible adverse health effects, or acute eye exposure that would prevent escape from a hazardous atmosphere.

57.5039 Maximum Permissible Concentration (Radon Daughters)

Except as provided by standard 57.5005, persons shall not be exposed to air containing concentrations of radon daughters

exceeding 1.0 WL in active workings. In enforcing this standard, the error factor for radon daughter sampling of 20% should be taken into consideration. This means that citations are to be issued when the measured radon daughter concentrations are in excess of 1.20 WL.

Also, this standard applies only to active work areas when workers are present or scheduled during the shift and, if workers are not present or scheduled, when evidence is available that other personnel normally enter the work area during the shift.

57.5040 Exposure Records (Radon Daughters)
"Significant and Substantial" Violation

Inadequate recordkeeping may result in excessive exposures to radiation going undetected and unremedied. Where the violation has actually or potentially contributed to this hazard, the citation will be designated "significant and substantial." Generally, such findings will be appropriate where:

1. The operator fails to keep personal exposure records, or
2. The operator has falsified or altered records or continuously understated the accumulated exposures.

Where such failures are the result of the operator's disregard for the recordkeeping requirements, such violation may also be considered unwarrantable.

In cases where no hazard results, a violation shall be cited as a technical violation without "significant and substantial" findings.

Respirator Credit

Where respiratory protection is used pursuant to 57.5044 and in compliance with 57.5005, that is, entry into hazardous areas for reasonable periods of time to establish controls or occasional entry for investigative or maintenance purposes, MSHA will allow respirator credit on mine employees' radon daughter exposure records. Respirators used for protection against radon daughters must be capable of removing 90 percent of the radon daughters from the respired air.

Credit will not be allowed for the wearing of respirators while performing any type of production work, regardless of the radiation levels.

57.5045 Posting of Inactive Workings

Inactive workings in which radon daughter concentrations are above 1.0 WL shall be posted against unauthorized entry and designated by signs indicating them as areas in which approved respirators shall be worn.

This standard applies to inactive workings (e.g., worked-out sections only). Active workings are subject to 57.5039. See 57.2 for the definition of "active workings" and 57.5040(a)(1) for examples of areas considered "active workings." Standards 57.5044 and 57.5046 for respiratory protection apply to both active and inactive workings.

57.5046 Protection Against Radon Gas

Where radon daughter concentrations exceed 10.0 WL, respirator protection against radon gas shall be provided (in addition to protection against radon daughters).

Because of the rare special circumstances of working in atmospheres that contain radon daughters above 10.0 working levels, there are no respirators or gas masks specifically approved by NIOSH for removal of radon gas. A self-contained breathing apparatus or a continuous flow airline (pure-air) respirator would satisfy the requirements of this standard.

57.5047 Gamma Radiation Exposure Records"Significant and Substantial" Violation

Inadequate gamma radiation exposure records may result in undetected and unremedied excessive exposures (see 57.5047(d)). Where the violation of 57.5047 has actually or potentially contributed to this hazard, the resulting citations will be designated "significant and substantial." Generally, such findings will be appropriate where:

1. The operator fails to keep personal exposure records, or
2. The operator has falsified or altered records or continuously understated the accumulated exposures.

Where such failures are the result of the operator's disregard for the recordkeeping requirements, such violation may be considered unwarrantable.

In cases where no hazard results, a violation shall be cited as a technical violation without "significant and substantial" findings.

56/57.14213 Ventilation for Welding

This is a work practice standard intended to reduce the concentration of airborne contaminants from welding below levels which may cause health impairment. In ventilation for welding fume control, local exhaust ventilation is better than dilution ventilation, and general dilution ventilation is better than natural ventilation.

This standard should be cited whenever welding is performed in a confined area without any detectable ventilation. For the health field notes, collect information on the number of persons exposed, type of welding being used, type of rod used, surface welding performed on, description of work area, length of time welding was done, type and use of personal protective equipment, and any other pertinent information.

Subpart J Travelways and Escapeways**57.11050 Escapeways**

This standard requires two or more separate escapeways to the surface at every underground mine. However, a second escapeway is recommended, but not required, during the exploration or development of an ore body. In this application, "exploration or development of an ore body" should be used in its narrowest sense, i.e., while an ore body is being initially developed, or development or exploration work is being conducted as an extension of a currently producing mine. Where mining occurs along a mineralized zone and production and development are indistinguishable as separate activities, the standard must be applied as it would to a producing mine.

A violation of 30 CFR 57.11050(a) exists and a citation must be issued whenever fewer than two functional escapeways out of an underground metal or nonmetal mine are available to miners working underground, even if the mine operator has started correcting the condition which caused the second escapeway to be nonfunctional. No violation of 30 CFR 57.11050(a) exists, however, if, upon there being fewer than two functional escapeways, the mine operator immediately initiates a continuous withdrawal of miners to the surface.

A "properly maintained" escapeway is an escapeway that is functional, providing the miners with a safe means of egress to the surface during a mine evacuation. There may be temporary periods when an escapeway is not immediately available, however, the functionality is still intact.

The following examples demonstrate situations that the Agency would consider to be functional escapeways. No violation of 30 CFR 57.11050(a) would exist in these circumstances:

- 1) When maintenance, repairs, or other interruption of service, and the removal from service does not affect the functional ability of the escapeway to enable miners to reach the surface in an emergency. For example, an interruption of service that would not usually affect the functioning of the escapeway would include the lubricating of hoist ropes, adjustment of hoist gates, replacement of bolts on the shaft guides, or the inspection of shafts, adits, or conveyances. If the functioning escapeway would not be impaired or affected in any way, i.e., if the work being performed or the inspection of the escapeway can immediately be terminated and the miners can

resume using the escapeway, the Agency would consider the escapeway to be "properly maintained."

2) When it is necessary to use the escapeway to lower mining equipment into, or retrieve mining equipment from the mine, and only miners facilitating the lowering or retrieving of mining equipment remain underground. As in the situation of miners working underground to perform maintenance or repair on the escapeway itself, in this situation the escapeway can be rapidly returned to service and only a few miners are stationed underground. The Agency believes that this policy interpretation reflects a reasonable accommodation of the concern for miners stationed underground to have a second escapeway out of the mine and the need to lower and retrieve mining equipment.

In setting an abatement time for any violation described above, an inspector or other authorized agency representative should, at a minimum, consider the following factors: the hazard(s) to miners, the time required to safely evacuate all but necessary maintenance personnel from the mine, the type of self-rescue devices available, the notification of all miners underground of the unavailability of the nonfunctional escapeway (including the instructions for use of the remaining escapeway in the case of an emergency), and the time required to return the affected escapeway to operation. The violation is abated when at least two escapeways are again fully functional or miners are no longer underground.

The second paragraph of this standard directs the positioning of a refuge within 30 minutes of a working place, where an employee cannot safely reach the surface within an hour.

57.11055 Inclined Escapeways

This standard requires an emergency hoisting facility only for that portion of a designated escapeway which is inclined more than 30 degrees and that is more than 300 feet in vertical extent. The vertical extent refers only to a continuous portion of a designated escapeway, and not to a composite of portions each less than 300 feet but more than 300 feet when combined.

56/57.12006 Distribution Boxes

This standard requires that distribution boxes be provided with a disconnecting device for each branch circuit. Such a disconnecting device shall be equipped or designed in such a manner that it can be determined by visual observation when such a device is open and that the circuit is deenergized. The distribution box shall be labeled to show which circuit each device controls.

A distribution box is defined under "Definitions" in 56/57.2. Many distribution boxes or power centers have a window at each individual circuit where it can be visually determined whether the circuit is deenergized or not. Where plugs are used at the distribution box to provide current for individual circuits, it can be visually determined when these plugs are not connected. When plugs are used, they shall conform to the requirements of standard 56/57.12084.

56/57.12019 Suitable Clearance Around Stationary Electrical Equipment

This standard requires that where access is necessary, suitable clearance shall be provided at stationary electrical equipment or switch gear. The intention of this standard is to provide sufficient access and working space around such electrical equipment to insure worker safety and to avoid contact by persons with electrical components.

The standard is intended to apply to the many and varied situations that do or will exist on mine property. Among the general factors to be considered in determining "suitable clearance" are voltages and conductors (including size), insulation, guards, existing passage or working space, direction of access to electrical components, potential exposure to live or exposed electrical parts, and the grounding of live parts.

The current editions of the National Electrical Code and the National Electrical Safety Code may be used as guidance in determining "suitable clearance." The provisions of the National Electrical Code for safe work clearances around electrical equipment can be found in Article 110 ("Requirements for Electrical Installations") and Article 710 ("Over 600 Volts, Nominal, General"). Part 1 of the National Electrical Safety Code contains two sections that may be of assistance: Section 11 ("Protective Arrangements in Electrical Supply Stations") and Section 12 ("Protective Arrangements of Equipment"). The National Electrical Code may be obtained from the National Fire Protection

Association, 470 Atlantic Avenue, Boston, Massachusetts 02210. The National Electrical Safety Code (also referred to as ANSI-C2) may be obtained from the Institute of Electrical and Electronics Engineers, Inc., National Bureau of Standards, 345 East 47th Street, New York, New York 10017.

Areas around stationary electrical equipment or switch gear should be restricted to authorized persons. Normal travel by or through such equipment should not be allowed unless no other travelway is available. However, if persons do travel by stationary electrical equipment, standard 56/57.11001 requires that a safe means of access be provided.

56/57.12020 Protection of Persons at Switchgear

This standard requires that dry wooden platforms, insulating mats, or other electrically nonconductive material shall be kept in place at all switchboards and power-control switches where shock hazards exist. However, metal plates on which a person normally would stand and which are kept at the same potential as the grounded, metal, non-current-carrying parts of the power switches to be operated may be used.

Switchgear, regardless of voltage, which has exposed energized parts should have insulating platforms or mats. See paragraph 3 below.

1. Low voltage (650 volts or less) switchgear which is completely enclosed in metal enclosures does not normally present a shock hazard if the metal enclosures are well grounded. Metal enclosures are well grounded if two or more good paths to ground are ground wire, rigid steel conduit, grounded building steel, or cable armor. Any combination of these examples which will provide two or more good paths to ground for fault current would eliminate the need for insulating mats at power switches rated 650 volts or less.
2. High voltage (more than 650 volts) switchgear should be completely enclosed in grounded metal enclosures and provided with grounded operating handles and grounded metal plates, because of the increased hazard presented by the higher voltages. Insulating mats or platforms should be used where shock hazards exist, and where physical conditions (wet, damp, and outdoor locations, etc.) warrant their use. However, at normally dry and well kept indoor installations (substation or switchgear) with grounded metal plates, insulating mats or platforms would not provide additional protection.

3. The older type switchgear, regardless of voltage rating, which has exposed energized parts should have an insulating platform or mat with an insulation rating not less than the phase-to-phase voltage of the circuit.

56/57.12028 Testing Grounding Systems

The intent of this standard is to ensure that continuity and resistance tests of grounding systems are conducted on a specific schedule. These tests will alert the mine operator if a problem exists in the grounding system which may not allow the circuit protective devices to quickly operate when faults occur. With the exception of fixed installations, numerous fatalities and injuries have occurred due to high resistance or lack of continuity in equipment grounding systems. These accidents could have been prevented by proper testing and maintenance of grounding systems.

Grounding systems typically include the following:

1. equipment grounding conductors - the conductors used to connect the metal frames or enclosures of electrical equipment to the grounding electrode conductor;
2. grounding electrode conductors - the conductors connecting the grounding electrode to the equipment grounding conductor; and
3. grounding electrodes - usually driven rods connected to each other by suitable means, buried metal, or other effective methods located at the source, to provide a low resistance earth connection.

Operators shall conduct the following tests:

1. equipment grounding conductors - continuity and resistance must be tested immediately after installation, repair, or modification, and annually if conductors are subjected to vibration, flexing or corrosive environments;
2. grounding electrode conductors - continuity and resistance must be tested immediately after installation, repair, or modification, and annually if conductors are subjected to vibration, flexing or corrosive environments; and

3. grounding electrodes - resistance must be tested immediately after installation, repair, or modification, and annually thereafter.

Conductors in fixed installations, such as rigid conduit, armored cable, raceways, cable trays, etc., that are not subjected to vibration, flexing or corrosive environments may be examined annually by visual observation to check for damage in lieu of the annual resistance test. When operators elect to conduct this visual examination as a method of compliance with 30 CFR 56/57.12028, MSHA will require that a record be maintained of the most recent annual visual examination.

Grounding conductors in trailing cables, power cables, and cords that supply power to tools and portable or mobile equipment must be tested as prescribed in the regulation. This requirement does not apply to double insulated tools or circuits protected by ground-fault-circuit interrupters that trip at 5 milli-amperes or less.

Testing of equipment grounding conductors and grounding electrode conductors is not required if a fail-safe ground wire monitor is used to continuously monitor the grounding circuit and which will cause the circuit protective devices to operate when the grounding conductor continuity is broken.

A record of the most recent resistance tests conducted must be kept and made available to the Secretary or his authorized representative upon request. When a record of testing is required by the standard, MSHA intends that the test results be recorded in resistance value in ohms.

56/57.12042 Track Bonding

This standard requires that both rails shall be bonded or welded at every joint, and rails shall be crossbonded at least every 200 feet if the track serves as a return trolley circuit. When rails are moved, replaced or broken bonds are discovered, they shall be rebonded within three working shifts.

A citation for a violation of this standard should not be issued until the end of the third working shift after rails are moved, replaced or a broken bond is discovered. That is, assuming a three shift operation, if a broken bond is discovered on a day shift, the citation shall be issued at the end of the next day shift if the broken bond is still unrepaired. A citation shall not be issued if the bond has been repaired within this period of time.

The bonding (or welding) of the rails shall be completed before any new installation of track is placed in regular or production operation. In a new area of the mine or major track installation, the bonding of both rails shall be completed in conjunction with, and progress with, the laying of rail lengths.

57.12082 Isolation of Powerlines

This standard requires that powerlines shall be well separated or insulated from waterlines, telephone lines, and air lines. Additional insulation is not required between powerlines and waterlines, telephone lines, and air lines if the insulation of the powerlines, as provided by the manufacturer, is in its original condition.

When powerlines are found to be in contact with water, telephone, or air lines, a careful check must be made of the condition of the insulation of the entire cable. If the cable contains splices, they must be vulcanized or of an equivalent type. Any insulation splits, cuts or other signs of cable abuse must be repaired in order to eliminate the possibility of "electrical tracking" and in order to make the insulating qualities of the splice or repair approximate the original dielectric quality provided by the manufacturer.

57.12084 Branch Circuit Disconnecting Devices

This standard requires that disconnecting switches that can be opened safely under load shall be provided underground at all branch circuits extending from primary power circuits near shafts, adits, levels and boreholes.

"Branch circuit" means that portion of a wiring system extending beyond the final overcurrent device protecting the system. It follows that any circuit ahead of the branch circuit is considered a primary circuit.

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Subpart L Compressed Air and Boilers**56/57.13015(b) Records of Inspections of Compressed Air
Receivers and Other Unfired Pressure Vessels**

Section (b) of standard 56/57.13015 requires that records of inspections made by inspectors holding a valid National Board Commission shall be retained by the mine operator in accordance with the requirements of the National Board Inspection Code (progressive record - no limit on retention time) and shall be made available to the Secretary or his authorized representative.

The recordkeeping requirement may be satisfied by an operator's written statement that the inspections have been made in accordance with the incorporated code. MSHA will accept such a certifying statement annually, without regard to format, if it is made available at the time of inspection.

56/57.13021 High Pressure Hose Connections

This standard requires the use of safety chains or other suitable locking devices at certain high-pressure hose-to-hose or hose-to-machine connections. Quick-coupling connectors are considered to be in compliance with this standard without safety chains or other locking devices if the wire used to hold the connectors is actually in use.

56/57.13030(c) Records of Inspections and Repairs of Boilers

Section (c) of standard 56/57.13030 requires that records of inspection and repairs be retained by the mine operator in accordance with the requirements of the ASME Boiler and Pressure Vessel Code and the National Board Inspection Code (progressive records - no limit on retention time) and shall be made available to the Secretary or his authorized representative.

The recordkeeping requirement may be satisfied by an operator's written statement that the inspection and/or repairs have been made in accordance with the incorporated code. MSHA will accept such a certifying statement annually, without regard to format, if it is made available at the time of inspection.

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Subpart M Machinery and Equipment**56/57.14100 Safety Defects: Examination, Correction, and
 Records**

This standard applies to all off-road and on-road self-propelled equipment used on mine property, including vehicles such as vans, suburbans, and pick-up trucks that are used at mine sites and remain on mine property. In most instances, it does not apply to vehicles used to transport persons between locations off mine property to mine property; however, if such vehicles transport personnel on mine property (e.g., from the gate to various sites at the mine), then such equipment must be inspected.

This standard will not be cited when an audible warning device has been installed on heavy duty mobile equipment at surface mines and surface operations of underground mines, but is inoperative because of electrical or mechanical defect.

Standard .14132 shall be used when the equipment has not been equipped with audible warning devices, or when they have been so equipped, and the device is not operational for whatever reason.

In some cases, mine operators have installed audible reverse alarms on underground equipment because prevailing conditions have dictated the need for a warning device to ensure miner safety. In this instance, Standard .14100 can be considered if the alarm is inoperable or inaudible and the defect can be shown to affect the safety of workers in the area. Surrounding noise levels, confined work areas, and distracting work assignments shall be considered at the time.

56/57.14101(a) Brakes/Minimum Requirements

Subsection (a) is divided into three parts. Part (1) of this subsection sets a minimum performance standard for service brake systems on self-propelled mobile equipment. Part (2) sets a minimum performance standard for parking brakes on self-propelled mobile equipment. Part (3) sets a maintenance standard for all braking systems on self-propelled mobile equipment.

Standard 56/57.14101(a)(1) should be cited if a service brake system is not capable of stopping and holding the equipment with its typical load on the maximum grade it travels.

Standard 56/57.14101(a)(2) should be cited if the parking brakes are not capable of holding the equipment with its typical load on the maximum grade it travels.

Standard 56/57.14101(a)(3) should be cited if a component or portion of any braking system on the equipment is not maintained in functional condition even though the braking system is in compliance with (1) and/or (2) above. It is important to note that if a component or portion of either system renders the equipment incapable of stopping or holding itself with its typical load on the maximum grade it travels, the appropriate standard, 56/57.14101(a)(1) or (2), should be cited.

Separate citations or orders should be issued if violations of 56/57.14101(a)(1) and 56/57.14101(a)(2) are found on the same piece of equipment.

56/57.14107 Moving Machine Parts

All moving parts identified under this standard are to be guarded with adequately constructed, installed and maintained guards to provide the required protection. The use of chains to rail off walkways and travelways near moving machine parts, with or without the posting of warning signs in lieu of guards, is not in compliance with this standard.

Conveyor belt rollers are not to be construed as "similar exposed moving machine parts" under the standard and cannot be cited for the absence of guards and violation of this standard where skirt boards exist along the belt. However, inspectors should recognize the accident potential, bring the hazard to the attention of the mine operators, and recommend appropriate safeguards to prevent injuries.

This standard is to be cited when a guard at conveyor locations does not extend a distance sufficient to prevent any parts of a person from accidentally getting behind the guard and becoming caught, or in those instances when there is no guard at the conveyor-drive, conveyor-head, conveyor-tail, or conveyor take-up pulleys.

56/57.14109 Unguarded Conveyors With Adjacent Travelways

Sections 56/57.14109 require unguarded conveyors next to travelways to be equipped with emergency stop devices or railings. A travelway is defined in 30 CFR §§ 56/57.2 as a passage, walk or way regularly used and designated for persons to go from one place to another. If an unguarded conveyor has travelways on each side of it, both unguarded sides must be equipped with emergency stop devices or railings.

Under Sections 56/57.14109(a), emergency stop devices must be located so that a person falling on or against the conveyor can readily deactivate the conveyor drive motor. MSHA expects that a

miner would be able to readily reach the emergency stop device to activate it and that the device would be located along the portion of the unguarded conveyor that is adjacent to a travelway.

Under Sections 56/57.14109(b), railings must: (1) be positioned to prevent persons from falling on or against the conveyor; (2) withstand the vibration, shock, and wear to which it will be subjected during normal operation; and (3) be constructed and maintained so that it will not create a hazard. MSHA expects that railings would be located along the portion of the unguarded conveyor that is adjacent to a travelway.

Neither the conveyor installation nor its framework is considered a railing for the purpose of these standards irrespective of its height or conformance with standard railing heights.

Sections 56/57.14109 do not apply to unguarded conveyors which are not next to travelways, including overhead conveyors, where there is no reasonable possibility that miners will come into contact with system components (e.g., idlers, conveyor belt) of the conveyor.

56/57.14130 and 56/57.14131 Providing, Maintaining, and Wearing Seat Belts

In an effort to reduce the severity of powered haulage accidents, district managers shall carefully consider the gravity and negligence of citations and orders issued for the failure to provide, maintain, or wear seat belts.

Gravity: The failure to provide, maintain, or wear seat belts is a serious safety hazard and under most circumstances should be a significant and substantial violation. Without mitigating circumstances, the gravity evaluation of reasonably likely or highly likely, and fatal would usually be justified.

Negligence: The failure to provide seat belts as required by the regulations may be considered highly negligent and therefore be the basis for a 104(d) citation/order in the absence of mitigating circumstances.

Failure to maintain seat belts in functional condition may be considered less negligent than the failure to provide seat belts. Some factors that could increase the degree of negligence are if the defect has been reported on a preshift examination, the defect is obvious, or the defect has existed for a long period of time. The examination of seat belts for defects is required by 30 CFR 56/57.14100.

Negligence for failure to wear seat belts should be determined by the extent of the mine operator's efforts to enforce the seat belt requirement. Examples of such efforts may include:

1. evidence that the equipment operators are instructed on the mandatory use of seat belts;
2. regular observation by supervisors to determine whether seat belts are being worn;
3. corrective action taken by supervisors when seat belts are not being worn; and
4. the development and implementation of a job safety analysis program to reinforce task training for equipment operators.

If the mine operator does not make any effort to ensure that seat belts are worn, the negligence would be high and a 104(d) citation/order would be appropriate. If, however, the mine operator's conduct indicated an effort to have seat belts worn, the negligence would usually be less than high.

Special Assessment: All citations/orders issued for failure to provide, maintain, or wear seat belts should be reviewed for special assessment. The types of violations that meet the requirements for special assessments are:

1. violations cited as contributing to a serious injury or fatality;
2. violations cited as an unwarrantable failure;
3. violations cited as an imminent danger; or
4. violations evaluated as having extraordinarily high gravity (highly likely and fatal).

56/57.14132(a) and (b) Horns and Backup Alarms For Surface
Equipment

Standard 56/57.14132(a) sets a maintenance standard for manually operated horns or other audible warning devices that are provided as safety features on self-propelled mobile equipment. The self-propelled mobile equipment referenced in this subsection includes any wheeled, skid-mounted, or track-mounted equipment capable of moving itself. This standard should be cited if any audible warning device that was provided on the

equipment as a safety feature is not functional. This includes manually-operated horns, automatic reverse-activated signal alarms, wheel-mounted bell alarms and discriminating backup alarms.

Standard 56/57.14132(b) pertains only to self-propelled mobile equipment where the operator has an obstructed view to the rear. A backup alarm system is only required when there is an obstructed view to the rear and an observer has not been provided. Standard 56/57.14132(b)(1) must be cited if an observer is not present and a backup alarm system is not provided on the equipment. Standard 56/57.14132(b)(2) must be cited if an observer is not present and a backup alarm system is provided and is operating as designed (functional) but is not audible above the surrounding noise level.

56/57.14201 Conveyor Start-Up Warning

This standard requires that no conveyor is started unless the person starting it is certain that all persons are clear. A positive audible or visible warning system is required to provide necessary flexibility to accommodate different mining and milling conditions throughout the nation. This standard has been uniformly interpreted by MSHA, and its predecessor organizations, to include both automatic and manual conveyor alarm systems as long as these systems are effected at each conveyor or series of conveyors within a system. However, MSHA and many mine operators believe that an automatic warning and start-up system is more effective than a manual system and, therefore, should be the system of preference. An automatic conveyor alarm system, or a system designed to first activate a start-up horn before the start-up system of the conveyor, is more effective in eliminating human error at the time of a conveyor start-up than a manual system.

A manual conveyor alarm system is one which actuates an audible alarm by an independent switch and uses a separate switch to actuate the conveyor. It may be considered "positive" and in compliance with the standard provided the system is capable of effectively warning persons prior to the time the conveyor will be started. Operators should be instructed to assure that persons are clear before starting the conveyor or conveyor system.

Although the standard specifies either an audible or visible warning system, visual warnings in bright sunlight or other well-lighted places are ineffective. For this reason, it is recommended that an audible warning system (horn) be used throughout a conveyor system located in bright sunlight or other

well-lighted places. The duration of the audible warning shall be long enough to allow anyone who is endangered by an activated conveyor system to move to safety.

Particular attention must be given to the scope, or the overall effectiveness of the audible warning system, to be certain that the warning is effective at each and every conveyor in the system. This does not mean that a separate horn or similar device must be installed for each conveyor, but it does mean that the warning must be positive and effective for each conveyor or series of conveyors capable of being shut down or started independently within the system.

This standard specifically exempts those conveyor systems visible from the start-up switch from the requirements of a positive start-up warning system. However, MSHA recommends that all conveyor systems have a positive audible or visible start-up warning even though they are visible from the start-up switch.

56/57.14211 Blocking Equipment in Raised Position

Standards 56/57.14211 prohibit persons from working on, under, or from raised portions of mobile equipment or a component of mobile equipment until the equipment has been blocked or mechanically secured. The standards specifically require blocking of raised components to prevent a "free and uncontrolled descent" in the event of a sudden failure of the system holding up the raised component. Hydraulic telescoping boom cranes with flow restrictions or check valves in the hydraulic system will prevent a free and uncontrolled descent of the boom and attached work platform.

Compliance with 56/57.14211 can also be achieved by mine operators if the following four safety features are implemented when hoisting personnel with cranes:

1. use of an anti-two-block device with automatic shutdown capabilities that will prevent breaking of the load or whip line in the event of a two-block condition (a horn or light warning in lieu of automatic shutdown is not sufficient);
2. all running ropes, other than rotation resistant ropes, must have a safety factor of at least 7;
3. rotation-resistant ropes must have a safety factor of at least 10; and

4. the cranes used to hoist personnel must be equipped for and operated with controlled load lowering and must not be capable of being operated in "free fall."

MSHA strongly recommends that miners avoid working near or on cranes unless there is no other means of performing the task, or the other means creates a greater hazard.

56/57.14213 Ventilation for Welding

See Subpart D, Air Quality, Radiation, and Physical Agents.

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56/57.15001 First Aid Materials

This standard requires that adequate first-aid materials, including stretchers and blankets, shall be provided at places convenient to all working areas, and that water or neutralizing agents shall be available where corrosive chemicals or other harmful substances are stored, handled or used.

The purpose of this mandatory standard is to ensure that adequate first-aid materials, including eye wash solution, safety showers (not just "deluge" showers, but a constant warm water supply for long-term flushing) and other neutralizing agents are available to workers where corrosive chemicals or other harmful substances are stored, handled, or used. Neutralizing agents shall be readily available for first-aid treatment and cleanup of corrosive chemical spillage or leakage. Spill-control products are commercially available for all hazardous chemical substances. These products both absorb and neutralize hazardous chemicals, thereby reducing the hazard to workers while containing the spilled chemicals.

56/57.15003 Protective Footwear

This standard requires that all persons shall wear suitable protective footwear when in or around an area of a mine or plant where a hazard exists which could cause injury to the feet.

The standard considers the existence of a hazard to the feet as the basic criterion necessitating the wearing of protective footwear. Inspectors should carefully examine the work areas and procedures to make this determination. However, it is rare that such hazards are not encountered in mining or milling operations.

Most mining company safety requirements for protective footwear are more stringent than the MSHA standard. A company policy requiring everyone to wear protective footwear at all times at the mining operation is much easier to implement and provides better protection than determining individual situations where protective footwear is required.

MSHA's standard does not define protective footwear. MSHA considers substantial hard-toed shoes or boots to be the minimum protection acceptable for most mining applications. There may be times when special purpose foot protection, such as metatarsal protectors, is needed. There may also be some instances where heavy leather shoes or boots will provide adequate safety for the feet.

56/57.15004 Eye Protection

This standard requires that all persons shall wear safety glasses, goggles or face shields or other suitable protective devices when in or around an area of a mine or plant where a hazard exists which could cause injury to unprotected eyes.

Photo-gray lenses which comply with ANSI Z87.1-1979 for impact and shatter resistance and frame construction would meet the requirements of this standard. However, these lenses do not meet the requirements for radiant energy generated during electric arc welding or gas flame cutting and, therefore, are not acceptable for these uses. Additionally, their use underground or at night is not advisable because most photo-gray lenses respond too slowly to changes in light level and may not lighten rapidly enough to provide unimpaired vision when traveling from a well-lighted area to a dark area.

56/57.15006 Protective Equipment and Clothing for Hazards and Irritants

This standard requires that special protective equipment and special protective clothing shall be provided, maintained in a sanitary and reliable condition, and used whenever hazards of process or environment, chemical hazards, radiological hazards, or mechanical irritants are encountered in a manner capable of causing injury or impairment.

The standard is intended to cover obvious work situations where the normal and ordinary work clothing and safety equipment provided by the miner for his/her own protection is not adequate to provide the level of protection required for the work being done. Usual items, such as safety glasses, hard hats, and safety-toed shoes, would not normally come under this standard.

Unusual items for conditions requiring extra protective measures could include aprons, rubber gloves, asbestos blankets, leg shields, protective creams, solvent impermeable coveralls, and other items such as tag lines, safety belts and lines. These must be maintained in a clean and reliable condition, ready for use.

The inspector must exercise considerable judgement in the enforcement of this standard. It is not feasible to develop a policy which covers all conceivable circumstances. However, as guidelines to enforcement, protective clothing would definitely be required if the worker experiences any irritation no matter how slight. Also, skin protection would definitely be required when exposed to chemicals that bear a "skin" notation in the TLV

booklet, even if the exposure is only 5 minutes a day and the worker does not exhibit any irritation.

57.15030 Provisions and Maintenance of Self-Rescue Devices

This standard requires that a 1-hour self-rescue device approved by MSHA shall be made available by the operator to all personnel underground and that each operator shall maintain self-rescue devices in good condition.

While the detection and reporting by miners of defective self-rescuers is a part of the training program required under CFR 57.18028, the operator has the final responsibility to see that all self-rescue devices are fully operable and to replace them immediately if they are defective. This responsibility can be discharged successfully only through a regular inspection program conducted by the operator, supplemented by the training of each miner to recognize and report defective self-rescue devices.

The operator needs an effective inspection program to ensure that each self-rescue device is maintained in "good condition." An effective inspection program established by the operator must include visual inspection and weighing. Visual inspection serves to identify surface defects such as a crushed case or dented seal. The operator's inspection program should also provide for the weighing of each self-rescuer at least every 90 days and for keeping a record of weighing for each device.

A self-rescuer is weighed by first cleaning the device, i.e., scraping off debris and wiping with a damp cloth, and then placing it on the balance. The balance used for weighing must have a capacity of at least 1100 grams and an accuracy of ± 1 gram. The current weight is compared with the manufacturer's weight stamped or etched in the self-rescuer case.

Self-rescue devices shall be removed from service if the device has a crushed or deeply dented case, the device has dents or damage around the seal area, or the device has a weight gain of 10 grams or more above the weight imprinted on the self-rescuer case.

Citations for violations will be issued for all self-rescuers which are not found to be in "good condition" as required by this standard.

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Subpart O Materials Storage and Handling56/57.16003 Storage of Hazardous Materials and
56/57.16004 Containers for Hazardous Materials

Standard 56/57.16003 requires that materials that can create hazards if accidentally liberated from their containers shall be stored in a manner that minimizes the dangers. Standard 56/57.16004 requires that hazardous materials shall be stored in containers of a type approved for such use by recognized agencies and that such containers shall be labeled appropriately.

Potential hazardous materials exist and are used throughout most mining and milling processes. Such materials must be properly and securely stored, based on the type of potential hazard (e.g., toxic, corrosive, flammable). The container must be appropriately labeled showing the contents.

Commercially supplied materials are generally labeled by the distributor. Unstable cabinets and shelves containing hazardous chemicals shall be securely fastened and made stable.

Corrosive substances are those that cause visible destruction or irreversible alterations to the body tissue on contact. Acids and corrosive chemicals shall not be stored with alkalies or solvents or stored on shelves above eye level. Common corrosive chemicals are mineral acids, e.g., hydrochloric (HCl), hydrofluoric (HF), nitric (HNO₃), sulfuric (H₂SO₄), acetic (CH₃COOH), etc., and basic solutions, e.g., sodium (NaOH), potassium (KOH) and ammonium (NH₄OH) hydroxides, etc.

Concentrations of solvent and other flammable vapors shall be kept at a minimum by ventilation of storage areas. Flammables shall be stored in a cool place away from all ignition sources, such as open flames, hot plates and sparking electrical equipment. There shall be no smoking in areas of solvent use or in any other flammable storage areas.

56/57.16016 Lift Trucks

This standard provides that fork and other similar types of lift trucks shall be operated with the: (a) Upright tilted back to steady and secure the load; (b) Load in the upgrade position when ascending or descending grades in excess of 10 percent; (c) Load not raised or lowered enroute except for minor adjustments; and (d) Load-engaging device downgrade when traveling unloaded on all grades.

The requirement that load-engaging devices when empty be placed in a downgrade position when traveling on all grades reflects the accepted safety practice of traveling or tramming with the load-engaging mechanism as low as possible. This practice is set forth in Chapter 22, Powered Industrial Trucks, Industrial Safety, published by the National Safety Council and is also a requirement of the Occupational Safety and Health Administration, Standard 29 CFR 1910.178(n) (i), (ii), and (iii). In most situations when tramming without a load, the load-engaging mechanism should be kept as close to the ground as safety permits. However, in situations where adjustments will be necessary to facilitate safe operation of the vehicle (e.g., when traveling on inclines, declines or over rough terrain), the load-engaging mechanism may be adjusted enroute.

Subpart Q Safety Programs56/57.18002 Examination of Working Places

30 CFR ' ' 56/57.18002, Examination of working places, provide:

- (a) A competent person designated by the operator shall examine each working place at least once each shift for conditions which may adversely affect safety or health. The operator shall promptly initiate appropriate action to correct such conditions.
- (b) A record that such examinations were conducted shall be kept by the operator for a period of one year, and shall be made available for review by the Secretary or his authorized representative.
- (c) In addition, conditions that may present an imminent danger which are noted by the person conducting the examination shall be brought to the immediate attention of the operator who shall withdraw all persons from the area affected (except persons referred to in section 104(c) of the Federal Mine Safety and Health Act of 1977) until the danger is abated.

MSHA intends that the terms "competent person" and "working place," used in §§56/57.18002(a), be interpreted as defined in §§ 56/57.2, Definitions.

A "competent person," according to ' ' 56/57.2, is "a person having abilities and experience that fully qualify him to perform the duty to which he is assigned." This definition includes any person who, in the judgment of the operator, is fully qualified to perform the assigned task. MSHA does not require that a competent person be a mine foreman, mine superintendent, or other person associated with mine management.

The phrase "working place" is defined in 30 CFR ' ' 56/57.2 as: "any place in or about a mine where work is being performed." As used in the standard, the phrase applies to those locations at a mine site where persons work during a shift in the mining or milling processes.

Standards 56/57.18002(b) require operators to keep records of working place examinations. These records must include: (1) the

date the examination was made; (2) the examiner's name; and (3) the working places examined. MSHA intends to allow operators considerable flexibility in complying with this provision in order to minimize the paperwork burden. Records of examinations may be entered on computer data bases or documents already in use, such as production sheets, logs, charts, time cards, or other format that is more convenient for mine operators.

In order to comply with the record retention portion of §§ 56/57.18002(b), operators must retain workplace examination records for the preceding 12 months. As an alternative to the 12-month retention period, an operator may discard these records after MSHA has completed its next regular inspection of the mine, if the operator also certifies that the examinations have been made for the preceding 12 months.

Evidence that a previous shift examination was not conducted or that prompt corrective action was not taken will result in a citation for violation of §§ 56/57.18002(a) or (c). This evidence may include information which demonstrates that safety or health hazards existed prior to the working shift in which they were found. Although the presence of hazards covered by other standards may indicate a failure to comply with this standard, MSHA does not intend to cite §§ 56/57.18002 automatically when the Agency finds an imminent danger or a violation of another standard.

57.18028 Mine Emergency and Self-Rescuer Training

This standard applies to underground mines only and states that all persons who are required to go underground shall be instructed in MSHA's approved course in mine emergency training. In addition to regular underground employees, the phrase "all persons who are required" shall be construed to mean those persons who through their duties must intermittently work underground even though their primary functions are on the surface. These include, but are not limited to engineers, surveyors, electricians, mechanics, maintenance personnel or laborers who repair, maintain, install, or perform their job assignments underground when necessary.

All persons who go underground, whether routinely or on occasion, shall be instructed in a course in either the MSA W-65 Self-Rescuer or the Permissible Draeger 810 Respirator for Self-Rescue. After the initial instruction, any person who has not had instruction in the use of either of these devices within the immediately preceding 12 months shall receive such instruction prior to going underground.

In instances where individuals who are infrequent visitors are permitted to go underground in the accompaniment of responsible and trained company personnel, these individuals would not be required to take the approved course in mine emergency training prior to going underground. In lieu of the approved course on self-rescuers, the individual or individuals entering the mine shall have been instructed in the use of the self-rescuer informally by a person trained in the use of this equipment.

The instruction shall be given by an MSHA instructor or by an instructor certified by the district manager. Provisional approval, in regard to the instruction of new employees, shall be interpreted to mean those company personnel who have received additional training under a cooperative plan, but who have not as yet been certified as instructors under such plan, and who can give the necessary instructions when the services of an MSHA or other certified instructor cannot be obtained.

Recordkeeping Requirements

This standard (underground only) specifies that all persons who are required to go underground be instructed on an annual basis in MSHA approved courses contained in the Bureau of Mines instruction guide 19 "Mine Emergency Training"; and instruction guide 2, "MSA W-65 Self-Rescuer" or instruction guide 3, "Permissible Draeger 810 Respirator for Self-Rescue." Records of all instructions are required to be kept at the mine site or at the nearest mine office for two years, and copies must be submitted to MSHA. 30 CFR Part 48.9 (Records of Training) requires an operator, upon a miner's completion of each MSHA approved training program, to record and certify that the miner has received the specified training.

The recordkeeping requirement of this standard may be satisfied by meeting the recordkeeping requirement contained in 30 CFR Part 48.9.

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56/57.19025 Hoist Rope Load End Attachments

The standard requires, in part, that wire rope shall be attached to the load by a method that develops at least 80 percent of the nominal strength of the rope. The short-coupled thimble attachment (see attached diagram) has been evaluated as being safe, and it is acceptable for personnel and material hoisting applications for hoist rope of 1-inch, 1-3/8 inch and 2-1/8 inch diameters, subject to the following conditions:

1. Repair and replacement parts are manufactured from the specified material and are within the engineering dimensions and tolerances specified by the manufacturer.
2. The manufacturer's assembly instructions are followed.
3. A weekly inspection procedure for slippage is conducted.

56/57.19045 Metal Bonnet

Metal bonnets shall be provided above those cages and skips specifically designed for man hoisting and above those work platforms, stages, or other temporarily or permanently installed shaft conveyances used by workers for shaft inspection, maintenance, or repairs.

Safety ropes or belts shall be worn at all times by shaftmen doing shaft work (56/57.15005).

56/57.19083 Overtravel Backout Device

The manufacturer of any hoist should be able to furnish material or information on a device or interlock that will comply with the requirements of the standard. The device prevents a conveyance or counterbalance from moving until the motor has developed enough power to move the conveyance in the right direction.

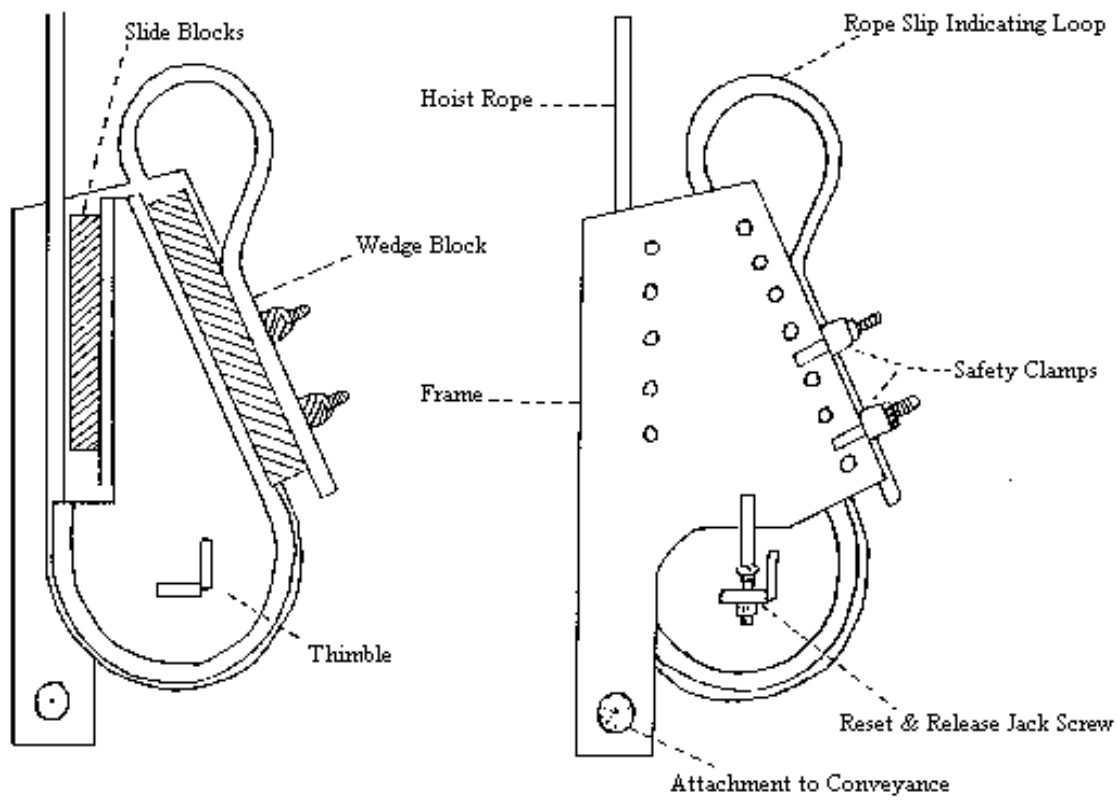
56/57.19120 Procedures for Inspection, Testing, and Maintenance

During MSHA inspections, the inspector shall observe while the hoisting engineer makes actual tests on hoisting equipment to determine the adequacy of overspeed and overtravel controls, braking mechanisms, limit switches, deadman controls, and position indicators. Prior to making these tests, all personnel shall be removed from the man cages or other locations which would be hazardous in the event of mechanical failure. When checking the overtravel controls, the first test should be made with the hoist at a low speed to determine if the brakes are functioning and the power circuit is deenergizing. The second test shall be made with the hoist running at normal operating speed.

The inspector should observe these tests at a time that is convenient to the mine operator. This could be at shift changes or at some other convenient time.

Refusal by an operator to make necessary tests in the inspector's presence constitutes an admission of failure of the safety devices. An order shall be written prohibiting the use of the hoist until the necessary adjustments or repairs have been made and the hoist tested in the inspector's presence.

Screen 1 of 1

**SHORT COUPLED THIMBLE**

56/57.20002 Potable Water

This mandatory standard is to ensure that potable drinking water is supplied and made available to all workers during working hours in all active working areas to prevent water-deficiency related illness and to prevent workers from drinking ground water which could be contaminated. The common drinking cup is prohibited in order to prevent the spread of communicable diseases. Containers from which drinking water must be dipped are prohibited because cups can contaminate the entire water supply. Containers from which water must be poured are prohibited because size and weight of containers encourage dipping. When water is cooled by ice, the ice shall either be made from potable water or shall not come in contact with the water in order to prevent contamination. Potable water outlets shall be posted to distinguish them from nonpotable water outlets. Potable water systems shall be constructed to prevent backflow or backsiphonage of non-potable water in order to prevent contamination.

The inspector should take a sample of the drinking water and have it analyzed for potability when complaints are received or when contamination is suspected. Contamination of potable water may be suspected when the potable water has unusual physical characteristics such as color, odor, or taste; when there are indications of bacteriological, chemical or radiological contamination of drinking water supplies; and/or when cross connections or backsiphonage is evident.

Potable water means water which shall meet the applicable minimum health requirements for drinking water established by the State or community in which the mine is located or by the Environmental Protection Agency in 40 CFR Part 141, pages 169-182, revised as of July 1, 1977. Where no such requirements are applicable, the drinking water provided shall conform with the Public Health Service Drinking Water Standards, 42 CFR Part 72, Subpart J, pages 527-533, revised as of October 1, 1976.

Local health authorities or a Safety and Health Technology Center should be contacted for guidance concerning water analysis.

56/57.20005 Carbon Tetrachloride

Carbon tetrachloride is a known carcinogen, and it is therefore prohibited for use on mine properties. There are adequate substitutes available for all relevant mining operations. Inspectors are to inform the Chief of the Health Division in Arlington when carbon tetrachloride is encountered on a mine property.

56/57.20008 Toilet Facilities

This mandatory standard is to ensure that toilet facilities be provided and readily accessible to workers. Toilet facilities shall be kept clean and sanitary to prevent the spread of communicable disease. Determinations regarding readily accessible locations, cleanliness and sanitary conditions, and the number of separate toilet rooms required, are to be made by the mine inspector.

56/57.20011 Barricades and Warning Signs

This mandatory standard is to ensure that barricades are provided or warning signs posted to alert workers and other persons and to prevent them from inadvertently entering areas in which health or safety hazards exist but are not obvious. Examples of health hazards are heat, acids, gases, dusts, noise, and radiation. All areas of a mine or mill should be checked for imperceptible health hazards. Storage facilities, laboratories, dumps, and tailings commonly contain toxic substances.

Warning signs are posted for the purpose of describing particular hazards and indicating precautions to be followed in order to avoid injury and illness.

56/57.20012 Labeling of Toxic Materials

This mandatory standard is to ensure that toxic materials that are used, discarded as a by-product, or stored during mining or milling processes, be plainly marked or labeled in order to positively identify the nature of the safety or health hazard and the protective action required to prevent injury and illness. Toxic materials can produce injury or illness through ingestion, inhalation, and absorption. As the chemical, physical, and toxicological properties vary among toxic materials, each one must be treated and handled on an individual basis. Labels can include the chemical, physical, and/or toxicological properties of the substances as well as precautions and personal protective equipment required for safe use and handling. Precautionary labeling should be classed "CAUTION", "WARNING", or "DANGER", depending on the severity of the hazard associated with a particular toxic material.

There are ten separate hazard classes which should be considered under these standards. They are: explosives, compressed gases, flammable liquids, flammable solids, oxidizers, irritants and poisons, radioactive materials, corrosives, biohazards and carcinogens. These materials may be commonly found in dump sites, storage areas, laboratories, and bag and drum containers.

**Subpart T Safety Standards for Methane in Metal and Nonmetal
 Mines**

57.22302, .22303, .22304, .22305 Minimum Air Quantity Formula
 for Gassy Metal/Nonmetal Mines Operating Multiple
 Diesel Units

MSHA's regulations specify that when a single unit of permissible diesel equipment is used in a gassy metal and nonmetal mine, the required "minimum" quantity of ventilating air is specified on the machine's approval plate, 30 CFR 36.45(a). This quantity is applicable only when one machine is operated.

According to a formula developed by the Bureau of Mines, the total ventilation for multiple units need not be the sum of the recommended rates for all the individual approved units. This formula is based on available evidence which suggests that while one unit is operating under a heavy load, the engines of other units being loaded are normally idling. MSHA has adopted, and will uniformly apply this formula to all "gassy" metal and nonmetal mines when two or more diesel units are operated in the same airway or split of air. MSHA will accept this formula as meeting the requirements for "minimum" air quantity as long as airborne contaminants remain below the listed TLV.

The minimum air volume formula is expressed:

$$Q_T = 100\% Q_1 + 75\% Q_2 + \dots + 50\% Q_n$$

Where:

Q_T = Total air quantity required;

Q_1 = the permissibility volume rating for largest rated diesel unit;

Q_2 = the permissibility volume rating for the next largest rated diesel unit; and

Q_n = the combined permissibility volume ratings for all additional diesel units.

The examples set forth below illustrate the use of the formula for determining required air quantity, in cubic feet per minute, when two or more diesel units are used in the same airway or split of gassy mines. The examples are for one underground mine

with five diesel units operating on the upper level in the main haulageway and three diesel units operating on the lower lever in the 1400 haulageway.

Upper Level, Main Haulageway

<u>Eng. Mfg.</u>	<u>Unit</u>	<u>hp</u>	<u>Air Req'd for Single Unit (cfm)</u>	<u>Adjustment for multi- use combination</u>	
GM	1	227	46,000	x 1	46,000 cfm
GM	2	197	40,000	x .75	30,000
GM	3	160	32,000	x .50	16,000
GM	4	119	24,000	x .50	12,000
Deutz	5	196	31,000	x .50	<u>15,500</u>
Total cfm required.....					119,500 cfm

Lower Level, 1400 Haulageway

<u>Eng. Mfg.</u>	<u>Unit</u>	<u>hp</u>	<u>Single Unit (cfm)</u>	<u>Adjustment for multi- use combination</u>	
GM	1	227	46,000	x 1	46,000 cfm
Duetz	2	196	31,000	x .75	23,250
Caterpillar	3	100	14,500	x .50	<u>7,250</u>
Total cfm required.....					76,500 cfm

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VOLUME V - COAL MINES

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GENERAL POLICIES AND PROGRAMS

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INTERPRETATION, APPLICATION, AND GUIDELINES ON ENFORCEMENT OF 30 CFR

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GENERAL POLICIES AND PROGRAMSV.G-1 Reporting PCB Spills

Under the authority of the Toxic Substances Control Act, the Environmental Protection Agency (EPA) requires that spills of polychlorinated biphenyl (PCB) be reported whenever the incident poses a substantial risk to human health or to the environment. PCBs have been shown to cause chronic toxic effects in many species even when they exist in very low concentrations. Well-documented tests show that PCBs cause, among other things, reproductive failures, gastric disorders, skin lesions, and tumors in laboratory animals.

Workers exposed to PCBs may show a number of symptoms and adverse effects including, but not limited to, chloracne and other epidermal disorders, digestive disturbances, jaundice, impotence, throat and respiratory irritations, and severe headaches.

Spills in mines most commonly result from damage to transformers or capacitors containing PCB dielectric fluid. EPA assumes that a transformer or capacitor contains PCBs if: (1) the nameplate indicates it contains PCB dielectric fluid; or (2) the owner or operator has any reason to believe that it contains PCB dielectric fluid. If a transformer or capacitor does not have a nameplate, and there is no information to indicate the type of dielectric fluid in it, the transformer or capacitor is assumed to contain PCB fluid. PCB dielectric fluids may be listed under the following trade names: Askarel, Aroclor, Pydraul, therminal, Pyroclor, Santotherm, Pyralene, Pyranol, Inerteen, Asbestol, Chlorextol, Diachlor, Dykanol, Elemex, Hyvol, No-Flamol, Saf-T-Kuhl, Aroclor B, Chlorinol, Chlorphen, and Eucarel.

As a general rule, EPA does not require that spills involving a single capacitor be reported unless PCBs threaten to enter a water-course. Minor leaks in transformers, such as bushing leaks or weeping, also do not require reporting. However, such spillage or leaking should be stopped and repaired as soon as possible.

If a spill should occur at a mine, the mine operator's first priority should be to control the spread of the spill by damming or diking the leak. Any threat of contamination to water supplies should be given the highest priority. Appropriate personal protection (e.g., impermeable gloves, boots and aprons, goggles, and respirators) must be worn by persons cleaning up spills pursuant to applicable MSHA regulations.

Once the spill is contained, clean-up measures can begin. All materials contaminated with PCBs, including soil and debris, should be collected, stored and disposed of in accordance with EPA regulations.

Upon discovery of a PCB spill, the district manager shall be notified immediately. The procedures for handling spills are set forth in the MSHA Health Inspection Handbook.

V.G-2 Operator Responsibility Over Customer Vehicles

It is the responsibility of the operator of a mine to enforce mandatory safety standards on all vehicles entering the mine property. In the area of backup alarms on customer trucks, the requirement could be met in several ways, including the following:

1. Traffic patterns can be established to eliminate the need to backup.
2. Operator personnel can act as observers where trucks are required to backup.

If the loading of customer trucks is being done in a hard hat area, it is the responsibility of the operator to see that all persons in the area wear hard hats. If hard hats are not available to the customer personnel, the following options will meet the requirement of the standard:

1. Rules can be established that while loading, the customer truck drivers must stay in their truck cabs if the cabs are protected by canopies; or
2. If the customer truck drivers must get out of their cabs, designated safe areas must be provided.

However, the policy is not applicable to independent contractors performing services on mine property.

V.G-3 Suspected "Foul Play" Felonies

It is MSHA's policy to cooperate with state and local law enforcement officials in all circumstances where a felony violating state or local law is suspected.

If, in the course of an inspection or investigation, there is reason to believe that foul play has occurred (for example, a death or an injury of suspicious cause or a fire of suspicious origin), the following procedures should be followed:

1. The inspector or investigator should consult through normal channels with the district manager.
2. The district manager should contact the Administrator's Office and the appropriate Regional Solicitor's Office.
3. After consultation with the Administrator's Office and an attorney in the Regional Solicitor's Office, promptly report the matter to appropriate state or local law enforcement officials.
4. Cooperate with the state and local officials, but ensure that any evidence which may also be relevant to a possible Mine Act violation is preserved.
5. If state or local law enforcement officials wish to participate in MSHA's investigation, the matter first should be cleared with the Supervisory Special Investigator in the headquarters office.
6. If only evidence or other information is being shared with state or local law enforcement officials, advance clearance from headquarters is not necessary, but the Supervisory Special Investigator should be promptly apprised of any such activities or contacts.

V.G-4 Mine Plan Approval Procedures

Under the Federal Mine Safety and Health Act of 1977, and the implementing standards and regulations, various plans and programs are required to be prepared by the mine operator and submitted to MSHA for approval. Inspectors should review all plans and programs before beginning an E01 inspection so that the plans and programs can be evaluated for adequacy during the inspection. In addition, management systems should be established in each District to ensure that all mine plans and programs are reviewed periodically. The period between reviews should be established on a plan-by-plan basis, except as provided for by Agency standards, such as the 6-month review of ventilation and roof control plans. In addition, the system should provide a record of all such reviews. Mine operators should be promptly advised to update their plans when an MSHA review indicates the plan is no longer adequate.

After the initial approval of plans, changes may be requested by the mine operator for approval. If MSHA cannot approve the requested changes or needs additional information, the operator

should be notified in writing of what information is needed or why the changes cannot be approved. The process should be completed quickly and the entire plan should not be opened for review, unless it is scheduled for review under the District's management system.

A thorough review of proposed mine plan provisions includes evaluation of comments provided by interested persons, such as the representative of miners. Accordingly when such input is received, it is important that the District review and consider that information in the plan approval process.

Contest of Mine Plan Approval Actions

In those situations when MSHA can no longer accept a provision of an approved plan, cannot approve a provision in a new plan, or cannot approve a proposed change to an approved plan, operators should be afforded the opportunity to contest MSHA's denial of approval. Where the operator disagrees with MSHA and indicates the desire to seek a citation to contest before the Federal Mine Safety and Health Review Commission, a citation should be issued. Normally, this would be a 104(a) citation and not involve unwarrantable failure findings, unless the circumstances justify it. The following several paragraphs illustrate how the three situations described can be handled.

When a plan provision is considered no longer adequate, the plan approval revocation procedures need to be followed. Upon revocation of approval, a citation must be issued for operating without an approved mine plan. Abatement can then be accomplished by the operator adopting a plan provision satisfying MSHA's concern. It may be appropriate for the operator to have this acceptable plan provision prepared before the citation is issued so that prompt abatement occurs. With this approach, there is no need to operate in violation of the mine's approved plan, and the violation would be "technical" in nature.

In the case of an operator-proposed change to an existing approved mine plan, if approval of the change is denied, the operator could notify the District that, as of a certain date, the mine's existing approved plan is no longer adopted by the operator, and that the operator intends to adopt the proposed change which is not approved. On that date, a 104(a) citation would be issued for the operator's failure to have and adopt an approved plan. Abatement would be achieved by the operator promptly adopting the provisions of the most recently approved plan for the mine. Again, there need not be any changes made in the actual mining procedures, and the violation would be

"technical" in nature.

The case of a new mine plan with a provision that cannot be approved could be handled in a similar manner. The operator could indicate that mining operations will begin on a particular date, using the plan that contains the provision which is not approved. On the date indicated for starting operations, a citation would be issued for failure to adopt and follow an approved plan, as required by the applicable standard. Abatement would be achieved by the operator promptly adopting provisions that satisfy MSHA's previously documented concerns.

In each of these cases, the operator would have the option of contesting the citation issued and presenting to an administrative law judge the reasons why the disputed plan provision should have been approved. Likewise, MSHA would present its reasons for revoking or denying approval.

Nothing in the above paragraphs is intended to interfere with or change the practice of issuing citations for any failure to follow approved plans found during inspections and investigations.

Criteria and Guidelines in Mine Plan Approvals

On occasion, MSHA has required criteria from the roof control and ventilation standards to be included in plans for all mines as a condition of the approval, without appropriate regard for the specific mining conditions. There have also been instances when Agency "guidelines" have been required in plans in a similar manner. The use of the criteria and guidelines in this manner has been successfully challenged in court and should be discontinued.

MSHA standards require suitable plans to be developed on a mine-by-mine basis. Criteria and guidelines are reference information in the same nature as experience and knowledge of the particular conditions at the mine. Certain criteria or guidelines may have broad application, but their inclusion should be on an "as needed" basis, rather than an across-the-board requirement. The evaluation should be whether the provision contained in a guideline is needed at a specific mine, rather than being concerned with why it is not included in the mine plan. Plans are not required in all cases to conform to the criteria, provided that no less than the same measure of protection will be afforded to the miners as would result from conformance with the criteria. Likewise, when a mine operator exceeds the requirements of an approved mine plan, this should not result in

immediately requiring the additional measures to be made a part of the mine plan. This kind of revision should be based on an "as needed" basis, taking into account current and projected mining conditions.

MSHA-Initiated Mine Plan Changes

After review by the District, if provisions of a mine plan are identified as unsuitable to the particular conditions at the mine, established Agency procedures apply. They are:

1. Written notification from the District Manager to the operator which states that changes are needed in the plan, identifies the reason why changes are needed, affords the operator an opportunity to meet with District personnel to discuss any proposed changes, and sets a reasonable time for the operator to submit revised plan provisions to the District.
2. If the operator fails to respond within the time provided, or through District and operator discussions the differences concerning the plan cannot be resolved and the operator does not resubmit a revised plan, a second written notification is sent from the District Manager to the operator. The purpose of this notification is to inform the operator that the District continues to be unable to approve the plan with the existing provisions, specify a time by which suitable plan provisions must be submitted by the operator to the District, and make it clear that after that time approval of the plan in its present form will be revoked and the operator will be without the required approved plan. Operating after the revocation date is a violation of the standard requiring the approved plan.

Management System Controls

The responsibility for plan approvals is assigned to the District Manager who functions through the District organization. However, this approval authority can be redelegated to the Acting District Manager in his/her absence. Below are fundamental management system controls necessary for proper administration of the plan and program approval process:

1. Completion of the final staff review by personnel located at the District Office.
2. Coordination of the progress of the plan through the

approval procedures by a supervisory technical specialist or engineer to ensure that the following are completed:

- a. a check is made to determine that all required information is submitted;
 - b. a check is made to determine that comments received from representatives of the miners have been considered and addressed;
 - c. the plan is evaluated for provisions that are contrary to existing standards or regulations;
 - d. Uniform Mine Files are checked during review of existing approved plans for information relating to plan adequacy; and
 - e. cross-communication with other plan approval groups occurs when appropriate.
3. Evaluation of each plan's technical adequacy and completeness by the District Manager, through the supervisory technical specialist or engineer, as follows:
 - a. when necessary, conducting an on-site investigation by technical specialists; and
 - b. acquiring and considering field office input from local inspectors during plan reviews, and addressing specific recommendations.
4. Contacts by the District with mine operators to request additional information should be limited to specially designated MSHA personnel, or a specially designed system.
5. Upon conclusion of a mine-site evaluation by a technical specialist, a technical survey, or an inspector's evaluation, opportunity for discussions are required with mine operations officials and identified representatives of the miners.
6. Ensure that recommendations to approve or deny approval of plans are made to the District Manager.

7. Approved plans and/or approved supplements are to be promptly provided to the inspection supervisor assigned to the mine for inclusion in the uniform mine file.

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INTERPRETATION, APPLICATION, AND GUIDELINES
ON ENFORCEMENT OF 30 CFR

PART 70 MANDATORY HEALTH STANDARDS FOR UNDERGROUND COAL
MINES

RESERVED - to be updated

[Note: Pages 11 through 25 were removed. Guidance will be added to update Part 70 to reflect the May 1, 2014 final rule, Lowering Miners' Exposure to Respirable Coal Mine Dust, Including Continuous Personal Dust Monitors.]

PART 71 **MANDATORY HEALTH STANDARDS FOR SURFACE COAL MINES**
AND SURFACE WORK AREAS OF UNDERGROUND COAL MINES

RESERVED - to be updated

[Note: Pages 27 through 34 were removed. Guidance will be added to update Part 71 to reflect the May 1, 2014 final rule, Lowering Miners' Exposure to Respirable Coal Mine Dust, Including Continuous Personal Dust Monitors.]

PART 75 MANDATORY SAFETY STANDARDS - UNDERGROUND COAL MINES**Subpart C Roof Support**75.209 Automated Temporary Roof Supports (ATRS) Systems

The purpose of the ATRS standard is to minimize hazards associated with miners working beyond permanently supported roof during the installation of roof supports. When this purpose is served, ATRS systems are required to be used. The use of an ATRS system is not necessary in the following three situations as miners are working in supported areas and are not exposed to unsupported roof:

1. installing roof bolts in an unsupported area with a remote-control roof bolting machine, where the operator does not proceed beyond the last row of permanent support;
2. placing truss supports in areas where permanent support is already in place, and where no adverse roof condition exists; and
3. on a longwall face when the face is within 5 feet of the longwall supports.

75.221 Roof Control Plan Information

Fatal roof fall accidents have occurred during pillar recovery operations. Investigation of a few of these accidents revealed that miners were occupying work locations inby the mining machine while coal was being mined or loaded. This practice should be discouraged, recognizing that recently mined coal pillars reduce the amount of support in these areas.

Work procedures and location of miners while coal is being mined or loaded should be incorporated into the roof control plan as part of the description of the mining system utilized during pillar recovery.

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Subpart D Ventilation75.301 Definitions

30 CFR 75.301 defines return air as:

Air that has ventilated the last working place on any split of any working section or any worked-out area, whether pillared or nonpillared. If air mixes with air that has ventilated the last working place on any split of any working section or any worked-out area, whether pillared or nonpillared, it is considered return air. For the purposes of existing Section 75.507-1, air that has been used to ventilate any working place in a coal producing section or pillared area, or air that has been used to ventilate any working face if such air is directed away from the immediate return, is return air.

Title 30 CFR 75.507-1(a) states that "All electric equipment, other than power-connection points, used in return air outby the last open crosscut in any coal mine shall be permissible except as provided in paragraphs (b) and (c) of this section."

For multiple entry setups with intake entries on one side, return entries on the other side, and conveyor belt and other common entries in the center, problems have arisen in determining whether or not return air is being coursed in the outby direction over non-permissible electric equipment in the conveyor belt entry. An acceptable method for making this determination is to measure air quantities at a location three crosscuts outby the working face in both the intake and return air courses. Taking into consideration standard anemometer error, if a comparison of these readings indicates a significant variance, a violation of §75.507 may exist.

Sulfur hexafluoride (SF₆), tracer gas, should not be used as the primary means for determining compliance with this standard. If after analyzing appropriate intake and return air measurements, tracing clouds of chemical smoke, and examining the section ventilation system, a determination is made that there is a violation of 75.507-1, tracer gas may be used to substantiate the violation.

75.302 Main Mine Fans

Main mine fans shall be installed and operated as soon as possible after the first crosscut is made at drift mines and as soon as connections have been made between shaft and/or slope openings at shaft or slope mines.

75.310 Installation of Main Mine Fans

The purpose of paragraph (b)(1) is to ensure that the mine fan is provided with a dependable power supply that will not be affected by short circuits, ground faults, or overloads occurring in mine power circuits. Transformers or other power sources supplying mine fan circuits may also supply power to other circuits, provided that such circuits are protected in a manner ensuring that any malfunction in the other circuits will cause automatic deenergization of the affected circuit and will not affect the mine fan circuit.

75.323 Actions for Excessive Methane

Section 75.323 specifies actions to be performed for excessive methane. Neither the Act nor the regulations provide that a mere presence of methane gas in excess of 1.0 percent is per se a violation. A violation would exist if a mine operator, upon becoming aware of the presence of excessive methane fails to perform the actions specified in Section 75.323.

75.325 Air Quantity

(a)(3) The name plate quantity of the machine mounted dust collector or diffuser fan is acceptable to meet the requirements of 30 CFR 75.325(a)(3) and 75.371(j). If the operator submits the nameplate quantity in the approved ventilation plan as the operating volume, this is the minimum quantity that must be maintained at all times. If this quantity is not maintained, if the measured operating capacity reveals that the name plate quantity is not indicative of actual conditions, or if respirable dust samples indicate that this quantity is not sufficient, appropriate enforcement action shall be taken and plan revisions shall be necessary.

Paragraph (f) requires that the minimum ventilating air quantity for an individual unit of diesel-powered equipment must be provided. This requirement includes entries under paragraph (f)(3) where diesel-powered equipment is being operated outby the loading point in areas of the mine developed on or after April 25, 1997. Such entries include crosscuts, dead-end spurs and any other area where such equipment is positioned to allow passage of other equipment or personnel, or entering an area to place or retrieve supplies.

The minimum ventilating air quantity for a unit of diesel-powered equipment is established based on the quantity of air specified on the unit's approval plate. The approval plate quantity is based on testing of the diesel exhaust gas concentrations of carbon monoxide (CO) and Oxides of Nitrogen measured as nitrogen

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dioxide (NO₂). The approval plate quantity is the quantity of air that is required to dilute the concentration of CO and NO₂ at the tailpipe to the Threshold-Limit-Values (TLVs) specified in 75.322. The TLVs are established to protect persons from adverse health effects from exposure to the specified contaminants. The TLV for CO is 50 parts per million (ppm) and the TLV for NO₂ is 5 ppm and is noted as a "ceiling limit" which cannot be exceeded for any amount of time. Since the nameplate air quantity is the quantity of air necessary to dilute the engine exhaust to the TLV limit, it is imperative that this minimum air quantity be provided where the unit of diesel equipment is operating so as to ensure miners are not exposed to hazardous concentrations of CO and NO₂. It should be noted that the testing of the diesel engine to determine the nameplate air quantity is performed on a new engine set to the manufacturer's specifications which represents the best operation of the engine.

75.327 Air Courses and Trolley Haulage Systems

The air in the trolley haulage entry, when separated from the belt haulage entry, may be used to ventilate the active working places.

Should conditions develop that necessitate an increased velocity in trolley haulageways in excess of 250 feet per minute, the mine operator should apply to the district manager for an exception through the ventilation plan, Section 75.371(v), giving in detail the reason for the request.

75.330 Face Ventilation Control Devices

The "area of deepest penetration" referred to in Section 75.330(b)(2), in conventional mining sections, is considered to be the solid surface of the coalbed at the advancing end of the working place, in both uncut and undercut faces prior to blasting. After blasting, the "area of deepest penetration" is the toe of the coal fall before loading starts, and advances with the toe as the fall is loaded.

75.340 Underground Electrical Installations

Underground electrical installations shall be considered to be in a noncombustible structure if the enclosure provides protection against flame spread for at least 1 hour when subjected to a fire test incorporating an ASTM E119-88 time/temperature heat input or equivalent.

The following types of installations, if acceptable prior to November 16, 1992, will be accepted as meeting the requirements for a noncombustible structure required by 75.340:

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1. Installations that are manufactured as packaged units fully enclosed in a metal housing such as:
 - a. power centers;
 - b. rectifiers and transformer stations that use dry-type transformers; or
 - c. transformers filled with nonflammable fluid or inert gas.
2. Battery charging stations that:
 - a. are enclosed in substantial metal housings;
 - b. are used to charge batteries that are also enclosed in substantial metal housings; and
 - c. remain on the machine during charging.

All electrical components that are nonpermissible or not intrinsically safe, at stoppings or regulators that separate intake and return air courses, must be located on the intake side of the stoppings or regulators.

75.341 Direct-Fired Intake Air Heaters

A carbon monoxide sensor placed at the bottom of the shaft, slope, or in the drift opening which provides continuous monitoring of the affected area and causes the heater to shut down when the carbon monoxide (CO) level reaches 50 parts per million will verify that CO is not entering the mine and that the heater is operating properly. The sensor will satisfy the examination requirements of this section.

75.342 Methane Monitors

On cutting machines, continuous-mining machines, and loading machines (including scoops and diesel-powered machines used to load coal from inby the last open crosscut but not including clean-up scoops), the methane monitor power-shutoff relay shall be connected into the machine's controls circuitry so that all electric motors on the machine (including auxiliary fan motors), all electric lights on the machine (except headlights that are evaluated by MSHA under Part 18 and are installed on diesel-powered machines), and all power take-off receptacles on the machine (except intrinsically safe receptacles) are automatically deenergized when the methane concentration reaches a maximum of 2.0 percent or the monitor is not operating properly. The methane monitor may remain energized.

When a methane monitor is required on a diesel-powered machine, the methane monitor shall also shut off the diesel engine when the methane concentration reaches a maximum of 2.0 percent or the monitor is not operating properly. The methane monitor power shutoff relay shall be connected into the control circuitry of an electrically-operated machine so that it is not possible to defeat the methane monitor by holding or blocking the machine's reset switch in the start position.

When a machine is operated by remote control, a warning device shall be installed in the remote control unit or on the machine in such a location that the warning device can be readily seen or heard by either the machine operator or by the machine operator helper at all locations from which the machine is operated. This does not, however, permit the machine operator to be positioned under unsupported roof or where he or she could be endangered by a sudden movement of the machine.

The sensing device for methane monitors required at the return air end of the longwall face shall be installed in the air current ventilating the longwall face near the return end of the longwall face where it will not be affected by a secondary intake if one is used. The methane monitor power shutoff relay shall be connected so that all electric motors, lighting circuits, and power take-off receptacles associated with the longwall mining installation are automatically deenergized when the methane concentration reaches a maximum of 2.0 percent or the monitor is not operating properly. The methane monitor and approved permissible telephones, however, may remain energized.

Methane monitor deficiencies should be cited under this section or Section 75.503, as applicable. Checks for operating accuracy shall be conducted with the sensor head filter or screen in place. Hand-held methane detectors shall not be used to check the operating accuracy of methane monitors. Enforcement personnel should test methane monitors with a known methane air test mixture when it is suspected that the monitor is defective or improperly calibrated.

Methane monitor readings shall not be used to meet the requirements for methane examinations. Such examinations are required to be made with approved methane detectors or atmospheric monitoring systems if used as specified in Section 75.351. Enforcement personnel shall not use methane monitor readings as a basis for issuing citations or orders.

75.350 Air Courses and Belt Haulage Entries

A district manager may not grant exceptions to these provisions to operators of mines opened after March 30, 1970. The operator should be advised that such requests should be submitted under the provisions of Section 101(c) of the Act (petition for modification of a mandatory safety standard).

Exceptions to this provision may be granted by the district manager in mines opened on or before March 30, 1970, and extensions of belt haulage entries in mines opened on or before March 30, 1970, only when an investigation determines that the conditions in the entries, other than the belt haulage entries, are necessary to provide adequate ventilation to the working places.

75.360 Preshift Examination

Roadways and track haulageways must be examined 3 hours immediately preceding each shift. This examination must include tests for methane in all high cavities where methane could accumulate. While traveling haulage roads, travelways, or belt conveyors, if high cavities in the roof are observed, the inspector should look for some method that has been provided for the preshift examiner to make such tests. Examples are ladders, tubes, methane detectors with probes, etc. Lack of some method to safely make such tests would be a good indication that tests were not being made or not properly being made. This could require issuing appropriate citations or orders.

75.371 Mine Ventilation Plan; Contents

Questions have been raised concerning whether the angles at which water sprays are directed must be included in the mine ventilation plan. As stated in the preamble to the final rule, this information is necessary for plan approval. It is not intended that enforcement personnel use engineering instruments to measure precise angles during inspection activities. Rather, the general spray direction and orientation and other parameters such as number of sprays, orifice size, and operating pressure would be determined by comparison with the requirements of the approved ventilation plan.

75.380 Escapeways; Bituminous and Lignite Mines

"The most direct, safe and practical route," as used in paragraph (d)(5) will be determined on a mine-by-mine basis. If the inspector believes that a particular escapeway is not the most direct, safe, and practical route, he or she must specifically inform the operator that another route is more direct, safe, and practical. This should be done by the inspector at the time of issuing a citation by orally notifying the operator of the preferred escapeway route and by

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noting in both the citation and inspector's notes, the escapeway route which the inspector believes to be more direct, safe, and practical.

Serious consideration should be given to the inherent hazards related to rehabilitation of fallen areas. In addition to the hazards of exposure related to such rehabilitation, other factors affecting whether the operator has set out the most direct, safe and practical route include roof conditions, traveling height, fan location, physical dimensions of a mine opening, and similar factors.

For example, if bad roof conditions are present along the shortest direct route and those roof conditions are beyond reasonable control, then an alternate safest route, as designated by the mine operator, may be acceptable. The presence of roof falls does not necessarily indicate that the passageway would not be suitable for evacuation.

Where coal seam thickness varies to the extreme, the shortest route may be through lower coal, making travel relatively slow and difficult, whereas an alternate route through a high passageway may permit faster and easier travel. Such an alternate route, although longer, may be acceptable. Similarly, an old mine shaft may not be safe for travel because of badly deteriorated shaft lining, timbers, etc., even though it is still suitable for mine ventilation purposes.

Standard development projections will not have to be altered to drive additional rooms, entries, or crosscuts for the sole purpose of providing a passageway to the nearest mine opening. However, the construction of ventilation controls such as stoppings, overcasts, and undercasts, or installation of an escape facility, may be required to provide the most safe, direct, and practical escapeway.

75.385 Opening New Mines

The total number of 20 miners allowed in any mine at any one time shall be interpreted to mean that no more than 20 miners (including supervisory personnel) may be permitted to work in any individual shaft, slope, or drift opening until a connection is made. In determining the total number of persons in the mine before a connection is made, the number shall not include State or Federal inspectors, representatives of the miners, or equipment manufacturing representatives.

Only the work necessary to make connections between the mine openings shall be permitted, and any development or other extraction of coal shall be prohibited until the connections are completed.

75.386 Final Mining of Pillars

The instructions outlined in Section 75.385 apply to this provision except that the limitation of 500 feet between the mine opening and working face shall be measured from the bottom of a shaft or slope or from the portal of drift mines to the working face.

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Subpart E**Combustible Materials and Rock Dusting****75.400 Accumulation of Combustible Materials**

Experience and tests have shown that accumulations of coal dust can contribute greatly to the propagation and severity of mine explosions. Such accumulations are also potential fire hazards since they are more readily ignitable and, once ignited, are more difficult to control and extinguish. The intent of this Section is to prevent the accumulations of the specified combustible materials in order to reduce the dangers of mine fires and explosions.

Coal dust means particles of coal that pass a No. 20 sieve. It is this fraction of the coal that participates in the dust explosion reaction. Loose coal means coal fragments larger in size than those passing a No. 20 sieve.

Tests have shown that intermittent piles of coal dust are more hazardous than smooth layers because the irregular piles are eroded more readily by the air movement generated during an explosion. As little as two 300-pound piles, under experimental conditions, caused an explosion to propagate when the entry otherwise was adequately rock-dusted.

Coal dust or coal and loose coal accumulations present a fire as well as an explosion hazard. The broken coal has considerably more surface area per unit mass than solid coal. For example, should an electric cable fail and cause an arc, the probability of igniting accumulations is greater than igniting solid coal. Also, when broken coal is ignited, fire propagates faster than in solid coal. As another example, if hydraulic oil is spilled into broken coal, the broken coal would ignite more easily and propagate flame faster than a similar spill on the smooth floor or against the coal rib.

Accumulations of coal dust, loose coal, or the combination of the two offer serious fire and explosion hazards and must be removed from the mine if, in the judgment of the inspector, they would lead to an intensification or spreading of a fire or an explosion. In evaluating whether the coal dust and loose coal would lead to intensification or spreading of a fire or an explosion, the inspector should consider all the facts concerning the deposit. For example, float coal dust, loose coal and/or coal dust deposited near working faces and in active haulage entries, where sources of ignition are likely to be, are more hazardous than similar deposits in back entries. However, the remoteness of back entries is not necessarily a safeguard.

Stoppings that normally isolate back entries may be destroyed by the force of an explosion, and accumulations of float coal dust, loose coal or coal dust in the back entries would add fuel to the flame.

In citing a violation, the inspector should describe fully the conditions and practices, such as the location, dimensions, etc. Imminent danger conditions normally can be considered to exist when accumulations of coal dust, float coal dust, loose coal, and other combustible materials are exposed to probable explosion and fire ignition sources, and the conditions observed could reasonably be expected to cause death or serious physical harm to a miner if normal mining operations were permitted to proceed in the area before the dangerous conditions are eliminated. There may be times when the inspector's interpretation of what is an accumulation of float coal dust, loose coal and coal dust and/or other combustible materials will differ with the opinion of others. However, the inspector should base his decision upon the facts surrounding each occurrence, and document such facts as the dimensions, type, specific location, and all other related factors. The inspector's decision as to what is an accumulation must be an objective one based on the facts or circumstances surrounding each occurrence.

Experience has demonstrated that the loading of loose coal caused by sloughing ribs creates a hazardous condition in that the pillar size can be substantially reduced and the width of the entry or room dangerously increased; therefore, such loose coal shall not be considered accumulations of combustible material if such material is rendered inert by heavy applications of rock dust. However, such loose coal shall not be permitted to accumulate in the roadways or outby timberlines.

75.400-2 Cleanup Program

The program referred to by this Section shall be outlined in written form and shall be available to the Secretary or his authorized representative. Consideration shall be given as to whether the program is effective, systematic, and is adequate under normal circumstances to control dangers from float dust, dust and loose coal along beltways, and dust and loose coal in the area between the face and loading point. Observance of quantities of inadequately inerted loose coal or coal dust throughout various areas of the mine during a single inspection, or from shift to shift, or from day to day, should be taken into consideration and is a strong indication that a systematic and effective cleanup program is not in operation.

75.402 Rock Dusting

If worked-out areas which are not rock-dusted are near active working areas and the rock-dusting can be done safely, they shall be rock-dusted in accordance with this Section. It would be unwise for an inspector to require rock-dusting of worked-out areas if miners would be exposed to potentially serious hazards such as bad roof, poor ventilation, etc. Nevertheless, where high-pressure rock-dusting machines are available, inspectors shall require that these machines be used at the outby edges of abandoned areas to rock-dust as much of the area that can be done safely.

75.403 Maintenance of Incombustible Content of Rock Dust***Section updated July 2015\ Release V-51***

Provided the percentages of incombustible content specified in this Section are maintained, rock dust may be applied wet (including foam rock dust). Wet rock dust shall be limited to rib and roof surfaces in the face areas and shall not be used for redusting mine surfaces. In such applications, only limestone or marble dust which meets the specification contained in Section 75.2(d) shall be used.

The application shall be at the rate of not less than 3 ounces of dust per square foot of surface, and shall be by a mixture of not more than 6 to 8 gallons of water with 100 pounds of dust, whether by premixed slurry or by mixing at the nozzle of a hose to assure that the mixture is not too fluid and that sufficient dust adheres to the surfaces. After the wet rock dust dries, additional dry rock dust shall be applied to all surfaces to meet applicable standards. Wet rock-dusting of ribs and roof does not eliminate the necessity for dry rock-dusting the floor.

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Subpart F Electrical Equipment - General

75.503 Permissible Electric Face Equipment; Maintenance
Splices shall not be made in external wiring of permissible equipment except in connection boxes as originally approved. However, splices may be made in cables of intrinsically-safe circuits, provided the splices are made in splice boxes (not necessarily explosion-proof) or the cables are joined together by proper connecting plugs. Longwall motor and shearer cable policy is located in Volume II under 18.20. Pump motor cables' policy is located in Volume II under 18.20.

Flame-resistant cable repair sleeves are acceptable for repair of conduit hose under the following conditions:

1. Minimum wall thickness of conduit and sleeve must be 1/4 inch. If a section of damaged conduit is missing, this wall thickness may be achieved by placing a section of conduit under the sleeve before shrinking.
2. If a sleeve is used to join two pieces of conduit, the conduit ends must be cut at an angle between 30 degrees and 45 degrees from the center line of the hose and butted together tightly.

All circuit breakers and other overload-protection devices shall be maintained in proper working condition. (Opening the circuit breaker on board the machine should deenergize the complete machine, except the methane monitor.)

An approval plate should be attached to the machine; however, a missing approval plate does not constitute a violation.

Where it is determined that a unit of equipment was shipped after January 1, 1981, and the load-locking valves are not maintained, enforcement action should be taken under this Section, for failure to maintain the electric face equipment in permissible condition. Load-locking valves provided on equipment shipped from the manufacturer prior to January 1, 1981, shall also be maintained. Appropriate enforcement action under Section 75.1725(a) should be taken if these load-locking valves are not being maintained.

75.507 Power Connection Points

This Section does not prohibit the installation of high-voltage cables, control cables or telephone cables in return air.

Furthermore, splices may be made in such cables if they are made in accordance with the applicable requirements of Sections 75.514, 75.603, 75.604, 75.804, and 75.810. However, unless high-voltage couplers are certified as explosion-proof, this Section prohibits their use in return air.

75.507-1 Electric Equipment Other Than Power-Connection Points; Outby the Last Open Crosscut; Return Air; Permissibility Requirement

"Return air," for the purpose of this Section, means air that has been used to ventilate any working face in a coal-producing section or pillared area, or air that has been used to ventilate any working face if such air is directed away from the immediate return. "Permissible," as used in this Section, means equipment to which an approval plate, label, or other device is attached as authorized by the Secretary and which meets requirements prescribed by the Secretary for the construction and maintenance of such equipment and are designed to assure that such equipment will not cause a mine explosion or a mine fire. Consequently, this Section prohibits the use, in return air, of any unit of equipment or any device which has not been approved as permissible or certified as explosion-proof by MSHA. This Section also prohibits the use in return air of approved or certified equipment which is not maintained in permissible condition. Furthermore, this Section prohibits nonpermissible-type electric equipment on the return air side of a permanent stopping, even if it is placed directly against the stopping with a block removed.

An approved or certified component which is maintained in permissible condition may be installed in return air if all nonpermissible components are installed in intake air. For instance, a certified explosion-proof motor that was formerly used on a permissible machine may be installed in return air if the motor is installed and maintained in permissible condition and all nonpermissible components, such as open switches and controllers, are installed in intake air.

Section 75.1105, provides that air currents used to ventilate structures or areas enclosing electrical installations, including battery charging station, "...shall be coursed directly into the return." To comply with 75.1105, all components of battery-charging stations at stoppings or regulators that separate intake and return air courses must be located on the intake side of the stoppings or regulators. In addition, the intake split of air

ventilating battery-charging stations must be coursed over the equipment and directly into the return.

Sections 75.507 and 75.507-1(a) also address the location of electric equipment in intake and return air. Section 75.507 provides that "except where permissible power-connection points are used, all power-connection points outby the last open crosscut shall be in intake air." Section 75.507-1 further provides that "all electric equipment, other than power-connection points, used in return air outby the last open crosscut...shall be permissible...." Electric equipment, such as a battery charger, which is not permissible must be used in intake air.

75.508 Map of Electrical System

Stationary electric equipment in connection with the mine electrical system shall be shown on the mine map by the use of symbols, print, or well-defined overlays, and shall be kept at the mine in a location that is accessible to the miners in the mine.

Equipment being used on the working section is not considered stationary equipment and need not be shown on the map; however, the circuit supplying power to the section should be identified.

75.508-2 Changes in Electrical System Map; Recording

"Completion of such changes" means when the equipment is energized and returned to service.

75.509 Electric Power Circuit and Electric Equipment;
Deenergization

A violation of this Section shall be cited only when electrical work is being performed on an energized machine. A violation of Section 75.1725(c) shall be cited if mechanical work or lubrication work is being performed on an energized machine.

For the purpose of this Section, troubleshooting or testing includes the work of locating electrical, hydraulic, or mechanical problems on a machine and the work of verifying that proper repairs have been performed. Troubleshooting or testing does not include the repair of the electrical, hydraulic, or mechanical problems. When troubleshooting and/or testing an energized machine, extreme caution must be taken to prevent inadvertent contact with energized parts in close proximity and assurance that equipment will not be accidentally started.

Examples of tests which may be performed with equipment energized are:

1. Voltage and current measurements;
2. Pressure and volume measurements on hydraulic systems; and
3. Mechanical clutch setting.

Sections 75.1720(c) and 77.1710(c) require that protective gloves be worn by miners when they are performing work "which might cause injury to the hands," unless the gloves would create a greater hazard by becoming entangled in the moving parts of equipment. As the accident and injury data associated with working on energized circuits and equipment clearly indicate, this type of work presents a significant risk of hand injury. Therefore, gloves, in accordance with Sections 75.1720(c) and 77.1710(c), are required whenever miners troubleshoot or test energized electric power circuits or electric equipment. Work gloves in good condition are acceptable for troubleshooting or testing energized low- or medium-voltage circuits or equipment. This Section does not prohibit installation of temporary guarding on an energized trolley wire provided:

1. It is not necessary to remove the trolley wire from the clips or hangers to install the temporary trolley guarding;
2. It is not necessary to wrap the guarding material around trolley wire;
3. The temporary trolley wire guard is specifically designed for the purpose so that it can be easily and safely installed without exposing the miner to a shock hazard; and
4. The miner who installs the temporary wire guard has received training in the hazards of energized trolley wires and in the safe method for installing the temporary trolley wire guards used at the mine. All miners who perform tasks in proximity to energized trolley wires (e.g., motormen, brakemen, supply crewmen, trackmen, wiremen, and miners who rock dust and roof bolt in the track entry) should receive this training as part of the training they receive under the applicable provisions of Part 48.

When permanent guarding is to be installed on a trolley or trolley feeder wire by wrapping guarding material around the conductor or when it is necessary to remove the trolley or trolley feeder wire from the hangers or clips for installation of the guarding material, the circuit shall be deenergized before such work is performed.

75.510 Energized Trolley Wires; Repair

This Section contains exceptions to Section 75.509 and Section 75.511. These exceptions permit a miner who is properly trained (see Section 75.510-1) and who wears approved and tested insulated shoes and wireman's gloves to repair energized trolley wires, even though the miner is not a qualified electrician within the meaning of Section 75.153.

For the purpose of this Section, the term "trolley wires" would also include trolley feeder wires and cutout switches used in trolley circuits. For the purpose of this Section, the word "repair" includes work such as straightening kinks in trolley wires and replacing trolley wires and trolley feeder wires in the clips or hangers, but does not include work such as installing or removing trolley wires, trolley feeder wires or trolley cutout switches.

Wiremen's gloves used to satisfy the requirements of this Section shall have a manufacturer's rating of at least 750 volts. Rubber boots satisfy the requirements of this Section, provided they are maintained free from cuts, holes and excessively worn places. Leather footwear rated for electrical hazards should not be used to satisfy the requirements of this Section because leather shoes can become highly conductive in the normally damp or wet environment of underground coal mines. Insulated footwear and wireman's gloves shall be closely inspected for damage and defects before each period of use. Damaged or defective gloves and footwear shall be replaced before repairs are performed on energized trolley wires.

75.510-1 Repair of Energized Trolley Wires; Training

The training required by this Section shall be provided in accordance with the applicable provisions of Part 48.

75.511 Low-, Medium-, or High-Voltage Distribution Circuits and Equipment; Repair

For the purpose of this Section, electrical work is considered to be the work required to install or maintain electric equipment or conductors. Listed below are examples of work that is required to be performed by a qualified person or a person trained to perform

electrical work and to maintain electric equipment under the direct supervision of a qualified person.

1. Locating faults in cables
2. Replacing blown fuses, except blown fuses on trolley poles may be replaced by miners other than persons qualified to do electrical work when:
 - a. it is not necessary to remove a cover lid or panel to gain access to the fuse;
 - b. the correct replacement fuse is available;
 - c. the fuse holder, power conductors, and motor controller have not been damaged;
 - d. warning signs are placed on the equipment to warn miners of the dangers of changing a blown trolley pole fuse without removing the trolley pole;
 - e. information signs are placed on the equipment to inform miners of the correct fuse for the equipment; and
 - f. the miners who install the fuses have received training in the hazards of energized trolley wires, voltage and current ratings of fuses, and in the safe methods for installing fuses. All miners who perform tasks involving equipment that use trolley fuses (e.g., motorman, supply crewman) should receive this training as part of the training they receive under applicable provisions of Part 48.
3. Making splices, connections and terminations in electric conductors and cables
4. Installation of couplers on the end of cables
5. Repair of electric components of electrically-powered portable, mobile or stationary equipment
6. Installation of electric wiring
7. Electrical maintenance of permissible equipment

8. Any type of work performed inside rooms, vaults, substations and other similar enclosures where energized parts or conductors are exposed
9. Any type of work performed inside transformers, power centers, rectifiers, switch boxes, switch houses, panels and other enclosures of electric equipment or conductors
10. Electrical troubleshooting and testing
11. Handling energized high-voltage power cables (see Section 75.812)

Listed below are examples of work that is not required to be performed by a qualified person or by a person trained to perform electrical work and maintain electric equipment under the direct supervision of a qualified person:

1. operation of electric equipment;
2. normal operation of control switches, switch boxes, or circuit breakers, provided no energized parts or conductors are exposed;
3. operation of cutout switches in trolley circuits;
4. hanging or removing fuse nips on or from trolley wires;
5. changing bits;
6. lubrication;
7. handling energized trailing cables;
8. inserting low- and medium-voltage cable couplers into receptacles or withdrawing low- and medium-voltage cable couplers from receptacles;
9. transportation of electric equipment and cables;
10. mechanical repairs on electrically-powered equipment, provided no energized parts or conductors are exposed;
11. installation and repair of equipment and circuits in which shock hazards do not exist (having a nominal rating

of 40 volts or less), provided such equipment is not required to be permissible; and

12. installation, repair, and guarding of trolley wires and trolley feeder wires.

Section 75.510 states that energized trolley wires may be repaired only by a person trained to perform electrical work and to maintain electrical equipment. Repair work is not required to be performed by a qualified person but must be performed by a person trained to repair and maintain energized trolley wires. However, electrical work, such as connecting a feeder wire inside the enclosed housing of a rectifier, is required to be performed by a qualified person or by a person trained to perform electrical work and to maintain electrical equipment under the direct supervision of a qualified person.

The phrase "under the direct supervision of a qualified person" must, as a minimum, include the following:

1. The qualified person shall examine and/or test an electric circuit or machine and determine the need for repair or maintenance;
2. The qualified person must give specific instructions to the employee assigned to perform this work with respect to the nature and extent of the repairs to be performed and, where necessary, prescribe the manner in which the work is to be performed;
3. The qualified person is, at all times, under continuing duty to instruct, advise, or consult with the employee in the event the work which he has assigned cannot be performed by the employee in the manner prescribed; and
4. The qualified person must examine and test, if necessary, the completed work before the circuit is energized or the machine is returned to service.

When a cable splice is made by a person other than a qualified person, the splice shall be inspected by a qualified person prior to reinsulation of the power conductors and prior to and after the final outer jacket is applied.

Testing and troubleshooting of energized equipment shall be done only by qualified persons, except that a person trained to perform electrical work and to maintain electrical equipment

under the direct supervision of a qualified person may do testing and troubleshooting on energized circuits as a part of his or her training program if a qualified person is present at all times to observe, instruct, and aid the trainee during such testing and troubleshooting.

Mining equipment manufacturers' service representatives are not required to be qualified persons, but are considered to be persons "trained to perform electrical work and to maintain electrical equipment under the direct supervision of a qualified person." When work is performed by manufacturers' service representatives who are not qualified persons, the completed work is required to be examined and tested, if necessary, by a qualified person before the machine or equipment is placed in service.

Rebuilding of electric equipment by original equipment manufacturers or rebuild shops may be performed by persons other than qualified persons; however, mine management is under a continuing responsibility to assure that such equipment is examined by a qualified person to assure safe operating condition before the equipment is placed in service.

Section 75.512 requires examinations and tests to be made only by a qualified person. The very nature of the required examinations and tests precludes the work being performed by a person trained to perform electrical work and to maintain electrical equipment under the direct supervision of a qualified person.

The disconnecting device is intended to provide workers with a visible means of readily determining that the equipment or circuit is deenergized. The worker must be able to see the power disconnect blades or contacts easily to determine, without any doubt, that the circuit is deenergized.

Disconnecting devices shall be locked out, where possible, and suitably tagged by persons who perform the work. Locking out is "possible" in almost all cases and can be accomplished in a practical manner. Single-pole blade-type disconnects and fused-type disconnects in high-voltage circuits are examples of cases where locking out is not practically possible. In all instances, trailing cables equipped with cable couplers or fused nips shall be opened, tagged and locked out. Some methods by which locking out may be accomplished are:

1. Drilling a small hole in the shell of the cable coupling so as to accommodate a padlock;

2. Chaining the cable coupler to the power center with a short cable and padlock; and
3. Placing the cable couplers or fuse nips inside a box equipped with a padlock.

The person doing the work shall keep the key to the padlock in his/her possession to insure that the circuit or cable will not be inadvertently energized while he or she is in contact with the conductors.

In every instance, the padlock shall be removed by the person who installed it if the person is present in the mine. If the person who installed the padlock is not present, the operator or the operator's agent (a responsible official) must designate a person to remove the padlock.

"Suitably tagged" means that a sign with wording such as "Danger, Repairs in Progress," shall be attached to the locked disconnecting device.

Disconnecting Devices Installed On-Board Mine Equipment

When disconnecting devices are installed on-board mine equipment, they may be used to meet the requirements of 30 CFR 75.509, 75.511 and 75.1725(c), provided the disconnecting devices are safety constructed, designed, and installed on the equipment as required by 30 CFR 75.520.

To meet the requirements of 30 CFR 75.509, 75.511, and 75.1725(c), disconnecting devices must function so as to provide positive visual confirmation that the equipment or circuit is deenergized. The worker must be able to easily see the power disconnect blades or contacts to determine, without any doubt, that the equipment or circuit is deenergized.

To meet the requirements of 30 CFR 75.520, disconnecting device enclosures must be explosion-proof and installed in a location on the machine that will not be hazardous to the machine operator or diminish visibility. In addition, the enclosure housing the disconnecting device must be the first enclosure on-board the machine that the trailing cable enters. The covers of disconnecting device enclosures must be provided with interlock switches so that miners cannot be exposed to energized parts when these covers are removed.

These covers must also be provided with caution labels to warn miners against entering these enclosures before deenergizing the trailing cables to the equipment. The disconnecting device must be capable of carrying the full-load current of the machine, and of interrupting the full-load current of the machine unless the device is interlocked to remove the load prior to opening. In addition, if the device is intended to interrupt short circuit current, it shall have a current interrupting rating greater than the available fault current at the machine.

Permitting a disconnecting device installed on-board a machine to be used as the visual disconnect for the equipment creates a change in established electrical work procedures. As a result, all miners who perform maintenance on this equipment must receive task training as required by 30 CFR 48.7(a)(3). This training must include clear instructions that the disconnecting device will only deenergize the machine, and that the trailing cable will remain energized.

75.512 Electric Equipment; Examination, Testing and Maintenance

This Section requires that each individual piece of electric equipment, including locomotives, personnel carriers, electric track switches and derails, compressors, car hauls, conveyor units, pumps, rock-dusting machines, battery-powered equipment and permissible equipment, be examined and tested. The required examinations and tests must be thorough enough to insure that the electric equipment has not deteriorated through neglect, abuse or normal use into an unsafe condition that could result in a shock, fire, or other hazard to the miners.

The record of examinations of electric equipment required by this Section shall list separately each individual piece of electric equipment in the mine.

If the qualified person making the required examinations and test finds any potentially dangerous condition, that person shall immediately cause the defective equipment to be removed from service until such condition is corrected.

If each individual piece of electric equipment is not listed separately and identified with a serial or company number and the location of each unit, and if all dangerous conditions and corrective actions are not recorded, the records of weekly examinations of electric equipment are incomplete and shall be considered to be in violation of this Section.

The qualified person making the examination is not required to sign the book; however, the name of the qualified person who made the required examination and test shall appear under "Examiner" in the book, Form 6-1492 (Weekly Record). The results of examinations required by this Section may be entered or recorded by the qualified person making the examination or by a responsible mine official (superintendent, mine foreman, electrical or maintenance foreman) or may transfer information from a check list, filled out by the examiner, to the required book. If the examiner cannot be readily identified from the records of weekly examinations of electric equipment, the records are incomplete and in violation of this Section.

75.512-2 Frequency of Examinations

The examination of electric equipment may be made at any time during each calendar week, even if more than 7 days pass between examinations.

75.513-1 Electric Conductors; Size

If power cables are manufactured in accordance with the Insulated Cable Engineers Association (ICEA) standards, the ampacity tables by the ICEA shall be used for determining compliance with this Section.

75.514 Electrical Connections or Splices; Suitability

This Section requires that conductors be joined together with clamps, connectors, track bonds, or other suitable connectors to provide good electrical connections. Splices made by twisting conductors together or by tying knots in conductors, splices that have bare or exposed conductors, or splices that heat or arc under load shall constitute noncompliance.

When splices are made in insulated conductors, the conductors must be reinsulated with insulating materials similar to the original. Flame-resistant insulating material should be used to replace flame-resistant insulation. Glass, asbestos, or other heat-resistant material should be used to replace high temperature insulation.

Feeder wires shall be joined together by proper feeder-wire splices. Wire rope clamps will be acceptable for splicing feeder wire; however, a minimum of two clamps of the proper size should be used in making each splice. The wire rope clamps should be examined periodically for tightness.

Where track is used as a power conductor, efficient connections require that:

1. Both rails of main-line tracks shall be welded or bonded at every joint, and cross bonds shall be installed at intervals of not more than 200 feet. If the rails are paralleled with a feeder circuit of like polarity, such parallel feeder shall be bonded to the track rails at intervals of not more than 1,000 feet.
2. At least one rail on secondary track-haulage rails shall be welded or bonded at every joint, and cross bonds shall be installed at intervals of not more than 200 feet.
3. Track switches in entries shall be well bonded.
4. In rooms where electric equipment is dependent upon the room track rails as a power conductor, rail joints shall be secured by means of fish plates, angle bars, or the equivalent, and at least one rail shall be bonded at each joint.

Visible arcing or heating at rail joints indicates poor connections or poor bonding.

Main-line track is interpreted to be track used to transport coal outby the junction of two or more coal-producing sections. All other track is considered to be secondary track and includes track that is used to transport miners and material or coal from a single coal-producing section. Both rails of secondary track may need to be bonded or welded at each joint if the additional current-carrying capacity is needed for compliance with Section 75.1001.

Bonding as used herein means a connection used to insure the required electrical conductivity between the rails. The connection may be obtained mechanically, as with a wedge or by welding the bonds on the rails.

75.515 Cable Fittings; Suitability

This Section requires fittings of such design as to prevent chafing of cable or wire insulation that would expose or accidentally ground the conductors at points where they enter the compartment walls of switch boxes, starters, motors, cable couplers, etc. Insulated wires passing through walls of metal enclosures shall be protected against damage to the insulation by insulated bushings or suitable insulating material, such as fire-resistant hose conduit used in conjunction with a suitable fitting or clamp that will prevent movement of the conductor in the opening. Fittings for cables need not be insulated. When

insulated wires pass through holes in metal dividers within the same enclosure, insulating bushings or other suitable insulating material shall be used to bush the holes. For the purpose of this Section, "cable" means two or more insulated conductors covered by an additional abrasion-resistant covering.

75.516 Power Wires; Support

"Power wire" means a current-carrying conductor which may be bare, insulated, or part of a cable assembly.

Shielded cables that meet all of the requirements of Section 75.804 are not required to be installed on insulators, even if they are used to supply low-, medium-, or high-voltage equipment. All other power wires and cables supplying belt conveyor drives, pumps, air compressors, and other units of portable or stationary equipment (except distribution boxes, portable pumps, battery chargers, and rock-dusting machines which are used on coal-producing sections and which require frequent movement) shall be installed on insulators and are not allowed to contact combustible material, roof, or ribs.

Acceptable insulators are constructed of noncombustible, nonabsorptive insulating material adequate for the voltage being used. Furthermore, insulators must have sufficient mechanical strength and must be installed in such a manner as to provide adequate support for the power wires or cables installed on them. Cables that meet the requirements of Section 75.600 may be supported from noncombustible material such as sandrock or slate roof, concrete or metal roof supports, or masonry walls by lengths of flame-resistant cable or conveyor belting.

Trolley wires and trolley feeder wires shall be supported only on bell-and-clip-type insulated hangers or other supports especially designed for that purpose.

All wires and cables that are required to be supported on insulators shall be supported in such manner that they do not contact combustible materials, roof, or ribs.

75.516-1 Installed Insulators

J-hooks shall be acceptable as insulators for the permanent installation of insulated cables if the manufacturer certifies the dielectric and tensile strength of the J-hook and if, in the opinion of the authorized representative of the Secretary, the J-hook is adequate for the duty imposed. The following guidelines shall be used as criteria for the acceptance of J-hooks as insulators:

1. The dielectric strength of the J-hook shall not be less than eight times the voltage of the circuit.
2. The tensile strength shall not be less than three times the weight the J-hook is intended to support.

Insulated J-hooks that do meet the above requirements will be acceptable as insulators for permanent installations of insulated control cables and insulated control wire (either single-conductor or twisted pair) or for temporary installation (not more than 6 months) of insulated power cables.

This Section does not prohibit single-conductor cables used in three-phase resistance-grounded low-voltage circuits from being installed on proper hangers and supported by a grounded messenger wire or insulated wires from being installed in grounded metal conduit.

75.517 Power Wires and Cables; Insulation and Protection
Any ungrounded power conductor extending from the track entry for any purpose shall be insulated. In addition, power wires and cables shall be installed under well supported roof and far enough away from any moving equipment to prevent damage; however, in some locations, metal or nonmetallic conduit may be necessary for additional protection against damage. Examples of these locations include: where power wires or cables other than trolley feeder wires cross the trolley wire; where power wires or cables pass through doors or stoppings; where power wires or cables are installed along supply storage areas; where power wires or cables are installed on tight corners with insufficient clearance; or other areas where power wires or cables cannot be isolated sufficiently to afford protection.

This Section also requires that damaged insulation on insulated power wires and cables (including trailing cables) and damaged jackets on power cables (including trailing cables) be repaired.

The outer jacket of a cable is intended to protect the internal conductors from cuts, abrasion, moisture, etc., and must be intact for the cable to be fully protected as required by this Section.

Tapes or other materials that are used to form the outer jacket of approved permanent splices may be used to replace damaged areas of outer jackets of trailing cable. Outer jackets shall be replaced in such manner so as to prevent moisture from entering the cable.

Tar-impregnated friction tape is not adequate for insulation or protection in the damp and wet areas of underground coal mines. Such tape will absorb mine water, which is highly conductive, creating a serious shock hazard to the miners.

75.518-1 Electric Equipment and Circuits; Overload and Short Circuit Protection; Minimum Requirements

In direct-current systems that are either ungrounded or provided with a neutral grounding point, protective elements shall be provided for both positive and negative lines. This necessitates the use of either a two-pole circuit breaker or a fuse in each polarity. Fuses of the correct type and capacity are acceptable as overload protection only for d.c. or single-phase a.c. circuits and motors. The proper selection is based on wire size, motor design, horsepower, and method of starting. If the computed value is other than a common size, the next higher size common fuse or thermal element is acceptable.

The installation of overload devices on locomotives operating on grades exceeding 5 percent can create a hazardous condition due to a decrease in braking power if the overcurrent protective devices open. Noncompliance with this Section shall not be cited for locomotives operating on grades exceeding 5 percent until suitable automatic brakes have been designed and installed on such locomotives and haulage cars.

75.518-2 Incandescent Lamps, Overload, and Short-Circuit Protection

Not more than 8 feet in distance means not more than 8 feet of ungrounded conductor.

75.519-1 Main Power Circuits; Disconnecting Switches; Locations

This Section applies to low- and medium-voltage power circuits entering a mine and to low-, medium-, and high-voltage power circuits at the bottom of shafts and boreholes. The requirements for disconnecting switches for high-voltage power circuits entering a mine are contained in Section 75.802(c).

A high-voltage cable coupler, switch, or other device not designed for load-breaking duty that is located at the bottom of a shaft or borehole may be used in conjunction with a high-voltage circuit breaker located on the surface provided:

1. A remote control switch that, when activated, will open the circuit breaker is provided at the bottom of the shaft or borehole; and

2. A visual or audible means to indicate that the circuit breaker has opened when the remote control switch is activated is provided at the bottom of the shaft or borehole. Signal lights will be acceptable if the lights receive power through the auxiliary contacts on the circuit breaker.

Unless fuse-type and knife-blade cutout switches are designed for load-breaking duty on high-voltage circuits, such switches shall be used for a disconnecting means only when some other means is first used to deenergize the circuit.

75.520 Electric Equipment; Switches

All control devices shall be fully enclosed to prevent exposure of bare wires and energized parts. The use of plugs and receptacles (e.g., Miller plugs), trolley taps, and trolley wire "stingers" to start and stop electric motors are examples of noncompliance with this Section.

75.521 Lightning Arrester; Ungrounded and Exposed Power Conductors and Telephone Wires

Conductors that are: (1) provided with metallic shields; (2) jacketed by a ground metal covering or enclosure; (3) installed under grounded metal framework; (4) buried in the earth; or (5) made of triplex or quadraplex that is supported by a grounded messenger wire, are not considered exposed for the length so protected. If the trolley wire of a d.c. system is paralleled by an exposed feeder cable, one lightning arrester would provide protection for both if they are connected together near the lightning arrester.

Lightning arrester ground fields shall be maintained with as low a resistance to earth as possible, preferably less than 5 ohms and no more than 25 ohms. Lightning arrester ground fields shall be separated from neutral ground fields by at least 25 feet. This distance prevents lightning surges from being transmitted to the neutral ground field where they could momentarily energize the frames of equipment grounded to the neutral ground field. Mines using single-phase power originating at the power company's secondary and extending underground cannot normally comply with this Section due to the power company's practice of connecting the lightning arrester ground to the grounded neutral which also connects to the center tap of the transformer, unless an isolation transformer is installed or the power company isolates the lightning arrester ground from the center tap ground and a separate neutral ground field is established.

75.523-1 Deenergization of Self-Propelled Electric Face
Equipment Installation Requirements

A machine that can only be operated from a remote location is not required to be provided with a device that will quickly deenergize the tramming motors of the machine in the event of an emergency. However, if at any time the remote controls are placed on the machine for the purpose of tramming the machine, or if for any other reason the operator trams the machine from onboard or alongside the machine, the machine shall be provided with a device that meets the requirements of this Section and Section 75.523-2.

Any device other than a bar or lever used for deenergizing tramming motors such as a "dead man control" can be accepted only by an approval letter from Technical Support.

75.523-2 Deenergization of Self-Propelled Electric Face
Equipment; Performance Requirements

The actuating bar or lever and its associated linkage should be designed to activate a circuit breaker, control switch, hydraulic valve, or other device that will deenergize the tramming motors when the actuating bar or lever is depressed.

The bar or lever shall extend a sufficient distance in each direction to provide a ready means of deenergizing the tramming motors without requiring the operator to change position or search for a safe stop switch if an emergency occurs.

The actuating bar or lever shall be designed so that a horizontal or vertical (downward) pressure of 15 pounds force shall cause deenergization of the tramming motors before the bar has traveled more than 2 inches.

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Subpart G Trailing Cables**75.600 Trailing Cables; Flame Resistance**

In order to maintain the flame-resistant qualities of the cable, this Section prohibits the use of flammable materials for replacing the outer jacket. Only flame-resistant tapes or other materials that have been accepted by Technical Support as the jacketing material in permanent splice kits and jacket repair kits will be acceptable for the repair or replacement of outer jackets.

75.601 Short-Circuit Protection of Trailing Cables

Section 75.900 prohibits the use of fuses for the short-circuit protection of three-phase a.c. trailing cables. Only fuses that have been tested and approved by Technical Support under Part 28 are acceptable for the short-circuit protection of d.c. and single-phase a.c. trailing cables. Approved fuses are identified by an MESA or MSHA approval number. (See Sections 75.601-2 and 75.601-3.)

A length of cable meeting the requirements of Section 75.600 and installed between a power center or rectifier and a distribution box, and laying on the mine floor will be considered to be a trailing cable and is required to comply with all applicable requirements of this Subpart.

In systems where rectifiers supply ungrounded or neutral-grounded direct-current power to mobile face equipment, short-circuit protection must be provided for both ungrounded conductors of the trailing cable. A properly adjusted two-pole circuit breaker or MSHA approved fuses installed in each ungrounded conductor would constitute compliance.

Adequate current-interrupting capacity means that the fuse or circuit breaker is capable of safely interrupting the current that can flow upon the occurrence of a short circuit at any point in the protected circuit.

Enclosed circuit breakers are not acceptable as visual evidence that the power is disconnected. Plugs and receptacles located at the circuit breaker and trolley nips are acceptable as visual means of disconnecting the power.

A "disconnecting device" is defined as both the trailing cable plug (cathead) and the receptacle. Both the plug and the receptacle must be marked in a similar manner.

75.601-2 Short-Circuit Protection; Use of Fuses;
Approval by the Secretary

The voltage rating of a fuse shall not be less than the maximum voltage of the circuit in which it is installed.

75.602 Trailing Cable Junctions

Plugs of the same size may be used for different cable sizes if dowel pins or other devices are provided to insure that each cable can only be connected to a circuit breaker of the proper size or if the plugs and receptacles are connected by a short length of chain long enough to permit the plug to be inserted into and withdrawn from the proper receptacle only.

75.603 Temporary Splices of Trailing Cables

A splice includes the mechanical joining of a grounding conductor that has been severed.

The connection of the trailing cable made in by the strain clamp on cable reel equipment that does not have provisions for the trailing cable to enter the collector ring compartment shall not be considered a temporary splice. The method of cable attachment accepted in the approval of the equipment will be in compliance with this provision.

The conductors of a temporary splice shall be joined together so that the passage of current will not create excessive heat at the connection. Each power conductor, grounding conductor, and ground-check conductor shall be individually spliced using a proper splicing sleeve, ring, or clamp; each power conductor shall be individually insulated with proper insulating tape, and the outer jacket shall be replaced with flame-resistant tape or other flame-resistant material to provide an outer jacket as thick as the original.

Torn or damaged insulation on a trailing cable shall be reinsulated and does not constitute a splice unless a conductor is severed.

75.604 Permanent Splicing of Trailing Cables

Materials listed by MSHA's Approval and Certification Center as flame resistant for use in making permanent splices in trailing cables shall be used in complete accordance with the manufacturer's instructions. Splice kits shall be applied without substituting or altering any parts. Any deviation would require additional evaluation or testing by MSHA. Without such evaluation, such deviations shall constitute noncompliance with this Section.

75.605 Clamping of Trailing Cables to Equipment

Section 18.40 requires insulated strain clamps or cable grips on the trailing cables of permissible machines, except that mesh-wire cable grips (e.g. Kellems grips) are not permitted on trailing cable reels. Where mesh-wire cable grips are permitted, they shall be installed in accordance with the following:

1. Sufficient slack shall be provided in the trailing cable between the machine and the cable grip.
2. A hose clamp shall be provided on the outby end of the cable grip to prevent slippage along the cable jacket.

A length of flame-resistant hose conduit is acceptable for insulating a metal strain clamp.

75.606 Protection of Trailing Cables

Trailing cables shall be placed away from roadways and haulageways where they might be run over or damaged by mobile equipment. Where the method of mining requires that trailing cables cross roadways or haulageways, the cables shall be securely supported from the mine roof, or if the height of the coal seam does not permit hanging the cables, the cables shall be installed in a trench cut into the mine roof or mine floor. A substantial bridge for the equipment to pass over the cables is also acceptable if, in the opinion of the inspector, the cables are adequately protected.

Subpart H Grounding**75.701 Grounding Metallic Frames, Casings, and Other Enclosures of Electric Equipment**

When a three-phase resistance grounded system supplies power to a rectifier bridge and to other portable or mobile loads, neither the positive nor negative conductor of the direct-current circuit can be grounded. The frames of the direct-current equipment must be grounded to the alternating-current ground rectifier frame. However, when a power system is being designed so as to provide a separate bank of transformers to supply power to the rectifier bridge and a separate bank of transformers to supply power to the a.c. portable or mobile loads, then one polarity of the rectifier bridge can be grounded. All frames of direct-current equipment are then grounded to the grounded power conductor.

75.702 Protection Other Than Grounding

Portable tools protected by an approved system of double insulation, or its equivalent, need not be grounded. Where such an approved system is employed, the tool will be distinctly marked.

75.703 Grounding Off-Track Direct-Current Machines and Enclosures of Related Detached Components

"Related detached components" refers to associated parts such as contactor compartments, control switches, or rheostats that are not installed on the frame of the machine. The metal frames or enclosures of such components shall be connected to the same grounding medium as the main frame of the machine to which it is related.

Metal frames or housings of pumps, battery chargers, sequence and slippage switches, breaker boxes, remote control switches, rheostats, rock-dusting machines, auxiliary fans, belt drives, belt feeders, contactor compartments, and any other equipment or devices receiving power from direct-current power systems shall be grounded to the grounding medium of the power system feeding such equipment or devices. The grounding medium for d.c. systems is normally the mine track or grounded d.c. feeder. When ungrounded d.c. systems are used, the grounding medium is usually the grounded frame of the rectifier or generator.

The metal battery case of batteries being charged shall be grounded. In instances where batteries are being charged without removing them from mobile equipment, the frame of the machine or battery case shall be grounded to the grounded frame of the charger to prevent the machine from becoming "alive" through failure of insulation in the charger, such as between primary and

secondary windings of transformers and leakage through spilled electrolyte from the batteries.

This Section requires that metal battery trays be effectively grounded to the battery charger frame during charging. Technical Support's Mine Electrical Systems Branch conducted tests on two-pole battery connectors to evaluate the effectiveness of the electrical connection between the connector housings as the means of grounding the battery trays. These tests indicate that the tolerance fit between the male and female connector housings does not provide an effective electrical connection, particularly when the connectors are contaminated with water, rock dust, or mud.

This Section also requires that metal battery connector housings be effectively grounded to the battery charger frame during charging. Consequently, provisions must also be made to effectively ground metal battery connector housings during charging.

All grounding conductor connections shall be clamped or bolted connections, shall be capable of carrying any fault current to which it may be exposed, and shall be connected first and disconnected last.

75.703-3 Approved Methods of Grounding Off-Track Mobile,
Portable, and Stationary Direct-Current Machines

Diode grounding of equipment is not acceptable on direct-current systems which have both the positive and negative polarities ungrounded.

75.706 Deenergized Underground Power Circuits; Idle Days - Idle
Shifts

Circuits supplying power to automatically-operated pumps shall be considered as being in use although the pumps may not be operating continuously.

Subpart IUnderground High-Voltage Distribution75.800 High-Voltage Circuits; Circuit Breakers

A suitable circuit breaker is one that is:

1. Capable of interrupting the maximum fault current to which it may be subjected without damage to itself;
2. Capable of carrying the continuous current imposed upon it without damage to itself; and
3. Rated for not less than the voltage of the circuit.

"Undervoltage protection" is defined in the IEEE Standard Dictionary of Electrical and Electronic Terms (IEEE Standards 100-1972) as "the effect of a device, operative on the reduction or failure of voltage, to cause and maintain the interruption of power to the main circuit." The principal purpose for undervoltage protection is to prevent automatic restarting of equipment when power is restored after an outage. Undervoltage protection can be provided by an undervoltage trip coil on the circuit breaker or by an undervoltage relay or a ground-check relay connected into the circuit breaker trip circuit. When an undervoltage relay or ground-check relay is used to operate the shunt trip coil on a circuit breaker, a stored-energy tripping source must be provided (i.e., capacitor trip or battery trip) to insure that the circuit breaker will trip during a power outage. The undervoltage relay may either be an induction or attraction type and must trip the circuit breaker when the line voltage decreases to 40 percent of nominal or less when power is lost.

A high-voltage circuit extending underground shall be protected against the harmful effects of a grounded phase in the underground circuit and in any surface circuit supplied from the same set of transformer windings. Consequently, if one set of transformer windings supplies resistance-grounded power to both underground and surface loads, the circuit(s) extending to the surface loads must also be provided with grounded-phase protection. Fuses may be used to provide grounded-phase protection only for small control transformers installed in the same substation as the transformers that supply the resistance-grounded circuit. In all other cases, circuit breakers equipped with grounded-phase protective devices must be used to provide the required grounded-phase protection.

Grounded-phase relays should be adjusted to operate on as low a value of current or voltage as practical. In order to provide safe, reliable relaying, settings should not exceed 50 percent of

the maximum fault current for current relaying or 50 percent of the phase-to-neutral voltage for potential relaying.

Where an ungrounded high-voltage circuit is accepted for use underground under the provisions of Section 75.802(b), the circuit must be provided with grounded-phase protection.

Grounded-phase indicating lights that do not trip the circuit breaker upon the occurrence of a phase-to-ground fault are not acceptable as compliance with this Section.

Short-circuit protection can be provided by using the instantaneous units of overcurrent relays or by using inverse-time overcurrent relays with minimal time dial settings.

The pickup of the instantaneous unit of an overcurrent relay is independent of the pickup of the inverse-time unit and is determined by the position of the top of the screw on the instantaneous unit.

Overcurrent devices are required in at least two phases of three-phase high-voltage underground distribution circuits.

75.800-3 Testing, Examination, and Maintenance of Circuit Breakers; Procedures

If the circuit breaker located on the surface provides overload, short-circuit, undervoltage, and grounded-phase protection for the entire underground circuit, only that circuit breaker is required to be tested by this Section. Circuit breakers installed underground for coordination purposes in such circuits are not required to be tested; however, each independent ground-check circuit must be tested in accordance with this Section.

The tests required by paragraph (b) (2) of this Section may be conducted one of three ways:

1. Primary injection test. This test method involves sufficient current to cause the circuit breaker to trip through at least two current transformers associated with the circuit breaker. Since this method requires that test connections be made on high-voltage conductors or terminals, stringent safety procedures must be followed. This method simultaneously tests the current transformer ratio, the current transformer secondary wiring, the operation and calibration of the relays, and the operation of the circuit breaker tripping circuit.

2. Secondary injection test. This test method involves passing sufficient current to cause the circuit breaker to trip through at least two of the protective relays associated with the circuit breaker.

This method simultaneously tests the operation and calibration of relays and the operation of the circuit breaker trip circuit.

3. Mechanical activation test. This test method involves mechanically activating at least two of the protective relays associated with the circuit breaker with a non-conductive probe. This method tests the operation of the circuit breaker trip circuit.

75.801 Grounding Resistors

Grounding resistors that are manufactured to meet the extended time rating as set forth in IEEE Standard 32-1972, formerly AIEE Standard 32, are acceptable as compliance with this Section. Resistors that are not manufactured in compliance with IEEE Standard 32-1972 shall be "rated for maximum fault current continuously."

75.802 Protection of High-Voltage Circuits Extending Underground

Grounding transformers must be sized to carry the rated ground-fault current of the system continuously. Consequently, the kVA rating of a zigzag grounding transformer or a wye-delta grounding transformer bank shall not be less than the rated phase-to-neutral voltage of the system (VON) in kV times the rated ground-fault current of the system (I) in amperes. If other loads are supplied from a wye-delta grounding transformer bank, the rating of the transformer bank must be adequate to supply the additional loads plus the rated ground-fault current.

Transformer banks connected wye on the primary side and supplied power from a resistance-grounded circuit shall not have the primary neutral grounded.

When used, grounding transformers shall be connected on the line side of circuit breakers so that the system will always be grounded and must be located in/or adjacent to the same substation as the power source transformers.

This Section requires that the grounding resistor be located at the source transformers. As used in this Section, the term "source transformer" means the transformer that supplies power to the electric circuit.

The frames of electric equipment receiving power from a resistance-grounded system that supplies a circuit extending underground must be grounded to the grounded side of the grounding resistor, regardless of whether the equipment is located on the surface or underground. However, the metallic frames, enclosures, and supporting structures of all high-voltage equipment and conductors located inside either a portable or stationary substation (including the source transformers, control transformer, grounding resistor, and circuit breakers) must be grounded to the same grounding medium to prevent hazardous step and touch potentials from existing within the substation during a grounded-phase condition or a lightning strike. Therefore, the metallic frames, enclosures, and supporting structures of all electric equipment and conductors located inside either a portable or stationary substation shall be grounded to the substation grounding medium.

All high-voltage power transformers and other equipment that receive power from a resistance-grounded system that supplies a circuit extending underground should be located outside the substation containing the source transformers. The frames, enclosures, and supporting structures of such equipment should be grounded to the grounded side of the grounding resistor. When equipment receiving power from a resistance-grounded circuit is installed inside the same substation as the source transformer, compliance with Section 75.521 and 75.802 is extremely impractical without creating step and touch potential fault conditions and lightning strikes.

Voltage regulators and capacitors located on the load side of the source transformer inside the substation are part of the power source and are not considered part of the load. As part of the power source, they must be grounded to the substation-grounding medium.

Among other things, capacitors are used to improve the power-factor by reducing reactive power in the system. Capacitors lower system losses and improve voltage. Voltage regulators control voltage spread at the utilization equipment under all load conditions. These components do not receive power from the source transformer, but they regulate the power supplied to the different loads (equipment). If these components are located inside the substation, their frames must be grounded to the substation-grounding medium to prevent step and touch hazards.

Substations are normally designed in accordance with IEEE Std 80-1986 (ANSI) [3].

These designs include reinforcing bars contained on the below-grade foundation structure. The purpose of these designs is to limit step and touch potentials at substations to values that are intended to eliminate the risk of dangerous electric-shock exposure to persons either working within the substation or approaching the substation.

Ungrounded three-phase high-voltage circuits may be permitted to feed stationary equipment only after an investigation has been made to determine that the use of such circuits in a particular mine does not pose a hazard to the miners.

Ungrounded circuits shall not be accepted for circuits feeding portable power centers and rectifiers that supply power to mobile equipment. SHC cables (cables having common metallic shield around all conductors) are not to be accepted for use in underground high-voltage circuits.

In all cases where ungrounded circuits are accepted for use underground, the circuit breaker protecting the circuit must be equipped with a ground-phase tripping circuit. Ground-indicating lights that do not trip the circuit breaker upon occurrence of a phase-to-ground fault are not acceptable.

75.803 Fail Safe Ground Check Circuits on High-Voltage Resistance Grounded Systems

Ground check circuits are required to be designed so as to ensure a safe dependable path for fault current by causing the circuit breaker to open when either of the following occurs:

1. The ground check wire is broken at any point; or
2. The grounding conductor is broken at any point.

If low-resistance parallel paths are present that prevent the ground check circuit from actuating the ground check relay when the grounding conductor is broken, the ground check circuit shall be acceptable as compliance with this Section if the ground check circuit is designed to cause the circuit breaker to open when the impedance of the grounding circuit increases beyond the amount necessary to cause a 100-volt drop external to the grounding resistor during fault conditions.

The following method may be approved by electrical inspection personnel as an alternate method for ensuring continuity of a safe, dependable path for fault current for resistance-grounded circuits extending to permanently installed, stationary equipment located on the surface:

1. Grounding circuit shall originate at the grounded side of the grounding resistor and shall extend along with the power conductors and shall serve as a grounding conductor for the frames of all equipment receiving power from the circuit.

2. Second grounding circuit shall connect the frames of the stationary equipment to a low resistance ground field located near the utilization location.
3. The resistance of the grounding resistor and the resistance of the ground field shall be maintained in such a manner that not more than 100 volts will appear between the equipment frame and earth under fault conditions in the event that the grounding conductor should be severed.

75.803-2 Ground Check Systems not Employing Pilot Check Wires;
Approval by the Secretary

Wireless ground check circuits shall not be approved unless such circuits are tested and evaluated by Technical Support.

75.804 Underground High-Voltage Cables

This Section does not apply to cables of ungrounded high-voltage circuits that are enclosed in steel armor or rigid steel conduit. All high-voltage cables, whether single or multiple conductor, shall conform to this Section.

If single-conductor high-voltage cables are used, the cables should be installed on a well-supported messenger wire or on cable hangers, and a power grounding conductor and ground check conductor shall extend along with the power conductors. The messenger wire, when paralleled with the cable shielding, can serve as the grounding conductor for the circuit if the impedance of the grounding circuit is low enough to limit the voltage drop to 100 volts or less. Normally, the high resistance of steel messenger wire will limit the distance the circuit can be extended. The shielding shall be connected to the messenger wire at each splice (single-conductor cables) and, at each termination. Inspectors must calculate the parallel resistance of the messenger wire and the three shields when determining compliance with the requirement for a maximum voltage drop of 100 volts.

Cables in systems using "other no less effective device approved by the Secretary or his authorized representative" as provided for in Section 75.803 for assuring grounding circuit continuity are exempted from the requirement to have an insulated ground check conductor.

75.805 Couplers

An existing high-voltage coupler that is not equipped with a pin for the ground check circuit may be used if a locking switch is mounted on the coupler so that it cannot be uncoupled until the key is inserted in the lock and the switch is opened. This operation breaks the ground check conductor first. Several

equipment companies are manufacturing conversion kits for installation on existing couplers not provided with ground check pins.

Cable couplers that are mounted on portable substations are considered to be receptacles and should be grounded to the same grounding medium as the substation enclosure. When these portable substations supply power to underground circuits, the grounding conductor and shielding in the cable should be insulated from the coupler housing, and the metallic housings of both the receptacle and the male part of the metallic frame of the portable substation. The grounding conductor shielding shall be connected to the grounded side of the groundings resistor.

75.807 Installation of High-Voltage Transmission Cables

Energized high-voltage cables shall be stored in unused crosscuts or other unused areas away from haulageways or mantrip stations where miners or equipment could contact or damage such cables.

75.808 Disconnecting Devices

A "branch line" means a circuit that is formed by connection to an existing high-voltage circuit for the purpose of feeding branch loads.

Cable couplers are acceptable as a disconnecting device only when used with an acceptable device such as a circuit breaker or oil-filled fused cutouts that are used to deenergize the circuit before the cable coupler is uncoupled.

If a remote switch in the ground check circuit is used to trip a circuit breaker prior to uncoupling the coupler, visible or audible evidence must be provided to indicate that the circuit breaker has opened before the coupler is uncoupled.

75.809 Identification of Circuit Breakers and Disconnecting Switches

The identifying markers for circuit breakers and disconnecting switches shall be large enough and shall be located so that they can be readily seen if the circuits need to be deenergized quickly.

Either metallic or plastic material may be used for the marker to adequately identify the circuit (e.g., No. 2 Belt Drive, No. 3 Rectifier, 1 Rt. 3 North, etc.).

The identifying markers shall leave no doubt as to which circuit or circuits will be deenergized when the switches are pulled.

**Subpart J Underground Low- and Medium-Voltage Alternating Current
Circuits**

**75.900 Low- and Medium-Voltage Circuits Serving
Three-Phase Alternating Current Equipment;
Circuit Breakers**

Each of the four protective features required by this Section must be provided for all underground low- and medium-voltage three-phase a.c. circuits with the exception of trailing cables, which must have short-circuit, undervoltage, and grounded-phase protection. Circuit breakers providing short-circuit protection for trailing cables shall be adjusted so as not to exceed the maximum allowable instantaneous settings specified under Section 75.601-1. Short-circuit and overcurrent protection for circuits shall conform to the National Electrical Code, 1968. Charts listing sizes and proper overload and short-circuit protection for motors and motor circuit conductors can be found in Appendix E of this volume. These tables shall be used to determine compliance with this Section.

"Adequate interrupting capacity" is the ability of a circuit breaker to safely interrupt the maximum amount of current that can flow through its contacts upon occurrence of a short circuit at any point in the circuit without damage to itself.

Low- and medium-voltage three-phase circuits used underground shall be protected against the harmful effects of a grounded phase in any circuit connected to the same transformer secondary. Consequently, if one bank of transformers supplies power to both underground and surface loads, both the surface and underground portions of the circuit(s) shall be provided with grounded-phase protection.

Grounded-phase protective devices for resistance-grounded circuits should be adjusted to operate on as low a value of fault current as practical, preferably not more than 50 percent of the current rating of the neutral grounding resistor.

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

When two phase conductors of a three-phase resistance grounded circuit are used to power single-phase loads, the equipment frames must be grounded to the grounded side of the grounding resistor. The grounding circuit shall be provided with a ground check circuit as required by Section 75.902 and the circuit shall be protected in accordance with the requirements of Section 75.900.

Ungrounded three-phase low- and medium-voltage circuits may be permitted in an underground coal mine to feed stationary equipment only after an investigation has been made by electrical personnel and after that investigation finds that the use of such circuits in a particular mine does not pose a hazard to the miners.

When two phase conductors of an ungrounded surface three-phase circuit are taken underground for use as a control circuit, this circuit exhibits all the hazards inherent in an ungrounded three-phase circuit and shall be judged accordingly. If an operator wishes to install an ungrounded circuit underground, including the control circuit described above, application should be made to the District Manager. The District Manager shall assign electrical inspectors or electrical engineers to an investigation of the application, and, if it is determined that no hazard is created by the installation of the ungrounded circuit, the District Manager shall notify the operator in writing of the acceptability of the circuit and of any restrictions imposed on the operation of the circuit.

Ungrounded circuits feeding portable distribution boxes or power centers that supply power to mobile equipment are not to be accepted.

In all cases where ungrounded circuits are accepted for use underground, the circuit breaker protecting the circuit must be equipped with grounded-phase protection. Ground-indicating lights that do not trip the circuit breaker when a phase-to-ground fault occurs are not acceptable.

75.902 Low- and Medium-Voltage Ground Check Monitor Circuits

The following criteria shall be used for determining compliance of ground check circuits in low- and medium-voltage systems supplying power only to stationary equipment.

1. If a ground check conductor is used, the ground check circuit will trip the circuit breaker when the ground check conductor is broken.
2. The ground check circuit will trip the circuit breaker if the ground wire is broken at any point in the grounding circuit. If low resistance parallel paths for fault current and monitoring current are present, the ground check circuit will be acceptable if it is designed to trip the circuit breaker when the impedance of the grounding circuit increases beyond the amount necessary to cause a 40-volt drop in the grounding circuit external to the grounding resistor under fault conditions.

3. Current flow in the ground check circuit will cause pickup of the ground check relay.

Ground check circuits meeting the above performance criteria are considered to be a no less effective device to assure continuity of the grounding conductor in circuits extending to properly installed stationary equipment only.

The following criteria shall be used for determining compliance of ground check circuits in low- and medium-voltage systems supplying power to self-propelled equipment:

1. If a ground check conductor is used, the ground check circuit will trip the circuit breaker when the ground check conductor is broken.
2. The ground check circuit will trip the circuit breaker if the ground wire is broken at any point in the grounding circuit. If low resistance parallel paths for fault current and monitoring current are present, the ground check circuit will be acceptable if it is designed to open the circuit breaker when the impedance of the grounding circuit increases beyond the amount necessary to cause a 40-volt drop in the grounding circuit external to the grounding resistor under fault conditions.
3. The ground check device shall be of failsafe design. "Failsafe" is interpreted to mean that the failure of any component, other than relay contacts, shall not prevent the ground check circuit from opening the circuit breaker when the conditions described in criteria 1 and 2 occur, unless the ground check circuit is designed to open the circuit breaker when such failure occurs.

Ground check circuits that have been accepted by Technical Support are assigned an MSHA acceptance number. Ground check devices that do not bear an MSHA acceptance number will be temporarily accepted if the first two criteria are satisfied. MSHA will obtain a similar device and will evaluate it for "failsafe" design.

When an arc suppression device is installed in a power center, the ground check circuit should be connected on the machine side of the device. Monitoring through an arc suppression device preloads the device and reduces its effectiveness in suppressing intermachine arcing and may also cause false tripping of the ground check circuit.

Any device inserted in a grounding conductor (including an arc suppression device and a parallel-path suppression device) shall have a short-circuit capacity that is not less than that of the grounding conductor in which it is installed. MSHA Technical Support tests such devices to determine their short-circuit capacity.

When an arc suppression or parallel path suppression device for a circuit is installed in a power center or distribution box and the receptacle for the circuit is not insulated from the metal frame of the power center or the distribution box, the circuit grounding conductor must be insulated through the receptacle and the associated plug. This is necessary to prevent shorting out the arc suppression or parallel path suppression device.

Nevertheless, the metal casings of both the plug and receptacle must be grounded. Normally, the receptacle is grounded by bolting it directly to the metal frame of the power center or distribution box. However, the plug must be grounded to the metal frame of the power center of the distribution box by an external grounding shunt or separate internal grounding conductor in the receptacle and plug. The grounding shunt or grounding conductor shall be sized in accordance with Section 75.701-4. In some cases, receptacles are insulated from the metal frames of power centers to prevent shorting out arc suppression or parallel path suppression devices. In such cases, both the receptacles and the associated plugs shall be grounded to the grounding conductors in the cables. In all cases, the metal casings of both halves of in-line cable couplers shall be grounded to the grounding conductors in the cables.

When wireless ground check circuits are used, an interlock circuit shall be provided for all cable couplers (including in-line cable couplers) to ensure that the power circuit will be deenergized before the power conductors are broken when the coupler is uncoupled. Typically, the pilot pins are connected together in the cable couplers to provide an interlock to trip the circuit breaker.

The wiring methods used on power center receptacles and cable couplers shall not result in the ground check circuits becoming ineffective. The pilot pins of the cable couplers shall not be connected together when one of the two pilot pins is connected to the system ground.

The following may be approved by the District Manager as a no less effective method for ensuring the continuity of grounding circuits of permanently installed stationary equipment.

1. A second grounding conductor sized in accordance with 30 CFR 75.701-4 and visible for its entire length when practicable shall extend from the power source at the grounded side of the grounding resistor to the frame of the stationary equipment.
2. The cable supplying power to the stationary equipment is shielded or steel armored and the shielding or armor is grounded at both ends.

Resistance grounded circuits extending to stationary low- or medium-voltage three-phase equipment located on the surface are not required to be equipped with ground check circuits.

75.902-2 Approved Ground Check Systems Not Employing Pilot Check Wires

This Section requires MSHA approval of all wireless ground check circuits; therefore, only wireless ground check devices bearing an MSHA acceptance number will be acceptable.

75.903 Disconnecting Devices

A connecting plug on the outby end of the trailing cable connected to the power center or distribution box will be accepted as a disconnecting device. Other means, such as switches with visible contacts, may also be acceptable for this purpose. Molded-case circuit breakers are not acceptable as visible disconnecting devices.

Disconnecting devices shall be plainly marked for identification to reduce the chance of energizing a cable while repairs are being made on the cable. While identification could take a variety of forms, one example of compliance with §§ 75.601, 75.903, and 75.904 would be to label the loading machine #1 cable plug, receptacles, and the circuit breaker through which the loading machine #1 is receiving power as "loader #1." Consequently, each of these would be labeled alike and easily identified.

75.904 Identification of Circuit Breakers

The circuit breaker must be marked to identify the circuit or machine receiving power through the circuit breaker. For example:
A circuit breaker through which "loader 1" is powered, is marked as "loader 1."

Either metal or plastic tags or markers may be used to identify circuit breakers if the tags or markers are attached securely to the circuit breaker enclosure and are large enough to be readily seen. The tag or marker should clearly identify the circuit or machine receiving power through the circuit breaker.

Subpart K Trolley Wires and Trolley Feeder Wires

75.1001-1 Devices for Overcurrent Protection; Testing and Calibration Requirements; Records

To provide the short-circuit protection required by this Section, trolley systems must be designed, installed, and maintained to assure, at all times, that a short circuit at any location in the trolley system will be cleared by one or more automatic circuit-interrupting devices.

Automatic circuit breakers and fuses used to protect trolley circuits shall have a voltage rating that equals or exceeds the maximum no-load voltage of the trolley circuit and shall be capable of interrupting the maximum fault current that can flow through the interrupting device. Molded-case circuit breakers are sometimes installed in trolley circuits with no-load voltages ranging from 275 to 350 volts d.c. Since most molded case circuit breakers are rated only 250 volts d.c., it is often necessary to connect two or more poles of the circuit breaker in series to achieve an adequate voltage rating. When two or more poles of a molded case circuit breaker are connected in series, the poles of the circuit breaker should be wired so the bottom of one pole is connected to the top of the next pole to decrease the voltage stress between adjacent poles when the circuit breaker opens under load. It is not acceptable to connect fuses in series to achieve a higher voltage rating.

A "short circuit" is defined as an abnormal connection of relatively low resistance, made accidentally or intentionally, between two points of different potential in a circuit.

The setting of an automatic circuit-interrupting device should not exceed 75 percent of the minimum available short-circuit current in the protected circuit to compensate for inaccuracies in the setting and the voltage drop across arcing faults. This safety factor is consistent with accepted engineering practice; however, in determining whether a violation of this Section exists, the safety factor shall not be used.

When a molded-case circuit breaker in the a.c. input leads of a rectifier bridge is used to provide short-circuit protection for a trolley circuit, the required instantaneous setting of the circuit breaker will be less than the required

setting of d.c. overload relay located in the output leads of the rectifier bridge. In such instances, the instantaneous setting of the circuit breaker shall not exceed 82 percent of the equivalent d.c. overload relay setting.

Reclosing circuit breakers used to protect trolley systems should be equipped with load-measuring circuits. Reclosing circuit breakers used to protect multiple-feed systems should also be equipped with voltage-differential circuits. Load-measuring and voltage-differential circuits are necessary to prevent the circuit breaker from reclosing on a short circuit or abnormally high load. Load-measuring circuits should be adjusted to as low a value of current as practical. In almost all instances, the system will perform satisfactorily with the load-measuring circuits adjusted at or below 300 amperes; however, there may be instances when slightly higher values are required because of pumps, lights, and other continuous loads on the system. Voltage-differential circuits should be adjusted to values equal to or exceeding 85 percent of the system voltage.

