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REPORT TO THE MINE SAFETY AND HEALTH ADMINISTRATION



MSHA NEEDS TO PROVIDE BETTER OVERSIGHT OF EMERGENCY RESPONSE PLANS

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BRIEFLY...

March 31, 2017

MSHA NEEDS TO PROVIDE BETTER OVERSIGHT OF EMERGENCY RESPONSE PLANS

WHY OIG CONDUCTED THE AUDIT

Emergency Response Plans (ERP) can save miners' lives. The importance of a well-crafted and up-to-date ERP cannot be understated. ERPs provide critical information to mine operators and miners during emergencies.

In 2006, accidents at the Sago, Aracoma, and Darby coal mines killed 19 miners. In response to these disasters, Congress passed the Mine Improvement and New Emergency Response (MINER) Act of 2006. The MINER Act requires all underground coal mine operators to develop an ERP to improve accident preparedness and response. The Mine Safety and Health Administration (MSHA) is responsible for issuing guidance, reviewing and approving initial ERPs, determining if mine operators fully implemented their ERPs, and reviewing the ERPs every six months.

WHAT OIG DID

Because of the critical importance of ERPs to the survival of miners, we performed an audit to determine the following:

Has MSHA provided sufficient oversight of ERPs?

READ THE FULL REPORT

To view the report, including the scope, methodology, and full agency response, go to: <http://www.oig.dol.gov/public/reports/oa/2017/05-17-002-06-001.pdf>.

WHAT OIG FOUND

MSHA has not provided sufficient oversight of ERPs. All of the ERPs we reviewed contained inaccuracies or omissions, MSHA did not sufficiently track its reviews of ERPs or document its inspection of ERP components, and guidance the agency issued had material gaps. As a result, the ERPs we reviewed were inadequate in one or more ways and placed miners at unnecessarily increased risk during an emergency.

All of the ERPs in our sample were incomplete or inaccurate. In a small sample of 51 ERPs, we found 177 phone numbers for emergency contacts were either disconnected or belonged to someone other than the person or organization listed in the ERP. For another 83, no one answered our repeated calls. ERPs were also missing required elements, such as a section on lifelines – cables placed along tunnel walls with directional cues to help guide miners to safety in reduced visibility conditions.

MSHA could not show it had performed required reviews of ERPs for 11 mines in our sample. MSHA's review processes were inconsistent among its districts, which led to inconsistent and incomplete data in its ERP tracking system. As a result, MSHA did not have reasonable assurance it was performing all required reviews.

Finally, MSHA's ERP guidance had gaps. For example, it was unclear when new mines had to submit ERPs and whether they could exclude certain information.

These issues occurred because MSHA had not standardized processes, developed sufficient guidance or training, or provided sufficient management oversight.

WHAT OIG RECOMMENDED

We made nine recommendations to MSHA to improve its processes, guidance, training, and oversight for the ERP program.

In its response, MSHA stated it agreed with the spirit of many, but not all, of our recommendations.

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March 31, 2017

INSPECTOR GENERAL'S REPORT

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The Mine Improvement and New Emergency Response Act of 2006 (MINER Act) requires all underground coal mine operators to develop emergency response plans (ERP). Because of the critical importance of ERPs to the survival of miners caught in mining disasters, we conducted an audit to determine the following:

Has the Mine Safety and Health Administration (MSHA) provided sufficient oversight of emergency response plans?

RESULTS IN BRIEF

MSHA has not provided sufficient oversight of ERPs. All of the ERPs we reviewed contained inaccuracies or omissions, MSHA did not sufficiently track its reviews of ERPs or document its inspection of ERP components, and guidance issued by the agency had material gaps. As a result, ERPs we reviewed were inadequate in one or more ways and placed miners at unnecessarily increased risk during an emergency.

All of the ERPs in our sample were incomplete or inaccurate. In a sample of 51 ERPs, we found 177 phone numbers for emergency contacts were either disconnected or belonged to someone other than the person or organization listed in the ERP. For another 83, no one answered our repeated calls. Because of the potential risk to miners as a result of these inaccurate emergency contact numbers, we issued an Alert Memorandum to notify MSHA immediately of our findings.¹ ERPs were also missing required elements, such as the section on lifelines – cables placed along tunnel walls with directional cues to help guide miners to safety in reduced visibility conditions.

