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Accident/Illness Investigations Procedures

PREFACE

This handbook sets forth procedures for the conduct of investigations of accidents and illnesses at the Nation's mines. The procedures in this handbook are intended to serve as organizational, technical, and instructional aids for MSHA's safety and health investigations. Previously issued procedural and administrative instructions for this subject are superseded by this handbook.

_____

Kevin G. Stricklin Date
Administrator for
Coal Mine Safety and Health

_____ _____

Neal Merrifield Date
Administrator for
Metal and Nonmetal Mine Safety and Health

_____ _____

Willian Francart Date
Director of Technical Support

MINE SAFETY AND HEALTH ADMINISTRATION
ACCIDENT/ILLNESS INVESTIGATIONS PROCEDURES HANDBOOK

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Chapter 1 - Introduction

The objective of an accident investigation is to determine the root cause(s) of the mine accident and to utilize and share this information with the mining community and others for the purpose of preventing similar occurrences. The Mine Safety and Health Administration's (MSHA) accident investigations include determinations of whether violations of the Federal Mine Safety and Health Act of 1977 (Mine Act), Public Law No. 109-236 (MINER Act), or 30 CFR regulations contributed to the accident. In addition to providing critical, potentially life-saving information, the findings of these investigations provide a basis for formulating and evaluating MSHA health and safety standards and policies.

I. Purpose

This handbook provides direction for the investigation of accidents and other occurrences involving health and safety in coal, metal, and nonmetal mines pursuant to the Mine Act. MSHA's accident investigation procedures are designed to result in efficient and orderly collection of all information relevant to a mining accident and to provide guidance for investigators in determining accident causes. Upon conclusion of the investigation and review and analysis of all relevant information, MSHA issues formal reports describing its findings and conclusions for fatal and other select accidents. These reports are intended to disseminate information to the mining community and others for purposes of accident prevention.

II. Authority

The Federal Mine Safety and Health Act of 1977, Public Law 91-173, as amended by Public Law 95-164, as amended by Public Law 109-236 (MINER Act), requires that authorized representatives of the Secretary of Labor make investigations in coal and other mines for the purpose of obtaining, utilizing, and disseminating information relating to the causes of accidents.

Authoritative sources include:

1. The Federal Mine Safety and Health Act of 1977, as amended, 30 U.S.C. §801 et. seq.

2. Title 30, Code of Federal Regulations (CFR)

III. Responsibilities

A. <u>Notification of Accidents</u>
Any accident, as defined at 30 CFR 50.2(h), must be reported immediately, at once, without delay, and within 15 minutes to MSHA by the mine operator. Mine

operators must call (800) 746-1553, a 24-hour toll-free number established by MSHA. The fact that there are certain types of accidents not immediately reported to Headquarters by MSHA districts does not in any way relieve the mine operator from notifying MSHA immediately of all accidents, as defined by the standard. Procedures for reporting to Headquarters by the districts are contained in Chapter 1, Section III.C.

B. Accident Response

1. Mine Emergencies. Each district must maintain an up-to-date Mine Emergency Response Plan that outlines duties and responsibilities of district personnel during a mine emergency. When an accident requiring an emergency response occurs, the District will follow the procedures for action and notification contained in its Mine Emergency Response Plan. The Headquarters Mine Emergency Response Plan outlines duties and responsibilities of headquarters officials, district managers, and technical support during an emergency.

Primary Communicator. In such accidents, MSHA shall serve as the primary communicator with the operator, miners' families, the press and the public. A separate MSHA official (senior MSHA official onsite and/or media specialist) will serve as the primary communicator with the mine operator, miners' representative, media and general public during such mine accidents. The Primary Communicator will collaborate with the Family Liaison to ensure consistent, timely and accurate information is disseminated to the public and the families. To the greatest extent possible, sensitive information will be shared with the families before being disseminated to the public. Nothing in this policy shall prohibit the mine operator from establishing communication with the families or the public.

- Each MSHA District will maintain one or more persons to serve as Primary Communicator to brief representatives' of miners, the mine operator, media and state agencies.
- The Primary Communicator will be responsible to brief Office of Public Affairs (OPA) personnel upon their arrival at the site.
- The Primary Communicator, Family Liaison, and OPA personnel will jointly develop briefing scripts.
- The Primary Communicator and Family Liaison will coordinate to ensure that identical information is released to all parties.
- The Primary Communicator and Family Liaison will ensure that sensitive information is released to family members prior to the public.

- The Primary Communicator will establish contact with representatives of State Agencies, the mine operator, miners' representatives, and the media to facilitate briefings.
- The Primary Communicator will develop a cooperative protocol with State officials to ensure conflicts are avoided.
- The Primary Communicators will establish a 24 hour a day schedule rotation that ensures that they are available at the accident site.
- The Primary Communicator will share new and emerging information with the Family Liaison at the earliest possible opportunity.
- The Primary Communicator will maintain a log that documents all significant events.
- The rules of FOIA apply to all requests for Agency documents.

Team and Leader Selection. The appropriate Administrator will appoint an investigation team and team leader who will coordinate the investigation with the Accident Investigation (AI) Program Manager when a mine accident results in more than two fatalities.

Family Liaison. The appropriate Administrator will also promptly assign an individual to be a liaison between MSHA and the families of victims of mine tragedies involving multiple deaths and where multiple miners are unaccounted for. This should be the liaison's highest priority from the beginning of the assignment until the investigation is complete.

This person will have appropriate technical expertise to effectively respond to technical questions as well as skills in crisis/grief management and communication. The liaison will be responsive to the needs of families of mine accident victims by providing clear and accurate information regarding the mine accident. The assigned liaison will travel to the site as soon as possible and be briefed by the MSHA official in charge of accident activities in order to promptly establish communication with the victims' families. The liaison will make arrangements to meet with family members for regular briefings and will remain in contact with families members during the emergency. Upon completion of the rescue at the site, the liaison will remain in contact with families by telephone, cellular phone, email, and/or conventional mail for the duration of the investigation until the report is delivered. During any resulting accident investigation the liaison will continue to be responsive to the needs of the families until the investigation is complete and MSHA issues a final report. The liaison will continue to interact with the accident investigation team for the purpose of responding to questions from and transferring information to victims' family members. Requests for information from the families will be

governed by the Freedom of Information Act and will be expedited to the greatest extent possible.

- Each MSHA District will maintain one or more persons to serve as Family Liaison to address the needs of a miner's family following a mine accident.
- The Family Liaison is not a counselor but may be required to coordinate support for family members with crisis management professionals such as the American Red Cross.
- The Family Liaison will establish a 24 hour a day schedule rotation that ensures that they are available at all times for family members throughout the rescue/recovery operation at the site.
- The Family Liaison will establish a schedule to brief family members on new and emerging information prior to its release to the public.
- The Family Liaison will be responsible to coordinate with the Primary Communicator to ensure identical information is released during their respective briefings.
- The Family Liaison may be responsible to interact with local officials to establish a facility where families may be centrally located.
- Upon completion of the onsite rescue/recovery, the Family Liaison will ensure that family members continue to be informed regarding status of the Investigation Report and significant issues.
- The Family Liaison will remain accessible to family members by telephone, cellular phone, email, and conventional mail until the report is delivered to each family.
- The Family Liaison will maintain written documentation of all significant events including all contacts with the family.
- Upon request for Agency documents from family members, the Family Liaison should coordinate with SOL to ensure the release is appropriate.
- This assignment should be the Family Liaison's highest priority responsibility from the beginning of the assignment until the investigation is complete and a final report is issued.

2. Accidents. The District Manager must promptly evaluate accidents and inform the mine operator (1) whether an investigation will be made; (2) the approximate date and time of the investigation; and (3) the requirements under §103(j) and Part 50, including the operator's responsibility to take appropriate measures to prevent the destruction of evidence that would assist in the investigation of the accident.

If the accident is to be investigated, the District Manager must direct the local office supervisor or available inspector to travel to the mine and to

issue such orders as appropriate to ensure the safety of any persons at the mine. The District Manager should also initiate preparations for providing logistic support for an accident investigation team.

The responsibilities of the person assigned to secure the accident site are discussed in Chapter 1, Section V, Orders to Ensure the Safety of Any Person.

The District Manager also will assign all accident investigation team members. Members of the accident investigation team should be personnel assigned to an inspection work group that does not regularly inspect the affected mine. The District Manager will arrange to contact and request the services of Educational Field Services and the appropriate Regional Solicitor's Office. The AI Program Manager will arrange for any necessary assistance from Technical Support in consultation with the district.

If any persons from Headquarters or Technical Support will participate as members of an accident investigation team, the District Manager will be notified and the individuals identified. Every attempt will be made to coordinate the arrival and participation of the Technical Support representatives so as not to delay the accident investigation. This does not mean that necessary activities cannot proceed until the representatives arrive, but that consideration should be given to allowing the investigation group to function as a team.

Representatives of Technical Support are especially valuable to the accident investigation team when their expertise assists the team in the interpretation and analysis of specifications or other technical information. For more detail regarding the role of Technical Support in accident investigations, see Chapter 1, Section VII., Technical Support.

When a single fatality accident occurs, the District Manager must notify the appropriate Regional Solicitor’s office. A regional attorney will be assigned to provide legal support to the accident investigation team. For more information regarding the involvement of the Regional Solicitor’s Office, refer to Chapter 1, Section VIII., Office of the Solicitor.

Upon completion of the on-site investigation of a fatal accident, the AI Program Manager will be advised by telephone of any preliminary findings or conclusions. Promptly after the on-site investigation, witness interviews, and any technical analysis, there will be one accident investigation report written under the direction of the District Manager. A

draft fatal accident report is due in Headquarters within 45 calendar days of the accident unless a written request is made by the District Manager for an extension – and approval is granted. By memorandum, the District Manager will apprise the Administrator of the status of any overdue draft fatal report at 45 calendar days and every 30 calendar days thereafter, until released.

3. Handbook Application. The investigation procedures described in this Handbook are generally applicable to all fatal accident investigations. These procedures should be used as a guide in the investigation of all other accidents. As may become necessary to conduct an effective and orderly investigation, procedures may be altered through consultations with the Administrator or AI Program Manager.

C. Headquarters Notification by Districts (no effect on Part 50 reporting by operators).

1. Accidents Requiring Immediate Headquarters Notification. Upon learning of the occurrence of any of the following categories of accidents, the District must immediately notify the appropriate AI Program Manager. If the AI Program Manager is unavailable, contact must be made with the AI specialist, or other person, following the priority calling lists which are updated and distributed periodically. In addition to immediate notification, a completed Preliminary Report of Accident, Form 7000-13, is to be provided to the appropriate AI Program Manager within 48 hours of the accident notification. Periodic updates to the AI Program Manager are required for cases involving serious injuries or other developing situations. The following require immediate Headquarters notification:

a. a death of any individual on mine property;

b. an injury that has a reasonable potential to cause death;

c. mine fires that result in evacuation of miners or cause significant damage to structures or equipment at a mine;

d. all explosions (e.g. methane or dust and/or unplanned detonation of explosives or blasting agents);

e. coal or rock outbursts (bumps or bounces) that result in injury or evacuation of an area, or that interrupts production for more than 30 minutes;

f. inundations by liquid or gas;

g. entrapment of any person(s) requiring mine rescue efforts;

h. any unstable condition at an impoundment or refuse pile that requires emergency corrective action to prevent failure and/or requires evacuation;

i. any accident at a mine that is likely to be the subject of immediate and/or extraordinary media interest; or

j. a death of any individual off mine property resulting from activities on mine property (e.g. flyrock)

2. Accidents Not Requiring Immediate Headquarters Notification. The following types of accident must also be reported to Headquarters but immediate telephone reporting is not required. A completed Form 7000-13 is to be provided to the appropriate AI Program Manager within 48 hours of the accident notification.

a. methane ignitions which do not result in serious injuries or require evacuation of miners;
b. an unstable condition at an impoundment, refuse pile, or culm bank that requires corrective action but does not cause an emergency or life threatening situation;
c. mine fires that last more than 30 minutes but are extinguished without significant injuries or property damage;
d. bumps or bounces that disrupt mining activity for more than one hour;
e. damage to hoisting equipment that endangered individuals or disrupted the use of the equipment for more than 30 minutes; and,
f. unplanned roof falls in active workings, at or above the anchorage zone, that significantly impede mine ventilation or blocks escapeways.

D. Preliminary Reports.
A Preliminary Report of Accident (MSHA Form 7000-13, revised March 05) is required for all accidents or occurrences that are immediately reportable to MSHA. The District will provide the Preliminary Report as quickly as possible, but no later than 48 hours after initial notification of the accident. In case of a fatal accident, the report must include on a separate page the name, address, relationship, and telephone number for the victim's next of kin, and the ages of any

dependent children. Also, any equipment involved in the accident must be identified. Complete instructions for completion of the Preliminary Report can be found in Chapter 4, Section II, Preliminary Report of Accident.

E. Interim Headquarters Briefings.
At the conclusion of all mine-site portions of fatal accident investigations and associated interviews, a conference will be conducted between the AI Program Manager, District Manager, and accident investigation team members to discuss information obtained, the investigation status (including pending deadlines), resources needed, and any other pertinent issues. Where appropriate, representatives from SOL and Technical Support shall be asked to participate in the conference. The District Manager will also brief the AI Program Manager of any significant issues or findings as they arise.

IV. Authority to Issue Statement

Briefings with the press and public shall be conducted by the primary communicator. To the greatest extent possible, sensitive information will be shared with the families before being disseminated to the public.

V. Orders to Ensure the Safety of Any Person

The inspector must exercise discretion and good judgment when using the broad authority provided by the Mine Act, and the following instructions are provided to assist in exercising this discretion.

A. § 103(k) Orders
In the event of an accident at the mine, § 103(j) and § 103(k) of the Mine Act state, in part, that an authorized representative may issue such orders as appropriate to ensure the safety and health of any persons at the mine.

When, as a result of an accident, a mine condition exists that threatens the safety and health of the miners, the Authorized Representative will generally utilize § 103(k) to ensure the safety of any persons in the mine (although, if the Authorized Representative is not present at the mine, a § 103(j) order should initially be issued over the phone, as explained below). A § 103(k) order does not preclude the issuance of a § 107(a) order is an imminent danger is found to exist.

The dangers to miners are obvious where a fire, explosion, or inundation has occurred in any underground mine, and a § 103(k) order shall address the safety of the miners in the entire underground portion of the mine.

In instances where any accident has resulted in death or serious injury to a miner, a § 103(k) order shall include all areas of the mine where the inspector believes that a hazardous condition or practice related to the accident is likely to exist. 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.

A § 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 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 § 103(k) order may be modified to permit an area of the mine to resume operations, modified to include other areas, or terminated if appropriate.

When a § 103(k) order is issued, the mine operator is required to obtain approval of an MSHA representative, in cooperation with the appropriate State representatives when feasible, of any plan to recover any person in the mine or to recover the mine or return the affected areas of the mine to normal. When a § 103(k) order is in effect, the mine operator must obtain MSHA's approval before allowing anyone, even individuals exempt from other withdrawal orders by § 104(c), to enter the affected area of the mine.

B. <u>§ 103(j) Orders</u>

In the event of a mine accident where rescue and recovery work is necessary, Section 103(j) grants MSHA broad authority to take whatever action, including the issuance of orders of withdrawal, is deemed appropriate to protect the life of any person.

Upon learning of a mine emergency, unless MSHA is already present, MSHA should verbally issue a section 103(j) order to the operator, including initial instructions, as soon as possible. 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. It 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 so as to prevent the destruction of evidence which would assist in investigating the cause or causes of the accident.

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.

Where appropriate, MSHA may supervise and direct the rescue and recovery activity. Normally, however, the inspector will utilize § 103(k) instead of § 103(j).

C. §107(a) Orders.
If an inspector or investigator determines that an imminent danger exists, a §107(a) order should be issued forthwith, regardless of any other orders that have been issued. Because the purpose of a §107(a) imminent danger order is to immediately remove miners from exposure to serious hazards in the mine and to prevent miners from entering such hazardous areas, an imminent danger must be actually impending at the time an order is issued. It is not necessary to issue citations/orders for violations that contribute to the imminent danger at this time, as they can be more appropriately addressed later in the investigation.

VI. Enforcement Actions

The accident investigation must determine whether there is compliance with all health and safety standards, and in this regard is no different than a regular mine inspection. Citations or orders must be issued for violations found. Violations found during an investigation should be completely evaluated and documented prior to the issuance of a citation or order. This evaluation and documentation is extremely important as significant penalties may be assessed for the violations. For that reason, the citations or orders should not be issued until all the related facts are available. At that time they should be promptly prepared and issued. The issue date for citations and orders must be the date the citations or orders are given to the mine operator, not the accident date.

Citations and orders issued for violations that contribute to a mine accident must be contained in the accident report and coded as part of the investigation. Citations and orders issued for violations observed during the investigation that were not contributory to the accident will be included in a separate inspection report and coded for that activity.

Prior to issuing citations or orders for violations that contributed to fatal accidents, the District Manager must provide draft copies of the intended actions to the appropriate AI Program Manager, who will schedule and host a conference between the District Manager and the appropriate Regional Solicitor or Associate Regional Solicitor; MSHA Headquarters Solicitors; and the appropriate Chief, Division of Safety or Division of Health to discuss the merits of the proposed issuances. Prior to the conference, the

AI Program Manager will distribute copies of draft enforcement actions and any supporting material to the conference participants.

Copies of enforcement actions subsequently issued for violations that contributed to fatal accidents must be sent to the above offices, as well as the Headquarters Assessment Office. As appropriate, Special Assessment Review (SAR) and Possible Knowing and/or Willful (PKW) must be included with the Office of Assessments' copy.

Citations and orders that involve potential willful or knowing violations will be evaluated, routed, and handled the same as similar violations cited during inspections. If however, the AI team members are selected outside of the district where the fatal accident(s) occurred, possible willful or knowing forms will be completed by the investigation team. In these situations, the AI team leader will function as the district manager and the headquarters Technical Compliance and Investigations Office program manager will function as the supervisory special investigator.

A special investigation will not be conducted as part of the accident investigation. However, information and documentation obtained during the accident investigation is typically available to the special investigators.

Generally, it is not appropriate to hold Health and Safety Conferences for violations contributing to fatal accidents. The District Manager must discuss requests for Health and Safety Conferences on violations that contributed to fatal accidents with the AI Program Manager before granting or denying such requests.

VII. Technical Support

A. General

Technical Support's engineering, scientific, and analytical expertise should be utilized to the greatest extent practical, and representatives of Technical Support will ordinarily participate in all fatal accident investigations. Technical Support personnel may also participate as part of the investigation team of other selected investigations.

Technical Support personnel are members of the accident investigation team and will participate in the preparation and review of the investigation report. Technical Support involvement may be to help author the entire report or, in most cases, to provide the lead accident investigator with a brief summary of the technical discussion of the item or area investigated. The summary can be in the form of "bullet" statements or a few short paragraphs. Only one report, the Agency's "Accident Investigation Report," must be generated with respect to the details and circumstances surrounding the accident. Technical Support team members will

ensure that the lead investigator is provided with copies of their field notes and any other supporting documentation they gathered or produced. The lead investigator will ensure that supporting documentation provided by Technical Support is included in the appropriate accident investigation file.

B. Laboratory or Analytical Studies

In some cases, the role of Technical Support may also include the analysis and/or testing of evidence collected by the investigation team. The District Manager will coordinate requests for laboratory or analytical studies with the appropriate AI Program Manager. Procedures (protocol) for all testing or studies will be agreed upon by Technical Support, the District Manager, and the AI Program Manager prior to beginning the test or study. This form of participation typically results in a test report. A test report that is sufficiently concise can stand on its own merit. However, an Executive Summary will normally accompany the full test report. The Executive Summary may be placed as an appendix of the Accident Investigation Report. The Executive Summary should explain how interested persons may obtain a copy of the full report.

C. Requesting technical support assistance

Prior to requesting technical support assistance, efforts should be made to obtain the following information or documentation, where applicable:

a. Type of Equipment
b. Manufacturer
c. Model
d. Serial Number
e. Approval number - if permissible
f. Operator's manual
g. Maintenance manual for the subject equipment
h. Determine the systems (brakes, hydraulics, electrical, structural, etc; exploding/ruptured vessel, fire protection, specific chemical processes, haul road design, etc.) that preliminary information indicates will need examined/and/or tested.
i. Determine whether special hazards (i.e. chemical spill, blood borne pathogens, working at heights, etc.) exist at the accident site?

Investigators should alert the mine operator to the potential need for mine electricians and/or mechanics to be available to assist in the investigation.

VIII. Office of the Solicitor

When a single fatality occurs, the District Manager must immediately notify the appropriate Regional Solicitor's Office. A Regional attorney will be assigned to provide legal support to the accident investigation team during its investigation and report writing and with any enforcement decision-making which follows. The Mine Safety and Health Division of the Office of the Solicitor is available to assist as well in these matters.

The responsibility for the accident investigation and subsequent enforcement actions remains with MSHA; however, the regional attorney's early involvement should improve the quality and efficiency of the investigation, particularly in witness interviews and any subsequent enforcement actions. For example, proposed topics of inquiry for witness interviews should be discussed with the Regional attorney before and during the interviews. These discussions should be conducted between the attorney and other members of the investigation team in a mutually agreeable manner so as not to be disruptive to the interview process. Likewise, when particular enforcement actions related to the accident investigation become necessary, the appropriateness of these actions should be discussed with the regional attorney before the enforcement action is taken.

Multiple-fatality accidents will be coordinated at Headquarters level, and legal support for these will be provided by the Mine Safety and Health Division of the Solicitor's Office.

Chapter 2 - Jurisdiction and Chargeability

I. General

The responsibility for resolving questions of jurisdiction and chargeability rests with Agency officials who are not normally present at the accident site. It is imperative, therefore, that on-site investigators confronted with questions of jurisdiction and/or chargeability gather all pertinent data and relay it promptly through appropriate channels to the District Manager.

The Preliminary Report of Accident for all deaths on mine property must be forwarded to the Headquarters Office, regardless of whether questions of jurisdiction or chargeability exist. If the death is ultimately determined to be outside of MSHA jurisdiction or not chargeable to the mining industry, Headquarters will correct the record with proper notations. If jurisdiction or chargeability is affirmed, a fatal case number will be assigned and all pertinent data recorded.

II. Jurisdiction

Questions of jurisdiction may arise during the initial notification of an accident to MSHA or upon arrival of the accident investigators at the site. If there is uncertainty regarding jurisdiction, the Agency representative must gather all related information and relay it to the District Manager, who must discuss it with the appropriate AI Program Manager. In addition to the list below, provide any additional helpful information.

- **Information about the operation**
  - State the size, commodity produced, union status, when MSHA inspections began, whether the operation is seasonal, etc.
  - Give a step-by-step description of all mining, preparation, and transportation processes and procedures that take place at the property, and list the equipment used. If not explained in the MSHA portion of a MSHA/OSHA MOU, explain the technical aspects of applicable processes and procedures such as pressure, heat, additives, hydration, etc.
  - State the industry that uses or purchases the final product; and the use of the final product.
  - Provide any information on whether the operator shares equipment, employees, facilities, etc. with any other entities or businesses.

- **Information about the location**
  - State the accident location, property owner, and/or mine operator control over the area.

- Provide a map or sketch that shows the accident location, property lines, ownership(s), roadways, extraction area(s), mine/milling/preparation area(s), etc. and a compass rose. If not to scale, provide approximate distances. Show any additional helpful depictions. For example, if the accident occurred on a road, please indicate such things as locations of speed limit signs, bridges, drop-offs, security gates, etc.

- **Information about the accident**
  - Provide photos, victim's activity at the time of accident, and equipment used
  - Provide copies of any lease agreements, contracts, or easements with respect to the location of the accident.
  - Provide all notes and reports produced as a result of MSHA's investigation.
  - Provide the CLR worksheet for any safety and health conference related to the accident.

- **Information that deals with federal jurisdiction**
  - Describe how the jurisdiction question arose and provide any information stating why the operator believes that MSHA does not have jurisdiction.
  - List any other federal agency that inspects the accident location or any portion of the property.
  - Provide a history of and information about any previous MSHA jurisdiction determinations that were made with respect to the property.
  - List the 30 CFR standards that could be cited if the accident location is determined to be within the scope of the Agency's jurisdiction.

If MSHA jurisdiction is affirmed, the accident investigators must be notified immediately and the investigation expanded, and if it is determined that MSHA does not have jurisdiction, the Accident Investigators will be notified. If the District Manager determines that the accident has occurred in the jurisdictional area of another agency, the other agency must be notified promptly and all accident related data transferred to that agency. The District Office must then terminate the accident investigation and advise the appropriate AI Program Manager so that any Preliminary Report of Accident already submitted can be removed from further consideration. Note that MSHA has concurrent jurisdiction with OSHA in some situations. Where clarification is necessary, the District Manager should consult with the AI Program Manager.

III. **Chargeability** (section updated in May 2016)

A. Chargeability Determination Process

If a District Manager is reasonably certain that a death at a mine is the result of natural causes, the investigation to gather information for a chargeability determination may be conducted by immediately available personnel. In such

cases, it will be appropriate to assign the investigation to local field personnel who may regularly be involved in inspection activities at the mine.

When the evidence does not conclusively show that the death is chargeable to the mining industry, such as a trespass, suicide, homicide, etc., the accident investigator must immediately gather all available related information and relay it to the District Manager. Information may include police reports, death certificates, autopsy or toxicology reports, or witness statements. Additional chargeability information which becomes available during conduct of the accident investigation must also be forwarded promptly so that the chargeability determination can be based on all available facts.

All accident investigations should continue while the issue of chargeability is being determined. This will aid in the preservation of information and evidence and may assist in determining chargeability. If the death is determined to be chargeable to the mining industry, a fatal investigation report must be prepared. As with any inspection or investigation, the Accident Investigation file should contain an event cover sheet, inspection notes, record of witness statements, photographs, maps, sketches, copies of police reports, death certificates and/or autopsy results. Interviews should be recorded on a digital audio recorder or documented in the inspection notes with the name of each interviewee and a summary of their testimony.

If the District Manager believes that a death should not be charged to the mining industry, a memorandum report requesting a chargeability concurrence determination must be submitted to the Administrator within 45 calendar days of the date of the death, unless the death certificate or autopsy report, if applicable, has not been received. The memorandum report must describe in detail the activities of the person prior to the time of death and any related information which addresses chargeability (refer to Chapter 2, Section III.A). For deaths involving natural causes, supporting documents must include a copy of the death certificate and, if possible, the autopsy report, the coroner's report, or the statement of an attending physician. In addition, any information that clarifies physical stress, prior medical history, or medication should be included in the report.

The Health Insurance Portability and Accountability Act of 1996 (HIPAA) restricts access to medical records such as hospital intoxicant test results as well as to autopsy reports. MSHA is authorized by statute to obtain certain information necessary to conduct mandatory investigations. Written requests on letterhead from the District Manager should be used to obtain necessary information. An example body of such a letter is provided in Appendix 24.

Once a chargeability decision has been made, the Chief, Office of Injury and Employment Information, will be provided with a copy of the decision.

In situations in which a District Manager has not determined that a death on mine property is chargeable to the mining industry, the District Manager must ensure that the investigation also provides information and documentation necessary to permit the Fatality Review Committee (the Committee) to determine whether the death is chargeable to the mining industry. After the investigation is completed, the District Manager should submit a memorandum to the Administrator containing all of the required factual information and evidence for the Committee. The memorandum should read: "See attached investigation for determination of chargeability of the death at [mine name], Mine I.D. No. [ ]." In the memorandum, the District Manager should not offer a recommendation, opinion, or conclusion regarding chargeability.

The Committee will apply the fatal injury guideline matrix shown in Appendix 25 when making chargeability decisions. The decision made by the Committee should be unanimous and will be final. The decision of the committee will be provided to the Assistant Secretary, Deputy Assistant Secretaries and the Administrator.

B. Fatality Review Committee Membership

The Director of Educational Policy and Development will serve as Committee Chair. The Director of Program Evaluation and Information Resources, Director of the Office of Assessments, Accountability, Special Enforcement and Investigations, and the Associate Solicitor for Mine Safety and Health will serve as voting members of the Committee. The Committee has the following members:

- Director of Educational Policy and Development (Committee Chair)
- Director of Program Evaluation and Information Resources
- Director of Assessments, Accountability, Special Enforcement and Investigations
- Associate or Deputy Associate Solicitor for Mine Safety and Health
- Federal Occupational Health Medical Doctor, United States Public Health Service

Each member of the Committee may designate an additional member for the purpose of attendance of monthly meetings on their behalf; that designee should be at the Deputy level of the program areas. The designee has the authority to review cases, and provide assistance, however may not vote on cases.