The mine operator should establish a program under which all trolley circuits will be tested and calibrated at least once every 6 months. The circuit breaker may be tested by loading the circuit until the current reaches that amount necessary to cause actuation of the circuit breaker or an external current source may be used. Circuit breakers equipped with solid state controls that are actuated by the voltage drop across a shunt may be tested by disconnecting the control circuit leads from the shunt and applying the proper amount of voltage to the shunt leads to cause actuation. Current actuated relays shall be tested by passing the necessary amount of current through them to cause actuation. Relays that have a current calibration coil may be calibrated with an external current calibration source, provided that: (1) each relay is installed, adjusted, maintained, tested and calibrated in accordance with the manufacturer's instructions; and (2) the tolerance of the calibration current source and the specified relay operating tolerance shall not exceed 15 percent.

The record required by this Section shall be kept in a book and should contain the following:

1. Date of test;
2. Name of qualified person making test;
3. Indicated current setting; and

4. Current required to activate the breaker.

75.1002-1 Location of Other Electric Equipment;
 Requirements for Permissibility

The distance shall be measured by following the shortest distance that air can travel (tight string distance) through crosscuts, entries or other openings.

In longwall mining, the 150-foot distance shall be measured in a straight line from the wire, cable or electric equipment in question to the outby edge of the longwall roof-support system.

Except in longwall mining, the 150-foot distance specified in this Section and Section 75.1002 shall be measured from the wire, cable or electric equipment in question to the nearer of either:

1. The outby edge of the pillar being mined; or
2. The inby edge of the solid pillars immediately outby the previously pillared area.

75.1003 Insulation of Trolley Wires, Trolley Feeder Wires
 and Bare Signal Wires; Guarding of Trolley Wires
 and Trolley Feeder Wires

Guarding shall be done with wood, plastic, or other substantial nonconductive material, firmly secured. Guarding shall extend for at least 6 feet from each side of the door or stopping. In advancing sections where the trolley feeder wire is extended beyond the track, or in retreating sections where the track is removed before the trolley or trolley feeder wires, adequate guarding shall be required between the end of such wires and the end of the tracks.

75.1003-1 Other Requirements for Guarding of Trolley Wires
and Trolley Feeder Wires

"Equipment" for the purpose of this Section is interpreted to mean track-mounted equipment, off-track mining equipment, component parts of mining equipment, mine supplies, or any item used in the operation or maintenance of a coal mine.

This Section applies to movement of any item that is used in the production or transportation of coal or in performing any duty necessary for the operation and maintenance of the mine. This Section requires mine management to take adequate precautions prior to movement of equipment to prevent the item being moved from contacting the trolley or trolley feeder wire. If the

inspector has reason to believe that any equipment, including off-track mining equipment, has been allowed to contact the trolley or trolley feeder wires, creating a short circuit, this Section should be cited.

The following precautions are considered adequate for movement of equipment other than off-track mining equipment in track and trolley entries:

1. Maintenance of 12 inches vertical clearance between the equipment being moved and energized trolley or trolley feeder wires; or
2. Deenergization of the trolley and trolley feeder wire while equipment is being moved along track and trolley entries; or
3. Transportation of the equipment in a mine car or other vehicle having two sides with dimensions not greater than the sides of mine cars normally used in the track haulage system. The equipment being transported shall not extend above the sides of the mine car; or
4. Transportation of small items of mine equipment, such as small pumps, component parts of mining equipment, and mine supplies, in a vehicle that normally traverses the intended route, provided no part of the equipment being transported extends higher than that part of the frame of the vehicle that is in front of or to the rear of the item being transported.

If items 1 through 4 cannot be met, adequate protection would require compliance with Sections 75.1003-2(a) through 75.1003-2(f)(5) or other equally effective safeguards designed to insure that such equipment will not contact energized trolley wires or trolley feeder wires.

75.1003-2 Requirements for Movement of Off-Track Mining Equipment in Areas of Active Workings Where Energized Trolley Wires or Trolley Feeder Wires are Present; Premovement Requirements; Certified and Qualified Persons

"Off-track mining equipment" for the purpose of this Section is interpreted to be a major item of complete or reasonably complete mining equipment, built on its own individual frame, consisting of its own components, performing its own unique function, and not designed to operate on mine track. "Off-track mining equipment" includes all self-propelled equipment

including cat-mounted rubber-tired or skid-mounted equipment. "Off-track mining equipment" includes major items of complete or reasonably complete mobile or stationary mining equipment that is used in the production of coal or to supply electrical, hydraulic, or pneumatic power to mining equipment.

At times, cutting heads, drill booms, conveyor booms, electric motors, etc., are removed from machines to facilitate transportation in the restricted confines of coal mine entries. These machines are still considered to be off-track mining equipment within the meaning of this Section. However, the detached cutting heads, drill booms, conveyor booms, electric motors, etc., are component parts of a machine and cannot be considered to be off-track mining equipment. Neither can roof bolts, oil barrels, steel ties, steel rails, belt structure, or other mine supplies be considered as off-track mining equipment.

When the trolley wire and trolley feeder wire are 12 inches horizontally from the equipment being moved, the equipment almost always passes under turnouts where the trolley wire and trolley feeder wire will be directly over the equipment being moved. Therefore, 12 inches horizontal clearance is not acceptable as compliance with this Section.

The measurement of 12 inches vertical clearance shall be determined by measuring vertically from the trolley wire to a perpendicular line intersecting with the highest projection on the equipment being moved.

Subpart L Fire Protection

75.1100-1 Type and Quality of Firefighting Equipment
Waterlines, with hoses attached, shall be of sufficient size to deliver 50 gallons of water per minute at a nozzle pressure of 50 psig. With this water flow and nozzle pressure, an effective solid stream can be projected about 60 feet in a 6-foot high entry. Water flow through the nozzle can be measured by a pitot tube instrument if the diameter of the nozzle orifice is known. For adjustable nozzles, the rate of flow decreases as the water flow pattern changes from a solid stream to a spray or fog. The minimum rate of 50 gpm shall be available at the most distant point in the mine. The type and method of installation of waterlines are options of the operator, provided they meet the requirements of Subpart L.

Portable water cars shall be examined during each regular inspection to ensure that the pump, valves and fittings have not corroded excessively.

A portable chemical car shall contain 125 pounds of all-purpose dry powder for each 500 gallons of water capacity required of a water car. The car shall contain provisions for expelling dry chemical through a hose and attached nozzle. The hose shall be a minimum of 100 feet long and a maximum of 150 feet long. The dry chemical is expelled rapidly; therefore, firefighting operations using a portable chemical car should be conducted by personnel trained in its use.

The portable foam-generating machine or device shall be equipped with all hardware necessary to install the machine or device in a mine passageway. Generally, plastic brattice (or equivalent) material is needed to seal the entry at the installation location. The foaming agent tends to be corrosive to metal parts and, unless the machine or device is carefully cleaned after use, the valves, pump and fittings may become inoperative.

Only foam-producing and multi-purpose dry chemical portable fire extinguishers are acceptable. The older type sodium bicarbonate extinguisher can be converted for use with all-purpose dry chemicals; however, such conversion can be hazardous and voids the approval of Underwriters' Laboratories, Inc., and Factory Mutual Research Corp. Therefore, such converted extinguishers are not acceptable as complying with paragraph (e) of this Section.

Portable fire extinguishers purchased after March 30, 1971, shall have a 2A 10 BC minimum rating. The letters "A," "B," "C" refer to the class of fire for which the dry chemical is effective, and the numerals "2" and "10" refer to the size of the standard fire for which the extinguisher is effective.

Class A fires are those occurring in solids such as coal, wood, rubbish, textiles and rubber. Class B fires are those occurring in flammable and combustible liquids such as fuel oils, lubricating oils, grease, paint, varnish and lacquer. Class C fires are those which involve energized electrical equipment where the electrical nonconductivity of the extinguishing medium is of importance. Where electricity is involved in a fire, the electric circuit should be broken or deenergized as soon as possible.

Fire hose suitable for use in coal mines must meet specific requirements. The lining material shall pass MSHA's test outlined in Schedule 2G to limit the flammability. Generally, the lining will be a synthetic rubber. The jacket shall be polyester or its equivalent. When subject to flame, the polyester jacket will melt and burn somewhat; however, the polyester is more vermin-resistant than other jacket materials. The flammability characteristics of the polyester jacket can be reduced by chemical treatment or by an impregnation of synthetic rubber of the type used for the liner. Such hose is highly recommended but is not necessary to meet the minimum specifications. The bursting pressure of the hose shall be at least four times the static pressure at the hose inlet. The hose coupling should also be designed to withstand the required bursting pressure. Couplings approved for fire hoses by the Underwriters' Laboratories, Inc., or Factory Mutual Research Corp. are recommended. Short shank couplings (of the type ordinarily used on water or air hose) will blow off at pressures ranging from 300 to 600 psig even if fastened with two hose clamps. Short shank couplings are not recommended for fire hoses; however, in a few instances, where the static pressure is less than 120 psig, they might meet the minimum requirements of the regulations, provided the water flow rate of 50 gpm through the nozzle is obtained. Short shank couplings cause excessive pressure loss; therefore, it is important to ensure that the minimum quantity of 50 gpm is met.

Fire hose purchased prior to December 30, 1970, may be used if it meets all requirements except those for flammability. An inspector having reason to doubt the acceptability of a specific fire hose should obtain all available manufacturer's

specifications and refer such information to his supervisor. The supervisor should request clarification from the MSHA Approval and Certification Center, Technical Support. Manufacturers of fire hose accepted by MSHA for flame resistance are required to place the acceptance numbers at intervals not to exceed 3 feet along the length of the fire hose.

Where waterlines are installed on a section, sufficient fire hose shall be provided to reach from the water outlet to each working face for fire-control operations. Water hose, ordinarily provided in a section and connected to machines for dust-suppression purposes shall be considered inadequate as fire hose if the rate of water flow through the hose and nozzle is less than the required 50 gallons per minute.

Average daily production figures shall be obtained from information submitted in accordance with procedures, as required by the respirable dust information reporting system.

Rock dust shall be dry and usable to comply with this section. If containers other than bags are used, a means of transporting the rock dust, such as shovels, pails, etc., to any location on the section shall be provided.

75.1100-2 Quantity and Location of Firefighting Equipment
Paragraph (a)(1) requires that each working section in the coal mine, where the production is 300 tons per shift or more, shall be provided with one of the combinations of firefighting equipment listed below:

	Combination Options and Number Required						
	a	b	c	d	e	f	g
<u>Fire Suppresion Equipment</u>							
Portable fire extinguisher	2	2	2	2	2	2	2
240 pounds of rock dust	1	1	1	1	1	1	1
Waterline with fire hose	1						
Portable water car			1	1			2
Portable chemical car		2			1	1	
Portable foam-generating machine			1		1		
Portable high-pressure rock-dusting machine				1		1	

Paragraph (a)(2) requires that each working section in the mine, where the mine production is less than 300 tons per shift, shall be provided with one of the combinations of firefighting equipment listed below:

	Combination Options and Number Required			
	a	b	c	d
<u>Fire Suppression Equipment</u>				
Portable fire extinguisher	2	2	2	2
240 pounds of rock dust	1	1	1	1
500 gallons of water with three 10-quart pails	1			
Waterline with fire hose		1		
Portable water car (500-gallon) with hose			1	
Portable all-purpose chemical car (125 pounds)				1

If 500 gallons of water and three 10-quart pails are provided, the water supply shall be available for transportation to any location on the section. Where water cars are used as section fire protection equipment, the water cars shall contain no less than the minimum amount of water required at all times. If the water cars provide water for dust abatement, etc., additional cars or water capacity shall be provided to ensure the availability of the minimum amount of required water at all times.

Firefighting equipment provided for working sections in all coal mines shall be stored in an accessible location at or in by the loading point.

The waterline required by paragraph (b) of this Section can be located in an adjacent entry, but outlets with valves must project into the belt entry every 300 feet. Fire hose connected to a waterline and projected into the belt entry will not be considered adequate since the valve must be located in the belt entry. "Entire length of belt conveyors," as used in this Section, includes that portion of underground belt conveyors that extend onto the surface of a mine, unless the surface located drive unit for the belt is 100 feet or more from any intake airway.

Five-hundred feet of fire hose, at strategic locations, shall be provided for each belt conveyor which is independently driven. However, where the length of the belt conveyor is less than 500 feet, only a length of fire hose sufficient to reach the length of such belt conveyor need be provided.

Direction of the air current along the belt, amount of fire hose, height of coal seam, and availability of transportation for men and materials must be considered to determine strategic locations for storing fire hose along belt conveyors. Ideally, the fire hose should be stored on intake air near the belt conveyor drive, but conditions may dictate that another location is suitable, or that a separation of the hose into two or more sections is necessary. Any tools or accessories required to join hose pieces or connect fire hose to the waterline shall be stored with the fire hose and shall be easily accessible. Waterlines are not required to parallel extensible and Lo-Lo conveyor belts serving mining machines if the length of such belt is less than 600 feet and sufficient fire hose is available to extend to the working face. Fire suppression devices and signal and alarm systems are not required to be installed along such conveyor belts. However, the belts considered as face equipment must have fire protection at the belt drive as specified in paragraph (e) of this Section for permanent electrical installations and, if hydraulically operated, must have fire suppression devices as provided in Section 75.1107.

Paragraphs (c)(1) and (c)(2) require that in mines producing 300 tons of coal or more per shift, all track entries in which mechanized equipment is used shall be protected by suitable firefighting equipment. Where waterlines are used, a minimum of 500 feet of fire hose shall be located at a readily accessible location which is plainly marked. Crosscuts, runarounds, sidetracks, etc. may be provided protection with one waterline if the outlet valves are located in a manner which allows 500 feet of fire hose, connected to one of the valves, to reach any such track location. Where two portable water cars are used in lieu of waterlines prescribed in this section, each water car shall operate individually and not be dependent on another water car for pump, hose, nozzle, or water. Where two or more adjacent mines are connected by track, one of the water cars required for each mine may be considered to be a common unit. All water cars shall be located on intake air as near the entrances to the mine as conditions permit and shall be properly filled, equipped, and ready for use at all times.

If rock dust is used as fire protection along such haulage tracks, the rock dust shall be in a dry, usable condition at all times.

One portable fire extinguisher is also required on each battery-powered tractor by paragraph (d).

A permanent electrical installation as addressed by paragraph (e) is electric equipment that is expected to remain in place for a relatively long or indefinite period of time.

Consequently, the following electric equipment should be considered permanently installed:

All rectifiers, transformers, high-voltage switchgear, and battery chargers which are not located on and advanced with the working section, rotary converters, motor-generator sets; belt drives, compressors, pumps (except those excluded below), and other similar units of electric equipment.

The following electric equipment should not be considered permanently installed:

Electric equipment which is located on and advanced with the working section, self-propelled electric equipment, portable pumps and portable rock dusters which are regularly moved from one location in the mine to another, and similar electric equipment.

Paragraph (f) does not apply to synthetic ester types of fire-resistant hydraulic fluids. Storage underground of more oil than is normally delivered to the working sections shall be considered a permanent oil storage station.

When welding, cutting, soldering or other operations using open flame are conducted on a working section, the firefighting equipment provided under paragraph (a) of this Section may be used at the welding, cutting, or soldering site to fulfill the requirement of paragraph (g).

As addressed in paragraph (i), if 5 tons of rock dust is readily available, within 2 miles of each working section, loaded in or on a wheeled vehicle, it does not have to be located with the other emergency materials. All other emergency materials shall be stored together and shall be readily accessible at all times.

When emergency material is stored at a central warehouse or building supply company, the inspector should determine whether the material will be available for shipment to the mine at all times.

75.1100-3 Condition and Examination of Firefighting Equipment

All firefighting equipment shall be maintained in a usable and operative condition. Rock dust shall be dry, water cars shall be kept filled and operative, water containers and pails shall be in usable condition, and chemical extinguishers shall be examined every 6 months. The inspection of chemical extinguishers should determine that:

1. The extinguisher is in its designated place.
2. Access and visibility to the extinguisher are not obstructed.
3. Seals should not be broken. This is an indication that the extinguisher may not be full. Some extinguishers have to be lifted slightly to determine if they are full.
4. The extinguisher has not been physically damaged or have any obvious defects (clogged nozzle, corrosion, leakage, damaged hose, etc.).
5. The examination record on the tag is up-to-date. This section is interpreted to mean that water shall be kept constantly in the waterlines in sufficient amounts to meet the requirements of Section 75.1100-1(a). The phrase "50 gallons of water per minute," as used in Section 75.1100-1(a), does not mean for only 1 minute.

In those instances where there is danger of freezing and bursting the waterlines if water is kept in the lines, the mine operator should consider a pressurized system, or should file a petition for modification under the provisions of Section 101(c) of the Act.

75.1101 Deluge-Type Water Sprays, Foam Generators; Main and Secondary Belt-Conveyor Drives

In requiring fire suppression systems for belt conveyor drives, apply the same rule used in Section 75.603 and in Section 75.1103, which permit the use of belt conveyor drives without a fire suppression system for 24 production shift hours after they have been installed before a citation is issued.

The figures "50 feet" and "150 feet" referred to in Sections 75.1101, 75.1101-5(b)(1) and (2), 75.1101-7(b) and 75.1101-14(a) mean lineal feet of belt entry.

Guidelines for Fire Protection at Surface Located Drive Units for Underground Belt Conveyors:

1. All belt drive units located within 25 feet of any intake airway should be equipped with an automatically actuated fire suppression system as described in this Section.
2. Belt drive units located more than 25 feet but less than 50 feet from any intake airway should be equipped with an automatically actuated fire suppression system, unless fire doors or air lock doors are provided in the belt entry and in all intake entries within 50 feet of the drive unit.
3. Belt drive units located more than 50 feet but less than 100 feet from any intake airway should be equipped with a sensor system which will automatically sound an alarm and stop the conveyor drive motor when a fire occurs on or near such belt drive.

The alarm shall be at a location where it can be heard by a responsible person who is always on duty while men are underground.

If a responsible person is not stationed where he can hear the alarm and/or is not always on duty while the belt is running and miners are underground, a fire door or air lock should be installed in the belt entry and all intake entries within 100 feet of the belt drive. If the conditions are not met, a fire suppression system should be required.

4. Belt drive units located 100 feet or more from any intake airway should be protected with one or two portable fire extinguishers as applicable under Sections 75.1100-2(e)(1) or (e)(2) (electrical installations).

Measurements made to determine the distance between the drive unit and the mine opening should be made between the belt drive roller and the nearest mine opening or intake airway, as applicable. The fire suppression system, fire door/air lock doors, and sensor controlled stop and alarm described in paragraphs 1, 2, 3 and 4 are in addition to

portable fire extinguishers and waterlines equipped with fire hose outlets and valves required by Sections 75.1100-2(b) and 75.1100-2(e).

75.1101-3 Water Requirements

The following additional features are to be considered and, unless deemed not necessary by the District Manager, shall be included in the installation:

1. When activated, the sensor system (or water flow) should stop the belt;
2. Sensors and nozzles should be located at or near the electrical controls, belt takeup and gear reducing units;
3. A manually-operated by-pass valve, located away from the belt drive, should be installed to furnish water to the suppression system in the event the automatically activated valve fails to open;
4. The sensor system required by Section 75.1103 must be provided with a standby power source maintaining an operative system for a minimum of 4 hours, unless the belt haulageway is examined in accordance with Section 75.1103-4(e);
5. When activated, the sensor (or water flow) shall operate an effective alarm signal, preferably both audible and visual. The warning sign must be located at a site where someone is in constant attendance, such as an attended belt loading point, section loading point, dispatcher's office, shop, mine office, lamp house, etc.;
6. The sensor system shall include a warning indicator (or test circuit) which shows it is in operative condition; and
7. The system shall require manual shut-off.

The installation of a water deluge system generally requires two branch lines to provide adequate water on the top of the top belt and to the surfaces between the two belts. A single branch line located at the top belt ordinarily does not offer an equivalent flow pattern. However, the single branch line system can be considered equivalent when the following conditions are met:

1. The entry width does not exceed 16 feet, and the entry height is not less than 6 feet;
2. The static water pressure is not less than 250 psig and the quantity of water delivered with all nozzles operating is not less than 1.0 gallon per square foot of top belt surface area per minute; and
3. The nozzles are mounted above the top conveyor belt near the roof, and reasonable water coverage of the belt surfaces is achieved by splashing action.

The maximum distance between nozzles shall not be more than 8 feet to achieve a reasonable water spray pattern. In general, the nozzles need not be closer than 6 feet apart.

The regulations require that 50 feet of fire-resistant belt and 150 feet of nonfire-resistant belt adjacent to the drive be protected. Depending on ventilation, design, and belt arrangement, this 50 (or 150) feet of protected belt should begin at the discharge roller if the discharge roller and drive roller are not more than 25 (or 75) feet apart. Where the discharge roller and drive rollers are more than 25 (or 75) feet apart, the protected area should include 25 (or 75) feet of adjacent belt in each direction from the drive roller. Where air velocity is a factor, the greater part of the protected area should be downwind from the drive roller.

The type, number, and location of the sensors are critical features of a water deluge system. There are about a dozen basic types of sensors which can be used, i.e., fixed temperature (heat), rate of temperature rise, rate compensation, radiation, ionization, combustion gases, smoke, heat detecting wire, pneumatic tube type, and resistance bridge type.

The location of the sensors should, in general, be in accord with the recommendation of the manufacturer. Sensors responding to heat should be located near the roof, preferably above the belt, drive rollers, powered takeup unit, transmission, and motor. Often, one sensor can be situated strategically to serve two of the possibly hazardous units.

75.1101-5 Installation of Foam Generator Systems

Automatically-operated high-expansion foam devices may be used for fire suppression at belt drives. The capacity of the unit shall be sufficient to cover 50 feet of fire-resistant belt conveyor (150 feet of nonfire-resistant belt) as well as the takeup and gear reducing units and electrical controls with foam in 5

minutes. In calculating the capacity, the volume of foam generated need not fill the entry to the roof but must be capable of filling the entry to the top belt.

Generally, the foam generator should be located on the intake air side of the belt drive and other components to be protected so as to take advantage of the ventilating air in moving the foam and preventing air, contaminated by smoke and hot gases, from entering into the foaming unit. Smoke and hot gases in the intake air to the unit decrease the efficiency of foam generation. The warning device actuated by the sensor or foam generator should be located where a miner is in constant attendance.

The foaming agent used in most foam generators tend to corrode metal parts. Therefore, care should be taken to flush out and clear the unit after operation.

The development of a foam plug in a passageway will affect the ventilation pattern. If the belt is in a neutral airway, smoke will be trapped in the entry decreasing visibility and travel.

75.1101-8 Water Sprinkler Systems; Arrangement of
 Sprinklers

The installation of a water sprinkler system for fire suppression at belt drives generally requires two branch lines so that an effective water discharge pattern can be produced. A single branch line located at the top belt ordinarily does not offer an equivalent flow pattern. However, the following single branch line system can be considered equivalent when the following conditions are met:

1. The entry width does not exceed 16 feet, and the entry height is not less than 6 feet.
2. The static water pressure is not less than 250 psig, and the quantity of water delivered with all nozzles operating is not less than 1.0 gallon per minute per square foot of top belt surface area.
3. The nozzles are mounted above the top conveyor belt near the roof, and reasonable water coverage of the belt surfaces is achieved by splashing action.

The maximum distance between sprinklers shall not be more than 8 feet to achieve a reasonable water spray pattern. In general, the sprinklers need not be closer than 6 feet apart. If sprinklers are too close together, the cooling action of the water from one sprinkler may affect the operation of another.

It is important that sprinklers be located so as to be actuated by the heat from a potential fire. The sprinklers shall operate in the temperature range 150°F to 300°F. Under some circumstances, sprinklers operating below 212°F may be actuated by steam.

If a large number of sprinklers are actuated by steam, the quantity of water flowing through these may decrease the quantity of water through those sprinklers in the fire area.

Sprinklers cannot be tested directly for the yearly functional examination without destroying their usefulness. In order to test a sprinkler system, the end sprinkler should be removed to ensure adequate water flow. The sprinklers should be free of dirt, and all damaged sprinklers should be replaced.

Sprinkler system lines are normally filled with water. Where freezing temperatures exist, the pipes may freeze and burst, or ice may form and plug the lines. Alternative systems developed for this situation are:

1. Regular dry pipe system.
2. Preaction system.
3. Deluge system.
4. Combined dry-pipe and preaction system.

These alternative methods are acceptable provided they offer equivalent protection and are installed in accordance with the provisions of the Fire Protection Handbook published by the National Fire Protection Association.

75.1101-13 Dry Powder Chemical Systems; General

Suppression at belt drives by all-purpose dry powder was included to serve primarily where freezing temperatures exist. The dry powder system operates for a short period of time (1 minute) whereas the deluge or sprinkler systems operate for 10 minutes or longer. Therefore, the dry powder system must be carefully designed to be effective. The discharge pattern from the nozzles is critical, and, normally, the locations of the nozzles shall be designed by an expert. Damaged or misaligned nozzles should be replaced promptly. The dry powder system consists of an open pipeline system. In order to prevent moisture and dust from entering pipes, the nozzles should be loosely covered. This can be achieved by tape covering, by water-proof grease or equivalent means. Caps that are tightly fastened should be checked to ensure they will blow off readily; screw caps are unacceptable. If

grease or similar materials are used, the orifices should be checked to insure the material has not hardened.

When the dry powder system operates, the mine passageway becomes filled with a dense cloud (ammonium phosphate). This material is nontoxic, but may impair breathing and vision. For this reason, guardrails or equivalent devices must be provided for the safety of miners in the immediate vicinity.

After operation of the system, the pipelines must be cleaned of dust and dried. If dust remains in the pipe, it may absorb moisture and cake. The all-purpose powder is slightly corrosive to metal parts especially when wetted. Thus, metal equipment and components of the fire suppression system should be cleaned.

The yearly test of the suppression system can be made by checking the powder storage compartment, the gas expelling unit, and by blowing the dry air (preferably bottled nitrogen) through the piping. It is important to ensure that the dry powder is not exposed to the humid atmosphere. If so, it will absorb moisture and cake. It is recommended that all dry powder be discharged through the system every 2 years.

75.1103-2 Automatic Fire Sensors; Approved Components;
 Installation Requirements

Fire sensors used in belt passageways shall be listed or approved by Underwriters' Laboratories (UL) or Factory Mutual (FM). New or unique devices to be used as fire sensors that are not yet listed by UL or FM and which may meet the requirements of these regulations shall be submitted to the Technical Support Group, MSHA, through the Chief, Division of Safety, Coal Mine Safety and Health, 1100 Wilson Boulevard, Arlington, Virginia 22209-3939, for a determination of acceptability and recommendation.

75.1103-3 Automatic Fire Sensor and Warning Device
 Systems; Minimum Requirements; General

The district manager can approve a sensor and alarm system even though the components are not listed or approved by a recognized testing laboratory. Some components, such as electronic items and new or unique devices, are not listed or approved by these agencies. However, such approval should be done judiciously, requiring detailed description and possible future compliance, if applicable, with Factory Mutual Research Corporation (FM) or Underwriters' Laboratories, Inc. (UL), standards. It is not mandatory that all components of the fire-warning device systems be listed or approved by UL or FM. However, MSHA will require that all components be adequate with regard to "type and quality."

For some components, this may mean the listing of approval by UL or FM.

All automatic fire warning systems must meet the requirements of 30 CFR 75.1103-4 through 75.1103-7, including when more than one type of system is installed in a belt entry. For example, if a CO monitoring system is installed in conjunction with a point-type heat sensor system, both systems must meet the installation and maintenance requirements of 30 CFR 75.1103-4 through 77.1103-7 and be fully operative at all times. This policy will not require the secondary system to be a complete system.

Application of this policy must take into consideration the installation and debugging phase that sometimes occurs when new types of fire warning systems are installed. Operators should be afforded a reasonable time for a redundant or replacement system to be installed and tested. Proper application of this policy is facilitated by the operator informing MSHA of plans to install a new system.

75.1103-4 Automatic Fire Sensor and Warning Device
 Systems; Installation; Minimum Requirements

Recognizing that a rise in temperature may activate either fire detection system installed on separate flights at the flight connection point, systems which activate either fire detection system upon a rise in temperature within 125 feet of the connection point can be considered equivalent to a system which provides identification of fire within each belt flight if the district manager determines that the miners are provided equivalent protection. If it has been determined that the system has failed to provide identification of a fire within a belt flight, any citations issued should be cited as a violation of this Section.

Where practicable, point-type sensors responding to temperature rise should be installed at or near the center of the belt and not more than 12 or less than 6 inches from the roof, except where installation of sensors in extremely high areas would pose a hazard through the use of ladders or scaffolding, or local irregularities prevent such installation.

Heat detecting Twisto Wire and Protecto Wire are acceptable as sensors, provided they are properly installed with two twists per linear foot. Proper tension is required on the Twisto Wire, and if Protecto Wire is used, it must be in minimum lengths of 12 inches and properly secured by soldering or other substantial means. However, acceptability does not apply to a

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system unless the entire system is in compliance with these regulations.

Any fire sensor and warning device system installed in a return airway must be approved as permissible by the Approval and Certification Center under Part 23. An approval under Part 23 requires that only components specified in the approval may be used with the system unless authorization for the use of different components has been obtained from the Approval and Certification Center by the mine operator. The unauthorized substitution of components different from those which were specified in the approval of a permissible fire sensor and warning device system used on a belt conveyor in a return airway shall be cited as a violation of Section 75.1103-7(b).

Some coal mines have intermixed heat sensors and heat sensor cables with reverse conductor color codes in the same polarized fire sensor and warning device system. Therefore, heat sensors which are polarized so that the white conductor must be positive have been installed in heat sensor cables which are polarized so the black conductor must be positive. Likewise, heat sensor cables which are polarized so that the white conductor must be positive have been connected to heat sensor cables which are polarized so that the black conductor must be positive.

If the colors are matched when splicing heat sensors and heat sensor cables with one conductor color code into heat sensor cables of the opposite conductor color code in accordance with customary electrical practice (black to black, white to white), the system will malfunction and no audible or visual signal will appear at the control station when an improperly polarized heat sensor(s) is activated. Although it is possible to correctly intermix heat sensors and heat sensor cables of opposite conductor color codes in polarized fire sensor and warning device systems, the potential confusion created by the differences in conductor color codes could create a safety hazard. Even if assurances are given that initial installation will be done in accordance with instructions to splice black to white conductors, there can be no satisfactory assurance that later maintenance will always be performed correctly because the method is contrary to common practice. Therefore, the use of heat sensors and heat sensor cables with opposite conductor color codes within the same polarized fire sensor and warning device system is not acceptable under Section 75.1103-2. Enforcement personnel should recognize that it is not important which conductor color code is used in a polarized fire sensor and warning device system as long as the conductor color code

and polarity of all heat sensors and heat sensor cables within the system are the same and the polarity of the heat sensors cable is compatible with the control unit and other components of the system.

The assistance of a coal mine inspector (electrical) or electrical engineer should be requested, when necessary, to determine if a mine operator has installed heat sensors or heat sensor cables with opposite conductor color codes within a polarized fire sensor and warning device system.

Other sensors addressed in paragraph (a)(2) that respond to effects of fire other than heat may be acceptable subject to individual determination. The Technical Support Group, in Bruceton, Pennsylvania, will provide assistance where needed in making this determination.

"Unplanned removal of power" and "preplanned removal of power" referred to in paragraphs (a)(3) and (e) do not include those times when it is necessary to remove the power to make minor repairs or adjustments. An examination is not required for that period of time normally required for shift change, provided the time required for shift change does not exceed 2 hours.

Where the operator chooses to make the examinations referred to in lieu of an automatic fire sensor and warning device system that will provide the 4-hour protection, the examination referred to would be required if the power supply to the sensor and alarm is removed, or the power is removed from the belt for more than 30 minutes during a production shift, or the belt is stopped prior to the beginning of an idle shift or an idle period such as weekends or holidays.

A battery must be disconnected automatically from the sensor system in the event the power is cut off as required by Section 75.321, unless the sensor system is intrinsically safe.

75.1103-5 Automatic Fire Warning Devices; Manual Resetting
"Effective warning signal" as used in paragraph (a) of this Section means "a signal indicating an emergency and requiring immediate action." Both audible and visual signals shall be provided as required by Section 75.1103-1.

The audible signal shall be capable of being heard from any point within the full range of the assigned duty locations of the person referred to in paragraphs (a)(1) and (a)(2), and the signal shall be audible above the normal sounds of the mining operation. This Section should be used to cite a failure of the system, when

activated, when it does not provide an effective warning signal at either the work locations where miners may be endangered from a fire at the belt flight or at a manned location where personnel have communication with all miners who may be endangered.

The visual signal shall be capable of attracting the attention of persons referred to in paragraphs (a)(1) and (a)(2) under normal mine lighting conditions.

Both signals need not be located in the same place. In some instances, the signals may be acceptably located a considerable distance apart, provided such signals can be seen or heard by responsible persons.

An alarm signal at the section telephone equivalent to that of a loud speaking telephone or "Page" system will be accepted for compliance with paragraph (a).

Sensors responding to effects of fire other than heat may be acceptable subject to individual determination. The Technical Support Group, Bruceton, Pennsylvania, will provide assistance where needed in making this determination.

Means for "Rapid Evaluation" as addressed in paragraph (b) is any method that will effectively demonstrate that the sensor and warning device systems are operative and capable of performing in the event of a fire. This will be determined on a system-by-system basis by the district manager.

MSHA will accept a system in which the trouble signal is or is not distinctive from the alarm signal. However, in this later instance, both the trouble and alarm signal will indicate a "fire" situation. The mine operator will then be required to respond to the signal prepared to control a fire. That is to say, that the communication lines need not be electrically monitored for short circuits, ground faults, and open circuits.

If communication lines are incorporated into a fire-warning system, MSHA will accept the use of communication systems without electrical supervision.

75.1103-6 Automatic Fire Sensors; Actuation of Fire-Suppression Systems

The fire sensor and suppression devices required at belt drives under Section 75.1101 may be separate and apart from the sensor and alarm system required under Section 75.1103, except that the sensor and alarm system required under Section 75.1103 shall transverse and include the belt drive area. If the systems

required under Sections 75.1101 and 75.1103 are combined and are interconnected, then the more stringent requirements of Section 75.1103-7(b) shall apply. For example, if the sensor and alarm system under Section 75.1103 is intrinsically safe, then interconnected fire-suppression devices under Section 75.1101 shall also be intrinsically safe.

75.1103-7 Electric Components; Permissibility Requirements

In order for the sensor and alarm system to remain functional as required by Section 75.1103-4(e), the source of power can be the line side of the circuit breaker or other protective device normally used to stop the belt. When battery-powered systems are used to comply with this section, a relay may be used to disconnect the battery power supply. A manually-operated on/off switch actuated by a miner as he leaves the section is not acceptable.

75.1103-9 Minimum Requirements; Fire Suppression Materials and Location; Maintenance of Entries and Crosscuts; Access Doors; Communications; Fire Crews; High-expansion Foam Devices

One supply of materials required by paragraph (a) of this Section will suffice for two belt drives, provided the supply is located within 300 feet of each drive unit and the ventilating current in both belt drive entries travels in a direction opposite that of the normal movement of the belts.

"Five hundred feet of fire hose" required by paragraph (a)(1) of this Section may be satisfied by the same fire hose required by Section 75.1100-2(b) or (c) if such hose is within 300 feet of the belt drive or tailpiece, as applicable.

The fire suppression required by paragraphs (a)(2) and (d) of this Section may be an extension of the system required by Section 75.1101 or a separate system installed at the belt "discharge head." In either case, the fire suppression system need cover only the belt discharge head in addition to that area now protected by the requirements of Section 75.1101.

"A crew consisting of at least five members" as used in paragraph (e) of this Section means any five men within the mine during the same working shift.

75.1103-11 Test of Fire Hydrants and Fire Hose; Record of Tests

Fire hose shall be tested annually to ensure that the hose and couplings are serviceable. The test shall include unreeling and reloading all of the fire hose at each depot and flowing water through hose with a nozzle attached. The nozzle, if adjustable,

shall be opened and closed quickly to introduce shock to the system. When the fire hose is made up of sections, at least one section shall be so tested each year, and a record kept of the date, the pressure used, and the fire hose section tested. A different section of hose shall be tested each year. However, if the fire hose consists of more than five sections, then all of the sections shall be tested at least once during the 5-year period. In addition, if any water leakage occurs during a test, then all of the hose at the depot shall be tested, and all leaking hose and/or couplings replaced immediately. It shall not be necessary to dry the hose following a test. The outer surface of the hose shall be kept reasonably clean. In no instance shall a fire hose be tested with compressed air.

75.1104 Underground Storage, Lubricating Oil and Grease

Portable, closed metal containers are considered to be of fireproof construction for temporary storage of lubricating oil and grease in face regions and other underground working places. Small vessels should be of the "safety can" type approved by the National Fire Protection Association. However, small metal containers, such as 5-gallon metal containers with plastic pouring spouts or lids are acceptable. No additional storage container is required for grease gun cartridges stored in face regions and other underground working places, provided they are kept in their shipping containers.

Underground storage places for lubricating oil and grease shall be of fire-proof construction in that all sides, roof, and floor must be composed of incombustible material. Concrete, concrete block, cinder block, or plastered wire-mesh fastened on substantial framework (or equivalent) are acceptable. The framework should be metal; however, flame-retardant wood, bearing the Underwriter's Laboratories, Inc., seal may be used also. The floor should preferably be concrete to facilitate removal of spillage. Loose floor material such as sand, cinders, or limestone dust will absorb spilled oil and grease and become flammable.

The storage of emulsion-type fire-resistant hydraulic oils needs special consideration. The water in some emulsion-type oils may evaporate from spilled pools leaving the residue which is highly flammable. Where spillage in storage areas is a factor, the emulsion-type hydraulic oils should be considered as flammable.

Synthetic-ester and similar fire-resistant hydraulic oils remain fire retardant after spillage.

75.1106 Welding, Cutting, or Soldering with Arc or Flame
Underground

This standard requires, among other precautions, that work be done under the supervision of a qualified person and that testing for methane be conducted immediately before and continuously during cutting, welding, and soldering operations. The tests for methane must be made in locations where methane is likely to exist, and in no case is cutting, welding, or soldering permitted in an atmosphere that contains 1.0 percent or more methane.

A person will be considered qualified for testing for methane and for oxygen deficiency if: 1) the person has been qualified for this purpose in the State in which the mine is located, or 2) the person has been qualified for this purpose by the Secretary. Notwithstanding the provisions of 1) and 2), no person shall be a qualified person for testing for methane unless the person demonstrates to the satisfaction of an authorized representative of the Secretary that he or she is qualified to test for methane with a portable methane detector approved by MSHA.

"Continuously" as used in this section is interpreted to mean that a qualified person is to remain at the worksite, and tests for methane must be made at regular and frequent intervals. In mines where welding, cutting, or soldering with a flame is performed, the inspector should observe at least one such operation to determine if the frequency of such tests is sufficient to ensure a systematic and effective means of monitoring the methane content in the air in the vicinity of the worksite.

Methane tests are critical for safe cutting, welding or soldering in an underground coal mine and are somewhat different from methane tests used for general mine ventilation. While § 75.323(a) specifies that tests for methane concentrations must be made at least 12 inches from the roof, face, ribs and floor, this distance requirement is not applicable to welding, cutting or soldering activities performed under § 75.1106. MSHA's policy on § 75.1106 clearly states that methane tests conducted under this section must be made in locations where methane is likely to exist, and in no case is cutting, welding or soldering permitted in an atmosphere that contains 1.0 percent or more of methane. Since the face, roof, ribs, floors and any fully or partially enclosed areas of an underground coal mine are locations where methane is likely to exist, methane tests must also be made at or near the surface of these areas (not 12 inches away) and within any fully or partially enclosed areas that may be exposed to the aforementioned ignition sources. Welding, cutting or soldering activities are prohibited if any methane levels are 1.0 percent or

greater within the affected areas. MSHA recommends the use of probes for methane detectors to take some of these measurements.

In a longwall mining system, adequate testing, cleaning, and rock dusting will generally require raising the chain conveyor and securing it above the mine floor before cutting, welding, or soldering operations begin. In this way, the space beneath the conveyor line can be ventilated and tested for methane, accumulated combustibles can be removed, and the area can be thoroughly rock dusted. Where raising the conveyor line is not practicable, other measures may be necessary to minimize the danger of ignitions.

During and after the cutting, welding, or soldering, this section also specifies that a diligent search be made for fire. This is a particularly important precaution because longwall chain conveyor line components or covers on other types of equipment may obscure a small fire.

75.1106-2 Transportation of Liquefied and Nonliquefied
Compressed Gas Cylinders; Requirements

This section does not prohibit the transportation on mantrips of Dewars used with supplied-air breathing devices or oxygen bottles for self-contained breathing apparatuses or for first-aid treatment. In addition, the transportation of any compressed oxygen cylinders associated with approved self-contained self-rescuers are not controlled by this standard because they are personal protective devices rather than mining equipment.

75.1106-3 Storage of Liquefied and Nonliquefied
Compressed Gas Cylinders; Requirements

Paragraph (b) of this section does not require that the cylinders be constantly attended while repair work is in progress and cutting or welding is done intermittently. However, the cylinders must be removed from the area in by the last open crosscut when the repair work is completed or when the repair work is interrupted for periods of time in excess of 15 minutes.

The term "when not in use" as used in paragraph (c) is not intended to be applied to intervals between intermittent cuts or welds at a given location while work is in progress and the cylinders are attended.

75.1107-1 Fire-Resistant Hydraulic Fluids and Fire-
Suppression Devices on Underground Equipment

"Unattended enclosed motors, controls, etc.," as used in paragraph (a)(3) means a reasonable enclosure to afford protection against personal contact with energized parts and against internal deposition of dust. It does not mean "explosion proof." The electrical insulation of components within the "unattended enclosed" equipment is not considered combustible material. A determination should be made in respect to this section because equipment mounted on combustible material, such as untreated wood, coal, or coal dust, would be considered combustible. Equipment mounted on a metal carriage (skid) on the bottom or a top shield, as applicable, will be acceptable as "equivalent" as used in paragraph (a)(3)(iii) provided: a 4-inch air space exists between the unit and the carriage or top shield; the carriage or top shield is substantially constructed of metal at least 1/8-inch thick; and the carriage or top shield covers the entire underside or top surface of the unit, as applicable, and extends at least 2 feet beyond the unit on all four sides.

"Unattended enclosed" equipment referred to in paragraph a) (3) mounted on fire clay or a similar noncombustible mine floor will be acceptable as "equivalent," provided the floor is free of coal, coal dust, or other combustibles.

Small rubber-tired wheels (rim diameter 6 to 8 inches) on mobile transformers do not constitute combustible material within the meaning of paragraph (a) (3) (iii) and need not be removed from unattended electrical power equipment. This interpretation should not be construed to permit the presence or use of other combustible materials at the device, such as a wooden platform base, and shall be restricted to situations and equipment involving only small rubber-tired wheels.

In some instances a determination must be made in regard to similar noncombustible electrically-powered equipment. Careful consideration should be given to the equipment as to its similarity to enclosed motors, controls, transformers, and rectifiers in regard to its being located in a fireproof area or structure.

"Flammable fluid," as used in this section, means any liquid having a flash point below 140°F. This does not include lubricating oil and grease. Electrical cables are required to conform to Schedule 2G only if the equipment is installed in accordance with paragraph (a) (3) (iii) which requires the cables to meet Schedule 2G or that the cables be enclosed in metal conduit.

The intent of this section is that timber supports or other timber appurtenances should be considered as combustible material. Enforcement of this regulation may cause difficulty for some installations. Removal of or substitution of metal supports for the timber may not always be practical. Alternative equivalent fire protection in these instances could be provided by using asbestos boards or metal plates, considering the merits of each existing installation individually.

The "controls" in paragraph (a) (3) are intended to mean large power controls on a working section or other power distribution center. It is difficult to identify all such controls by an ampere rating, and some judgment must be used by the inspector. Questions may arise as to whether an "on-off" switch for an enclosed motor should be included as a "control" and whether such control could be mounted on a wooden post. Such practice can be tolerated if the switch is fully enclosed in a metal box

comparable with paragraph (a)(3)(iii), which requires cables to meet Schedule 2G or be enclosed in metal conduit.

Brake fluid used in manually-operated automotive-type braking systems is not considered to be hydraulic fluid within the meaning of paragraph (b) of this section.

It is important that equipment, to be considered attended, be in line of sight of a miner at least once during a 30-minute period. If the normal duties of a miner require that the miner face in one direction opposite to a machine, for example at a belt discharge point, it can be assumed that the miner will turn his head to the machine behind him often enough to comply with the 30-minute requirement of paragraph (c). However, if a machine is closer to a miner than 500 feet but is around a corner, it would be classed unattended unless the normal duties of the miner require him to pass by the obstructing corner during every 30-minute interval, and he or she has reason to look around the corner when passing.

Paragraph (d) of this Section requires that machines normally used at the face be inspected (for fire), and the input powerline deenergized when the miner leaves the area for more than 30 minutes. Deenergization means disconnecting the power cable, or equivalent, at the power center.

75.1107-3 Fire-Suppression Devices; Approved Components;
 Installation Requirements

The purpose of this section is to ensure that the components of the fire-suppression device are of the type approved by Underwriters' Laboratories, Inc., or Factory Mutual Research Corporation ("UL" or the initials "FM" in a diamond-shaped box will be on the components or device). Generally, Underwriters' Laboratory, Inc., approves the entire system, whereas Factory Mutual Research Corporation approves components. Some hardware components on a fire-suppression device, such as nuts, bolts, clamps, brackets, and the like, need not bear UL or FM approval, but sound engineering judgment should be exercised in overall approval of such a device. Components of a type not listed as approved, or not installed in accordance with the recommendations of a nationally recognized testing laboratory (UL or FM), may be accepted if such components are of a type and installed in a manner approved by the Secretary, as determined by the district manager. However, components of fire-suppression devices on attended and unattended equipment shall be listed or approved by UL or FM where these companies have listed or approved the type of components used in a system.

The Approval and Certification Center has conducted tests on American Biltrite Rubber Company's Cover Compound No. 22107, accepted it for listing, and authorized the marking "USBM-2G-13C."

Hoses manufactured during 1970, 1971, and 1972 with Biltrite Compound 22107 will be recognized and accepted as complying with paragraph (c) of this Section even though they are not marked 2G-13C.

The examples of the code letter identifications of Stratoflex 212 and 215 hoses are:

Stratoflex 212-8 H-4-V
Stratoflex 215-8 H-4-V

The numbers "212" and "215" identify the type hose, "-8" is the specific size (other members may appear in this location), "H-" indicates the hose was manufactured at Hohenwald, Tennessee, and "V" indicates the year of manufacture as 1970. "W" and "X" indicate 1971 and 1972, respectively.

"Where appropriate," as used in paragraph (d) of this Section, calls attention to the fact that most manufacturers' specifications refer to surface installations and, on occasion, these specifications may not be appropriate for underground installations. This determination will have to be made on a mine-by-mine basis by the district manager.

75.1107-4 Automatic Fire Sensors and Manual Actuators;
 Installation; Minimum Requirements

The "50 square feet of top surface area," referred to in this Section means the 50 square feet of top surface area and does not include the side surfaces of the machine or its components.

Heat detecting Protector Wire is acceptable as a sensor in minimum lengths of 12 inches, provided the wire is properly secured by soldering or other substantial means.

To be effective, all heat detecting sensors, including sprinklers, must be kept free of oil, grease, rock dust, and other materials that may have an insulating effect.

Paragraph (a)(2) of this Section requires that at least two manual actuators should be installed on all continuous-mining machines and machines with dual controls purchased prior to the effective date of this Section. Some of the smaller pieces of equipment may be equipped with one actuator.

Paragraph (a)(2)(i) of this Section requires that manual actuators on remote-controlled equipment shall be within easy reach of the operator's normal operating position and should be both insulated and clearly identified.

Remotely controlled continuous mining machines can be advanced beyond permanently supported roof while the operator remains in a location under permanent supports. When continuous mining machines are advanced inby permanently supported roof, fire suppression systems cannot be safely actuated as required by 30 CFR 75.1107-4(a)(2)(ii) unless special precautions are taken. Currently, there are two acceptable methods for actuating the fire suppression system on remotely controlled mining equipment:

1. the system can be manually actuated if, at all times, the actuator is located where the roof is permanently supported; or
2. the system can be actuated remotely from a permanently supported location, and the actuation device can be operated by its own power source, independent of the electrical power provided by the trailing cable, as required by 30 CFR 75.1107-4(c).

Mine operators presently employing extended-cut mining systems with continuous miners that are not equipped with fire suppression systems that can be actuated at all times from a location under permanently supported roof are in violation of 30 CFR 75.1107-4(a)(2)(ii). Fire suppression systems that have electrically powered actuation devices that are not powered independent of the trailing cable for the machine are in violation of 30 CFR 75.1107-4(c).

A point-type sensor is a bi-metal strip contactor, thermo-couple, or similar device. If other sensors (plastic-covered wire, radiation, gas, smoke) are used, equivalent protection shall be provided. Manual application at a sprinkler system should consist of a water hose nozzle arrangement or equivalent in the immediate vicinity. This type back-up system is also desirable for other suppression devices.

Two or more manual controls shall be installed where practical. "Where practical" has reference to the size of the machine protected and possible avenues of approach. One control, for example, may suffice on a small roof drilling machine. Normally, the two controls should be on opposite ends or at least one of them in a position away from the operator's cab. The purpose of the two controls is to offer an alternate, should fire, heat or smoke engulf one set of controls.

Sensors as addressed in paragraph (b) shall, where practicable, be installed above the area of the equipment that is likely to produce the most heat in the event of a fire.

Paragraph (c) requires that where the fire-suppression system is dependent on the mine power supply, the power supply to the fire-suppression system must originate on the line side of the overload protection of the equipment being protected.

The purpose of paragraph (e) of this Section is to provide a rapid means of determining that the system is operative. Any effective method will be acceptable.

75.1107-5 Electrical Components of Fire-Suppression
 Devices; Permissibility Requirements

This Section and Section 75.1107-6 are general requirements for fire-suppression devices which permit the inspector to require proper devices for unusual conditions to insure that adequate fire controls will be achieved.

75.1107-6 Capacity of Fire-Suppression Devices; Location
 and Direction of Nozzles

"Enclosed to minimize runoff and overshoot of the extinguishing agent," as used in paragraph (b) of this Section, does not prohibit necessary openings in cable-reel compartments to facilitate cleanliness of equipment, provided the discharge nozzle is not directed toward the openings.

Where practicable, and within the intent of these regulations, extinguishant nozzles shall not be located where accidental discharge of the system will endanger the operator of such equipment.

75.1107-7 Water Spray Devices; Capacity; Water Supply;
Minimum Requirements

"Inundating" means covering the whole top of the machine either by direct or indirect water spray. "Internal injection" means directing the extinguishing agent into the compartment of the machine.

Past experience has shown that approximately 40 percent of the fires on machines have had a cable to ignite in the cable reel compartment. Some of these fires may have been caused by poor splices and the excessive heat liberated in the coiled cable. Whether fire control with water is achieved by inundating or internal injection, the indicated amount of water shall be directed into the cable reel compartment.

The requirements of paragraph (f) state that the quantity of liquid stored on the machine can be reduced appreciably if certain approved liquid chemicals are added to the water. Tests show that a potassium bicarbonate solution is three to four times more effective than plain water. However, potassium bicarbonate solution is corrosive to unalloyed steel. Other chemicals that are noncorrosive or contain inhibitors are as effective for fire control.

The use of liquid chemical is not mandatory, but the industry should be encouraged to use such additives in water.

75.1107-8 Fire-Suppression Devices; Extinguishant Supply
Systems

The purpose of the rising stem, or other visual indicator-type shutoff valve addressed in paragraph (a)(4), is to provide a visual means for assuring that the control valve is in the open position while the machine is operating.

"Reasonable time for changing hose," as used in paragraph (b) means without unnecessary delay.

75.1107-9 Dry Chemical Devices; Capacity; Minimum
Requirements

In paragraph (b) and (c) of this Section and subsequent regulations, the word "nominal" is used to express the approximate weight in pounds of all-purpose dry chemical.

75.1107-11 Extinguishing Agents; Requirements on Mining
Equipment Employed in Low Coal

This Section provides for lesser quantities of extinguishants on equipment with space limitations. However, there may be

instances where the equipment is less than 32 inches high and may not have space limitations. In those instances the full complement of extinguishant shall be installed.

75.1107-12 Inerting of Mine Atmosphere Prohibited

The term "total flooding" does not mean total flooding with water, but control of the potentially hazardous area by inerting the whole atmosphere, i.e., carbon dioxide. This method of fire control is not recommended in mines because of the limited means of escape for miners who might be trapped in the enclosed space.

75.1107-13 Approval of Other Fire-Suppression Devices

Where installation of fire-suppression devices on permissible mine machinery requires alteration of components, a field change approval will be required.

75.1107-15 Fire-Suppression Devices; Hazards; Training of Miners

This Section requires the operator to instruct the miners in safe operating procedures of fire-suppression devices on the equipment that the miners have been assigned to operate.

The inspector shall take appropriate action in each instance where the operator fails to instruct the equipment operator.

75.1107-16 Inspection of Fire-Suppression Devices

"Qualified," as used in paragraph (a) of this Section, does not mean formal training. A person qualified by reason of on-the-job experience and instruction may be designated by the mine operator to inspect the fire-suppression devices.

75.1108 Flame-Resistant Conveyor Belts

Conveyor belts which have been approved as flame-resistant by the Bureau of Mines, MESA, or MSHA are marked every 30 feet on alternate edges of the coal carrying side of the belt, with the following: Flame Resistant MESA, U.S.B.M., or MSHA No.

Subpart M **Maps**75.1200 Mine Map

The original maps and tracings of a mine, those from which true copies are made, shall be kept in a fireproof repository to ensure the protection of such maps and tracings from damage or destruction by fire, water, or other such hazards.

Such repository shall be located on the surface of the mine in an area chosen by the operator. Such repository may be located on the surface at a central mine office or in the office of an individual, partnership, corporation, or other such firm contracting the engineering work for a mine, if the following conditions are met: A true copy of the mine map shall be maintained on the surface of the mine in a fireproof building or a fireproof container which meets the approval of the Coal Mine Safety and Health district manager of the district in which the mine is located, and such copy shall be certified by a registered engineer or registered surveyor in the state in which the mine is located.

75.1202 Temporary Notations, Revisions, and Supplements

The mine maps shall be kept up-to-date by temporary notations. However, such notations may be made on a true copy of the mine map. Such a true copy may be considered in compliance with the provision requiring that the mine map be kept up-to-date by temporary notations.

75.1203 Availability of Mine Map

The operator shall furnish to the Coal Mine Safety and Health district manager of the District in which the mine is located two copies of the mine map and any revision and supplement thereof on or before the first day of March of each year unless otherwise specified by the district manager. Such copies shall show all the required information, as posted on the mine map on or after the first day of January of each year.

75.1204 Mine Closure; Filing of Map With Secretary

If the mine is to be permanently abandoned, the operator shall notify the District Manager promptly after ventilation is discontinued and shall submit a complete map of the mine within 60 days of abandonment.

If the mine is to be temporarily closed, the operator shall notify the District Manager promptly after ventilation is discontinued and submit a completion map no later than the expiration of the 90-day period during which the mine was not ventilated.

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Subpart N Blasting and Explosives

There is a formal agreement between MSHA and the BATF relative to compliance inspections of surface explosives storage facilities. These inspections will determine compliance with both MSHA surface standards and requirements in 27 CFR Part 55. Procedures covered by this agreement can be found in the General Inspection Handbook.

75.1310 Explosives and Blasting Equipment

Permissible cap lamp batteries approved as shot-firing units are approved to fire single shots only.

Single-Shot Blasting Units approved under any Schedule except Schedule 12D are not permissible blasting units and must be removed from the mine.

75.1316 Preparation Before Blasting

Paragraph (d) of 30 CFR 75.1316 addresses blasting activities at approaching working faces when the faces are within 25 feet of each other. Some concerns have been expressed as to whether this provision restricts mining of crosscuts to one direction only. This paragraph recognizes that crosscuts could be developed from both directions simultaneously. It is designed to protect against premature detonation of explosives that can occur by accidentally cutting or drilling into loaded boreholes. The 25-foot limitation is based on the size of cutting machine cutter bar and drill steel lengths currently used by the coal mining industry. The hazard addressed is that if cutting and drilling occur simultaneously at two approaching faces with less than 25 feet of separation, drilling could be completed and borehole loading operations started at one face while cutting or drilling activities continue at the other face. Under these circumstances, limiting mining activities to only one face at a time will prevent accidents resulting from the cutting or drilling at one face contacting loaded boreholes in an approaching face, especially if mine communications fail or when the space separating approaching faces is less than anticipated.

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Subpart O Hoisting and Mantrips**75.1400 Hoisting Equipment; General**

A hoist used to transport person(s) shall comply with the provisions of this Section. The number of person(s) transported or the frequency of which the hoist is used to transport person(s) are not factors for compliance with this Section.

Although scaffolding hoists are not equipped with safety catches, they can comply with personnel hoisting regulations. Safety systems utilizing safety belts attached to independently suspended safety lines by lanyards and rope grabs can be approved by district managers as a no less effective device to be used in lieu of safety catches.

The following guidelines should be used in approving these devices.

1. Life lines must be attached to a structural member of the shaft or collar or surface facility and not to the hoist rope outrigger.
2. Life lines of at least first grade 5/8-inch nylon rope, 3/4 inch manila hemp rope, or equivalent, must be provided for each miner.
3. Substantial safety belts securely attached to the independently suspended safety lines by lanyards and rope grabs must be used at all times when embarking, disembarking or working on the platform.

75.1402 Communication Between Shaft Stations and Hoist Room

A signal code shall be adopted and used, and it should be posted in view of the hoisting engineer and at all places where signals are given.

Signals received by the engineer shall be repeated by the engineer when miners are to be hoisted or lowered.

75.1403 Other Safeguards

The safeguards, in addition to those included as criteria in the Federal Register, may be considered of sufficient importance to be required in accordance with this Section.

It must be remembered that these criteria are not mandatory. If an authorized representative of the Secretary determines that a transportation hazard exists and the hazard is not covered by a mandatory regulation, the authorized representative must issue a safeguard notice, allowing time to comply before a 104(a)

citation can be issued. Nothing here is intended to eliminate the issuance of a 107(a) order when an imminent danger exists.

75.1403-3 Criteria - Drum Clutch; Cage Construction

At the bottom of each hoisting shaft and at intermediate landings, a "runaround" should be provided for safe passage from one side of the shaft to the other. This passageway should be not less than 5 feet in height and 3 feet in width.

Ice should not be permitted to accumulate excessively in any shaft where miners are hoisted or lowered.

No person should ride a cage with equipment, supplies, or materials. This does not prohibit the carrying of small handtools, surveying instruments, or technical devices.

75.1403-5 Criteria - Belt Conveyors

The requirements for the transportation of persons on belt conveyors, as outlined in this Section, shall apply when any person is transported on belt conveyors at times other than during the regularly scheduled mantrip operations.

Bare pinch wires are acceptable for stopping and starting belt conveyors used to transport persons, provided that the voltage on such circuits is not more than 12 volts. A pull cord arrangement that will enable any person riding the belt to stop and start it shall be acceptable as compliance. Start switches may be located at intervals of not more than 500 feet along such belt conveyors.

An official or other responsible person designated by him should be in attendance while miners are boarding or leaving belts.

Ample clearance should be provided at conveyor-loadingheads and at conveyor-control panels.

75.1403-6 Criteria - Self-Propelled Personnel Carriers

Self-propelled track equipment should be equipped with sanding devices capable of applying sand to all rails in either direction of travel.

75.1403-7 Criteria - Mantrips

The following shall be adopted as additional policy to govern the use of "scoop tractors" when transporting persons:

1. Underground personnel may be transported in a scoop that is in the rear position according to the direction of travel. In other words, the scoop must be located so that, if a person accidentally fell from the scoop, the tractor would be moving in a direction away from the fallen person.
2. A locking device (stiff link or other accepted device) shall be used to preclude the possibility of accidental activation of the hydraulic control lever which operates the scoop.
3. If the scoop is equipped with an ejector blade, the control lever for the blade must also be locked in the neutral position.
4. Mantrip passengers should not ride under unguarded trolley wire unless suitable covered man-cars are used.
5. Failure to provide special locking devices on drop-bottom cars used for transporting miners on mantrips shall be considered to constitute a danger that a mantrip accident will occur immediately or before such danger can be eliminated within the meaning of Section 107(a) of the Act.

75.1403-8 Criteria - Track Haulage Roads

Rails should be secured at all joints by means of plates or welds.

75.1403-9 Criteria - Shelter Holes

Upon the approach of moving traffic, persons shall take refuge in shelter holes or other places of safety.

75.1403-10 Criteria - Haulage; General

During inspections of mines where reflectors or other devices are being used in lieu of permissible trip lights, the inspector should determine if approval to use the reflectors or other type device has been granted by the district manager. In the event approval has not been granted, a safeguard notice should be issued.

Backpoling should be prohibited except at places where the trolley pole cannot be reversed or when going up extremely steep grades, and then only at very slow speeds.

Main haulage roads are interpreted to be: (1) the road leading from the surface to the section of a one-section mine; and (2) the road leading from the surface into a multi-section mine, including the roads leading to the various sections of the mine.

Exceptions to main haulage roads are sidetracks or branch lines of limited distance which are not ordinarily used for through traffic. Sidetracks, branch lines, etc., may or may not extend from any main haulage road. Therefore, a main haulage road, as referred to in paragraph (b), is a roadway used for the transportation of personnel, equipment, materials, supplies and/or other articles taken into or out of a coal mine, or section of a coal mine, regardless of alternate methods used to transport coal from the working faces and regardless of the size of the mine. Any branch track leading to a nearby installation (pump, compressor, etc.), crosscut, or pillar place is considered as an exception to main haulage roads.

Sprinkling a shuttle car haulage road to allay dust shall not be construed as making the roadway wet and increasing the difficulty of controlling the shuttle car.

Abrupt changes in vertical clearance that present a hazard to persons riding on mobile equipment should be eliminated where possible. Otherwise, signs, preferably luminous, shall be posted to warn of the change in clearance.

New overcasts and similar structures installed on haulageways should be constructed so as to provide the same vertical clearance as the surrounding area or to permit operation of haulage equipment without restricting the operators' or passengers' normal position.

Material being transported should be so loaded and protected that there is no danger to the motorman or brakeman from sliding of equipment and material. Except in emergencies, timbers and other materials not necessary for, or not incidental to, the operation of locomotives, cutting machines, loading machines, and coal-drilling machines should not be transported on such equipment.

Track locomotives should be equipped with proper rerailing devices, safe seating facilities for the operator, audible warning devices, sealed-beam headlights or the equivalent on each end, a suitable lifting jack and bar, and properly installed and maintained sanding devices.

No person should get on or off moving locomotives or cars being moved by locomotives; however, the brakeman may get on or off the rear end of a slowly moving trip.

Standing cars on any track, unless held effectively by brakes, should be properly blocked or spragged. Cars shall be secured effectively at working faces.

Where it is clear at a particular mine that self-propelled, track-mounted, or rubber-tired equipment that is used to transport miners is operating on grades so steep that the ratio of the gear train is not sufficient to prevent movement of the equipment when it is parked, inspectors should determine the operator's method of preventing accidental movement. It should be noted that devices which trap hydraulic fluid, such as the "MICO Leverlock," are sometimes being used as parking brakes. This type of device is not suitable for use as a parking brake because pressure may be lost due to fluid leakage or contraction when it cools, allowing the vehicle to move. If the operator does not use a reliable method of preventing accidental movement of parked equipment, then a notice to provide safeguard under this section should be issued. Generally, the notice should indicate that the operator shall take reliable precautions against accidental movement of the affected equipment when it is parked. Inspectors should allow operators flexibility in providing the necessary precautions, while at the same time making it clear what constitutes compliance with the safeguard notice. Many manufacturers of mining equipment now have available parking brake systems for personnel carriers.

Where an inspector determines that a safeguard notice is necessary in order to address a transportation hazard, the specific safeguard requirements are to be determined by the inspector based on the actual, specific conditions or practices that constitute a transportation hazard at that particular mine. The inspector should document either in the notice or in the inspector's notes the conditions which provide the basis for the issuance of the safeguard notice. The safeguard notice should also identify the nature of the hazard to which it is directed. For example, if a notice to provide safeguards is issued to require a specific minimum clearance distance between pieces of haulage equipment, the safeguard should also include a statement of the hazards that the clearance distance is intended to prevent, such as injury to equipment operators from pieces of rib coal which could be knocked loose or, if the area is a walkway, injury to pedestrians by the equipment due to insufficient clearance.

Service brakes and parking brakes on personnel carriers must be maintained in an operative condition. Accordingly, such brakes that have been allowed to deteriorate into an inoperative condition constitute a violation of Section 75.1725. Emergency and parking brakes that are not installed and maintained on rubber-tired haulage equipment or parking brakes not installed

and maintained on other face equipment would constitute a violation of Section 75.523-3.

Where block signals are used, not more than one locomotive, except pushers, should operate in any signal block at the same time unless by special authority. All mine traffic should be under the direction of a person(s) designated by the operator, and no traffic should be in transit without prior clearance, verbally or by use of block signals.

Where seating facilities are provided, operators of equipment should be seated while such equipment is being operated.

This section shall be used to require audible warning devices on all self-propelled equipment, including off-track equipment. Such devices shall be of the type provided by the manufacturer of the equipment and shall be maintained in operative condition.

Self-propelled, rubber tired haulage equipment shall be equipped with sealed-beam lights.

Rubber-tired, battery-powered mine tractors should be equipped with a suitable lifting jack and bar adequately secured or carried in a compartment.

Since controls meeting the requirements of paragraph (m) are available, future notices to provide safeguards or 104(a) citations shall not give more than 30 days for compliance.

75.1404 Automatic Brakes; Speed Reduction Gear

This provision is not intended to require automatic brakes or speed reduction gears on locomotives used by mechanics and others solely to haul repair parts or supplies, or their transportation, provided that no more than one haulage car is used with such locomotives. All other locomotives shall be equipped with hydraulic brakes, pneumatic brakes or dynamic braking, in addition to manual brakes.

75.1405 Automatic Couplers

All track haulage cars which are regularly coupled and uncoupled shall be equipped with automatic couplers. This provision also applies to rubber-rail type haulage cars. Unless an alternate method of coupling has been approved which will at all times guarantee no less than the same measure of protection afforded by automatic couplers, operators are required to install the automatic couplers on their rubber-rail cars.

75.1502 Mine emergency evacuation and firefighting program
 of instruction

In addition to the simulated drills required by the regulation, the following additional activities may be included in the program of instruction:

The mine operator's program of instruction, required by 30 CFR 75.1502, must include all miners on all shifts. The training program should emphasize the location of the proper routes of travel and the importance of prompt evacuation when such an order is given. The program should incorporate provisions to advise miners of changes to the escapeways, such as rerouting, designation of other entries, and any changes in escape facilities. It should also emphasize proper Self-Contained-Self-Rescuer (SCSR) donning procedures. Specific situations such as encountering smoke dictate donning the SCSR immediately, while others may permit partial or complete evacuation without donning the unit. As evacuation through some smoke may be necessary, the program should include precautions to take when smoke is encountered, as well as instruction and drills in communication techniques emphasizing not to remove the SCSR mouthpiece to talk in contaminated air.

All aspects of mine emergency evacuation drills required by paragraph (c) of this Section need not be held underground. For example, portions of the drill, such as demonstrations of fire fighting equipment, may be conducted on the surface. The evacuation portion of the drill need not be held at the same time as the firefighting portion of the drill.

Subpart Q Communications**75.1600 Communications**

The communication systems that are now in use at each mine will be acceptable at the present time. However, there must be at each mine an operative means of communications between each working section and the surface when the working section is more than 100 feet from the portal.

**75.1600-1 Communication Facilities; Main Portals;
 Installation Requirements**

The second sentence requires that at least one such communication facility be located where there is a responsible person who is always on duty when miners are underground and can hear the communication and respond.

A telephone or equivalent facility at a central location which may be greater than 500 feet from any portal will satisfy the requirements of the second sentence of this section, as it applies to multiple portals of any one mine or a number of mines within a reasonable geographical area, provided that a responsible person at the central location can hear the telephone and respond immediately.

Subpart R **Miscellaneous****75.1700** **Oil and Gas Wells**

This provision shall apply to all oil and gas wells including active, inactive, abandoned, shut-in, previously plugged wells, water injection wells and carbon dioxide sequestration wells. This standard also applies to coal bed methane wells drilled from the surface that branch horizontally into the coal seam being mined or will connect through subsidence cracks to active workings. Approval for barriers of less than 300 feet in diameter around the well or horizontal branch of the well, and consistent with State laws, may be granted only by the District Manager. A petition for modification would be required to mine through the well or within the safe barrier as determined by the District Manager.

75.1702 **Smoking; Prohibition**

This Section is an absolute prohibition against having smoking articles underground and is directed to all persons. When smoking materials, matches, or lighters are found underground, a citation for violation of this section should be issued to the operator, as well as to the individual miner if he/she can be identified. No evidence is needed of negligence or fault on the part of the operator in order to issue the citation. The condition or practice described in the citation should indicate a violation of the prohibition against smoking articles underground.

The operator's search program for smokers' articles shall be systematic and conducted at least weekly at irregular intervals and as often as necessary to insure that the program is being adhered to and not being violated.

Records of searches for smokers' articles shall be made and kept in a book provided for that purpose in a safe place on the surface, and the records shall be available for inspection.

When an inspector observes a miner smoking underground, he/she shall obtain the name of the miner involved, the names of any witnesses, and issue a citation to the miner. He/she shall also issue a citation or an order of withdrawal to the operator.

Generally, orders of withdrawal are not to be issued, except in appropriate circumstances where an inspector actually observes a person smoking underground or where the operator's search program is not vigorously enforced. In other circumstances, where cigarette butts or cigarettes, lighters, or matches are observed underground, a citation of section 104(a) or 104(d)

would be more appropriate. The operator shall post "No Smoking" signs at or near the surface structures where smoking is prohibited.

75.1703 Portable Electric Lamps

Electric cap lamps used for portable illumination underground shall be maintained in permissible condition. Lamps that have been altered, such as by exposing a contact point in the headpiece for use as a shot-firing unit, shall be considered to be nonpermissible.

75.1708 Surface Structures, Fireproofing

Where existing structures are fireproof and were erected on or before March 30, 1970, the erection of fire doors is not necessary.

Fire doors shall be substantially constructed and located in the mine as near as practicable to the surface to prevent the products of combustion from entering and endangering persons underground.

75.1709 Accumulations of Methane and Coal Dust on Surface
 Coal-Handling Facilities

At least once during each working shift, or more often if necessary, in surface coal-handling and coal-storage facilities, a qualified person designated by the operator shall make examinations for methane wherever the possibility of accumulations exists. A record of such examinations shall be kept. The examinations for methane shall be made with a methane detector approved by the Secretary. When an accumulation of 1.0 percent or more of methane is detected in such surface facilities, means shall be provided to prevent methane from accumulating in such quantity. Tests for methane in surface structures shall be made prior to any repair work in which welding is done or an open flame is used.

The operator shall initiate an effective and systematic program of preventing coal dust from accumulating on coal-handling facilities. The presence of excessive concentrations of coal dust, whether in or on such facilities, constitutes a violation of this provision. Also, where excessive airborne dust could present an explosion hazard, water sprays or other effective means shall be used to allay such dust.

75.1710-1 Canopies or Cabs; Self-Propelled Electric Face
 Equipment; Installation Requirements

This Section requires that all self-propelled electric face equipment in all coal mines where the bottom to top (mine floor

to mine roof) measurements are 42 inches or greater be equipped with cabs or canopies. The following guidelines are to be used relative to the enforcement of this Section:

1. To determine if cabs or canopies are required, the following guidelines are applicable.
 - a. Measurements are to be taken on a section-by-section basis at any given mine.
 - b. Measurements are to be taken at the minimum height (bottom to top) in the working section provided this minimum height is not a result of poor mining practices. Should this be the case, such measurement is to be disregarded and the minimum height determined from measurements at locations where accepted practices were followed.
 - c. For electric face equipment which is regularly required to travel to other areas of the mine, the minimum height (bottom to top) is to be determined within the area of regular travel.
 - d. Where the minimum height frequently fluctuates below and above 42 inches, a citation for a violation of this Section is not to be issued when such fluctuations below 42 inches would routinely create the necessity to remove cabs or canopies. An evaluation of the minimum height is to be made periodically to determine if such fluctuations still exist. These evaluations should normally be made as a part of a mandated regular mine inspection.
 - e. Self-propelled electric face equipment which has machine-mounted operating controls must be provided with a cab or a canopy, as required by this Section, even if the equipment is normally operated by remote controls. Self-propelled electric face equipment without machine-mounted controls is not required to have a cab or canopy as long as the operator using the remote controls is located away from the machine being operated. If, at any time, the remote controls are used for tramming or for any other reason, while placed on the equipment, the equipment operator must be protected by a cab or canopy. The cab or canopy must be positioned over the controls on the equipment so that the equipment operator is protected when using machine-

mounted controls or when operating the equipment using remote controls placed on the equipment. This Section applies only to self-propelled electric face equipment where the equipment operator is using remote controls. The equipment operator, however, must be located under roof that has been permanently supported and be a sufficient distance from the equipment to ensure the operator would not be endangered by movement of the equipment.

2. If it is determined that cabs or canopies are required (actual mine floor to mine roof is 42 inches or greater) and have not been installed, a citation is to be issued giving reasonable time for abatement. Extensions of time are to be granted only when the mine operator is able to establish to the District enforcement personnel's satisfaction that a "good faith" effort is being made to gain compliance. Examples of acceptable effort include, but are not limited to, the following:
 - a. Management has ordered new or used lower profile equipment on which a cab or canopy is or will be installed and will be workable under the conditions encountered.
 - b. Management has established an acceptable program for the installation of canopies on existing equipment.
 - c. Management has established a test program agreement with the district manager.
3. The filing of an application for modification of a safety standard pursuant to the procedures set forth in Section 101(c) of the Act, or the fact that a hearing is pending on such application, is not a cause for staying the issuance of a citation at mines presently required to have cabs or canopies.
4. Similarly, the filing of such an application for modification or the fact that a hearing is pending is not grounds for MSHA to extend the reasonable time permitted for the abatement of a citation unless a "good faith" effort, as described in item 2, is also proposed.
5. New electric face equipment or used equipment new to a mine is required to have cabs or canopies if the bottom to top measurement is 42 inches or greater.

With reference to cab and canopy test program agreements submitted by mine operators, the following guidelines were developed to assist District Managers in developing and evaluating such agreements.

1. When an operator elects to establish a test program, he/she should submit the following information in writing to the district manager(s):
 - a. The name of mine(s) covered by the test program.
 - b. The area(s) of the mine(s) selected for the test program.
 - c. A description of the conditions in the areas(s) and how they would be considered as representative of the mine(s) covered by the test program.
 - d. A list of the equipment to be tested and the type of equipment each test piece will represent.
 - e. A description of the approach which will be pursued on each piece of test equipment.
 - f. A time frame for the work to be performed.
 - g. A general description of the method of orientation and training of the equipment operators in use of the test equipment.
 - h. A commitment to submit periodic progress reports describing the success or failure of the test designs, the problems encountered and the changes made to resolve the problem, etc.
 - i. The name and title of the person(s) designated to monitor, keep records and prepare progress reports on the program.
2. If an operator has a one-section mine, a program for testing one piece of equipment at a time would be acceptable.
3. If an operator has a multi-section mine, the program would include one piece of equipment of each type in the mine.
4. If an operator has several mines with similar conditions and equipment, a program for testing one piece of equipment of each type in these mines would be acceptable. These mines may be located in more than one MSHA District, provided the District Managers concur.

MSHA has determined that certain controls on roof bolting machines are not subject to the requirements of 30 CFR 75.1710-1(a). These controls and the circumstances where their location does not necessitate a cab or a canopy are as follows:

1. Controls that position and set the Automated Temporary Roof Support (ATRS) system (including "inch tram" controls) are not required to be located under a canopy provided:
 - a. the controls are located on the machine in such a manner that they are operable from under permanently supported roof, and
 - b. the controls are used only within the working place and not to tram from place to place.
2. Controls that position the drill station canopy, such as canopy raise, canopy lower, boom swing levers, etc., are not required to be located under a canopy, provided these controls are located on the machine in such a manner that they are operable from under supported roof.

75.1711 Sealing of Mines

The regulation states that the openings of any coal mine that is declared inactive by the operator, or is permanently closed, or abandoned for more than 90 days, shall be sealed. Work to seal shall commence promptly after the 90-day period during which the mine was not ventilated and shall be performed with reasonable diligence.

Each coal mine is categorized by the appropriate District in one of seven statuses. These Statuses include, among others: Abandoned, Intermittent, and Temporarily Idle. These Particular statuses and their relation to the sealing requirements are discussed below.

Abandoned. Sealing is required for mines placed in abandoned status either by the operator or by MSHA. When an operator has not properly updated mine status to abandoned, MSHA will revise the status to abandoned and notify the operator in writing of the status change and the requirement for sealing within 90 days.

Intermittent. Mines place in intermittent status, as a result of being seasonally idled for more than 90 days, are not considered abandoned and the sealing requirements does not apply. However, the mine must remain essentially ready to resume production within a short timeframe. To maintain intermittent status, facilities and equipment such as the mine office, surface and underground power systems, the main mine fan, and underground coal haulage systems must

remain intact. In addition, all mine openings must be provided with a positive means to prevent access by unauthorized persons.

Temporarily Idle. Mines in temporarily idled status, even though this status may last longer than 90 days, are not considered permanently closed or abandoned for the purposes of this standard. Mines are considered to be in temporarily idled status when the work of all miners has been terminated and production related activities has ceased. The mine still has recoverable reserves, it is anticipated that this is a temporary condition, and the mine will reopen in the future. This category includes mines that do not maintain ventilation or conduct underground examinations. The only activity at these mines would be security checks, visual examinations of surface areas to determine conditions, or surface activity due to another agency's requirements (e.g. state environmental agency).

While there is no specific time restriction applied to mines in temporarily idled status, it is necessary to verify what activity is taking place at the mine once each quarter. This may be accomplished by a brief mine visit or other documented contact with the mine operator. These mines do not require a regular inspection. The openings of all mines in temporarily idled status must be adequately fenced or guarded prohibiting the entrance of any persons. If an operator removes substantially all recoverable equipment and facilities, such that there is not demonstrable intention of reactivating the mine, the status will be revised to abandoned, the operator notified in writing and sealing shall be required within 90 days.

Prior to persons performing work at or entering temporarily idled mines, the mine operator must notify the District Manager and complete any necessary plan submission (30 CFR 75.1721) or status change.

Districts shall conduct regular reviews to assure that these mines are in the appropriate status. It is unlikely that a mine would remain in intermittent or temporarily idled status for more than 12 consecutive months. If it is determined that the condition has become permanent, the mine operator shall be required to seal the mine.

Appropriate enforcement action under this section shall be taken if it is determined that the openings of mines in either intermittent or temporarily idled status are not adequately fenced or guarded prohibiting access.

Mine sites that have active impoundments are still subject to inspection and therefore cannot be placed in temporarily idled

status. However, the site should be reclassified as a surface site and any underground mine sealed, as appropriate.

75.1712-4 Waiver of Surface Facilities Requirements

The bathing facilities, clothing change rooms, and sanitary flush toilet facilities required by Sections 75.1712-1 and 75.1712-4, are at times waived under the authority of this Section. This is normally done because water is not available. Since Section 71.500 requires sanitary facilities at surface worksites of surface coal mines only, the waiving of sanitary facilities under this Section removes the only requirement for the mine operator to provide sanitary facilities at surface worksites of underground coal mines.

Therefore, all waivers should require a chemical toilet (approved under Section 71.500) at each surface worksite of the underground coal mine as a condition of waiving the flush toilets.

75.1712-5 Application for Waiver of Surface Facilities

Section 75.1712 provides that sanitary toilet facilities shall be provided in the active workings of the mine when surface facilities (as required in Section 75.1712-1) are not accessible to the active workings. Based on this provision, Section 75.

1712-6 requires an approved sanitary toilet underground within 500 feet of each working place in the mine.

Where a surface sanitary toilet is located within 500 feet of a working place, Section 75.1712-6 is satisfied and there is no requirement for an approved sanitary toilet to be located underground. Thus, for an underground mine which is less than 500 feet in depth, or for an underground drift mine which has advanced to a distance of less than 500 feet, which has sanitary toilet facilities on the surface, there is no requirement for an approved sanitary toilet to be located underground in those portions of the active workings which are within 500 feet of the surface sanitary toilets. In other cases, except where a waiver of the location requirement has been granted as provided in Section 75.1712-7, an approved sanitary toilet is required to be located underground within 500 feet of each working place in the mine where miners are regularly employed.

Sanitary toilets are to be approved by MSHA, Coal Mine Safety and Health. The primary responsibility for gaining approval is that of the toilet manufacturer. A list of approved sanitary toilets for use in underground coal mines is available in district and subdistrict offices and from MSHA, Coal Mine Safety and Health, 1100 Wilson Boulevard, Arlington, Virginia 22209-3939.

Where a sanitary toilet is found to be in a shipping crate or is otherwise not ready for service, the unit does not satisfy the requirement that an approved sanitary toilet be provided and maintained. If an approved sanitary toilet is not provided, not properly located, or ready for service, a citation for violation of this Section shall be issued.

75.1712-7 Underground Sanitary Facilities; Waiver of Requirements

Upon determination of the District Manager, a waiver of the location requirement may be made. However, only the location requirement may be waived, and the waiver can be granted only on the basis of the thickness of the coal seam or of any other physical restriction in the underground workings. A sanitary toilet is required to be provided, either on the surface or underground, within 500 feet of each working place in the mine, except where a waiver of the location requirement has been granted.

75.1713-1 Arrangements for Emergency Medical Assistance and Transportation for Injured Persons; Agreements; Reporting Requirements; Posting Requirements

Paragraphs (a) and (b) of this Section are not to be interpreted to mean that a physician or an ambulance must be present at the mine at all times. These paragraphs do mean, however, that the required services must be arranged for and be readily available.

Paragraphs (c) and (d) of this Section have been disapproved by the Office of Management and Budget (OMB) pursuant to authority under Executive Order 12174 (44 FR 69609) and the Paperwork Reduction Act of 1980. Beginning January 1, 1982, no enforcement action shall be taken relative to the reporting requirements of these two paragraphs.

Discontinuance of these information reporting requirements does not alter the requirements of paragraph (a), (b), and (c) of this Section. Operators of underground coal mines still must have arrangements established with a licensed physician, medical service, medical clinic or hospital to provide 24-hour emergency medical service and arrangements with an ambulance service, or otherwise provide, for 24-hour emergency transportation for any person injured at the mine.

Likewise, operators must continue to post at appropriate places at the mine the names, titles, addresses, and telephone numbers of all persons or services available under the arrangements for medical assistance and emergency transportation. Where appropriate, inspectors shall make the necessary inquiries to determine the currency and accuracy of the information posted.

75.1714 Availability of Approved Self-Rescue Devices;
Instruction in Use and Location

The term "visitor" used in paragraph (a) of this Section includes insurance inspectors, equipment manufacturers' representatives, and others to whom the mine operator may deny entry, but does not include persons having the right to enter the mine. Accordingly, an operator shall not be cited for violation of paragraph (a) when a State mine inspector is observed underground without an SCSR.

Citations for failure of the mine operator to provide self-contained self-rescuers shall be cited under paragraph (a) of this Section. The inspector should include in the body of the citation a statement referring to 30 CFR 75.1714-1(b) which outlines how the provisions of paragraph (a) can be met.

75.1714-1 Approved Self-Rescue Devices

Under paragraph (b)(3) of this Section, MSHA will consider for approval as a self-rescue device or devices, when used and maintained as prescribed by MSHA, a combination of separate 10-minute and 60-minute self-contained breathing apparatus approved under Subpart H of 30 CFR Part 11.

75.1714-2 Self-Rescue Devices; Use and Location Requirements

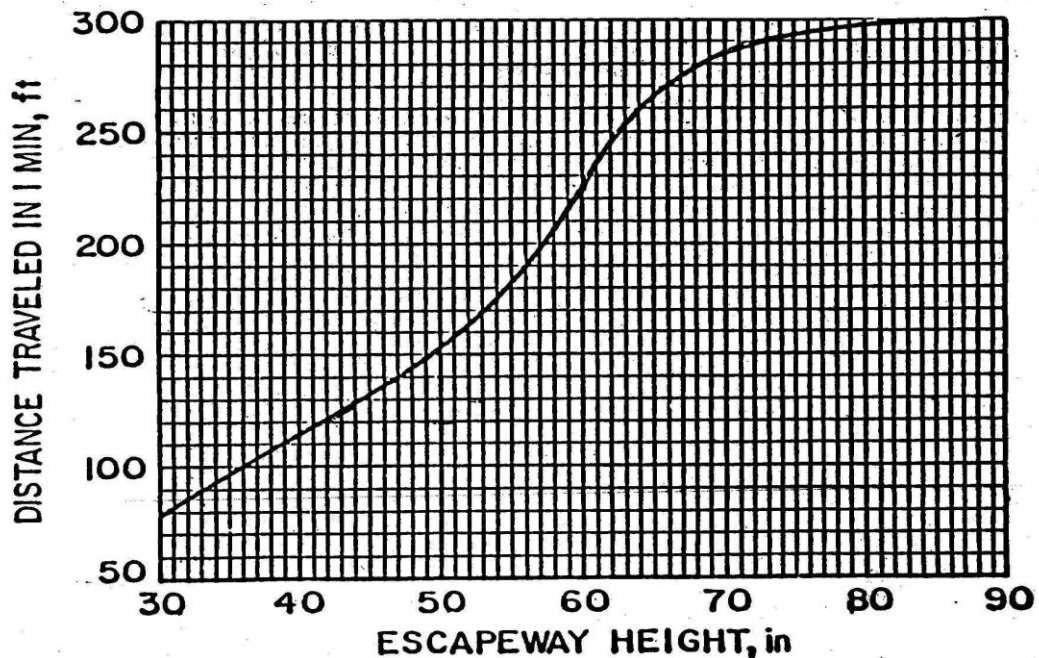
Under paragraph (c) of this Section, the determination that wearing the self-contained self-rescuer is hazardous may be made by an individual miner or by the operator. The inspector should not issue a citation unless the person is more than 25 feet from his or her self-contained self-rescuer.

The District Manager is required in paragraph (e)(1) to consider 11 factors in deciding whether to permit an operator to place a self-contained self-rescue device more than 25 feet from a miner. In order to assist the inspector when considering these factors, the following guidelines are provided to help determine whether to permit or prohibit storage, storage distances, and storage methods and procedures.

1. Distance from affected sections to surface. If the deepest penetration of a working section is not farther from the surface than the travel distance listed in 3. below, the district manager may approve a plan for the operator to provide miners only with filter-type self-rescuers. However, when the deepest penetration of a working section is greater than the travel distance listed in 3., operators shall be required to provide self-contained self-rescuers.
2. Pitch of seam in affected sections. In pitching seams, such as encountered in anthracite mines, self-contained self-rescuers should be stored on level travelways.

3. Height of coal seam in affected sections. The height of the travelway affects the speed of travel and consequently the distance that miners may be away from stored self-contained self-rescuers. Miners generally should not be farther from self-rescuers than a distance that they can travel at a normal pace in 5 minutes. However, the time and distance can be increased or decreased after considering all factors. Miners should never be farther from self-contained self-rescuers than a distance they can travel at a normal pace in 10 minutes.

The chart below should be used to convert time to the travel distance.



4. Location of escapeways. Where designated escapeways are not readily available, such as during travel in remote locations of bleeders and return airways, storage of self-contained self-rescuers should be limited to not more than 5 minutes travel time.
5. Proposed location of self-contained self-rescuers. The preferred locations for storage of self-contained self-rescuers are in the intake escapeways and accessible from more than one entry. In longwall mining sections, self-contained self-rescuer units should be stored near the face on the

headgate and tailgate sides of the longwall unit. Enough self-contained self-rescuer units for all miners covered by the storage plan should be stored at both locations.

The environment in the storage location should be in accordance with manufacturers' recommendations. Storage plans should include provisions for segregating visitors' self-contained self-rescuers from those provided for employees at the mine. Each miner must be trained to know the specific location of the self-contained self-rescuer that is available for him/her.

6. Type of work performed by affected miners. Different plans may be approved for various categories of miners, dependent primarily upon the amount of travel required to perform their work. Storage plans for section workers should rarely allow for travel times greater than 5 minutes. Storage plans for rovers may allow for travel time up to 10 minutes.
7. Degree of risk to which affected miners are exposed. e amount of methane liberation and size and type of power systems, i.e., battery, electrical (a.c. or d.c.) or diesel, are some of the factors that should be considered when evaluating the degree of risk. Another factor should be the history of violations that could lead to the cause and effect of fires, explosions, and inundations.
8. Potential for breaking into oxygen-deficient atmospheres. When mining near abandoned areas, as described in Section 75.1701, or into areas having a high potential for outbursts, storage of self-contained self-rescuers shall not be permitted.
9. Type of risks to which affected miners are exposed. The types of risks that should be considered when evaluating storage plans are the risks associated with explosions, fires, and inundations.
10. Accident history of mine. The types of accidents which should be considered are those relating to explosions, fires, inundation of gases, and outbursts.
11. Other matters bearing upon the safety of miners. Storage plans should include a requirement for examination of self-contained self-rescuers during the period of the preshift examination or at the beginning of the shift. If the self-contained self-rescuers are stored in substantially constructed containers, or in another permanent manner, and located so that the units are protected from damage,

inspection of the self-contained self-rescuers once each 24 hours should be sufficient to assure reliability of the units. Plans should include a provision that would permit any miner to wear or carry a self-contained self-rescuer. The tests required under the provisions of Section 75.1714-3(d) shall be made in accordance with the manufacturer's approved instructions.

The minimum number of self-contained self-rescuers underground at each mine must be equal to or greater than the number of miners underground.

The Bureau of Mines Report "Guidelines for Oxygen Self-Rescuer," Volumes I and II, is used by many operators as a basis for developing storage plans. Many recommendations made in the report are included above and the others may be helpful to the operator in preparing a storage plan and assist the inspector in approving plans. However, the guidance provided above for the 11 factors should be the primary source of guidance when giving permission for storage of self-contained self-rescuers.

Paragraph (e)(3) of this Section prohibits the operator from obtaining permission from the district manager to place the self-contained self-rescuers more than 25 feet away from miners on mantrips into and out of the mine. For purposes of this Section only, miners are not considered to be on mantrips while walking into or out of the mine, or while being transported in shafts or slopes. Therefore, permission may be granted for storage of self-contained self-rescuers for miners in these situations.

Violations of the approved storage plan for self-contained self-rescuers shall be cited under Section 75.1101-23. The provisions of paragraph (e) of this Section state that the miner operator may apply to the district manager under Section 75.1101-23 for permission to place the self-contained self-rescuer 25 feet away. This provision merely informs the operator of how to apply for a storage plan and shall not be used when citations are issued for violations of the storage plan.

75.1714-3 Self-Rescue Devices; Inspection, Testing,
Maintenance, Repair and Recordkeeping

Paragraph (b) of this Section requires that the self-rescue device be inspected for damage and for the integrity of its seal after each time it is worn or carried by a person. The term "inspected" consists of visually examining the self-rescuer. In order to make a valid visual examination of the Drager 810, the self-rescuer must be removed from the carrying pouch. The examiner shall make sure that the top and bottom of each container is not separated.

In paragraph (c) of this Section, the phrase "...except devices using vacuum containers as the only method of sealing, shall be tested... by weighing ..." applies only to Drager 810 self-rescuers not provided with a stainless steel band to reinforce the seal. The addition of the stainless steel band requires that the Drager 810 self-rescuer be weighed to check its condition.

Extensions of approvals have been granted for modification in the periodic testing procedures for the Mine Safety Appliances Company (MSA) 60-minute self-contained self-rescuers (SCSR) and the Draeger OXY-SR 60B SCSR.

The MSA 60-minute SCSRs are not required to have an annual dry leak test of all stored units and a 90-day dry leak test for units that are worn or carried. Any unit removed from storage must be tested before the unit is returned to storage. The water immersion test may be used in lieu of the dry leak test.

The periodic test for the Draeger OXY-SR 60B SCSRs now only requires a visual examination of the unit every 90 days.

During recovery operations at a mine explosion and during an inspection of an adjacent mine, it was brought to the attention of MSHA that the release pins and bands on the self-contained self-rescuers (SCSRs) in use at these two mines had been taped. The purpose for taping was to prevent the release pins from opening accidentally.

Several miners who were injured in the explosion were unable to open the cases of their SCSRs because their hands were burned. A miner who was not injured opened the cases for the injured miners. He stated that he had a very difficult time removing the tape to free the release pins and open the cases.

MSHA inspectors should, during the course of their inspections, determine if the releases of SCSRs are fastened in a manner other than as designed by the manufacturer. In those instances where other means are used, appropriate action shall be taken to have the extra fasteners removed.

75.1718 Drinking Water

Coal mine operators are required by this Section to supply drinking water in the active workings of mines and that the water "is carried, stored, and otherwise protected in sanitary containers." Coal operators have had difficulty in maintaining water containers in a sanitary manner, especially in keeping water containers clean. To alleviate this problem, sanitary, disposable, polyethylene water container liners are available. These liners are approved for use with foods by the Food and Drug Administration and have been used by

the dairy industry to line milk cans. This type of sanitary liner is acceptable for use with water containers in coal mines.

75.1719-1 Illumination in Working Places

Included in the category of self-propelled mining equipment are loading machines, cutting machines, shuttle cars, coal scoops, clean-up scoops, tractors, roof-bolting machines, face drills, longwall and shortwall installations, and supply vehicles, but rubber-tired trailers pulled by battery tractors are not included.

Technical Support tests and evaluates lighting systems in a simulated working place prior to the installation of the lighting systems underground. Each lighting system submitted is tested and evaluated to determine whether the required amount of light is provided, if the system is designed and installed to minimize discomfort glare and if the system complies with the other applicable provisions of the illumination regulations.

A Statement of Test and Evaluation (STE) is issued by Technical Support for accepted lighting systems. Each STE specifies the maximum height and width of the working place, the type and model of machine (for machine-mounted lighting systems), the location and orientation of light fixtures, the type of diffusers or louvers, and other conditions under which the lighting system must be installed and operated to provide compliance with the applicable provisions of the illumination regulations.

Lighting system manufacturers are furnishing a 3-by-5-inch metal plate with each accepted machine-mounted lighting system. The metal plate contains pertinent information about the lighting system and should be attached to the machine near the permissibility plate. The 3-by-5-inch metal plate is not required by regulation; however, the plate must be present on the machine to consider the system as one for which an STE has been issued.

The operator is not required to have an STE; therefore, a citation shall not be issued for failure to comply with an STE. If the STE is not being complied with, and in order to issue a citation, the inspector must take measurements to determine if the failure to comply with the STE results in a reduction of light below the 0.06 footlamberts required by paragraph (d) of this Section.

When an inspector observes self-propelled mining equipment being operated in a working place, a lighting system has been installed in accordance with an STE, and all of the provisions of the STE are being complied with as recorded on the metal plate, the lighting system shall be acceptable as being in compliance with paragraph (d) of this Section and the inspector shall not take light measurements.

Experience with STEs has shown that flexibility in the application of STEs is needed. Due to differences in machine design, manufacturers' mechanical design changes, and mine operators' modifications of mining machines, it is, at times, impossible to install a light fixture exactly as specified in the STE. In other instances, if a light fixture is installed in the specified location, the light source is in direct view of the operator or helper and objectionable glare is created. Therefore, it has become necessary to establish procedures which will permit coal mine operators to make application to the district manager in the district in which the mine is located for approval of a modification of an STE.

The term "a miner's normal field of vision," as contained in paragraph (e), means surfaces that can be readily seen by a miner from any position in the working place that his/her duties require him/her to be while self-propelled mining equipment is being operated. Not included are floor surfaces under the machine or surfaces behind line curtains or ventilation tubing.

Paragraph (g) requires that light fixtures be designed and installed to minimize discomfort glare. There are some locations on board certain mining machines in thin coal seams in which it is impossible to install presently available fixtures without creating discomfort glare to miners.

Extremely bright lights are required to light the area from rib to rib in thin coal seams (less than 42 inches in thickness), and these light fixtures of necessity are installed at the miner's eye level which compounds the glare problem. To combat this glare problem in seams with mining heights less than 42 inches, it is necessary to reduce the area in which light measurements are made to not more than 5 feet from the machine and to specify other locations in which light measurements are not to be taken. The intent of this policy is not to allow a reduction in the number of light fixtures used, but to permit better locations, diffusing, and guarding of light fixtures as a method of reducing or eliminating discomfort glare.

This policy recognizes the technical problems involved in reducing glare and defines locations within the area specified in paragraph (e)(1) through paragraph (e)(6) in which light measurements are to be taken.

When the mining height is less than 42 inches, light measurements shall be made within an area the perimeter of which is 5 feet from any part of continuous-mining machines, loading machines, coal drills, and cutting machines when measured parallel to the mine floor.

Headlights on continuous-mining machines and loading machines should be oriented so that the maximum amount of light is provided on the coal face. This improves the ability of the machine operator to see the location of the cutting bits or gathering arms. Therefore, to allow the most efficient utilization of the available light, light measurements shall not be taken of the floor area between the cutter boom hinge pin or gathering head hinge pin and the coal face. Scoops used as load/haul/dump vehicles, clean-up, or supply vehicles shall be illuminated in accordance with paragraph (e)(6) while such vehicles are being operated in the working place.

Auger-Type Continuous Miners

Most auger-type continuous-mining machines are operated with jack setters and timbermen working inby the miner operator in close proximity to rotating cutting bits or the machine. These miners must be able to communicate with the miner operator by means of signaling with their cap lamps and even small amounts of glare can be extremely hazardous.

Present technology will not permit installation of light fixtures on rope-propelled, auger-type continuous-mining machines in which miners are required to be inby the machines to set jacks or timbers without creating discomfort glare to the jack setters or timbermen. Therefore, illumination will not be required in working places in which rope-propelled, auger-type continuous-mining machines are operated if jack setters or timbermen are required to work inby the machine operator pending the development of glare-free illumination systems for these machines.

Illumination is not required in a working place in which a roof bolting machine is being operated if a rope-propelled, auger-type continuous-mining machine is also being operated in the same working place.

Remotely-Controlled Continuous Miner

When the mining height is less than 42 inches and remotely-controlled continuous-mining machines are operated in the working place, light measurements shall not be made of the area on the right side of the machine and outby the center of the main frame.

Shortwall Mining Equipment

1. When either chain conveyors or extensible belt conveyors are used to transport the coal from the continuous miner to the section loading point, the following areas shall be illuminated:
 - a. The face;

- b. The area for the length of the self-advancing roof support system and all surfaces within the miner's normal field of vision between the gob-side of the travelway and the side of the block of coal from which coal is being extracted; and
 - c. The control station and the headpiece and tail- piece of the conveyor, and all surfaces within 5 feet horizontally from the control station, head-piece and tailpiece.
2. When shuttle cars are used to transport the coal from the continuous miner to the section loading point, illumination shall be provided in accordance with the following:
- a. The face, ribs, roof, floor, and exposed surfaces of mining equipment between the face and the outby edge of the rear bumper of the continuous-mining machine shall be illuminated by the stationary lighting fixtures in accordance with the requirements of paragraph (e) (4) or by lighting fixtures installed on the continuous-mining machine in accordance with the requirements of paragraph (e) (1).
 - b. The shuttle car roadway shall be illuminated by stationary lighting fixtures in accordance with the requirements of paragraph (e) (4) or by lighting fixtures installed on the shuttle car in accordance with the requirements of paragraph (e) (6).

Longwall Mining Equipment

Problems have been encountered in illuminating the coal face and face conveyor to 0.06 footlamberts in longwall mining installations operating in coal seams under 42 inches in thickness. The problems have been caused by the lack of sufficient clearance between the bottom of the roof support chocks and the side of the face conveyor, leaving little or no space through which light fixtures installed on the chocks can cast light on the face conveyor or the coal face. Therefore, in determining compliance with the illumination requirements for longwall mining installations operating in coal seams less than 42 inches in thickness, measurements shall not be taken on the face conveyor or the coal face. Measurements shall be taken the entire length of the travelway and the area within a distance of 5 feet horizontally from the control station, headpiece, and tailpiece.

High spillboards are installed on many longwall face conveyors so that the coal will be retained on the face conveyor to prevent

spillage. These spillboards are necessary to prevent spilled coal and coal dust from accumulating along the travelway and between the roof-support shields or chocks. In some instances, the roof-support shields or chocks barely clear the spillboards.

The spillboards on longwall face conveyors are considered "other obstructions necessary to insure safe mining conditions," as provided in Section 75.1719-3(b)(8). Consequently, in determining compliance with the illumination regulations for longwall mining installations, light measurements shall not be made of areas where shadows are cast by spillboards installed on the longwall face conveyors.

Roof-Bolting Equipment

When the mining height is less than 42 inches, measurements shall not be taken of the area in front of and to the side of the roof-bolting machine operator(s) position(s). This does not apply to roof drills that are an integral part of a continuous mining machine.

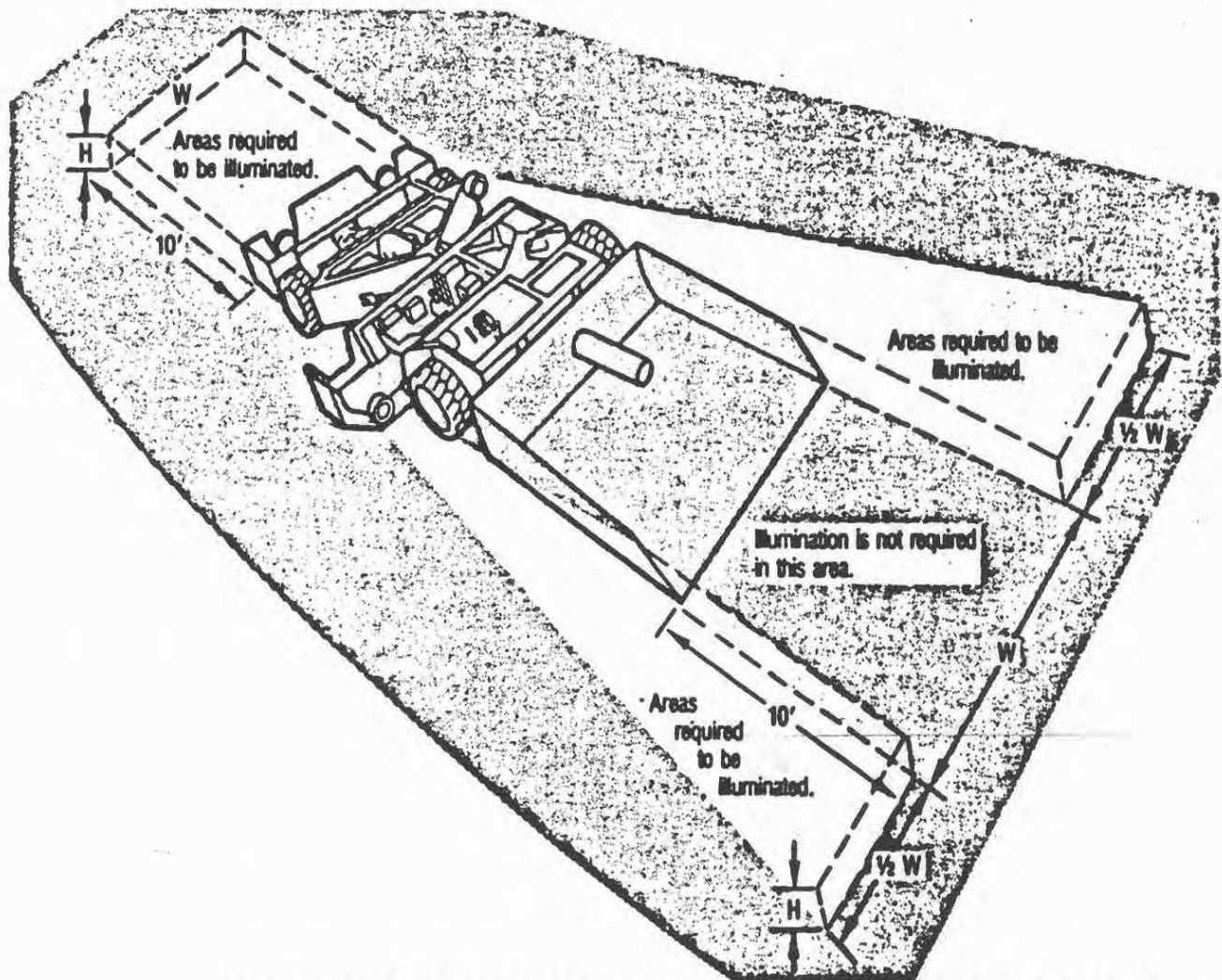
Light fixtures installed adjacent to supply trays on dual-head roof-bolting machines create objectionable glare to the operator and helper. Therefore, to allow removal or repositioning of these light fixtures, the lighting system shall be considered to be in compliance if the required level of light is provided as determined by illumination measurements made with the drill heads either together or separated approximately 8 feet and in position to drill holes or install roof bolts.

Shuttle Cars and Other Self-Propelled Equipment

The requirements of paragraph (e)(6) apply at all times when shuttle cars are being trammed in the working place even though a continuous-mining machine or loading machine is also being operated in the same working place. However, this does not prevent the shuttle car operator from turning the headlights out while the shuttle car is under the boom of the continuous mining machine or loading machine.

When determining the height and width of the coal surface to be illuminated as provided in paragraph (e)(6)(ii), the maximum height of the equipment (including sideboards, cabs, and canopies) and the maximum width of the equipment (including bumpers, tires, cabs, and canopies) shall be used. The height and width of the coal surface that is required to be illuminated will be the same in both directions of travel.

When the mining height will not permit installation of light fixtures at a location that will light the area directly in front of shuttle cars, tractors, maintenance vehicles, scoops, load/haul/dump vehicles, etc., the unshaded areas outlined on the following illustration may be lighted and measurements taken accordingly.



Areas required to be illuminated when coal seam height will not permit the installation of light fixtures on top of the machine.

75.1719-2 Lighting Fixtures; Requirements

The required illumination may be provided by light fixtures which are mounted onboard mining equipment and receive power from the equipment, by stationary light fixtures which are mounted on the roof or along the rib and receive power through trailing cables, or by a combination of these two systems. Light fixtures installed on shearers in longwall systems or continuous miners in shortwall systems shall be considered machine-mounted light fixtures. Light fixtures installed on roof support equipment of longwall or shortwall mining systems shall be considered stationary light fixtures.

Stationary lighting fixtures which receive power from alternating-current systems which are not resistance grounded as provided in paragraph (c) (2) or from direct-current systems shall be grounded in accordance with the appropriate section of Part 75, Subpart H.

The requirements of paragraph (c) (3) apply to all machine-mounted lighting fixtures including headlights that were furnished as original equipment on the machine. The required grounded conductor may be inside the supply cable to the fixture or may be an external grounding shunt. The required grounding conductor shall be in addition to any holes or welds used to fasten the fixture to the machine.

When a grounding conductor inside of the supply cable is used to ground a machine-mounted lighting fixture, the grounding conductor shall connect the frame of the fixture to the grounded explosion-proof enclosure from which the machine-mounted lighting system receives its power.

Paragraph (e) requires that trailing cables conducting power to stationary lighting fixtures be protected against short circuits and overloads. The settings of the circuit breakers providing short-circuit protection for such trailing cables shall not exceed the minimum available short-circuit current at the end of the cable or the setting specified in Section 75.601-1, whichever is lower. The rating of the device providing overload protection shall not exceed the capacity rating of the cable.

Since the required electrical protection for circuits and trailing cables supplying power to stationary lighting fixtures is specifically contained in paragraphs (c) and (e), a fail-safe ground-check monitor is not required for a three-phase circuit supplying power to stationary lighting fixtures. Likewise, undervoltage protection is not required for a three-phase circuit supplying power to stationary lighting fixtures. The maximum length of trailing cables conducting power to stationary lighting fixtures is not specified; however, the requirement for short-circuit protection will limit the length of such cable.

75.1720 Protective Clothing; Requirements

Hard hats or hard caps are required to be worn by miners at underground coal mines in accordance with paragraph (f) of this Section. The purpose of the safety standard is to provide substantial protection for the head from falling objects and to protect miners against electrical shock or burn. Hard hats are required to be suitable for these purposes, and if they are painted, the paint base must be nonmetallic.

Hard hats or caps that meet or exceed the applicable specifications of the American National Standards Institute (ANSI) provide appropriate head protection and comply with these requirements. The applicable standards are ANSI's "Safety Requirement for Industrial Head Protection," Z89.1, and "Safety Requirements for Industrial Protective Helmets for Electrical Workers, Class B," Z89.2.

Hard hats or caps that do not meet or exceed the applicable ANSI or equivalent standards should not be used. Plastic "baseball-type" caps and thin plastic hats do not have adequate suspension systems and are not constructed of sufficiently substantial material to afford the necessary protection from impact and penetration of falling objects. Hats or caps constructed of metal materials create an additional hazard of electrical shock or burn because they are conductive.

The phrase "when other hazards to the eyes exist from flying particles" is interpreted to mean that face shields or goggles shall be worn by miners when performing work such as breaking material with a hammer, digging with a pick, tightening a roof support with an axe or hammer, sounding roof, riding in or on haulage equipment (except closed-type equipment such as covered man cars), and any other work considered hazardous to the miners' eyes.

Paragraph (c) of this Section requires that miners wear gloves whenever they troubleshoot or test energized electric power circuits or electric equipment. Work gloves in good condition are acceptable for troubleshooting or testing energized low- and medium-voltage circuits or equipment.

75.1722 Mechanical Equipment Guards

Guards installed to prevent contact with moving parts of machinery shall:

1. Be of substantial construction;
2. Be of such construction that openings in the guard are too small to admit a person's hand;

3. Be firmly bolted or otherwise installed in a stationary position; and
4. Be of sufficient size to enclose the moving parts and exclude the possibility of any part of a person's body from contacting the moving parts while such equipment is in motion.

Guards designed to prevent contact with ventilating fans having exposed blades shall completely enclose the outby side of the fan blades.

Guards, such as substantial chains, cables, or the equivalent, installed to protect persons from contact with the inby side of ventilating fans shall:

1. Be located at least 6 feet on the inby side of the fan blade;
2. Be installed to a height of at least one-half the height of the air passageway; and
3. Extend the width of the air passageway. Inspectors should carefully examine each belt conveyor drive to determine whether all rollers are sufficiently guarded to prevent persons from becoming entangled between the rollers and the conveyor belt.

75.1723 Stationary Grinding Machines; Protective Devices

Face shields or goggles shall be worn when operating any type of grinding wheel regardless of how the wheel is guarded.

75.1724 Hand-Held Power Tools; Safety Devices

If a hand-held power tool is equipped with a friction device in lieu of a switch which requires constant pressure to keep the tool operating, the friction device shall be adjusted to readily slip in case of emergency.

75.1725 Machinery and Equipment; Operation and Maintenance

The presence of defects, such as worn tires, defective steering or brakes, malfunctioning hydraulic controls, worn lagging on belt conveyor drive rollers, or frozen or damaged idler rollers could indicate that such machinery and equipment is not maintained in safe operating condition. Therefore, a violation of this section would exist if such defects render the equipment or machinery unsafe to operate.

When an inspector finds a violation as described above, he shall issue a citation requiring the condition to be corrected in reasonable time. Since this Section also requires that unsafe

equipment or machinery be removed from service immediately, the operator should be advised of the requirement. If the operator removes such unsafe equipment or machinery from service immediately it should be noted on the citation. If the operator does not remove such equipment or machinery from service immediately, another citation for such failure should be issued giving the operator reasonable time to comply.

This Section in no way affects enforcement of other mandatory safety standards and should be used only where such condition is not covered by any other regulation. Lack of frame grounding, improper protection, etc., are to be cited under the appropriate sections in accordance with Section 104 of the Act allowing reasonable time for compliance.

Loading machines and continuous-mining machines shipped from the manufacturer after January 1, 1981, are required to be equipped with load-locking valves in the boom and head lift cylinders. Where it is determined that a unit of equipment was shipped after January 1, 1981, and the load-locking valves are not maintained, enforcement action should be taken under Section 75.503, for failure to maintain the electric face equipment in permissible condition. Load-locking valves provided on equipment shipped from the manufacturer prior to January 1, 1981, also have to be maintained. Appropriate enforcement action under this Section should be taken if these load-locking valves are not being maintained.

The tramming of solid-state controlled battery powered equipment in the high-tram mode immediately upon energization of the tram motors indicates that an electrical fault is present on the equipment. When this occurs, the equipment is not in safe operating condition and must be removed from service and properly repaired.

Faulty equipment responds in two ways. First, the tram motors may start in high tram and then immediately stop, which causes the machine to "lurch" a short distance. This response indicates that the protective circuits in the solid-state logic unit are sensing a fault and are functioning properly. Second, the tram motors immediately start in high-tram and continue to run in this mode. This response indicates that an electrical fault is present on the machine and that the protective circuits in the solid-state logic unit are inoperative.

Proper functioning of temperature-sensitive switches or other devices which shut down air compressor motors when overheating occurs is essential to the safe operation of this equipment. Examinations and testing performed on air compressors must include attention to

overtemperature devices, and whenever these safety features are not functioning properly the equipment must be immediately removed from service.

Management shall have the responsibility of designating only properly trained personnel to operate equipment and machinery.

The trailing cable shall be disconnected from the source of power before repairs are made on portable or mobile equipment, except when the equipment must be operated for making adjustments.

Raised, elevated, and unsecured equipment must be securely blocked to prevent movement before miners position themselves under or between movable components of the equipment.

Occasionally more than one component location on a machine must be blocked. Blocking material must be capable of supporting the weight of the equipment or component. Wood used for blocking material must be solid and should be flat sided. Most equipment can be safely blocked with a wooden crib. The crib should be installed on a solid footing and wedged tightly to the machine to prevent any initial movement that could dislodge the blocking.

Machinery shall not be lubricated manually while in motion or while energized unless facilities are provided to assure against equipment accidentally starting while being lubricated. Section 75.509 prohibits equipment from being lubricated while energized. This would prohibit the use of machine-powered, hand-operated lubricators on the same machine that is being lubricated.

When it is necessary to position certain mechanical parts of equipment for repairs, maintenance, or lubrication, or when hydraulic fluid must be power-pumped, the machine may be energized for that portion of work. However, when hydraulic fluid is power-pumped, no other repair, maintenance, or lubrication work shall be done. Repair, maintenance, or lubrication work shall not be done until the power is removed from the machine. This would prohibit the use of machine-powered, hand-operated lubricators on the same machine that is being lubricated, unless all incoming power connectors are broken by a circuit breaker. A small circuit breaker, connected to the lineside of the power circuit breaker, could supply power to a machine-mounted lubricating system if the power circuit breakers are opened before the machine is lubricated. Opening a circuit breaker which is installed on the machine, and which opens all power conductors entering the machine, shall be acceptable as compliance with this Section for lubrication or changing bits. Opening a double-pole control switch which will open both the negative and positive control circuits, shall be acceptable on direct-current-powered cutting

machines and continuous miners for the purpose of deenergizing the machine for changing cutting bits.

When machines are mechanically connected to each other but trammed independently, and are sufficiently different in size, weight, and power, an emergency stop switch shall be installed on the smaller machine to deenergize the larger machine. Without an emergency stop switch the equipment is not considered to be in a safe operating condition and must be removed from service.

75.1729 Welding Operations

Welding operations shall be shielded to the extent that the other persons working in the adjacent area will not be able to view the welding area directly. Areas in which welding operations are being performed shall be ventilated sufficiently to prevent accumulation of smoke and other contaminants.

75.1730 Compressed Air; General; Compressed Air Systems

All pressure vessels shall be plainly marked with the manufacturer's name and maximum allowable working pressure. Safety relief valves shall be adjusted to flow at a pressure not exceeding the maximum allowable working pressure of the vessel, except that if the vessel is exposed to fire or other sources of external heat the relief valve may be adjusted to a value not exceeding 110 percent of maximum allowable working pressure.

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PART 77 MANDATORY SAFETY STANDARDS - SURFACE COAL MINES
AND SURFACE WORK AREAS OF UNDERGROUND COAL MINES

Subpart C Surface Installations

77.100 Demonstration of Ability to Test for Methane andfor Oxygen Deficiency

The demonstration of ability requirement of 30 CFR 77.100 applies when an applicant works at a surface area of an underground mine or a surface mine where there is a need for competence in testing for methane and/or oxygen deficiency. Locations where such tests are required include:

Tests for Methane

- 77.201-1 structures, enclosures, or other facilities where coal is handled or stored;
- 77.211(b) tunnels located below stockpiles, surge piles, and coal storage silos;
- 77.1112(b) areas where welding, cutting, or soldering will take place and that are likely to contain methane;
- 77.1916(c) any slope or shaft designed to penetrate into any coalbed below the surface and where welding, cutting, or soldering is to be performed;

Tests for Oxygen Deficiency and Methane

- 77.1501(c) the collar of auger holes when the auger hole penetrates an abandoned or mined out area of an underground mine; and
 - 77.1901(a) slope and shaft areas.
- Applicants for temporary certification who work at mines where one or more of the above standards has application are required to demonstrate their ability to competently perform the prescribed test to an MSHA inspector or training specialist. Where none of the circumstances or conditions described by the above standards are present, persons working at such mines and applying for temporary certification are not required to demonstrate their ability to perform methane or oxygen deficiency tests. MSHA inspectors will determine whether a demonstration of ability is necessary on a mine-by-mine basis. A temporary certification under 30 CFR 77.100 applies only to the mine where the miner is employed at the time the temporary certification is granted.

77.200 Surface Installations; General

This Section does not apply to housekeeping. It is to be used for keeping surface facilities in good repair relative to safety.

Inspections of surface facilities, structures, and enclosures should include an examination of all load-carrying members and related bracing. When such members or bracing are substantially warped, bent, deteriorated due to corrosion or weathering, or otherwise damaged or missing, the structure may be unstable or have a reduced load-carrying capacity. These conditions can cause or contribute to serious accidents and injuries, and appropriate enforcement action must be taken pursuant to this Section to require the structure, enclosure, or other facility to be maintained in good repair.

The district engineering staff should be consulted to evaluate the condition of a surface structure where assistance is needed in determining whether the condition causes instability or reduces the load-carrying capacity of the structure.

77.201 Methane Content in Surface Installations

Methane tests are not required where there are no surface structures, enclosures, or other facilities where methane could accumulate; where auger mining is not being conducted; or where tunnels are not located below stockpiles. There may be other conditions that do not require methane tests, in which case the inspector should use good judgment in requiring compliance with this regulation.

77.201-1 Tests for Methane; Qualified Person; Use of Approved Device

These tests are required regardless of any other gas detecting methods used.

77.201-2 Methane Accumulations; Change in Ventilation

This Section may be used to determine if a ventilation fan is needed for various surface facilities. However, it does not provide the authority to require a fan if other satisfactory adjustments in ventilation can be made.

77.202 Dust Accumulations in Surface Installations

This section is not meant to control dust from a health standpoint. It is meant to control dangerous quantities of coal dust that would create a fire or explosion hazard.

77.206 Ladders; Construction; Installation and
Maintenance

The phrase "wooden members" in Paragraph (b) includes the side members and rungs of ladders.

The words "used regularly" in Paragraph (c) mean, if the ladder is used for any regularly scheduled purpose regardless of the time interval. Paragraph (c) also states that backguards are required on all steep or vertical ladders that are more than 7 feet in height. This requirement in Paragraph (c) cannot be used to cite ladders on mobile equipment or for step ladders and vertical ladders that are not secured at a fixed location.

77.207 Illumination

The inspector should also consider the quality of light in providing a safe working environment. Attention should be given to glare, diffusion, and direction of the light. In areas where moving equipment is present, it is necessary to have the general working area lighted in order to provide sufficient illumination. An area may be illuminated by fixed lighting, machine-mounted lights, or portable lights.

77.208 Storage of Materials

It is not the intent of Paragraph (b) of this section to require valve covers on well secured intermittently used compressed gas cylinders in occupied shops and designated repair areas. However, the valve should be closed promptly after each period of use. Paragraph (e) permits the transportation and storage of compressed gas cylinders with recessed valves without additional protection.

77.211 Draw-off Tunnels; Stockpiling and Reclaiming
Operations; General

The requirements of Paragraph (a) of this section may be used as a factor in making a determination as to the need for a ventilation fan. However, it does not provide the authority to require a fan if satisfactory ventilation can be achieved by other means. Paragraph (b) does not require installation of a methane monitor.

77.212 Draw-off Tunnel Ventilation Fans; Installation

This section does not require the installation of a fan to ventilate a draw-off tunnel; however, it does regulate the installation if used.

77.213 Draw-Off Tunnel Escapeways

This section applies to any tunnel of sufficient length in which a miner could be entrapped. The escapeway shall be provided from the enclosed end to the surface by an exit other than the existing

tunnel. "Equivalent size" means that the smallest dimension in the escapeway from draw-off tunnels shall be no less than 30 inches.

77.214 Refuse Piles; General

A "safe distance," as used in Paragraph (a) of this section, should be at least 300 feet. Any proposal to construct a refuse pile within 300 feet should be reviewed by the District Manger.

"Fenced or otherwise guarded" as used in Paragraph (d) means a gate or other similar barrier across the entrance or exits to and from the refuse pile.

77.215 Refuse Piles; Construction Requirements

Paragraph (e) does not prohibit the operator from constructing a valley-fill type refuse pile, side hill refuse pile, etc., provided the operator installs hydraulic structures which will pass runoff from the affected watershed either around or under the refuse pile. The 100 year six-hour frequency storm should be used to determine the size of the hydraulic structure(s) used to accommodate surface runoff.

Paragraph (g) does not prohibit the operator from storing coal on a refuse pile in the form of a temporary stockpile.

77.215-1 Refuse Piles; Identification

This section does not specify a minimum or maximum size for the identification marker, nor for the letters/numbers used on the identification marker.

77.215-2 Refuse Piles; Reporting Requirements

The USGS topographic map, required by Paragraph (b)(2), should be legible of sufficient size to indicate the drainage area affecting the refuse pile. The nearest landmarks or communities should also be indicated.

Information, required by Paragraph (b)(3), should contain, as a minimum, the initial starting date of the pile (if known), foundation preparation (if known), material transport and handling (aerial tram, conveyor belt, truck haulage, etc.), approximate size(s) of refuse material, compaction equipment that had been used or is being used, and the lift thickness of the refuse material being placed.

Paragraph (b)(6) requires the operator to furnish information regarding diversion ditch size, decant pipe size, and any other hydraulic structure being used to pass water around or under a refuse pile in a permanent manner.

Under paragraph (b)(8), the operator shall submit revised reporting requirements if there are any significant changes

made in paragraphs (b)(1) through (b)(8) of this Section.

77.215-3 Refuse Piles; Certification

Paragraphs (a) and (b) do not require specific wording for certification. However, the registered engineer should incorporate the wording in paragraph (a) as part of the certification. In addition, the certification should include statements describing the remedial work performed at the site that has minimized the hazardous condition(s).

77.216 Water, Sediment, or Slurry Impoundments and
Impounding Structures; General

For the purpose of determining the elevation to which water, sediment or slurry can be impounded, measurements should be taken from the upstream toe of the structure to the lowest point on the crest of the structure. If the lowest point on the crest of the structure is the invert of a properly designed open channel spillway, then that point is the proper location for the upper measurement. Where decant pipes and pipe spillways are used, the elevation must still be measured to the lowest point on the crest of the structure, not to the invert of the decant riser or spillway pipe.

As the emphasized language above makes clear, the impoundment capacity of a structure may be based on a measurement to the invert of the spillway only if two contingencies are satisfied. The spillway must be an open channel configuration, and it must be properly designed. Where either of these requirements is lacking, the impoundment capacity of a structure must be determined based on a measurement made to the lowest point on the crest of the structure, without reference to the spillway.

To assure that the requirement of a properly designed spillway is satisfied when the impoundment capacity of a structure is to be determined by measurement to the invert of the spillway, district managers are advised to adopt the following procedures:

1. For impounding structures completed after August 6, 1981, the District Manager should notify the operator that, in order to rely on a measurement to the invert of the spillway for determining impoundment capacity, the operator must supply the information and analyses necessary for the district manager to make a meaningful evaluation of whether the spillway is properly designed. If this information is not made available to the district manager, then measurements should be made to the crest of the structure when determining impoundment capacity.

2. For impounding structures completed before August 6, 1981, if the district manager has reason to believe that the spillway is not properly designed, the operator may be required to supply the information necessary for the district manager to make a meaningful evaluation of whether the spillway is properly designed.

This Section will not generally apply to incised ponds constructed on undisturbed, relatively flat ground unless such ponds are determined by the district manager to present a hazard to coal miners.

77.216-3 Water, Sediment, or Slurry Impoundments and Impounding Structures; Inspection Requirements; Correction of Hazards; Program Requirements

In paragraph (c), "at the mine" refers to the mine office, preparation plant, engineering office, etc., depending on which location would be in the closest proximity to the site.

"One of the following persons" referred to in paragraph (d) should also include the preparation plant superintendent or foreman.

To comply with the training requirements of 30 CFR 77.216-3(g), a coal company shall submit, and the district manager may approve, a mine's training plan for persons whose work assignments require them to be qualified or certified. The intent of the plan is to ensure that the potential qualified person "shall be trained to recognize specific signs of structural instability and other hazardous conditions by visual observation and, if applicable, to monitor instrumentation."

The Mine Safety and Health Administration will consider the following items when evaluating a person to become qualified to inspect impoundments. The person must initially be trained according to an approved 30 CFR Part 77 training plan that has a program of instruction on impoundment inspection. The training course may be given by an instructor from the National Mine Health and Safety Academy, a district training or technical impoundment specialist, Technical Support personnel designated by the district manager, or an instructor designated to instruct impoundment inspection on an approved 30 CFR Part 77 training plan.

Before the person is considered qualified and is eligible to inspect water, sediment, or slurry impoundments according to 30 CFR 77.216-3, the person in the training program must pass an evaluation. The district manager may make use of an oral,

written or practical demonstration, in order to determine the successful completion of training by the person.

The results will be recorded on the appropriate Certification/Qualification Examination Report (MSHA Form 5000-17) by the Agency's representative who conducted the examination and forwarded to the Qualification and Certification Unit, P.O. Box 25367, Denver, CO 80225-0367.

The qualification status will become a permanent record in the Agency's data base and will not expire as long as retraining is attended on an annual basis.

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Subpart DThermal Dryers77.301 Dryer Heating Units; Operation

Additional standards which should be consulted with regard to paragraph (b) of this Section are: The National Fire Protection Association Standards Number 60 "Standards for the Installation and Operation of Pulverized Fuel Systems"; and 653 "Prevention of Dust Explosions in Coal Preparation Plants." Both can be found in the NFPA National Fire Codes, Volume 3--Combustible Solids, Dusts, and Explosives, 1971-72.

77.303 Hot Gas Inlet Chamber Dropout Doors

The phrase, "At the bottom," as used in this Section, is interpreted to mean in the bottom area, not necessarily underneath.

77.313 Wet-Coal Feedbins; Low-level Indicators

"Wet coal bins," as referred to in this Section, mean large surge bins where audible and visible low level indicators are necessary.

77.314 Automatic Temperature Control Instruments

The instrument referred to in paragraph (b) of this Section need not be locked. However, the mechanism that controls the temperature setting shall be locked or sealed to prevent tampering or unauthorized adjustment.

Subpart ESafeguards for Mechanical Equipment77.400 Mechanical Equipment Guards

The word "line," used in paragraph (b) of this Section, means beltline and should read "... if whipping action from a broken beltline would be hazardous to persons below." The guard required in paragraph (c) should extend a minimum distance of 30 inches from the point where persons could become caught between the belt and the pulley.

77.401 Stationary Grinding Machines; Protective Devices

Only wheels or discs with manufacturer's identification tags still attached, showing the proper r.p.m. rating of the wheel, shall be used. A grinding wheel or disc rated for 5,000 r.p.m. should not be used with a machine rated for 7,000 r.p.m.

77.403 Mobile Equipment; Falling Object Protective Structures (FOPS)

In enforcing paragraphs (a) and (b) of this Section, the inspector must make an independent judgment that a FOPS is necessary in order to protect the operator of the equipment. If an inspector observes equipment being operated and, in his/her opinion, a FOPS is necessary, the inspector shall issue a citation or order.

When mobile equipment other than what is listed in this Section, such as an excavator with a rotating deck, is used where there exists a hazard from falling objects, steps shall be taken to protect the operator. If, upon inspection, any machine is found operating in close proximity to a highwall and there is a danger from falling material, an order of withdrawal under the provisions of Section 107(a) of the Act would be appropriate to protect the machine operator.

77.403a Mobile Equipment; Rollover Protective Structures (ROPS)

Section 77.403a and 77.403b are written without parentheses. A citation may be written as 77.403a(c)(1). There are other possible combinations, but ensure that the correct transposition is made.

If an inspector, upon an inspection of a mine, finds that an imminent danger does exist which involves equipment manufactured prior to July 1, 1969, and relates to the lack of ROPS for such equipment, he/she shall issue an order under Section 107(a) of the Act. Such orders should describe the conditions (equipment, grades, etc.) and/or practices which constitute the imminent danger. Any such order issued should require the equipment (or similar equipment) to be withdrawn prohibited from operation under the conditions that created the imminent danger.

When such order has been issued, it should not be terminated because the mine operator has removed the equipment from service at the area where the imminent danger was found. The order should remain in effect to prevent the mine operator from putting that equipment (or similar equipment) back in operation under the same conditions after the inspector leaves the mine.

When an inspector finds a ROPS that is damaged or otherwise altered from its original configuration so that it no longer complies with these standards, a citation or order, as appropriate, should be issued for violation of paragraph (a) describing the condition observed.

Alterations and repairs to ROPS shall also be carefully examined for insufficient or defective welds. A ROPS with an insufficient or defective weld does not meet the requirements of paragraph (a), and a citation or order, as appropriate, should be issued. This condition also indicates that the weld may not have been performed by a certified welder, as required by paragraph (f). To determine whether a violation of paragraph (f) has occurred, the inspector should ask the operator to furnish evidence that the weld was performed by a certified welder.

77.404 Machinery and Equipment; Operation and Maintenance
Paragraph (a) of this Section does not affect enforcement of other mandatory safety standards and should be used only where such condition is not covered by any other regulation. Lack of frame grounding, improper protection, etc., are to be cited under the appropriate section in accordance with Section 104(a) of the Act, allowing reasonable time for compliance.

The presence of defects, such as worn tires, defective steering or brakes, malfunctioning hydraulic controls, worn lagging on belt conveyor drive rollers, or frozen or damaged idler rollers, could indicate that such machinery and equipment are not maintained in safe operating condition. Therefore, a violation of this Section would exist if such defects render the equipment unsafe to operate.

When an inspector finds a violation as described above, he/she shall issue a citation requiring the condition to be corrected in a reasonable time. This Section also requires that unsafe equipment be removed from service immediately. The operator should be advised of the requirement. If the operator removes such unsafe equipment from service immediately, this should be noted on the citation. If the operator does not remove such equipment from service immediately, another citation for such failure should be issued, giving the operator reasonable time to comply.

During the inspection of shop areas, battery-charging stations, and other places where hoisting equipment is used, such equipment should be closely examined to assure that the equipment is in safe operating condition.

These installations should be closely examined to make certain that:

1. The hoist is securely fastened to the dolly or other support.
2. The dolly rides the I-beam without excessive side play.
3. The hoist has proper operating controls that allow the hoist to be operated from a safe position.
4. The dolly or hoist does not contain bent or defective parts or defective ropes or chains.
5. The hoist is being operated within its rated capacity.
6. Hoists attached to I-beams are being used for vertical lifting only.
7. The structure the hoist is attached to is provided with adequate stops or devices to prevent it from traveling beyond the end of the supporting structure.

The failure of safety devices such as horns, headlights, taillights, brake lights, or mirrors on mobile surface equipment can contribute to serious accidents involving these vehicles. Mine operators should be aware that horns, lighting systems, and other safety features can be rendered inoperable by accumulations of dust, mud, grease, or oil, as well as defective mechanical or electrical components. Accordingly, all such safety devices are required, under paragraph (a), to be maintained in operating condition or the mobile equipment must be removed from service.

MSHA's policy on Paragraph (c) of this section is similar to the policy on Section 77.500, which states that it is not necessary to completely deenergize large surface mining equipment where means are provided in the equipment to deenergize any part where repair work is to be done. Similarly, to comply with Paragraph (c), it is not necessary to completely deenergize large surface mining equipment where the motion of the operating equipment does not pose a hazard, and means are provided in the equipment to deenergize that part where repair or maintenance work is to be done. Each repair or maintenance job must be examined

separately for hazards related to that particular job or work area. If the machine's operation poses a hazard to the employee performing the work, the machine shall be shut down until the work is completed or the hazard no longer exists. General maintenance and housekeeping can normally be performed while the machine is in motion except around unguarded energized electric or moving mechanical equipment.

77.405 Performing Work From a Raised Position;
Safeguards

Mechanical means that are manufactured as an integral part of the machine for the purpose of securing a portion of the machine in a raised position are acceptable as meeting the requirements of this section.

Paragraph (b) of this Section requires that raised, elevated, and unsecured equipment must be securely blocked to prevent movement before miners position themselves under or between moveable components of the equipment. Occasionally, more than one component location on a machine must be blocked. Blocking material must be capable of supporting the weight of the equipment or component. Wood used for blocking material must be solid and should be flat sided. Most equipment can be safely blocked with a wooden crib. The crib should be installed on a solid footing and wedged tightly to the machine to prevent any initial movement that could dislodge the blocking.

77.408 Welding Operations

Welding operations within enclosed areas where excessive smoke and fumes accumulate should be ventilated by mechanical means.

77.410 Mobile Equipment; Automatic Warning Devices

The warning device required by this Section need not be provided for automobiles, jeeps, pickup trucks, and similar vehicles where the operator's view directly behind the vehicle is not obstructed. Service vehicles making visits to surface mines or surface work areas of underground mines are not required to be equipped with such warning devices.

77.413 Boilers

It is not the intent of this regulation to cause electric hot water heaters to meet the requirements of this Section, even though the name "boiler" appears on the name plate. The regulation applies only to steam boilers.

Subpart F Electric Equipment - General77.500 Electric Power Circuits and Electric Equipment;
Deenergization

When electrical work is being performed on equipment, it is not necessary to completely deenergize the power system if means are provided on the equipment to deenergize the particular part or circuit on which repair work is to be done.

When work is performed in close physical proximity to exposed electric circuits or parts, they shall be deenergized. High-voltage circuits that are not equipped with metallic shielding are considered to be exposed. Sections 110-16 and 710-34 of the 1968 National Electrical Code pertaining to working clearances can be used as a guide in determining "close physical proximity." All circuits within an electrical enclosure shall be deenergized before work is performed within the enclosure unless such energized circuits are guarded by suitable physical guards or adequate physical separation.

"Troubleshooting or testing", for the purpose of this Section, would include the work of locating an electrical problem in the electric circuits on an energized machine, but would not include the actual repair with the machine energized.

Sections 75.1720(c) and 77.1710(c) require that protective gloves be worn by miners when they are performing work "which might cause injury to the hands," unless the gloves would create a greater hazard by becoming entangled in the moving parts of equipment. As the accident and injury data associated with working on energized circuits and equipment clearly indicates, this type of work presents a significant risk of hand injury. Therefore, gloves worn in accordance with 75.1720(c) and 77.1710(c) will be required whenever miners troubleshoot or test energized electric power circuits or electric equipment. Work gloves in good condition are acceptable for troubleshooting or testing energized low- and medium-voltage circuits or equipment.

77.501 Electric Distribution Circuits and Equipment;
Repair

"Electrical work," as referred to in this Section, includes the design, installation, maintenance or repair of electric equipment and circuits. Splices and terminations made in electric cables, installation of couplers on the ends of cables, electric machine repairs, electric wiring, pole and line work, work performed inside electrical substations or other areas in proximity to exposed energized electrical parts, work performed inside transformers, switchboxes, switch houses,

electric panels or other enclosures of electric equipment and circuits are examples of tasks that are considered to be "electrical work" and are required to be performed by or under the direct supervision of a qualified person.

Examples of duties that are not considered to be "electrical work" and would not be required to be performed by a qualified person or under the direct supervision of a qualified person are, operation of electric equipment, transportation of equipment and cables, operation of control switches, circuit breakers or switchboxes, provided no energized parts are exposed, changing cutting bits, lubrication work, moving of energized trailing cables, or inserting or withdrawing proper cable couplers into or from their receptacles. These tasks are considered to be part of the normal routine operation of electric equipment; therefore, they are not considered to be "electrical work."

The term "direct supervision" shall not be interpreted to mean that the qualified person be physically present at all times during the performance of such repairs, but the qualified person has the following responsibilities:

1. The qualified person shall examine and/or test an electric circuit or machine and determine the need for repair or maintenance.
2. The qualified person must give specific instructions to the employee assigned to perform this work with respect to the nature and extent of the repairs to be performed and, where necessary, prescribe the manner in which the work is to be performed.
3. The qualified person is, at all times, under continuing duty to instruct, advise, or consult with the employee, in the event the work assigned cannot be performed by the employee in the manner prescribed.
4. The qualified person must examine and test the completed work before the circuit is energized or the machine is returned to service.

It is MSHA's policy that a person trained to perform electrical work and to maintain electric equipment under the direct supervision of a qualified person shall not be assigned the duty of testing or troubleshooting energized circuits. Persons trained to perform electrical work and to maintain electric equipment may only do testing and troubleshooting on energized circuits as part of their training program. During this

testing and troubleshooting operation, a qualified person, as defined in Section 77.103, must be present at all times to observe, instruct, and aid the trainee.

"Suitably tagged" means that a sign with wording such as "Danger - Hands Off - Do Not Close - Miners Working on Line," shall be attached to the opened disconnecting device. The tag should bear the name of the workman who installed it.

Keys to locks used to lock out switches should be kept by the person working on the circuit or equipment.

77.502 Electric Equipment; Examination, Testing and Maintenance

For purposes of this Section, "electric equipment" shall include all control circuits; control switches or devices; circuit breakers; fuses; conduits; wiring; motors; transformers; lighting equipment; hand-held tools such as drills, wrenches, and saws; etc. The tests, examinations, and proper maintenance required by this Section shall include all items mentioned above and all other such equipment at the mine.

77.503 Electric Conductors

Section 77.503 requires that, "electric conductors shall be sufficient in size and have adequate current carrying capacity and be of such construction that a rise in temperature resulting from normal operation will not damage the insulating materials." Section 77.503-1 outlines the term "sufficient" and states that electric conductors must "meet the minimum current carrying capacity provided for in the National Electric Code, 1968" (emphasis added). While Section 77.503 states general ampacity and conductor size requirements, Section 77.503-1 incorporates the specific minimum requirements of standards promulgated by consensus standards organizations.

Since publication of the 1968 NEC, technological advances in power cable manufacture have been made. Insulated conductors having better grades of insulation and temperature ratings have been developed which far exceed the capabilities of conductors addressed by the 1968 NEC. Therefore, ampacity tables for insulated conductors other than trailing cables used on the surface and manufactured in accordance with minimum NEC standards, or which meet the more general safety test of Section 77.503 are acceptable.