¹ Report Number 05-16-001-06-001, October 9, 2015

MSHA could not show it had performed required reviews of ERPs for 11 mines in our sample. MSHA's review processes were inconsistent among its districts, which led to inconsistent and incomplete data in its ERP tracking system. As a result, MSHA did not have reasonable assurance it was performing all required reviews.

Finally, MSHA's ERP guidance had gaps. For example, it was unclear when new mines had to submit ERPs and whether they could exclude certain information. During our audit, MSHA issued additional guidance for ERPs that corrected two issues discussed in our report.

All of these issues occurred because MSHA had not standardized processes, developed sufficient guidance or training, or provided sufficient management oversight.

BACKGROUND

In 2006, accidents at the Sago, Aracoma, and Darby coal mines killed 19 miners. In response to these disasters, Congress passed the MINER Act. The MINER Act requires all underground coal mine operators to develop and adopt written "accident response plans," which MSHA calls ERPs, and periodically update those plans to reflect changes in mine operations, advances in technology, or other relevant considerations. ERPs are required to contain the following six key components:

- Post-accident communications
- Post-accident tracking
- Post-accident breathable air
- Post-accident lifelines
- Training
- Local coordination

The MINER Act requires the Secretary of Labor to review and approve the ERPs after taking into consideration comments submitted by miners or their representatives. After the initial approval, the Secretary must also review the ERPs at least every six months, considering comments submitted by miners or their representatives and advances in science and technology. The Secretary has delegated these responsibilities to MSHA.

In order to meet its responsibilities under the MINER Act, MSHA issues guidance for mine operators to use in developing their ERPs and for MSHA districts to use when reviewing plans. In addition, MSHA must review (and potentially approve) the initial ERP and review approved plans at least every six months to ensure mine operators update them to reflect changes in mine operations and advances in technology.

In April 2008, the Government Accountability Office (GAO) issued a report on MSHA's oversight of ERPs and found ERPs varied in content and did not always specify the protections to be provided for miners. In addition, GAO reported MSHA headquarters

provided limited oversight of the overall quality of the plans and provided insufficient oversight to ensure ERP content met a consistent agency-wide standard. GAO recommended the Secretary of Labor direct MSHA to take steps to ensure districts consistently applied MSHA guidance on approving and enforcing ERPs. The Secretary agreed with the recommendations, and GAO's website showed all of the recommendations as closed and implemented.

RESULTS

MSHA has not provided sufficient oversight of ERPs. All of the ERPs we reviewed contained errors or omissions, such as wrong emergency contact numbers or missing required elements. In addition, MSHA did not properly track its reviews of ERPs or document its inspection of ERP components. For example, we could not determine if key tests of ERP requirements were occurring because inspectors were sometimes marking them as "not applicable." In addition, MSHA's tracking system reported it had not met the MINER Act requirement for ERP reviews for almost half of the mines in our sample. Finally, we found significant gaps in guidance intended to help mine operators prepare ERPs and to help MSHA personnel review them.

ERPs WE REVIEWED WERE INACCURATE OR INCOMPLETE

We found all of the ERPs we reviewed listed incorrect emergency contact phone numbers or lacked elements required by law, regulations, and MSHA guidance. Collectively, these issues rendered ERPs significantly less useful in an emergency and placed miners at increased risk during an emergency.

MOST ERPs IN OUR SAMPLE CONTAINED INCORRECT EMERGENCY CONTACT NUMBERS

Eighty-four percent (43 of 51) of the ERPs we reviewed listed incorrect emergency contact phone numbers. We dialed 779 emergency contact telephone numbers listed in a random sample of 51 ERPs,² of which 177 were either disconnected or belonged to someone other than the person or organization listed in the ERP. For example, one phone number belonged to a rescue team member who had not been at that number for six years. In another ERP, the pages containing the phone numbers appeared to have last been updated more than six years earlier. In addition to the 177 incorrect numbers, we deemed another 83 "undeterminable" either because no one answered our multiple calls or a generic voicemail message played that did not identify the owner of the

² Originally, our statistical sample comprised 116 ERPs; however, we stopped dialing numbers once we reached 51 ERPs because we believed the large number of incorrect emergency phone numbers posed an immediate risk to miners. At this point, we ended our testing and immediately notified MSHA of our findings. Because we did not test emergency numbers for all 116 ERPs, we did not project our results to the overall population of ERPs.

number (see Table 1). Either way, we concluded the “undeterminable” numbers were not legitimate emergency contacts.