The Deputy Assistant Secretary for Operations shall be notified of the additional designees and shall be promptly notified of any personnel changes so that replacements can swiftly be made to avoid unnecessary delays in the processing of cases before the Committee.

The Deputy Assistant Secretary for Operations has responsibility for oversight and management of this Committee.

C. Deaths Requiring a Decision by the Fatality Review Committee

When the Administrator determines that a death on mine property warrants a decision by the Committee, the following memorandum report format should be followed:

1. The memorandum should be written from the investigator to the District Manager who will forward it to the Administrator with a cover memorandum from the District Manager. After a review by the Administrator, the information will be transmitted to the committee chairperson for distribution to the Fatality Review Committee.

2. The subject of the memorandum should be: Investigation of Death at Company Name, Mine Name, I.D. Number, Location (including the county and state), and time and date of the accident or occurrence.

3. Give the victim's name, age, total mining experience, job experience, time and date of death, and cause of death.

4. State the dates of the investigation and list the names of persons present during the investigation or who provided information.

5. Give a narrative description of the activities of the victim prior to the time of the accident, starting from the beginning of the shift.

6. List the victim's regular occupation, the occupation at the time of the accident, and the experience on the job being performed when the accident occurred. Duties normally performed by the victim in the regular occupation should also be given. Any duty that would not be considered routine should be identified.

7. So that the possibility of overexertion may be evaluated, state distances traveled by the victim, grades negotiated, weights lifted, etc. Specify time intervals between the performance of any arduous tasks and the time of the accident.

8. Environmental factors that may be relevant such as temperature extremes, elevations, noise levels, etc., should be given. This would include the presence of any noxious gases or a lack of sufficient oxygen.

9. Obtain the victim's previous medical history, if available. Also, obtain the statement of death from a medical officer including any statements that indicate that death was aggravated by or the result of tasks performed. If the attending physician will not make such statements, the report should so indicate. Attach copies of death certificates and autopsy reports, when available.

The Chair of the Fatality Review Committee is authorized to make a determination that deaths are "not chargeable" in certain kinds of cases without referring the matter to the full Committee on the basis of third party medical examiner reports and/or law enforcement reports and on the basis of information gained during MSHA's investigation.

- Where a death certificate, coroners' report, or law enforcement report lists suicide or homicide as the cause of death, and there is no indication that the death was the result of an occupational danger or exposure, the Committee Chair may make a determination that the death is not chargeable.
- Where a death certificate, coroners' report, or autopsy report lists heart attack or a similar natural cause of death, and where there is no indication that the death was brought about by an occupational hazard or exposure, the Committee Chair may determine that the death is not chargeable.
- Where the decedent was a non-employee trespasser or had no authorization to be on the property, the Committee Chair may make a determination that the death is not chargeable.
- Where the incident resulting in death did not occur on mine property or did not result from activity on mine property, the Committee Chair may make a determination that the death is not chargeable.

In all cases in which the Committee Chair is not reasonably certain that the death is not chargeable to the mining industry, the matter should be referred to the full Committee. If, following a determination that a death was "not chargeable," additional information is received that may cast doubt on the original determination, the matter should be referred to the full Committee.

D. Fatality Review Committee Report

The Committee will meet every 30 days to review pending cases. A report from the Committee Chair will be sent to the Deputy Assistant Secretary of Operations and the Assistant Secretary each month listing all outstanding chargeability cases.

The monthly report must include:

- the date of death;
- victim name;
- program area;
- whether the matter has been referred to the Review Committee;
- date of referral; and
- a preliminary determination as to cause of death.

The program area Administrators, or the Committee chairs, if a referral to the Committee has been made, will provide the Deputy Assistant Secretary of Operations and the Assistant Secretary with a report whenever a chargeability determination has not been made within six months of a death. Follow-up reports are required for each month thereafter until a chargeability determination is reached.

The report should state whether the chargeability issue is pending before a District Manager or Administrator, or if it has been referred to the Fatality Review Committee and, if so, the date of the referral. The report should state what efforts have been made to obtain relevant documents, such as death certificates, autopsy reports, and toxicology reports. The report should also describe whether MSHA's fatality investigation is ongoing and, if so, what additional information is needed to reach a chargeability determination.

E. Additional Information

Whenever any person discovers additional information that should be considered in the Committee's review, the information should be sent to the appropriate District Manager. The District Manager will verify the information, to the extent possible, and forward it to the Fatality Review Committee Chairperson through the appropriate Administrator. In the event a case has already been decided when additional information is submitted, the Committee Chairperson will review the new information, and if necessary, consult with the Associate or Deputy Associate Solicitor for Mine Safety and Health, and reopen the case if appropriate.

Chapter 3 - Investigations of Accidents

I. General

MSHA's accident investigations are conducted by an experienced team of investigators and typically involve three phases: (1) an on-site physical examination of the accident scene and applicable records and documentation; (2) interviews with witnesses who have knowledge of the conditions or practices which may have contributed to the accident; and (3) analysis and testing of mining equipment or material which may have been involved in the accident. The causes of the accident are determined after a complete review and analysis of all the facts and evidence.

II. Investigation Participants

A. Participants during the Physical Examination of the Accident Scene

The physical examination of an accident site is conducted under MSHA control in cooperation with the state agency with authority over matters of miner safety and health, the mine operator, and the miners' representative.

Mine operators have a right to accompany MSHA personnel during the physical examination of the accident site. The mine operator should be asked to designate a representative for this purpose.

The Mine Act provides rights for miners' representatives to participate in enforcement-related activities of MSHA. In the accident investigation context, these provisions are construed to include miner representative "walk-a-round" rights during the physical examination of accident sites. As necessary to conduct an orderly investigation, Section 103(f) of the Act provides investigators with the authority to control the number of representatives participating in the physical portion of the investigation. An equal number of participants will ordinarily be allowed.

In most instances, miners' representative can be easily identified. A mine that has not had a designated representative of miners prior to the accident can create unusual situations where miners at the mine request representation after the accident. Title 30 CFR Part 40 prescribes the procedures for miners to identify their representative(s). Miners should be assured that their participation in the designation of a representative will be treated as confidential to the extent allowed by law if they request that their identity be kept confidential. In unusual situations, contact the AI Program Manager for further information regarding the identification of miner's representatives.

Occasionally, an investigator may encounter multiple miner representatives or multiple operators, such as independent contractors, participating along with the mine operator. These multi-entities may require that the various representatives be divided into workable groups and activities scheduled to avoid creating confusion or disruptions. If an unusual situation results in confusion, or the investigator fears disruption of the investigation, the District Manager should contact the AI Program Manager for guidance.

MSHA recognizes that many states have responsibility and authority under state law for the investigation of mining accidents. For this reason, MSHA cooperates extensively with state mining officials in the performance of its investigations.

B. Participation during Interviews of Witnesses

Accident investigations include interviews with witnesses who have knowledge of the conditions or practices which may have contributed to the accident (refer to Chapter 3, Section VI.C for interview procedures).

C. Participation during Laboratory Analysis

MSHA performs testing of equipment and other physical evidence as necessary to identify contributing or causative factors. The participation of other private parties in these activities is contingent on a single consideration: will such participation, in MSHA's judgment, produce a more accurate determination of the cause of the accident. State officials, representatives of the mine operator, and miners' representatives may observe in most cases as long as their presence doesn't interfere with the process and is safe.

D. Participation during Review and Analysis of Evidence

MSHA carefully evaluates and analyzes all the facts and evidence gathered during the investigation before reaching a determination as to the cause or causes of a mine accident. The accident reports prepared by the mine operator, representatives of miners, and the state mining agency may be considered during this portion of the investigation. However, persons other than MSHA employees or consultants must not participate in the decision-making process of the accident investigation team.

III. Investigation Team

When investigating fatal accidents, the investigation team must have a team leader who has been thoroughly trained in accident investigation techniques and procedures. The team leader's training and experience must also include knowledge of the proper procedures for the collection of evidence and maintaining a chain of custody. Other team members may include technical specialists, engineers, supervisors, or other inspectors or investigators, as needed.

The District Manager should make every effort to assemble an investigation team that has had no direct inspection or plan approval responsibility within the last 6 months. Such persons can be used in an advisory capacity to provide information about conditions and practices at the mine. Moreover, enforcement personnel assigned to the district or office responsible for the mine may be assigned duties to ensure that the mine is safe and is maintained safe for the investigation team to do its work. In situations where the local inspector(s) is utilized, the inspector should perform the assigned tasks apart from the investigative activities.

Considerable time may elapse before an accident investigator arrives at the mine. During this time, the inspector normally assigned enforcement responsibilities at the mine may be required to perform duties as a first enforcement personnel on site until an accident investigator arrives. Although the first enforcement personnel on site are not part of the accident investigation team, the first responder should secure the scene and issue a 103(k) order as appropriate. Any other activity or collection of preliminary information should be limited to assure the independence of the investigation and should include only items that cannot be preserved until the investigator arrives. Finally, any records and/or documentation provided to the first responder should be turned over to the investigator as soon as possible.

IV. Involvement of a Special Investigator

MSHA's accident investigations are separate and distinct from special investigations. There are circumstances, however, where a special investigator may be assigned either (1) as a member of the accident investigation team or, (2) to accompany the accident investigation team. The function of the special investigator in each role is somewhat different as described below:

A. Special Investigators Assigned to Accident Investigation Team
Unless assigned as the team leader, the special investigator, as a member, is to be available for any assignments from the team leader that are necessary for the timely completion of the accident investigation. The duties of the special investigator assigned as a member of the team are to function as an accident investigator. However, he or she should be alert to the findings of the investigation and, when appropriate, make timely recommendations to the team leader for a special investigation. The accident investigation team leader is responsible for immediately notifying the District Manager when conditions are found that indicate the need for a special investigation.

B. Special Investigators Accompanying the Accident Investigation Team
A special investigator, or a person who has received special investigations training, may also be assigned to accompany an accident investigation team. The special investigator's duties in this capacity are to observe all pertinent conditions and

monitor all statements to determine if a possible §110 violation occurred.

If, during the course of the accident investigation, the Special Investigator accompanying the team believes that a §110 violation may have occurred, he or she must:

1. Inform the accident investigation team leader at the earliest possible moment that a §110 violation may have occurred;

2. Advise the accident investigation team leader of the requirements for the preservation of evidence; and

3. Notify the Senior Special Investigator (SSI) as soon as possible that a possible §110 violation may have occurred. When in concurrence, the SSI must then recommend to the District Manager that a special investigation be initiated.

If the accident investigation team is comprised of personnel external to the district, the accident investigation team leader, the AI Program Manager, and the Chief, Technical Compliance and Investigation Office (TCIO), must be notified and participate in the decision to open a special investigation. The decision to actually initiate a special investigation will be made by the District Manager.

In the event that a §110 violation appears to have occurred, the participation of the Special Investigator as a member of the accident investigation team must be terminated if the investigator will be assigned to conduct the special investigation. However, the special investigator may continue to participate in the accident investigation if the special investigation is assigned to another investigator. If a special investigation is opened prior to completion of an accident investigation, the two investigations must be coordinated by the District Manager.

V. Organization and Planning

A. General

The effectiveness of an accident investigation will depend upon how well it is planned, organized, and conducted. The team leader is responsible for organizing and directing the efforts of the team to ensure that the investigation is thorough and completed in a timely manner.

B. Investigation Plan

The investigation plan is a systematic procedure which ensures a continuity of effort from the preliminary examination of the accident site to the submission of the final report. This phase provides the opportunity for the team leader to organize the team for the investigation. The leader should ensure that each team

member knows the area of the investigation he or she is responsible for, the initial task to be accomplished, and the data elements that need to be collected to complete the report. It has been found advantageous, when possible, for the team members or organized team groups to do a "walk-through" of the accident area prior to the collection of information or evidence. The investigation team should also be briefed by local MSHA personnel on the status of any preliminary actions.

Where rescue and/or recovery activities have occurred, the investigators should consider informal debriefing of mine rescue teams, MSHA personnel, and other persons involved in such work. These persons can be formally interviewed if necessary.

Whenever possible, a member of the investigation team should proceed to the hospital where the injured miner(s) have been taken to obtain informal statements, if permitted by medical attendants. Also, when the team has been identified in time, a member should be present at the morgue when personal effects of the victim(s) are being inventoried. In instances where team members have not been selected, the local District Manager should dispatch a special investigator to the morgue for this duty. A death certificate and, where available, an autopsy report will be obtained as a part of each fatal accident investigation.

C. Orientation

The team members must obtain copies of all relevant mine information from MSHA records as part of the investigation. This information will be analyzed along with records and information obtained at the mine. For mine accident investigation purposes, additional information (other than that routinely required to be maintained under the Mine Act) may be requested and required to be produced under Section 103(h).

A meeting of all interested parties, including representatives of the miners and the operator, should be held in much the same manner as a pre-inspection conference. The discussion should include how the investigation will proceed. All parties should be advised not to disturb any part of the accident scene and not to remove any items from the accident scene without prior MSHA permission. If permission is granted, an MSHA representative must be present to identify and determine exactly what is removed.

Additionally, all participants should be advised of the hazards of coming in contact with body parts (e.g. skin, limbs, hair, etc.), body fluids (e.g. blood, urine, feces, etc.), or other biological or health hazards. If appropriate, the Accident Investigation Team Leader may contact the Division of Health for precautionary health or biological procedures to be followed while in the accident area. Refer to

Administrative Policy and Procedures Manual (APPM) Volume IV Chapter 428 "Blood Borne Pathogen Exposure Control Program" for Guidance.

D. Accident Investigation Administrative File

The accident investigation team members need to be acutely aware of the various types and forms of information or evidence available, when and how it should be gathered, and how it must be transferred, stored, and recorded. To facilitate future FOIA requests or other types of information sharing, consideration should be given to digitally scanning documents in cases where voluminous records will be gathered. Any information relevant to the accident, whether in the form of physical evidence such as methane detectors, documentary evidence such as records and plans, or testimony taken at the investigation, must be collected and preserved in a systematic manner and stored at a central location designated by the investigation team leader. This compilation of data is the Accident Investigation Administrative File which contains the information that will be used to support the investigation findings and conclusions. Administrative files will be maintained for all fatal accident investigations, or other investigations as deemed necessary by the District Manager, and a running index (file log) of the file contents will be maintained to facilitate its use. Such information may be maintained with the inspection event file, in lieu of an administrative file, for non-fatal accident investigations. Files containing confidential information, including references to such information in the file log, must be identified as confidential to prevent inadvertent disclosure. For larger investigations involving multiple investigators, these files should be scanned and maintained electronically in a secure MSHA computer network folder. This will enhance access by team members, minimize the potential for loss of hard copy files, and simplify copying files for distribution when necessary.

VI. Technical Investigation

A. General

Team members, individually or collectively, must investigate and observe all conditions and practices relevant to the occurrence under investigation. Detailed records must be maintained of all observations and information obtained to document the investigation. The investigators must determine what happened, when and where it happened, and who was involved. They must also determine how and why the incident occurred so that they will be able to make accurate conclusions.

B. On-Site Investigation

Although preliminary information would normally already have been obtained and reviewed, the accident investigation does not get underway until the investigation team has observed the accident scene. It is here that both material and human

factors may first become apparent and the team gets an overview of the accident. Investigators will observe any conditions, locations, and/or equipment pertinent to the accident, and they mentally begin the process of reconstructing the sequence of events that led to the accident.

A sketch may suffice in the majority of cases; however, a scaled drawing may be necessary to reflect pertinent details of the accident scene. Photographs and/or video recordings must be taken as a part of the investigation when conditions permit. A compass direction should be plotted, if it will be used in the text of the report. All dimensions and distances necessary in clarifying the accident should be measured and shown on a sketch. Although some distances can be subsequently reported as approximations, all measurements should be made and recorded to the smallest tolerance practical unless the location of an item is not a factor in the accident. All physical evidence at the accident site that may be relevant to the cause of the accident must be documented.

C. Witness Statements

Witness statements are an essential part of accident investigations. Because recollections can become confused and physical conditions at the accident site can change over time, all persons with information relevant to the accident should be interviewed as soon as reasonably possible. Formal interviews should be conducted after the accident scene has been carefully examined. However, if the recovery or examination of the accident scene is extensively delayed by hazardous mine conditions or will otherwise be prolonged, consideration should be given to interviewing witnesses prior to the completion of the examination of the accident scene. Notes prepared on information received during interviews must contain the initials of the person who prepared them and the date the notes were taken.

State agencies will often conduct their own investigation of the accident. MSHA will coordinate its accident investigation activities with the authorized representatives of the state agency, recognizing the authority and responsibility of the state agency. However, MSHA will conduct its investigation independent of the state agency if a conflict of purpose arises between MSHA and the state.

1. Immediate Response Contact. Prior to conducting interviews, investigators should solicit information immediately through informal discussions with individuals who may have pertinent knowledge. These discussions should be conducted informally and personally by an MSHA investigator and should focus on the specific circumstances of the accident. In some cases, the local inspector, as the first enforcement personnel on site, may obtain an initial statement. Any information should be reduced to writing and promptly obtained by the investigation team.

These informal discussions should be used to obtain initial information as well as to identify those witnesses who will be formally questioned. If a person should refuse to be questioned, information gathered from informal discussions with that person should still be considered. Investigators should visit and informally interview anyone hospitalized as a result of the accident as soon as medical authorities permit it. Any suggestions for potential interviewees offered by the operator or miners representative should be considered.

2. Interviews. The investigator must endeavor to privately contact every potential interviewee, either by telephone or in person. During such private contacts, the interview process must be explained and an opportunity for a confidential interview must be offered. It should be made clear that a confidential statement is one where no other parties are present except MSHA, the witness, and their representative; and that MSHA will withhold such statements from public disclosure to the extent allowed by law. These contacts can be facilitated by obtaining employee names, addresses, and telephone numbers from the operator. MSHA is authorized to obtain this information as essential to its mandatory investigation function. These private contacts should be made very soon after the accident, since these contacts should precede non-confidential interviews. Information obtained from confidential interviews conducted before non-confidential interviews, can greatly enhance the non-confidential interviews. The District Manager can assign persons to assist the investigator in making these private contacts and conducting confidential interviews while the investigator is examining the accident scene. Persons who give confidential interviews may need to be interviewed again in a general manner during the non-confidential interviews to assist their confidentiality.

Each witness is to be interviewed separately. Witness interviews are completely voluntary, and a witness may refuse to answer any question or may terminate the interview at any time. Should a witness request to have a personal representative present during the interview, it should be allowed. Each witness should be told that a record of the interview will be made, and that the record will only be shared with individuals or groups in response to a FOIA request or court order (except where confidentiality is requested).

Normally, MSHA and the state agency (if any) will jointly conduct the non-confidential interviews. Where appropriate, MSHA and state investigators may cooperate in developing questions prior to the interviews.

The mine operator and the representative of miners (if any) may be invited to participate in non-confidential interviews except when government-only

interviews are deemed appropriate. Each party will generally be allowed one representative to attend the interviews. In special cases where technical assistance is needed, MSHA may allow a greater number of representatives to attend. The number of persons in attendance must be limited to the minimum needed to conduct an effective interview.

During the course of the interview, the mine operator and the miners' representatives, if present, will be permitted to ask questions to follow up on questions by MSHA and the state agency, to expand upon information, or to clarify points made by the witness. If the mine operator or miners' representatives believe that new areas of questioning should be explored, they must submit the proposed questions to MSHA investigators, who will then decide whether to pursue that area of questioning.

The MSHA team leader has the authority to limit attendance at the interviews to include only MSHA, with or without state agency representatives. Factors that the investigator should consider in determining whether to limit attendance in this manner include:

a. request by the witness for a confidential interview;

b. public statements or disclosures from participants that may compromise the integrity of the investigation;

c. behavior during interviews that could interfere with the effectiveness of the interview process;

d. indications of disruptive conduct as evidenced during the physical inspection of the mine; or

e. other factors which may create an atmosphere not conducive to MSHA carrying out its investigatory responsibilities.

Any one or more of the above factors can result in MSHA's determination that interview attendance will be limited to MSHA with or without state agency representatives. Each witness may choose to be accompanied by a personal representative of his or her choosing. If appropriate, the witness may be questioned whether the personal representative was freely chosen by the witness and whether the witness is aware of a potential conflict of interest if the personal representative represents the mine operator as well.

3. Location of the Interviews. To the extent feasible, interviews should be conducted in a neutral, informal environment, with comfortable seating and

lighting, to put witnesses at ease as much as possible. The superintendent's office, courtrooms, or attorney's offices are not ideal, as they may create an atmosphere that would inhibit the witness and such locations may not be secure. Off-mine sites should be considered in the location selection. If digital audio recorders are used, ensure that microphones connected to digital audio recording devices are positioned to obtain the best recording possible. Ensure that recurring miscellaneous sounds and noises will not adversely affect the recording.

4. Introductory Statement of MSHA Investigators to a group of interviewees. All witnesses will normally be assembled at the interview site immediately prior to commencement of the interview phase of the investigation. However, individual witnesses may be scheduled to be available throughout the interviews.

My name is _____. I am a [position title] with the Mine Safety and Health Administration, an Agency of the United States Department of Labor. [Introduce other MSHA representatives and any other individuals who are present].

I have been assigned to conduct an investigation into the accident that occurred at [mine operator's name and mine name] on [date of accident] in which [brief description of accident, including number of miners involved and resulting deaths or serious injuries].

The investigation is being conducted by MSHA to gather information to determine the cause of the accident, and these interviews are an important part of the investigation.

After the investigation is completed, MSHA will issue a written report detailing the nature and causes of the accident. MSHA accident reports are made available to the public in the hope that greater awareness about the causes of accidents can reduce their occurrence in the future. Information obtained through witness interviews is frequently included in these reports. Your statement may also be used in other enforcement proceedings.

I would like to thank all interview participants in advance for your appearance here. We appreciate your assistance in this investigation. The willingness of miners and mine operators to work with us is critical to our success in making the nation's mines safer. [Provide opportunity for state representative to make an introductory statement]. After reading the statement, all witnesses except the one to be interviewed first should be excused from the interview site.

5. Introduction to Individual Interviews. A statement similar to the following should be read into the record at the beginning of each individual interview (if a court reporter is not used, and a digital audio device is used, the digital audio recording device should be started at this time.)

This interview with [name of person interviewed] is being conducted under Section 103(a) of the Federal Mine Safety and Health Act of 1977 as part of an investigation by the Mine Safety and Health Administration into the conditions, events, and circumstances surrounding the fatal accident that occurred at [mine operator's name, name and location of mine, and date of accident]. This interview is being conducted at [location, date, and time of the interview]. The following individuals are present at the interview: [names and titles of MSHA employees and all parties participating in the interviews].

[Name of person interviewed], the interview will begin by asking you a series of questions. Feel free at any time to clarify any statements that you make in response to the questions. After we have finished asking questions, you will also have an opportunity to make a statement of your own and provide us with any other information that you believe may be important. If at any time after the interview you recall any additional information that you believe may be useful in the investigation, please contact [provide name, telephone number of contact person].

You are permitted to have a representative with you during this interview and you may consult with your representative at any time. You may designate any person to be your representative.

Your statement is completely voluntary. You may refuse to answer any question and you may terminate (end) your interview at any time. If you do not understand a question, tell me and I will rephrase the question. If you need a break for any reason, please let me know.

A court reporter will record your interview and will later produce a written transcript of the interview. [This statement applies when a court reporter is used. If a court reporter is not used, and a digital audio recorder is used say, "A digital audio recording will be made of this interview. A written transcript may or may not be produced."].

If any part of your statement is based not on your own first-hand knowledge but on information that you learned from someone else, please let us know. Please answer each question as fully as you can, including any information

you have learned from someone else. We may not ask the right questions to learn the information you have, so do not feel limited by the precise question asked. If you have information about the subject area of a question, please provide us with that information.

Do you have any questions regarding the manner in which this interview will be conducted?

[To the Court Reporter "or State Official" if applicable] Will you please swear [name of person interviewed].

Please state your full name, address, and telephone number, and please spell your last name for the record.

Are you appearing voluntarily at this interview? Has anyone made any promises to you for giving the statement or offered you any rewards in exchange for making your statement? [If so, who?] Has anyone threatened you or warned you not to provide a truthful statement? [If so, who?] Do you understand that you may refuse to answer any question or terminate this interview at any time?

Do you have a representative with you? [If so,] Please identify the representative. [If not,] Do you wish to have a representative with you?

6. Scope of Questioning. An important consideration during the interview process is to treat the witness with courtesy and respect. Interviews will be more productive if the line of questioning for each witness is planned ahead of time. Each witness will have a different perspective on the accident; some individuals will have a very specific and limited perspective. Let the witnesses tell their story in their own way without suggesting an answer.

   New information may often come to light during interviews, and entirely new areas of inquiry may need to be addressed. Advance preparation does not mean that adjustments cannot be made in the line of questioning or that witnesses may not be recalled for supplemental questioning. Where appropriate, a witness may be taken back to the accident site so that details of the accident can be more thoroughly addressed during the interview.

7. Concluding Statement of MSHA Investigators. At the conclusion of each interview, a statement similar to the following should be made:

On behalf of MSHA, I would like to thank you for appearing and answering questions. Your cooperation is very important to us as we work to determine the cause of the accident.

If you wish, you may now go back over any answer that you have given during this interview and you may also make a closing statement covering any additional points you believe should be raised [Pause to give person opportunity to think].

We ask that you not discuss your interview today with any person who may have already been interviewed or who may be asked to give a statement in the future. This will ensure that everyone's statement will be based on each person's independent memory of the events surrounding the accident.

After questioning other witnesses, we may wish to ask you further questions, and we will call you back if necessary. If at some later point you have additional information regarding the accident that you would like to provide to us, please contact [name of appropriate investigator assigned to accident investigation team] at the telephone number given to you prior to this interview.

The Mine Act provides certain protection for individuals who participate in accident investigations. If at any time you believe that you have been treated unfairly because of your cooperation in this investigation, please immediately contact [name of appropriate investigator assigned to accident investigation team]. Thank you again for your help.

D. Permanent Record of the Interview

When a court reporter is used to record witness interviews during fatal accident investigations, MSHA will pay for one copy of the transcript. An electronic file copy of each transcript should also be requested. MSHA will maintain custody of verified copies or original interview exhibits, such as drawings, maps, or items referred to during interview statements. The reporter should be informed at the time he or she is engaged that MSHA will photocopy and distribute additional copies as needed. The reporter should also be informed that transcript copies may be made available at a later time to the public as a government document at FOIA rates.

If witness interviews will not be recorded by a court reporter, a digital audio recorder may be used to record interviews. When audio recordings are made during interviews, the recording device should also be placed in a manner to allow the witness to be comfortable while she/he is speaking. The team leader in consultation with management will decide whether to allow the use of additional

recording devices, such as those of the mine operator. In general, if audio recording devices are used by MSHA or state agencies, the operator, if present, would be permitted to utilize his or her own recording system, unless such practice would interfere with an effective interview. In all cases, however, MSHA's record of the interview must be considered the official record.

Copies of witness statements must be included in the official accident investigation file. MSHA will not transcribe audio recordings of interviews to fill FOIA or other requests but will provide copies of recordings, as appropriate. MSHA may, in the public interest, release copies of statements prior to the close of the investigation if it will not impede the remainder of the investigation. However, release of confidential statements is not authorized without the express approval of the Office of the Solicitor.

E. Public Hearings

A public hearing is the questioning of witnesses under oath in a public forum (members of the general public including the media may be in attendance). Witnesses may appear voluntarily but they may also be compelled by subpoena to appear to answer questions and/or to produce records or other documents in their possession. Because of procedural notice requirements, the public hearing questioning is normally done after the on-site investigation is completed or nearly completed. The witness contacts would be done in the course of the on-site investigation process. Based on all information available, a potential list of witnesses to be called to testify at the public hearing will be developed. The public must be given formal notice of a public hearing, and all persons subpoenaed to appear must receive personal service prior to their scheduled appearance. While the public is free to attend a public hearing, the public is not free to participate in the conduct of the hearing except to the extent permitted by the person chairing the hearing.