For example, conductors manufactured in accordance with the Insulated Cable Engineers Association (ICEA) standards, which conform to the ICEA ampacity tables or other nationally recognized standards would be acceptable as meeting the requirements of

Section 77.503. Enforcement action should not be taken if cables do not meet the specifics of the 1968 NEC ampacity and temperature rating standards, but equal or surpass the minimum level of safety afforded by compliance with the NEC. This enforcement policy will allow the use of newly-designed electric conductors which are not addressed by the 1968 NEC, but which do comply with Section 77.503 and offer equal or greater miner protection.

Trailing cables are required to meet the minimum capacity requirements of the Insulated Power Cable Engineers Association (IPCEA) - National Electric Manufacturers Association (NEMA) standards. This policy does not affect MSHA's treatment of trailing cables.

77.504 Electrical Connections or Splices; Suitability

This Section requires that splices made in electric conductors be made in a workman-like manner and establish sufficient electrical conductivity so that the joined conductors will not heat or spark under load. Because of the different characteristics of devices, such as pressure terminal or pressure splicing connectors and soldering lugs, they shall be suitable for the material of the conductor and shall be properly installed and used. Conductors of dissimilar metals shall not be intermixed in a terminal or splicing connector where physical contact occurs between dissimilar conductors, unless the device is suitable for the purpose and conditions of use. Materials such as solder, fluxes, inhibitors, and compounds, where employed, shall be suitable for the use and shall be of a type which will not adversely affect the conductors, installation, or equipment. Soldered splices in electric conductors shall be joined with suitable connectors and then soldered. Splices made by twisting conductors together, tying knots in conductors, splices that have bare or exposed conductors, splices that heat or arc under load, or splices in multiple conductor cables that do not have the outer jacket replaced would constitute noncompliance.

All connections or splices in insulated conductors shall be reinsulated to at least the same degree of protection as the remainder of the conductor. Tape, such as rubber, glass, asbestos, or plastic will be acceptable as insulation. Friction tape is not an acceptable insulation material, but may be used to provide mechanical protection.

77.505 Cable Fittings; Suitability

For the purpose of this Section, a cable, with either single or multiple conductors, is one that has an outer jacket in addition to the insulation provided for each power conductor. An electrical fitting is an accessory such as a clamp or other part of a wiring system that is intended primarily to perform a

mechanical rather than an electrical function. The function of a proper electrical fitting for a cable entering a junction box, electrical panel, termination box, or other electrical enclosure is to prevent a strain on the electrical connections and to prevent chafing or other movement of the cable that might allow an energized electrical conductor to fault to the enclosure frame. Proper fittings would permit box connectors, packing glands, strain insulators, strain clamps, or metal or wood clamps, etc.

Electric circuits that are made up of individual insulated wires that enter junction boxes, termination boxes or other electrical enclosures need not have fittings, but must be provided with insulated bushings.

77.506 Electric Equipment and Circuits; Overload and Short-Circuit Protection

Section 77.506 requires "automatic circuit-breaking devices or fuses of the correct type and capacity" on electric equipment and circuits to protect against short circuits and overloads. Section 77.506-1 specifies what was considered to be the correct type and capacity for circuit breakers and fuses at the time the standard was enacted. It requires such devices and fuses to meet the minimum requirements of the 1968 NEC. For certain excavation equipment, requiring strict compliance with the terms of the 1968 NEC could prevent the use of circuit protective devices of appropriate type and capacity. Therefore, Section 77.506-1 should not be applied to some equipment which meets the requirements of Section 77.506.

Alternating- and direct-current loop (feedback) systems and their controls, which are used on large shovels, draglines and in-mine hoisting installations are normally designed so that their currents are limited to values below those which would cause a harmful overload condition to circuits or motors. These circuits on the equipment specified above comply with Section 77.506, and will not be required to have short-circuit or overload protective devices to comply with the terms of the NEC.

77.507 Electric Equipment; Switches

The intent of this Section is to require that all control devices be fully enclosed to prevent exposure of bare wires and energized parts. Improvised starting methods such as plug and receptable devices, trolley taps and trolley wire "stingers" that are used to start or stop electric motors are examples of noncompliance with this provision.

77.508 Lightning Arresters, Ungrounded and Exposed Power Conductors and Telephone Wires

Conductors that are provided with a metallic shield or are

jacketed by a grounded metal covering or enclosure, suspended by a grounded messenger wire, installed under grounded metal framework, protected by the umbrella-effect of overhead grounded static line, or are buried in the earth are not considered exposed for the length so protected. If the trolley wire of a d.c. system is paralleled by an exposed feeder cable, one lightning arrester would provide protection for both if they are interconnected near the lightning arrester.

To comply with this Section, three-phase alternating-current circuits should be provided either with three separate lightning arresters or with a three-phase arrester which consists of three arresters in one case having a common ground terminal.

77.511 Danger Signs at Electrical Installations

"Major electrical installations" shall include the following:

1. All high-voltage installations housing exposed energized parts, such as: fence enclosed substations; skid-mounted transformers; transformers or switchgear located in vaults or rooms; circuit breaker and switch houses; enclosures on board machines, in preparation plants, or shops, that house high-voltage switches, fuses or exposed buss; and high-voltage motor controls.

Examples of high-voltage installations that are not considered to be major are: high-voltage cables serving surface mine equipment; pole-mounted transformers, regulators and capacitors; pole-mounted disconnecting switches; motor generator sets having no exposed high-voltage parts, and high-voltage cables or wiring in conduits passing through enclosures from floor to floor in preparation plants or machines.

2. Rooms or areas housing switchboards containing exposed parts energized at more than 40 volts to ground.

77.513 Insulating Mats at Power Switches

Insulating mats or dry wooden platforms are required to be kept in place where a person would normally stand at switchboards or power control switches only if a shock hazard exists.

Installations where a shock hazard exists include, but are not limited, to the following:

1. all live front switchboards with exposed components energized at more than 40 volts to ground; and

2. all overhead high-voltage disconnect switches which are operated from the ground by means of mechanical linkage. (See Section 77.704-9 for requirements for high-voltage switches.)

Enclosed power control switches such as portable circuit breakers of switch houses that are supplied power from a resistance-grounded system, as required by Section 77.802 or 77.901, are not considered to pose a shock hazard.

Grounded metal mats or plates may not be used instead of insulating mats in front of live front switchboards.

Insulating mats or platforms installed at high-voltage installations shall be rated for not less than the phase-to-phase voltage of the circuit. Insulating mats can provide such additional safety if placed at low-voltage linestarters, fuse boxes, and other low-voltage switchgear containing renewable parts.

77.516 Electric Wiring and Equipment; Installation and Maintenance

Section 77.516 requires, in addition to compliance with Sections 77.503 and 77.506, that electric equipment installed after June 30, 1971, meet the requirements of the NEC. The NEC has been incorporated into MSHA standards to address wiring and wiring methods for surface facilities and structures not specifically covered in Part 77. The NEC will continue to be applied to surface facilities and structures other than the specified excavation equipment. The NEC contains safety guidelines which are not specifically tailored to surface mine excavation equipment and conductors, but which cover a much broader scope. While Section 77.516 addresses wiring and electric equipment installed after June 30, 1971, on surface mining machines, many provisions of the NEC are not applicable to the wiring methods, types of equipment, and conditions on these machines. For example, certain excavation equipment designed and installed since June 30, 1971, is not compatible with the requirements of the 1968 NEC. Therefore, strict application of and compliance with the NEC for the wiring methods used on surface mine excavation equipment is not practicable.

Wiring and electric equipment installed after June 30, 1971, on-board electric or diesel-powered surface excavation equipment are not required to comply with the NEC under Section 77.516, although mine operators are free to rely on it as a guideline. This policy applies to equipment such as draglines, shovels, dozers, bucket wheel excavators, mobile

drills, mobile cranes, haulage trucks, and endloaders. However, all other relevant provisions in Part 77 will continue to apply to these machines. Equipment and wiring installed after June 30, 1971, will be inspected and enforcement action taken in the same manner as on equipment installed prior to that date. For example, Sections 77.404 and 77.502 requiring examination and proper maintenance will be enforced, along with appropriate conductor ampacities under Section 77.503, short-circuit and overload protection under Section 77.506 and all relevant grounding provisions.

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Subpart GTrailing Cables77.600 Trailing Cables; Short-Circuit Protection;
Disconnecting Devices

This Section does not permit the use of single element fuses for trailing cable short-circuit protection. Dual element fuses with adequate interrupting capacity may be used to provide short circuit protection for single phase and d.c. trailing cable circuits.

"Adequate interrupting capacity" means that the fuse or circuit breaker is capable of interrupting the maximum short-circuit current the circuit may conduct without destruction to the device.

This Section requires that short-circuit protection be provided for each undergrounded power conductor. Therefore, in direct current systems in which neither polarity is grounded, protective elements shall be provided for both the positive and negative lines. This necessitates the use of either a fuse in each polarity or a two-pole circuit breaker.

A visual means of disconnecting power from trailing cables must be provided so that it can readily be determined whether or not the cable is deenergized. Enclosed circuit breakers are not acceptable as visual evidence that power is disconnected. Plugs and receptacles located at the circuit breaker would be acceptable as the visible means of disconnecting the power.

77.603 Clamping of Trailing Cables to Equipment

If a strain clamp is used, it shall be designed and installed to prevent damage to the cable jacket. Cable grips, such as Kellems grips, anchored to the machine, may be used in lieu of strain clamps.

77.606 Energized Trailing Cables; Handling

Other protective devices such as insulated sleeves, insulated jackets, insulated aprons, insulated cable handling hooks, etc., are required by this Section when they are necessary to prevent the energized trailing cable from contacting the cable handler's body or clothing.

77.606-1 Rubber Gloves; Minimum Requirements

Rubber gloves with a rating of at least 20,000 volts shall be worn while handling energized high-voltage trailing cables, regardless of what other protective devices are used.

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Subpart HGrounding77.700-1 Approved Methods of Grounding

Approved methods of grounding the metallic enclosures of electric equipment receiving power from ungrounded alternating-current power systems are contained in Section 77.701-1.

Approved methods of grounding the metallic enclosures of electric equipment powered from direct-current power systems are contained in Section 77.701-2.

Subpart H does not specify approved methods of grounding the metallic enclosures of stationary equipment receiving power from low- and medium-voltage, solidly grounded alternating-current systems. Nevertheless, Section 77.701 requires that such enclosures be grounded by methods approved by an authorized representative of the Secretary. An inspector shall not approve any method of grounding that does not include a solid connection to a grounding conductor which extends to the grounded point of the power source. The grounded power conductor of a solidly grounded alternating-current power system may serve as the equipment grounding conductor only between the grounded point of the power source and the grounded enclosure of the service disconnecting means for a building or other stationary facility. The grounded point of the power source and the metallic enclosure of each service disconnecting means shall be connected to an acceptable grounding medium such as metal waterlines having low-resistance to earth, a low-resistance ground field, etc.

Subpart H does not specify approved methods of grounding the metallic enclosures of portable or mobile equipment receiving power from high-voltage systems since the requirements for grounding such enclosures are specifically contained in Section 77.802.

This Section specifies approved methods of grounding metallic sheaths, armors and conduits enclosing power conductors. The approved methods of grounding listed in this Section are similar in that they each require a solid connection to an acceptable grounding medium. In resistance-grounded systems, the only acceptable grounding medium is the grounded neutral of the system.

In other systems, an acceptable ground medium includes:

1. Metal waterlines having low-resistance to earth;
2. A low-resistance ground field; or
3. Any other grounding medium which ensures that there is no

difference in potential between the metallic enclosures and earth.

It should be emphasized that the metallic enclosures of all circuits supplied power from the same system must be solidly connected to the same grounding medium.

77.701 Grounding Metallic Frames, Casings, and Other Enclosures of Electric Equipment

Certain moveable electric equipment, e.g., rail-mounted and pivoting coal stackers, traveling shop cranes on track rails, small traveling hoists on I beams, etc., cannot be strictly classified as portable, mobile or stationary equipment. For the purposes of frame grounding, such equipment shall be considered stationary. Consequently, the grounding requirements of Subpart H apply to such equipment.

This Section requires that metallic frames of electric equipment be grounded by methods approved by an authorized representative of the Secretary. Therefore, rail-mounted and pivoting coal stackers, traveling shop cranes on track rails, small traveling hoists on I beams, and similar equipment shall be grounded in accordance with the following:

All tracks shall be bonded or welded at each joint, and each individual track rail or I beam shall be solidly grounded through a grounding conductor which meets the requirements of Section 77.701-3 to an acceptable grounding medium. In instances where the conveyor, hoisting and/or tramming motors receive power through a trailing cable, the moving frame shall be grounded to an acceptable grounding medium through a proper size grounding conductor inside the cable. In instances where the conveyor, hoisting and/or tramming motors receive power through a trolley system, the moving frame shall be grounded to an acceptable grounding medium through an additional grounding trolley contact.

77.701-1 Approved Methods of Grounding of Equipment Receiving Power From Ungrounded Alternating-Current Power Systems

The metallic enclosures of all equipment supplied power from the same system must be solidly connected to the same grounding medium.

77.701-2 Approved Methods of Grounding Metallic Frames, Casings and Other Enclosures of Electric Equipment Receiving Power from a Direct-Current Power System

Paragraph (b) requires that metal battery trays be solidly connected to the grounded frame of the battery charger while the batteries are being charged.

77.702 Protection Other Than Grounding

Portable tools and appliances that are protected by an approved system of double insulation, or its equivalent, need not be grounded. Where such an approved system is employed, the equipment will be distinctly marked.

77.703 Grounding Frames of Stationary High-Voltage Equipment Receiving Power From Ungrounded Delta Systems

The term "ungrounded," as used in Sections 77.701-1, 77.703, 77.704-1(a) and 77.704-11, refers to the type of system grounding. The term does not refer to the grounding of metallic enclosures of electric equipment and circuits.

77.703-1 Approved Methods of Grounding

The grounding methods approved for grounding metallic enclosures of equipment receiving power from ungrounded alternating-current power systems (Section 77.701-1) are acceptable for grounding the metallic enclosures of stationary high-voltage equipment receiving power from ungrounded delta systems, provided the requirements of Sections 77.802 and 77.810 are also met.

77.704 Work on High-Voltage Lines; Deenergizing and Grounding

High-voltage lines shall be deenergized with a disconnecting device so that it can be determined by visual observation that the circuit is deenergized before the lines are grounded (refer to Section 77.704-9 when operating disconnecting devices), except that repairs may be permitted on energized high-voltage lines as specified in the regulations.

77.704-1 Work on High-Voltage Lines

There may be instances where one qualified electrician will go back some distance from the work site and deenergize and ground the high-voltage system to be repaired. This qualified electrician must be in either direct telephone or radio communication with the qualified electrician performing the actual work, and when he/she has deenergized and grounded the system, he/she can inform the qualified electrician to make the repairs.

77.704-8 Protective Equipment; Testing and Storage

Tested gloves that are not in use and kept in a storeroom or warehouse shall be given the same consideration as new gloves.

77.705 Guy Wires; Grounding

Guy wires attached to poles supporting high-voltage transmission lines must either be securely connected to the system ground or provided with insulators installed near the

pole end as required by 30 CFR 77.705. One of the safety purposes of this requirement is to ensure that guy wires do not become energized so that a shock hazard is presented to persons on the ground. Therefore, when insulators are installed, they must be located below or extend below all high-voltage lines supported by the pole.

The in-line insulator, if used, should be at least 8 feet from the ground, according to the National Electrical Safety Code, 1973.

A guy wire connected to a pole butt ground which is not connected to the system ground would be an example of noncompliance with this Section.

Subpart I Surface High-Voltage Distribution**77.800 High-Voltage Circuits; Circuit Breakers**

High-voltage circuits supplying power to portable or mobile alternating-current equipment shall be protected against the harmful effects of a grounded phase in any circuit connected to the same transformer secondary. Consequently, if one bank of transformers supplies power to both stationary and portable or mobile loads, the circuit(s) extending to the stationary loads, as well as the circuit(s) extending to the portable or mobile loads, shall be provided with grounded phase protection.

Grounded phase protection for resistance-grounded circuits should be adjusted to operate on as low a value of fault current as practical; preferably not more than 40 percent of the current rating of the neutral grounding resistor.

77.800-1 Testing, Examination, and Maintenance of Circuit Breakers; Procedures

Paragraph (c) does not require the tank surrounding the oil circuit breakers to be dropped during this examination unless there is doubt of the qualified person making this examination as to conditions inside the tank.

77.802 Protection of High-Voltage Circuits; Neutral Grounding Resistors; Disconnecting Devices

The exception in this Section applies to high-voltage systems which supply power to stationary surface equipment only. Consequently, if a high-voltage system supplies power to equipment located underground in a mine, as well as equipment located on the surface, the frames of all equipment supplied power from the system shall be grounded in accordance with Section 75.802. Likewise, if a high-voltage system supplies power to portable or mobile equipment located on the surface, as well as stationary equipment located on the surface, the frames of all equipment supplied power from the system shall be grounded in accordance with the resistance grounding requirements of this Section.

77.803 Fail Safe Ground Check Circuits on High-Voltage Resistance-Grounded Systems

The ground check circuit required by this Section shall cause the circuit breaker to trip when any of the following occur:

1. The ground check wire is broken; and

2. Either the ground wire is broken at any point, or the impedance of the grounding circuit increases beyond the amount necessary to cause a 100-volt drop in the grounding circuit external to the grounding resistor under ground fault conditions.

It shall not be possible to reclose the circuit breaker while either of the above faults exist.

This Section permits the approval of a no less effective device in lieu of a fail safe ground check circuit. The following alternate method shall be considered no less effective than a fail safe ground check circuit for assuring the continuity of the grounding circuit extending to permanently installed stationary equipment which is supplied power from a high-voltage resistance-grounded system:

1. An equipment grounding conductor, sized in accordance with Section 77.701-3, shall originate at the grounded side of the grounding resistor and shall extend along with the power conductors and shall serve as a grounding conductor for the frames of all equipment receiving power from the resistance-grounded system.
2. A grounding electrode conductor shall connect the frames of the stationary equipment to a low resistance ground field located near the utilization location.
3. The ohmic value of the grounding resistor and the impedance of the low resistance ground field shall be maintained in such a manner that not more than 100 volts will appear between the equipment frame and earth under fault conditions in the event that the equipment grounding conductor should be severed.
4. The ohmic value of the grounding resistor and the impedance of the ground field to which the grounding resistor is grounded shall be maintained in such manner that not more than 100 volts will appear between the grounded side of the grounding resistor and earth under fault conditions in the event that the equipment grounding conductor should be severed.
5. This method for assuring the continuity of grounding circuits shall not be approved for high-voltage circuits which supply power to high-voltage equipment underground in a mine or to portable or mobile high-voltage equipment

on the surface. The continuity of such grounding circuits shall be continuously monitored by fail safe ground check circuits as required by Sections 75.803 and this Section.

77.803-2 Ground Check Systems Not Employing Pilot Check Wires;
Approval by the Secretary

High-voltage trailing cables used with ground check systems not employing ground check wires, as provided in this Section, are not required to be equipped with installed ground check conductors.

77.805 Cable Couplers and Connection Boxes; Minimum Design
Requirements

Existing medium- and high-voltage cable couplers that are not equipped with a terminal contact for the ground check conductor may be used if suitable means are provided for breaking the ground check conductor first when the coupler is being uncoupled. Suitable means include the installation of a locking switch on the coupler so that the coupler cannot be uncoupled until the ground check conductor is broken, or the installation of an external ground check connector on the coupler so that the ground check conductor is broken first when the coupler is being uncoupled.

Except for connections made inside cable connection boxes, totally enclosed metal switchhouses, etc., this Section expressly prohibits the use of single-pole couplers (Miller plugs) in medium- or high-voltage power circuits.

77.808 Disconnecting Devices

A "branch line" means a circuit that is formed by connection to an existing high-voltage circuit for the purpose of feeding branch loads. "Visual observation," as referred to in this Section, means that a physical separation in the current-carrying parts of the disconnecting device can actually be seen. Enclosed circuit breakers, oil-filled cutout switches, and other devices which do not have a visual means of determining that the circuit is deenergized do not meet the requirements of this Section.

A cable coupler or other device that is not designed for load-break purposes is not acceptable as a disconnecting device unless it is used in conjunction with a current-interrupting device such as a circuit breaker or oil-filled cutout which can be used to deenergize the circuit before the cable coupler or other device is opened. If a remote switch in the ground check circuit is used to trip a circuit breaker prior to uncoupling the coupler, visual or audible evidence must be provided to indicate that the circuit breaker has opened when the control switch is operated.

77.809 Identification of Circuit Breakers and Disconnecting Switches

The identifying markers for circuit breakers and disconnecting switches shall be large enough and located where they can be readily seen in the event that the circuit must be deenergized quickly.

Either metallic or plastic material may be used for the marker which should adequately identify the circuit (e.g., No. 1 Loader, Dragline, No. 1 Transformer Skid, etc.).

Where cable couplers are used in conjunction with current-interrupting devices to meet the requirements of Section 77.808, both the cable coupler and the current-interrupting device shall be labeled.

77.810 High-Voltage Equipment; Grounding

"Effectively grounded," as used in this Section, means that the frames, supporting structures and enclosures of high-voltage equipment are grounded in a manner that will prevent lethal voltages from appearing on such equipment during ground fault conditions.

The frames, supporting structures and enclosures of high-voltage equipment receiving power from a system, required by Section 75.802 or Section 77.802 to be resistance grounded, shall be considered effectively grounded only when they are grounded in accordance with the resistance grounding requirements contained in Section 75.802.

The frames, supporting structures and enclosures of stationary high-voltage equipment receiving power from a resistance-grounded power system other than a system which is required to be resistance grounded by Section 75.802 or Section 77.802 shall be considered effectively grounded provided:

1. Such frames, structures and enclosures are solidly connected to a grounding conductor which originates at the grounded side of the grounding resistor, extends along with the power conductors and serves as the grounding conductor for the frames, supporting structures and enclosures of all high-voltage equipment supplied power from the system; and
2. The grounding conductor is solidly connected to a ground field at the power source and at each utilization location.

The frames supporting structures and enclosures of stationary high-voltage equipment receiving power from a wye-connected power system in which the neutral of the source is solidly grounded shall be considered effectively grounded provided:

1. such frames, structures and enclosures are solidly connected to a neutral conductor which originates at the neutral point of the power source, extends along with the power conductors and serves as the grounding conductor for the frames, supporting structures and enclosures of all high-voltage equipment supplied power from the system; and
2. the neutral conductor is solidly connected to a ground field at the power source and at each utilization location.

Subpart J Low- and Medium-Voltage Alternating Current Circuits**77.900 Low- and Medium-Voltage Circuits Serving Portable or Mobile Three-Phase Alternating-Current Equipment; Circuit Breakers**

Low- and medium-voltage circuits supplying power to portable or mobile three-phase alternating-current equipment shall be protected against the harmful effects of a grounded phase in any circuit connected to the same transformer secondary.

Consequently, if one bank of transformers supplies power to both stationary and portable or mobile loads, the circuits, extending to the stationary loads, as well as the circuits extending to the portable or mobile loads, shall be provided with grounded phase protection.

Grounded phase protection for resistance-grounded circuits should be adjusted to operate on as low a value of fault current as practical; preferably not more than 40 percent of the current rating of the neutral grounding resistor.

77.902 Low- and Medium-Voltage Ground Check Monitor Circuits

The ground check circuit required by this Section shall cause the circuit breaker to trip when any of the following occur:

1. The ground check wire is broken. Existing low- and medium-voltage cable couplers that are not provided with a terminal contact for the ground check conductor may be used if suitable means are provided for breaking the ground check conductor first when the coupler is being uncoupled.
2. Either the ground wire is broken at any point, or the impedance of the grounding circuit increases beyond the amount necessary to cause a 40-volt drop in the grounding circuit external to the grounding resistor under ground fault conditions.

77.903 Disconnecting Devices

"Visual evidence," as used in this Section, means that a physical separation of the current-carrying parts of the disconnecting device can actually be seen. Consequently, molded case circuit breakers are not acceptable as disconnecting devices. A connecting plug on the outby end of a cable with which the cable is connected to the power source box shall be accepted as a disconnecting device. Other visible disconnecting means, such as switches with visibly opened contacts, will also meet the requirements of this Section.

77.904 Identification of Circuit Breakers

Either metal or plastic tags may be used to identify circuit breakers if they are attached securely to the circuit breaker enclosure and are large enough and placed so that they can be readily seen. The trailing cable should also be identified with the circuit breaker.

77.906 Trailing Cables Supplying Power to Low-Voltage Mobile Equipment; Ground Wires and Ground Check Wires

Low-voltage trailing cables used with ground check systems not employing ground check wires, as provided in Section 77.902-2, are not required to be equipped with insulated ground check conductors.

Subpart KGround Control77.1004 Ground Control; Inspection and Maintenance; General

If an area is posted in accordance with paragraph (b), such posting shall be done in a manner to ensure that any worker in the area would be immediately aware of the hazard.

77.1005 Scaling Highwalls; General

The phrase, "The material removed from a safe location," as used in paragraph (b), means that the person who is removing the material must be in a safe location.

77.1006 Highwalls; Men Working

"Special safety precautions," as used in paragraph (c), shall include a thorough examination of the highwall or spoil bank for dangerous conditions and, if dangerous conditions are found, they shall be corrected before miners are permitted to work in such areas.

77.1008 Relocation of Drills; Safeguards

This Section does not apply when moving from hole to hole in a series, but the requirements apply when moving from one general area to another.

77.1009 Drills; Operation

Should an inspector observe a drill in operation with the controls unattended, enforcement action under this Section should be taken.

Subpart LFire Protection77.1100 Fire Protection; Training and Organization

The firefighting organizational plan should include a list of the persons trained and a written plan for extinguishing a fire if one should occur. The written plan should include a list and location of firefighting equipment. The scope of the training shall be commensurate with the size of the buildings and machinery involved and related to the number of employees. Further information can be obtained from the Fire Protection Handbook published by the National Fire Protection Association, Section II.

77.1101 Escape and Evacuation; Plan

The escape and evacuation plan should be written and posted in a proper location.

The requirements of paragraph (a) refer primarily to surface structures such as preparation plants, drawoff tunnels, shops, and other buildings where persons work. When applying this Section at surface mines, the inspector shall be cognizant of the potential fire hazard at surface mines and require only those means of escape commensurate with the hazard.

Paragraph (b) requires that all employees, including office and clerical personnel, shall be instructed on the current escape and evacuation plan, fire alarm signals, and applicable procedures.

Judgment should be used in enforcing paragraph (c) regarding the maintaining of exits from areas where persons are required to work or travel. For example, small washrooms and certain offices may be equipped with one exit as is common practice in surface buildings. However, large offices, generally those housing three or more people, wash and change houses, plants, shops, lunch-rooms, etc., shall have at least two exits. "Means for exit from all areas" means a continuous and unobstructed way of exit from any point in the building to a public way. The exits should be marked by readily visible signs, and every exit should be suitably illuminated. Should questions arise relative to the number, location, and design of exits, the National Fire Protection Code No. 101 and the Fire Protection Handbook shall be used for references.

77.1103 Flammable Liquids; Storage

Reference is made to the standards of the National Fire Protection Association and the applicable portion in Code No.

30--Flammable and Combustible Liquids. The basic requirements for storing flammable liquids are:

1. Buildings or rooms within buildings in which flammable and combustible liquids are stored shall be of noncombustible structure, including walls, floor, and ceiling; properly ventilated and, where possible, located away from stairways or exits. If heated, only electric heaters, hot water, or low-pressure steam shall be used.
2. Drums and other containers stored in the open shall be located to reduce the spread of fire to other materials in storage or other property areas. The surrounding area shall be kept free of combustible materials, brush, etc.

"Safety can" shall mean an approved container, of not more than a 5-gallon capacity, having a spring-closing lid and spout cover and so designed that it will safely relieve internal pressure when subjected to fire exposure.

77.1104 Accumulations of Combustible Materials

This Section, in essence, refers to good housekeeping. Excessive quantities of coal or coal dust shall not be permitted to accumulate, particularly where other highly flammable materials are present.

77.1106 Battery-Charging Stations; Ventilation

Battery-charging stations shall be adequately ventilated to prevent the accumulation of explosive gases, particularly hydrogen which can be released during the charging cycle.

77.1108 Firefighting Equipment; Requirements; General

The intent of this general paragraph is to give the operator a choice in the type of extinguishing agent and, in some respects, the size or quantity of the unit. Questions can arise on the definition of the term "adequate supply," particularly for portable fire extinguishers as, for example, at a motor drive. Many of these questions can be answered by referring to the National Fire Protection Codes, particularly Code No. 10.

The entire fire control system shall be considered. For example, if the operator provides a sprinkler system at a hazardous location, then smaller hand-held units would be acceptable at a specific location within the sprinkler-protected area. Likewise, if a good water hydrant-hose system is offered,

then small units could be acceptable at a specific location. An isolated plant ordinarily would require a higher degree of protection than a plant served by a local fire department.

77.1108-1 Type and Capacity of Firefighting Equipment

The size and location of fire extinguishers required in paragraph (b) should follow recommendations given in the appropriate National Fire Protection Association Codes. The type of extinguishing agent shall conform with the size and class of potential fire hazard. Carbon tetrachloride fire extinguishers are not acceptable in accordance with the National Fire Protection Code. Carbon tetrachloride is toxic and is harmful if not handled properly.

77.1109 Quantity and Location of Firefighting Equipment

When questions arise concerning paragraph (a), the standards presented in National Fire Protection Code No. 10 shall be used as a guide. Generally, a minimum of one extinguisher having a rating no less than 2A8B or 2A8BC where electrical installations are present shall be provided on each floor or level in the structure. At least one extinguisher shall be provided for each 3,000 square feet of floor space.

Where the floor space exceeds 3,000 square feet, and more than one extinguisher is required, they shall be no more than 75 feet apart. If the area protected contains permanent electrical installations, the maximum distance between extinguishers shall be no more than 50 feet.

The purpose of paragraph (b) is to insure that a water stream or dry powder extinguishing agent can be applied at any location in the building. The 125-pound extinguisher can be a single unit or made up of several smaller units, provided the total weight of powder meets the requirement.

A 125-pound dry chemical extinguishing unit shall be provided for each 5,000 square feet of floor area in a building of noncombustible construction, or 2,500 square feet area in a building of combustible construction.

A single 125-pound unit can provide protection for more than a single floor if the system is permanently installed with rigid piping. Thus, a portable 125-pound unit can serve only a single floor, but a permanently installed unit may serve one or more floors, provided the floor area does not exceed 2,500 or 5,000 square feet, depending on the type of construction.

The following portable fire extinguisher ratings will be acceptable as meeting the requirements of paragraph (c)(1). All trucks up to and including those of 20-ton (load) capacity should be equipped with at least one extinguisher having a minimum rating of 5BC. Trucks larger than 20-ton capacity should be equipped with an extinguisher having at least a 10BC rating. Two 5BC extinguishers are acceptable.

Other mobile equipment, such as front-end loaders, bulldozers, portable welding units, and augers of comparable size (to the trucks) should be rated on an equivalent basis, except hydraulically-operated equipment containing flammable and combustible liquids, trucks transporting flammable and combustible liquids, and diesel-powered motor generator sets. Examples are as follows:

1. A front-end loader or portable welding unit no larger in size (weight) than a 20-ton truck should require the same protection as a 20-ton truck or 5BC.
2. A front-end loader, bulldozer, auger, etc., larger than a 20-ton truck should require the same protection as a truck larger than a 20-ton or 10BC.

Mobile equipment containing flammable and combustible liquids, including trucks transporting flammable and combustible liquids and diesel-powered motor generator sets, should be protected with extinguishers having a minimum rating twice that required for other mobile equipment in examples 1 and 2; except that additional fire protection shall not be required for equipment using hydraulic fluids only for power-steering and power-breaking systems.

Paragraph (c)(2) requires equipment larger in size than that equivalent to a 50-ton truck to be provided with additional fire protection commensurate with the hazard. A minimum of one extinguisher having the proper rating shall be provided on each of all multilevel equipment such as shovels and draglines.

The extinguisher required by paragraph (c)(3) should be rated no less than 5BC.

When implementing paragraph (d), judgment shall be used in the evaluation of the requirements for extinguishers at each permanent electrical installation. One portable extinguisher can serve several adjacent electric motors or transformers. Extinguishers provided and located according to paragraph (a)

shall be acceptable as protection for electrical installations within that area, provided such extinguishers are no more than 50 feet from the electrical installation.

Substation - Two extinguishers having a total rating of 20BC shall be provided at permanent substations.

The requirement in paragraph (e) of two portable fire extinguishers at the stated combustible liquid storage depots clarified in NFPA Code No. 30 means that two portable units, each having a rating of not less than 10-B units, shall be provided. Questions will arise as to whether a single extinguisher having a rating of 20-B units can be used instead of two 10-B fire extinguishers. Decisions shall be made for individual circumstances. Two 10-B extinguishers are generally preferred, as a greater chance exists that at least one unit will not be downwind of the fire. Decisions shall be based on the size of liquid storage, location and surrounding conditions. Rock dust in the amount of at least 500 pounds, kept dry and maintained usable, will be acceptable as "equivalent" to two portable extinguishers at remote combustible liquid storage installations, provided a shovel or equivalent means is available for applying the rock dust.

Fire protection referred to in paragraph (f) means two extinguishers having a rating of not less than 5BC each.

77.1300 Explosives and Blasting

Refer to Section 75.1300 for the policies related to joint MSHA and ATF activities.

77.1303 Explosives; Handling and Use

The following are guidelines for enforcing paragraph (g):

In the event the explosive haulage vehicle has to be moved within the blasting area, precautions shall be taken to avoid driving the vehicle over or dragging hoses over firing lines, detonator wires or explosive materials. The driver, in moving the vehicle, shall obtain the assistance of a second person to guide his/her movement.

During charging and firing, only the work activities associated with the explosives operation shall be permitted in the blasting area. Blasting operations shall be under the direct control of authorized persons. Boreholes shall be stemmed immediately after charging and shots, shall be fired as soon as practical after charging has been completed.

Holes to be blasted shall be charged as near to blasting time as practical, and such holes shall be blasted as soon as possible after charging has been completed. Where required to postpone the firing of the blast, the provisions of paragraph (g) shall be followed.

Paragraph (j) governs surface drilling and blasting when there is a danger that these operations can affect the active workings of an underground coal mine. In such instances, the appropriate orders should be issued to ensure that underground miners will be withdrawn from the endangered area before blasting is done.

To prevent damage to detonating cord, as addressed in paragraph (r), detonating cord downlines used in the charging of boreholes should be cut from the spool after the primed charge is in position.

Paragraph (qq) requires that, before entering the blast area, personnel shall make certain that it is completely free of visible reddish brown fumes, an indication of a highly toxic concentration of nitrogen dioxide gas.

MSHA recognizes that the use of ANFO, cast primers, and detonating cord, provides one of the safest means of blasting

available. However, it should be emphasized that detonating cord and cast primers contain explosives and are designed to explode. Consequently, they should be used with respect and common sense afforded an explosive, and it must be kept in mind that every explosive can be detonated under certain critical conditions.

77.1400 Personnel Hoists and Elevators

Safety systems utilizing safety belts attached to independently suspended safety lines by lanyards and rope grabs must be utilized when scaffolding hoists are used at surface facilities.

The following guidelines should be used when inspecting these devices:

1. Lifelines must be attached to a structural member of the shaft or collar or surface facility and not to the hoist rope outrigger.
2. Lifelines of at least first grade 5/8-inch nylon rope, 3/4-inch manila hemp rope, or equivalent, must be provided for each miner.
3. Substantial safety belts securely attached to the independently suspended safety lines by lanyards and rope grabs must be used at all times when embarking, disembarking or working on the platform.

Subpart PAuger Mining77.1501 Auger Mining; Inspections

"The drilling site," as referred to in paragraph (a), should include that area of the highwall under which augering operations will be conducted during the shift. "All loose material," as used, is to be construed to mean loose material that poses a hazard to miners.

The term, "shall be inspected frequently," as used in paragraph (b), shall be construed to mean that such inspections should be made at intervals not to exceed 30 minutes when augering operations are conducted during a heavy rainfall and as often as necessary to assure the safety of the worker after a heavy rainfall or during any period of intermittent freezing and thawing.

77.1504 Auger Equipment; Operation

The following example meets the requirements of paragraph (c): If the control cab on the augering machine is located directly above or to the side of the auger train, the auger machine operator shall not be considered as being in direct line with the borehole during augering operations.

To meet the requirements of paragraph (e), the face of highwalls at auger mining sites shall be provided with adequate illumination for a distance of 25 feet on both sides of each drilling site.

77.1505 Auger Holes; Blocking

In accordance with this Section, the blocking material should be piled at least 12 inches above the top of the auger hole to allow for settling. "Other suitable material" shall consist of material that will not fire readily.

Subpart QLoading and Haulage

77.1605 Loading and Haulage Equipment; Installations
Cracks or discolorations in the cab windows that impair or distort the operator's vision or a crack that will damage the windshield wiper blade are examples of noncompliance of paragraph (a). Plexiglass may be used in lieu of safety glass in cab windows if the transparency is not impaired by scratches or discoloration.

Paragraph (k) is applicable to all elevated roadways on mine property, including roads used to transport coal, equipment, or personnel, and regardless of the size, location, or characterization of the roadways. Berms or guards are required on all exposed banks of elevated roadways. Thus, elevated roadways with two exposed banks are required to have berms or guards on both sides.

Berms or guardrails are required along the section of an elevated roadway crossing the crest of an impounding structure when the structure has been built to its final crest elevation and when the section of road over the impounding structure is completed. However, temporary berms or guardrails are not required along the section of an elevated roadway where it crosses the working surface of the impounding structure while the site is under active construction. Placement of such temporary berms or guardrails can be detrimental to the overall, long-term integrity of the structure, since the optimum moisture content and the required compaction parameters would be adversely affected.

On elevated roadways, leading to or constructed on the inclined surfaces of the impounding structure, berms or guardrails are required to be maintained as the structure increases in height.

If active construction on an impounding structure is suspended for any reason, and the roadway has not yet achieved the final elevation in accordance with the approved construction plan, then berms or guardrails are required if the site is an elevated roadway.

The requirements of paragraph (k) apply to that part of an elevated haulage road where one bank is, or both are, unprotected by a natural barrier which will prevent vehicles or equipment from running off and rolling down the unprotected bank(s).

"Elevated roadways," as used in this requirement, are roadways of sufficient height above the adjacent terrain to create a hazard in the event that mobile equipment should run off the roadway.

"Berm," as used in this Section, means a pile or mound of material at least axle high to the largest piece of equipment using such roadway and as wide at the base as the normal angle of repose provides. Where guardrails are used in lieu of berms, they shall be of substantial construction.

The width of the haulage road does not preclude the need for berms or guardrails.

77.1606 Loading and Haulage Equipment; Inspection and Maintenance

Mobile loading and haulage equipment shall be inspected by a competent person before such equipment is placed in operation at the beginning of each shift. Any defects found affecting safety during the required inspection shall be recorded and reported to the mine operator.

77.1702 Arrangements for Emergency Medical Assistance and
Transportation for Injured Persons; Reporting
Requirements; Posting Requirements

Paragraphs (a) and (b) of this Section are not to be interpreted to mean that a physician or an ambulance must be present at the mine at all times. These paragraphs do mean, however, that the required services must be arranged for and be readily available.

Paragraphs (c) and (d) of this Section have been disapproved by the Office of Management and Budget (OMB) pursuant to authority under Executive Order 12174 (44 FR 69609) and the Paperwork Reduction Act of 1980. Beginning January 1, 1982, no enforcement action shall be taken relative to the reporting requirements of these two paragraphs.

Discontinuance of these information reporting requirements does not alter the requirements of paragraphs (a), (b), and (e) of this Section. Operators of surface coal mines still must have arrangements established with a licensed physician, medical service, medical clinic or hospital to provide 24-hour emergency medical assistance and must have arrangements with an ambulance service, or otherwise provide, for 24-hour emergency transportation for any person injured at the mine.

Likewise, operators must continue to post at appropriate places at the mine the names, titles, addresses, and telephone numbers of all persons or services available under the arrangements for medical assistance and emergency transportation. The posted information is required to be current and accurate. Where appropriate, inspectors shall make the necessary inquiries to determine the accuracy of the information posted.

77.1710 Protective Clothing; Requirements

This Section does not require operators of service vehicles making visits to surface mines or surface work areas of underground mines to wear protective clothing.

Paragraph (c) of this Section requires that miners wear gloves whenever they troubleshoot or test energized electric power circuits or electric equipment. Work gloves in good condition are acceptable for troubleshooting or testing energized low- and medium-voltage circuits or equipment. High-voltage gloves, rated at least for the voltage of the circuit, are required for troubleshooting or testing of energized high-voltage circuits or in compartments containing exposed energized high-voltage circuits.

The purpose of paragraph (d) is to provide substantial protection for the head from falling objects and to protect miners against electrical shock or burn. Hard hats are required to be suitable for these purposes and, if they are painted, the paint base must be nonmetallic.

Hard hats or caps that meet or exceed the applicable specification of the American National Standards Institute (ANSI) provide appropriate head protection and comply with these requirements. The applicable standards are ANSI's "Safety Requirements for Industrial Head Protection," Z89.1, and "Safety Requirements for Industrial Protective Helmets for Electrical Workers, Class B," Z89.2.

Hard hats or caps that do not meet or exceed the applicable ANSI or equivalent standards should not be used. Plastic "baseball-type" caps and thin plastic hats do not have adequate suspension systems and are not constructed of sufficiently substantial material to afford the necessary protection from impact and penetration of falling objects. Hats or caps constructed of metal materials create an additional hazard of electrical shock or burn because they are conductive.

Paragraph (g) of this Section requires that safety belts and lines shall be worn at all times by all miners working in positions where there is a danger of falling, except where safety belts and lines may present a greater hazard or are impractical. In those cases, the standard requires that alternative precautions be taken to provide the miners with an equal or greater degree of protection. Substantial scaffolding with adequate guardrails or safety nets are acceptable alternatives. The objective of this policy is to insure that miners working where there is a danger of falling are always protected.

77.1711 Smoking Prohibition

This Section prohibits smoking or open flame where such practice may cause a fire or explosion. Section 77.1702 requires that areas be posted with warning signs where fire or explosion hazards exist.

77.1712 Reopening Mines; Notification; Inspection Prior to Mining

Failure of the operator to notify MSHA of the reopening of the mine before operations begin is a violation of this Section. Failure to have all the plans, programs and systems submitted during this inspection is not necessarily a violation. During a

reopening inspection required by Section 77.1712, the inspector should ascertain that the operator is fully informed and aware of the applicable plans, programs, and systems required by Part 77.

77.1713 Daily Inspection of Surface Coal Mines; Certified
Persons; Reports of Inspection

MSHA will continue to require that daily on-shift examinations be made in accordance with this Section at active working areas of surface mines, active surface installations at these mines, and preparation plants not associated with underground coal mines. MSHA will not require daily on-shift examinations of the surface work areas of underground coal mines.

77.1800 Cutout Switches

It is the intent of this Section to require that cutout switches be installed in both trolley wires and parallel trolley feeder wires at the same point. Where it is necessary to use a cutout switch in each circuit, they shall be installed reasonably close to facilitate the opening of both circuits. The practice of using a jumper to bridge a removed section of trolley wire as a means of disconnecting power shall not be accepted.

77.1802 Insulation of Trolley Wires, Trolley Feeder Wires;
and Bare Signal Wires; Guarding of Trolley Wires
and Trolley Feeder Wires

It is the intent of this Section that guarding shall be done with wood, plastic or other substantial nonconductive material, and be firmly secured. The mine inspector shall require additional guarding of trolley wires at all locations where a potential shock hazard exists.

Subpart T Slope and Shaft Sinking

In addition to the requirements of Subpart T, all applicable requirements of Part 77 shall apply to slope and shaft sinking operations unless specifically excepted by Subpart T.

77.1900 Slopes and Shafts; Approval of Plans

When inspecting shaft and slope sinking operations, Part 77 will apply for inspection purposes until such time as mining is started in the coalbed to be mined. At that time, all of the applicable provisions of Part 75 shall be met by the responsible organization that commences the mining cycle in the coalbed that is to be mined.

Excavation of a newly commenced slope or shaft progresses from the surface, through the overlying strata, to the coalbed to be mined. When an existing slope or shaft is extended that is open to the surface, excavation progresses from the existing slope or shaft bottom on down through underlying strata to the next coalbed to be mined. Part 77 standards will apply in these instances.

When excavation of a new slope or shaft reaches the coalbed to be mined, additional excavation or construction is often required before the mining cycle can commence. Frequently, horizontal excavations in the coalbed and surrounding strata must be advanced from the shaft or slope bottom to a point that permits installation or setup of mining equipment needed for the mining cycle to begin. Similarly, a skip loading pocket, a sump area, or similar vertical excavation may need to be developed above or below the coalbed before the mining cycle can begin. In order for Part 77 standards to apply, the plans for the development and construction at the coalbed level or above or below the coalbed from the slope or shaft bottom must be submitted and addressed under the approved slope or shaft construction plan.

Sufficient excavation and construction work will be permitted under the approved slope or shaft construction plan to allow installation and set up of the mining and ventilation equipment necessary to begin the mining cycle. In some cases, this excavation and construction work may include driving a connection between slopes and/or shafts. The extent of slope or shaft excavation and development work permitted under the Part 77 slope or shaft construction plan is to be kept to a minimum consistent with this policy, detailed in the approved plan,

appropriate for the conditions at the mine and approved by the District Manager. After completing the work as detailed in the approved plan, application of §77.1900 will cease, and application of Part 75 standards will commence. Part 77 standards will continue to apply to all activities on the surface.

In cases where a new slope or shaft is constructed from the surface into an existing mine or is raised from an existing mine to the surface, Part 77 standards will apply to the slope or shaft construction and to areas at the immediate slope or shaft bottom to the extent necessary to install equipment and complete construction.

Where a new slope or shaft is constructed from an underground area of an existing mine from one coalbed to another coalbed to be mined, where the slope or shaft does not directly intersect the surface, Part 75 standards will apply because the slope or shaft does not originate from the surface and will not directly intersect the surface. Construction, repair or inspection of these slopes or shafts will be covered under Part 75 standards.

In cases where construction, repairs or inspection are necessary at existing slopes or shafts that originate from the surface, Part 77 standards will be applied to the construction, repair or inspection activity. Any construction, repair, or inspection activity performed under Part 77 standards will be confined to the slope or shaft and the immediate slope or shaft bottom. Ongoing routine maintenance of the slope or shaft or routine maintenance of equipment installed in the slope or shaft would fall under Part 75 standards. An approved slope or shaft construction plan under Part 77 will not be required if Part 75 standards are complied with.

The hoist used under an approved slope or shaft construction plan is not intended for use as a permanent man hoisting installation. If the hoist used in conjunction with the slope or shaft construction, repair, or inspection does not comply with all provisions of Part 75 standards then only those persons engaged in the slope or shaft construction, repair, or inspection will be permitted to ride the hoist during these activities. It is not the intention of this policy to permit access to the mine by using a hoist approved under a slope or shaft construction plan for any other purpose except for construction, repair, or inspection activity directly related to the slope or shaft.

A slope or shaft construction plan as required under §77.1900 shall be approved by the District Manager prior to commencing any work activity that will be addressed under the Part 77 plan.

77.1908 Hoist Installations; Use

"Crossheads," as referred to in paragraph (d), are members that engage the guides.

"Independently powered auxiliary hoists," as referred to in paragraph (f), means any safe method that can be used to remove miners from a slope or shaft quickly in the event of an emergency.

77.1908-1 Hoist Operation; Qualified Hoistman

A qualified hoistman within the meaning of this Section is an individual who meets the requirements of Section 77.105.

77.1909-1 Use of Nonpermissible Explosives and
Nonpermissible Shot-Firing Units; Approval by
Health and Safety District Manager

When an inspector finds nonpermissible explosives and nonpermissible shot-firing units being used, he shall check to see if a permit, as required by this Section, has been issued, and to determine if the proper safeguards were being employed.

77.1913 Fire-Resistant Wood

This Section requires that all timbers and other wood products except track crossties permanently installed in slopes and shafts shall be fire-resistant.

PART 90 MANDATORY HEALTH STANDARDS - COAL MINERS WHO
HAVE EVIDENCE OF THE DEVELOPMENT OF PNEUMOCONIOSIS

RESERVED - to be updated

[Note: Pages 216 through 222 were removed. Guidance will be added to update Part 90 to reflect the May 1, 2014 final rule, Lowering Miners' Exposure to Respirable Coal Mine Dust, Including Continuous Personal Dust Monitors.]



MSHA HANDBOOK SERIES

U. S. Department of Labor
Mine Safety and Health Administration
Coal Mine Safety and Health
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Handbook Number: PH16-V-1

COAL MINE SAFETY AND HEALTH GENERAL INSPECTION PROCEDURES HANDBOOK

PREFACE

This handbook sets forth general procedures for conducting inspection of coal mines consistent with Section 103(a) of the Mine Act. Previously issued procedural and administrative instructions for this subject material are superseded by this handbook.

The following description of responsibilities sets forth the steps that a mine inspector takes when conducting mine inspections. When the text describes an action that the inspector “shall” do or specifies steps that the inspector “shall” perform in some sequence, then the inspector is to do so consistent with the specific conditions at a mine. Any determination not to conduct such action is to be based on his or her sound discretion, and that of the inspector’s supervisors. When the action is one which “should” be followed, then the inspector who does it is engaging in the best practices for such inspection and should do it consistent with the specific conditions at a mine.

The Mine Postings and Records Documentation and Inspection Procedure Header Documentation pages contained in the Inspector Tracking System (ITS) approved with this handbook may be printed by the inspector and used as inspection notes. These pages apply only to regular (E01) inspections and are not required to be used on other event codes. The pages are designed to provide a complete listing and documentation of the Mine Postings and Records and the Inspection Procedures that may or may not be applicable at a mine. The use of these pages will lessen the chance of inspection or documentation error by an inspector.

The items identified in the paragraphs that are in **bold** lettering are areas identified that inspectors need to place additional emphasis to ensure inspection documentation and enforcement levels are commensurate with the conditions found at the mine.

Any proposed future revisions to this handbook will be communicated to the National Council of Field Labor Locals (NCFL) in accordance with the Collective Bargaining Agreement.

Approved:

Kevin G. Stricklin

Administrator for Coal Mine Safety and Health

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Chapter 1 - INTRODUCTION

The objective of MSHA mine inspection and investigation activities is to promote a safe and healthful working environment for miners. MSHA personnel work to achieve this objective in three ways: (1) by enforcing the Federal Mine Safety and Health Act of 1977 ([Mine Act](#) or the Act) (P.L. 95-164), as amended (30 U.S.C. 801 et seq.) and the Mine Improvement and New Emergency Response Act of 2006 ([MINER Act](#)) (P.L. 109-236); (2) conducting education and training activities; and (3) providing technical assistance to the mining community.

- A. **Purpose.** This handbook sets forth procedures for MSHA personnel to follow when conducting inspections and investigations of underground and surface coal mines and facilities. The instructions in this handbook are primarily procedural and administrative. The instructions contained in this handbook supersede previously issued procedural and administrative instructions on the subjects addressed in this handbook.
- B. **Authority.** Section 103(a) of the Act provides authorized representatives (ARs) of the Secretary of Labor with the authority to conduct inspections and investigations of coal and other mines. Additionally, Section 103(a) provides ARs with the right of entry to, upon, and through any coal or other mine. Only persons who have been authorized by the Secretary and have had proper credentials issued to them shall conduct inspections and investigations under the Act. When requested, ARs shall present their credentials to interested parties before conducting an inspection or investigation.
- C. **Responsibility.** The Administrator for Coal Mine Safety and Health (CMS&H) has the primary responsibility for enforcing the Mine Act and implementing the standards and regulations relating to coal mines. This responsibility ultimately rests with the ARs (inspectors, specialists and their supervisors). Inspectors are responsible for conducting thorough inspections and investigations. Inspectors should discuss safety and health practices with mine operators and the miners during every inspection. Stakeholder participation is essential to achieving an effective safety and health program at each mine.
- D. **Health and Safety Rules.** Inspectors must have thorough knowledge of the [Mine Act](#) and Title 30, Code of Federal Regulations ([30 CFR](#)). MSHA employees should comply with applicable state and company health and safety rules and regulations unless they conflict with Federal standards or interfere with the performance of their duties.
- E. **Danger Boards/Hazardous Areas.** Inspectors, and miners' representatives accompanying an inspector, have the right of entry into "posted" or "dangered-off" areas in the performance of their duties, but should do so with caution. Inspectors should not travel anywhere in a mine where the oxygen content is below the

acceptable air quality standards. In case of an emergency that adversely affects the mine's air quality, inspectors should protect themselves with use of a self-contained self-rescuer.

- F. **Supervisory Coal Mine Inspectors Accompanying an Inspector.** When a supervisor accompanies an inspector, investigator, or specialist, the supervisor's name should not be cited as one of the inspection officials or authors of the resulting report except when the supervisor participates in the inspection event. Supervisors must use care to correctly code their time and activity after accompanying an inspector during inspection activities.
- G. **Inspectors-in-Training.** When an inspector-in-training who has not been authorized to conduct inspections accompanies an inspector, include only the inspector's name in the report. The name of the inspector-in-training and his or her right of entry (ROE) number shall not be documented on the MSHA Form 2000-22 (Mine Activity Data Sheet), MSHA Form 2000-86 (Respirable Dust Sampling and Monitoring Data), MSHA Form 2000-84 (CMS&H Noise Report), or other forms required to be submitted with the inspection report. The inspector-in-training should remain in the presence of the inspector at all times and is not permitted to conduct any part of an inspection or investigation independently. The only exception is for inspectors-in-training who have received the entry level respirable dust and noise training at the MSHA Academy. Non-ARs certified to sample respirable dust and noise may assist the inspector (who is responsible for the inspection with respirable dust or noise sampling when the inspector is on the same mechanized mining unit (MMU)).
- H. **Inspection Equipment and Supplies.** Each inspector and inspector-in-training shall have equipment and supplies sufficient to safely and effectively complete the projected type of inspection or investigation **and be properly trained in the use of such equipment.** All underground inspectors should carry a device to detect and evaluate potentially adverse roof and rib conditions. Personal Protective Equipment (PPE) applicable to mine conditions and specified for use in MSHA directives shall be worn. Inspectors should immediately notify their supervisor if equipment deemed essential for planned inspection activity (including that necessary to address anticipated health/safety exposures) is not available at their office location. Each Field Office or other offices designated to have inspectors and inspectors-in-training assigned on a regular basis should have equipment available and sufficient supplies to safely and effectively complete the projected type of inspection or investigation. **The inspector should use the equipment that is owned and properly maintained by MSHA.** (Refer to the Inspector's Equipment List and Field Office Equipment and Supplies List in the appendix section of this handbook.)

MSHA-provided multi-gas detectors must be checked periodically to verify that the gas sensors are responding appropriately and the detector is maintained according to

the manufacturer's specifications. In order to maintain the performance and accuracy of multi-gas instruments used by CMS&H personnel, all CMS&H multi-gas detectors must be tested according to the following schedule:

1. All multi-gas detectors used by enforcement personnel will be calibrated according to the manufacturer's specifications at least once every 31 days or more often if required by the manufacturer; and

All multi-gas detectors used by enforcement personnel will be performance ("bump") tested according to the manufacturer's specifications at the beginning of each day of use.

Instruments that fail the "bump" test must be recalibrated prior to use in the field. Documentation of "bump" tests and the monthly calibration of each instrument will be maintained by the districts for a period of at least the previous fiscal year plus the current fiscal year. The documentation can consist of:

1. the computer data files that are produced by the instrument and an automated calibration unit; or
2. a copy of the printed test results that are stored in a central location; or
3. records developed and maintained by district personnel.

To ensure these testing requirements do not interfere with the ability of Agency personnel to perform field inspection duties, each office shall have sufficient calibration gas on hand at all times.

- I. **MSHA Personnel – Former Mine Employee.** At least two years shall elapse from the last date of employment at a mine until MSHA personnel may conduct inspections or investigations at such mine. At least one year shall elapse from the last date of employment by the same operator of a mining company until MSHA personnel may conduct inspections or investigations at such mining company. This one year waiting period applies to all official matters involving their former mining company employer (such as ABC Mining Company, who owns more than one mine including XYZ Mine), as opposed to being limited to the particular mine at which they were employed (such as XYZ Mine).
- J. **Mine Labor/Management Relations.** MSHA employees should remain impartial toward both labor and management. MSHA employees shall refrain from offering opinions on labor management relations matters which are not covered under the Act, regulations, or standards. When a picket line is present at a mine site, inspectors should discuss the purpose of their presence on mine property with the individuals on

the picket line. If access to mine property is delayed or denied, inspectors shall give consideration to whether the mine is in production or just being maintained and the type of inspection activity to be performed in determining whether crossing the picket line is appropriate. Under no circumstances should inspectors put anyone, including themselves, in danger while crossing a picket line. Inspectors should contact their supervisor when necessary in making this determination. In such situations, the supervisor may opt to contact labor representatives to attempt to resolve the problem, accompany the inspector, or send an additional inspector if the situation warrants.

- K. Miners' and Operators' Representatives.** Section 103(f) of the Mine Act requires that representatives of the operator and miners be permitted to accompany inspectors in order to assist in conducting a full inspection. A representative of the operator and a representative authorized by miners shall be given an opportunity to accompany inspectors during the physical inspection of any coal or other mine, including areas where only contractors are working, for the purpose of aiding such inspection and participating in pre- or post-inspection conferences held at the mine. Where there is no authorized miner representative, inspectors shall consult with a reasonable number of miners concerning matters of health and safety in such mine. (Refer to [Representation of Miners Designation Form 2000-238](#) and Section 103(f) of the [PPM, Volume I](#), for further guidance.)
- L. Interagency Agreements (IA) and Memorandums of Understanding (MOU).** Several agreements and memoranda exist that facilitate the efficient use of government personnel and directly affect the conduct of business by MSHA personnel. These include:
- Interagency Agreement between the Mine Safety and Health Administration (MSHA), U.S. Department of Labor, and the Occupational Safety and Health Administration ([OSHA](#)), U.S. Department of Labor.
- Memorandum of Understanding between the U.S. Department of Labor, Mine Safety and Health Administration (MSHA), and the U.S. Department of the Interior, Bureau of Land Management ([BLM](#)).
- Memorandum of Understanding between the U.S. Department of Labor, Mine Safety and Health Administration (MSHA), and the Interstate Mining Compact Commission ([IMCC](#)).
- Memorandum of Understanding between the U.S. Department of Labor, Mine Safety and Health Administration (MSHA), and the U.S. Department of Justice, Bureau of Alcohol, Tobacco, Firearms and Explosives ([ATF](#)).

Chapter 2 - GENERAL PROCEDURES

This section covers the general procedures that should be addressed by inspectors during any inspection or investigation. Depending on the type of inspection or investigation, procedures listed in other handbooks may also apply. Inspectors must provide at least the minimum documentation, as directed in the paragraphs labeled *Documentation Required*. The documentation required for each procedure listed in this chapter shall include a statement in the inspection notes that the procedure was completed. A statement that the required procedure was completed, or an "NA" or "Not Applicable" may be used if the procedure does not apply. A short statement such as "No Violations Observed" or "NVO" shall be included when no hazards or violations are observed.

Inspectors should report time pertinent to each event on their Weekly Activity Data Form (MSHA Form 7000-36) for all inspection-related activity, including: inspection preparation, travel, on-site inspection and/or investigation activities, office-generated paperwork such as opening or closing out the event or report writing associated with the event, and review of the Uniform Mine File or Electronic Uniform Mine File (UMF/EUMF).

A. Weekly Activity Data Form (MSHA Form 7000-36). The Weekly Activity Data Form is used to add or change data about an inspector's work and is initiated by an AR or ROE personnel. The Weekly Activity Data Form is filled out by hand or using the Inspectors' Portable Application for Laptops (IPAL). It is subsequently entered into the MSHA Standardized Information System (MSIS) database. Completion of the form is required for all AR and ROE personnel assigned to District and Field Offices. Enforcement personnel, including Technicians performing inspection assistance duties, will complete all items on MSHA Form 7000-36 when applicable for activity codes beginning with E Activities E01 through E32 and must be used in conjunction with a mine ID number and an event number.

MSHA Form 7000-36 fields are listed below and the numbers on the list correspond to the numbering schema on the form. If this form is being completed using IPAL, numbers 1 through 3 will be filled in using your IPAL profile.

1. **Item 1. Name** – Your last name, first name and middle initial.
2. **Item 1a. AR Number** – Your Authorized Representative (AR) number, if applicable.
3. **Item 1b. ROE Number** – Your Right of Entry number, if applicable.
4. **Item 2. Org Code** – The Organization Code (Org) is your office code.

5. **Item 3. Work Group Identifier** – Enter your 2-digit work group code.
6. **Item 4. Weekly Mileage** – Not applicable to Coal.
7. **Item 5. Date** - Month, day, year (mm/dd/yyyy). Enter the appropriate date for the time worked. Multiple lines may be used for the same day/date.
8. **Item 6. Activity Code** - Enter the Activity Code. A list of Activity Codes can be found in the [IPAL User's Manual](#) (Appendix E) on the back of the printed form or from the drop-down list in IPAL.
9. **Item 7. Event Number** – If an E activity code was entered for item 6, an event number associated with the inspection activity for which these hours are being reported must be entered. If this is being completed in IPAL, event numbers will be available through a drop-down list. When the event number is selected first using the drop-down list, the activity code and mine ID will be filled in with the corresponding information. If an event was initiated by another inspector and not available in the drop-down list, a supplemental event will need to be added in IPAL in order to enter time.
10. **Item 8. Mine ID** – If applicable, enter the Mine ID where this activity occurred.
11. **Item 9. Contractor ID** – If the inspection is specific to a contractor at the mine, such as major construction or a shaft or slope sinking project, enter the MSHA Contractor ID.
12. **Item 10. Shift** - Required for events when site inspection time is entered. Shifts are based on mine work schedules and the codes are 1 - Midnight, 2 - Day and 3 - Evening. Two-line entries are required when there are shift over-laps, with one entry for each shift inspected or other activity conducted. This entry is designed to identify the shift that the employee was actually at the mine site. It is not designed to identify which shift he/she traveled on. For example, if an employee left the office at 6:00 a.m. to travel to the mine and rode the man trip underground, and spent 6 hours inspecting, all on the day shift, then the employee would have a one-line entry on the number 2 shift. The only time that multiple entries would be required for an activity on any given day would be when the inspector or inspector-in-training was actually at the mine for more than one shift.
13. **Item 11. Task Code** – Enter the appropriate Task Code to describe the role the employee was fulfilling during the inspection. If no task code is entered, the system will treat it as a General Inspection Activity. A list of Task Codes can be found in the [IPAL User's Manual](#) (Appendix E) on the back of the printed form

or from the drop-down list in IPAL. If a supervisor accompanies an inspector, the same Activity Code, Event Number, and Mine ID should be used with an "S" Task Code for Supervisory Duties (Field).

The following five items (Columns 12 through 16 on MSHA Form 7000-36) contain two positions for recording full hours and one position to record quarter-hours. Full hours are entered to the left of the solid line and the quarter-hour designation is entered to the right of the solid line. If more than 9 hours are recorded on a line, the digits are separated by the dotted line of the column. Quarter-hours are calculated as follows: "0" for no minutes; "1" for one-quarter of an hour or 15 minutes; "2" for one-half hour or 30 minutes; and "3" for three-quarters of an hour or 45 minutes. There can be no entry for 4 or more quarter-hours. When you reach 4 quarter-hours, you have completed another full hour. Totals for each column can be calculated and entered at the bottom of the column.

Note: To properly record a time of 2 hours & 15 minutes, for example, enter 2 for the Hour in box to the left of the solid line and 1 (as in "1 Quarter-Hour") in the box to the right.

14. **Item 12. Travel** - Required entry for all codes when travel is involved for inspection activities, which includes time to load the vehicle. Enter travel time to the nearest quarter-hour.
15. **Item 13. Other** - Examples of other inspection-related time include time spent reviewing documents (e.g., UMF) to prepare for an inspection, multi-gas detector bumping or calibration, clean up, writing a report of an investigation, ITS, completing rock dust sample submission forms, respirable dust data cards, air sample forms and preparing respirable dust or noise sampling equipment.
16. **Item 14. Site Inspection Time** - Columns used to record time spent at a mine site by AR and ROE personnel when reporting events.
 - a. **On-Site Insp. Time (MNM)** - Not applicable to Coal.
 - b. **MMUs/Pits (Coal)** - This section includes underground working sections, surface pits, and surface facilities with their own mine identification (ID) numbers. Enter the number of hours and quarter-hour identifier for the amount of time spent inspecting MMUs or Pits. MMU time should include travel time from the surface to the MMU, time spent reviewing examination books, records and maps associated with the intent of inspecting the MMU, time spent preparing to travel underground, and time spent distributing respirable dust or noise sampling equipment. Travel time shall be reported

as “Outby” time when citations or orders are issued while traveling to or from the section or when inspecting the travel route to meet E01 requirements.

- c. **Outby (UG mines Coal)** – Enter the number of hours and quarter-hour identifier for the amount of time spent inspecting Outby areas. Outby time includes travel time from the surface to the area being inspected, time spent reviewing examination books, records and maps associated with the area inspected, and time spent preparing to travel underground.
 - d. **Surface Areas (Coal)** – Enter the number of hours and quarter-hour identifier for the amount of time spent inspecting surface areas of an underground mine or surface areas of surface mines excluding time at the pits. Surface area time includes time spent reviewing examination books, records, maps, (including records and posting for the underground only when the inspector does not travel underground on that day’s inspection) and time spent preparing to inspect the area.
 - e. **C/O Writing On Site/ Reviews (Coal)** – Enter the number of hours and quarter- hour identifier for the amount of time spent on-site writing issuances or conducting on-site reviews of company records. This would include time spent reviewing books, training records, and other documents and postings not associated with an inspection of a physical area.
17. **Item 15. C/O Writing Off Site** - Enter the number of hours and quarter-hour identifier for the amount of time spent writing, researching, or supporting office generated enforcement actions. This includes time spent completing required forms which may accompany any enforcement actions such as Special Assessment Review Forms, Possible Knowing and Willful Forms, and Photo Mounting Worksheets. Office generated subsequent actions that are issued should be charged to the open event that the citation or order was originally issued under, if that event is still open.
18. **Item 16. Total Inspection/Non-Inspection Hours** - This column has a two-fold purpose. It is used to record the total Inspection-Related Time as entered in columns 12 through 15 or to enter any time for non-inspection related activities (T codes). As with the other columns, the number of hours and quarter-hour identifier for the amount of time spent is entered. Examples of non-inspection related activities are time spent on conferences, plan approvals/reviews, Freedom of Information Act (FOIA) requests, leave, jury duty, etc. (For additional instructions for entering time in IPAL, see the [IPAL User’s Manual](#).)

19. **Item 17. Supervisor Initials and Date** - Supervisors will initial and date the inspector's completed and initialed copy of the form.
 20. **Item 18. Key Entered By and Date** - Mine Safety and Health Assistants should certify with their initials and date that the data on this form was entered in MSIS.
 21. **Item 19. Remarks** - Fill in additional information as appropriate. Information for this field can only be entered by hand either on a preprinted or IPAL generated copy of the form.
 22. **Item 20. Inspector Initials and Date** - When complete, initial and date the form.
- B. Uniform Mine File Review.** Inspectors shall review and sign the Uniform Mine File (UMF)/Electronic Uniform Mine File (EUMF) just prior to conducting an inspection or investigation. The type of event and the area to be inspected will dictate the extent of the review, in accordance with the [Uniform Mine File Procedures Handbook](#). The UMF/EUMF review shall be conducted as part of the inspection/investigation and coded as "other" time. Inspectors who are regularly assigned to a coal mine are not required to conduct additional reviews of the UMF/EUMF when conducting other types of inspections or investigations during the same inspection quarter, but are not precluded from doing so. There are instances when an inspector conducts a "limited inspection" which would not require the UMF to be reviewed in its entirety. A "limited inspection" is generally specific in nature and short in duration (one or two days on a certain event) (Example: ventilation specialists with the intent to inspect an area of their expertise such as bleeder entries). The inspectors and specialists must review for a "limited inspection" at a minimum, the roof control and ventilation plans and any other plans pertinent to that inspection. Immediate signature and review does not apply to mine emergencies.
- Documentation Required:** *The inspector should document the date of the UMF review on the General Information Cover Sheet and complete the MSHA Form 2000-137 (Inspector Certification Form) in the UMF/EUMF, per instructions in the Uniform Mine File Procedures Handbook. If additional reviews are conducted, no additional documentation is required.*
- C. Arrival at the Mine.** Inspectors should arrive at the mine in time for pre-inspection contacts, a preliminary review of examination records, and an overview of the mine map to determine which area of the mine to begin the inspection or investigation. While performing surface or underground inspection activity related to an open event, the mine map shall be thoroughly reviewed with special attention given to mining in close proximity to worked-out areas, oil and gas wells, fuel transmission lines, and bodies of water which could present an underground flood hazard, and

mines located adjacent to, above, and below active workings. Also, where surface mines are present, any dangers surface mining may present to underground miners shall be checked. The information obtained from these sources in addition to the information reviewed at the MSHA office and mine examination records should aid the inspector in determining what area of a mine needs immediate attention. **The arrival time at the mine should be entered on the Daily Cover sheet and will be considered the official time of arrival.** The arrival time at the mine shall be independent from other Agency time reporting data (PeopleTime, Weekly Time and Activity, Inspection Shifts, etc.). **A departure time is not required. MSHA personnel should proceed to the area selected for inspection as quickly as possible after arriving at the mine site.**

***Documentation Required:** If the inspector is unable to preliminarily review files, maps, and examination records before the underground portion of the inspection begins, this fact should be noted and a reason given. If possible, the inspector should review files, maps and record books before exiting mine property. The inspector shall document the arrival time, pre-inspection contacts, and records books reviewed on the daily cover sheet or in the narrative portion of the inspection notes for all inspection-related events. The mine map review shall be documented once for each event. If additional reviews are conducted for the same event, no additional documentation is required. The arrival time at the mine shall be entered on the Daily Cover sheet and will be considered the official time of arrival.*

D. Conference Procedures. Inspectors should prepare carefully for conferences as they will provide an opportunity to discuss safety and health issues and reinforce effective programs at the mine.

The inspector shall print and review the following information with mine management during each inspection period:

- those portions of the Mine Profile Report determined by the inspector to be applicable, located at MSHA Intranet Home Page - MSHA Report Center – Mine Profile (hyperlink only accessible when connected to the MSHA network),
- the Part 75 Exam Rule Calculator for the previous inspection period, located at <http://arlweb.msha.gov/drs/Part75ExamRule-calculator.asp> (accessible from any internet connection) and;
- the Rules to Live By Calculator for the previous inspection period, located at <http://arlweb.msha.gov/drs/rlb-violations-calculator.asp> (accessible from any internet connection.)

***Documentation required:** The inspector should document the completion of these reviews in the daily inspection notes.*

1. Pre-inspection Conference. On the first day of the inspection, the inspector will notify the representatives of the operator and miners of the type of inspection to be conducted and schedule a time for the pre-inspection conference. During the pre-inspection conference the inspector should inform the operator and the miner representatives (if designated) of the procedures for requesting a safety and health conference under § 100.6(b). The inspector should notify the representatives of the operator and miners of the inspection and afford them the opportunity to exercise their rights under Section 103(f) of the Mine Act.

Documentation Required: *The inspector should document on the General Information Cover Sheet or in the inspection notes the conference type, the date conducted, the name of the operator and/or miner representative in attendance and any comments or concerns voiced by the representatives.*

2. Post-Inspection Conferences. The inspector should schedule and conduct a post-inspection conference with the mine operator and miners' representative (if designated). The conference should include a summary of all enforcement actions taken. Accidents at the mine and the available results of any samples or surveys taken during the inspection should be discussed. A means to prevent recurrence of violations, hazards, and accidents should be formulated by the mine operator and fully discussed by all parties. The inspector's immediate supervisor should be made aware of the post-inspection conference date and briefed immediately regarding concerns voiced during any portion of an inspection or investigation.

Documentation Required: *The inspector should document on the General Information Cover Sheet or in the inspection notes the conference type, the date conducted, the name of the operator's and miners' representatives in attendance, and any comments or concerns voiced by the representatives.*

E. Advance Notice. The Mine Act prohibits advance notice of MSHA inspection activities. When an inspector learns that an operator, contractor, or any other person has given advance notice of an impending inspection, the inspector should issue a citation under Section 104(a) of the Mine Act, alleging a violation of Section 103(a) of the Act.

Advance notice includes subtle forms of communication (such as coded references, like "company is here," or "visitors are on site") intended to disguise communications announcing MSHA's presence at a mine. Communications warning of inspection pending activity after a multi-day inspection has begun also constitute advance notice. All persons need to be aware of their legal obligations, and an individual or an operator may violate the Mine Act's advance notice provisions even if not warned explicitly against providing advance notice. Inspectors are to consider all advance notice citations for a special assessment, which will be based upon the

circumstances involved with the violation.

Advance notice has an inherent tendency to interfere with an inspection. Thus, an inspector need not demonstrate that mine conditions or practices were altered based on advance notice to establish an advance notice violation. However, the physical conditions of a mine may indicate that mine personnel received advance notice and acted to conceal violations. For example, rock dust applied over obvious accumulations of loose coal and coal dust in limited or discrete areas near the inspection location, or new ventilation curtains installed where there are indications that no mining had occurred after the curtains were hung are conditions that may indicate advance notice occurred. Enforcement personnel should document these conditions when a citation for advance notice is issued.

In addition, inspectors are to immediately notify their supervisor following the issuance of a citation for a violation of Section 103(a) for giving advance notice. The supervisor is to inform the District Manager of the issuance. District Managers, in consultation with the Technical Compliance and Investigation Office (TCIO) and the Office of the Solicitor, as appropriate, will evaluate each advance notice violation to determine whether the circumstances and evidence warrant an investigation under Section 110(e) and/or injunctive action under Section 108(a)(1) of the Mine Act.

When preparing to conduct an inspection, MSHA enforcement personnel should take precautions not to disclose their intentions to conduct an inspection in a specific location. Examples of such precautions include reviewing examination books for several areas of the mine, rather than only the specific area that they intend to inspect that day, and making a general request for transportation, rather than requesting transportation to travel to a specific location. (Additional guidance is available in [Volume I of MSHA's Program Policy Manual](#).)

- F. Inspector Compliance with the Tracking Requirements of an Emergency Response Plan (ERP).** Normally, the inspector should comply with the mine operator's tracking system. The District Manager (or his designee) may make the determination that: (1) electronic tracking of an MSHA inspector could provide advance notice of an inspection; and (2) important inspection objectives could be undermined if the MSHA inspector was tracked. In those cases, the District Manager/designee may allow the inspector to perform the portion of the inspection where the advance notice concern exists without the inspection party being tracked by the mine operator. In these situations, the inspector must provide the intended travel routes to an MSHA supervisor or to another MSHA representative who will be available at all times in the event of a mine emergency while the inspection party is underground. If the intended travel route changes, the MSHA inspector must notify the supervisor or the other MSHA representative.

Documentation Required: *The inspector shall document in the notes the reason(s) why tracking devices were not worn. The notes should also reflect who was notified of the intended travel routes and any changes to these routes. No documentation is required for this section if there is no problem with the tracking system.*

- G. Denial of Entry, Assault, or Harassment of Inspectors.** In the event an inspector is refused entry to a mine, or is threatened or harassed while making an inspection, the inspector should promptly notify his/her immediate supervisor and give the supervisor all the available information. The supervisor shall also alert his/her Manager of any circumstances that have the potential to place an inspector in harm's way. (Refer to Section 103(a) of the PPM, Volume I, for further guidance.) [Under Section 111 of Title 18](#) of the U. S. Code, it is a Federal crime to forcibly assault, intimidate, or impede MSHA employees performing investigative, inspection, law enforcement or other official duties. (Refer to [PPM Volume I](#), section I.103-1 for further guidance.)
- H. Examination Records.** Before physically inspecting an area of a mine, the inspector should conduct a limited review of the operator's most recent examination records pertinent to the planned inspection activity for that day. More than one record will often apply to an area, such as preshift, on-shift, daily and weekly examination records. When a record of examination lists a condition that may identify a serious hazard, the inspector should thoroughly document the hazards in the narrative portion of the inspection notes and proceed to this area immediately. If additional areas are inspected (other than those planned at the start of the shift), pertinent examination records shall also be examined prior to leaving the mine property. In all cases, mine examination records pertinent to the issuance of a citation, order, or safeguard should be reviewed prior to placing the enforcement action in writing, and the review should be documented.

When conducting an inspection or investigation other than a Regular Safety and Health inspection, only the records or postings pertinent to that activity code and area of intended inspection need be reviewed. These reviews shall be sufficient to provide a reasonable assurance that the operator is complying with MSHA recording and posting requirements.

The inspector's review of the operators' examination records is to assure that required pre-shift, supplemental, on-shift and weekly examinations are performed and properly recorded, and that any hazardous conditions and violations of nine specific mandatory safety and health standards are recorded as corrected in a timely manner. The review should be used during inspections to assure all areas of the mine site are being examined in accordance with the 30 CFR and any approved plans.

In addition to hazardous conditions, mine operators must examine for, record and correct violations of the following nine standards: § 75.202(a), § 75.220(a)(1), § 75.333(h), § 75.370(a)(1), § 75.400, § 75.403, § 75.1403, § 75.1722(a), and § 75.1731(a).

Inspectors should check operators' examination records for the following:

- a. Examinations have been conducted at required intervals;
- b. examination records indicate violations of nine specific mandatory safety and health standards;
- c. hazardous conditions and violations of nine specific mandatory safety and health standards have been properly recorded;
- d. records of violations or hazardous conditions indicate a need for inspector to follow up;
- e. corrective actions have been recorded for reported hazardous conditions and violations of the nine standards; and
- f. ventilation of worked-out and outby areas have been evaluated properly.

Also, if examiners observe violations of other mandatory safety or health standards during their examinations, operators are required to correct those violations.

On a quarterly basis, mine operators must review with examiners all citations and orders issued in areas where pre-shift, supplemental, on-shift, and weekly examinations are required.

(Refer to [Preshift 3 hrs: 62 Fed. Reg. 35085 \(June 30, 1997\)](#); [Preshift Examination Fixed: 64 Fed. Reg. 45165 \(Aug. 19, 1999\)](#); [Preshift: 77 Fed. Reg. 20700 \(April 6, 2012\)](#); and [Q&As Mine Exam Final Rule 07-23-2012](#) for additional information.)

Documentation Required: *The inspector should document the records inspected on the daily cover sheet or in the narrative portion of the inspection notes.*

- I. **Inspecting Working Places and Surface Pits for Imminent Dangers.** When inspecting a working section or a surface pit, the inspector shall check all working places for conditions or practices that may constitute an imminent danger. This check should be conducted as soon as practical after arrival at the section or pit before inspecting equipment or observing any cycle of operation. The imminent danger examination at an underground working section shall include all working places and the entire length of a longwall or shortwall face. However, if travel to the section or pit is of short duration and entirely incidental to inspecting other areas of the mine, an imminent danger examination is not required.

Documentation Required: *The inspector shall document the examination(s) for imminent dangers conducted in the inspection notes to include a short statement such as "No imminent*

dangers observed” or “NIDO”. No other documentation is required unless an imminent danger or violation is observed.

- J. Inspection of Working or Idle Sections.** When inspecting a working or idle section, the inspector shall observe the following general conditions: adequacy of rock dusting and clean up, adequacy of roof support, installation of temporary and permanent ventilation controls, and presence of dates, times and initials. The inspector shall check for methane accumulations and oxygen deficiency.
- K. Handling Orders.** Closure Notice ([MSHA Form 7000-9 Red Tag](#)). When a closure or withdraw order is issued under Section 103(k), 104(b), 104(d)(1), 104(d)2), 104(e), or 107(a) of the Mine Act, the inspector shall conspicuously post mine or equipment “CLOSED” posters (MSHA Form 7000-9) so that anyone approaching the area can see them. The posters should be placed in a sufficient number of locations to prevent unauthorized entry into the area or use of the equipment. Posters are normally placed:
1. at the portal of the mine if the entire mine is closed;
 2. at the entrance to the section if a section is closed; or
 3. on the controls of equipment involved in the order.

The “CLOSED” poster shall be hung as soon as possible after informing the mine operator or contractor that an order is being issued. However, when issuing a Section 107(a) Imminent Danger Order of Withdrawal, do not delay the removal of miners from the affected area(s), or stopping the condition or practice before hanging the closure tag. Upon termination of the order, the inspector shall remove the “CLOSED” poster(s).

- L. Proposed Modification to Safety Standards.** A citation shall be issued when a mine operator has failed to comply with any safety standard, even though a petition for modification has been filed and a decision on the petition is pending before the Administrator. (Refer to Section 108 in [Volume I of the PPM](#) for further guidance.)
- M. Section 108 - Injunctive Relief Procedures.** An injunction is an order from a court demanding that a person do something (e.g., allow entry) or refrain from doing something (e.g., working against an order of withdrawal). The failure or refusal to comply with any type of injunction can be punishable by a contempt-of-court charge. Inspectors should notify their supervisor when the mine operator or his or her representative:

1. Violates, fails, or refuses to comply with any order or decision issued under the Mine Act;
2. Interferes with, hinders, or delays the inspector in performing any of his or her official duties;
3. Denies entry onto mine property;
4. Refuses to permit inspection of the mine by the inspector or investigation of an accident or occupational disease occurring on mine property;
5. Refuses to provide information or reports requested for the purpose of carrying out provisions of the Mine Act; or
6. Refuses to permit access to or copying of records requested for the purpose of carrying out provisions of the Mine Act.

When any of these circumstances arises and cannot be remedied by communication with the operator, discuss it with your supervisor immediately to determine if injunctive action may be appropriate. Additionally, if one of the above situations is encountered, record the names of as many persons involved as possible, the date and time of the denial or observance, and a detailed account of the circumstances. Then contact your supervisor as soon as possible. Your supervisor and the District Manager will contact the Regional Solicitor's Office to determine the merits of the case, the sufficiency of the evidence, and whether injunctive relief is advisable or possible. (Refer to Section 108 in [Volume I of the PPM](#) for further guidance.)

N. Use of Cameras. Cameras should be used whenever practical to obtain digital images to document violations, accident scenes, or other conditions during an inspection or investigation, subject to the following restrictions:

1. Only cameras approved as permissible for use in return air by MSHA's Approval and Certification Center (A&CC) shall be used or carried into areas where permissible equipment is required, unless otherwise approved by the District Manager.
2. Cameras are prohibited within 25 feet of explosives, other than Ammonium Nitrate Fuel Oil (ANFO), including storage magazines, loaded explosives vehicles, and explosives loading areas.
3. Cameras are prohibited in areas where flammable materials are stored or used and in areas of coal handling facilities that are Class I or Class II Hazardous Locations (explosive dusts or gases) as outlined in National Fire Protection Association® NFPA 70®, National Electrical Code®.

Digital photographs must clearly and accurately depict the nature of the violation or condition. Where appropriate, photographs of abatement or termination measures should also be taken. Before photographs are taken, ensure that the camera is set to the correct date and time. If the camera has audio capability, it should be turned off so that voices are not recorded, unless all persons are explicitly notified that their statements are being recorded.

To be most effective, a violation or condition should be captured with both an “up close” shot and a distance shot to provide perspective and points of view. The photograph should depict a miner's potential for exposure to the hazard or violation of the standard. As a rule of thumb, no more than two or three good photographs are necessary to illustrate a violation and its resolution. Too many photographs can become an administrative burden.

When taking a video recording, begin at a distance and “zoom in” to provide greater detail of particular features. When panning an area, move the camera slowly enough to permit viewers to observe relevant details and attempt to minimize unintended camera movement. Additionally digital memory cards may be needed to ensure sufficient storage capacity if both videos and photographs are taken.

At no time should MSHA personnel put themselves or others at risk or ask miners to reenact practices to obtain photographs. MSHA personnel should not photograph conditions that pose an imminent danger before taking actions necessary to prevent miners from being exposed to the hazard.

Even when printed photographs are produced, the digital images should be stored on a CD or DVD, and the CD or DVD must be maintained in the mine inspection/investigation file or as part of the inspection report. When transferring the digital images and the associated information to support enforcement action, use MSHA Form [4000-125](#). A copy of completed 4000-125 forms shall be attached to the affected citation or order.

Documentation Required: *If persons other than inspectors are taking photographs during an inspection or investigation, inspectors should record in their notes the name and affiliation of those persons. All images captured by inspectors during an inspection or investigation must be retained in the mine inspection/investigation file or as part of the inspection report. Images from digital photographs should be saved to a CD or DVD in the same file format (normally JPEG with moderate compression) and at the same resolution as they were originally captured by the camera and must be maintained in the mine inspection/investigation file or as part of the inspection report. The inspection/ investigation notes or the Photo Mounting Worksheet (MSHA Form 4000-125) should document: (a) the person who took the photograph when more than one inspector/investigator was involved in the inspection/investigation; (b) the date and time the photograph was taken; (c) the location of the condition or object; (d) a brief description of image(s) captured; and (e) the person who*

transferred the digital image to the CD or DVD and to the Photo Mounting Worksheet. Original digital images should not be modified or edited. All enforcement actions, inspector notes, and digital images associated with an inspection or an investigation should be provided to the Office of the Solicitor or a Conference and Litigation Representative (CLR) once a matter has been referred to the Federal Mine Safety and Health Review Commission or any other judicial body. Once the digital images are effectively and reliably stored on a CD or DVD, the images may be deleted from the camera's digital memory card.

O. Inspection Report.

Mine Activity Data Form (MSHA Forms 2000-22). The Lead inspector shall complete and submit an MSHA Form 2000-22 as a cover page for all types of inspection or investigative activity reports. This electronic form is maintained in the IPAL system and changes are to be made as needed until the event is closed. If an inspector revises the form after a close date has been entered and uploaded, the inspector shall report the changes to the Mine Safety and Health Assistant responsible for updating the revised information in the MSHA Standardized Information System (MSIS). All items (boxes) must be filled out by entering either the appropriate information or by entering zeros (0). Any Form 2000-22 with documentation in Item 17 (Remarks) concerning mine operator's program or plan reviews should be forwarded to the District Office by the Mine Safety and Health Assistant for the District Manager's review.

Item-by-Item Instructions for Completing MSHA Form 2000-22:

Item 1. Action. Indicate if this report is new or if it is updating a previous original report.

Item 2. Activity Code. Enter one of the authorized inspection activity codes. A complete list of event codes can be found in the appendix of the [IPAL User's Manual](#).

Item 3. Event Number. The event number is generated from a maintained event number bank assigned to the inspector opening the event as the Lead AR. This number is used on T&As and Citation/Orders. Exercise care to use the correct event number when issuing citations and orders.

Item 4. Date Event Started. Enter the appropriate event starting date (month, day, year). The start date begins when any activity time is used on one or more of the following items: inspection preparation, travel, or on-site inspection, office generated paperwork or report writing associated with the event, including the review of the UMF/EUMF.

Item 5. Date Event Finished. The date on which all physical, written, and verbal activities have been completed. This includes report preparation and on-site closeout conferences.

Item 6. Mine ID. The authorized 7-digit mine identification number.

Item 7.a. Organization Code (Mine Assignment). Enter the last four digits of the Field Office organization code that is assigned the responsibility for inspecting the mine.

Item 7.b. Work Group Identifier. Enter the 2-digit work group identifier that is assigned the responsibility for inspecting the mine.

Item 8.a. Organization Code (AR Assignment). Enter the last four digits of the organization code of the Lead AR who is performing the inspection when this organization is not the field office with the assigned responsibility.

Item 8.b. Work Group Identifier. Enter the 2-digits of the work group identifier of the Lead AR who is performing the inspection when this work group is not the work group with the assigned responsibility.

Item 9. Company Name. This entry must be identical to the company name contained in the current mine status record.

Item 10. Mine Name. This entry must be identical to the mine name contained in the current mine status record.

Report Type. This section identifies segments of inspection reports.

- 1) Item 11.a. First. Check this box if the report is the first partial submittal of a report for long-term inspection activity.
- 2) Item 11.b. Interim. Check this box to identify intermediate report segments for long-term inspection activity.
- 3) Item 11.c. Last. Check this box to identify the final report segment for long-term events, which should be retained as the cover page for the completed inspection report.
- 4) Item 11.d. Not Applicable. Check this box for all reports for one-day events, which should be retained as the cover page for the completed inspection report.

Item 12. Areas of Inspection. Items 1 (Item 12.a.) through 12 (Item 12.l.) identify the area(s) inspected or visited during this activity. Each of these boxes must

contain an entry-positive (checkmark for area(s) inspected) or negative (leave unchecked).

- 1) Item 12.a. Active Sections. Sections that are producing coal. The number of producing sections inspected/visited must be entered.
- 2) Item 12.b. Idle Sections. Sections that are not producing coal. The number of nonproducing sections inspected/visited must be entered.
- 3) Item 12.c. Outby Areas. All underground areas excluding sections. Enter positive (check mark) or negative (leave unchecked).
- 4) Item 12.d. Shafts/Slopes. Existing shaft and slope openings. Enter positive (check mark) or negative (leave unchecked).
- 5) Item 12.e. Surface Areas (UG). All surface areas of an underground mine that are required to be inspected, such as preparation plants (associated with underground mine ID numbers), bath houses, fans, impoundments with no identification numbers, etc. Enter positive (check mark) or negative (leave unchecked).
- 6) Item 12.f. Surface Workings. Surface mines and surface facilities. Enter positive (check mark) or negative (leave unchecked) and identify under either Item 12m or Item 17 (Remarks) the type of surface working inspected.
- 7) Item 12.g. Company Records. All records and documents stipulated in Title 30 CFR. Enter positive (check mark) or negative (leave unchecked).
- 8) Item 12.h. ATF. Surface explosives storage facilities (inspected under MOU with the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) for safety and security standards). Enter positive (check mark) or negative (leave unchecked).
- 9) Item 12.i. Impoundments. Impoundments with identification numbers. Enter positive (check mark) or negative (leave unchecked).
- 10) Item 12.j. Refuse Piles. Numbered refuse piles with identification numbers. Enter positive (check mark) or negative (leave unchecked).
- 11) Item 12.k. Major Construction. Enter positive (check mark) or negative (leave unchecked) in the first box after 12k. Items 1 through 5 will reflect the number of the various major construction operations covered by the report. Enter the number of each type inspected.

- 12) Item 12.l. Miscellaneous. Complete this item for any area of inspection not covered in Items a through k above. Enter positive (check mark) or negative (leave unchecked) and explain under Item 17 (Remarks).
- 13) Item 12.m. MMU/Pit Number. List identifiers for all MMUs and Pits that were inspected.

Item 13. Number of Samples Collected. This section summarizes the type(s) and total number of samples taken during the period covered by the inspection report.

- 1) Item 13.a. Air Samples. Enter the total number of bottle samples collected.
- 2) Item 13.b. Rock Dust Spot. Do not use this item due to rock dust spots no longer exist.
- 3) Item 13.c. Rock Dust Surveys. Enter the number of individual rock dust samples collected. Each bag collected and submitted counts as one sample.
- 4) Item 13.d. Respirable Dust. Enter the total number of individual respirable dust samples collected, both valid and invalid.
- 5) Item 13.e. Noise. Enter the number of individual noise samples.
- 6) Item 13.f. Other. Include any other type of health sample collected individually. If this item contains a value, show specific types of samples taken in Item 17.

Item 14. Impoundments/Refuse Piles. This section pertains to waste deposits that have identification numbers assigned. Should more than 10 waste deposits be inspected, additional entries can be made in Item 17.

- 1) Item 14.a. Number. The complete waste deposit (refuse pile or impoundment) number is 11 digits. The first 4 digits of this number are made up of the State abbreviation (2 digits) and the District (2 digits). Since these items either do not change, or can be identified from the mine ID number or the organization code, they will not be entered on the form. Enter into the available positions the last seven digits of the waste deposit identification number that includes the site identification number (5 digits) and the number of the waste deposit at that site (2 digits). If the last two digits are less than nine, include a zero before the last digit (example – 03).
- 2) Item 14.b. Field Hazard Classification (FHC). Leave this field blank.
- 3) Item 14.c. Configuration. Leave this field blank.

Item 15. Prime Independent Contractor Codes (Major Construction). Enter the 3- or 4-position alphanumeric identifier of the prime/leading independent contractor(s) who are inspected as major construction operations under Item 12.k. only. Do not list minor subcontractors.

Item 16. Inspection Results. Record the number of citations, orders, safeguards, and other actions taken during the period covered by the inspection report. Count only the actions that have the subject event number on them. Include vacated issuances in the total number of citations issued.

Item 17. Remarks. This section should be used to document deficiencies associated with the Cleanup Plan, Self-Contained Self Rescuer (SCSR) Storage Plan, Ground Control Plan, types of surface workings inspected, miscellaneous areas of inspection, special samples collected or to provide any other information deemed appropriate.

Item 18. Signature and Card Number of AR(s) Responsible for Activity. Enter AR number(s) of the person(s) participating in the event during the period covered by the report. ROE numbers of inspectors-in-training shall not be documented on the Mine Activity Data form. ARs are not required to sign the form.

Item 19. Key Entered By. Mine Safety and Health Assistants should certify with their initials and date that the data on this form was entered into MSIS.

Activity Calendar. A calendar is provided on the reverse side of the form to track time spent on the event. The key code for shifts marked on the calendar are 1-Owl or Midnight Shift, 2-Day Shift, 3-Evening or Afternoon Shift. Inspectors should indicate in the appropriate box each shift that was worked at the mine site. When a shift overlaps, the shift with the majority of the time must be checked. When more than one shift is spent at the mine site, the boxes for each shift actually spent at the mine site must be marked. **Office time, including the review of the UMF, completion of notes, forms, correlating information from surveys and samples, and time spent to compile the event report shall be charged to the event.** Only the Mine Activity Data Form Calendar completed by the Lead AR is required to be submitted. **The Lead AR shall assure notes, including a daily cover sheet, are provided for each box checked.** Other generated time reports may be used in lieu of the activity calendar as long as all the required information is provided (e.g., identifies all ARs who charged time to the event and the day and shift worked). When other time-generated reports are used for this purpose, they shall be dated and initialed by the lead AR to indicate the report has been compared with the inspection notes and report activities for the event.

2. **Inspection Notes.** Inspectors should submit notes, including a completed Daily Cover Sheet ([MSHA Form 7000-10I](#)), for each day that time is reported on an

inspection or investigation. In addition to required documentation for procedures conducted, inspectors should document pertinent general observations in their inspection notes.

- a. **General Information Cover Sheet.** The General Information Cover Sheet ([MSHA Form 7000-10H](#)) for each inspection or investigation should be started on the first day of the inspection and completed when the event is closed. Information for this sheet will be obtained from the UMF/EUMF, the Mine Activity Data Sheet, and from the mine site. The General Information Cover Sheet is to be used to document information common to any inspection or investigation activity and may be used in lieu of the daily activity sheet for single-day events.
- b. **Daily Cover Sheet.** The inspector should identify the members of the inspection party in the spaces provided on the Daily Cover Sheet. Inspectors shall also list a summary of the areas physically inspected in the “Areas of Inspection Activity” section of the Daily Cover Sheet (Example: #1 Belt, #2 Belt, etc.).
- c. **Continuation Pages.** Inspectors should supplement Daily Cover Sheets using approved note keeping forms, check lists, listings or other preprinted forms to document inspection or investigation activities that require more than one page of notes. Any legible written format may be used for continuation pages, unless otherwise specified by an inspection procedure. [MSHA Form 7000-10M](#) (Air Readings) is available to document the location and results of air tests and measurements. The inspector should date, initial, and sequentially number the front of each page of the inspection notes, including nonstandard formats, starting with the Daily Cover Sheet as Page 1. (It is acceptable to initial, date, and number only the first page of large documents such as SCSR inventories and Diesel inventories.) Original documentation of samples, tests, and measurements should be included in the inspection notes. Preprinted sheets are also provided to assist in documentation of respirable dust ([MSHA Form 7000-10N](#)) and noise ([MSHA Form 7000-10P](#)) inspections and may be included in the inspection notes when used. On completion, daily notes should be turned in to the immediate supervisor for review. Inspectors should not document required information on the backside of inspection notes.
- d. **Documentation of Enforcement Actions.** Section 104(a) of the Mine Act requires that each citation or order be in writing and describe with particularity the nature of the violation, including a reference to the provision of the Mine Act, standard, rule, regulation, or order alleged to have been violated. In addition, the citation is required to fix a reasonable time for the abatement of the violation.

Facts relevant to the condition or practice cited for each enforcement action and information regarding the negligence and gravity determinations should be documented. To ensure that quality citations and orders are issued, inspectors should document the following information:

1. The time (24 Hr. Clock) the inspector observed the violation.
2. A description of the conditions and practices causing and constituting the violation of a specific regulation or section of the Mine Act. They must be accurately identified and described, including a means to quantify the size and extent of the cited condition or practice (such as dimensions, periods of time, and number of occurrences). The names of individuals shall not be included in the condition or practice section of the citation.
3. The standard or section of Act violated.
4. The location or equipment where the violation or hazard exists.
5. **The following gravity factors, when applicable:**
 - a. Mine characteristics, such as methane liberation, geological conditions, accident history, and other physical factors that would affect the likelihood of the occurrence.
 - b. The number of persons exposed to the hazard and the duration and frequency of this exposure under continued normal mining practices.
 - c. The type of injury or illness resulting from the occurrence of the event, including how this was determined such as industry history, personal knowledge, or experience.
 - d. The number of persons who were actually injured or became ill as a result of the hazard caused by the violation or the number of persons who could be affected if the anticipated event occurred, including how this was determined.
6. **The following negligence factors, when applicable:**
 - a. The title of person(s) who knew, or had reason to know, that the violation existed and how this was evidenced. Document the name of any person who knew or had reason to know that the violation existed in your inspection notes only, as the condition or practice section of citations should not contain the name of any person.

- b. Mitigating circumstances including, but not limited to, actions taken by the operator to prevent or correct hazardous conditions or practices. The number of mitigating circumstances documented should be used in conjunction with the definitions for degrees of negligence listed in [§ 100.3\(d\)](#). The failure of the operator to exercise a high standard of care for miners constitutes negligence.
 - c. Facts indicating the length of time that the violation existed.
7. For unwarrantable failures of the operator to comply with a mandatory safety or health standard, include the factors that explain how the operator engaged in aggravated conduct. The following factors, when applicable, should be documented to explain how the operator engaged in aggravated conduct:
- a. the obviousness or extensiveness of the cited condition or practice;
 - b. the length of time that the cited condition or practice existed and whether it was excessive;
 - c. any similar violations that were issued at the mine or to the contractor in the recent past;
 - d. the title of any agent of the operator or contractor who conducted an examination or had been in the area, or was aware of the existence of the condition, including dates and times. Document the name of any agent of the operator or contractor who conducted an examination or had been in the area, or was aware of the existence of the condition in your inspection notes only, as the condition or practice section of the citation/order should not contain the name of any person;
 - e. facts related to whether the cited condition or practice had been reported to the operator or contractor who then allowed it to exist, without correcting or adequately addressing the problem, for a period of time;
 - f. the title of any supervisor or an agent of the operator or contractor who committed or allowed the condition or practice to exist. Document the name of any supervisor or an agent of the operator or contractor who committed or allowed the condition or practice to exist in your inspection notes only, as the condition or practice section of citation/order should not contain the name of any person;
 - g. whether the mine operator or contractor made reasonable efforts to correct the cited condition or practice; and

- h. other factors, not identified above, that resulted in a negligence evaluation by the inspector of “high” or “reckless” disregard.
- 8. The time the citation/order/safeguard was set for abatement and the time it was terminated. Describe in detail the specific action(s) taken to correct the cited condition(s) or practice(s) that justifies termination or extension.

If an enforcement action results from failure to comply with an approved plan, permit, or petition, a copy of the related approval letter and pertinent page(s) shall be included with the inspector’s notes. When enforcement or subsequent action(s) are taken based upon the results of analysis report(s), that report shall be included with the inspector notes.

(Refer to the [Citation and Order Writing Handbook](#) for further guidance and additional information.)

Chapter 3 - REGULAR SAFETY and HEALTH INSPECTION PROCEDURES

A Regular Safety and Health Inspection (E01) is one in which a mine is inspected in its entirety pursuant to Sections 103(a)(3) and (4) of the Act. This inspection is to determine if imminent dangers exist and to ascertain compliance with mandatory health and safety standards, approved plans (including suitability to current mine conditions), citations, orders, or decisions issued, and other requirements of the Act. If other types of inspections, excluding 103(i) inspections, are used to complete a Regular Safety and Health Inspection, comments should be included on the regular inspection event sheet to clearly show the event numbers used.

No portion of a 103(i) spot inspection (including inspection notes, reports, bottle samples, etc.) may be used to complete any other type of inspection, including a Regular Safety and Health Inspection. Subsequent actions on previously issued citations and orders are permitted as long as they are in the same general area and do not interfere with the requirements of the 103(i) inspection.

When conducting inspections while riding on mobile equipment, the mode of transportation should allow a complete and effective inspection of the areas from a safe position. When extremely low coal seams are inspected, it may not be possible to conduct an inspection from mobile equipment completely, effectively, or safely. Conveyor belts shall be inspected from within the entry where the belt is located and the entire conveyor length must be traveled.

Problems encountered during inspection activities that could affect the health or safety of miners which are not covered by existing standards should be promptly communicated to the inspector's immediate supervisor. It is especially important that this information is shared when other inspectors travel to the mine or mine assignments change.

Inspection Tracking System (ITS).

The ITS is designed to enhance MSHA's ability to determine inspection progress, fulfill established inspection procedures, and plan and coordinate inspection activities. Inspection information contained in the ITS should be maintained as required by the applicable procedural header.

The documentation required for each item under the procedural headers listed in this chapter should include a statement in the inspection notes that the procedure was completed (example: first day arrival in advance of starting time). Inspectors should document pertinent general observations made during their inspections in the narrative portion of the inspection notes. Not Applicable or "NA" may be used if the header does not apply. A short statement such as "No Violations Observed" or "NVO" should

be included when no hazards or violations are observed. No other documentation is required unless a violation is observed.

The completion of each procedure shall be documented in the ITS and/or on the inspection tracking map. If additional documentation is required, these requirements appear beneath the paragraphs labeled *Documentation Required* applicable to the header. To the extent possible, documentation should be entered into the ITS at the end of each inspection day and synced to ensure that other inspection personnel can access inspection results and prevent the loss of information.

Printed portions of the ITS may be used as a part of the inspection notes which should have on the front of each page the date, inspector initials, and page number(s). When included as part of the inspection notes, printed portions of the ITS must also be provided in the daily notes and attached to a daily cover sheet.

If a required inspection procedure cannot be fully completed by the end of the inspection, the inspector's immediate supervisor shall be advised prior to closing the event.

Tracking Map. A tracking map should be used to record the location of MMU(s) or name of section(s), approved evaluation/measuring points, and each air course inspected. The appropriate field or district office shall provide the inspector(s) with a map for the subject mine if the mine operator is unwilling to provide a copy. Line diagrams will no longer be accepted for tracking purposes. Tracking maps received from the mine operator may not always show each location of measurement points or evaluation points where test and measurements are required to be performed by the mine ventilation plan. All required measurement points and evaluation points should be marked for identification on the tracking map at the beginning of each E01 inspection and as new measuring points or evaluation points become approved. This will help assure that the required points are not missed during the inspection. Each approved measurement point or evaluation point should be marked on the tracking map and identified by the name and location of each measurement point or evaluation point, including each MMU number. Should a new measurement point or evaluation point become approved after the affected air course has been traveled and inspected during the quarter's inspection, a go-back would not be necessary just to document the air reading at that measurement point or evaluation point. Upon reviewing the UMF prior to the mine inspection, measurement points or evaluation points should be reviewed on the mine map that accompanies the approved ventilation plan and a comparison should be made to the official mine map posted at the mine site and the operators' records of air readings.

A. General.

1. **First Day Arrival in Advance of Starting Time.** The inspector should arrive at the mine on the first day of the inspection in advance of the mine's starting time. Sufficient time should be allowed for pre-inspection contacts, a preliminary review of record books pertaining to the area or equipment being inspected, and an overview of the mine map to determine which area of the mine to begin the inspection. When preparing to conduct an inspection, inspector should take precautions not to disclose their intentions to conduct an inspection in a specific location. Examples of such precautions include reviewing examination books for several areas of the mine, rather than only the specific area that they intend to inspect that day, and making a general request for transportation, rather than requesting transportation to travel to a specific location. A physical inspection of the mine should begin immediately after the pre-inspection contacts are made. The inspector should enter the mine with the mantrip on the first inspection day. At surface coal mines, the surface pit and related mining operations should be inspected before any preparation facilities. At underground coal mines, working sections should be inspected before the surface facilities. However, this does not preclude inspecting other areas (including surface areas) first where the inspector determines a serious problem or condition needs immediate attention. If a physical inspection of the mine cannot begin on the first day of a regular inspection, MSHA supervision or management should be informed as soon as practicable.
2. **Mine Map.** Prior to going underground on the first day of the inspection, the inspector should review the mine map for consistency with approved mining methods and determine whether mining is being conducted in proximity to worked-out areas, oil and gas wells, fuel transmission lines, bodies of water that could present an underground flood hazard, mines located adjacent to, above, and below active workings, and any danger that surface mining may present to underground miners. During the course of inspection activities, the mine map should be reinspected as needed to assure the maps are appropriately updated, changes documented, or noted as incomplete as compared to the actual mining activities.
3. **Check In And Out System.** The inspector shall determine if the system being used at the mine complies with § 75.1715 (Identification check system).
4. **Cleanup Program.** Inspectors shall evaluate the adequacy and effectiveness of the operator's cleanup program continually by reviewing the enforcement history for regular cleanup and removal of accumulations of coal and float coal dust, loose coal, and other combustibles.

§ 75.400-2 (Cleanup program) – Cleanup Program requires mine operators to

establish and maintain a program for regular cleanup and removal of accumulations of coal and float coal dust, loose coal, and other combustibles. Such program shall be available to the Secretary or authorized representative. Therefore, mine operators are required to have a written cleanup program.

The written program must include details regarding how the operator will regularly control the accumulation of float coal dust, loose coal and other combustibles. These details could involve the quantity, schedule, and method for rock dust application in various locations. MSHA guidance to the mining industry interprets that mine operators should include the following elements in their written cleanup program:

- a. The regular cleanup methods for the removal of accumulations of coal and float coal dusts, loose coal, and other combustibles in all active workings or on diesel-powered and electrical equipment in these areas ;
- b. The equipment and methods used for applying rock dust to maintain 80% Total Incombustible Content (TIC) as required by § 75.403 and the methods to continuously apply rock dust to areas where coal dust is generated and float coal dust accumulates; and
- c. The means to evaluate the effectiveness of their cleanup program, such as review of preshift examination records, rock dust usage, rock dust sampling results, and compliance history. Mine operators should place emphasis on critical areas such as longwall tailgates, belt transfer points, section returns, and bleeder entries.

There are various methods for applying rock dust, such as hand dusting, mechanical dusting and wet rock dust application. Mine operators should use mechanical rock dusters on the working sections, in the return entries of these sections, and on the longwall tailgate to neutralize float coal dust accumulations and to maintain compliance with the 80% TIC requirement. These areas often require continuous rock dusting with trickle dusters or high-pressure rock dusting machines to maintain the required incombustible content levels and inert float coal dust accumulations. Accumulations of coal and other combustibles must be cleaned up and removed from the mine. Accumulations of oil, grease, coal dust and other combustible materials are not allowed on diesel or electrical equipment.

To evaluate the mine operator's cleanup program, inspectors should:

- a. Review the current cleanup program each quarter for compliance with § 75.400-2;
- b. Maintain a copy of the current cleanup program in the uniform mine file (UMF);
- c. Compare the UMF cleanup program with the current cleanup program. Changes should be justified, and

- d. The mine operator should modify the cleanup program to address significant or persistent violations of Subpart E. The inspector should include necessary modifications of the cleanup program in the actions to terminate a citation or order.

When a violation of §§ 75.400 (Accumulation of combustible materials), 75.402 (Rock dusting), or 75.403 (Maintenance of incombustible content of rock dusting), is found, abatement should be set at the shortest reasonable time after careful evaluation of conditions on a mine-by-mine basis, including whether the mine liberates large volumes of methane gas or has a history of methane ignitions. If an operator fails to totally abate the citation within the specified time, a Section 104 (b) Order of Withdrawal should be issued.

If a mine operator has repeat violations of §§ 75.400 (Accumulation of combustible materials), 75.402 (Rock dusting) or 75.403 (Maintenance of incombustible content of rock dusting), inspection personnel should discuss the adequacy of the cleanup program with the mine operator and consider requiring the use of more effective methods for controlling and maintaining the incombustible content of the combined coal dust, rock dust, and other dust along with elevated enforcement actions. Inspection personnel should also consider changes to the cleanup program which would require the use of bulk dusters, trickle dusters, or high-pressure rock-dusting machines to continuously rock dust the areas downwind of belt transfers, the returns of active sections, the tailgates of longwalls, and the bleeder entries.

Rock dusting in non-pillared worked out areas - prior to abandoning sections or other underground areas, efforts should be made to assure that the incombustible content of mine dust is in full compliance with the regulations. Afterwards, rock dust can be blown into inaccessible areas if accumulations of float coal dust are observed at the approaches to the inaccessible areas.

(Refer to [Maintenance of Incombustible Content of Rock Dust in Underground Coal Mines: 76 Fed. Reg. 35968 \(June 21, 2011\)](#) for additional information.)

Documentation Required: *The inspector should document in the remarks section, Item 17 of the Mine Activity Data sheet (MSHA Form 2000-22) that the Cleanup Program in effect at the mine is adequate or otherwise note the deficiencies in the program. Additionally, document a general statement in the notes of any discussions held with the mine operator in reference to changes in the Cleanup Program based on the evaluation of the adequacy and effectiveness of the program.*

5. **Communication and Tracking Surface Facility.** The surface facility for the post-accident two-way communication and electronic tracking systems shall be

inspected for compliance with applicable standards, and the Emergency Response Plan (ERP). This inspection should include:

- a. Observing the responsible person demonstrate the functionality of the post-accident tracking system to determine whether it uniquely identifies miners underground and their locations.
 - b. Observing the responsible person: (1) conduct an emergency communication broadcast test and (2) confirm that messages were received.
 - c. Determining whether the responsible person on the surface has a working knowledge of the communication and tracking system, is always on duty when miners are underground to provide communications, initiates corrective actions for system failures and faults, and takes appropriate actions during emergencies. If the responsible person performs duties away from the communications center, determine whether the responsible person will remain in contact with the system and can immediately attend to alerts. (Refer to [Q&As Post-Accident Two-Way Communication Tracking 2011](#) for further guidance and additional information.)
6. **Refuge Alternatives.** Inspect all refuge alternatives (RAs) for compliance with applicable standards, including determining if the RAs are properly located, examined, and maintained.
1. Assure RAs are examined as part of the preshift examination;
 2. properly identified on the mine map;
 3. within 1,000 feet of the nearest working face;
 4. conspicuously marked;
 5. connected to lifelines with branch lines;
 6. assure a clear space is available to fully deploy the RA;
 7. communications are provided; and
 8. the RA is adequate in size to accommodate the number of persons reasonably expected to use it.

(Refer to [Q&As Mine Emergency Evacuation 2007](#); [Q&As Breathable Air](#); [Q&As Mine Emergencies §§ 75.1501 & 75.1502](#); [Q&As Refuge Alternatives](#); [Q&As Post-Accident Two-Way Communication Tracking 2011](#); [Mine Emergency Evacuation: 71 Fed. Reg. 71430 \(Dec. 8, 2006\)](#); [Refuge Alternatives: 73 Fed. Reg. 80656 \(Dec. 31, 2008\)](#); and [2000-223 ERP Review Form](#) for further guidance and additional information.)

7. **Independent Contractors.** Independent contractors shall be inspected for compliance with applicable standards. The inspector shall examine the independent contractor register. The inspector should give consideration to the

size of the contractor, the type of work being performed, and the length of time the contractor is projected to be present at the mine to determine what inspection activities are appropriate. With the exception of “major construction site inspections” all inspection efforts directed to independent contractors should be contained within the report for the ongoing inspection or investigation being conducted.

[MSHA Form 2000-208](#) (yellow contractor notes page) should be completed and submitted as part of the inspection report. Form 2000-208 should be filled out each time a contractor is inspected. If the number of contractor employees, the work location, and type of work being performed remain the same, inspectors may use a single page with multiple dates indicated. Each date will be entered separately by the appropriate Mine Safety and Health Assistant. When the independent contractor is inspected for the first time at each mining operation, the Independent Contractor Information Form ([MSHA Form 2000-207](#)) should be completed and the information documented shall be entered into Contractor Database for the subject mine. The appropriate Mine Safety and Health Assistant should update the Contractor Database. (Refer to [Contractor Forms](#) and [Contractor Database Training Booklet](#) for further guidance.)

When an enforcement action is issued to a contractor who has not previously been issued a MSHA Contractor I.D. Number, the inspector shall gather the information required to complete [MSHA Form 7000-52 Contractor ID](#). This information will be provided to the appropriate Mine Safety and Health Assistant, a contractor I.D. number will be assigned, and the enforcement action shall be served. Before obtaining a new contractor I.D. number, the Mine Safety and Health Assistant should check that the contractor does not already have an I.D. number that it is using on other mine sites.

Documentation Required: *The inspector should document inspections of independent contractors in the inspection notes utilizing MSHA Form 2000-208. When the independent contractor is inspected for the first time at the mining operation and any new data or updates to MSHA’s Contractor Database, MSHA Form 2000-207 should be filled out and the documented information should be submitted for entry into the Contractor Database for the subject mine.*

8. **Travel with Mine Examiners.** The inspector should travel with and evaluate at least one preshift, at least one on-shift, and at least one weekly mine examiner to determine if adequate examinations are being conducted. Observations should be made of the examiner’s equipment to determine that it is appropriate for the measurements and tests required on these examinations and that calibrations are current when such calibration is required. It should be noted that a mine examiner may satisfy more than one examination requirement

during their travel through an area. If an inspector observes a hazard or violation of a mandatory health or safety standard while accompanying a mine examiner, appropriate enforcement action shall be taken, regardless of whether the examiner records and/or corrects the hazard.

While conducting inspections of aircourses and approaches to sealed areas, inspectors must issue appropriate citations when deteriorating roof and rib conditions are observed. Inspectors should accompany the mine's weekly examiners and discuss the importance of noting hazardous roof conditions in the examination records and conduct follow-up inspections to observe corrective actions taken.

(Refer to [Preshift 3 hrs: 62 Fed. Reg. 35085 \(June 30, 1997\)](#) and [Preshift Examination Fixed: 64 Fed. Reg. 45165 \(Aug. 19, 1999\)](#); [Preshift: 77 Fed. Reg. 20700 \(April 6, 2012\)](#); [Q&As Mine Exam Final Rule 07-23-2012](#) for additional information.)

Documentation Required: *The inspector should document the examination type, the examiner by name, and the area examined in the inspection notes; if the examiner is satisfying the requirements of more than one examination (a combination of preshift, on-shift, or weekly) it should be documented in the inspection notes and the inspector may also consider the procedure complete for those examinations.*

9. **Inspection Shifts.** A portion of each E01 inspection should be conducted on each working shift to the extent necessary to gauge the general attitude of supervisors and miners toward health and safety. Any shift during which work is conducted, such as belt moves, mine clean up, rock dusting, power moves, and work during vacation shut downs, is considered a working shift. Normal mine examinations and water pumping are not considered working shifts.

Inspection of mines or facilities on idle shifts should focus on activities specific to that shift, such as maintenance work. Otherwise, inspections on idle shifts should be limited to places where conditions during idle shifts are similar to the conditions that normally exist on working shifts (e.g., escapeways, travelways, explosives and material storage areas for which conditions would be similar for both working and idle shifts).

In mines where regular weekend production occurs, a representative number of regular E01 inspection days should be allocated for weekend inspections. Accordingly, at mines which regularly (more than two weekends per month) produce coal on Saturday and/or Sunday, at least one Saturday or one Sunday should be included in each regular inspection. This step is intended to ensure that production shifts and crews are observed and inspected by the regular

inspector during E01 inspections. Application of this procedure is mandatory only to the extent that resources are available within the district for the resulting overtime costs.

Documentation Required: *The inspector should document the mine shift(s) (day or 1st shift, afternoon or 2nd shift, midnight or 3rd shift, and/or weekend production shift) inspected each day on the cover sheet of inspection notes to identify the mine shift and shift type (production, maintenance, or idle). For example when an operation works only two shifts, only two shifts are required to be documented in the ITS. The documentation requirements of this section are independent of any other documentation requirements.*

- 10. Part 47 Hazard Communication.** Inspectors shall evaluate the mine operator's compliance with Part 47 Hazard Communication (HazCom). The inspector will assure containers are properly labeled and Material Safety Data Sheets are available. The operator's written program shall be reviewed.

(Refer to [Q&As Hazard Communication 2002](#); [HazCom Inspection Procedures; HazCom Tool Kit 2002](#); and [HazCom: 67 Fed. Reg. 42314 \(June 21, 2002\)](#); for further guidance and additional information.)

- 11. Mantrip Operation.** The inspector shall evaluate mantrip operating practices for safety by observing at least one mantrip enter or exit the mine.

- 12. Mine Rescue.** An inspector shall inspect mine rescue team stations for capabilities and compliance with regulations quarterly, except for state-maintained mine rescue stations, which shall be inspected biannually. If an E01 inspection is not open, the inspection may be conducted during a spot (E16) inspection. For mine rescue stations that cover more than one mine, the inspection can be conducted during an E01 or E16 inspection of any of the covered mines. Under these circumstances, to avoid duplication of mine rescue station inspections and to minimize confusion, the inspector must notify the field office supervisor(s) assigned to the mines and provide the event number, mine identification number, and the date of the inspection. If violations of 30 CFR Part 49 Subpart B are found during the inspection, duplicate citations must be issued to each mine covered by the mine rescue station.

Where inspection of mine rescue stations serving mines in different MSHA Districts are performed, the mine rescue station should be inspected by personnel from either MSHA Districts, but not by personnel from both districts. To avoid duplication of MSHA inspections and minimize confusion as to which district should inspect mine rescue stations, the procedures below should be followed:

1. Mine rescue stations located on mine property shall be inspected by the district having jurisdiction over the mine.
2. Mine rescue stations located off mine property should be inspected by the district where the mine rescue station is located.

In addition to the annual statement submitted to the District Manager by the mine operator certifying that each team meets the requirements of 30 CFR Part 49 Subpart B, inspection personnel may use the [Mine Rescue Check Sheet \(I11-V-10\)](#) during an inspection pertaining to mine rescue teams and mine rescue stations to assist in verifying compliance.

(Refer to [Part 49 Mine Rescue Station Inspection Check Sheet](#); [MSHA Form 2000-224 Mine Rescue Team \(MRT\) - Certification Form](#); [Mine Rescue: 73 Fed. Reg. 7636 \(Feb. 8, 2008\)](#); [Mine Rescue Equipment: 73 Fed. Reg. 53116 \(Sept. 15, 2008\)](#); [Mine Rescue Teams: 74 Fed. Reg. 28606 \(June 17, 2009\)](#); and [Q&As Mine Rescue Teams 03-08-2008](#) for further guidance and additional information.)

- 13. Filter Self-Rescuers (FSRs) and Self-Contained Self Rescuer (SCSRs).** The inspector shall inspect and evaluate FSRs and SCSRs. MSHA inspectors should inspect 50% of SCSRs worn or carried each E01 regular inspection alternating as close as practicable the other 50% on the following E01 regular inspection and 100% of the SCSRs stored on the section and/or on the mantrip for sections. A representative number but no less than 10% of outby SCSRs should be inspected. If defects are found, additional SCSRs should be inspected. All locations where SCSRs are required to be stored outby and/or stored on underground mobile equipment shall be inspected for compliance with applicable standards and approved plans.

Inspectors shall evaluate: the adequacy of the approved SCSR storage plans (if applicable), compliance with annual testing requirements specified in the approved ERP, accuracy of SCSR storage locations shown on mine maps as required by § 75.1714-5 (Map locations of SCSRs), and company records for compliance with applicable standards. The evaluation should also include comparing data from operator FSR and SCSR inspection and testing records with observations made during physical inspections. Data from SCSR inspection and testing records and observations made during physical inspections should be compared to MSHA's SCSR Inventory Report to assure the mine operator's SCSR inventory is being updated and problems are reported as required by § 75.1714-8 (Reporting of SCSR inventory and malfunctions; retention of SCSRs). Inventory changes are to be reported within the quarter that any change occurs by utilizing [MSHA Form 2000-222 \(2000-222 Instructions\)](#). An up-to-date copy of MSHA's SCSR Inventory Report shall be

provided to the inspector at the start of each E01 inspection for the subject mine. This report shall be included in the inspection report and initialed by the inspector(s) conducting the inspections. This will indicate that the operators' records, physical inspection, and MSHA's SCSR Inventory comparison was made. MSHA Form 2000-220 is to be discontinued.

Investigating and Reporting Problems with Self-Rescue Devices – Each CMS&H District is required to assure each reported incident involving the use of a self-rescue device is thoroughly investigated. Incidents involving the following events are considered significant and should be reported to the inspector's immediate supervisor, who will in turn report the incident to Division of Safety at (202) 693-9527, or Technical Support at (202) 693-9473, as soon as practicable:

- a. an injury to a miner while using a self-rescue device;
- b. failure of a self-rescue device to perform as designed; and/or
- c. an incident that resulted in a need for a miner(s) to don a self-rescue device to escape to a safe location. Item c applies even if there were no reported injuries and the self-rescue devices performed as designed.

Operator's Inspection Procedures - § 75.1714-3(a) (SCSRs; inspection, testing, maintenance, repair and recordkeeping) requires, in part, that mine operators provide for proper inspection of self-rescue devices by a person trained to perform such inspection. Proper inspection and testing instructions are conducted in accordance with manufacturer's conditions-of-use requirements approved by MSHA and NIOSH for SCSRs, approved plans, and the testing as required under § 75.1714-3(c) (SCSRs; inspection, testing, maintenance, repair and recordkeeping) for FSRs.

As a part of this inspection, the inspector should review the mine operator's records to determine if the mine operator:

- a. conducted required inspections on each self-rescue device in use at the mine; and
- b. documented the date of each inspection. If possible, the inspector should also determine who conducted the inspection and if this person knew, understood, and followed the applicable instructions and procedures.

Inspection of Devices Being Worn or Carried By Miners - When inspecting a self-rescue device that is being worn or carried by a miner, the inspector shall:

- a. interview the miner, explaining the purpose of the inspection, and determine if the device has been inspected by the person trained to perform the inspection after each time the self-rescue device is worn as required by § 75.1714-3(b);
- b. assure effective donning and usage training has been provided;
- c. acquire the device from the miner; inspect the device by following the manufacturer's approved daily inspection procedures for the device being examined; and, if not previously established, determine the date the mine operator last tested the device in accordance with the approved MSHA and NIOSH procedures; and
- d. issue citations for self-rescue devices with broken seals or damage such that the device will not function properly as per § 75.1714-3(b) (SCSRs; inspection, testing, maintenance, repair and recordkeeping). A citation under § 75.1714-3(b) is appropriate if, on an end of shift inspection, the damaged self-rescue device is not removed from service.

Inspection of stored SCSR devices - When inspecting stored SCSR devices, the inspector shall:

- a. conduct a visual examination of SCSRs using the appropriate approved procedures for conducting daily inspections;
- b. look for any obvious sign that may indicate a device is not being properly maintained; and
- c. determine the last date the unit was tested as per procedures in accordance with manufacturer's conditions-of-use requirements approved by MSHA and NIOSH.

MSHA inspectors should verify that in-service MSA Life-Saver 60 SCSRs have not exceeded their service life and verify that mine operators follow the manufacturer's revised storage instructions for in-service units. (Refer to [MSA-NIOSH User Notice](#) for further guidance.)

Other Inspection Actions at Coal Mines:

- a. Inspection personnel must assure that SCSRs are being inspected and tested

as required under § 75.1714-3. Appropriate enforcement action must be taken if it is found that the required inspections and tests are not being conducted.

- b. A mine operator must submit to MSHA a complete inventory of all SCSRs at each of its mines under § 1714-8(a). In the event that a change in a mine operator's SCSR inventory occurs, a mine operator must report the change to MSHA within the quarter that the change occurs under § 75.1714-8(a)(2). Appropriate enforcement action must be taken if it is found during an inspection that the inventory has not been appropriately updated.
- c. Section 2 of the MINER Act of 2006 amended section 316 of the Federal Mine Safety and Health Act of 1977 at section 316(b)(2)(E)(iii)(III) to require that a maintenance schedule for checking the reliability of SCSRs be included in a mine's Emergency Response Plan (ERP). Program Policy Letter ([PPL No. P13-V-01](#)), which was a reissue of PPL No. P06-V-10, provides guidance that ERPs should address SCSR performance by specifying a schedule for opening, initiating the breathing cycle, and establishing operational reliability for a representative number of SCSR units on an annual basis. Inspection personnel must assure this testing is being conducted in compliance with each mine's approved ERP and that any defects are being reported as required by § 75.1714-8(b). Mine operators reporting SCSR defects to MSHA are required to preserve and retain the reported units in accordance with § 75.1714-8(c). Appropriate enforcement action must be taken if the tests and/or reporting and retention requirements are not being met.
- d. § 75.1504(b)(2) requires, in part, that quarterly mine emergency evacuation training and drills emphasize the importance of recognizing when an SCSR is not functioning properly, demonstrating how to initiate and reinstate the starting sequence, and the proper use of the SCSR by controlling breathing and physical exertion. Inspection personnel must determine if miners are being trained in how to recognize an SCSR is not functioning properly; the proper manufacturer's procedures for manually starting the SCSRs in use at the mine; to understand that starting the SCSR manually is a last resort to be used only when no other SCSRs are available; and that physical exertion and breathing must be controlled as per the manufacturer's procedures. Inspection personnel should talk to miners about these requirements to determine if effective training is being conducted. Appropriate enforcement action must be taken if it is determined that the training is not effective.

Actions to Dispose of SR-100 SCSRs

SR-100 SCSRs that are removed from service may not be reintroduced into any

other industry. The SR-100 owners must follow the manufacturer's instructions for disposal of SCSRs that are removed from service.

Refer to [Q&As Emergency Mine Evacuation 5-3-07](#); [CSE User Notice 2-25-2010](#); [CSE User Notice 5-10-2010](#); [CSE User Notice 1-14-2011](#); [NIOSH CSE User Notice 2-26-2010](#); [NIOSH CSE User Notice 6-23-2010](#); [NIOSH CSE User Notice 9-29-2010](#); [NIOSH CSE User Notice 10-20-2010](#); [Q&As on Phase-out of the CSE SR-100](#); and [SCSR: 71 Fed. Reg. 71430 \(Dec. 8, 2006\)](#) for further guidance and additional information.

Documentation Required: *Each SCSR storage cache shall be inspected and documented in the inspector's notes including the physical location. Each SCSR required to be inspected should be documented in the inspection notes by including the SCSR manufacturer, model, serial number and physical location. A general statement, for example: the approved SCSR storage plan parameters were evaluated (if applicable), would serve as documentation that the inspector evaluated the approved SCSR storage plan for the area covered by the inspection notes for that day. If the operator maintains an SCSR cache listing, the inspector may use that listing as inspection notes if the SCSR manufacturer, model number, serial number, and physical location are listed. The printed MSHA SCSR Inventory Report submitted with each E01 inspection shall be initialed on the front page by the inspector(s) conducting the inspection. The inspector should document in the remarks section, Item 17 of the Mine Activity Data sheet (MSHA Form 2000-22) that the storage plan (if applicable) is adequate or otherwise note the deficiencies in the approved plan (for example, the approved storage plan parameters were evaluated at each of the designated storage caches identified in the approved plan and the plan is adequate). This would serve as documentation that the storage plan parameters were evaluated at each of the designated storage caches during this inspection as identified in the approved plan. A general statement that a discussion with a representative number of miners to ensure effective donning and usage training was provided will be sufficient.*

14. **Smoking Program.** During the course of the regular Safety and Health Inspection (E01) at underground mines, MSHA inspectors shall evaluate the mine operator's compliance with the approved smoking articles search program and should determine whether an adequate search program exists and is being complied with. MSHA inspectors shall not search anyone for matches, lighters, or smoking materials. However, the inspector should:
- a. Observe searches for smoking materials to ensure searches are done as prescribed in the mine's search program;
 - b. Determine whether an adequate search program exists by reviewing the records;

- c. Interview a number of miners concerning the search program; and
- d. Be alert for evidence of smoking underground.

The operator's written program shall be reviewed. If a citation is issued to an individual for smoking or for carrying smokers' articles in areas prohibited by Section 317(c) of the Mine Act or § 75.1702 (Smoking prohibition), the violation shall be served to the miner. An original shall be retained by the inspector. A copy shall be given to the miner violating the statutory provision. A copy shall also be provided to the operator.

Special assessment under Section 110(g) of the Mine Act is mandatory for the violations cited to miners related to smoking or the carrying of smoking materials.

- 15. Petitions for Modification.** Inspectors should identify all granted petitions for modification when reviewing the UMF and evaluate them during the regular inspection to determine if they are still warranted. If the final order requires revisions to be implemented into the operator's training plan, a review of the training plan(s) should be conducted to assure those provisions have been implemented and approved. The inspector(s), through their supervisor, should notify the District Manager if a granted modification is no longer appropriate or is not in use, in which case it should be considered for revocation. Mines which are permanently abandoned and sealed should initiate the revocation process. (Refer to the [Petitions for Modification Handbook](#) for further guidance.)

Documentation Required: *If the inspector determines that granted modifications are no longer appropriate or not in use, inspectors shall indicate on the inspector's certification form that the modification should be considered for revocation. Otherwise, the inspectors' documentation that the UMF was reviewed will suffice.*

- 16. Review of Training Plans and Training Records.** The inspector shall review a representative number of training records (at least 10%) of all persons working at the mine. If the review indicates 25% of the records reviewed have deficiencies, then additional records shall be reviewed. If a 104(g) order is issued, an Educational Field Services Specialist should conduct a follow-up, and review each applicable approved training record for compliance with applicable standards and approved plans. This inspection shall include all applicable Part 48 Subpart A, Part 48 Subpart B, Part 75, and Part 77 approved plans to reasonably assure that proper training was given to the miners in accordance with the operator's approved plans. A thorough review of the training plans in the UMF should be conducted before going to the mine.

The inspector shall:

- a. Try to obtain a list of employees from the mine operator and contractor (if applicable) containing names of employees, their hire date and classification;
- b. Review the required number of MSHA Form 5000-23s or equivalent approved form for completeness, including date, type of training, signature of company representative, mine ID, address, etc., for a two-year period;
- c. Assure the annual refresher training has been conducted for each employee on or before the annual requirements with the exception of new employees hired as a New Miner or Experienced Miner. (Example: An employee's training was conducted on July 1, 2011; was the annual refresher training conducted on or before July 31, 2012);
- d. Assure New Miner Training, Experienced Miner Training, Hazard Training, New Task Training, and Annual Refresher Training have been provided as required; and
- e. Assure all applicable training courses required (New Miner Training, Experienced Miner Training, and Annual Refresher Training) have been conducted by an MSHA approved instructor qualified for the subject course. New Task Training of miners and Hazard Training do not have to be performed by MSHA-approved instructors.

Specific training requirements and types for miners and independent contractors may be found in [Volume III of MSHA's PPM](#). (Refer to the [Education and Training Procedures Handbook](#) for additional guidance.)

Documentation Required: *The inspector should document the specific type of training record reviewed (annual refresher, hazard, newly employed inexperienced miner, etc.) and the approximate number of training records reviewed.*

17. **Observation of Multi-Gas Detector Calibration.** Observation of detector gas calibrations shall be conducted to assure the proper calibration of gas detectors or otherwise determine that calibrations are being properly performed as recommended by the detector manufacturer.

- B. **Underground and Surface of Underground Mine Records and Postings.** All records and postings listed in this section shall be reviewed during a Regular Safety and Health inspection. Before the inspection is completed, all records required to be

created and/or retained since the ending date of the previous Regular Safety and Health inspection shall be reviewed.

The purpose of an inspector's review of the operator's examination records is to assure that required examinations are performed at required intervals, properly recorded, and violations and/or hazardous conditions are recorded and corrected in a timely manner. The review should be used during inspections to assure all areas of the mine site are being examined in accordance with 30 CFR and any approved plans, and the ventilation of worked-out and outby areas has been properly evaluated.

During all onsite enforcement activities, inspectors should compare the results of their record and posting reviews to actual observations in or at the mine. The appropriate citation or order shall be issued when non-compliance has been determined during these reviews or observations.

Underground and Surface of Underground Mine Records.

1. AMS Alert/ Alarm Signals, Malfunctions, Tests, Calibrations, and Maintenance- § 75.351(o).
2. Annual AMS Operator Training - § 75.351(q)(i) – (iv).
3. Annual Expectations Training for Donning and Transferring SCSRs - § 75.1504(c).
4. Annual Tests of Fire Hydrants and Fire Hoses - § 75.1103-11.
5. Annual Training for Certified and Qualified Persons – § 75.161(a) - (b).
6. Annual Mine Rescue Physical – § 49.17(c).
7. ATRS Certification - § 75.209(f).
8. Audiometric Test Records - § 62.171(c).
9. Bi-Monthly Tests of Hoist Safety Catches - § 75.1400-2.
10. 14-Day Hoist Rope Examinations - § 75.1433(d).
11. 14-Day Hoist Rope Examinations - § 77.1433(d).
12. Certification of Canopies or Cabs - § 75.1710-1(e).
13. Certification of ROPS & FOPS - § 77.403-1(d).

14. Certification of Certified Person Sampling – § 71.202.
15. Certification of Certified Person Maintenance and Calibration – § 71.203.
16. Check-In/Check-Out System and Belt Identification – § 75.1715.
17. Cleanup Program - § 75.400-2.
18. Contractor Register - § 45.4(a) - (b).
19. Daily and Monthly Main Mine Fan Examinations - § 75.312(g)(1) and (h).
20. Daily Hoisting Equipment Examinations - § 77.1404.
21. Daily Hoisting Equipment Examinations - § 75.1400-4.
22. Daily Inspection of Active Surface Working Areas - § 77.1713(c).
23. Daily Examination of Slope and Shaft Projects – § 77.1901(f).
24. Daily Inspection of Man-Hoists for Slope and Shaft Sinking - § 77.1906(c).
25. Diesel Exhaust Gas Samples Exceeding TLV® Action Levels for CO & NO₂ (including hazards as per §§ 75.321, 75.322 and required to be recorded as per §§ 75.363(c) and 70.1900(d)).
26. Diesel Equipment Inventory (updated within 7 days of changes) – § 72.520(a) - (b).
27. Diesel Fuel Evidence – § 75.1901(a).
28. Diesel Training and Qualifications – § 75.1915(c).
29. Diesel-Powered Equipment, Weekly Tests and Examinations – § 75.1914(h)(1).
30. Diesel-Powered Generators (Moving Equipment) – § 75.901(b)(12).
31. Examinations of Trolley Systems for Off-Track Equipment Moves – § 75.1003-2(b).
32. First-Aid Training of Surface Supervisory Employees - § 77.1703.
33. First-Aid Training of Underground Supervisors (Initial Training) – § 75.1713-3.
34. First-Aid Training of Underground Supervisors (Retraining) – § 75.1713-5.

35. HazCom Program – § 47.31.
36. Hearing Conservation Program Training – § 62.180(b).
37. High-Voltage Power Centers and Transformers; Record of examinations as per §§ 75.812 and 75.812-2.
38. High-Voltage Continuous Mining Machines – § 75.832(g).
39. Impoundment Examinations – § 77.216-3(c).
40. Initial Hoist Rope Stretch Measurements – § 75.1432.
41. Initial Hoist Rope Stretch Measurements - § 77.1432.
42. Inspections and Tests of Fire Suppression for Diesel-Powered Equipment – § 75.1911(j).
43. Inspections and Tests of Fire Suppression for UG Permanent Diesel Storage – § 75.1912(i).
44. Legal Identity Changes Within 30 Days – § 41.12.
45. List of Certified and Qualified Person for Part 75 Duties – § 75.159.
46. List of Certified and Qualified Person for Part 77 Duties – § 77.106.
47. Main Mine Fan Pressure Recordings – § 75.310(a)(4).
48. Map of Electrical System – § 75.508.
49. Map of Electrical System (Change Made by End of Next Workday) – § 75.508-2.
50. Map of Roof Falls – § 75.223(b) - (c).
51. Material Safety Data Sheets – § 47.51.
52. Measurements of Tensioned Roof Bolt Torque – § 75.204(f)(6).
53. Methane Monitor Calibration – § 75.342(a)(4)(ii).

54. Mine Accident, Injury, and Illness Reports (Form 7000-1) – § 50.20(a).
55. Mine Accident Maintenance of Records – § 50.40(a) - (b).
56. Mine Emergency Evacuation Responsible Person Mine Emergency Evacuation Training and Drills – § 75.1504(d)(3).
57. Mine Emergency-Training and Records for Examination, Maintenance, and Repairs of Refuge Alternatives and Components – § 75.1508(b).
58. Emergency Evacuation Training – § 75.1501(a)(3).
59. Mine Map – § 75.1203.
60. Miner Notification of Noise Exposure – § 62.110(e).
61. Monthly Calibration of Fire Sensors and Warning Device Systems – § 75.1103-8(c).
62. Monthly Examinations of Surface Electrical Equipment – § 77.502.
63. Monthly Fire Doors Tests (when non-fireproof structures are within 100' of mine openings) – § 75.1708.
64. Monthly Tests, Exams, & Maintenance of Surface High Voltage Circuit Breakers – § 77.800-2.
65. Monthly Tests, Exams, & Maintenance of Surface Low & Medium Voltage Circuit Breakers – § 77.900-2.
66. Monthly Tests, Exams, & Maintenance of UG High Voltage Circuit Breakers – § 75.800-4(a).
67. Monthly Tests, Exams, & Maintenance of UG Low and Medium Voltage Circuit Breakers – § 75.900-4.
68. Movement of Energized High Voltage Power Centers and Transformers – §§ 75.812 and 75.812-2.
69. Noise Records (Access to all Part 62 Records) – § 62.190.
70. Post-Accident Communication and Tracking Component and System Failure and Corrective Action Records – Section 316(b)(2)(a) of the MINER Act. (Refer to ERP for specific requirements.)

71. Post-Accident Communication and Tracking System Examination Records - Section 316(b)(2)(a) of the MINER Act. (Refer to ERP for specific requirements.)
72. Post-Accident Tracking Miner Location Record – Section 316(b)(2)(a) of the MINER Act. (Refer to ERP for specific requirements – this may be maintained as a data record.)
73. Preshift by Pumpers of Hazards Found – § 75.360(a)(2).
74. Preshift/On-shift Examinations – § 75.360(g).
75. Quarterly Employment and Coal Production Reports (Form 7000-2) – § 50.30(a).
76. Quarterly Inspection and Calibration of Thermal Dryer Control Instruments – § 77.314(c).
77. Quarterly Mine Emergency Evacuation Training and Drills – § 75.1504(a).
78. Qualified Persons to Test for Methane – § 75.151.
79. Record of Explosive Materials – 27 CFR § 555.125(b) and 555.127 (surface area).
80. Record of Work on High Voltage – § 75.705–3.
81. Recording of Hazardous Conditions – § 75.363(b).
82. Refuge Alternatives (Maintenance and Repair) – § 75.1508(b).
83. Roof Bolt Manufacturer’s Certification – § 75.204(a)(2).
84. Roof Control Plan Availability – § 75.220(e).
85. Seal- Approved Seal Design - § 75.335(c)(1).
86. Seal Sampling and Monitoring – § 75.333(e).
87. Seal Construction and Repair – § 75.337(c)(5).
88. Seal-Certification of Provision of Approved Seal Design is Addressed – § 75.335(c)(2).
89. Seal-Certification of Seal Construction, Installation, and Materials - § 75.337(d).