Table 1: Wrong Emergency Numbers in ERPs

Issue	Instances	ERPs*	Percent
Wrong Number	177	43	84%
Undeterminable	83	31	61%

*ERPs add up to more than 51 because many had both issues.

With regard to ERPs, the MINER Act states:

The plan shall set out procedures for coordination and communication between the operator, mine rescue teams, and local emergency response personnel and to make provisions for familiarizing local rescue personnel with surface functions that may be required in the course of mine rescue work.³

Essentially, the MINER Act requires mine operators to make arrangements with various emergency responders so they are familiar with the particulars of specific mines and therefore better prepared to respond in emergencies. To help satisfy this requirement, MSHA issued guidance requiring mine operators to include call lists in their ERPs. The call lists were to contain the telephone numbers of emergency providers with which mine operators had previously made arrangements for service.

Having correct emergency telephone numbers listed in an ERP is essential. Incorrect telephone numbers unnecessarily delay communication between mine personnel and emergency responders, increasing the risk of injuries to miners. Because we considered this finding to be an immediate risk, we issued an alert memorandum to MSHA on October 9, 2015.⁴ In its response to our alert memorandum and related emails, MSHA stated we should not have considered 40 of the 177 incorrect telephone numbers as incorrect because the caller received the following message:⁵

At no additional charge, AT&T can help you find a similar business in the same area, since the number you have called is not in service. Please stay on the line for alternate businesses, or for an additional charge, call directory assistance.

³ MINER Act §316(b)(2)(E)(vi)

⁴ Report Number 05-16-001-06-001

⁵ MSHA also disagreed with our results because it believed 17 of the 43 mines in our sample were not in “active” status at the time we made our calls. Mines not in “active” status may not need an ERP. The fact that the mines in question changed status from active to inactive during our audit does not affect our findings. At some point in time, all of the mines in our sample were active and operating under an ERP that included inaccurate emergency contact numbers.

We strongly disagree with MSHA that this is an acceptable alternative. Time is of the essence in emergency situations and MSHA's assertion that it would be acceptable to connect to a random "similar business in the same area" underestimates the potential gravity of mine emergencies. Many valuable minutes could be wasted while waiting to connect to an alternative "similar business in the same area." The MINER Act, in its local coordination section, requires mine operators to establish and maintain relationships with emergency responders. This, in turn, allows those responders to gain some level of familiarity with the mine, and thus be able to react quickly, saving valuable time and, more importantly, miners' lives. Merely posting a list of phone numbers or randomly connecting to an emergency provider unfamiliar with the specifics of a mine does not satisfy the spirit of the MINER Act's local coordination section.

MSHA further stated some of the incorrect phone numbers included volunteer fire and ambulance services that may not have staff serving on a 24/7 basis, and that MSHA does not have authority over the hours and availability of emergency medical services. However, MSHA's assertion that some emergency providers may not staff telephones on a 24/7 basis again contradicts the premise of an emergency responder. Emergency responders, by definition, should be available to answer phones and react 24 hours per day, 7 days per week, 365 days per year. Indeed, prior to the MINER Act, MSHA had issued a regulation requiring mine operators to "make arrangements with a licensed physician, medical service, medical clinic or hospital to provide 24-hour emergency medical assistance."⁶ An emergency provider who does not answer telephone calls during off hours does not meet the commonly understood definition of an "emergency provider."

The incorrect phone numbers in ERPs occurred partly because MSHA did not review those phone numbers during ERP reviews and inspections to ensure those numbers were viable and active. In addition, MSHA guidance issued as late as 2013 pointed mine operators to its "Mine Emergency Operations" online database.⁷ The database purported to include emergency contact information mine operators could use in preparing the local coordination section of their ERP. This database, however, was shut down in 2009. Nonetheless, some ERPs we reviewed either included telephone numbers from this database or referred to the database as part of their local coordination section.

MSHA directed us to three alternative tools available on its website that mine operators could use instead of the outdated database; however, two of the alternative tools — the mine rescue team database and the spreadsheet — included an incorrect phone number for a member of a mine rescue team. Moreover, MSHA's guidance to mine operators did not make them aware of these alternative tools. As a result, MSHA had no

⁶ Title 30, Code of Federal Regulations (30 CFR), §75.1713-1(a)

⁷ Program Policy Letter (PPL) P13-V-01-*Implementation of Section 2 of the Mine Improvement and New Emergency Response Act of 2006*, January 2013

reasonable assurance that mine operators knew of the alternative tools available to them on MSHA's website or that the information in those tools was accurate.