1. Determination to Hold Public Hearing. A public hearing will not be held after every fatal accident, or after every major accident. The criteria below are designed to identify those accidents posing a situation where a public questioning forum would aid the accident investigation or would provide additional information and insights not available through other means of inquiry. Public hearings may only be scheduled with the concurrence and approval of the Administrator in consultation with the Associate Solicitor of the Division of Mine Safety and Health.

Accident investigations which may be evaluated for feasibility and possible benefit of public hearing are:

a. Accident investigations of sufficient complexity, magnitude, or nature as to warrant appointment of a special accident investigation team by the Administrator with national office staff direct participation.

b. Accidents that involve MSHA regulations which have been subject to controversy and/or substantial opposition prior to or upon publication, or standards which have been substantially affected by policy applications which are seen as controversial.

c. Accidents involving technology that may require further research by MSHA or may not be completely understood by the general mining community and where additional research or guidance may need to be developed.

d. Accidents of a recurring nature where the causes have been difficult to ascertain.

e. Accidents where multiple management entities are involved, or where several entities represent portions of the labor force at a mine. These could be multiple independent contractors along with the mine operator, or multiple labor representation. The number of entities vying for position in the interview process and the scope of their involvement may complicate the normal interview process, and that fact alone may be reason to invoke the public hearing authority of the agency.

f. Where records and documents are needed to assist the accident investigation but will not be produced unless a subpoena is issued.

The accident investigation team, with the concurrence of the Administrator, or the Administrator alone, may decide to hold a public hearing after seeking advice from SOL and consulting with the Assistant Secretary. Any person may request that a public hearing be held. The justification for a public hearing will be reviewed by the Administrator before a determination is made. The Administrator must designate in writing the person authorized to chair the public hearing and authorized to issue subpoenas and otherwise carry out the Secretary's authority and responsibilities under §103(b) of the Mine Act.

When MSHA determines that a public hearing is necessary, it must be convened at an appropriate time and place. Normally, the date, time, and place of the public hearing must be published by notice in the Federal Register. Prior to the hearing, the operator of the mine, the representative of miners, the responsible state agency, and such other persons as MSHA deems appropriate, must be notified in writing of the time and place of the public hearing. All persons being summoned to appear at the public hearing must be served at least 5 days prior to their appearance date unless extraordinary circumstances exist, or the person being summoned agrees to appear. Any person served with a subpoena to appear may file a motion to quash the subpoena prior to their appearance; however, unless specifically authorized not to appear, any person subpoenaed must physically appear at the scheduled time.

The hearing and its procedural rules must be under the general direction of the appropriate Administrator, in consultation with the Associate Solicitor for Mine Safety and Health. Parties seeking to appeal rulings of the hearing chairperson may file them with the appropriate Administrator. The determination of the Administrator on any issue pertaining to the conduct of the public hearing must be final for the Agency.

2. Conducting a Public Hearing. The following general rules must apply:

   a. All witnesses, whether subpoenaed or appearing voluntarily, must be sworn and advised of their legal rights with regard to the giving of testimony.

   b. All persons having information relevant to the investigation, as established by preliminary questioning, must be given an opportunity to testify.

   c. A transcript of the hearing must be made by a court reporter and must be made available to the public.

   d. The hearing must be open to the public. No tape recorders, television cameras, or other photographic equipment will be permitted in the hearing room without the approval of the appropriate Administrator.

   e. Members of the public may attend the public hearing but may not participate in the questioning process except as permitted by the MSHA Chairperson.

f. The public hearing will be conducted by MSHA. The state agency with authority for mine accident investigations will be invited to attend, with a representative and may ask questions of a witness.

g. When circumstances warrant, further procedural rules applicable to the hearing may be established prior to or during the hearing.

F. Operator Records

Several areas of records must be explored and documented as a part of the investigation.

1. Mine Performance Information. The accident history and compliance record for at least the past year should be obtained and evaluated to determine if other accidents and violations have similar root causes to those under investigation. If so, an evaluation of whether corrective actions were implemented and followed by the operator should be made to assist in negligence and root cause determination.

2. Examination Books. Examination books or other appropriate records should be sought out early during the investigation. In some instances, they may have been collected during the recovery operations. Under normal circumstances, the books should be identified by the team, promptly copied, and returned to the mine operator. Under receipt and proper chain of custody, MSHA may keep the original records, if needed to support a citation, and return copies to the mine operator.

3. Operator Accident Reports. A copy of the operator's accident investigation report, as required by 30 CFR 50.11(b), should be requested from the operator. This report should be entered in the accident investigation file.

4. Training Records. The investigation team should determine from MSHA Form 5000-23 and by interview, whether the victim(s) had received training or instructions related to the task being performed at the time of the accident. If training was received, find out the date the training was given, the name of the instructor, and the training method used. Based on evidence gathered during the accident investigation, a determination should be made on whether or not the training was conducted according to the approved training plan. Also, based on this evidence, conclusions may be reached as to whether the training covered appropriate topics. Company records should be used to determine other training programs completed, such as welder training, supervisory training, or maintenance training.

5. Rescue and Recovery Logs. If the accident resulted in the recovery of the accident site by mine rescue teams, a copy of the log should be obtained to document any changes made in the mine environment during the recovery.

6. Digital Records. Early in the investigation, the operator should be advised that the requirements of §103(j) of the Mine Act to prevent the destruction of any evidence which would assist in investigating the cause or causes of the accident apply to relevant digital records, including mine monitoring systems such as atmospheric monitoring systems, belt conveyor systems, main mine fan records, electrical systems, maps, etc. The investigation team should obtain copies of relevant digital records from the operator. This may include the downloading of digital information from the operator's computer hardware.

7. Other Records. The operator must provide upon request, pursuant to §103(h) of the Mine Act, other records, reports, or information necessary to perform the investigation in addition to those specifically required to be maintained by the Act.

G. Report of Autopsy or Death Certificate

When fatalities are involved, and as soon as it is available, investigators must obtain a copy of the report of autopsy, if one was performed, and a copy of the death certificate. These documents should be reviewed before the formal report is finalized in order to ensure that the findings and conclusions of the accident investigators are consistent with the official cause of death. However, Districts should not delay finalizing a fatal accident investigation report due to problems in obtaining the death certificate or report of autopsy. In most circumstances, the investigation report should be completed and issued and the documents reviewed when they arrive. The appropriate AI Program Manager should be notified by the District Manager of the existence of any inconsistencies as soon as they are apparent.

In all instances where the cause of death noted in the autopsy report and/or death certificate is inconsistent with the findings of the accident investigators, the inconsistencies must be reconciled or explained in the report of accident investigation.

H. Information from Other Sources

MSHA will accept, from any source, information relevant to accidents investigated by the Agency. MSHA will accept such information either publicly or by confidential arrangements. The team leader must afford any interested party the opportunity to present relevant information. Information obtained by others will be

considered on its merits but, as an independent investigating authority, MSHA must make its own evaluation of the merit and meaning of such information.

I. Miner Accident Injury Information from Medical Institutions

Medical information about a miner's injuries potentially caused by a mine accident may be obtained by MSHA from a hospital, physician or other medical treatment entity without consent from the miner or family under the HIPAA regulations that specifically permit such disclosures to MSHA as a public health authority. Such disclosure is limited to the minimum amount necessary to carry out MSHA's Mine Act public health responsibilities (refer to Appendix 24).

J. Management Organization

Investigators should determine the management structure of the operation. This includes supervisory personnel directly affecting the instructions given the miners, how work procedures are established at the mine, and the methods used for mine planning. The responsibility for conducting mine examinations, as well as the monitoring by upper management of such examinations, needs to be determined. Likewise, the company's safety management procedures and organization should be examined to determine its function in relation to the accident. Responsibility for mine/workplace design and equipment selection and maintenance should also be examined for any possible relationship to the accident.

As part of the accident investigation, it is important to determine if entities other than the identified mine operator played a significant role in operating the mine. It may be necessary to gain additional information during the accident investigation if there is reason to believe that an entity not identified as an "operator" is involved in the control or operation of a mine. Circumstances surrounding the operation of a particular mine (e.g., entities with few employees and with relatively short histories of operation at the mine site, entities who have lease agreements with other entities involved in mining, etc.), as well as information derived from local MSHA inspectors, may raise concern regarding the identity of the "operator" or the existence of multiple operators.

In such situations, efforts should be made during the investigation and interviews to identify all of the entities and individuals that are actually controlling the mining operation -- both those directly involved in the operation and those overseeing the operation. Likewise, in situations where independent contractors are present at the accident site, the relationship of the independent contractors to each other and the production operator, as well as the role that the contractors may have played in the accident, should be evaluated. If information suggesting that an entity other than the one listed with MSHA as the "operator" may also be involved in the operation of the mine, such information should be included in the accident investigation report. Since a determination regarding the status of other entities as an "operator"

will often involve an analysis of legal issues, it will be necessary to consult with the Office of the Solicitor.

VII. Root Cause Analysis

It cannot be overstated that the primary purpose of an accident investigation is to determine the causes of an accident to prevent similar occurrences. Rather than identifying and correcting only direct and indirect causes, the investigation must also identify the **root** causes of accidents. When underlying root causes are recognized and eliminated, future unsafe work procedures and conditions may also be eliminated.

As the investigation progresses the investigators will inevitably form conceptions about the causes of the accident. However, a complete and thorough accident investigation must always be structured to properly identify, explore, and develop root causes in the interest of accident reduction or elimination. Rather than acknowledging or accepting them on their own merit, the investigator must give full consideration to related or underlying conditions, practices, or circumstances. The investigator must constantly ask "why" these occurred and, if they had not existed, would the likelihood of a recurrence be reduced or eliminated. Investigators must attempt to discover what decisions and actions were the root causes of the accident.

Accident causation must be evaluated at three levels: direct, indirect, and root causes. Causation of violations or other hazardous conditions and practices can also be evaluated using this method.

A. Direct Causes

All accidents result from a direct cause, which is the energy source or hazardous material that inflicted the injury or resulted in the unplanned event. The accident classification typically hints at the direct cause, such as fall of roof. However, the direct cause should be further developed to identify specifically what happened (e.g. the size and rock composition of roof that fell, or the specific nature of a machinery component failure). Environmental and physical factors must be determined to identify, quantify, and qualify the direct cause.

1. Environmental Factors. The effect of the mine environment on the accident must be investigated, such as:

   a. the coal or metal and nonmetal seam height;

   b. the mine roof or hanging wall conditions;

   c. wet and muddy conditions that may have existed;

   d. climatic conditions;

e. methane liberation;

f. any coal or rock outbursts;

g. road grades and conditions; and

h. float coal or other dusts affecting visibility.

Environmental conditions such as contaminants, noise, artificial illumination, radiation, and the adequacy of the work surface or space should also be assessed for their possible influence on personnel or equipment involved in the accident.

The investigation should include an evaluation of other environmental factors that may have played a part in the accident. Weather conditions must be considered as possible causation factors. Precipitation, temperature, wind, or lightning may affect the control or operation of equipment, reduce visibility, or result in undetected hazards. However, an element or condition must not be considered a factor just because it exists; its contribution to the accident must be verified.

2. Physical Factors. The physical factors involved must be evaluated for their effect on the cause of the accident, such as: the design of the mining system, facilities, or equipment. The size and shape of pillars may affect roof stability. The inadequacy of a ventilation system may be a result of its design. Selection of equipment may be a factor if the equipment is unsuited to the mine or mining system. The maintenance of the equipment or tools definitely can be a factor in an accident. The condition of the tools and equipment and their role must be evaluated. The use of protective clothing or devices must be evaluated to determine if their absence, condition, or improper use may have been a factor.

Material (equipment or components, structures, etc.) failures or malfunctions which may have impaired the operational capabilities of equipment or contributed to a structural failure must be assessed. Failure can be the result of exceeding the design capability or operating limits of the item in question. The equipment, structure, component, or part could fail by: (1) becoming completely inoperable; (2) operable, but being no longer able to perform its intended function satisfactorily; or (3) deteriorating to the point where it is unreliable or unsafe for continued use.

The causes of failures must be identified. Damage that occurred during the accident should be identified in detail, and/or specimens gathered for analysis to determine the mode and sequence of failure.

A proper evaluation is dependent upon determining the difference between failures that may have caused the accident and damage caused by the accident. The first step in identifying failures or malfunctions is to document the most obvious evidence available at the accident site by taking notes and photographs and by drawing diagrams. Even though the investigation team begins by examining components which most probably failed, this examination is not complete until all major components and systems have been examined for evidence of failure. In cases where preliminary evidence (e.g., personnel statements) indicates that no failures or malfunctions occurred, the examination is still recommended. The purpose of the examination in this case would be to substantiate that a failure did not occur.

Once the investigation team has identified or at least suspects a failure or malfunction, it must continue the search for evidence of the cause of failure. For example, could the lack of maintenance have caused a failure of this part, component, or system? To answer questions like this, the investigation team must examine maintenance records and operation logs and evaluate any maintenance factors which may have contributed to the failure.

Components which the investigation team has identified or suspects as having failed may need to be shipped to an analysis facility. This type of analysis is important where the investigation team may not have the capability to determine why a component failed. Technical Support must be utilized whenever possible for these evaluations.

Equipment manufacturers can be utilized as a source of information concerning the design, operation, and maintenance of equipment. It may also be useful to consult with the manufacturer when making determinations relative to equipment failure or malfunctions. Contact with the manufacturer must be coordinated with the appropriate AI Program Manager.

The lack of special tools or equipment may have been a factor or have a bearing on the accident. The investigators should be alert to and evaluate indications that the lack of some particular device or equipment may have been a factor.

B. Indirect Causes

Indirect causes are human actions or inactions that resulted in the hazard or unplanned event described in the direct cause. Safety programs and regulations require miners and mine operators to take **specific actions** to eliminate, mitigate, or reduce the miners' exposure to hazards, including: conducting examinations, providing installations, and correcting or eliminating hazards as they develop. To identify indirect causes, direct causes should be evaluated to determine if they resulted from one or more of the following actions/inactions:

- Examination. Did the direct cause exist because of:
  - No examination?
  - Deficient examination?
  - Improper examination?

- Installation. Did the direct cause exist because of:
  - Lack of required installation?
  - Improper installation?

- Correction. Did the direct cause exist because a hazard was:
  - Not recognized?
  - Not reported?
  - Not corrected if reported?

This evaluation of the actions or inactions of personnel involved in the accident must also determine compliance with applicable regulations, formal standard operating procedures, or what is generally accepted as common practice. All actions relevant to the accident must be documented so that a chronology of the events which occurred before, during and, where appropriate, after the accident, can be developed. The foreman's actions pertaining to the accident area or work activities of the victim must also be ascertained.

C. Root Causes

The root cause identifies the reason that the mine operator's rules, policies, procedures or programs failed to ensure that employees took appropriate actions to prevent the indirect causes that led to the hazard or unplanned event. Examples of operator's rules, policies, procedures or programs include roof control plans, safety programs, mine ventilation plans, training plans, and other written company safety documents. Most root causes can be attributed to one of the following lapses in the operator's safety management program:

- Policies, procedures, or programs were not in place to guide miners in the appropriate actions. In such cases, mine operators should be encouraged to develop and implement appropriate written procedures.

- Policies or programs did not contain the correct steps or procedures. In such cases, mine operators should be encouraged to revise their procedures to include appropriate information.

- Policies, procedures, or programs were not clear or properly communicated. In such cases, mine operators should be encouraged to rewrite and clarify their policy or procedures, adding drawings, maps, or pictures as appropriate.

- Policies, procedures, or programs were not monitored or enforced. In such cases, mine operators should be encouraged to require monitoring and enforcement of their policies and procedures.

Most root cause statements can be formatted in one of the four categories listed above. To more specifically identify the root cause, evaluate the operator's policies, procedures, and programs applicable to each action/inaction for:

- Information: Did a misunderstanding or lack of communication have a bearing on the accident? Was the right information:
    - Given to the miner?
    - Understood by the miner?

- Knowledge/Training: Whether or not the victim was trained in accordance with the regulations is only part of the story. The important factor is whether the evidence indicated that the victim understood the task and hazards related to it.
    - Did the miner know how to do the task?
    - Could the miner apply the knowledge to the task?

- Tools/Equipment:
    - Were appropriate tools/equipment available?
    - Were appropriate tools/equipment used?
    - Did the procedures for using tools or equipment have a bearing on the accident?

- Incentive:
    - Was correct performance punished?
    - Was incorrect performance rewarded?
    - Were consequences suitable?

- Capacity: Was the task made difficult because of the miner's
    - Physical ability?
    - Concentration - did some event or circumstance result in apparent loss of concentration in the performance of a task or job?
    - Habits?

D. Corrective Actions
Prior to terminating the 103(k) or 103(j) order, investigators must ensure that the mine operator has developed and implemented corrective actions addressing each direct cause (to eliminate existing hazards associated with the accident or violation), each indirect cause as well as each root cause to institutionalize policies, programs, and/or procedures that will plausibly prevent similar occurrences in the future. Appropriate corrective actions must be reflected in the Action to Terminate section of corresponding enforcement actions.

E. If investigators cannot determine that a mining accident is attributable to human actions or failures to act, then there are no indirect or root causes. These accidents are not within reasonable control of the mine operator and imply no fault or negligence.

VIII. Collection of Evidence

Accident sites must be measured, sketched, video recorded (conditions permitting), and photographed in as close to the original condition as possible. If the site has been disturbed, the manner in which it has been disturbed, including by whom, when, and why, must be noted. Whenever any item(s) is removed from an accident scene, an MSHA accident investigation team member must be present.

One member of the investigation team must be assigned the responsibility of collecting, marking, and maintaining the chain of custody of physical and documentary evidence obtained during the investigation. Collection of physical evidence (such as equipment, timbers, roof bolts, pre-shift books, etc.) should be taken according to the applicable procedures in chapter 6 section C of the Special Investigations Procedures Handbook. The following additional guidelines also apply to evidence collection:

A. Each item must be permanently marked or effectively tagged with a unique identifier that includes the initials of the investigator.

B. After removal from the site, the evidence must be secured in an MSHA office and must not be removed except for official purposes related to the investigation.

C. Records must be kept of the date, time, and purpose of each removal as well as the name of the person who removed it.

D. Should the mine operator refuse to release any items or evidence, the matter should be referred to the District Manager for referral to the AI Program Manager. (Some states may have additional remedies available; therefore, cooperation between MSHA and State officials in the above matters is imperative.) If an issue

concerning destructive testing arises, Technical Support and SOL should be consulted.

The authority of MSHA to investigate accidents and to remove evidence extends only to mines as defined in §3(h) of the Mine Act. Any question as to whether a given location can be examined and/or evidence removed must be referred through the District Manager to the AI Program Manager. The AI Program Manager will consult with the Administrator and the Associate Solicitor for Mine Safety and Health to resolve the matter appropriately.

A master log of all items collected must be maintained as part of the accident investigation file. The file and all evidence collected must be secured and stored under lock and key under the direct control of the investigation team leader. Where returnable items such as equipment are collected during the investigation, a chain of custody must be maintained from the time the evidence is collected until the District Manager or Administrator authorizes the return of the evidence to the operator. A chain of custody log must also be maintained for any mine records collected as a part of the investigation.

A correspondence file should also be maintained especially for disaster investigations that result in a high volume of correspondence between the AI investigator team leader, other offices of MSHA, and outside parties.

IX. Close-out Conference

At the conclusion of the on-site examination portion of the accident investigation, a close-out conference must be held with both operators and miners' representatives to discuss future investigative procedures and, if appropriate, the preliminary findings of the investigation. Where appropriate, operators should be informed that the investigation is on-going and that enforcement action may be forthcoming.

X. Personal Contacts and Visits to Surviving Family Members (section updated in May 2016)

The District Manager or family liaison will be as responsive as possible to requests from the families of mine accident victims for information relating to mine accidents.

A. <u>Initial Contact</u>

As soon as possible following a fatal accident, surviving family members should be contacted by an MSHA management official. All contacts, including personal visits, should be scheduled at a respectable time interval after the accident, with special consideration afforded to family religious or local customs and practices. In particular, at no time should initial contacts be scheduled so as to interfere with funeral arrangements.

The initial contact made by an MSHA management official should be as brief as possible, but express the sympathy of all MSHA personnel, as well as that of the mining community for the family's loss. The initial contact should also include the offer of a personal visit if the contact is being made by telephone. Whether in person or by telephone, the name, address, and telephone number of the contacting official should always be provided, should family members wish to further consult with MSHA, or to provide information or comment during the course of the investigation. Also, insofar as proprieties permit, the contacting official should discuss MSHA's role, normal procedures, and the status of the investigation.

In the event that a personal visit is requested, the MSHA management official should provide reasonable accommodation to family members, including the date, time, and location of such visit. Non-management investigation team members may accompany the management official; however, it is not necessary that the entire investigation team participate. One or two members will suffice. The MSHA management official will take the lead in discussing the accident with the family.

Topics which should be included in the discussion with family members are the status of the investigation, the investigation process, and preliminary factual events surrounding the accident. The family members should also be provided an opportunity to comment and to ask questions. In no event should any conclusions be expressed at this point of the investigation.

Following all initial contacts, the appropriate Administrator's office should be informed by telephone and by a memorandum or e-mail of the date on which the visit was conducted and any points of comment that should be noted by the Administrator.

B. Interim Contacts

During any contact with family members, particularly in the interim period before release of the final report, the management official should listen carefully and closely to the comments, concerns, and questions. Issues raised during this period are frequently those of most concern to the surviving family members and will require resolution, if possible, during the final family contact, at which time the finished report will be provided and thoroughly discussed. Although it is not necessary to notify Headquarters in regard to these contacts, the management official should log or otherwise track these contacts in the event reference to them becomes necessary.

C. Report Release Visit

In the case of fatal accidents, it is MSHA policy to attempt to provide the victim's family with first copy of the final report of investigation prior to general release of

the report. A personal visit with the family should be scheduled to provide them with a copy of the report and to review with them the findings and conclusions contained therein prior to distributing the report to others. This visit will also be conducted by an MSHA management official. When scheduling these visits, the MSHA management official should again make every effort to accommodate family members' preferences as to the location, date, and time of the visit.

During this visit, attending family members should each be provided a copy of the completed report, accompanied by copies of any contributory enforcement actions. In some instances, the management official (ordinarily the District Manager) may not have participated in the investigation and may not be fully familiar with all its aspects. In this case, a member of the investigation team, preferably the team leader, should also be present for any needed consultation or assistance. The contents of the report should be thoroughly discussed with those in attendance, particularly with regard to MSHA's findings and conclusions. Family members should each be provided an opportunity to comment and to ask questions. However, any attorneys representing the family that may be present should not be allowed to dominate the discussion with negligence and liability questions. Any significant issues or points of comment raised should be responded to, if possible or appropriate, and duly noted.

Family members should be provided with notice that MSHA's enforcement actions may be contested by the mine operator in litigation before the Federal Mine Safety and Health Review Commission, an administrative court that is outside of the Department of Labor. The DOL does not provide legal representation or legal advice to families regarding Commission proceedings or any other proceedings. Information regarding the Commission and its rules of procedure, including rules relating to participation by potentially interested parties, is available at www.fmshrc.gov, by phone at (202) 434-9900, or by mail at 1331 Pennsylvania Avenue, NW, Suite 520N, Washington, DC 20004-1710.

Within five working days following the final contact or visit, a memorandum must be prepared for the appropriate Administrator and routed through the appropriate District Manager. This memorandum should contain the location and date of the visit, a listing of those in attendance, and a synopsis of any significant issues or points of comment raised by surviving family members.

In the event that surviving family members decline the offer of a personal visit and prefer to review the report privately, a copy(s) must be forwarded to their specified address by certified mail, return receipt requested. This is a courtesy extended by MSHA. Public release of the report should be delayed until receipt and review by family members.

As soon as possible after the release to the family, a similar overview meeting must be conducted with the mine operator. This meeting should include the miners' representative. If the operator declines such a meeting within a reasonable time, general distribution of the report will proceed with copies provided to the operator.

D. Contacts Involving Representatives of Families

It should be remembered that all personal contacts initiated by MSHA are extended as a courtesy to surviving family members and are not intended to be adversarial or biased in nature. These contacts are rather designed to involve family members in the process of the investigation and to serve as an additional resource to the family.

Due to the fact that the extension of this courtesy and resource is personal and only intended for surviving family members, non-family participation and involvement is not encouraged except in unusual circumstances. In the event that any contact is made or scheduled that involves parties other than family members, the District Manager must contact the appropriate AI Program Manager for guidance before continuing such contact.

Chapter 4 - Reporting and Report Writing

I. Purpose

This chapter has been developed to provide guidance in the compilation of factual information regarding the findings of investigations of accidents involving health and safety in mines and the dissemination of this information. The procedures and format to be used for the findings of investigations of occupational illnesses are distinctly different and are addressed in Chapter 5.

II. Preliminary Report of Accident

A. Reporting

The District will provide the Preliminary Report of Accident (MSHA Form 7000-13, revised March 05) as soon as possible but not later than 48 hours after the initial notification of the accident. Unless the system is out of service, the form will be completed on the network Accident Investigation Database. Headquarters will be provided a copy by PDF-format copy by email.

When gathering preliminary information, any equipment involved in the accident must be identified. The manufacturer and model of the equipment is to be included on MSHA Form 7000-13.

B. Instructions for Completion of the Preliminary Report of Accident

The report should be completed as indicated below. If not specifically mentioned, the items are self-explanatory.

1. Accident Type: Mark if fatal, nonfatal, non-injury, or unknown. An example of an unknown accident type would be a death on mine property, the cause of which may be natural or which has not yet been determined.

2. Accident Classification: Enter the appropriate classification as entrapment, inundation, gas or dust ignition, mine fire, explosives, roof fall, electrical, haulage, machinery, outburst, impounding dam, hoisting, or off-site injury. Refer to Chapter 4, Section II.C, Classification of Mine Accidents, for definitions. The AI Program Manager should be consulted for guidance on fatal classifications.

5. Fatal Case Number: Assigned by Headquarters.

6. a. Mining Company Name: Enter name of company operating the mine.
   b. Mine Name: Enter the name of the mine.

c. Parent of Mining Company: Enter name of company if not the same as the operator.

7. Mine Location: Enter the town, county, and state where the mine is located.

10. Primary Mineral Mined: Enter coal, potash, sand and gravel, anthracite, lignite, etc.

13. Union: Enter name of union with which contractor is affiliated.

14. Contractor ID Number: If a contractor employee was injured in the accident, enter the Contractor ID Number.

15. Contractor Address: Enter city, county, and state of contractor. Address should include mailing address, not just the city and state.

16. Number of Contractor Employees: At the mine site.

23. Victim Information, Activity at Time of Accident: State the activity of the victim at the time of the accident.

27. Description of Accident: Enter brief summary of how and why the accident occurred; i.e., ignition occurred during mining, cutting, welding, smoking material, etc. When it is appropriate, specify the model and serial number of equipment involved.

28. Equipment Manufacturer: Enter name of manufacturer of equipment involved in the accident.

29. Model: Enter model number of equipment, i.e., 21SC shuttle car, model of roof bolter, etc.

32. Field Office: Enter the MSHA field office that has responsibility for inspecting the mine at which the accident occurred.

33. Event Number: The event number that will be used for tracking purposes.

34. Accident Investigator: Person in charge of conducting the investigation.

35. MSHA Person Notified: Person who received the initial report of the accident.

36. Type of Report: Enter either Initial or Amended report type.

37. Name of Preparer and Date Prepared: Name of person completing the form.

C. Classification of Mine Accidents

The following procedure will be used when classifying accidents. Remember that it is the accident you are classifying. The accident classification identifies the circumstances which contributed most directly to the resulting accident. The accident may or may not be directly tied to any resulting injury. For that reason, you must not associate the classification decision with any injury that may have resulted. Keep the concepts of accident and injury clear and distinct in your mind as separate things.

The classifications are listed in alphabetical order:

ELECTRICAL - Accidents in which electric current is most directly responsible for the resulting accident.

ENTRAPMENT - In accidents involving no injuries or nonfatal injuries which are not serious, entrapment of mine workers takes precedence over roof falls, explosives accidents, inundations, etc. If a roof fall results in an entrapment accident, the accident classification is "Entrapment."

EXPLODING VESSELS UNDER PRESSURE - These are accidents caused by explosion of air hoses, air tanks, hydraulic lines, hydraulic hoses, and other accidents precipitated by exploding vessels.