90. Seal-Certified Person Sampling Training (records maintained 2 years) - § 75.338(a).
91. Seal-Certification of Training for Persons that Perform Seal Construction and Repairs - § 75.338(b).
92. Seal-Gas Sampling Records - § 75.336(e)(2).
93. Seal Recordkeeping Requirements (See Table) - § 75.339(a).
94. Self-Rescuer Device Tests - § 75.1714-3(e).
95. Self-Rescuer Inventory Update - § 75.1714-8(a), (b).
96. Semi-Annual Hoist Rope Measurements and Nondestructive Tests - § 75.1433(e).
97. Semi-Annual Hoist Rope Measurements and Nondestructive Tests - § 77.1433(e).
98. Smoking Program - § 75.1702.
99. Testing, Examination, and Maintenance of High Voltage Longwall Equipment - § 75.821(d).
100. Training & Retraining of Surface Miners (Form 5000-23) - § 48.29.
101. Training & Retraining of Underground Miners (Form 5000-23) - § 48.9.
102. Training of Mine Rescue Team Members - § 49.18(g).
103. Trolley Overcurrent Tests and Calibrations - § 75.1001-1(c).
104. Weekly Examination for Hazardous Conditions - § 75.364(h).
105. Weekly Examination of Fire Sensors and Warning Device Systems - § 75.1103-8(b) - (c).
106. Weekly Examination of Underground Electric Equipment - § 75.512.
107. Weekly Inspection of Fire Suppression Devices - § 75.1107-16(c).

Underground Mine Postings.

1. Administrative Noise Control Procedures – § 62.130(a).
2. AMS Map or Schematic – § 75.351(a)(3).
3. Approved Respirable Dust Control Plan (Surface) – § 71.301(d).
4. Approved Ventilation Plan and Revisions – § 75.370(f)(3).
5. Bathhouse Waiver – § 71.403(c). [2000-87 Bathhouse Waiver Form](#).
6. Citations and Orders - Section 109(a).
7. Contact Information for AMS Operators and Designated Responsible Persons – § 75.351(a)(4).
8. Copy of Mine Rescue Availability - § 49.12(h).
9. Copy of Mine Rescue (Alternative Capability Small and Remote Mines) - § 49.13(d).
10. Copy of Mine Rescue Notification Plan - § 49.19(b).
11. Emergency Medical Assistance Arrangements Underground Mine as per § 75.1713-1(a).
12. Escapeway Map Posted at a Surface Location Where Miners Congregate – § 75.1505(a)(4).
13. Granted Petitions for Modification – § 44.5(b).
14. Non-Final Petitions for Modification – § 44.9 (at mines with no representative of miners).
15. Pattern of Violation Notice – § 104.4(d).
16. Proposed Ventilation Plan and Revisions – § 75.370(a)(3)(iii).
17. Proposed Health and Safety Standards or Regulations Posted – Section 101(e).
18. Representative of Miners – § 40.4. [MSHA Form 2000-238 Miners Rep](#).

19. Respirable Dust Sample Results (Surface) – § 71.210(b).
20. Respirable Dust Sample Results (Underground) § 70.210(b).
21. Roof Control Plan Available – § 75.220(e).
22. X-Ray Plan – Mine Act 203(a), [42 CFR §§ 37.4\(e\)](#) and [37.6\(c\)](#).

Note: This provision can only be enforced at underground mines and preparation plants or surface operations that have the same mine identification number as the underground mine. As per 42 CFR § 37.2(g), *Miner* means any individual including any coal mine construction worker who is working in or at any underground coal mine, but does not include any surface worker who does not have direct contact with underground coal mining or with coal processing operations. (Refer to [42 CFR Part 37](#) for further guidance.)

C. Surface Facility, Surface Mine Records and Postings.

All records and postings listed in this section pertinent to the mine being inspected shall be reviewed during a Regular Safety and Health inspection. Before the inspection is complete, all records required to be created and/or retained since the ending date of the previous Regular Safety and Health inspection shall be reviewed.

The purpose of an inspector's review of the operator's examination records is to assure that required examinations are performed at required intervals, properly recorded, and violations and/or hazardous conditions are recorded and corrected in a timely manner. The review should be used during inspections to assure all areas of the mine site are being examined in accordance with 30 CFR and any approved plans.

During all onsite enforcement activities, inspectors should compare the results of their record and posting reviews to actual observations in or at the mine. The appropriate citation or order shall be issued when non-compliance has been determined during these reviews or observations.

Surface Facility and Surface Mine Records.

1. Audiometric Test Records – § 62.171(c).
2. Auger Mining Inspections – § 77.1501(a) - (b).

3. Certification for ROPS – § 77.403-1(d).
4. Contractor Register – § 45.4(a) - (b).
5. Daily Examination of Active Areas of Mine – § 77.1713(c).
6. Daily Examination of Hoist for Slope and Shaft Sinking - § 77.1906(c).
7. Preshift and On-shift Examination of Slope and Shaft Areas – § 77.1901(f).
8. Daily Hoist Examination – § 77.1404.
9. First Aid Training for Supervisors – § 77.1703.
10. First Aid Retraining for Supervisors – § 48.29(a).
11. Hazard Training Records – § 48.31(d).
12. HazCom Program – § 47.31(a).
13. Hearing Conservation Program Training – § 62.180(b).
14. Hoist Rope Examination and Tests – § 77.1433(d) - (e).
15. Hoist Rope Initial Measurement – § 77.1432.
16. Impoundment Inspection – § 77.216-3(c).
17. Investigation and Accident Reports (5 Years) – § 50.40(a) - (b).
18. Material Safety Data Sheets – § 47.51.
19. Mine Accident, Injury and Illness Reports (Form 7000-1) – § 50.20(a).
20. Miner Notification of Noise Exposure – § 62.110(e).
21. Monthly Examination of Electrical Equipment – § 77.502.
22. Monthly Examination of High Voltage Circuit Breakers - § 77.800-2.
23. Monthly Examination of Low & Medium Voltage Circuit Breakers – § 77.900-2.
24. Qualified & Certified Persons – § 77.106.
25. Quarterly Employment and Coal Production Reports (Form 7000-2) – § 50.30(a).

26. Record of Equipment Pre-Operational Check – § 77.1606(a).
27. Record of Explosive Materials – 27 CFR §§ 555.125(b) and 555.127.
28. Thermal Dryer Examination – § 77.314(c).
29. Training & Retraining of Surface Miners (Form 5000-23) – § 48.29(a).
30. Work on Energized High Voltage Lines – § 77.704-3.
31. Ventilation of Slopes and Shafts – § 77.1911(a).

Surface Facility and Surface Mine Postings.

1. Administrative Noise Control Procedures – § 62.130(a).
2. Approved Respirable Dust Control Plan (Surface) – § 71.301(d).
3. Bathhouse Waiver – § 71.403(c). [2000-87 Bathhouse Waiver Form](#).
4. Bathhouse Waiver Application – § 71.404(b).
5. Citations and Orders - Section 109(c).
6. Emergency Medical Assistance Arrangements (Surface Mine) – § 77.1702(e).
7. Granted Petitions for Modification - § 44.5(b).
8. Mine Map (Posted or Available) – § 77.1202.
9. Non-Final Petitions for Modification – § 44.9 (at mines with no representative of miners).
10. Pattern of Violation Notice – § 104.4(d).
11. Proposed Health and Safety Standards or Regulations Posted – Section 101(e).
12. Representative of Miners – § 40.4.
13. Respirable Dust Sample Results (Surface) – § 71.210(b).
14. Safety Program Instructions – § 77.1708.
15. Training Plans (with no miners' representative) – § 48.23(d).
16. Training Plans – § 48.23(n).

D. Surface Areas of Underground Mines, Surface Facilities, or Surface Mines.

- 1. Aerial Tramways.** An inspection shall be conducted of all aerial tramways for existing and potential hazards, including structure condition, guarding, accumulations, lighting, electrical installation, and fire protection.
- 2. Auger Openings and Highwall Mining.** Auger openings and highwall mining shall be inspected for compliance with applicable standards.
- 3. Coal Stock Pile.** Coal stockpiles shall be inspected for compliance with applicable standards including inspection for potential hazards such as fires, slope instability, or persons working in close proximity to active underground feeders.
- 4. Communications Installations.** An inspection shall be conducted of all communication installations for compliance with applicable standards, including attention to the knowledge level of responsible persons when such persons are required by regulation or approved mine plans. The inspection should include attention to grounding, insulation, lightning protection, proper operation, compliance with the ERP and safe access.
- 5. Draw-Off Tunnels.** An inspection shall be conducted of draw-off tunnels (including fire hazards, combustible accumulations, inadequate escapeways, air quality, guarding, and ventilation) for compliance with applicable standards.
- 6. Drilling and Blasting.** An inspection shall be conducted of any and all drilling or blasting operations on mine property for compliance with applicable standards and approved plans. The inspector should observe a complete drilling and blasting cycle to evaluate work practices if drilling or blasting is being conducted during the inspection. Attention should be given to maintenance of equipment, dust control practices, handling and use of explosives, and examinations.

Documentation Required: *Locations of inspections and observations of drilling and blasting practices shall be inspected and documented including the area(s) inspected.*

- 7. Dumping Facilities.** An inspection shall be conducted of conditions and practices at all dumping facilities including the adequacy of illumination, safe access, stop blocks, berms, access road grades, warning signs, posted speed limits, and the presence of surface stress cracks for compliance with applicable standards and in accordance with guidance provided in the [Dump Point Inspection Handbook](#).

***Documentation Required:** Each dumping facility shall be inspected per the procedural requirement and documented, including the area(s) inspected.*

- 8. Electrical Installations.** The inspector shall compare the mine operator's record of monthly examination to electrical installations that are in use and available for use. All electrical installations that are in use and available for use should be listed and maintained in the ITS. An inspection shall be conducted of all surface electrical installations for compliance including existing and potential hazards, such as structure condition, guarding, combustible accumulations, lighting, fire protection, safety devices, examinations, circuit breaker identification and capacity, danger signs, and safe access. If an inspector finds that wiring of electric equipment is in a rundown condition, with many violations existing on one unit of equipment and if there is evidence that thorough and complete examinations are not being made or that the required tests are not being made, a citation should be issued under § 77.502 (Electric equipment; examination, testing, and maintenance). Please refer to the Coal [Electrical Inspection Handbook](#), Chapter 2, for more information. A regular inspector shall not attempt to perform inspections or tests that require the expertise of an electrical specialist.

***Documentation Required:** Each electrical installation shall be inspected and documented including the area(s) inspected.*

- 9. Equipment (Other), Including Electrical Equipment.** The inspector should compare the mine operator's record of monthly examination to electrical equipment in use and available for use. All electrical equipment in use and available for use at the mine should be listed and maintained in the ITS. The inspector shall review the operator's examination records and inspect aerial tramways, and in use and available for use haulage, mobile, and portable equipment. Areas where these types of equipment are used, such as custom coal preparation facilities, shall be inspected for compliance with applicable standards and to determine if hazardous or potentially hazardous conditions exist. Attention should be given to safe access, guards, equipment condition, braking systems, audible warning devices, back-up alarms, cab windows, examinations, fire detection systems, combustible materials, fire protection, condition of electrical cables, wiring, and circuit protection. This procedure also applies to independent contractor equipment in service at the mine. Spare surface equipment as defined under this section only and not routinely used, such as those maintained on a ready line, tagged out of service and disabled (such as the battery being removed), do not have to be inspected.

***Documentation Required:** Each piece of equipment inspected should be identified by equipment manufacturer, equipment type, and identifying number (serial number, company number, etc.). All equipment inspected, regardless of*

whether the operator or an independent contractor owns it should be documented in the inspection notes. Equipment owned by the contractor is not required to be documented in the ITS (except for when the contractor is the operator as defined by Section 3(d) of the Mine Act). Small pieces of handheld electrical equipment are not required to be recorded or maintained in the ITS.

- 10. Equipment (Pit).** The inspector shall review the examination records for all pit equipment in use and available for use at the mine. All pit equipment in use and available for use at the mine and all portable equipment shall be inspected for compliance with applicable standards and to determine if hazardous or potentially hazardous conditions exist. Attention will be given to safe access, guards, equipment condition, braking systems, audible warning device, back-up alarm, cab windows, examinations, fire detection systems, combustible materials, fire protection, condition of electrical cables, wiring, and circuit protection. This procedure will also apply to independent contractor equipment in service at the mine.

Documentation Required: *Each piece of pit equipment inspected shall be identified by the equipment manufacturer, equipment type, and identifying number (serial number, company number, etc.). All equipment inspected, regardless of whether the operator or an independent contractor owns it should be documented in the inspection notes. Equipment owned by the contractor is not required to be documented in the ITS (except for when the contractor is the operator as defined by Section 3(d) of the Mine Act).*

- 11. Escapeways.** An inspection shall be conducted of all work areas to determine if escapeways are adequate. Attention will be given to safe access, lighting, and escapeway maintenance. Inspections should include discussions with miners working in each area to determine compliance with applicable standards.

Documentation Required: *Each escapeway shall be inspected per the procedural requirement and documented and include the location description.*

- 12. Explosives Storage (Magazines).** An inspection shall be conducted of all areas where explosives are stored on mine property. An inspection should include observing storage security, the presence of combustible materials, the handling of explosives, and recordkeeping for compliance with applicable standards. The inspector shall complete the appropriate listed ATF forms when explosives are present on the mine property. The inspector shall issue to the mine operator a copy of the ATF form to be posted upon completion of inspection. (Refer to the ATF Federal Explosives Law and Regulations, ATF Publication 5400.7, [27 CFR Part 555](#); [List of explosive Materials](#); ([ATF E-Form 5030.5](#) or ATF Form 5030.5 (revised April 2005)); ([ATF E-Form 5400.5](#) Report of Theft or Loss-Explosive Materials (revised March 2008)) and ATF Form 5400.5 for further guidance.)

Documentation Required: *Each explosives storage area shall be inspected per the procedural requirement and documented including the location description. The appropriate ATF form(s) should be completed and included in the inspection report. Typed or printed names are acceptable on the form(s). If there are no explosives on property, document this in the notes and no form(s) are required to be completed.*

- 13. Firefighting Equipment (Surface).** An inspection shall be conducted on all specialty or standalone firefighting equipment or apparatuses in use and available for use. Also refer to the National Fire Protection Association® (NFPA) Nos. [NFPA 11A 1970](#) – High Expansion Foam Systems, [NFPA 13 1969](#) – Installation of Sprinkler Systems, [NFPA 13A 1971](#) – Care and Maintenance of Sprinkler Systems, [NFPA 15 1969](#) – Water Spray Fixed Systems for Fire Protection, [NFPA 17 1969](#) – Dry Chemical Extinguishing Systems, [NFPA 72A 1967](#) – Local Protective Signaling Systems or [NFPA 198 1969](#) – Care, Maintenance and Use of Fire Hose for further guidance.

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Documentation Required: *Inspection of specialty or standalone fire protection equipment should be documented and identify the location and type of fire protection provided (e.g., water line systems, 125-pound or greater multipurpose dry powder extinguishers, etc.). For the purpose of documentation for all handheld portable fire extinguishers associated with protection of a designated piece of equipment or a designated location shall be considered inspected with that piece of equipment or designated location and does not require separate documentation.*

- 14. Fuel Storage.** An inspection shall be conducted of all areas where fuel is being stored including safe access, no smoking signs, combustible materials, handling, and fire protection for compliance with applicable standards.

Documentation Required: *The location(s) of fuel storage should be documented.*

- 15. Haulage Facilities (including belts).** An inspection shall be conducted of each haulage facility, including attention to safe access, handrails, guards, equipment condition, fire hazards, combustible materials, fire protection, and electrical installations for compliance with applicable standards.

As per § 77.1607(cc) (Loading and haulage equipment; operation), unguarded conveyors with walkways shall be equipped with emergency stop devices or cords along their full length. Emergency stop devices or cords are electrical equipment under § 77.502 (Electric equipment; examination, testing, and maintenance), and must be examined, tested, and maintained by a qualified person to assure safe operating condition. § 77.502-2 (Electric equipment; frequency of examination and testing) requires that such examination and testing be conducted at least monthly. The Program Policy Manual (PPM) states that MSHA considers control switches or devices to be electric equipment covered by § 77.502. An emergency stop device includes a pull cord switch and its activating mechanical arm which controls the operation of a conveyor belt.

Emergency pull cord switches and their mechanical arms must be visually examined for physical damage during the monthly examinations. Although examination of the emergency pull cord switches and mechanical arms does not have to be recorded during the monthly examinations of electric equipment, a record of defective switches and arms must be kept.

Documentation Required: *Documentation should include the location description.*

- 16. Health and Safety Discussions.** The inspector shall discuss matters concerning health and safety and work practices with miners including recent accidents, accident history, mine-specific hazards, and occupation-specific health and safety concerns.

Documentation Required: *Documentation should include the general location of discussions and number of miners present.*

- 17. Highwalls, Spoil Banks and Ground Control Plans.** An inspection shall be conducted of all highwalls and spoil banks for compliance with applicable standards such as loose material, overhanging rock, or unstable spoil banks. The inspector shall also evaluate compliance with the current ground control plan. The inspector shall evaluate the adequacy of the plan with observed conditions and poll the operator and a representative number of miners as to their knowledge of the plan. Enforcement action shall be taken for all noncompliance with the ground control plan.

Highwall Inspection Preparation

Prior to beginning an inspection, the inspector should:

- a. Carefully review the UMF, including the ground control plan, and carry a copy of the ground control plan for reference during the inspection; and
- b. Review the accident and violation histories and consider them when issuing

enforcement actions.

Discussions with the Mine Operator and Foremen/Examiners

The inspector should discuss the following with the appropriate mine officials during an inspection:

- a. Examination requirements of §§ 77.1713 (Daily inspection of surface coal mine; certified person; reports of inspection), 77.1004(a) (Ground control; inspection and maintenance; general), and, if applicable, 77.1501 (Auger mining; inspections), and recordkeeping;
- b. Ground control plan requirements to evaluate their knowledge and implementation of its provisions;
- c. Old underground workings that are depicted on the map required by § 77.1200 (Mine maps) to determine how an operator determined their presence and extent, and any other condition shown on the map that is or may need to be addressed in the ground control plan;
- d. Reportable accidents at the mine and the methods used to prevent similar occurrences;
- e. Known near-miss accidents at the mine and similar occurrences at other mines and prevention methods;
- f. Rock falls, unstable and potentially hazardous conditions the mine is experiencing, and any changes that were made to the ground control plan or work practices;
- g. Hazard abatement and mitigation methods;
- h. Safety precautions specified in the ground control plan for working near highwalls and for compliance with § 77.1006(c) (Highwalls; men working);
- i. Barricading methods used at the mine;
- j. Communication of hazards to all miners;
- k. Methods used to monitor ground movement; and
- l. Methods used for stripping loose material and for sloping loose unconsolidated material as required by § 77.1001 (Filing of ground control plan).

Highwall and Pit Area Inspection

During an inspection of a highwall and pit area, the inspector shall inspect for and consider the items below. Appropriate enforcement action must be taken for any violative condition or practice or any condition posing an imminent danger.

- a. Inspect for fallen material and fresh rubble in the pit as this may indicate highwall movement and instability.
- b. Inspect for evidence of flyrock as this may be indicative of poor blasting practices.
- c. Inspect highwalls and work activities for violative and potentially unstable and hazardous conditions that may be related to the following:
 - 1) Excessive fracturing;
 - 2) Overhangs;
 - 3) Loose rocks;
 - 4) Discontinuities such as joints, faults, and bedding planes;
 - 5) Cracks on the highwall face and on tops of highwalls and benches, when safely accessible;
 - 6) Old underground mine workings;
 - 7) Inadequate webs for auger/highwall mining;
 - 8) Water from the highwall;
 - 9) Highwall points and corners;
 - 10) Scaling methods; and Undercutting.
- d. Inspect benches for stability and compliance with ground plan control provisions from a safe location.
- e. Measure heights and slopes of highwalls, benches, and spoil piles, where safe to do so, for compliance with the ground control plan. Electronic measuring devices may be used to accomplish this.
- f. Inspect for the safe operation of equipment in the pit area.
- g. Inspect for safety of any person working near a highwall or bench.
- h. Inspect for safe drilling and blasting work practices and coordination and communication prior to blasting.
- i. Talk with miners about the following:
 - 1) Knowledge and awareness of potential rock falls;

- 2) Scaling issues and safety;
 - 3) Effects of water and of freezing and thawing cycles on the highwall;
 - 4) Recent accidents and near misses;
 - 5) Unstable and potentially hazardous conditions;
 - 6) Hazards of working near a highwall;
 - 7) Limiting exposure to the highwall;
 - 8) Ground control plan provisions and training;
 - 9) Hazards they have observed;
 - 10) Barricading techniques at the mine;
 - 11) Using personal protective equipment;
 - 12) Maintaining equipment in safe operating condition; and
 - 13) Remaining focused on the task being performed and limiting distractions.
- j. Inspect for the effectiveness of water management.
- k. Inspect for loose material on the top of the highwall.
- l. Inspect any monitoring equipment and instrumentation that is required by the ground control plan to ensure it is in proper working condition.
- m. Inspect spoil piles to ensure safety of persons exposed and for compliance with ground control plan provisions.
- n. Inspect dump points for compliance with regulations and ground control plan provisions.

Documentation Required: *Documentation should include the location description. In addition, the inspector should document in the remarks section, Item 17 of the Mine Activity Data sheet (MSHA Form 2000-22) that the Ground Control Plan in effect at the mine is adequate or otherwise note the deficiencies in the plan. This would serve as documentation that the Ground Control Plan was evaluated during this inspection.*

18. Hoisting Equipment. An inspection shall be conducted of all hoisting equipment, including structure condition, guarding, accumulations, lighting, electrical installations, rope condition, fire protection, safety devices, and safe access for compliance with applicable standards. The inspector should observe at least one complete cycle of operation of all hoisting equipment including emergency hoists.

Documentation Required: *Hoisting equipment shall be inspected per the procedural requirement. Documentation should include the equipment description and the company number, serial number, approval number, or other identifying method.*

19. Illumination of Work Areas. An inspection shall be conducted of all work areas to determine that they are sufficiently illuminated to provide safe working conditions including auger operations and highwall mining operations. The evaluation should include observation of lighting and information obtained from miners.

20. Air Quality Tests in Required Locations (Surface). The inspector shall test for methane in all structures and areas where there is a potential for a hazardous accumulation of methane. Test for carbon monoxide (CO), methane (CH₄), and oxygen (O₂) deficiency shall be conducted for compliance with applicable standards.

***Documentation Required:** Documentation should include the time the tests were conducted; the concentrations of carbon monoxide (CO) in parts-per-million, methane (CH₄) percentage, and oxygen (O₂) percentage; and the location of each test.*

21. Mine Map (Surface). An inspection shall be conducted of all mine maps for compliance with applicable standards. The inspector shall review the mine map for consistency with approved mining methods, mining in proximity to underground mines, electrical power lines, oil and gas wells, fuel transmission lines, mines located adjacent to or below active workings, and any danger that surface mining may present to underground miners.

22. Other Places Where Miners Work or Travel. Other work areas and travelways shall be inspected, including observations of work practices, illumination, safe access, combustible material accumulations, examinations, workplace maintenance, and air quality for compliance with applicable standards. (Refer to [Q & As Tree Cutting on Mine Property](#) for further guidance.)

Fall Protection

Backguards required by § 77.206(c) (Ladders; construction; installation and maintenance) for use with steep or vertical ladders may provide adequate fall protection if the backguard does not interfere with safe work methods of construction. The use of backguards may hinder safe work methods (such as the need to continually adjust scaffolding surrounding the ladders).

Safety belts and lines shall be provided and are required to be worn where there is a danger of falling, including during construction activities. If backguards on ladders hinder safe work methods in constructing concrete storage silos, inspectors should determine if safety belts and lines provide adequate fall protection without the use of such backguards and apply § 77.1710(g) (Protective clothing), rather than § 77.206(c), at such construction sites. The use of full-body safety harnesses and lines will allow for greater freedom of

movement.

Training in accordance with the applicable portion(s) of 30 CFR Part 48 shall be provided by the mine operator and specifically address the use and maintenance of safety harnesses and lines.

- 23. Potable Water (Surface).** The inspector shall determine if potable water is provided and available as required by §§ 71.600 (Drinking water; general) and 71.601 (Drinking water; quality). This evaluation should include information obtained from the miners and the operator.
- 24. Preparation Plant.** All preparation plants, including structure condition, guarding, accumulations of combustible materials, lighting, electrical installations, air quality, fire protection, examinations (where required), and safe access shall be inspected for compliance with applicable standards.
- 25. Refuse Piles and Impoundments.** Refuse piles and impoundments shall be inspected in accordance with the [MSHA Coal Mine Impoundment Inspection and Plan Review Handbook](#) to determine compliance with applicable standards and approved plans, including safe access, berms, proximity to underground mines, drainage, combustible materials around site, equipment condition, and fire protection. A comparison should be made between the operator's examination records and the inspector's observations. (Refer to [MSHA Form 2000-34](#) and Impoundment Checklist for information.)
- Documentation Required:** Each refuse pile or impoundment shall be inspected per the procedural requirement. Documentation shall include the location description. The inspector shall also complete the information required by MSHA Form 2000-22, Items 12I and 12J. MSHA Form 2000-34 is required for all E01 inspections.*
- 26. Sanitary Facilities (Bathhouse).** An inspection shall be conducted of all sanitary facilities for compliance with §§ 71.400 (Bathing facilities; change rooms; sanitary flush toilet facilities); 71.401 (Location of facilities); and 71.402 (Minimum requirements for bathing facilities, change rooms, and sanitary flush facilities). Special attention should be given to location, structure, cleanliness, safe access, and compliance with a bathing facilities waiver. (Refer to [MSHA Form 2000-87 Bathhouse Waiver](#) for form information.)
- 27. Shop and Other Structures.** All shops and other structures shall be inspected for compliance with applicable standards. Special attention should be given to structure condition, guarding, accumulations of combustible materials, lighting, electrical installation, air quality, fire protection, safety devices, and safe access.

Documentation Required: *Each shop and other structure shall be inspected per the procedural requirement and identified by name and location.*

- 28. Surface First-Aid Equipment.** The surface first-aid equipment shall be inspected for compliance with § 77.1707 (First aid equipment; location; minimum requirements).

Documentation Required: *Inspections of first-aid equipment conducted per the procedural requirement and the general location of the equipment should be documented.*

- 29. Thermal Dryer.** An inspection shall be conducted of all thermal dryers for compliance with §§ 77.307(a) to 77.315. Special attention should be given to structure condition, guarding, accumulations of combustible materials, lighting, electrical installation, air quality, fire protection, safety devices, and safe access.

- 30. Travelways and Active Roadways.** An inspection shall be conducted of all travelways and active roadways for compliance with §§ 77.404(a), 77.807-1, 77.1000 to 77.1006(a), and 77.1600 to 77.1608(a). Special attention shall be given to berms, road grades and design, visibility, and traffic control. (Refer to the [Haul Road Inspection Handbook](#) for further guidance.)

Documentation Required: *Each travelway and active roadway shall be inspected per the procedural requirement and identified by name and general location.*

- 31. Ventilating Fan Installations.** An inspection shall be conducted of all ventilating fan installations for compliance with applicable standards. Special attention should be given to airway heaters, safe access, guards, equipment condition, fire detection systems, combustible material presence within 100 feet of the main mine fan installation, fire protection, condition of electrical cables, wiring and circuit capacity, pressure recording device, fan chart, and other monitoring devices installed in the fan house.

Documentation Required: *Each ventilation fan installation shall be inspected per the procedural requirement and the location shall be documented.*

- 32. Oil, Gas, and Coalbed Methane Wells.** Many oil and gas well activities are not directly connected to mining, do not occur on mine property, and are not subject to MSHA jurisdiction. Longwall gob wells are specifically developed to assist with methane extraction from active longwall panels and are typically under MSHA jurisdiction. Well plugging activities that occur near active mining may be under MSHA jurisdiction. Contact your supervisor if there is any question about jurisdiction and inspection requirements for the surface facilities and activities for oil, gas, and coalbed methane wells on or near mine

property. The § 75.1200 (Mine map) map should show all oil and gas wells within 500 feet of active mining areas. A petition for modification of § 75.1700 (Oil and gas wells) is needed to plug an oil, gas, or surface directionally drilled horizontal coalbed methane well that will be intersected by a coal mine.

Inspect the surface facilities and operation of wells under MSHA jurisdiction. This inspection should include a general safety inspection under Part 77. Inspect hoisting operations, personal protective equipment and machinery. Maintenance of wellhead equipment is inherently dangerous because explosive levels of methane may be present in piping and equipment. Before starting any maintenance activity that could result in an ignition, the well should be shut in and all piping and equipment that will be affected should be purged with inert gas. Tests for methane (CH₄) leakage conducted by a qualified person should be made prior to any work on the wellhead and associated equipment. Verify that wellhead equipment (valves, blowers, stacks, etc.) corresponds to specifications in the mine ventilation plan.

(Refer to [Informational Report 1346 – Consideration for Underground Coal Mines That Operate Near Coalbed Methane Wells](#) for further guidance.)

Documentation Required: *Gas and oil well maintenance and plugging inspections should be documented in the inspection notes, including the location description.*

E. Underground Outby Areas.

- 1. Aircourses (including Escapeways).** During each regular inspection, the inspector should compare the mine operator's weekly examination records of aircourses to the mine map to assure that the mine operator is examining the mine in its entirety. The inspector will assure that all aircourses required to be examined are maintained in the ITS by name and identified with an intake or return designation. If the aircourse is also an escapeway, it should be so identified with the aircourse name.

When aircourses cannot be examined weekly in their entirety, appropriate enforcement action shall be taken under § 75.364(b) (7 day examination). Rehabilitation or clean-up of the affected portion of the airway should be the primary focus in regard to termination of the citation with appropriate abatement time given considering the scope of the work involved. When rehabilitation or clean-up of the affected area is determined to be impracticable, the mine must submit a petition for modification and propose an alternate method that provides at least the same degree of safety as conducting an examination of the entire aircourse. The inspector shall give primary consideration to the health and safety of miners in establishing abatement times.

If a 104(b) order is issued, the affected portion of the mine must be closed, which may result in the closure of a working section or possibly the entire mine.

At least one entry in each intake and return aircourse shall be inspected in its entirety for compliance with applicable standards and approved plans. Special attention should be given to ventilation controls, personnel door conditions and spacing, personnel door static pressures (refer to [Mandoor Static Force](#) and [Calculation of Static Force: 73 Fed. Reg. 80580 \(Dec. 31, 2008\)](#) for further guidance), mine roof conditions, rock dust application, examination certifications, escape facilities, and any equipment operated in the aircourses. Additional entries and/or crosscuts within a multiple entry aircourse may need to be traveled to fully evaluate operator compliance with applicable standards and approved ventilation plans.

When inspecting escapeways, conduct a function test of the post-accident communication and tracking system by contacting the responsible person using the post-accident untethered communication device and requesting that the responsible person identify the location of a miner in the escapeway, who is at a location known to the inspector.

Inspectors shall evaluate the carrying capacity of escape capsules to determine if all miners underground could be evacuated in a swift and timely manner, including disabled miners. Inspectors shall also determine if each escapeway is maintained in a safe condition to always assure passage of miners and disabled miners using an escape capsule to evacuate to the surface.

Documentation Required: *The aircourse should be identified in the inspection notes as it appears in the ITS. The inspector should document the complete inspection of aircourses by checking the completion box in the ITS. The inspector should clearly mark the extent of daily travels that contribute to the E01 inspection by date and initials on the mine tracking map, including any approved evaluation or measurement point locations associated with the aircourse and the beginning and ending point of each day's travel until each intake or return aircourse is fully inspected (this does not apply to routine travel of or incidental travel through an aircourse). If an aircourse is inspected in its entirety, no additional documentation in the notes is required. If an aircourse is not inspected in its entirety, the starting and stopping points, as correlated to a permanent reference point, such as a crosscut number or spad number, should be recorded on the mine map and in the inspection notes. The points may also be recorded in the comments of the ITS.*

2. **Atmospheric Monitoring Systems (AMS).** The inspector shall examine AMS components and observe the operator making a required calibration of system sensors. Data and times obtained during the inspection should be

compared with information recorded by the system on the surface. Additionally, an evaluation should be made concerning the knowledge of the responsible person(s) about the system display, the actions required for any alert and alarm, and appropriate notification of miners and mine management when an alert or alarm occurs. The most recent records should also be reviewed to determine if proper notifications and corrective actions have been taken to address previous alerts, alarms, or system failures.

AMS Inspection Check Sheet

An AMS is a network consisting of hardware and software meeting the requirements of §§ 75.351 (Atmospheric monitoring systems) and 75.1103-2 (Automatic fire sensors; approved components; installation) that are capable of measuring atmospheric parameters; transmitting the measurements to a designated surface location; providing alert, alarm, or warning signals; processing and cataloging atmospheric data; and providing reports.

Enforcement authority depends on the purpose of the installation. An AMS may be required: under § 75.323(d)(1)(ii) (Actions for excessive methane) to monitor for methane (CH₄) in the return split alternative; under § 75.340(a)(1)(ii) and (a)(2)(ii) (Underground electrical installations), to monitor intake air used to ventilate electrical installations; under § 75.350(b) (Belt air course ventilation) to use air from the belt entry to ventilate working sections or areas where mechanized mining equipment is being installed or removed; under § 75.350(d) (Belt air course ventilation), to monitor point-feed regulators; or § 75.362(f) (On-shift examination), to continuously monitor for methane (CH₄) in return splits. Where an AMS is used to meet the above requirements, the AMS must meet the requirements contained in § 75.351 (Atmospheric monitoring systems).

An AMS can also be used as an automatic fire sensor and warning device system that uses carbon monoxide (CO) sensors to provide identification of fire along belt conveyors. Where an AMS system is used as an automatic fire sensor and warning device system, the AMS must meet the requirements in §§ 75.1103-1 through 75.1103-8 (regarding automatic fire sensors).

Additional details of the AMS are contained in the approved mine ventilation plans. Failure to follow requirements set forth in that plan should be cited under § 75.371 (Mine ventilation plan; contents).

The Approval and Certification Center (A&CC) evaluates AMS systems to ensure that the electric circuit feeding the sensors will not ignite methane (CH₄). Components installed in areas where permissible equipment is required must be intrinsically safe or in explosion-proof enclosures. Systems evaluated and

accepted by A&CC must be installed and maintained as evaluated and must have an MSHA acceptance label attached to the blue outstations, classified sensors, and classified barriers. The failure to use systems maintained in permissible condition should be cited under §§ 75.503 (Permissible electric face equipment; maintenance), 75.507 (Power connection points), or 75.1002 (Installation of electric equipment and conductors; permissibility) as appropriate.

The following checklist details the salient parts of an inspection of an AMS network. (Refer to [Carbon Monoxide and Atmospheric Monitoring Systems Inspection Procedure Handbook](#) for further guidance.)

a. Surface Inspection

1. Review records of sensor calibrations and records of alert, alarm and malfunction signals;
2. Review records of weekly functional test; and
3. Verify the names of designated AMS operators and other appropriate personnel.

Review the map or schematic

1. Determine if the schematic and other maps are properly displayed and are properly updated.

Observe operation of system

1. Determine the operational status of CO sensors;
2. Review the AMS printout to determine any unusual history of sensors' malfunctions, alert and alarm signals, and abnormal readings; and
3. Determine the means of disconnecting the data line.

Visual and audible alarms on the surface

1. Verify that the AMS signals can be seen or heard by the AMS operator;
2. Determine if the visual and audible alarm signals are distinguishable from the alert signals; and
3. Observe the operation of the manual reset for automatic warning devices.

Communications

1. Determine if the designated system operator has means of two-way communication with all working sections.

b. Underground Inspection

Air currents

1. Check the velocity (minimum and maximum) and direction of the air.

Air velocities

1. Verify that sensor spacing does not exceed allowable limits specified in the applicable regulation, plans, or petition for modification.

Installations of sensors

1. Verify that sensors are installed near the center of the entry, at a location where miners are not exposed to unnecessary hazards when maintaining, testing, or calibrating the sensor.

Locations of sensors

1. Determine if sensors are installed at the locations identified on the mine maps; and
2. Assure belt drives are properly monitored in belt entries (primary escapeway, and return air splits if applicable).

Inspection/Calibration of sensors

1. Visually check sensors for damage and assure air flow patterns are not blocked;
2. Compare sensor readings with handheld detector readings, if applicable;
3. Have the agent of the operator simulate a malfunction at a sensor unit. Verify that malfunctions are recorded at the designated surface location;
4. Check permissibility of AMS sensors and alarm units, where applicable. Each barrier classification must match associated component classification; and
5. Ensure that the manufacturer calibration procedures are used. Check calibration of at least 10 percent, but no less than five CO sensors.

Outstations

1. Verify that all outstations are located in intake air;
2. Verify that outstations are identified as "red" or "blue";
3. Verify sensors located in an area where permissible equipment is required are connected to a blue outstation;
4. Verify compliance with the requirements of § 75.313 (Main mine fan stoppage with persons underground); and
5. Verify compliance with the requirements of § 75.1103-7 (Electrical components; permissibility requirements).

Alarm units

1. Verify that underground alarm units are installed at locations where they can be seen or heard by miners working in those areas.

c. Response to alerts, alarms, warnings, and malfunctions

1. Verify the actions taken by the system operator when an alert, alarm, warning, or malfunction signal is received; and
2. Verify that proper procedures are followed during a malfunction when the belts are running.

d. Training

1. Verify that system operators have been adequately trained in accordance with their duties and responsibilities;
2. Verify that persons responsible for maintaining and installing components of the monitoring systems are trained in the requirements of these duties;
3. Verify that miners are trained in the evacuation requirements when an alarm is activated;
4. Verify that appropriate personnel required to be identified by § 75.351 (Atmospheric monitoring systems) are trained; and
5. Verify that persons monitoring for CO or smoke in the affected areas during a malfunction are trained.

Documentation Required: *Compliance with this procedure should be recorded in the inspection notes, including the AMS manufacturer and model.*

- 3. Belts, Skip Shaft Facilities, Bunkers.** During each regular inspection, the inspector should compare the mine operator's examination of conveyor belt flights to the mine map to assure the mine operator is examining all conveyor belts. The inspector will assure all conveyor belt flights required to be examined are maintained and identified in the ITS. Each conveyor belt flight, skip shaft, or bunker and all associated equipment of each system shall be inspected for compliance with applicable standards, with attention to safe access, guards, fire detection systems, combustible materials, fire protection (determining whether or not the 50 psi/50 gpm of water is available in water lines at or near the working section and other locations as deemed necessary by the inspector), condition of electrical cables and wiring, power source capacity, and general operating condition. Inspectors shall inspect all belt take-up storage units to assure that adequate fire protection is afforded. Also refer to the National Fire Protection Association® (NFPA) Nos. [NFPA 11A 1970](#) - High Expansion Foam Systems, [NFPA 13 1969](#) - Installation of Sprinkler Systems, [NFPA 13A 1971](#) - Care and Maintenance of Sprinkler Systems, [NFPA 15 1969](#) - Water Spray Fixed Systems for Fire Protection, [NFPA 17 1969](#) - Dry Chemical Extinguishing Systems [NFPA 72A 1967](#) - Local Protective Signaling Systems or [NFPA 198 1969](#) - Care, Maintenance and Use of Fire Hose. The weekly examination should conform to the checklist provided in MSHA Forms (not all inclusive) [2000-222](#), [2000-225](#), or [2000-234](#).

Inspectors should be mindful of any limitations included in the regulatory text of the following standards, which incorporate NFPA consensus codes: §§ 75.1101-7 (Installation of water sprinkler systems; requirements); 75.1101-8 (Water sprinkler systems; arrangement of sprinklers); 75.1107-3(b) (Fire suppression devices; approved components; installation requirements); 75.1107-4(b) (Automatic fire sensors and manual actuators; installation; minimum requirements); 75.1107-13(b) (Approval of other fire suppression devices); 75.1107-16(b) (Inspection of fire suppression devices); and 75.1107-17 (Incorporation by reference; availability of publications). For example, in accordance with § 75.1101-7(a), each sprinkler system must be installed, **as far as practicable**, in accordance with NFPA 13, “Installation of Sprinkler Systems.” NFPA 13 is the NFPA consensus standard for installation of fire protection sprinkler systems. Among other things, this consensus standard provides guidance on locating sprinklers, dealing with horizontal or vertical obstructions to sprinkler discharge water, specifying allowable types of pipes and fittings, and presenting methods for determining minimum pipes sizes.

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The following check sheets may be used for inspector notes [Form 2000-222 Deluge](#); [Form 2000-225 Dry Powder](#); [Form 2000-234 Water Sprinkler](#). (Refer to [Belt Air: 69 Fed. Reg. 17480 \(April 2, 2004\)](#); and [Flame-Resistant Belts 73 Fed. Reg. 80580 \(Dec. 31, 2008\)](#) for additional information.)

Documentation Required: *The belt flight, skip shaft facility, and bunker should be identified in the inspection notes as it appears in the ITS. The inspector should document the complete inspection by checking the completion box in the ITS. The inspector should clearly mark the extent of daily travels that contribute to the E01 inspection by date and initials on the mine tracking map and the beginning and ending point of each day’s travel. If a belt flight, skip shaft facility, and bunker is inspected in its entirety, no additional documentation in the notes is required. If a belt flight is not inspected in its entirety, the starting and stopping points, as correlated to a permanent reference point, such as a crosscut number or spad location, should be recorded on the mine map and in the inspection notes. They may also be recorded in the comments of the ITS (this does not apply to routine travel of or incidental travel into the belt flight).*

The inspector shall record the completion of the 50 psi/50 gpm of water availability check in water lines at or near the working section in each ITS, MMU log. For the purpose of documentation, for all handheld portable firefighting extinguishers associated with protection for a designated piece of equipment or a designated location shall be inspected with that piece of equipment or designated location and does not require separate documentation.

- 4. Blasting Practices.** An inspection for compliance with applicable standards and approved plans shall be conducted of all areas where explosives are observed being used in the mine. Observation of work practices and blasting cycle shall be conducted. Special attention shall be given to recordkeeping, the presence of combustible materials, and fire protection.

Documentation Required: *The inspector's evaluation of blasting practices should be documented in the inspection notes to show the location where explosives being used were observed.*

- 5. Bleeders, Including Each Check Point.** At the beginning of each regular inspection, the inspector should compare the mine operator's examination of bleeder entries to the mine map to assure the mine operator is examining all bleeders. The inspector will assure all locations of bleeder entries required to be examined are maintained and identified in the ITS. At least one entry in each set of bleeder entries shall be inspected in its entirety, including any required check points specified in the currently approved mine ventilation plan. At mines that are in 103(i) status, bleeder entries should be inspected during coal producing shifts. Special attention should be given to ventilation controls, roof conditions, rock dust application, examination certifications, and equipment being operated in the bleeder entries.

Documentation Required: *The bleeders should be identified in the inspection notes as it appears in the ITS. The inspector should document the complete inspection of the bleeder by checking the completion box in the ITS. The inspector should clearly mark the extent of daily travels that contribute to the E01 inspection event by date and initials on a mine tracking map, including any approved check points, evaluation points, or measurement point locations associated with the bleeder and the beginning and ending point of each day's travel until each bleeder is fully inspected. If the bleeder is inspected in its entirety, no additional documentation in the notes is required.*

If a bleeder is not inspected in its entirety, the starting and stopping points, as correlated to a permanent reference point, such as a crosscut number or spad location, should be recorded on the mine map and in the inspection notes. They may also be recorded in the comments of the ITS.

- 6. Diesel Fuel Storage.** All areas where fuel is being stored underground shall be inspected, with attention to safe access, combustible materials, handling fuel, fire protection, safety alarms, and recordkeeping for compliance with applicable standards.

Documentation Required: *The location of each diesel fuel storage area(s) inspected should be recorded in the inspection notes.*

- 7. Fire Protection.** All specialty or standalone firefighting equipment in use or available for use outby the working section shall be inspected for compliance with approved programs, approved plans, and applicable standards (e.g., portable water cars, portable chemical cars, portable foam-generating machines, additional firefighting materials for conveyor belt flights exceeding 2,000 feet in length, and emergency materials within 2 miles of each working section). A fire extinguisher with a 2-A:10-B:C designation that contains approximately 4.25 pounds of dry powder meets the intent of the standard and provides an acceptable level of protection. Also refer to the National Fire Protection Association® (NFPA) Nos. [NFPA 11A 1970](#) - High Expansion Foam Systems, [NFPA 13 1969](#) - Installation of Sprinkler Systems, [NFPA 13A 1971](#) - Care and Maintenance of Sprinkler Systems, [NFPA 15 1969](#) - Water Spray Fixed Systems for Fire Protection, [NFPA 17 1969](#) - Dry Chemical Extinguishing Systems, [NFPA 72A 1967](#) - Local Protective Signaling Systems or [NFPA 198 1969](#) - Care, Maintenance and Use of Fire Hose.

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Documentation Required: *Inspection of specialty or standalone fire protection equipment should be documented in the inspection notes to show the location and type of fire protection provided. For purpose of documentation, for all handheld portable fire extinguishers associated with protection for a designated piece of equipment or a designated location shall be considered inspected with that piece of equipment or designated location and does not require separate documentation.*

- 8. Haulage or Mobile Equipment.** The inspector shall review the operator examination records and inspect each piece of in use and available for use haulage, mobile, and portable equipment to determine if hazardous or potentially hazardous conditions exist, with attention to braking mechanisms,

batteries, audible warning devices, reflective devices, lights, tires, safe access, guards, equipment condition, fire suppression systems, combustible materials, fire protection, condition of trailing or inter-machine electrical cables, cable conduit, safety devices, and compliance with applicable standards. The inspector should assure that all in use and available for use haulage, mobile and portable equipment is documented and maintained in the ITS.

The inspector should evaluate the operator's policy on towing methods and conditions that assure equipment being towed is properly coupled to the tow vehicle. When hazardous conditions are identified the inspector shall issue safeguard notices under § 75.1403 (Other safeguards). This procedure will also apply to independent contractor equipment encountered in service at the mine.

Documentation Required: Each piece of equipment inspected should be entered in the inspection notes, including the equipment manufacturer, equipment type, an identifying number (e.g., serial number, company number, etc.), and the general location of the equipment when inspected. Inspection of equipment operated and maintained by independent contractors is not required to be documented in the ITS.

9. **Longwall Tailgate Entry.** The inspector shall evaluate the mine operator's examination of the longwall tailgate entry. The inspector will assure the longwall tailgate entry is maintained and identified in the ITS. Longwall tailgate travelways shall be inspected in their entirety, for compliance with applicable standards and approved plans, including attention to ventilation controls, man door location and placement, approaches to worked-out areas, mine roof conditions, rock dust application, examination certifications, and any equipment being operated in the tailgate travelway.

Documentation Required: The longwall tailgate entry should be identified in the inspection notes as it appears in the ITS. The inspector should document the complete inspection of the longwall tailgate entry by checking the completion box in the ITS. ***The inspector should clearly mark the extent of daily travels that contribute to the E01 inspection by date and initials on a mine tracking map and the beginning and ending point of each day's travel in the tailgate entry until each tailgate entry is fully inspected. If the longwall tailgate is inspected in its entirety, no additional documentation in the notes is required.***

If a longwall tailgate entry is not inspected in its entirety, the starting and stopping points, as correlated to a permanent reference point, such as a crosscut number or spad location, should be recorded on the mine map and in the inspection notes. They may also be recorded in the comments of the ITS.

- 10. Non-Pillared Worked Out Areas.** The inspector shall evaluate the mine operator's examination of non-pillared worked-out areas. The inspector will assure all non-pillared locations of worked-out areas required to be examined are maintained and identified in the ITS. Non-pillared worked-out areas shall be inspected to the point of deepest penetration or to alternative evaluation locations approved in the mine ventilation plan, to determine compliance with applicable standards and approved plans, including attention to ventilation controls, mine roof conditions, rock dust application, examination certifications, and any equipment being operated in the worked-out area.

Documentation Required: *Non -pillared worked out areas should be identified in the inspection notes as it appears in the ITS. The inspector should document the complete inspection of non-pillared worked out areas by checking the completion box in the ITS. The inspector should clearly mark the extent of daily travels that contribute to the E01 inspection by date and initials on a mine tracking map and the beginning and ending point of each day's travel for worked-out areas until each non-pillared worked-out area is fully inspected. If the non-pillared worked out area is inspected in its entirety, no additional documentation in the notes is required.*

If a non-pillared worked out area is not inspected in its entirety, the starting and stopping points, as correlated to a permanent reference point, such as a crosscut number or spad location, should be recorded on the mine map and in the inspection notes. They may also be recorded in the comments of the ITS.

- 11. Other Places Where Miners Work or Travel (Underground).** The inspector shall evaluate the mine operator's examination of other areas where miners work or travel. The inspector will assure all areas where miners are required to work or travel are examined in accordance with applicable standards. Locations of other areas where miners work or travel shall be maintained and identified in the ITS. Other work areas and travelways should be inspected for compliance with applicable standards (example: high-voltage cable entries that are not located in regular travelways and other areas normally traveled by the mine personnel on a daily or weekly basis). **The inspector shall look for evidence of examinations in the outby areas traveled and determine if the mine examiner had certified with dates, times, and initials (DTIs) that the required examinations were conducted for each area of travel. At least one test for oxygen (O₂) deficiency and methane (CH₄) content shall be conducted in each outby area inspected.**

Documentation Required: *Other Places Where Miners Work or Travel (Underground) should be identified in the inspection notes as it appears in the ITS. The presence of the mine examiner's dates, times, and initials, should be recorded in the inspection notes. The test results of methane (CH₄), and oxygen*

(O₂) should be recorded in the inspection notes as a percentage). The inspector should document the complete inspection of other areas where miners work or travel by checking the completion box in the ITS. The inspector should clearly mark the extent of daily travels that contribute to the E01 inspection on a mine tracking map and the beginning and ending point of each day's travel for other places where miners work or travel, including the inspector's initials, and date of inspection until each other place where miners work or travel is fully inspected.

- 12. Outby Electrical Equipment.** The inspector shall compare the mine operator's record of weekly examination of electrical equipment to all electrical equipment in use and available for use at the mine. The inspector shall also ensure that permanent electrical installations are identified on the electrical map required to be maintained by § 75.508. A list of all electrical equipment in use and available for use should be maintained in the ITS. An inspection shall be conducted of each piece of in use and available for use permanent electrical equipment as listed in the operator examination records or observed in use by the inspector to determine compliance with applicable standards and to determine if hazardous or potentially hazardous conditions exist, with attention to safe access, guards, equipment condition, fire suppression systems, combustible materials, fire protection, condition of trailing or power cables, circuit breaker settings, cable conduit, braking mechanisms, reflective materials, and safety devices. If an inspector finds that wiring of electric equipment is in a rundown condition, with many violations existing on one unit of equipment, and if there is evidence that thorough and complete examinations are not being made or that the required tests are not being made, a citation should be issued under § 75.512 (Electric equipment; examination, maintenance and testing). Please refer to the [Electrical Inspection Handbook](#), Chapter 2, for more information. Inspectors shall not attempt to perform inspections or tests that require the expertise of an electrical specialist.

Documentation Required: *Each piece of in-use and available-for-use outby permanent or portable electrical equipment, including the equipment description and company number, serial number, approval number, or other positive identification, inspected under this procedure should be listed in the inspection notes. Small pieces of handheld electrical equipment are not required to be listed in the ITS. The inspector should document the complete inspection of the outby permanent or portable electrical equipment by checking the completion box in the ITS. The location of such equipment may also be recorded in the ITS.*

- 13. Seals.** All seals must be inspected each quarter, including new seals and seals being constructed, except seals determined by MSHA to be gob isolation seals in an approved spontaneous combustion plan (§ 75.334(f) (Worked-out areas and areas where pillars are being recovered)). Seals that are constructed as

part of an approved spontaneous combustion plan that are accessible, such as those outby the face on the tailgate or inby the face on the headgate, also need to be inspected. It may also be necessary to inspect seals during spot inspections under Section 103(i) of the Mine Act. All mine seals shall be inspected for compliance with applicable standards and approved plans, including their condition and seals under construction, water traps, test pipes, examination certifications, and seal ventilation. MSHA seal sampling procedures shall be followed during inspection of mine seals. (Refer to [MSHA Form 7000-10U](#); [Q & A's Sealing Abandoned Areas 12-2008](#); [Seals: 73 Fed. Reg. 21182 \(April 18, 2008\)](#); and [Seal Correction Notice: 73 Fed. Reg. 27729 \(May 14, 2008\)](#) for additional information.)

During the inspections, the following evaluations must be conducted:

1. Review examination record books concerning seals and adjacent aircourses before going underground, including the sampling records under § 75.336(e) (Sampling and monitoring requirements). Any hazardous conditions noted by the seal examiners recorded in the weekly or preshift exam books should be investigated. Review seal construction records under §§ 75.335(c)(1) and (2) (Seal strengths, design applications, and installations); and 75.337(c)(5), (d), and (e) (Construction and repair of seals).
2. Inspect safe access for the examiner's route of travel to and from seals. Roof support must be maintained to provide safe access to the seals. Check for hazardous conditions, test for methane (CH₄) and oxygen (O₂) deficiency, and determine if the air is moving in the proper direction under §§ 75.360(b)(5) (Preshift examination at fixed intervals); and 75.364(b)(4) and 75.364(c)(3) (Weekly examination).
3. Verify the required operators' examinations by checking initials, dates, and times.
4. Inspect seals for deterioration and for damage such as cracking, spalling, or bulging. Inspect the base of the seal for deterioration due to mine water and floor heave. Although some spalling of ribs and sloughing from the roof may accumulate near the seal, enough of the seal must be kept clear to facilitate a reasonable visual examination.
5. Inspect the strata surrounding seals for rib sloughing, roof falls or floor deterioration that may affect the integrity of the seal. Ensure that the seal's convergence is being measured and that the threshold as per design has not been exceeded.

6. Evaluate rock dust around the seals and in adjacent aircourses.
7. Inspect sampling pipes and sample the atmosphere behind the seals. At a minimum, inspectors should sample at one location at each set of seals. Seals that have reached a design strength of at least 120 psi overpressure or greater do not have to be sampled. The determination of seal strength is based on the quality control test results specified in the seal design under § 75.335(b)(1)(i) (Seal strengths, design applications, and installations) and reported to the District Manager under § 75.337(e)(3) (Construction and repair of seals).

Sample the sealed atmosphere whether seals are outgassing or ingassing for seals with design strength less than 120 psi. Additional sampling locations may be specified in the approved ventilation plan.

Equipment that may be needed includes:

1. Permissible vacuum pump with sufficient power to pull a sample through a sampling pipe in seals that are ingassing;
2. Tubing, adapters, connectors, etc.;
3. High range methane detector;
4. Standard range methane detector (less than 5%);
5. Oxygen (O₂) detector;
6. Carbon dioxide (CO₂) detector, if an alternative method is approved under § 75.336(d) to determine the inert status of the sealed atmosphere;
7. Bags to collect samples;
8. Double pointed needle syringe; and
9. Gas sample tubes.

Multi-gas detectors should be used during regular inspections and bag samples should only be used to verify compliance if a detector indicates the atmosphere behind a seal may be non-inert. If the handheld detector indicates oxygen (O₂) levels of 8.5% or greater and methane (CH₄) levels between 2.5% and 23%, a bag sample should be taken. It is not necessary to collect bag samples at each set of seals during quarterly inspections.

Pumping must continue long enough to purge the sampling tube and line with six times the volume of the sample system prior to extracting the sample.

Note: The typical handheld gas detector uses catalytic heat-of-combustion sensing technology. These sensors require oxygen to operate. The IEC standard for selection, installation, use, and maintenance of combustible gas detectors indicates that the minimum oxygen concentration for use of this type of sensor is 10%. The ATX 620 or its equivalent is typically used for sampling

areas with suspected oxygen content below normal ranges. This device has an infrared sensor that enables the instrument to properly measure methane content when oxygen levels are at or below 10%.

Inspect the water drainage system and check for lack of air exchange (test with chemical smoke). Examine the drainage pipe system and verify that seals do not impound water or slurry. If a drainage system includes a valve, it must be opened as part of the inspection.

Confirm that the certified persons conducting sampling have been trained in the use of the sampling equipment and sampling procedures. Check the required training records and certifications under § 75.338.

New seal installations must be inspected by MSHA during construction. Inspectors should examine both sides of seals during construction. Section 75.337(e)(1) (Construction and repair of seals) requires the mine operator to notify the District Manager between 2 and 14 days prior to commencement of seal construction. An inspection, which may coincide with a quarterly inspection, a Section 103(i) spot inspection, or other inspection type events must be conducted during construction of each set of seals. This construction inspection will assist in determining the mine operator's compliance with MSHA's existing seals standard and the mine's ventilation plan including:

1. Proper site preparation;
2. Sealed area preparation;
3. Seal construction;
4. Training;
5. Examinations;
6. Recordkeeping including certifications; and
7. Any other requirements specified in the approved ventilation plan.

§ 75.337(e)(2) (Construction and repair of seals) includes a requirement for the mine operator to notify the District Manager in writing within five days of completion of a set of seals. After construction is completed, seals must be inspected by MSHA during the next regular inspection. The focus of the inspection of newly completed seals should be to determine the mine operator's compliance with the requirements of MSHA's existing seals standard and the mine's ventilation plan, including:

1. Seal construction;
2. Quality control tests;
3. Certifications;
4. Examinations;

5. Post-sealing ventilation;
6. Rock-dusting;
7. Sampling pipes and water drainage system;
8. Roof support; and
9. Any other requirements specified in the approved ventilation plan.

Documentation Required: *The inspector should record in the inspection notes each set of seals that is inspected. The seals shall be identified in the inspection notes as they appear in the ITS. This should include the name, location, and the number of seals in the set. The inspector should document the complete inspection of the set of seals by marking the completion box in the ITS.*

14. Track and Off-Track Haulage Roads. The inspector shall review the mine operator's examination of track and off-track haulage roads to assure the mine operator is examining all haulage roads. The inspector will assure all haulage roads required to be examined are maintained and identified in the ITS. Each haulage road shall be inspected, for compliance with applicable standards, and to determine if hazardous or potentially hazardous conditions exist, including roadway conditions, clearance, switches, bonding, trolley guards, equipment, combustible materials, fire protection, and condition of electrical cables and wiring. The inspector shall compare information from examination records with observations made during the examination. Refer to the [Electrical Inspection Handbook](#) for additional track haulage and trolley wire information. A regular inspector shall not attempt to perform inspections or tests that require the expertise of an electrical specialist.

Documentation Required: *The haulage road should be identified in the inspection notes as it appears in the ITS. The inspector should document the complete inspection by checking the completion box in the ITS. The inspector should clearly mark the extent of daily travels that contribute to the E01 inspection by date and initials on the mine tracking map and the beginning and ending point of each day's travel. If a haulage road is inspected in its entirety, no additional documentation in the notes is required.*

If a haulage road is not inspected in its entirety, the starting and stopping points, as correlated to a permanent reference point, such as a crosscut number or spad location, should be recorded on the mine map and in the inspection notes. They may also be recorded in the comments of the ITS (this does not apply to routine travel of or incidental travel into the haulage road).

F. Underground Working Sections.

1. **Blasting Practices.** An inspection shall be conducted of all areas where explosives are being used on the section for compliance with applicable standards and approved plans. Observation of work practices and blasting cycle shall be conducted. Special attention shall be given to recordkeeping the presence of explosive storage practices, combustible materials, and fire protection.

Documentation Required: *The inspectors evaluation of blasting practices should be documented in the inspection notes to show the location where explosives being used were observed.*

2. **Boreholes in Advance of Mining.** The operator's compliance with plans approved under §§ 75.388 (Boreholes in advance of mining) and 75.389 (Mining into inaccessible areas) shall be evaluated by the inspector. Boreholes in advance of mining shall be inspected for compliance with applicable standards and approved plans. Approved plans shall be evaluated by the inspector. Discussions shall be conducted with affected miners and mine supervisors to evaluate their familiarity with plan requirements.
3. **Communications.** An evaluation for compliance with applicable standards shall be conducted of all communication methods, including attention to grounding, insulation, proper operation, and safe access.
4. **Dust Control Parameters.** Dust controls used on the section shall be inspected to determine compliance with applicable standards and the approved mine ventilation plan. A representative number of miners shall be polled to determine if conditions observed represent normal mining conditions. The inspector shall not travel to the mine for the sole purpose of conducting a dust control parameter inspection with plans to return on the next inspection day with the intent to conduct respirable dust sampling (dust control parameters shall be conducted on the same day respirable dust sampling is conducted). At least once during each inspection, the inspector will determine if the mine operator performed an adequate on-shift examination of the dust controls (§ 75.362(a)(2)(On-shift examination)). **Respirable coal mine dust samples shall be collected pursuant to the [Coal Mine Health Inspection Procedures Handbook](#); and [Chapter 1 Revision](#).** To assure dust data cards are properly completed, special attention needs to be given when documenting the assigned occupational code, DAs, and MMU assigned numbers. (Refer to [Coal Mine Occupations Form 2000-169](#) for further occupation information.)

When inspectors are present on working sections evaluating dust control parameters, they should take air quantity measurements and assure that the

face ventilation control devices are installed and maintained in accordance with the approved ventilation plan under § 75.370(a)(1) (Mine ventilation plan; submission and approval). They should also discuss with section personnel the importance of maintaining face ventilation controls in accordance with the approved ventilation plan.

5. **Dates, Times, and Initials.** The inspector shall examine all working places on each working section and determine if the mine examiner had certified with dates, times, and initials that the required examinations were conducted.
6. **Escapeway Map.** The inspector shall determine if an up-to-date escapeway map is maintained on each working section and that the RA location and escapeway map coincide. Discussions shall be conducted with the miners to determine if they are familiar with the map location, the designated escape routes, and evacuation procedures.
7. **Fire Protection.** All firefighting equipment shall be inspected for compliance with applicable standards, including attention to equipment maintenance, placement for safe access, inspection record, and adequate capacity available for use on the section. Inspectors shall determine if the requirements of § 75.1100-1(a) (Type and quality of firefighting equipment) are being complied with. A fire extinguisher with a 2-A:10-B:C designation that contains approximately 4.25 pounds of dry powder meets the intent of the standard and provides an acceptable level of protection. Also refer to the National Fire Protection Association® (NFPA) Nos. [NFPA 11A 1970](#) - High Expansion Foam Systems, [NFPA 13 1969](#) - Installation of Sprinkler Systems, [NFPA 13A 1971](#) - Care and Maintenance of Sprinkler Systems, [NFPA 15 1969](#) - Water Spray Fixed Systems for Fire Protection, [NFPA 17 1969](#) - Dry Chemical Extinguishing Systems, [NFPA 72A 1967](#) - Local Protective Signaling Systems or [NFPA 198 1969](#) - Care, Maintenance and Use of Fire Hose.

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Again, it is being stressed that these are copyrighted documents and we have acquired them for only MSHA. Any further distribution outside of MSHA is a violation of MSHA's license. (Refer to [Fire Extinguishers: 73 Fed. Reg. 53124 \(Sept. 15, 2008\)](#) for additional information.)

Documentation Required: *Inspection of specialty or standalone fire protection equipment should be documented in the inspection notes to show the location and type of fire protection provided. For the purpose of documentation for all handheld portable*

fire extinguishers associated with protection for a designated piece of equipment or a designated location shall be considered inspected with that piece of equipment or designated location and does not require separate documentation.

- 8. First-Aid Equipment.** An inspection shall be conducted of all underground working sections first-aid equipment for compliance with applicable standards.
- 9. Health and Safety Discussions.** The inspector shall discuss matters concerning health and safety and work practices with the miners during inspection activities on a working section, including recent accidents, accident history, mine-specific hazards, and occupation-specific health and safety concerns.

(Refer to [Accident Rep: 74 Fed. Reg. 68918 \(Dec. 29, 2009\)](#) and [Part 50: 75 Fed. Reg. 21990 \(April 27, 2010\)](#) for additional information.)

Documentation Required: *Health and safety discussions by the inspector should be documented in the inspection notes to show the mechanized mining unit number.*

- 10. Ventilation Plan Discussion.** The inspector should conduct the specific activities below to reinforce inspection and documentation elements related to ventilation plans. These activities are in addition to any other activities that are deemed necessary as part of the inspector's E01 Regular Safety and Health Inspections or during E21 Ventilation Technical Investigations by ventilation specialists.

- a. Discuss and question miners on current mining activities and conditions. Question the miners to determine whether their ventilation plan training is complete and adequate. Ten example questions are listed below. These or other questions may be asked to determine the miners' level of knowledge. These discussions should be documented.
- 1) Were you trained on the contents of the ventilation plan?
 - 2) Do you know how far the ventilation control device set back should be?
 - 3) What is the required air quantity at the end of the ventilation control device?
 - 4) What is the scrubber quantity (if applicable)?
 - 5) What is required quantity at the last open cross cut?
 - 6) What are the required quantity and/or velocity at the headgate?
 - 7) What are the required quantity and/or velocity at the tailgate?

- 8) How often are you required to take gas checks?
 - 9) Do you know what to do if the machine mounted methane monitor reaches 1%, 1.5%, or 2%?
 - 10) Is belt air allowed to be used at the face?
- b. All ventilation plans are to be reviewed on a six month basis, and necessary documentation of the plan reviews and evaluations, including MSHA Form 2000-204, is to be included with the E01 inspection report or the E21 investigation report.
- c. Assistance may be requested from MSHA's Educational Field Services (EFS) to evaluate training on retreat mining.

These measures will serve to strengthen our inspection efforts to ascertain the adequacy of ventilation plans and to determine the effectiveness of miner training concerning ventilation plans.

Documentation Required: *A general statement that a discussion was held with a representative number of miners for each MMU inspected about current mining activities, conditions, and training with respect to ventilation plans will suffice.*

- 11. Location of Last Open Crosscut.** The inspector shall determine the location of the last open crosscut on each working section identified by a permanent reference correlated to the mine map (e.g., survey spad number, crosscut number, etc.).

Installation of Permanent Stoppings on Working Sections

Inspectors shall determine if the requirements of §§ 75.333(b)(1), and (b)(3), 75.350(c), and 75.380(g) regarding the installation of these permanent ventilation controls and each standard states a specific location where they shall be built and maintained. Unless the mine operator can provide a valid justification for the District Manager to approve a greater number of open crosscuts in the mine's ventilation plan, permanent stoppings installed to separate intake and return aircourses must be completed in the third crosscut outby the face by the time the face crosscut is cleaned, bolted, and ready for travel. Permanent stoppings installed to separate an intake air course or the primary escapeway from the belt haulage way are to be completed as part of the belt move and prior to the resumption of mining.

Documentation Required: *The location of the last open crosscut of a MMU should be determined and documented in the inspection notes. The inspector should clearly mark only once the location of each MMU that contributes to the E01 inspection by date and initials on the mine tracking map. The documentation should be by MMU*

number and permanent reference to a location that will be included in the operator's mine map submitted to the District Manager.

- 12. Mining/Work Cycle.** The inspector shall observe the complete mining cycle on each active producing working section. The physical condition of the working section (roof and rib conditions, cleanup/rock dusting, ventilation controls, haulage practices, approved plan compliance, etc.) shall be carefully evaluated during these inspection activities.

The inspector shall measure the air quantity in the last open crosscut in each set of entries or rooms on each working section, the quantity of air reaching the intake end of a pillar line, at the end of the face ventilating device (if required) where equipment is being operated, the air velocity at each end of the longwall face and the quantities approved in the ventilation plan. The inspector will assure that the face ventilation control devices are installed and maintained in accordance with the approved ventilation plan and visually check that water sprays used for respirable dust suppression are properly maintained and functioning each time the mining/work cycle is observed. This evaluation is in addition to Item 4 of this chapter (Dust Control Parameters).

Documentation Required: *Inspector observation of the complete mining/work cycle should be documented in the inspection notes to show the MMU number, the method of mining (continuous mining advance, continuous mining retreat, conventional mining advance, blasting from the solid advance, etc.) the date observation of the mining/work cycle was started, and the date this procedure was fully completed for that MMU. The inspector should document the results of air readings in the narrative portion of the inspection notes.*

- 13. Operations Under Water.** The operator's compliance with plans approved under §§ 75.388(f) (Boreholes in advance of mining) or 75.1716 (Operations under water) shall be evaluated by the inspector for compliance with applicable standards and approved plans. Discussions shall be conducted with affected miners and mine supervisors to evaluate their familiarity with plan requirements. (Refer to [Information Circular 8741](#) for further guidance.)
- 14. Post-Accident Communication and Tracking System.** Conduct a functional test of the post-accident communication and tracking system by contacting the responsible person using the post-accident untethered communication device and requesting that the responsible person identify the location of a miner, who is at a location known to the inspector.
- 15. Potable Water (Working Section).** The inspector shall determine if potable water is available and in compliance with §§ 75.1718 (Drinking water) and

75.1718-1 (Drinking water; quality). This evaluation shall include information obtained from the miners and the operator.

- 16. Rock Dust Sampling.** The inspector should collect rock dust samples on each advancing and retreating active working section in the mine. Most rock dust samples will be collected between 40 feet outby the working faces and 1,000 feet outby the working faces. Rock dust samples should also be collected conducted in previously mined active areas. From 1,000 feet outby the working faces to the mouth of the section, inspectors will collect at least two band samples per air course.

Note: Refer to chapter 5, Rock Dust Sampling section of this handbook for additional required procedures.

Documentation Required: The MMU number (Sampling Location Area), a description of the sampling area (Location In Mine), each sample collected identified by a permanent reference correlated to the mine map, e.g., survey spad number, crosscut number, etc.), and the percentage of methane detected on a handheld detector shall be documented in the inspection notes for each sample collected.

- 17. Roof and Rib Conditions.** The inspector shall observe roof and rib conditions on each active working section to determine compliance with applicable standards and approved plans. Special attention shall be given to roof control failures, roof control plan requirements, and information obtained from the miners installing the roof supports and the mine operator. Approved roof control plans for the first panel in a longwall district are often unique. Inspectors should review the roof control plans carefully and focus on compliance with the plan requirements during inspection of longwalls.

Supplemental roof support materials and the tools and equipment necessary to install them should be regularly examined during mandatory inspections to assure that supplies have not been used, lost, or misplaced. These materials must be available in sufficient quantity and in a readily accessible location to support the roof if adverse roof conditions are encountered or a roof fall accident occurs.

Roof Bolt Spacing

When evaluating roof support spacing to determine compliance with an approved roof control plan, inspectors should measure the lengthwise and crosswise distances between roof bolts. Inspectors should use reasonable judgment in determining from these measurements whether enforcement action is appropriate.

The Agency recognizes that roof bolt spacing specified in a plan represents nominal dimensions and that reasonable tolerances for installation are permitted. To require roof bolt operators to reach inby and make exact measurements may introduce hazards. Therefore, an occasional inadvertent deviation that slightly increases the spacing of roof bolts but does not detrimentally affect support performance may not constitute a violation. Typically, roof bolt spacing that occasionally exceeds the approved spacing pattern by less than 6 inches at intermittent locations and does not create a specific hazard should not be cited.

Roof Support

No person shall proceed beyond the last full row of permanent supports except to:

1. install roof supports;
2. repair equipment according to procedures outlined in the roof-control plan; or
3. extend ventilation controls when these controls must be extended to repair equipment. In this case, the procedures outlined in the roof control plan must have been implemented. When ventilation controls are extended as part of the normal mining cycle, they should be extended remotely from under permanently supported roof.

Whenever a citation or order is written for violating § 75.202(b) (Protection from falls of roof, face and ribs), the issuing inspector should notify the roof control supervisor and the field office supervisor. A copy of the citation/order should be provided to the roof control supervisor as soon as practicable. (Refer to [Methane Test Ext Cuts: 68 Fed. Reg. 40132 \(July 7, 2003\)](#) for additional information.)

Documentation Required: *Roof and Rib observations should be documented in the inspection notes to show the MMU number, and that the roof and ribs appear adequately supported. If geological conditions that are abnormal to regular mining conditions (faults, interfaces, etc.) are observed, they should be noted.*

18. **Roof Control Plan Discussion - The inspector should conduct the specific activities below** to reinforce inspection and documentation elements related to roof control plans. These activities are in addition to any other activities that are deemed necessary, as part of the inspector's E01 Regular Safety and Health Inspections or during E20 Roof Control Technical Investigations by roof control specialists.

1. All sections where retreat mining is occurring must be inspected at least monthly. The inspection will be conducted by a roof control specialist, as resources permit, or by a regular inspector at a minimum. This requirement does not apply to longwall mining sections unless the mine has a history of bounce conditions or deep cover related issues.
2. Discuss and question miners on current mining activities and conditions. Question the miners to determine whether their level of knowledge and training on roof control plans is adequate, especially their training on retreat mining activities.
3. All roof control plans are to be reviewed on a six month basis, and necessary documentation of the plan reviews and evaluations, including MSHA Form 2000-204 (if applicable), must be included with the E01 inspection report or the E20 investigation report.
4. Assistance may be requested from MSHA's Educational Field Services (EFS) to evaluate training on retreat mining.

These measures will serve to strengthen our inspection efforts to ascertain the adequacy of roof control plans and to determine the effectiveness of miner training concerning roof control plans.

Documentation Required: *A general statement that a discussion was held with miners for each MMU inspected about current mining activities, conditions, and training with respect to the roof control plans is adequate. Training with respect to retreat mining activities will also be documented.*

19. **Sanitary Facilities.** Sanitary facilities located on a working section shall be inspected for compliance with §§ 75. 1712-6 (Underground sanitary facilities; installation and maintenance) and 75. 1712-10 (Underground sanitary facilities; maintenance). Special attention shall be given to the location and cleanness of these facilities. (Refer to [Sanitary Toilets: 68 Fed. Reg. 37082 \(June 23, 2003\)](#) for additional information.)
20. **Section Equipment.** The inspector shall compare the mine operator's record of weekly examination of electrical equipment to electrical equipment in use and available for use. All electrical equipment in use and available for use should be maintained and listed in the ITS. An inspection shall be conducted of each piece of in use and available for use electrical equipment as listed in the operator examination records or observed in use by the inspector to determine compliance with applicable standards and to determine if hazardous or potentially hazardous conditions exist, with attention to permissibility, safe access, guards, equipment condition, fire suppression systems, combustible

materials, fire protection, condition of trailing or inter-machine electrical cables, cable conduit, circuit breaker capacity and identification, methane monitor, and safety devices. Each piece of in use and available for use portable electrical equipment should be inspected. The inspector shall assure the circuit breaker, receptacle, and plug is labeled to be the same. On at least an annual basis electrical specialists or inspectors who hold a current MSHA electrical qualification card should conduct a complete permissibility inspection of each longwall system. If an inspector finds that wiring of electric equipment is in a rundown condition, with many violations existing on one unit of equipment and if there is evidence that thorough and complete examinations are not being made or that the required tests are not being made, a citation should be issued under § 75.512 (Electric equipment; examination, testing and maintenance). Please refer to the [Coal Electrical Inspection Procedures Handbook](#), Chapter 2, for more information. Inspectors shall not attempt to perform inspections or tests that require the expertise of an electrical specialist. (Refer to [Q&As High-Voltage Longwall](#); [Q&A s High-Voltage Longwall Addendum 2002](#); [Emerg. Parking Brake](#): 54 Fed. Reg. 12406 (March 24, 1989); [HV Longwall](#): 67 Fed. Reg. 18822 (April 17, 2002); [Part 18 Battery Powered Plugs](#): 68 Fed. Reg. 37077 (June 23, 2003); [Elect. Motor-Drive Equip](#): 69 Fed. Reg. 68078 (Nov. 23, 2004); [Explosion-Proof Encl](#): 71 Fed. Reg. 28581 (May 17, 2006); and [High-Voltage Continuous Miners](#): 75 Fed. Reg. 17529 (April 6, 2010) for further guidance and additional information.)

Maintaining Methane Monitors in Proper Operating Condition for Mining Equipment. Under § 75.342 (Methane monitors), methane monitors on mining equipment must be maintained in permissible and proper operating condition. To eliminate potential hazards associated with methane liberation in the working places, it is imperative that equipment with methane monitors be operated only when the methane monitor is functioning properly.

At least once during each regular inspection, the inspector shall conduct a visual examination and functional test of mining equipment provided with a methane monitor to ensure that the monitors are operating properly, are not “bridged out,” and do not have material covering the sensor head. The functional test may consist of activating a test circuit on the monitor or application of calibration gas. Inspectors shall test methane monitors with a known methane air test mixture when it is suspected that the monitor is defective or improperly calibrated. Enforcement action shall be taken for violation of § 75.342(a)(4) (Methane monitors) when a methane monitoring system gives a reading below 2.3% or above 2.7% when the typical 2.5% methane-in-air calibration gas is applied to the sensor head. Inspectors should also check the examination records to ensure the required calibration tests are

being performed at least once every 31 days or as approved in the Mine Ventilation Plan.

Documentation Required: *Inspection of each piece of in use and available for use section equipment should be documented in the inspector's notes and the ITS, including the MMU numbers, the company number, serial number, approval number, or other positive identifier. Documentation that the methane monitor was observed as being tested during the E01 inspection should be included in the inspection notes. Small pieces of handheld electrical equipment are not required to be recorded in the ITS.*

G. Ventilation (General Tests and Measurements).

During each E01 regular inspection, the inspector shall compare the mine operator's preshift and weekly examination records to assure the mine operator is properly evaluating the mine ventilation system. The inspector will assure the mine operator is obtaining air quality and quantity readings at all locations required by the standards and any approved plans. Additionally, the inspector shall determine the direction and quantity of airflow, and test for the presence of methane (CH₄) and oxygen (O₂) deficiency, at the following locations:

1. In the last open crosscut of each set of entries or rooms on each section;
2. Areas where mechanized mining equipment is being installed or removed;
3. On a longwall or shortwall, including areas where longwall or shortwall equipment is being installed or removed, in the intake entry or entries at the intake end of the longwall or shortwall. Approved ventilation plans for the first panel in a longwall district and the start up of each successive panel are often unique. Inspectors should review the ventilation plans carefully and focus on compliance with the plan requirements during inspection of longwalls;
4. At each end of the longwall or shortwall face at the locations specified in the approved ventilation plan;
5. At the intake end of any pillar line;
6. Where air enters the mine at each main intake;
7. In each intake split that ventilates a working section;
8. In the return of each split of air that ventilates a working section, immediately before it enters the main returns;
9. Where the air leaves the main returns;
10. The point immediately before the bleeder air enters a return;

11. In belt entries, for compliance with applicable standards and approved plans, such as belt air dumps, belt point feeds.
12. At least once on every E01 inspection of mines approved to use belt air to ventilate a working section at least 200 feet outby the tailpiece, but outby the point at which point feeding of air into the belt entry occurs;
13. At the measurement points specified in the mine ventilation plan for evaluating bleeders systems and worked-out areas, including where air enters and leaves the worked-out areas;
14. **In the entry nearest each set of seals, immediately after the air passes the seals** (airflow measurement not required);
15. In at least one location in each outby aircourse traveled during an inspection day (tests for presence of oxygen and methane only); and
16. In each face, the presence of oxygen and of methane only.

It should be noted that carbon dioxide (CO₂) and nitric oxide (NO) are produced during the combustion of diesel fuel. These gases may pose a hazard to anyone receiving short-term exposure to harmful quantities. See chart located in section H of this chapter for additional information.

In some cases, the air quantities or velocities specified in the mine ventilation plan or regulations may be inadequate to continuously dilute, render harmless, and carry away flammable, explosive, noxious, and harmful gases, dusts, smoke, and fumes. In those instances, or if the inspector determines the mine ventilation plan is not suitable to address mining conditions, the inspector should submit an MSHA Form 2000-204 (Plan Review Form) through their supervisor immediately.

When an inspector observes gas detectors in use at the mine, (s)he should physically examine a representative number of the instruments to determine whether the detector(s) is turned on and functions properly, and assess the worker's knowledge concerning their use. (Refer to [Q&As 1992 Ventilation Handbook](#); [1996 Vent. Final Rule: 61 Fed. Reg. 9764 \(March 11, 1996\)](#); and [Corrections Notice 1996 Final Rule: 61 Fed. Reg. 29287 \(June 10, 1996\)](#) for additional information.)

Documentation Required: *The results of Ventilation General Tests and Measurements (items 1 through 14 above) should be documented in the inspection notes. This includes the test location, the test and measurement results, and airflow direction in bleeders until each area of the ventilation general tests and measurements is*

fully inspected Methane (CH₄) and oxygen (O₂) tests should be taken at each required location and recorded as a percentage. The air velocity and area (height and width of location where the required measurement was taken) should be recorded with the air quantity calculated. In addition to completing this procedure for all outby areas, the inspector should only once clearly mark each working section air readings that contribute to the E01 inspection by date and initials on the mine tracking map, including the locations of any approved evaluation or measurement points associated with the aircourse.

H. Mine Gas Exposure Levels

Gas	TLV®	Excursion Limit	Explosive Range
Oxygen (O ₂)	19.5% min.	Not Applicable	Not Applicable
Carbon Dioxide (CO ₂)	0.5%	0.5%-statutory limit*	Not Applicable
Carbon Monoxide (CO)	50 ppm	400 ppm for 15 min.	12% - 75%
Nitric Oxide (NO)	25 ppm	37.5 ppm for 15 min.	Not Applicable
Nitrogen Dioxide (NO ₂)	5 ppm-ceiling limit	5 ppm-ceiling limit	Not Applicable
Methane (CH ₄)	Not Applicable	Not Applicable	5% - 15%

*Persons who work or travel in bleeders or worked-out areas may be exposed to up to 3.0% carbon dioxide (CO₂) for a time period not to exceed 15 minutes. Oxygen (O₂) and carbon dioxide (CO₂) limits are from § 75.321 (Air quality). Other limits are from ACGIH TLVs®, 1972 (§ 75.322 (Harmful quantities of noxious gases)).

I. Underground Diesel Equipment.

The inspector shall inspect all in use and available for use diesel equipment to determine compliance with applicable standards and the approved ventilation plan, including attention to: exhaust gas temperatures (for outby heavy-duty diesel equipment using non-ceramic paper/synthetic diesel particulate filters), diesel emissions compliance (in accordance with [Chapter 5 Diesel Exhaust Gas Monitoring](#) of the Coal Mine Health Inspection Procedures Handbook, § 75.322 harmful quantities of noxious gases, and § 70.1900 Exhaust Gas Monitoring when used on the working sections), and compare the data from inspection records with observations made during the physical inspection of diesel equipment. Items such as permissibility, safe access, guards, equipment condition, fire suppression systems, combustible materials, fire protection,

brakes, lighting, reflective devices, intake air systems, fuel system, electrical system, safety systems, hydraulic systems, audible warning devices, and other safety devices shall be evaluated as part of the inspection of diesel equipment. The data from the Diesel Inventory maintained by the mine operator on the MSHA Homepage, Online Tools, Online filing/forms Homepage/Diesel Inventory (provided by the supervisors at the beginning of each E01 regular inspection), should be compared to the equipment and records located at the mine site to determine if changes to the diesel inventory have been provided to MSHA within 7 calendar days after changes are made (§ 72.520(b) (Diesel equipment inventory)). A copy of the current MSHA Diesel Inventory Report for the subject mine should be included with each E01 completed inspection report and initialed by the inspector(s), indicating that the operator's records, physical inspection, and MSHA Diesel Inventory comparison was made. (Refer to [Diesel Equipment Inventory Q&As](#); [Diesel Compliance Guide Q&As](#); [Q&As Diesel Regs 1999 Utah](#); [Diesel 1996: 61 Fed. Reg. 55412 \(Oct. 25, 1996\)](#); [Diesel Exhaust: 63 Fed. Reg. 12647 \(Mar. 16, 1998\)](#); and [Diesel Part Generators: 70 Fed. Reg. 77728 \(Dec. 30, 2005\)](#) for further guidance and additional information.)

The District Diesel Coordinator shall be made aware of any discrepancies found prior to issuance of any inventory-related citation and to ensure that the diesel inventory database is updated to maintain its accuracy.

Evaluation of Non-Permissible Heavy-Duty Diesel-Powered Equipment, Compressors, and Generators Using an Adequate Diesel Particulate Matter (DPM) After-treatment Device:

Inspectors will perform two specific evaluations to determine if an adequate DPM after-treatment device is being used. First, the operator's diesel inventory will be reviewed. This review will determine if the listed DPM after-treatment control for each piece of diesel equipment will provide sufficient collection efficiency to reduce the DPM emissions to the level of 2.5 grams per hour. If the diesel inventory indicates the use of an inadequate DPM after-treatment device, the affected machine must be inspected to confirm the use of the stated device prior to taking enforcement action for violation of § 72.501(c) (Emission limits for nonpermissible heavy-duty diesel-powered equipment, generators and compressors).

Second, inspectors, with adequate training and testing equipment, will measure the exhaust gas temperature of diesel-powered machines equipped with a non-ceramic particulate filter. This evaluation is to verify that the DPM after-treatment device is maintained in accordance with the manufacturer's specifications as required by § 72.503(d) (Determination of emissions; filter maintenance). These specifications include conditions of use that are necessary

to maintain the established collection efficiencies and are required to gain MSHA acceptance as a DPM after-treatment device.

Currently accepted high-temperature disposable particulate filters (HTDPFs) must be operated in a diesel exhaust stream that is 650 degrees Fahrenheit (°F) or less to provide the established collection efficiency (80 or 83 percent depending on the model of the DPM after-treatment device). Specification sheets are hyperlinked for the two currently accepted HTDPFs ([High Temp Exhaust Filter Information](#)). Paper/Synthetic diesel particulate filters are accepted with a collection efficiency of 95 percent at a maximum exhaust gas temperature of 302°F. Specifications for accepted non-ceramic filters may be found on MSHA's web page as additional information with the acceptance list of filters.

MSHA will determine the exhaust gas temperature of diesel-powered equipment using the following test procedure:

1. Conduct the test when the engine is producing the maximum exhaust gas temperature. This test condition should be the same as that established by the mine operator to conduct the undiluted exhaust emissions weekly test required under § 75.1914(g) (Maintenance of diesel-powered equipment). This test condition is normally produced using torque converter stall or hydrostatic transmission load.
2. Ensure that you are not exposed to undiluted exhaust gases or hot surfaces and that all persons participating in the test are aware of your location.
3. Measure the peak exhaust gas temperature in the undiluted exhaust using an electronic handheld thermocouple instrument with a maximum 6 inch, J-type thermocouple attached.
4. Place the thermocouple into the undiluted exhaust stream using an exhaust port near the inlet of the DPM exhaust filter and after any exhaust cooling device. The exhaust port must be located to permit measurement of the exhaust gas temperature before entering the DPM after-treatment device but after any exhaust cooling device. This may be the same port that the mine operator uses to determine the exhaust gas emissions concentrations for § 75.1914(g) (Maintenance of diesel-powered equipment). (Note: the thermocouple must not touch the wall of the exhaust pipe and should be as close as possible to the center of the exhaust pipe.) Run the test for a minimum of 60 seconds to a maximum of 120 seconds or until the exhaust gas temperature is reasonably stable, whichever is less.

5. Record the identification of the machine being tested, the engine's serial number and the peak exhaust gas temperature measured.
6. The following Exhaust Temperature Action Table summarizes the actions an inspector must take in response to peak temperature determinations and when additional testing is necessary.

Exhaust Temperature Action Table			
Test No.	Peak Temperature Determination		Action To Be Taken
	HTDPF Type (°F)	Paper/Synthetic Type (°F)	
1	≤ 650	≤ 302	DPM Control is Adequate
	≥ 700	≥ 325	DPM Control is Not Adequate, Citation under § 72.503(d)
	$> 650 \leq 699$	$> 302 \leq 324$	Retest according to items 1) – 6)
2	≥ 700	≥ 325	Control is Not Adequate, Citation under § 72.503(d) using Test 2 Peak Temp. as basis
	$> 650 \leq 699$	$> 302 \leq 324$	Average Test 1 + Test 2 Peak Temp., use as basis of Citation under § 72.503(d)
	≤ 650	≤ 302	Retest according to items 1) – 6)
3	≥ 700	≥ 325	Control is Not Adequate, Citation under § 70.503(d) using Test 3 Peak Temp. as basis
	$> 650 \leq 699$	$> 302 \leq 324$	Average Test 1 + Test 3 Peak Temp., use as basis of Citation under § 72.503(d)
	≤ 650	≤ 302	Average Test 2 + Test 3 Peak Temp., use as basis to determine control is adequate

The following paragraphs detail the enforcement actions and additional testing summarized in the Exhaust Temperature Action Table above:

Scenario 1

The DPM control is adequate if the exhaust gas temperature measured is less than or equal to 650°F for an HTDPF or less than or equal to 302°F for a Paper/Synthetic filter.

A citation shall be issued for violation of § 72.503(d) (Determination of emissions; filter maintenance) if the exhaust gas temperature measured is greater than or equal to 700°F for a HTDPF or greater than or equal to 325°F for a Paper/Synthetic filter. The violation of § 72.503(d) should state that the DPM control being relied on to remove DPM from the diesel emissions was not maintained in accordance with the manufacturer's specifications in that the filter was being operated at an exhaust gas temperature of XXX°F.

Scenario 2

If the exhaust gas temperature measured is 651°F to 699°F for an HTDPF or 303°F to 324°F for a Paper/Synthetic filter, the inspector will re-test the machine in accordance with exhaust gas temperature test procedures (1 – 6) above.

If the second temperature determination is greater than or equal to 700°F for HTDPF or greater than or equal to 325°F for a Paper/Synthetic filter, then this single determination shall be used as the basis of a citation for a violation of § 72.503(d) as stated above.

If the second temperature determination is 651°F to 699°F for HTDPF or 303°F to 324°F for a Paper/Synthetic filter, the inspector shall average the two peak temperature determinations and use this average as the basis of a citation for a violation of § 72.503(d) as stated above.

If the second temperature determination is less than or equal to 650°F for HTDPF or less than or equal to 302°F for a Paper/Synthetic filter, then the inspector shall conduct a third test of the machine in accordance with exhaust gas temperature test procedures (1 – 6) above.

Scenario 3

If the third temperature determination is greater than or equal to 700°F for HTDPF or greater than or equal to 325°F for a Paper/Synthetic filter, then this single determination shall be used as the basis of a citation for a violation of § 72.503(d) as stated above.

If the third temperature determination is 651°F to 699°F for HTDPF or 303°F to 324°F for a Paper/Synthetic filter, the inspector shall average the two peak

temperature determinations in this temperature range and use this average as the basis of a citation for a violation of § 72.503(d) as stated above.

If the third temperature determination is less than or equal to 650°F for HTDPF or less than or equal to 302°F for a Paper/Synthetic filter, the inspector shall average the two peak temperature determinations in this temperature range and use this average as the basis for determining that the DPM control is adequate. (Refer to [High Temp Exhaust Filter Information](#) for further guidance.)

Determination of Diesel Fuel Sulfur Content

§ 75.1901(a) (Diesel fuel requirements) specifies only diesel fuel having a sulfur content no greater than 0.05 percent and a flash point of 100°F or greater be used in equipment operated in underground coal mines. The rule further requires that, on request, the mine operator shall provide to an inspector evidence that the diesel fuel purchased for use in diesel-powered equipment underground meets these requirements. The color of diesel fuel cannot be used as evidence that the fuel meets the sulfur content limitation.

A mine operator may provide documentation from the fuel supplier to demonstrate that the fuel's sulfur content complies with the standard. However, in cases where there may be a reason to question this documentation offered by the mine operator, MSHA may elect to have the diesel fuel analyzed by a laboratory to confirm the actual sulfur concentration in a sample of the diesel fuel. If a diesel fuel sulfur content question arises, inspectors should request that their supervisor contact the Mechanical and Engineering Safety Division, A&CC, for assistance in locating a laboratory to perform a fuel sulfur analysis.

Ventilation (Diesel Equipment)

At underground mines where diesel equipment is being operated, tests for the presence of carbon monoxide (CO) and nitrogen dioxide (NO₂) shall be made at the following locations to determine compliance with applicable standards:

1. In the return of each working section where diesel equipment is used, at a location which represents the contribution of all diesel equipment on such section; In the area of the section loading point if diesel haulage equipment is operated on the working section;
2. At a point inby the last piece of diesel equipment on the longwall or shortwall face when mining equipment is being installed or removed;
3. In any other area designated by the District Manager as specified in the mine

operator's approved ventilation plan where diesel equipment is operated in a manner that can result in significant concentrations of diesel exhaust; and

4. Other areas where the diesel equipment is being operated.

(Refer to [Diesel: 61 Fed. Reg. 55412 \(Oct. 25, 1996\)](#); and [Diesel-Powered Generators: 70 Fed. Reg. 77728 \(Dec. 30, 2005\)](#) for additional information.)

Documentation Required: *The locations and results of Ventilation (Diesel Equipment) test for the presence of carbon monoxide (CO) and nitrogen dioxide (NO₂) should be documented in the inspection notes. Each piece of in use or available for use diesel equipment inspected should be entered in the inspection notes and ITS to include the equipment manufacturer, equipment type, and a positive identifying number (e.g., serial number, company number). The location of the equipment may be recorded in the ITS. The results of the diesel emissions test conducted (carbon monoxide (CO) and nitrogen dioxide (NO₂)) and gas temperature readings (where required for outby non-permissible heavy-duty diesel equipment using non-ceramic paper/synthetic diesel particulate filters) should also be in the inspection notes. The printed MSHA Diesel Inventory Report (provided by the supervisor at the beginning of each E01 regular inspection) submitted with each E01 inspection needs only to be initialed on the front page by the inspector(s) who conducted the inspection. The inspection notes must document that the inventory was reviewed and describe any discrepancy.*

J. Air Sample Locations.

The quantity of airflow shall be measured and samples of mine air collected for analysis to determine the quality of the air at the following locations:

1. In each of the working section immediate return entries, outby, and as close as practical to the last permanent stopping (to determine section face liberation); and
2. At all locations where air leaves the mine (to determine total mine methane liberation). On blowing ventilation systems this may include roadways, belt conveyor entries, and/or other areas where air leaves the mine.

Samples may also be collected at other locations deemed necessary to evaluate air quality.

Documentation Required: *The quantity of airflow measured (including velocity and area), the date and time collected, the handheld methane (CH₄) and oxygen (O₂) readings in percentage, the bottle number of samples collected, and the location of the measurement or collection, the type of sample (total liberation or other) and any special remarks concerning sample collected, should be documented in the inspection notes and entered into the applicable areas of the ITS.*

Chapter 4 – OTHER INSPECTION-RELATED ACTIVITIES

- A. New Mines, Coal Facilities, and Other Sites.** On the first visit to a new mining operation, the inspector should make the mine operator aware that the Act, the MINER Act of 2006, 30 CFR, and MSHA policy govern inspector actions at their mine.

The operator should be informed that these documents are available for viewing on MSHA's website (www.msha.gov). Some of these documents are available in hard copy from MSHA's National Mine Health and Safety Academy located at Beaver, WV. Additionally, a discussion should be conducted and the operator made aware of MSHA's role concerning enforcement, education and training, and technical assistance.

Key MSHA contact names, positions, and phone numbers within the field office and district office having inspection jurisdiction over the mine should also be made available to the mine operator should questions arise regarding health, safety, compliance, or other concerns at a later date.

- B. Shaft or Slope Construction Sites.** Shaft and slope construction operations shall be inspected monthly for compliance with applicable standards §§ 77.1900(a) to 77.1916(d) and approved plans. The inspection activity (normally conducted on an E18 inspection code) shall, to the extent possible, include an observation of all critical phases of the operation such as drilling and shooting, installation of water rings, operation of the hoisting rig lowering and raising materials and employees, etc. The inspector shall determine if adequate training has been given to all workers at these sites and that records of training are available (refer to [Shaft and Slope Const: 70 Fed. Reg. 77716 \(Dec. 30, 2005\)](#) for additional information). The provisions of Section 103(f) of the Mine Act apply, in that the representative of the miners shall be afforded the opportunity to participate in the inspection of shaft or slope construction sites.

Until all work regarding the project outlined in the approved shaft and/or slope sinking plan is completed, 30 CFR Part 77 standards shall apply to the shaft construction site. The shaft sinking plan required by 30 CFR Part 77 should indicate when the applicable provisions of 30 CFR Part 75 shall be met by the responsible organization that commences the mining cycle.

- C. Other Major Construction Sites.** Regular safety and health inspections of major construction sites at existing underground mines shall be conducted at least four times

per fiscal year, and at surface mines and facilities at least two times per fiscal year to determine compliance with applicable standards and approved plans. At the discretion of the District Manager, inspections may be conducted more often to address unusual hazards. The provisions of Section 103(f) of the Mine Act apply, in that a representative of the miners shall be afforded the opportunity to participate in the inspection of shaft or slope construction sites.

- D. **Interconnected Mines.** Where adjacent mines are connected underground but are considered separate mines, the inspector shall issue an order to each mine if any imminent dangers are found in one mine that may affect the safety of the miners in the connected mine. The inspector shall implement this procedure regardless of whether these mines are controlled by the same or different operators.
- E. **Non-producing Mines.** Regular safety and health inspections shall be conducted at non-producing mines at which persons are working and at mines where persons do not regularly work that are placed in a non-producing status due to the presence of an impoundment on mine property to determine compliance with standards applicable to the activities at the mine. At underground mines that are declared inactive by the operator, permanently closed, or abandoned for more than 90 days, inspections of surface areas should be scheduled and conducted to determine compliance with § 75.1711 (Sealing of mines).
- F. **Abandoned Mines.** As long as there is an active impoundment associated with a mine, an abandoned or abandoned and sealed status should not be applied to the operator. In order for a mine operator to close and abandon a mine, the operator must submit appropriate documentation to MSHA (e.g., status change reports for dust sampling and underground mine abandonment and closure map). Once the notification has been submitted, the District Manager shall ensure that all impacted branches in the district (impoundment, roof control or ventilation departments) are notified that the mine is either being closed or abandoned. The District Manager shall also ensure that the underground mine openings are sealed in accordance with § 75.1711 (Sealing of mines). Inspections should not be conducted at abandoned mines with no coal production and no persons are working at the site. Enforcement personnel should work closely with supervisors when:
1. A mine's status is changed to "abandoned." Event reports for activities at mines found to be abandoned should be amended or revised;
 2. Dates entered for mine status change, including abandonment. The status is determined by MSHA and not dictated solely by operator information. A mine is

abandoned for inspection purposes when MSHA determines the entity is no longer a mine, preparation plant, or facility; and

3. A mine, preparation plant, or facility with an active impoundment submits a request to abandon the mine. An impoundment not abandoned in conformance with an approved plan as specified in § 77.216-5 (Water, sediment, or slurry impoundments and impounding structures) is an active impoundment and its associated entity is an active mine. The mine status code must be maintained as active or the impoundment should be transferred to an active mine identity.

G. Reopening Inspections. A safety and health reopening inspection of the entire mine shall be conducted in accordance with § 75.373 (Reopening mines) before mining operations are resumed at mines that have been abandoned or declared inactive by the operator. The intent is to ensure the safety of miners at mines that have not been routinely examined during periods of inactivity. An exception is where there has only been a change of mine name or ownership and the mine has not actually been physically closed or abandoned. At underground mines, a safety and health inspection of the entire mine shall be conducted as soon as practical after notification from the operator that the mine is to be reopened.

The reopening inspector shall determine whether the provisions of §§ 75.1721 (Opening of new underground coal mines, or reopening of abandoned coal mines; notification by operator) or 77.1712 (Reopening mines; notification; inspection prior to mining) have been complied with in full. Any citation or order of withdrawal issued during the course of a reopening inspection should reflect that this inspection was made prior to reopening the mine. Any violations caused by or attributed to the negligence of the current operator shall be issued on a separate spot inspection event code. Any citations or orders issued under this separate spot inspection are to be processed under normal routing for penalty assessment.

Only rehabilitation work may be performed on the surface areas of underground mines by an operator prior to notifying MSHA. Surface rehabilitation work may occur prior to or during a reopening inspection, but production of coal shall not begin until the reopening inspection has been completed. This affords MSHA the opportunity to accurately assess the proposed mining systems and also to identify any potential problems that may present hazards to miners before mining operations commence. If the inspection can be performed safely in by the point where a new section is to be started, the area may be released. Areas that cannot be inspected will be sealed or ventilated in a manner that will not affect working sections. At underground mines, a

Regular safety and health inspection of the entire mine shall be started within 30 days after the mine begins production.

- H. Spot Inspections.** Spot inspections can be conducted for a variety of purposes. They include, but are not limited to, determining the status of citations, notices to provide safeguards, or other MSHA enforcement documents issued during a previous inspection; collecting additional samples; and monitoring potentially hazardous conditions not covered by Section 103(i). Section 103(i) of the Act defines the conditions in mines under which spot inspections are to be conducted at various time intervals. Section 103(i) inspections shall not constitute a part of any other category of inspections and shall be directed specifically to the problems, hazards, or conditions under which the mine was classified as a Section 103(i) mine.

Designations for 103(i) spot inspection status shall not be delayed until the start of a new underground mine inspection quarter. New spot inspection status designations shall be made as soon as it has been determined that any coal mine liberates more than the required limits of methane within 24 hours in accordance with the 1977 Mine Act with regards to 103(i) spot inspection designations.

The intervals of the 103(i) spot inspections are to be conducted in accordance with the Act that requires spot inspections at 5-, 10-, and 15-working-day intervals for mines liberating methane at certain rates. Using the 5-day language as an example with mines producing over 1,000,000 cfd of methane, the Act requires “...a minimum of one spot inspection by [an] authorized representative of all or part of such mine during every 5 working days at irregular intervals.” (Mines working a 7 day-per-week schedule must have an inspection frequency of one day for each 5-day spot block maintained on the spot calendar – holidays will be considered as a working day). A 103(i) spot inspection should occur somewhere within each consecutive 5-day block of time. More than 5 days could pass between consecutive inspections so long as an inspection occurs within each block. This assures the required irregularity as well as meeting the frequency requirement. Over a 1-year period at the example mine, 73 103(i) spot inspections would be conducted. The same principle governs mines in 10- and 15-day status.

Mines with standard 5-day weeks and which are idle on weekends may adjust their spot calendars to exclude weekends. Holidays will be considered as a working day. Any type of work in any mine other than normal mine examinations and water pumping shall be considered a working day (e.g., belt moves, mine clean up, rock dusting, power moves, work during vacation shut downs, etc., shall be considered working days). Mines working more than 5 days per week must receive the

appropriate 103(i) spot inspection at intervals determined by the mine's actual working days. District Managers are to review the working status of mines subject to 103(i) inspections and ensure that spot inspections are conducted at the appropriate interval of mine working days.

When the mine is placed into a 103(i) status due to one (or more) of the conditions described below the information concerning the change shall be entered and submitted on a [MSHA Form 2000-209](#) ([2000-209 Instruction Sheet](#) and [2000-209 Union Codes](#)) immediately.

1. **Ignition** - The mine is in 103(i) status due to an ignition or explosion. (Having had an ignition or explosion that resulted in death or serious injury within the past 5 years.)
2. **Hazard** - The mine is in 103(i) status due to especially hazardous conditions.
3. **5 Day** - The mine is in 103(i) status due to methane liberation. (Liberates more than 1,000,000 cubic feet of methane or other explosive gases during a 24-hour period.)
4. **10 Day** - The mine is in 103(i) status due to methane liberation. (Liberates more than 500,000 cubic feet, but less than one million cubic feet of methane or other explosive gases during a 24-hour period.)
5. **15 Day** - The mine is in 103(i) status due to methane liberation. (Liberates more than 200,000 cubic feet, but less than 500,000 cubic feet of methane or other explosive gases during a 24-hour period.)

A limited on-site review of mine examination and/or ventilation records is considered essential to 103(i) inspection activities. The inspection shall pertain to the specific reason the mine was selected for a 103(i) inspection. For example, if a mine is included because it liberates excessive quantities of methane, 103(i) inspections should focus on working section ventilation, general mine ventilation, mining activities related to methane liberation, bleeder systems, seals (including new seal construction), or other areas where methane is likely to accumulate. This does not prevent another category of inspection or investigation from being conducted during the same visit to the mine. Subsequent actions on previously issued citations and orders are permitted as long as they are in the same general area and they do not interfere with the requirements of the 103(i) inspection. The original inspector notes should be distinct and separate for each type of inspection and subsequently filed with the respective inspection report.

The following guidelines shall be implemented for 103(i) spot mines:

1. **Supervisors shall set up calendars to track mines that are included in the 103(i) inspection requirements.** Section 103(i) spot inspections shall be conducted at irregular intervals, including off shifts and weekends, as resources and the budget permits.
2. An inspection shift shall be dedicated to 103(i) spot inspections. This means that a “normal” or standard inspection shift (a minimum of 8-hour shift) which includes travel and related inspection activities, will suffice to meet a full day’s requirement. Thereafter, other inspection duties, primarily E01 activity, may be conducted at the same mine or another mine.
3. While conducting the 103(i) spot inspection, activities shall pertain to the specific reason the mine was selected for a 103(i) inspection. For example, if a mine is included because it liberates excessive quantities of methane, 103(i) inspections should focus on mining activities, bleeders, and seals. If an evaluation of the active section takes less than a standard day, the remainder of that day should be spent in the bleeder entries, returns, or evaluating seals. It may also be necessary to inspect seals during spot inspections under Section 103(i) of the Mine Act (including new seals and seals being constructed). Seals that are constructed as part of an approved spontaneous combustion plan that are accessible, such as those outby the face on the tailgate or inby the face on the headgate, also may be inspected.

When present on a working section, during 103(i) inspection (regarding liberation of excessive methane), the inspector should measure the air quantity in the last open crosscut in each set of entries or rooms on each working section, the quantity of air reaching the intake end of a pillar line, at the end of the face ventilating device (if required) where equipment is being operated, the air velocity at each end of the longwall face, and the quantities approved in the ventilation plan. The inspector will assure that the face ventilation control devices are installed and maintained in accordance with the approved ventilation plan and visually check that water sprays used for respirable dust suppression are properly maintained and functioning each time the producing working section is inspected.

Randomly, while conducting 103(i) inspections, the inspector should observe the mine operator calibrating the methane monitor of face equipment.

Checks may be randomly conducted for compliance with §§ 75.400 (Accumulation of combustible materials) and 75.403 (Maintenance of incombustible content of rock dust) during Section 103(i) spot inspections at mines selected for such inspections due to excessive methane liberation, methane hazards, or ignitions if the inspector decides such samples are necessary.

Documentation Required: *The inspector shall document the location and results of air readings in the narrative portion of the inspection notes.*

- I. **Accident Investigations.** Procedures for formal reports of accident investigations are covered in the [Accident/Illness Investigations Procedures Handbook](#). Reports required in addition to the formal report will contain the citations and orders issued during the accident investigation for violations that contributed to the cause of the accident. Also, Section 103(j) or 103(k) orders issued during the investigation are to be included in the accident report. All other citations and orders issued that are not pertinent to the cause of the accident shall be included in a separate report, usually a spot inspection report. (Refer to [Part 50 Direct Final Rule: 74 Fed. Reg. 68918 \(Dec. 29, 2009\)](#) for additional information.)

Issuance of Citations for Failure to Immediately Notify MSHA of an Accident Under § 50.10:

Violations for failure to immediately notify MSHA of accidents, as defined in § 50.2(h), may not be cited under § 50.10 alone. Instead, violations of § 50.10 must be cited using one of the following paragraphs:

1. § 50.10(a) for accidents involving death of an individual at the mine;
2. § 50.10(b) for accidents involving injury of an individual at the mine which has a reasonable potential to cause death;
3. § 50.10(c) for accidents involving entrapment of an individual at the mine which has a reasonable potential to cause death; or
4. § 50.10(d) for any other accident [which would include an entrapment of an individual at a mine for more than 30 minutes and accidents defined in § 50.2(h)(4) through (12)].

J. **Petitions for Modification Investigations.** The procedures for investigating and processing Section 101(c) petitions for modification are found in the [Petitions for Modification Handbook](#).

K. **Special Investigations.** Procedures for special investigations are found in the [Special Investigations Procedures Handbook](#). Instruction on filling out Possible Knowing/Willful Violation Review form, MSHA Form 7000-20, can be found in this handbook. (Refer to [7000-20 Possible Knowing/Willful Instructions](#) for further guidance on filling out the form.)

Note: Only a violation of a mandatory health or safety standard or order issued under the Mine Act, or MINER Act of 2006 shall be reviewed for possible further action. **This includes violations of 30 CFR Parts 47, 48, 49, 50 (for 50.10 only), 62, 70, 71, 72, 75, 77, and 90.** The inspector and their supervisor shall first review each citation or order to ensure that the violation has been properly cited.

L. **Technical Investigations.** Technical investigations are similar to spot inspections because the investigations are directed to a specific purpose or subject. Detailed reports of tests, observations, and conditions must also be maintained in the UMF, Special Attention Areas, for as long as they are applicable.

Transmittal of Technical Support Reports with Recommendations for Mine Operators:

1. Immediately following a Technical Support investigation at a mine site resulting in recommendations for the mine operator, a close-out meeting will be held with mine management and the miners' representative to discuss the preliminary results.
2. Technical Support on-site investigation reports containing recommendations to the mine operator will be sent to the District Manager and the Chief of Safety, Coal. The District Manager will transmit the report to the mine operator and miners' representative. Delivery will be documented.
3. Requests for Technical Support investigations will come from the District Manager or the Chief of Safety, Coal to the appropriate Technical Support Center Chief. The District Manager will notify the Chief of Safety when Technical Support assistance has been requested.
4. A copy of the report will be placed in the mine file.

- M. Electrical Inspections/Investigations.** Electrical inspection and investigation procedures are found in the [Coal Electrical Inspection Procedures Handbook](#). A regular inspector shall not attempt to perform inspections or tests that require the expertise of an electrical specialist.
- N. Health Inspections/Investigations.** Health inspection and investigation procedures are found in the [Coal Mine Health Inspection Procedures Handbook, Chapter 1 Revision, Chapter 3 Revision, Chapter 5 Revision, Chapter 6 Revision, and Chapter 9 Revision](#). The inspector/specialist is not required to sign the dust sampling result on computer generated MSN 014 after the results are analyzed (only that there must be some type of identifier of who conducted the survey). A copy of MSN 014 should be maintained with the event inspection report on which it was conducted. The inspector/specialist should assure that all Respirable Dust Sampling and Monitoring Data MSHA Form 2000-86s are inserted in the event inspection report. MSHA Form 2000-146 is no longer to be used. (Refer to [MSHA Form 2000-86 Respirable Dust Sampling and Monitoring Data](#); [MSHA Form 2000-84 Noise](#); [2000-96 Designated Occupation Change Notice](#); [Q&As Noise Exposure 2000](#); [Coal Mine Occupations Form 2000-169](#); [Noise: 64 Fed. Reg. 49548 \(Sept. 13, 1999\)](#); [Asbestos: 73 Fed. Reg. 11284 \(Feb. 29, 2008\)](#); and [Dust Sampling: 75 Fed. Reg. 17512 \(April 6, 2010\)](#) for additional information and available forms.)
- High Levels of Quartz:** Each respirable dust sample that indicates quartz exposures that are determined to be greater than 100 µgm³ based on MSHA and/or operator collected samples shall be investigated. For underground mines and surface sampling entities with a dust-control plan, these actions will be addressed by notifying the mine operator of MSHA's concerns about miners' exposure to high quartz levels and the need to address these concerns by modifying the dust-control parameters to reduce the quartz in the miners' work environment as measured by respirable dust samples.
- O. Part 50 Audit Program.** The District Manager shall be responsible for the audit program. Audits will be conducted under the inspection and investigation authority of Section 103 of the Mine Act and 30 CFR Part 50. Audits shall be conducted when necessary as determined by the District Manager. To accomplish these audits, auditors shall review and document information related to accidents, injuries, and occupational illnesses. They will also review the quarterly employment and coal production reports, which MSHA considers relevant and necessary to determine compliance with the reporting requirements. The auditors will be inspectors selected by the District Manager, and they should have a thorough understanding of Part 50 and audit procedures.

Responsibilities.

1. **District Manager.** The District Manager will:
 - a) Direct the audit program and provide the Administrator with a report on the audit results;
 - b) Initiate a Part 50 audit whenever circumstances indicate that it is appropriate. In all instances, however, a Part 50 audit will be required at mines at which a chargeable fatality occurred;
 - c) Ensure that appropriate enforcement action is taken when required by audit results;
 - d) Provide applicable data and guidance to the auditors; and
 - e) Furnish to the auditors documentation that establishes MSHA policy or procedures concerning 30 CFR Part 50 and the audit program.

Auditors. Part 50 auditors will:

- a) Request an audit package for the mine. There are two alternate methods for this:
 1. The audit package can be obtained from the MSHA intranet website <http://mshenet.msha.dir.labor.gov/> (hyperlink only accessible when connected to the MSHA network) by clicking on: 1) MSHA Report Center; 2) DW Production Reports; 3) Part 50 Reports; and 4) Part 50 Audit Checklist. Questions should be directed to the Office of Program Evaluation and Information Resources (PEIR), Information Technology Center (ITC), (303) 231-5475; or
 2. The computer-generated audit forms can be obtained from ITC. The forms that cover the preceding 3 years must be requested at least 2 weeks prior to conducting the audit.
- b) Coordinate the audit with the inspector conducting the regular inspection at the mine being audited;
- c) Keep the District Manager informed of all changes in plans, schedules, problems that arise during each audit, and any other factors that could affect the progress of the audit; and
- d) Have some latitude in determining how the audit will be conducted (e.g.,

number of days and scope of review).

Structuring and Conducting the Audit.

- a. Consistency. Data collection, data analysis, and audit review should be as consistent as possible so that a National analysis can be based on the same type of data.

Data Collection and Verification. The purpose of data collection in these audits is to allow auditors to check, to the extent possible, all data necessary to determine operator compliance with Part 50. The auditors will review records and conduct interviews, as well as observe mine operator procedures and practices.

In all instances, [MSHA Form 7000-1](#), [MSHA Form 7000-2](#), and the mine operator accident investigation report (where applicable) must be compared against the employment, hours worked, and injury and occupational illness data obtained from Office of Injury and Employment Information (OIEI). Operators who refuse access to such records will be cited.

In addition, auditors should verify compliance by using other data sources. Such sources may include miners' representative and employee interviews and examination of other available records including state workers' compensation records. (Also see § 50.11.) If discrepancies are found, amended copies of forms shall be immediately submitted by the operator/contractor to OIEI.

Protection of Personal Information. Personal information collected in an audit shall be protected from public disclosure under the [Freedom of Information Act, 5 U.S.C. § 552](#), and the [Privacy Act, 5 U.S.C. § 552a](#), as applicable.

Procedures for Safeguarding Personally Identifiable Medical or Other Sensitive Information:

In conducting audits, it is often necessary for MSHA to collect personally identifiable medical information about miners-injuries or illnesses. Because, in general, access to personally identifiable medical or other sensitive information raises privacy concerns, the following procedures are being issued to protect the information collected. A copy of these procedures ([HQ Memo dated Dec 13, 2010](#)) shall be included in Part 50 audit files.

1. Filing of information. Part 50 audit information shall be kept in a file (electronic or manual) separate from the uniform mine file or any other inspection records, and

shall be identified by the mine name and mine identification number. The cover of the file shall have a label stating: "May contain personally identifiable medical or other sensitive information-- Authorized Users Only."

2. Storage of information. Information shall be stored in a locked file cabinet, safe, or secure room when not being reviewed.
3. Authorized users. Access to the information shall be limited to persons whose official duties require them to work with such information, but may include persons who have a need to know the information to perform related duties.
4. Access control system. A log or other method shall be used to identify persons who have access to the information and to account for removal of information from the stored area.
5. Safeguarding during transport. Persons shall maintain control of the information during transport and shall protect the information from unauthorized or unintentional access, disclosure, modification, or destruction.

Preparation and Distribution of Audit Results. The preparation of audit results and findings will include input and cooperation from all audit members. The auditors will furnish a copy of audit results to the District Manager. A review and discussion will be held if necessary. A copy of the audit results will be filed with background data and relevant documentation on the audit.

The District Manager will send a copy of the completed audit to the Chief, OIEI. (Refer to the [PC-7014 Yellow Jacket Pt 50 Q&As; Part 50 Accident Rep.: 74 Fed. Reg. 68918 \(Dec. 29, 2009\)](#); and [Part 50: 75 Fed. Reg. 21990 \(April 27, 2010\)](#) for further guidance and additional information.)

- P. Hazardous Condition Complaint Inspections.** Hazardous conditions complaints (HCC) whether classified as Section 103(g) or "Other" hazardous condition complaints are a necessary part of the safety and health effort and must be addressed in a manner consistent with the seriousness of the complaint. The [Hazardous Condition Complaint Procedures Handbook](#) establishes procedures for addressing hazardous condition complaints. Inspectors and specialists must follow the procedures established by the Hazard-Complaint Procedures Handbook when investigating hazardous condition complaints.

The Mine Act and 30 CFR Part 43 require MSHA to perform an immediate inspection of a mine when any communication from a miner, representative of the miners, or

other party alleging an imminent danger, a violation of a mandatory safety or health standard, or a violation of the Mine Act or the MINER Act of 2006 at a mine is received. Activity codes E03 (for Section 103(g) complaints) and E04 (for complaints other than complaints made by a miner or representative of the miners) are designated for hazardous condition complaint investigations. The Act requires MSHA to initiate a separate investigation to determine whether the alleged violation or danger exists.

The Hazard Complaint Procedures Handbook instructs investigators to provide mine operators and miners representatives with a sanitized copy of the hazardous condition complaint allegations (version where all personal identifiable information has been removed), when investigating a Section 103(g) hazardous condition complaint. As described in the Hazard Complaint Procedures Handbook, the sanitized allegations must be written in a way that keeps the identity of complainants confidential. This sanitized notice shall be provided no later than at the time the investigator arrives at the site where the hazardous conditions allegedly exist. For example, if the hazard was alleged on No. 4 Belt the complaint notice should be given at the time the investigator arrives at the No. 4 Belt. If the hazardous condition complaint addresses more than one location or area of the mine, the written notice can be broken down in parts and each part issued to the operator at the time the investigator travels to the alleged site(s). For “Other” hazardous condition complaints, a copy of the complainant’s allegations is not provided to the mine operator or any other party.

When an imminent danger is alleged, the mine operator shall be informed of the allegation and directed to investigate the hazard immediately. See Hazard Complaint Procedures Handbook for further discussion of allegations of imminent danger and the actions to be taken by MSHA.

For Section 103(g) complaints, when no violations are found or a special investigation is not warranted, the miner or representative of the miners shall be notified in writing of MSHA’s negative findings. A copy of the notice shall also be given to the operator prior to leaving the mine premises on a [MSHA Form 7000-3a](#) (Mine Citation/Order Continuation Form) or [MSHA Form 7000-35](#) (Complaint Allegations and Findings Form). Should the special investigation continue for more than one inspection day, the parties should be notified in writing that MSHA’s investigation is ongoing and has not reached a conclusion. A copy of the notice shall be provided prior to leaving the mine premises on a MSHA Form 7000-3a or MSHA Form 7000-35. These requirements for notification relate only to hazardous condition complaints categorized as Section 103(g) complaints.

If the inspector observes violations, the inspector shall take appropriate enforcement action. When violations are observed during the investigation, they shall be cited on a separate event.

Filing Hazard Condition Complaints in the UMF On completion of all hazard condition complaint investigations, the sanitized version of the hazardous condition complaint shall be filed under the title “Miscellaneous” under subtitle “Hazard Complaints” in the appropriate mine file. All complaints received, with either a positive or negative finding, shall be filed in the UMF. The complaints are to be removed quarterly so that only one year of history is retained. Reports from the HCC application in MSIS should be used to meet this requirement. The HCC system is the official record of hazardous condition complaints received by MSHA. See the [Hazardous Condition Complaint Procedures Handbook](#) for more information on the HCC application. (Refer to [7000-33 Verbal Complaint Information](#); [7000-34 Notification of Hazard Conditions](#); [7000-35 Complaint Allegations and Findings](#); and [One Call Does it All 1 800 Number](#) for available forms and additional information.)

Q. Railroad Equipment. If an inspector encounters unsafe conditions involving railroad equipment owned by a railroad company (including trackbed, railroad cars, or other equipment) he/she should report the conditions to his or her immediate supervisor. The supervisor is to inform the District Manager of the unsafe conditions. If the issue involves a rail carrier and the carrier has responsibility over the track and/or equipment involved, then the District Manager shall contact the Federal Railroad Administration (FRA). This does not preclude appropriate actions taken by inspectors to protect the health and safety of miners exposed to the conditions in areas under MSHA jurisdiction. The inspector should gather the appropriate mine information, name of railroad company, the conditions or circumstances which are deemed unsafe, and any other relevant information.

If the unsafe trackbed, railroad cars, or equipment owned by the railroad company presents an imminent danger, a Section 107(a) imminent danger withdrawal order, with no underlying violation, shall also be issued to the mine operator, requiring that the mine operator’s employees be removed from the unsafe area. If the above procedures have been followed and the hazard continues to exist, an appropriate citation or order may be issued to the railroad company requiring that the unsafe condition be corrected. The inspector should ensure that MSHA has jurisdiction over the unsafe equipment (i.e., the equipment is located on mine property).

When the mining company owns the railroad trackbed, railroad cars, or other equipment and any of these are found to be in violation of the Act or standards, an

appropriate citation or order shall be issued to the mine operator. If warranted, a Section 107(a) imminent danger withdrawal order shall also be issued to the mining company.

- R. **Mining Sites, Milling Operations and Plants.** An MSHA/OSHA (Occupational Safety and Health Administration) [Interagency Agreement](#) regarding jurisdiction over milling is currently in effect. Inspection personnel should be familiar with the agreement. Should a question on jurisdiction develop, refer to MSHA's Program Policy Manual, [PPM Volume 1](#), Section 4. If additional guidance is needed, the matter should be documented and brought to the attention of the immediate supervisor or District Manager.
- S. **Explosives.** Compliance inspections of explosives storage facilities on mine property shall be conducted to determine if the facilities meet the requirements of the Commerce in Explosives standards (27 CFR Part 555, Subpart K – Storage). (Refer to the [ATF Federal Explosives Law and Regulations Title 27 Part 555](#) ATF Publication 5400.7, [List of explosive Materials](#), and [ATF Telephone List](#) for additional information.)

§§ 77.2(e)(4) (Definitions) and 77.1304(a) (Blasting agents; special provisions) reference the former Bureau of Mines Information Circular [IC 8179](#) and [IC 8746 \(revision to IC 8179\)](#) "Safety Recommendations for Sensitized Ammonium Nitrate Blasting Agents."

Where surface mines are close to underground operations, an inspection shall be conducted for any danger surface mining may present to underground miners. This includes shaft and slope sinking operations connected to underground mines and surface blasting directly over or adjacent to underground mine workings.

The inspector shall:

1. Inspect records of licensees and permittees under MSHA jurisdiction;
2. Inspect storage facilities where explosive materials are stored;
3. Document noncompliance or compliance on ATF E-[ATF Form 5030.5](#) or ATF 5030.5 (revised 2005) and (ATF E-[ATF Form 5400.5](#) or ATF Form 5400.5 Report of Theft or Loss-Explosive Materials (revised March 2008)); and
4. Promptly notify a mine supervisor or manager of any noncompliance.

As a precaution against the use of deteriorated or damaged explosives, the inspector should check with mine operators concerning explosive materials they have purchased. If there is any indication that explosives recently purchased were in a deteriorated or damaged condition, obtain the name of the explosives supplier. In

addition, determine that any deteriorated or damaged explosives encountered are being handled and disposed of properly by the mine operator.

Consider degraded explosives as non-permissible, as they can be unstable and unexpectedly detonate if mishandled. If degraded explosives are used, a misfire, hang-fire, or fire can occur. Therefore, special precautions shall be taken in their removal and disposal. They shall be transported in limited quantities and in proper containers, preferably with a sawdust bed for insulation and absorption qualities. Carefully consider and evaluate the following factors when dealing with degraded explosives: the amount of explosives, the location, the condition, the knowledge/capability of personnel, and mode of transportation. Whenever possible, allow the explosives supplier to remove degraded explosives.

ANFO-based Explosives – Ammonium Nitrate Fuel Oil (ANFO) is hygroscopic (readily absorbing and retaining moisture) due to a high percentage of ammonium nitrate as a constituent. For this reason, it is typically wrapped in plastic membrane. When deterioration occurs due to moisture, it is indicated by the wet or pasty condition of the powder usually at the machine-pack end. This condition renders the explosive useless for blasting and requires disposing the explosives following the manufacturer's instructions.

Nitroglycerin-based Explosives – Nitroglycerin (NG) leaks from explosives. Leakage is shown by the discoloration of the shell paper or by the presence of drops of nitroglycerin on the case liner and possible discoloration of the box. Leakage occurs over time when NG explosives are not rotated and gravity separates the NG from the inert stabilizing material that makes up the bulk of the explosive. The operator should consult the manufacturer if NG from degraded explosives has leaked onto the floor of the magazine. The floor should be washed thoroughly with an agent approved by the manufacturer for the purpose of desensitizing NG. If experienced personnel are not available for removal or disposal, or if there is any question about the safety of the undertaking, the handling and destruction of the explosives should not be attempted until a representative of the explosives manufacturer has been consulted.

The Memorandum of Understanding between MSHA and the Bureau of Alcohol, Tobacco, Firearms and Explosives ([ATF MOU](#)) currently in effect states that MSHA agrees to inspect explosive storage magazines for the ATF as part of normal E01 events. Specifically, MSHA has agreed to inspect explosives storage facilities (Subpart K, orange book) and explosives records and reports (Subpart G).

Violations of ATF regulations should be entered on [ATF Form 5400.5](#) and distributed to the mine operator. All inspection results and all accidental or unintended detonations investigated by either MSHA or the mine operator must be reported to the appropriate ATF Regional Regulatory Administrator. Any theft of explosives or suspicious activities concerning explosives must be immediately reported to the ATF on ATF Form 5400.5.

MSHA inspectors should use standard procedures when citing violations of §§ 75.1301(a) to 75.1328(c) or 77.1300(a) to 77.1304(d) (Explosives and blasting) pertaining to explosives. The ATF standards only apply to surface explosives storage and usage. All underground storage and usage is only covered by § 75.1300. For violations falling under 27 CFR (Subparts K and G), the inspector will document this violation on [ATF Form 5030.5](#). Please note that the ATF storage and record regulations include items that are not included in 30 CFR. In those cases, the ATF violations will only be entered on ATF Form 5030.5 and no MSHA citation will be issued.

The Surface Mining Control and Reclamation Act of 1977 requires approval of an operator's blasting plan by MSHA and the Department of the Interior's Office of Surface Mining (OSM), or the appropriate state agency, when surface blasting activities are planned in close proximity to an active underground coal mine. Therefore, MSHA shall evaluate such plans when they are received from the operator, from the state regulatory authority, or from OSM. Joint approval with MSHA is also required when a coal mine operator proposes to discharge slurry, water, or other coal mining waste into active, inactive, or abandoned underground mine workings.

If the plans adequately address the health and safety of both surface and underground coal miners, MSHA must provide written notification to the originator of the plans and copies of the decisions must be mailed to the other concerned parties. Notification of disapprovals will be served in the same manner.

Document a violation or noncompliance on ATF E-Form 5030.5 or ATF Form 5030.5 (revised 2005), Report of Violations, and give the original to the licensee, permittee, or operator. The inspector shall make a recall inspection on a scheduled date, when necessary, and complete Part II of ATF E-Form 5030.5 or ATF Form 5030.5 at that time. If a second recall inspection is necessary, the inspector will complete Part III of ATF E-Form 5030.5 or ATF Form 5030.5.

If a condition is a violation of both 30 CFR and 27 CFR, issue a citation/order and document the action on the ATF E-Form 5030.5 or ATF Form 5030.5 (revised 2005).

For further reference, consult ATF P 5400.7 (11/07), “ATF: Explosives Law and Regulations” and [27 CFR Part 555](#), “Commerce in Explosives.”

Report each compliance inspection to the ATF Regional Regulatory Administrator and all copies of ATF Forms shall be forwarded to the District Manager who will retain a copy and forward copies to the appropriate ATF regional office. A report showing no violations may be submitted on any appropriate form (ATF E-Form 5030.5 or ATF Form 5030.5), provided the name, address, and license or permit number, if any, of the proprietor and the date of inspection are shown.

Submit a copy of the applicable form(s) with all E01 inspection reports for mines that use explosives and with any other inspection report where an ATF standard is cited. A contractor working on mine property may have their own licenses and permits thus requiring MSHA to conduct inspections of explosive use and storage under the contractor’s identification number.

If the mine operator or contractor on mine property does not use or store explosives and has no licenses and permits for explosives, the ATF Forms do not need to be filled out.

Below are three examples of completed reports of noncompliance with ATF standards:

[ATF Form 5030.5 Example 1](#): Notice of noncompliance shall be issued even though the condition was corrected while the inspection was being made. This is a history of the total operation and could possibly be important in the future if the same condition is found. No recall is needed if the condition is corrected and future voluntary compliance is indicated.

[ATF Form 5030.5 Example 2](#): Notice of noncompliance issued since the condition was not corrected while the inspection was being made. Recall date set and indicated when the operator would be in compliance. A recall inspection is similar to an inspection made by an MSHA inspector following the expiration of the abatement time granted when a citation is first issued.

[ATF Form 5030.5 Example 3](#): Recall has been made and all violations apparent on August 22, 2011, have not been corrected and future voluntary compliance is not indicated. When a recall investigation is necessary a judgment must be made at this time to determine if the noncompliance is willful or non-willful. If some circumstances have prevented the compliance and the explanation is satisfactory, an additional recall can be made without further action. If the continuing violations are considered willful,

the investigation should be referred to ATF for further investigation. If the inspector cannot get the form signed by the owner or his or her agent, then the inspector will write in the name of the individual involved and so state that this is not a signature. A copy of the completed form should still be given to the owner or his or her agent. Where the inspector is required to sign any of the ATF forms, the inspector should also print his or her name in the same block as has been done in the past to determine the name of the person who signed the form.

Evaluating Applications to Become Qualified to Perform Blasting in Underground Coal Mines - Persons performing blasting in underground coal mines shall be either certified to perform blasting by the state in which the mine is located or be qualified by MSHA to perform blasting. To be qualified by MSHA, underground coal miners shall successfully demonstrate to an inspector their ability to safely use permissible explosives. In states lacking programs for certifying blasting personnel, MSHA is the qualifying agency and the District Managers have been delegated this responsibility.

The procedures listed below are to be used when evaluating applicants to become qualified to perform blasting in underground coal mines under provision of § 75.1301 (Qualified person). The basic approach is for each potential qualified blaster to answer a series of questions on the use of explosives and demonstrate critical tasks associated with the blasting operation. The demonstration may either be held underground at the coal face or on the surface using a simulated coal face. Either way, knowledge of the same critical tasks shall be demonstrated. General instructions for inspectors to conduct the evaluations are given below. Demonstration questions and answers, an answer sheet, and drawings of an acceptable simulated coal face are available in the District Office.

1. When the demonstration is held at a mine, the inspector should inform both mine management and the representative of the miners that he or she is there for a qualified blaster demonstration.
2. The inspector should briefly explain that the purpose of the demonstration is for the candidate to show the ability to use explosives under the provisions of 30 CFR Part 75, Subpart N, by answering questions and performing certain tasks.
3. To successfully demonstrate this ability, the candidate for qualified blaster needs to answer at least 80 percent of the questions correctly and demonstrate the ability to perform the critical tasks. Demonstration of the critical tasks should be permitted only after the required percentage of questions is correctly answered.
4. All questions or tasks not answered or performed properly should be thoroughly discussed with the candidate on completion of the demonstration to assure

understanding of procedures necessary to safely perform blasting activities. Questions should be repeated as necessary.

Successful demonstrations will be documented on MSHA [Form 5000-17](#) following [Form 5000-17 Instructions](#) (Certification/Qualification Examination Report), and submitted to the Qualification and Certification Unit, P.O. Box 25367, Denver, Colorado 80225-0367. A “Qualified Person: Blasting” card will be issued by the Q & C Unit and mailed to the qualified person.

T. Mine Emergency Procedures.

Dispatching MSHA Personnel and Emergency Equipment to Mine Site - On notification of an emergency, the District Manager or other designated district official shall immediately dispatch inspectors to the mine site.

Initial On-Site Procedures - The first MSHA personnel arriving at a mine after notification of a mine emergency shall initiate the following actions:

1. Issue the appropriate Orders of Withdrawal necessary to ensure the health and safety of the miners.
2. Obtain the following information (i.e., the answers to these following questions) and promptly report it to the District Office:
 - a) Are miners entrapped? Have they been communicated with?
 - b) What is the nature and location of the emergency?
 - c) Have mine rescue teams been alerted?
 - d) Have firefighting or rescue and recovery operations started?
 - e) Are the surface mine fans still operating?
 - f) Is mine emergency assistance needed from the Office of Technical Support?
 - g) Are MSHA’s Mine Emergency Units needed?
3. Advise company officials that persons in contact with miners underground should determine if the miners are familiar with the emergency escapeway routes and the emergency evacuation procedures in effect at the mine. If the

miners are not familiar with the routes and procedures, instructions or directions to the nearest escape route should be given.

4. Advise company officials to have the surface fans examined to determine their condition. If a fan is not operating, it should remain off until examinations are made and it is determined that the fan should be restarted. All responsible agencies and company officials should be consulted before restarting a fan.
5. Advise company officials to have an attendant assigned to each operating surface fan to ensure continued operation.
6. Advise company officials to have qualified persons make carbon monoxide and methane tests at each exhausting surface fan and keep a log of the results obtained.
7. Notify officials at interconnected mines of the emergency and inform them that you are issuing them a verbal order of withdrawal.
8. Advise company officials to establish police lines to restrict entrance to mine property except to authorized personnel and to assign guards for the entrances to each mine opening.
9. Determine whether power is on in the mine and in what areas. Mine power available outside of the affected area should be used for transporting mine personnel to the surface and for transporting firefighting and rescue/recovery personnel and supplies to the affected area.
10. Advise company officials to have power disconnected from the affected area, unless the power is needed to transport personnel to safety or for rescue/recovery operations. If power is needed to transport personnel to safety, power should be removed upon evacuation or retreat, unless it is needed for rescue and recovery operations. Also, advise company officials to have power switches locked out or attended by a qualified person.
11. Advise company officials to have a positive check-in and check-out system in addition to the one established at the mine. Each person going in and out of the mine shall sign in and out.
12. Advise company officials to implement a search program, in conjunction with the check-in and check-out system, to ensure that any person entering the

underground area of the mine does not carry smoking materials, matches, or lighters.

13. Advise company officials to alert mine rescue teams, doctors, and hospitals, if needed.
14. Advise company officials that current mine maps or prints will be needed.
15. If another MSHA employee is not present at the mine, request that company officials assign someone on the surface to maintain a log of all rescue and recovery activities. As soon as another MSHA employee is available, he or she shall be assigned to maintain a separate log for MSHA.
16. After the above surface tasks have been completed, proceed underground if this can be done safely, to monitor the firefighting and rescue/recovery operations and look for additional information and causes. If two MSHA personnel are dispatched to the emergency site, one may proceed directly underground, if this can be done safely.
17. Relay all pertinent information to an MSHA person on the surface who shall relay this information to the District Office.
18. Upon arrival underground, check returns for methane, carbon monoxide, and other gases if this can be done safely and advise company officials to assign persons to continuously sample the returns and report the results.
19. All MSHA personnel shall keep complete notes on all activities performed in their work assignments. All such notes shall be submitted to the District Manager or other designated District official.
20. Report all gas readings and mine conditions to the MSHA person in charge of the log, and keep a record of time, location, and gas readings in a notebook. Make sure that the gas detecting devices are accurate.

(Refer to [MSHA Form 7000-10A](#) for pocket card information and [Headquarters Mine Emergency Response Guidelines Handbook](#).)

- U. **Use of 103 (j) and (k) orders.** As specified in Item T.1 above, on learning of a mine emergency, as soon as possible, MSHA shall issue a 103(j) or (k) order (depending on whether or not an inspector is present at the mine site) to the operator along with

initial instructions. The order should be reduced to writing and served to the operator as quickly as practical. The order should be written so as to protect all persons engaged in the rescue and recovery operation as well as any other persons on site, and reduce the potential for miscommunication. Parties on site should be informed that any activities will be permitted through subsequent modifications of the 103(k) order. The 103(k) order is intended to protect all persons involved in the emergency operation. As such, all parties on site are subject to the 103(k) order and its subsequent modifications. Each proposed action should be reviewed by the designated senior MSHA person on site before the 103(k) order is modified and before the action is commenced. Even though the 103(k) order is controlling, consistent with federal primacy, every effort should be made to gain consensus among the parties present in the command center to obtain the safest most effective outcome. (Refer to [Accident/Illness Investigation Procedures Handbook](#) for further guidance.)

First Response Air Sampling Units:

In addition to following the above guidance, the first MSHA personnel arriving on site should establish baseline air quality readings at the main return or exhaust fan after a mine fire or explosion has occurred. The following items for the units will be maintained in each district and field office, except where field offices are located within the same building as the district office:

- a. 115 volt AC Vacuum Pump
- b. Flame arrester
- c. Two 500 ft. Rolls of ¼ -inch inside diameter vinyl tubing
- d. ATX-620 Multi-gas Detector with IR Sensor or equivalent
- e. Tubing connectors

These air sampling units will permit MSHA to set up a system to monitor the atmosphere from a safe location at specific mine locations such as a mine fan or an exhaust entry. As a first response system for monitoring air, it is envisioned that MSHA personnel will place the vinyl tubing at a mine fan or inside an exhaust entry and then run the tubing to a location that will not subject personnel to potentially high concentrations of carbon monoxide (CO) or methane (CH₄). The vacuum pump will be attached to the tubing and operated by connecting to a 110 volt electrical source at the mine site. Connecting the vacuum pump, tubing, flame arrester and the ATX-620 detector or equivalent detector in the manner shown on the attached sketch will permit MSHA personnel to monitor the mine atmosphere until additional mine emergency equipment is available. In addition, it will be necessary to collect a bag sample for documentation of the mine air for analysis by Technical Support or MSHA's Air Lab. At least on an hourly basis, a bag sample will be collected and

labeled with the date, time, person collecting the sample, and the mine location. The bag should be filled two times and emptied after each filling by rolling the bag to expel any air. This process ensures that the gas sample bag has been purged of any contaminate atmosphere. The gas sample bag should then be filled to approximately $\frac{3}{4}$ full or $\frac{1}{2}$ full if the sample is to be shipped by air.