After receiving our draft alert memorandum, and despite its disagreement with our findings and recommendation, MSHA directed district personnel to conduct mine inspections and verify mine operators were complying with the requirements for having up-to-date contact numbers for emergency purposes, in accordance with various guidance. MSHA districts contacted mine operators to update the local coordination section of the identified ERPs, reviewed and approved ERP addendums, inspected underground coal mines for accurate postings, and issued citations for non-compliance where necessary. In addition, MSHA planned to implement a policy directing operators to default to 911 in case of an emergency.⁸ We strongly disagree with MSHA's guidance to default to calling 911 because this policy also fails to meet the local coordination requirements of the MINER Act. Local emergency providers with which the mine operator has made previous arrangements are the first stop in an emergency, while dialing 911 would be part of a comprehensive approach to an emergency response. Emergency providers contacted by dialing 911 are unlikely to be familiar with the mine and issues specific to it they may encounter.

Subsequent to performing inspections on October 7-8, 2015, MSHA issued a number of violations that indicated problems with the emergency contact numbers in the ERPs and the postings at the mines, as follows:

- 33 violations for non-compliance with 30 CFR §75.1713-1. Inspectors found mine operators had not made proper arrangements for emergency medical assistance and transportation for injured persons.
- 13 violations for non-compliance with 30 CFR §49.19. Inspectors found mine operators did not post the call lists at the mine as required, or the posted call lists contained incorrect phone numbers.
- 2 violations for non-compliance with §316(b) of the MINER Act. In these cases, inspectors cited the mine operators because of incorrect phone numbers in their ERPs.

In addition, MSHA issued citations for other issues related to emergency contacts during these inspections. The violations included the following:

- 2 violations for non-compliance with 30 CFR §49.12. Inspectors found mine operators had not coordinated to have two mine rescue teams available.

⁸ In April 2016, MSHA issued PPL P16-V-01 – *Implementation of Section 2 of the Mine Improvement and New Emergency Response Act of 2006*, to provide mine operators updated policy and guidance for development of their ERPs. For the local coordination section, this PPL stated normally, this will include alerting 911 and appropriate Federal and State officials. Calling 911 will alert local emergency responders and place hospitals and doctors on alert as appropriate.

- 1 violation for non-compliance with 30 CFR §49.50. An inspector cited the mine operator for not certifying to the district manager that the mine rescue team meets the requirements.

During our audit, MSHA began taking corrective action when it issued PPL P16-V-01 – *Implementation of Section 2 of the Mine Improvement and New Emergency Response Act of 2006* in April 2016, superseding PPL P13-V-01. In this PPL, MSHA removed references to the database that no longer existed. In addition, MSHA removed the mine rescue team database and spreadsheet containing the incorrect phone number from its website.

In its response to our draft report, MSHA said Congress recognized each mine is different and might have different needs so it established an “individual plan approach.” MSHA used this as an argument against establishing requirements on mine operators when creating their ERPs.

What MSHA did not mention in its response is that §316(b)(2)(F) of the MINER Act states:

In addition to the content requirements contained in subparagraph (E), and subject to the considerations contained in subparagraph (C), the Secretary may make additional plan requirements with respect to any of the content matters.

This MINER Act provision not only provides MSHA with the ability to make specific requirements for ERPs, but also allows it to do so without detracting from the unique factors in each mine operator’s ERP. While each mine may have some unique attributes, most ERP requirements are both consistent and applicable to all underground coal mines.

When developing the MINER Act, Congress acknowledged:

There was understandable concern over the degree to which the plan model might place additional burdens on both regulators and the regulated community.

Congress added:

Operators are therefore encouraged to work with district office personnel in the formulation and approval process; and district office personnel are encouraged to take initiative in the process and to utilize their judgment and expertise in working with operators to craft flexible and practical solutions.

We believe the recommendations we made in this report are practical solutions and will help MSHA ensure coal mines have ERPs that are complete and useful during an emergency.