EXPLOSIVES AND BREAKING AGENTS - Accidents involving the detonation of manufactured explosives that can cause flying debris, concussive forces, or fumes.

FALLING, ROLLING, OR SLIDING ROCK OR MATERIAL OF ANY KIND -Injuries caused directly by falling material require great care in classification. Remember that it is the accident we want to classify. If material was set in motion by machinery, haulage equipment, or hand tools, or while material is being handled or disturbed, etc., charge the force that set the material in motion. For example, where a rock was pushed over a highwall by a dozer and the rock hit another rock which struck and injured a worker - charge the accident to the dozer (machinery). Charge the accident to that which most directly caused the resulting accident. Without the dozer, there would have been no resulting accident. This includes accidents caused by improper blocking of equipment under repair or inspection.

FALL OF FACE, RIB, SIDE OR HIGHWALL - Accidents in this classification include falls of material (from in-place) while barring down or placing props; also pressure bumps and bursts. Since pressure bumps and bursts which cause accidents are infrequent, they are not given a separate category. Not included are accidents in which the motion of machinery or haulage equipment caused the fall either directly or by knocking out support; such accidents are classified as machinery or haulage, whichever is appropriate.

FALL OF ROOF OR BACK - Underground accidents which include falls while barring down or placing props; also pressure bumps and bursts. Not included are accidents in which the motion of machinery or haulage equipment caused the fall either directly or by knocking out support; such falls are classified as machinery or haulage, whichever is appropriate.

FIRE - An unplanned underground mine fire not extinguished within 10 minutes of discovery; or an unplanned mine fire in a surface mine or in the surface area of an underground mine that is not extinguished in 30 minutes. Fires of shorter duration may be responsible for reportable injuries. In those cases, the fire would still be the cause of the accident. Not included are fires initiated by electricity or by explosion of gas or dust.

HANDLING MATERIAL (lifting, pulling, pushing, shoveling material) - The material may be in bags or boxes, or loose sand, coal, rock, timber, etc. The accident must have been most directly caused by handling material.

HAND TOOLS - Accidents related to non-powered tools when being used as hand tools. Do not include electric tools or air-powered tools.

NON-POWERED HAULAGE - Accidents related to motion of non-powered haulage equipment. Included are accidents involving wheelbarrows, manually pushed mine cars and trucks, etc.

POWERED HAULAGE - Haulage includes motors and rail cars, conveyors, belt feeders, longwall conveyors, bucket elevators, vertical manlifts, self-loading scrapers or pans, shuttle cars, haulage trucks, front-end loaders, load-haul-dumps, forklifts, cherry pickers, mobile cranes if traveling with a load, etc. The accident is caused by the motion of the haulage unit. Include accidents that are caused by an energized or moving unit or failure of component parts. If a car dropper suffers an injury as a result of falling from a moving car, charge the accident to haulage.

HOISTING - Damage to hoisting equipment in a shaft or slope which endangers an individual or interferes with use of the equipment for more than 30 minutes.

Hoisting may also be the classification where a victim was injured by hoisting equipment but there was no damage to the equipment, such as accidents involving cages, skips, buckets, or elevators. The accident results from the action, motion, or failure of the hoisting equipment or mechanism. Included is equipment such as derricks and cranes only when used in shaft sinking; suspended work platforms in shafts; mine cars being lowered or raised by hoisting equipment on slopes or inclines; a skip squeezed between shaft structural members or rails resulting in an accident; or an ore bucket tipped for any reason causing an accident.

IGNITION OR EXPLOSION OF GAS OR DUST - Accidents resulting as a consequence of the ignition or explosion of gas or dust. Included are exploding gasoline vapors, space heaters, or furnaces.

Methane Ignition - A methane ignition occurs when methane burns without producing destructive forces. Damage resulting from an ignition is limited to that caused by flame and heat. Personnel in the immediate vicinity of an ignition may be burned and line brattice or other materials in close proximity may be discolored, melted or burned. Ignitions generally involve small quantities of methane and are usually confined to a small area; however, in the case of methane roof layering, flame spread may be more extensive.

Methane Explosion - A methane explosion occurs when methane is ignited and burns violently. The flame of the explosion accelerates rapidly, heating the environment and causing destructive forces. Evidence of the destructive forces may be manifest on victims, equipment, structures, etc. Witnesses to an explosion may hear the noise generated by the resulting sound pressure wave.

IMPOUNDMENT - An unstable condition at an impoundment, refuse pile, or culm bank which requires emergency action in order to prevent failure, or which causes individuals to evacuate an area. Also the failure of an impoundment, refuse pile, or culm bank.

INUNDATION - An unplanned inundation of a mine by a liquid or gas. The mine may be either a surface or underground operation.

MACHINERY - Accidents that result from the action or motion of machinery or from failure of component parts. Included are all electric and air-powered tools and mining machinery such as drills, tuggers, slushers, draglines, power shovels, loading machines, compressors, etc. Include derricks and cranes except when they are used in shaft sinking (see HOISTING) or mobile cranes traveling with a load (see POWERED HAULAGE).

SLIP OR FALL OF PERSON - Includes slips or falls from an elevated position or at the same level while getting on or off machinery or haulage equipment that is not moving. Also includes slips or falls while servicing or repairing equipment or machinery; includes stepping in a hole.

STEPPING OR KNEELING ON OBJECT - Accidents are classified in this category only where the object stepped or kneeled on contributed most directly to the accident.

STRIKING OR BUMPING - This classification is restricted to those accidents in which an individual, while moving about, strikes or bumps an object but is not handling material, using hand tools, or operating equipment.

OTHER - Accidents not elsewhere classified. This is a last resort category.

III. Fatalgrams.

Fatalgrams are intended as a means to prevent mining accidents by providing important and practical fatal accident information to the mining community as soon as possible. The following procedures should be followed to ensure the timely development and distribution of Fatalgrams.

A. As soon as possible, but usually following the on-site and interview segments of a fatal accident investigation (typically within 5 days), the district accident investigation team will develop an *enhanced* narrative description of the fatal accident. This description should briefly outline the story of the accident along with the key factors that contributed to its occurrence. The narrative will be accompanied by a selection of photographs or a drawing of the accident area and emailed to the appropriate AI Program Manager. In addition, bullet-style "Best Practices" will be included with the narrative. The "Best Practices" statements will identify ways to prevent a future fatal accident of a similar nature.

B. The AI Program Office will further the development of the Fatalgram and select an appropriate photograph or drawing. The draft Fatalgram will be circulated to the Accident Prevention Committee for suggested edits before release and posting on the MSHA website.

IV. Formal Report

A. Preparation of Report

A formal report is required in all investigations involving fatal accidents. The District Manager may require formal reports for other non-fatal or non-injury

investigations. Promptly after the on-site investigation, witness interviews, and technical tests are completed, a report must be written under the direction of the District Manager or the AI Program Manager, whichever is appropriate.

Final reports must be prepared and submitted in the following manner:

1. The draft fatal report must be submitted by email to the AI Program Manager for approval within 45 calendar days following the start of the fatal investigation. Upon approval and release, paper copies must be sent to the AI Program Manager and the Headquarters Office of Assessments. The District Manager must request an extension for any fatal accident report that cannot be drafted within 45 calendar days, giving reasons for the delay. Extensions should rarely be necessary because investigators are to continue the investigation and complete a draft report without interruption unless essential technical testing or evaluation is needed. Ordinarily, however, investigators will not return to regular inspection assignments until a draft report is complete. Additionally, unless the District Manager directs otherwise, no investigator must be assigned more than one fatal investigation concurrently.

2. The report must include maps, photographs, and other illustrations necessary to present a complete story of the matter investigated. The original maps and/or illustrations must be prepared in a manner that will allow copies to be made. If copies of the maps and illustrations cannot be prepared in the office responsible for conducting the investigation, they may be requisitioned through an MSHA office having the necessary facilities.

3. All fatal accident reports must be reviewed in draft form by the AI Program Manager. Any concerns raised by the Program Manager must be addressed by the District Manager prior to the report being made final. Copies of all citations and orders, both contributory and noncontributory, as deemed appropriate by the team leader, and a set of completed Accident Investigation Data Forms, MSHA Form 7000-50 series, must accompany the draft report.

4. The National Mine Health and Safety Academy, Support Services Branch, can be utilized for printing and distribution. An original report, a distribution list for the district in which the accident occurred, and a printing request should be submitted.

   In addition to the specified format of printed formal reports, distinctively colored covers must be incorporated and utilized uniformly in their

distribution. The color of the report cover must correspond to the type of accident as follows:

Report Color Coded Cover Pages	Accident Type
Red	Fatal
Yellow	Injury
Blue	Non-Injury

5. In the event that the investigation of an accident is prolonged, an interim report must be prepared when requested by the Administrator. The AI Program Manager will direct the method and procedure for submittal of the interim report. However, with the exception of those facts and issues which are unresolved at the time of the writing, the content and format of the interim report must be the same as for the final report.

6. The AI database must be updated with complete information for each E06, E07, and E08 event completed. The root cause analysis and text of the database report should coincide with the published paper report (in cases where one is produced). Periodic audits will be conducted to ensure that the database is complete. The completed 7000-50 forms should be reviewed by the supervisor and printed copies retained in the investigation file.

B. Formal Report Format

The following report format should be used for all fatal accident reports. Sometimes the investigator may be unclear as to how certain factual material, peculiar to a specific investigation, fits into this format. No format can be devised to completely avoid these contingencies, and they can be handled without unduly compromising the format or quality of the report.

1. Cover Page. A cover page of appropriate color, as previously addressed, and as illustrated on the following page, must cover each printed report. An identical non-colored title page must follow the cover page for photocopying purposes (only the non-colored title page is required for PDF-formatted or other electronic versions of the report).

   Each cover page of a fatal accident investigation report must bear a catalog number, positioned in the upper right corner. The purpose of the catalog number is to provide a means whereby libraries and other repositories of fatal accident investigation reports may efficiently catalog and store these for easy retrieval by interested parties. The catalog number must consist of the organizational origin of the investigation report (CAI for coal or MAI for metal/nonmetal), the four-digit year of occurrence, and the fatal case

number assigned by Headquarters. For example a catalog number of MAI-2006-05, would represent a MNM accident report of a fatality at a MNM operation, which occurred in 2006, and which represented the fifth fatality of the year. The report concerning the fifth coal fatality occurring in 2006 would bear a catalog number of CAI-2006-05. Before assigning the catalog number, the appropriate AI Program Office should be consulted.

The following are examples of fatal report cover pages where independent contractors are and are not involved:

(WITH INDEPENDENT CONTRACTOR)

MAI-1999-21

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

METAL AND NONMETAL MINE SAFETY AND HEALTH

REPORT OF INVESTIGATION

Surface Nonmetal Mine
(Sand and Gravel)

Fatal Machinery Accident
June 28, 1999

ABC Contracting Company (DE5)
Anytown, USA

at

ABC Pit and Plant
ABC Redi Mix, Inc.
Mining Town, Minerals County, Oregon
ID No. 51-12345

Note: "at" is used to reference the mine at which an independent contractor was involved in an accident. "At" is not used in this manner when independent contractors are not involved in the accident.

Accident Investigators

Manny Supervisor
Supervisory Mine Safety and Health Inspector

Roger Inspector
Mine Safety and Health Inspector

Fred C. Engineer
Civil Engineer

Dave D. Engineer, P.E.
Mechanical Engineer

Originating Office
Mine Safety and Health Administration
Western District
2060 Peabody Road, Suite 610
Vacaville, CA 95687
James M. Salois, District Manager

(WITHOUT INDEPENDENT CONTRACTOR)

MAI-1999-21

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

METAL AND NONMETAL MINE SAFETY AND HEALTH

REPORT OF INVESTIGATION

Surface Nonmetal Mine
(Sand and Gravel)

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ABC Pit and Plant
ABC Redi Mix, Inc.
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Dave D. Engineer, P.E.
Mechanical Engineer

Originating Office
Mine Safety and Health Administration
Western District
2060 Peabody Road, Suite 610
Vacaville, CA 95687
James M. Salois, District Manager

2. Table of Contents. Formal accident reports should generally be double-sided printed. The Table of Contents should be overleaf of the report sketch, map or photograph. When the report is open, the Overview should face the sketch, map, or photograph (unless the sketch or photograph can fit on the same page as the Overview). The following shows a general report outline and Table of Contents page:

Table of Contents

OVERVIEW ..... **Page #**

GENERAL INFORMATION ..... **Page #**

DESCRIPTION OF THE ACCIDENT ..... **Page #**

INVESTIGATION OF THE ACCIDENT ..... **Page #**

DISCUSSION ..... **Page #**

ROOT CAUSE ANALYSIS ..... **Page #**

CONCLUSION ..... **Page #**

ENFORCEMENT ACTIONS ..... **Page #**

APPENDICES

3. Report Content. Given that the purpose of the report is to inform stakeholders of the facts and circumstances that resulted in an accident, such that similar accidents might be prevented, it follows that the report should convey the essential information as concisely and effectively as possible. Extraneous facts can be maintained in the investigation file but should not be included in the report unless necessary. The following is a description of the above sections of a formal report:

   a. Table of Contents. A table of contents is required for all fatal reports and for other reports exceeding nine pages. Typical table with page number referenced for two levels of headings.

   b. Overview. The information in this section must mirror the information entered into Section B, Items 23 and 24, Description of the Accident and Conclusion, on the Accident Investigation Data Form (MSHA Form 7000-50 series). The purpose of the overview

is to provide critical and concise information about the accident, the mine, and the conclusion early in the report. The completed investigation file for each E06, E07, and E08 event must contain completed 7000-13 and 7000-50 forms. In most cases, one or two concise paragraphs can provide a full overview.

c. General information. This should include mine type, location, ownership, management, relevant involvement of independent contractors, mining method, and any unique factors pertinent to the operation.

d. Description of the Accident (Story of the Event). This consists of a description of the mine or facility's operation or work procedures beginning at an appropriate time to the extent necessary that the reader can comprehend the events leading up to the accident and understand the total mine environment if it relates to or affects the accident. For example: the roof conditions that have a bearing on the accident can be described; the electrical system, equipment, and voltages can be described to the extent necessary to understand the electrical installation and factors of the accident; or the mine ventilation can be described to the extent that it is involved in the accident. Information not necessary to understand what happened, but needed to understand the cause or contributing factors, can be described in the discussion section.

Information that is extraneous to the accident should not be included. This section of the report continues with a description of the accident itself. Any recovery activities or post accident activities can be covered in this section. Also, any MSHA participation in recovery activities can be woven into the story.

e. Investigation of the Accident. This section briefly outlines the investigation, stating when it started and ended, along with pertinent activity descriptions as necessary to provide an insight to the investigation. The names and/or job titles of interviewees must not be listed in the report. Rather, the number of interviewees should be stated in this section.

f. Discussion. This section contains a discussion of the pertinent factual details or factors bearing on the event. Information relevant to the accident should be documented, discussed and evaluated in paragraph or subsection format. The mining methods, equipment, plans, and work procedures believed to have an impact on or

contribution to the accident can be discussed. This section should be used to document MSHA's consideration and determination of the relative importance of the information learned in the investigation.

Information that supports the determined cause of the accident, as well as information considered in excluding factors that did not cause or contribute to the accident, is the basis of this section. Also include all information that supports any citations and orders issued as contributory violations. New information learned during any phase of the investigation, not mentioned elsewhere, can also be introduced and discussed here.

The results of laboratory analyses included in the appendix can be referenced, eliminating the need for discussing the analyses in this section. This section should address the "who, what, when, where, why, and how" of the accident.

g. Root Cause Analysis. Root Causes, along with corresponding Corrective Actions, must be identified in this section. Corrective actions may include corrections already adopted by the operator, corrections yet to be adopted, or both.

h. Conclusion. The conclusion states the cause(s) of the accident. The conclusion should list the **direct**, **indirect**, and **root** cause(s) of the accident. Facts or information not discussed elsewhere in the report should not appear in the conclusion. The conclusion must be fully supported by facts developed within the body of the report.

i. Signature. The report must include the approval signature and date.

j. Enforcement Action. This section must contain any enforcement action taken as a part of the accident investigation including §103(k) orders, §107(a) orders, and citations, orders, or safeguards issued for conditions or practices which contributed to the occurrence of the accident. The narrative portion of contributing citations and orders should be shown verbatim along with the section cited, type of action, and the S&S designation. The violation number can also be shown.

k. Appendices. The report must contain the following separate appendices, if applicable:

1) **Test Results** – In most cases it will be sufficient to include an Executive Summary prepared by the investigators which states the results of the tests. However, the Executive Summary should provide information as to how interested persons may obtain a copy of the complete report of all tests of equipment made in conjunction with the investigation.

2) **Sketches and/or Photographs** – Additional sketches and/or photographs necessary to clarify the report must be included.

3) **Charts, Tables, Illustrations, and Maps** – This information can be included to clarify or substantiate the report.

Equipment Identification

Investigators should exercise care in identifying equipment. Descriptions of equipment should be factual and avoid drawing any inference about facts not in evidence.

The investigator should not assume, and therefore not infer, in the report that when an Original Equipment Manufacturer (OEM) is identified on an MSHA approval plate that the equipment conforms in all respects to the OEM's original configuration. Such assumptions and inferences can be avoided by using generic descriptions and reporting only incontrovertible physical evidence such as information on name plates and approval plates. For example, when referring to a permissible shuttle car in an accident investigation report, the report should state only that the equipment involved in the accident was an electrically-powered, rubber-tired, coal hauler which bore an MSHA approval plate which contained the following information. The report would then document any or all of the information on that plate as well as any other nameplate (such as a rebuild shop's plate) that might have been present. It would also be appropriate to record any relevant specifications of the operating parameters of the equipment such as nominal voltage and any relevant physical characteristics of the equipment that may have contributed to the cause of the accident. If it is determined that the approval plate or any other identifier on the machine is improperly affixed to the machine, such determination could also be reported. The report can also report any permissibility violations that were observed.

The same issue exists for non-permissible equipment, as well. For example,

a hand-held pneumatic face drill should be identified only with that description and any nameplate information that may be present. Use of trade names commonly associated with such a device is not appropriate because the trade name may, in fact, be registered by a particular manufacturer.

4. Review of Report. When a fatal accident investigation report draft is completed, it is to be emailed to the appropriate AI Program Manager for review. A copy of any enforcement actions issued or anticipated must accompany the draft report. Following Headquarters review and approval, the report will be finalized, printed, and released. A conference call will be arranged to discuss proposed enforcement actions and will include the District Manager or designee, the investigator, Regional SOL, national office SOL, the Division of Safety designee, and the AI Program Manager or staff.

5. Hand-Delivery of the Report. MSHA policy is to hand-deliver a copy of the final fatal accident report to the victim's family, the mine operator, and appropriate labor organization or miner's representative prior to its release to any other entity.

   a. Visit to the Victim(s)'s Family. A copy of the report will be hand-delivered to the victim(s)'s family first. More detail on this topic may be found in Chapter 3, Section IX.C.

   b. Visit to the mine operator and labor organization or miner's representative. A conference should be scheduled with company officials responsible for the mine for hand-delivery of the report following delivery to the victim's family. A meeting with the labor organization or miner's representative should also be arranged. The contents of the report should be briefly explained with discussions on any measures to prevent future similar accidents.

6. General Release of Report and Press Statement. Once copies of the report have been provided to the victim's family, the mine operator, and the labor organization or miner's representative, the report is released to the general public. In some cases, a press statement will be issued along with the report. The AI Program Manager and the Office of Program Education and Outreach (OPEO), with input from the appropriate District Manager, should have a press statement developed and approved prior to the release date of the report.

7. Final Reports on the Internet. Following the meetings the final electronic

version must be emailed as soon as possible to the AI Program Manager for posting on the MSHA public internet website.

V. Form Reports

A form report format consisting of a completed set of Accident Investigation Data Base forms (Form 7000-50 series) is appropriate for most nonfatal accident investigations. An important consideration in the decision to write a formal report or a form report is whether the information learned in the investigation has a sufficient value to the mining community to warrant the expenditure of resources necessary to prepare and disseminate a formal report.

A. Accident Investigation Database

Completion of the appropriate Form 7000-50 and entry into the database is required for all investigation events coded E06, E07, or E08. Non-chargeable accidents investigated under an E33 code should not be entered into the database. As the primary internal system of assembling and storing accident data, the system relies on the accurate completion of accident investigation data forms, MSHA 7000-50 series, for all chargeable accident investigations **(including those where formal reports were completed)**. The database must contain accurate and complete information. The use of the AI data forms guide the investigator to consider specific topics in the investigation, help ensure the investigation is complete, and accurately populate the accident investigation information database.

B. Use of the Accident Investigation Data Forms

The AI data form set includes a general accident information form, a victim form, an independent contractor form, an ignition/explosion form, a roof fall form, and a continuation form. Upon completion of the investigation, the appropriate forms will be approved and entered into the AI database following standard operating procedures (SOPs) established by the District Manager. The SOPs will ensure that the final forms have been reviewed by the approving official for both technical and data-entry accuracy. A set of forms, printed from the AI database, will be maintained with the accident investigation file. These forms are not intended for public release, and should be filed under the cover of a completed MSHA Form 2000-22 as part of the investigation event.

In the case of deaths on mine property that are determined to be natural deaths or otherwise not chargeable to the industry, a set of AI data forms is not required and no data should be entered into the database. A preliminary report is required, however, for all deaths on mine property; and data should be entered into the preliminary database.

C. Reports

The database is designed to generate a data form report (a set of completed MSHA 7000-50 forms). The data form report may serve as the final report for **non-fatal** accident investigations.

D. General Information Form (MSHA Form 7000-50a)

This form is completed for all accidents investigated by MSHA and coded E06, E07, or E08.

Mine Information

Event Number: This is the event number assigned to the accident investigation.

1. MSHA ID Number: Enter the Mine ID Number from the Legal Identity Form.

2. Mine Name: Enter the mine name from the Legal Identity Form.

3. Operating Company Name: Enter the company name from the Legal Identity Form.

4a. Mine Location: Enter the town, county, and state in which the mine is located.

4b. Union Affiliation: Record the appropriate name or abbreviation of the union affiliation for the mine. Should multiple unions exist at the mine site, record the union organization that **represents the greatest number of workers** at the site or mine. If the union organization cannot be found in Appendix 4, record **"ONL"** (Other Not Listed), and accurately enter the name of the unlisted organization. If there is no union representation, write "**None.**"

5. Mine Type: Reference the mine type listed in Appendix 5. Enter both the applicable mine type code and the description.

6a. Material Mined or Processed: Reference the Standard Industrial Classification Codes (SIC) in Appendix 6. Enter both the SIC code and the description of the **primary material** mined or processed.

6b. Part 48 ? or Part 46? Place an "X" next to the appropriate Part on the line provided.

Note: Items No. 7, 8, 10, 12, 13, and 14 do not apply to Surface Facilities.

7. Name of Seam (Applies to Coal only): Enter the name of the coal seam being mined. If the operation is mining multiple seams, **enter the seam in which the accident occurred**. In multiple seam mines where the accident did not occur in one of the seams, enter **"Multiple Seams."**

8. Mining Data:

   a. Mining Method: Reference the list of mining methods in Appendix 7. Enter both the code and a description of the mining system. If the operation is using more than one mining system, enter the **primary mining system** at the operation. Single and multi-bench mining methods are descriptive terms for open pit mining.

   b. Extraction Method: Reference the list of extraction methods in Appendix 7. Enter both the code and a description of the extraction method in use at the operation. If the operation is using more than one extraction method, enter the **primary extraction method** at the operation.

   c. Haulage Method: This item refers to the method by which extracted material is transported. Reference the list of haulage types in Appendix 7. Enter both the code and a description of the type of haulage. If the operation is using more than one haulage method, enter the code for primary haulage method in the appropriate block on the form and indicate secondary and third haulage methods in the additional blocks. The methods should be listed in the order they occur starting at the point of extraction (i.e., shuttle car, conveyor belt, and track).

   d. Are explosives used in the extraction of material?: Check the appropriate block. Check "yes" only if explosives are used as part of the **normal mining cycle**.

9. Employment:

   At Time of Accident: Enter the number of **production operator employees** working underground and on the surface **at the time of the accident**.

   Average Mine Employment: Enter the **average number** of production operator employees.

Note: Do not include independent contractor employees in this number. Independent contractor employees are listed on the supplemental contractor information form.

10. Production (Coal only): Enter the estimated amount of raw coal, in tons, extracted during a normal **workday**. No production should be listed for Preparation Plants.

11. Hours of Operation: (Overlapping shifts may add up to more than 24 hrs.)

    a. Hours per Shift: Enter the number of hours during a normal work shift.

    b. Shifts per Day: Enter the number of shifts worked on a normal workday.

    c. Days per Week: Enter the average number of days the mine normally operates each week. Do not record a range, i.e., 4 - 6 days.

12. Number of Active MMU'S (UG coal only): Enter the number of active developing and retreating mechanized mining units.

13. Methane Liberation: Enter the cubic feet of methane liberated in the ventilation system in 24 hours. If no methane is liberated, enter "0."

14. Average Mining Height: Enter the average mining height, height between benches, or, if a single seam operation, the highwall height.

15. Management/Labor Officials: Enter the title, name, and address of the operation's principal management and labor officials, including the superintendent, mine foreman, section foreman, and, when applicable, the leading miner representative. The list should include **the highest level of management at the accident site at the time of the accident.** For labor officials (including miners representative), record the one union representative closest to the accident on the last line of this section.

Accident Information

16. Date/Time of Accident: Enter the date (in the form MM/DD/YY) and time (use 24 hour time).

17. Type of Investigation: Mark the appropriate box dependent upon whether the accident resulted in fatal injuries, non-fatal injuries, or no injuries. Mark only one box, indicating the most serious injury associated with the accident. For instance, if an accident results in both fatal and non-fatal injuries, only the fatal box should be checked.

18. Accident Classification: Reference accident classifications in Appendix 8. Enter both the code and a description of the accident classification.

19. Number of Deg. 1-5 Injuries: Enter the number of persons incurring fatal and lost-time injuries as a **direct** result of the accident. If the accident resulted in no injuries, enter "0."

20. Location of Accident Injury/Illness: Reference accident locations in Appendix 9. Enter both the code and description of the accident location. **Note: This is the location of the event, not necessarily the victim. Do not provide both a surface and underground location.**

21. Number of Independent Contractor Companies Involved in Accident: Where applicable, enter the number of independent contractor **companies** (not employees) involved in the accident. Enter "0" if no contractors were involved.

22. Equipment Involved: This section identifies equipment associated with the accident. If the accident did not involve equipment, leave items 22a through 22e blank. If more than one piece of equipment was involved in the accident, code the two most directly involved.

    a. Type: Reference the list of mining equipment in Appendix 10. Enter both the code and a description of the mining equipment.

    b. Manufacturer: Reference the list of equipment manufacturers in Appendix 11. Enter both the code and the manufacturer's trade name.

    c. Model Number: Enter the manufacturer's equipment model number.

    d. Serial Number: Enter the serial number of the equipment.

    e. Control: Signify whether the equipment is operated with remote or on-board controls. Enter "R" if the equipment was operated using a remote control. Enter "O" is the equipment is not remotely

controlled. Enter NA if no mining equipment was involved in the accident.

Note: If the equipment is not contained in the list of equipment codes, contact the appropriate AI Program Manager's Office.

23. Description of the Accident: Describe the findings of fact disclosed during the accident investigation. If necessary, use continuation sheets (MSHA Form 7000-50e), checking or circling the "Continued on Attachment" statement. In cases where a formal report is also released, this section should mirror the Overview section. Where applicable your narrative must include:

    a. What happened, including the events leading up to and following the occurrence;

    b. Damage or impairment to the mining operation and mine equipment relating to the accident;

    c. Protective devices or clothing;

    d. Work environment, including the work-site, operations, systems, work procedures, and hazards involved;

    e. Training of the miners involved; if the evidence indicated that the miner did not understand the task or the hazards related to it, this should be indicated; and

    f. Instructions given to the victim(s) and other persons directly involved in the accident. The person giving these instructions should also be included.

24. Conclusion: The conclusion should summarize the **direct**, **indirect**, and **root** cause(s) of the accident.

25. Enforcement Actions: For all contributory citations and orders issued in conjunction with the accident investigation, indicate whether the violation was due to **inadequate P**rocedures, **C**onditions, or **T**raining by checking the appropriate box:

    P. Procedure Type - Includes work procedures which create a violation that contributed to the accident. Examples: traveling inby roof

supports; failure to lock-out the electrical system; failure to follow approved plans.