First response air sampling equipment is being placed in CMS&H offices so that a unit is within approximately 1 hour of any underground coal mine. This results in a complete set of the above equipment being located in each Coal office. The vacuum pump, flame arrester and tubing should be maintained for mine emergency use only. The ATX-620 detector or equivalent detector should be used for inspection activities such as evaluating the atmosphere behind seals. Each District Manager will designate one person (supervisor, if available) in the office where these units are located to be responsible for maintaining the readiness of the equipment, including the ATX-620 detector. Each set of equipment should be checked at least quarterly to determine that it is ready for use if a mine emergency were to occur. The quarterly checks should be documented and the records maintained for 3 years. This check should note when the monthly calibrations of the ATX-620 or equivalent detector were performed and who performed these checks.

Since the ATX-620 detector or equivalent detector will be used in inspection work, the use of this instrument must be tracked by a log maintained in the office. Tracking who is using the detector will permit the responsible person to make the necessary contacts to arrange for the detector to be moved to the site of the mine emergency in a timely manner. Using this detector for inspection activities will help ensure the unit is always checked for proper operation and the required “bump checks” and calibration checks are conducted. (Refer to [Air Sample Schematic](#) for further guidance.)

MSHA should ensure that only necessary and appropriate parties are granted access to the mine site and surface areas. Persons permitted onsite may include mine employees, necessary contractors or consultants, labor representatives, mine rescue teams and support personnel, state and local government officials who have some responsibility at the operation, law enforcement, ambulances and medical personnel, fire department personnel, vendors delivering necessary supplies, food suppliers, and others deemed necessary to the emergency operation. Other persons such as elected officials, clergy, etc., who have no direct role in the rescue and recovery may be permitted access on a case-by-case basis following consultation with MSHA Headquarters. High-level elected officials, such as a Governor or U.S. Congressional members, should be allowed onsite with immediate notification to Headquarters. Family members may be permitted in designated areas unless nearby facilities are

provided off-site. Persons not allowed at the mine site should include: reporters, photographers, spectators, friends, curiosity seekers, and others not necessary to a safe and orderly emergency operation.

Access to underground areas of the mine is further restricted. Underground access should be restricted to only mine employees and contractors, state and federal mining officials, labor representatives, mine rescue teams, necessary consultants, and any others, only if approved on a case-by-case basis following consultation with Headquarters. No person should be allowed underground unless necessary to the safe and timely rescue or recovery efforts.

Section 103(j) and 103(k)

The term “accident” is defined in Section 3(k) of the Mine Act. Generally, the District Manager or District Accident Investigation Coordinator will determine which accidents will be investigated. On learning of an accident, unless MSHA is already present, enforcement personnel should verbally issue a Section 103(j) order to the operator, including initial instructions, as soon as possible. The order, including any instructions, should then be reduced to writing and transmitted to the operator as soon as practicable.

The order should also require the operator to prevent the destruction of evidence at the accident site. In the event that a mine accident is not a mine emergency (i.e., there are no ongoing rescue and recovery efforts), MSHA may issue a 103(j) order prohibiting activity at the accident site to prevent the destruction of evidence which would assist in investigating the cause or causes of the accident.

On MSHA’s arrival on site and following assessment of conditions, MSHA may modify the Section 103(j) order, including all instructions, to reflect that MSHA is now proceeding under the authority of Section 103(k) of the Mine Act. MSHA should inform parties on site that any activities that are rescue or recovery related will be permitted through subsequent modifications of the Section 103(k) order. The Section 103(k) order is intended to protect all persons involved in the emergency operation or accident investigation. As such, all parties on site are subject to the Section 103(k) order and any subsequent modifications. Each proposed action should be reviewed by the designated MSHA person onsite before the Section 103(k) order is modified and before the action is commenced. MSHA has the authority to issue a Section 103(k) order unilaterally. However, every effort should be made to gain consensus among the parties involved to obtain the safest and most effective outcome. (Refer to [103\(j\) Sample Language](#) for further guidance.)

In the event of a mine accident where rescue and recovery work is necessary, Section 103(j) of the Act grants the inspector broad authority to take whatever action, including the issuance of orders, that the representative deems appropriate to protect the life of any person. Where appropriate, the inspector may supervise and direct the rescue and recovery activity.

Immediately on arrival at the mine accident scene, or later as mine rescue operations develop, the inspector may determine that direct control is necessary, either entirely or partially, particularly in situations where a less hazardous rescue procedure is desirable. Because of this broad authority, discretion and good judgment on the part of the inspector are imperative.

Under Section 103(k) of the Act, the inspector can issue any such order as deemed appropriate to ensure the safety of any person, including a Section 107(a) order if an imminent danger is found. Again, it is important to emphasize that the inspector must exercise discretion and good judgment when issuing a 103(k) order. The following instructions are provided to assist in exercising this discretion:

1. The Section 103(k) order is issued to ensure the safety of any person at the mine, and should apply to relevant areas of the mine to accomplish this. In some cases, the order will only apply to the accident site itself. In some accidents (for example, a fire, explosion, or inundation), the extent of the hazard may not immediately be known, and the order may apply to the entire underground mine until the extent of the hazard is clarified. Additionally, the inspector may apply the order to the entire underground portion of the mine if evidence reasonably indicates the same safety risks are present throughout the mine.
2. The Section 103(k) order should remain in effect until a systematic evaluation of the conditions and safety practices is conducted, and MSHA reasonably determines that hazards similar to those that caused or contributed to the accident have been eliminated. The evaluation can be made prior to the accident investigation or concurrent with it. After this evaluation and determination have been made, the Section 103(k) order may be modified to permit an area of the mine to resume operations, or terminated if appropriate, provided that such action will not pose a hazard to the miners.
3. In addition, Section 103(k) requires the operator to obtain the inspector's approval of any plan to recover any person in a mine, to recover the mine, or to return affected areas of the mine to normal.

Notwithstanding the instructions above, during rescue and recovery work, when it is determined by the inspector that an order is appropriate to protect the life of any person, or that supervision and direction of rescue and recovery activities is appropriate, a Section 103(j) order shall be issued to the operator. When possible, the inspector should contact the District Manager or Assistant District Manager prior to issuing a Section 103(j) order.

An inspector, when present at the mine following an accident, may immediately determine that rescue and recovery work is necessary. In such a situation, the Section 103(k) order issued under this section will generally be appropriate. Section 103(k) orders are not to be terminated without approval of the District Manager or his or her designee.

- V. Special Assessment.** Special assessment is mandatory for the following violations: those for which the daily penalty has been invoked under Section 110(b) of the Mine Act, those cited to miners related to smoking or the carrying of smoking materials under Section 110(g) of the Mine Act, flagrant violations as defined in the MINER Act, violations involving personal liability under Section 110(c) of the Mine Act, and violations involving discrimination under Section 105(c) of the Mine Act.

Special assessment review is required for all violations that contribute to a fatality or serious injury. However, special assessment is not mandatory for those violations as they may involve circumstances for which MSHA determines, in its discretion, special assessment is not warranted.

An inspector may recommend any enforcement action for special assessment if unique and/or aggravating circumstances exist. After the issuing inspector and the inspector's supervisor review a violation, the District Manager shall make the final determination as to whether or not a special assessment is warranted.

Completion of a Special Assessment Review (SAR) Form, [MSHA 7000-32 Special Assessment Review](#), is mandatory for any violation submitted for special assessment. SARs must describe the facts and circumstances justifying the recommendation for a special assessment. An SAR package (copies of inspector notes, conference worksheets, sketches or photographs, relevant portions of required plans, accident reports or memoranda and other information that would assist the Office of Assessments in determining an appropriate civil penalty) will be included with each citation or order of withdrawal. In fatal accident cases, the MSHA Legal Identity Form must also be included with the SAR package.

For review of special assessments of [Rules to Live By \(RTLBI\)](#) (March 15, 2010), [Rules to Live By II](#) (Jan. 1, 2011), [Rules to Live By III](#) (Jan. 31, 2012) or [Rules to Live By IV](#) standards, the AR should properly evaluate each violation and keep in mind that the RTLBI standards are the standards that have and continue to contribute to serious accidents and fatalities. However, the pop-ups located in IPAL for the RTLBI standards are merely reminders and should not dictate how the inspector evaluates the violation. Not every RTLBI violation is significant and substantial or has high negligence associated with it.

When a RTLBI standard is violated, the issuing inspector should continue to evaluate the violation for a special assessment review. If the inspector's evaluation of the condition is high negligence or higher, an SAR form should be filled out. If the inspector determined that the violation was moderate or below, a SAR form should only be completed when a special assessment is warranted.

Special Assessment Review of Violations for Requirements for Personal Protective Equipment (PPE).

The failure to provide, maintain, and use personal protection equipment (PPE), and train miners in its use continues to be a significant factor in injuries, illnesses, and fatalities in the mining industry. MSHA enforcement personnel are to take the following actions when PPE citations or orders of withdrawal are issued:

1. If negligence is elevated as at least "high" due to mine operator's failure to provide or maintain PPE, or train miners in its use, special assessment review is required;
2. If negligence is evaluated less than "high" because evidence indicates that a mine operator provided or maintained PPE, or trained miners in its use, special assessment review is not required except where required under other Agency criteria such as investigations and imminent danger situations.

(For additional information on special assessment matrix and guidance, refer to Part 100.5, [Volume III of MSHA's Program Policy Manual](#) and the [Citation and Order Writing Handbook](#).)

W. Appearance as a Witness in Litigation Involving MSHA.

MSHA personnel who have been asked to participate in or expect to be called as a witness in litigation to which MSHA is a party should:

1. Thoroughly review all citations, orders, documents, investigative reports, and notes involved in the case, and provide legible copies to the attorney or Conference/Litigation Representative (CLR) handling the litigation;
2. Inform supervisory personnel of the litigation and their involvement therein, supervisory personnel will ensure that the affected employee is available to the attorney or CLR prior to deposition or trial to discuss the circumstances of the case and details of testimony;
3. Make necessary arrangements to attend any deposition or hearing and meet with the attorney or CLR prior to the deposition or hearing; and
4. Immediately inform the attorney or CLR handling the case of any changes in circumstances regarding the enforcement action, his or her availability to appear, and contacts with, or requests from, the opposing party or the opposing party's representative, or subpoenas requiring attendance at any meetings or proceedings. Under no circumstances communicate with an opposing party's representative without the knowledge and participation of the Solicitor's Office or the CLR assigned to the case. MSHA personnel should not divulge communications between SOL attorneys or the CLR assigned to a case to opposing parties or third parties. Also, MSHA personnel shall not provide any written materials to opposing parties or third parties without the knowledge and permission of SOL or the CLR assigned to the case.

During litigation, including deposition and trial, MSHA personnel called as witnesses should:

1. Dress neatly and conduct themselves in a professional manner;
2. Be cooperative, respectful, and attentive to the judge, participating attorneys, and other interested parties;
3. When testifying, truthfully answer questions asked and, if you do not know the answer, acknowledge that you do not know the answer;
4. Answer questions directly without volunteering extraneous information;
5. Be prepared to describe the facts and circumstances that support the finding of a violation for each citation or order;
6. Be able to define each level of negligence (none, low, moderate, high, and reckless disregard) and be prepared to describe the facts and circumstances that support the negligence level assigned for each citation and/or order;
7. With respect to citations/orders that are designated "significant and substantial" (S&S) and/or "unwarrantable," be able to define the elements of each designation

and to describe the facts that support the S&S and/or unwarrantable finding for each citation and/or order; and

8. Promptly correct misstatements in testimony or clarify a point that has clearly been misunderstood.

X. **Appearance as a Witness or Other Participation in Private Litigation.** MSHA follows the guidelines for Department of Labor employee testimony found in [29 CFR § 2.20](#). Specifically, this policy relates to:

1. Subpoenas served on MSHA employees requiring them to either (1) produce documents or other written materials, or (2) appear and testify in administrative or judicial proceedings (including labor arbitrations and actions brought by individuals under Section 105(c)(3) of the Mine Act) to which MSHA is not a party; and
2. Written or oral requests to informally interview MSHA employees or to produce official MSHA documents or other material that may be used in administrative or judicial proceedings (including labor arbitrations and actions brought by individuals under Section 105(c)(3) of the Mine Act) to which MSHA is not a party.

When subpoenas and requests outlined above are received by an MSHA employee, the employee's supervisor shall be informed immediately. Field supervisors shall promptly refer the matter to the appropriate Regional Solicitor's office or the MSH Division, Office of the Solicitor. No further action shall be taken until authorized by the Office of the Solicitor. In particular, the substance of the case should not be discussed with the party's representative who issued the subpoena or made the informal request until the MSHA employee receives permission to do so. There should be no discussions with any outside parties about the substance of the requests. A copy of the subpoena or request, along with all available pertinent information, shall be forwarded to the appropriate Regional Solicitor's office or the MSH Division, Office of the Solicitor immediately upon receipt.

Note that requests for MSHA documents should be handled under the normal FOIA processing procedures, regardless of the identity of the requester or the purposes for which the documents may be used.

These procedures are not applicable when the matter is initiated by MSHA or at the request of the U.S. Attorney's office in an MSHA-related case. In these instances, the provisions of Section W above apply.

Y. **Mine Information Form (MIF) MSHA Form 2000-209.** The Mine Information Form,

[MSHA Form 2000-209](#) and [2000-209 Instruction Sheet](#), must be used whenever a change or update in the mine status occurs. (Refer to the [Union Abbreviation Codes](#) for further guidance if filling out line 26.) The form is completed when a mine opens or closes, or whenever it is necessary to enter or delete a mine from the system; to change the status of a mine; or to provide or change descriptive information about a mine.

All other items on this form shall be reviewed for completeness and accuracy during each E01 inspection of the mine. However, it is not necessary to fill out the form completely during these reviews. Any time the information is being updated, it is necessary to complete the first four items plus the information that is being changed.

Mine operators are required by regulation to notify MSHA of certain changes to the operational status of each mine. However, **it is the responsibility of MSHA personnel to determine the correct operational and auxiliary status of each mine and ensure that this status is updated. The mine status should be changed as often as necessary, either on notification from mine operators or from personal observation.** If the operational and/or auxiliary status of a mine clearly differs from the status provided by the mine operator, MSHA personnel shall determine the correct status and update MSHA Form 2000-209 to reflect the actual mine status. At a minimum, both the operational status and the auxiliary status of each mine must be reviewed and, if necessary, changed by updating MSHA Form 2000-209 at the start of every inspection event (for mines with multipliable air samples to be conducted to calculate total methane liberation the form should be completed as soon as the analyses are received to determine such liberation). **Total mine employees on line 15 and methane liberation on line 22a often change each quarter and an updated MIF needs to reflect any changes. A copy of the completed Form 2000-209 should be immediately submitted to the immediate supervisor for review so the information can be entered in the MSIS system by the appropriate Mine Safety and Health Assistant. A copy shall be maintained with the inspection report. The information from Form 2000-209 should be entered in the MSIS system within 3 working days after it has been received by the Mine Safety and Health Assistant.**

- Z. General Mine Status Information (MMU/DA/DWP Data).** The status codes on [MSHA Form 2000-142](#) are changed only when there are changes in the status of the complete mine. If there is a change in the status of a portion of a mine (MMU, DWP, DA) that does not apply to the complete mine, that change should be reported on the MMU/DA/DWP Data Form. The sampling requirements for the operator are based on the status of the individual sampling entities and not the mine itself. The general definition of a producing underground mine, as given in §§ 70.220 and 71.220, is one

that has at least one producing MMU. Quality control reports will be generated to show those mines in AA and AB status that do not meet this requirement.

AA. Citation Disposition. Inspectors should track violation numbers issued to them from the MSIS terminal operator or person responsible for forms control on the Citation Disposition Form used to track the use of violation numbers. On receipt of a bank of violation numbers, the numbers should be documented on the Mine Citation/Order Form Receipt and Disposition Record (MSHA Form 7000-3b located in IPAL), Part I completed, and a signed copy should be given to the Mine Safety and Health Assistant or person responsible for forms control. On use of the bank of violations numbers, Part II of the 7000-3b form shall be completed, and a signed copy should be given to the Mine Safety and Health Assistant or person responsible for forms control.

Part I – The inspector will complete this part at the time he/she receives the forms listed in Part II. The original signed copies of all voided citations should be attached to 7000-3b when filed and will be retained by the person responsible for forms control.

Part II – As the inspector uses the Mine Citation/Order forms, he/she will indicate the appropriate disposition of each form opposite the control number. When all forms have been used or otherwise accounted for, the inspector should authenticate and date the duplicate copy of the form at the bottom and return it to the person responsible for forms control.

(Refer to the [IPAL User's Manual](#) for further instructions guidance.)

Chapter 5 - SAMPLING PROCEDURES

- A. Air Samples.** The location of samples collected shall be no less than 12 inches from the roof, face, floor and ribs. Special collection media may be required to sample for the presence of dusts, fumes, mists, and vapors. The Pittsburgh Safety and Health Technology Center (PSHTC) should be contacted for guidance on special collection media. (Refer to the [IPAL User's Manual](#) for instructions on filling out MSHA Form 2000-43, Mine Atmosphere Sample Record.)

Air samples sent to the lab are routinely analyzed for five gases: carbon dioxide (CO₂), oxygen (O₂), methane (CH₄), ethane (C₂H₆), and nitrogen (N₂) (note: the results of nitrogen are not reported on the analysis of air sample report). The 10-milliliter (ml) air sample bottles or 'vac-u-tainers®' shall be used to collect this type of sample. Additionally, when collecting air samples in vac-u-tainers®, a plunger (needle) shall be used to prevent contamination. When transferring air samples from gas sampling bags to air sample bottles, a double-sided plunger (needle) shall be used to prevent contamination. Air samples sent to the lab for fire gas analysis/calculations are routinely acetylene (C₂H₂), argon (Ar), carbon dioxide (CO₂), carbon monoxide (CO), ethane (C₂H₆), ethylene (C₂H₄), hydrogen (H₂), methane (CH₄), nitrogen (N₂), and oxygen (O₂). For these gases and particularly for carbon monoxide (CO) and hydrogen (H₂) analysis, 50-ml air sample bottles or bag containers shall be used. When collected, bag samples will be labeled with the date, time, person collecting the sample and the mine location. The bag should be filled two times and emptied after each filling by rolling the bag to expel any air. This process ensures that the gas sample bag has been purged of any contaminate atmosphere. The gas sample bag should then be filled to approximately $\frac{3}{4}$ full or $\frac{1}{2}$ full if the sample is to be shipped by air. If analysis for carbon monoxide (CO), hydrogen (H₂), or other constituents is needed, indicate the chemical by symbol in the remarks section of MSHA Form 2000-43. Do not use ordinary 10-ml or 50-ml bottles to sample for sulfur dioxide (SO₂), hydrogen sulfide (H₂S), oxides of nitrogen, or aldehydes; special testing tubes or vessels are needed. Contact Tech Support for appropriate sample media and techniques.

Air samples shall be collected to substantiate violations citing excessive methane (CH₄), carbon monoxide (CO), carbon dioxide (CO₂), and low oxygen (O₂). When special samples are collected in connection with a problem arising at a mine or to substantiate a violation (e.g., less than 19.5 volume per centum of oxygen (O₂), more than 0.5 volume per centum of carbon dioxide (CO₂), harmful quantities of other noxious or poisonous gases), inform laboratory personnel of the problem involved. Mark the Mine Atmosphere Sample Record for special samples with a conspicuous

red "S" on the front of the MSHA Form 2000-43, IPAL printout in the upper left corner and on the outside shipment holder/ mailer. Such samples are given preference over other samples and the analytical results will be promptly reported to the appropriate office.

Procedures for Processing Air Samples taken to substantiate violations:

- a. Describe in the citation or order the location where the air samples were taken to substantiate the violation.
- b. Make a notation on the Mine Atmosphere Sample Record, in the "Remarks" section, stating the number of the citation or order, the initials of the inspector, and the date and time of issuance.

Determine the number of samples necessary to calculate total methane liberation (TL) for a mine - All total methane liberation bottle samples should be collected and submitted for analysis the first month, or at the beginning of a newly opened event of the inspection quarter at mines that are on mandated 103(i) spot inspections. If possible, all air samples collected to satisfy the mine TL calculations should be collected on the E01 event; this helps the laboratory with the data retrieval and tracking process. If duplicate samples are collected at any location for any reason during a Regular Safety and Health Inspection, both samples shall be sent to the lab immediately but only one sample should be marked for use in the calculation of total methane liberation for the mine if taken in a TL sample (do not hold duplicate samples). To the extent possible, TL samples should be collected during normal production times so an accurate TL calculation can be conducted. If major air changes are planned in the early part of the inspection that may seriously affect the TL calculation the inspector may wait until those changes are made as long as the TL samples can be collected in a timely fashion.

Where possible, mail the maximum number of samples that a holder/ mailer will accommodate at one time. Send all air samples to the Gas Laboratory Dust Analysis Section within 3 working days (postmarked) of collection. Samples collected from more than one mine may be mailed in the same holder/ mailer. A copy of the completed MSHA Form 2000-43 shall be included in the shipment holder/ mailer, a copy submitted to the Mine Safety and Health Assistant, and a copy retained by the inspector until the analysis report is received. Mail all air samples (in accordance with postal regulations) to MSHA's Gas Laboratory Dust Analysis Section at 100 Bluestone Road, Mount Hope, WV 25880-1000. The results of all air samples sent to the MSHA laboratory for analysis will be emailed to the appropriate field and district office supervisor and assistant. The results should be included with the inspection

report. If the analysis of an air sample discloses a violation not determined with testing instruments during the inspection, the inspector shall issue the appropriate enforcement action.

B. Air Measurements.

Anemometer - Use a properly calibrated anemometer to measure the velocity when calculating the volume of air for compliance with the Act and for calculating the liberation of methane in, but not limited to, a return aircourse. When determining air velocities, take a traverse reading of the cross section that is measured. Use correction factors for the individual anemometers to determine the actual air velocity. When measuring air velocities less than 100 feet-per-minute, the use of chemical smoke may be necessary. However, if the instrument is calibrated for a lower velocity, it is acceptable.

Pitot Tube - The pitot tube is a primary standard instrument for determining velocities of 750 to 10,000 fpm. Velocities in excess of 2,000 fpm may crack the bearings of ordinary vane anemometers and thus prohibit their use in high velocities. High airflow velocity measurements are often required in auxiliary fan tubing or main fan ducts. For such measurements the pitot tube is often the most practical instrument. Commercial-type pitot tubes generally are accurate to within 1.0 percent and specially made types can be accurate to within .01 percent.

Use the pitot tube in conjunction with a differential pressure gauge, such as a manometer or water gauge, to determine the velocity pressure of the airflow. The pressure gauge most commonly used by MSHA is the "Magnehelic", which provides a reading in inches of water (in. wg.). Using the inches of water reading, determine the velocity and air quantity by calculation or by using conversion tables. Further information about the techniques for using anemometers/chemical smoke and pitot tubes is available in the 1960 Bureau of Mines [Bulletin 589](#), "Introduction to Mine Ventilation Principles and Practices."

To convert inches of water to velocity, use the following formula:

$$V = 4005 \sqrt{VP}$$

Where V = velocity in feet-per-minute (fpm)

VP = velocity pressure in inches of water (in wg.)

NOTE: To correct centerline measurements, multiply velocity (V) by a method factor of 0.9. The true velocity is then multiplied by area (A) to obtain air quantity (Q).

Smoke Clouds - Do not use anemometers to measure velocity if the indicated velocity falls below the minimum shown on the anemometer's correction chart. Timed smoke clouds are commonly used to determine air velocities that are too low to be measured with anemometers. The proper procedures for making timed smoke cloud measurements follow.

Location and Calculation of the Measurement - Select a smooth, straight, unobstructed section of the airway so that the air current will not be disturbed. (Refer to Figure 5-1.)

Measure distance (d) from the selected beginning point to the end point. This measured distance will be determined by the degree to which the smoke cloud remains intact, how well it can be seen, and the airflow rate over the measured area. Greater distances increase accuracy if the smoke cloud can be seen clearly. Ten (10) feet is usually adequate. At low flow rates, the distance may be reduced to 5 feet.

Calculate the airway area. When calculating air quantity for shorter times and distances, the airway area is usually measured at two points – one near the release point and one near the timing point. Three area measurements are recommended for distances of 10 ft. or more. Use the average value of the measured areas to compute the air quantity. More than three area measurements may be used to obtain a more accurate measurement when required or when the cross-sectional area is very irregular.

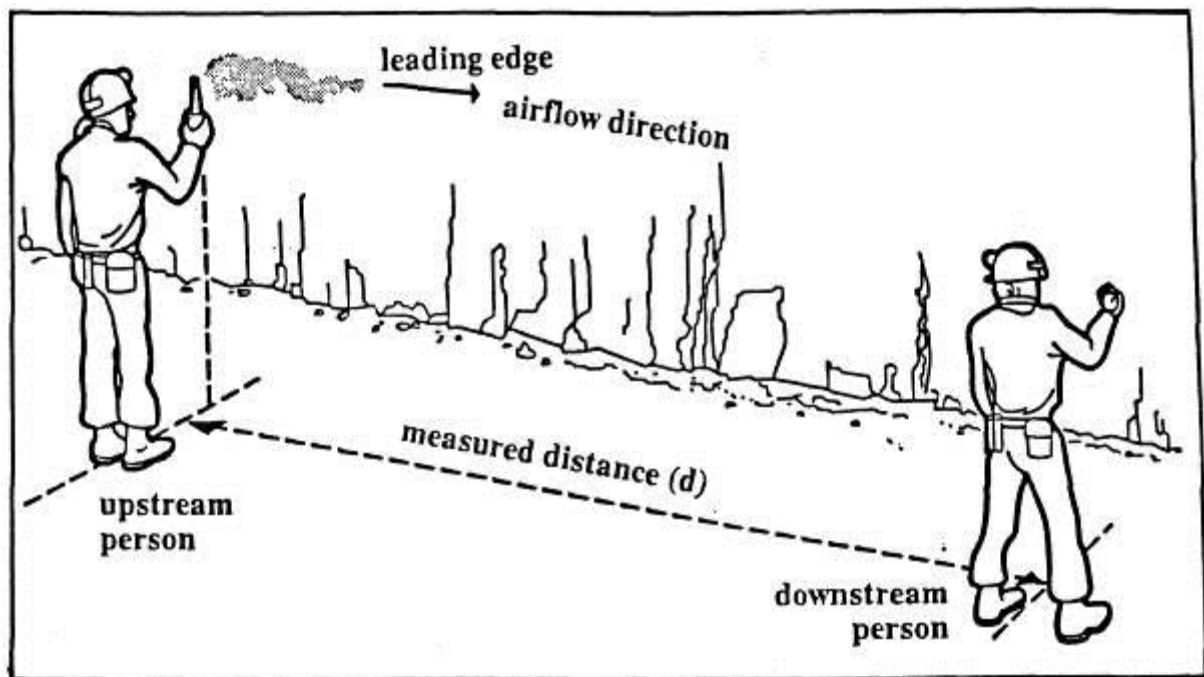


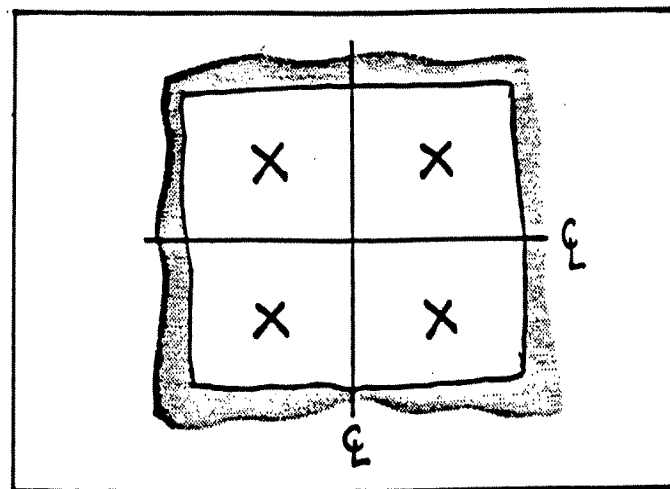
Figure 5-1: Taking Timed Smoke Cloud Readings

Taking Readings - For best results, two people should work together (one at each end of the measured distance).

- a. The upstream person breaks off both ends of the chemical smoke tube and inserts one end into the rubber tubing of the aspirator bulb. Wear gloves when breaking off the tube ends and using smoke tubes to prevent serious cuts. Also wear eye protection when breaking off the ends of the smoke tube. Provisions are usually provided in the box or container to break tube ends cleanly. Do not dispose of used tubes in travelways.
- b. The upstream person holds the aspirator bulb and smoke tube away from his/her body. Squeeze the aspirator bulb to force air through the glass tube which contains the smoke-generating chemical (only a small puff of smoke is necessary).
- c. Release the smoke perpendicular to the airstream (facing the mine rib). When the upstream person signals release of the smoke cloud, the downstream person

- starts timing, with a stopwatch, how long the smoke cloud takes to travel over the specified distance.
- d. If a stopwatch is not available, use a watch with a sweep second hand. In this case, the downstream person should signal for release of the smoke cloud when the second hand reaches a reference point.
 - e. Record the time interval from the release of the smoke until the leading edge (front) of the smoke cloud reaches the downstream person. The leading edge is used because the first part of the smoke should just be leaving the tube and starting to travel downstream in the air current when the timing begins.
 - f. Divide the airway cross section into four quadrants and time smoke clouds in each of the four quadrants. (Refer to Figure 5-2.) Make at least one measurement at the center point of each quadrant. Make several measurements in each quadrant for greater accuracy.

Figure 5-2: Section Showing Quadrants (below)



Calculating Air Quantities from Timed Smoke Cloud Measurements. Use the four steps covered in this section to calculate air quantity from timed smoke cloud measurements.

STEP 1 - AVERAGING READINGS

Assume that the following data were recorded during smoke cloud measurements:

Smoke Travel Time In Seconds

Quadrant	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Average
Upper Right	5	6	6	5	6	5.6
Lower Right	7	7	8	14*	8	7.5
Upper Left	7	7	6	7	6	6.6
Lower Left	6	6	7	8	6	6.6

* Throw this value out.

Times that are considerably longer or shorter than the others in a quadrant should not be used in figuring the average smoke cloud travel time. They probably result from a momentary fluctuation in velocity (e.g., someone opening a door, etc.). Such irregular times should be discarded (thrown out).

When calculating average times for each quadrant, do not use a zero for values that are “thrown out.” Base the average only on the number of trials “kept in.”

Example:

$$\text{Average time (t}_{\text{avg}}\text{) for the lower right quadrant} = \frac{7 + 7 + 8 + 8}{4} = 7.5 \text{ seconds}$$

$$t_{\text{avg}} (\text{upper right}) = \frac{5 + 6 + 6 + 5 + 6}{5}$$

$$t_{\text{avg}} (\text{upper right}) = 5.6 \text{ seconds}$$

After calculating the average travel time (t_{avg}) in each quadrant, the final average for the entire airway is determined. Using the data from the table above, the final average travel time would be:

$$t_{avg} \text{ (final)} = \frac{\text{total of average quadrant times}}{\text{number of quadrants}}$$

$$t_{avg} \text{ (final)} = \frac{5.6 + 7.5 + 6.6 + 6.6}{4}$$

$$t_{avg} \text{ (final)} = 6.6 \text{ seconds}$$

STEP 2: CALCULATING AIR VELOCITY

Now use the average smoke cloud travel time and the measured distance to compute the air velocity by using the formula:

$$V = \frac{d}{t} \times 60 \frac{\text{sec}}{\text{min}}$$

Where V = calculated air velocity in feet per minute (fpm)
 d = measured distance in feet (ft)
 t = final average travel time over d in seconds (sec)

Example:

If the measured distance used to determine velocity is 10 feet, then

$$V = \frac{10 \text{ ft.}}{6.6 \text{ sec}} \times 60 \frac{\text{sec}}{\text{min}}$$

$$V = 90.0 \text{ fpm}$$

The average velocity obtained by the timed smoke cloud technique is about 10 percent higher than the true velocity when readings are taken at the centerline of four quadrants. Therefore, a correction called "method factor" should be applied. The method factor for smoke cloud measurements in four quadrants is equal to 0.9. This factor, when multiplied by the calculated velocity, yields the true velocity.

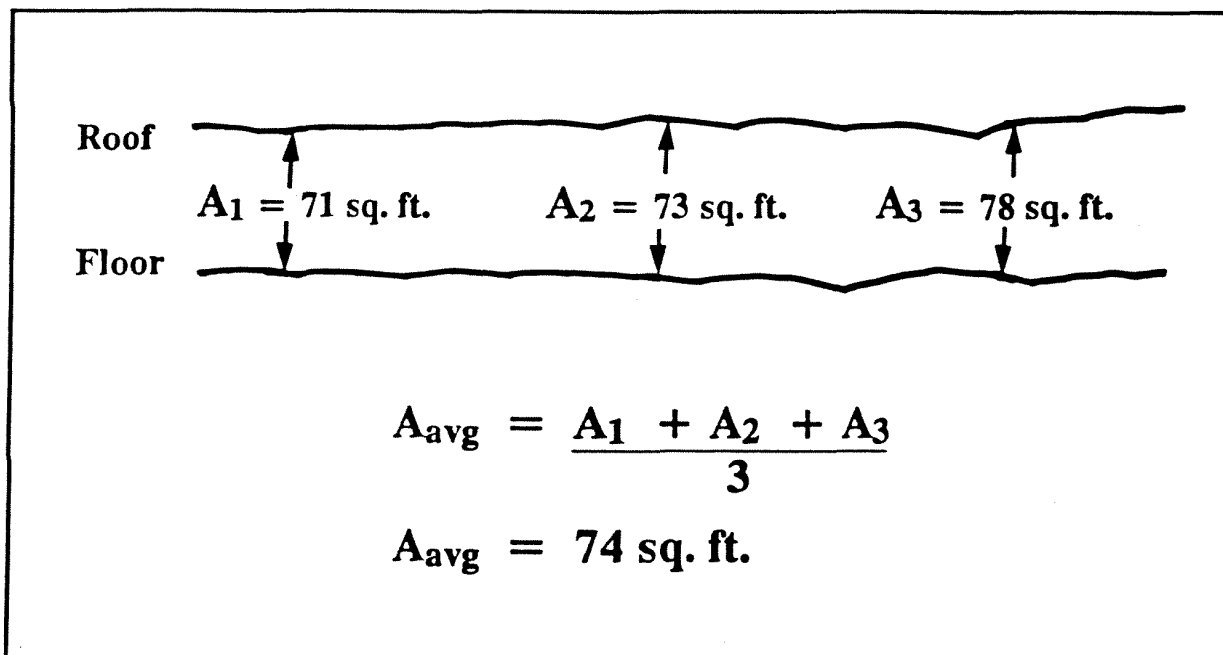
$$\text{True Velocity} = \text{Calculated Velocity} \times \text{Method Factor}$$

$$\text{True Velocity} = 90.0 \text{ fpm} \times 0.9 = 81.0 \text{ fpm}$$

STEP 3: CALCULATING AVERAGE AREA

The next step in determining air quantity is to calculate the average (A_{vg}) of the airway over the measured distance.

Example:



STEP 4: CALCULATING AIR QUANTITY

Air quantity can now be determined by using the formula $Q = VA$

Where: Q = air quantity in cfm
 V = air velocity in fpm
 A = airway cross-sectional area in square feet.
 (height x width (in feet) = area in square feet.

Therefore: $V = 81.0$ fpm
 $A = 74$ sq. ft.
 $Q = 6053$ cfm

Using Air Velocity Table - The Air Velocity Table (Figure 5-3, [MSHA Form 7000-10F](#)) can be used as an alternative for calculating air velocity. When the final average time has been calculated (6.6 seconds in Step 1 above), locate the air velocity on the table.

Example:

Find 6.6 seconds in the "TIME SEC" column. For a measured distance of 10 ft., the air velocity equals 82 fpm.

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MSHA Form 7000-10F, June 93 (revised)

SMOKE TUBE DATA CONVERTED TO VELOCITY BASED ON							
$V = \frac{\text{distance (feet)}}{\text{time (seconds)}} \times 60 \times 0.9 \text{ FROM BULLETIN 589}$							
TIME SEC	VELOCITY			TIME SEC	VELOCITY		
	10 ft.	15 ft.	20 ft.		10 ft.	15 ft.	20 ft.
5.0	108	162	216	15.0	36	54	72
5.2	104	156	208	15.2	36	53	71
5.4	100	150	200	15.4	35	53	70
5.6	96	145	193	15.6	35	52	69
5.8	93	140	186	15.8	34	51	68
6.0	90	135	180	16.0	34	51	68
6.2	87	131	174	16.2	33	50	67
6.4	84	127	169	16.4	33	49	66
6.6	82	123	164	16.6	33	49	65
6.8	79	119	159	16.8	32	48	64
7.0	77	115	154	17.0	32	48	64
7.2	75	113	150	17.2	31	47	63
7.4	73	109	146	17.4	31	47	62
7.6	71	107	142	17.6	31	46	61
7.8	69	104	138	17.8	30	46	61
8.0	68	101	135	18.0	30	45	60
8.2	66	99	132	18.2	30	45	59
8.4	64	96	129	18.4	29	44	59
8.6	63	94	126	18.6	29	44	58
8.8	61	92	123	18.8	29	43	57
9.0	60	90	120	19.0	28	43	57
9.2	59	88	117	19.2	28	42	56
9.4	57	86	115	19.4	28	42	56
9.6	56	84	113	19.6	28	41	55
9.8	55	83	110	19.8	27	41	55
10.0	54	81	108	20.0	27	41	54
10.2	53	79	106	20.2	27	40	53
10.4	52	78	104	20.4	27	40	53
10.6	51	76	102	20.6	26	39	52
10.8	50	75	100	20.8	26	39	52
11.0	49	74	98	21.0	26	39	51
11.2	48	72	96	21.2	25	38	51
11.4	47	71	95	21.4	25	38	50
11.6	47	70	93	21.6	25	38	50
11.8	46	69	92	21.8	25	37	50
12.0	45	68	90	22.0	25	37	49
12.2	44	66	89	22.2	24	36	49
12.4	44	65	87	22.4	24	36	48
12.6	43	64	86	22.6	24	36	48
12.8	42	63	84	22.8	24	36	47
13.0	42	62	83	23.0	23	35	47
13.2	41	61	82	23.2	23	35	47
13.4	40	60	81	23.4	23	35	46
13.6	40	60	79	23.6	23	34	46
13.8	39	59	78	23.8	23	34	45
14.0	39	58	77	24.0	23	34	45
14.2	38	57	76	24.2	22	33	45
14.4	38	56	75	24.4	22	33	44
14.6	37	55	74	24.6	22	33	44
14.8	36	55	73	24.8	22	33	44

Figure 5-3: Velocity Table for Smoke Cloud Measurements

C. Rock Dust Samples.

Mine Dust Sampling

Mine operators are responsible for maintaining the minimum incombustible content specified in § 75.403 (Maintenance of incombustible content of rock dust) for mine dust (mixtures of coal dust, float coal dust and rock dust). This incombustible content must be maintained throughout all accessible areas of the coal mine except for within 40 feet of working faces or where the dust is too wet or too high in incombustible content to propagate an explosion as specified in § 75.402. Completed crosscuts that are less than 40 feet from a working face must also be rock dusted. Accessible areas encompass travelable portions of the coal mine including bleeders and worked-out areas where pillars have not been removed. Areas that are unsafe to enter include areas with unsupported roof, subsiding areas, pillared areas and any other area that poses an identifiable risk to the examiner that cannot be reasonably mitigated (such as by deenergizing and locking out a belt drive). Accessible areas also include areas that are merely hard to access such as the area between a conveyor belt and an adjacent rib.

The incombustible content of rock dust will be evaluated during regular inspections and spot inspections. This evaluation will include the collection and analysis of mine dust samples. Samples will be sent to the National Air and Dust Laboratory (NADL).

MSHA's collection of mine dust samples and analysis of incombustible content is only for oversight and enforcement of the mine operators compliance with § 75.403. To evaluate compliance, mine dust samples should be collected from various locations within the coal mine. Sample locations should be chosen by the mine inspector based on visual identification of potentially non-compliant conditions and other factors such as the proximity to float coal dust sources. Band samples, which are comprised of mine dust from the roof, ribs, and floor, may be collected from crosscuts or entries. All significant accessible air courses in the mine should be periodically sampled. *A significant air course is of sufficient length to justify separate sampling. For example: near a return shaft bottom, several aircourses typically merge within a relatively short distance. Although each separate split that combines with another split starts a new air course, for mine dust sampling purposes, these short sections that merge should be treated as extension of the main aircourses.*

Likewise, a short split of air used to ventilate seals and is then directed to the return is not a significant air course. When evaluating the significance of an air course, the inspector should weigh the area involved and the potential for coal dust

accumulation. Sampling near advancing mining sections, retreat mining sections, belt transfers, and any other locations where coal dust is generated, or accumulates should be emphasized. Inspectors should collect enough samples to define problem areas. When collecting rock dust samples, inspectors should document in their notes the facts needed to evaluate negligence and gravity of potential § 75.403 violations. Visual confirmation that rock dust has been applied to the non-compliant area(s) may be used to terminate a violation. However, if fresh rock dust is not evident, inspectors should resample non-compliant locations before terminating any enforcement actions. A green reading by MSHAs coal dust explosibility meter (CDEM) may be used for termination of a citation or order.

Guidelines for sample areas, the minimum number of samples and the frequency of sampling are:

Quarterly Sampling

Working Sections

Continuous Miner and Conventional Working Sections

Mining coal generates an average of 0.1 pounds of float coal dust per ton of coal mined according to research published by the U.S. Bureau of Mines. Most of this float coal dust is deposited at or near the working sections. The likelihood of a methane ignition is greatest at the working faces due to the confluence of methane liberation during mining, frictional sparking from the mining process and potential permissibility problems. The effective control of coal dust on the working section is critical to prevent small methane ignitions at or near the working face from transitioning to a large coal dust explosion.

Inspectors should collect at least four band samples per air course between 40 feet outby the working faces and 1,000 feet outby the working faces. Samples may be collected from completed (and roof-bolted) crosscuts within 40 feet of working faces. If the section has advanced less than 1,000 feet from the mouth of the section (where the section has broken off from a main or submain), samples may be collected from the portion of the main or submain aircourses within 1,000 feet of the working faces. At least one sample per air course should be collected inby the section loading point including, air courses separated by temporary ventilation controls similar to the sampling process of those separated by permanent ventilation controls. The inspector has the authority to close the necessary entries to mobile haulage equipment in order to collect the rock dust samples on a working section.

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Within the panel, advancing or retreating section, and gate road development, from 1,000 feet outby the working faces to the mouth of the section, inspectors should collect at least two band samples per air course.

Longwalls

Inspectors should collect at least two band samples per air course within 1,000 feet of the longwall face. Inspectors should collect at least four band samples from the immediate longwall return within 1,000 feet of the longwall face. From 1,000 feet of the longwall face to the mouth of the panel, inspectors should collect at least two band samples per air course, on both headgate and tailgate sides.

Bleeders

Inspectors should collect at least one band sample per significant accessible bleeder aircourse that is used as a return for a working section.

Outby (not including the area from the faces to the mouth of the section)

Returns

Inspectors should collect at least one band sample per significant return aircourse.

Haulageways (main track or rubber tired haulageways)

Inspectors should collect at least one band sample per haulageway aircourse.

Conveyor Belts/Conveyor Slopes

Inspectors should collect at least one band sample per belt flight.

Return Regulators from Belt Entries

Inspectors should collect at least one band sample downwind of each significant regulator.

Stageloader/Crusher, Glory Hole, Production Shafts, Inter Seam Shaft, Bunker, or Coal Storage Facility

Inspectors should collect at least one band sample per unit.

Annual Sampling

Inspectors should collect at least one band sample from each significant accessible air course and bleeder that is not sampled quarterly.

These sampling parameters are basic recommendations and should be re-evaluated each quarter by the field office supervisor and coal mine inspector(s) considering mine-specific conditions, the sources of float coal dust, the use of trickle dusters

and high pressure dusters, and the mine's compliance history. Potentially problematic areas of the mine identified in the quarterly review should be listed in the E01 inspection report and samples should be collected based on the re-evaluation. The Subpart E violation history for the mine, float coal dust sources, the cleanup program and other pertinent information should be considered in this review. This review should include an examination of the effectiveness of the mine operator's cleanup program, identification of weaknesses in this program and formulation of a strategy to eliminate identified hazards and improve compliance. This quarterly review and any changes to sampling strategy, deficiencies in the cleanup program or Subpart E compliance issues should be documented in the E01 inspection report. The District Manager and staff should periodically review mines with persistent or unusual combustible dust issues.

At each sample location, collect mine dust from a band approximately six inches wide around the perimeter of the mine entry or crosscut. The results of large-scale dust explosion testing by NIOSH indicate that only the uppermost $\frac{1}{8}$ th to $\frac{1}{4}$ -inch layer of mine dust contributes to an explosion. To get a representative sample of this potentially explosive mine dust, inspectors will collect the uppermost $\frac{1}{8}$ th inch (approximate depth) of mine dust from the surface of the band. By targeting a $\frac{1}{8}$ th inch depth, the $\frac{1}{4}$ inch limit should not be exceeded. The limited depth sample will be collected by gently brushing the surface of the floor mine dust into the pan. See Figure 5-4 below.

Floor Mine Dust Sample Collection

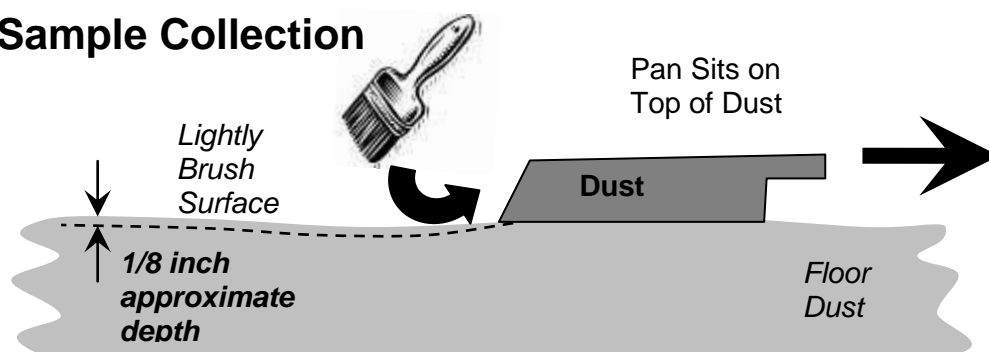


Figure 5-4

A dust explosion can propagate in an entry with a layer of pure rock dust on the floor if non-compliant mine dust is present on the roof, ribs, timbers, and

suspended items.

Where float coal dust has accumulated or near sources of float coal dust, inspectors will collect two samples from each band location, one sample from the mine floor and one sample with dust from both ribs and the mine roof.

Split Samples

Based on inspectors evaluation band samples may be split at any location where coal dust is visible on the roof, ribs, structures or suspended items. Issue a citation if either of these samples from a band are non-compliant with the incombustible content requirements in § 75.403. In areas where the roof/ribs/and mine floor are uniformly rock dusted only a single band sample is needed.

Collect the mine dust sample from the dust pan and/or scoop. The mine dust sample should be shaken through the 10 mesh sieve. Any oversize material should be discarded. If the amount of the -10 mesh sample is greater than one-half of a sample bag, reduce the sample volume by the coning and quartering method. To cone and quarter a sample, place all of the -10 mesh dust on a piece of brattice cloth and mix thoroughly by successively lifting opposite corners of the cloth. After thoroughly mixing the dust sample, gather the dust in a cone-shaped pile in the center of the brattice cloth. Using the dust pan, divide the cone into 4 quarters. Remove the dust from two diagonally opposite quarters. If the quantity of dust that remains on the brattice cloth is the volume required to fill a sample bag about one-half full, carefully transfer this dust to a plastic sample bag. If too much dust still remains further reduce the volume by mixing, coning and quartering until an acceptable sample volume is obtained. The minimum quantity of mine dust that can be analyzed by the NADL is approximately 3 ounces or a depth of 2 ½ inches. If the mine dust collected from the roof, ribs and suspended items is insufficient in quantity, a second 6-inch wide sample should be taken adjacent to the first strip. If the band sample is split between the floor and the roof/ribs, only the roof/ribs and suspended items portion of the band should be doubled.

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A specialized tool may be required to collect dust samples from the roof, ribs and suspended items in high areas. An example of such a tool is shown in Figure 5-5.

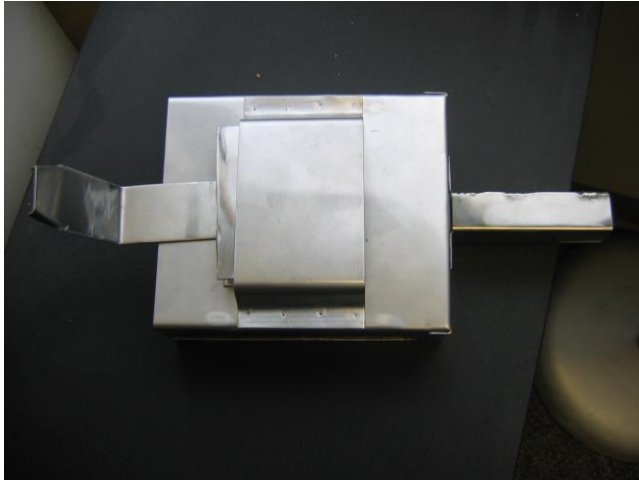


Figure 5-5

Wet locations will be bypassed with samples collected at bands from an adjacent dry area. In large areas with wet conditions, a dust sample from the roof, ribs and suspended items will be collected if possible. When wet areas dry out, band samples may be taken as a part of the periodic outby sampling protocol.

Tests for methane must be made at each rock dust sample location with a properly calibrated hand-held methane detector. The methane percentage measured will be used to determine compliance with § 75.403 (concerning additional incombustible content when methane is present in the ventilating current).

MSHA's policy for the issuance of citations and orders where there are multiple violations of the same standard which are observed in the course of an inspection and which are all related to the same piece of equipment or to the same area of the mine, such multiple violations should be treated as one violation, and one citation should be issued. Separate citations shall be issued for: violations of separate standards on one piece of equipment; violations of separate standards in a distinct area of a mine; identical violations on separate pieces of equipment; and, identical violations in distinct areas of a mine ([MSHA Program Policy Manual, Vol. I](#)). Combine non-compliant mine dust samples on a single citation for each separate aircourse, bleeder or worked-out area of the mine. The extent of the non-compliant area sampled should be considered in assessing the gravity and the negligence of the citation. Extensive or persistent § 75.403 violations indicate potential violations

of examination standards that should be probed by the inspector.

Sample bags are long enough to permit tying a knot in the open ends. Securely tie the string of the identifying tag within the formed knot of the sample bag. Each tag is pre-printed with a unique alphanumeric code that will be used to identify the sample. Inspectors may include additional handwritten information on the tag, provided it does not obscure the pre-printed identifier. In order to process the sample, the laboratory needs the pre-printed tag attached firmly to the sample.

It is the responsibility of the NADL supervisor to ensure that rock dust analysis reports and accompanying analysis data are promptly made available for use by the districts. Software tools allow supervisors and others to monitor for prompt issuance of citations/orders for non-compliance and to generate oversight reports.

The responsible supervisor must assure that all rock dust analysis reports returned from the NADL are included within the appropriate inspection report. A citation or order must be promptly issued for non-compliant rock dust samples.

Data Submittal and Mailing of Bagged Samples

Rock dust sampling data must be input into and submitted using the Inspectors Portable Application for Laptops (IPAL). Rock dust samples should be mailed to the NADL in accordance with postal regulations within 3 working days from when the samples were collected. Securely seal the shipping boxes to prevent loss of samples in transit. Include the return address on the shipping label. Place the return address of the office on the outside of the shipment box from which the samples are being mailed. Use a regular corrugated pasteboard carton, but fill voids around the bags with packing to keep the bags from breaking open from rough handling. Do not use crumpled manila envelopes, excelsior, paper towels, shredded paper, packing peanuts or tissues as packing. Dust Sampling Lab Report (MSHA Form 2000-156 – Rock Dust Sample Submission Form) must be prepared and uploaded to the NADL

Server using the IPAL. A copy of MSHA Form 2000-156 must be printed and shipped with the bagged sample(s). Compliance/noncompliance concerning rock dust samples will be determined at the NADL and the results returned electronically.

The NADL supervisor will notify the appropriate District Manager should boxed samples arrive at the lab and no accompanying MSHA Form 2000-156 data is available on the file server. Hard copies of MSHA Form 2000-156 will not be

accepted for submittal of rock dust samples to determine compliance with § 75.403.

When rock dust samples are collected, sufficient information to complete MSHA Form 2000-156 must be included in the inspection notes. For citations issued, sample results should be attached to the citation. A rock dust sample is not required to be submitted and MSHA Form 2000-156 is not required to be filled out if a citation is issued for violation of § 75.400 based on visual observation.

Map

A map of each mine will be maintained at the field office showing ventilation air courses, float coal dust sources, sample locations, sample collection dates, dust violations and other pertinent information. This map will be used in the E01 regular inspection rock dust review and may be used in discussions with the mine operator. The previous E01 rock dust map(s) should be maintained with the affected E01 inspection report.

Review of Compliance History

Each E01 regular inspection, field office supervisors are to review each mine's compliance with Subpart E, *Combustible Materials and Rock Dusting*, including locations sampled, sources of float coal dust, trickle dusters, rock dust application methods and the mine's cleanup program. Sample frequencies and locations are to be adjusted as necessary. Non-producing mines will be sampled up to date. Further sampling will not be necessary until production resumes or mine conditions warrant further sampling. For example, when the entire mine is idle for two consecutive quarters no sampling will be necessary. Deficiencies of the cleanup program are to be noted and targeted enforcement methods are to be used, if necessary, to achieve compliance.

Float Coal Dust

Float coal dust consists of extremely fine coal particles that will pass through a No. 200 sieve (§ 75.400-1(b)). The generation of float coal dust occurs whenever coal is cut or crushed. Float coal dust is generated in underground coal mines by continuous miners, longwall shearers, feeder breakers, stage loaders and the tires or wheels of mine equipment rolling over loose coal. The liberation of float coal dust occurs wherever coal is transferred, dumped or loaded. Float coal dust becomes airborne and may be transported long distances by ventilation air currents.

Float coal dust is one of the greatest potential hazards to underground coal miners today. Most reports of historic coal mine explosions list float coal dust as a contributing factor.

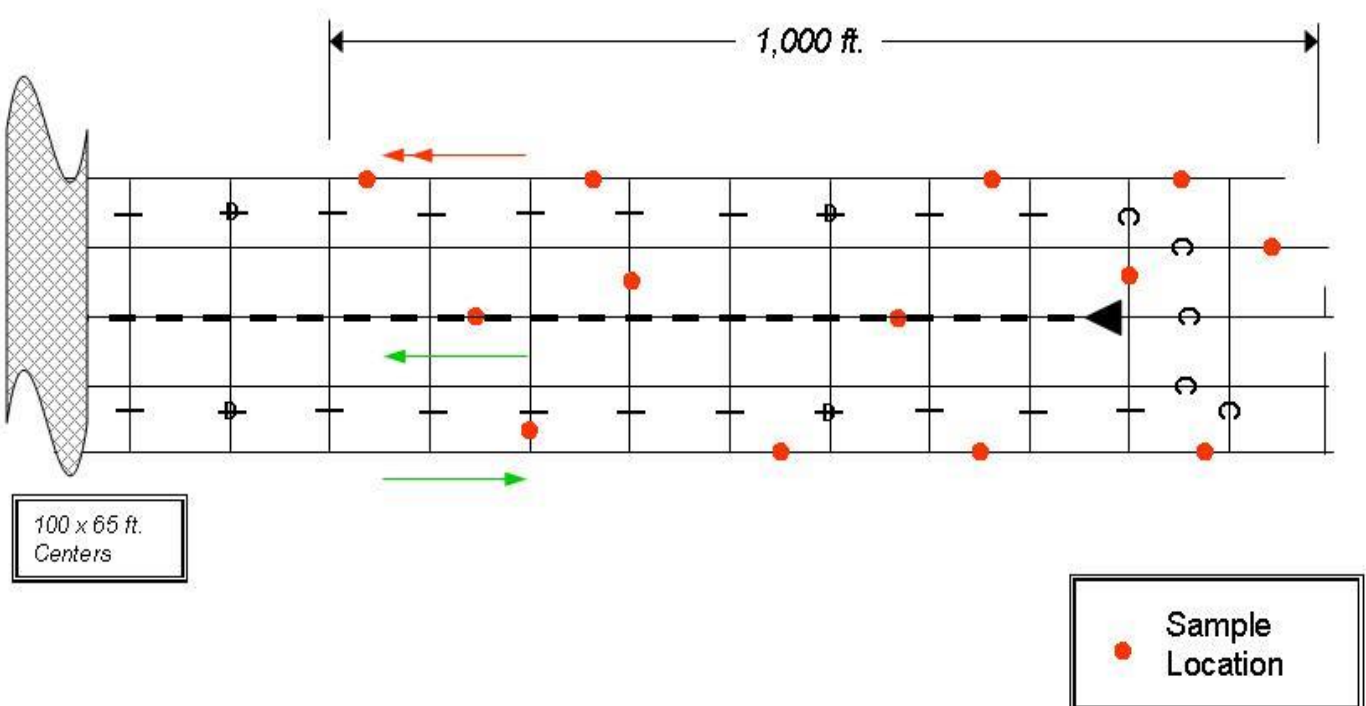
The following are proven techniques to reduce float coal dust accumulations and hazards:

1. Minimize the production of float coal dust by maintaining sharp cutting bits on continuous miners and longwall shearers and by using and maintaining dust suppression sprays and scrubbers whenever coal is mined.
2. Use a hand-held wash down hose or jet-type water sprays on the continuous miner that is directed at the roof and ribs to clean the fine coal dust generated by mining prior to leaving the working face. The fine coal dust washed to the mine floor is easily diluted and rendered harmless with rock dust. The wet roof and ribs helps rock dust adhere to these surfaces. Shields, hoses and other areas where float coal dust accumulates on a longwall should be washed off at least once per shift or more often as necessary.
3. Minimize the liberation of float coal dust at belt transfers, where coal is crushed and where coal is dumped through the use of water sprays, enclosed transfers and dust collection systems. Use belt scrapers and water sprays to prevent float dust liberation from the return side of conveyor belts.
4. Use trickle dusters or high-pressure rock dusters in the returns from working sections, the tailgate return of longwalls, in pillaring areas and down wind of belt transfers to dilute float coal dust. Areas where large quantities of float coal dust is generated or liberated may require that a trickle duster run continuously and other areas may only need trickle dusting a few hours per shift.

Periodically apply rock dust to areas where float coal dust may accumulate.

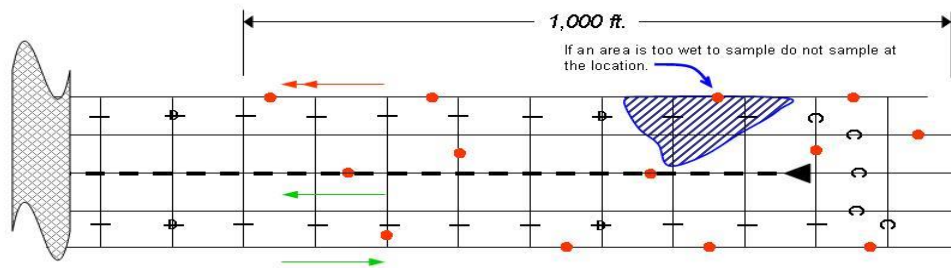
Note: Refer to chapter 3 of this handbook for additional information and required documentation on the evaluation of the mine operator's Cleanup Program.

MINE DUST SAMPLE LOCATIONS Advancing Miner Section

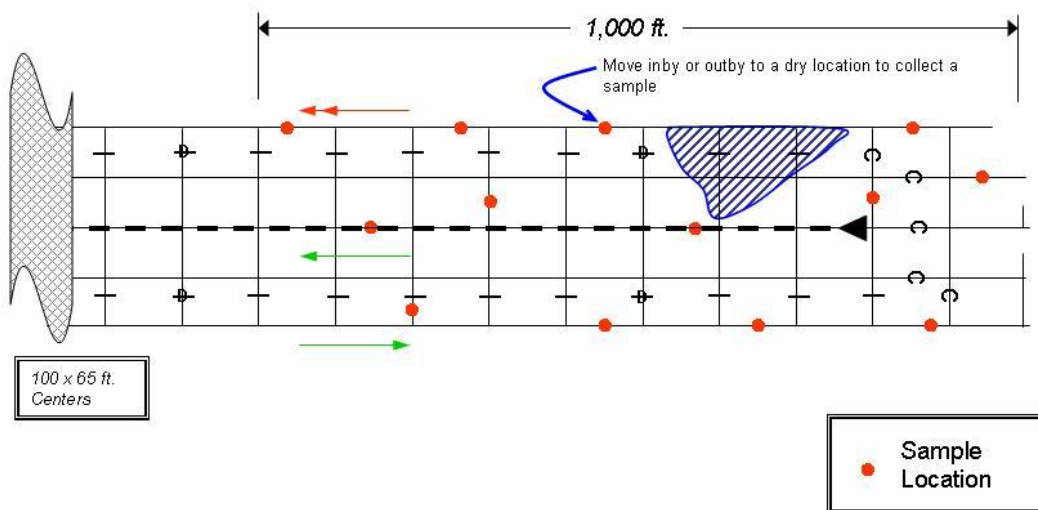


Sample locations are minimums, inspectors may collect additional samples at their discretion.

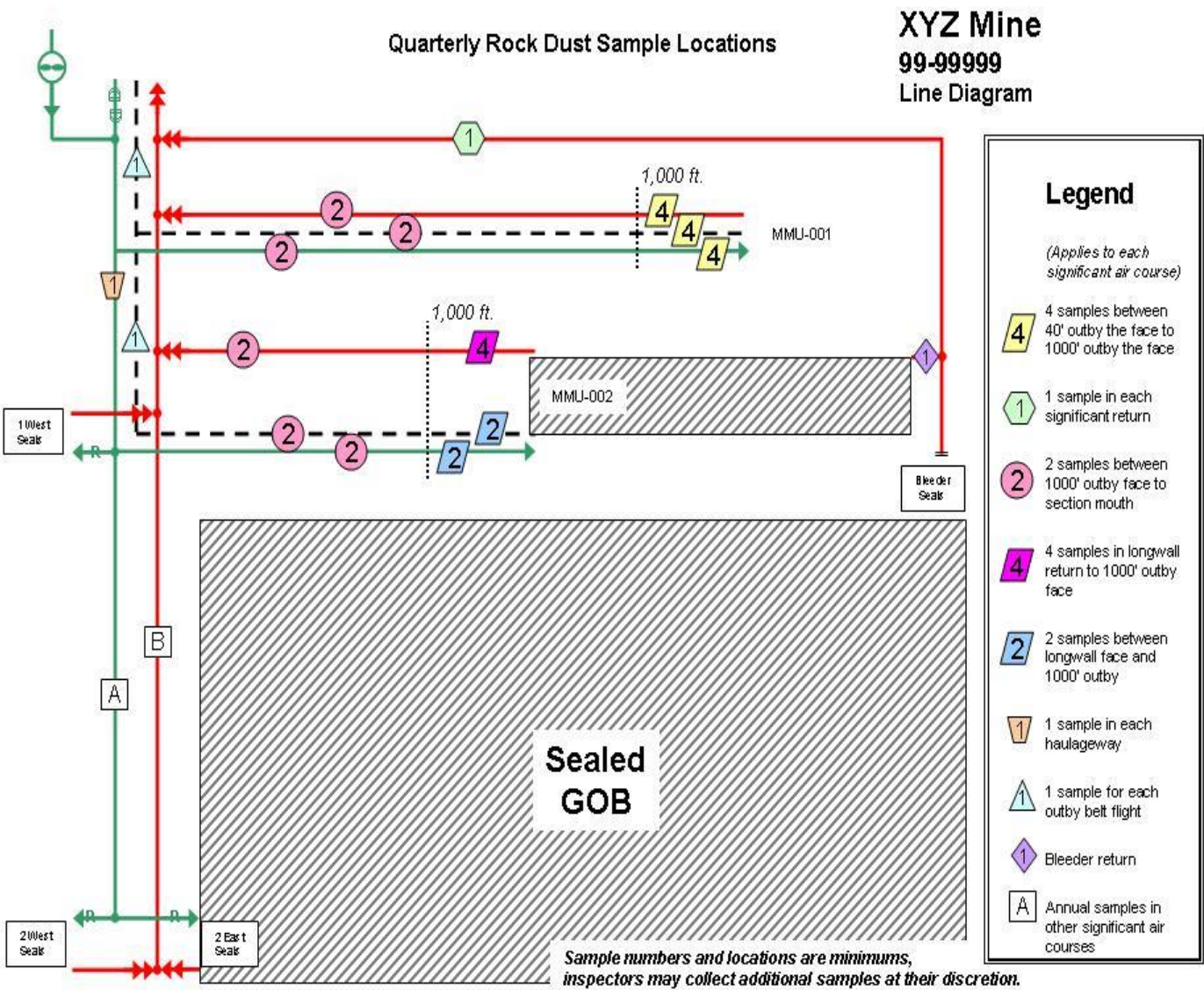
MINE DUST SAMPLE LOCATIONS
Limited Wet Areas (Map 1/2)



MINE DUST SAMPLE LOCATIONS
Limited Wet Areas (Map 2/2)



Sample locations are minimums, inspectors may collect additional samples at their discretion.



Chapter 6 - APPENDICES

A. Other Miscellaneous Forms and Related Information.

Other miscellaneous forms and related information not found in this Handbook are hyperlinked on the next 2 pages of this chapter.

B. Supervisor Certification.

The first-line supervisor responsible for E01 inspections at the mine shall review each Inspection Mine Postings and Records and Inspection Procedure Documentation page contained within the ITS and certify their review by dating and initialing in the bottom margin area of the front page. Additionally, the First-Line Supervisor E01 Certification (included in these appendices) shall be completed by the supervisor. This certification shall be filed and maintained with the inspection report.

C. Inspection Equipment and Supplies.

A list of inspection equipment and supplies has been generated to help indicate what equipment and supplies are needed for inspectors to conduct their duties. All of the equipment and supplies may or may not be applicable to all inspectors and the type of mines they inspect.

1. Inspector's Equipment and Supplies.
2. Field Office Equipment and Supplies.

D. Forms and Information Needed in an E01 Inspection Report.

A list of forms has been generated to help indicate what forms may be needed to complete an E01 inspection report. All of the forms may or may not be applicable to all E01 inspection reports.

E. Inspector Tracking System.

The documentation pages contained in the ITS as illustrated in the appendices of this Handbook may be printed by the inspector and used as inspection notes. These pages apply only to regular (E01) inspections and are not required to be used on other event codes. The pages are designed to provide a complete listing and documentation of the Mine Postings and Records and the Inspection Procedures that may or may not be applicable at a mine. The use of these pages will lessen the chance of inspection or documentation error by an inspector.

A. Other Miscellaneous Forms and Related Information.

MSHA Form 7000 and 2000 series note pages to assist inspectors with their notetaking during inspections and investigations are provided as follows:

[Form 2000-169](#) Coal Mining Occupations

[Form 2000-208](#) (revised 2010)

[Form 2000-222](#) Deluge-Type Water Spray Systems

[Form 2000-225](#) Dry Powder Chemical Systems

[Form 2000-234](#) Water Sprinkler Systems

[Form 7000-9](#) Closure Notice

[Form 7000-10A](#) Guidelines in the Event of a Mine Disaster

[Form 7000-10B](#) Documentation Required in Inspector's Notes

[Form 7000-10C](#) Record and Training List (Partial)

[Form 7000-10D](#) Electrical Breaker Settings

[Form 7000-10E](#) Electrical Magnetic Trip Range

[Form 7000-10F](#) Smoke Tube Data Converted to Velocity

[Form 7000-10G](#) Ventilation Qavg for Tubing Size

[Form 7000-10H](#) , [7000-10HH](#) General Information Cover Sheet

Form [7000-10I](#) ; [7000-10II](#) Daily Cover Sheet

Form [7000-10J](#) ; [7000-10JJ](#) Pre-printed Grid Pages

Form [7000-10K](#) ; [7000-10KK](#) Pre-printed Line Pages

Form [7000-10L](#) ; [7000-10LL](#) Line Diagram

Form [7000-10M](#) ; [7000-10MM](#) Air Reading

Form [7000-10N](#) ; [7000-10NN](#) Respirable Dust

Form [7000-10P](#) ; [7000-10PP](#) Noise

Form [7000-10R](#) Glossary for Electrical Equipment

Form [7000-10S](#) Glossary for Diesel Equipment

Form [7000-10T](#) Roof Bolt Head Mks-ASTM F432-95 (two pages)

Form [7000-10U](#) Seal Recordkeeping Requirements 75.339(a)

Form [7000-10V](#) Static Force Req to Open a Mandoor (two pages)

Form [7000-10W](#) Area of Circular Ducts

Form [7000-59 Pitot Card \(two pages\)](#)

[2000-7 Legal Identity Report; 2000-7 Legal Identity Report Instructions](#)

[2000-222 SCSR Operators' Inventory Form; 2000-222 SCSR Operators' Inventory Form Instructions](#)

[5000-1 Certificate of Electrical Training](#)

[5000-23 Certificate of Training](#)

[5000-13 Instructor's File Update](#)

[5000-41 Certificate of Hoisting Engineer Request](#)

[5000-46 MSHA MIIN](#)

[7000-51 Mine Operator ID Request](#)

[MESA-MSHA Informational Report Index](#)

[Experienced Miners and Supervisors Training: 63 Fed. Reg. 53750 \(Oct. 6, 1998\)](#)

[Education & Training Handbook Procedures](#)

[Miners Rights](#)

[Rules to Live By I](#)

[Rules to Live By II](#)

[Rules to Live By III](#)

[Rules to Live By IV](#)

[18 U.S.C. § 111](#)

[MSHA Form 2000-238 Miners Rep](#)

[Notice on 103\(f\) of the Act; 43 Fed. Reg. 17546 \(April 25, 1978\)](#)

B. First-Line Supervisor E01 Certification.

I certify that to the best of my knowledge and belief this inspection is thorough, based on a review of the information provided for Event No. _____ and through discussions with inspector(s). If it is determined that there are inspection deficiencies, the event will be reopened and corrective actions taken prior to counting this inspection event complete for the official count of completed statutory E01 inspections at the end of the fiscal year.

Supervisor's Signature: _____ Date: _____

Note: This certification should be filed and maintained with the inspection report.

C. Inspection Equipment and Supplies.

1. THE FOLLOWING EQUIPMENT AND SUPPLIES SHOULD BE PROVIDED TO EACH UNDERGROUND INSPECTOR AND EACH SURFACE INSPECTOR AS NEEDED (INCLUDING INSPECTORS-IN-TRAINING).

Credentials and identification check tag
Self-contained self-rescuer (SCSR)
Permissible electric cap lamp
Lamp belt with attached identification check
Light meter (photometer)
Portable water pressure gauge (to measure spray nozzle pressure)
Protective hat
Knee pads
Eye protection
Hearing protection - ear plugs or ear muffs (whichever provides the needed protection)
Gloves
Leg bands
Footwear (safety shoes or boots)
Coveralls
Clothes bag
Respirator with appropriate cartridge (fit test required)
Carrying case for equipment
Copies of the Act, 30 CFR, Inspection Procedures Handbooks, and Program Policy Manual
Citation/order and continuation forms (7000-3 & 7000-3a)
Appropriate notebook (with informational inserts as needed), pencil, and ballpoint pen
Laptop computer/printer
Digital camera/memory card (in unrestricted areas)
Field equipment bag
Permissible multi-gas detector
Dust collecting equipment and sample containers -incombustible (Bituminous Coal and Lignite Mines)
Magnehelic gage(s) and pitot tube
Anemometer, a watch with a second hand or a stop watch, measuring tape, measuring rule, smoke tubes, and aspirator bulb
6-foot wooden rule
Hammer
Air sample bottles-10cc (and proper plunger needle assemblies)

Feeler gauges – flat/radial (appropriate sizes)
1/8-inch Precision Key Stock for Packing Gland
Roof testing device (required for underground inspections)

**2. THE FOLLOWING EQUIPMENT SHOULD BE AVAILABLE TO
EACH INSPECTOR AS NEEDED IN EACH FIELD OFFICE**

Noise dosimeters and calibrator

Approved respirable dust sampling pumps, battery chargers, volt meter, sampling
head assemblies, and filter cassettes

Calibrators for respirable dust pumps

Cap lamp chargers

Forms

Mechanical in-line flow meter

Belt speed indicator (rpm indicator) (as needed)

Roof bolt torque wrench and roof bolt finishing bit gauge

Permissible multi-gas detector for air quality of seals (and pump as needed)

High speed anemometer

10-inch magnehelic gage

Fire Hydrants 50/50 gauge and appropriate adapters

National Fire Protection Association® (NFPA) Nos. 11A, 13, 13A, 15, 17,
72A, and 198

Air sample bottles (10cc & 50cc) (and proper plunger needle assemblies)

Air sample bags

Pin gauges (appropriate sizes for measuring diametrical clearances of cylindrical
joints)

Extendable probes for permissible multi-gas detector (as needed)

Electronic handheld thermocouple instrument (measure diesel exhaust
temperatures)

Emergency Response Box: 10cc and 50cc air sample bottles, List of Emergency
Phone Numbers, Up-to-date Inspection Procedures, Citation and Order Writing,
Program Policy, Electrical Inspection Manuals, 30 CFR, and Pocket Underground
and Surface CFRs, Smoke Tubes and an Aspirator Bulb, Large High-Powered Hand
Spot Light, Magnehelic Gage with Pitot Tube (Size appropriate to need), Supply of
Inspection Note Blanks and Notebooks (Pocket and Letter Size), Measuring Tapes,
100-, 50-, 25- ft. and Wooden 6-Foot Rule, Numbered Master Log Book, Evidence
Tags, Chain-of Custody-Tags, and Itemized Receipt Tags, Pad Locks, Ziplock® Bags,
Complete Copies of all Form 50 Accident Reports and Preliminary Forms,
Mechanical Pencils, Pens, and Legal Pads, Hand-issued Form 7000-3 and Form 7000-
3a, MSHA Form 7000-9 Closure Notices, Glowsticks and Reflective Tape, Chalk and
Spray Paint, and Set of Feeler Gauges – flat and radial.

First Response Kit/Air Sampling Unit: 115VAC vacuum pump, flame arrester, two 500-ft. rolls of ¼-inch ID vinyl tubing, ¼-inch tubing connectors (straight and tees), Plastic ties on clamps and tie tools, 24 AR sample bags and stick on labels, Pinch cock clamp or hose clamp, 1 extension cord, GFCI electrical switch, water trap, reducer bushing (as required to connect multi-gas detector), and ATX-620 multi-gas detector or its equivalent.

D. Forms and Information Needed in an E01 Inspection Report.

E01 Inspection Report and Requested Order of Filing

(all of the below forms may not be applicable for all inspection reports, which do not have to be maintained in any particular order in the files)

- _____ 2000-22 Mine Activity Data (if applicable with SCSR Plan, Cleanup Program, and Ground Control Plan statements, documented on line No. 17-Remarks).
- _____ Citations, Orders, and Safeguards (7000-3) with any photo mounting worksheets (4000-125), with all subsequent actions (7000-3a) including any vacated issuances and vacate memorandums if applicable, elevated enforcement actions paperwork (7000-32 SAR). Citations and orders organized by date with the last issuance being up front in the report. Previous issued citations, orders, and safeguard subsequent actions shall be maintained in the event that the original enforcement action was generated from.
- _____ General Inspection Cover Sheet (7000-10H), Daily Cover Sheets (7000-10I) if applicable with all notes including any preprinted listings documented as notes taken on the event.
- _____ 2000-204 Roof & Vent Plan Evaluation. (Inspector signatures are not required, a printed name or Authorized Representative number is sufficient).
- _____ 2000-209 Mine Information Form (one copy must be submitted to health clerk or supervisor immediately upon completion and one copy maintained in report).
- _____ 2000-223 ERP Plan Review Form.
- _____ Air Bottle Results for Each Sample Taken (Analytical Report).
- _____ 2000-43 Mine Atmosphere Sampling Print Out (only if result not yet received, then a copy of the submitted form showing that analytical report not yet received).
- _____ 2000-156 Rock Dust Sample Submission Form(s), sample forms with analysis results (if results not yet received by close date of inspection a copy of the submitted 2000-156 showing that analysis results not yet received).
- _____ 2000-86 Respirable Dust Form.

- _____ MSN 014 Respirable Dust Results with Blue Cards Attached (not mandatory that they be signed, but must have a positive identifier of who conducted the sample).
- _____ 2000-84 Noise Survey Results.
- _____ Results of other samples taken (asbestos, etc.).
- _____ 2000-207 Independent Contractor Form (only if new or updated).
- _____ 2000-208 Independent Contractor Form (for contractors on mine site).
- _____ Impoundment Inspection Forms. (MSHA form number is currently being assigned)
- _____ 2000-34 Coal Refuse Pile Periodic Inspection Form.
- _____ ATF 5030.5 and/or ATF 5400.5 ATF Inspection Form.
- _____ Diesel Equipment Inventory Records (print out).
- _____ SCSRs Inventory Records (print out). Note: 2000-220 form is discontinued.
- _____ Part 49 Checklist (Mine Rescue Station).
- _____ ITS Tracking (print out).
- _____ Mine Tracking Map(s).
- _____ First-Line Supervisors E01 Certification Sheet

E. Inspection Tracking System.

1. Inspection Tracking System (ITS) – Surface Facilities

Mine ID: Event #: Period: Mine Name:

MINE INFORMATION

MINE ID:		CHECKLIST TYPE:	Facility
EVENT NO:			
COMPANY:			
MINE:			
HALF:			

Information Log

TOTAL EMPLOYEES (MIF ITEM 15):	
NO. OF PRODUCTION PITS (MIF ITEM	
AVERAGE DAILY PRODUCTION:	
CHAIRMAN SAFETY COMMITTEE:	
CHAIRMAN ADDRESS:	
RECORDING SECRETARY:	
SECRETARY ADDRESS:	
MINE PHONE NUMBER:	

104(d) Status

104(d)1 Citation:

NUMBER:	
SECTION/LAW	
DATE:	
BY:	

104(d)1 Order:

NUMBER:	
SECTION/LAW	
DATE:	
BY:	

104(d) Orders:

DATE	ISSUANCE #	INSPECTOR	SECTION OF LAW

GENERAL COAL MINE INSPECTION PROCEDURES AND INSPECTION TRACKING SYSTEM HANDBOOK

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Facility Log

Start	Complete	Topic	N/A	Reserved For	Start Date	Start Initials	Complete Date	Complete Initials
<input type="checkbox"/>	<input type="checkbox"/>	NOISE	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	RESPIRABLE DUST	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	COAL STORAGE	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	EQUIPMENT	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	POTABLE WATER	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	SANITARY TOILET	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	WORK CYCLE	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	EXAMINATION RECORD	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	OFF-SHIFT'S (REPRESENTATIVE	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	COMMUNICATIONS	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	HEALTH AND SAFETY DISCUSSION	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	GROUND CONTROL PLAN (ADEQUACY & POLL MINERS)	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	FIRST-AID EQUIPMENT	<input type="checkbox"/>					

General

	General	N/A	Reserved For	Date Inspection Completed	Inspection Initials
<input type="checkbox"/>	First Day Arrival in Advance of Starting Time	<input type="checkbox"/>			
<input type="checkbox"/>	Mine Map Review (First day of Hazards)	<input type="checkbox"/>			
<input type="checkbox"/>	Independent Contractors	<input type="checkbox"/>			
<input type="checkbox"/>	Travel with Mine Examiners	<input type="checkbox"/>	Header***		Header***
<input type="checkbox"/>	a. On-Shift Examiner	<input type="checkbox"/>			
<input type="checkbox"/>	Inspection Shifts	<input type="checkbox"/>	Header***		Header***
<input type="checkbox"/>	a. Day Shift	<input type="checkbox"/>			
<input type="checkbox"/>	b. Afternoon Shift	<input type="checkbox"/>			
<input type="checkbox"/>	c. Midnight Shift	<input type="checkbox"/>			
<input type="checkbox"/>	d. Weekend Shift	<input type="checkbox"/>			
<input type="checkbox"/>	Part 47 Hazard Communication	<input type="checkbox"/>			
<input type="checkbox"/>	Petition of Modification	<input type="checkbox"/>			
<input type="checkbox"/>	Inspection for Training Plans Compliance and Training Records	<input type="checkbox"/>			
<input type="checkbox"/>	Observation of Multi-Gas Detector Calibration	<input type="checkbox"/>			

Surface Facility

Aerial Tramways; Coal Stock Piles; Communications Installations

Aerial Tramways

	Aerial Tramways	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Coal Stock Piles

	Coal Stock Piles	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]	-					[]

Communications Installations

	Communications Installations	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Draw-Off Tunnels; Dumping Facilities; Electrical / Substations Installations

Draw-Off Tunnels

	Draw-Off Tunnels	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Dumping Facilities

	Dumping Facilities	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Electrical / Substations Installations

	Electrical / Substations	Location	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Equipment (Other) Including Electrical Equipment

	Equipment Description	CO#	Serial#	Location	Reserved For	Equipmnt Status	Date	Initials
[]								

**GENERAL COAL MINE INSPECTION PROCEDURES AND
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Escapeways; Fire Fighting Equipment; Fuel Storage; Haulage Facilities (Including Belts)

Escapeways

	Escapeways	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Fire Fighting Equipment

	Fire Fighting Equipment	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Fuel Storage

	Fuel Storage	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Haulage Facilities (Including Belts)

	Haulage Facilities (Including	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

**Illumination of Work Areas; Highwall, Spoil Banks and Ground Control Plans; Air
Quality Test in Required Locations; Mine Map**

Illumination of Work Areas

	Illumination of Work Areas	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Highwall, Spoil Banks and Ground Control Plans

	Highwall, Spoil Banks, and Ground Control Plans	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Air Quality Test in Required Locations

	Air Quality Test in Required	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Mine Map

	Mine Map	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

**GENERAL COAL MINE INSPECTION PROCEDURES AND
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CHAPTER 6

Other Places Where Miners Work or Travel; Preparation Plants

Other Places Where Miners Work or Travel

Other Places Where Miners Work or	Location	Reserved For	Date	Initials	Remove Next Qtr/Half
[]					[]

Preparation Plants

Preparation Plants (Floors) Including Elevators / Records	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]					[]

Refuse Piles and Impoundments

Refuse Piles and Impoundments (Name)	Refuse Piles and Impoundment #	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Sanitary Facilities (Bathhouse); Shops and Other Structures; Thermal

Dryer

Sanitary Facilities (Bathhouse)

Sanitary Facilities (Bathhouse)	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]					[]

Shops and Other Structures

Shops and Other Structures	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]					[]

Thermal Dryer

Thermal Dryer	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]					[]

Travelways and Active Roadways; Ventilating Fan Installations

Travelways and Active Roadways

Travelways and Active Roadways	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]					[]

Ventilating Fan Installations

Ventilating Fan Installations	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]					[]

Surface Facility Records and Postings

Postings

	Section / 30 CFR	Posting Description	N/A	Reserved For	Date	Initials
[§101(e)	Proposed Health and Standards or New Regulations Posted	[]			
[§104.4(d)	Pattern of Violation Notice Posted	[]			
[§109(c)	Citations and Orders	[]			
[40.4	Representative Miners	[]			
[44.5(b)	Granted Petition for Modification	[]			
[44.9	Non-Final Petitions for Modification (at mines with no Representative of Miners)	[]			
[48.23(d)	Training Plans (with no Miner's Representative)	[]			
[48.23(n)	Training Plans	[]			
[62.130(a)	Administrative Noise Control Procedures	[]			
[71.210(b)	Respirable Dust Sample Results (Surface)	[]			
[71.301(d)	Approved Respirable Dust Control Plan (Surface)	[]			
[71.403(c)	Bathhouse Waiver	[]			
[71.404(b)	Bathhouse Waiver Application	[]			
[77.1202	Mine Map (Posted or Available)	[]			
[77.1702(e)	Emergency Medical Assistance Arrangements (Surface	[]			
[77.1708	Safety Program Instructions	[]			

**GENERAL COAL MINE INSPECTION PROCEDURES AND
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Records

	30 CFR	Record Description	N/ A	Reserved For	Date	Initials
[27 CFR Part	Record of Explosive Materials Part 555.125(b) and 555.127	[]			
[41.12	Legal Identity Changes within 30 days	[]			
[45.4(a)&(b)	Contractor Register	[]			
[47.31	HazCom Program	[]			
[47.51	Material Safety Data Sheets	[]			
[48.29(a)	Training & Retraining of Surface Miners (Form 5000-23)	[]			
[48.31(d)	Hazard Training Records	[]			
[50.20(a)	Mine Accident, Injury and Illness Reports(Form 7000-1)	[]			
[50.30(b)	Quarterly Employment and Coal Production Reports (Form	[]			
[50.40(a)&(b)	Investigation and Accident Reports - 5 Years	[]			
[62.110(e)	Miner Notification and Noise Exposure	[]			
[62.171(c)	Audiometric Test Records	[]			
[62.180(b)	Hearing Conversation Program Training	[]			
[77.106	Certified and Qualified Persons	[]			
[77.107-1	Annual Training for Certified and Qualified Persons	[]			
[77.216-3(c)	Impoundment Inspection	[]			
[77.314(c)	Thermal Dryer Examination	[]			
[77.403-1(d)	Certification for ROPS	[]			
[77.502	Monthly Examination of Electrical Equipment	[]			
[77.704-3	Working on Energized HV Lines	[]			
[77.800-2	Monthly Examination of High Voltage Circuit Breakers	[]			
[77.900-2	Monthly Examination of Low & Medium Voltage Circuit	[]			
[77.1404	Daily Hoist Examination	[]			
[77.1432	Hoist Rope Initial Measurement	[]			
[77.1433(d)&(Hoist Rope Examination and Tests	[]			
[77.1501(a)&(Auger Mining Inspections	[]			
[77.1606(a)	Record of Equipment Pre-Operational Check	[]			
[77.1703	First Aid Training for Supervisors	[]			
[77.1705	First Aid Re-Training for Supervisors	[]			
[77.1712(f)	Reopening of Mines	[]			
[77.1713(c)	Daily Examination of Active Areas of Mines	[]			
[77.1901(f)	Daily Examination of Slope and Shaft Projects	[]			
[77.1906(c)	Daily Examination of Hoist at Shaft and Slope Sinking	[]			
[77.1911(a)	Ventilation of Shaft and Slope	[]			

Removed Equipment

Equipment Description	CO#	Serial#	Location	Remove Next Qtr/Half

**GENERAL COAL MINE INSPECTION PROCEDURES AND
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2. Inspection Tracking System (ITS) – Surface Mines

Mine ID: Event #: Period: Mine Name:

MINE INFORMATION

MINE ID:		CHECKLIST TYPE:	Surface
EVENT NO:			
COMPANY:			
MINE:			
HALF:			

Information Log

TOTAL EMPLOYEES (MIF ITEM 15):	
NO. OF PRODUCTION PITS (MIF ITEM	
AVERAGE DAILY PRODUCTION:	
CHAIRMAN SAFETY COMMITTEE:	
CHAIRMAN ADDRESS:	
RECORDING SECRETARY:	
SECRETARY ADDRESS:	
MINE PHONE NUMBER:	

104(d) Status

104(d)1 Citation:

NUMBER:	
SECTION/LAW	
DATE:	
BY:	

104(d)1 Order:

NUMBER:	
SECTION/LAW	
DATE:	
BY:	

104(d) Orders:

DATE	ISSUANCE #	INSPECTOR	SECTION OF LAW

**GENERAL COAL MINE INSPECTION PROCEDURES AND
INSPECTION TRACKING SYSTEM HANDBOOK
PITS**

CHAPTER 6

Pit 001-0 Log

Start	Complete	Topic	N/A	Reserved For	Start Date	Start Initials	Complete Date	Complete Initials
<input type="checkbox"/>	<input type="checkbox"/>	NOISE	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	RESPIRABLE DUST	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	HIGHWALL / SPOIL BANKS	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	COAL STORAGE(PIT AREA)	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	EQUIPMENT	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	POTABLE WATER	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	SANITARY TOILET	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	WORK CYCLE	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	EXAMINATION RECORD	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	OFF-SHIFT'S (REPRESENTATIVE	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	COMMUNICATIONS	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	FIRE FIGHTING EQUIPMENT	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	HEALTH AND SAFETY	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	GROUND CONTROL PLAN (ADEQUACY & POLL MINERS)	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	FIRST-AID EQUIPMENT (PIT	<input type="checkbox"/>					

Equipment (Pit)

Equipment Description	CO#	Serial#	Approval #	Location	Reserved For	Equipmnt Status	Date Inspection Completed	Inspection Initials

General

General	N/A	Reserved For	Date Inspection Completed	Inspection Initials
<input type="checkbox"/> First Day Arrival in Advance of Starting Time	<input type="checkbox"/>			
<input type="checkbox"/> Mine Map Review (First day of Hazards)	<input type="checkbox"/>			
<input type="checkbox"/> Independent Contractors	<input type="checkbox"/>			
<input type="checkbox"/> Travel with Mine Examiners	<input type="checkbox"/>	Header***		Header***
<input type="checkbox"/> a. On-Shift Examiner	<input type="checkbox"/>			
<input type="checkbox"/> Inspection Shifts	<input type="checkbox"/>	Header***		Header***
<input type="checkbox"/> a. Day Shift	<input type="checkbox"/>			
<input type="checkbox"/> b. Afternoon Shift	<input type="checkbox"/>			
<input type="checkbox"/> c. Midnight Shift	<input type="checkbox"/>			
<input type="checkbox"/> d. Weekend Shift	<input type="checkbox"/>			
<input type="checkbox"/> Part 47 Hazard Communication	<input type="checkbox"/>			
<input type="checkbox"/> Petition for Modification	<input type="checkbox"/>			
<input type="checkbox"/> Inspection of Training Plans Compliance and Training Records	<input type="checkbox"/>			
<input type="checkbox"/> Observation of Multi-Gas Detector Calibration	<input type="checkbox"/>			

**GENERAL COAL MINE INSPECTION PROCEDURES AND
INSPECTION TRACKING SYSTEM HANDBOOK
Surface Mine**

CHAPTER 6

Aerial Tramways; Auger / Highwall Mining; Coal Stock Piles; Communications Installations

Aerial Tramways

	Aerial Tramways	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Auger / Highwall Mining

	Auger / Highwall Mining	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Coal Stock Piles

	Coal Stock Piles	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Communications Installations

	Communications Installations	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

**Draw-Off Tunnels; Drilling and Blasting; Dumping Facilities; Electrical /
Substations Installations**

Draw-Off Tunnels

	Draw-Off Tunnels	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Drilling and Blasting

	Drilling and Blasting (Should Observe Drilling & Blasting Cycle)	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Dumping Facilities

	Dumping Facilities	Location	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Electrical / Substations Installations

	Electrical / Substations	Location	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Equipment (Other) Including Electrical Equipment

	Equipment Description	CO	Serial#	Location	Reserved For	Equipmnt Status	Date	Initials
[]								

Escapeways; Explosives Storage (Magazines); Fire Fighting Equipment; Fuel Storage

Escapeways

Escapeways	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]					[]

Explosives Storage (Magazines)

Explosive Storage (Magazines)	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]					[]

Fire Fighting Equipment

Fire Fighting Equipment	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]					[]

Fuel Storage

Fuel Storage	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]					[]

Haulage Equipment (Including Belts); Hoisting Equipment; Illumination of Work Areas; Air Quality Test in Required Locations

Haulage Equipment (Including Belts)

Haulage Equipment (Including Belts)	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]					[]

Hoisting Equipment

Hoisting Equipment/Records	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]					[]

Illumination of Work Areas

Illumination of Work Areas	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]					[]

Air Quality Test in Required Locations

Air Quality Test Description of Locations	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]					[]

Mine Map; Other Places Where Miners Work or Travel

Mine Map

Mine Map	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]					[]

Other Places Where Miners Work or Travel

	Other Places Where Miners Work or Travel	Location	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Preparations Plants; Refuse Piles and Impoundments

Preparations Plants

	Preparation Plants (Floors) Elevator / Records	Location	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Refuse Piles and Impoundments

	Refuse Piles and Impoundment (Name)	Refuse Piles and Impoundments #	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]							[]

Sanitary Facilities (Bathhouse); Shops and Other Structures; Surface First-Aid Equipment; Thermal Dryer

Sanitary Facilities (Bathhouse)

	Sanitary Facilities (Bathhouse)	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Shops and Other Structures

	Shops and Other Structures	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Surface First-Aid Equipment

	Surface First-Aid	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Thermal Dryer

	Thermal Dryer	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Travelways and Roadways; Ventilating Fan Installations

Travelways and Roadways

	Travelways and Roadways	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

**GENERAL COAL MINE INSPECTION PROCEDURES AND
INSPECTION TRACKING SYSTEM HANDBOOK**

CHAPTER 6

Ventilating Fan Installations

	Ventilating Fan Installations	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Surface Facility Records & Postings

Postings

	Section / 30 CFR	Posting Description	N/A	Reserved For	Date	Initials
[]	§101(e)	Proposed Health and Standards or New Regulations Posted	[]			
[]	§104.4(d)	Pattern of Violation Notice Posted	[]			
[]	§109(c)	Citations and Orders	[]			
[]	40.4	Representative of Miners	[]			
[]	44.5(b)	Granted Petitions for Modification	[]			
[]	44.9	Non-Final Petitions for Modification (at mines with no Representative of Miners)	[]			
[]	48.23(d)	Training Plans (with no Miners' Representative)	[]			
[]	48.23(n)	Training Plans	[]			
[]	62.130(a)	Administrative Noise Control Procedures	[]			
[]	71.210(b)	Respirable Dust Sample Results (Surface)	[]			
[]	71.301(d)	Approved Respirable Dust Control Plan (Surface)	[]			
[]	71.403(c)	Bathhouse Waiver	[]			
[]	71.404(b)	Bathhouse Waiver Application	[]			
[]	77.1202	Mine Map (Posted or Available)	[]			
[]	77.1702(e)	Emergency Medical Assistance Arrangements (Surface	[]			
[]	77.1708	Safety Program Instructions	[]			

GENERAL COAL MINE INSPECTION PROCEDURES AND INSPECTION TRACKING SYSTEM HANDBOOK

CHAPTER 6

Records

	30 CFR	Record Description	N/A	Reserved For	Date	Initials
<input type="checkbox"/>	27 CFR Part	Record of Explosive Materials Part 555.125(b) and 555.127	<input type="checkbox"/>			
<input type="checkbox"/>	41.12	Legal Identity Changes within 30 days	<input type="checkbox"/>			
<input type="checkbox"/>	45.4(a)&(b)	Contractor Register	<input type="checkbox"/>			
<input type="checkbox"/>	47.31(a)	HazCom Program	<input type="checkbox"/>			
<input type="checkbox"/>	47.51	Material Safety Data Sheets	<input type="checkbox"/>			
<input type="checkbox"/>	48.29(a)	Training & Retraining of Surface Miners (Form 5000-23)	<input type="checkbox"/>			
<input type="checkbox"/>	48.31(d)	Hazard Training Records	<input type="checkbox"/>			
<input type="checkbox"/>	50.20(a)	Mine Accident, Injury and Illness Reports(Form 7000-1)	<input type="checkbox"/>			
<input type="checkbox"/>	50.30(b)	Quarterly Employment and coal Production Reports	<input type="checkbox"/>			
<input type="checkbox"/>	50.40(a)&(b)	Investigation and Accident Reports - 5 Years	<input type="checkbox"/>			
<input type="checkbox"/>	62.110(e)	Miner Notification of Noise Exposure	<input type="checkbox"/>			
<input type="checkbox"/>	62.171(c)	Audiometric Test Records	<input type="checkbox"/>			
<input type="checkbox"/>	62.180(b)	Hearing Conversation Program Training	<input type="checkbox"/>			
<input type="checkbox"/>	77.106	Qualified & Certified Persons	<input type="checkbox"/>			
<input type="checkbox"/>	77.107-1	Annual Training for Certified and Qualified Persons	<input type="checkbox"/>			
<input type="checkbox"/>	77.216-3(c)	Impoundment Examination	<input type="checkbox"/>			
<input type="checkbox"/>	77.314(c)	Thermal Dryer Examination	<input type="checkbox"/>			
<input type="checkbox"/>	77.403-1(d)	Certification for ROPS	<input type="checkbox"/>			
<input type="checkbox"/>	77.502	Monthly Examination of Electrical Equipment	<input type="checkbox"/>			
<input type="checkbox"/>	77.704-3	Working on Energized HV Lines	<input type="checkbox"/>			
<input type="checkbox"/>	77.800-2	Monthly Examination of High Voltage Circuit Breakers	<input type="checkbox"/>			
<input type="checkbox"/>	77.900-2	Monthly Examination of Low & Medium Voltage Circuit	<input type="checkbox"/>			
<input type="checkbox"/>	77.1404	Daily Hoist Examination	<input type="checkbox"/>			
<input type="checkbox"/>	77.1432	Hoist Rope Initial Measurement	<input type="checkbox"/>			
<input type="checkbox"/>	77.1433(d)&	Hoist Rope Examination and Tests	<input type="checkbox"/>			
<input type="checkbox"/>	77.1501(a)&(Auger Mining Inspections	<input type="checkbox"/>			
<input type="checkbox"/>	77.1606(a)	Record of Equipment Pre-Operational Check	<input type="checkbox"/>			
<input type="checkbox"/>	77.1703	First Aid Training for Supervisors	<input type="checkbox"/>			
<input type="checkbox"/>	77.1705	First Aid Re-Training for Supervisors	<input type="checkbox"/>			
<input type="checkbox"/>	77.1713(c)	Daily Examination of Active Areas of Mines	<input type="checkbox"/>			
<input type="checkbox"/>	77.1901(f)	Daily Examination of Slope and Shaft Projects	<input type="checkbox"/>			
<input type="checkbox"/>	77.1906(c)	Daily Examination of Hoist at Shaft and Slope Sinking	<input type="checkbox"/>			
<input type="checkbox"/>	77.1911(a)	Ventilation of Shaft and Slope	<input type="checkbox"/>			

Removed Equipment

Equipment Description	CO#	Serial#	Location	Remove Next Qtr/Half

**GENERAL COAL MINE INSPECTION PROCEDURES AND
INSPECTION TRACKING SYSTEM HANDBOOK**

CHAPTER 6

3. Inspection Tracking System (ITS) - Underground and Surface of U/G Mine

Mine ID: Event #: Period: Mine Name:

MINE INFORMATION

MINE ID:		CHECKLIST TYPE:	Underground
EVENT NO:			
COMPANY:			
MINE:			
QUARTER:			

Information Log

SURFACE EMPLOYEES:	
UNDERGROUND EMPLOYEES:	
NUMBER OF AIR SHAFTS:	
NUMBER OF AIR SLOPES:	
NUMBER OF AIR DRIFTS:	
AVERAGE DAILY PRODUCTION:	
CHAIRMAN SAFETY COMMITTEE:	
CHAIRMAN ADDRESS:	
RECORDING SECRETARY:	
SECRETARY ADDRESS:	
MINE PHONE NUMBER:	

104(d) Status

104(d)1 Citation:

NUMBER:	
SECTION/LAW	
DATE:	
BY:	

104(d)1 Order:

NUMBER:	
SECTION/LAW	
DATE:	
BY:	

104(d) Orders:

DATE	ISSUANCE #	INSPECTOR	SECTION OF LAW

Air Samples for Total Liberation

	Bottle # for Total	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

GENERAL COAL MINE INSPECTION PROCEDURES AND
INSPECTION TRACKING SYSTEM HANDBOOK

CHAPTER 6

Air Samples Collected (Non-TL)

	Bottle # for Non-TL	Location Description	Reserved For	Date	Initials	Remove Next Qtr/ Half
[]						[]

Intake Drift, Shaft, Slope Openings

	Location Description	Vent Map ID	Air Quantity	Reserved For	Date	Initials	Remove Next Qtr/ Half
[]							[]

MMU's

MMU 001-0

Log

Start	Complete	Topic	N/A	Reserved For	Start Date	Start Initials	Complete Date	Complete Initials
[]	[]	NOISE	[]					
[]	[]	RESPIRABLE DUST	[]					
[]	[]	FACES	[]					
[]	[]	IMMEDIATE RETURN AIR SAMPLE	[]					
[]	[]	BLASTING PRACTICES	[]					
[]	[]	BOREHOLES IN ADVANCE OF	[]					
[]	[]	COMMUNICATIONS	[]					
[]	[]	DUST CONTROLS PARAMETERS	[]					
[]	[]	DATES, TIMES, AND INITIALS	[]					
[]	[]	ESCAPEWAY MAP	[]					
[]	[]	FIRE PROTECTION	[]					
[]	[]	FIRST-AID EQUIPMENT	[]					
[]	[]	HEALTH AND SAFETY DISCUSSION	[]					
[]	[]	MINING WORK CYCLE	[]					
[]	[]	OPERATIONS UNDER WATER	[]					
[]	[]	POTABLE WATER (WORKING	[]					
[]	[]	POST ACCIDENT COMMUNICATION AND TRACKING SYSTEM (SECTION)	[]					
[]	[]	ROCK DUST SAMPLING	[]					
[]	[]	ROOF AND RIBS CONDITIONS	[]					
[]	[]	SANITARY FACILITIES	[]					
[]	[]	SECTION EQUIPMENT	[]					
[]	[]	SCSR'S DEVICES (WORKING SECTION- STORED AND CARRIED)	[]					
[]	[]	OFF-SHIFT'S (REPRESENTATIVE	[]					
[]	[]	TRAVEL WITH EXAMINER	[]					
[]	[]	MANTRIP OBSERVATION	[]					
Start	Complete	Topic	N/A	Reserved For	Start Date	Start Initials	Complete Date	Complete Initials
[]	[]	SUPPLEMENTAL (ROOF) SUPPORT MATERIALS, EQUIPMENT, AND	[]					

GENERAL COAL MINE INSPECTION PROCEDURES AND INSPECTION TRACKING SYSTEM HANDBOOK

CHAPTER 6

<input type="checkbox"/>	<input type="checkbox"/>	50PSI/50GPM OF WATER AVAILABILITY IN WATER LINES	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>	LOCATION OF LAST OPEN CROSSCUT (SPAD	<input type="checkbox"/>					

Equipment

	Equipment	CO#	Serial#	Approval	Location	Reserved For	Equipmnt Status	Date	Initials
<input type="checkbox"/>									

Diesel Equipment

	Equipment	CO#	Serial#	Approval	Location	Reserved For	Equipmnt Status	Date	Initials
<input type="checkbox"/>									

General

	General	N/A	Reserved For	Date Inspection Completed	Inspection Initials
<input type="checkbox"/>	First Day Arrival in Advance of Starting Time	<input type="checkbox"/>			
<input type="checkbox"/>	Mine Map Review (First day of Hazards)	<input type="checkbox"/>			
<input type="checkbox"/>	Check In and Out System	<input type="checkbox"/>			
<input type="checkbox"/>	Cleanup Program	<input type="checkbox"/>			
<input type="checkbox"/>	Communication and Tracking Surface Facility	<input type="checkbox"/>			
<input type="checkbox"/>	Refuge Alternatives	<input type="checkbox"/>			
<input type="checkbox"/>	Independent Contractors	<input type="checkbox"/>			
<input type="checkbox"/>	Travel with Mine Examiners	<input type="checkbox"/>	Header***		Header***
<input type="checkbox"/>	a. Pre-Shift Examiner	<input type="checkbox"/>			
<input type="checkbox"/>	b. On-Shift Examiner	<input type="checkbox"/>			
<input type="checkbox"/>	c. Weekly Examiner	<input type="checkbox"/>			
<input type="checkbox"/>	Inspection Shifts	<input type="checkbox"/>	Header***		Header***
<input type="checkbox"/>	a. Day Shift or 1st Shift	<input type="checkbox"/>			
<input type="checkbox"/>	b. Afternoon Shift or 2nd Shift	<input type="checkbox"/>			
<input type="checkbox"/>	c. Midnight Shift of 3rd Shift	<input type="checkbox"/>			
<input type="checkbox"/>	Weekend E01 Inspections	<input type="checkbox"/>			
<input type="checkbox"/>	Part 47 Hazard Communication	<input type="checkbox"/>			
<input type="checkbox"/>	Man-Trip Operations	<input type="checkbox"/>			
<input type="checkbox"/>	Mine Rescue	<input type="checkbox"/>			
<input type="checkbox"/>	Smoking Program	<input type="checkbox"/>			
<input type="checkbox"/>	Petition for Modification	<input type="checkbox"/>			
<input type="checkbox"/>	Inspection of Training Plans Compliance and Training Records	<input type="checkbox"/>			
<input type="checkbox"/>	Observation of Multi-Gas Detector Calibration	<input type="checkbox"/>			

Surface Areas of Underground Mines

Aerial Tramways; Auger / Highwall Mining; Coal Stock Piles; Communications Installations

Aerial Tramways

	Aerial Tramways	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Auger / Highwall Mining

	Auger/Highwall Mining	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Coal Stock Piles

	Coal Stock Piles	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Communications Installations

	Communications Installations	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Draw-Off Tunnels; Dumping Facilities; Electrical / Substations Installations (Including Mine Fans)

Draw-Off Tunnels

	Draw-Off Tunnels	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Dumping Facilities

	Dumping Facilities	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Electrical / Substations Installations (Including Mine Fans)

	Electrical / Substations Installations (Including Mine Fans)	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Equipment (Other) Including Electrical Equipment (Surface)

	Equipment Description	CO#	Serial#	Location	Reserved For	Equipmnt Status	Date	Initials
[]								

**GENERAL COAL MINE INSPECTION PROCEDURES AND
INSPECTION TRACKING SYSTEM HANDBOOK**

CHAPTER 6

Escapeways; Explosives Storage (Magazines); Fire Fighting Equipment; Fuel Storage

Escapeways

	Escapeways (Surface)	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Explosives Storage (Magazines)

	Explosive Storage (Magazines)	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Fire Fighting Equipment

	Fire Fighting Equipment	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Fuel Storage

	Fuel Storage	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

**Haulage Equipment (Including Belts); Health and Safety Discussions (General);
Highwall of Portals (Ground Control if Applicable)**

Haulage Equipment (Including Belts)

	Haulage Equipment (Including	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Health and Safety Discussions (General)

	Health and Safety Discussions	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Highwall of Portals (Ground Control if Applicable)

	Highwall and Portal Openings (Ground Control Plan if Applicable)	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

**GENERAL COAL MINE INSPECTION PROCEDURES AND
INSPECTION TRACKING SYSTEM HANDBOOK**

CHAPTER 6

**Hoisting Equipment; Illumination of Work Areas; Air Quality Test in Required Locations;
Non- Major Construction Sites**

Hoisting Equipment

	Man / Material Hoisting, Elevators Equipment (For U/G) -	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Illumination of Work Areas

	Illumination of Work Areas	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Air Quality Test in Required Locations

	Air Quality Test in Required	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Non-Major Construction Sites

	Non-Major Construction Sites	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

**Other Places Where Miners Work or Travel (Surface Areas); Potable Water; Preparation
Plants**

Other Places Where Miners Work or Travel (Surface Areas)

	Other Places Where Miners Work or Travel (Surface Areas)	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Potable Water

	Potable Water	Location Description	Reserved	Date	Initials	Remove Next Qtr/Half
[]						[]

Preparation Plants

	Preparation Plants (Floors) (Including Elevators/Records)	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Refuse Piles and Impoundments; Sanitary Facilities (Bathhouse)

Refuse Piles and Impoundments

	Refuse Piles and Impoundments (Name)	Refuse Piles and Impoundments #	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]							[]

Sanitary Facilities (Bathhouse)

	Sanitary Facilities (Bathhouse)	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Shops and Other Structures; Surface First-Aid

Shops and Other Structures

	Shops and Other Structures	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Surface First-Aid

	Surface First-Aid	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Thermal Dryer; Travelways and Roadways; Ventilating Fan Installations; Oil, Gas and Coalbed Methane Wells

Thermal Dryer

	Thermal Dryer	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Travelways and Roadways

	Travelways and	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Ventilating Fan Installations

	Ventilating Fan Installations (Preparation Plants)	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Oil, Gas and Coalbed Methane Wells

	Oil, Gas and Coalbed Methane	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

**GENERAL COAL MINE INSPECTION PROCEDURES AND
INSPECTION TRACKING SYSTEM HANDBOOK**
Underground Outby Areas

CHAPTER 6

Aircourses (Including Escapeways)

	Aircourses (Including Escapeways)	Intake / Return	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

**Automatic Fire Sensor and Warning Devices System That Use Carbon Monoxide
Sensors and AMS Systems**

	Atmospheric Monitoring Systems	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Belts, Skip Shaft Facilities, Bunkers; Blasting Practices

Belts, Skip Shaft Facilities, Bunkers

	Belts, Skip, Bunkers	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Blasting Practices

	Blasting Practices	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Bleeders (Including Each Check Point)

	Bleeders (Including Each	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

**GENERAL COAL MINE INSPECTION PROCEDURES AND
INSPECTION TRACKING SYSTEM HANDBOOK**

CHAPTER 6

Diesel Fuel Storage (U/G); Fire Protection (Water / Chemical Cars, Foam Generators, Fire Fighting Equipment, Emergency Materials, Additional Fire Fighting Equipment for Belts Over 2000 ft in Length)

Diesel Fuel Storage (U/G)

	Diesel Fuel Storage	Location	Reserved For	Date	Initials	Remove Next Qtr / Half
[]						[]

Fire Protection (Water/Chemical Cars, Foam Generators, Fire Fighting Equipment, Emergency Materials, Additional Fire Fighting Equipment for Belts Over 2000 Ft In Length)

Belts

	Fire Protection (Water/ Chemical Cars, Foam Generators, Fire Fighting Equipment Emergency Materials, Additional Fire Fighting Equipment for Belts Over 2000 FT in length, etc.)	Location Description	Reserved For	Date	Initials	Remove Next Qtr / Half
[]						[]

Haulage or Mobile Equipment (UG)

	Equipment	CO#	Serial	Approval	Location	Reserved For	Equipmnt Status	Date	Initials
[]									

Longwall Tailgate Entry; Non-Pillared Worked Out Areas

Longwall Tailgate Entry

	Longwall Tailgate	Location	Reserved	Date	Initials	Remove Next Qtr / Half
[]						[]

Non-Pillared Worked Out Areas

	Non-Pillared Worked Out	Location	Reserved	Date	Initials	Remove Next Qtr / Half
[]						[]

Other Places Miners Work or Travel

	Other Places Miners Work or	Location	Reserved	Date	Initials	Remove Next Qtr / Half
[]						[]

**GENERAL COAL MINE INSPECTION PROCEDURES AND
INSPECTION TRACKING SYSTEM HANDBOOK**

CHAPTER 6

Outby Electrical Equipment

	Equipment Description	CO#	Serial#	Location	Reserved For	Equipment Status	Date	Initials
[]								

Seals

	Sets of Seals (Name)	Location Description	Number of Seals	Type of Seals	Reserved For	Date	Initials	Remove Next Qtr/Half
[]								[]

Track and Off-Track Haulage Roads

	Track and Off-Track Haulage	Location	Reserved	Date	Initials	Remove Next Qtr/Half
[]						[]

Underground Diesel Equipment (Outby)

	Annual Survey	Equipment Description	CO #	Serial #	Exhaust Gas and Emissions Temperature	Location	Reserved For	Equipment Status	Date	Initials	Annual Survey date	Annual Survey Initials
[]	[]											

Outby SCSR's (Storage Caches)

	SCSR'S Caches (Located in Outby Storage Areas)	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Post-Accident Communications and Tracking System (Outby); Refuge Alternatives

Post-Accident Communications and Tracking System (Outby)

	Post-Accident Communications and Tracking System (Outby)	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Refuge Alternatives

	Refuge Alternatives	Location Description	Reserved For	Date	Initials	Remove Next Qtr/Half
[]						[]

Underground Mine Records and Postings

Postings

	Section / 30 CFR	Posting Description	N/A	Reserved For	Date	Initials
<input type="checkbox"/>	§101(e)	Proposed Health and Standards or New Regulations Posted	<input type="checkbox"/>			
<input type="checkbox"/>	§104.4(d)	Pattern of Violation Posted	<input type="checkbox"/>			
<input type="checkbox"/>	§109.(a)	Citations and Orders	<input type="checkbox"/>			
<input type="checkbox"/>	203(a)	X-Ray Plan	<input type="checkbox"/>			
<input type="checkbox"/>	40.4	Representative Miners	<input type="checkbox"/>			
<input type="checkbox"/>	44.5(b)	Granted Petitions for Modification	<input type="checkbox"/>			
<input type="checkbox"/>	44.9	Non-Final Petitions for Modification (at mines with no representative of miners)	<input type="checkbox"/>			
<input type="checkbox"/>	48.3(d)	Training Plans (with no Miners' Representative)	<input type="checkbox"/>			
<input type="checkbox"/>	48.3 (n)	Training Plans	<input type="checkbox"/>			
<input type="checkbox"/>	48.23(d)	Training Plans (with no Miners' Representative)	<input type="checkbox"/>			
<input type="checkbox"/>	48.23(n)	Training Plans	<input type="checkbox"/>			
<input type="checkbox"/>	49.12(h)	Mine Rescue Availability	<input type="checkbox"/>			
<input type="checkbox"/>	49.13(d)	Mine Rescue (Alternative Capability Small and Remote	<input type="checkbox"/>			
<input type="checkbox"/>	49.19(b)	Copy of Mine Rescue Notification Plan	<input type="checkbox"/>			
<input type="checkbox"/>	62.130(a)	Administrative Noise Control Procedures	<input type="checkbox"/>			
<input type="checkbox"/>	70.210(b)	Respirable Dust Sample Results (Underground)	<input type="checkbox"/>			
<input type="checkbox"/>	71.210(b)	Respirable Dust Sample Results (Surface)	<input type="checkbox"/>			
<input type="checkbox"/>	71.301(d)	Approved Respirable Dust Control Plan (Surface)	<input type="checkbox"/>			
<input type="checkbox"/>	71.403(c)	Bathhouse Waiver	<input type="checkbox"/>			
<input type="checkbox"/>	71.404(b)	Bathhouse Waiver Application	<input type="checkbox"/>			
<input type="checkbox"/>	75.220(e)	Roof Control Plan Available	<input type="checkbox"/>			
<input type="checkbox"/>	75.351(a)(3)	AMS Map or Schematic	<input type="checkbox"/>			
<input type="checkbox"/>	75.351(a)(4)	Contact Information for AMS Operators and Designated Responsible Persons	<input type="checkbox"/>			
<input type="checkbox"/>	75.370(a)(3)(iii)	Proposed Ventilation Plan and Revisions	<input type="checkbox"/>			
<input type="checkbox"/>	75.370(f)(3)	Approved Ventilation Plan and Revisions	<input type="checkbox"/>			
<input type="checkbox"/>	75.1505(a)(4)	Escapeway Map Posted at a Surface Location Where Miners Congregate	<input type="checkbox"/>			
<input type="checkbox"/>	75.1713-1(e)	Emergency Medical Assistance Arrangements (Underground	<input type="checkbox"/>			

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Records

	30 CFR	Record Description	N/A	Reserved For	Date	Initials
[]	27 CFR Pt 555	Record of Explosive Materials Part 555.125(b) and 555.127 (surface area)	[]			
[]	41.12	Legal Identity Changes (within 30 days)	[]			
[]	45.4(a)&(b)	Contractor Register	[]			
[]	47.31	HazCom Program	[]			
[]	47.51	Material Safety Data Sheets	[]			
[]	48.29(a)	Training & Retraining of Surface Miners (Form 5000-23)	[]			
[]	48.9	Training & Retraining of Underground Miners (Form	[]			
[]	49.17(c)	Annual Mine Rescue Physical	[]			
[]	49.18(g)	Training of Mine Rescue Team Members	[]			
[]	50.20(a)	Mine Accident, Injury and Illness Reports (Form 7000-1)	[]			
[]	50.30(a)	Quarterly Employment and Coal Production Reports	[]			
[]	50.40(a)&(b)	Investigation and Accident Reports (Maintained for 5	[]			
[]	62.110(e)	Miner Notification and Noise Exposure	[]			
[]	62.171(c)	Audiometric Test Records	[]			
[]	62.180(b)	Hearing Conversation Program Training	[]			
[]	62.190	Access to all Part 62 Records	[]			
[]	70.1900(d)	Diesel Exhaust Gas Samples Exceeding TLV® Action Levels for CO & NO2	[]			
[]	71.202	Certification of Certified Person Sampling	[]			
[]	71.203	Certification of Certified Person Maintenance and	[]			
[]	72.520(a) &	Diesel Equipment Inventory (updated within 7 days of	[]			
[]	75.151	Qualified Persons to Test Methane	[]			
[]	75.159	List of Certified and Qualified Person for Part 75 Duties	[]			
[]	75.161	Annual Training for Certified and Qualified Persons	[]			
[]	75.204(a)(2)	Roof Bolt Manufacturer's Certification	[]			
[]	75.204(f)(6)	Measurements of Tensioned Roof Bolt Torque	[]			
[]	75.209(f)	ATRS Certification	[]			
[]	75.220(e)	Roof Control Plan Availability	[]			
[]	75.223(b)&(c)	Map of Roof Falls	[]			
[]	75.310(a)(4)	Main Mine Fan Pressure Recordings	[]			
[]	75.312(g)(1)&(h)	Daily and Monthly Main Mine Fan Examinations	[]			
[]	75.333(e)	Seal Sampling and Monitoring	[]			
[]	75.335(c)(1)	Approved Seal Design	[]			
[]	75.335(c)(2)	Certification of Provision of Approved Seal Design is	[]			
[]	75.336(e)(2)	Gas Sampling Records (1 Year)	[]			
[]	75.337(c)(5)	Seal Construction and Repair	[]			
[]	75.337(d)	Certification of Seal Construction, Installation, and	[]			

	30 CFR	Record Description	N/A	Reserved For	Date	Initials
[]	75.338(a)	Seal-Certified Person Sampling Training (records maintained	[]			

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<input type="checkbox"/>	75.338(b)	Certification of Training for Persons that Perform Seal Const & Repair (2 years)	<input type="checkbox"/>				
<input type="checkbox"/>	75.339(a)	Seal Recordkeeping Requirements	<input type="checkbox"/>				
<input type="checkbox"/>	75.342(a)(4)(ii)	Methane Monitor Calibration	<input type="checkbox"/>				
<input type="checkbox"/>	75.351(o)	AMS Alert/ Alarm Signals, Malfunctions, Tests, Calibrations, and Maintenance	<input type="checkbox"/>				
<input type="checkbox"/>	75.351(q)	Annual AMS Operator Training	<input type="checkbox"/>				
<input type="checkbox"/>	75.360(a)(2)	Pre-shift by Pumpers (hazards found)	<input type="checkbox"/>				
<input type="checkbox"/>	75.360(g)	Pre-shift / On-Shift Examinations	<input type="checkbox"/>				
<input type="checkbox"/>	75.363(b)	Recording of Hazardous Conditions	<input type="checkbox"/>				
<input type="checkbox"/>	75.364(h)	Weekly Examination of Hazardous Conditions	<input type="checkbox"/>				
<input type="checkbox"/>	75.400-2	Clean-up Program	<input type="checkbox"/>				
<input type="checkbox"/>	75.508	Map of Electrical System	<input type="checkbox"/>				
<input type="checkbox"/>	75.508-2	Electrical Map - Changes Made	<input type="checkbox"/>				
<input type="checkbox"/>	75.512	Weekly Examination of Underground Electric Equipment	<input type="checkbox"/>				
<input type="checkbox"/>	75.705-3	Record of Work on High Voltage	<input type="checkbox"/>				
<input type="checkbox"/>	75.800-4(a)	Monthly Tests, Exams, & Maintenance of UG High Voltage Circuit Breakers	<input type="checkbox"/>				
<input type="checkbox"/>	75.812 & 75.812-2	Movement of Energized High Voltage Power Centers and Transformers	<input type="checkbox"/>				
<input type="checkbox"/>	75.821(d)	Testing, Examination, and Maintenance of High Voltage Longwall Equipment	<input type="checkbox"/>				
<input type="checkbox"/>	75.832(g)	High Voltage Continuous Mining Machines	<input type="checkbox"/>				
<input type="checkbox"/>	75.900-4	Monthly Tests, Exams, & Maintenance of UG Low & Medium Voltage Circuit Breakers	<input type="checkbox"/>				
<input type="checkbox"/>	75.901(b)(12)	Diesel Powered Generators (moving equipment)	<input type="checkbox"/>				
<input type="checkbox"/>	75.1001-1(c)	Trolley Overcurrent Tests and Calibrations	<input type="checkbox"/>				
<input type="checkbox"/>	75.1003-2(b)	Examinations of Trolley Systems for Off-Track Equipment	<input type="checkbox"/>				
<input type="checkbox"/>	75.1103-8(b)	Weekly Examinations of Fire Sensors and Warning	<input type="checkbox"/>				
<input type="checkbox"/>	75.1103-8(c)	Monthly Calibration of Fire Sensors and Warning Device	<input type="checkbox"/>				
<input type="checkbox"/>	75.1103-11	Annual Tests of Fire Hydrants and Fire Hoses	<input type="checkbox"/>				
<input type="checkbox"/>	75.1107-16(c)	Weekly Inspection of Fire Suppression Devices	<input type="checkbox"/>				
<input type="checkbox"/>	75.1203	Mine Map	<input type="checkbox"/>				
<input type="checkbox"/>	75.1400-2	Bi-Monthly Tests of Hoist Safety Catches	<input type="checkbox"/>				
<input type="checkbox"/>	75.1400-4	Daily Hoisting Equipment Examinations	<input type="checkbox"/>				
<input type="checkbox"/>	75.1432	Initial Hoist Rope Stretch Measurements	<input type="checkbox"/>				
<input type="checkbox"/>	75.1433(d)	Bi-Weekly Hoist Rope Examinations	<input type="checkbox"/>				
<input type="checkbox"/>	75.1433(e)	Semi-Annual Hoist Rope Measurements and Nondestructive	<input type="checkbox"/>				

	30 CFR	Record Description	N/A	Reserved For	Date	Initials
<input type="checkbox"/>	75.1501(a)(3)	Annual Responsible Person Training	<input type="checkbox"/>			
<input type="checkbox"/>	75.1504(a)	Quarterly Mine Emergency Evacuation Training and Drills	<input type="checkbox"/>			
<input type="checkbox"/>	75.1504(c)	Annual Expectation Training for Donning and Transferring	<input type="checkbox"/>			
<input type="checkbox"/>	75.1504(d)(e)	Mine Emergency Evacuation and Drills	<input type="checkbox"/>			
<input type="checkbox"/>	75.1508(b)	Refuge Alternatives (maintenance and repair)	<input type="checkbox"/>			

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<input type="checkbox"/>	75.1702	Smoking Program	<input type="checkbox"/>			
<input type="checkbox"/>	75.1708	Monthly Fire Doors Tests (when non-fireproof structures are within 100' of mine openings)	<input type="checkbox"/>			
<input type="checkbox"/>	75.1710-1(e)	Certification of Canopies or Cabs	<input type="checkbox"/>			
<input type="checkbox"/>	75.1713-3	First-Aid Training of Underground Supervisors	<input type="checkbox"/>			
<input type="checkbox"/>	75.1715.5	First-Aid Training of Underground Supervisors (Retraining)	<input type="checkbox"/>			
<input type="checkbox"/>	75.1714-3(e)	Self-Rescuer Device Tests	<input type="checkbox"/>			
<input type="checkbox"/>	75.1714-8(a)&(b)	Self-Rescuer Inventory Update	<input type="checkbox"/>			
<input type="checkbox"/>	75.1715	Check-In / Check-Out System and Belt Identification	<input type="checkbox"/>			
<input type="checkbox"/>	75.1901(a)	Diesel Fuel Evidence	<input type="checkbox"/>			
<input type="checkbox"/>	75.1911(j)	Inspections and Tests of Fire Suppression for Diesel Powered Equipment	<input type="checkbox"/>			
<input type="checkbox"/>	75.1912(i)	Inspections and Tests of Fire Suppression for UG Permanent Diesel Storage	<input type="checkbox"/>			
<input type="checkbox"/>	75.1914(h)(1)	Diesel-Powered Equipment, Weekly Tests and Examinations	<input type="checkbox"/>			
<input type="checkbox"/>	75.1915(c)	Diesel Training and Qualifications	<input type="checkbox"/>			
<input type="checkbox"/>	77.106	List of Certified and Qualified Person for Part 77 Duties	<input type="checkbox"/>			
<input type="checkbox"/>	77.216-3(c)	Impoundment Examinations	<input type="checkbox"/>			
<input type="checkbox"/>	77.314(c)	Quarterly Inspection and Calibration of Thermal Dryer Control Instruments	<input type="checkbox"/>			
<input type="checkbox"/>	77.403-1(d)	Certification of ROPS & FOPS	<input type="checkbox"/>			
<input type="checkbox"/>	77.502	Monthly Examination of Surface Electrical Equipment	<input type="checkbox"/>			
<input type="checkbox"/>	77.704-3	Working on Energized High Voltage Lines	<input type="checkbox"/>			
<input type="checkbox"/>	77.800-2	Monthly Tests, Exams, & Maintenance of Surface High Voltage Circuit Breakers	<input type="checkbox"/>			
<input type="checkbox"/>	77.900-2	Monthly Tests, Exams, & Maintenance of Surface Low & Medium Voltage Circuit Breakers	<input type="checkbox"/>			
<input type="checkbox"/>	77.1202	Mine Map (Posted and Available) (if applicable)	<input type="checkbox"/>			
<input type="checkbox"/>	77.1404	Daily Hoisting Equipment Examinations	<input type="checkbox"/>			
<input type="checkbox"/>	77.1432	Initial Hoist Rope Stretch Measurement	<input type="checkbox"/>			
<input type="checkbox"/>	77.1433(d)	Bi-Weekly Hoist Rope Examinations	<input type="checkbox"/>			
<input type="checkbox"/>	77.1433(e)	Semi-Annual Hoist Rope Measurements and Nondestructive	<input type="checkbox"/>			
<input type="checkbox"/>	77.1501(a)&(b)	Auger Mining Inspections (Surface) (If applicable)	<input type="checkbox"/>			
<input type="checkbox"/>	77.1606(a)	Record of Equipment Pre-Operational Checks (defects	<input type="checkbox"/>			
<input type="checkbox"/>	77.1702(e)	Emergency Medical Assistance Arrangements (Surface Mine)	<input type="checkbox"/>			
<input type="checkbox"/>	77.1703	First Aid Training of Surface Supervisory Employees	<input type="checkbox"/>			
<input type="checkbox"/>	77.1708	Safety Programs Instructions (Surface Mine)	<input type="checkbox"/>			
<input type="checkbox"/>	77.1713(c)	Daily Examination of Active Areas of Surface Mines	<input type="checkbox"/>			
<input type="checkbox"/>	77.1901(f)	Daily Examination of Slope and Shaft Sinking	<input type="checkbox"/>			
	30 CFR	Record Description	N/A	Reserved For	Date	Initials
<input type="checkbox"/>	77.1906(c)	Daily Inspection of Man-Hoists for Slope and Shaft Sinking	<input type="checkbox"/>			
<input type="checkbox"/>	77.1911(a)	Shaft and Slope Ventilation	<input type="checkbox"/>			
<input type="checkbox"/>	316(b)(2)(a)	Post-Accident and Tracking Failure	<input type="checkbox"/>			
<input type="checkbox"/>	316(b)(2)(a)	Post-Accident and Tracking Weekly	<input type="checkbox"/>			

Removed Equipment

Equipment Description	CO#	Serial#	Location	Remove Next Qtr/Hal

MSHA Handbook Series



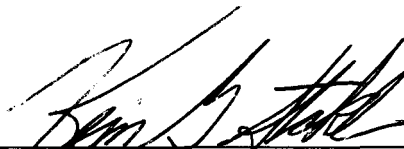
U.S. Department of Labor
Mine Safety and Health Administration
Coal Mine Safety and Health
Metal and Nonmetal Mine Safety and Health

December 2013

Handbook Number PH13-I-1(1)

CITATION AND ORDER WRITING HANDBOOK FOR COAL MINES AND METAL AND NONMETAL MINES

This handbook sets forth procedures to be followed in writing and issuing citations and orders for health, safety, training, and documentation violations at coal and metal and nonmetal mines. Changes to this handbook must be authorized by the Administrator for Coal Mine Safety and Health and the Administrator for Metal and Nonmetal Mine Safety and Health. Previously issued instructions relating to this subject are superseded by this handbook. Compliance related instructions contained in the MSHA Program Policy Manual are not superseded by this handbook.

A handwritten signature in black ink, appearing to read "Kevin G. Stricklin", written over a horizontal line.

Kevin G. Stricklin
Administrator for Coal
Mine Safety and Health

A handwritten signature in black ink, appearing to read "Neal H. Merrifield", written over a horizontal line.

Neal H. Merrifield
Administrator for Metal and Nonmetal
Mine Safety and Health

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APPENDIX E – MISCELLANEOUS FORMS AND CODES

DISCLAIMER

The citations and orders shown in the Appendices are examples for illustrative purposes only. Citation and order forms depicted in this Handbook are also for illustrative purposes and may not be an exact duplicate of the actual forms.

Citations and orders issued for violations of the Federal Mine Safety and Health Act of 1977, the Mine Improvement and New Emergency Response Act of 2006, or other standards or regulations must depict gravity and negligence determinations reflective of circumstances present at the time of issuance.

CHAPTER 1 – INTRODUCTION

I. AUTHORITY

The Federal Mine Safety and Health Act of 1977 (Mine Act) directs an Authorized Representative (AR) of the Secretary of Labor to issue citations and orders when he or she believes that a violation of the Mine Act or any mandatory health or safety standard, rule, order, or regulation promulgated pursuant to the Mine Act has occurred. The Mine Act also authorizes an AR to issue an order of withdrawal when an imminent danger condition exists. Sections 103, 104, and 107 of the Mine Act describe in detail the authority for issuing these citations and orders.

The Mine Improvement and New Emergency Response Act of 2006 (MINER Act) amended the Mine Act. It provides for such things as:

- increased protection for underground coal miners;
- changed reporting requirements for certain accidents occurring at mine sites;
- established a new classification of violations which may be deemed flagrant; and
- a modified civil penalty criteria.

II. PURPOSE

This handbook is intended to provide guidance for all enforcement personnel in:

- issuing, extending, modifying, vacating, and terminating citations and orders;
- describing the conditions or practices constituting a violation or imminent danger;
- writing clear justification for extensions and modifications of citations and orders;
- adequately describing the area or equipment affected by citations or orders; and
- adequately evaluating the degree of gravity and negligence of the violation.

This handbook has been combined to reflect the uniformity of citation and order writing for both metal and nonmetal and coal enforcement personnel. Procedures, scenarios, and examples in this handbook should be used by all enforcement personnel, except for safeguards which can only be issued by coal inspectors.

III. RESPONSIBILITY

If, upon inspection or investigation, an AR believes that a mine operator has committed a violation of the Mine Act or any mandatory health or safety standard, rule, order, or regulation promulgated pursuant to the Mine Act, he or she must issue a citation or order to the mine operator. Each citation or order must be in writing and shall describe with particularity the nature of the violation, including reference to the provision of the Mine

Act, standard, rule, regulation, or order alleged to have been violated. In addition, each citation must fix a reasonable time for abatement of the violation.

IV. BACKGROUND

Mine Safety and Health Administration (MSHA) personnel must constantly strive for accuracy in writing citations and orders. A significant percentage of citations and orders have been overturned during the legal process for reasons such as:

- failure to cite the appropriate standard;
- failure to establish the existence of an imminent danger;
- assumptions or suppositions not based on evidence of facts;
- failure to specifically describe the area of danger or area affected;
- issuance of a 107(a) order for control purposes when no imminent danger exists;
- illegible or confusing writing; and
- failure to properly evaluate the degree of gravity, exposure to the hazard, or the mine operator's negligence.

The description of a violation must be written in such a manner that all parties know the true nature of the situation. The descriptive narrative must include information that clearly establishes a violation and describes with particularity the nature of the violation. The proposed civil penalty prepared by the Office of Assessments is determined, in part, by information contained in the citation or order.

CHAPTER 2 - SELECTED PROVISIONS OF THE MINE ACT

I. INSPECTIONS AND INVESTIGATIONS

A. Section 103(a)

MSHA must conduct frequent inspections and investigations at coal and other mines each year for the purpose of: obtaining, utilizing, and disseminating information relating to health and safety conditions, the causes of accidents, and the causes of diseases and physical impairments originating in such mines; gathering information with respect to mandatory health and safety standards; determining whether an imminent danger exists; and determining whether mine operators have complied with mandatory health and safety standards, citations, orders, and decisions issued under the Mine Act. Additionally, MSHA must develop guidelines for additional inspections of mines.

B. Section 103(j)

Enforcement personnel shall consult with the appropriate District Manager before issuing 103(j) orders of withdrawal. In the event of a mine accident where rescue and recovery work is necessary, MSHA is authorized to take any action deemed appropriate to protect lives, including supervising and directing any mine rescue and recovery effort. The mine operator is required to take measures to prevent destruction of evidence that could assist accident investigators.

C. Section 103(k)

In the event of a mine accident MSHA may issue orders deemed appropriate to ensure the safety of any person in the mine. The operator of that mine shall obtain the approval of the MSHA representative, in consultation with state mining agency representatives (if appropriate), regarding any plan to recover any person in the mine, to recover the mine, or to return affected mining areas to normal.

II. CITATIONS, ORDERS AND NOTICES

A. Section 104(a)

If, upon inspection or investigation, an inspector believes that a mine operator subject to the Mine Act has violated this Act, or any mandatory health or safety standard, rule, order, or regulation promulgated pursuant to the Mine Act, he or she shall, with reasonable promptness, issue a citation to the mine operator. Each citation shall be in writing and shall describe with particularity the nature of the violation, including a reference to the provision of the Mine Act, standard, rule, regulation, or order alleged to have been violated. In addition, the citation shall fix a reasonable time for the abatement of the violation. The requirement for the issuance of a citation with

reasonable promptness shall not be a jurisdictional prerequisite to the enforcement of any provision of the Mine Act.

B. Section 104(b)

When an inspector finds that a violation previously cited has not been abated and that the period of time for abatement should not be further extended, he or she must issue a withdrawal order for the cited equipment or that part of the mine affected by the violation. The operator is required by such an order to remove all persons from the area affected, except those persons necessary to correct the violation as referenced in Section 104(c), until the violation is abated.

C. Section 104(d)(1) Citations

Upon MSHA's finding of a violation which could significantly and substantially contribute to the cause and effect of a safety or health hazard and is due to the mine operator's unwarrantable failure to comply, such a finding shall be included in any citation issued to the operator.

D. Sections 104(d)(1) and 104(d)(2) Orders

If another violation of a mandatory standard, whether significant and substantial or not and which is caused by the mine operator's unwarrantable failure, is found during the same or any subsequent inspection within 90 days of issuance of the 104(d)(1) citation, MSHA shall issue a 104(d)(1) withdrawal order. If an unwarrantable failure violation is observed during any subsequent inspection made after a 104(d)(1) order has been issued, a 104(d)(2) order shall be issued. These two sections provide for the issuance of withdrawal orders that are caused by the mine operator's unwarrantable failure to comply with mandatory safety and health standards.

E. Section 104(e)(1)

If MSHA has established that a mine operator has the same pattern of violations by receiving repeat or multiple significant and substantial violations of mandatory MSHA standards, the operator shall be issued a notice that such a pattern exists. Provisions are also made in this section for withdrawing all persons from the affected area if MSHA finds another significant and substantial violation during an inspection within 90 days of issuance of the notice of pattern of violations. The 104(e) withdrawal order remains in effect until MSHA finds the violation has been abated.

F. Section 104(e)(2)

Where miners have been withdrawn under Section 104(e)(1), a further withdrawal order shall be issued upon MSHA's finding of a significant and substantial violation during a subsequent inspection.

G. Section 104(e)(3)

The pattern of violations that resulted in the issuance of a notice shall be terminated if an MSHA inspection of the entire mine finds no significant and substantial violations of mandatory standards. However, a mine operator can reestablish a pattern of violation status as a result of subsequent significant and substantial violations.

H. Section 104(g)(1)

If an inspector finds that any miner has not received the mandatory health and safety training required under Section 115 of the Mine Act, the miner shall be ordered withdrawn from the mine until he or she has completed the required training.

I. Flagrant Violations

With the passage of the MINER Act, Section 110(b) of the Mine Act was amended to include:

"Violations under this Section [110(b)] of the Mine Act that are deemed to be flagrant may be assessed a civil penalty of not more than \$220,000. For purposes of the preceding sentence, the term 'flagrant' with respect to a violation means a reckless or repeated failure to make reasonable efforts to eliminate a known violation of a mandatory health or safety standard that substantially and proximately caused, or reasonably could have been expected to cause, death or serious bodily injury."

"Flagrant" violations are an MSHA assessment enforcement tool as are other special assessments. They are applied only to elevated enforcement actions meeting certain criteria. The inspectors' determination of the proper level of enforcement action remains the same. The enforcement actions of 104(d)(1) citations, 104(d)(1) orders, and 104(d)(2) orders and the policies and procedures used to determine their use remains the same without regard to a 'flagrant' designation. More information on this subject can be found in Chapter 4 in this handbook.

III. PROCEDURES TO COUNTERACT DANGEROUS CONDITIONS

A. Section 107(a)

If an inspector finds an imminent danger condition or practice existing at a mine, he or she shall issue a 107(a) order withdrawing persons from the affected area or equipment from service. No one may enter the area, except those persons necessary to correct the conditions as referenced in Section 104(c), until MSHA determines that conditions and practices which caused the imminent danger no longer exist.

B. Section 107(b)

If an inspector finds that conditions exist at a mine which have not yet resulted in an imminent danger, that such conditions cannot be effectively abated using existing technology, and that an imminent danger cannot be ruled out if mining activities were to proceed, the inspector shall issue a 107(b) notice to the operator informing him or her of such conditions. A copy of this notice shall be filed with the Secretary of Labor and with the representative(s) of the miners. This section also permits MSHA to issue notices, conduct investigations, hold public hearings, and make findings of fact. The appropriate District Manager shall be consulted before these types of actions are issued.

IV. MINERS SMOKING OR CARRYING SMOKING MATERIALS IN PROHIBITED AREAS -- SECTION 110(g)

Any miner who willfully violates the mandatory safety standards relating to smoking or the carrying of smoking materials, matches, or lighters shall be subject to a civil penalty assessed by the Commission of not more than \$375 for each occurrence of such violation.

CHAPTER 3 - VIOLATION DESCRIPTION AND ISSUING FORM

I. FACTUAL INFORMATION

It is important that factual information, not conclusions, be included in each citation or order. Statements such as "additional roof support is needed" or "adequate fire protection was not provided" may be true but these descriptions do not clearly describe a violation. The former does not describe the condition of the roof or the type and amount of roof supports installed, nor identify a hazard. The latter does not indicate the nature of the fire hazard nor the degree to which protection is not provided.

The citation or order must contain facts sufficient to establish a violation of the standards under the Mine Act and any special circumstances related to the violation, such as "significant and substantial" and "unwarrantable failure" findings.