Finally, in its response to our report recommendation to clarify procedures for local coordination in PPL P16-V-01MSHA said the reference to 911 met the local coordination requirements of the MINER Act.

We disagree with MSHA's response. Regarding the local coordination section, Congress said:

It is important that the appropriate assignment of roles, coordination of functions, and anticipation and planning for rescue-related activities be periodically reviewed with local first responders. For these reasons, the committee determined that an emergency response plan should provide the means to achieve these ends through appropriate advance contact, discussion and coordination with local first responders and emergency personnel.

These statements by Congress are why we recommended MSHA issue guidance to clarify the mine operator's responsibility for the local coordination section. We did not always see those attributes in the ERPs, which made it apparent to us that mine operators and MSHA district personnel needed additional guidance.

ERPs LACKED REQUIRED ELEMENTS

All 116 of the MSHA-approved ERPs we reviewed in our sample lacked one or more required elements. Such omissions would leave a mine unprepared in the event of an emergency, putting miners at further risk. Table 2 provides examples of missing elements in ERPs.⁹

⁹ See Exhibit for a complete listing.

Table 2: Examples of Missing Elements in ERPs

Missing Element	Instances	Percent*
Self-contained self-rescuer (SCSR) training provisions. SCSRs are breathing masks that are critical in an underground emergency. Not being properly trained in the use of an SCSR could mean the difference between life and death.	31	27%
Procedures for coordinating with local emergency responders	38	33%
Translation services for non-English speaking miners and their families	116	100%
“Lifelines.” Lifelines are cables placed about shoulder height along tunnel walls with directional cues intended to help guide miners to safety in reduced visibility conditions	56	48%
Included incorrect MSHA district contact information and inaccurate language about emergency communications equipment the mine operator was required to install.	3	3%

*ERPs add up to more than 100% because many had more than one issue.

The omissions occurred partly because MSHA had not standardized its review and approval processes across districts by developing a standardized ERP template and keeping review checklists up to date. In the absence of centralized MSHA guidance, some districts offered ERP templates to assist mine operators in preparing ERPs. Two of the four districts we visited offered templates. As a result, all ERPs from the two districts offering templates included the required sections for certain selected attributes, whereas many ERPs in the other two districts were frequently missing those elements (see Table 3). While MSHA headquarters had created a review checklist in 2009, it had not been updated since then, and therefore lacked new requirements added since 2009, including multiple PPLs on communications and tracking devices and a major PPL on the MINER Act.¹⁰

¹⁰ P11-V-11-Approval of Communication and Tracking Devices Required by the Mine Improvement and New Emergency Response Act of 2006 (MINER Act), April 2011; P12-V-04-Reissue of P10-V-02 - Requirements of 30 CFR, §75.313 and Two-Way Communication and Electronic Tracking Systems Operation after an Underground Coal Mine Accident, May 2012; P13-V-01-Implementation of Section 2 of the Mine Improvement and New Emergency Response Act of 2006, January 2013; P13-V-09-Re-Issue of P11-V-07 - Two-Way Communication and Electronic Tracking System: Potential Interference of RF Electromagnetic Fields with Electric Blasting Circuits, July 2013; and P14-V-01-Revised Guidance for Compliance with Post-Accident Two-Way Communication and Electronic Tracking Requirements of the Mine Improvement and New Emergency Response Act of 2006 (MINER Act), March 2014.

Table 3: Benefits of Using An ERP Template

District	District Offered Template?	Percent of Time Attribute Present in ERPs ¹¹			
		Redundant Communications	Tracking System	Local Coordination ¹	Advance Notice ²
A	Yes	100%	100%	100%	100%
B	Yes	100%	100%	100%	100%
C	No	71%	86%	79%	79%
D	No	100%	100%	82%	100%

¹ ERP contains plans for familiarizing local rescue personnel with surface functions.

² ERP provides for advanced notice to MSHA of on-site activities related to local emergency response coordination.

The district-developed checklists varied widely, even on important topics. For example:

- One district’s checklist had 28 questions related to SCSRs, while another had only 4 questions on the topic.
- One district’s checklist asked whether the tracking system had the capability to print a list of the last known location of all miners underground. Another district’s checklist did not address this issue.
- One district’s checklist asked if there was a standby power source for the tracking system. Another district’s checklist did not address this.