C. Condition Type - Includes physical circumstances that caused violations that contributed to the accident. Examples: poorly maintained equipment; defective tools; adverse ground/roof conditions; and missing guards.

T. Training Type - Includes violations caused by inadequate training.

Enter the citation number, the part and section of Title 30 CFR cited, or, if 30 CFR is not cited, the Section of the Act under which the citation or order was issued. Enter the regulation cited **exactly as it appears in Title 30 CFR**. If a 103(k) Order is issued, list this order as well.

In the space provided, indicate whether the violation cited is a citation or order, the type of action (i.e., 104(d)(1)), and briefly summarize the nature of each violation. For citations and orders issued to independent contractors, enter the Contractor ID in the space provided, labeled **IC**.

MSHA Information

26. Last Quarter Nonfatal Days Lost Injury Incidence Rate: Enter the most recent **available** quarter's injury NFDL incidence rate for:

Industry - The rate for the applicable industry, using the appropriate subunit (i.e. underground, surface, dredge...).

This Mine - Enter the mine's injury incidence rate for the most recent quarter, using the appropriate subunit.

Contractor - If applicable, enter the contractor's injury incidence rate, using the appropriate subunit and industry for the primary contractor involved.

27. Did Technical Support participate in this Investigation? Check the appropriate box.

28. Part 50 Document Control Number (MSHA Form 7000-1): This item should only be completed for **non-injury accidents if known** (for accidents resulting in injuries, this information will be contained in the supplementary victim information). The Part 50 Form document control number will be entered by PEIR following PEIR's receipt of the 7000-1 report.

29. MSHA District Office: Enter the name of the district in which the mine is located.

30. MSHA Field Office: Enter the field office in which the mine is located.

31. Date Last Regular Inspection Completed: Enter the date of the last completed regular inspection.

32. Lead Accident Investigator - Name, AR Number, and Date: Identify the lead investigator for the accident investigation. Enter the Authorized Representative's name, AR Number, and the date on which this form was completed.

33. Date On-site Investigation Started: Enter the date on which the on-site investigation started.

34. Formal Report: Check "Yes" if a formal report is prepared for this investigation. If no formal report is prepared, check the "No" block and leave the date blank.

35. Report Release Date: Enter the date the formal report was approved.

E. Victim Information Form (MSHA Form 7000-50b)

This form is used in conjunction with the Accident Investigation Data Form (MSHA Form 7000-50a). This form is used to record information for those victims with **reportable lost time (Degree 1 - 5) injuries**. Refer to Appendix 15 for clarity. Reportable injuries are those injuries that operators are required to report pursuant to 30 CFR Part 50. The form allows reporting of victim information for three individuals. Additional sheets should be used for accidents involving more than three victims. This form may contain private information and should be protected accordingly.

Event Number: This is the event number assigned to the accident investigation.

1. Name of Injured/Ill Employee: Enter the name of the victim - First Name, Middle Initial, Last Name.

2. Sex: Enter "M" for male or "F" for female.

3. Victim's Age: Enter the victim's age in years.

4. Degree of Injury: Reference Injury Degrees in Appendix 15. Enter both the code associated with the degree of injury and the description (e.g., 01, Fatal).

5. Date/Time of Death: For fatal accidents, enter the date and time of death, using the form MM/DD/YY and 24 hour time. For non-fatal accidents, leave blank.

6. Date and Time Started: Enter the date and time the victim started work using 24 hour time.

7. Regular Job Title: Reference the list of mine occupations in Appendix 16. Enter both the code associated with the regular job of the victim and the descriptive job title.

8. Work Activity When Injured: Reference the list of work activities in Appendix 17. Enter both the code associated with the work activity and the description of the work activity in which the victim was engaged at the time of the accident.

9. Was this work activity part of regular job? Check the appropriate box.

10. Experience: Enter the number of years, weeks, and/or days of experience the victim had: a) in this work activity; b) in the regular job title; c) at this operation; and d) total mining experience.

11. What Directly Inflicted Injury or Illness? Reference the source of injury list in Appendix 18. The source of injury identifies the object, substance, exposure, or bodily motion which directly produced or inflicted the injury. Enter both the **code** of the injury source most closely describing that which caused the injury, as well as a **written description** of the injury source.

12. Nature of Injury or Illness: Reference the nature of injury or illness list in Appendix 19. Enter both the **code and description** for the nature of injury for the most serious injury incurred by the victim. Where an individual suffers several injuries, such as cuts and sprains, and no one injury is indicated as more serious than any other, classify as "multiple injuries."

13. Training Deficiencies: If the victim lacked any of the training required under Title 30 CFR Part 48, check those boxes which apply. This instruction includes independent contractors.

14. Company of Employment: If the victim is an employee of the production operator, enter "operator." If the victim is employed by any other company, enter the company name and, when applicable, the Independent Contractor ID. If the victim is not employed by a valid independent contractor or is a non-mining individual, enter the name of the company or the individual, without an ID Number.

15. On-Site Emergency Medical Treatment: Indicate the **highest** level of training of those individuals who were present with the victim at the accident site prior to delivery to an ambulance service or otherwise transported from the accident site.

    Example: Three miners assist an injured victim: one had never received any training in emergency medical treatment; one was trained in Red Cross First Aid; and the third had completed an EMT course, but was not certified. The EMT box should be checked.

    Not Applicable - Check if the victim died prior to being discovered.

    First-Aid - Check if any individual had taken any form of a first aid course.

    CPR - Check if any individual was trained in cardio-pulmonary resuscitation (CPR).

    EMT - Check if any individual had at any time taken a full course of instruction for an Emergency Medical Technician.

    Medical Professional - Check if any individual was a Medical Doctor, Registered Nurse, etc.

    None - Check this box when none of the individuals at the accident site had ever received emergency medical training.

16. Part 50 Document Control Number: Enter the Part 50 Form document control number if known; otherwise the number will be provided by PEIR following receipt of the 7000-1 report.

17. Union Affiliation of Victim: Record the appropriate name or abbreviation of the union the victim is affiliated with. If the union organization cannot be found in Appendix 4, record **"ONL"** (Other Not Listed) and then accurately enter the name of the unlisted organization. If there is no union representation, write "**None.**"

F. Independent Contractor Information Form (MSHA Form 7000-50c)
This form is used in conjunction with the Accident Investigation Data and Victim Information Forms (MSHA Forms 7000-50a and 7000-50b). This form is used to report independent contractor information for all accidents MSHA investigates in which independent contractors are involved. The form allows reporting of information for three independent contractors. Additional sheets should be used for accidents involving more than three contractors.

Event Number: This is the event number assigned to the accident investigation.

1. Company Name: Enter the independent contractor's trade name.

2. MSHA ID Number: Enter the independent contractor's MSHA ID Number, if applicable, otherwise leave blank.

3. Type of Independent Contractor: Reference the list of independent contractor types in the Coding section. Enter the code for the type of independent contractor as well as the description.

4. Nature of Contract Work: Enter the description of the nature of the work being performed by the independent contractor from the register of independent contractors required under 30 CFR §45.4.

5. Number of Independent Contractor Employees On-site at Time of Accident: Enter the number of this contractor's employees on site at the time of the accident, with separate entries for the number of underground and surface employees.

6. Independent Contractor Officials: On the first line indicate the title, name, and address of the independent contractor's highest management official on site. If there is no supervisor, enter “No supervisor on site” on the first line. The Company President and other relevant officials (e.g., Safety Director) should also be listed. If there is a union representative, that person should be listed as well.

G. Methane Ignition/Explosion Information (MSHA Form 7000-50d)
This form was primarily designed for recording data related to frictional face ignitions; however, the form should also be used to collect information during the investigation of all ignitions or explosions of methane. When used for ignitions/explosions not at the face, items 1, 2a, 8 (description), 14, 18, 22, 23, and 24 would usually be completed.

A methane ignition is usually a short duration burning of a small quantity of methane without indications of violence from expanding gases. At a minimum, the set of completed forms would include MSHA Forms 7000-50a and 7000-50d. Distribution of the completed Methane Ignition/ Explosion Accident Investigation Data Form set, when utilized as a report, would be the same as a formal report. A report cover page is recommended.

Event Number: This is the event number assigned to the accident investigation.

Section Information

1. Ignition or Explosion: Mark the appropriate box indicating the determination that the accident was either an ignition or explosion.

2. Location of Ignition/Explosion:

   a. Description: Describe the location of the ignition such as the face area, longwall face, outby area, shaft, etc. Include the name of the area or section such as 1 Right, Main West Haulage Block 50, 2nd Level, etc.

   b. MMU Number: (Coal Only) Record the Mechanized Mining Unit number assigned to the section when appropriate.

   Note: Items 3 through 7 apply to Coal only.

3. Type of Mining: Indicate the type of mining conducted as development or retreat.

4. Extended Cut Approved in: If the event occurred on an active section, record which plan(s) contained extended cut approval information or requirements prior to the accident.

5. Extended cut used at time of accident?: Indicate if an extended cut was being taken at the time of the accident.

6. Depth extended cut approved (in feet): Record the maximum depth approved for the section on which the accident occurred (distance from the last row of permanent roof supports to the point of deepest penetration).

7. Depth of extended cut at time of accident (in feet): Record the depth of the cut at the time of the accident (distance from the last row of permanent roof supports to the point of deepest penetration).

Dust Suppression Information:

8. Water spray parameters:

   a. Record the number of **operating** water sprays required by the ventilation plan.

   b. Record the number of **operating** sprays observed during the investigation as actually operating.

   c. Record water pressure (PSI) required by the ventilation plan.

   d. Record the water pressure (PSI) measured during the investigation.

   e. Record the water flow (GPM) required by the ventilation plan.

   f. Record the water flow (GPM) measured during the investigation.

   g. Briefly describe the type of water spray system used, type of scrubber, or type of fan system observed during investigation.

   h. Record the measured velocity in feet-per-minute for exhaust system ventilation (mean entry velocity).

Face Ventilation Information

9. Ventilation configuration: Record the ventilation configuration used in the accident area.

10. Ventilation control devices at time of ignition: Indicate the types of control(s) determined to be in place at the time of the accident.

11. Distance from inby end of ventilation control to face:

    a. Record required distance in the approved ventilation plan.

    b. Record distance at the time of accident as determined during the investigation.

12. Air quantities:

    Note: Items a and b, and, c and d should be comparative readings.

a. Indicate the air quantity at the last open crosscut or reaching the pillar line, as required by the regulations or the approved ventilation plan, in cubic feet per minute.

b. Record the measured air quantity at the last open crosscut or reaching the pillar line as determined during the investigation.

c. Indicate the air quantity at the face on a non-longwall face as required by the regulations or the approved ventilation plan.

d. Record the measured air quantity at the face on a non-longwall section as determined during the investigation.

e. Record diffuser fan capacity measured during the investigation where applicable.

f. Record scrubber quantity measured during the investigation where applicable.

Methane Information

13. Methane liberation:

a. On section: Record the methane liberation rate (cubic feet per 24 hours) as calculated during the investigation for the section involved in the accident. Generally, this is the results of bottle samples taken in the immediate return for an advancing section. For a retreating section, a combination of samples taken in the return and/or evaluation points should be used where practical.

b. Category (M/NM Only): Identify the current category of the mine in accordance with Subpart 57.22003.

14. Source of methane accumulation:

a-c. Indicate the source of methane (for methane ignitions) as determined by the investigation. If other is marked, describe source (i.e., outburst).

d. If a feeder is marked, briefly describe its location.

15. Was methane monitor functioning properly? Indicate results of functional tests of the methane monitor conducted during the investigation. Where a methane monitor was not a factor, indicate as Not Applicable (N/A).

16. Equipment involved maintained in permissible condition? Indicate the determination of the investigation where mining equipment was a factor in the accident. Where equipment was not a factor, indicate as Not Applicable (N/A).

17. Location of methane monitor sensing head:

    a-c. Indicate the location of the methane monitor sensor device, where appropriate, as looking toward the face. For longwall sections use the shearer monitor.

    d. Distance from face: Record the distance the sensor head was from the face at the time of the accident as determined by the investigation.

18. Barometric Pressure:

    a. Record the barometric pressure at the time of the accident as secured from an official source (airport, etc.).

    b. Indicate the movement of the barometer during the period of time before the accident.

Bit Information (Where mining equipment is involved)

19. Bit type: Briefly describe the type(s) of bits that were in use at the time of the accident.

20. Bit configuration: Briefly describe the bit configuration.

21. Condition of bits: Briefly describe the condition of the bits (worn on left side, good, etc.)

Other Information

22. Energy Source: Indicate the energy source that initiated the ignition/explosion as determined by the investigation. If "other" is marked, describe source (i.e., lightning).

23. Coke Samples Taken: Indicate whether samples for the presence of coke were taken as a part of the investigation.

24. Other Technical Data: Discuss or record any other important technical information specific to the accident. For example, "no air movement could be measured in the panel, all stoppings had been removed, and the area wasn't sealed."

H. Unintentional Fall of Roof/Back, Rib, or Face (MSHA Form 7000-50f)
This form is used in combination with other Accident Investigation Data forms to record data related to falls of roof/back, rib, or face.

Event Number: Enter the event number assigned to the accident investigation.

General Information

1. Type of Fall: Mark the appropriate box indicating the type of fall. "Back" will be used for Metal/Nonmetal mines. For Item 1.e. (Rock burst), see Metal/Nonmetal definition in 30 CFR 57.3000.

2. Dimension of Fall:

   a. Length: Describe the length in feet (rounded to the nearest foot).

   b. Width: Describe the width in feet (rounded to the nearest foot).

   c. Thickness: Describe the maximum thickness in feet and inches.

3. Width of Entry Room, etc.: Describe in feet and inches.

4. Immediate Roof/Back Information:

   a. Thickness: Enter the thickness of the **immediate** roof in feet and/or inches.

   b. Strata Composition: Describe the composition of the immediate roof, such as firm, shale, sandstone, cracks (surface or otherwise), etc.

5. Main Roof/Back Information:

a. Thickness: Enter the thickness of the **main** roof in feet (rounded). The main roof could be sandstone, shale, etc., not the immediate roof/back.

b. Strata Composition: Briefly describe composition of the main roof such as draw rock, shale, sandstone, etc.

6. Was the fall above the anchorage horizon of the bolts? Mark the proper box. Mark N/A if bolts were not used in the area of fall.

7. Did the fall affect ventilation, resulting in less than required quantity or quality? Mark the proper box (Quality will usually be used for Metal/Nonmetal).

8. Did the fall affect the passage of workers? Mark the proper box.

9. Did miners have indication of a pending fall? Mark the proper box.

10. If indication was given, what type? Briefly describe the type of indication given such as the roof/back working, timbers/posts cracking or taking weight, roof bolts breaking, etc.

Fall on Working Section/Active Face Area

11. Type of Roof Support: Briefly describe the types of roof/back support being used, such as resin bolts, conventional bolts, timbers/posts, cable bolts, truss bolts, concrete, steel sets, etc.

12. Type of ATRS (Coal only): Describe the type of ATRS being used, such as a doughnut, ironing board, etc.

13. Type of Original Support in Fall Area: Briefly describe the types of roof/back support that were used, such as resin bolts, conventional bolts, timbers/posts, cable bolts, truss bolts, concrete, steel sets, etc.

14. Distance Between Fall and Face: Measured distance between the nearest face and the fall in feet and estimated inches.

Fall Outby Working Section/Previously Developed Area

15. Location and Type of Entry (intake, return, main haulage, etc.): Briefly describe in what entry or crosscut the fall occurred.

16. Approximate Date of Development: Enter the date the area in which the fall occurred was developed (using MM/DD/YY).

17. Type of Original Support in Fall Area: Briefly describe the type of roof supports being used, such as resin bolts, conventional bolts, timbers/posts, cable bolts, truss bolts, etc.

Operator's Investigation

18. Did the operator investigate the fall? Mark the proper box.

19. What did the operator determine to be the cause of the fall? Briefly describe the mine operator's determination of the cause of the fall.

20. What steps did the operator take to prevent a similar occurrence? Briefly describe these steps, such as longer roof bolts, cribs, timbers/posts, etc.

Plan Revisions

21. Are plan revisions anticipated (Coal only)? Mark the appropriate box.

I. Continuation Form (MSHA Form 7000-50e)
This is a multipurpose form which can be used to continue narrative sections of the other forms. Enter the Event Number and indicate which item the continuation is associated with.

Chapter 5 - Investigation of Occupational Illnesses and Incidents Causing Acute Health Effects

I. General

Investigations of chemical exposures, illness symptoms or disease cases provide valuable information to the mining community about health hazards. The purpose of investigating these health-related symptoms and illnesses is:

A. To understand how the exposure occurred;

B. To learn whether other employees have been affected by the same hazard;

C. To learn the employee's current health status (Was the condition temporary or permanent?) and employment status;

D. To learn what measures have been taken by the mine operator to prevent similar occurrences; and

E. To share information regarding the hazard, the illness and the outcome within MSHA, and with the larger mining community.

F. Determine if there has been a violation of any mandatory health standards.

II. General Requirements

When an MSHA Form 7000-1 is received, the reviewer should pay specific attention to reports involving the situations described below. The reviewing official should determine whether to recommend an investigation of the occurrence to the District Manager. When a decision is made to investigate the accident, a preliminary report must be sent to the headquarters AI Program Manager within 48 hours.

Symptoms or conditions related to:

A. Inhalation or dermal exposure to an **acid** or a **base**
Symptoms or conditions may include difficulty breathing, eye burns, loss of sight, rashes and skin burns. Examples of sources: Hydrochloric acid is used at gold mines for carbon washing and copper mines use sulfuric acid for leaching. Bases include lye and lime, both wet and dry.

B. Inhalation or dermal exposure to an **asphyxiant**
Symptoms or conditions may include blurred vision, dizziness, headache, nausea, and loss of consciousness. Examples of sources: Carbon monoxide (CO), cyanide

gas (HCN) and salt solutions such as potassium cyanide (KCN) and sodium cyanide (NaCN) are all asphyxiants. Cyanide (CN) may be encountered by miners working at gold and silver operations. Carbon monoxide (CO) may pose a risk to many miners, in particular, those involved in blasting operations.

C. Inhalation, ingestion, or dermal exposure to **heavy metals**
Symptoms or conditions may include memory loss, tremors and weakness. Miners may be exposed to heavy metals, such as arsenic, cadmium, lead and mercury, during mining and while welding.

D. Inhalation of **respirable particulates**, such as coal mine dust and silica
Investigations should be conducted on miners with 20 years or less mining experience who develop advanced black lung disease, such as progressive massive fibrosis or STAGE 2 coal workers' pneumoconiosis, or silicosis.

E. Inhalation of **respiratory irritants** which result of burning in the eyes, nose or throat, cough and difficulty breathing
These include: ammonia (NH_3), chlorine (Cl_2), nitrogen dioxide (NO_2), and phosphine (PH_3). Ammonia and chlorine are used in the extraction process at some mining operations. Phosphine may be formed in some mines when moisture reacts with metallic phosphides. One source of nitrogen dioxide is exhaust from diesel powered equipment.

F. Inhalation or dermal exposure to **sensitizers** which can cause reddening or swelling of the skin, cough, difficulty breathing and possible collapse
Roof bolters, for example, may be exposed to sensitizers such as isocyanates, MDI, or TDI. Miners working in flotation operations may be exposed to chemicals such as amines and other flocculants, for example, aminopropylamine, and propanediamine.

G. Inhalation or dermal exposure to **organic solvents** which are often used for cleaning
Stoddard solvent and chlorinated solvents may cause dizziness, headache, nausea, skin inflammation (dermatitis) and skin rashes.

The District Manager, the Administrator or the Division of Health Chief may also initiate investigations covering other health-related matters, including situations where a MSHA Form 7000-1 report may not have been submitted. For example, an inspector learns that a former miner is suffering from tremors and memory loss, possibly related to their former work at the mine as a welder.

A reviewer may also consider following up on certain cases where the "return-to-work" information has not been reported or filed and the description of the impairment suggests that the employee may be off work for an extended period of time. The reviewer should

check with MSHA's Office of Injury and Employment Information (303-231-5448) to find out whether the mine operator has submitted the "return-to-work" information. If not, the reviewer should consider contacting the miner named in the MSHA Form 7000-1 and determine his/her health and employment status.

III. Investigations

Investigations of occupational illness should be conducted by industrial hygienists, health specialists, or other persons assigned by the District Manager. Technical Support personnel (such as the toxicologist) should participate in, or be consulted about, the investigation when appropriate.

Each investigation should include a thorough review of the mine file including the operation's sampling history, the 7000-1 form in question, other 7000-1 forms reporting similar illnesses (in particular at other operations with the same controlling company), and any studies or relevant information.

During the course of the investigation, the following information should be obtained:

A. The age of the employee;

B. Number of years the employee has worked in the mining industry;

C. Number of years the employee has worked at the operation where the condition was reported;

D. The length of time elapsed since the condition(s) or symptoms first developed;

E. The work-exposure history of the employee at previous work sites and at the site where the condition was reported;

F. Whether any personal protective equipment was provided and/or used;

G. Information about any hazard awareness training provided to the employee;

H. The employee's current medical condition and any associated treatment; (see Chapter 3, section VI. I. and Appendix 24 regarding HIPAA)

I. The employee's current employment status;

J. Whether the employee was transferred to a different job or position due to the illness;

K. The employee's knowledge of any co-workers reporting or suffering from similar symptoms or illness;

L. Whether a workers' compensation claim was filed, and the status of the claim; and

M. Whether the employee will provide written permission to MSHA for the investigator to discuss the case with, or to obtain documentary information from, the attending physician. If written permission is obtained from the employee, a copy of the document must be maintained in the case file, and upon final disposition of the case, filed in the official mine file (see Chapter 5, Section IV, Sources of Information, for a suggested format).

IV. Sources of Information

All contacts or conversations made regarding the investigation should occur only after the employee involved has been notified by the investigator. The employee's right to privacy concerning his/her health must be respected. Contact should not be made with the employee at his/her work site unless specifically asked to do so by the employee.

When contacting the employee named on the Part 50 report, she/he should be informed that MSHA is investigating the case. It should be explained that MSHA is not investigating either the merit or validity of any workers' compensation claim that the employee may have filed. The investigator should notify the employee that any medical information provided to MSHA will be treated confidentially and will be protected under the Privacy Act.

The investigator may want to contact the physician who treated the employee if there are have questions concerning the illness case. A physician, however, may require written permission before discussing the case or before providing any information. A suggested format for the employee's consent to release medical information follows:

> I, __(Name)__ hereby consent to the release of my personal and private medical information, now in the possession of any medical facility, hospital, clinic, or physician, to any identified representative of the Mine Safety and Health Administration (MSHA), U.S. Department of Labor. I give such consent freely, without reservation, and without promise of consideration. I further agree to indemnify and hold harmless, any institution or physician providing such information, in any form, to an identified representative of MSHA.
>
> I understand that MSHA will treat all such information confidentially and will protect the same in accordance with the provisions of the Privacy Act.
>
> Signature: _____ Witness: _____
> Print Name: _____ Printed Name: _____
> Date: _____ Date: _____

Representatives of the mine operator should also be contacted and asked if they had performed any investigations of the employee's claim and, if so, would they provide

MSHA with a copy of their report. Additionally, they should be asked about past and present exposures, environmental and work conditions, personal protection programs and training, medical monitoring, and other factors which may be relevant to the cause and prevention of the worker's condition.

V. Findings

Based upon the information compiled, the MSHA investigator should complete the appropriate Accident Investigation Data Forms (MSHA Form 7000-50 Series) addressing the District's findings. The data forms should be routed from the investigator, through either the District or Assistant District Manager. After their final review, the forms should be attached to the subject 7000-1, accompanied by other appurtenant documentary information and filed in the official mine file.

Preliminary Report of Accident, MSHA Form 7000-13

PR000

Preliminary Report of Accident

U.S. Department of Labor
Mine Safety and Health Administration

1. Accident Type:
2. Accident Classification:
3. Date/Time of Accident:
4. Date/Time of Death
5. Fatal Case No

6. Mine Information :
a) Mining Company Name
b) Mine Name
c) Parent of Mining Company

7. Mine Location : a) City b) County c) State
8. Mine ID Number:
9. Union:

10. Primary Mineral Mined:
11. Number of Mine Employees: a) Total b) Underground c) Open Pit/Quarry d) Mill/Prep Plant e) Other

12. Contractor Name:
13. Union:
14. Contractor ID Number:

15. Contractor Address: a) City b) County c) State d) Zip Code

16. Number of Contractor Employees: a) Total b) Underground c) Open Pit/Quarry d) Mill/Prep Plant e) Other

17. Number of Persons in Mine at Time of Accident:
a) Mine Employees: b) Contractor Employees:

18. Number of Persons Unaccounted For:
a) Mine Employees: b) Contractor Employees:

19) Location of Accident:
☐ 01-Underground ☐ 03-Open Pit ☐ 07-Advance Mining ☐ 30-Mill/Prep Plant ☐ Other (specify)
☐ 02-Surface at Underground ☐ 06-Dredge Mining ☐ 08-Retreat Mining ☐ 99-Office Facility

20. Mining Height: Feet Inches

21. Nonfatal Injuries:
22. Fatal Injuries:

23. Victim Information : a) Name b) Age

c) Regular Job Title:
d) Activity at Time of Accident:
☐ Mine Employee
☐ Contractor Employee

24. Experience : Years Weeks Days Years Weeks Days Years Weeks Days Years Weeks Days
a) Total: b) at the mine: c) at activity (23d) d) with Contractor

25. Autopsy Performed: If Yes, Location
26. Mine Telephone No.:

27. Description of Accident (include equipment involved, the exact location in the mine, and status of rescue and recovery operations):

The information provided in this notice is based on preliminary data ONLY and does not represent final determinations regarding the nature of the incident or conclusions regarding the cause of the accident.

28. Equipment Manufacturer:
29. Model:

30. District:
32. Field Office:
33. Event Number:

34. Accident Investigator:
35. MSHA Person Notified: Date: Time:

36. Type of Report:
37. Name of Preparer and Date Prepared:

38. Reason For Amendment:

MSHA Form 7000-13, March 05 (revised)

Accident Investigation Data, MSHA Form 7000-50a

Accident Investigation Data
Event Number:

U.S. Department of Labor
Mine Safety and Health Administration

A. Mine Information

1. Mine ID Number: -
2. Mine Name:
3. Operating Company Name:
4. Mine Location: (Town, County, and State)
b. Union Affiliation:
5. Mine Type:
6a. Material Mined/Processed
b. Part 48? Part 46?
7. Name Of Seam: (Coal Only)
8. Mining Data: a. Mining Method b. Extraction Method:
c. Haulage Method(s):
d. Are explosives used in the extraction of material? Yes No
9. Employment: At Time of Accident: a. Underground b. Surface:
Avg Mine Employment: a. Underground b. Surface:
10. Production: (Coal only) Avg Tons per Day:
11. Hours of Operation: a. Hours per Shift: b. Shifts per Day: c. Days per Week:
12. Number of Active MMU's:(Coal Only) a. Development: b. Retreat:
13. Methane Liberation: Cubic Feet in 24 hours:
14. Average Mining Height: Feet: Inches:
15.Management/Labor Officials:
Title Name Address

B. Accident Information

16. Date(MM/DD/YY)/Time(24Hr.) of Accident: a. Date: b. Time:
17. Type of Investigation: Fatal Non-Fatal Non-injury
18. Accident Classification:
19.Number of Deg. 1-5 Injuries:
20. Location of Accident/Injury/Ill. a. Surface Location: b. Underground Location:
21. Number of Independent Contractor Companies Involved in Accident:
22. Equipment Involved: #1 a. Type: b. Manufacturer: c. Model No: d. Serial Number: e.Controls:
#2 a. Type: b. Manufacturer: c. Model No: d. Serial Number: e.Controls:
23. Description of the Accident:

Continued on attachment

MSHA Form 7000-50a, Dec 94 Printed 05/18/2006 7:37:37 AM

24. Conclusion:

Continued on attachment ____

25. Contributory Issuances: Indicate P for procedure type violation, C for condition type, or T for Training type.

Violation Type | Citation Number | Regulation Cited | Section of the Act

P C T | | . | |

Citation | Order | Type of Action: | Summary of Violation:

IC:

P C T | | . | |

Citation | Order | Type of Action: | Summary of Violation:

IC:

P C T | | . | |

Citation | Order | Type of Action: | Summary of Violation:

IC:

P C T | | . | |

Citation | Order | Type of Action: | Summary of Violation:

IC:

P C T | | . | |

Citation | Order | Type of Action: | Summary of Violation:

IC:

P C T | | . | |

Citation | Order | Type of Action: | Summary of Violation:

IC:

C. MSHA Information

26. Last Quarter NFDL Injury Incidence Rate (PEIR) for:
Industry: | This Mine: | Contractor:

27. Did Technical Support participate in this investigation? Yes ☐ No ☐

28. Part 50 Document Control Number: (Form 7000-1)

29. MSHA District Office:

30. MSHA Field Office:

31. Date Last Regular Inspection Completed: Date: ____/____/____

32. Lead Accident Investigator: Name;AR Number;Date
Name: _____ AR No. ____ Date: ____/____/____

33. Date On-site Investigation Started: Date: ____/____/____

34. Formal Report: Yes ☐ No ☐

MSHA Form 7000-50a, Dec 94

MSHA Form 7000-50a Codes

Appendices 3-13 contain the codes to be used with the Accident Investigation Database General Information Form 7000-50a.

