

Attachment D: Instructions to respondents

Instructions to interview participants

Objective

Thank you for agreeing to participate in this important project for the NIOSH Office of Mine Safety and Health Research. The objective of the project is to characterize barriers to the development, commercialization, and adoption of safety and health protection technologies for underground coal (and other gassy) mining. Information about barriers is being collected through a series of structured interviews with representatives of organizations associated with underground coal mining. We are using a standardized question protocol for all interviews to facilitate analysis, such as identifying areas of agreement and similarities and differences among organization types. More information on the scope of the interviews is provided in the Interview Question Topics and Definitions sections below. Representatives from the following types of organizations are being interviewed:

- Government operated research and development
- Non-governmental research & development
- Safety/electronics equipment suppliers
- Original equipment manufacturers
- Equipment distributors
- Mining engineering & construction firms
- Mining companies
- Trade/professional organizations
- Safety & health regulators and experts

Your Participation

NIOSH has contracted with [contractor name] to conduct these interviews. Interviews are being conducted by telephone and are expected to take approximately one hour to complete. Interviews will typically include one or two representatives from the organization and one or two interviewers. Based on the question topics provided below, please identify one or two people from your organization that are best suited to answer the questions. A representative from [contractor name] will contact you to schedule a date and time for the interview. We will provide a teleconference number for you to use for the interview when it is scheduled.

Interview Question Topics

- Hazards associated with underground coal mining
 - Questions about the types of hazards associated with different underground coal mining activities
- Currently available safety and health protection technology
 - Questions about currently available safety and health protection technologies and their effectiveness
- Safety and health protection technology development and use
 - Questions about awareness and selection of technologies, development of new technologies, and barriers to the development and use of new technologies

Definitions

- *Safety and health hazard*—any situation or circumstance that may lead to a worker suffering an injury or illness. This includes acute injuries, chronic injuries, and illnesses.

- *Safety and health protection technology*—Any physical hardware that provides worker protection. This includes hardware designed specifically for worker protection as well as aspects or components of hardware designed primarily for other purposes (e.g., mining equipment) that provide worker protection.
 - *Protection*—A means of accomplishing any of three functions: (i) protecting workers from injury or illness caused by hazards present during routine operations (e.g., hard hats, hearing protection), (ii) preventing potentially injury- or illness-causing incidents or conditions from occurring (e.g., proximity sensors, ventilation), (iii) reducing the impact or severity of injury or illness after an accident (e.g., self-contained self-rescuers, refuge chambers).

Consent script

Your participation in this interview is voluntary. The interview will cover hazards associated with underground coal mining, safety and health protection technology, and safety and health protection technology development, commercialization, and use. Participation will involve responding to questions about your opinions and experiences. You can refuse to answer any questions and can stop participating at any time. Refusal to participate or discontinuing participation will involve no penalty or loss of benefits to which you are otherwise entitled. Your participation is expected to last 1 hour. Your responses will be kept private and you can stop participating at any time. Neither your identity nor the name of your organization will be revealed to NIOSH or made public. Specific information linking interviewee name and organization to particular interview responses will not be included in any information viewed by NIOSH or in any presentations or reports produced in the course of the study. Interviews will be audio recorded to ensure that all information is captured. Audio recordings will be used only by [contractor name] and not shared with NIOSH.

There is a small risk that your participation or the information you provide us will not remain confidential. To avoid loss of confidentiality, all potentially identifying information from the interviews will be carefully secured through password protection, encryption, locked file cabinets, and electronic permissions so as to minimize the risk of any breach of confidentiality. Identifying information and audio recordings will be destroyed at the end of the study.

There is no direct benefit to you, except that your help may improve the safety and health of miners. There will be no costs to you, other than your time involved. If you have any questions or concerns regarding this study, you may contact [NIOSH technical contact] at [phone number]. If you have questions about rights or privacy, you may contact Sandra Berry, the Chair of the RAND Human Subjects Protection Committee, at 310-393-0411 x7779. Do you have any questions?

Instructions to workshop participants

Objective

Thank you for agreeing to participate in this important project for the NIOSH Office of Mine Safety and Health Research. The objective of the project is to prioritize barriers to the development, commercialization, and adoption of safety and health protection technologies for underground coal (and other gassy) mining. Information about barriers has previously been collected through a series of structured interviews with representatives of organizations associated with underground coal mining. For this workshop, NIOSH is bringing together about 30 experts in underground coal mining to help refine and prioritize the barriers identified in the interviews.

Participants in the interviews and the workshop include representatives from the following types of organizations:

- Government operated research and development
- Non-governmental research & development
- Safety/electronics equipment suppliers
- Original equipment manufacturers
- Equipment distributors
- Mining engineering & construction firms
- Mining companies
- Trade/professional organizations
- Safety & health regulators and experts

Your Participation

Prior to the workshop, please review the attached description of barriers to the development, commercialization, and use of safety and health protection technologies gleaned from the interviews. This material will form the basis for the workshop activities. As you review, please consider how you would organize the barriers, the extent to which they are independent of each other or how they are interrelated, and which are most important to address first.

The workshop will run for one day. At the workshop we will seek your input about the relative priority of the barriers in various dimensions and under different sets of assumptions. The workshop will use the Delphi method to seek a consensus among participants. The Delphi method entails soliciting responses from participants, sharing de-identified responses with the group to discuss differences and the reasoning behind them, then allowing participants to update their responses after the discussion. The cycle of sharing and updating can be repeated as necessary. A preliminary workshop agenda is attached [see Attachment 3].

The Delphi method is implemented using a web-based survey instrument that participants access via computer or tablet. Please let us know if you are unable to bring a computer or tablet and we will provide one for you to use.

Logistics

The workshop will be held at [facility name and address] on [date] from [start time] to [end time]. NIOSH has contracted with [contractor name] to conduct the workshop. Travel expenses for workshop participants will be reimbursed. Please make your own travel arrangements. A representative from [contractor name] will contact you to collect the information needed to provide the reimbursement.

Consent script

Your participation in this workshop is voluntary. Participation will involve responding to questions about the priority of barriers to technology development, commercialization, and use and engaging in group discussion about different responses. You can refuse to answer any questions and can stop participating at any time. Refusal to participate or discontinuing participation will involve no penalty or loss of benefits to which you are otherwise entitled. Your participation is expected to last 1 work day plus any travel time needed. Your responses will be kept private and you can stop participating at any time. Neither your identity nor the name of your organization will be revealed to NIOSH or made public. Specific information linking participant names and organizations to particular responses will not be included in any information viewed by NIOSH or in any presentations or reports produced in the course of the study. The workshop will be audio recorded to ensure that all information is captured. The audio recording will be used only by [contractor name] and not shared with NIOSH.

There is a small risk that your participation or the information you provide us will not remain confidential. To avoid loss of confidentiality, all potentially identifying information from the workshop will be carefully secured through password protection, encryption, locked file cabinets, and electronic permissions so as to minimize the risk of any breach of confidentiality. Identifying information and the audio recording will be destroyed at the end of the study.

There is no direct benefit to you, except that your help may improve the safety and health of miners. There will be no costs to you, other than your time involved. If you have any questions or concerns regarding this study, you may contact [NIOSH technical contact] at [phone number]. If you have questions about rights or privacy, you may contact Sandra Berry, the Chair of the RAND Human Subjects Protection Committee, at 310-393-0411 x7779. Do you have any questions?