II. VIOLATION DESCRIPTION

Essential elements to be considered in a violation description are:

- A. The conditions and practices causing and constituting the violation of a specific regulation or section of the Mine Act. They must be accurately identified and described.
- B. A determination of what caused the violation by clearly describing conditions and practices. This determination is particularly significant when citing violations in conjunction with imminent danger orders and Section 104(d) citations and orders.
- C. The location or equipment where the violation or hazard exists. This element **must** be specifically identified for several reasons:
 - 1. It serves as notification to the mine operator for abatement purposes;
 - 2. It informs the miners and miners' representative(s) of the exact location of the hazard; and
 - 3. It serves as clarification for inspectors on abatement visits.
- D. Information concerning gravity and negligence. This information must be provided so an accurate determination of the proposed civil penalty can be made.
- E. Information concerning the hazard, exposure, or lack of exposure to miners. Some mandatory standards require that exposure be shown to support a citation or order.
- F. Facts relevant to the mine operator's knowledge of the violative condition or practice.

III. CITATION, CONTINUATION, SUBSEQUENT ACTION, AND ORDER FORMS

- A. MSHA Form 7000-3 shall be used for issuing citations, orders, 110(g) notices, and the initial pattern of violations notice.
- B. MSHA Form 7000-3a shall be used for continuations and subsequent actions for citations, orders, and pattern of violations notices.
- C. Each set of forms are usually distributed as follows:
 - Original - mine operator
 - Second page - MSHA inspector
 - Third page - miners' representative, if applicable
- D. Computer generated citations/orders require an original signature for each printed copy.
- E. Distribution of the computer copies will be the same as for the hand written copies.

CHAPTER 4 - CITATIONS AND ORDERS

These procedures shall be followed when completing Mine Citation/Order Form 7000-3 unless otherwise specified. The items referenced below correspond to the appropriate sections on Form 7000-3. Many of the documentation procedures in this Handbook do not include completion of Section IV of the Citation/Order or Continuation form in order to reduce redundancy.

I. COMPLETING MINE CITATION/ORDER FORMS

A. Section I - Violation Data

1. Date - Enter the issue date by using the following format for the month, day, and year (mm/dd/yyyy, e.g., 01/07/2013).
2. Time - Enter the issue time with a four-digit number based on a 24-hour clock (military time, e.g., 22:30).
3. Citation/Order Number - The seven-digit number preprinted on the Form 7000 3 or generated by an inspector's computer.
4. Served To - Enter the first and last name of the operator (or operator's agent) and title to whom the citation or order is served.
5. Operator - Enter the official business name of the mining company as shown on the MSHA Legal Identity Report Form 2000-7 in effect at the time the violation occurred. Enter the name of the independent contractor if a contractor is being cited.
6. Mine - Enter the mine name as shown on the Legal Identity Report Form in effect at the time the violation occurred.
7. Mine ID - Enter the seven-digit MSHA mine identification (ID) number. If applicable, also enter the contractor's three or four digit MSHA ID number.
8. Condition or Practice - Provide a detailed description of the condition(s) or practice(s) which causes and constitutes a violation or an imminent danger. If more space is needed, check the "Continuation" block in the lower right hand corner of Item 8 and use a Mine Citation/Order Continuation Form 7000-3a.
- 8a Written Notice - This block is for coal inspectors to use when a violation is cited during any inspection conducted as a result of a written complaint. Coal inspectors should not use this block for any violation other than those issued as a result of the complaint. This does not alter the type of inspection that is ongoing.
9. Violation
 - A. Health, Safety, and Other - These blocks are for coal inspectors to use to mark whether the cited hazard relates to health, safety, or other (administrative). For violations of § 75.370, coal inspectors may mark both the health and safety blocks.

- B. Section of Act - Enter the applicable section [e.g., Section 103(a), Section 104(b)] here if a section of the Mine Act has been violated, otherwise leave blank.
- C. Part/Section of Title 30 CFR – Identify the Part and Section of Title 30 CFR violated including the subparagraphs of the section violated. **Exception: Do not** complete Item 9C if you issue a section 107(a) imminent danger order without citing a violation of a mandatory health or safety standard. Refer to Section XVII in this chapter for further guidance concerning section 107(a) imminent danger orders.

B. Section II – Inspector’s Evaluation

10. Gravity - Gravity is an evaluation of the seriousness of the violation. It is determined by the three factors listed in § 100.3 (e) (Determination of penalty amount; regular assessment). Section 100.3 states: “Gravity is determined by the likelihood of the occurrence of the event against which a standard is directed; the severity of the illness or injury if the event has occurred or was to occur; and the number of persons potentially affected if the event has occurred or were to occur.” These factors correspond to items 10A, 10B, and 10D on MSHA Form 7000 3.

Inspectors should first determine what injury or illness the standard is designed to prevent based on the specific facts pertaining to the violation. In general, a mandatory safety or health standard is designed to prevent an injury or illness. For example, § 62.100 (Occupational noise exposure) states that the purpose of Part 62 standards is to: “...prevent the occurrence and reduce the progression of occupational noise-induced hearing loss among miners.” Likewise, the standards in Subpart C of Part 75 (Roof Support) are designed to protect persons from injuries caused by falls of the roof, face, or ribs and coal or rock bursts.

Some standards are designed to prevent more than one type of injury or illness, depending on the circumstances specific to the cited condition or practice. For example, § 75.400 (Accumulation of combustible materials) is generally designed to prevent fires; however, when accumulations of float coal dust are present, this standard is also designed to prevent coal dust explosions.

After determining the injury or illness against which the standard is directed, the inspector should consistently consider that same injury or illness when evaluating each of the gravity factors listed in items 10A, 10B, and 10D on MSHA Form 7000-3.

A. Injury or Illness (has) (is): Check the appropriate block to indicate the likelihood of an injury or illness occurring. Factors such as the fatality and injury or illness frequency associated with the violation in the general industry are relevant but must be tied to an evaluation of the particular circumstances surrounding the violation as found by the inspector.

In determining the likelihood of an injury or illness, the inspector should assume that normal mining operations would have continued with the violation remaining unabated. Factors to consider when evaluating likelihood include: how frequently miners are exposed to the condition or practice; the number of miners exposed to the condition or practice; the location and extensiveness of the condition or practice; and the length of time the condition or practice has existed. The longer a condition

or practice has existed, together with the frequency of exposure, increases the likelihood of an injury or illness.

Also, in evaluating the likelihood of harm from violation of a standard intended to protect miners in an emergency, the inspector should assume that the emergency has occurred. For example, in evaluating the likelihood of harm arising from an operator's failure to properly maintain SCSRs, the inspector should assume that a fire, explosion, or other event that would cause a miner to don an SCSR has occurred.

The choices for likelihood on the Mine Citation/Order Form are as follows.

- No Likelihood – Select this box for violations of laws or regulations that are not designed to prevent injury or illness. This block must always be selected when citing a violation of a law or regulation that is not a mandatory health or safety standard. (See Paragraph E)
- Unlikely – Select this box for violations of mandatory standards when the injury or illness against which the standard is directed is not reasonably likely to occur. This would include violations in which normal mining operations would not be expected to create the circumstances necessary to trigger the injury- or illness-causing event.
- Reasonably Likely – Select this box for violations of mandatory standards when the injury or illness against which the standard is directed is reasonably likely to occur. This would include violations in which normal mining operations would be expected to create the circumstances necessary to trigger the injury- or illness-causing event. The occurrence of an injury or illness does not have to be more probable than not in order for the likelihood to be designated as reasonably likely.
- Highly Likely – Select this box for violations of mandatory standards when the injury or illness against which the standard is directed is highly likely to occur. This would include violations in which the circumstances necessary to trigger the injury- or illness-causing event already exist.
- Occurred – The "Occurred" block can only be checked when an injury or illness has actually occurred. For example, the inspector might observe a recent roof fall along a travelway. It is evident the roof was not adequately supported or scaled. The inspector should not evaluate the likelihood as "Occurred" because a miner was not injured by the fall. Based on the traffic along the travelway and other factors, the inspector could evaluate the likelihood of injury as "Highly Likely," "Reasonably Likely," or "Unlikely."

When an event has "Occurred" and an injury or illness resulted, the severity of injury or illness marked in Item 10B on MSHA Form 7000-3 should match the injury or illness that actually occurred if the actual injury/illness was equal to or more severe than expected. If, however, an injury or illness has occurred that is less serious than could reasonably be expected, the inspector should evaluate the injury or illness at the level of severity that could reasonably be expected.

Example of an injury less severe than expected

Scenario: A miner was trapped in a bin for an hour, but emerged with only minor injuries. However, a fatal injury would have been expected given the facts of the entrapment.

These types of violations should be evaluated based on the expected rather than the actual results. Accordingly, assuming a violation was observed that directly related to the entrapment, the violation would be evaluated as at least “Reasonably Likely” and “Fatal” rather than “Occurred” and “No Lost Workdays.”

Example of an injury more severe than expected

Scenario: A miner was struck on the head with a small rock and later dies as a result of the injury.

These types of violations should be evaluated based on the actual rather than the expected results. Accordingly, assuming a violation was observed that directly related to the miner being injured, the violation would be evaluated as “Occurred” and “Fatal.”

- B. Injury or illness could reasonably be expected to be:** Evaluate the expected severity of the injury or illness and check the appropriate box based on the facts available. This evaluation is entirely independent of the likelihood of the injury or illness. The inspector should assume that an injury or illness has occurred and evaluate only the expected severity.

The degrees of severity on the Mine Citation/Order Form are as follows:

- No lost work days – Select this block when the expected injury or illness would not cause the affected miner(s) to miss one or more scheduled workday(s) or to be placed on restricted duty, excluding the day of injury or onset of illness. This block must always be selected when citing a violation of a law or regulation that is not a mandatory health or safety standard. (See Paragraph E)
- Lost work days or restricted duty – Select this box when the expected injury or illness would cause the injured or ill person to lose one full day of work or more after the day of the injury or illness, or would cause one full day or more of restricted duty.
- Permanently disabling – Select this box when the expected injury or illness would result in the total or partial loss of the use of any member or function of the body.
- Fatal – Select this box when the expected injury or illness would result in death, or has a reasonable potential to cause death.

Scenario: A berm or guardrail is not provided for a haul road located at the top edge of a 300-foot tall highwall. The haul road is accessible but is rarely used. Tire

tracks are not present and there is no operational or maintenance need to travel the haul road. (Unlikely; Fatal; “S&S” - No)

- C. Significant and Substantial:** By checking "Yes" in Item 10C ("S&S"), the inspector is indicating that based upon the particular facts surrounding the violation there exists a reasonable likelihood the hazard contributed to by the violation will result in an injury or illness of a reasonably serious nature.

It is very important to first determine the likelihood of the injury or illness (Box 10A) and the expected severity of the injury or illness (Box 10B) before attempting to make the S&S determination for a violation. Checking the correct boxes will greatly simplify making the correct S&S determination.

Check the appropriate box based on the evaluations made in items 10A and 10B.

- Yes – Select this block for a violation of a mandatory health or safety standard when the likelihood of injury or illness in item 10A is marked at least “Reasonably Likely,” and the expected injury or illness in item 10B is marked at least “Lost Workdays or Restricted Duty.”
- No – Select this block when the likelihood of injury or illness in item 10A is marked less than “Reasonably Likely,” and/or the expected injury or illness in item 10B is marked less than “Lost Workdays or Restricted Duty.”

Only violations of mandatory health and safety standards, as opposed to violations of regulations, can be designated as “S&S.” Violations of sections of the Mine Act other than Titles II and III, without an accompanying mandatory health or safety standard, also cannot be designated as “S&S.” (See Paragraph E)

The Federal Mine Safety and Health Review Commission (Commission) has determined that the relevant time frame for determining whether a reasonable likelihood of injury exists includes both the time that a violative condition existed prior to the citation and the time that it would have existed if normal mining operations had continued. Therefore, if no miners were exposed to the hazard at the time of the violation, an inspector still might evaluate the violation as “Reasonably Likely” if a miner was exposed to the hazard before the inspector observed the violation or if it was reasonably likely that a miner would be exposed to the hazard if normal mining operations were allowed to continue.

The Commission has also held that in evaluating the reasonable likelihood of a fire, ignition, or explosion, one must examine whether a “confluence of factors” is present based on the particular facts surrounding the violation. This means that in some cases, additional circumstances must occur for the hazard associated with the violation to cause an injury or illness.

Examples of properly evaluated violations

Scenario: [Referencing § 56/57.14107 (Moving Machine Parts) or § 77.400 (Mechanical Equipment Guards)] Persons were working next to the stacking conveyor while it was in motion. They were reasonably likely to come in contact

with and be injured by the unguarded moving machine parts of the #2 self-cleaning tail pulley. (Reasonably Likely; Permanently Disabling; "S&S" - Yes)

Scenario: (Referencing § 56/57.14107 or § 77.400) A guard was not provided on the #2 self-cleaning tail pulley of the stacking conveyor. Persons did not work or travel in the area on any shift while the machinery was running. The conveyor was turned off and locked out when maintenance was performed. (Unlikely; Permanently Disabling; "S&S" - No)

Scenario: (Referencing § 56/57.14107 or § 77.400) A guard was not provided on the #4 self-cleaning tail pulley adjacent to the walkway. Persons were not in the area and the tail pulley was not in operation at this time. However, persons had been in the area and the equipment had been operating on the previous shift with the guard off. The tail pulley was not out of service, however, and it was scheduled to operate when night shift operations began later today. Personnel travel on the walkway next to the energized tail pulley during the night shift. (At least Reasonably Likely; Permanently Disabling; "S&S" - Yes)

Scenario: (Referencing Section 109 of the Mine Act (Posting of Orders and Decisions)) Citations issued during an inspection are not being posted on the mine bulletin board. (No likelihood; No Lost Workdays; "S&S"-No)

Examples of improperly evaluated violations

Scenario: (Referencing § 56.14107) the #2 conveyor motor V-belt drive was not guarded and persons were not in the area at the time. (Unlikely; Permanently Disabling; "S&S" - No)

This evaluation is not correct if it is based only on the insufficient reason that miners were not in the area at the time the violation was observed. There must be documented evidence based on past, present, and continued mining operations, that miners had not or would not be in the area for the violation to be properly be evaluated as "unlikely" and therefore "non-S&S." Further, a statement that "the machinery was not operating at this time" is not sufficient reason for evaluating a violation as "non-S&S."

Scenario: A loader was observed parked and not operating at the time of inspection. It did not have the required seat belts installed. The inspector determined that the machine was used as a spare and was not out of service. The inspector did not issue a citation for the lack of seat belts. The only rationale used by the inspector was that the loader was not operating at the time he or she observed the violation.

This evaluation is not correct - a violation was observed on mobile equipment that could be started and used any time subjecting miners to possible injury or death. A citation shall be issued for all violations found on equipment or machinery not taken out of service and tagged prior to being inspected by MSHA.

D. Number of Persons Affected: Enter the number of persons affected if the injury or illness occurred or were to occur. The number of persons affected is the number of persons who could reasonably be expected to be harmed should the anticipated

event occur, or the number of persons who received an injury or illness if the event did occur and the likelihood is marked as “Occurred.” This number is always zero (000) when citing a violation of the Mine Act or a regulation that is not a mandatory safety or health standard. (See Paragraph E) The “Number of Persons Affected” can vary, depending on mining conditions, the hazard, and the area of exposure.

- Scenario: A citation was issued for overexposure to noise. The inspector determined that the crusher operated three shifts, seven days a week and that one miner worked in the crusher area performing the same duties on each of the three shifts. The total “Number of Persons Affected” for this violation would be 3.
- Scenario: A citation was issued for overexposure to respirable dust for the designated occupation on a mechanized mining unit (MMU). The inspector determined that 7 miners worked on the MMU on each of three shifts. The total “Number of Persons Affected” for this violation would be 21.
- Scenario: A citation was issued because a mine operator was not complying with the Approved Mine Emergency Evacuation and Firefighting Program of Instruction. The inspector determined that 10 miners worked underground on one shift. The total “Number of Persons Affected” for this violation would be 10.
- Scenario: A citation was issued to a mine operator for a front end loader not having effective service brakes. The inspector determined that one miner operated the loader on each of three shifts. The total “Number of Persons Affected” would be 1, since only one miner would be injured (affected) if the brakes failed. (This is based on the assumption that the brakes would be repaired before another miner is injured.)
- Scenario: An “S&S” violation was issued to a mine operator for two miners working on a crusher without the machinery’s controls having been locked or tagged as being out of service. The inspector determined that the two miners were the only persons working on the crusher and that work was not performed on the machinery on other shifts. The total “Number of Persons Affected” would be 2.

It is important not to confuse the “Number of Persons Affected” by a condition or practice with the number of persons exposed to the condition or practice. The “Number of Persons Affected” is entered in Block 10D of the Mine Citation/Order Form (See above.) The number of persons exposed is not entered on the Form, but it often can be used in evaluating the likelihood that an event will cause an injury or illness. For example, assume there is a small area of loose roof in the travelway between the end of the track and the working section. Each day 10 miners travel under the bad roof twice a shift, three shifts per day. Thirty miners (10 miners, three shifts) are exposed to the hazard created by the bad roof. This exposure could be used to justify a finding that the hazard was “Reasonably Likely” or even “Highly Likely” to injure a miner. However, the loose roof is small enough that if it

fell, it would only strike one miner. As a result, only one miner would be affected by the hazard, while 30 miners were exposed to the hazard created by the violation.

- E.** Only a violation of a “mandatory health or safety standard” can be designated as “S&S.” Therefore, only violations of requirements in § 50.10 and 30 CFR Parts 46, 47, 48, 49, 56, 57, 58, 62, 70, 71, 72, 75, 77, and 90 can be designated as “S&S.”

Violations of requirements in 30 CFR Parts 40, 41, 43, 44, 45, or 50 (except § 50.10) cannot be designated as “S&S” because they are regulations, not mandatory health and safety standards. For these violations, item 10A shall be marked “No Likelihood,” item 10B shall be marked “No Lost Workdays,” item 10C shall be checked “No,” and item 10D shall indicate the “Number of Persons Affected” as “000.”

Violations of sections of the Mine Act other than Titles II and III, without an accompanying mandatory health or safety standard, also cannot be designated as “S&S.” Enter the following into the Condition or Practice section of the 7000-3 Form for these violations:

“The condition has been designated as “non significant and substantial” because the conduct violated a provision of the Mine Act other than a mandatory safety or health standard.”

- 11. Negligence** - Negligence is defined in § 100.3(d) as “...conduct, either by commission or omission, which falls below a standard of care established under the Mine Act to protect miners against the risks of harm. Under the Mine Act, an operator is held to a high standard of care. A mine operator is required to be on the alert for conditions and practices in the mine that affect the safety or health of miners and to take steps necessary to correct or prevent hazardous conditions or practices. The failure to exercise a high standard of care constitutes negligence.”

The degrees of negligence are defined in § 100.3 (d) as follows:

- No negligence - The operator exercised diligence and could not have known of the violative condition or practice.
- Low negligence - The operator knew or should have known of the violative condition or practice, but there are considerable mitigating circumstances.
- Moderate negligence - The operator knew or should have known of the violative condition or practice, but there are mitigating circumstances.
- High negligence - The operator knew or should have known of the violative condition or practice, and there are no mitigating circumstances
- Reckless disregard - The operator displayed conduct which exhibits the absence of the slightest degree of care.

If there are no mitigating circumstances, negligence must be evaluated at least “High” unless the operator could not have known about the violation (that is, there was no

negligence at all). Mitigating circumstances may include but are not limited to the following:

- The operator has made a reasonable effort to prevent or correct hazardous conditions or practices before the inspector observed the conditions or practices.
- Ordering repair parts, posting warning signs, or restricting travel in a hazardous area prior to being cited also could be considered as possible mitigating circumstances. However, actions taken by the operator after being cited, such as, withdrawing equipment and personnel and/or immediately proceeding to correct the violation should not alter the negligence evaluation made by the inspector.

Mine operators are required to be on alert for conditions or practices in the mine that affect the safety or health of miners and to take the steps necessary to correct or prevent hazardous conditions or practices.

Negligence for unwarrantable failure violations has been defined as aggravated conduct constituting more than ordinary negligence. Accordingly, when citing a violation with “high” negligence, the inspector also must evaluate whether aggravated conduct exists to determine if the violation also is an unwarrantable failure to comply.

Factors inspectors should evaluate when determining “aggravated conduct” may include the following:

- The violative condition or practice posed a high degree of danger to miners.
- The violative condition or practice was obvious and/or extensive.
- The violative condition or practice had existed for a period of time.
- Repeated similar violations have been cited at the mine or to the contractor in the recent past.
- An agent of the operator or contractor had been in the area, or was aware of the existence of the hazard.
- The operator knew or had reason to know that its action(s) violated a mandatory standard.
- The violative condition or practice had been reported to the operator or contractor who then allowed it to exist, without correcting or adequately addressing the problem, for a period of time.
- The violation was a result of deliberate activity by the operator.
- The individual who committed or allowed the condition or practice to exist was a supervisor or an agent of the operator or contractor;

- Reasonable efforts were not made by the mine operator or contractor to prevent or correct the hazard.
- Other factors, not enumerated above, resulted in a negligence evaluation by the inspector of “high” or “reckless disregard.”

Any one of the circumstances above may constitute sufficient grounds for an unwarrantable failure citation or order.

Inspectors must include the factors that explained how the operator engaged in aggravated conduct in the Condition or Practice section of the Mine Citation/Order Form when issuing a section 104(d) citation or order.

(See Section XIII of this document for detailed information on Section 104(d) Citations and Orders.)

12. Type of Action - Identify the Section of the Mine Act under which action is being taken [e.g., 104(a), 104(d)(1)].
13. Type of Issuance - The "Safeguard" block is for Coal use only. Check the "Citation," or "Order," or “Safeguard” block for the appropriate type of issuance. The “Written Notice” block is to be used by District Managers when issuing the initial 104(e) Pattern of Violations Notices. It is also used by inspectors when issuing 110(g) notices for miners smoking or carrying smoking materials in prohibited areas.
14. Initial Action - Check block “A” or "B” or “D” for the type of initial issuance, if appropriate, that subsequently resulted in this action. The "Safeguard" block (block “C”) is for Coal use only.
 - E. Citation/Order Number - Enter the seven-digit preprinted control number from the initial action.
 - F. Dated - Enter the date of the initial action.
15. Area or Equipment - This pertains only to orders of withdrawal [i.e., 104(b), 104(d), 104(e), 104(g), 107(a), 103(j) and 103(k)] and must indicate the area from which employees shall be withdrawn until the dangerous conditions and causes of those conditions have been corrected. Equipment should be identified by manufacturer, model, serial number (if known), color, and name, etc. if it is ordered removed from service.

Note: The phrase "No Area Affected" should be written in this space if this is a technical order of withdrawal [e.g., 104(b) order for failure to complete Part 50 employment or injury reporting reports.
16. Termination Due Date and Time (A and B) - Enter the date and time the mine operator is required to have the violation corrected. These blocks are left blank for orders of withdrawal.

C. Section III - Termination Action

17. Action to Terminate - Describe in detail the specific action(s) taken to correct the cited condition(s) or practice(s) which justifies termination. Do not write terms like “The condition was corrected.”
18. Terminated Date and Time (A and B) - Enter the date and time the termination was issued.

D. Section IV - Automated System Data

19. Type of Inspection (Activity Code) - Enter the appropriate enforcement activity code.
20. Event Number - Enter the preprinted event number from the Inspection/Investigation Data Summary Form 4000-40 for M/NM and from the Mine Activity Data Form 2000-22 for Coal.
21. Primary or Mill – This block is for metal and nonmetal inspectors. They should enter the letter “P” if the violation occurred in the production or primary mining phase of the operation. Generally, an entry of “P” includes activities and/or equipment from the mining site up to, but not including, milling processes. Enter the letter “M” if the violation occurred in the milling phase of the operation.

Exception: Violations cited at free standing mills with a separate Mine ID number should have “P” entered in this space.

22. Signature - The signature of the inspector issuing the citation or order must be entered in this block.
23. AR Number - Enter the AR number of the inspector issuing the citation or order.

II. SECTION 103(a) - CITATIONS FOR DENIAL OF ENTRY

A. Denial of Entry - Established MSHA Mine ID Number

When a mine operator or his or her agent directly refuses to allow an inspector entry to an active mining operation having an MSHA mine ID number, the inspector must issue a Section 104(a) citation citing Section 103(a) of the Mine Act and immediately contact his or her supervisor. The inspector must either hand deliver or mail the citation to the mine operator certified mail, return receipt requested.

Note: In the rare instances that these types of violations are issued, inspectors and supervisors should discuss them with the district office and/or regional solicitor prior to issuance. These violations are frequently litigated and are often contentious so consultation and coordination with all parties prior to issuance will assure that everyone understand the situation and are in agreement with the actions being taken.

B. Denial of Entry - No Established MSHA Mine ID Number

The inspector must notify his or her supervisor to determine whether or not the mining operation falls under the jurisdiction of the Mine Act. If it is subsequently determined that the operator is engaged in mining or milling activities and if entry is denied to a mine that does not have an MSHA mine ID number, a mine ID number should be obtained based on the information that has been acquired.

After the mine ID number has been obtained, the field office supervisor and inspector should return to the mine, or make arrangements to meet with the mine operator, and request access under the provisions of the Mine Act.

C. Other Forms of Denial of Entry

Denial of right of entry procedures also apply when inspectors have been granted entry but are not allowed to inspect or to continue an inspection or investigation. These procedures apply to any type of interference whether it be delay, harassment, or personal assault.

In all such cases, except personal threats or assault, the inspector should try to communicate with the mine operator, explaining the entry and inspection rights of MSHA under Section 103(a) of the Mine Act.

MSHA policy requires that an inspector leave the scene where an apparent violation of Section 111 of Title 18 of the United States Code is about to occur. To avoid a confrontation, inform the person(s) involved that an attack on an MSHA inspector is a Federal crime and that they may be subject to arrest. If the inspector believes that he/she is subject to physical harm or assault, he/she should leave the property immediately and promptly notify his/her supervisor.

D. 104(b) Orders - Denial of Entry

A Section 104(b) order of withdrawal must be issued if the operator still refuses entry after a Section 104(a) citation has been issued. Injunctive proceedings may be initiated by the District Manager if the operator does not comply with the order. Section XIX in this chapter details procedures on issuing 104(a) citations if the operator works in the face of an order of withdrawal.

Note: In the rare instances these types of violations are issued, supervisors should discuss them with the district office and/or regional solicitor prior to issuance. These types of violations are frequently litigated and are often contentious so consultation and coordination with all parties prior to issuance will assure that everyone understand the situation and are in agreement with the actions being taken.

E. Documentation for Denial of Entry

1. On a Mine Citation/Order Form, fill out the other blocks as you normally would and then:

- a. After the violation description has been entered in Section I, item 8, the following sentence shall be added: The condition has not been designated as “significant and substantial” because the conduct violated a provision of the Mine Act rather than a mandatory safety or health standard.
 - b. Enter "103(a)" in Item 9B. Leave Item 9C blank since a standard is not violated.
 - c. Complete Items 10A through 10D, Item 11, and enter "104(a)" in Item 12. Note: Item 10C must be marked “no.”
 - d. Check the "Citation" block in Item 13 and leave Item 15 "Area or Equipment" blank.
 - e. In Item 16 enter the "Termination Due Date and Time." Terminate the citation if entry is permitted.
2. On an Order of Withdrawal, fill out the other blocks as you normally would and then:
- a. Enter "103(a)" in Item 9B and leave Item 9C blank.
 - b. Do not complete Items 10A through 10D and Item 11. In Item 12 enter "104(b)" and check the "Order" block in Item 13.
 - c. In Item 14 check the "Citation" block and enter the number of the denial of entry citation and the date it was issued.
 - d. In Item 15 enter "No Area Affected" and leave Item 16 blank. Terminate the order if entry is permitted.
3. In Item 19 enter the appropriate "Type of Inspection" MIS code for the inspection type that was intended if the inspection occurs.

III. SECTION 103(j) AND 103(k) ORDERS

After a mine accident defined in 30 CFR Part 50.2 has occurred, an AR may assume the authority to take whatever action is necessary to protect the health, safety, and life of any person under Section 103(k) of the Mine Act.

A 103(j) or 103(k) order **should not** be solely issued to preserve accident evidence since the mine operator is required to take this action under 30 CFR Part 50.12.

If the operator does not preserve accident evidence, it is appropriate to issue a 104(a) citation citing Part 50.12. This 104(a) citation should not be issued unless pertinent accident evidence has been removed, changed or destroyed.

INSPECTORS SHALL NOT ISSUE 103(j) ORDERS UNTIL CONSULTING WITH THE APPROPRIATE DISTRICT MANAGER.

A. Accident and Rescue/Recovery Procedures

Inspectors will generally use Section 103(k) to protect the safety of any person in the mine when a mine condition exists as a result of an accident that threatens the safety of miners. The 103(k) order does not preclude the issuance of a Section 107(a) order if an imminent danger situation is found. It is imperative that discretion and good judgment be exercised by inspectors when using the broad authority provided by the Mine Act.

In instances where an accident has resulted in the death or serious injury to a miner and the inspector believes that the hazardous condition(s) or practice(s) causing that accident is likely to exist elsewhere at the mine, the Section 103(k) order shall include all such areas of the mine. In some instances, it will be obvious that the conditions are peculiar to the accident site, and, therefore, the Section 103(k) order would not apply to areas other than the accident site.

The 103(k) order should remain in effect until a systematic evaluation of the conditions and safety practices is conducted and a determination is made that hazards similar to those which caused or contributed to the accident have been eliminated. The evaluation can be made prior to the accident investigation or concurrent with it. After this evaluation and determination has been made, the Section 103(k) order may be modified to permit an area of the mine to resume operations, or terminated, provided that such action will not pose a hazard to the miners.

B. Differences Between Sections 103(j), 103(k), and 107(a) Orders

Section 107(a) orders contain an exception to the requirement to withdraw persons from the affected area(s) under Section 104(c).

Section 104(c) of the Mine Act states that certain persons are not required to be withdrawn or prohibited from entering any mine area. This refers to persons who, in the judgment of the mine operator or the inspector, are necessary to eliminate the conditions described in the order.

Sections 103(j) and 103(k) of the Mine Act contain no exceptions. If an inspector believes it is necessary to protect the life or safety of any person, even those persons mentioned in Section 104(c) may be prohibited from entry into a mine area. This exclusion would be noted in the written narrative of the 103(j) or 103(k) order.

The issuance of a Section 103(k) order does not preclude the issuance of a Section 107(a) order should an imminent danger situation be found. Additionally, a 103(k) order will not be used as a substitute for, or in place of, a 107(a) imminent danger order.

C. Documentation for 103(j) and 103(k) Orders

1. Section I of Form 7000-3: fill out the other blocks as you normally would and then:

Item 8 - describe in detail what has occurred and what the mine operator is required to do.

Item 9 - leave blank.

2. Section II of Form 7000-3:

Items 10 and 11 - leave blank.

Item 12 - enter "103(j)" or "103(k)" whichever is applicable.

Item 13 - check the "Order" box.

Item 14 - leave blank.

Item 15 - provide a detailed description of the area or equipment affected.

Items 16, 17, and 18 - leave blank.

IV. SECTION 104(a) CITATIONS

Section 104 citations are the primary tool for obtaining compliance with the Mine Act, mandatory health, safety, training, and other standards, rules or regulations.

A Section 104(a) citation must set forth:

- a violation of a standard, regulation, or section of the Mine Act;
- the degree of hazard that exists;
- the degree of exposure to the hazard; and
- the degree of negligence by the mine operator.

The time fixed for abatement of a violation shall be determined, whenever practical, after a discussion with the mine operator or the operator's agent. Inspectors shall give primary consideration to the health and safety of miners in establishing abatement times for all citations.

V. MODIFYING CITATIONS TO "NON-S&S"

An "S&S" citation may be reduced to "non-S&S" only if:

- the "S&S" determination was made in error;
- evidence is presented to the inspector or other MSHA officials (e.g., Conference Litigation Representative) justifying a modification to "non-S&S";
- the determination of "S&S" is modified on the recommendation of the Office of the Solicitor; or
- the determination of "S&S" is modified by an Administrative Law Judge.

The specific reason(s) for an inspector to modify an "S&S" violation to "non-S&S" **must be documented on MSHA Form 7000-3a**. A violation has to meet the minimum criteria of "Reasonably Likely" and "Lost Workdays or Restricted Duty" to have been evaluated as "S&S." Therefore, to re-evaluate the citation or order to "non-S&S," at least one of those requirements must be reduced to a lower evaluation and the specific reason(s) for the change documented. The modification must also indicate that the "S&S" block in Item 10C is changed to "No."

Note – See example in Appendix A (Safety Violations) of this Handbook.

VI. NOTICE TO PROVIDE SAFEGUARDS

Section 314(b) of the Mine Act is specific to coal only and is intended for use in regards to minimizing haulage and hoisting related hazards with respect to the transportation of men or materials that are identified at a specific mine.

When preparing for an inspection, an inspector must review the safeguard summary sheet in the uniform mine file so that he/she knows what safeguards have been previously issued for the mine. The inspector should also be familiar with the requirements for each safeguard.

When an inspector identifies a hazard specific to the mine and similar to those already identified in 30 CFR, Subpart O, Sections 75.1403-2 through 75.1403-11, he/she will issue a notice to provide safeguards to the mine operator if one has not been previously issued. Refer to Appendix A (Safety Violations) of this Handbook for further guidance. In those cases where the provisions of a safeguard notice are found to be violated at a mine, a citation or order will be issued as appropriate. The safeguard originally issued will be referenced in the initial action block on the Mine Citation/Order Form 7000-3.

VII. SECTION 104(b) ORDERS

Inspectors shall review the circumstances when the time fixed for a citation's abatement has expired. In determining whether to issue a Section 104(b) order, the inspector must determine whether there is a reasonable basis for extending the abatement date. If an extension of time is not justified and the cited condition or practice is not abated, the inspector must issue a Section 104(b) order of withdrawal. Upon abatement of the condition or practice cited in the original citation, the order can be terminated.

Chapter 7 in this handbook details the action to be taken if the mine operator files for a petition for modification or appeals a violation to the Federal Mine Safety and Health Review Commission.

A 104(b) order will not be issued when other orders of withdrawal are not complied with. See Section XIX in this chapter regarding mine operators who work in violation of an order of withdrawal.

Documentation for Section 104(b) Orders

1. Section I of Form 7000-3: fill out the other blocks as you normally would and then:
 - Complete Item 9B with the appropriate section of the Mine Act if a section [e.g., Sections 103(j) or 103(k)] is violated.
 - If appropriate, complete Item 9C with the standard violated.
 - Do not complete Items 10A through D or Item 11.
 - **Do not** modify the initial citation to make the negligence or gravity higher than was marked on the initial citation.
2. Enter 104(b) in Item 12 and check the "Order" block in Item 13.
3. Check the "Citation" block in Item 14A; enter the initial citation number in Item 14E and the date of citation issuance in Item 14F.
4. Complete Item 15 "Area or Equipment" with the area or equipment affected by the order. Enter the phrase "No Area Affected" if this is a technical violation.
5. Do not complete item 16A or B.
6. A 104(b) order does not require the completion of a Special Assessment Review Form or a Possible Knowing/Willful Violation Review Form.
7. Terminate the 104(b) order when the out of compliance condition(s) is/are corrected.

VIII. SECTION 104(d) CITATIONS AND ORDERS

A. Criteria for Issuing a 104(d)(1) Citation

A 104(d)(1) citation shall be issued if:

1. there is a violation of a mandatory health or safety standard;
2. the violation significantly and substantially contributes to the cause and effect of a mine safety or health hazard; and
3. there is an unwarrantable failure of the mine operator or contractor to comply with the standard.

Note: A violation of a section of the Mine Act cannot be issued as a 104(d) citation or a 104(d) order even if the negligence evaluation is determined to be "high" or "reckless disregard." Violations of regulations at 30 CFR Parts 40, 41, 43, 44, 45, or 50 [excluding 50.10] also cannot be issued as 104(d) citations or orders even if the negligence evaluation is "high" or "reckless disregard." However, violations of interim mandatory health and safety standards found in Title 2 and Title 3 of the Mine Act, not superseded by mandatory health and safety standards, can be cited as "S&S" and evaluated as unwarrantable failure citations or orders based on the evaluations conducted in Items 10A and 10B of the Citation/Order form.

A violation is caused by an unwarrantable failure if it is determined that the mine operator or contractor has engaged in aggravated conduct constituting more than ordinary negligence.

B. Determining "Aggravated Conduct" for Purposes of Determining Unwarrantable Failure

Factors inspectors should evaluate when determining "aggravated conduct" include one or more of the following:

1. the violative condition or practice was obvious or extensive;
2. the violative condition or practice had existed for a period of time;
3. similar violations have been issued at the mine or to the contractor in the recent past;
4. an agent of the operator or contractor had conducted an examination or had been in the area, or was aware of the existence of the condition;
5. the violative condition or practice had been reported to the operator or contractor who then allowed it to exist, without correcting or adequately addressing the problem, for a period of time;

6. the individual who committed or allowed the condition or practice to exist was a supervisor or an agent of the operator or contractor;
7. reasonable efforts were not made by the mine operator or contractor to correct the violative condition or practice; and
8. other factors, not enumerated above, resulted in a negligence evaluation by the inspector of “high” or “reckless disregard.”

Only one 104(d)(1) citation can be issued during a 90-day period, or for as long as the mine operator or contractor remains under the 104(d) series. The inspector who issues the 104(d)(1) citation must keep other MSHA inspectors at the mine informed that the operator or contractor is under the 104(d) series to avoid the issuance of two 104(d)(1) citations to the operator or contractor.

Note: The mine operator or contractor remains on the 104(d) citation series until 90 days pass since the issuance of the original 104(d)(1) citation.

If another unwarrantable failure violation is observed during the same inspection, or any other type of inspection being conducted at the same time, or any other inspection within 90 days of the issuance of the unwarrantable failure citation, a 104(d)(1) order must be issued. If a 104(d)(1) order is issued, inspectors will issue 104(d)(2) orders for unwarrantable failure violations observed during any subsequent inspections until the mine is inspected in its entirety without an unwarrantable violation found.

C. Criteria for 104(d) Orders

Section 104(d) orders are required to meet the following criteria:

1. there is a violation (either "S&S" or "non-S&S") of a mandatory health or safety standard which was caused by the mine operator's or contractor's unwarrantable failure to comply;
2. the first 104(d)(1) order must be issued within 90 days of the issuance of a 104(d)(1) citation; and
3. 104(d)(2) orders follow the issuance of a 104(d)(1) order and must be issued on a subsequent inspection following issuance of a 104(d)(1) order. All 104(d)(2) orders are to refer to the original 104(d)(1) order.

Note: Section 104(d) orders do not have to be issued for a violation of the same health or safety standard as the 104(d)(1) citation. The violation causing the issuance of a 104(d)(1) or (d)(2) order does not have to be evaluated as "S&S." The only requirement for a 104(d)(1) or (d)(2) order is that the safety or health violation was caused or contributed to by the operator's or contractor's aggravated conduct.

Unwarrantable failure violations observed on a subsequent inspection will be 104(d)(2) orders if two conditions are met:

- the operator or contractor is on the 104(d) series; and
- a 104(d)(1) order was issued on a previous inspection

Section 104(d) orders will be issued until a "clean" inspection is made of the **entire mining operation**, through any combination of enforcement related inspections, and no unwarrantable failure violations are observed. **The mine operator or contractor remains on the 104(d) order series until this clean inspection occurs and no further unwarrantable failure violations are observed.**

Note: The 90 day time frame established for 104(d) citations does not apply to 104(d) orders.

If a 104(d)(1) or (d)(2) order is issued at a large mine and it is not possible to inspect the entire mine during the same inspection, the areas inspected will be documented until the mine is inspected in its entirety. Examples of the 104(d) series are:

Scenario: The inspector issues a 104(d)(1) citation. Other unwarrantable failure violations are not found on that inspection or any other inspection within 90 days. Other violations are cited but they are not unwarrantable failures. The operator is removed from the 104(d) series.

Scenario: The inspector issues a 104(d)(1) citation on a regular inspection. Another unwarrantable failure is found during the same inspection and a 104(d)(1) order is issued. Another inspector returns to the property several days later and conducts a subsequent inspection of the entire operation. Unwarrantable failure violations are found during the inspection and 104(d)(2) orders are issued.

Scenario: The inspector issues a 104(d)(1) citation. Other unwarrantable failure violations are not found during the inspection. An inspector goes back to the property within 90 days. Another unwarrantable failure violation is found and a 104(d)(1) order is issued. Several other unwarrantable failure violations are cited during the same inspection - all are 104(d)(1) orders.

Scenario: The inspector issues a 104(d)(1) citation. Another inspector returns to the property within 90 days on a subsequent inspection to check on compliance of an outstanding citation and finds no unwarrantable failure violations. The mine operator remains on the 104(d) series for the remainder of the 90 days (assuming that other unwarrantable violations are not found and cited during that time).

Scenario: The inspector issues a 104(d)(1) citation and a 104(d)(1) order during the same inspection. Another inspector returns to the property on a subsequent inspection, finds an unwarrantable failure violation and issues a 104(d)(2) order. Several days later, an inspection is made of the entire mine and unwarrantable failure violations are not found during that inspection. The operator is removed

from the 104(d) series because of this "clean" inspection.

Scenario: The mine operator is issued a 104(d)(1) citation. Ninety days pass and other unwarrantable failure violations are not found. An inspector returns to the mine on the 91st day and finds an unwarrantable failure violation. The unwarrantable sequence starts over with the issuance of a Section 104(d)(1) citation.

Scenario: An operator is issued a 104(d)(1) citation and a 104(d)(1) order. On a subsequent inspection the operator is issued a 104(d)(2) order. Two weeks later a complete inspection of the entire mine is conducted and unwarrantable failure violations are not cited. An inspector returns to the property after this clean inspection and finds an unwarrantable failure violation. The unwarrantable series is started anew with the issuance of a 104(d)(1) citation.

Scenario: The inspector issues a 104(d)(1) citation. Other unwarrantable failure violations are not found during the inspection. An inspector goes back to the property within 90 days. An imminent danger with an unwarrantable failure violation is found, a 107(a) order is issued, and a 104(d)(1) order is issued in conjunction with the 107(a). Several other unwarrantable failure violations are cited during this same inspection; all are 104(d)(1) orders.

D. Documentation for Section 104(d) Citation/Orders

1. **Section 104(d)(1) Citation:** Item 8 of the Mine Citation/Order Form shall include the following statement in the violation narrative:

"This violation is an unwarrantable failure to comply with a mandatory standard."

The remainder of the form is completed similarly to a 104(a) citation except that "104(d)(1)" is written in Item 12. Item 8 of the Mine Citation/Order Form shall also include the factors that explain how the operator engaged in aggravated conduct. **The violation must be evaluated as "S&S," the "Yes" block checked, and negligence evaluation marked at least "High."**

Note: A Section 104(b) withdrawal order will be issued, not a 104(d) order of withdrawal, if the operator or contractor fails to abate or correct a condition cited under a 104(d)(1) citation.

2. **Section 104(d)(1) Order:** Item 8 of the Mine Citation/Order Form shall include the factors that show how the operator engaged in aggravated conduct. The following statement must also be written within the violation narrative:

"This violation is an unwarrantable failure to comply with a mandatory standard."

Enter "104(d)(1)" in Item 12 and check the "Order" block in Item 13. **The order can be evaluated as "S&S" or "non-S&S."** Complete Item 14 by checking the "Citation" block and Items 14E and F with the number of the 104(d)(1) citation

and the date it was issued.

3. **Section 104(d)(2) Order:** The procedure is the same as for the 104(d)(1) order except in Item 14 E & F, check the "Order" block; in Item 14E refer to the **first** 104(d)(1) order; and in Item 14F enter the date the first 104(d)(1) order was issued. **The order can be evaluated as "S&S" or "non-S&S."**
Note: All 104(d)(2) orders must refer to the **first** 104(d)(1) order issued.
4. **Section 104(d)(1) and 104(d)(2) Orders:** Item 15 "Area or Equipment" is completed with information relating to what is ordered withdrawn. Enter the phrase "No Area Affected" if the 104(d) order is a technical violation and evaluated as "non-S&S."
5. Initiate both a Possible Knowing/Willful Violation Review Form for each 104(d)(1) citation **and** each "S&S" 104(d) order issued.
6. Prepare and send to the District Office a packet that includes: the original Possible Knowing/Willful Violation Review Form; a copy of the Legal Identity Report; a copy of the relevant general field notes; a copy of the citation/order notes; photographs if available; a copy of relevant citation(s) or order(s); and a copy of all modifications. Each photograph should be identified by the citation or order number and a descriptive and legible narrative should be attached or written underneath each photograph. This packet shall be submitted to the District Office in a timely manner or as directed by the District Manager.

IX. FLAGRANT CITATIONS AND ORDERS

Section 110(b)(2) of the Mine Act permits the assessment of significant penalties for a flagrant violation, which is a reckless or repeated failure to make reasonable efforts to eliminate a known violation of a mandatory health or safety standard that substantially and proximately caused, or reasonably could have been expected to cause, death or serious bodily injury.

Only violations of mandatory health or safety standards can be evaluated as flagrant violations. While most sections of the Mine Act are not mandatory health or safety standards, violations of interim mandatory health and safety standards found in Title 2 and Title 3 of the Mine Act, which are not superseded by mandatory health and safety standards, can be cited as "significant and substantial" ("S&S") and evaluated as flagrant violations. A violation can be classified as a flagrant violation when the cited condition or practice either (i) substantially and proximately caused death or serious injury or (ii) reasonably could have been expected to cause death or serious injury.

Any violation that meets either the reckless failure or the repeated failure screening criteria below must be evaluated for possible classification as a flagrant violation:

Flagrant violations that arise from a mine operator's **reckless failure** must have:

1. been evaluated as significant and substantial;
2. been evaluated with an expected injury of at least permanently disabling,
3. been marked as an unwarrantable failure; and
4. been evaluated with a negligence level of reckless disregard.

The following is an example of a violation required to be evaluated in the District as a possible reckless failure flagrant violation in conjunction with the unwarrantable failure violation.

Scenario: A 104(d)(1) “S&S” citation was issued for the mine operator’s failure to install a guard on the tail pulley of a conveyor belt with miners working in the area. Injury or illness was evaluated as permanently disabling and negligence was evaluated as reckless disregard because the mine operator had been informed of the condition for several work shifts prior to being cited and had instructed miners to continue operating the belt without providing a suitable guard.

Flagrant violations that arise from a mine operator’s **repeated failure** must have:

1. been evaluated as significant and substantial;
2. been evaluated with an expected injury of at least permanently disabling;
3. been marked as an unwarrantable failure; and
4. two prior "unwarrantable failure," S&S violations of the same safety or health standard cited within the past 15 months. The 15-month time period includes violations cited previously on the same day or during the same inspection as the flagrant violation.

For repeated failure evaluations, prior citations/orders must be violations of the same safety or health standard citing the same subsections (e.g., citing 56/57.14201(a) and 56/57.14201(b) do not meet the criteria for flagrant repeated failure consideration), and have been cited as 104(d)(1) or 104(d)(2) enforcement actions. Prior violations that cite the same subsection as the potentially repeated flagrant violation should be forwarded for evaluation, regardless of whether there is some distinction in the underlying cited condition or practice (e.g., an order asserting a violation of 75.220(a)(1) because the entries were driven at widths exceeding the roof control plan minimum distance should be forwarded for flagrant review in conjunction with two prior 75.220(a)(1) violations issued because roof bolts were not inserted at distances specified in the roof control plan).

The following is an example of a violation required to be evaluated in the District as a possible repeated failure flagrant violation in conjunction with the unwarrantable failure violation.

Scenario: A 104(d)(2) “S&S” order of withdrawal was issued for a mine operator’s having failed to install a guard on the tail pulley of a conveyor belt with miners working in the area. Injury or illness was evaluated as permanently disabling. Negligence was evaluated as high negligence because the operator had: (a) been informed of the condition several work shifts prior to being cited; (b) instructed miners to continue operating the belt without providing a suitable guard; and (c)

given miners an oral warning to be careful in this area. The inspector determined that three unwarrantable, S&S violations of the same subsection of the guarding standard (56.14107(a)) had been cited within the past 15 months.

Inspectors must complete the relevant portions of a Special Assessment Review (SAR) Form, check the "flagrant violation" box in section 10 of the SAR Form, and initiate the district review procedure for every violation that meets the "reckless" and/or "repeated" flagrant screening criteria. Inspectors must send to the District Office a packet that includes each of the following items:

- the completed Possible Knowing/Willful Violation Review Form;
- a copy of the Legal Identity Report;
- a copy of the relevant general field notes;
- a copy of the citation(s)/order(s), including associated violation notes;
- diagrams and photographs, if available;
- applicable portions of mine plans or records, if relevant;
- accident investigation reports, data sheets, witness statements, prior associated citation(s)/order(s), and/or memoranda or other evidence, if relevant; and
- a copy of any modifications.

This packet shall be submitted to the Field Office Supervisor for review and evaluation before being submitted to the District Office in a timely manner or as directed by the District Manager.

District Managers have the discretion to recommend violations that do not meet the reckless or repeated flagrant violation screening criteria, but which meet the broader statutory definition of a flagrant violation, for evaluation as flagrant violations pursuant to existing guidance. To allow more effective and efficient review, District Managers should informally notify the Office of the Solicitor that such matters have been referred.

X. SECTION 104(e) PATTERN OF VIOLATIONS

Section 104(e) of the Mine Act provides for sanctions against mine operators who have a pattern of violations of mandatory health and safety standards that could significantly and substantially contribute to the cause and effect of health and safety hazards. 30 CFR Part 104 includes procedures for initial screening of mines that may be developing a pattern of violations; criteria for determining whether a pattern of violations exists at a mine; procedures for issuance of potential pattern notice and final pattern notice; and procedures for terminating a Notice of Pattern of Violations. Either the Administrator for Coal Mine Safety and Health or the Administrator for Metal and Nonmetal Mine Safety and Health makes the final determination as to whether a Notice of Pattern of Violations will be issued at a specific mine. Mine operators remain on the 104(e) Pattern of Violation series until:

- No 104(e) Order of Withdrawal is issued within 90 days of issuance of the initial 104(e) Notice of Pattern of Violations;
- An inspection of the entire mine occurs and no "S&S" violations are issued; or
- Partial mine inspections, collectively covering the entire mine, are conducted within 90 days of issuance of the 104(e) Notice of Pattern of Violations and no "S&S" violations are cited.

A. Issuance of a Notice of Pattern of Violations

The Notice of a Pattern of Violations shall only be issued by a District Manager on an MSHA Citation/Order Form 7000-3.

1. Complete Item 8 with the following language:

Pursuant to Section 104(e)(1) of the Federal Mine Safety and Health Act of 1977 (Mine Act), you are hereby notified that a violation exists at the (Name of Mine). If upon any inspection within 90 days after issuance of this Notice, an Authorized Representative of the Secretary finds any violation of a mandatory health or safety standard that could significantly and substantially contribute to the cause and effect of a coal or other mine

safety or health hazard, the Authorized Representative shall issue an order requiring the operator to cause all persons in the area affected by such violation, except those persons referred to in Section 104(c) of the Mine Act, to be withdrawn from, and to be prohibited from entering such area until an Authorized Representative of the Secretary determines that such violation has been abated. This Notice of Pattern of Violations shall remain posted at the (Name of Mine) until it is terminated by an Authorized Representative.

2. Leave Items 9A, 9B, 9C, 10A through 10D, and Item 11 blank.

3. In Item 12, enter "104(e).

4. Check the "Written Notice" block in Item 13.

5. Items 14A through 14F should be left blank.

6. Items 15, 16, 17, and 18 are left blank.

B. Issuing 104(e)(1) or 104(e)(2) Orders of Withdrawal on MSHA Citation/Order 7000-3 Form

1. Complete Item 8 with a narrative description of the violation. At the end of the narrative, add the following statement: "A Notice of Pattern of Violations, number xxxxxxxx, was issued on xx/xx/xx."

2. Leave Items 9A and 9B blank. However, where violations of interim mandatory health and safety standards found in Title 2 and Title 3 of the Mine Act, not superseded by mandatory health and safety standards, are cited as "S&S" enter the appropriate section in 9B. Complete Item 9C with the mandatory standard violated;

3. Complete Items 10A through D and Item 11 based on the determination made at the time the violation was observed.

4. In Item 12, enter "104(e)(1)" or "(2)" and in Item 13 check the "Order" box; For 104(e)(1) orders, check Item 14D. Complete Item 14E with the Notice of Pattern of Violations number and Item 14F with its issuance date; For 104(e)(2) orders, check the "Order" box in Item 14B. Write the number from the 104(e)(1) order in Item 14E and its date of issue in Item 14F;

5. In Item 15 "Area or Equipment" describe the area or equipment affected; and

6. Item 16 "Termination Due Date and Time" is left blank.

C. Terminating a Notice of Pattern of Violations

Terminating a Notice of Pattern of Violations is done on a Mine Citation/Order Continuation Form 7000-3a using the initial number from the Notice of Pattern of

Violations. Termination of Notices of Pattern of Violations will be issued by the District Manager or his designee. Depending on the basis for terminating the Notice of Pattern of Violations, language in the narrative should include one of the following statements:

Example One - “xxxxxxx Mine has gone 90 days from the issuance of a Notice of Pattern of Violations without being cited for a violation which could significantly and substantially contribute to the cause and effect of a mine safety or health hazard. Therefore, the mine is no longer subject to orders of withdrawal issued pursuant to Section 104(e) of the Federal Mine Safety and Health Act of 1977. Accordingly, the Notice of Pattern of Violations is terminated.”

Example Two - “xxxxxxx Mine underwent an inspection of the entire mine which was completed on xx/xx/xx without being cited for a violation which could significantly and substantially contribute to the cause and effect of a mine safety or health hazard. Therefore, the mine is no longer subject to orders of withdrawal issued pursuant to Section 104(e) of the Federal Mine Safety and Health Act of 1977. Accordingly, the Notice of Pattern of Violations is terminated.”

D. All 104(e) violations should be reviewed for possible knowing and willful if the negligence is at least “High.”

E. Prepare and send to the District Office a packet that includes: the original Possible Knowing/Willful Violation Review Form; a copy of the Legal Identity Report; a copy of the relevant general field notes; a copy of the citation/order notes; photographs if available; a copy of relevant citation(s) or order(s); and a copy of all modifications. This packet shall be submitted to the District Office in a timely manner or as directed by the District Manager.

XI. SECTION 104(g)(1) ORDERS

Section 104(g)(1) of the Mine Act provides for the withdrawal of untrained miners from a mine or mill until they have received the training required by Section 115 of the Mine Act. The purpose of a Section 104(g)(1) order is to eliminate the hazard that untrained or inadequately trained miners pose to themselves and to other miners. Section 104(g)(1) orders shall be evaluated for “S&S” using the criteria in Section VI of this Chapter.

Underground Mines (Part 48). Sections 48.5, .6, .7, .8, and .11 are the only standards which may be cited under 104(g)(1) for untrained miners.

Surface Mines and Surface Areas of Underground Mines (Part 48). Sections 48.25, .26, .27, .28, and .31 are the only sections that may be cited under 104(g)(1) for untrained miners.

Surface Mines (Part 46). Sections 46.5, .6, .7, .8, and .11 are the only sections that may be cited under 104(g)(1) for untrained miners.

Citations shall **not** be issued in lieu of Section 104(g)(1) orders **unless** the miner cannot be trained because he or she is no longer employed at the mine, was permanently disabled, or was fatally injured.

When miners have received training but there are violations involving training plans, cooperative training programs, records of training, compensation for training, etc., Section 104(g)(1) orders of withdrawal should not be issued. Issuances of 104(a) or 104(d) actions, in these situations, are appropriate.

Section 104(g)(1) orders of withdrawal shall be written for the following types of untrained miners:

- new miners;
- experienced or newly-hired experienced miners;
- miners assigned to perform a task for which they have had no previous experience;
- miners whose annual refresher training is not up-to-date; and
- miners or applicable persons working on mine property who have not been given hazard training.

A. Determining the Number and Type of Citations or Orders to Issue for Part 46 and Part 48 Training Violations

1. Violations Involving One Miner:

If one miner is involved, but two or more sections of Part 46 or Part 48 have been violated, one Section 104(g)(1) order will be issued citing the appropriate section(s). Separate evaluations of negligence and gravity should be provided for each violation.

Scenario: One underground miner was found not task trained and had not received annual refresher training. One Section 104(g)(1) order would be issued.

2. Violations Involving More Than One Miner:

- a. When more than one untrained miner is withdrawn from a mine, a single 104(g)(1) order is appropriate provided the Part 46 or Part 48 training violation is the same for all the miners.
- b. Where multiple miners are involved and different violations of the training requirements have occurred for each miner, one or more 104(g)(1) orders of withdrawal would be issued, depending on the circumstances.

Scenario: Eight underground miners did not have the requisite safety training (three did not receive new miner training; two were not task trained; three missed annual refresher training). Three separate 104(g)(1) orders would be issued: one citing 30 CFR 48.5; one citing 30 CFR 48.7; and one citing 30 CFR 48.8. The relevant miners' names will also be listed in Item 15 "Area or Equipment" on each violation.

- c. When more than one miner is involved in violation of the same standard, the total number of miners withdrawn will be entered in Item 10D "Number of Persons Affected" on Form 7000-3. Each miner's name will also be listed in Item 15 "Area or Equipment."
- d. A 104(g)(1) order including more than one miner may be modified to allow individual miners to return to work as soon as each miner completes the training specified in the order.

3. 104(g)(1) Violations Involving Independent Contractors:

A Section 104(g)(1) order of withdrawal would be issued to the direct employer of any miner who has not received the required training. If there is uncertainty as to who employs the miner, the order of withdrawal should be issued to the operator with the greatest physical presence at the mine. Any discrepancies occurring after the miner is withdrawn can be resolved through subsequent modification actions.

4. Citations Issued With Section 104(g)(1) Orders:

Citations shall not be issued in addition to 104(g)(1) orders for the same violation except in instances of overlapping compliance responsibility between contractors and mine operators. There may be circumstances where it is appropriate to issue citations or orders for training violations to both the independent contractor and the production operator.

Scenario: A miner is the employee of an independent contractor and the production operator had agreed to provide the miner training in accordance with the mine's MSHA approved training plan. The miner has not received the required training. A 104(g)(1) order would be issued to the independent contractor and, as appropriate, a 104(a) citation, or a 104(d)(1) citation, or a 104(d)(1) order, or a 104(d)(2) order would be issued to the production operator.

B. Documentation for Section 104(g)(1) Orders

- 1. Write the violation narrative in Item 8. For a single employee and multiple training violations, follow the first narrative by noting the second cited standard then add a second narrative. If more space is needed, use a Mine Citation/Order Continuation Form. Include separate evaluations for gravity and negligence for

each standard violated. Insert the following statement at the end of the violation narrative in Item 8:

"The Federal Mine Safety and Health Act of 1977 declares that untrained miner(s) are a hazard to themselves and others."

2. In Item 9C, enter the first standard cited.
3. "S&S" evaluations should be based on the criteria found in Section VI of this Chapter.
4. Enter 104(g)(1) in Item 12.
5. In Item 13 check the "Order" block.
6. In Item 15 "Area or Equipment" indicate the person(s) to be withdrawn. Use a Mine Citation/Order Continuation Form if more room is required to list all the miners.
7. Items 16A and B are not completed.

XII. SECTION 107(a) IMMINENT DANGER ORDERS

Imminent danger is defined in the Mine Act as "the **existence** of any condition or practice in a coal or other mine which could reasonably be expected to cause death or serious physical harm before such condition or practice can be abated." Courts interpreting this provision have stated that that an **imminent danger exists only** when the hazardous condition has a reasonable potential to cause death or serious injury to a miner if normal mining operations were permitted to proceed in the area before the dangerous condition was eliminated or corrected. .

An imminent danger order cannot be issued for an accident which has already occurred unless the imminence still exists. Immediate physical exposure to the imminent danger does not have to be witnessed by the inspector to issue a 107(a) order.

Because the purpose of Section 107(a) orders is to immediately remove miners from exposure to serious hazards and to prevent them from entering such hazardous areas or utilizing hazardous equipment, an imminent danger must be **impending** at the time an order is issued. Therefore, when an imminent danger is observed, the inspector must, as soon as possible and as the imminent danger is being observed, issue an oral Section 107(a) order. An oral order should be documented in writing as soon as practical.

If an oral Section 107(a) order is issued, it should be stated in precise terms such as: "I am issuing you a Section 107(a) imminent danger order." At the least, the inspector must use the words "imminent danger" or "107(a)" at the time the oral order is issued.

A written order, issued after an oral Section 107(a) order was communicated to the operator, must clearly state that it is confirming an oral imminent danger order and identify:

- the individual to whom the oral order was issued;
- the time and date the oral order was issued;
- the location at which the oral order was issued; and
- the reason the oral order was issued. This reason should be in the manner developed for issuance of Section 107(a) orders.

Imminent danger orders shall contain a detailed description of the conditions or practices which cause and constitute the imminent danger and a description of the area of the mine from which persons must be withdrawn and prohibited from entering. Only those persons described in Section 104(c) of the Mine Act may enter the affected area while the order is in place.

An imminent danger withdrawal order often arises because of a violation of the Mine Act and its mandatory health or safety standards. All violations which caused or contributed to the imminent danger are to be addressed as separate citations or orders referring back to the 107(a) Imminent Danger order of withdrawal. The issuance of an imminent danger order does not preclude the issuance of a section 104(d)(1) citation or order or a section 104(d)(2) order

A. Documentation for 107(a) Orders - Mandatory Standard Not Violated

1. In Item 8 describe the condition(s) or practice(s) which contributed to the imminent danger situation. Add the following statement at the end of the Item 8 narrative: "This condition is an imminent danger." Also include a statement concerning when, where, why, and to whom the verbal order was issued. If additional space is needed, a Mine Citation/Order Continuation Form 7000-3a must be used.
2. Leave items 9A, 9B, 9C, 10, and 11 blank.
3. In Item 12 enter "107(a)".
4. In Item 13 check the "Order" block.
5. Leave Item 14 blank.
6. In Item 15 describe the "Area or Equipment" affected.
7. In Item 16 "Termination Due Date and Time" are left blank.

8. Terminate the order when the condition(s) or practice(s) that created the imminent danger is abated.
9. Completion of a Possible Knowing/ Willful Violation Review Form is not required for imminent danger orders issued with no violations of mandatory standards.

B. Documentation - 107(a) Order Issued and Mandatory Standard(s) Violated

1. Complete Item 8 as indicated above and include the statement, "Citation No.\Order No. xxxxxxx is being issued in conjunction with this order." Describe the condition(s) or practice(s) which created the imminent danger situation and why the risk of hazard will occur before it can be remedied. Add the following statement in the Item 8 narrative: "This condition is an imminent danger." Also include a statement concerning when, why, where, and to whom the verbal order was issued.

A Mine Citation/Order Continuation Form 7000-3a will be used if additional space is needed. When one or more violations create an imminent danger, each violation must be described in Item 8. Complete additional Form 7000-3s for each violation. For each additional Form 7000-3, indicate in Item 8 that the violation was a contributing factor in the issuance of the imminent danger order and that an abatement time is not set for 104(a) citations and 104(d)(1) citations issued in conjunction with 107(a) Orders.

2. Leave items 9A, 9B, 9C, 10 and 11 blank.
3. In Item 12 enter "107(a)."
4. In Item 13 check the "Order" block.
5. Leave Item 14 blank for all 104(a) and 104(d) citations issued in conjunction with 107(a) orders of withdrawal. However, Item 14 must be completed for all 104(d) orders issued in conjunction with 107(a) orders of withdrawal by checking Item 14A or 14B, entering either the initial 104(d) citation or 104(d) order number (as appropriate) in Item 14 E, and entering the date in Item 14F.
6. In Item 15 describe the "Area or Equipment" affected.
7. In Item 16 "Termination Due Date and Time" is not entered.
8. Terminate the imminent danger order when **all** conditions or practices creating the imminent danger have been abated.

9. A Possible Knowing/Willful Violation Review Form must be completed for 104(a) citations and 104(d) citations and orders issued in conjunction with a 107(a) imminent danger order regardless of the negligence evaluation.

XIII. SECTION 107(b)(1) NOTICES

Section 107(b) provides unique enforcement procedures and requirements to contend with the unusual circumstances of dangerous conditions that cannot be effectively abated through the use of existing technology. Accordingly, enforcement personnel or District Managers shall not issue orders or take any action under Section 107(b) before consulting with the Administrators for Metal and Nonmetal or Coal Mine and Safety and Health.

Further, Section 107(b) orders are not to be modified, terminated, or vacated by inspectors or district officials without prior consultation with the Administrators for Metal and Nonmetal or Coal Mine Safety and Health.

XIV. SECTION 110(g) NOTICES

A miner shall be issued a notice under Section 110(g) of the Mine Act if he or she is found willfully violating any of the mandatory safety standards relating to smoking or the carrying of smoking materials, matches, or lighters. Mandatory standards applicable to smoking are: 56/57.4100, 57.5041, 56/57.6904, 56/57.7805, 57.22101, 57.22102, 57.22105, 75.1702, and 77.1711.

To find a **willful** violation of the safety standard relating to smoking, the inspector must have evidence that the miner actually smoked in an underground coal mine or smoked in a restricted area in an underground metal or nonmetal mine or surface area. The restricted area on the surface must be posted as being a non-smoking area. Further, for a miner to willfully violate the standards regarding the carrying of smoking materials, the inspector must have proof that the miner actually knew that he or she was carrying the smoking materials into a restricted area or into an underground coal mine.

If the miner who was smoking or carrying materials in restricted areas was an agent of a mine operator, such as a foreman or other supervisor, the miner should not be subject to a Section 110(g) penalty but instead should be subject to a referral under Section 110(c) or Section 110(d) of the Mine Act.

Inspectors should make all reasonable efforts to document the miner's past training regarding smoking and the carrying of smoking materials, obtain and note the miner's address and rate of pay so the nature of the proposed civil penalty can be accurately assessed and mailed to him or her since the civil penalty for this notice is assessed to the miner and not the mine operator or contractor.

The mine operator or contractor shall be issued a citation and a possible imminent danger order (depending on the circumstances observed) whenever a miner is found to be smoking or found carrying smoking materials, matches, or lighters in prohibited areas.

Scenario: A miner is observed smoking a cigarette in an underground explosives magazine. There are six open cases of dynamite within three feet of the miner. A 110(g) notice shall be issued to the miner. Also, a 104(a) citation or a 104(d) Citation or order and a separate 107(a) order shall be issued, depending on the circumstances, to the mine operator or contractor for a violation of 57.6904 or 75.1702.

Documentation for 110(g) Notice

1. Item 4 of the Mine Citation/Order form is completed with the miner's name. Items 5, 6, and 7 are completed with the operator's name, the mine name, and the Mine ID number.
2. Item 8 is completed with a description of the observed violation. The following statement shall be included at the end of that description:

"This is notification to the individual that he or she will receive a civil penalty for willfully violating a mandatory safety standard relating to smoking or the carrying of smoking materials, matches, or lighters."
3. Item 9B is completed with "110(g)".
4. Item 9C is completed with one of the standards violated: 56/57.4100, 57.5041, 56/57.6904, 56/57.7805, 57.22101, 57.22102, 57.22105, 75.1702, and 77.1711.
5. Complete Section II, items 10A through D based on the determination made at the time the violation was observed. Section II, item 11 will always be completed with at least "high" negligence checked.
6. Item 16 is not completed.
7. One copy of the completed notice is given to the miner.
8. A copy of the notice will be mailed to the MSHA Office of Assessments in Arlington, Virginia. A cover letter shall be attached explaining the circumstances and any mitigating factors relating to its issuance. The letter shall also provide the miner's address so that the proposed civil penalty can be processed.

XV. MINE OPERATOR IN VIOLATION OF AN ORDER OF WITHDRAWAL

A separate 104(a) citation shall be issued, in all instances, for failure to comply with each order violated citing the applicable section [104(b), 104(d)(1), 104(d)(2), 104(e)(1), 104(e)(2), 104(g)(1), 107(a), 103(j) or 103(k)] when an inspector encounters a mine operator working in violation of an order of withdrawal. In citing this violation,

inspectors should explain to the mine operator what MSHA's rights are under the Mine Act and the penalty for continuing to operate in the face of a withdrawal order.

Note: A 104(a) citation for operating in the face of an order shall not be issued when an order of withdrawal is issued and the "Area or Equipment" in Item 15 is noted as "No Area Affected" because the mine operator was notified that an "Area or Equipment" was not required to be withdrawn. If appropriate, injunctive action can be initiated by the District Manager if the mine operator continues to operate in the face of a withdrawal order.

While these violations are not issued often, civil penalties assessed to mine operators can be substantial; therefore, inspectors must document in detail the activity and statements regarding all the circumstances concerning the issuance of this citation.

Note: In the rare instances these types of violations are issued, inspectors and supervisors should discuss them with the district office and/or regional solicitor prior to their issuance. As these violations are frequently litigated and are often contentious, consultation and coordination with all parties prior to issuance will assure that is knowledgeable regarding the actions being taken.

Since this citation stands alone for assessment purposes, it will be separately evaluated for gravity and negligence. Violations of the Mine Act are always designated as "non S&S." The following guidance applies to these evaluations:

Negligence evaluation - shall be based on existing conditions and circumstances at the time of its issuance and **does not** have to reflect the same negligence as the preceding order of withdrawal since circumstances may have changed since the order's issuance. Evaluations for negligence, however, are usually "high" or "reckless disregard" because the mine operator was previously issued an order of withdrawal.

Gravity evaluation – shall be designated as "non significant and substantial" as it is a violation of a section of the Mine Act. Further, these types of violations cannot be evaluated as unwarrantable failure or flagrant.

A Possible Knowing/Willful Violation Review Form will be completed for all citations issued for a mine operator operating in the face of an order of withdrawal.

Documentation for Working in Violation of a Withdrawal Order

1. In Item 9B of the Mine Citation/Order Form enter the section of the Mine Act violated; this entry will be the same as the type of order originally issued.

Example: If a 104(b) order is not complied with, enter "104(b)" in Item 9B. Enter "107(a)" in Item 9B if the operator is working in violation of a 107(a) order

of withdrawal. Enter 104(d)(1), 104(d)(2), 104(g)(1), 104(e)(1), 104(e)(2), 103(j), or 103(k) in Item 9B if the operator is working in violation of one of these orders.

2. Item 9C is left blank.
3. Items 10 and 11 are completed with gravity and negligence evaluations made dependent on the circumstances present at the time of observation.
4. In Item 14 check the "Order" block, enter the order number and the date it was issued.
5. In Items 16A and B enter the "Termination Due Date" and "Time."
7. Terminate the citation when personnel are withdrawn as required. Terminate the order when the original condition or practice is abated.
8. Prepare and send to the District Office a packet that includes:
 - a. the original Possible Knowing/Willful Violation Review Form;
 - b. a copy of the Legal Identity Report;
 - c. a copy of relevant general field notes;
 - d. a copy of the citation/order notes;
 - e. appropriate photographs;
 - f. a copy of relevant citation(s) or order(s); and
 - g. a copy of all modifications.

This packet shall be mailed to the District Office in a timely manner.

CHAPTER 5 - HEALTH CRITERIA (METAL AND NONMETAL)

I. DOCUMENTATION OF HEALTH VIOLATIONS

Generally, when health sample results indicate that there has been an overexposure to dust, chemical contaminants, etc., the following information will be documented by the inspector:

- type of contaminant
- amount of exposure as compared to what is allowed
- error factor used
- length of the miner's exposure
- personal protective equipment program (or lack of) implemented by the operator
- type of (or lack of) personal protective equipment worn when the overexposure occurred
- training provided to the miner in the use of the personal protective equipment (if appropriate)
- controls used and their condition
- feasible controls available

II. CONTAMINANTS WITH CEILING DESIGNATIONS

When there is an overexposure to a contaminant that has a ceiling designation it is appropriate to issue a 104(a) citation with an abatement time reflecting the time needed to remove miners. Miners shall not reenter the area until the hazardous condition(s) is corrected except for those miners who are working to establish the necessary engineering controls. These miners must wear appropriate personal protective equipment. In this case, standards 56/57.5001(c) and 56/57.5005 should be considered as one standard and should be entered in Item 9C of the Mine Citation/Order Form (e.g., 56.5001(c)/.5005).

The above situation warrants issuance of a 107(a) imminent danger order only if the concentration(s) measured and the work condition(s) create a situation that is immediately dangerous to the exposed miners.

III. IMMINENT DANGER SITUATIONS INVOLVING CHEMICAL HAZARDS

A. IDLH Levels

MSHA considers the atmosphere "immediately harmful to life" whenever a contaminant's Immediate Danger to Life or Health (IDLH) limit is exceeded. The IDLH limits for various contaminants can be found in the "National Institute for Occupational Safety and Health (NIOSH) Pocket Guide to Chemical Hazards." However, imminent danger situations can exist below IDLH levels due to a miner's length of exposure, work activity, or time to escape. The following procedures shall be utilized whenever a contaminant's IDLH limit, plus the sampling factor, is exceeded:

1. A 107(a) order of withdrawal with contributing citations and/or orders shall be issued noting the contaminant levels and the conditions constituting the imminent danger situation.
2. The order of withdrawal shall require that all miners be immediately withdrawn from the contaminated atmosphere. The order should note that only those miners wearing appropriate personal protective equipment, and who are working on establishing engineering controls, are permitted to reenter the affected area.
3. Additionally, as required by 56/57.5005(c), at least one other person with backup equipment and rescue capability shall be present before any unprotected miner may reenter an atmosphere immediately harmful to life.
4. See Chapter 4, Section XVII of this handbook concerning the issuance of an imminent danger order with contributing citations and orders.

B. Other Situations

In some cases an imminent danger may exist even though a contaminant's IDLH limit is not exceeded. Continual exposure at high levels and adsorption through all routes of exposure can result in similar harm to miners. The issuance of an imminent danger order may be warranted if dizziness, headaches, slowed reflexes, lack of coordination, or other serious symptoms are shown by miners and are believed to be caused by exposure, including direct contact, along with consideration of the work environment, and serious physical harm or death may occur. The following procedures are to be implemented whenever there is exposure that may cause serious physical harm or death:

1. A 107(a) order of withdrawal with contributing citations and/or orders shall be issued noting the contaminant levels and the conditions constituting the imminent danger situation.
2. The order of withdrawal shall require that miners be immediately withdrawn from the contaminated atmosphere. It should be noted on the order that only those miners

wearing appropriate personal protective equipment, and who are working to establish engineering controls, are permitted to reenter the affected area.

3. Additionally, as required in metal and nonmetal mines under 56/57.5005(c), at least one other person with backup equipment and rescue capability shall be present before any miner enters an atmosphere immediately harmful to life.
4. See Chapter 4, Section XVII of this handbook concerning the issuance of an imminent danger order with contributing citations and orders.

Scenario: A miner has been exposed to 700 parts per million (ppm) of carbon monoxide. He has been drilling in the same area for the last four hours. The miner complains of dizziness, headache, nausea, is uncoordinated, and exhibits severe mental confusion. The miner's partner indicates that he also has similar symptoms. Further investigation reveals that the drill has fallen on both miners three times within the last hour due to their lack of concentration and inability to coordinate drilling activities. Ventilation in the area is not adequate due to holes and blockages observed in the vent tubing providing air into the area.

Scenario: A cyanide pipe in a mill broke and is spraying the solution everywhere including near miners working in the area. The exposed solution has flowed through the mill and has contacted some acidic material. Hydrogen Cyanide levels are measured at the doorway to the mill at 35 ppm.

In both of the above scenarios, due to the high exposure to a contaminant, the length of exposure time, the noted symptoms of miners, the safety hazards associated with incorrectly operating equipment, and the hazardous workplace environment, an imminent danger situation exists. In these cases, inspectors would issue a 107(a) imminent danger order and withdraw affected miners from their workplace.

IV. NEGLIGENCE AND GRAVITY EVALUATIONS - HEALTH VIOLATIONS

The following instructions apply to Section II of the Mine Citation/Order Form unless otherwise specified.

A. Negligence

The degree of negligence is dependent on what the mine operator did **before** MSHA collected the samples that established the violation. Factors to be considered by the inspector include items such as:

1. whether the mine operator knew or had been told of the high contaminant level(s);
2. the condition of engineering control systems;
3. whether engineering control systems had been provided;

4. whether the operator provided appropriate personal protection, whether it was fit-tested (if appropriate), whether personnel were trained in its use and limitations (if appropriate), and whether it was worn, properly maintained, cleaned.

B. Gravity

1. Likelihood: Consider "Reasonably Likely" or "Highly Likely" if respiratory or hearing protection was not provided; if the respiratory or hearing protection was not adequately maintained; if the individual was not respirator fit-tested; if the person was not trained in the use or limitations of the respirator; or if the protection was not suitable for the hazard. Also, consider "Reasonably Likely" or "Highly Likely" if the respiratory or hearing protection program had deficiencies which caused the personal protection to be inadequate.

Note: With regard to nuisance particulates and silver metal overexposures between 0.01 mg/m^3 and 0.1 mg/m^3 , operators must use engineering controls to reduce exposure to the permissible limit and comply with the respiratory protection requirements of standard 56/57.5005. However, .5001(a)/.5005 citations for overexposure to nuisance particulates and to silver metal in the above concentration range cannot be evaluated as "S&S." Overexposures to soluble compounds of silver, such as silver nitrate, above 0.01 mg/m^3 can be evaluated as "S&S" if adequate respiratory protection was not worn.

Occurrence would be marked as "Unlikely" if appropriate respiratory protection was being worn, was appropriate to the hazard, the miner was respirator fit-tested, and the mine operator had an acceptable respiratory protection program.

2. Severity: Overexposure to airborne contaminants and physical agents should be marked according to the severity of the disease they produce.

Examples: Silica causes silicosis which is permanently disabling and sometimes fatal; radon daughter exposure can cause lung cancer which can be fatal; and excessive noise causes hearing loss which can be permanently disabling.

3. Number of Persons Affected: For most situations, indicate the number of miners sampled. There are situations, however, where more workers should be entered in Item 10D of the Mine Citation/Order Form. If other miners perform the same job on different shifts or if several miners rotate during the same shift and perform the identical job, that number should be entered in this box.

Example: A day-shift crusher operator is overexposed to respirable silica bearing dust. Two other miners operate the crusher on the evening shift. Item 10D would have the number "3" entered for Persons Affected.

C. Significant and Substantial Violations

The "**Yes**" block in Item 10C must be marked if it is reasonably likely that one or more miners will or could suffer at least "Lost Workdays" or "Restricted Duty" as a result of exposure to the contaminant.

The "**No**" block in Item 10C is to be marked if it is not reasonably likely that one or more miners will or could suffer at least "Lost Workdays" or "Restricted Duty" as result of exposure to the contaminant.

Note: Since all overexposure limits have a likelihood of health impairment, this evaluation is dependent on the use of adequate personal protective equipment.

V. DOCUMENTATION OF AIRBORNE CONTAMINANT VIOLATIONS

Complete the citation form as usual except as follows:

- A. "Date and Time of Issue" is the date and time the citation was issued.
- B. In Item 8 include the following information: The Threshold Limit Value (TLV) or the exposure limit; the error factor; the contaminant; the concentration; the job title of the person sampled; the equipment and area where the person was working; and the believed reason for the overexposure. Always include information as to whether or not the miner was wearing approved respiratory protection with an adequate training, fit-testing, and maintenance program. Include a statement noting the sample date which is the date entered as the occurrence date in IPAL.
- C. When there is an overexposure to airborne contaminants (except asbestos or those having ceiling limits), standards 56/57.5001(a) and 56/57.5005 should be considered as one standard. Enter the standard in Item 9C using the following format: 56.5001(a)/56.5005. When overexposures are for asbestos, inspectors should use 56/57.5001(b) and 56/57.5005 as one standard [e.g., 56.5001(b)/.5005 or 57.5001(b)/.5005].
- D. Standard 56/57.5005 can be written alone **only** where MSHA requires a respiratory protection program for compliance and the mine operator fails to follow the program's requirements or the overexposed miner is not wearing a respirator where required. Standard 56/57.5005 can be cited without resampling if:

the area or equipment in question was observed operating without miner(s) complying with the respiratory protection program mandated by an outstanding citation for dust overexposure; or

the mine operator had been allowed to operate because all feasible engineering or administrative controls had been implemented but a respiratory protection program was still required by MSHA to gain compliance.

- E. These citations should be evaluated as "S&S" if a respirator was not being worn; if the miner sampled had not been properly fit-tested with the respirator being worn; if the respirator was not properly maintained; or if the respirator was not selected in accordance with American National Standards Institute (ANSI) Z88.2-1969. Additionally, there may be other circumstances where the citation should be evaluated as "S&S." Inspectors should review ANSI requirements and the circumstances of each case to determine if a citation should be evaluated as "S&S."

Note: With regard to nuisance particulates and silver metal overexposures between 0.01 mg/m^3 and 0.1 mg/m^3 , operators must use engineering or administrative controls to reduce exposure to the permissible limit and comply with the respiratory protection requirements of standard 56/57.5005. However, .5001(a)/.5005 citations for overexposure to nuisance particulates and to silver metal in the above concentration range cannot be evaluated as "S & S." Overexposures to soluble compounds of silver, such as silver nitrate, above 0.01 mg/m^3 should be evaluated as "S & S" if adequate respiratory protection was not worn.

- F. If approved protection was not being worn, the initial termination due date will be the time necessary for the operator to provide appropriate respirators and develop a respiratory protection program in accordance with ANSI Z88.2-1969.

Inspectors should also include a statement in citations that when a respiratory protection program was implemented in accordance with ANSI Z88.2-1969, the citation will be extended to allow the mine operator time to implement engineering or administrative controls.

- G. When issued, state in extensions what items are required to be accomplished by the abatement due date.
- H. If resampling has been done and results have not been received, an extension of time is not needed.
- I. When an extension of time is required because MSHA sampling indicated that additional work needs to be completed by the mine operator, inspectors will issue an appropriate extension.
- J. When resampling results indicate that contaminant levels are in compliance, enter the date and time the termination was issued in Item 12 of Form 7000-3a.

VI. ORDERS OF WITHDRAWAL - AIRBORNE CONTAMINANT VIOLATIONS

- A. If appropriate personal protection is being worn and progress has not been made towards compliance, resampling must be conducted to determine if an overexposure still exists before issuing a Section 104(b) order of withdrawal.
- B. If the due date and time has passed, a Section 104(b) order of withdrawal must be issued if the operator or contractor has failed to provide appropriate respiratory

protection, if the miner was not wearing an appropriate respirator, or if the operator has not implemented an appropriate respiratory protection program. Once an appropriate respiratory protection program is implemented or an appropriate respirator has been provided and/or worn, the Section 104(b) order can be modified to allow work to continue until feasible engineering or administrative controls are implemented.

Note: If the operator or contractor can install feasible engineering or administrative controls more quickly than acquiring the respiratory protection, the quicker means of abatement should be required.

A 104(b) order must also be issued if the operator or contractor has failed to implement feasible engineering or administrative controls within the established abatement time and further extension of time is not warranted.

Once appropriate

engineering controls have been implemented, the 104(b) order can be modified to allow work to continue until resampling is conducted and the results analyzed to determine compliance. The order can be terminated if resampling indicates that the mine operator is in compliance.

- C. When an inspector issues a Section 104(b) order of withdrawal, item 8 of the citation/order form should note, in detail, the reasons for the operator's failure to abate the citation and what must be done to achieve abatement of the condition or practice that caused issuance of the citation. It also should be noted in the 104(b) order, if applicable, that the failure to abate the violation involved a deficiency in the use of personal protective equipment (e.g., respirators).
- D. When an operator continues production in violation of a 104(b) order or neglects to abide by the conditions under which the 104(b) order was modified, the inspector must issue a 104(a) citation to the operator for a violation of Section 104(b) of the Mine Act and require, as an abatement condition, that a respiratory protection program be instituted for compliance. See Chapter 4, Section XX of this handbook for procedures to follow when an operator operates in the face of a withdrawal order.

VII. GENERIC WORDING - CHEMICAL CONTAMINANT OR DUST CITATION

“The (job description) (location description) was exposed to a (shift or time weighted average) of (contaminant) on (sampling date). This exceeded the Threshold Limit Value (TLV) times the error factor of (enter factor). The analytical results were received and the citation was issued on (date citation was issued).”

Include language in the citation regarding the possible sources of the contaminant and any obvious deficiencies of the control systems; the type and condition of any personal protective equipment; and, if a respirator was used, whether or not a respirator program consistent with ANSI Z88.2-1969 was in place. When a respiratory protection program is nonexistent or deficient, state that the abatement time will be extended, if necessary, after a respiratory protection program consistent with ANSI Z88.2-1969 is in place so as to allow a reasonable period for the installation of controls.

CHAPTER 6 - HEALTH CRITERIA (COAL)

Information and guidance on the issuance of health citations and orders at coal mines may be found in the Coal Mine Health Inspection Procedures Manual and related Procedure Instruction Letters (PILs). Appendix C of this document contains examples of coal mine health citations and orders.

CHAPTER 7 - GENERAL INFORMATION

I. CITATION/ORDER BOOKS / IPAL CITATION NUMBERS - ACCOUNTABILITY

Citation/Order books are accountable government property and inspectors are required to sign an issuance sheet. Inspectors are also accountable for violation numbers issued through the IPAL system. Upon receipt of the violation numbers, the inspector must sign and date to acknowledge receipt of these numbers.

II. ISSUING CITATIONS AND ORDERS

It is not mandatory to give mine operators the citation or order form at the time the violation is observed. The operator or his designee, however, shall be told that there is a violation and a thorough discussion will ensue as to exposure, negligence, severity, and time permitted for abatement. Citations and orders shall be issued to the mine operator or his or her agent with reasonable promptness.

Note: Some citations or orders, because of the time needed for analysis or for other reasons, might be cited and delivered to the mine operator at a time after the violation has occurred. Examples include, but are not limited to: certain Part 50 violations, certain health violations, violations cited as a result of accident investigations, and violations cited as a result of reviewing accident forms.

III. INSPECTION OR INVESTIGATION CLOSEOUT CONFERENCE

At the conclusion of any enforcement-related inspection or investigation, inspectors shall discuss their general findings and each violation issued during that activity with the mine operator and, if applicable, with contractors and/or miners representatives. During this conference, inspectors will inform operators of citations or orders that have been evaluated as possibly flagrant and/or any that will be recommended for possible special assessment.

All parties will also be informed that they have 10 days in which to request a safety and health conference with the appropriate district manager if they disagree with actions taken by the inspector during the inspection or investigation. Further, all parties should be told that it is within the sole discretion of MSHA to grant requests for a conference and that a request for such conference must be in writing and include a brief statement of the reason(s) why each citation or order should be conferenced.

IV. COMPLIANCE ASSISTANCE VISIT INSPECTION FOLLOW-UP (METAL AND NONMETAL)

If an inspector observes a violation that is not abated which was noted on a previous CAV inspection, a 104(a) citation will be issued without referencing the CAV notice in the narrative or negligence evaluation section of the citation.

Inspectors should remember that a 104(a) citation is not the only action that can be taken for unabated CAV notices. Since the CAV inspection, the hazard observed during that inspection may have worsened or miners' exposure to the hazard might have increased. If an imminent danger situation now exists, a Section 107(a) withdrawal order should be issued with **no reference** made to the CAV notice in the body or negligence evaluation section of the order.

V. FIELD NOTES

For MNM inspectors, the forms provided to document inspectors' observations during enforcement activities are MSHA Forms 4000-49E (Citation/Order Documentation) and 4000-49F (General Field Notes), both 8½" x 11" in size, or Forms 4000-49G (Citation/Order Documentation), 4000-49H (General Field Notes), both 5" x 8" in size, and 4000-31 (Health Field Notes). For Coal inspectors, the forms provided to document inspectors' observations during enforcement activities are MSHA Form 7000 series. **Inspectors are not to take notes on other paper and copy them to these forms unless directed otherwise.**

For specific guidance on citation and order documentation, refer to the respective program area's General Inspection Procedures Handbook, as follows:

- Coal Mine Safety and Health General Inspection Procedures Handbook, Handbook No. PH13-V-1, Chapter 2, Section O.2.d. Documentation of Enforcement Actions.
- Metal and Nonmetal General Inspection Procedures Handbook, Handbook No. PH13-IV-1, Chapter 7, Section D Required Documentation for Citations and Orders.

VI. CONTRACTOR CITATIONS AND MSHA ID NUMBERS

Unless a contractor is cited, has a reportable accident, or is engaged in one of the nine types of construction or services listed in the MSHA Program Policy Manual (Volume III), an MSHA contractor ID number is not necessary. Some mine operators, however, require contractors to get numbers as a precondition for contract bidding. MSHA will provide an ID number for any contractor who requests one, but they need not apply except for the reasons specified above.

A contractor without an MSHA ID number can be cited using the mine operator's mine ID number until a contractor number is issued. A modification can then be written to include the new contractor number and to change the company name to the contractor's name when that number is obtained.

Note: The contractor's name entered on the citation must be exactly as it was when the MSHA Contractor ID number was assigned.

Contractor citations cannot be put into the MSHA computer system until the contractor is linked to the mine ID number. The Contractor Form 4000-39 must be submitted to link that contractor number with the mine ID number.

VII. ISSUING CITATIONS OR ORDERS - ACCIDENT INVESTIGATIONS

Inspectors will initiate a separate event and use that event number if citations or orders are issued which are not directly related to an accident. If a regular inspection is not ongoing at the mine at the time of the accident, a new event should be initiated.

Note: Unrelated citations or orders should not be included with the accident report.

VIII. TERMINATION (ABATEMENT) TIMES FOR CITATIONS

Inspectors shall give primary consideration to the health and safety of miners in establishing abatement times for all citations. The termination time for a citation must be specific and provide a reasonable time for mine operators to abate the conditions, practices, or circumstances which caused issuance of the citation. Citation abatement times **shall not** be established for the convenience of the mine operator, or for the inspector, or because the mine operator has filed an appeal with the Federal Mine Safety and Health Review Commission, or because the operator filed a Petition for Modification.

IX. EXTENDING/TERMINATING CITATIONS AT AN MSHA OFFICE

Most citations and orders require an on-site inspection to verify conditions before they can be terminated. Some citations and orders, such as those relating to certain records, may be terminated without conducting an on-site inspection. A field office supervisor should review and approve any citations or orders that are terminated by inspectors without conducting an on-site inspection. A "new" event number should not be initiated when a citation or order is extended, terminated, or vacated from an MSHA office. The appropriate enforcement activity code from the last on-site inspection should be used. Coal Inspectors could also use the T02 activity code for Office Generated Issuances.

X. EXTENDING CITATIONS - OPERATOR HAS APPEALED A CITATION OR ORDER

The filing of an appeal of a citation or order by a mine operator or contractor with the Federal Mine Safety and Health Review Commission (Commission) or the filing of a petition for modification does not relieve the operator or contractor of the responsibility of complying with the cited mandatory standard by its due date. These activities are not a basis to extend any citation unless inspectors are directed otherwise.

The extension of any citation **is** appropriate if primary consideration has been given to whether a safety or health hazard exists or may exist to the miners. An extension of time for the operator or contractor to comply may be appropriate if the hazard can be eliminated or minimized with an interim measure which ensures protection of miners.

XI. MODIFICATIONS TO CITATIONS/ORDERS/SUBSEQUENT ACTIONS

The original Mine Citation/Order Form 7000-3 and 7000-3a and all copies must be exactly alike. Any items written or entered in error on the form must be modified using a Mine Citation/Order Continuation Form 7000-3a. **Inspectors will not make changes on MSHA copies nor ask mine operators to make the same changes on their copies.**

Example: If a subsequent extension action is being changed, state: "The extension dated mm/dd/yy is being modified." If a subsequent termination action is being modified, state: "The termination dated mm/dd/yy is being modified." If a modification is being changed, state: "The modification dated mm/dd/yy is being corrected." If a Mine Citation/Order

Form is being modified or corrected, state: "Citation (or Order) No. xxxxxxx is being modified in Section xx, Item xx, to (the corrected action should be entered)."

XII. TERMINATING CITATIONS AND ORDERS

- A. Citations and orders will be terminated on either the Mine Citation/Order Form or a Continuation Form and given to the mine operator or contractor.

Example: Four citations/orders were written and issued to the mine operator on Monday. Three days later all violative conditions were corrected. The four citations/orders shall be individually terminated on a Mine Citation/Order Continuation Form 7000-3a.

- B. Citations and orders shall be terminated when a mine is classified by MSHA as permanently abandoned and sealed, or if it moves to a location some distance from the original site (e.g., a portable crusher). Citations and orders shall also be terminated when out of compliance equipment is permanently "removed from service," is permanently retired from service, or is permanently removed from the mine site.

The following procedures shall apply when citations and orders are terminated in the above situations:

1. Mine operation status is changed to "permanently abandoned."

The inspector shall make every reasonable attempt to determine if the operator complied with the cited standards.

- a. If the operator did comply then:

Terminate any outstanding citations or orders and hand deliver or mail the operator the terminations. Write on the termination(s) that the violative condition(s) or practice(s) was corrected.

- b. If it is determined that the operator did not correct the violative condition(s) or practice (s) before the mine was abandoned then:

Terminate any outstanding citations or orders and hand deliver or mail the operator the terminations. Write the following on each termination:

"The basis for termination of this citation (or order) is the classification of the mine as permanently abandoned. The violative condition(s) or practice(s) was not corrected. The operator is required to comply with the provisions of the cited standard before resuming activities at this location or at another mine.

2. Operation or equipment moves to a new location away from the initial mine site.

- a. If the inspector determines that the operator did comply prior to moving then:

Terminate all outstanding citations or orders and hand deliver or mail the operator all terminations. Note on the termination(s) that the basis for termination is that the violative condition was corrected.

- b. If the inspector determines that the operator did not comply prior to moving then:

Terminate all outstanding citations or orders and hand deliver or mail the operator all terminations. Write the following statement on each termination:

"The basis for termination of this citation (or order) is the moving of mining operations (or equipment). The violative condition(s) or practice(s) was not corrected prior to moving. The operator is required to comply with the provisions of the standard before resuming any activities at another mine. Failure to correct the cited condition(s) or practice(s) prior to resuming these activities will be considered by MSHA to be aggravated conduct constituting more than ordinary negligence."

XIII. EQUIPMENT REMOVED FROM SERVICE

The term "removed from service" does not mean that the mine operator stopped using and parked a piece of equipment (e.g., front-end loader, truck) or a mining unit (e.g., portable crusher, screening unit) when it could or can be restarted and easily placed back into service in the same condition which caused issuance of the original citation(s) or order(s). Rather, "removed from service" refers to the action(s) taken by the mine operator or contractor to permanently incapacitate or render inoperable the equipment and eliminate the violation. The inspector should note those actions on the termination and refer to any evidence that the equipment was removed from service such as documentation and relevant statements made by the mine operator, or his or her representatives,

Scenario: A loader is cited for not having an audible back-up alarm installed. The mine operator (or contractor) takes the tires off the loader, places it on blocks, removes the battery, and welds the doors closed. Any of these actions could qualify the equipment as being "removed from service" and justify termination of any outstanding citation(s) or order(s).

XIV. MINE OWNERSHIP CHANGES WITH OUTSTANDING CITATIONS OR ORDERS

When ownership of a mine changes after a citation(s) or order(s) is issued, the termination should be issued to the operator of the property at the time of termination. The operator of the mine at the time a citation is issued is the entity that will be assessed the civil penalty even though the mine no longer belongs to that operator.

In all cases, do not modify the outstanding citation(s) to change mine ownership.

When a change in mine operator occurs after a citation is issued but before it is terminated and justification is not found to extend the citation, a Section 104(b) order of withdrawal can be issued to the new mine operator.

Unless conditions that were noted on the original citation have deteriorated and now pose an imminent danger to miners, the new mine operator should generally be given the same amount of time to correct the violative condition as was given the previous mine operator.

Example: On July 1, Jane Doe Sand and Gravel is cited for an unguarded conveyor head pulley and given one week to abate the condition. On July 7, Tom Brown Crushing purchases the mine and begins managing the operation the same day. On July 10, an inspector returns to check on the outstanding guarding citation and finds that a guard had not been installed on the head pulley.

Based on the circumstances noted above:

- an extension would be issued if the inspector found and documented mitigating circumstances (e.g., the new mine operator was unaware of the violation). The extension would be issued to "Tom Brown Crushing" noting in Section II narrative of form 7000-3a that Tom Brown Crushing purchased the operation on July 7 and was the new mine operator; or
- a Section 104(b) order of withdrawal would be issued if the inspector found and documented that there were no mitigating circumstances to issue an extension (e.g., the new mine operator was aware of the violation but chose not to abate the cited condition). The 104(b) order would be issued to "Tom Brown Crushing" noting in the Item 8 narrative that Tom Brown Crushing purchased the operation on July 7 and was the new mine operator.

XV. VACATING CITATIONS/ORDERS

Vacated citations and orders must be included with inspection or investigation reports as they are part of the inspection record. If the inspector is still at the mine, he or she will not reclaim the previous copies and mark the citation or order "Void." Instead, those copies shall be left with the mine operator and inspectors shall issue a "Vacate" action on Form 7000-3a. Inspectors shall state the specific reason for vacating the citation or order on that form. Copies of all vacated citations and orders shall be forwarded to the District Office separate from the inspection report. Vacating an imminent danger order must be authorized by the appropriate District or Assistant District Manager prior to that action occurring.

XVI. VOIDING CITATIONS/ORDERS

A voided citation or order is one which was written or typed on the Mine Citation/Order Form and an error was discovered before it was presented to the mine operator or contractor.

The inspector will mark "Void" on the original citation or order form and all copies. The circumstances which caused the voidance will be noted on all forms. These voided forms will not be included with the inspection report but will be kept with the citation book until it is completed. The inspector should attach the voided forms to the empty book and return it to the field office supervisor when the book is finished.

When using the IPAL system, a citation or order that is issued in error must be vacated or modified by using Form 7000-3a.

XVII. STANDARD SUBSECTIONS - CITATIONS/ORDERS

Unless directed otherwise, specify both the standard **AND** the appropriate subsection when a violation is cited.

Examples: Citations for failure to guard a piece of equipment should be issued under 56/57.14107(a) **and not** 56/57.14107; violations for failure to maintain an audible warning device on self-propelled equipment should be cited as 56/57.14132(a) **and not** 56/57.14132.

XVIII. PART 41 - LEGAL IDENTITY

Each mine operator is required to file notification of legal identity and every change thereto on an MSHA Legal Identity Report Form 2000-7 with the appropriate MSHA office.

Inspectors will check for any change in the mine operator, mine name, company officers, parent company, and the address of record during every inspection. An updated Legal Identity Report Form must be submitted by the mine operator within 30 days if changes have occurred. When applicable, a citation will be issued to the mine operator when corporate, company, partnership, or any other changes have been made without MSHA being notified as required under 30 CFR Part 41.

The operator and the mine name on a Mine Citation/Order Form and Continuation Form must be the same as on the Legal Identity Report Form in effect at the time a citation or order is issued.

XIX. PART 44 - PETITIONS FOR MODIFICATION

Title 30 CFR Part 44.4(c) reads in part: "... Orders granting petitions for modification may contain special terms and conditions to assure adequate protection to miners. The

modification, together with any conditions, shall have the same effect as a mandatory standard."

During each regular inspection, inspectors shall:

- determine that all requested petitions for modification, or a notice of their availability, are posted on the mine bulletin board as required by 30 CFR Part 44.9; and
- determine if a final petition decision or summary of that decision is posted. A copy of the full decision must be kept at the affected mine office and made available to the miners in accordance with 30 CFR 44.5(b).
- review the terms and conditions contained in the decision and order section of all granted petitions for modification.

When a violation of one or more of the conditions specified in granted petitions for modification is found, the inspector shall:

- cite the safety standard for which the petition for modification was granted;
- include the docket number of the granted petition for modification in Item 8 of the Mine Citation/Order Form;
- note the specific condition which was violated in the narrative of the Mine/Citation Order Form; and
- notify his (or her) supervisor after citing this violation.

This citation may be the basis for initiating action to revoke the granted petition depending on the circumstances present at the time of issuance.

XX. PART 50 - ACCIDENT, INJURY AND EMPLOYMENT REPORTING VIOLATIONS

An evaluation of compliance with employee and injury reporting requirements under 30 CFR Part 50 and the MINER Act shall be made during every regular inspection.

Inspectors shall issue a citation for **each separate instance** of:

- failing to immediately notify MSHA of an accident as defined in Part 50.2(h) within 15 minutes (50.10);
- failing to investigate an accident or occupational injury (50.11);
- altering an accident site (50.12);

- failing to report an accident, injury, or illness (50.20);
- failing to report quarterly employment (50.30); and
- reporting employment hours, production (coal), illnesses, or reportable injuries or accidents after the due date and each instance of inaccurate reporting (50.20 or 50.30).

Inspectors shall issue only one citation where mine operators have:

- failed to maintain quarterly employment or accident investigation reports (50.40); and
- failed to allow an MSHA representative to inspect and copy information related to accidents, injuries, or illnesses (50.41).

Violations of 30 CFR Part 50 (excluding 50.10) are violations of regulations as opposed to standards and will always be evaluated as "non-S&S." These violations, however, may be the result of high negligence, depending on circumstances. Violations of 30 CFR 50.10 may be evaluated as "S&S" or "non-S&S" depending on circumstances.

XXI. POSSIBLE KNOWING/WILLFUL VIOLATION REVIEW FORM (7000-20)

A. Inspectors will initiate a Possible Knowing/Willful Violation Review Form for:

- 107(a) orders with 104(a) and 104(d) citations;
- 107(a) orders with 104(d) orders;
- "S&S" 104(d) citations and orders with an evaluation of at least "high" for negligence;
- 104(e) orders of withdrawal with an evaluation of at least "high" for negligence;
- flagrant violations; and
- citations issued for working in violation of an order.

B. The District Office shall be sent a packet that includes:

1. the original Possible Knowing/ Willful Violation Review Form;
2. a copy of the Legal Identity Report;
3. a copy of the relevant general field notes;
4. a copy of the citation/order notes;
5. appropriate photographs; a copy of the relevant citation(s) or order(s); and
6. a copy of all modifications.

This packet shall be mailed to the District Office in a timely manner following the date the citation(s) or order(s) was issued.

Appendix A

Safety Violations

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MSHA Form 7000-3 Mar 85 (Revised)

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MSHA Form 7000-3 Mar 85 (Revised)

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	7	0	1	0	8	0
4. Served To	FRED BIRCH, OWNER			5. Operator	F. B. MINING COMPANY		
6. Mine	F. B. MINE			7. Mine ID	5 6 - 0 9 9 9 9 - (contractor)		
8. Condition or Practice							8a. Written Notice (103g)

Mr. Fred Birch, owner and operator of the F. B. Mining Company, continued to deny an authorized representative of the Secretary the right of entry into the F.B. Mine for the purpose of conducting an inspection of the mine in accordance with the requirements of Section 103(a) of the Federal Mine Safety and Health Act of 1977.

NOTE: Section I, Item 9B, is completed with 103(a). Items 10 and 11 are not completed. Item 15 is completed with the phrase "No Area Affected."

See Continuation Form (MSHA Form 7000-3a)									
9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR						
		1 0 3 - a							

Section II -- Inspector's Evaluation

10. Gravity:	A. Injury or Illness (has) (is):	No Likelihood	Unlikely	Reasonably Likely	Highly Likely	Occurred
	B. Injury or Illness could reasonably be expected to be:	No Lost Workdays	Lost Workdays or Restricted Duty	Permanently Disabling	Fatal	
	C. Significant and Substantial (See Reverse):	Yes	No	D. Number of Persons Affected		
11. Negligence (check one)	A. None	B. Low	C. Moderate	D. High	E. Reckless Disregard	
12. Type of Action	1 0 4 - b - , - -	13. Type of Issuance (check one)	Citation	Order	Safeguard	Written Notice
14. Initial Action	A. Citation	B. Order	C. Safeguard	D. Written Notice	E. Citation/Order Number	F. Dated
					4 4 1 0 1 6 1	Mo Da Yr
15. Area or Equipment	NO AREA AFFECTED					

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)

Section III -- Termination Action

17. Action to Terminate					
18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E 2 7	20. Event Number	0 0 7 3 5 0 0	21. Primary or Mill	
22. Signature	JOHN SMITH				23. AR Number
					0 1 9 9 9

Section I -- Violation Data

1. Date	Mo 07	Da 01	Yr 08	2. Time (24 Hr. Clock)	0800	3. Citation/Order Number	4410002
4. Served To Joe Doe, Co-owner				5. Operator Big Lick Coal Company			
6. Mine Big Lick No. 1				7. Mine ID 64-07153- (contractor)			
8. Condition or Practice							8a. Written Notice (103g)

Joe Doe, partner and mine foreman, continued to deny Paul Jones, an authorized representative of the Secretary, the right of entry into the Big Lick No. 1 Mine for the purpose of conducting an inspection of the mine in accordance with the requirements of Section 103(a) of the Act.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	103-a	C. Part/Section of Title 30 CFR	.
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Section II -- Inspector's Evaluation

10. Gravity:					
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>					
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>					
C. Significant and Substantial (See Reverse): Yes <input type="checkbox"/> No <input type="checkbox"/>				D. Number of Persons Affected	
11. Negligence (check one)					
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>					
12. Type of Action				13. Type of Issuance (check one)	
104-b-				Citation <input type="checkbox"/> Order <input checked="" type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>	
14. Initial Action		D. Written Notice		E. Citation/Order Number	
A. Citation <input checked="" type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/>		<input type="checkbox"/>		4410001	
F. Dated					
Mo Da Yr 070108					

15. Area or Equipment

No area affected.

16. Termination Due	A. Date	Mo Da Yr	B. Time (24 Hr. Clock)
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Section III -- Termination Action

17. Action to Terminate

18. Terminated	A. Date	Mo Da Yr	B. Time (24 Hr Clock)
----------------	---------	----------	-----------------------

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E01	20. Event Number	0808080	21. Primary or Mill
22. Signature				23. AR Number
Paul Jones				29320

MSHA Form 7000-3 Mar 85 (Revised)

104(b) ORDER - DENIAL OF RIGHT OF ENTRY

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 	Da 	Yr 		3. Citation/Order Number												
4. Served To John Smith, Assistant Foreman						5. Operator J and S Coal Company, Inc.													
6. Mine No. 1						7. Mine ID 4 4 - 0 3 5 3 6 - (contractor)													

Section II -- Justification for Action

Purpose - This inspection was conducted to investigate a complaint dated 7/22/08 alleging that dangerous loose coal, coal dust, and float coal dust have accumulated throughout the 2 south belt entry.

Negative Findings -The entire 2 south belt entry was examined and accumulations of loose coal, coal dust or float coal dust were not found.

This example reflects only one hazard that was involved in the 103(g) inspection. In those instances where two or more hazards are alleged to exist in a request for a 103(g) inspection, each of the alleged hazards must be addressed by issuing a citation or order or by providing written notification that each alleged hazard did not exist.

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo 	Da 	Yr 	B. Time (24 Hr. Clock)					C. Vacated <input type="checkbox"/>	D. Terminated <input type="checkbox"/>	E. Modified <input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	0	3	10. Event Number	0	8	8	8	8	0	1	11. Signature James Lee	AR Number	12. Date	Mo 0	Da 7	Yr 2	13. Time (24 Hr. Clock)	1	0	3	0
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MSHA Form 7000-3a, Mar 85 (Revised)

103(g) HAZARD COMPLAINT INSPECTOR
NOTICE OF NEGATIVE FINDINGS

MSHA Form 7000-3 Mar 85 (Revised)

U.S. Department of Labor
Mine Safety and Health Administration

1. Subsequent Action <input checked="checked" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 7	Yr 2		3. Citation/Order Number	4	4	1	0	0	0	6	-	0	1
4. Served To John Smith, Assistant Foreman					5. Operator J and S Coal Company, Inc.												
6. Mine No. 1					7. Mine ID 4 4 0 3 5 3 6 - (contractor)												

Order No. 4410006 dated 7/25/08 is hereby modified to permit rehabilitation of the 2 south section according to the agreed upon plan dated 7/25. All items listed on this plan must be strictly adhered to.

9

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)					C. Vacated	<input type="checkbox"/>	D. Terminated	<input type="checkbox"/>	E. Modified	<input checked="" type="checkbox"/>
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9. Type of Inspection	E	0	6	10. Event Number	0	8	8	8	8	0	8														
11. Signature					AR Number					12. Date			Mo	Da	Yr	13. Time (24 Hr. Clock)									
James Lee					2 0 7 7 7								0	8	0	5	0	8				0	9	0	0

11

U.S. Department of Labor
Mine Safety and Health Administration

1. Subsequent Action <input checked="checked" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 7	Yr 2		3. Citation/Order Number	4	4	1	0	0	0	6	-	0	2
4. Served To John Smith, Assistant Foreman					5. Operator J and S Coal Company, Inc.												
6. Mine No. 1					7. Mine ID 4 4 0 3 5 3 6 - (contractor)												

Ventilation has been restored to the No. 2 south section. An examination of the mine was made and samples of the mine atmosphere did not reveal the presence of carbon monoxide.

--

8. Extended To	Mo	Da	Yr												
A. Date				B. Time (24 Hr. Clock)								C. Vacated <input type="checkbox"/> D. Terminated <input checked="" type="checkbox"/> E. Modified <input type="checkbox"/>			

9. Type of Inspection	E	0	1	10. Event Number	0	8	8	8	8	0	9										
11. Signature James Lee					AR Number				12. Date		Mo	Da	Yr	13. Time (24 Hr. Clock)							
					2	0	7	7			7	0	8				0	5	0	8	0

103(j) ORDER - TERMINATION

A fatal accident occurred at this operation on July 2, 2008, when two miners were attempting to blast oversized ore at the No. 4 draw point area. This order is issued to assure the safety of all persons at this operation. It prohibits all activity at the No. 4 draw point area until MSHA has determined that it is safe to resume normal mining operations in the area. The mine operator shall obtain prior approval from an authorized representative for all actions to recover and/or restore operations to the affected area.

NOTE: The gravity and negligence sections are not completed nor is a termination due date established.

Section II -- Inspector's Evaluation

15. Area or Equipment

NO. 4 DRAW POINT AREA

Section III -- Termination ActionSection IV -- Automated System DataMSHA Form 7000-3 Mar 85 (Revised)

U.S. Department of Labor

Mine Safety and Health Administration

1. Subsequent Action <input checked="checked" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 7	Yr 0		3. Citation/Order Number	4	4	1	0	1	6	4	-	0	1
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5. Operator
J.H. MINING COMPANY, INC.

7. Mine ID	5	6	-	0	0	0	1	3	-			(contractor)
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Order #4410164 is terminated. Conditions that contributed to the accident have been corrected and normal mining operations can resume.

See Continuation Form ☐

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)						C. Vacated	<input type="checkbox"/>	D. Terminated	<input checked="" type="checkbox"/>	E. Modified	<input type="checkbox"/>
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9. Type of Inspection	E	0	6	10. Event Number	0	0	7	3	5	1	2
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11. Signature	AR Number					12. Date	Mo	Da	Yr	13. Time (24 Hr. Clock)							
JOHN SMITH	0	1	9	9	9		0	7	0	3	0	8		0	8	1	5

103(k) ORDER - TERMINATION

Section I -- Violation Data

1. Date	Mo 08	Da 10	Yr 08	2. Time (24 Hr. Clock)	0800	3. Citation/Order Number	4410007
4. Served To John Smith, Mine Foreman				5. Operator J and S Coal Company, Inc.			
6. Mine No. 1				7. Mine ID 44-03536- (contractor)			
8. Condition or Practice							8a. Written Notice (103g) <input type="checkbox"/>

The mine has experienced a fatal track haulage accident along the 10 left haulway. This Order is issued to ensure the safety of any person in the coal mine until an examination or investigation is made to determine that the 10 left haulway is safe. Only those persons selected from company officials, state officials, the miners' representative and other persons who are deemed by MSHA to have information relevant to the investigation may enter or remain in the affected area.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR
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Section II -- Inspector's Evaluation

10. Gravity:									
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>									
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>									
C. Significant and Substantial (See Reverse): Yes <input type="checkbox"/> No <input type="checkbox"/> D. Number of Persons Affected									
11. Negligence (check one)									
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>									
12. Type of Action									
13. Type of Issuance (check one)									
Citation <input type="checkbox"/> Order <input checked="" type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>									
14. Initial Action									
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number									
F. Dated									

15. Area or Equipment

Entire 10 left track haulway and equipment involved in the accident.

16. Termination Due	A. Date	Mo 08	Da 10	Yr 08	B. Time (24 Hr. Clock)
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Section III -- Termination Action

17. Action to Terminate
The 10 left track haulway and the equipment involved in the fatal haulage accident has been examined and it has been determined that it is safe to resume normal mining operations in the affected area.

18. Terminated	A. Date	Mo 08	Da 10	Yr 08	B. Time (24 Hr Clock)	1600
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Section IV -- Automated System Data

19. Type of Inspection (activity code)	E06	20. Event Number	0888811	21. Primary or Mill
22. Signature James Lee				23. AR Number 20777

MSHA Form 7000-3 Mar 85 (Revised)

103(k) ORDER - ISSUANCE AND TERMINATION

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo 07	Da 06	Yr 08	2. Time (24 Hr. Clock)	1300	3. Citation/Order Number	4410168
4. Served To SAMUEL ADAMS, LEVEL FOREMAN				5. Operator ABLE MINING, INC.			
6. Mine THE DOUBLE M MINE				7. Mine ID 57-06789- (contractor)			
8. Condition or Practice							8a. Written Notice (103g)

Signs warning against smoking and open flames were not posted in the underground shop where flammable solvents were being used. The Safety Director stated that signs had been posted a few days ago. Employees had been instructed not to smoke in areas where there were flammable liquids. Several large multi-purpose fire extinguishers were in the area which reduced the chances of a fire spreading.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR
		-	57.4101

Section II -- Inspector's Evaluation

10. Gravity:			
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input checked="" type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>			
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input checked="" type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>			
C. Significant and Substantial (See Reverse): Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		D. Number of Persons Affected	
		005	
11. Negligence (check one)			
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>			
12. Type of Action		13. Type of Issuance (check one)	
104-a-		Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>	
14. Initial Action		E. Citation/Order Number	
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/>			
15. Area or Equipment			

16. Termination Due	A. Date	Mo 07	Da 06	Yr 08	B. Time (24 Hr. Clock)	1600
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Section III -- Termination Action

17. Action to Terminate
TWO "NO SMOKING" SIGNS WERE POSTED IN APPROPRIATE AREAS OF THE SHOP.

18. Terminated	A. Date	Mo 07	Da 06	Yr 01	B. Time (24 Hr Clock)	1535
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Section IV -- Automated System Data

19. Type of Inspection (activity code)	E01	20. Event Number	0345678	21. Primary or Mill	
22. Signature				23. AR Number	
BILL WILLIAMS				02555	

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - "NON-S&S"

Section I -- Violation Data

1. Date	Mo 07	Da 20	Yr 08	2. Time (24 Hr. Clock)	0845	3. Citation/Order Number	4410003
4. Served To John Smith, Assistant Foreman				5. Operator J and S Coal Company, Inc.			
6. Mine No. 1				7. Mine ID 44-03536- (contractor)			
8. Condition or Practice				8a. Written Notice (103g) <input type="checkbox"/>			

Energized insulated power wires were not passing through insulated bushings where they entered a power control switchbox on the Labour water pump at the northeast pumping station. The wires were resting against the metal frame of the switchbox, and there was no apparent damage to the insulation.

(The wrong section number has been used on purpose in this example. See Example 5 for modification.)

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR
		-	75.514

Section II -- Inspector's Evaluation

10. Gravity:			
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input checked="" type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>			
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input checked="" type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>			
C. Significant and Substantial (See Reverse): Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		D. Number of Persons Affected	
		001	
11. Negligence (check one)			
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>			
12. Type of Action		13. Type of Issuance (check one)	
104-a-		Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>	
14. Initial Action		D. Written Notice	
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/>		E. Citation/Order Number	
		F. Dated	
		Mo Da Yr	
15. Area or Equipment			

16. Termination Due	A. Date	Mo 07	Da 21	Yr 08	B. Time (24 Hr. Clock)	0800
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Section III -- Termination Action

17. Action to Terminate						
18. Terminated						
A. Date		Mo	Da	Yr	B. Time (24 Hr Clock)	

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E01	20. Event Number	0888800	21. Primary or Mill	
22. Signature James Lee				23. AR Number	
				20777	

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 7	Yr 2	0	0	8	3. Citation/Order Number	4	4	1	0	0	0	3	-	0	1
4. Served To John Smith, Assistant Foreman									5. Operator J and S Coal Company, Inc.										
6. Mine No. 1									7. Mine ID 4 4 - 0 3 5 3 6 - (contractor)										

Section II -- Justification for Action

The energized power wires entering a power control switchbox on the Labour water pump at the northeast pumping station have not been provided with insulated bushings. A power failure resulted in the mine being idle. Therefore, additional time has been requested and granted.

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo 0	Da 7	Yr 2	0	8	B. Time (24 Hr. Clock)	0	8	0	0	C. Vacated	<input type="checkbox"/>	D. Terminated	<input type="checkbox"/>	E. Modified	<input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	0	1	10. Event Number	0	8	8	8	8	0	0	11. Signature	AR Number	12. Date	Mo 0	Da 7	Yr 2	1	0	8	13. Time (24 Hr. Clock)	0	8	3	0		
James Lee													2	0	7	7	7										

MSHA Form 7000-3a, Mar 85 (Revised)

104(a) CITATION - EXTENSION

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 7	Yr 2	0	8	3. Citation/Order Number	4	4	1	0	0	0	3	-	0	2
4. Served To John Smith, Assistant Foreman					5. Operator J and S Coal Company, Inc.													
6. Mine No. 1					7. Mine ID 4 4 - 0 3 5 3 6 - (contractor)													

Section II -- Justification for Action

The power wires were entered through insulated bushings into the power control switches on the Labour water pump at the northeast pumping station.

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	C. Vacated	<input type="checkbox"/>	D. Terminated	<input checked="" type="checkbox"/>	E. Modified	<input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	0	1	10. Event Number	0	8	8	8	8	0	0	11. Signature	AR Number	12. Date	Mo	Da	Yr	13. Time (24 Hr. Clock)	0	8	0	0			
										James Lee				2 0 7 7 7				0 7 2 3 0 8							

MSHA Form 7000-3a, Mar 85 (Revised)

104(a) CITATION - TERMINATION

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 7	Yr 2		3. Citation/Order Number	4	4	1	0	0	0	3	-	0	3
4. Served To John Smith, Assistant Foreman					5. Operator J and S Coal Company, Inc.												
6. Mine No. 1					7. Mine ID 4 4 - 0 3 5 3 6 - (contractor)												

Section II -- Justification for Action

Citation No. 4410003, issued for a violation of 30 CFR 75.514 is modified in Item 9 C to show the correct section number 30 CFR 75.515.

(Modification to correct wrongly cited section number of the regulations.)

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	C. Vacated	<input type="checkbox"/>	D. Terminated	<input type="checkbox"/>	E. Modified	<input checked="" type="checkbox"/>
----------------	---------	----	----	----	------------------------	------------	--------------------------	---------------	--------------------------	-------------	-------------------------------------

Section IV -- Inspection Data

9. Type of Inspection	E	0	1	10. Event Number	0	8	8	8	8	0	0	11. Signature	AR Number	12. Date	Mo	Da	Yr	13. Time (24 Hr. Clock)						
					2	0	7	7	7			James Lee			0	7	2	3	0	8	1	0	0	0

MSHA Form 7000-3a, Mar 85 (Revised)

104(a) CITATION - MODIFICATION

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	7	0	6	0	8	1
4. Served To	SAMUEL ADAMS, LEVEL FOREMAN				5. Operator	MUDDY MINING, INC.	
6. Mine	THE DOUBLE M MINE				7. Mine ID	5 7 - 0 6 7 8 9 - (contractor)	
8. Condition or Practice					8a. Written Notice (103g)	<input type="checkbox"/>	

A written record of workplace examinations was not available for review by MSHA. Examinations had been conducted every shift of each working place and appropriate action had been taken to correct hazardous conditions. However, the operator had failed to record those examinations.

NOTE: Do not issue this citation in conjunction with, or in addition to, a citation for failing to conduct the workplace examination required under 56/57.18002(a).

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR
			5 7 . 1 8 0 0 2 b

Section II -- Inspector's Evaluation

10. Gravity:

A. Injury or Illness (has) (is): No Likelihood ☒ Unlikely ☐ Reasonably Likely ☐ Highly Likely ☐ Occurred ☐

B. Injury or Illness could reasonably be expected to be: No Lost Workdays ☒ Lost Workdays or Restricted Duty ☐ Permanently Disabling ☐ Fatal ☐

C. Significant and Substantial (See Reverse): Yes ☐ No ☒ D. Number of Persons Affected 0 0 0

11. Negligence (check one)

A. None ☐ B. Low ☐ C. Moderate ☒ D. High ☐ E. Reckless Disregard ☐

12. Type of Action	1	0	4	-	a	-	,	-	-	13. Type of Issuance (check one)
										Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>

14. Initial Action	A. Citation <input type="checkbox"/>	B. Order <input type="checkbox"/>	C. Safeguard <input type="checkbox"/>	D. Written Notice <input type="checkbox"/>	E. Citation/Order Number	F. Dated	Mo	Da	Yr

15. Area or Equipment

16. Termination Due	Mo	Da	Yr	A. Date	B. Time (24 Hr. Clock)
	0	7	0	6	0
					1

Section III -- Termination Action

17. Action to Terminate

A RECORD OF EXAMINATIONS WAS NOW BEING KEPT AND WAS AVAILABLE FOR REVIEW BY MSHA.

18. Terminated	Mo	Da	Yr	A. Date	B. Time (24 Hr Clock)
	0	7	0	6	0
					1

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	0	3	4	5	6	7	8	21. Primary or Mill
22. Signature	BILL WILLIAMS											23. AR Number
												0

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - NON-"S&S"

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	7	0	8	0	4	4
4. Served To	LEFTY JONES, SAFETY DIRECTOR			5. Operator	WHEAT MINING COMPANY		
6. Mine	WMC MINE AND MILL			7. Mine ID	5 6 - 0 0 3 3 3 - (contractor)		
8. Condition or Practice				8a. Written Notice (103g)	<input type="checkbox"/>		

The cab window of the front-end loader was cracked on the driver's side creating a line of vision problem for the operator.

The loader was being operated in the stockpile area. According to the operator, the loader does not work in any other areas of the mine.

Other traffic or employees were not in the immediate vicinity. The windshield cracks extend two feet vertically by two feet horizontally, with numerous smaller cracks radiating from the larger cracks.

Equipment: 988 Caterpillar front-end loader, #10, Serial Number 234567

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR
			5 6 . 1 4 1 0 3 b

Section II -- Inspector's Evaluation

10. Gravity:	A. Injury or Illness (has) (is):	No Likelihood <input type="checkbox"/>	Unlikely <input checked="" type="checkbox"/>	Reasonably Likely <input type="checkbox"/>	Highly Likely <input type="checkbox"/>	Occurred <input type="checkbox"/>
	B. Injury or Illness could reasonably be expected to be:	No Lost Workdays <input type="checkbox"/>	Lost Workdays or Restricted Duty <input type="checkbox"/>	Permanently Disabling <input checked="" type="checkbox"/>	Fatal <input type="checkbox"/>	
	C. Significant and Substantial (See Reverse):	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	D. Number of Persons Affected	0 0 1	
11. Negligence (check one)	A. None <input type="checkbox"/>	B. Low <input type="checkbox"/>	C. Moderate <input checked="" type="checkbox"/>	D. High <input type="checkbox"/>	E. Reckless Disregard <input type="checkbox"/>	
12. Type of Action	1 0 4 - a - , - -			13. Type of Issuance (check one)	Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>	
14. Initial Action	A. Citation <input type="checkbox"/>	B. Order <input type="checkbox"/>	C. Safeguard <input type="checkbox"/>	D. Written Notice <input type="checkbox"/>	E. Citation/Order Number	F. Dated Mo Da Yr
15. Area or Equipment						

16. Termination Due	Mo	Da	Yr	A. Date	B. Time (24 Hr. Clock)
	0	7	2	0	8
				1	6

Section III -- Termination Action

17. Action to Terminate						
18. Terminated	Mo	Da	Yr	A. Date	B. Time (24 Hr Clock)	

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	0	4	5	6	7	8	9	21. Primary or Mill					
22. Signature	PAULA FIELDS											23. AR Number	0	3	1	1	1

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - "NON-S&S"

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 7	Yr 0	3. Citation/Order Number	4	4	1	0	1	7	0	-	0	1
4. Served To LEFTY JONES, SAFETY DIRECTOR					5. Operator WHEAT MINING COMPANY											
6. Mine WMC MINE AND MILL					7. Mine ID 5 6 - 0 0 3 3 3 - (contractor)											

Section II -- Justification for Action

The loader was removed from the mine site and the violation is terminated. Prior to its removal, the loader's windshield had not been replaced by the operator. The mine operator was notified that, prior to resuming mining activities at another site, he is required to comply with the cited standard. If the operator does not comply, MSHA will consider his actions to be aggravated conduct constituting more than ordinary negligence.

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	C. Vacated	<input type="checkbox"/>	D. Terminated	<input checked="" type="checkbox"/>	E. Modified	<input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	1	5	10. Event Number	0	3	5	7	9	1	0	11. Signature	AR Number	12. Date	Mo	Da	Yr	13. Time (24 Hr. Clock)	0	8	3	0
											JOHN SMITH				0 7 1 8 0 8							

MSHA Form 7000-3a, Mar 85 (Revised)

104(a) CITATION - TERMINATION
EQUIPMENT REMOVED FROM MINE SITE

The self-cleaning tail pulley of the No. 2 conveyor belt was not guarded. The conveyor was not operating at the time of the inspection but had operated the day before. The guard was lying on the ground. Several feet of dust had accumulated around the guard indicating that it had not been in place for an extended period of time. Employees were required to work in this area when the conveyor was operating. The unguarded conveyor tail pulley was within two feet of an active workplace and was visible to anyone in the area. Miners would be seriously injured if they came in contact with the unguarded pulley.

Section II -- Inspector's Evaluation

C. Significant and Substantial (See Reverse):	Yes	X	No			D. Number of Persons Affected	0	0	1
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14. Initial Action										D. Written Notice		E. Citation/Order Number		F. Dated		Mo	Da	Yr
A. Citation		<input type="checkbox"/>	B. Order		<input type="checkbox"/>	C. Safeguard		<input type="checkbox"/>										

16. Termination Due		Mo	Da	Yr					
				A. Date	B. Time (24				
		0	7	0	Hr. Clock)	1	2	0	0
				3					
				0					
				8					

18. Terminated		Mo	Da	Yr	A. Date B. Time (24 Hr Clock)				
		07	03	08		1	3	3	0

22. Signature	23. AR Number				
JANE JONES	0	2	1	3	6

104(a) CITATION - "S&S"

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="checked" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 7	Yr 0		8	3. Citation/Order Number	4	4	1	0	1	6	9	-	0	1
4. Served To SAMUEL ADAMS, LEVEL FOREMAN					5. Operator MUDDY MINING, INC.													
6. Mine THE DOUBLE M MINE					7. Mine ID 5 7 - 0 6 7 8 9 - (contractor)													

Section 11 -- Justification for Action

This action is to modify Citation #4410169 based on information presented at an MSHA Health and Safety Conference. Information received included: the loose slab was located one foot from the right rib and a ditch was located directly beneath the slab. Persons in this area walk approximately five feet to the side of the ditch and are not likely to be hit by the slab. Based on this information the citation is modified to "Non-S&S". Item 10A is modified to "unlikely" and Item 10C is changed to "No".

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)					C. Vacated	<input type="checkbox"/>	D. Terminated	<input type="checkbox"/>	E. Modified	<input checked="" type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection				E	0	1	10. Event Number				0	3	4	5	6	7	8											
11. Signature							AR Number				12. Date			Mo	Da	Yr	13. Time (24 Hr. Clock)											
PAULSMITH							0	1	6	5	4				0	7	2	1	0	8					1	3	0	0

MSHA Form 7000-3a, Mar 85 (Revised)

104(a) CITATION - "S&S"
MODIFIED TO "NON-S&S"

Section I -- Violation Data

1. Date	Mo 07	Da 24	Yr 08	2. Time (24 Hr. Clock)	0800	3. Citation/Order Number	4410171
4. Served To LEFTY JONES, SAFETY DIRECTOR				5. Operator WHEAT MINING COMPANY			
6. Mine WMC MINE AND MILL				7. Mine ID 56-00333- (contractor)			
8. Condition or Practice							8a. Written Notice (103g) <input type="checkbox"/>

No apparent effort was made to replace the cracked cab window on the driver's side of the front-end loader which was being operated in the stockpile area. The loader is hereby ordered withdrawn from service until the cab window is replaced and an MSHA inspector can observe the windshield in the loader.

Equipment: 988 Caterpillar front-end loader, #10, Serial Number 234567

NOTE: Section II, Items 10, 11, 16A and 16B are not completed. If equipment is ordered withdrawn from service enter the equipment's name, model, and serial number (if known) in Section II, Item 15.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR	56-14103b
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Section II -- Inspector's Evaluation

10. Gravity:

A. Injury or Illness (has) (is): No Likelihood ☐ Unlikely ☐ Reasonably Likely ☐ Highly Likely ☐ Occurred ☐

B. Injury or Illness could reasonably be expected to be: No Lost Workdays ☐ Lost Workdays or Restricted Duty ☐ Permanently Disabling ☐ Fatal ☐

C. Significant and Substantial (See Reverse): Yes ☐ No ☐ D. Number of Persons Affected ☐

11. Negligence (check one)

A. None ☐ B. Low ☐ C. Moderate ☐ D. High ☐ E. Reckless Disregard ☐

12. Type of Action

104-b-

13. Type of Issuance (check one)

Citation ☐ Order ☒ Safeguard ☐ Written Notice ☐

14. Initial Action

A. Citation ☒ B. Order ☐ C. Safeguard ☐ D. Written Notice ☐

E. Citation/
Order
Number

4410170

F. Dated

Mo
07

Da
08

Yr
08

15. Area or Equipment

CATERPILLAR FRONT-END LOADER (MODEL 988, SERIAL #234567)

16. Termination Due

A. Date

Mo
Da
Yr

B. Time (24
Hr. Clock)

Section III -- Termination Action

17. Action to Terminate

18. Terminated

A. Date

Mo
Da
Yr

B. Time (24 Hr Clock)

Section IV -- Automated System Data

19. Type of Inspection
(activity code)

E15

20. Event Number

0357913

21. Primary or Mill

22. Signature

JOHN SMITH

23. AR Number

01999

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number										
	0	7	2	7	0	8										
4. Served To	LEFTY JONES, SAFETY DIRECTOR					5. Operator	WHEAT MINING COMPANY									
6. Mine	WMC MINE AND MILL					7. Mine ID	5	6	-	0	0	3	3	3	-	(contractor)
8. Condition or Practice	8a. Written Notice (103g) <input type="checkbox"/>															

The mine operator is continuing to operate the Caterpillar 988 front-end loader even though a 104(b) order #4410171 for non-compliance was issued by MSHA on July 24, 2008. This order required the loader to be removed from service until a cracked cab window was repaired.

The loader was loading trucks in the plant on July 27, 2008. The foreman stated that they had production to worry about and did not have time to shut the loader down and replace the window. This condition has not been designated as "significant and substantial" because the conduct violated a provision of the Mine Act rather than a mandatory safety or health standard.

NOTE: Section I, Item 9B, is completed with the section of the mine act violated. Item 9C is not completed. A 104(a), not a 104(d), citation is to be issued regardless of the negligence evaluation.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	1	0	4	-	b	C. Part/Section of Title 30 CFR										
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Section II -- Inspector's Evaluation

10. Gravity:

A. Injury or Illness (has) (is): No Likelihood ☒ Unlikely ☐ Reasonably Likely ☐ Highly Likely ☐ Occurred ☐

B. Injury or Illness could reasonably be expected to be: No Lost Workdays ☒ Lost Workdays or Restricted Duty ☐ Permanently Disabling ☐ Fatal ☐

C. Significant and Substantial (See Reverse): Yes ☐ No ☒ D. Number of Persons Affected 0 0 1

11. Negligence (check one)

A. None ☐ B. Low ☐ C. Moderate ☐ D. High ☒ E. Reckless Disregard ☐

12. Type of Action

1 0 4 - a - , - -

13. Type of Issuance (check one)

Citation ☒ Order ☐ Safeguard ☐ Written Notice ☐

14. Initial Action

A. Citation ☐ B. Order ☒ C. Safeguard ☐ D. Written Notice ☐ E. Citation/Order Number 4 4 1 0 1 7 1 F. Dated Mo Da Yr 0 7 2 4 0 8

15. Area or Equipment

16. Termination Due

A. Date Mo Da Yr 0 7 2 7 0 8 B. Time (24 Hr. Clock) 0 9 3 0

Section III -- Termination Action

17. Action to Terminate

18. Terminated

A. Date Mo Da Yr B. Time (24 Hr Clock)

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	1	5	20. Event Number	0	3	8	5	1	9	3	21. Primary or Mill					
22. Signature	TED JOHNSON											23. AR Number	0	4	7	8	9

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - WORKING IN VIOLATION OF A
104(b) ORDER OF WITHDRAWAL

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	7	2	1	0	8	0
4. Served To	John Smith, Assistant Foreman			5. Operator	J and S Coal Company, Inc.		
6. Mine	No. 1			7. Mine ID	4 4 - 0 3 5 3 6 - (contractor)		
8. Condition or Practice						8a. Written Notice (103g)	

No apparent effort was made by the operator to install a proper bushing where the energized power wires go through the metal frame into the switches of the Labour water pump in the northeast pumping station.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act		C. Part/Section of Title 30 CFR	
			-		7 5 . 5 1 5

Section II -- Inspector's Evaluation

10. Gravity:	A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>				
	B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>				
	C. Significant and Substantial (See Reverse): Yes <input type="checkbox"/> No <input type="checkbox"/>			D. Number of Persons Affected	
11. Negligence (check one)	A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>				
12. Type of Action	13. Type of Issuance (check one)				
	1	0	4	-	b - , - -
					Citation <input type="checkbox"/> Order <input checked="" type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>
14. Initial Action	A. Citation <input checked="" type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/>		D. Written Notice <input type="checkbox"/>		E. Citation/Order Number
					4 4 1 0 0 0 3
	F. Dated		Mo	Da	Yr
			0	7	2

15. Area or Equipment

The Labour water pump located at the northeast pumping station

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)

Section III -- Termination Action

17. Action to Terminate

18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	0	8	8	8	0	0	21. Primary or Mill
22. Signature	James Lee										23. AR Number
											2

MSHA Form 7000-3 Mar 85 (Revised)

104(b) ORDER OF WITHDRAWAL - FAILURE TO ABATE

Section I -- Violation Data

1. Date	Mo 07	Da 21	Yr 08	2. Time (24 Hr. Clock)	1100	3. Citation/Order Number	4410005
4. Served To John Smith, Assistant Foreman				5. Operator J and S Coal Company, Inc.			
6. Mine No. 1				7. Mine ID 44-03536- (contractor)			
8. Condition or Practice							8a. Written Notice (103g) <input type="checkbox"/>

The Labour pump was not removed from operation as required by Order of Withdrawal No. 4410004 dated 7/21/08 at 0830 hours. The Order has not been modified, vacated, or terminated. This condition has not been designated as "significant and substantial" because the conduct violated a provision of the Mine Act rather than a mandatory safety or health standard.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	104-b	C. Part/Section of Title 30 CFR	.
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Section II -- Inspector's Evaluation

10. Gravity:		A. Injury or Illness (has) (is): No Likelihood <input checked="" type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>	
B. Injury or Illness could reasonably be expected to be:		No Lost Workdays <input checked="" type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>	
C. Significant and Substantial (See Reverse):		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> D. Number of Persons Affected 001	
11. Negligence (check one)			
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input type="checkbox"/> D. High <input checked="" type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>			
12. Type of Action		13. Type of Issuance (check one)	
104-a-		Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>	
14. Initial Action		F. Dated	
A. Citation <input type="checkbox"/> B. Order <input checked="" type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/>		Mo Da Yr 07 21 08	
15. Area or Equipment			

16. Termination Due	Mo Da Yr 07 21 08	A. Date B. Time (24 Hr. Clock)	1115
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Section III -- Termination Action

17. Action to Terminate	The pump was removed from service.
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18. Terminated	Mo Da Yr 07 21 08	A. Date B. Time (24 Hr Clock)	1105
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Section IV -- Automated System Data

19. Type of Inspection (activity code)	E01	20. Event Number	0888800	21. Primary or Mill	
22. Signature James Lee				23. AR Number 20777	

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - WORKING IN VIOLATION OF A 104(b) ORDER OF WITHDRAWAL

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 7	Yr 2	1	0	8	3. Citation/Order Number	4	4	1	0	0	0	4	-	0	1
4. Served To John Smith, Assistant Foreman					5. Operator J and S Coal Company, Inc.														
6. Mine No. 1					7. Mine ID 4 4 - 0 3 5 3 6 - (contractor)														

Section II -- Justification for Action

A suitable bushing was provided and properly installed at the point where the energized power wires entered the power control switchbox on the Labour pump located at the northeast pumping station.