State Code Reference, MSHA Form 7000-50a, Item 4

FIPS STATE ABBR	STATE NAME	STATE CODE	FIPS STATE ABBR	STATE NAME	STATE CODE
AK	Alaska	02	MT	Montana	30
AL	Alabama	01	NC	North Carolina	37
AR	Arkansas	05	ND	North Dakota	38
AZ	Arizona	04	NE	Nebraska	31
CA	California	06	NH	New Hampshire	33
CO	Colorado	08	NJ	New Jersey	34
CT	Connecticut	09	NM	New Mexico	35
CZ	Panama Canal	61	NV	Nevada	32
DC	Dist of Columbia	11	NY	New York	36
DE	Delaware	10	OH	Ohio	39
FL	Florida	12	OK	Oklahoma	40
GA	Georgia	13	OR	Oregon	41
HI	Hawaii	15	PA	Pennsylvania	42
IA	Iowa	19	PR	Puerto Rico	72
ID	Idaho	16	RI	Rhode Island	44
IL	Illinois	17	SC	South Carolina	45
IN	Indiana	18	SD	South Dakota	46
KS	Kansas	20	TN	Tennessee	47
KY	Kentucky	21	TX	Texas	48
LA	Louisiana	22	UT	Utah	49
MA	Massachusetts	25	VA	Virginia	51
MD	Maryland	24	VI	Virgin Islands	78
ME	Maine	23	VT	Vermont	50
MI	Michigan	26	WA	Washington	53
MN	Minnesota	27	WI	Wisconsin	55
MO	Missouri	29	WV	West Virginia	54
MS	Mississippi	28	WY	Wyoming	56

Union Code Reference, MSHA Form 7000-50a, Item 4(b)

Description	Code
None (No Union Affiliation)	9999
Other not listed	9000
Aerospace IEM	2637
AFL	2648
AFL-AIO	2649
AFL-CIO	2647
AFL-FIO	2667
AJO Metal Trades Council	2676
Alaska Public Employees Assn.	2684
Albany Trucking & Allied Indus	2664
Allied Chem. & Alkali Workers (ACAW)	2685
Allied Industrial Workers (AIW)	2530
Alum., Brick & Glass Workers Int Union	2726
Aluminum Workers Int. Union	2466
Amalgamated Transit Union	2621
Amer Fed St Co & Mun Employees	2515
Amer Train Dispatchers Assn	2586
Amer. Fed. of Grain Millers	2554
Amer. Postal Workers Union	2576
American Communications Assn.	2489
American Fed. Govt. Employees	2514
American Fed. of Teachers	2607
American Federation of Guards	2523
American Flint Glass Workers	2511
Appalachian Miners of America	2705
Assn. Plumbers & Pipe Fitting	2572
Atlantic Independant Union	2690
Automotive Mechanics	2669
B. of Locomotive Engineers	2587
B. of Maintenance Way Employees	2588
B. of Railroad Signalmen	2589
B. of Railway Carmen	2594
B. of Utility Workers of N.E.	2625
Bldg & Trades Council Eagle Mt	2634
Brotherhood of Marine Officers	2546
Building Laborers Int.	2652
Butte Machinists Union	2650
Butte Teamsters	2651
Cement, Lime & Gypsum Workers	2484
Chariton Valley Ind. Union	2707
Coal Strippers	2710
Columbia River Gorge Comm.	2680
Communications Workers	2490
Congreso Uniones Ind De P.R.	2727
Congress of Independent Unions	2693
Construction & Gen. Laborers	2653
Coopers International Union	2493
Council For Oil & Allied Indus	2562
Council of Southern Mountains	2704
County & Mun Employees-Sharon	2658
Crow Hollow Miners Union	2702
Dist 50 Allied & Tech Workers	2629
Distributed Workers of America	2663
Employees Assn. of Armco Steel	2686
Equipment Engineers	2692
Federal Labor Union	2688
Gen Building & Construction	2646
Gen Laborers & Material Handlers	2631
Gen Teamsters & Allied Workers	2630
Gen Teamsters Deliverymen	2635
General Laborers Union	2659
Glass,Pottery,Plastic & Allied Wkrs	2582
Globe Miami Trades Council	2675
Granite Cutters Int. Assn.	2521
Heavy Equipment Laborers Union	2641
Hermandad Genrl De Trabajadores	2725
Hod-Carriers-Laborers	2699
Hoisting Engineers	2655
HREBIU	2529
Ind Concrete Material Handlers	2719
Ind Miners Breakerman Truckers	2712
Ind. Union of Marine Workers	2547
Independent Watchmens Assn.	2628
Independent Miners & Assoc.	2711
Independent Strip Miners Union	2709
Independent Union	2689
Independent Workers of No. Amer.	2729
Int Fed Pro & Tech Engineers	2500
Int Union Elevator Constructor	2499
Int Union Operating Engineers	2501
Int. Assn. Fire Fighters	2505
Int. Assn. Iron Workers	2534
Int. Assn. of Asbestos Workers	2467
Int. Assn. of Machinists	2543
Int. Assn. of Siderographers	2603
Int. Assn. Tool Craftsmen	2618
Int. B. Electrical Workers (IBEW)	2496
Int. B. of Boilermakers (IBB)	2473
Int. Brotherhood of Painters	2564
Int. Brotherhood of Teamsters (IBT)	2609
Int. Chemical Workers Union	2485
Int. Longshoremens Ass'cn	2541
Int. Longshoremen's Union	2542
Int. Molders & Allied Workers	2556
Int. U. Journeymen Horseshoers	2527
Int. Union Electrical Workers	2497

Int. Union of Bricklayers 2477
Int. Union Petroleum Workers.....2568
Int. Woodworkers of America 2682
International Guards Union 2524
International Mailers Union.....2544
Journeyman Stone Cutters 2695
Klickitat Co. Planning Comm.....2679
Laborers Dist Council of Phila 2632
Laborers Dist Council of W Pa.....2633
Laborers Int. Union 2480
Labors Local.....2728
Lumber & Sawmill Workers.....2639
Machine Printers & Engravers.....2583
Machinists Political League.....2573
Madison Federation of Labor 2645
Masters, Mates & Pilots.....2548
Material Yardworkers.....2665
Mechanics.....2671
Mechanics Educational Society.....2552
Metal Polishers Buffer Plater U.....2553
Metals Trade Union.....2700
Morenci-Clifton Trades Council.....2674
Municipal Employees 2661
N. M. Highway Employees Assn. 2691
Nat Alliance Postal & Fed Emp.....2577
Nat. Assn. Govt. Employees.....2517
Nat. Fed. Federal Employees.....2518
Nat. Labor Relations Board U. 2519
Nat. Marine Engineers Assn. 2550
National Industrial Workers 2531
National Maritime Union.....2551
Needham Public Works Assn. 2660
Office & Professional Employees.....2561
Oil, Chemical & Atomic Workers (OCAW)..2486
Operators Union 2678
Oregon State Employees Assn.....2718
Plant Protection Employees.....2570
Plasters & Cement Masons Assn. 2571
Professional Association.....2520
Progressive Mine Workers 2706
Railroad Yardmasters of Amer. 2590
Railway & Airline Supervisors.....2592
Redstone Workers Association.....2668
Rockport Employees Assn.....2657
S. Illinois Dist Labor Council.....2698
Service Employees Int. Union 2598
Sheet Metal Workers Int. Assn. 2599
Sindicato De Equipo Pesado 2715
Sand Gravel & Cut Stone Worker 2670
Scotia Employees Union.....2703
Slate Tile & Comp. Roofers 2604
Society Tool & Die Craftsmen.....2619
Southern Labor Union.....2701
Southwestern Illinois Council 2697
Staff Officers Association 2584
Stoughton Employees Assn. 2656
Stove Furnace Appliance Workers.....2606
System Federation.....2717
Technical Engineers Assn. 2502
Thomas Legal Defense Fund.....2507
Tile Marble Terrazzo Finishers.....2545
Tile Workers Independent Union.....2642
Transport Workers Union 2622
Tri-Trades Union.....2683
Truckdrivers & Helpers Union.....2666
Union De Concreto Mixto Y Equipo 7222
Union De La Construction DeCt.....2724
Union De Trabajadores De La Cm.....2720
Union De Trabajadores Indep Lib.....2713
Union Obreros Cmt Mezclado 2721
Union Trabajadores Unidos 2714
United Automobile Workers 2468
United B. Carpenters & Joiners.....2482
United Bonneville Workers Assn.....2644
United Brick & Clay Workers.....2476
United Electrical Workers.....2498
United Glass & Ceramic Workers.....2512
United Industrial Workers.....2662
United Laborers Union.....2636
United Mine Workers of America (UMWA) 2555
United Paperworkers Int. Union (UPIU).....2565
United Plant Guard Workers.....2569
United Rubber Workers of Amer. 2597
United Rubber Workers Union 2696
United Shoe Workers of America 2602
United Steel Workers of America (USWA)..2605
United Stone & Allied Products.....2694
United Telegraph Workers.....2610
United Transportation Union 2591
Uranium Metals Trade Council.....2716
USAPWA.....2638
Washington St. Council of Emp. 2681
Wayland Highway Dept. Assn. 2654
Welch Miners Union.....2708
Western Energy Workers 2687
White Pine Metal Trade Council.....2673
WMRRE 2672
Wood Wire & Metal Lathers.....2537
WPPSS.....2677
Wyoming Construction Comp Assn.....2643

Mine Type Reference, MSHA Form 7000-50a, Item 5

Code	Description
A	Auger
C	Culm Bank/Refuse Pile
D	Dredge
I	Independent Shop/Yard
M	Mill/Preparation Plant
S	Strip/Open Pit Quarry
U	Underground

Material Mined (SIC Code) Reference, MSHA Form 7000-50a, Item 6(a)

Code	Description	CMDTY
149932	Agate Mining	N
281901	Alumina Milling	N
109901	Aluminum Ore-Bauxite Mining	M
149933	Amethyst Mining	N
123101	Anthracite	C
123100	Anthracite Mining	C
109902	Antimony Ore Mining	M
145901	Aplite Mining	N
147901	Arsenic Minerals Mining	N
149901	Asbestos Mining	N
149902	Asphalt Mining	N
147902	Barite/Barium Ore Mining	N
142905	Basalt Mining, Crushed & Broken	N
141107	Basalt Mining, Dimension	N
145902	Bentonite Mining	N
109903	Beryl-Beryllium Ore Mining	M
122201	Bituminous	C
122101	Bituminous (Surface)	C
122100	Bituminous Coal and Lignite Surface Mining	C
122200	Bituminous Coal Underground Mining	C
147401	Boron Minerals Mining, N.E.C.	N
145903	Brucite Mining	N
142201	Calcitic Limestone Mining, Crushed & Broken	S
324100	Cement, Hydraulic	S
147900	Chemical & Fertilizer Minerals Mining, N.E.C.	N
106101	Chromite/Chromium Ore Mining	M
145906	Clay Mining, Fire	N
145501	Clay, Ball	N
145900	Clay, Ceramic & Refractory Minerals Mining, N.E.C.	N
145904	Clays Mining, Common, N.E.C.	N
106102	Cobalt Ore Mining	M
147903	Colloidal Phosphate Mining	N
106103	Columbium/Tantalum Ore Mining	M
102101	Copper Mining, Native	M
102100	Copper Ore Mining, N.E.C.	M
102195	Copper, Heap Leaching	M
102199	Copper, in Situ Leaching	M
144604	Cristobalite, Ground	G

149903	Cryolite Mining	N
149934	Diamond Mining	N
149904	Diatomaceous Earth (Diatomite) Mining	N
142203	Dolomite Mining, Crushed & Broken	S
142202	Dolomitic Limestone Mining, Crushed & Broken	S
149935	Emerald Mining	N
145905	Feldspar Mining	N
106100	Ferroalloy Ores (Except Vanadium) Mining, N.E.C.	M
106195	Ferroalloys, Heap Leaching	M
106199	Ferroalloys, in Situ Leaching	M
147904	Fluorspar Mining	N
145907	Fuller's Earth Mining	N
103101	Galena Mining	M
149936	Garnet Mining	N
149931	Gemstones Mining, N.E.C.	N
149905	Gilsonite Mining	N
142301	Gneiss Mining, Crushed & Broken	S
141108	Gneiss Mining, Dimension	S
104103	Gold Bullion Production	M
104100	Gold Ore Mining, N.E.C.	M
104195	Gold, Heap Leaching	M
104199	Gold, in Situ Leaching	M
142300	Granite Mining, Crushed & Broken	S
141101	Granite Mining, Dimension	S
149906	Graphite Mining	N
144202	Gravel Mining	G
149907	Gypsum Mining	N
101101	Hematite Mining	M
281900	Industrial Inorganic Chemicals Mining, N.E.C.	N
101103	Iron Agglomerate & Pellet Production	M
101104	Iron Ore Dressing (Beneficiation) Plant	M
101100	Iron Ore Mining, N.E.C.	M
101195	Iron, Heap Leaching	M
101199	Iron, in Situ Leaching	M
149937	Jade Mining	N
145502	Kaolin	N
145500	Kaolin/Ball Clay Mining	N
145908	Kyanite Mining	N
103102	Lead Ore Mining	M
103100	Lead/Zinc Ore Mining, N.E.C.	M
103195	Lead/Zinc, Heap Leaching	M
103199	Lead/Zinc, in Situ Leaching	M

149908	Leonardite Mining	N
122102	Lignite	C
327401	Lime, Dead-Burned	S
327402	Lime, Hydrated	S
327400	Lime, N.E.C.	S
142200	Limestone Mining, Crushed & Broken, N.E.C.	S
141102	Limestone Mining, Dimension	S
147905	Lithium Minerals Mining	N
104101	Lode Gold Mining	M
145909	Magnesite Mining	N
101102	Magnetite Mining	M
106104	Manganese Ore Mining	M
142901	Marble Mining, Crushed & Broken	S
141103	Marble Mining, Dimension	S
109904	Mercury Ore Mining	M
149909	Mica Mining	N
142906	Mica Schist Mining, Crushed & Broken	N
141109	Mica Schist Mining, Dimension	N
109995	Misc. Metals, Heap Leaching	M
109999	Misc. Metals, in Situ Leaching	M
109900	Miscellaneous Metal Ore Mining, N.E.C.	M
149900	Miscellaneous Nonmetallic Minerals Mining, N.E.C.	N
106105	Molybdenum Ore Mining	M
106106	Nickel Ore Mining	M
131112	Oil Sand Mining	N
131111	Oil Shale Mining	N
149938	Olivine Mining	N
144203	Pebble Mining	G
149910	Perlite Mining	N
147500	Phosphate Rock Mining	N
147906	Pigment Minerals Mining	N
109403	Pitchblende Mining	M
104102	Placer Gold Mining	M
109905	Platinum Group Ore Mining	M
147402	Potash Mining	N
147400	Potash, Soda & Borate Minerals Mining, N.E.C.	N
147405	Potassium Compounds Mining, N.E.C.	N
149911	Pumice Mining	N
147907	Pyrites Mining	N
149912	Pyrophyllite Mining	N
149939	Quartz Crystal Mining	N
144605	Quartz, Ground	G

142907	Quartzite Mining, Crushed & Broken	S
141110	Quartzite Mining, Dimension	S
327403	Quicklime	S
109404	Radium Ore Mining	M
109495	Radium/Uranium/Vanadium, Heap Leaching	M
109499	Radium/Uranium/Vanadium, in Situ Leaching	M
109906	Rare Earths Ore Mining	M
149940	Ruby Mining	N
147908	Salt Mining	N
289900	Salt, Brine/Evaporated	N
144200	Sand & Gravel Mining, Construction, N.E.C.	G
144201	Sand Mining, Common	G
144601	Sand, Abrasive	G
144602	Sand, Foundry	G
144603	Sand, Glass	G
144600	Sand, Industrial, N.E.C.	G
142902	Sandstone Mining, Crushed & Broken	S
141104	Sandstone Mining, Dimension	S
149941	Sapphire Mining	N
145910	Shale Mining, Common	N
149913	Shell Mining	N
104401	Silver Bullion Production	M
104400	Silver Ore Mining, N.E.C.	M
104495	Silver, Heap Leaching	M
104499	Silver, in Situ Leaching	M
142903	Slate Mining, Crushed & Broken	S
141105	Slate Mining, Dimension	S
149914	Soapstone Mining	N
147403	Sodium Compounds Mining, N.E.C.	N
142900	Stone Mining, Crushed & Broken, N.E.C.	S
141100	Stone Mining, Dimension, N.E.C.	S
147909	Strontium Minerals Mining	N
147910	Sulfur Mining	N
149915	Talc Mining	N
109907	Tin Ore Mining	M
109908	Titanium Ore Mining	M
149942	Topaz Mining	N
142904	Traprock Mining, Crushed & Broken	S
141106	Traprock Mining, Dimension	S
149916	Tripoli Mining	N
147404	Trona Mining	N
106107	Tungsten Ore Mining	M

149943	Turquoise Mining	N
109401	Uranium Ore Mining	M
109400	Uranium/Vanadium Ore Mining, N.E.C.	M
109402	Vanadium Ore Mining	M
149917	Vermiculite Mining	N
149918	Zeolites Mining	N
103103	Zinc Ore Mining	M
109909	Zirconium Ore Mining	M

Mining Method Reference, MSHA Form 7000-50a, Item 8(a)

Code	Description
05	Block Caving
07	Cut/Fill
03	Dredge
08	Longwall
01	Multi-bench (Open Pit)
09	Other
04	Room/Pillar
02	Single Bench (Open Pit)
06	Stope

Extraction Method Reference, MSHA Form 7000-50a, Item 8(b)

Code	Description
04	Continuous Miner (Deep-cut, Coal only)
03	Continuous Miner (Normal-cut)
07	Highwall Miner (Coal only)
08	Other
01	Plow
02	Shearer
05	Shovel/Dragline/Loader
06	Surface Auger

Haulage Method Reference, MSHA Form 7000-50a, Item 8(c)

Code	Description
02	Contin Haul (Mobile Bridge, Flex Coal)
01	Conveyor Belt
08	Other
04	Rail/Track
07	Scoop/LHD/Loader
06	Shuttle Car/Ram Car
05	Slurry Pipe
03	Truck

Accident Classification Reference, MSHA Form 7000-50a, Item 18

Code	Description
32	All Other Occupational Illnesses
31	Disorders Assoc with Repeated Trauma
30	Disorders via Physical Agents, Not Toxic
27	Dust Diseases of the Lungs
01	Electrical
02	Entrapment
03	Exploding Vessels under Pressure
04	Explosives and Breaking Agents
06	Fall of Face, Rib, Pillar or Highwall
07	Fall of Roof or Back
05	Falling, Rolling or Sliding Rock /Materl
08	Fire
09	Handling Material
10	Handtools
13	Hoisting
14	Ignition or Explosion of Gas or Dust
15	Impoundment
16	Inundation
17	Machinery
11	Non-Powered Haulage
26	Occupational Skin Diseases and Disorders
21	Other Accident
29	Poisoning
12	Powered Haulage
28	Respiratory Conditions via Toxic Agents
18	Slip or Fall of Person
19	Stepping or Kneeling on Object
20	Striking or Bumping

Surface Location Reference, MSHA Form 7000-50a, Item 20(a)

Code	Description
03	Auger Operation
04	Construction Area
05	Culm Bank/Refuse Pile
06	Dredge
09	Haulageway
01	Mill/Preparation Plant
08	Office Facility
10	Other Surface Area
07	Shop
02	Strip/Open Pit Area

Underground Location Reference, MSHA Form 7000-50a, Item 20(b)

Code	Description
03	Face
08	Haulageway
07	Inby Permanent Support
04	Intersection
06	Last Open Crosscut
10	Other
09	Other Entry
02	Slope/Inclined Shaft
05	Underground Shop/Office
01	Vertical Shaft

Mining Equipment Type Reference, MSHA Form 7000-50a, Item 22(a)

080100	Acoustic tape recorder
080200	Acoustic transceiver
010000	Aerial tramway
020000	Aircraft
020100	Aircraft-Airplane
020200	Aircraft-Helicopter
030000	Alarm
030100	Alarm-Audible
030200	Alarm-Audible/Visual
030300	Alarm-Visual
510100	Asbestos substitute packing
660100	Audio dosimeter
040000	Auger
040100	Auger-Coal
040200	Auger-Drill (not roof bolting)
520100	Autoclave
240300	Blaster Galvanometer/multimeter/ohmmeter)
050100	Blasting agent (ANFO) loader-portable
050000	Blasting equipment
050200	Blasting machine
050201	Blasting machine-Large capacity
050202	Blasting machine-multiple-shot
050203	Blasting machine-Single-shot
050204	Blasting machine-Ten-shot
050205	Blasting machine-Twenty-shot
060000	Boat, barge, float, pontoon
560301	Box car
070000	Brake system not mobile/self-propelled
510200	Brattice cloth
270200	Bucket wheel excavator
540100	Camera
560400	Car dump system
520200	Classifier
560302	Coal or ore car
080000	Communication equipment
090000	Compressed air equipment
100100	Compressed air sys-air compressor
100200	Compressed air sys-receiver tank
100300	Compressed air sys-unfired pressure vessel
100000	Compressed air system
110100	Concrete equip-mine sealant machine
110200	Concrete equip-water spray unit
110000	Concrete placement equipment
520300	Conditioner tank
120100	Continuous miner-no roof drills
120200	Continuous miner with roof drills
120000	Continuous mining machine
130000	Conveyor
130100	Conveyor belt
130200	Conveyor belt-bucket
130300	Conveyor belt-chain
130103	Conveyor belt-fixed
130400	Conveyor belt-hydraulic
130102	Conveyor belt-other mobile systems
130500	Conveyor belt-pan
130600	Conveyor belt-pneumatic
130700	Conveyor belt-screw (auger)
130101	Conveyor belt-mobile bridge carrier sys
140000	Crane
140100	Crane-fixed
140101	Crane-fixed derrick
140102	Crane-fixed tower
140200	Crane-mobile
140201	Crane-mobile-crawler mounted
140202	Crane-mobile-locomotive
140300	Crane-mobile-Overhead and gantry
140203	Crane-mobile-truck mounted
710100	Crawler (bulldozer)
150000	Cutting machine-coal/salt/soft minerals
080300	Data logger
080400	Data tape recorder
080500	Data transceiver
160100	Detector/monitor-aerosol
160200	Detector/monitor-air velocity
160300	Detector/monitor-calibrator
160400	Detector/monitor-carbon monoxide sensing
160500	Detector/monitor-combustible gas
160600	Detector/monitor-flame safety lamp
160700	Detector/monitor-heat detection
160800	Detector/monitor-humidity assembly
160900	Detector/monitor- hydrogen sulfide
161000	Detector/monitor-level sensing
161100	Detector/monitor-light sensing
161200	Detector/monitor-methane
161300	Detector/monitor-multiple gas
161400	Detector/monitor-oxides of nitrogen
161500	Detector/monitor-oxygen
161600	Detector/monitor-position sensing
161700	Detector/monitor-pressure
160000	Detector/monitor-substance/position
161800	Detector/monitor-temperature

180000	Diesel eng. accessories/safety components
170000	Diesel engine
190000	Dimension stone cut/polish machines
200000	Dredge
210000	Drill-rock
210100	Drill-rock-fixed
210200	Drill-rock- hand-held
210300	Drill-rock-machine-mounted
740101	Dumper-rear dump
740200	Dumper-highway
740203	Dumper-highway- bottom dump
740201	Dumper-highway-rear dump
740202	Dumper-highway-side dump
740102	Dumper-side dump
740103	Dumper bottom dump
740100	Dumper, ore haulage dump truck
220200	Dust collection-water spray unit
220100	Dust collection system
220000	Dust control system
230100	Elec equip-alternator
230200	Elec equip-battery
230201	Elec equip-battery assembly
230202	Elec equip-battery connector
230300	Elec equip-circuit breaker
230400	Elec equip-connection box
230500	Elec equip-distribution box
230600	Elec equip-enclosure
230601	Elec equip-enclosure assembly
230700	Elec equip-fuse
230800	Elec equip-generator
230900	Elec equip-ground monitoring system
231100	Elec equip-line-powered devices
231200	Elec equip-monitor & power sys (MAPS)
231300	Elec equip-motor
231400	Elec equip-relay
231401	Elec equip-relay overcurrent
231402	Elec equip-relay power control
231600	Elec equip-switch (includes master)
230602	Elec equip enclosure-breaker
230603	Elec equip enclosure-controller
230604	Elec equip enclosure-emergency stop
230605	Elec equip enclosure-foot switch
230606	Elec equip enclosure-push button
230607	Elec equip enclosure-resistor
230608	Elec equip enclosure-starter
230609	Elec equip enclosure-transformer
240100	Elec test eqp-air sampling pump
240400	Elec test eqp-cable fault detector
240500	Elec test eqp-dust dosimeter
240600	Elec test eqp-multimeter
241100	Elec test eqp-voltmeter
240000	Elec test equipment
240200	Elec test equipment-ammeter
430100	Electric cap lamp
230000	Electrical equipment
250000	Elevating aerial work platform
240700	Elec test eqp-ohmmeter
240800	Elec test eqp-rock dust analyzer
240900	Elec test eqp-tachometer
241000	Elec test eqp-vibration/shock analyzer
260000	Elevator
510300	Equipment covering
760000	Equipment or machine not listed
270000	Excavator
270100	Excavator-backhoe loader
270401	Excavator-crawler or wheel mounted
270300	Excavator-ditching machine
270400	Excavator-dragline
270500	Excavator-hoe, backhoe
270600	Excavator-shovel
270700	Excavator-telescoping boom
270402	Excavator-walking
280100	Explosive material
280000	Explosives
280101	Explosives-permissible
280102	Explosives-sheathed
280200	Explosives-stemming devices
280300	Explosives-storage magazines and boxes
290100	Fan-auxiliary
290200	Fan-booster or secondary
290300	Fan-diffuser, area, or jet
290400	Fan-main or primary
290000	Fan-ventilation (Axial and Centrifugal)
680101	Feeder, storage, or surge bin; hopper
300000	Feeder-breaker (feeders w/o breakers)
310200	Fire hose
310100	Fire suppression sys-engineered system
310000	Fire suppression system
510400	Flame-resistant conveyor belt
510500	Flame-resistant fire hose
510600	Flame-resistant hose conduit
510700	Flame-resistant permanent splice kit
510800	Flame-resistant trailing cable
560303	Flat car, timber truck, low boy
320000	Forklift
330000	Grader, motor grader (motor/road patrol)
340000	Grizzly
350000	Hand tools, not powered
360000	Handtools, powered
430200	Headlight

670200	Heat exchanger, process or space heater
370000	Hoist
370100	Hoist-Hydr-automotive/vehicle maint. only
370200	Hoist-material handling
560304	Hopper car or gondola
380100	Hydraulic fluid
380200	Hydraulic hose
390000	Hydraulic monitor (placer mining)
380000	Hydraulic System
400000	Impact breaker (not hand held)
511000	Insulating material-cable equipment
510900	Insulating matl for battery box cover
231001	Intrinsically safe battery supply
231006	Intrinsically safe circuit barrier
231003	Intrinsically safe control circuit
231008	Intrinsically safe electrical sys-valve
231002	Intrinsically safe load monitor
231004	Intrinsically safe output barrier
231005	Intrinsically safe power supply
231007	Intrinsically safe remote receiver
231000	Intrinsically safe system
410000	Jack
420000	Ladder, fixed and portable
440100	LHD- crawler loader
430000	Lighting-illumination equip
440000	Load-haul-dump (LHD) machine
450000	Loading mach-gathering arm/coal loader
560100	Locomotive, motor
460300	Longwall-chock
460200	Longwall-face conveyor
460100	Longwall-shearer (plow or cutter drum)
460400	Longwall-shield
460500	Longwall-stage loader
460000	Longwall mining system
430300	Luminaire
470000	Machine retriever (disabled machines)
490000	Machine tools (Usually fixed in place)
480000	Machine, not elsewhere described
430400	Machine-mounted lighting system
500000	Manlift (surface installations)
510000	Material
520000	Mill and preparation plant machinery
521100	Mill Prep plant-kiln (drying)
521000	Mill Prep plant jig
521500	Mill/Prep plant-screen
520400	Mill/Prep plant crusher
520500	Mill/Prep plant dryer
520502	Mill/Prep plant dryer centrifugal
520501	Mill/Prep plant dryer thermal
520600	Mill/Prep plant feeder
520700	Mill/Prep plant filter
520800	Mill/Prep plant flotation cell
520900	Mill/Prep plant grinding mill
521600	Mill/Prep plant separator
521700	Mill/Prep plant thickener
370300	Mine hoist (material/personnel)
430500	Mine lamp or flashlight
600100	Mobile roof support unit
530000	Mucking machine, overshot type
521200	Packaging machine/bagger/sewing machine
080600	Page phone
740300	Personnel carrier-self propelled vehicle
560305	Personnel/mantrip car-not self-propelled
540200	Photo flash devices
540000	Photographic equipment
521300	Pug mill (mixing)
550000	Pump, hydraulic power unit
080700	Radio
560000	Railroad equip (surface and underground)
560700	Rails, track components, & accessories
580000	Ramcar
580200	Ramcar-diesel
580100	Ramcar-electric (also battery powered)
080800	Remote control transmitter
590000	Respirator
610000	Rock dusting machine
600300	Rock-roof bolting machine (coal mines)
600200	Rock-roof bolting machine-noncoal mines
600000	Rock-roof support system
560500	RR equip-car handling system
560600	RR equip-constr/maint/repair
570000	RR equip-raise climber (Alimak)
560300	RR equip-rolling stock
560200	RR equip-powered personnel carrier
620000	Scaffolding, fixed or powered
521400	Scaling/measuring devices (incl nuclear)
630000	Shortwall machine
640000	Shuttle car
640200	Shuttle car-diesel
640100	Shuttle car-electric
511100	Signal cable
680102	Silo
680103	Skip pocket/skip loading/ measuring bin
650000	Slusher
231500	Solenoid actuator (solenoid valve)
080900	Sound (voice) amplifier
660200	Sound level calibrator
660300	Sound level meter
660000	Sound measurement equipment
430600	Stand-alone area lighting system

670000	Steam power system
670100	Steam power system-boiler
670300	Steam power system-piping
670400	Steam/hot water high pressure cleaner
680104	Stockpile
690000	Storage tank
690100	Storage tank-compressed gas
690200	Storage tank-flammable/Combustible liq
690300	Storage tank-water
690400	Storage tank other-(process chemicals)
680201	Storage/loadout-hydraulic system
680202	Storage/loadout-loading chute
680200	Storage/loadout-loading-discharge
680203	Storage/loadout-pneumatic system
680000	Storage/loadout facilities (bulk solids)
680100	Storage/loadout facilities (storage)
680204	Storage/loadout-reclaim/ drawoff tunl sys
700000	Surveying equipment
700100	Surveying equipment-borehole probe
700200	Surveyor equipment-laser
700300	Surveyor equipment-strata inspection
560306	Tank car
081000	Telephone
710000	Tractor-not frnt end loadr or backhoe
710200	Tractor-wheel
720000	Tractor-scraper (pan scraper)
740400	Truck, explosive material loading
740500	Truck, service or utility
730000	Tunnel Boring Machine (full face type)
560307	Utility car (crane, cable reel, caboose)
740000	Vehicle, rubber tired
511200	Ventilation tubing
521800	Washer (log washer)
750000	Welding machine, welding equipment
440204	Wheel/front end

Equipment Manufacturer Reference, MSHA Form 7000-50a, Item 22(b)

0118	A.M. General Corporation
0101	Abex
0102	Acker (Minpro)
0103	Acme
0104	Adams
0105	Advance Mining Aerodyne
0106	Akerman HW
0107	AKW
0108	Allen-Sherman-Hoff
0109	Allis-Chalmers (AC) [Fiat-Allis]
0110	Alpine (Oesterreichisch-Alpine
0111	AMCA
0113	American Hoist and Derrick Co.
0114	American Isuzu Motors, Inc.
0115	American Longwall
0116	American Motors
0117	American Poclain
0119	Anderson Mavor, Inc.
0120	Anderson Strathclyde
0121	Apache Powder Co.
0122	Armor (elevator)
0123	Armstrong Rubber Co.
0124	ASEA Inc.
1118	Athley Products
0125	Atlas (elevator)
0126	Atlas Copco
0128	Austin Powder Co.
0325	Austin-Western
0130	Autocar
0201	Badger (Ronco)
0201	Badger Construction Equipment Co
0203	Badger Dynamics [TCI Power Products]
0204	Baker
0205	Balderson
0206	Baldwin-Lima-Hamilton
0208	Barber-Greene [Telsmith Div.]
0209	Bay City
0210	Bay State (elevator)
0211	Beckwith (elevator)
0212	Beebe Brothers, Inc.
0213	Bell Equipment USA Inc., I.A.
0214	Benati
0215	Bertram (John) and Sons Co.
0216	Betti
0218	Birdsboro
0219	Black & Decker
0220	Blaw-Knox
0224	Bombardier, Ltd.
0225	Bowdil Co.
0226	Boxmag Rapid
0227	Bridgestone
0228	Broderson
0229	Bros
0221	Browning
0231	Bucyrus-Erie (BE)
0233	Buffalo Forge Company
0232	Buffalo-American
0234	Buffalo-Springfield
0235	Bunker Hill Co.
0236	Burlington (elevator)
0324	C-I-L, Inc.
0301	Cable Belt
0302	Calweld-Div of Smith Intern’t Inc
0303	Campbell (elevator)
0304	Canton (elevator)
0305	Capitol (elevator)
0306	Carco Winch Products
0307	Carver
0308	Case
0310	Caterpillar
0312	Ceder, Martin A. (elevator)
0319	CH&E
0315	Champ
0316	Champion
0317	Champion Road Machinery Co.
0318	Chance, AB [Pitman Mfg. Co.]
0320	Chevrolet
0321	Chicago Blower Corp.
0322	Chicago Pneumatic
0323	Chrysler Corp.
0333	Cleveland Trencher
0334	Cline (Cline Truck Mgf Corp)[T&J Ind]
0335	Clyde Iron Works, Inc.
0336	CMC [Construction Machinery Co.]
0337	Coeur d'Alenes Co.
0338	Colt Industries [Quincy]
0339	Compair
0340	Connelsville Corp. (elevator)
0341	Consolidated (elevator)
0342	Continental (elevator)

0344 Continental Products Corp. (tires)
0345 Cooper Tire & Rubber Co.
0346 Crane Carrier Co.
0347 Cummins
0348 Cushman
0401 Daimler-Benz (Unimog)
0403 Davey
0406 Demag Corp.
0407 Denver Engrng Works, Denver Iron Works
0408 Detroit (elevator)
0409 Detroit Diesel Corp.
0410 Detroit-Kiesler
0411 Deutz
0412 Dillon Box Iron Works
0413 Dings
0414 Ditch Witch
0415 Dixie Dredge
0416 DJB
0417 Dodge
0419 Dorr-Oliver
0420 Dosco
0421 Dover Conveyor and Equipment (Dover)
0422 Dowty Meco
0423 Dravo
0424 Dredgemaster
0426 Drilco [Smith International]
0427 Driltech
0428 Drott Excavators
0429 Drott-Case
0430 Dunlop Tire Corp.
0431 DuPont de Nemours & Co., E.I. [ETI]
0432 Dynahoe
0434 Dynapac
0501 Eastern (elevator)
0503 Eaton Yale&Towne (Const Eqp Dv) (Trojan)
0502 Eaton, Yale [Timberjack]
0504 Eberius (elevator)
0505 Economy Engineering
0506 Eickhoff Corp.
0508 Eimco
0509 El Dorado
0511 El-Jay, Inc.
0510 Elgood Mayo Corp.
0512 Elkhorn Industrial Products
0513 Ellicott
0514 Emaco
0515 Emco (elevator)
0516 Emery (elevator)
0517 Ensign
0518 Ensign-Bickford Company, The
0519 Envirotech Corporation
0520 Epling
0521 Equipment Corporation of America
0522 Erie-Strayer
0523 Eriez
0524 Ersham (elevator
0525 Esco (elevator)
0526 Essick
0527 Euclid (Euc)
0528 Explosives Technology International-ETI
2800 Fabricated at mine
0601 Fairchild
0604 Ferrari
0606 Firestone Tire & Rubber Co.
0607 Fletcher
0608 Flygt
0609 FMC Corp. (Sweeper Div.)
0611 Foot Brothers
0612 Ford (Ford Motor Co.)
0613 Ford New Holland (wheel tractors)
0614 Fox
0615 Franklin
0616 Freightliner
0618 Fuller
0617 Furukawa
0619 FWD Wagner
0719 G.H.H. Sterkade
0701 Galigher
0703 Galion (elevator)
0705 Galis
0702 Gallagher (elevator)
0706 Gardner-Denver
0708 Gates Rubber Co.
0709 GATX-Fuller (Traylor)
0710 Gebhard [Shovel Supply]
0711 General Electric Co.
0712 General Electric Co. of Canada
0713 General Engines
0716 General Tire & Rubber Co.
0717 Gerlinger
0718 Getman
0720 Glock
0722 Goex, Inc. [GOEX International]
0723 Goodall Rubber Co.
0724 Goodman
0217 Goodrich, B.F.
0726 Goodyear Tire & Rubber Co.
0727 Gorman-Rupp
0728 Gould (battery)
0729 Grace
0730 Gradall
0731 Grimmer-Schmidtf

0732	Grove Manufacturing
0733	Gruendler
0734	Grundlach (coal crusher)
0735	Gullick Dobson Ltd.
0801	Hankook Belt
0802	Hanson
0803	Hardy-Tynes Manufacturing Co.
0804	Harnischfeger
0805	Hartenstein (elevator)
0806	Hartzell Fan, Inc.
0807	Haughton (elevator)
0809	Hawker Siddeley
0810	Hazemag
0811	Hein-Werner Corp.
0812	Heintzmann Corp.
0813	Hemscheidt America Corp.
0814	Hendrie Bolthoff
0815	Hendrix
0816	Hepburn
0911	Hercules Tire & Rubber Co.
1221	Hewitt-Robins
0823	Hino
0821	Hitachi
0822	HME
0824	Hobart
0825	Hoechst
0827	Honda
0829	Horner (elevator)
0831	Huber Corporation
0832	Hughes Aircraft Co.
0833	Hummer
0834	Humphreys
0835	Huwood-Irwin Corporation
0836	Hydra-Mac, Inc.
0838	Hyster
0127	ICI
0903	Independent Explosives Co. of Pa.
0904	Ingersoll-Rand Co.
0905	Ingram
0906	Insley Mfg.
0909	Iowa Manufacturing [Cedar Rapids]
0910	Iowa Mold Tooling Co. Inc.
0912	ISCO Manufacturing Company, Inc.
0913	Isuzu
0902	ITT [Marlow]
0914	Iveco
1308	J.I. Case Co.
1002	Jaeger
1001	Jarvis Clark Inc.
1003	JCB, Inc.
1004	JCI (John Clark Inc.)
1006	Jeffrey-Dresser
0715	Jimmy [General Motors Corp.]
1009	JLG Industries, Inc.
1010	John Deere
1011	Jold
1012	Joshua Hendy Iron Works
1013	Joy Machinery Co. (Joy Manufacturing Co)
1101	Kato
1102	Kawasaki
1103	Kellog-American [Holman]
1104	Kelly-Springfield Tire Co.
1105	Kent
1106	Kenworth
1107	Kersey Manufacturing Co.
1108	KHD Humboldt Wedag
1109	Kieckhefer, A. (elevator)
1110	Klein
1111	Klockner-Becorit
1112	Kobelco
1113	Kobota
1114	Koehler Manufacturing Co.
1117	Kolberg Manufacturing
1119	Komatsu
1120	Kone
1122	Krebs
1123	Kress (Kress Corp.)
1124	Krupp
1125	Kubota
1201	Lagerquist (Gust.) and Sons (elevator)
1202	Lakeshore, Inc.
1203	Lambert National Hoist
1204	Lardner (elevator)
1205	Lear
1208	Lee Tire & Rubber Co.
1207	Lee-Norse Co.
1211	Liebherr
1213	Linatex
1214	Lincoln
1215	Linden-Alimak
1216	Lindsay
1217	Line Power
1220	Little Giant Crane & Shovel
1222	Long-Airdox
1223	Longyear
1314	M-B Company, Inc.
1336	M-R-S Manufacturing Company
1303	M.A.N. GHH Sterkrade
1301	Mack
1302	Manitowoc
0425	Marion [Dresser]
1306	Mark Industries (Marklift)

1310	Marshall (elevator)
1311	Massey-Ferguson
1313	Mazda Motors
1315	McLanahan
1316	McLauthlin, Geo. T. (elevator)
1317	MDI/Yutani
0222	Melroe (Bobcat)
1319	Mercedes-Benz
1320	Mescher
1321	Michelin Tire Corp.
1323	Miller
1324	Mine Equipment Co.
1325	Mining Progress, Inc.
1326	Mining Services International
1328	Mitsubishi Corporation
1210	Mixermobile [Wabco (Scoopmobile)]
0112	Mobile Crane Dv (Amhoist) Am.Crane Corp
1331	Mobile Drill
1332	Mohawk Tire & Rubber Co.
1333	Montgomery Elevator
1327	Motec [Minneapolis-Moline]
1335	Moxy (off-highway trucks)
1337	MSI
1338	Mud Cat
1339	Murphy (elevator)
1340	MVD
1341	Myers-Whaley
1401	Nagle
1402	National Crane
1403	National Iron
1404	National Mine Service
1405	Navistar
1406	Nelson Brothers
1407	New Holland
1408	Nissan
1410	Nitro Nobel Mec
1409	Nitrochem Energy Corporation
1411	Nolan
1413	Northern Industrial Sales & Serv Inc.
1414	Northwest
1415	Northwestern (elevator)
3000	Not listed
0000	Not Reported
1501	O & K (Orenstein & Koppel)
1502	O & K Trojan (wheel loaders)
1505	O'Keefe (elevator)
1503	Ohio Brass
1504	Ohio Hoist Mfg. Co.
1506	Oshkosh
1507	Otis Elevator Co. (United Technologies)
1508	Ottumwa Iron Works
1509	Outokumpu
1510	Owen Oil Tools
1511	Owens
0313	P&H (Harnischfeger)
1603	Pacific (elevator)
1604	Pacific Car
1605	Page
1606	Payhauler (Payhauler Corp.)
1609	Payne, F.S. (elevator)
1612	PEMCO
1613	Penndrill
1614	Pennsylvania Crusher
1615	Perkins
1616	Peterbilt
1617	Petito
1618	Pettibone Corp.
1619	PHB Weserhutte
1620	Pioneer
1621	Pirelli Tire Corp.
1623	Plymouth
0309	Poclain [Case-Drott Div.]
1701	Quickway
1817	R O Corporation
1802	Raygo
1804	Reed Tool Co.
1803	Reedrill, Inc.
1805	REI
1806	Remington
1807	Research Energy of Ohio
0314	Rex Chainbelt [Rexworks, Inc.]
1412	Rexnord, Inc. (Nordberg)
1811	Richard Mozley
1812	Richmond
1907	S & S
1901	Sala
1902	Salem (McCarthy)
1903	Samsung Construction Equipment Company
1905	San Francisco (elevator)
1914	Scott ATO
1916	Sedgwick Machine Works (elevator)
1917	Senex Explosives
1918	Shelby Manufacturing Co.
1919	Sierra Chemical Corporation
1121	Silent Hoist & Crane
1921	Simmons-Rand
1922	Sioux
1923	Skega
1924	Slurry Explosive
1926	Sound (elevator)
1927	Southeastern (elevator)
1928	Southern Explosives Corporation

1929 Southwest Construction Equipment Co.
1930 Speicher
1931 Stacy
1932 Stamler
1933 Stanley (elevator)
1934 Steiger Tractor Inc.
1935 Stephens-Adamson
1936 Stewart-Warner [Thor]
1937 Stow Manufacturing
1938 Street Brothers Machine Works
1939 Sullair Corporation
1940 Sullivan
1942 Superior Lidgerwood Mundy
1943 Symons
1944 Syntron
2001 Tadano Ltd.
2002 Takeuchi
2003 Tampo
2004 Tamrock Inc.
2005 Taylor (elevator)
2007 TCM
2008 Teledyne
2010 Terex
2012 Timberjack
2013 Timberland Equipment Co.
2014 TLT-Babcock, Inc.
2016 Towmotor
2017 Toyo
2018 Toyo Tire (U.S.A.) Corp.
2019 Toyota
1209 Tractomotive [Allis-Chalmers]
2024 Trojan Corporation (explosives)
2025 Tyler
2110 U.S. Elevator
2101 UD Trucks
2102 Unidynamics (elevator)
2104 Uniroyal Tire Co.
2105 Unit
2108 Unit Rig Equipment Co. (Electrahaul)
2107 United Tire & Rubber Co., Ltd. (Canada)
2109 Universal
2201 Valley (elevator)
2202 VCON-Vehicle Constr-Dv Peerless Mfg Co
2205 Vermeer Manufacturing Coompany
2203 Viking Explosives
2204 Viola Industrie (elevator)
2208 Voest Alpine
2209 Volkswagen
2210 Volvo
2211 Volvo GM
2213 Vulcan Iron Works
2212 Vulcan-Denver Corp.
2302 W.A. Box
2303 Wagner
2304 Walter
2305 Warner (elevator)
2309 Washington Iron Works
2311 Wellman-Seaver-Morgan
2312 Wemco
2313 Western (elevator)
2314 Western Star
2315 Westfalia
2316 Westinghouse (Canadian Westinghouse)
2317 Westinghouse Electric Co.
2318 White
0817 White Engines, Inc.
2320 White-Oliver
2321 Wilcox
2322 Wilfley
2323 Winter-Weiss
2324 Wirth
2325 Wiseda Ltd.
2316 Worthington
2327 Wultex machne co., Ltd.
2400 X
2502 Yokohama Tire corp.
2600 Z

District Reference, MSHA Form 7000-50a, Item 29

Code	Description
*	ALL Districts
*C	ALL Coal
*M	ALL MNM
C0100	Wilkes-Barre
C0200	New Stanton
C0300	Morgantown
C0400	Mt. Hope
C0500	Norton
C0600	Pikeville
C0700	Barbourville
C0800	Vincennes
C0900	Denver
C1000	Madisonville
C1100	Birmingham
M2000	Northeastern
M3000	Southeastern
M4000	North Central
M5000	South Central
M6000	Rocky Mountain
M7000	Western

Organization Reference, MSHA Form 7000-50a, Item 30

Code	Field Office	District
C0101	Wilkes-Barre, PA	Wilkes-Barre
C0102	Pottsville, PA	Wilkes-Barre
C0103	Shamokin, PA	Wilkes-Barre
C0201	Ruff Creek, PA	New Stanton
C0202	Kittanning, PA	New Stanton
C0204	Johnstown, PA	New Stanton
C0205	Indiana, PA	New Stanton
C0206	Clearfield, PA	New Stanton
C0301	Morgantown, WV	Morgantown
C0303	Bridgeport, WV	Morgantown
C0304	Oakland, MD	Morgantown
C0305	St. Clairsville, OH	Morgantown
C0308	Wellston, OH	Morgantown
C0401	Mt. Hope, WV	Mt. Hope
C0402	Mt. Carbon, WV	Mt. Hope
C0403	Summersville, WV	Mt. Hope
C0404	Princeton, WV	Mt. Hope
C0405	Pineville, WV	Mt. Hope
C0406	Madison, WV	Mt. Hope
C0407	Logan, WV	Mt. Hope
C0501	Norton, VA	Norton
C0502	Vansant, VA	Norton
C0601	Pikeville, KY	Pikeville
C0602	Elkhorn City, KY	Pikeville
C0603	Phelps, KY	Pikeville
C0605	Martin, KY	Pikeville
C0606	Whitesburg, KY	Pikeville
C0607	Hindman, KY	Pikeville
C0701	Barbourville, KY	Barbourville
C0702	Harlan, KY	Barbourville
C0703	Jacksboro, TN	Barbourville
C0704	Hazard, KY	Barbourville
C0801	Vincennes, IN	Vincennes
C0802	Benton, IL	Vincennes
C0803	Hillsboro, IL	Vincennes
C0901	McAlester, OK	Denver
C0902	Aztec, NM	Denver
C0904	Gillette, WY	Denver

C0905	Price, UT	Denver
C0906	Craig, CO	Denver
C0907	Delta, CO	Denver
C0908	Castle Dale, UT	Denver
C1001	Madisonville, KY	Madisonville
C1002	Morganfield, KY	Madisonville
C1003	Beaver Dam, KY	Madisonville
C1101	Bessemer, AL	Birmingham
M2621	Wyomissing, PA	Northeastern
M2641	Charlottesville, VA	Northeastern
M2681	Warrendale, PA	Northeastern
M2851	Geneva, NY	Northeastern
M2861	Manchester, NH	Northeastern
M2881	Albany, NY	Northeastern
M3611	Bartow, FL	Southeastern
M3631	Macon, GA	Southeastern
M3651	San Juan, PR	Southeastern
M3661	Birmingham, AL	Southeastern
M3811	Franklin, TN	Southeastern
M3821	Lexington, KY	Southeastern
M3851	Columbia, SC	Southeastern
M3861	Knoxville, TN	Southeastern
M3871	Sanford, NC	Southeastern
M4631	Lansing, MI	North Central
M4641	Marquette, MI	North Central
M4661	Hibbing, MN	North Central
M4671	Ft. Dodge, IA	North Central
M4821	Peru, IL	North Central
M4851	Hebron, OH	North Central
M4861	Vincennes, IN	North Central
M5611	San Antonio, TX	South Central
M5631	Carlsbad, NM	South Central
M5641	Albuquerque, NM	South Central
M5651	Denham Springs, LA	South Central
M5671	Dallas, TX	South Central
M5851	Rolla, MO (N)	South Central
M5852	Rolla, MO (S)	South Central
M5861	Norman, OK	South Central
M5871	Little Rock, AR	South Central
M6621	Rapid City, SD	Rocky Mountain
M6642	Denver, CO	Rocky Mountain
M6651	Topeka, KS	Rocky Mountain

M6821	Helena, MT	Rocky Mountain
M6831	Green River, WY	Rocky Mountain
M6851	Salt Lake City, UT	Rocky Mountain
M6861	Mesa, AZ	Rocky Mountain
M7611	Boise, ID	Western
M7641	Kent, WA	Western
M7651	Albany, OR	Western
M7821	Vacaville, CA	Western
M7831	San Bernardino, CA	Western
M7841	Boulder City, NV	Western
M7851	Elko, NV	Western
M7861	Anchorage, AK	Western

Accident Investigation Data-Victim Information, MSHA Form 7000-50b

Accident Investigation Data - Victim Information
Event Number:

U.S. Department of Labor
Mine Safety and Health Administration

Victim Information: 1

1. Name of Injured/Ill Employee: | 2. Sex: | 3. Victim's Age: | 4. Last Four Digits Of SSN: | 5. Degree of Injury:

6. Date(MM/DD/YY) and Time(24 Hr.) Of Death: a. Date: b. Time: | 7. Date and Time Started: a. Date: b. Time:

8. Regular Job Title: | 9. Work Activity when Injured: | 10. Was this work activity part of regular job? Yes No

11. Experience Years Weeks Days Years Weeks Days Years Weeks Days Years Weeks Days
a. This Work Activity: | b. Regular Job Title: | c: This Mine: | d. Total Mining:

12. What Directly Inflicted Injury or Illness? | 13. Nature of Injury or Illness:

14. Training Deficiencies:
Hazard: New/Newly-Employed Experienced Miner: Annual: Task:

15. Company of Employment: (If different from production operator) Independent Contractor ID: (if applicable)

16. On-site Emergency Medical Treatment:
Not Applicable: First-Aid: CPR: EMT: Medical Professional: None:

17. Part 50 Document Control Number: (form 7000-1) | 18. Union Affiliation of Victim:

Victim Information: 2

1. Name of Injured/Ill Employee: | 2. Sex: | 3. Victim's Age: | 4. Last Four Digits Of SSN: | 5. Degree of Injury:

6. Date(MM/DD/YY) and Time(24 Hr.) Of Death: a. Date: b. Time: | 7. Date and Time Started: a. Date: b. Time:

8. Regular Job Title: | 9. Work Activity when Injured: | 10. Was this work activity part of regular job? Yes No

11. Experience Years Weeks Days Years Weeks Days Years Weeks Days Years Weeks Days
a. This Work Activity: | b. Regular Job Title: | c: This Mine: | d. Total Mining:

12. What Directly Inflicted Injury or Illness? | 13. Nature of Injury or Illness:

14. Training Deficiencies:
Hazard: New/Newly-Employed Experienced Miner: Annual: Task:

15. Company of Employment: (If different from production operator) Independent Contractor ID: (if applicable)

16. On-site Emergency Medical Treatment:
Not Applicable: First-Aid: CPR: EMT: Medical Professional: None:

17. Part 50 Document Control Number: (form 7000-1) | 18. Union Affiliation of Victim:

Victim Information: 3

1. Name of Injured/Ill Employee: | 2. Sex | 3. Victim's Age | 4. Last Four Digits Of SSN: | 5. Degree of Injury:

6. Date(MM/DD/YY) and Time(24 Hr.) Of Death: a. Date: b. Time: | 7. Date and Time Started: a. Date: b. Time:

8. Regular Job Title: | 9. Work Activity when Injured: | 10. Was this work activity part of regular job? Yes No

11. Experience: Years Weeks Days Years Weeks Days Years Weeks Days Years Weeks Days
a. This Work Activity: | b. Regular Job Title: | c: This Mine: | d. Total Mining:

12. What Directly Inflicted Injury or Illness? | 13. Nature of Injury or Illness

14. Training Deficiencies:
Hazard: New/Newly-Employed Experienced Miner: Annual: Task:

15. Company of Employment: (If different from production operator) Independent Contractor ID: (if applicable)

16. On-site Emergency Medical Treatment:
Not Applicable: First-Aid: CPR: EMT: Medical Professional: None:

17. Part 50 Document Control Number: (form 7000-1) | 18. Union Affiliation of Victim:

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MSHA Form 7000-50b Codes

Appendices 15-19 contain the codes to be used with the Accident Investigation Database Victim Information Form 7000-50b.

Degree of Injury Reference, MSHA Form 7000-50b, Item 5

Code	Description
01	Fatal
02	Permanent total or partial disability
03	Days away from work only
04	Days away from work & days restrict acty
05	Days of restricted work activity only
06	No days away from work, no restrict acty
07	Occ Illnesses not classified 01 - 06
08	Fatal & NF, natural causes, cmp business
09	Fatal & NF, non-empl, on or off property

Job Title Reference, MSHA Form 7000-50b, Item 8

Note: There are two codes for many occupations. Those starting with a zero (0) are underground jobs and those starting with a one (1) are surface jobs.