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	C. Vacated	<input type="checkbox"/>	D. Terminated	<input checked="" type="checkbox"/>	E. Modified	<input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	0	1	10. Event Number	0	8	8	8	8	0	0	11. Signature	AR Number	12. Date	Mo	Da	Yr	13. Time (24 Hr. Clock)	1	2	0	0	
										James Lee				2 0 7 7 7 0 7 2 1 0 8									

MSHA Form 7000-3a, Mar 85 (Revised)

104(b) ORDER OF WITHDRAWAL - TERMINATION

Section I -- Violation Data

1. Date	Mo 07	Da 08	Yr 08	2. Time (24 Hr. Clock)	0800	3. Citation/Order Number	4410172
4. Served To PETER JONES, SAFETY DIRECTOR				5. Operator XYZ MINING, INC.			
6. Mine XYZ MINE				7. Mine ID 56-01008- (contractor)			
8. Condition or Practice							8a. Written Notice (103g) <input type="checkbox"/>

The headpulley guard was removed and not replaced on the primary crusher discharge conveyor belt on July 6, 2008. According to a maintenance employee, Foreman Chester Coombs ordered the guard taken off because it was binding the headpulley. The unguarded pulley was three feet off ground level, was highly visible, and was turning at a high rate of speed. A laborer usually shovels spilled material onto the conveyor belt immediately adjacent to the headpulley. Leaving machinery guards off is a violation of the company's safety policy. Coombs stated he had read and was aware of this policy but that if an employee was careful an injury would not occur. Foreman Coombs engaged in aggravated conduct constituting more than ordinary negligence in that he was aware that the headpulley guard was off and that employees worked in the area when the machinery was in motion. This violation is an unwarrantable failure to comply with a mandatory standard.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR	56.14112b
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Section II -- Inspector's Evaluation

10. Gravity:		A. Injury or Illness (has) (is):		No Likelihood <input type="checkbox"/>	Unlikely <input type="checkbox"/>	Reasonably Likely <input checked="" type="checkbox"/>	Highly Likely <input type="checkbox"/>	Occurred <input type="checkbox"/>
		B. Injury or Illness could reasonably be expected to be:		No Lost Workdays <input type="checkbox"/>	Lost Workdays or Restricted Duty <input type="checkbox"/>	Permanently Disabling <input type="checkbox"/>	Fatal <input checked="" type="checkbox"/>	
		C. Significant and Substantial (See Reverse):		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	D. Number of Persons Affected		001
11. Negligence (check one)		A. None <input type="checkbox"/>		B. Low <input type="checkbox"/>	C. Moderate <input type="checkbox"/>	D. High <input checked="" type="checkbox"/>	E. Reckless Disregard <input type="checkbox"/>	
12. Type of Action		104-d-1		13. Type of Issuance (check one)		Citation <input checked="" type="checkbox"/>	Order <input type="checkbox"/>	Safeguard <input type="checkbox"/>
14. Initial Action		A. Citation <input type="checkbox"/>		B. Order <input type="checkbox"/>	C. Safeguard <input type="checkbox"/>	D. Written Notice <input type="checkbox"/>	E. Citation/Order Number	F. Dated Mo Da Yr
15. Area or Equipment								

16. Termination Due	Mo 07	Da 08	Yr 08	A. Date	B. Time (24 Hr. Clock)	1000
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Section III -- Termination Action

17. Action to Terminate THE GUARD WAS REPLACED OVER THE PRIMARY CRUSHER DISCHARGE HEADPULLEY. ALSO, FOREMAN COOMBS WAS REINSTRUCTED ON COMPANY GUARDING POLICY BY THE PLANT MANAGER.						
18. Terminated	Mo 07	Da 08	Yr 08	A. Date	B. Time (24 Hr Clock)	1015

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E01	20. Event Number	0123456	21. Primary or Mill	
22. Signature TED SMITH					23. AR Number 02933

MSHA Form 7000-3 Mar 85 (Revised)

104(d)(1) CITATION - UNWARRANTABLE FAILURE WITH TERMINATION

Mine Citation/Order

U.S. Department of Labor

Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo 0	Da 8	Yr 1908	2. Time (24 Hr. Clock)	1	3	3	0	3. Citation/Order Number	4	4	1	0	0	1	5	
4. Served To John Smith, Mine Foreman				J and S Coal Company, Inc.													
6. Mine No. 1				7. Mine ID 44-03536-													
8. Condition or Practice												8a. Written Notice (103g)					<input type="checkbox"/>

The methane and dust control plan is not being complied with on 1 left section. Line brattice (or other approved device) was not installed for a distance of 40 feet, from the last open crosscut to the face of No. 3 entry, where the continuous miner was cutting coal. The plan requires the curtain to be maintained to within 30 feet of the point of deepest penetration of the face. The air at the face contained 0.9 per centum of methane as indicated by a permissible methane detector. The foreman, Ray Smith, was directing mining operations in the face and knew that line brattice was available on the section. Foreman Smith engaged in aggravated conduct by ordering work to be performed in a working face having no positive ventilation. The mine has had previous ignitions. This violation is an unwarrantable failure to comply with a mandatory standard.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	-	C. Part/Section of Title 30 CFR	7	5	3	3	0	b	2
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Section II -- Inspector's Evaluation

10. Gravity:

A. Injury or Illness (has) (is): No Likelihood ☐ Unlikely ☐ Reasonably Likely ☒ Highly Likely ☐ Occurred ☐

B. Injury or Illness could reasonably be expected to be:

No Lost Workdays ☐ Lost Workdays or Restricted Duty ☒ Permanently Disabling ☐ Fatal ☐

C. Significant and Substantial (See Reverse):

Yes ☒ No ☐ D. Number of Persons Affected 002

11. Negligence (check one)

A. None ☐ B. Low ☐ C. Moderate ☐ D. High ☒ E. Reckless Disregard ☐

12. Type of Action

104-d-1, -

13. Type of Issuance (check one)

Citation ☒ Order ☐ Safeguard ☐ Written Notice ☐

14. Initial Action

A. Citation ☐ B. Order ☐ C. Safeguard ☐ D. Written Notice ☐

E. Citation/Order Number

F. Dated

Mo Da Yr

15. Area or Equipment

16. Termination Due

Mo Da Yr
081908

A. Date B. Time (24 Hr. Clock)

1340

Section III -- Termination Action

17. Action to Terminate

Line brattice was installed to within 10 feet of the face. Methane could not be detected immediately after the brattice was installed.

18. Terminated

Mo Da Yr
081908

A. Date B. Time (24 Hr Clock)

1345

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	1	5	20. Event Number	0	8	8	8	8	3	0	21. Primary or Mill					
22. Signature James Lee												23. AR Number	2	0	7	7	7

MSHA Form 7000-3 Mar 85 (Revised)

104(d)(1) CITATION - UNWARRANTABLE FAILURE WITH TERMINATION

Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo 08	Da 10	Yr 08	2. Time (24 Hr. Clock)	0800	3. Citation/Order Number	4410173
4. Served To LEFTY JONES, SAFETY DIRECTOR				5. Operator WHEAT MINING COMPANY			
6. Mine WMC PORTABLE CRUSHER				7. Mine ID 56-01975- (contractor)			
8. Condition or Practice							8a. Written Notice (103g) <input type="checkbox"/>

The window of the front-end loader was cracked on the driver's side creating a line of vision problem for the operator. The loader was operating in the stockpile area. Because of the broken windshield the loader operator did not have clear vision to avoid hitting other vehicular traffic and employees in the area. The windshield cracks extended two feet vertically by two feet horizontally. This loader and condition was cited (#4410168) on July 8, 2008, at another mine (Mine ID #56-00333) owned by the operator. When the citation was terminated, the operator was informed in writing that the violation still existed but was being terminated because of the equipment's removal from that mine site. Further, the operator was informed that they were required to repair the broken windshield prior to working the machine at another mine site. The Safety Director stated that there wasn't time to repair the windshield at the new site because they were behind on production. The mine operator has engaged in aggravated conduct constituting more than ordinary negligence. This violation is an unwarrantable failure to comply with a mandatory standard.

Equipment: 988 Caterpillar front-end loader (Serial #234567)

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR	5614103b
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Section II -- Inspector's Evaluation

10. Gravity:				
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>				
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input checked="" type="checkbox"/>				
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			D. Number of Persons Affected 001	
11. Negligence (check one)				
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input checked="" type="checkbox"/>				
12. Type of Action 104-d-1, - -				
13. Type of Issuance (check one) Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>				
14. Initial Action				
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number F. Dated Mo Da Yr				

15. Area or Equipment

16. Termination Due	Mo 08	Da 10	Yr 08	A. Date	B. Time (24 Hr. Clock)
					1630

Section III -- Termination Action

17. Action to Terminate				
18. Terminated				
Mo Da Yr A. Date B. Time (24 Hr Clock)				

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E 01	20. Event Number	0456619	21. Primary or Mill
22. Signature JOHN SMITH				23. AR Number 01999

MSHA Form 7000-3 Mar 85 (Revised)

104(d)(1) CITATION - UNWARRANTABLE FAILURE - CITING MINE OPERATOR FOR PREVIOUSLY TERMINATED VIOLATION

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number													
	07	09	08		0810		4410174												
4. Served To PETER JONES, SAFETY DIRECTOR					5. Operator XYZ MINING, INC.														
6. Mine XYZ MINE					7. Mine ID 56-01008-(contractor)														
8. Condition or Practice					8a. Written Notice (103g)														

A six-foot section of handrail on the elevated walkway by the coarse gravel bins was missing, exposing employees daily to falling hazards. The fall to ground was estimated to be 18 feet. Mine Foreman, Chester Coombs, was walking along the walkway, his regular daily route of travel. The missing handrail had been reported to Foreman Coombs on June 27, 2008, in a written report from the plant loader operator. Coombs stated he had more important things to worry about than a missing handrail. Foreman Coombs engaged in aggravated conduct constituting more than ordinary negligence in that he knew the handrail was missing and employees were exposed to falling hazards. This violation is an unwarrantable failure to comply with a mandatory standard.

See Continuation Form (MSHA Form 7000-3a)

[illegible]

10. Gravity:													
A. Injury or Illness (has) (is):		No Likelihood	<input type="checkbox"/>	Unlikely	<input type="checkbox"/>	Reasonably Likely	<input checked="" type="checkbox"/>	Highly Likely	<input type="checkbox"/>	Occurred	<input type="checkbox"/>		
B. Injury or Illness could reasonably be expected to be:		No Lost Workdays	<input type="checkbox"/>	Lost Workdays or Restricted Duty		<input type="checkbox"/>	Permanently Disabling		<input type="checkbox"/>	Fatal	<input checked="" type="checkbox"/>		
C. Significant and Substantial (See Reverse):				Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	D. Number of Persons Affected		0	0	1	
11. Negligenc (check one)													
A. None		<input type="checkbox"/>	B. Low		<input type="checkbox"/>	C. Moderate		<input type="checkbox"/>	D. High		<input type="checkbox"/>	E. Reckless Disregard	<input checked="" type="checkbox"/>

12. Type of Action																13. Type of Issuance (check one)													
	1	0		4	-	d	-	1	,									Citation	<input type="checkbox"/>	Order	<input checked="" type="checkbox"/>	Safeguard	<input type="checkbox"/>	Written Notice	<input type="checkbox"/>				
14. Initial Action																													
A. Citation <input checked="" type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/>																E. Citation/ Order Number		4	4	1	0	1	6	0	F. Dated		Mo	Da	Yr
																		0	7	0	8	0	8			0	7	0	8

WALKWAY AT THE NO. 7 COARSE GRAVEL BINS

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)					
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17. Action to Terminate

18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)				
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19. Type of Inspection (activity code)		E	0	1	20. Event Number						0	1	2	3	4	5	6	21. Primary or Mill										
22. Signature		TED SMITH																	23. AR Number					0	2	9	3	3

The trailing cable to the No. 2 shuttle car on 1st left section contained five poorly made temporary splices; three of the splices had exposed, uninsulated conductors. The condition of the temporary splices contributes substantially to a fire or electrical shock hazard. The mine floor is wet. Persons without gloves handle trailing cables. The condition of the cable was reported in the preshift examiner's book on 8/28/08 and 8/29/08. and was countersigned by the mine foreman. The mine operator was engaged in aggravated conduct by acknowledging a safety hazard and not taking corrective action. This violation is an unwarrantable failure to comply with a mandatory standard.

Section II -- Inspector's Evaluation[illegible]

Section III -- Termination Action

Section IV -- Automated System Data

22. Signature	23. AR Number				
James Lee	2	0	7	7	7

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	8	3	1	0	8	1
4. Served To				5. Operator			
John Smith, Mine Foreman				J and S Coal Company, Inc.			
6. Mine No. 1				7. Mine ID			
				4	4	-	0
				3	5	3	6
				-	(contractor)		
8. Condition or Practice				8a. Written Notice (103g)			

Positive-acting stop controls are not installed along the belt conveyor in 2 south section. The belt has been extended a distance of 600 feet.

This condition has been reported in the pre-shift and on-shift examination books for the dates of 8/20 through 8/30/08. The controls are required by Notice to Provide Safeguard No. 1 ABC, dated 9/16/76. The mine operator has engaged in aggravated conduct by failure to correct a known safety violation. This violation is an unwarrantable failure to comply with a mandatory standard.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act		C. Part/Section of Title 30 CFR	
			-	7	5
				1	4
				0	3

Section II -- Inspector's Evaluation

10. Gravity:

A. Injury or Illness (has) (is): No Likelihood ☐ Unlikely ☒ Reasonably Likely ☐ Highly Likely ☐ Occurred ☐

B. Injury or Illness could reasonably be expected to be: No Lost Workdays ☐ Lost Workdays or Restricted Duty ☒ Permanently Disabling ☐ Fatal ☐

C. Significant and Substantial (See Reverse): Yes ☐ No ☒ D. Number of Persons Affected 0 0 1

11. Negligence (check one)

A. None ☐ B. Low ☐ C. Moderate ☐ D. High ☒ E. Reckless Disregard ☐

12. Type of Action

1 0 4 - d - 1 , - -

13. Type of Issuance (check one)

Citation ☐ Order ☒ Safeguard ☐ Written Notice ☐

14. Initial Action

A. Citation ☒ B. Order ☐ C. Safeguard ☐ D. Written Notice ☐

E. Citation/Order Number

4 4 1 0 0 1 5

F. Dated

Mo Da Yr

0 8 1 9 0 8

15. Area or Equipment

Belt conveyor in 2 south section

16. Termination Due

A. Date

Mo

Da

Yr

B. Time (24 Hr. Clock)

Section III -- Termination Action

17. Action to Terminate

18. Terminated

A. Date

Mo

Da

Yr

B. Time (24 Hr Clock)

Section IV -- Automated System Data

19. Type of Inspection

(activity code)

E 0 1

20. Event Number

0 8 8 8 8 3 1

21. Primary or Mill

22. Signature

James Lee

23. AR Number

2 0 7 7 7

MSHA Form 7000-3 Mar 85 (Revised)

104(d)(1) UNWARRANTABLE FAILURE ORDER - BASED ON NOTICE TO PROVIDE SAFEGUARDS

Section I -- Violation Data

1. Date	Mo 07	Da 10	Yr 08	2. Time (24 Hr. Clock)	0800	3. Citation/Order Number	4410175
4. Served To J.R. JOHNSON, SAFETY DIRECTOR				5. Operator ABC MINING COMPANY			
6. Mine ABC MINE				7. Mine ID 75-09133- (contractor)			
8. Condition or Practice							8a. Written Notice (103g) <input type="checkbox"/>

The underground water truck driver did not have on his person a positive means of identification. The driver stated that he had not been issued any identification in the three months he had worked underground. The safety director stated "we just haven't issued dog tags to the new man because we've got production to think about." This mine has been issued fourteen previous violations for this standard in the last three months. Management engaged in aggravated conduct constituting more than ordinary negligence in that production was deemed more important than issuing ID tags to an employee. This violation is an unwarrantable failure to comply with a mandatory standard.

NOTE: For 104(d)(2) orders, Section II, Item 14 is completed with the initial 104(d)(1) order and not the 104(d)(1) citation. Also note that 104(D) orders can be either "S&S" or "Non-S&S".

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR	5711058
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Section II -- Inspector's Evaluation

10. Gravity:		A. Injury or Illness (has) (is):		No Likelihood <input checked="" type="checkbox"/>	Unlikely <input type="checkbox"/>	Reasonably Likely <input type="checkbox"/>	Highly Likely <input type="checkbox"/>	Occurred <input type="checkbox"/>
		B. Injury or Illness could reasonably be expected to be:		No Lost Workdays <input checked="" type="checkbox"/>	Lost Workdays or Restricted Duty <input type="checkbox"/>	Permanently Disabling <input type="checkbox"/>	Fatal <input type="checkbox"/>	
		C. Significant and Substantial (See Reverse):		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	D. Number of Persons Affected		001
11. Negligence (check one)		A. None <input type="checkbox"/>		B. Low <input type="checkbox"/>	C. Moderate <input type="checkbox"/>	D. High <input checked="" type="checkbox"/>	E. Reckless Disregard <input type="checkbox"/>	
12. Type of Action		104-d-2		13. Type of Issuance (check one)		Citation <input type="checkbox"/> Order <input checked="" type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>		
14. Initial Action		A. Citation <input type="checkbox"/> B. Order <input checked="" type="checkbox"/> C. Safeguard <input type="checkbox"/>		D. Written Notice <input type="checkbox"/>		E. Citation/Order Number		4410159
						F. Dated		Mo 07
								Da 03
								Yr 08
15. Area or Equipment WATER TRUCK DRIVER - BENNY FRANKLIN								

16. Termination Due	A. Date	Mo 07	Da 03	Yr 08	B. Time (24 Hr. Clock)	
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Section III -- Termination Action

17. Action to Terminate						
18. Terminated						
A. Date		Mo 07	Da 03	Yr 08	B. Time (24 Hr Clock)	

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E01	20. Event Number	0567890	21. Primary or Mill	
22. Signature JANE JONES				23. AR Number 02136	

MSHA Form 7000-3 Mar 85 (Revised)

104(d)(2) ORDER
"NON-S&S" UNWARRANTABLE FAILURE

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)	3. Citation/Order Number
	1	1	0	0 9 0 0	4 4 1 0 0 1 9
4. Served To John Smith, Mine Foreman				5. Operator J and S Coal Company, Inc.	
6. Mine No. 1				7. Mine ID 4 4 - 0 3 5 3 6 - (contractor)	
8. Condition or Practice					
8a. Written Notice (103g) <input type="checkbox"/>					

No. 1 entry of 1 right section had been driven 22 to 27 feet in width for a distance of 125 feet inby spad No. 100. Additional roof support had not been installed. A maximum width of 20 feet was permitted by the approved roof control plan, which was revised 4/15/08, because of fragile roof conditions. Sam Jones is the section foreman and one of the preshift examiners for the section, and he did not record the condition. The condition has existed for approximately 5 working shifts. This section has a history of unintentional roof falls. Three citations have been issued at this mine for violations of 75.203(e) in the past 6 months. Sam Jones engaged in aggravated conduct by his failure to record and take action on a known hazard. This violation is an unwarrantable failure to comply with a mandatory standard.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR
		-	7 5 2 0 3 e

Section II -- Inspector's Evaluation

10. Gravity:

A. Injury or Illness (has) (is): No Likelihood ☐ Unlikely ☐ Reasonably Likely ☒ Highly Likely ☐ Occurred ☐

B. Injury or Illness could reasonably be expected to be: No Lost Workdays ☐ Lost Workdays or Restricted Duty ☐ Permanently Disabling ☐ Fatal ☒

C. Significant and Substantial (See Reverse): Yes ☒ No ☐ D. Number of Persons Affected 0 0 1

11. Negligence (check one)

A. None ☐ B. Low ☐ C. Moderate ☐ D. High ☐ E. Reckless Disregard ☒

12. Type of Action	1 0 4 - d - 2 , - -	13. Type of Issuance (check one)
		Citation <input type="checkbox"/> Order <input checked="" type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>

14. Initial Action	D. Written Notice	E. Citation/ Order Number	F. Dated
A. Citation <input type="checkbox"/> B. Order <input checked="" type="checkbox"/> C. Safeguard <input type="checkbox"/>		4 4 1 0 0 1 6	Mo Da Yr 0 8 3 0 0 8

15. Area or Equipment

No. 1 entry of 1 right section beginning at spad No. 100 and extending inby for a distance of 125 feet.

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)

Section III -- Termination Action

17. Action to Terminate

18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E 0 1	20. Event Number	0 8 8 8 8 3 5	21. Primary or Mill
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22. Signature James Lee	23. AR Number
	2 0 7 7 7

MSHA Form 7000-3 Mar 85 (Revised)

104(d)(2) UNWARRANTABLE FAILURE ORDER - SUBSEQUENT INSPECTION

104(e)(1) PATTERN OF VIOLATIONS ORDER - ISSUANCE AND TERMINATION

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	8	1	3	0	8	4
4. Served To	JANE SMITHSON, OWNER			5. Operator	BEDROCK MINING COMPANY		
6. Mine	BEDROCK MINE			7. Mine ID	5 6 - 0 7 8 9 1 - (contractor)		
8. Condition or Practice				8a. Written Notice (103g)	<input type="checkbox"/>		

The driver of haul truck (Number H-35) did not sound an audible warning or use other means to warn persons in the area prior to moving the vehicle. The haul truck, with its engine running, was parked in the shop area. Two mechanics walked in front of the haul truck and had to jump clear to avoid being hit when it unexpectedly moved into their path.

A Notice of Pattern of Violations, No. 8765931, was issued by MSHA on 06/13/08.

NOTE: Complete Section II, Item 14, with the number of the first 104(e) order. Also, 104(e) orders are required to be evaluated as "S&S". 104(e)(2) orders are written for all "S&S" violations observed on any subsequent inspection after a 104(e)(1) order has been issued.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR
		-	5 6 . 1 4 2 0 0

Section II -- Inspector's Evaluation

10. Gravity:	A. Injury or Illness (has) (is):	No Likelihood <input type="checkbox"/>	Unlikely <input type="checkbox"/>	Reasonably Likely <input checked="" type="checkbox"/>	Highly Likely <input type="checkbox"/>	Occurred <input type="checkbox"/>
	B. Injury or Illness could reasonably be expected to be:	No Lost Workdays <input type="checkbox"/>	Lost Workdays or Restricted Duty <input type="checkbox"/>	Permanently Disabling <input type="checkbox"/>	Fatal <input checked="" type="checkbox"/>	
	C. Significant and Substantial (See Reverse):	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	D. Number of Persons Affected	0 0 2	
11. Negligence (check one)	A. None <input type="checkbox"/>	B. Low <input type="checkbox"/>	C. Moderate <input checked="" type="checkbox"/>	D. High <input type="checkbox"/>	E. Reckless Disregard <input type="checkbox"/>	
12. Type of Action	1 0 4 - e - 2 , - -			13. Type of Issuance (check one)	Citation <input type="checkbox"/> Order <input checked="" type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>	
14. Initial Action	A. Citation <input type="checkbox"/>	B. Order <input checked="" type="checkbox"/>	C. Safeguard <input type="checkbox"/>	D. Written Notice <input type="checkbox"/>	E. Citation/Order Number	4 4 1 0 1 7 7
				F. Dated	Mo	Da
					0	7
15. Area or Equipment	Haul Truck H-35					

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)

Section III -- Termination Action

17. Action to Terminate	THE WARNING HORN WAS FOUND TO BE OPERABLE AND COULD BE HEARD ABOVE THE SURROUNDING NOISE. THE TRUCK DR WAS REINSTRUCTED TO SOUND THE HORN WHENEVER THE VEHICLE WAS MOVED.					
18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)	
		0	8	1	3	

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	1	5	20. Event Number	0	9	7	5	3	1	9	21. Primary or Mill
22. Signature	JANE JONES											
23. AR Number	0 2 1 3 6											

MSHA Form 7000-3 Mar 85 (Revised)

104(e)(2) PATTERN OF VIOLATIONS ORDER - ISSUANCE AND TERMINATION

Mine Citation/Order

U.S. Department of Labor

Continuation

Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 6	Yr 1	3. Citation/Order Number	8	8	3	4	5	6	7	-	0	1
4. Served To JANE SMITHSON, OWNER					5. Operator BEDROCK MINING COMPANY											
6. Mine BEDROCK MINE					7. Mine ID 5 6 - 0 7 8 9 1 - (contractor)											

Section II -- Justification for Action

Bedrock Mine has gone 90 days from the issuance of a Notice of Pattern of Violations without being cited for a violation which could significantly and substantially contribute to the cause and effect of a mine safety or health hazard. Given this action, the mine is no longer subject to orders of withdrawal issued pursuant to Section 104(e) of the Federal Mine Safety and Health Act of 1977. Accordingly, the Notice of Pattern of Violations is terminated.

NOTE: This termination of a 104(e) Notice of Pattern of Violations was issued after the mine operator went 90 days without any "S&S" violations issued.

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	C. Vacated	<input type="checkbox"/>	D. Terminated	<input checked="" type="checkbox"/>	E. Modified	<input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	0	1	10. Event Number	0	1	3	5	7	9	1	
11. Signature JANE JONES				AR Number		12. Date		Mo	Da	Yr	13. Time (24 Hr. Clock)	
				0 2 1 3 6				0	9	1	3	0 8

MSHA Form 7000-3a, Mar 85 (Revised)

104(e) TERMINATION OF
NOTICE OF PATTERN OF VIOLATIONS

107(a) ORDER - IMMINENT DANGER
NO VIOLATION OF A MANDATORY STANDARD

Section I -- Violation Data

1. Date	Mo 07	Da 10	Yr 08	2. Time (24 Hr. Clock)	0900	3. Citation/Order Number	4410184
4. Served To RICHARD JONES, SAFETY DIRECTOR				5. Operator INTER CEMENT CORPORATION			
6. Mine ICC MILL				7. Mine ID 75-00024- (contractor)			
8. Condition or Practice							8a. Written Notice (103g) <input type="checkbox"/>

Two mechanics were not wearing life jackets when repairing a broken six-inch dredge discharge line approximately 100 yards offshore. The discharge line was located atop flotation barrels positioned between the dredge and the shore. The water depth was estimated to be 32 feet. At the broken spot, one mechanic was sitting on a flotation barrel. The other mechanic was adjacent to the first miner in a wooden boat. The second mechanic was bending over the side trying to repair the line. Neither employee knew how to swim. Life jackets were available and the foreman had instructed the employees to use them.

An oral 107(a) imminent danger order was issued to Bob Smith, Foreman, at 0900 hours on this date.

Citation No. 4410185 is being issued in conjunction with this order.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR
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Section II -- Inspector's Evaluation

10. Gravity:			
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>			
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>			
C. Significant and Substantial (See Reverse): Yes <input type="checkbox"/> No <input type="checkbox"/>		D. Number of Persons Affected	
11. Negligence (check one)			
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>			
12. Type of Action		13. Type of Issuance (check one)	
107(a) <input checked="" type="checkbox"/> 107(b) <input type="checkbox"/>		Citation <input type="checkbox"/> Order <input checked="" type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>	
14. Initial Action		D. Written Notice <input type="checkbox"/>	
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/>		E. Citation/Order Number	
15. Area or Equipment		F. Dated	
JOHN JONES, TOM SMITH - MECHANICS		Mo Da Yr	

16. Termination Due	A. Date	Mo Da Yr	B. Time (24 Hr. Clock)
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Section III -- Termination Action

17. Action to Terminate			
18. Terminated			
A. Date	Mo Da Yr	B. Time (24 Hr Clock)	

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E 01	20. Event Number	0088301	21. Primary or Mill
22. Signature				23. AR Number
JOHN REDWOOD				03333

104(a) CITATION ISSUED FOR A CONDITION
IN 107(a) IMMINENT DANGER ORDER

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	8	1	7	0	8	
4. Served To	John Smith, Mine Foreman			5. Operator	J and S Coal Company, Inc.		
6. Mine No. 1				7. Mine ID	4 4 - 0 3 5 3 6 - (contractor)		
8. Condition or Practice				8a. Written Notice (103g)	<input type="checkbox"/>		

Safe seating facilities were not provided for repairmen who were riding on top of a 6-ton track locomotive with their legs hanging over the front end. One man was approximately 8 inches from the bare trolley wire. To reach its destination, the locomotive had to pass through a low area (14 inches from the top of the locomotive to the roof) 300 feet ahead of a steep grade. Tom Davis, Chief Electrician, was operating the locomotive (No. 29) near the mouth of the 2 east section. This is an imminent danger. An oral imminent danger order was issued to Tom Davis at 0915 hours. This hazard has been cited on other occasions. The underlying cause was that management was not enforcing its written rule nor the safeguard Notice No. 4011337 dated 4/7/08 which requires that all personnel be safely seated prior to operating or being transported on mobile equipment. A separate citation for a violation of 75.1403 (#4410012) is being issued in conjunction with this order.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR

Section II -- Inspector's Evaluation

10. Gravity:	A. Injury or Illness (has) (is):	No Likelihood	<input type="checkbox"/>	Unlikely	<input type="checkbox"/>	Reasonably Likely	<input type="checkbox"/>	Highly Likely	<input type="checkbox"/>	Occurred	<input type="checkbox"/>
	B. Injury or Illness could reasonably be expected to be:	No Lost Workdays	<input type="checkbox"/>	Lost Workdays or Restricted Duty	<input type="checkbox"/>	Permanently Disabling	<input type="checkbox"/>	Fatal	<input type="checkbox"/>		
	C. Significant and Substantial (See Reverse):	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	D. Number of Persons Affected					
11. Negligence (check one)	A. None	<input type="checkbox"/>	B. Low	<input type="checkbox"/>	C. Moderate	<input type="checkbox"/>	D. High	<input type="checkbox"/>	E. Reckless Disregard	<input type="checkbox"/>	
12. Type of Action	1	0	7	-	a	-	,	-	-		
	13. Type of Issuance (check one)										
	Citation <input type="checkbox"/> Order <input checked="" type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>										
14. Initial Action	A. Citation	<input type="checkbox"/>	B. Order	<input type="checkbox"/>	C. Safeguard	<input type="checkbox"/>	D. Written Notice	<input type="checkbox"/>	E. Citation/Order Number		
	F. Dated										
	Mo	Da	Yr								

15. Area or Equipment

The transportation system used by the maintenance crews.

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)

Section III -- Termination Action

17. Action to Terminate

Suitable transportation was provided for the two repairmen. All the repairmen and supervisory personnel were instructed in safe operating procedures for operating and riding transportation equipment.

18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)
		0	8	1	8
		0	8	0	8
		0	7	3	0

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	0	8	8	8	8	2	5	21. Primary or Mill	
22. Signature	James Lee												
	23. AR Number												
	2	0	7	7	7								

MSHA Form 7000-3 Mar 85 (Revised)

107(a) ORDER - IMMINENT DANGER WITH UNDERLYING CAUSES

Safe seating facilities were not provided for the two repairmen who were riding on top of a 6-ton locomotive being operated by Tom Davis, Chief Electrician. This condition was one of the factors that contributed to the issuance of Imminent Danger Order No. 4410011 dated 8/17/08. Therefore, no abatement time was set.

[illegible]

15. Area or Equipment

Suitable transportation with adequate seating facilities was provided for the two repairmen.

MSHA Form 7000-3 Mar 85 (Revised)

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104(a) CITATION - ISSUED FOR A CONDITION IN 107(a) ORDER NO. 4410013

1. Date	Mo 0 8	Da 2 3	Yr 0 8	2. Time (24 Hr. Clock)	1 0 0 0	3. Citation/Order Number	4 4 1 1 1 1 0
4. Served To JOSEPH COMBS, FOREMAN					5. Operator SENTINEL AGGREGATES		
6. Mine SINTENEL MINE					7. Mine ID 4 7 - 0 0 0 8 2 - (contractor)		
8. Condition or Practice					8a. Written Notice (103g) <input type="checkbox"/>		
Two employees were not wearing life jackets while working from a platform in about 20 feet of water. The platform was constructed of four barrels, about 24" in diameter and 36" long, tied together with pieces of hemp rope. The employees were using the platform to provide access to the dewatering pump. The foreman stated that he and the employees always use the platform access to prime the pump or perform maintenance work on it. The foreman engaged in an aggravated conduct constituting more than ordinary negligence. This violation is an unwarrantable failure to comply with a mandatory standard. This violation is one of the factors cited in imminent danger order No. 4411109 dated 8/23/08. Therefore, no abatement time was set.							

[illegible]

10. Gravity:																			
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input checked="" type="checkbox"/> Occurred <input type="checkbox"/>																			
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input checked="" type="checkbox"/>																			
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>										D. Number of Persons Affected 0 0 2									
11. Negligence (check one)																			
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input type="checkbox"/> D. High <input checked="" type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>																			
12. Type of Action										13. Type of Issuance (check one)									
1 0 4 - d - 1 , - -										Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>									
14. Initial Action										15. Area or Equipment									
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/>										E. Citation/Order Number F. Dated Mo Da Yr									

17. Action to Terminate									
18. Terminated									
	A. Date	Mo 	Da 	Yr 	B. Time (24 Hr Clock)				

19. Type of Inspection (activity code)	E	0	1	20. Event Number	0	9	9	5	5	7	6	21. Primary or Mill						
22. Signature														23. AR Number				
JOHN REDWOOD														0	3	3	3	3

U.S. Department of Labor
Mine Safety and Health Administration

MSHA Form 7000-3 Mar 85 (Revised)

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U.S. Department of Labor
Mine Safety and Health Administration

104(d)(1) ORDER ISSUED AS PART OF A 107(a) IMMINENT DANGER ORDER

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)						3. Citation/Order Number							
	0	8	3	0	8		0	9	0	0		4	4	1	0	1	
4. Served To JOHN BANKS, MINER					5. Operator BOGGY MINING COMPANY												
6. Mine CLAIM NUMBER 3					7. Mine ID 9 3 - 0 1 2 3 4 - (contractor)												
8. Condition or Practice											8a. Written Notice (103g)						

A miner (John Banks) was smoking a cigarette at the underground explosives magazine. Six open boxes of explosives were within three feet of the miner. Mr. Banks also had one opened pack of cigarettes and a lighter on his person. Company personnel were aware that Mr. Banks routinely smoked in and around the magazine.

This is to inform Mr. Banks that he will receive a Notification of Proposed Civil Penalty for violating a mandatory standard relating to smoking near explosives as required by Section 110(g) of the Mine Act.

NOTE: The inspector should attempt to obtain the individual's address so that the proposed civil penalty may be mailed to him. A letter (with the miner's address) is attached to the violation and the package is mailed to the Office of Assessments in Wilkes-Barre, Pennsylvania.

In this case, a 107(a) imminent danger order and a 104(a) citation for violation of 57.6904 would also be issued to the mine operator.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other		B. Section of Act	1	1	0	-	g				C. Part/Section of Title 30 CFR	5	7	.	6	9	0	4									
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Section II -- Inspector's Evaluation

10. Gravity:		A. Injury or Illness (has) (is):		No Likelihood	<input type="checkbox"/>	Unlikely	<input type="checkbox"/>	Reasonably Likely	<input checked="" type="checkbox"/>	Highly Likely	<input type="checkbox"/>	Occurred	<input type="checkbox"/>
		B. Injury or Illness could reasonably be expected to be:		No Lost Workdays	<input type="checkbox"/>	Lost Workdays or Restricted Duty	<input type="checkbox"/>	Permanently Disabling	<input type="checkbox"/>	Fatal	<input checked="" type="checkbox"/>		
		C. Significant and Substantial (See Reverse):		Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	D. Number of Persons Affected		0	0	1	
11. Negligence (check one)		A. None		<input type="checkbox"/>	B. Low	<input type="checkbox"/>	C. Moderate	<input type="checkbox"/>	D. High	<input checked="" type="checkbox"/>	E. Reckless Disregard	<input type="checkbox"/>	
12. Type of Action		-	-	,	-	-	13. Type of Issuance (check one)						
							Citation	<input type="checkbox"/>	Order	<input type="checkbox"/>	Safeguard	<input type="checkbox"/>	
14. Initial Action		A. Citation	<input type="checkbox"/>	B. Order	<input type="checkbox"/>	C. Safeguard	<input type="checkbox"/>	D. Written Notice	<input type="checkbox"/>	E. Citation/Order Number			
										F. Dated	Mo	Da	
												Yr	
15. Area or Equipment													

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)				

Section III -- Termination Action

17. Action to Terminate									
18. Terminated									
A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)					

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	0	0	7	6	3	8	9	21. Primary or Mill					
22. Signature TED JOHNSON												23. AR Number	0	4	7	8	9

MSHA Form 7000-3 Mar 85 (Revised)

110(g) NOTICE - MINER SMOKING IN PROHIBITED AREA

Section I -- Violation Data

1. Date	Mo 0	Da 8	Yr 20	2. Time (24 Hr. Clock)	0	9	3	0	3. Citation/Order Number	4	4	1	0	0	2	3	
4. Served To Edgar Simms, Locomotive Operator				5. Operator J and S Coal Company, Inc.													
6. Mine No. 1				7. Mine ID 4 4 - 0 3 5 3 6 - (contractor)													
8. Condition or Practice																8a. Written Notice (103g)	<input type="checkbox"/>

Edgar Simms was holding a lighted cigar while operating a track locomotive near the 2 North switch. The switch is located approximately one mile underground. A subsequent search of Simms, by the Mine Foreman, revealed a butane lighter and one other cigar. This is notification that Mr. Simms will receive a civil penalty for violating a mandatory safety standard related to smoking. Mr. Simms address is: PO Box 317, Anytown, USA, 99999.

(A violation will be issued to the mine operator for the same standard.)

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	1	1	0	-	g	C. Part/Section of Title 30 CFR	7	5	.	1	7	0	2
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Section II -- Inspector's Evaluation

10. Gravity:															
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likel <input type="checkbox"/> Occurred <input type="checkbox"/>															
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input checked="" type="checkbox"/>															
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> D. Number of Persons Affected 0 0 1															
11. Negligence (check one)															
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input type="checkbox"/> D. High <input checked="" type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>															
12. Type of Action															
13. Type of Issuance (check one)															
Citation <input type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>															
14. Initial Action															
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number															
F. Dated															
Mo Da Yr															
15. Area or Equipment															

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)
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Section III -- Termination Action

17. Action to Terminate
The Mine Foreman removed Edgar Simms and the smoking materials from the mine.

18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)
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Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	0	8	8	8	8	3	1	21. Primary or Mill					
22. Signature	James Lee											23. AR Number	2	0	7	7	7

Section I -- Violation Data

1. Date	Mo 07	Da 11	Yr 08	2. Time (24 Hr. Clock)	0830	3. Citation/Order Number	4410190
4. Served To SYDNEY JONES, PRESIDENT				5. Operator TMC MINING COMPANY			
6. Mine TRIANGLE MINE				7. Mine ID 72-00012- (contractor)			
8. Condition or Practice							8a. Written Notice (103g)

There were no speed limit signs posted along the unbermed portion of the main service road. This is a violation of Condition No. 3 of the Granted Modification of Mandatory Standard 56.9300 (Docket #M-90-20-M), which specifically requires signs to be posted along the unbermed portion. The Assistant Safety Manager stated that signs had been posted but must have been stolen.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR	56.9300d4
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Section II -- Inspector's Evaluation

10. Gravity:		A. Injury or Illness (has) (is):		No Likelihood	<input type="checkbox"/>	Unlikely	<input checked="" type="checkbox"/>	Reasonably Likely	<input type="checkbox"/>	Highly Likely	<input type="checkbox"/>	Occurred	<input type="checkbox"/>
		B. Injury or Illness could reasonably be expected to be:		No Lost Workdays	<input checked="" type="checkbox"/>	Lost Workdays or Restricted Duty	<input type="checkbox"/>	Permanently Disabling	<input type="checkbox"/>	Fatal	<input type="checkbox"/>		
		C. Significant and Substantial (See Reverse):		Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	D. Number of Persons Affected		001			
11. Negligence (check one)		A. None		<input type="checkbox"/>	B. Low	<input type="checkbox"/>	C. Moderate	<input checked="" type="checkbox"/>	D. High	<input type="checkbox"/>	E. Reckless Disregard	<input type="checkbox"/>	
12. Type of Action		104-a-											
		13. Type of Issuance (check one)		Citation	<input checked="" type="checkbox"/>	Order	<input type="checkbox"/>	Safeguard	<input type="checkbox"/>	Written Notice	<input type="checkbox"/>		
14. Initial Action		A. Citation		<input type="checkbox"/>	B. Order	<input type="checkbox"/>	C. Safeguard	<input type="checkbox"/>	D. Written Notice	<input type="checkbox"/>	E. Citation/Order Number		
		F. Dated		Mo	Da	Yr							
15. Area or Equipment													

16. Termination Due	A. Date	Mo 07	Da 12	Yr 08	B. Time (24 Hr. Clock)	0900
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Section III -- Termination Action

17. Action to Terminate						
18. Terminated						
A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)		

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E01	20. Event Number	0768987	21. Primary or Mill	
22. Signature TED JOHNSON				23. AR Number 04789	

Section I -- Violation Data

1. Date	Mo 1	Da 1	Yr 08	2. Time (24 Hr. Clock)	0	7	0	0	3. Citation/Order Number	1	2	3	4	5	7	5
4. Served To Mike McGregor, Safety Director									5. Operator Black Rock Coal Company							
6. Mine No. 1									7. Mine ID 1 5 - 0 3 5 3 6 - (contractor)							
8. Condition or Practice									8a. Written Notice (103g)							

The North Mains section (MMU 001-0) was not provided two communication systems routed through two separate entries to the surface as required in the Emergency Response Plan in accordance with the Mine Improvement and New Emergency response Act of 2006 (Miner Act). The emergency notification telephone for the North Mains working section was not operational. The telephone could not send or receive a message in the page or talk mode from the responsible person located on the surface.

See Continuation Form (MSHA Form 7000-3a)																
9. Violation	A. Health Safety Other	<input checked="" type="checkbox"/>	B. Section of Act	3	1	6	-	b	C. Part/Section of Title 30 CFR							

Section II -- Inspector's Evaluation

10. Gravity:															
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>															
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>															
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>															
D. Number of Persons Affected 0 1 6															
11. Negligence (check one)															
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>															
12. Type of Action															
1 0 4 - a - , - -															
13. Type of Issuance (check one)															
Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> 0 Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>															
14. Initial Action															
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number <input type="checkbox"/> F. Dated Mo Da Yr															
15. Area or Equipment															

16. Termination Due	A. Date	Mo 1	Da 1	Yr 08	B. Time (24 Hr. Clock)	0	7	0	0
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Section III -- Termination Action

17. Action to Terminate

18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)				
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Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	7	6	5	4	3	2	1	21. Primary or Mill	
22. Signature	23. AR Number												
	2 3 1 9 0												

1. Date		Mo	Da	Yr	2. Time (24 Hr. Clock)						3. Citation/Order Number													
		0	7	1	1	0	8			0	9	0	0					4	4	1	0	1	9	1
4. Served To SYDNEY JONES, PRESIDENT										5. Operator TMC MINING COMPANY														
6. Mine TRIANGLE MINE										7. Mine ID 7 2 - 0 0 0 1 2 - (contractor)														
8. Condition or Practice										8a. Written Notice (103g)														

A miner (Payroll #9876) was injured on 04/06/08. This resulted in three lost work days. The company failed to complete and submit an MSHA #7000-1 (Mine, Accident, Injury, and Illness Report) for the injury. This company has received four previous Part 50 violations during the past twelve months for failing to report on-the-job injuries to MSHA and two violations for failure to submit quarterly employment reports (MSHA #7000-2 forms). Additionally, company personnel have been repeatedly instructed in Part 50 rules on completing and submitting the required forms to MSHA.

[illegible]

10. Gravity:																			
A. Injury or Illness (has) (is): No Likelihood <input checked="" type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>																			
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input checked="" type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>																			
C. Significant and Substantial (See Reverse): Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>										D. Number of Persons Affected									
										0 0 0									
11. Negligence (check one)																			
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input type="checkbox"/> D. High <input checked="" type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>																			
12. Type of Action										13. Type of Issuance (check one)									
1 0 4 - a - , - -										Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>									
14. Initial Action										D. Written Notice									
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/>										E. Citation/Order Number									
										F. Dated									
										Mo Da Yr									
15. Area or Equipment																			

16. Termination Due	A. Date	Mo 07	Da 12	Yr 08	B. Time (24 Hr. Clock)	08	00	
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17. Action to Terminate									
18. Terminated									
A. Date		Mo	Da	Yr	B. Time (24 Hr Clock)				

19. Type of Inspection (activity code)	E	0	1	20. Event Number	0	7	6	8	9	8	7	21. Primary or Mill						
22. Signature TED JOHNSON													23. AR Number	0	4	7	8	9

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	7	1	0	8		4
4. Served To	SYDNEY JONES, PRESIDENT			5. Operator	TMC MINING COMPANY		
6. Mine	TRIANGLE MINE			7. Mine ID	7 2 - 0 0 0 1 2 - (contractor)		
8. Condition or Practice				8a. Written Notice (103g)			

An MSHA #7000-2 (Quarterly Employment Report) for the 4th Quarter 2000 (October, November, December) was not completed nor mailed to MSHA's Health and Safety Analysis Center prior to January 15, 2001. This company has received four Part 50 violations during the past twelve months for failing to report on-the-job injuries to MSHA and two violations for failing to submit quarterly employment reports. Additionally, company personnel have been repeatedly instructed in Part 50 regulations on completing and submitting the required forms to MSHA.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR	5	0	.	3	0	a
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Section II -- Inspector's Evaluation

10. Gravity:	A. Injury or Illness (has) (is): No Likelihood <input checked="" type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>						
	B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input checked="" type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>						
	C. Significant and Substantial (See Reverse): Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> D. Number of Persons Affected 0 0 0						
11. Negligence (check one)	A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input type="checkbox"/> D. High <input checked="" type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>						
12. Type of Action	1	0	4	-	a	-	, - -
13. Type of Issuance (check one)	Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>						
14. Initial Action	A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number						
15. Area or Equipment	F. Dated Mo Da Yr						

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)
	0	7	1	2	0

Section III -- Termination Action

17. Action to Terminate	THE QUARTERLY REPORT WAS FILLED OUT AND SUBMITTED TO MSHA.
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18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)
	0	7	1	2	0

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	0	7	6	8	9	8	7	21. Primary or Mill
22. Signature	TED JOHNSON											
23. AR Number	0 4 7 8 9											

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - FAILURE TO PREPARE
AND SUBMIT AN MSHA 7000-2 FORM

Section I -- Violation Data

1. Date	Mo 0	Da 7	Yr 1	2. Time (24 Hr. Clock)	0	9	1	0	3. Citation/Order Number	4	4	1	0	1	9	3	
4. Served To SYDNEY JONES, PRESIDENT									5. Operator TMC MINING COMPANY								
6. Mine TRIANGLE MINE									7. Mine ID 7 2 - 0 0 0 1 2 - (contractor)								
8. Condition or Practice																8a. Written Notice (103g)	<input type="checkbox"/>

A copy of MSHA Form #7000-1 (Mine Accident, Injury, and Illness Report) for a reported lost-time injury that occurred to a miner (Payroll #45678) on May 4, 2008, was not at the mine office for review by MSHA. This company has received four previous Part 50 violations during the past twelve months for failing to report on-the-job injuries to MSHA and two violations for failing to submit quarterly employment reports. Additionally, company personnel have been repeatedly instructed in Part 50 rules on completing and submitting required forms to MSHA. Those instructions also included keeping copies of the forms at the mine office for review by MSHA.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other		B. Section of Act									C. Part/Section of Title 30 CFR	5	0	.	4	0	b											
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Section II -- Inspector's Evaluation

10. Gravity:

A. Injury or Illness (has) (is): No Likelihood ☒ Unlikely ☐ Reasonably Likely ☐ Highly Likely ☐ Occurred ☐

B. Injury or Illness could reasonably be expected to be: No Lost Workdays ☒ Lost Workdays or Restricted Duty ☐ Permanently Disabling ☐ Fatal ☐

C. Significant and Substantial (See Reverse): Yes ☐ No ☒ D. Number of Persons Affected 0 0 0

11. Negligence (check one)

A. None ☐ B. Low ☐ C. Moderate ☐ D. High ☒ E. Reckless Disregard ☐

12. Type of Action	1	0	4	-	a	-	,																									
13. Type of Issuance (check one)																																
Citation																<input checked="" type="checkbox"/>	Order	<input type="checkbox"/>	Safeguard	<input type="checkbox"/>	Written Notice	<input type="checkbox"/>										

14. Initial Action	A. Citation	<input type="checkbox"/>	B. Order	<input type="checkbox"/>	C. Safeguard	<input type="checkbox"/>	D. Written Notice	<input type="checkbox"/>	E. Citation/ Order Number																									
F. Dated																Mo	Da	Yr																

15. Area or Equipment

16. Termination Due	A. Date	Mo 0	Da 7	Yr 1	2	0	8	B. Time (24 Hr. Clock)	0	8	0	0
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Section III -- Termination Action

17. Action to Terminate

18. Terminated	A. Date	Mo	Da	Yr					B. Time (24 Hr Clock)				
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Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	0	7	6	8	9	8	7	21. Primary or Mill									
22. Signature TED JOHNSON													23. AR Number				0	4	7	8	9

MSHA Form 7000-3 Mar 85 (Revised)

U.S. Department of Labor
Mine Safety and Health Administration

The No. 17 track-mounted self-propelled personnel carrier was not provided with sand-rigging. This mine has wet track, steep grades, and "S" curves. This presents the hazard of derailment and associated injuries. The personnel carrier was transporting 6 miners to an idle section.

This is a Notice to Provide Safeguard(s) requiring No. 17 personnel carrier and all other personnel carriers at this mine to be equipped with operable sand rigging when transporting 6 or more miners.

Section II -- Inspector's Evaluation																																																														
10. Gravity:																																																														
A. Injury or Illness (has) (is):					No Likelihood	<input type="checkbox"/>	Unlikely	<input type="checkbox"/>	Reasonably Likely	<input type="checkbox"/>	Highly Likely	<input type="checkbox"/>	Occurred	<input type="checkbox"/>																																																
B. Injury or Illness could reasonably be expected to be:					No Lost Workdays	<input type="checkbox"/>	Lost Workdays or Restricted Duty	<input type="checkbox"/>	Permanently Disabling	<input type="checkbox"/>	Fatal	<input type="checkbox"/>																																																		
C. Significant and Substantial (See Reverse):					Yes	<input type="checkbox"/>	No	<input type="checkbox"/>				D. Number of Persons Affected			<input type="text"/>	<input type="text"/>	<input type="text"/>																																													
11. Negligence (check one)																																																														
A. None		<input type="checkbox"/>	B. Low		<input type="checkbox"/>	C. Moderate		<input type="checkbox"/>	D. High		<input type="checkbox"/>	E. Reckless Disregard		<input type="checkbox"/>																																																
12. Type of Action										13. Type of Issuance (check one)																																																				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																											
12. Type of Action										13. Type of Issuance (check one)																																																				
Citation <input type="checkbox"/> Order <input type="checkbox"/> Safeguard <input checked="" type="checkbox"/> Written Notice <input type="checkbox"/>																																																														
14. Initial Action										15. Area or Equipment																																																				
A. Citation <input type="checkbox"/>					B. Order <input type="checkbox"/>					C. Safeguard <input type="checkbox"/>					D. Written Notice <input type="checkbox"/>					E. Citation/Order Number					F. Dated					Mo	Da	Yr																														
14. Initial Action										15. Area or Equipment																																																				
A. Citation <input type="checkbox"/>										B. Order <input type="checkbox"/>										C. Safeguard <input type="checkbox"/>										D. Written Notice <input type="checkbox"/>										E. Citation/Order Number										F. Dated										Mo	Da	Yr

Section III -- Termination Action

17. Action to Terminate

New linkage was properly installed and the sand-rigging was working satisfactorily on the No. 17 personnel carrier.

Section IV -- Automated System Data																								
19. Type of Inspection (activity code)			E	0	1	20. Event Number					0	8	8	8	8	3	1	21. Primary or Mill						
22. Signature																	23. AR Number							
James Lee																			2	0	7	7	7	

Section I -- Violation Data

1. Date	Mo 0	Da 8	Yr 2	2. Time (24 Hr. Clock)	0	8	0	0	3. Citation/Order Number	4	4	1	0	0	2	2	
4. Served To John Smith, Mine Foreman									5. Operator J and S Coal Company, Inc.								
6. Mine No. 1									7. Mine ID 4 4 - 0 3 5 3 6 - (contractor)								
8. Condition or Practice																8a. Written Notice (103g)	<input type="checkbox"/>

Citations issued during the inspections conducted on August 19 and 21, 2008, had not been posted on the mine bulletin board.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	1	0	9	-	a	C. Part/Section of Title 30 CFR	.
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Section II -- Inspector's Evaluation

10. Gravity:															
A. Injury or Illness (has) (is): No Likelihood <input checked="" type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>															
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input checked="" type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>															
C. Significant and Substantial (See Reverse): Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> D. Number of Persons Affected 0 0 0															
11. Negligence (check one)															
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>															
12. Type of Action 1 0 4 - a - , - -															
13. Type of Issuance (check one) Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>															
14. Initial Action															
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number F. Dated Mo Da Yr															
15. Area or Equipment															

16. Termination Due	A. Date	Mo 0	Da 8	Yr 2	2	0	8	B. Time (24 Hr. Clock)	0	8	3	0
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Section III -- Termination Action

17. Action to Terminate
Copies of the citations and orders were posted on the bulletin board.

18. Terminated	A. Date	Mo 0	Da 8	Yr 2	2	0	8	B. Time (24 Hr Clock)	0	8	3	0
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Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	0	8	8	8	8	3	1	21. Primary or Mill					
22. Signature												23. AR Number	2	0	7	7	7
James Lee																	

MSHA Form 7000-3 Mar 85 (Revised)

109(a) VIOLATION OF THE MINE ACT WITH TERMINATION

Appendix B

Training Violations

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Section 1 -- Violation Data

Section 1 Violation Data																	
1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)						3. Citation/Order							
	0	7	0	2	0	8	0	0		Number	4	4	1	0	1	7	9
4. Served To TIMOTHY DAWSON, PRESIDENT									5. Operator ABCD MINING COMPANY, INC.								
6. Mine ABCD MINE									7. Mine ID 7 3 - 0 1 2 3 5 - (contractor)								
8. Condition or Practice																	
8a. Written Notice (103g)																	

Michael Martin (Payroll Number 123456), a temporary summer employee, had not received the required MSHA 40-hour new miner training prior to performing maintenance duties underground. The mine operator was aware of the Part 48 training requirements, but believed it was unnecessary for a temporary employee. Mr. Martin had no previous mining experience. The operator is hereby ordered to withdraw Michael Martin from the mine until he has received the required training. The Federal Mine Safety and Health Act of 1977 declares that an untrained miner is a hazard to himself and to others.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	-	C. Part/Section of Title 30 CFR	4	8	.	5	a
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Section II -- Inspector's Evaluation

10. Gravity:

A. Injury or Illness (has) (is): No Likelihood ☐ Unlikely ☐ Reasonably Likely ☒ Highly Likely ☐ Occurred ☐

B. Injury or Illness could reasonably be expected to be: No Lost Workdays ☐ Lost Workdays or Restricted Duty ☐ Permanently Disabling ☐ Fatal ☒

C. Significant and Substantial (See Reverse):	Yes	X	No		D. Number of Persons Affected	0	0	1
---	-----	---	----	--	-------------------------------	---	---	---

11. Negligence (check one)

A. None ☐ B. Low ☐ C. Moderate ☒ D. High ☐ E. Reckless Disregard ☐

12. Type of Action

1	0	4	-	9	-	1	,	-	-	13. Type of Issuance (check one)
										Citation <input type="checkbox"/> Order <input checked="" type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>

14. Initial Action

[illegible]

15. Area or Equipment

MICHAEL MARTIN (PAYROLL NUMBER 123456)

16. Termination Due

A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)				
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Section III -- Termination Action

17. Action to Terminate

18. Terminated

A. Date	Mo 	Da 	Yr 	B. Time (24 Hr Clock)			
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Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	0	9	7	7	5	5	3	21. Primary or Mill		
---	---	---	---	------------------	---	---	---	---	---	---	---	---------------------	--	--

22. Signature	23. AR Number					
JOHNREDWOOD		0	3	3	3	3

Section I -- Violation Data

1. Date	Mo 0	Da 8	Yr 2	0	8	2	1	0	8	2. Time (24 Hr. Clock)	0	8	0	0	3. Citation/Order Number	4	4	1	0	0	2	0
4. Served To John Smith, Mine Foreman										5. Operator J and S Coal Company, Inc.												
6. Mine No. 1										7. Mine ID 4 4 - 0 3 5 3 6 - (contractor)												
8. Condition or Practice															8a. Written Notice (103g)							<input type="checkbox"/>

John Jones was performing laborer duties in the mains section conveyor belt entry in the underground portion of the mine. He has not received the safety training as required by Section 115 of the Act. Mr. Jones is a new miner, hired by this company on 8/13/08. He has received none of the required 40 hours of new miner training. In the absence of such training, John Jones is declared a hazard to himself and others, and is to be withdrawn immediately from the mine until he has received the required training, as determined by an Authorized Representative.

(If a miner has not received training in violation of 2 or more of the training regulations, a single Order is issued; however, each additional violation is given an inspector's evaluation on a Form 7000-3a.)

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR	4	8	.	5	a
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Section II -- Inspector's Evaluation

10. Gravity:

A. Injury or Illness (has) (is): No Likelihood ☐ Unlikely ☐ Reasonably Likely ☒ Highly Likely ☐ Occurred ☐

B. Injury or Illness could reasonably be expected to be:

No Lost Workdays ☐ Lost Workdays or Restricted Duty ☐ Permanently Disabling ☐ Fatal ☒

C. Significant and Substantial (See Reverse): Yes ☒ No ☐ D. Number of Persons Affected 0 0 1

11. Negligence (check one)

A. None ☐ B. Low ☐ C. Moderate ☐ D. High ☒ E. Reckless Disregard ☐

12. Type of Action

1 0 4 - g - 1 , - -

13. Type of Issuance (check one)

Citation ☐ Order ☒ Safeguard ☐ Written Notice ☐

14. Initial Action

A. Citation ☐ B. Order ☐ C. Safeguard ☐ D. Written Notice ☐

E. Citation/
Order
Number

F. Dated

Mo Da Yr

15. Area or Equipment

John Jones is withdrawn from the mine

16. Termination Due

A. Date Mo Da Yr

B. Time (24
Hr. Clock)

Section III -- Termination Action

17. Action to Terminate

18. Terminated

A. Date Mo Da Yr

B. Time (24 Hr Clock)

Section IV -- Automated System Data

19. Type of Inspection

(activity code)

E 0 1

20. Event Number

0 8 8 8 8 3 1

21. Primary or Mill

22. Signature

James Lee

23. AR Number

2 0 7 7 7

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)					3. Citation/Order Number								
	0	7	0	3	0	8	0	0		4	4	1	0	1	8	0	
4. Served To TIMOTHY DAWSON, PRESIDENT									5. Operator ABCD MINING COMPANY, INC.								
6. Mine ABCD MINE									7. Mine ID 7 3 - 0 1 2 3 5 - (contractor)								
8. Condition or Practice																8a. Written Notice (103g)	

See Continuation Form (MSHA Form 7000-3a)																									
9. Violation	A. Health Safety Other		B. Section of Act										C. Part/Section of Title 30 CFR	4	8	.	8								

10. Gravity:																							
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input checked="" type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>																							
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input checked="" type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>																							
C. Significant and Substantial (See Reverse): Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>															D. Number of Persons Affected					0	5	6	
11. Negligence (check one)																							
A. None <input type="checkbox"/>				B. Low <input type="checkbox"/>				C. Moderate <input type="checkbox"/>				D. High <input checked="" type="checkbox"/>				E. Reckless Disregard <input type="checkbox"/>							
12. Type of Action		1	0	4	-	g	-	1	,				-	-	13. Type of Issuance (check one)								
															Citation	<input type="checkbox"/>	Order	<input checked="" type="checkbox"/>	Safeguard	<input type="checkbox"/>	Written Notice	<input type="checkbox"/>	
14. Initial Action												D. Written Notice		E. Citation/Order Number				F. Dated		Mo	Da	Yr	
A. Citation		<input type="checkbox"/>	B. Order		<input type="checkbox"/>	C. Safeguard		<input type="checkbox"/>															
15. Area or Equipment																							
Ben Hopper, Lois Smith, Tom Jones, Ezra D. Light; Billy Kidd; Mina Byrd; Jack Hammer; Justin Hustin; Manny Keys; et. al.																							

17. Action to Terminate									
18. Terminated									
A. Date		Mo	Da	Yr	B. Time (24 Hr Clock)				

19. Type of Inspection (activity code)	E	0	1	20. Event Number	0	9	7	7	5	5	3	21. Primary or Mill						
22. Signature JOHNREDWOOD													23. AR Number	0	3	3	3	3

104(g)(1) ORDER - PART 48
SINGLE MINER AND MULTIPLE VIOLATIONS

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input type="checkbox"/>	1a. Continuation <input checked="" type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 7	Yr 0	3. Citation/Order Number	4	4	1	0	1	8	1	-	
4. Served To JEFF CRIBS, PRESIDENT					5. Operator XYZ MINING COMPANY, INC.										
6. Mine XYZ Mine					7. Mine ID 7 3 - 0 1 2 3 6 - (contractor)										

Section II -- Justification for Action

Continuation of Section II, Inspector's Evaluation, to evaluate 30 CFR 48.8

ITEM 10A - Reasonably Likely
ITEM 10B - Lost Workdays
ITEM 10C - Significant and Substantial - Yes
ITEM 10D - Number of Persons Affected - 001
ITEM 11 - Negligence - High

See Continuation Form

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)					C. Vacated	<input type="checkbox"/>	D. Terminated	<input type="checkbox"/>	E. Modified	<input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	0	1	10. Event Number	0	9	7	7	5	5	4	
11. Signature JOHN SMYTHED	AR Number				12. Date	Mo	Da	Yr	13. Time (24 Hr. Clock)			
	0	3	3	3	4	0	7	0	3	0	8	1

MSHA Form 7000-3a, Mar 85 (Revised)

104(g)(1) ORDER - PART 48 CONTINUATION SHEET
SINGLE MINER AND MULTIPLE VIOLATIONS

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)						3. Citation/Order Number							
	0	8	2	0	0	8	0	0			8	8	8	3	4	5	6
4. Served To KEN SWIFT, QUARRY FOREMAN										5. Operator NORTHEAST AGGREGATES							
6. Mine NORTHEAST										7. Mine ID 4 7 - 9 9 1 2 3 - (contractor)							
8. Condition or Practice										8a. Written Notice (103g)							

The training plan did not include the minimum information specified in 30 CFR Part 46.3(b)(1) through 46.3(b)(5), nor has the plan been submitted to MSHA for approval.

The following items contribute to the ineffectiveness of the plan:

There was not a general description of the teaching methods to be used.

No approximate time range was given for the subject areas to be covered.

No evaluation procedures were included to determine the effectiveness of the training.

No course material was provided for training new miners in recognizing and avoiding electrical and other hazards at the mine.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act								C. Part/Section of Title 30 CFR	4	6	.	3	a																
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Section II -- Inspector's Evaluation

10. Gravity:

A. Injury or Illness (has) (is): No Likelihood ☐ Unlikely ☒ Reasonably Likely ☐ Highly Likely ☐ Occurred ☐

B. Injury or Illness could reasonably be expected to be:

No Lost Workdays ☐ Lost Workdays or Restricted Duty ☒ Permanently Disabling ☐ Fatal ☐

C. Significant and Substantial (See Reverse): Yes ☐ No ☒ D. Number of Persons Affected ☐ 0 ☐ 1 ☐ 2

11. Negligence (check one)

A. None ☐ B. Low ☐ C. Moderate ☒ D. High ☐ E. Reckless Disregard ☐

12. Type of Action

1 0 4 - a , - -

13. Type of Issuance (check one)

Citation ☒ Order ☐ Safeguard ☐ Written Notice ☐

14. Initial Action

A. Citation ☐ B. Order ☐ C. Safeguard ☐ D. Written Notice ☐

E. Citation/Order Number

F. Dated

Mo Da Yr

15. Area or Equipment

16. Termination Due

A. Date
Mo Da Yr
0 8 2 7 0 8

B. Time (24 Hr. Clock)
0 8 0 0

Section III -- Termination Action

17. Action to Terminate

18. Terminated

A. Date
Mo Da Yr

B. Time (24 Hr Clock)

Section IV -- Automated System Data

19. Type of Inspection (activity code)

E 0 1

20. Event Number

0 9 8 9 3 4 1

21. Primary or Mill

22. Signature

Jay Lowe

23. AR Number

0 3 3 3 2

104(a) CITATION - PART 46
TRAINING CERTIFICATES NOT PROVIDED

Section I -- Violation Data

1. Date	Mo 0	Da 8	Yr 21	2. Time (24 Hr. Clock)	0	9	3	0	3. Citation/Order Number	8	8	8	3	4	5	8	
4. Served To KEN SWIFT, QUARRY FOREMAN									5. Operator NORTHEAST AGGREGATES								
6. Mine NORTHEAST									7. Mine ID 4 7 - 9 9 1 2 3 - (contractor)								
8. Condition or Practice																8a. Written Notice (103g)	<input type="checkbox"/>

The mine operator was not completing or generating the required records of training which was being completed in segments [30 CFR 46.9b(1-4)].

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR	4	6	.	9	b
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Section II -- Inspector's Evaluation

10. Gravity:															
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input checked="" type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>															
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input checked="" type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>															
C. Significant and Substantial (See Reverse): Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> D. Number of Persons Affected 0 0 0															
11. Negligence (check one)															
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>															
12. Type of Action															
1 0 4 - a , - - Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>															
13. Type of Issuance (check one)															
14. Initial Action															
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number F. Dated Mo Da Yr															

15. Area or Equipment

16. Termination Due	A. Date	Mo 0	Da 8	Yr 21	B. Time (24 Hr. Clock)	0	8	0	0
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Section III -- Termination Action

17. Action to Terminate

18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)
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Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	0	9	8	9	3	4	1	21. Primary or Mill					
22. Signature Jay Lowe												23. AR Number	0	3	3	3	2

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - PART 46
INCOMPLETE TRAINING RECORDS

Section I -- Violation Data

1. Date	Mo 0	Da 8	Yr 21	08	2. Time (24 Hr. Clock)	1	0	0	0	3. Citation/Order Number	8	8	8	3	4	5	9	
4. Served To KEN SWIFT, QUARRY FOREMAN					5. Operator NORTHEAST AGGREGATES													
6. Mine NORTHEAST					7. Mine ID 4 7 - 9 9 1 2 3 - (contractor)													
8. Condition or Practice										8a. Written Notice (103g)								<input type="checkbox"/>

The mine operator failed to record and certify that each miner had received the required training.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR	4	6	.	9	a
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Section II -- Inspector's Evaluation

10. Gravity:									
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input checked="" type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>									
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input checked="" type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>									
C. Significant and Substantial (See Reverse): Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>									
D. Number of Persons Affected									
11. Negligence (check one)									
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>									
12. Type of Action									
13. Type of Issuance (check one)									
Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>									
14. Initial Action									
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number									
F. Dated									
15. Area or Equipment									

16. Termination Due	A. Date	Mo 0	Da 8	Yr 21	08	B. Time (24 Hr. Clock)	0	8	0	0
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Section III -- Termination Action

17. Action to Terminate									
18. Terminated									
A. Date									
B. Time (24 Hr Clock)									

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	0	9	8	9	3	4	1	21. Primary or Mill
22. Signature Jay Lowe												
23. AR Number												
0 3 3 3 2												

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - PART 46
TRAINING RECORDS NOT PROVIDED

Section I -- Violation Data

1. Date	Mo 0	Da 8	Yr 2008	2. Time (24 Hr. Clock)	0	8	0	0	3. Citation/Order Number	4	4	1	0	1	8	9	
4. Served To JAMES DOBSON, PRESIDENT				5. Operator QRS MINING COMPANY													
6. Mine WMC MINE AND MILL				7. Mine ID 7 3 - 0 1 2 3 6 - (contractor)													
8. Condition or Practice																8a. Written Notice (103g)	<input type="checkbox"/>

Chad Scott (payroll number 98342), truck driver, had not received the MSHA-required 24-hour new miner training within 90 days after beginning work at the mine. Mr. Scott had no previous mining experience, and he was only provided with 8 hours of training. The mine operator was aware of the Part 46 training requirements. The mine operator must withdraw Chad Scott from the mine until he receives the required training. The Federal Mine Safety and Health Act of 1977 states that an untrained miner is a hazard to himself and to others.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR	4	6	.	5	a
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Section II -- Inspector's Evaluation

10. Gravity:															
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>															
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input checked="" type="checkbox"/>															
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> D. Number of Persons Affected 0 0 1															
11. Negligence (check one)															
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input type="checkbox"/> D. High <input checked="" type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>															
12. Type of Action 1 0 4 - g - 1 , - - 13. Type of Issuance (check one)															
Citation <input type="checkbox"/> Order <input checked="" type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>															
14. Initial Action															
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number F. Dated Mo Da Yr															

15. Area or Equipment

Chad Scott (payroll number 98342)

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)
---------------------	---------	----	----	----	------------------------

Section III -- Termination Action

17. Action to Terminate

18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)
----------------	---------	----	----	----	-----------------------

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	0	9	7	7	5	5	5	21. Primary or Mill						
22. Signature John Redwood													23. AR Number	0	3	3	3	3

MSHA Form 7000-3 Mar 85 (Revised)

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	8	2	0	0	8	4
4. Served To	JAMES DOBSON, PRESIDENT			5. Operator	QRS MINING COMPANY		
6. Mine	QRS MINE			7. Mine ID	7 3 - 0 1 2 3 6 - (contractor)		
8. Condition or Practice				8a. Written Notice (103g)	<input type="checkbox"/>		

Twenty-two miners working at the mine have not received annual refresher training within the last twelve months. Refresher training was last provided to these miners on April 11, 2007. The mine operator was aware of the training requirements. The mine operator must withdraw the 22 miners from the mine until they have received the required training. The Federal Mine Safety and Health Act of 1977 states that an untrained miner is a hazard to himself and to others.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR
			4 6 . 8 a

Section II -- Inspector's Evaluation

10. Gravity:

A. Injury or Illness (has) (is): No Likelihood ☐ Unlikely ☒ Reasonably Likely ☐ Highly Likely ☐ Occurred ☐

B. Injury or Illness could reasonably be expected to be:

No Lost Workdays ☐ Lost Workdays or Restricted Duty ☒ Permanently Disabling ☐ Fatal ☐

C. Significant and Substantial (See Reverse):

Yes ☐ No ☒ D. Number of Persons Affected 0 2 2

11. Negligence (check one)

A. None ☐ B. Low ☐ C. Moderate ☐ D. High ☒ E. Reckless Disregard ☐

12. Type of Action

1 0 4 - g - 1 , - -

13. Type of Issuance (check one)

Citation ☐ Order ☒ Safeguard ☐ Written Notice ☐

14. Initial Action

A. Citation ☐ B. Order ☐ C. Safeguard ☐ D. Written Notice ☐

E. Citation/Order Number

F. Dated

Mo Da Yr

15. Area or Equipment

Joseph Johns, Harry Tee, Mike Mott, Mark Hank, Sam Wright, Harold Moody, et. al.

16. Termination Due

A. Date Mo Da Yr B. Time (24 Hr. Clock)

Section III -- Termination Action

17. Action to Terminate

18. Terminated

A. Date Mo Da Yr B. Time (24 Hr Clock)

Section IV -- Automated System Data

19. Type of Inspection

(activity code)

20. Event Number

0 9 7 7 5 5 5

21. Primary or Mill

22. Signature

John Redwood

23. AR Number

0 3 3 3 3

MSHA Form 7000-3 Mar 85 (Revised)

104(g)(1) ORDER - PART 46
MULTIPLE MINERS AND A SINGLE VIOLATION

Section I -- Violation Data																																				
1. Date		Mo	Da	Yr	2. Time (24 Hr. Clock)										3. Citation/Order Number																					
		0	8	2	0	0	8											0	9	3	0						4	4	1	0	1	9	0			
4. Served To JAMES DOBSON, PRESIDENT															5. Operator QRS MINING COMPANY																					
6. Mine QRS MINE															7. Mine ID						7	3	-	0	1	2	3	6	-							(contractor)
8. Condition or Practice																									8a. Written Notice (103g)											
Bill Porter (payroll number 98340), haul truck driver, had not received the MSHA required task training on the haul truck he was operating prior to assuming his duties on July 6, 2008. [30 CFR Part 46.7a] Mr. Porter indicated that he had not operated any haulage trucks prior to operating this one.																																				
Bill Porter last received annual refresher training on February 14, 2007. This is not within MSHA's requirements for annual refresher training. [30 CFR 46.8]																																				
The mine operator was aware of the Part 46 training requirements. The Federal Mine Safety and Health Act of 1977 states that an untrained miner is a hazard to himself and to others.																																				
Note: The second standard is evaluated for S&S on a mine citation/order continuation form.																																				
See Continuation Form (MSHA Form 7000-3a)																											X									
9. Violation		A. Health Safety Other			B. Section of Act											C. Part/Section of Title 30 CFR						4	6	.	7	a										
Section II -- Inspector's Evaluation																																				
10. Gravity: A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/> B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input checked="" type="checkbox"/> C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> D. Number of Persons Affected 0 0 1																																				
11. Negligence (check one)		A. None <input type="checkbox"/>		B. Low <input type="checkbox"/>		C. Moderate <input type="checkbox"/>		D. High <input checked="" type="checkbox"/>		E. Reckless Disregard <input type="checkbox"/>																										
12. Type of Action		1	0	4	-	g	-	1	,								13. Type of Issuance (check one)		Citation	<input type="checkbox"/>	Order	<input checked="" type="checkbox"/>	Safeguard	<input type="checkbox"/>	Written Notice	<input type="checkbox"/>										
14. Initial Action		A. Citation <input type="checkbox"/>		B. Order <input type="checkbox"/>		C. Safeguard <input type="checkbox"/>		D. Written Notice <input type="checkbox"/>		E. Citation/Order Number								F. Dated		Mo	Da	Yr														
15. Area or Equipment Bill Porter (payroll number 98340)																																				
16. Termination Due		A. Date		Mo	Da	Yr	B. Time (24 Hr. Clock)																													
Section III -- Termination Action																																				
17. Action to Terminate																																				
18. Terminated		A. Date		Mo	Da	Yr	B. Time (24 Hr Clock)																													
Section IV -- Automated System Data																																				
19. Type of Inspection (activity code)		E	0	1	20. Event Number		0	9	7	7	5	5	5	21. Primary or Mill																						
22. Signature John Redwood																						23. AR Number						0	3	3	3	3				

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input type="checkbox"/>	1a. Continuation <input checked="" type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 8	Yr 2	0	0	8	3. Citation/Order Number	4	4	1	0	0	8	9	-		
4. Served To JAMES DOBSON, PRESIDENT					5. Operator QRS MINING														
6. Mine QRS Mine					7. Mine ID 7 3 - 0 1 2 3 6 - (contractor)														

Section II -- Justification for Action

Continuation of Section II, Inspector's Evaluation, to evaluate 30 CFR 46.8a

ITEM 10A - Unlikely

ITEM 10B - Lost Workdays

ITEM 10C - Significant and Substantial - No

ITEM 10D - Number of Persons Affected - 001

ITEM 11 - Negligence - High

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)					C. Vacated	<input type="checkbox"/>	D. Terminated	<input type="checkbox"/>	E. Modified	<input type="checkbox"/>
----------------	---------	----	----	----	------------------------	--	--	--	--	------------	--------------------------	---------------	--------------------------	-------------	--------------------------

Section IV -- Inspection Data

9. Type of Inspection	E	0	1	10. Event Number	0	9	7	7	5	5	5	11. Signature	AR Number	12. Date	Mo	Da	Yr	13. Time (24 Hr. Clock)							
												JOHN REDWOOD	0 3 3 3 3		0	8	2	0	0	8		0	9	3	0

Appendix C

Coal Health Violations

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Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)	3. Citation/Order Number
	0	7	1	5	0
	1	5	0	8	1
4. Served To	Alice McGregor, Safety Director				5. Operator
					Beautiful Vista Coal Company
6. Mine	No. 1				7. Mine ID
					1
					5
					-
					1
					3
					5
					2
					6
					-
					(contractor)
8. Condition or Practice					8a. Written Notice (103g)
					<input type="checkbox"/>

The dust collection system provided on the Ingersoll Rand highwall drill (S/N IR-124356) was not effective in controlling the dust produced during the drilling process. Visible dust was observed being emitted from beneath the drill table and a visible dust cloud was observed passing over the blaster, hole loader nearby, and blast foreman. An examination of the collection system revealed that the skirting material provided on the drill table was torn in several places and the bushing material between the drill steel and drill table needed replacement. This highwall drill was observed drilling holes along the #6 highwall bench. The Note: The highwall drill is, typically, only in operation on the day shift.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	X	B. Section of Act	C. Part/Section of Title 30 CFR	7	2	.	6	2	0
Section II -- Inspector's Evaluation										
10. Gravity:										
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input checked="" type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>										
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>										
C. Significant and Substantial (See Reverse): Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> D. Number of Persons Affected 0 0 3										
11. Negligence (check one)										
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>										
12. Type of Action 1 0 4 - a - , - -										
13. Type of Issuance (check one)										
Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> 0 Safeguard <input type="checkbox"/>										
14. Initial Action										
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number F. Dated Mo Da Yr										
15. Area or Equipment										

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)
		0	7	1	5
		1	5	0	8
		1	3	0	0

Section III -- Termination Action

17. Action to Terminate

The drill was removed from service and the skirting material replaced. The drill steel bushing was also replaced

18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)
		0	7	1	5
		1	5	0	8
		1	4	0	1

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	7	6	5	4	3	2	2	21. Primary or Mill						
22. Signature													23. AR Number	2	3	1	9	0

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - 30 CFR 72.620

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo 09	Da 15	Yr 08	2. Time (24 Hr. Clock)	1030	3. Citation/Order Number	1234571
4. Served To Alice McGregor, Safety Director				5. Operator Beautiful Vista Coal Company			
6. Mine No. 1				7. Mine ID 15-13526- (contractor)			
8. Condition or Practice							8a. Written Notice (103g) <input type="checkbox"/>

The results of five valid samples collected by MSHA Inspector(s) from August 6, 2008, through August 27, 2008, indicate that the #3 Ingersol Rand Highwall Drill operator (Designated Work Position 002-0-384) is exposed to an average respirable dust concentration of 2.7 mg/m³ which exceeds the allowable exposure of 2.0 mg/m³. These samples were collected on the #3 Ingersol Rand Highwall Drill (S/N 04-12345) which is normally operated on both the day and afternoon shifts. The mine operator must take immediate action to lower the exposure in the environment of the #3 Ingersol Rand Highwall Drill operator to 2.0 mg/m³ or less and then sample each production shift until five valid sample have been collected and submitted to the Pittsburgh Dust Processing Laboratory. A copy of the sample results is attached to this citation.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	X	B. Section of Act	-	C. Part/Section of Title 30 CFR	71.100
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Section II -- Inspector's Evaluation

10. Gravity:							
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>							
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>							
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> D. Number of Persons Affected 002							
11. Negligence (check one)							
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>							
12. Type of Action 104-a-							
13. Type of Issuance (check one) Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> 0 Safeguard <input type="checkbox"/>							
14. Initial Action							
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number F. Dated Mo Da Yr							
15. Area or Equipment							

16. Termination Due	A. Date	Mo 09	Da 25	Yr 08	B. Time (24 Hr. Clock)	1300
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Section III -- Termination Action

17. Action to Terminate

18. Terminated	A. Date	Mo 10	Da 15	Yr 08	B. Time (24 Hr Clock)	1401
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Section IV -- Automated System Data

19. Type of Inspection (activity code)	E01	20. Event Number	7654322	21. Primary or Mill	
22. Signature				23. AR Number	23190

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)	3. Citation/Order Number
	0	7	1	5	0
	8				
4. Served To	5. Operator				
Mike McGregor, Safety Director	Black Rock Coal Company				
6. Mine	7. Mine ID				
No. 1	1				5
	-				1
	3				5
	2				6
	-				
					(contractor)
8. Condition or Practice	8a. Written Notice (103g)				

The mine operator did not collect the required bimonthly respirable dust samples in the Designated Area 201-0 as identified in Advisory Number 0001 dated July 3, 2008. The bimonthly cycle missed was April - June. Two miners are normally exposed during each production shift - a belt examiner and a belt shoveler. This belt is in operation during both the day and afternoon shifts.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	X	B. Section of Act	C. Part/Section of Title 30 CFR	7	0	.	2	0	8	(a)
Section II -- Inspector's Evaluation													
10. Gravity:													
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>													
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>													
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> D. Number of Persons Affected 0 0 4													
11. Negligence (check one)													
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>													
12. Type of Action 1 0 4 - a - , - -													
13. Type of Issuance (check one)													
Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> 0 Safeguard <input type="checkbox"/>													
14. Initial Action													
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number F. Dated Mo Da Yr													
15. Area or Equipment													

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)
	0	7	1	5	0
	8				

Section III -- Termination Action

17. Action to Terminate
The drill was removed from service and the skirting material replaced. The drill steel bushing was also replaced

18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)
	0	7	1	5	0
	8				

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	7	6	5	4	3	2	2	21. Primary or Mill
22. Signature	23. AR Number											
	2											
	3											
	1											
	9											
	0											

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - 30 CFR 70.208(a)

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo 07	Da 11	Yr 08	2. Time (24 Hr. Clock)	1030	3. Citation/Order Number	1234568
4. Served To Mike McGregor, Safety Director				5. Operator Black Rock Coal Company			
6. Mine No. 1				7. Mine ID 15-03536- (contractor)			
8. Condition or Practice						8a. Written Notice (103g)	

During the on-shift examination for MMU 001-0 the certified person (section foreman) failed to adequately determine the concentrations of carbon monoxide (CO) and nitrogen dioxide (NO₂) in the return at a location representing the contribution of all diesel equipment on this section and at the section loading point. The handheld detector the foreman used during this on-shift examination was not equipped with sensors to measure these contaminants and no equivalent means of sampling/evaluation were available at the mine. The handheld detector normally used by the foreman had been returned to the manufacturer for repair two weeks prior to this date. This unit uses 1 EIMCO diesel scoop for clean up and 3 EIMCO diesel ramcars for section haulage in the production process. Eight miners work on this section.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	X	B. Section of Act	-	C. Part/Section of Title 30 CFR	70.1900(a)(1)
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Section II -- Inspector's Evaluation

10. Gravity:							
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>							
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input checked="" type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>							
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> D. Number of Persons Affected 008							
11. Negligence (check one)							
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>							
12. Type of Action 104-a-							
13. Type of Issuance (check one) Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> 0 Safeguard <input type="checkbox"/>							
14. Initial Action							
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number F. Dated Mo Da Yr							
15. Area or Equipment							

16. Termination Due	A. Date	Mo 07	Da 12	Yr 08	B. Time (24 Hr. Clock)	0900
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Section III -- Termination Action

17. Action to Terminate							
18. Terminated							
A. Date Mo Da Yr B. Time (24 Hr Clock)							

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E01	20. Event Number	7654321	21. Primary or Mill	
22. Signature				23. AR Number 23190	

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - 30 CFR 70.1900(a)(1)

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)	3. Citation/Order Number
	0	7	1	1	0
	1	1	0	8	1
					2
					3
					4
					5
					6
					7

4. Served To
Mike McGregor, Safety Director

5. Operator
Black Rock Coal Company

6. Mine
No. 1

7. Mine ID
1 5 - 0 3 5 3 6 - (contractor)

8. Condition or Practice
8a. Written Notice (103g)

During the on-shift examination for MMU 002-0 the certified person (section foreman) failed to adequately determine the concentrations of carbon monoxide (CO) and nitrogen dioxide (NO₂) in the return at a location representing the contribution of all diesel equipment on this section and at the section loading point. The section foreman failed to take readings at the section loading point as required by 30 CFR 70.1900(a)(2). This unit uses 1 EIMCO diesel scoop for clean up and 3 EIMCO diesel ramcars for section haulage in the production process. There are 5 miners that regularly work or travel in the affected area: unit foreman, scoop operator, and 3 ramcar operators.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	X	B. Section of Act	C. Part/Section of Title 30 CFR
			-	7 0 . 1 9 0 0 (a) (2)

Section II -- Inspector's Evaluation

10. Gravity:

A. Injury or Illness (has) (is): No Likelihood ☐ Unlikely ☐ Reasonably Likely ☒ Highly Likely ☐ Occurred ☐

B. Injury or Illness could reasonably be expected to be: No Lost Workdays ☐ Lost Workdays or Restricted Duty ☒ Permanently Disabling ☐ Fatal ☐

C. Significant and Substantial (See Reverse): Yes ☒ No ☐

D. Number of Persons Affected
0 0 5

11. Negligence (check one)
A. None ☐ B. Low ☐ C. Moderate ☒ D. High ☐ E. Reckless Disregard ☐

12. Type of Action
1 0 4 - a - , - -

13. Type of Issuance (check one)
Citation ☒ Order ☐ 0 Safeguard ☐

14. Initial Action
A. Citation ☐ B. Order ☐ C. Safeguard ☐ D. Written Notice ☐ E. Citation/Order Number ☐ F. Dated ☐ Mo ☐ Da ☐ Yr ☐

15. Area or Equipment

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)
		0	7	1	1
		1	1	0	0

Section III -- Termination Action

17. Action to Terminate
The section foreman took readings at the section loading point and found 16 ppm of carbon monoxide and 1.0 ppm of nitrogen dioxide.

18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)
		0	7	1	1
		1	1	0	8

Section IV -- Automated System Data

19. Type of Inspection (activity code)	20. Event Number	21. Primary or Mill
E 0 1	7 6 5 4 3 2 1	
22. Signature	23. AR Number	
	2 3 1 9 0	

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo 07	Da 11	Yr 08	2. Time (24 Hr. Clock)	1940	3. Citation/Order Number	1234570
4. Served To Mike McGregor, Safety Director				5. Operator Black Rock Coal Company			
6. Mine No. 1				7. Mine ID 15-03536- (contractor)			
8. Condition or Practice							8a. Written Notice (103g) <input type="checkbox"/>

During the on-shift examination for MMU 001-0 the certified person (section foreman) failed to adequately determine the concentrations of carbon monoxide (CO) and nitrogen dioxide (NO2) in the return at a location representing the contribution of all diesel equipment on this section and at the section loading point. This unit uses 1 EIMCO diesel scoop for clean up and 3 EIMCO diesel ramcars for section haulage in the production process. The handheld detector the foreman used during this on-shift examination was a Solaris multigas detector (S/N 54231). When the detector was checked on this inspection date it was found that the instrument had not been calibrated during the previous 30 days. Manufacturer's literature indicates the unit should be calibrated every 30 days and bump tested before each shift used. Interviews with the calibration technician confirmed this finding. Eight miners work on this section.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	X	B. Section of Act	-	C. Part/Section of Title 30 CFR	70.1900(b)(2)
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Section II -- Inspector's Evaluation

10. Gravity:							
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>							
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input checked="" type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>							
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> D. Number of Persons Affected 008							
11. Negligence (check one)							
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>							
12. Type of Action 104-a-							
13. Type of Issuance (check one) Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> 0 Safeguard <input type="checkbox"/>							
14. Initial Action							
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number F. Dated Mo Da Yr							
15. Area or Equipment							

16. Termination Due	A. Date	Mo 07	Da 12	Yr 08	B. Time (24 Hr. Clock)	1000
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Section III -- Termination Action

17. Action to Terminate							
18. Terminated							
A. Date Mo Da Yr B. Time (24 Hr Clock)							

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E01	20. Event Number	7654321	21. Primary or Mill	
22. Signature					23. AR Number
					23190

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - 30 CFR 70.1900(b)(2)

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	7	1	1	0	8	1 1 4 0
4. Served To	Mike McGregor, Safety Director			5. Operator Black Rock Coal Company			
6. Mine No. 1				7. Mine ID 1 5 - 0 3 5 3 6 - (contractor)			
8. Condition or Practice						8a. Written Notice (103g)	

During the on-shift examination for MMU 003-0 the certified person (section foreman) failed to adequately determine the concentrations of carbon monoxide (CO) and nitrogen dioxide (NO₂) in the return at a location representing the contribution of all diesel equipment on this section and at the section loading point. This unit uses 1 EIMCO diesel scoop for clean up and 3 EIMCO diesel ramcars for section haulage in the production process. The on-shift examination was performed at 11:30. At this time the diesel scoop and the #2 diesel ramcar were idle during the mid-day lunch break. Title 30 CFR 70.1900(b)(3) requires that the samples be collected during periods of normal operations. Eight miners work on this section.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	X	B. Section of Act		C. Part/Section of Title 30 CFR	7 0 . 1 9 0 0 (b) (3)
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Section II -- Inspector's Evaluation

10. Gravity:							
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>							
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input checked="" type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>							
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>							
D. Number of Persons Affected 0 0 8							
11. Negligence (check one)							
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>							
12. Type of Action 1 0 4 - a - , - -							
13. Type of Issuance (check one) Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> 0 Safeguard <input type="checkbox"/>							
14. Initial Action							
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number <input type="checkbox"/> F. Dated Mo Da Yr							
15. Area or Equipment							

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)
	0	7	1	1	0
					1 2 3 0

Section III -- Termination Action

17. Action to Terminate

18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E 0 1	20. Event Number	7 6 5 4 3 2 1	21. Primary or Mill	
22. Signature				23. AR Number	
				2 3 1 9 0	

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - 30 CFR 70.1900(b)(3)

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)	3. Citation/Order Number
	0	7	2	1 4 3 0	1 2 3 4 5 7 3
4. Served To Mike McGregor, Safety Director				5. Operator Black Rock Coal Company	
6. Mine No. 1				7. Mine ID 1 5 - 0 3 5 3 6 - (contractor)	
8. Condition or Practice					8a. Written Notice (103g)

The dust collection system provided on the J. H. Fletcher, dual-boom, roof bolting machine (S/N DDR-20456) was not maintained as approved. Fine dust was observed coming from the exhaust mufflers during drilling. Upon examination of the dust collection boxes fine dust was found on the clean side of the filter media on each side of the roof bolting machine. Examination of the filters revealed small holes and tears in the media resulting from overloading and/or attempts to clean the filters by "tapping" them against the machine. This roof bolting machine installs roof supports on MMU 003-0 and is normally operated on day, afternoon, and midnight shifts. MSHA established this machine as a Designated Area (903-0) on July 3, 2007.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	X	B. Section of Act	C. Part/Section of Title 30 CFR
			-	7 2 . 6 3 0 (b)

Section II -- Inspector's Evaluation

10. Gravity:					
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>					
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>					
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
D. Number of Persons Affected 0 0 6					
11. Negligence (check one)					
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>					
12. Type of Action 1 0 4 - a - , - -					
13. Type of Issuance (check one)					
Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> 0 Safeguard <input type="checkbox"/>					
14. Initial Action					
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number F. Dated Mo Da Yr					
15. Area or Equipment					

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)
	0	7	2	1	0 8

Section III -- Termination Action

17. Action to Terminate					
18. Terminated					
A. Date Mo Da Yr B. Time (24 Hr Clock)					

Section IV -- Automated System Data

19. Type of Inspection (activity code)	20. Event Number	21. Primary or Mill
E 0 1	7 6 5 4 3 2 1	
22. Signature		23. AR Number
		2 3 1 9 0

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - 30 CFR 72.630(b) Example 1

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	7	2	1	0	7	1
4. Served To	Mike McGregor, Safety Director			5. Operator			
				Black Rock Coal Company			
6. Mine	No. 1			7. Mine ID	1		
				5	-	0	3
				5	3	6	-
				(contractor)			
8. Condition or Practice							8a. Written Notice (103g)

The dust collection system provided on the J. H. Fletcher, dual-boom, roof bolting machine (S/N DDR-40265) was not maintained as approved. An examination of the dust collection boxes revealed that the rubber door latches on the left (operator's) side of the machine were broken. This condition allows leakage along the door seal compromising the collection efficiency of the dust collector. This roof bolting machine installs roof supports on MMU 003-0. MSHA established this machine as a Designated Area (903-0) on July 3, 2008.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	X	B. Section of Act		C. Part/Section of Title 30 CFR	7	2	.	6	3	0	(b)
Section II -- Inspector's Evaluation														
10. Gravity:														
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input checked="" type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>														
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>														
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> D. Number of Persons Affected 0 0 2														
11. Negligence (check one)														
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>														
12. Type of Action 1 0 4 - a - , - -														
13. Type of Issuance (check one)														
Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> 0 Safeguard <input type="checkbox"/>														
14. Initial Action														
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number F. Dated Mo Da Yr														
15. Area or Equipment														

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)
	0	7	2	1	0
	8				1
					5
					3
					0

Section III -- Termination Action

17. Action to Terminate

The rubber door latches were replaced.

18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)
	7	2	1	0	8
					1
					4
					5
					1

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	7	6	5	4	3	2	1	21. Primary or Mill
22. Signature												23. AR Number
												2
												3
												1
												9
												0

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - 30 CFR 72.630(b) Example 2

U.S. Department of Labor
Mine Safety and Health Administration

The dust collection system provided on the J. H. Fletcher, dual-boom, roof bolting machine (S/N DDR-65420) was not maintained as approved. An examination of the dust collection boxes on each side of the machine revealed that the door gaskets provided to separate the coarse and fine dust compartments of the boxes were missing or damaged compromising the collection efficiency of the dust collector. This roof bolting machine installs roof supports on MMU 003-0. MSHA established this machine as a Designated Area (903-0) on July 3, 2008.

Section II -- Inspector's Evaluation

15. Area or Equipment

Section III -- Termination Action

The gaskets werere

The gaskets werereplaced.

Section IV -- Automated System Data22. SignatureMSHA Form 7000-3 Mar 85 (Revised)

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	7	2	0	0	8	1 0 3 0
4. Served To	Mike McGregor, Safety Director				5. Operator		
				Black Rock Coal Company			
6. Mine	No. 1				7. Mine ID	1 5 - 0 3 5 3 6 - (contractor)	
8. Condition or Practice						8a. Written Notice (103g)	

The dust collection system provided on the J. H. Fletcher, dual-boom, roof bolting machine (S/N DDR-02465) was not maintained as approved. The static vacuum pressure at the left (operator's) side drill pot indicated 6 inches (Hg). The dust collection system approval plate located in the operators' compartment specifies a minimum static vacuum pressure of 15 inches (Hg). This condition indicates possible leakage somewhere in the collection system or other system defect compromising the collection efficiency of the dust collector. This roof bolting machine installs roof supports on MMU 003-0. MSHA established this machine as a Designated Area (903-0) on July 3, 2008.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	X	B. Section of Act		C. Part/Section of Title 30 CFR	7 2 . 6 3 0 (b)
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Section II -- Inspector's Evaluation

10. Gravity:							
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>							
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>							
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> D. Number of Persons Affected 0 0 2							
11. Negligence (check one)							
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>							
12. Type of Action 1 0 4 - a - , - -							
13. Type of Issuance (check one)							
Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> 0 Safeguard <input type="checkbox"/>							
14. Initial Action							
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number F. Dated Mo Da Yr							
15. Area or Equipment							

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)
	0	7	2	1	0

Section III -- Termination Action

17. Action to Terminate							
18. Terminated							
A. Date Mo Da Yr B. Time (24 Hr Clock)							

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E 0 1	20. Event Number	7 6 5 4 3 2 1	21. Primary or Mill	
22. Signature					23. AR Number
					2 3 1 9 0

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - 30 CFR 72.630(b) Example 4

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	9	0	4	0	7	0
4. Served To	Mike McGregor, Safety Director			5. Operator	Black Rock Coal Company		
6. Mine No. 1				7. Mine ID	1 5 - 0 3 5 3 6 - (contractor)		
8. Condition or Practice				8a. Written Notice (103g)	<input type="checkbox"/>		

The results of five valid samples collected by MSHA Inspector(s) from August 6, 2008, through August 27, 2008, indicate that the #5 Joy shuttle car operator (Occupation Code 050) is exposed to an average respirable dust concentration of 2.7 mg/m³ which exceeds the allowable exposure of 2.0 mg/m³. These samples were collected on the #5 Joy shuttle car (S/N ET-12345) used to haul coal on MMU 001-0. Three shuttle cars are used for coal haulage on this unit, which produces coal on both the day and afternoon shifts. The mine operator must take immediate action to lower the exposure in the environments shuttle car operators to 2.0 mg/m³ or less and then sample the #5 Joy shuttle car operator each production shift until five valid sample have been collected and submitted to the Pittsburgh Dust Processing Laboratory. A copy of the sample results is attached to this citation. Information to be coded on the dust data card: Type of Sample = 2, MMU/DA/SA = 001-1, Occupation Code = 050

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	X	B. Section of Act		C. Part/Section of Title 30 CFR	0	7	0	.	1	0	0	(a)
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Section II -- Inspector's Evaluation

10. Gravity:										
A. Injury or Illness (has) (is):	No Likelihood	<input type="checkbox"/>	Unlikely	<input type="checkbox"/>	Reasonably Likely	<input checked="" type="checkbox"/>	Highly Likely	<input type="checkbox"/>	Occurred	<input type="checkbox"/>
B. Injury or Illness could reasonably be expected to be:	No Lost Workdays	<input type="checkbox"/>	Lost Workdays or Restricted Duty	<input type="checkbox"/>	Permanently Disabling	<input checked="" type="checkbox"/>	Fatal	<input type="checkbox"/>		
C. Significant and Substantial (See Reverse):	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	D. Number of Persons Affected	0	0	6		
11. Negligence (check one)										
A. None	<input type="checkbox"/>	B. Low	<input type="checkbox"/>	C. Moderate	<input checked="" type="checkbox"/>	D. High	<input type="checkbox"/>	E. Reckless Disregard	<input type="checkbox"/>	
12. Type of Action	1	0	4	-	a	-	,	-	-	
13. Type of Issuance (check one)										
Citation	<input checked="" type="checkbox"/>	Order	<input type="checkbox"/>	0	Safeguard	<input type="checkbox"/>				
14. Initial Action										
A. Citation	<input type="checkbox"/>	B. Order	<input type="checkbox"/>	C. Safeguard	<input type="checkbox"/>	D. Written Notice	<input type="checkbox"/>	E. Citation/Order Number		
F. Dated	Mo	Da	Yr							
15. Area or Equipment										

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	
	0	9	1	2	0	8
	0	7	0	0		

Section III -- Termination Action

17. Action to Terminate										
18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)					

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	7	6	5	4	3	2	1	21. Primary or Mill				
22. Signature											23. AR Number	2	3	1	9	0

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - 30 CFR 70.100(a) for NDO

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 9	Yr 0	8	3. Citation/Order Number	1	2	3	4	5	7	5	-	0	1
4. Served To Mike McGregor, Safety Director						5. Operator Black Rock Coal Company											
6. Mine No. 1						7. Mine ID 1 5 - 0 3 5 3 6 - (contractor)											

Section II -- Justification for Action

The results of 5 valid samples collected by the operator from September 5, 2008, through September 7, 2008, indicate that the average concentration of respirable dust that the #5 Joy Shuttle Car Operator is now exposed is 0.9 mg/m³ which is in compliance with the current applicable standard of 2.0 mg/m³ for this occupation. This citation is terminated.

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	C. Vacated	<input type="checkbox"/>	D. Terminated	<input checked="" type="checkbox"/>	E. Modified	<input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	0	1	10. Event Number	7	6	5	4	3	2	1				
11. Signature Thomas Morris				AR Number 2 3 1 9 0		12. Date		Mo 0	Da 9	Yr 1	4	0	8	13. Time (24 Hr. Clock) 0 8 0 0	

MSHA Form 7000-3a, Mar 85 (Revised)

70.100(a) NDO Termination

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	9	0	4	0	8	0
4. Served To	Mike McGregor, Safety Director			5. Operator	Black Rock Coal Company		
6. Mine No. 1				7. Mine ID	1 5 - 0 3 5 3 6 - (contractor)		
8. Condition or Practice						8a. Written Notice (103g)	

The results of five valid samples collected by an MSHA Inspector on August 6, 2008, on Northeast Mains (MMU 001-0) indicate that the average respirable dust concentration in the environments of the miners working on this unit is 3.5 mg/m³ which exceeds the allowable concentration of 2.0 mg/m³. The highest concentration (4.0 mg/m³) of respirable dust was measured in the environment of the #5 Joy shuttle car operator (Occupation Code 050). The mine operator must take immediate action to lower the exposure in the section environment to 2.0 mg/m³ or less and then sample the #5 Joy shuttle car operator each production shift until five valid sample have been collected and submitted to the Pittsburgh Dust Processing Laboratory. A copy of the sample results is attached to this citation. Information to be coded on the dust data card:

Type of Sample = 2, MMU/DA/SA = 001-1, Occupation Code = 050

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	X	B. Section of Act		C. Part/Section of Title 30 CFR	7	0	.	1	0	0	(a)
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Section II -- Inspector's Evaluation

10. Gravity:									
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>									
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>									
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									
D. Number of Persons Affected									
0 0 8									
11. Negligence (check one)									
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>									
12. Type of Action									
1 0 4 - a - , - -									
13. Type of Issuance (check one)									
Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> 0 Safeguard <input type="checkbox"/>									
14. Initial Action									
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input checked="" type="checkbox"/> 0									
E. Citation/Order Number									
F. Dated									
Mo Da Yr									
15. Area or Equipment									

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)
	0	9	1	2	0
	0	7	0	0	

Section III -- Termination Action

17. Action to Terminate									
18. Terminated									
A. Date									
Mo Da Yr									
B. Time (24 Hr Clock)									

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	7	6	5	4	3	2	1	21. Primary or Mill	
22. Signature													
23. AR Number													
2 3 1 9 0													

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - 30 CFR 70.100(a) for NDO Example 2

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	1	1	0	8	0 7 0 0		1 2 3 4 5 7 5
4. Served To				5. Operator			
Mike McGregor, Safety Director				Black Rock Coal Company			
6. Mine No. 1				7. Mine ID			
				1 5 - 0 3 5 3 6 - (contractor)			
8. Condition or Practice						8a. Written Notice (103g)	

The results of five valid samples collected by MSHA Inspector(s) from October 15, 2008, through October 30, 2008, indicate that the #1 Joy Continuous Mining Machine Operator (Occupation Code 036) is exposed to an average respirable dust concentration of 3.7 mg/m³ which exceeds the allowable exposure of 2.0 mg/m³. These samples were collected on the #1 Joy Continuous Mining Machine (S/N JM 1234) used to cut coal on MMU 001-0. Eight miners work on this section each production shift. This unit produces coal on both the day and afternoon shifts. The mine operator must take immediate action to lower the respirable dust concentration in the environment of the miners on MMU 001-0 to 2.0 mg/m³ or less and then sample each production shift until five valid samples have been collected and submitted to the Pittsburgh Dust Processing Laboratory. A copy of the sample results is attached to this citation.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	X	B. Section of Act		C. Part/Section of Title 30 CFR	
				-	7 0 . 1 0 0 (a)	

Section II -- Inspector's Evaluation

10. Gravity:									
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>									
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>									
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									
D. Number of Persons Affected									
0 1 6									
11. Negligence (check one)									
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>									
12. Type of Action									
1 0 4 - a - , - -									
13. Type of Issuance (check one)									
Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> 0 Safeguard <input type="checkbox"/>									
14. Initial Action									
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/>									
E. Citation/Order Number									
F. Dated									
Mo Da Yr									
15. Area or Equipment									

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)
	1 1 2 3 0 8				0 7 0 0

Section III -- Termination Action

17. Action to Terminate									
18. Terminated									
A. Date									
Mo Da Yr									
B. Time (24 Hr Clock)									

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E 0 1	20. Event Number	7 6 5 4 3 2 1	21. Primary or Mill	
22. Signature				23. AR Number	
				2 3 1 9 0	

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - 30 CFR 70.100(a) for DO

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	1	1	0	8	0 7 0 0		1 2 3 4 5 7 5
4. Served To				5. Operator			
Mike McGregor, Safety Director				Black Rock Coal Company			
6. Mine				7. Mine ID			
No. 1				1 5 - 0 3 5 3 6 - (contractor)			
8. Condition or Practice						8a. Written Notice (103g)	

The Part 90 Miner identified in Advisory Number 0012, dated November 8, 2008, was exposed to an average respirable dust concentration of 1.5 mg/m³. This finding is based upon the results of five valid samples collected by the operator [or MSHA Insector]. Mine management must take corrective action to lower the respirable dust concentration in the environment of the affected Part 90 Miner to 1.0 mg/m³ or less as required by 30 CFR 90.201(d) and collect and submit five valid samples to the Pittsburgh Dust Processing Laboratory by the termination date specified below.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	X	B. Section of Act		C. Part/Section of Title 30 CFR	
				-		9 0 . 1 0 0

Section II -- Inspector's Evaluation

10. Gravity:									
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>									
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>									
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									
D. Number of Persons Affected									
0 0 1									
11. Negligence (check one)									
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>									
12. Type of Action									
1 0 4 - a - , - -									
13. Type of Issuance (check one)									
Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> 0 Safeguard <input type="checkbox"/>									
14. Initial Action									
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/>									
E. Citation/Order Number									
F. Dated									
Mo Da Yr									
15. Area or Equipment									

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)
		1	2	2	0 7 0 0

Section III -- Termination Action

17. Action to Terminate									
18. Terminated									
A. Date									
Mo Da Yr									
B. Time (24 Hr Clock)									

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E 0 1	20. Event Number	7 6 5 4 3 2 1	21. Primary or Mill	
22. Signature				23. AR Number	
				2 3 1 9 0	

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - 30 CFR 90.100 for Part 90 Miner

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	6	1	5	0	8	1 0 3 0
4. Served To	Alice McGregor, Safety Director				5. Operator Beautiful Vista Coal Company		
6. Mine No. 1					7. Mine ID 1 5 - 1 3 5 2 6 - (contractor)		
8. Condition or Practice						8a. Written Notice (103g)	

The mine operator failed to comply with the requirements of the approved respirable dust control plan provide for the Caterpillar bulldozer (S/N 12W3081). The air conditioning unit used to pressurize and maintain the comfort of the operators' cab was not maintained in operating condition as required by the approved plan. This piece of equipment was observed moving material in the #2 pit and was being operated with the doors and windows open. This bulldozer is used on both the day and afternoon production shifts. This piece of equipment was established as a Designated Work Position and cited for non-compliance with the respirable dust standard on May 1, 2008.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	X	B. Section of Act		C. Part/Section of Title 30 CFR	7 1 . 3 0 1 (c)
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Section II -- Inspector's Evaluation

10. Gravity:							
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>							
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>							
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> D. Number of Persons Affected 0 0 2							
11. Negligence (check one)							
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>							
12. Type of Action 1 0 4 - a - , - -							
13. Type of Issuance (check one) Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> 0 Safeguard <input type="checkbox"/>							
14. Initial Action							
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number F. Dated Mo Da Yr							
15. Area or Equipment							

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)
	0	6	1	5	0
					1 4 0 0

Section III -- Termination Action

17. Action to Terminate

18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E 0 1	20. Event Number	7 6 5 4 3 2 2	21. Primary or Mill	
22. Signature				23. AR Number	
				2 3 1 9 0	

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - 30 CFR 71.301(c)

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	9	1	5	0	8	0
4. Served To	Mike McGregor, Safety Director				5. Operator	Beautiful Vista Coal Company	
6. Mine No. 1					7. Mine ID	1 5 - 0 3 5 3 6 - (contractor)	
8. Condition or Practice							8a. Written Notice (103g)

The air quantity provided for the J. H. Fletcher, dual boom, roof bolting machine to control respirable was not in compliance with the approved ventilation plan. Only 1,950 CFM of air was measured with a properly calibrated anemometer at the inby end of the line curtain. The approved ventilation plan requires a minimum air quantity of 3,600 CFM at the inby end of the line curtain where roof bolts are being installed. This condition was observed on MMU 007-0 in the #5 entry where the roof bolting machine operators were installing their 3rd row of permanent supports. This machine was established as a roof bolting machine designated area (907-0) on January 15, 2008, and is currently on a reduced standard of 0.7 mg/m³ due to quartz. Insufficient air quantity for this particular machine was also found during this inspection event on September 4, 2008.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	X	B. Section of Act		C. Part/Section of Title 30 CFR	7	5	.	3	7	0	(a)	(1)
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Section II -- Inspector's Evaluation

10. Gravity:																		
A. Injury or Illness (has) (is):	No Likelihood	<input type="checkbox"/>	Unlikely	<input type="checkbox"/>	Reasonably Likely	<input checked="" type="checkbox"/>	Highly Likely	<input type="checkbox"/>	Occurred	<input type="checkbox"/>								
B. Injury or Illness could reasonably be expected to be:	No Lost Workdays	<input type="checkbox"/>	Lost Workdays or Restricted Duty	<input type="checkbox"/>	Permanently Disabling	<input checked="" type="checkbox"/>	Fatal	<input type="checkbox"/>										
C. Significant and Substantial (See Reverse):	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	D. Number of Persons Affected	0	0	2										
11. Negligence (check one)	A. None	<input type="checkbox"/>	B. Low	<input type="checkbox"/>	C. Moderate	<input checked="" type="checkbox"/>	D. High	<input type="checkbox"/>	E. Reckless Disregard	<input type="checkbox"/>								
12. Type of Action	1	0	4	-	a	-	,	-	-	13. Type of Issuance (check one)	Citation	<input checked="" type="checkbox"/>	Order	<input type="checkbox"/>	0	Safeguard	<input type="checkbox"/>	
14. Initial Action	A. Citation	<input type="checkbox"/>	B. Order	<input type="checkbox"/>	C. Safeguard	<input type="checkbox"/>	D. Written Notice	<input type="checkbox"/>	E. Citation/Order Number						F. Dated	Mo	Da	Yr
15. Area or Equipment																		

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	
	0	9	1	5	0	8
					0	7

Section III -- Termination Action

17. Action to Terminate																	
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The line curtain and box check curtains were tightened. The foreman measured 3,927 CFM at the inby end of the line curtain.

18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)	
	0	9	1	5	0	8
					0	7

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	7	6	5	4	3	2	2	21. Primary or Mill						
22. Signature													23. AR Number	2	3	1	9	0

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	9	2	5	0	8	0
4. Served To	Mike McGregor, Safety Director				5. Operator	Beautiful Vista Coal Company	
6. Mine No. 1					7. Mine ID	1 5 - 0 3 5 3 6 - (contractor)	
8. Condition or Practice						8a. Written Notice (103g)	

The mine operator failed to replace missing labels on five 55-gallon drums of perchloroethylene stored on the ground floor of the preparation plant. The material data safety sheet (MSDS) provided by the manufacturer indicates that perchloroethylene is a health hazard. The drums were sealed, stored in a protected area, and there was no evidence of material leakage. This violation was observed during a normal production shift when 5 miners are frequently working or traveling in the area. The plant normally operates two 10-hour production shifts per day.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	X	B. Section of Act		C. Part/Section of Title 30 CFR	4	7	.	4	1	(a)	(1)
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Section II -- Inspector's Evaluation

10. Gravity:									
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>									
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>									
C. Significant and Substantial (See Reverse): Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>									
D. Number of Persons Affected									
0 1 0									
11. Negligence (check one)									
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>									
12. Type of Action									
1 0 4 - a - , - -									
13. Type of Issuance (check one)									
Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> 0 Safeguard <input type="checkbox"/>									
14. Initial Action									
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/>									
E. Citation/Order Number									
F. Dated									
Mo Da Yr									
15. Area or Equipment									

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)
	0	9	2	6	0
	8				0

Section III -- Termination Action

17. Action to Terminate

18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	7	6	5	4	3	2	2	21. Primary or Mill	
22. Signature													
23. AR Number													
2 3 1 9 0													

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - HazCom

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo 07	Da 21	Yr 08	2. Time (24 Hr. Clock)	0845	3. Citation/Order	4410227
4. Served To John Smith, Assistant Foreman				5. Operator J & S Coal Company			
6. Mine No. 1				7. Mine ID 44-03536- (contractor)			
8. Condition or Practice						8a. Written Notice (103g) <input type="checkbox"/>	

The highwall drill operator was not protected from the inhalation of respirable drill dust. Visual observation indicated an excessive amount of dust was being generated during drilling. The highwall drill does not have an environmental cab, and the water-holding tank was empty. DWP is on a reduced dust standard of 1.0 mg/m3. The drill operator was not wearing a respirator, and his clothing was covered with dust.

Drill operator: DWP 001-0, occupational code 384

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR	72.620
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Section II -- Inspector's Evaluation

10. Gravity:									
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>									
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>									
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> D. Number of Persons Affected 001									
11. Negligence (check one)									
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>									
12. Type of Action 104-a-									
13. Type of Issuance (check one)									
Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/>									
14. Initial Action									
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number F. Dated Mo Da Yr									
15. Area or Equipment									

16. Termination Due	A. Date	Mo 07	Da 22	Yr 08	B. Time (24 Hr. Clock)	0800
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Section III -- Termination Action

17. Action to Terminate									
18. Terminated									
A. Date Mo Da Yr B. Time (24 Hr Clock)									

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E01	20. Event Number	0888800	21. Primary or Mill	
22. Signature James Lee					23. AR Number 20777

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - DRILL DUST VIOLATION

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo 08	Da 28	Yr 08	2. Time (24 Hr. Clock)	1200	3. Citation/Order	9071006
4. Served To Ralph Bunney, Safety Director				5. Operator Bambu Company			
6. Mine No. 300				7. Mine ID 45-00020- (contractor)			
8. Condition or Practice						8a. Written Notice (103g) <input type="checkbox"/>	

The operator failed to submit for approval a written respirable dust control plan for the Part 90 miner identified in Advisory No. 0012, dated 07/15/08. Citation No. 9071004, based on this Advisory, was issued on 7/15/08.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR	90300-a
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Section II -- Inspector's Evaluation

10. Gravity:

A. Injury or Illness (has) (is): No Likelihood ☐ Unlikely ☒ Reasonably Likely ☐ Highly Likely ☐ Occurred ☐

B. Injury or Illness could reasonably be expected to be: No Lost Workdays ☐ Lost Workdays or Restricted Duty ☒ Permanently Disabling ☐ Fatal ☐

C. Significant and Substantial (See Reverse): Yes ☐ No ☒ D. Number of Persons Affected ☐

11. Negligence (check one)
A. None ☐ B. Low ☐ C. Moderate ☒ D. High ☐ E. Reckless Disregard ☐

12. Type of Action
104-a- - - - - 13. Type of Issuance (check one)
Citation ☒ Order ☐ Safeguard ☐

14. Initial Action
A. Citation ☐ B. Order ☐ C. Safeguard ☐ D. Written Notice ☐ E. Citation/Order Number ☐ F. Dated ☐ Mo ☐ Da ☐ Yr ☐

15. Area or Equipment

16. Termination Due	A. Date	Mo 09	Da 04	Yr 08	B. Time (24 Hr. Clock)	0800
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Section III -- Termination Action

17. Action to Terminate

18. Terminated

A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)
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Section IV -- Automated System Data

19. Type of Inspection (activity code)	E22	20. Event Number	5032426	21. Primary or Mill	
22. Signature Thomas Morris				23. AR Number 02420	

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - FAILURE TO SUBMIT RESPIRABLE DUST CONTROL PLAN

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo 08	Da 05	Yr 08	2. Time (24 Hr. Clock)	1400	3. Citation/Order	9071005
4. Served To Ralph Bunny, Safety Director				5. Operator Bambu Company			
6. Mine No. 300				7. Mine ID 45-00020- (contractor)			
8. Condition or Practice						8a. Written Notice (103g) <input type="checkbox"/>	

The Part 90 miner identified in Advisory No. 0012, dated 07/15/08, was exposed to an average respirable dust concentration of 1.4 mg/m³.

This finding was based on the results of five valid dust samples collected by the operator [or inspector]. 30 CFR 90.201(d) requires management to take corrective action, and to collect five valid respirable dust samples in the Part 90 miner's work position. These samples must be submitted to the Pittsburgh Respirable Dust Processing Laboratory by the date of termination.

The operator failed to take corrective actions, and also failed to submit additional samples.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR	90.100
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Section II -- Inspector's Evaluation

10. Gravity:									
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>									
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>									
C. Significant and Substantial (See Reverse): Yes <input type="checkbox"/> No <input type="checkbox"/> D. Number of Persons Affected <input type="text"/>									
11. Negligence (check one)									
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>									
12. Type of Action									
104-b, - - - - - 13. Type of Issuance (check one)									
Citation <input type="checkbox"/> Order <input checked="" type="checkbox"/> Safeguard <input type="checkbox"/>									
14. Initial Action									
A. Citation <input checked="" type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number 9071004 F. Dated 071508									
15. Area or Equipment									
The Part 90 miner identified in the attached Advisory No. 11									
16. Termination Due									
A. Date Mo Da Yr B. Time (24 Hr. Clock)									

Section III -- Termination Action

17. Action to Terminate									
18. Terminated									
A. Date Mo Da Yr B. Time (24 Hr Clock)									

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E22	20. Event Number	5032425	21. Primary or Mill	
22. Signature					23. AR Number
Thomas Morris					02420

MSHA Form 7000-3 Mar 85 (Revised)

104(b) ORDER - FAILURE TO COMPLY WITH PART 90 RESPIRABLE DUST STANDARD

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo 07	Da 15	Yr 08	2. Time (24 Hr. Clock)	0920	3. Citation/Order	9071004
4. Served To Ralph Bunny, Safety Director				5. Operator Bambu Company			
6. Mine No. 300				7. Mine ID 45-00020- (contractor)			
8. Condition or Practice						8a. Written Notice (103g) <input type="checkbox"/>	

The Part 90 miner identified in Advisory No. 0012, dated 07/15/08, was exposed to an average respirable dust concentration of 1.4 mg/m³.

This finding was based on the results of five valid dust samples collected by the operator [or inspector]. 30 CFR 90.201(d) requires management to take corrective action, and to collect five valid respirable dust samples in the Part 90 miner's work position. These samples must be submitted to the Pittsburgh Respirable Dust Processing Laboratory by the date of termination.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR	90.100
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Section II -- Inspector's Evaluation

10. Gravity:									
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input checked="" type="checkbox"/> Occurred <input type="checkbox"/>									
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>									
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> D. Number of Persons Affected 001									
11. Negligence (check one)									
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>									
12. Type of Action 104-a-									
13. Type of Issuance (check one)									
Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/>									
14. Initial Action									
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number F. Dated Mo Da Yr									
15. Area or Equipment									

16. Termination Due	A. Date	Mo 08	Da 05	Yr 08	B. Time (24 Hr. Clock)	0800
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Section III -- Termination Action

17. Action to Terminate									
18. Terminated									
A. Date Mo Da Yr B. Time (24 Hr Clock)									

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E26	20. Event Number	5032424	21. Primary or Mill	
22. Signature Thomas Morris				23. AR Number 02420	

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - PART 90 RESPIRABLE DUST STANDARD

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo 07	Da 07	Yr 08	2. Time (24 Hr. Clock)	1600	3. Citation/Order	2071001
4. Served To John Brown, Superintendent				5. Operator XYZ Company			
6. Mine No. 2				7. Mine ID 44-01701- (contractor)			
8. Condition or Practice							8a. Written Notice (103g) <input type="checkbox"/>

The average concentration of respirable dust in the working environment of the designated work position was 13.0 mg/m³, which exceeds the 2.0 mg/m³ standard. This finding was based on the results of five valid dust samples collected by the operator [or inspector]. Management must take corrective action to lower the respirable dust, and then sample each production shift until five valid samples are taken. The samples must be submitted to the Pittsburgh Respirable Dust Processing Laboratory.

Designated work position: 001-0 368
Advisory No. 0001 dated 7/6/08

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR	71.100
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Section II -- Inspector's Evaluation

10. Gravity:									
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input checked="" type="checkbox"/> Occurred <input type="checkbox"/>									
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>									
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> D. Number of Persons Affected 001									
11. Negligence (check one)									
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>									
12. Type of Action 104-a-									
13. Type of Issuance (check one)									
Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/>									
14. Initial Action									
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number F. Dated Mo Da Yr									
15. Area or Equipment									

16. Termination Due	A. Date	Mo 07	Da 27	Yr 08	B. Time (24 Hr. Clock)	0800
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Section III -- Termination Action

17. Action to Terminate									
18. Terminated									
A. Date Mo Da Yr B. Time (24 Hr Clock)									

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E16	20. Event Number	5032408	21. Primary or Mill	
22. Signature Thomas Morris					23. AR Number 02420

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION BASED ON MSHA OR MINE OPERATOR SAMPLES

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo 07	Da 07	Yr 08	2. Time (24 Hr. Clock)	1800	3. Citation/Order	2071002
4. Served To John Brown, Superintendent				5. Operator XYZ Company			
6. Mine No. 3				7. Mine ID 44-01702- (contractor)			
8. Condition or Practice						8a. Written Notice (103g) <input type="checkbox"/>	

The average concentration of respirable dust in the working environment of the designated occupation was 3.0 mg/m3, which exceeded the 1.2 mg/m3 applicable limit. This finding was based on the results of five valid dust samples collected by the operator [or inspector]. Management must take corrective action to lower the respirable dust, and then sample each production shift until five valid samples are taken. The samples must be submitted to the Pittsburgh Respirable Dust Processing Laboratory.

Designated occupation: continuous miner operator -036
Location: MMU 001-0
Advisory No. 0001 dated 7/6/08

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR	70101
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Section II -- Inspector's Evaluation

10. Gravity:									
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>									
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>									
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> D. Number of Persons Affected 002									
11. Negligence (check one)									
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>									
12. Type of Action 104-a-									
13. Type of Issuance (check one)									
Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/>									
14. Initial Action									
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number F. Dated Mo Da Yr									
15. Area or Equipment									

16. Termination Due	A. Date	Mo 07	Da 27	Yr 08	B. Time (24 Hr. Clock)	0800
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Section III -- Termination Action

17. Action to Terminate									
18. Terminated									
A. Date Mo Da Yr B. Time (24 Hr Clock)									

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E16	20. Event Number	5032409	21. Primary or Mill	
22. Signature Thomas Morris					23. AR Number 02420

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION BASED ON REDUCED DUST STANDARDS

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo 1 0	Da 0 5	Yr 0 8	2. Time (24 Hr. Clock)	0 9 0 0	3. Citation/Order	9 0 0 0 0 0 1
4. Served To John Brown, Superintendent				5. Operator TR Company			
6. Mine No. 40				7. Mine ID 4 5 - 5 1 2 3 2 - (contractor)			
8. Condition or Practice						8a. Written Notice (103g)	

The mine operator did not collect the required bimonthly valid respirable dust samples in the designated area, as identified in Advisory No. 0001, dated October 5, 2008.

Bimonthly cycle missed: August - September

Designated area: 212-0

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR	7 0 . 2 0 8
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Section II -- Inspector's Evaluation

10. Gravity:				
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input checked="" type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>				
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input checked="" type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>				
C. Significant and Substantial (See Reverse): Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			D. Number of Persons Affected	
			0 0 1	
11. Negligence (check one)				
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>				
12. Type of Action				
1 0 4 - a - , - -				
13. Type of Issuance (check one)				
Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/>				
14. Initial Action				
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number				
F. Dated				
Mo Da Yr				
15. Area or Equipment				

16. Termination Due	A. Date	Mo 1 0	Da 0 5	Yr 0 8	B. Time (24 Hr. Clock)	0 9 1 0
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Section III -- Termination Action

17. Action to Terminate	No action required because bimonthly sampling requirements can only be satisfied during the established bimonthly period.
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18. Terminated	A. Date	Mo 1 0	Da 0 5	Yr 0 8	B. Time (24 Hr Clock)	0 9 1 0
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Section IV -- Automated System Data

19. Type of Inspection (activity code)	E 2 6	20. Event Number	5 1 2 3 4 5 6	21. Primary or Mill	
22. Signature				23. AR Number	
Thomas Morris				0 2 4 2 0	

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION BASED ON FAILURE TO TAKE RESPIRABLE DUST SAMPLES

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 7	Yr 0	8	3. Citation/Order Number	2	0	7	1	0	0	2	-	0	1
4. Served To John Brown, Superintendent						5. Operator XYZ Company											
6. Mine No. 3						7. Mine ID 4 4 - 0 1 7 0 2 - (contractor)											

Section II -- Justification for Action

MMU - 001 was idle for a period of 10 days during the period for abatement. Samples have been collected during each working shift, and MSHA has received two samples. Additional time is granted to allow more samples to be sent to MSHA so compliance or noncompliance can be determined.

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo 0	Da 8	Yr 0	5	8	B. Time (24 Hr. Clock)	0	9	0	0	C. Vacated	<input type="checkbox"/>	D. Terminated	<input type="checkbox"/>	E. Modified	<input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	2	6	10. Event Number	5	0	3	2	4	1	9						
11. Signature Thomas Morris				AR Number		12. Date		Mo 0	Da 7	Yr 2	7	0	8	13. Time (24 Hr. Clock)			
				0 2 4 2 0								1 0 0 0					

MSHA Form 7000-3a, Mar 85 (Revised)

EXTENSION OF ABATEMENT TIME

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data																									
1. Date		Mo	Da	Yr	2. Time (24 Hr. Clock)				3. Citation/Order Number																
		0	7	2	7	0	8					1	8	0	0										
4. Served To John Brown, Superintendent										5. Operator XYZ Company															
6. Mine No. 3										7. Mine ID 4 4 - 0 1 7 0 2 - (contractor)															
8. Condition or Practice																									
8a. Written Notice (103g)																									
<p>MSHA's analysis of the five most recent respirable dust samples collected from the working environment of the designated occupation shows an average concentration of 5.7 mg/m3. Due to the obvious lack of effort by the operator to control respirable dust, the reasonable time period for the abatement of the original violation will not be further extended. All miners working on this section must be withdrawn until the condition is corrected.</p> <p>Designated occupation: continuous miner operator -036 in mechanized mining unit 001-0</p>																									
See Continuation Form (MSHA Form 7000-3a)																									
9. Violation		A. Health Safety Other		B. Section of Act		C. Part/Section of Title 30 CFR																			
Section II -- Inspector's Evaluation																									
10. Gravity:																									
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>																									
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>																									
C. Significant and Substantial (See Reverse): Yes <input type="checkbox"/> No <input type="checkbox"/> D. Number of Persons Affected <input type="text"/>																									
11. Negligence (check one)																									
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>																									
12. Type of Action		13. Type of Issuance (check one)																							
		1	0	4	-	b	-	,																	
		Citation <input type="checkbox"/> Order <input checked="" type="checkbox"/> Safeguard <input type="checkbox"/>																							
14. Initial Action		15. Area or Equipment																							
A. Citation <input checked="" type="checkbox"/>		B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number 2 0 7 1 0 0 2 F. Dated Mo Da Yr 0 7 0 7 0 8																							
The mechanized mining unit 001-0																									
16. Termination Due		17. Action to Terminate																							
18. Terminated		19. Event Number																							
Section IV -- Automated System Data																									
20. Type of Inspection (activity code)		21. Event Number																							
E 1 6		5 0 3 2 4 1 0																							
22. Signature Thomas Morris																									
23. AR Number 0 2 4 2 0																									

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 7	Yr 2	0	8	3. Citation/Order Number	2	0	7	1	0	0	3	-	0	1
4. Served To John Brown, Superintendent								5. Operator XYZ Company										
6. Mine No. 3								7. Mine ID 44 - 01702 - (contractor)										

Section II -- Justification for Action

The operator has submitted and implemented a revised respirable dust control plan. Therefore, the order is modified to permit MSHA to collect respirable dust samples on MMU 001-0 to determine compliance.

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	C. Vacated	<input type="checkbox"/>	D. Terminated	<input type="checkbox"/>	E. Modified	<input checked="" type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	2	6	10. Event Number	5	0	3	2	4	2	0
11. Signature Thomas Morris				AR Number		12. Date		Mo	Da	Yr	13. Time (24 Hr. Clock)
				02420				0	7	2	800

MSHA Form 7000-3a, Mar 85 (Revised)

104(b) ORDER - MODIFICATION

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 7	Yr 2	7	0	8	3. Citation/Order Number	2	0	7	1	0	0	3	-	0	2
4. Served To John Brown, Superintendent									5. Operator XYZ Company										
6. Mine No. 3									7. Mine ID 44 - 01702 - (contractor)										

Section II -- Justification for Action

The average concentration of respirable dust in the working environment of the designated occupation was 1.0 mg/m³, which is within the applicable limit of 1.2 mg/m³. This finding was based on the results of five valid dust samples collected during an MSHA inspection.

Designated occupation: continuous miner operator -036

Location: MMU 001-0

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)					C. Vacated	<input type="checkbox"/>	D. Terminated	<input checked="" type="checkbox"/>	E. Modified	<input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	2	2	10. Event Number	5	0	3	2	4	2	3	11. Signature	AR Number	12. Date	Mo	Da	Yr	13. Time (24 Hr. Clock)						
					0	2	4	2	0			Thomas Morris			0	8	1	0	0	8	1	4	0	0

MSHA Form 7000-3a, Mar 85 (Revised)

104(b) ORDER - TERMINATION

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 7	Yr 2	0	1	3. Citation/Order Number	2	0	7	1	0	0	3	-	0	2
4. Served To John Brown, Superintendent								5. Operator XYZ Company										
6. Mine No. 3								7. Mine ID 4 4 - 0 1 7 0 2 - (contractor)										

Section II -- Justification for Action

The average concentration of respirable dust in the working environment of the designated occupation was 4.9 mg/m³, which exceeded the applicable limit of 1.2 mg/m³. This finding was based on the results of five valid dust samples collected during an MSHA inspection.
The order is now in effect as originally issued.

Designated occupation: continuous miner operator -036
Location: MMU 001-0

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	C. Vacated	<input type="checkbox"/>	D. Terminated	<input type="checkbox"/>	E. Modified	<input checked="" type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	2	2	10. Event Number	5	0	3	2	4	2	1								
11. Signature Thomas Morris				AR Number 0 2 4 2 0				12. Date				Mo	Da	Yr	13. Time (24 Hr. Clock)				
												0	8	2	0	0	8	0	0

MSHA Form 7000-3a, Mar 85 (Revised)

MODIFICATION (REINSTATING) 104(b) ORDER AS ORIGINALLY ISSUED.

Appendix D

Metal and Nonmetal Health Violations

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Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	07	18	08		1600		4410188

4. Served To	5. Operator
SYDNEY JONES, PRESIDENT	TMC MINING COMPANY
6. Mine	7. Mine ID
TRIANGLE MINE	72-00012- (contractor)
8. Condition or Practice	8a. Written Notice (103g)

The repair shop welder was exposed to a shift-weighted average of 2.35 mg/m³ of nickel welding fumes when sampled on July 1, 2008.

This amount exceeded the Threshold Limit Value (TLV) of 1.0 mg/m³ times the error factor (1.10*) for welding fume sampling and elemental analysis. The employee was welding tubing in the repair shop and visible fumes were produced during this process.

The engineering control in use was one 24-inch exhaust fan in the shop roof. The welder was not wearing a respirator and a respirator program meeting the requirements of ANSI Z88.2-1969 was not in place. The original abatement date is for the institution of a respiratory protection program meeting the requirements of ANSI Z88.2-1969. When a respiratory protection program meeting the minimum requirements is established, the abatement date will be extended to allow the mine operator time to install additional engineering controls.

* Note: The error factor for metal dust and fume sampling is determined by, and will be supplied by, the Pittsburgh lab.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act		C. Part/Section of Title 30 CFR	
			-		56.5001a/.5005

Section II -- Inspector's Evaluation

10. Gravity:	A. Injury or Illness (has) (is):	No Likelihood	<input type="checkbox"/>	Unlikely	<input type="checkbox"/>	Reasonably Likely	<input checked="" type="checkbox"/>	Highly Likely	<input type="checkbox"/>	Occurred	<input type="checkbox"/>
	B. Injury or Illness could reasonably be expected to be:	No Lost Workdays	<input type="checkbox"/>	Lost Workdays or Restricted Duty	<input type="checkbox"/>	Permanently Disabling	<input checked="" type="checkbox"/>	Fatal	<input type="checkbox"/>		
	C. Significant and Substantial (See Reverse):	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	D. Number of Persons Affected		001			

11. Negligence (check one)	A. None	<input type="checkbox"/>	B. Low	<input type="checkbox"/>	C. Moderate	<input checked="" type="checkbox"/>	D. High	<input type="checkbox"/>	E. Reckless Disregard	<input type="checkbox"/>
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12. Type of Action	104-a-	13. Type of Issuance (check one)	Citation	<input checked="" type="checkbox"/>	Order	<input type="checkbox"/>	Safeguard	<input type="checkbox"/>
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14. Initial Action	A. Citation	<input type="checkbox"/>	B. Order	<input type="checkbox"/>	C. Safeguard	<input type="checkbox"/>	D. Written Notice	<input type="checkbox"/>	E. Citation/Order Number		F. Dated	Mo	Da	Yr
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15. Area or Equipment	
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16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	
		07	20	08		0800

Section III -- Termination Action

17. Action to Terminate	
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18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)	
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Section IV -- Automated System Data

19. Type of Inspection (activity code)	E01	20. Event Number	0768987	21. Primary or Mill	
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22. Signature	TED JOHNSON	23. AR Number	04789
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MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - "S&S" OVEREXPOSURE
TO WELDING FUMES

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 7	Yr 1	8	3. Citation/Order Number	4	4	1	0	1	8	8	-	1
4. Served To SYDNEY JONES, PRESIDENT							5. Operator TMC MINING COMPANY									
6. Mine TRIANGLE MINE							7. Mine ID 7 2 - 0 0 0 1 2 - (contractor)									

Section II -- Justification for Action

A respiratory protection program meeting the requirements of ANSI Z88.2-1969 is in place. The welder is wearing a properly fitted and approved respirator (Wilson Model 1212, Approval No. TC-21C-142). The termination due date is extended until August 15, 2008, for the implementation of additional engineering controls. The welder shall continue to wear the respirator when welding until adequate engineering controls have been implemented and further sampling by MSHA confirms the exposure to be less than the permissible exposure limit times the error factor.

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo 0	Da 8	Yr 1	5	0	8	B. Time (24 Hr. Clock)	1	2	0	0	C. Vacated	<input type="checkbox"/>	D. Terminated	<input type="checkbox"/>	E. Modified	<input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	1	5	10. Event Number	0	7	6	8	9	9	1		
11. Signature TED JOHNSON					AR Number 0 4 7 8 9			12. Date Mo 0 Da 7 Yr 2 1 0 8			13. Time (24 Hr. Clock) 1 5 3 0		

MSHA Form 7000-3a, Mar 85 (Revised)

104(a) CITATION - EXTENSION AFTER
RESPIRATORY PROTECTION PROVIDED

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 07	Da 18	Yr 08	3. Citation/Order Number	4	4	1	0	1	8	8	-	6
4. Served To SYDNEY JONES, PRESIDENT						5. Operator TMC MINING COMPANY									
6. Mine TRIANGLE MINE						7. Mine ID 72-00012- (contractor)									

Section II -- Justification for Action

The mine operator purchased and installed a local exhaust fume collection system that can be moved close to welding and cutting operations. The welder in the repair shop was exposed to a shift-weighted average of 0.13 mg/m3 of nickel welding fumes after a resample was conducted by MSHA on August 22, 2008. This average is less than the Threshold Limit Value (TLV) times the error factor (1.10) for welding fume sampling and elemental analysis. The analytical results were received and the termination issued on September 1, 2008.

See Continuation Form

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	C. Vacated	<input type="checkbox"/>	D. Terminated	<input checked="" type="checkbox"/>	E. Modified	<input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	1	5	10. Event Number	0	7	6	8	9	9	4	
11. Signature TED JOHNSON				AR Number		12. Date		Mo	Da	Yr	13. Time (24 Hr. Clock)	
				04789				09	01	08	0915	

MSHA Form 7000-3a, Mar 85 (Revised)

104(a) CITATION - TERMINATION AFTER RESAMPLING

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

12/05/95

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	07	18	08		1600		4410189
4. Served To				5. Operator			
J.B. SMITH, PRESIDENT				S&S MINING COMPANY			
6. Mine				7. Mine ID			
S&S MINE				71-03798- (contractor)			
8. Condition or Practice				8a. Written Notice (103g)			

The primary crusher operator was exposed to a shift-weighted average of 3.30 mg/m³ of respirable silica-bearing dust on 07/02/08. This exceeded the Threshold Limit Value (TLV) of 1.25 mg/m³ times the error factor (1.20 for respirable free silica dust sampling and analysis). Respiratory protection was not being used and a respiratory protection program meeting the requirements of ANSI Z88.2-1969 was not in place. All feasible engineering controls were not in use to control employee's dust exposure. An operator's control booth was in place but a window was broken and a ventilation system had not been provided for the booth. The original abatement date is for the institution of a Respiratory Protection Program. When a Respiratory Protection Program that meets the minimum requirements of ANSI Z88.2-1969 is in place, the abatement date will be extended to allow the mine operator time to install additional and repair existing engineering controls.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR
			56.5001a/.5005

Section II -- Inspector's Evaluation

10. Gravity:			
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>			
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>			
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		D. Number of Persons Affected	
		001	
11. Negligence (check one)			
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>			
12. Type of Action		13. Type of Issuance (check one)	
104-a-, -		Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/>	
14. Initial Action		D. Written Notice	
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/>		<input type="checkbox"/>	
E. Citation/Order Number		F. Dated	
		Mo Da Yr	
15. Area or Equipment			

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)
	07	20	08		0900

Section III -- Termination Action

17. Action to Terminate					
18. Terminated					
A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)	

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E01	20. Event Number	3850189	21. Primary or Mill	
22. Signature				23. AR Number	
TED JOHNSON				04789	

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - "S&S" OVEREXPOSURE
TO SILICA-BEARING DUST

U.S. Department of Labor
Mine Safety and Health Administration

Section II -- Justification for Action

A Respiratory Protection Program meeting the requirements of ANSI Z88.2-1969 is in place. The primary crusher operator is wearing a properly fitted and approved respirator (MSA COMFO II, Approval Number TC-21C-134). The termination due date is extended until August 15, 2008, for the implementation of additional engineering controls. The crusher operator shall continue to wear the approved respirator while operating the crusher until engineering controls have been implemented and further sampling by MSHA confirms the exposure to be less than the Threshold Limit Value (TLV) times the error factor.

Section III -- Subsequent Action Taken													
8. Extended To		Mo A. Date	Da 	Yr 	B. Time (24 Hr. Clock)			C. Vacated	<input type="checkbox"/>	D. Terminated	<input type="checkbox"/>	E. Modified	<input type="checkbox"/>
		0 8	1 5	0 8		1	2	0	0				

MSHA Form 7000-3a, Mar 85 (Revised)

8

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 07	Da 18	Yr 08	3. Citation/Order Number	4410189-02
4. Served To J.B. SMITH, PRESIDENT			5. Operator S&S MINING COMPANY				
6. Mine S&S MINE			7. Mine ID 71-03798- (contractor)				

Section II -- Justification for Action

The mine operator replaced the control booth's broken window and installed a heating and cooling unit in the booth of the primary crusher. Water sprays were also installed on the crusher which reduced source dust levels. The primary crusher operator was exposed to a shift-weighted average of 0.82 mg/m3 of respirable silica-bearing dust during a resample conducted on August 22, 2008. This shift-weighted average is less than the Threshold Limit Value (TLV) of 1.11 mg/m3.

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	C. Vacated <input type="checkbox"/>	D. Terminated <input checked="" type="checkbox"/>	E. Modified <input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E 15	10. Event Number	3850200
11. Signature	AR Number	12. Date	Mo Da Yr
TED JOHNSON	04789	090108	13. Time (24 Hr. Clock)
			1130

MSHA Form 7000-3a, Mar 85 (Revised)

104(a) CITATION - TERMINATION AFTER RESAMPLING
FOR SILICA-BEARING DUST

U.S. Department of Labor
Mine Safety and Health Administration

104(b) ORDER OF WITHDRAWAL FOR SILICA-BEARING DUST

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 7	Yr 2	3	0	8	3. Citation/Order Number	4	4	1	0	1	9	0	-	0	1
4. Served To J.B. SMITH, PRESIDENT									5. Operator S&S MINING COMPANY										
6. Mine S&S MINE									7. Mine ID 7 1 - 0 3 7 9 8 - (contractor)										

Section II -- Justification for Action

The primary crusher operator has been restructured and retrained in the use of his fit-tested respirator. He will use the respirator whenever the crusher is in operation. The foreman and the plant manager will check periodically through the shift to ensure that he continues to use it. All provisions of ANSI Z88.2-1969 will be followed. Management will install the needed engineering controls at the primary crusher within two months and will notify MSHA when the controls are in place. The crusher operator will continue to wear the respirator until a resample analysis indicates that the quartz dust at the crusher is within the Threshold Limit Value (TLV). The Section 104(b) order is modified to include the above provisions and to allow crushing operations to resume. The order will be terminated when the silica dust overexposure has been fully abated.

Note: In this example, the 104(b) Order of Withdrawal is not terminated but modified to allow crushing operations to resume until the quartz dust overexposure is brought to within permissible limits.