Code	Description
132	Aerial tram/hand tram
171	Auger helper
071	Auger helper
070	Auger operator
170	Auger operator
017	Auger (timber/jacksetter left side)
018	Auger (timber/jacksetter right side)
173	Backhoe operator
142	Bagging/packaging oper./Worker
136	Ball/rod/pebble mill oper./Worker
172	Barge att/boat oper/dredge oper.
031	Battery charging station/fan attendant
131	Battery station oper./Fan attendant
101	Belt man/conveyor crew/vulcanizer
001	Belt/conveyor man/crew
025	Bobcat
125	Bobcat operator
079	Boring mach opr(rock) raise borer mnr opr
154	Brake man/rope rider/car dropper
054	Brake man/rope rider/car dropper
168	Bulldozer/tractor oper.
068	Bulldozer/tractor operator
126	Car dump/rotary dump/shake-out opr/helpr
026	Car dump/shake-out/roscoe/loaderhead opr
115	Cement man/mason/brick layer
015	Cement/concrete man/mason
160	Clam shell operator
013	Cleanup man
113	Cleanup man
187	Coal-M/NM sampler/dust sampler/lab tech
087	Coal-M/NM sampler/technician/dust samplr
035	Continuous miner helper
036	Continuous miner operator
178	Crane oper.
181	Crusher/pan operator/attendant
081	Crusher/pan opr/attendant/feeder breaker
037	Cutting machine helper
038	Cutting machine operator
085	Diesel shuttle car
065	Dispatcher
165	Dispatcher
161	Dragline operator
058	Drift miner
133	Drill helper/chuck tender
033	Drill helper/chuck tender
134	Drill operator (coal/wagon/diamond)
034	Drill operator (coal/wagon/diamond)
183	Driver jeep/pickup
083	Driver/jeep/pickup
179	Dryer/kiln oper/worker
102	Electrician/helper/wireman
002	Electrician/helper/wireman
092	Engineer (elect/vent/mining)
192	Engineer (elect/vent/mining)
180	Fine coal plant operator
140	Flotation/concentrator oper./Worker
166	Forklift
066	Forklift operator
182	Front-end loader/high lift operator
082	Front-end-loader operator
075	Grader operator
175	Grader/road roller operator
122	Grizzlyman/chute puller/binman
022	Grizzlyman/chute puller/binman
159	Ground person/spotter
137	Hammer mill oper./Worker
039	Hand loader
139	Hand loader
032	Hand trammer
040	Headgate operator
184	Highwall drill oper/helper
103	Hoistman/hoist engineer/helper
003	Hoistman/hoist engineer/helper
143	Hydrating plant oper/worker
095	Inspector/fire boss/preshift exam.
195	Inspector/fire boss/preshifter
027	Jack-leg/stoper oper./Rock driller
127	Jack-leg/stopper/rock driller
151	Jackhammer/chipping hammer/spade oper.
051	Jackhammer/chipping hammer/spade oper.
188	Jet piercing channel/drill oper./Helper
088	Jet piercing channel/drill oper./Worker
116	Laborer/utility man/bull gang
016	Laborer/utilityman/bull gang
185	Lampman/building repair/maint/janitor
135	Leaching operations worker
042	Loading machine helper
043	Loading machine/gathering arm loader opr
060	Longwall face worker (return side)
041	Longwall jacksetter/snaker/helper
044	Longwall operator (tailgate side)
064	Longwall operator (headgate side)

061	Longwall worker (return side fixed pos)
004	Mechanic/repairman/helper
104	Mechanic/repairman/helper
163	Miner NEC/Surface miner
063	Miner NEC/Ug miner
072	Mobile bridge operator
069	Motorman/swamper/snapper/switchman
169	Motorman/swamper/snapper/switchman
029	Mucking machine operator
105	Oiler/greaser
005	Oiler/greaser
177	Overhead crane oper
164	Pan scraper operator
141	Pelletizing oper./Worker
194	Plumber/carpenter/painter
011	Pumper
111	Pumper
059	Raise miner
006	Rock duster
045	Rockman/hangup man/chute blaster
046	Roof bolter (single head)
047	Roof bolter helper (single head)
048	Roof bolter mounted (left side)
019	Roof bolter mounted (right side)
014	Roof bolter (twinhead left side)
012	Roof bolter (twinhead right side)
174	Rotary drill oper.(Hyd./Elect/churn)
074	Rotary drill oper.(Hydraul/elect/churn)
056	Rotary/jumbo drill oper. (Pneumatic)
156	Rotary/jumbo drill oper. (Pneumatic)
186	Rotory bucket excavator operator
084	Sand filler (wet/dry)
077	Scaler (hand)
078	Scaler (mech.)
144	Scalper/screen/sizing/tipple plant worker
028	Scoop car/tram/load haul dump operator
128	Scoop car/tram/load-haul-dump opr.
080	Shaft miner/shaft repairer
062	Shopman/millwright/machinist/bit sharpener
162	Shopman/millwright/machinist/bit sharpener
107	Shotfirer/blaster/shooter/helper
007	Shotfirer/shooter/blaster/helper
167	Shovel oper.(Stripping/loading)
067	Shovel operator
073	Shuttle car (off standard)
050	Shuttle car/ram operator (standard side)
150	Shuttle/ram car operator
190	Silo/train load out operator
145	Sizing/washing/cleaning plant opr/worker
023	Skip tinder/top loader/cager/station att
123	Skiptender/dumper/cager/station att.
189	Slurry/mixing/pumping operation worker
089	Slurry/mixing/pumping operation worker
130	Slusher operator
030	Slusher operator
110	Steel setter/worker
198	Stone finishing/sizing personnel
057	Stope miner
049	Supervisory/management/foreman/boss
149	Supervisory/management/foreman/boss
009	Supplier/warehouse man/supply driver
109	Supplyman/warehouseman/supply driver
020	Survey crew
120	Survey crew
157	Sweeper/compactor operator
052	Tailgate operator
010	Timberman/propman/steel setr/steelworker
053	Track man/track gang/tamping mach. Oper
153	Trackman/track gang/tamping mach oper
124	Trainee
076	Truck driver
176	Truck driver
091	Union official/safety rep.
191	Union official/safety rep.
199	Unknown or NEC
099	Unknown or NEC
008	Vent man/crew/stop blder/brattice man
196	Watchman/guard
129	Water attendant
094	Waterline man,plumber,carpenter/painter
193	Weighman/scaleman/timekeeper/ clerk
021	Welder
121	Welder/blacksmith
197	Yard engine engineer/fireman

Activity Reference, MSHA Form 7000-50b, Item 9

Code	Description
001	Accident recovery
002	Advance longwall roof support
006	Bar down face, rib or side, roof or back
009	Bathing; changing clothes, etc.
003	Blasting; shoot coal
004	Blow gun, airlance at all locations
005	Brush floor
007	Caging; operate elevator, manlift
008	Cement work; gunite crew, etc.
010	Chute, pull or free-using a bar
011	Clean up
014	Climb in piled matl/ore/rock/timber/ston
012	Climb in raise/shaft/manway
013	Climb scaffolds/ladders/platforms/towers
015	Couple/uncouple mine car/tractor/jeep
016	Crawling/kneeling
017	Cross over (conveyor)
018	Double jack
019	Drill face/rib/side/down/raise
020	Electrical maintenance/repair
021	Environmental tests/checks
022	Escaping a hazard
023	Get on or off equipment/machines
024	Grinding (bits, steel, welds, etc.)
025	Hand load; hand shoveling/mucking
030	Hand tools (Not powered)
031	Hand tools (Powered)
026	Handling coal, rock waste, or ore
027	Handling explosives
028	Handling supplies/material;load/unload
029	Handling timber - booming a cap
032	Hang/reposition tubing/pipe/rope/wire
033	Horseplay
034	Idle time plant/equipment down time
035	Impactor (Using impactor)
036	Inspect equipment-Not maintenance/repair
037	Investig/enter/work in bins/tanks/storage
038	Lay/repair railroad track/roadbed/equip
039	Machine maintenance/repair
040	Move power cable-includes reeling cable
041	Moving equipment
064	Mucking machine
042	Observe operations
043	Office and laboratory work.
046	Operate (work on) barge, boat, dredge
045	Operate auger (underground mines)

Code	Description
044	Operate auger - surface
047	Operate bulldozer
051	Operate coal/ore cutting machine
050	Operate conveyor belt (not riding)
052	Operate fork lift
053	Operate front-end loader
054	Operate grader
055	Operate haulage truck (surface & ug)
056	Operate hoist
057	Operate jitney
058	Operate load-haul-dump
059	Operate loading machine
060	Operate locomotive (air trammer)
061	Operate longwall/shear/plow (longwall)
063	Operate mill equipment
065	Operate power shovel/dragline/backhoe
066	Operate rock dust machine
067	Operate scraper (rig); cans, etc.
068	Operate shortwall-underground shortwall
069	Operate shuttle car
070	Operate slusher
072	Operate surface equipment, NEC.
073	Operate underground equipment, NEC.
071	Operate utility truck
062	Operate/ride in/ride on mantrip
098	Other, NEC
049	Operate continuous miner
074	Remove/position hydr jack (not longwall)
075	Rerail equip (incl replace trolley pole)
076	Ride/not operate equip-except mantrip
077	Roof bolter, drilling
078	Roof bolter, inserting bolt
080	Roof bolter, NEC
079	Roof bolter, tramming
081	Sand fill (backfilling stopes)
082	Set brattice
083	Set/remove/relocate props
084	Skip pocket (pull/free)
085	Spot cars; drop cars
086	Sprag/block/chock mine cars/track equip
087	Supervise (not simply observe operation)
088	Surface construction, NEC
089	Timbering (include lagging and cribbing)
090	Travel (to/from work locatn-not mantrip)
099	Unknown
091	Ventilation (maintenance/installation)
092	Walking/running
093	Welding&cutting-incl electric/acetylene
094	Wet down working place (using water)
048	Work in coal tipple/crusher/clean plant

096 Working w chemicals-caustics/acids/lime
095 Working w/ solvents (cleaners/degreasers)
097 Working with noxious materials, NEC

Source of Injury or Illness Reference, MSHA Form 7000-50b, Item 12

Code	Description
021	Acids and alkalies
064	Air hoist
026	Apparel, N.E.C. - Ring, eyeglasses
046	Axe, hammer, sledge, doublejack, maul
121	Back mine roof, hanging wall
004	Bags, sacks (Rock dust only when in bag)
005	Barrels, kegs, drums
035	Belt conveyors/mobile bridge conveyor
078	Belts (not conveyor)
113	Blocking
002	Bodily motion
003	Boilers/pressure vessels/hoses/ tanks
006	Boxes, crates, cartons, toolbox
009	Brattice curtain; plastic and canvas
020	Brick, ceramic
089	Broken rock, coal, ore, waste
019	Building/structure/boat/raft/ramp NEC
024	Caustic chemicals/chemical compnds NEC
090	Caving rock/coal/ore/waste/ bentonite
125	Cement Products
065	Chain hoist
066	Electric hoist
079	Chains, ropes, cables (not conveyor)
047	Chisel
034	Chutes and slides
030	Coal (processed)
033	Coal and petroleum products, NEC
029	Cold (atmospheric, environmental) NEC
008	Containers, NEC (baskets, oil cans)
038	Conveyors, NEC
062	Cranes, derricks
111	Cribbing
048	Crowbar/pry/scaling bar/RR bar/ steel bar
014	Dams, locks, ponds, bridges etc.
012	Doors (incl ug ventiltn)/mandoor/ airlock
082	Drill steel (all kinds)
055	Drill, percussive
054	Drill, rotary (coal drill)
080	Drum/pulley/sheave-not convyr/ shive blk
042	Elec conductor/wire/cable/trolley pole
043	Electrical apparatus, NEC
063	Elevators, cages, skips, hoists
044	Explosives (rel directly to explosives)
070	Fixed ladder-incl in shaft/ manway/raise
045	Flame, Fire, Smoke, NEC
010	Floor; walking surface-not underground
105	Forklift/stacker/tractor/powered carrier
040	Generators
117	Ground
051	Hand tools not powered, NEC
057	Hand tools, powered, NEC
058	Heat (Atmospheric and Environmental)
069	Hoisting apparatus, NEC
027	Ice
056	Impactor, Tamper
068	Jack-mechanical/hydraul/air-not longwall
031	Kiln products/incl buildup to be removed
059	Kilns; milting furnaces and retorts
049	Knife, machete
072	Ladders, NEC
091	Landslide (surface only)
073	Liquids, NEC
074	Machines, NEC
001	Live animals/insects/birds/ reptiles
036	Longwall conveyor
067	Longwall supports; jacks/chocks/ ram jack
094	Loose dirt and mud
081	Mechanical power transmission eqp NEC
086	Metal cover/guard/door/gate/mat/ canopy
088	Metal, NEC (Pipe, wire, nails)
032	Methane gas (in mines and processed)
075	Milling/Cleaning Plant/Breaker Machines
123	Mine floor, bottom, footwall
015	Mine headframe
108	Mine jeep/car; kersey/jitney/S&S tractor
025	Mine rescue/self rescue equip/safty belt
095	Mineral items, NEC
127	Miscellaneous, NEC
085	Molten metal-hot pellets, hot slag
039	Motors
071	Moveable ladders
106	Narrow gauge rail car/motor/equip (ug)
096	Noise, NEC
109	Nonpowered vehicles
023	Noxious mine gases, NEC
061	Other heating equip NEC catalitic
022	Oxygen deficient atmosphere
114	Pallets
103	Passenger cars and pickup trucks
097	Plants, trees, vegetation
112	Posts, Caps, Headers, Timber
053	Power saw, band saw
092	Pulveriz mineral/fine particle/mine dust
098	Pump/fan/compressor/engine/ turbine, NEC
100	Radiating substances of equipment, NEC
099	Radioactive ore (inj is from radiation)
115	Railroad ties
083	Roof (Rock) bolts
007	Rubber/glass/plastic/fiberglass/ fabric
093	Sand or gravel or shell

016	Scaffold/staging/platform/catwalk/gantry
037	Shaking and vibrating conveyor
122	Side or rib
028	Snow
101	Soaps/detergents/cleaning Compounds/NEC
060	Space heaters (Salamander)
118	Stairs/steps-stone/wood/dirt/ steel/other
107	Stand gauge rail car/motor/equip (surf)
102	Steam
084	Steel rail-all sizes/IBeams/HBeams/frog
011	Steps, stairs
052	Stone/wheel grinder/buffer/ polisher/waxr
013	Storage tanks/bins, portable surge bins
119	Street, road
076	Surface mining machines
017	Towers, poles, etc.
041	Transformers, converters
077	Underground mining machines
124	Underground, NEC
110	Vehicles, NEC
126	Water
018	Wharfs, docks, etc.
087	Wheels from cars or trucks of any size
116	Wood items, NEC
120	Working surfaces outside, NEC
050	Wrench; all types
104	Young Buggy/Hwy ore carrier/lrg truck/bus

Nature of Injury or Illness Reference, MSHA Form 7000-50b, Item 13

100	Amputation or enucleation
292	Anthracosis
291	Asbestosis
110	Asphyxia/strangulation/drowning/suffocat
301	Burn from electric arc-not contact burn
120	Burn or scald (heat/hot substances)
130	Burn, chemical
350	Cerebral hemorrhage -- not concussion
293	Coal workers pneumoconiosis/black lung
140	Concussion -- brain, cerebral
150	Contagious/infectious disease-occupatnl
160	Contusion, bruise -- intact skin surface
170	Crushing
180	Cut/laceration/puncture/opn wound/infect
190	Dermatitis/Rash/skin/tissueinflammation
200	Dislocation
320	Dust in eyes or other particles
210	Electric shock, electrocution
360	Electrical burn -- contact burn
250	Environmental heat-not sunburn/radiation
220	Fracture, (FX), chip
230	Freezing/frostbite/exposure to low temp
240	Hearing loss, or impairment
340	Heart attack
260	Hernia; rupture - inguinal/noninguinal
270	Inflam/irritation of joint/tendon/muscle
302	Laser burn
303	Lung cancer, ionizing radiation
370	Multiple injuries
380	Occupational diseases,N.E.C.
390	Other injury, N.E.C.
290	Other Pneumoconiosis N.E.C.
300	Other radiation effects, N.E.C.
280	Poisoning, systemic
310	Scratch, abrasion (superficial wound)
294	Silicosis
330	Sprain/strain/twist/tear/rupt disc/whipl
304	Sunburn
400	Unclassified, not determined pain/ache

Accident Investigation Data-Ind. Contractor Info., MSHA Form 7000-50c

Accident Investigation Data - Independent Contractor Information
Event Number:

U.S. Department of Labor
Mine Safety and Health Administration

Independent Contractor Information: 1

1. Company Name:
2. MSHA ID Number:
3. Type of Independent Contractor:
4. Nature of Contract Work:
5. Number of Independent Contractor employees On-Site at Time of Accident:
a. Underground
b. Surface:
6. Independent Contractor Officials:

On-Site/Other: Title Name Address

Independent Contractor Information: 2

1. Company Name:
2. MSHA ID Number:
3. Type of Independent Contractor:
4. Nature of Contract Work:
5. Number of Independent Contractor employees On-Site at Time of Accident:
a. Underground
b. Surface:
6. Independent Contractor Officials:

On-Site/Other: Title Name Address

Independent Contractor Information: 3

1. Company Name:
2. MSHA ID Number:
3. Type of Independent Contractor:
4. Nature of Contract Work:
5. Number of Independent Contractor employees On-Site at Time of Accident:
a. Underground
b. Surface:
6. Independent Contractor Officials:

On-Site/Other: Title Name Address

MSHA Form 7000-50c, Dec 94 Printed 05/18/2006 7:39:03 AM

Type of Independent Contractor, (Type of Work) MSHA Form 7000-50c, Item 3

Code...Description

04.....Construction of dams
03.....Demolition of mine facilities
09.....Drilling and blasting
06.....Equipment installation-i.e., crusher/mill
05.....Excavating/earthmoving activity with mobile equipment
08.....Material handling within mine property
01.....Mine development incl shaft, slope sinking
10.....Other Types of Work N.E.C.
02.....Reconstruction/Construction of mine facilities
07.....Service/repair site equipment for > 5 continuous days

Accident Investigation Data - Methane Ignition/Explosion Information, MSHA Form 7000-50d

Accident Investigation Data - Methane Ignition/Explosion Information
Event Number:

U.S. Department of Labor
Mine Safety and Health Administration

A. Section Information

1. Ignition or Explosion:
a. Ignition b. Explosion

2. Location of Ignition/Explosion:
a. Description: b. MMU Number:

3. Type of Mining:
Development Retreat

4. Extended Cut Approved in: (Coal only)
Ventilation Plan Roof Control Plan No Approval

5. Extended cut used at time of accident?
Yes No

6. Depth extended cut approved(in feet):

7. Depth of extended cut at time of accident (in feet):

B. Dust Suppression Information

8. Water Spray Parameters:
a. Number of water sprays required in ventilation plan:
b. Number of water sprays operable at time of ignition:
c. Water pressure required in ventilation plan (in PSI):
d. Water pressure measured during investigation (in PSI):
e. Water flow rate required in ventilation plan (in GPM):
f. Water flow rate measured during investigation (in GPM):
g. Type of water spray system (include type of scrubber and fan system):
h. Exhaust system velocity (in FPM):
Description

C. Face Ventilation Information

9. Ventilation Configuration: a. Exhaust Blowing Combination

10. Ventilation control devices at time of accident:
a. Auxiliary Fan/Tubing b. Curtain c. Diffuser
Other ventilation controls (describe):

11. Distance from inby end of ventilation control to face:
a. Required in Ventilation Plan (ft.) b. At time of accident (ft.)

12. Air Quantities (in CFM):
a. Air quantity required at LOC or pillar line:
b. Air quantity measured at LOC or pillar line:
c. Air quantity required at face or reaching longwall:
d. Air quantity measured at face or longwall:
e. Measured diffuser fan capacity:
f. Measured scrubber quantity:

D. Methane Information

13. Methane Liberation a. On Section (cubic feet each 24 hrs):
b. Category (Metal and Nonmetal only): I II III IV V VI

14. Source of Methane Accumulation: a. Normal Liberation b. Feeder c. Other(Describe):
d. Description of feeder location (if applicable):

15. Was methane monitor functioning properly? Yes No N/A

16. Equipment involved maintained in permissible condition? Yes No N/A

17. Location of methane monitor sensing head: a. Right side b. Left Side c. Center d. Distance From Face (in inches)

18. Barometric Pressure:
a. Measurement (in/hg) b. Rising Falling Steady

E. Bit Information

19. Bit Type:

20. Bit Configuration:

21: Condition of Bits:

F. Other Information

22. Energy Source:
a. Frictional b. Electrical c. Cutting/Welding d. Smoking e. Undetermined f. Other (describe):

23. Coke samples taken:
Yes No

24. Other Technical Data:

MSHA Form 7000-50d, Sept. 96 Printed 05/18/2006 7:40:26 AM

Accident Investigation Data, Unintentional Fall Of Roof/Back, Rib or Face, MSHA Form 7000-50f

Accident Investigation Data - Unintentional Fall of Roof/Back, Rib, or Face

Event Number: | | | | | | | |

U.S. Department of Labor
Mine Safety and Health Administration

A. General Information

1. Type of Fall: (M/NM Only)
a. Roof/Back | b. Rib | c. Face | d. Outburst | e. Rockburst

2. Dimension of Fall:
a. Length Feet | b. Width Feet | c. Thickness Feet Inches

3. Width of Entry, Room, etc: Feet Inches

4. Immediate Roof/Back Information:
a. Thickness Feet Inches | b. Strata Composition:

5. Main Roof/Back Information:
a. Thickness Feet | b. Strata Composition:

6. Was the fall above the anchorage horizon of the bolts?
Yes | No | N/A

7. Did the fall affect ventilation resulting in less than required quantity or quality?
Yes | No

8. Did the fall affect the passage of workers? (entrapment)
Yes | No

9. Did miners have indication of the pending fall?
Yes | No

10. If indication was given, what type?

B. Fall on Working Section/Active Face Area

11. Type of Roof Support:

12. Type of ATRS (Coal only):

13. Type of Original Support in Fall Area:

14. Distance Between Fall and Face: Feet Inches

C. Fall Outby Working Section/Previously Developed Area

15. Location and Type of Entry (intake, return, main haulage, etc.):

16. Approximate Date of Development (MM/DD/YYYY): a. Date: ___/___/____

17. Type of Original Support in Fall Area:

D. Operator's Investigation

18. Did the operator investigate the fall?
Yes | No

19. What did the operator determine to be the cause of the fall?

20. What steps did the operator take to prevent a similar occurrence?

E. Plan Revisions

21. Are plan revisions anticipated (Coal only)?
Yes | No

MSHA Form 7000-50f, Sept. 96 Printed 05/18/2006 7:40:40 AM

Example of Letter to Obtain Medical Information Necessary to Conduct Mandatory Investigations

To Provider/Plan:

The Mine Safety and Health Administration (MSHA), U.S. Department of Labor is requesting that you provide medical information of mine accident victims as requested by the Secretary of Labor's authorized representative.

We are requesting this information because we are conducting a mine accident investigation under the federal statutory authority of Section 103 of the Federal Mine Safety and Health Act of 1977 (Mine Act), 30 U.S.C. § 813, to investigate health and safety conditions, causes of accidents, diseases and physical injuries.

We recognize that the requested information is considered to be protected health information under the HIPAA Privacy Rule (45 CFR § 164.501 through 164.5 34), and that many of you must comply with this rule. We want to assure you that the Privacy Rule allows you to disclose this information to us without the individual's authorization under the following provisions:

For public health activities (45 CFR §164.512(b)): A covered entity may disclose protected health information for the public health activities and purposes described in this paragraph to:

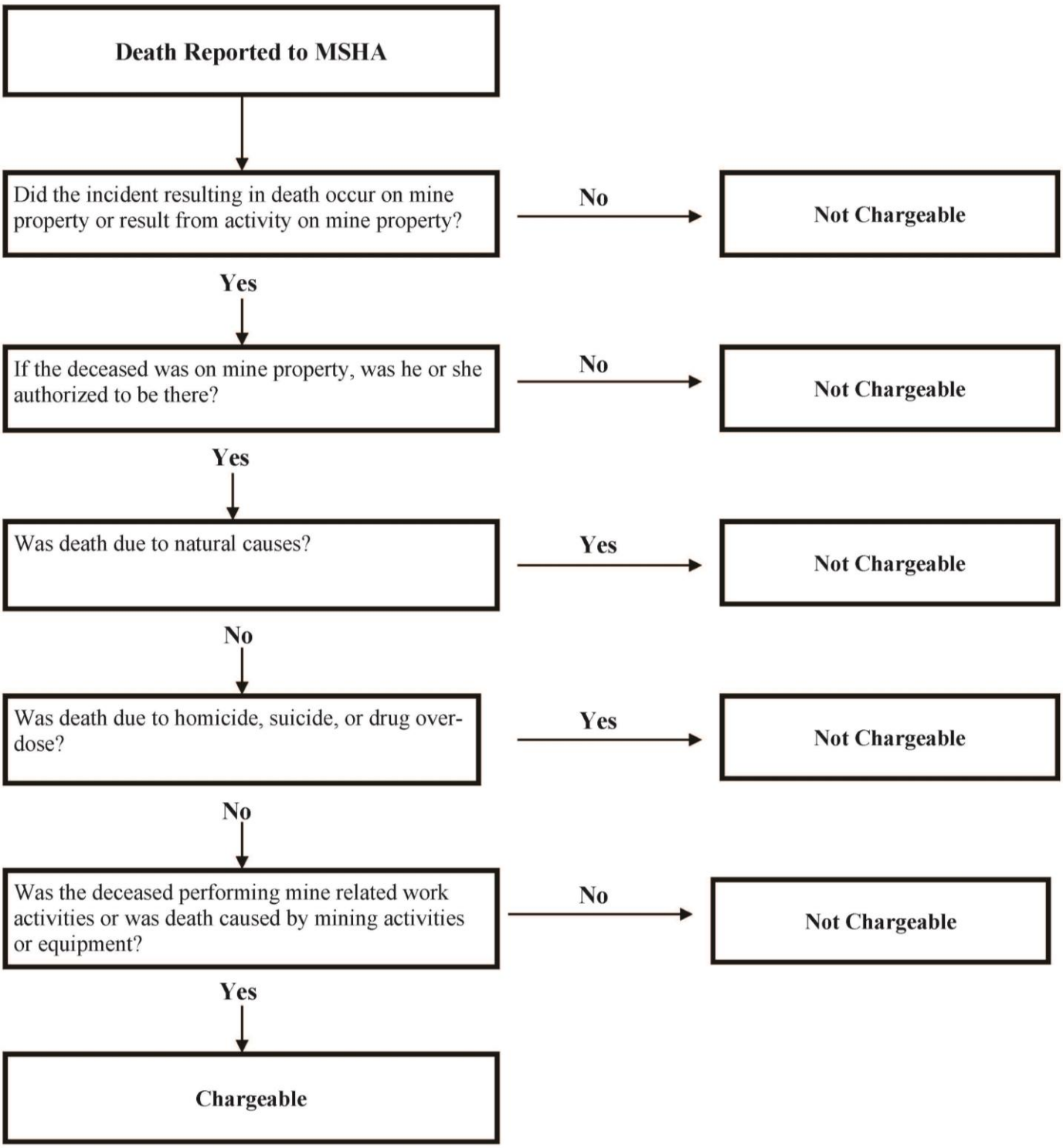
A public health authority that is authorized by law to collect or receive such information for the purpose of preventing or controlling disease, injury, or disability, including, but not limited to, the reporting of disease, injury, vital events such as birth or death, and the conduct of public health surveillance, public health investigations, and public health interventions; or, at the direction of a public health authority, to an official of a foreign government agency that is acting in collaboration with a public health authority

The Mine Safety and Health Administration, U.S. Department of Labor, is such a "public health authority" because it is responsible for public health matters as part of its official mandate set out in Section 103(a) of the Mine Act. (See 45 §CFR 164.501) In that capacity, we are requesting information to conduct a statutorily required mine accident investigation.

MSHA is authorized to collect or receive this information under Section 103(a) of the Mine Act, 30 U.S.C. § 813(a) which provides in relevant part, as follows:

> Authorized representatives of the Secretary or the Secretary of Health, Education, and Welfare (HHS) shall make frequent inspections and investigations in coal, or other mines each year for the purposes 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.

The information that we have requested is the minimum amount necessary for us to carry out this public health project under the Privacy Rule. (See 45 CFR §164.514(d).)

We trust that you are assured that providing us with the requested information is appropriate. Please contact MSHA officials at 202-693-9507 for coal mine accidents or 202-693-9614 for non-coal mine accidents if you have additional questions or concerns.

Fatal Injury Guideline Matrix