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	C. Vacated <input type="checkbox"/>	D. Terminated <input type="checkbox"/>	E. Modified <input checked="" type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	1	5	10. Event Number	0	1	2	3	4	5	6														
11. Signature	TED SMITH				AR Number	0	2	9	3	3	12. Date	Mo	Da	Yr	13. Time (24 Hr. Clock)	0	7	2	4	0	8	0	8	0	0

MSHA Form 7000-3a, Mar 85 (Revised)

104(b) ORDER MODIFICATION - ALLOWING
MINING OPERATIONS TO RESUME

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data																																																																		
1. Date		Mo	Da	Yr	2. Time (24 Hr. Clock)					3. Citation/Order Number																																																								
		0	7	2	4	0	1						0	8	0	0	4					4	1	0	1	9	1																																							
4. Served To J.B. SMITH, PRESIDENT										5. Operator S&S MINING COMPANY																																																								
6. Mine S&S MINE										7. Mine ID										8a. Written Notice (103g) <input type="checkbox"/>																																														
										7										1 - 0 3 7 9 8 -										(contractor)																																				
8. Condition or Practice																																																																		
<p>Section 104(b) Order No. 4410190, issued 07/23/01, required that the primary crusher be shut down and not started until the crusher operator was using a respirator for which he had been fit-tested and trained, as required by ANSI Z88.2-1969.</p> <p>The primary crusher is in full operation, the crusher operator is not wearing a respirator, and engineering controls have not been installed to control the dust. The crusher operator is working in visible silica-bearing dust. The condition has not been designated as "significant and substantial" because the conduct violated a provision of the Mine Act rather than a mandatory safety or health standard.</p> <p>Note: Section I, Item 9B, is completed with 104(b).</p>																																																																		
See Continuation Form (MSHA Form 7000-3a)																																																																		
9. Violation		A. Health Safety Other		B. Section of Act		1					0					4					-					b					C. Part/Section of Title 30 CFR																																			
Section II -- Inspector's Evaluation																																																																		
10. Gravity:																																																																		
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>																																																																		
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>																																																																		
C. Significant and Substantial (See Reverse): Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> D. Number of Persons Affected 0 0 1																																																																		
11. Negligence (check one)																																																																		
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>																																																																		
12. Type of Action		1					0					4					-					a					-					, - -					13. Type of Issuance (check one)																													
																																Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/>																																		
14. Initial Action		A. Citation <input type="checkbox"/> B. Order <input checked="" type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/>					E. Citation/Order Number					4					4					1					0					1					9					0					F. Dated																			
15. Area or Equipment																																																																		
16. Termination Due																																																																		
A. Date		Mo	Da	Yr	B. Time (24 Hr. Clock)																																																													
		0	7	2	4	0	1						0					9					0					0																																						
Section III -- Termination Action																																																																		
17. Action to Terminate																																																																		
18. Terminated																																																																		
A. Date		Mo	Da	Yr	B. Time (24 Hr Clock)																																																													
Section IV -- Automated System Data																																																																		
19. Type of Inspection (activity code)		E					0					1					20. Event Number					0					1					2					3					4					5					6					21. Primary or Mill									
22. Signature		TED SMITH																				23. AR Number					0					2					9					3					3																			

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - FAILURE TO
COMPLY WITH 104(b) ORDER

U.S. Department of Labor
Mine Safety and Health Administration

MSHA Form 7000-3 Mar 85 (Revised)

13

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 7	Yr 16	3. Citation/Order Number	4	4	1	0	1	9	2	-	0	1
4. Served To RICHARD JONES, SAFETY DIRECTOR						5. Operator INTERNATIONAL CEMENT CORPORATION										
6. Mine ICC MILL						7. Mine ID 75 - 00024 - (contractor)										

Section II -- Justification for Action

The mine operator had repaired the holes and leaks in the dust control system duct work for the #2 bagging machine. The mine operator had also purchased and was using a vacuum system to clean up dust spills. The machine operator was found to be exposed to a shift-weighted average of 0.25 mg/m3 of respirable silica-bearing dust during a resample conducted on August 7, 2008. This shift-weighted average is less than the Threshold Limit Value (TLV) of 0.33 mg/m3.

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	C. Vacated	<input type="checkbox"/>	D. Terminated	<input checked="" type="checkbox"/>	E. Modified	<input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	1	5	10. Event Number	0	0	8	8	3	1	2	
11. Signature TED SMITH				AR Number		12. Date		Mo	Da	Yr	13. Time (24 Hr. Clock)	
				02933				0	8	1	9	08

MSHA Form 7000-3a, Mar 85 (Revised)

104(a) CITATION - TERMINATION AFTER
RESAMPLING

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 7	Yr 1	Da 6	Yr 0	Da 8	3. Citation/Order Number	4	4	1	0	1	9	2	-	0	2
4. Served To RICHARD JONES, SAFETY DIRECTOR					5. Operator INTERNATIONAL CEMENT CORPORATION														
6. Mine ICC MILL					7. Mine ID 7 5 - 0 0 0 2 4 - (contractor)														

Section II -- Justification for Action

The bagging machine was shut down and removed from service by disconnecting the electrical leads to the machine and wrapping it in plastic. The mill foreman stated that they would not be using the machine anymore as a new machine was being installed. The mine operator is notified that the basis for this termination is the removal of the bagging machine from service. Prior to the resumption of milling activities with this machine they are required to comply with the cited standard. Failure to comply will be considered by MSHA to be aggravated conduct constituting more than ordinary negligence.

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	C. Vacated	<input type="checkbox"/>	D. Terminated	<input checked="" type="checkbox"/>	E. Modified	<input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	1	5	10. Event Number	0	0	8	8	3	1	2				
11. Signature TED SMITH	AR Number				12. Date	Mo	Da	Yr	13. Time (24 Hr. Clock)						
	0	2	9	3	3	0	8	1	9	0	8	1	2	3	0

MSHA Form 7000-3a, Mar 85 (Revised)

104(a) CITATION - TERMINATION AFTER
REMOVAL OF EQUIPMENT FROM SERVICE

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo 07	Da 06	Yr 08	2. Time (24 Hr. Clock)	1600	3. Citation/Order Number	4410194
4. Served To SAMUEL ADAMS, LEVEL FOREMAN				5. Operator ABLE MINING, INC.			
6. Mine THE DOUBLE M MINE				7. Mine ID 57-06789- (contractor)			
8. Condition or Practice				8a. Written Notice (103g) <input type="checkbox"/>			

The 1402 stope driller was exposed to air containing 1.90 WL of radon daughters on July 6, 2008. This exceeded the maximum permissible exposure limit of 1.00 WL times the error factor (1.20) for radon daughter sampling. Several sections of ventilation tubing had large holes and the 1402 stope regulator door was damaged. The driller was not wearing a respirator.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR	57.5039
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Section II -- Inspector's Evaluation

10. Gravity:		A. Injury or Illness (has) (is):		No Likelihood	<input type="checkbox"/>	Unlikely	<input type="checkbox"/>	Reasonably Likely	<input checked="" type="checkbox"/>	Highly Likely	<input type="checkbox"/>	Occurred	<input type="checkbox"/>
		B. Injury or Illness could reasonably be expected to be:		No Lost Workdays	<input type="checkbox"/>	Lost Workdays or Restricted Duty	<input type="checkbox"/>	Permanently Disabling	<input type="checkbox"/>	Fatal	<input checked="" type="checkbox"/>		
		C. Significant and Substantial (See Reverse):		Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	D. Number of Persons Affected		001			
11. Negligence (check one)		A. None		<input type="checkbox"/>	B. Low	<input type="checkbox"/>	C. Moderate	<input checked="" type="checkbox"/>	D. High	<input type="checkbox"/>	E. Reckless Disregard	<input type="checkbox"/>	
12. Type of Action		104-a-		13. Type of Issuance (check one)		Citation		<input checked="" type="checkbox"/>	Order	<input type="checkbox"/>	Safeguard	<input type="checkbox"/>	
14. Initial Action		A. Citation		<input type="checkbox"/>	B. Order	<input type="checkbox"/>	C. Safeguard	<input type="checkbox"/>	D. Written Notice	<input type="checkbox"/>	E. Citation/Order Number	F. Dated Mo Da Yr	
15. Area or Equipment													

16. Termination Due	A. Date	Mo 07	Da 07	Yr 08	B. Time (24 Hr. Clock)	1600
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Section III -- Termination Action

17. Action to Terminate						
18. Terminated						
A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)		

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E01	20. Event Number	0345678	21. Primary or Mill	
22. Signature BILL WILLIAMS				23. AR Number 02555	

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - "S&S"
OVEREXPOSURE TO RADON DAUGHTERS

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 7	Yr 0	Da 6	Yr 0	8	3. Citation/Order Number	4	4	1	0	1	9	4	-	0	1
4. Served To SAMUEL ADAMS, LEVEL FOREMAN									5. Operator ABLE MINING, INC.										
6. Mine THE DOUBLE M MINE									7. Mine ID 5 7 - 0 6 7 8 9 - (contractor)										

Section II -- Justification for Action

Repairs to the ventilation tube and the stope regulator door have brought the concentration of radon daughters under the exposure limit.

The 1402 stope driller was exposed to air containing 0.22 WL of radon daughters when resampled on July 7, 2008. During resampling the driller was wearing a fit-tested and approved respirator. The amount is less than the maximum permissible exposure limit of 1.00 WL times the error factor (1.20) for radon daughter sampling.

See Continuation Form

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	C. Vacated	<input type="checkbox"/>	D. Terminated	<input checked="" type="checkbox"/>	E. Modified	<input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	0	1	10. Event Number	0	3	4	5	6	7	8		
11. Signature BILL WILLIAMS					AR Number		12. Date		Mo	Da	Yr	13. Time (24 Hr. Clock)	
					0 2 5 5 5				0	7	0	7	0
												1	6
												0	0

MSHA Form 7000-3a, Mar 85 (Revised)

104(a) CITATION - TERMINATION AFTER
RESAMPLING

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	9	2	5	0	8	1
							2
4. Served To	Mike McGregor, Safety Director				5. Operator		
					Beautiful Vista Coal Company		
6. Mine No. 1					7. Mine ID		
					1	5	-
					0	3	5
					3	6	-
							(contractor)
8. Condition or Practice					8a. Written Notice (103g)		

The mine operator failed to replace missing labels on five 55-gallon drums of perchloroethylene stored on the ground floor of the preparation plant. The material data safety sheet (MSDS) provided by the manufacturer indicates that perchloroethylene is a health hazard. The drums were sealed, stored in a protected area, and there was no evidence of material leakage. This condition was observed during a normal production shift and 5 miners are frequently working or traveling in the area. The plant normally operates two 10-hour production shifts per day.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	X	B. Section of Act		C. Part/Section of Title 30 CFR	4	7	.	4	1	a	1
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Section II -- Inspector's Evaluation

10. Gravity:	A. Injury or Illness (has) (is):		No Likelihood	<input type="checkbox"/>	Unlikely	<input checked="" type="checkbox"/>	Reasonably Likely	<input type="checkbox"/>	Highly Likely	<input type="checkbox"/>	Occurred	<input type="checkbox"/>
	B. Injury or Illness could reasonably be expected to be:		No Lost Workdays	<input type="checkbox"/>	Lost Workdays or Restricted Duty	<input type="checkbox"/>	Permanently Disabling	<input checked="" type="checkbox"/>	Fatal	<input type="checkbox"/>		
	C. Significant and Substantial (See Reverse):		Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	D. Number of Persons Affected		0	1	0	
11. Negligence (check one)	A. None		<input type="checkbox"/>	B. Low	<input type="checkbox"/>	C. Moderate	<input checked="" type="checkbox"/>	D. High	<input type="checkbox"/>	E. Reckless Disregard	<input type="checkbox"/>	
12. Type of Action	1	0	4	-	a	-	,					
13. Type of Issuance (check one)	Citation		<input checked="" type="checkbox"/>	Order	<input type="checkbox"/>	0	Safeguard	<input type="checkbox"/>				
14. Initial Action	A. Citation	<input type="checkbox"/>	B. Order	<input type="checkbox"/>	C. Safeguard	<input type="checkbox"/>	D. Written Notice	<input type="checkbox"/>	E. Citation/Order Number		F. Dated	Mo
											Da	Yr
15. Area or Equipment												

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	
		0	9	2	6	0
						8

Section III -- Termination Action

17. Action to Terminate	
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18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)	

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	7	6	5	4	3	2	2	21. Primary or Mill					
22. Signature												23. AR Number	2	3	1	9	0

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - "NON S&S" HAZCOM

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)	3. Citation/Order Number
	0	7	1	6 0 0	4 4 1 0 1 9 6
4. Served To				5. Operator	
RICHARD JONES, SAFETY DIRECTOR				INTERNATIONAL CEMENT CORPORATION	
6. Mine				7. Mine ID	
ICC MILL				7 5 - 0 0 0 2 4 - (contractor)	
8. Condition or Practice				8a. Written Notice (103g)	

The #2 bagging machine operator was exposed to a shift-weighted average of 1.56 mg/m³ of respirable silica-bearing dust when sampled for a full shift on 07/03/08. This amount exceeded the Threshold Limit Value (TLV) of 0.33 mg/m³ times the error factor (1.20) for respirable free silica sampling and analysis. The operator was not wearing an approved fit-tested respirator nor was a respiratory protection program meeting the requirements of ANSI Z88.2-1969 in place. Also, all feasible engineering controls were not used to reduce the bagger operator's exposure. A dust collection system was being used but numerous holes and leaks in the ductwork reduced the system's efficiency. Accumulations of dust, 5 to 6 inches deep in the area, were indicative of these leaks and the poor cleanup methods. Cleanup was done sporadically, when production permitted, with shovels and brooms causing more dust to become airborne. The workplace safety reports, for the week preceding this sample, indicated that the malfunctioning dust collection system had been noted and reported to the foreman. The foreman stated that he had production to worry about and that when customer orders slowed down he might get the collection system repaired. He also said that he had not purchased any respirators for the employees because they were too expensive. This company has received four previous violations for over-exposure to silica-bearing dust at the bagging plant within the past year. Management engaged in aggravated conduct constituting more than ordinary negligence by deeming production more important than the miner's health. This violation is an unwarrantable failure to comply with a mandatory standard.

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR
		-	5 6 . 5 0 0 1 a/. 5 0 0 5

Section II -- Inspector's Evaluation

10. Gravity:			
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>			
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>			
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
D. Number of Persons Affected			
0 0 1			
11. Negligence (check one)			
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input type="checkbox"/> D. High <input checked="" type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>			
12. Type of Action			
1 0 4 - d - 1 , - -			
13. Type of Issuance (check one)			
Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/>			
14. Initial Action			
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number			
F. Dated			
Mo Da Yr			
15. Area or Equipment			

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)
	0	7	1	8	1 6 0 0

Section III -- Termination Action

17. Action to Terminate					
18. Terminated					
A. Date					
Mo Da Yr					
B. Time (24 Hr Clock)					

Section IV -- Automated System Data

19. Type of Inspection (activity code)	20. Event Number	21. Primary or Mill
E 0 1	0 0 8 8 3 0 1	
22. Signature		23. AR Number
JOHN REDWOOD		0 3 3 3 3

MSHA Form 7000-3 Mar 85 (Revised)

104(d)(1) CITATION - "S&S" OVEREXPOSURE
TO SILICA-BEARING DUST

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	7	0	6	0	8	1
4. Served To	SAMUEL ADAMS, LEVEL FOREMAN			5. Operator	ABLE MINING, INC.		
6. Mine	THE DOUBLE M MINE			7. Mine ID	5 7 - 0 6 7 8 9 - (contractor)		
8. Condition or Practice				8a. Written Notice (103g)	<input type="checkbox"/>		

The 1402 stope driller was exposed to air containing 1.90 WL of radon daughters on July 6, 2008. This amount exceeded the maximum permissible concentration (exposure limit) of 1.00 WL times the error factor (1.20) for radon daughter sampling. Several sections of ventilation tubing had large holes and the 1402 stope regulator door was damaged. The driller was not wearing a respirator. The damaged regulator door and the malfunctioning ventilation tubing had been noted and turned in to the foreman, Joe Jones, two weeks preceding this sampling. Additionally, company samples taken for the week preceding the MSHA samples indicated over-exposure to radon daughters in this area. Foreman Jones stated that it was too expensive to repair the defective items. Management engaged in aggravated conduct constituting more than ordinary negligence in deeming production more important than a miner's health. This violation is an unwarrantable failure to comply with a mandatory standard.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR
			5 7 . 5 0 3 9

Section II -- Inspector's Evaluation

10. Gravity:	A. Injury or Illness (has) (is):		No Likelihood	<input type="checkbox"/> Unlikely	<input type="checkbox"/> Reasonably Likely	<input checked="" type="checkbox"/> Highly Likely	<input type="checkbox"/> Occurred
	B. Injury or Illness could reasonably be expected to be:		No Lost Workdays	<input type="checkbox"/> Lost Workdays or Restricted Duty	<input type="checkbox"/> Permanently Disabling	<input type="checkbox"/> Fatal	<input checked="" type="checkbox"/>
	C. Significant and Substantial (See Reverse):		Yes	<input checked="" type="checkbox"/> No	D. Number of Persons Affected		0 0 1
11. Negligence (check one)	A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input checked="" type="checkbox"/>						
12. Type of Action	1 0 4 - d - 1 , - -		13. Type of Issuance (check one)				
			Citation <input type="checkbox"/> Order <input checked="" type="checkbox"/> Safeguard <input type="checkbox"/>				
14. Initial Action	A. Citation <input checked="" type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/>		E. Citation/Order Number		F. Dated		
			4 4 1 0 1 1		Mo 0 5 Da 2 7 Yr 0 8		
15. Area or Equipment	1402 STOPE DRILLER						

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)

Section III -- Termination Action

17. Action to Terminate							
18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)		

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E 0 1	20. Event Number	0 3 4 5 6 7 8	21. Primary or Mill
22. Signature	BILL WILLIAMS			
	23. AR Number			
	0 2 5 5 5			

MSHA Form 7000-3 Mar 85 (Revised)

104(d)(1) ORDER - "S&S" OVEREXPOSURE
TO RADON DAUGHTERS

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	7	0	4	0	8	3
4. Served To	J.R. JOHNSON, SAFETY DIRECTOR			5. Operator	ABC MINING COMPANY		
6. Mine	ABC MINE AND MILL			7. Mine ID	7 5 - 0 9 1 3 3 - (contractor)		
8. Condition or Practice				8a. Written Notice (103g)	<input type="checkbox"/>		

An underground tram operator is working in area nine east where the measured carbon monoxide level was 800 ppm (parts per million). The operator has been in the area for over two hours and has the following symptoms: headache, nausea, dizziness, and some mental confusion. Sampling was conducted in the operator's work area with eight drager tubes. The operator was not wearing respiratory protection. The TLV for a full shift is 50 ppm, and the STEL is 400 ppm. Exposure to carbon monoxide over this length of time can result in death. An oral imminent danger order was issued to Jim Smith, foreman, at 0800 hours this date.

Citation No. 4410199 is being issued in conjunction with this order.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR

Section II -- Inspector's Evaluation

10. Gravity:	A. Injury or Illness (has) (is):		No Likelihood	<input type="checkbox"/> Unlikely	<input type="checkbox"/> Reasonably Likely	<input type="checkbox"/> Highly Likely	<input type="checkbox"/> Occurred
	B. Injury or Illness could reasonably be expected to be:		No Lost Workdays	<input type="checkbox"/> Lost Workdays or Restricted Duty	<input type="checkbox"/> Permanently Disabling	<input type="checkbox"/> Fatal	<input type="checkbox"/>
	C. Significant and Substantial (See Reverse):		Yes	<input type="checkbox"/> No	D. Number of Persons Affected		
11. Negligence (check one)	A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>						
12. Type of Action	1 0 7 - a - , - -		13. Type of Issuance (check one)				
			Citation <input type="checkbox"/> Order <input checked="" type="checkbox"/> Safeguard <input type="checkbox"/>				
14. Initial Action	A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number		F. Dated				
			Mo Da Yr				

15. Area or Equipment

TRAM OPERATOR (NINE EAST)

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)

Section III -- Termination Action

17. Action to Terminate						
18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)	

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E 0 1	20. Event Number	0 7 3 5 1 1 4	21. Primary or Mill
22. Signature	JOHN SMITH			23. AR Number
				0 1 9 9 9

MSHA Form 7000-3 Mar 85 (Revised)

107(a) ORDER - "S&S" OVEREXPOSURE
TO CARBON MONOXIDE

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	7	0	4	0	8	3
4. Served To	J.R. JOHNSON, SAFETY DIRECTOR			5. Operator			
6. Mine	ABC MINE AND MILL			7. Mine ID			
8. Condition or Practice				8a. Written Notice (103g)			

An underground tram operator is working in area nine east where the measured carbon monoxide level was 800 ppm (parts per million). The operator has been in the area for over two hours and has the following symptoms: headache, nausea, dizziness, and some mental confusion. Sampling was conducted in the operator's work area with eight drager tubes. The operator was not wearing respiratory protection. The TLV for a full shift is 50 ppm, and the STEL is 400 ppm. Exposure to carbon monoxide over this length of time can result in death. An oral imminent danger order was issued to Jim Smith, foreman, at 0800 hours this date.

This violation is a factor cited in imminent danger order No. 4410198

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR

Section II -- Inspector's Evaluation

10. Gravity:	A. Injury or Illness (has) (is):	No Likelihood	<input type="checkbox"/> Unlikely	<input type="checkbox"/> Reasonably Likely	<input type="checkbox"/> Highly Likely	<input checked="" type="checkbox"/> Occurred
	B. Injury or Illness could reasonably be expected to be:	No Lost Workdays	<input type="checkbox"/> Lost Workdays or Restricted Duty	<input type="checkbox"/> Permanently Disabling	<input type="checkbox"/> Fatal	<input checked="" type="checkbox"/>
	C. Significant and Substantial (See Reverse):	Yes	<input checked="" type="checkbox"/> No		D. Number of Persons Affected	0
11. Negligence (check one)	A. None	<input type="checkbox"/> B. Low	<input type="checkbox"/> C. Moderate	<input checked="" type="checkbox"/> D. High	<input type="checkbox"/> E. Reckless Disregard	<input type="checkbox"/>
12. Type of Action	1	0	4	-	a	-
13. Type of Issuance (check one)	Citation	<input checked="" type="checkbox"/> Order	<input type="checkbox"/> Safeguard	<input type="checkbox"/>		
14. Initial Action	A. Citation	<input type="checkbox"/> B. Order	<input type="checkbox"/> C. Safeguard	<input type="checkbox"/> D. Written Notice	<input type="checkbox"/> E. Citation/Order Number	
15. Area or Equipment						

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)

Section III -- Termination Action

17. Action to Terminate						
18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)	

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	0	7	3	5	1	1	4	21. Primary or Mill
22. Signature	JOHN SMITH											
23. AR Number	0											

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION ISSUED IN CONJUNCTION WITH 107(a) ORDER OF WITHDRAWAL

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	7	0		1 1 0 0		4 4 1 0 2 0 0
4. Served To				5. Operator			
J.R. JOHNSON, SAFETY DIRECTOR				ABC MINING COMPANY			
6. Mine				7. Mine ID			
ABC MINE AND MILL				7 5 - 0 9 1 3 3 - (contractor)			
8. Condition or Practice				8a. Written Notice (103g)			

A laboratory technician was handling hot acid in the assay laboratory where the measured hydrogen chloride levels were 35 ppm (parts per million), which is almost at the immediately dangerous to life and health (IDLH) level of 50 ppm. A sample was taken in the operator's work area for an hour with a Drager diffusion tube. The measured exposures are almost at levels that are fatal. The ceiling limit for hydrogen chloride is 5 ppm. The technician was removed from the lab when levels exceeded the ceiling limit of 5 ppm, and an oral imminent danger order was issued to Becky Mills, laboratory supervisor, at 1045 hours this date. The technician was not wearing respiratory protection and complained of eye and throat irritation.

Citation No. 4410201 is being issued in conjunction with this order.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other		B. Section of Act		C. Part/Section of Title 30 CFR	
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Section II -- Inspector's Evaluation

10. Gravity:		A. Injury or Illness (has) (is):		No Likelihood	<input type="checkbox"/>	Unlikely	<input type="checkbox"/>	Reasonably Likely	<input type="checkbox"/>	Highly Likely	<input type="checkbox"/>	Occurred	<input type="checkbox"/>
		B. Injury or Illness could reasonably be expected to be:		No Lost Workdays	<input type="checkbox"/>	Lost Workdays or Restricted Duty	<input type="checkbox"/>	Permanently Disabling	<input type="checkbox"/>	Fatal	<input type="checkbox"/>		
		C. Significant and Substantial (See Reverse):		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	D. Number of Persons Affected					
11. Negligence (check one)		A. None		<input type="checkbox"/>	B. Low	<input type="checkbox"/>	C. Moderate	<input type="checkbox"/>	D. High	<input type="checkbox"/>	E. Reckless Disregard	<input type="checkbox"/>	
12. Type of Action		1	0	7	-	a	-	,	-	-			
		13. Type of Issuance (check one)		Citation		<input type="checkbox"/>	Order	<input checked="" type="checkbox"/>	Safeguard	<input type="checkbox"/>			
14. Initial Action		A. Citation		<input type="checkbox"/>	B. Order	<input type="checkbox"/>	C. Safeguard	<input type="checkbox"/>	D. Written Notice	<input type="checkbox"/>	E. Citation/Order Number		
		F. Dated		Mo	Da	Yr							

15. Area or Equipment

THE ASSAY LABORATORY

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	
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Section III -- Termination Action

17. Action to Terminate	
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18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)	
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Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	0	7	3	5	1	1	4	21. Primary or Mill				
22. Signature												23. AR Number	0	1	9	9

JOHN SMITH

MSHA Form 7000-3 Mar 85 (Revised)

107(a) ORDER - "S&S" OVEREXPOSURE
TO HYDROGEN CHLORIDE

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number	
	0	7	0	4	0	8	1 1 0 0
4. Served To	J.R. JOHNSON, SAFETY DIRECTOR			5. Operator	ABC MINING COMPANY		
6. Mine	ABC MINE AND MILL			7. Mine ID	7 5 - 0 9 1 3 3 - (contractor)		
8. Condition or Practice				8a. Written Notice (103g)	<input type="checkbox"/>		

A laboratory technician was handling hot acid in the assay laboratory where the measured hydrogen chloride levels were 35 ppm (parts per million), which is almost at the immediately dangerous to life and health (IDLH) level of 50 ppm. A sample was taken in the operator's work area for an hour with a Drager diffusion tube. The measured exposures are almost at levels that are fatal. The ceiling limit for hydrogen chloride is 5 ppm. The technician was removed from the lab when levels exceeded the ceiling limit of 5 ppm, and an oral imminent danger order was issued to Becky Mills, laboratory supervisor, at 1045 hours this date. The technician was not wearing respiratory protection and complained of eye and throat irritation.

This violation is a factor cited in imminent danger order No. 4410200.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR
		-	5 7 . 5 0 0 1 a / . 5 0 0 5

Section II -- Inspector's Evaluation

10. Gravity:	A. Injury or Illness (has) (is):	No Likelihood	<input type="checkbox"/>	Unlikely	<input type="checkbox"/>	Reasonably Likely	<input type="checkbox"/>	Highly Likely	<input checked="" type="checkbox"/>	Occurred	<input type="checkbox"/>
	B. Injury or Illness could reasonably be expected to be:	No Lost Workdays	<input type="checkbox"/>	Lost Workdays or Restricted Duty	<input type="checkbox"/>	Permanently Disabling	<input type="checkbox"/>	Fatal	<input checked="" type="checkbox"/>		
	C. Significant and Substantial (See Reverse):	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	D. Number of Persons Affected	0 0 1				
11. Negligence (check one)	A. None	<input type="checkbox"/>	B. Low	<input type="checkbox"/>	C. Moderate	<input checked="" type="checkbox"/>	D. High	<input type="checkbox"/>	E. Reckless Disregard	<input type="checkbox"/>	
12. Type of Action	1 0 4 - a - , - -						13. Type of Issuance (check one)	Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/>			
14. Initial Action	A. Citation	<input type="checkbox"/>	B. Order	<input type="checkbox"/>	C. Safeguard	<input type="checkbox"/>	D. Written Notice	<input type="checkbox"/>	E. Citation/Order Number		
15. Area or Equipment											

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)

Section III -- Termination Action

17. Action to Terminate											
18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)						

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E	0	1	20. Event Number	0	7	3	5	1	1	4	21. Primary or Mill				
22. Signature	JOHN SMITH											23. AR Number	0	1	9	9

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION ISSUED IN CONJUNCTION WITH A 107(a) ORDER OF WITHDRAWAL

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)	3. Citation/Order Number
1	1	0	7	1 0 0 0	6 6 6 6 6 7
4. Served To				5. Operator	
JANE DOE, SAFETY DIRECTOR				ABC ROCK COMPANY	
6. Mine				7. Mine ID	
ABC MINE				7 0 - 7 7 7 7 - (contractor)	
8. Condition or Practice				8a. Written Notice (103g)	

Clouds of dust were being produced by the No. 4 Ingersoll Rand air track drill when it was being used to drill blast holes in the south end of the quarry. The dust control system on the drill was not being used. The system functioned by water feeding through a hollow drill steel and out the drill bit. The water tank for the system was empty. No other dust control was being used. The drill operator was not wearing a respirator, and his clothing was covered with dust. He was drilling in non-water-soluble material. A respiratory protection program meeting all requirements of ANSI Z88.2 - 1969 was not in place.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR
			5 8 . 6 2 0

Section II -- Inspector's Evaluation

10. Gravity:			
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input checked="" type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>			
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>			
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
D. Number of Persons Affected			
0 0 1			
11. Negligence (check one)			
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>			
12. Type of Action			
1 0 4 - a - , - -			
13. Type of Issuance (check one)			
Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/>			
14. Initial Action			
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number			
F. Dated			
Mo Da Yr			
15. Area or Equipment			

16. Termination Due	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)
	1	1	0	7	1 2 0 0

Section III -- Termination Action

17. Action to Terminate

The water tank on air trac was filled and the dust control system was activated. After the dust control system was activated, there was no visible dust when the drill was operated.

18. Terminated	A. Date	Mo	Da	Yr	B. Time (24 Hr Clock)
	1	1	0	7	1 1 3 0

Section IV -- Automated System Data

19. Type of Inspection (activity code)	20. Event Number	21. Primary or Mill
E 0 1	1 2 3 4 5 6 9	
22. Signature		23. AR Number
TED OLSON		9 9 9 9 9

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - "S&S" OVEREXPOSURE TO DRILL DUST

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data

1. Date	Mo 11	Da 07	Yr 08	2. Time (24 Hr. Clock)	1700	3. Citation/Order Number	44444444
4. Served To SYDNEY JONES, PRESIDENT				5. Operator TMC MINING COMPANY			
6. Mine TRIANGLE MINE				7. Mine ID 72-00012- (contractor)			
8. Condition or Practice							8a. Written Notice (103g) <input type="checkbox"/>

The results of an MSHA full shift noise sample taken on 11/07/08 showed the driver of the No. 31 Euclid Haul truck received an action level noise dose of 76%. This exceeds the action level dose or 50% plus the error factor (or 66%). The miner was not enrolled in a hearing conservation program as required by 30 CFR 62.120.

The abatement date for this citation is to allow the mine operator time to enroll the miner into a formal hearing conservation program which meets all the requirements of 30 CFR 62.150.

See Continuation Form (MSHA Form 7000-3a)

9. Violation	A. Health Safety Other	B. Section of Act	C. Part/Section of Title 30 CFR	62.120
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Section II -- Inspector's Evaluation

10. Gravity:		A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input checked="" type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>	
B. Injury or Illness could reasonably be expected to be:		No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>	
C. Significant and Substantial (See Reverse):		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> D. Number of Persons Affected 001	
11. Negligence (check one)		A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>	
12. Type of Action		13. Type of Issuance (check one)	
104-a-		Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/>	
14. Initial Action		E. Citation/Order Number	
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/>		F. Dated Mo Da Yr	
15. Area or Equipment			

16. Termination Due	A. Date	Mo 11	Da 29	Yr 08	B. Time (24 Hr. Clock)	1000
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Section III -- Termination Action

17. Action to Terminate						
18. Terminated						
A. Date		Mo	Da	Yr	B. Time (24 Hr Clock)	

Section IV -- Automated System Data

19. Type of Inspection (activity code)	E01	20. Event Number	1234567	21. Primary or Mill	
22. Signature TED JOHNSON					23. AR Number 0555

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - "NON S&S" HEARING CONSERVATION PROGRAM

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 1	Da 1	Yr 0	7	0	8	3. Citation/Order Number	4	4	4	4	4	4	4	-	0	1
4. Served To SYDNEY JONES, PRESIDENT									5. Operator TMC MINING COMPANY										
6. Mine TRIANGLE MINE									7. Mine ID 7 2 - 0 0 0 1 2 - (contractor)										

Section II -- Justification for Action

The driver of the No. 31 Euclid haulage truck has been enrolled in a formal hearing conservation program meeting all provisions of 30 CFR 62.150.

See Continuation Form

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	C. Vacated	<input type="checkbox"/>	D. Terminated	<input checked="" type="checkbox"/>	E. Modified	<input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	0	1	10. Event Number	1	2	3	4	5	6	7			
11. Signature TED JOHNSON					AR Number		12. Date		Mo	Da	Yr	13. Time (24 Hr. Clock)		
					0 5 5 5 5				1	1	2	9	0	8

MSHA Form 7000-3a, Mar 85 (Revised)

104(A) CITATION - TERMINATION AFTER ENROLLMENT IN HEARING PROGRAM

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data															
1. Date	Mo	Da	Yr	2. Time (24 Hr. Clock)		3. Citation/Order Number									
	1	2	0	3	0	8									
4. Served To	GEORGE JONES, SAFETY DIRECTOR					5. Operator	XYZ MINING COMPANY								
6. Mine	XYZ MINE					7. Mine ID	8	1	-	1	2	3	4	5	-
8. Condition or Practice	8a. Written Notice (103g) <input type="checkbox"/>														
The results of an MSHA full shift noise sample taken on 12/03/08 showed the operator of the front-end loader received a permissible exposure level noise dose of 152%. This exceeds the permissible exposure level noise dose of 100% plus error factor (or 132%). The end loader operator was wearing a hearing protector.															
The abatement date for this citation is to allow time for the mine operator to install all feasible engineering and administrative controls.															
The mine operator must ensure continued use of a hearing protector until the noise dose is reduced to or below the permissible exposure level.															
Equipment: Caterpillar 880 front-end loader, S/N 00764762															
See Continuation Form (MSHA Form 7000-3a)														X	
9. Violation	A. Health Safety Other														
	B. Section of Act														
	C. Part/Section of Title 30 CFR														
Section II -- Inspector's Evaluation															
10. Gravity:															
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input checked="" type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>															
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>															
C. Significant and Substantial (See Reverse): Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>															
D. Number of Persons Affected 0 0 1															
11. Negligence (check one)															
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>															
12. Type of Action 1 0 4 - a - , - -															
13. Type of Issuance (check one) Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/>															
14. Initial Action															
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number <input type="checkbox"/>															
15. Area or Equipment															
16. Termination Due															
A. Date Mo Da Yr 1 2 1 6 0 8 B. Time (24 Hr. Clock) 1 2 0 0															
Section III -- Termination Action															
17. Action to Terminate															
18. Terminated															
A. Date Mo Da Yr B. Time (24 Hr Clock)															
Section IV -- Automated System Data															
19. Type of Inspection (activity code) E 0 1 20. Event Number 7 6 5 4 3 2 1 21. Primary or Mill															
22. Signature JOE SOUTH 23. AR Number 0 5 5 5 6															

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - "NON S&S" OVEREXPOSURE TO NOISE

Mine Citation/Order

Continuation

U.S. Department of Labor

Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 1	Da 2	Yr 0	3. Citation/Order Number	4	4	4	4	4	4	5	-	0	1
4. Served To GEORGE JONES, SAFETY DIRECTOR					5. Operator XYZ MINING COMPANY											
6. Mine XYZ MINE					7. Mine ID 8 1 - 1 2 3 4 5 - (contractor)											

Section II -- Justification for Action

The mine operator installed a new muffler, put in a noise insulating floor mat, and plugged all openings between the operator's compartment and the engine compartment with noise attenuating material on the Caterpillar front-end loader.

Based on an MSHA full shift noise sample taken on 12/16/08, the operator of the front-end loader received a permissible exposure level noise dose of 76%. This dose is less than the permissible exposure level of 100% plus error factor (or 132%).

The front-end loader operator identified above must remain enrolled in a hearing conservation program which complies with the provisions of 30 CFR 62.150 until the noise dose is reduced below the action level.

Equipment: Caterpillar 880 front-end loader, S/N 00764762

See Continuation Form

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	C. Vacated	<input type="checkbox"/>	D. Terminated	<input checked="" type="checkbox"/>	E. Modified	<input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	0	1	10. Event Number	7	6	5	4	3	2	1
11. Signature JOE SOUTH				AR Number		12. Date		Mo	Da	Yr	13. Time (24 Hr. Clock)
				0 5 5 5 6		1 2 1 6 0 8		1 7 3 0			

MSHA Form 7000-3a, Mar 85 (Revised)

104(a) CITATION - TERMINATION AFTER RESAMPLING

Mine Citation/Order

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Violation Data														
1. Date		Mo	Da	Yr	2. Time (24 Hr. Clock)					3. Citation/Order Number				
		0	1	0	1 7 0 0					4 4 4 4 7 6				
4. Served To					5. Operator									
JOHN MILTON, PRESIDENT					ONLY THE BEST ROCK									
6. Mine					7. Mine ID									
HARD ROCK MINE					9 0 - 8 8 8 8 - (contractor)									
8. Condition or Practice														
8a. Written Notice (103g) <input type="checkbox"/>														
The results of an MSHA full shift noise sample taken on 01/03/08 showed the operator using the jack leg drill received a noise dose of 1230%. This exceeds the dual hearing protection level of 800% plus error factor (or 1056%). The miner was not wearing dual hearing protection, but was just using a muff-type hearing protector. Further, no muffler was installed on the drill.														
The initial abatement period is to allow time for the mine operator to provide and ensure the concurrent use of dual hearing protectors. The abatement date may be extended to allow the mine operator time to install and implement all feasible engineering and administrative noise controls.														
Dual hearing protection must be worn by the affected miner until the noise dose is reduced to or below the dual hearing protection level. After the dual hearing protection requirement is met, actions specified under 30 CFR 62.130 apply for exposures that exceed the permissible exposure level.														
Equipment: Model 2 B-Barber jack leg drill, Company # 10														
Location: 9 East Section, 12 Right														
See Continuation Form (MSHA Form 7000-3a) <input type="checkbox"/>														
9. Violation	A. Health Safety Other	B. Section of Act			C. Part/Section of Title 30 CFR									
					6 2 . 1 4 0 a									
Section II -- Inspector's Evaluation														
10. Gravity:														
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input checked="" type="checkbox"/> Occurred <input type="checkbox"/>														
B. Injury or Illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays or Restricted Duty <input type="checkbox"/> Permanently Disabling <input checked="" type="checkbox"/> Fatal <input type="checkbox"/>														
C. Significant and Substantial (See Reverse): Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> D. Number of Persons Affected 0 0 1														
11. Negligence (check one)														
A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>														
12. Type of Action 1 0 4 - a - , - -														
13. Type of Issuance (check one) Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/>														
14. Initial Action														
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number F. Dated Mo Da Yr														
15. Area or Equipment														
16. Termination Due														
A. Date		Mo	Da	Yr	B. Time (24 Hr. Clock)									
		0	1	0	1 2 0 0									
Section III -- Termination Action														
17. Action to Terminate														
18. Terminated														
A. Date		Mo	Da	Yr	B. Time (24 Hr Clock)									
Section IV -- Automated System Data														
19. Type of Inspection (activity code)		20. Event Number			21. Primary or Mill									
E 0 1		1 2 3 4 5 6 8												
22. Signature										23. AR Number				
HORATIO ALGER										6 0 0 0 0				

MSHA Form 7000-3 Mar 85 (Revised)

104(a) CITATION - OVEREXPOSURE TO NOISE

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input type="checkbox"/> <input checked="" type="checkbox"/> X	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 1	Yr 0	3. Citation/Order Number	4	4	4	4	7	6	-	0	1
4. Served To JOHN MILTON, PRESIDENT						5. Operator ONLY THE BEST ROCK									
6. Mine HARD ROCK MINE						7. Mine ID 9 0 - 8 8 8 8 8 - (contractor)									

Section II -- Justification for Action

The mine operator has provided the miner with both a muff and a plug-type hearing protector of the miner's choosing.

The mine operator has trained the miner in the use of the dual hearing protection, and ensured that they are being used concurrently.

The mine operator has ordered a manufacturer's muffler for the jack leg drill. The miner operating the jack leg drill must continue to wear the dual hearing protection until the noise dose has been reduced to or below the dual hearing protection level.

This citation is being extended to allow time for the mine operator to install and implement all feasible engineering and administrative controls.

Equipment: Model 2 B-Barber Jack Leg Drill, No. 10

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo 0	Da 1	Yr 7	B. Time (24 Hr. Clock)	1	2	0	0	C. Vacated	<input type="checkbox"/>	D. Terminated	<input type="checkbox"/>	E. Modified	<input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	0	1	10. Event Number	1	2	3	4	5	6	8	11. Signature	AR Number	12. Date	Mo 0	Da 1	Yr 1	13. Time (24 Hr. Clock)	1	3	0	0																	
HORATIO ALGER				6				0				0				0				0				1				3				0				0			

MSHA Form 7000-3a, Mar 85 (Revised)

104(a) CITATION - EXTENSION OF NOISE CITATION

Mine Citation/Order
Continuation

U.S. Department of Labor
Mine Safety and Health Administration

Section I -- Subsequent Action/Continuation Data

1. Subsequent Action <input checked="" type="checkbox"/>	1a. Continuation <input type="checkbox"/>	2. Dated (Original Issue)	Mo 0	Da 1	Yr 0	3. Citation/Order Number	4	4	4	4	4	7	6	-	0	4
4. Served To JOHN MILTON, PRESIDENT						5. Operator ONLY THE BEST ROCK										
6. Mine HARD ROCK MINE						7. Mine ID 9 0 - 8 8 8 8 8 - (contractor)										

Section II -- Justification for Action

A "P" code for the occupation operating the No. 10, Model 2B Barber jack leg drill has been assigned as number XXXX.

All feasible engineering and administrative controls must continue to be used and maintained. This includes the muffler for the jack leg drill. In addition, if new feasible engineering and/or administrative controls become available, they must be implemented.

The mine operator must continue to meet requirements of 30 CFR Part 62.

This citation is terminated.

See Continuation Form ☐

Section III -- Subsequent Action Taken

8. Extended To	A. Date	Mo	Da	Yr	B. Time (24 Hr. Clock)	C. Vacated	<input type="checkbox"/>	D. Terminated	<input checked="" type="checkbox"/>	E. Modified	<input type="checkbox"/>
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Section IV -- Inspection Data

9. Type of Inspection	E	0	1	10. Event Number	1	2	3	4	5	6	8	11. Signature	AR Number	12. Date	Mo	Da	Yr	13. Time (24 Hr. Clock)	1	3	0	0			
										HORATIO ALGER				6 0 0 0 0				0 3 0 5 0 8							

MSHA Form 7000-3a, Mar 85 (Revised)

104(a) CITATION - TERMINATION OF NOISE VIOLATION WITH "P" CODE

Appendix E
Miscellaneous Forms
And Codes

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Special Assessment Review Form

U.S. Department of Labor
Mine Safety and Health Administration



1. MSHA District Office		2. Field Office	
3. Mine ID/Contractor ID		4. Mine Name	
5. Operator Name		6. Citation/Order Number	7. Citation/Order Issue Date
8. Accident Related Violation? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, all violations must be submitted together with any accident report or memorandum.			
9. A. Operator Notified of Special Assessment? <input type="checkbox"/> Yes <input type="checkbox"/> No			
10. Inspector's Recommendation		Is this a flagrant violation? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Special Assessment? <input type="checkbox"/> Yes <input type="checkbox"/> No		If yes, explain below the serious or aggravating circumstances involved.	

☐ See Continuation Seet

Signature

Date

11. Supervisor's Review Is this a flagrant violation? ☐ Yes ☐ No

Special Assessment? ☐ Yes ☐ No

Comments:

☐ See Continuation Seet

Signature

Date

12. Assistant District Manager's Review Is this a flagrant violation? ☐ Yes ☐ No

Special Assessment? ☐ Yes ☐ No

Comments:

☐ See Continuation Seet

Signature

Date

13. District Manager's Review Is this a flagrant violation? ☐ Yes ☐ No

Special Assessment? ☐ Yes ☐ No

Comments:

☐ See Continuation Seet

Signature

Date

POSSIBLE KNOWING/WILLFUL VIOLATION REVIEW FORM
(Confidential, Pre-decisional Information)

U.S. Department of Labor
Mine Safety and Health Administration

MINE ID _____ MSHA OFFICE _____

MINE NAME _____

COMPANY NAME _____

Citation/Order Number _____ Date _____

ACCIDENT INFORMATION

Was this violation associated with an accident which caused an injury? Yes ☐ No ☐ If yes: Fatal? ☐ Non-fatal? ☐

REVIEW CRITERIA (Attach supplemental information if needed)

1. Did the condition or practice cited create the presence of a high degree of risk to the health and safety of miners? Yes ☐ No ☐
- a) Who was exposed to the hazard? (Name and Occupation) _____
- b) How were they exposed to the hazard? _____
- c) When and over what period of time did the exposure occur? _____
- d) Is this first hand information? _____
If not, who provided the information? (Name and Occupation) _____
2. Did the operator or agent have actual knowledge, or reason to know, of the facts or conditions constituting the violation?
- a) Who had this knowledge? (Name and Title) _____
- b) How was this knowledge evidenced? _____
- c) Is this first hand information? Yes ☐ No ☐ _____
If not, who provided the information? (Name and Occupation) _____
3. Any other pertinent information: _____

INSPECTORS CONCLUSION:

Based on this review, does this appear to be a possible knowing and/or willful violaton of the Act or mandatory health or safety standard?

Inspector AR Number: _____ Signature: _____ Date: _____

Supervisor: Do you agree with the inspector's conclusion? Yes ☐ No ☐
Signature: _____ Date: _____

POSSIBLE RECOMMENDED ACTIONS:

A. Conduct a special investigation. ☐ C. No further action. ☐
Assistant District Manager: Recommendation (A or C from the list above)
Signature: _____ Date: _____
Supervisory Special Investigator: Recommendation: _____ (A or C from the list above)
Signature: _____ Date: _____
District Manager: Action Decision: _____ (A or C from the list above)
Signature: _____ Date: _____

ADDITIONAL COMMENTS OR REMARKS

CASE ASSIGNMENT INFORMATION:

Investigation Case No. _____ Date Assigned _____
Investigator Assigned _____ ID No. _____

Enforcement Activity Codes

MSIS Code	Activity	Description
E01	Regular Safety and Health Inspection	Mandatory Safety and Health Inspections of a mine, surface facility, or other entity having a mine I.D. number in its entirety.
E02	103(i) Spot Inspections	Mandatory spot inspections of mines that qualify under 103(i) of the Act and are inspected for gases liberation, serious ignition or explosions hazards, or other especially hazardous conditions or problems.
E03	103(g) Written Notification Hazard Complaint Inspection	Special inspections that respond to a written notice filed pursuant to 103(g) of the Act alleging a violation or imminent danger exists at a mine.
E04	Verbal Hazard Complaint Inspections	Special inspections that result from a verbal or otherwise written complaint where a violation or hazardous condition is alleged and is not a 103(g) request or a code-a-phone complaint.
E05	108 Injunctive Actions or Other SI Activities	All investigative activities conducted pursuant to 108 of the Act regarding injunctions or any other Special Investigation activities.
E06	Fatal Accident Investigation	Investigation of a death of an individual at a mine.
E07	Non-Fatal Accident Investigation	Investigation of a serious non-fatal injury accident at a mine.
E08	Non-Injury Accident Investigation	Investigation of non-injury accidents as defined in 30 CFR, Part 50.2
E09	Mine Emergency Operations	Includes all rescue and recovery operations during a mine emergency. No citations or orders should be issued against this type of activity. Also, includes time monitoring the mine environment during mine fires determined to be mine emergencies.
E10	Petition for Modification Investigation	All investigative activities conducted pursuant to 101 (c) and 101 (d) of the Act.
E11	105(c) Investigation (Discrimination)	All investigative activities conducted pursuant to 105 (c) of the Act where a complaint of discrimination is alleged.
E12	110(c), 110(d) Investigation (Willful or Knowing Violations)	All investigative activities conducted pursuant to 110 of the Act regarding citations and orders where there is possible knowing and willful intent.
E13 <i>(Coal Only)</i>	Re-opening Inspection	This is a non-penalty inspection of an entire mine after having been abandoned or declared inactive. This code is restricted to Coal Mine program area use only.
E14 <i>(Metal Only)</i>	Compliance Assistance Visit	A visit to a new mine, a visit prior to re-opening a mine, a visit to inspect new facilities at an operating mine, or the installation of new equipment at an operating mine to point out potential violations without monetary civil penalties being proposed.
E15	Compliance Follow-up Inspection	An inspection conducted for the primary purpose of ascertaining the abatement status of previously cited violations.
E16	Spot Inspection	The inspection of a mine or part(s) of a mine to determine whether there is compliance with safety and health standards
E17	Special Emphasis Programs	Activity for a specialized purpose that may be unique for the agency, coal or metal. An example would be the "Focus on Safe Work" outreach.

MSIS Code	Activity	Description
		Each activity may be assigned a unique identifier.
E18	Shaft, Slope or Major Construction Spot Inspection	An inspection of a shaft, slope, or major construction site to determine whether an imminent danger exists and whether there is compliance with safety and health standards or any issued violations.
E19	Electrical Technical Investigation	An investigation of all or part of a mine's electrical components and systems. Includes field changes on electrical face equipment, trolley surveys, circuit breaker studies, ground monitor checks and other special electrical inspections/investigations.
E20	Roof Control Technical Investigation	An investigation of a mine's roof conditions that may include engineering and in-depth studies of roof problems or potential problems, roof control surveys, and pull tests.
E21	Ventilation Technical Investigation	An investigation of a mine's ventilation system that may include detailed engineering studies of current or potential problems, surveys, and waiver requests.
E22	Health Technical Investigation	Includes a toxic substance or harmful physical agent investigation of a reported problem or potential problem with any toxic substance or harmful physical agent. An investigation of an operator's sampling program where samples may or may not be collected and investigations of Part 90 miners and their occupations (Coal). Includes free silica technical investigations dictating additional respirable dust samples for further analysis.
E23	Impoundment Spot Inspection	An inspection of an impoundment to determine whether an imminent danger exists and whether there is compliance with approved plans and safety and health standards.
E24	Other Technical Compliance Investigations	Other technical investigations not described by any other code.
E25	Part 50 Audit	Part 50 Audit of a mine's accident, injury, illness, and employment records. Includes all activity in pursuit of the audit.
E26	Other Contacts	Includes industry assistance, technical assistance visits for plan evaluations, and other contacts not classified by one of the other codes. Although this is a visit to a mine, these are <i>not</i> mine inspections or investigations.
E27	Attempted Inspection (Denial of Entry)	A mine visit specifically for the purpose of conducting an enforcement activity, but the activity could not be accomplished because of direct or indirect denial of entry.
E28	Mine Idle Activity	A mine visit specifically for the purpose of conducting an enforcement activity, but the activity could not be accomplished because the mine was not operating.
E29	Program in Accident Reduction/Compliance Analysis Program	A program aimed at injury reduction in selected mines with high accident and injury levels. This includes accident reduction surveys conducted by teams. In Coal, includes all time working in a non-AR capacity.
E30	Accident Reduction Program	All activities in the field related to the accident reduction and prevention programs, and formal walk and talk activities. These are activities not conducted as part of any other event.
E31	Training Plan Approval and Revisions (Field)	All field activities regarding the initial approval or revision of training plans.

MSIS Code	Activity	Description
E32	On-site Training Program Evaluation (Field)	All field activities related to evaluating MSHA approved instructors, training plans, course content, task outline, 5000-23 forms, records of certified and qualified persons, learning environment, etc., not conducted as part of another event.
E33	Non-Chargeable Accident Investigation	Investigation of any death, serious non-fatal injury, or non-injury accident at a mine that is not charged to the mine, contractor, or the mining industry. NOTE: If the accident is subsequently deemed chargeable, the activity may be changed to another event type. Issuances can be issued during an E33 event.
T01	Investigative Case Review	Time spent in an MSHA office reviewing reports of investigations.
T02 <i>(Coal only)</i>	Office Generated Violation Activity	All time associated with office generated violations not coded under another code.
T03	Legal Hearing/Document	Time involved in legal hearings, MSHA hearings, or testifying in court, including the prep time for these activities unless covered by another activity code. Does not include time spent by the CLR's.
T04	Safety and Health Conference	All time spent on operator / miners' representative requested conferences related to cited violations of the Act or regulations and the subsequent assessment of civil penalties. These are not inspectors' closeout conferences.
T05	Contested Case Activities	All CLR activities (office, mine site, hearings, etc.) relating to ACRI case resolutions.
T06	Plan Approvals and Reviews	Time spent in an MSHA office reviewing and approving plans
T07	Technical Assistance to Industry/Union Personnel or Interested Parties	All time associated with providing technical assistance to company or union personnel or other interested parties. This includes groups requiring our technical expertise but that are not specifically under MSHA jurisdiction.
T08	Instructor Approval	All activities, other than training instructors, required to produce approved instructors.
T09	Evaluating Cooperative Instructors	All time evaluating cooperative instructors in the office or field.
T10	Qualification and Certification	All activities related to qualifying and certifying people. Includes noise, dust, methane, oxygen deficiency, impoundments, electrical, mine rescue and first aid instructors, and so forth.
T11	Holmes Safety Association (Assistance to Chapters/Councils)	All activities of HSA chapters. Include all time spent in forming and operating HSA chapters or councils, preparing for and making presentations at meetings, and time involving Joseph A. Holmes Awards.
T12	State Grants Assistance and State Plans	Includes time spent attending State Grants meetings, as well as meetings with state and headquarters personnel regarding State Grant assistance and plans.
T13	Other Education and	Includes work on accident reduction and prevention programs that are not

MSIS Code	Activity	Description
	Training Field Activities	mine specific, as well as other activities providing assistance to the mining community that are not coded as an education and training event or that are not covered by another activity code. These activities are at locations other than the MSHA office.
T14	Informational Meetings, Seminars, and Training Classes Given to Industry	All activities relating to training, demonstrations, meetings, seminars, conferences, association meetings and informational meetings for industry (off-site meetings, excluding Holmes Safety).
T15	Instructing Mine Rescue and First Aid (non-MSHA)	All activities, excluding mine-rescue and first-aid-instructor training, related to mine rescue and first aid training, including team training, judges training, and so forth.
T16	Supervisory Duties (Office)	All supervisory-related duties in an MSHA Office.
T17	National Committee Meetings and Assignments	Includes time spent attending committee meetings at the national level and assignments from headquarters, such as the development or revision of standards and /or regulations.
T18	Review of Documents/Laboratory Duties / Vehicle Maintenance	Time spent reviewing such documents as regulations, policy, accident investigations, conducting laboratory duties (not associated with an event), and vehicle maintenance.
T19	Official Union Duties	Personnel participating in official union duties.
T20	Staff Meetings	Personnel participating in staff or safety meetings in or outside MSHA offices.
T21	Instructing MSHA Personnel in Training Classes	Time of MSHA personnel instructing classes, in information meetings, seminars, and so forth.
T22	Informational Meetings, Seminars and Training Classes Received	Personnel receiving training other than Mine Rescue and First Aid from both MSHA and outside sources.
T23	Mine Rescue/MERD Activities	Includes time spent training and preparing for or participating in the National or regional contests. Also includes time spent preparing for or participating in MERD exercises.
T24	FOIA Request/Congressional Inquiries	Includes all time spent researching and responding to the request.
T25	Medical Accommodation -- On- the-Job Injury	Include all time charged by the individuals who were injured or incapacitated on the job and who are performing meaningful work for MSHA in a capacity that meets their physician's prescribed limitations or restrictions. These assignments must be of limited duration.
T26	Medical Accommodation— Personal Injury	Include all time charged by the individuals who were injured or incapacitated outside of Government time and who are performing meaningful work for MSHA in a capacity that meets their physician's prescribed limitations or restrictions. These assignments must be of limited duration.
T27	Special and Miscellaneous Assignments	Duties of a temporary nature outside of regularly assigned job-related duties and any other activity not covered by other codes.

MSIS Code	Activity	Description
T28	Annual Leave	Self explanatory
T29	Administrative Leave	Self explanatory
T30	Compensatory Leave	Self explanatory
T31	Holiday	Self explanatory
T32	LWOP	Leave Without Pay
T33	AWOL	Absent Without Leave
T34	Military Leave	Self explanatory
T35	Sick Leave	Self explanatory
T36	OWCP	Worker's Compensation
T37	Jury Duty	Self explanatory
T38	Furlough (non-pay status)	Self explanatory
T39	Suspension Without Pay	Self explanatory

New Enforcement Task Codes

Task Code	Task Title
I	General I nspection Activity
S	S upervisory Duties (Field)
T	Inspector T rainee
R	R oof Control (on-site and plans)(Specialists only)
V	V entilation (on-site and plans)(Specialists only)
H	H ealth (on-site and plans)(Specialists only)
W	Impoundments / W aste Piles (on-site and plans)(Specialists only)
E	E lectrical (on-site)
L	Hau L age Technical (special activities; does not include routine checks)
C	Self- C ontained Self-Rescuers Evaluation (Field)
U	Ed U cation and Training (including walk & talk activities)
A	Compliance A ssistance
D	Respirable D ust Sampling
N	N oise Sampling
Y	Industrial H Y giene
M	Diesel E M issions Work (does not include routine gas checks and ventilations checks)
Z	Ha Z ard Communication



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Coal Mine Safety and Health
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Coal Mine Safety and Health Supervisor's Handbook

Preface

This handbook establishes general procedures and guidance for supervisors but does not address all supervisory duties and responsibilities. The supervisor should meet with the appropriate Assistant District Manager to have his/her duties and responsibilities explained in more detail when necessary.

Previously issued procedural and administrative instructions for this subject material are superseded by this handbook. Compliance instructions that are contained in the MSHA Program Policy Manual are not superseded by this handbook.

Kevin G. Stricklin
Administrator for
Coal Mine Safety and Health

Date

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Chapter 1 - Supervisory Oversight of Inspector and Specialist Activities**I. Purpose**

The Federal Mine Safety and Health Act of 1977, as amended, establishes requirements to improve the safety and health of miners. As part of this mandate, Coal Mine Safety and Health (CMS&H) conducts inspections and investigations of coal mines each year. The primary purpose of these inspections is to determine the existence of imminent dangers and to evaluate operator/contractor compliance with mandatory safety and health standards. Agency policies and procedures for conducting these mandated activities are contained in the Program Policy Manual, the *Coal Mine Safety and Health General Inspection Procedures Handbook*, and all other handbooks relevant to CMS&H. Inspections and investigations conducted by CMS&H personnel must comply with these policies and procedures.

II. Authority

Section 110 of Chapter 100 of Volume I of the Administrative Policy and Procedures Manual (APPM) requires that the Administrator for CMS&H provide direction and leadership in the administration of nationwide coal mine safety and health inspection programs. This section also requires the Administrator to develop criteria and methods for ensuring compliance with coal mine safety and health standards. In addition, Chapter 100 of Volume II of the APPM requires that the Administrator develop directives that concern the functional responsibilities of CMS&H.

III. General Oversight Responsibility

To ensure that inspections and investigations are conducted according to MSHA policies and procedures, CMS&H supervisors must review the work performed by their inspectors and specialists. This is accomplished through reviews of all inspection work products and reports for completeness and thoroughness. The supervisor must also accompany inspectors and specialists on mine visits to observe the quality of inspections and investigations. The supervisor must also review the Inspection Tracking System (ITS) for E01 activities. Any deficiencies identified by the supervisor and the corrective actions taken shall be documented by the supervisor.

The supervisor, the Assistant District Manager (ADM), and the District Manager (DM) shall use this handbook as a guideline to ensure work products and field activities are complete and thorough and to provide managerial oversight.

IV. Reviewing Inspection Work Products

The supervisor shall review all inspection reports and work products generated by inspectors and specialists related to an assigned field activity (E01, E02, E03, E16, etc.).

A. Purposes for Reviewing Work Products

The purposes for reviewing work products are:

1. To determine whether inspectors and specialists are properly enforcing the Mine Act, standards, regulations, approved plans, variances, waivers, and petitions for modification;
2. To determine whether inspectors and specialists are documenting their activities in accordance with MSHA policies and procedures; and
3. To determine whether the inspection events were complete and thorough and conducted in accordance with MSHA policies and procedures. The supervisor will accomplish this by using these guidelines and through discussions with the inspectors or specialists. The ITS will be used where applicable.

B. Review of Work Products

The supervisor will review all work products for the inspection event. He/she will review the notes and date and initial the daily cover sheet to indicate that the notes have been reviewed. Each enforcement action shall be reviewed and initialed by the supervisor.

To promote consistency and to develop a more knowledgeable inspectorate, supervisory reviews of work products must be conducted in a timely manner with constructive feedback provided to the inspector or specialist. While reviewing work products, the supervisor will look for inconsistencies between the notes and enforcement actions. Information related to documentation and enforcement action requirements can be found in the *Coal Mine Safety and Health General Inspection Procedures Handbook* and in the *Citation and Order Writing Handbook*.

Inspectors and specialists must provide sufficient information to justify issuance of an enforcement action, including their evaluations. Inspection notes should be amended if sufficient factual information related to enforcement actions and the inspector's or specialist's evaluations are not provided. A subsequent action to modify an enforcement action should be issued if the supervisor determines that the proper level of enforcement was not taken or that the level of enforcement cannot be substantiated by facts. A

list of procedural steps and considerations for supervisory reviews of enforcement actions and related documentations is provided in [Chapter 2](#) of this handbook.

If a second subsequent action is issued to extend the termination due date and time (extension) of a citation, a copy of the second extension shall be provided to the appropriate ADM. The ADM shall review the extension to assure that the inspector or specialist properly considered the health and safety of miners and the actions taken by the operator or contractor to correct the cited condition or practice. If the ADM feels the extension may not have been properly justified, he/she should discuss it with the inspector or specialist and/or the supervisor. After discussing the issue, the issuing inspector or specialist and the supervisor must be provided with guidance as to why the extension should not have been issued if the ADM determines that the extension was not properly justified.

As part of work product reviews, supervisors should, where practicable, periodically review available inspection tracking maps to assure all appropriate areas are being inspected and that inspection notes are in agreement with the map. Upon completion of the E01, the supervisor shall date and initial the tracking map and include it with the final E01 inspection report.

C. Uniform Mine File (UMF) Review

The supervisor will determine whether the inspector or specialist reviewed the mine's UMF and provided appropriate certification in accordance with the *Coal Uniform Mine File Procedures Handbook*. Additional duties and responsibilities of field office and specialist supervisors related to reviewing, certifying, and maintenance of the UMF are provided in the *Coal Uniform Mine File Procedures Handbook*.

D. Samples and Tests

The supervisor must determine whether the samples, tests, and/or measurements required for each inspection were collected and properly documented. Sampling and documentation requirements are specified in the *Coal Mine Safety and Health General Inspection Procedures Handbook*.

E. Accomplishments

The supervisor shall identify extraordinary efforts or accomplishments of the inspector or specialist.

F. Corrective Actions

When reviewing work products, the supervisor must take appropriate corrective actions when deficiencies related to the thoroughness and completeness of the inspection are identified. Some actions require a discussion with the inspector or specialist to remind him/her of procedural requirements. Necessary corrective actions should be timely and documented within 5 working days of identification. If the inspector or specialist and/or the supervisor are not available during this time, then corrective action should be taken as soon as the parties are available.

G. Debriefings

Any extraordinary efforts, accomplishments, misconduct, or deficiencies identified while reviewing work products must be discussed with the inspector or specialist and documented.

V. Use of Enforcement Tools

The supervisor will determine whether the enforcement tools available to the inspector or specialist were properly used and whether the level of enforcement is appropriate for the compliance behavior of the operator and conditions in the mine. The evaluation will be based on a review of the citations/orders issued, the inspection notes, Possible Knowing/Willful Violation Review Forms, Special Assessment Review Forms, and any other related documents.

While reviewing work products for an inspection activity, the supervisor should be mindful of the number and types of citations/orders being issued during the inspection. The ADM should be consulted if the supervisor feels there are increasing compliance issues at the mine. Following this consultation, the ADM should discuss the issues with the DM if he/she feels that additional action is warranted. If the DM agrees with the ADM's assessment, the DM should contact the mine operator to discuss compliance concerns and the mine operator's corrective actions.

If the DM is not satisfied with the mine operator's response regarding compliance concerns and corrective actions, he/she, in consultation with the ADM and the supervisor, will determine methods to address the concerns identified by the supervisor. The methods may include, but are not limited to, impact inspections, involvement of Educational Field Services (EFS), involvement of Technical Support, requiring revisions to applicable approved plans, and increased inspector presence.

When inspectors encounter conditions or situations where specialist help is needed, the inspector should request assistance and his/her supervisor should discuss the issues with the specialist supervisor to determine the expertise

needed. The DM and appropriate ADM shall be involved if Technical Support or EFS is needed.

VI. Supervisory E01 Certification

The supervisor responsible for E01 inspections at the mine shall review each page of the Inspection Tracking System (ITS) documentation. The supervisor shall certify his/her review of the ITS documentation by dating and initialing in the bottom margin area of the front page. Additionally, the **First-Line Supervisor E01 Certification** shall be completed by the supervisor (*see the following page or see the Coal Mine Safety and Health General Inspection Procedures Handbook*). This certification shall be filed and maintained with the inspection report. Supervisory certification must also be entered into the MSIS event screen for the inspection to be counted in the completion rate.

If it is determined that an E01 was not properly completed after the event has been closed, an E16 spot inspection event shall be opened and the necessary inspection activities to complete the E01 shall be conducted. The E16 event will be closed after the necessary inspection activities have been conducted and will be part of the corresponding E01 inspection report.

First-Line Supervisor E01 Certification

I certify that to the best of my knowledge and belief this inspection is thorough, based on a review of the information provided for Event No. _____ and through discussions with inspector(s). If it is determined that there are inspection deficiencies, the event will be reopened and corrective actions taken prior to counting this inspection event complete for the official count of completed statutory E01 inspections at the end of the fiscal year.

Supervisor's Signature: _____ Date: _____

Note: This certification should be filed and maintained with the inspection report.

VII. Rotation of Inspectors**A. Inspection Supervisors**

1. Inspection supervisors shall rotate mine assignments among inspectors within a field office on a periodic basis. If permitted by the number of inspection personnel assigned to the office, mine assignments should be rotated at least annually. The appropriate ADM should be consulted if periodic rotation cannot be accomplished.
2. Inspection supervisors will maintain a list of all mines assigned to their work group with the names of the persons who conducted E01 inspections at each mine and E02 inspections at each mine in Section 103(i) status. If a specialist work group is assigned to conduct E02 inspections at a mine, it is sufficient for the inspection supervisor's list to indicate as much. This list should cover at least two years. The list must include both active and temporarily idled mines. The E02 inspection tracking calendar (discussed below) may be used for the list.
3. If inspectors are assigned to conduct six-month plan reviews at non-complex mines, the names of those to conduct the reviews shall be forwarded to the appropriate specialist supervisor at the start of each quarter.

B. Specialist Supervisors

1. If practical, considering the number of specialists assigned to the group and logistics, specialist supervisors should periodically rotate their specialist's mine assignments.
2. Specialist supervisors will maintain a list of all mine assignments for the six-month reviews conducted by their work group specialists and, if applicable, by inspectors at non-complex mines. The list should cover at least two years and must include both active and temporarily idled mines.
3. If a specialist work group has been assigned to conduct E02 inspections, the specialist supervisor will maintain a list of those who conducted the inspections at each mine in Section 103(i) status. This list should cover at least two years. The E02 inspection tracking calendar (discussed below) may be used for this list.

VIII. E02 (Section 103(i) Spot) Inspections

A calendar for tracking E02 inspections at mines in Section 103(i) status shall be established. The supervisor responsible for assuring that required E02 inspections are being conducted will be responsible for assuring that the calendar is maintained up-to-date. The calendar should, at a minimum, show the mines where E02 inspections were conducted, the persons who conducted the E02 inspections, event numbers, the dates of inspections, the shifts, and the areas inspected.

A full inspection shift should be dedicated to a Section 103(i) spot inspection. This means that a "normal" or standard inspection shift (a minimum of 8 hours), including travel and related inspection activities, will suffice to meet the requirement. Thereafter, other inspection duties, primarily E01 activity, may be conducted at the same mine or at another mine.

E02 inspection activities shall pertain to the specific reason the mine was selected for a Section 103(i) inspection. For example, if a mine is included because it liberates excessive quantities of methane, Section 103(i) inspections should focus on mining activities, bleeders, returns, and seals. If an evaluation of an active section takes less than a standard inspection shift, the remainder of that day should be spent in the bleeder entries, returns, or evaluating seals. Seals under construction may also be inspected during an E02 inspection. Seals that are constructed as part of an approved spontaneous combustion plan that are accessible, such as those outby the face on a longwall tailgate or inby the face on the longwall headgate, may also be inspected during an E02 inspection.

ADMs shall monitor Section 103(i) inspections to ensure that they are being conducted as required. Supervisors shall ensure that a minimum of eight hours, including travel and related inspection activities, are being dedicated to the E02 inspections conducted by their inspectors or specialists.

Designations for Section 103(i) spot inspection status shall not be delayed until the start of a new underground mine inspection quarter. Supervisors must assure that 5-day Section 103(i) spot inspection designations are made immediately after it has been determined that any coal mine liberates more than one-million cubic feet of methane per 24 hours. The information related to methane liberation and Section 103(i) spot status must be updated on form 2000-209 and entered into the MSIS within 3 days of the District receiving the information.

At mines where Section 103(i) spot inspections are required due to methane liberation, total methane liberation bottle samples should be collected and submitted early in the inspection quarter as indicated in the *Coal Mine Safety and*

Health General Inspection Procedures Handbook. This allows necessary adjustments to be made to the Section 103(i) status of a mine in a timely manner. To the extent possible, total methane liberation bottle samples should be collected during normal production shifts so that the results will be representative of liberation during mining.

IX. Supervisory Mine Visits

Each underground supervisory mine visit, as discussed below, should include observations of conditions and include a portion of the belt entries. The tracking sheets for the mine visits for each district are located at <W:\COAL\Specproj\Mine Visits and Accompanied Supervisory Managerial Activities>. For underground mine visits, the remarks required to be entered on the tracking sheets shall include specific locations traveled to, identifying conveyor belts inspected, and the number of rockdust samples collected. Meetings and conferences do not constitute a mine visit and will not be counted as a mine visit. The supervisor will review the work products generated by the inspectors and specialists under his/her supervision during a supervisory mine visit activity.

The DM, or designee, shall review mine visit tracking sheets quarterly to assure that required mine visits are being conducted and documented by supervisory/managerial personnel. Notification should be provided to those who are not on track to complete their required mine visits.

The DM may reduce the number of required mine visits due to resource management or for circumstances that necessitate increased supervisory/management presence at a mine, or at multiple mines, for mine emergencies, helping with inspections or investigations, etc. Written correspondence (memo or e-mail) should be provided to the affected personnel if the DM reduces the number of required mine visits. This correspondence should include the expected number of mine visits to be made by the affected personnel.

A. Mine Visit Requirements (Underground)

Each active underground mine in producing status in the district should be visited by either district management or a supervisor at least one time per fiscal year. At an underground mine, a supervisor traveling with an inspector or specialist should spend sufficient time in active underground working areas (working sections), and/or outby areas (such as seals, travelways, roadways, track and belt conveyor entries, returns, bleeders, etc.), where problem conditions may exist. Mine visits at underground mines in producing status are to be conducted according to the following schedule:

District Managers (DM) - an average of 1 mine visit per month to assess the level of enforcement at problematic mines.

Assistant District Managers (ADM), Enforcement - an average of 6 mine visits per quarter. The ADM will ensure they travel with each supervisor under their direct supervision or with an inspector from the affected supervisor's work group at least 2 times per fiscal year. While inspector accompaniment is acceptable, to the extent possible, the travel should be conducted with the supervisor rather than the inspector. This allows for ADM oversight in ensuring the accuracy of inspection reports and enables the managers to interact with supervisors in determining the supervisor's strengths or areas for development and/or improvement.

Assistant District Managers (ADM), Technical - an average of 4 mine visits per quarter. The ADM will ensure they travel with each supervisor under their direct supervision or with a specialist/inspector from the affected supervisor's work group at least one time per fiscal year.

Assistant District Managers (ADM), Combined Enforcement/Technical: In districts where there is only one ADM, he/she will conduct an average of 5 mine visits per quarter. Three of these visits will be conducted with a Field Office Supervisor or an inspector from the affected supervisor's work group, and the remaining 2 visits will be conducted with a District Specialist Supervisor or a specialist/inspector from the affected supervisor's work group. The ADM will ensure they travel with each supervisor under their direct supervision or a specialist/inspector from the affected supervisor's work group at least 3 times per fiscal year. While inspector accompaniment is acceptable, to the extent possible, the travel should be conducted with the supervisor rather than the inspector.

Staff Assistants, Conference & Litigation Representatives (CLRs), and Supervisory Special Investigators (SSIs) should visit a mine an average of at least once per month. These visits should be part of an E-code inspection.

Field Office and District Specialist Supervisors - The Field Office Supervisor will conduct an average of 9 mine visits per quarter. The District Specialist Supervisor will conduct an average of 5 mine visits per quarter. The mine visits may be accomplished during accompanied activities or during the performance of on-site inspection activities. The Health Supervisor shall observe 2 respirable dust surveys in their entirety per fiscal year as part of their required number of mine visits.

During mine visits, the supervisor, together with the inspector or specialist, should conduct a limited review of the operator's most recent examination records pertinent to the planned inspection activity for that day. The supervisor will ensure that the inspector or specialist considers the information in the examination records when making determinations related to enforcement actions.

B. Mine Visit Requirements (Surface)

There is no specific schedule for surface mine visits other than those necessary for supervisors to conduct required accompanied activity (AA) reviews with surface inspectors. Additional surface mine visits are at the discretion of the supervisor or district management.

At a surface mine, a supervisor traveling with an inspector or specialist should spend sufficient time in the active working areas (pit areas, surface facilities) observing the inspection of highwalls, equipment, haul roads, record books, impoundments, refuse piles, etc. The supervisor should also review pertinent examination records along with the inspector or specialist. The supervisor will ensure that the inspector or specialist considers the information in the examination records when making determinations related to enforcement actions.

C. Purposes of Supervisory Mine Visits and Accompanied Activities

The purposes of the supervisory mine visit and accompanied activities are to:

1. Determine whether inspectors and specialists are conducting their inspection activities in accordance with MSHA policies and procedures;
2. Determine whether inspectors and specialists are properly enforcing the Mine Act, standards, regulations, approved plans, variances, waivers, and petitions for modification;
3. Determine whether the level of enforcement is consistent with the conditions and practices in the mine and the compliance history of the operator;
4. Determine whether inspectors and specialists are clearly communicating their findings to mine operators and miners' representatives;
5. Determine whether approved plans, education and training activities, etc., are adequate for the areas and equipment inspected during the mine visit; and

6. Provide the supervisor a first-hand look at the condition of the mine and work practices.

NOTE: The supervisor should place emphasis on observing how the inspector or specialist is conducting the inspection.

D. Inspection Equipment

The supervisor will check the inspector's or specialist's inspection equipment to determine its operational condition, whether applicable equipment has been properly calibrated, and if equipment is used and/or worn properly.

E. Use of Inspector Resources

The supervisor will ensure that the inspector's or specialist's Program Policy Manual, directives, and inspection handbooks are appropriately considered and utilized during inspection activity.

F. Accomplishments

The supervisor will identify extraordinary efforts or accomplishments of the inspector or specialist.

G. Corrective Actions

The supervisor will take appropriate corrective actions for deficiencies identified during the review regarding the inspector's performance during the activity. Some actions require a discussion with the inspector or specialist to remind him/her of procedural requirements. Necessary corrective actions will be taken timely and will be documented within 5 working days of identification. If the inspector or specialist and/or supervisor are not available during this time, then corrective action should be taken as soon as the parties are available.

H. Debriefings

Any extraordinary efforts, accomplishments, misconduct, or deficiencies identified during the mine visit should be discussed with the inspector or specialist and documented.

X. Documentation of Supervisory Activity Reviews

A. Supervisory Field Activity Review (FAR)

A Supervisory FAR is a thorough review of the inspector's or specialist's work products (notes, reports, enforcement actions, diagrams, maps, etc.) for a completed inspection.

1. The supervisor must document at least one FAR conducted on a completed inspection assignment for each of his/her inspectors and specialists during the first half and during the second half of each fiscal year. The FAR must be on an E-code event, such as an E01, E02, E03, E16, etc. At least one FAR per fiscal year half should be conducted on a complete E01 inspection. At least one FAR per fiscal year half should be conducted on an E02 inspection if the work group has mines in Section 103(i) status.
 2. The supervisor shall document his/her observations related to the completeness of the work product. The supervisor shall document accomplishments and deficiencies identified and any corrective action taken. Each completed [Supervisory FAR Documentation Form](#) (see Chapter 3) shall be provided to the appropriate 2nd level reviewer (ADM) within 30 days of the activity close date. A copy of the FAR shall be maintained by the supervisor for at least 3 years. The Supervisory FAR Documentation Form completed by the supervisor will suffice as the documentation and supervisory notes for the review.
- B. Supervisory Accompanied Activity (AA) Review
- A Supervisory AA Review is conducted while traveling with the inspector or specialist at the mine.
1. Supervisors shall document an AA with each of their inspectors and specialists at least twice during the first half and at least twice during the second half of each fiscal year. The AA review may be on one or more assigned field activities, such as E01, E02, E03, E16, etc. At least one AA review per fiscal year half should be conducted on an E02 inspection if the work group has mines in Section 103(i) status.
 2. For the AA review, the supervisor shall document his/her observations related to the inspector's or specialist's actions. The emphasis should be on how the inspector or specialist conducted the inspection. The supervisor must document accomplishments and deficiencies identified and any corrective action taken and when it was taken. Each completed [Supervisory AA Review Documentation Form](#) (see Chapter 3) shall be provided to the appropriate 2nd level reviewer (ADM) within 30 days of the accompaniment. A copy of the AA review shall be maintained by the supervisor for at least 3 years. The Supervisory AA Documentation Form completed by the supervisor will suffice as the documentation and supervisory notes for the review.

The DM may reduce the number of required FARs and/or AA reviews due to resource management or for circumstances that necessitate increased supervisory presence at a mine, or at multiple mines, for mine emergencies, helping with inspections or investigations, etc. Written correspondence (memo or e-mail) should be provided to the affected supervisor if the DM reduces the number of required FARs and/or AA reviews. This correspondence should include the expected number of FARs and/or AA reviews to be conducted by the affected supervisor.

C. Supervisory Combined FAR/AA Review

A supervisor may conduct a FAR in conjunction with an AA review and complete the combined FAR/AA documentation. This would satisfy the documentation requirements for one FAR and for one AA review for an inspector or specialist. Each completed [Supervisory Combined FAR/AA Review Documentation Form](#) (see Chapter 3) shall be provided to the appropriate 2nd Level Reviewer (ADM) within 30 days of the accompaniment and the activity close date. A copy of the AA review shall be maintained by the supervisor for at least 3 years. The Supervisory Combined FAR/AA Documentation Form completed by the supervisor will suffice as the documentation and supervisory notes for the combined reviews.

NOTE: Providing each completed supervisory review form to the ADM is for tracking completed supervisory FARs and AA reviews for each inspector and specialist, and to give the ADM an opportunity to select the FARs and AA reviews for conducting required 2nd Level Reviews. The ADM is not required to conduct a 2nd Level Review of each supervisory FAR and AA review. Once the ADM selects a FAR and/or AA review for conducting a 2nd Level Review, the remainder of the work products for the review must be provided to the ADM. Copies of completed forms do not have to be maintained by the ADM if a 2nd Level Review will not be conducted.

D. Tracking Supervisory FARs and AA Reviews

The Enforcement ADM and the Technical ADM, or designees, shall track the completion of supervisory FARs and AA reviews for inspectors and specialists, respectively, to ensure they are being conducted as required. Within the first two weeks of the start of the last quarter in a fiscal year half (January and July), the appropriate ADM (enforcement or technical) or designee shall provide a status update to their respective supervisors that lists the FARs and AA reviews due to be conducted by the end of the quarter.

XI. 2nd Level Reviews of Supervisory FARs and AA Reviews**A. Purposes of the 2nd Level Reviews**

Second-level managers (ADM's) will oversee the documented supervisory level FARs and AA reviews conducted by his/her supervisors. The ADM will also:

1. Determine whether supervisors are properly conducting and documenting reviews of inspector and specialist work products and activities;
2. Determine whether supervisory reviews are consistent with inspection reports;
3. Determine whether conducted activities adhere to MSHA policies and procedures;
4. Determine whether the proper level of enforcement is being used;
5. Determine whether supervisors are identifying any extraordinary efforts and accomplishments of their inspectors and specialists;
6. Determine whether supervisors are taking appropriate corrective actions for deficiencies they identify in their reviews; and
7. Identify any trends or deficiencies that should be addressed on a broader scale.

B. Conducting the 2nd Level Reviews

The ADM shall review at least one FAR and at least one AA review from each supervisor during the first half and during the second half of each fiscal year. The ADM shall review all work products including the appropriate notes, inspection reports, citations and orders, and any other work product that reflects the thoroughness and completeness of the activity reviewed. The ADM and supervisor may jointly conduct this review with the inspector or specialist if available. The supervisor's notes concerning the general condition of the mine and the adequacy of approved plans, education and training activities, etc., related to the areas and equipment inspected should also be included. The completed supervisory review documentation form may be used for these notes.

The ADM shall determine whether the supervisor properly conducted and documented the review. The ADM shall take appropriate corrective actions

for deficiencies identified during the review regarding the completeness and thoroughness of the event. Some actions require a discussion with the supervisor to remind him/her of procedural requirements. Necessary corrective actions will be taken timely and will be documented within 5 working days of identification. If the supervisor and/or ADM are not available during this time, then corrective action should be taken as soon as the parties are available.

Following completion of the review, the ADM shall meet with the supervisor. Any extraordinary efforts, accomplishments, misconduct, or deficiencies identified by the review are to be discussed with the supervisor and documented.

C. Documenting 2nd Level Reviews

1. The ADM shall document his/ her assessment of the supervisory level FARs and AA reviews on the applicable [2nd Level FAR Documentation Form](#), [2nd Level AA Review Documentation Form](#), or [2nd Level Combined FAR/AA Review Documentation Form](#) (see Chapter 4). The emphasis will be on the completeness and thoroughness of the event and how the supervisor conducted the review. The accomplishments and deficiencies identified will be included, along with any corrective action taken and when it was taken. Each documented 2nd Level Review shall be provided to the DM within 30 days of receipt of the FAR and/or AA review from the supervisor.
2. After the DM has completed his/her review, the DM shall meet with the ADM. Any extraordinary efforts, accomplishments, misconduct, or deficiencies identified by the review are to be discussed with the ADM and documented. The 2nd Level Review shall be returned to the ADM and maintained for at least 3 years. The applicable 2nd Level Review Documentation Form filled out by the ADM and signed by the DM will suffice as the documentation for the review.

D. Tracking 2nd Level Reviews

The DM, or designee, shall track the completion of 2nd Level reviews conducted by ADMs to ensure they are being conducted as required. Within the first two weeks of the start of the last quarter in a fiscal year half (January and July), the DM or designee shall provide a status update to the ADMs that lists the 2nd Level reviews due to be conducted by the end of the quarter.

XII. Performance Appraisals**A. Supervisors**

Supervisors shall hold their inspectors and specialists accountable under the performance management system. The accomplishments and/or deficiencies identified in the work product and activity reviews shall be used as a means of evaluating performance. However, they cannot be used as the sole means. The supervisor shall also identify positive and negative trends using key indicators and other available reports.

B. Assistant District Managers

ADMs shall hold their supervisors accountable under the performance management system. Some factors to be used when evaluating performance are listed below.

1. Properly conducting and documenting inspection work product reviews and accompanied activities;
2. Properly documenting the extraordinary efforts and accomplishments of their inspectors and specialists;
3. Taking appropriate corrective actions when the inspection activity reviews and accompanied activities identify deficiencies, and documenting them;
4. The completeness and thoroughness of the inspection activities;
5. The proper use of enforcement tools;
6. The completion of the required mine visits; and
7. The rotation of mine assignments among inspectors and specialists.

The ADM shall identify positive and negative trends using key indicators and other available reports.

C. District Managers

DMs shall hold ADMs accountable under the performance management system. The following are some of the factors, but not the only ones, to be used when evaluating performance:

1. Properly documenting the extraordinary efforts and accomplishments of the appropriate supervisor;

2. Taking appropriate corrective actions when deficiencies are identified;
3. The completeness and thoroughness of inspection activities;
4. The proper use of enforcement tools;
5. The completion of the required mine visits; and
6. Properly conducting the required 2nd Level Reviews.

The DM shall identify positive and negative trends using key indicators and other available reports.

XIII. Other Supervisory and District Management Related Duties

Some of the items below are covered in more detail in the *Coal Mine Safety and Health General Inspection Procedures Handbook* but are listed here for convenience.

A. Specialist Inspections

When specialists are assigned to conduct Regular (E01) Inspection activities, they should be assigned activities related to their particular area of expertise. The assignments should be made at the beginning of each inspection quarter to allow ample time for specialist inspection related activities to be conducted.

B. Six-month Ventilation and Roof Control Plan Reviews

The importance of completing the six-month plan reviews by specialists or inspectors cannot be overstated. It is of utmost importance that the plans receive six-month reviews to assure the plans are applicable to mining conditions, are accurate, and are up-to-date. Supervisors shall ensure that six-month plan reviews are conducted timely and in accordance with applicable Standard Operating Procedures (SOPs).

C. Diesel Inventory List

At the start of an E01 inspection, the responsible field office supervisor shall provide the most current diesel inventory list for the mine to the inspector responsible for conducting the inspection.

D. SCSR Inventory List

At the start of an E01 inspection, the responsible field office supervisor shall provide the most current SCSR inventory list for the mine to the inspector responsible for conducting the inspection.

E. Form 2000-22 (Mine Activity Data Form), Line 17

The supervisor should review Item 17 (Remarks) of all 2000-22 forms for noted deficiencies related to a mine operator's programs or plans, including, where applicable, SCSR Storage Plans, Clean-up Programs, and Ground Control Plans. Deficiencies noted in Item 17 should be forwarded to the District Office for the DM's review.

F. Emergency Response Plans (ERP)

Each Form 2000-223 completed to document the completion of a 6-month ERP review are to be filed with the ERP in the UMF and a copy sent to the DM. The DM must provide sufficient oversight to assure that the date of each review will be entered into the Mine Plan Approval (MPA) system.

G. Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF)

The inspector must complete the appropriate ATF forms related to surface explosives storage and use. All inspection results and all accidental or unintended detonations investigated by either MSHA or the mine operator must be reported to the appropriate ATF Regional Regulatory Administrator. All copies of ATF forms shall be forwarded to the DM who will retain a copy and forward copies to the appropriate ATF regional office. If the mine operator or contractor on mine property does not use or store explosives and has no licenses and permits for explosives, the ATF forms do not need to be filled out.

H. Advance Notice

The supervisor must inform the DM upon notification from an inspector that a citation for a violation of Section 103(a) of the Mine Act has been issued to an operator for giving advance notice. The DM shall contact Coal Headquarters regarding the issue. The DM, in consultation with the Technical Compliance and Investigation Office (TCIO) and the Office of the Solicitor, as appropriate, will evaluate each advance notice violation to determine whether the circumstances and evidence warrant an investigation under Section 110(e) and/or injunctive action under Section 108(a)(1) of the Mine Act.

XIV. Sources of Information and Useful Links

The [MSHA internet](#) and [MSHA intranet](#) sites provide a wealth of information and links to documents that can be used to assist inspectors, specialists, and supervisors. In addition to specifying inspection procedures and requirements, the [Coal Mine Safety and Health General Inspection Procedures Handbook](#) has numerous links to useful information, directives, and forms that are in the [Handbook-Master Folder](#).

Additional links are provided below. Many more can be accessed from the MSHA internet site, the MSHA intranet site, and the *Coal Mine Safety and Health General Inspection Procedures Handbook*. The links below are provided here for added convenience.

[Federal Mine Safety and Health Act of 1977 \(1977 Mine Act\)](#)
[Mine Improvement and New Emergency Response Act of 2006 \(MINER Act\)](#)
[Merged 1977 Mine Act and MINER Act \(Mine Act\)](#)
[Title 30 of the Code of Federal Regulations](#)
[Final Rules](#)
[Program Policy Manual](#)
[MSHA's Handbook Series](#)
[Compliance Guides](#)
[Pattern of Violations Single Source Page](#)
[Understanding the Assessment Process](#)
[Equipment, Health and Safety Alerts](#)
[DOL Supervisor's Toolbox Webpage](#)

XV. Supervisor's Time-Based Checklist

- A. Daily
 - 1. Review inspection work products
 - 2. Inspector uploads and ITS
 - 3. E-mails, voice mails, and messages

- B. Weekly
 - 1. Weekly timesheets
 - 2. Safety meeting
 - 3. Complaint investigations status
 - 4. Overdue citations status
 - 5. E02 inspections status and updates

- C. Bi-weekly
 - 1. Certify PeopleTime

- D. Monthly
 - 1. Key Indicator Reports
 - 2. Staff meeting
 - 3. Vehicle reports
 - 4. Union activity report
 - 5. E01 inspection progress

- E. Quarterly
 - 1. Complete underground mine E01 inspections
 - 2. MSHA personnel SCSR testing, training, and donning
 - 3. Safety meeting (headquarter notification required)

- F. Bi-annually (each 6-month period)
 - 1. Mid-term performance appraisals
 - 2. Complete and document a minimum of two AAs and one FAR for each inspector
 - 3. Complete surface mine and surface facility E01 inspections

- G. Annually
 - 1. Inspector noise surveys
 - 2. Inspector respirator fit-testing and training
 - 3. MSHA employee training (HazCom, Blood-borne Pathogens, Noise, etc.)
 - 4. Performance appraisal and rating
 - 5. UMF review and certification
 - 6. MSHA equipment inventory

Chapter 2 – Procedures for Supervisory Review of Work Products

The following items are procedural steps and considerations to facilitate supervisory reviews of enforcement actions and related documentation. The information presented is not intended to supersede instructions provided in current handbooks related to inspection procedures and to citation and order writing.

1. Issue Date and Time; Served To; Operator; Mine; Mine ID (Contractor ID); Type of Inspection; Event Number

- Is this information shown correctly on the enforcement action?

2. Facts to Establish a Violation

- Are sufficient facts documented to show that a violation did occur?
- For the standard cited, were all test criteria addressed in the *Condition or Practice* section of the citation/order?
- Was sufficient information provided to quantify the extent of the cited condition/practice?
- For a citation/order issued for a violation of an approved plan or permit, was sufficient information provided related to the requirements that were violated?
- For a citation/order issued for a violation of an approved plan or permit, was a copy of the related approval letter and pertinent pages included with the notes?
- If a citation/order is issued based on the results of an analysis report, is that report included with the inspection notes?
- Does the enforcement action clearly describe the nature of the violation in detail?

3. Location of a Violation or Hazard

- Does the *Condition or Practice* section of the enforcement action clearly indicate the location or equipment cited for abatement and termination purposes?

4. Section of the Mine Act or 30 CFR Violated

- Does the section cited, including appropriate subparagraph, correspond to the condition/practice cited?

5. Number of Persons Exposed

The number of persons exposed is the number of persons who are exposed to the hazards presented and contributed to by the cited condition/practice. The number of persons exposed is related to determining the likelihood of an injury or illness. The supervisor must make certain that the inspector or specialist does not confuse the number of persons exposed with the number of persons affected.

- Do the inspection notes indicate the number of persons exposed?
- Do the inspection notes contain factual information related to how the inspector made this determination?
- Did the inspector avoid confusing the number of persons exposed with the number of persons affected?

6. Likelihood

Factors to consider during an inspector's evaluation of likelihood include: the number of miners exposed to a condition or practice; the frequency and duration of exposure; the location and extensiveness of the condition or practice; and the length of time the condition or practice has existed (the longer a violative condition or practice has existed, along with exposure, increases the likelihood of an injury or illness).

- Do the inspection notes contain the facts upon which the inspector relied in making their evaluation of likelihood, including the number of persons exposed and the duration and frequency of exposure under normal continued mining practices?
- Did the inspector consider mine characteristics, such as methane liberation, geological conditions, accident history, and other physical factors, that would affect the likelihood?
- Is the inspector's evaluation of likelihood supported by the facts?

7. Severity of Injury or Illness

The inspector must not consider likelihood as a factor when evaluating the reasonably expected severity of an injury or illness (the anticipated event may be unlikely to occur, but an injury or illness received as a result of an accident due to the cited condition/practice may be serious in nature).

- Do the inspection notes contain factual information related to the inspector's evaluation of severity, including how this determination was made (industry history, personal knowledge, experience, etc.)?
- Is the inspector's evaluation of severity supported by the facts?

8. Number of Persons Affected

The number of persons affected is the number of persons who could reasonably be expected to receive an injury or illness should the anticipated event occur, or is the number who actually received an injury or illness because the anticipated event did occur and the likelihood is marked as "Occurred." The number of persons affected may or may not be the same as the number of persons exposed.

- Did the inspector consider the extent of the condition/practice when making their determination?

- Does the citation accurately indicate the number of persons affected?
- Did the inspector avoid confusing the number of persons affected with the number of persons exposed?

9. Negligence

The length of time a violative condition or practice has existed is a factor to consider when making a negligence evaluation. Examination records are a useful tool to help inspectors determine the length of time a violative condition or practice has existed, the extent of the condition or practice, and the mine officials who knew of the condition or practice. Repeated violations of the same standard must also be considered as this may warrant an elevated negligence determination. Any mitigating factors should also be documented in the notes. Actions taken by the mine operator after a violation has been observed and cited by the inspector do not mitigate the operator's negligence.

- Do the inspection notes contain documented facts to support the inspector's evaluation of negligence?
- Do the inspection notes include the title of the persons who knew, or had reason to know, that the violation existed and how this was evidenced?
- Is the length of time a violative condition or practice has existed, including the facts used to make this determination, documented in the inspection notes?
- Did the inspector consider the length of time a condition/practice has existed when making the negligence determination?
- Did the inspector consider repeated violations of the same standard?
- Did the inspector review and consider information in examination records?
- Are mitigating factors documented in the inspection notes?

10. Termination Due Date and Time

- Did the inspector establish the termination due date and time based on the health and safety of the miners rather than for the convenience of the operator or MSHA?

11. Extensions of the Due Date and Time

An extension establishes a new termination due date and time. Extensions must be based on the health and safety of the miners and actions taken by the operator to correct the cited condition/practice. District management and supervisors must ensure that inspectors are not extending the due dates and times without proper justification.

- Did the inspector properly consider the health and safety of miners and the actions taken by the operator when extending the due date and time?

12. Actions to Terminate

It is not sufficient to simply indicate that a condition/practice has been corrected when an enforcement action is terminated. The specific actions taken to correct a cited condition or practice must be documented in the termination. Factors such as the time involved, the number of miners utilized, etc., to correct a cited condition/practice can also help justify an inspector's evaluations.

- Were the actions taken by an operator to correct a cited condition/practice properly noted and indicated in the subsequent action?

13. Aggravated Conduct / Unwarrantable Failure Statement

A violation is caused by an unwarrantable failure if the operator has engaged in "aggravated conduct constituting more than ordinary negligence."

- Did the inspector document and address one or more of the factors for aggravated conduct when issuing the enforcement action?
- Do the inspection notes include the title and name of any supervisor, agent of the operator, or contractor who committed or allowed the condition/practice to exist?
- If an enforcement action was issued pursuant to Section 104(d) of the Mine Act, does it contain the statement, "This violation is an unwarrantable failure to comply with a mandatory standard."?

14. Area or Equipment

- Did the inspector properly consider the full extent of hazards presented and contributed to by the condition/practice when issuing an order pursuant to Section 104(d) of the Mine Act?

15. Vacating Citations and Orders

- Do the inspection notes and subsequent action include proper justification for vacating the citation/order?
- Were copies (separate from the inspection report) of the original citation/order, the subsequent action to vacate, and the related inspection notes provided to the DM?
- Was the subsequent action to vacate filed with the inspection report?
- Did both the inspector and the supervisor file, with the inspection report, notes which describe in detail the reasons and circumstances involved with vacating a citation/order (a supervisor may file a memo in lieu of notes)?
- If a Section 107(a) order is involved, was the DM's written approval provided and attached to the inspection report?

Chapter 3 – Supervisory FAR and AA Documentation

Instructions

During each half of the fiscal year (six-month intervals), at least one field activity review (FAR) must be conducted for each inspector and specialist who conducted inspections or performed investigative duties during that half of the fiscal year. At least one FAR per fiscal year half should be conducted on a complete E01 inspection. At least one FAR per fiscal year half should be conducted on an E02 inspection if the work group has mines in Section 103(i) status.

During each half of the fiscal year (six-month intervals), at least two accompanied activity (AA) reviews must be conducted with each inspector and specialist who conducted inspections or performed investigative duties during that half of the fiscal year. At least one AA review per fiscal year half should be conducted on an E02 inspection if the work group has mines in Section 103(i) status.

The DM may reduce the number of required FARs and/or AA reviews due to resource management or for circumstances that necessitate increased supervisory presence at a mine, or at multiple mines, for mine emergencies, helping with inspections or investigations, etc. Written correspondence (memo or e-mail) should be provided to the affected supervisor if the DM reduces the number of required FARs and/or AA reviews. This correspondence should include the expected number of FARs and/or AA reviews to be conducted by the affected supervisor.

The forms that follow may be used for documenting FARs and AA reviews. The forms are also available via a link under *CMS&H Supervisor Resources* on the [MSHA Intranet](#) site. To input data, left-click in the shaded area signifying a data input field and type the information. To place a mark in a Yes, No, or NA box, double-click on the desired box and click on the radio button next to "Checked" in the *Default value* portion of the pop-up menu and then click "OK". The supervisor may choose to print the forms and complete them by hand if the ADM does not object.

The supervisor will complete and sign the applicable review form and forward it to the 2nd level reviewer. If the ADM selects the documented review for 2nd Level Review, copies of the appropriate notes, inspection reports, citations and orders, and other inspection work products must be provided to the ADM. A copy of all reviews will be retained by the supervisor for a period of three years.

Supervisory FAR Documentation Form

Inspector/Specialist Reviewed: _____	
Fiscal Year: _____	Half (1 st or 2 nd): _____
Inspection Close Date:	
Mine Name:	Event Code:
Mine ID:	Event No.:
Supervisor:	Supervisory Review Date:

E02 Inspection Information

Complete this section if the event code for the FAR was E02, otherwise, move ahead to the **General Documentation** section.

1. Did the inspector or specialist conduct E02 inspection activities pertaining to the specific reason the mine was selected for Section 103(i) spot inspections?

☐ Yes / ☐ No

If **No**, list the reasons, corrective actions taken, and the dates: _____

2. If the mine is in Section 103(i) status due to methane liberation, was the E02 inspection focused on mining activities, bleeders, returns, and/or seals?

☐ Yes / ☐ No / ☐ NA-Section 103(i) status is not due to methane liberation

If **NA**, explain the reason for the mine being in Section 103(i) status: _____

If **No**, list the reasons, the locations where the E02 inspection was conducted, any applicable corrective actions taken, and the dates: _____

3. Is a calendar being maintained to track E02 inspections at mines in Section 103(i) status? ☐ Yes / ☐ No

If **No**, list the reasons, corrective actions taken, and the dates: _____

General Documentation

1. Did the inspector or specialist review and certify the Uniform Mine File (either electronic or hard copy) for this inspection activity?

☐ Yes (certification date: _____) / ☐ No

If **No**, list the corrective actions taken and the dates: _____

2. Was the supervisor's annual review certification of the Uniform Mine File (either electronic or hard copy) properly documented for the mine involved with this FAR? (May not apply to technical supervisor):
☐ **Yes** (certification date: _____) / ☐ **No** / ☐ **NA-not applicable**

If **No**, list the corrective actions taken and the dates: _____

3. Were the inspection reports, forms, and notes related to the areas and equipment inspected properly prepared, initialed, and dated by the inspector or specialist?
☐ **Yes** / ☐ **No**

If **No**, list the corrective actions taken and the dates: _____

4. Were the inspection reports, forms, and notes related to the areas and equipment inspected properly completed by the inspector or specialist in accordance with MSHA policies and procedures? ☐ **Yes** / ☐ **No**

If **No**, list the corrective actions taken and the dates: _____

5. Did the inspector or specialist properly document their review of examination records? ☐ **Yes** / ☐ **No**

If **No**, list the corrective actions taken and the dates: _____

6. Did the inspector or specialist properly document the collection of the specific samples and the results of the specific tests and measurements required for this inspection? ☐ **Yes** / ☐ **No** / ☐ **NA-none required**

If **No**, list the corrective actions taken and the dates: _____

Enforcement Actions

1. For this FAR, were any enforcement actions (*citations, orders, terminations, extensions, modifications, and/or subsequent actions to vacate*) issued?
☐ **Yes** / ☐ **No** (If **No**, move ahead to the **Supervisory Conclusions** section)
2. For each citation/order issued, did the inspector or specialist properly enforce the Mine Act, standards, regulations, approved plans, variances, waivers, and petitions for modification? ☐ **Yes** / ☐ **No** / ☐ **NA-none issued**

If **No**, list the corrective actions taken and the dates: _____

3. For each citation/order issued, was the proper level of enforcement taken?

☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the corrective actions taken and the dates: _____

4. For each citation/order issued, did the inspector or specialist document answers to and provide supporting facts for the following, when applicable, in their notes (*see current handbooks related to inspection procedures and to citation and order writing for more information*):

- mine characteristics that would affect the likelihood of occurrence;
- the number of persons exposed to the condition/practice;
- the type of injury or illness that could reasonably be expected;
- the number of persons who could reasonably be expected to be injured or become ill (number of persons affected) if the anticipated event were to occur, or the number of persons who were affected if the anticipated event occurred and likelihood was marked as "Occurred");
- the title of persons who knew, or had reason to know, that the violation existed;
- mitigating circumstances; and
- facts indicating the length of time that the violation existed?

☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the deficient areas, corrective actions taken, and the dates: _____

5. For each citation/order issued for a violation of approved plan criteria, did the inspector or specialist include a copy of the approval letter and the relevant approved plan pages with their notes?

☐Yes / ☐No / ☐NA-*none issued for violating approved plan criteria*

If **No**, list the corrective actions and the dates: _____

6. Did the inspector or specialist properly consider the health and safety of miners first when setting the termination due date and time for each citation issued?

☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the corrective actions taken and the dates: _____

7. For each citation/order that was terminated at the time the inspector or specialist completed the citation/order form, were the actions taken to abate the cited condition or practice properly documented? ☐Yes / ☐No / ☐NA-*not applicable*

If **No**, list the corrective actions taken and the dates: _____

8. For each subsequent action issued to terminate an outstanding citation/order, did the inspector or specialist properly document the actions taken to correct the cited condition or practice? ☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the corrective actions taken and the dates: _____

9. For each subsequent action issued to extend the termination due date and time for a previously issued citation, did the inspector or specialist properly consider the health and safety of miners and the actions taken by the operator to correct the condition/practice? ☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the corrective actions taken and the dates: _____

10. For each citation/order vacated, did the inspector or specialist document proper justification? ☐Yes / ☐No / ☐NA-*none vacated*

If **No**, list the corrective actions taken and the dates: _____

11. For each Section 104(d) citation/order issued, did the inspector or specialist address one or more of the factors for aggravated conduct?
☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the corrective actions and the dates: _____

12. For each Section 104(d) citation/order issued, did the inspector or specialist include the statement "This is an unwarrantable failure to comply with a mandatory standard" in the *Condition or Practice* section of each citation/order?
☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the corrective actions taken and the dates: _____

13. For each order issued, did the inspector or specialist properly consider the full extent of hazards presented and contributed to by the condition/practice when determining the *Area or Equipment* affected? ☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the corrective actions taken and the dates: _____

Supervisory Conclusions

1. Were any extraordinary efforts and/or accomplishments by the inspector or specialist identified during this FAR? ☐Yes / ☐No

If **Yes**, list the extraordinary efforts and/or accomplishments identified: _____

2. Were any weaknesses related to the performance of the inspector or specialist identified during this FAR? ☐ **Yes** / ☐ **No**

If **Yes**, list the weaknesses, corrective actions taken, and the dates: _____

3. To the best of your knowledge obtained through discussion with the inspector or specialist, reviewing work products, and, if applicable, the Inspection Tracking System (ITS) review, was a complete and thorough inspection conducted in accordance with MSHA policies and procedures? ☐ **Yes** / ☐ **No**

If **No**, list the corrective actions taken and the dates: _____

4. Was the inspector or specialist debriefed concerning the results of this FAR? ☐ **Yes** (debriefing date: _____) / ☐ **No**

If **No**, provide an explanation: _____

5. Additional comments related to this FAR: _____

Supervisor's Signature: _____ **Date:** _____

Supervisory AA Review Documentation Form

Inspector/Specialist Reviewed: _____	
Fiscal Year: _____	Half (1 st or 2 nd): _____
Accompaniment Date:	
Mine Name:	Event Code:
Mine ID:	Event No.:
Supervisor:	Supervisory Review Date:

E02 Inspection Information

Complete this section if the event code for the AA was E02, otherwise, move ahead to the **Areas Visited** section.

1. Did the inspector or specialist conduct E02 inspection activities pertaining to the specific reason the mine was selected for Section 103(i) spot inspections?

☐ Yes / ☐ No

If **No**, list the reasons, corrective actions taken, and the dates: _____

2. If the mine is in Section 103(i) status due to methane liberation, was the E02 inspection focused on mining activities, bleeders, returns, and/or seals?

☐ Yes / ☐ No / ☐ NA-Section 103(i) status is not due to methane liberation

If **NA**, explain the reason for the mine being in Section 103(i) status: _____

If **No**, list the reasons, the locations where the E02 inspection was conducted, any applicable corrective actions taken, and the dates: _____

3. Is a calendar being maintained to track E02 inspections at mines in Section 103(i) status? ☐ Yes / ☐ No

If **No**, list the reasons, corrective actions taken, and the dates: _____

Areas Visited

1. For an underground AA:

List the working sections visited by the supervisor: _____

List the portions of belt entries visited by the supervisor or otherwise provide the reasons for not visiting a portion of a belt entry: _____

List outby areas, other than portions of belt entries listed above, visited by the supervisor: _____

2. For a surface AA:

List the pits/production areas visited by the supervisor: _____

List other areas visited by the supervisor: _____

Examination Records

1. Did you accompany the inspector or specialist during their review of examination records? ☐Yes / ☐No

If **No**, provide an explanation: _____

2. Did the inspector or specialist thoroughly review the examination records?
☐Yes / ☐No / ☐NA-*did not observe (see above)*

If **No**, list the corrective actions taken and the dates: _____

3. Did the inspector or specialist review examination records that were pertinent to the areas inspected? ☐Yes / ☐No

If **No**, list the corrective actions taken and the dates: _____

Equipment and Usage

1. Did the inspector or specialist use appropriate personal protective equipment (PPE) during this AA? ☐Yes / ☐No

If **No**, list the corrective actions taken and the dates: _____

2. Were the instruments and tools used by the inspector or specialist during this AA within the appropriate calibration date (if applicable), properly tested prior to use (if applicable), and used properly during the inspection? ☐Yes / ☐No

If **No**, list the corrective actions taken and the dates: _____

3. Did the inspector or specialist collect the specific samples and perform the specific tests and measurements required for the areas and equipment inspected?

☐Yes / ☐No / ☐NA-*none required*

If **No**, list the corrective actions taken and the dates: _____

4. For an underground AA where rock dust samples were collected, did the inspector or specialist use the proper sample collection techniques?

☐Yes / ☐No / ☐NA-*surface AA or no samples collected*

If **No**, list the corrective actions taken and the dates: _____

Enforcement Actions

1. For this AA, were any citations/orders issued?

☐Yes / ☐No (If **No**, move ahead to the **Supervisory Observations** section)

2. Did the inspector or specialist properly consider examination records when issuing each citation/order? ☐Yes / ☐No

If **No**, list the corrective actions taken and the dates: _____

3. For each citation/order issued, did the inspector or specialist properly enforce the Mine Act, standards, regulations, approved plans, variances, waivers, and petitions for modification? ☐Yes / ☐No

If **No**, list the corrective actions taken and the dates: _____

4. For each citation/order issued, was the proper level of enforcement taken?

☐Yes / ☐No

If **No**, list the corrective actions taken and the dates: _____

5. For each order issued, did the inspector or specialist properly consider the full extent of hazards presented and contributed to by the condition/practice when determining the *Area or Equipment* affected? ☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the corrective actions taken and the dates: _____

6. Did the inspector or specialist clearly communicate findings related to citations/orders to the mine operator's and miners' representatives? ☐Yes / ☐No

If **No**, list the corrective actions taken and the dates: _____

Supervisory Observations

1. Provide a description of the mine conditions and work practices you observed during this AA: _____
2. During this AA, did you feel the approved plans, education and training activities, etc., relative to the areas and equipment inspected were adequate? ☐Yes / ☐No

If **No**, list each inadequacy, the corrective actions taken, and the dates: _____

Supervisory Conclusions

1. Were any extraordinary efforts and/or accomplishments by the inspector or specialist identified during this AA? ☐Yes / ☐No

If **Yes**, list the extraordinary efforts and/or accomplishments identified: _____

2. Were any weaknesses related to the performance of the inspector or specialist identified during this AA? ☐Yes / ☐No

If **Yes**, list the weaknesses, corrective actions taken, and the dates: _____

3. Did you identify any trends or deficiencies that should be addressed on a broader scale? ☐Yes / ☐No

If **Yes**, list the trends or deficiencies, corrective actions taken, and the dates: _____

4. For this AA, did the inspector or specialist conduct a complete and thorough inspection in accordance with MSHA policies and procedures? ☐Yes / ☐No

If **No**, list the corrective actions taken and the dates: _____

5. Was the inspector or specialist debriefed concerning the results of this AA?
☐Yes (debriefing date: _____) / ☐No

If **No**, provide an explanation: _____

6. Additional comments related to this AA: _____

Supervisor's Signature: _____ Date: _____

Supervisory Combined FAR/AA Review Documentation Form

Inspector/Specialist Reviewed: _____	
Fiscal Year: _____	Half (1 st or 2 nd): _____
Inspection Close Date: Mine Name: Mine ID:	Accompaniment Date: Event Code: Event No.:
Supervisor:	Supervisory Review Date:

E02 Inspection Information

Complete this section if the event code for this inspection was E02, otherwise, move ahead to the **Areas Visited** section.

1. Did the inspector or specialist conduct E02 inspection activities pertaining to the specific reason the mine was selected for Section 103(i) spot inspections?

☐ Yes / ☐ No

If **No**, list the reasons, corrective actions taken, and the dates: _____

2. If the mine is in Section 103(i) status due to methane liberation, was the E02 inspection focused on mining activities, bleeders, returns, and/or seals?

☐ Yes / ☐ No / ☐ NA-Section 103(i) status is not due to methane liberation

If **NA**, explain the reason for the mine being in Section 103(i) status: _____

If **No**, list the reasons, the locations where the E02 inspection was conducted, any applicable corrective actions taken, and the dates: _____

3. Is a calendar being maintained to track E02 inspections at mines in Section 103(i) status? ☐ Yes / ☐ No

If **No**, list the reasons, corrective actions taken, and the dates: _____

Areas Visited

1. For an underground inspection:

List the working sections visited by the supervisor: _____

List the portions of belt entries visited by the supervisor or otherwise provide the reasons for not visiting a portion of a belt entry: _____

List outby areas, other than portions of belt entries listed above, visited by the supervisor: _____

2. For a surface inspection:

List the pits/production areas visited by the supervisor: _____

List other areas visited by the supervisor: _____

General Documentation

1. Did the inspector or specialist review and certify the Uniform Mine File (either electronic or hard copy) for this inspection activity?

☐Yes (certification date: _____) / ☐No

If **No**, list the corrective actions taken and the dates: _____

2. Was the supervisor's annual review certification of the Uniform Mine File (either electronic or hard copy) properly documented for the mine involved with this review? *(May not apply to technical supervisor):*

☐Yes (certification date: _____) / ☐No / ☐NA-not applicable

If **No**, list the corrective actions taken and the dates: _____

3. Were the inspection reports, forms, and notes related to the areas and equipment inspected properly prepared, initialed, and dated by the inspector or specialist?

☐Yes / ☐No

If **No**, list the corrective actions taken and the dates: _____

4. Were the inspection reports, forms, and notes related to the areas and equipment inspected properly completed by the inspector or specialist in accordance with MSHA policies and procedures? ☐Yes / ☐No

If **No**, list the corrective actions taken and the dates: _____

5. Did the inspector or specialist properly document their review of examination records? ☐Yes / ☐No

If **No**, list the corrective actions taken and the dates: _____

6. Did the inspector or specialist properly document the collection of the specific samples and the results of the specific tests and measurements required for this inspection? ☐Yes / ☐No / ☐NA-*none required*

If **No**, list the corrective actions taken and the dates: _____

Examination Records

1. Did you accompany the inspector or specialist during their review of examination records? ☐Yes / ☐No

If **No**, provide an explanation: _____

2. Did the inspector or specialist thoroughly review the examination records? ☐Yes / ☐No / ☐NA-*did not observe (see above)*

If **No**, list the corrective actions taken and the dates: _____

3. Did the inspector or specialist review examination records that were pertinent to the areas inspected? ☐Yes / ☐No

If **No**, list the corrective actions taken and the dates: _____

Equipment and Usage

1. Did the inspector or specialist use appropriate personal protective equipment (PPE) during this inspection? ☐Yes / ☐No

If **No**, list the corrective actions taken and the dates: _____

2. Were the instruments and tools used by the inspector or specialist during this inspection within the appropriate calibration date (if applicable), properly tested prior to use (if applicable), and used properly during the inspection? ☐Yes / ☐No

If **No**, list the corrective actions taken and the dates: _____

3. Did the inspector or specialist collect the specific samples and perform the specific tests and measurements required for the areas and equipment inspected? ☐Yes / ☐No / ☐NA-*none required*

If **No**, list the corrective actions taken and the dates: _____

4. For an underground inspection activity where rock dust samples were collected, did the inspector or specialist use the proper sample collection techniques?
☐Yes / ☐No / ☐NA-*surface inspection or no samples collected*

If No, list the corrective actions taken and the dates: _____

Enforcement Actions

1. Were any enforcement actions (*citations, orders, terminations, extensions, modifications, and/or subsequent actions to vacate*) issued during this inspection?
☐Yes / ☐No (If No, move ahead to the **Supervisory Observations** section)

2. Did the inspector or specialist properly consider examination records when issuing each citation/order? ☐Yes / ☐No / ☐NA-*none issued*

If No, list the corrective actions taken and the dates: _____

3. For each citation/order issued, did the inspector or specialist properly enforce the Mine Act, standards, regulations, approved plans, variances, waivers, and petitions for modification? ☐Yes / ☐No / ☐NA-*none issued*

If No, list the corrective actions taken and the dates: _____

4. For each citation/order issued, was the proper level of enforcement taken?
☐Yes / ☐No / ☐NA-*none issued*

If No, list the corrective actions taken and the dates: _____

5. Did the inspector or specialist clearly communicate findings related to citations/orders to the mine operator's and miners' representatives?
☐Yes / ☐No / ☐NA-*none issued*

If No, list the corrective actions taken and the dates: _____

6. For each citation/order issued, did the inspector or specialist document answers to and provide supporting facts for the following, when applicable, in their notes (*see current handbooks related to inspection procedures and to citation and order writing for more information*):
- mine characteristics that would affect the likelihood of occurrence;
 - the number of persons exposed to the condition/practice;
 - the type of injury or illness that could reasonably be expected;
 - the number of persons who could reasonably be expected to be injured or become ill (number of persons affected) if the anticipated event were to

occur, or the number of persons who were affected if the anticipated event occurred and likelihood was marked as "Occurred");

- the title of persons who knew, or had reason to know, that the violation existed;
- mitigating circumstances; and
- facts indicating the length of time that the violation existed?

☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the deficient areas, corrective actions taken, and the dates: _____

7. For each citation/order issued for a violation of approved plan criteria, did the inspector or specialist include a copy of the approval letter and the relevant approved plan pages with their notes?

☐Yes / ☐No / ☐NA-*none issued for violating approved plan criteria*

If **No**, list the corrective actions and the dates: _____

8. Did the inspector or specialist properly consider the health and safety of miners first when setting the termination due date and time for each citation issued?

☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the corrective actions taken and the dates: _____

9. For each citation/order that was terminated at the time the inspector or specialist completed the citation/order form, were the actions taken to abate the cited condition or practice properly documented? ☐Yes / ☐No / ☐NA-*not applicable*

If **No**, list the corrective actions taken and the dates: _____

10. For each subsequent action issued to terminate an outstanding citation/order, did the inspector or specialist properly document the actions taken to correct the cited condition or practice? ☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the corrective actions taken and the dates: _____

11. For each subsequent action issued to extend the termination due date and time for a previously issued citation, did the inspector or specialist properly consider the health and safety of miners and the actions taken by the operator to correct the condition/practice? ☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the corrective actions taken and the dates: _____

12. For each citation/order vacated, did the inspector or specialist document proper justification? ☐Yes / ☐No / ☐NA-*none vacated*

If **No**, list the corrective actions taken and the dates: _____

13. For each Section 104(d) citation/order issued, did the inspector or specialist address one or more of the factors for aggravated conduct?
☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the corrective actions and the dates: _____

14. For each Section 104(d) citation/order issued, did the inspector or specialist include the statement "This is an unwarrantable failure to comply with a mandatory standard" in the *Condition or Practice* section of the citation/order?
☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the corrective actions taken and the dates: _____

15. For each order issued, did the inspector or specialist properly consider the full extent of hazards presented and contributed to by the condition/practice when determining the *Area or Equipment* affected? ☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the corrective actions taken and the dates: _____

Supervisory Observations

1. Provide a description of the mine conditions and work practices you observed during this inspection: _____
2. During this inspection, did you feel the approved plans, education and training activities, etc., relative to the areas and equipment inspected were adequate?
☐Yes / ☐No

If **No**, list each inadequacy, the corrective actions taken, and the dates: _____

Supervisory Conclusions

1. Were any extraordinary efforts and/or accomplishments by the inspector or specialist identified during this inspection? ☐Yes / ☐No

If **Yes**, list the extraordinary efforts and/or accomplishments identified: _____

2. Were any weaknesses related to the performance of the inspector or specialist identified during this inspection? ☐Yes / ☐No

If **Yes**, list the weaknesses, corrective actions taken, and the dates: _____

3. Did you identify any trends or deficiencies that should be addressed on a broader scale? ☐Yes / ☐No

If **Yes**, list the trends or deficiencies, corrective actions taken, and the dates: _____

4. For this review, did the inspector or specialist conduct a complete and thorough inspection in accordance with MSHA policies and procedures? ☐Yes / ☐No

If **No**, list the corrective actions taken and the dates: _____

5. Was the inspector or specialist debriefed concerning the results of this review? ☐Yes (debriefing date: _____) / ☐No

If **No**, provide an explanation: _____

6. Additional comments related to this review: _____

Supervisor's Signature: _____ **Date:** _____

Chapter 4 – 2nd Level Review Documentation

Instructions

Supervisors are required to submit all completed FAR and AA review documentation forms to the ADM for tracking purposes and to allow the ADM an opportunity to select the FARs and AA reviews for conducting 2nd Level reviews. The ADM, or his/her designee, shall track the completion of each FAR and AA for each inspector to ensure they are being conducted as required. Within the first two weeks of the start of the last quarter in a fiscal year half (January and July), the appropriate ADM or designee shall provide a status update to each supervisor that lists the FARs and AA reviews due to be conducted by the end of the quarter.

The ADM will conduct a 2nd Level Review of at least one FAR and of at least one AA review submitted by each supervisor under his/her area of responsibility during the first half and during the second half of each fiscal year. The ADM shall review all work products associated with the FAR or AA, including inspection notes, inspection reports, citations and orders, and any other work produced by the inspector or specialist that reflects the thoroughness and completeness of the activity reviewed. The ADM and supervisor may jointly conduct this review with the inspector or specialist if available. The supervisor's notes concerning the general condition of the mine and the applicability of approved plans, education and training activities, etc. should also be included. The completed supervisory review documentation form for the specific review activity may be used for these notes.

For 2nd Level reviews, the ADM shall complete and sign the applicable 2nd Level Review documentation form and attach it to the supervisory review documentation. The ADM will meet with the supervisor to discuss extraordinary efforts, accomplishments, or deficiencies identified by the review and will document this debriefing. Upon completion of the debriefing, the ADM will forward the 2nd Level Review and supervisory review documentation, along with the appropriate work products, to the DM. Following review by the DM, the DM will meet with the ADM to discuss the findings. The DM shall document this debriefing by signing and dating the 2nd Level review documentation form, and will return the complete 2nd Level Review package to the ADM. The 2nd Level Review package will be retained by the ADM for a period of at least three years for each supervisor.

The forms that follow may be used for documenting 2nd Level reviews. The forms are also available via a link under *CMS&H Supervisor Resources* on the [MSHA Intranet](#) site. To input data, left-click in the shaded area signifying a data input field and type the information. To place a mark in a Yes, No, or NA box, double-click on the desired box and click on the radio button next to "Checked" in the *Default value* portion of the pop-up menu and then click "OK". If the DM does not object, the forms may be printed and completed by hand.

2nd Level FAR Documentation Form

Supervisor Reviewed: _____	
Fiscal Year: _____	Half (1 st or 2 nd): _____
Mine Name:	Event Code:
Mine ID:	Event No.:
2 nd Level Reviewer:	2 nd Level Review Date:

E02 Inspection Information

Complete this section if the event code for the FAR was E02, otherwise, move ahead to the **General Documentation** section.

1. Did the supervisor correctly determine that E02 inspection activities pertained to the specific reason the mine was selected for Section 103(i) inspections or otherwise apply appropriate corrective actions? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

2. If the mine is in Section 103(i) status due to methane liberation, did the supervisor correctly determine that the E02 inspection was focused on mining activities, bleeders, returns, and/or seals or otherwise apply appropriate corrective actions? ☐Yes / ☐No / ☐NA-Section 103(i) status is not due to methane liberation

If **NA**, explain the reason for the mine being in Section 103(i) status: _____

If **No**, list the reasons, the locations where the E02 inspection was conducted, any applicable corrective actions taken by the 2nd level reviewer, and the dates: _____

3. Is a calendar being maintained to track E02 inspections at mines in Section 103(i) status? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

General Documentation

1. Did the supervisor correctly determine that the inspector or specialist reviewed and certified the Uniform Mine File (either electronic or hard copy) for this inspection activity or otherwise apply appropriate corrective actions? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

2. Was the annual supervisory review certification of the Uniform Mine File (either electronic or hard copy) documented for the mine involved in the FAR? (*May not apply to technical supervisor*)

☐ **Yes** (certification date: _____) / ☐ **No** / ☐ **NA-not applicable**

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

3. Did the supervisor review all inspection reports, forms, citations and orders, and notes for the FAR? (*Initials and dates on work products will be acceptable documentation of supervisory review*) ☐ **Yes** / ☐ **No**

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

4. Did the supervisor correctly determine that the inspector or specialist properly completed the inspection reports, forms, and notes related to the areas and equipment inspected or otherwise apply appropriate corrective actions?

☐ **Yes** / ☐ **No**

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

5. Did the supervisor correctly determine that the inspector or specialist properly documented their review of examination records or otherwise apply appropriate corrective actions? ☐ **Yes** / ☐ **No**

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

6. Did the supervisor correctly determine that the inspector or specialist properly documented the collection of the specific samples and the results of the specific tests and measurements required for the areas and equipment inspected or otherwise apply appropriate corrective actions? ☐ **Yes** / ☐ **No** / ☐ **NA-none required**

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

Enforcement Actions

1. Were any enforcement actions (*citations, orders, terminations, extensions, modifications, and/or subsequent actions to vacate*) issued during this inspection?
☐ **Yes** / ☐ **No** (*If No, move ahead to the **Supervisory Conclusions** section*)
2. Regarding proper enforcement of the Mine Act, standards, regulations, approved plans, variances, waivers, and petitions for modification for each citation/order

issued: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

3. Regarding the level of enforcement for each citation/order issued: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

4. Regarding the documentation of supporting facts for each citation/order issued: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

5. Regarding the termination due date and time set for each citation issued and the inspector's or specialist's consideration of the health and safety of miners: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

6. Regarding documenting the actions taken by the operator to abate each cited condition or practice that was terminated at the time the inspector or specialist completed the citation/order form: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor?
☐Yes / ☐No / NA-*not applicable*

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

7. Regarding the inspector's or specialist's documentation of actions taken by the operator to abate each outstanding citation/order that was terminated by subsequent action: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

8. Regarding the inspector's or specialist's consideration of the health and safety of miners and actions taken by the operator for each termination due date and time that was extended by subsequent action: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor?
☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

9. Regarding proper justification provided by the inspector or specialist for each subsequent action issued to vacate a citation/order: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No / ☐NA-*none vacated*

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

10. Regarding addressing one or more of the factors for aggravated conduct by the inspector or specialist for each Section 104(d) citation/order issued: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

11. Regarding the inspector's or specialist's consideration of the full extent of hazards presented and contributed to by the condition/practice when determining the *Area or Equipment* affected for each order issued: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor?
☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

Supervisory Conclusions

1. Regarding extraordinary efforts and/or accomplishments by the inspector or specialist: Do you agree with the supervisor's assessment? ☐Yes / ☐No

If **No**, describe the reasons for disagreement: _____

2. Regarding weaknesses related to the performance of the inspector or specialist: Do you agree with the supervisor's assessment: ☐Yes / ☐No

If **No**, describe the reasons for disagreement: _____

3. Regarding the completeness and thoroughness of the inspector's or specialist's inspection in accordance with MSHA policies and procedures: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

4. Did the supervisor debrief the inspector or specialist regarding the results of the FAR? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

2nd Level Reviewer Conclusions

1. Did the supervisor conduct a thorough FAR and properly document their findings, including necessary corrective actions for identified deficiencies? ☐Yes / ☐No

If **No**, describe the deficiencies, the corrective actions taken, and the dates: _____

2. Was the supervisor debriefed concerning the results of this 2nd Level Review? ☐Yes (debriefing date: _____) / ☐No

If **No**, provide an explanation: _____

3. Additional comments related to this 2nd Level Review: _____

ADM's Signature: _____ Date: _____

District Manager's comments: _____

District Manager's Signature: _____ Date: _____

2nd Level AA Review Documentation Form

Supervisor Reviewed: _____	
Fiscal Year: _____	Half (1 st or 2 nd): _____
Mine Name:	Event Code:
Mine ID:	Event No.:
2 nd Level Reviewer:	2 nd Level Review Date:

E02 Inspection Information

Complete this section if the event code for the AA was E02, otherwise, move ahead to the **Areas Visited** section.

1. Did the supervisor ensure that E02 inspection activities pertained to the specific reason the mine was selected for Section 103(i) inspections or otherwise apply appropriate corrective actions? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

2. If the mine is in Section 103(i) status due to methane liberation, did the supervisor ensure that the E02 inspection was focused on mining activities, bleeders, returns, and/or seals or otherwise provide appropriate justification?
☐Yes / ☐No / ☐NA-Section 103(i) status is not due to methane liberation

If **NA**, explain the reason for the mine being in Section 103(i) status: _____

If **No**, list the reasons, the locations where the E02 inspection was conducted, any applicable corrective actions taken by the 2nd level reviewer, and the dates: _____

3. Is a calendar being maintained to track E02 inspections at mines in Section 103(i) status? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

Areas Visited

1. For an underground AA, did the supervisor visit a portion of a belt entry or otherwise provide adequate justification? ☐Yes / ☐No / ☐NA-surface AA

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

Examination Records

1. Did the supervisor accompany the inspector or specialist during their review of examination records or otherwise provide adequate justification? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer, and the dates: _____

2. Did the supervisor determine that the inspector or specialist conducted a thorough review of examination records or otherwise apply appropriate corrective actions? ☐Yes / ☐No / ☐NA-*did not observe (see above)*

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

3. Did the supervisor determine that the inspector or specialist reviewed examination records that were pertinent to the areas inspected or otherwise apply appropriate corrective actions? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

Equipment and Usage

1. Did the supervisor determine that the inspector or specialist used appropriate personal protective equipment (PPE) during the AA or otherwise apply appropriate corrective actions? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

2. Did the supervisor determine that the instruments and tools used by the inspector or specialist during the AA were within the appropriate calibration date (if applicable), were properly tested prior to use (if applicable), and were used properly during the inspection or otherwise apply appropriate corrective actions? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

3. Did the supervisor determine that the inspector or specialist collected the specific samples and performed the specific tests and measurements required for the areas and equipment inspected or otherwise apply appropriate corrective actions? ☐Yes / ☐No / ☐NA-*none required*

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

4. For an underground AA where rock dust samples were collected, did the supervisor determine that the inspector or specialist used proper sample collection techniques or otherwise apply appropriate corrective actions?

☐Yes / ☐No / *NA-surface AA or no samples collected*

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

Enforcement Actions

1. Were any citations/orders issued during the AA?

☐Yes / ☐No (If **No**, move ahead to the **Supervisory Observations** section)

2. For each citation/order issued, did the supervisor determine that the inspector or specialist properly considered examination records or otherwise apply appropriate corrective actions? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

3. For each citation/order issued, did the supervisor determine that the inspector or specialist properly enforced the Mine Act, standards, regulations, approved plans, variances, waivers, and petitions for modification or otherwise apply appropriate corrective actions? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

4. For each citation/order issued, did the supervisor determine that the inspector or specialist used the proper level of enforcement or otherwise apply appropriate corrective actions? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

5. For each order issued, did the supervisor determine that the inspector or specialist properly considered the full extent of hazards presented and contributed to by the condition/practice when determining the *Area or Equipment* affected or otherwise apply appropriate actions? ☐Yes / ☐No / ☐NA-none issued

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

6. Did the supervisor determine that the inspector or specialist clearly communicated his/her findings related to citations/orders to the mine operator's and miners' representatives or otherwise apply appropriate corrective actions? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

Supervisory Observations

1. Did the supervisor provide an adequate description of mine conditions and work practices observed during the AA? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

2. Did the supervisor feel that the approved plans, education and training activities, etc., relative to the areas and equipment inspected were adequate or otherwise apply appropriate corrective actions? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

Supervisory Conclusions

1. Regarding extraordinary efforts and/or accomplishments by the inspector or specialist: Do you agree with the supervisor's assessment? ☐Yes / ☐No

If **No**, list the disagreements: _____

2. Regarding weaknesses related to the performance of the inspector or specialist: Do you agree with the supervisor's assessment? ☐Yes / ☐No

If **No**, list the disagreements: _____

3. Regarding the identification of any trends or deficiencies that should be addressed on a broader scale: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

4. Regarding the completeness and thoroughness of the inspector's or specialist's inspection in accordance with MSHA policies and procedures: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

5. Did the supervisor debrief the inspector or specialist regarding the results of the AA? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

2nd Level Reviewer Conclusions

1. Did the supervisor conduct a thorough AA review and properly document their findings, including necessary corrective actions for identified deficiencies?
☐Yes / ☐No

If **No**, describe the deficiencies, the corrective actions taken by the 2nd level reviewer, and the dates: _____

2. Was the supervisor debriefed concerning the results of this 2nd Level Review?
☐Yes (debriefing date: _____) / ☐No

If **No**, provide an explanation: _____

3. Additional comments related to this 2nd Level Review: _____

ADM's Signature: _____ **Date:** _____

District Manager's comments: _____

District Manager's Signature: _____ **Date:** _____

2nd Level Combined FAR/AA Review Documentation Form

Supervisor Reviewed: _____	
Fiscal Year: _____	Half (1 st or 2 nd): _____
Mine Name:	Event Code:
Mine ID:	Event No.:
2 nd Level Reviewer:	2 nd Level Review Date:

E02 Inspection Information

Complete this section if the event code for the AA was E02, otherwise, move ahead to the **Areas Visited** section.

1. Did the supervisor ensure that E02 inspection activities pertained to the specific reason the mine was selected for Section 103(i) inspections or otherwise apply appropriate corrective actions? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

2. If the mine is in Section 103(i) status due to methane liberation, did the supervisor ensure that the E02 inspection was focused on mining activities, bleeders, returns, and/or seals or otherwise provide appropriate justification?
☐Yes / ☐No / ☐NA-Section 103(i) status is not due to methane liberation

If **NA**, explain the reason for the mine being in Section 103(i) status: _____

If **No**, list the reasons, the locations where the E02 inspection was conducted, any applicable corrective actions taken by the 2nd level reviewer, and the dates: _____

3. Is a calendar being maintained to track E02 inspections at mines in Section 103(i) status? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

Areas Visited

1. For an underground inspection activity, did the supervisor visit a portion of a belt entry or otherwise provide adequate justification?
☐Yes / ☐No / ☐NA-surface AA

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

General Documentation

1. Did the supervisor correctly determine that the inspector or specialist reviewed and certified the Uniform Mine File (either electronic or hard copy) for this inspection activity or otherwise apply appropriate corrective actions? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

2. Was the annual supervisory review certification of the Uniform Mine File (either electronic or hard copy) documented for the mine involved with this review? (*May not apply to technical supervisor*)
☐Yes (certification date: _____) / ☐No / ☐NA-not applicable

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

3. Did the supervisor review all inspection reports, forms, citations and orders, and notes for the review? (*Initials and dates on work products will be acceptable documentation of supervisory review*) ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

4. Did the supervisor correctly determine that the inspector or specialist properly completed the inspection reports, forms, and notes related to the areas and equipment inspected or otherwise apply appropriate corrective actions?
☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

5. Did the supervisor correctly determine that the inspector or specialist properly documented their review of examination records or otherwise apply appropriate corrective actions? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

6. Did the supervisor correctly determine that the inspector or specialist properly documented the collection of the specific samples and the results of the specific tests and measurements required for the areas and equipment inspected or otherwise apply appropriate corrective actions? ☐Yes / ☐No / ☐NA-none required

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

Examination Records

1. Did the supervisor accompany the inspector or specialist during their review of examination records or otherwise provide adequate justification? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer, and the dates: _____

2. Did the supervisor determine that the inspector or specialist conducted a thorough review of examination records or otherwise apply appropriate corrective actions? ☐Yes / ☐No / ☐NA-*did not observe (see above)*

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

3. Did the supervisor determine that the inspector or specialist reviewed examination records that were pertinent to the areas inspected or otherwise apply appropriate corrective actions? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

Equipment and Usage

1. Did the supervisor determine that the inspector or specialist used appropriate personal protective equipment (PPE) during the inspection activity or otherwise apply appropriate corrective actions? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

2. Did the supervisor determine that the instruments and tools used by the inspector or specialist during the inspection activity were within the appropriate calibration date (if applicable), were properly tested prior to use (if applicable), and were used properly during the inspection or otherwise apply appropriate corrective actions? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

3. Did the supervisor determine that the inspector or specialist collected the specific samples and performed the specific tests and measurements required for the areas and equipment inspected or otherwise apply appropriate corrective actions? ☐Yes / ☐No / ☐NA-*none required*

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

4. For an underground inspection activity where rock dust samples were collected, did the supervisor determine that the inspector or specialist used proper sample collection techniques or otherwise apply appropriate corrective actions?

☐Yes / ☐No / NA-surface inspection or no samples collected

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

Enforcement Actions

1. Were any enforcement actions (*citations, orders, terminations, extensions, modifications, and/or subsequent actions to vacate*) issued during this inspection?

☐Yes / ☐No (If No, move ahead to the **Supervisory Observations** section)

2. For each citation/order issued, did the supervisor determine that the inspector or specialist properly considered examination records or otherwise apply appropriate corrective actions? ☐Yes / ☐No / ☐NA-none issued

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

3. Regarding proper enforcement of the Mine Act, standards, regulations, approved plans, variances, waivers, and petitions for modification for each citation/order issued: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No / ☐NA-none issued

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

4. Regarding the level of enforcement for each citation/order issued: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

5. Did the supervisor determine that the inspector or specialist clearly communicated his/her findings related to citations/orders to the mine operator's and miners' representatives or otherwise apply appropriate corrective actions?

☐Yes / ☐No / ☐NA-none issued

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

6. Regarding the documentation of supporting facts for each citation/order issued: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

7. Regarding the termination due date and time set for each citation issued and the inspector's or specialist's consideration of the health and safety of miners: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

8. Regarding documenting the actions taken by the operator to abate each cited condition or practice that was terminated at the time the inspector or specialist completed the citation/order form: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor?
☐Yes / ☐No / ☐NA-*not applicable*

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

9. Regarding the inspector's or specialist's documentation of actions taken by the operator to abate each outstanding citation/order that was terminated by subsequent action: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

10. Regarding the inspector's or specialist's consideration of the health and safety of miners and actions taken by the operator for each termination due date and time that was extended by subsequent action: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor?
☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

11. Regarding proper justification provided by the inspector or specialist for each subsequent action issued to vacate a citation/order: Do you agree with the

supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No / ☐NA-*none vacated*

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

12. Regarding addressing one or more of the factors for aggravated conduct by the inspector or specialist for each Section 104(d) citation/order issued: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

13. Regarding the inspector's or specialist's consideration of the full extent of hazards presented and contributed to by the condition/practice when determining the *Area or Equipment* affected for each order issued: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No / ☐NA-*none issued*

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

Supervisory Observations

1. Did the supervisor provide an adequate description of mine conditions and work practices observed during the inspection activity? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

2. Did the supervisor feel that the applicable approved plans, education and training activities, etc., relative to the areas and equipment inspected were adequate or otherwise apply appropriate corrective actions? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

Supervisory Conclusions

1. Regarding extraordinary efforts and/or accomplishments by the inspector or specialist: Do you agree with the supervisor's assessment? ☐Yes / ☐No

If **No**, describe the reasons for disagreement: _____

2. Regarding weaknesses related to the performance of the inspector or specialist: Do you agree with the supervisor's assessment: ☐Yes / ☐No

If **No**, describe the reasons for disagreement: _____

3. Regarding the identification of any trends or deficiencies that should be addressed on a broader scale: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

4. Regarding the completeness and thoroughness of the inspector's or specialist's inspection in accordance with MSHA policies and procedures: Do you agree with the supervisor's assessment and, if applicable, the corrective actions taken by the supervisor? ☐Yes / ☐No

If **No**, list the disagreements, the corrective actions taken by the 2nd level reviewer, and the dates: _____

5. Did the supervisor debrief the inspector or specialist regarding the results of the review? ☐Yes / ☐No

If **No**, list the corrective actions taken by the 2nd level reviewer and the dates: _____

2nd Level Reviewer Conclusions

1. Did the supervisor conduct a thorough review and properly document their findings, including necessary corrective actions for identified deficiencies? ☐Yes / ☐No

If **No**, describe the deficiencies, the corrective actions taken by the 2nd level reviewer, and the dates: _____

2. Was the supervisor debriefed concerning the results of this 2nd Level Review? ☐Yes (debriefing date: _____) / ☐No

If **No**, provide an explanation: _____

3. Additional comments related to this 2nd Level Review: _____

ADM's Signature: _____ Date: _____

District Manager's comments: _____

District Manager's Signature: _____ Date: _____