The lack of centralized oversight meant that each district developed its own unique local review and approval procedures. For example, all four districts we visited had a “specialist” initially review the ERP and recommend it for the District Manager’s approval, but there were different processes for subsequent reviews. Some MSHA districts followed up only with periodic inspector reviews. Other districts conducted periodic reviews using both inspectors and specialists. Specialist reviews were typically more thorough, and used a highly detailed checklist intended to ensure ERPs complied with all requirements for approval. Conversely, inspector reviews used a seven-item checklist and were considerably less detailed than specialist reviews.

In addition, ERPs were missing sections devoted to lifelines and training because MSHA had issued guidance stating, “There is no need to approve these prescriptive requirements in the ERP,” referring to certain ERP components required by the MINER Act.¹² This language is confusing, as personnel interpreted it to mean that a mine operator should not include language in the ERPs when the corresponding 30 CFR section already has language addressing it. This appears to contradict the MINER Act, which specifies the sections an ERP should contain. At least one MSHA

¹¹ This table shows four examples of how using an MSHA ERP template that includes MSHA’s requirements can help mine operators create a more complete ERP.

¹² PPL P13-V-01. The three ERP components this statement applied to were post-accident breathable air, post-accident lifelines, and training.

district adopted this interpretation and instructed a mine operator to remove the “lifelines” section from its ERP. As a result, some mine operators did not fully address these sections in their ERPs. When mine operators do not address all ERP components, their ERP no longer meets MINER Act requirements. An ERP is intended to be a self-contained document addressing each required component. Omitting certain components would disperse mine emergency response policies and procedures among several documents, potentially causing confusion and delays in responding to an emergency.

During our audit, MSHA initiated corrective actions to address some of the issues we discussed during fieldwork. For example, MSHA had mine operators in one district submit ERP addendums to correct three ERPs containing incorrect information. MSHA also contacted districts in an effort to correct issues with missing provisions for non-English speaking miners.

Although MSHA agreed in spirit with our recommendation to develop a national checklist reviewers could use to help guide them, the agency disagreed with the concept of actually developing a standardized checklist. However, in 2008, MSHA had developed a national checklist for ERPs in response to a GAO audit recommendation. The issue we identified was that MSHA did not keep the checklist updated as requirements changed. We are not aware of any reasons why MSHA would have agreed to develop a standardized checklist in 2008, but not in 2017.

Additionally, MSHA’s response said there was never a requirement for translation services and that the memo we cited did not establish Agency policy. However, Section 7 of the MINER Act requires MSHA to be as responsive as possible to requests from the families of mine accident victims for information relating to mine accidents. During the mine accident at Crandall Canyon Mine, family members required translation services because three of the trapped miners were Hispanic. Many of their family members spoke little or no English. The internal review team for the accident made two recommendations related to non-English speaking family members. As corrective action, MSHA issued a memo on October 31, 2008, that said:

During the next 6-month review, a mine’s ERP should be reviewed to ensure that plans, where necessary, have provisions for interpreters for non-English speaking miners and their families in the event of a mine emergency. If it is determined that a mine’s ERP is deficient in this regard, the District Manager will notify the mine operator in writing and request a revised ERP that contains this provision for translation services.

MSHA’s assertion that this memo did not create a requirement applicable to future ERPs lacks foresight and increases the likelihood that non-English speaking family members will continue to experience challenges in the event of a mine emergency. During our audit, MSHA said only five mines in our sample required translation services. When we questioned MSHA on its process to identify whether a miner’s family members spoke English, it responded it did not have a process. Therefore, we were

unable to verify if only five mines required translation services for family members. Even if we only counted five ERPs as missing translation services, it would not affect our overall conclusion because almost all of the ERPs we reviewed would still be missing one or more elements we tested.

ERP REVIEWS WERE NOT PROPERLY TRACKED AND INSPECTIONS NOT PROPERLY DOCUMENTED

We found issues with the way MSHA staff documented inspections of ERP components and tracked their reviews of ERPs. As a result, we could not conclusively determine if MSHA was meeting its legal requirement to review all components of ERPs every six months.

INACCURATE DOCUMENTATION OF INSPECTIONS

For 62 of 67 mines we reviewed, inspection reports contained multiple instances where inspectors failed to date and initial tests to show they were completed, as well as multiple instances of inspectors incorrectly marking applicable tests as “not applicable.” Moreover, we found instances where inspectors marked tests as “not applicable” during an inspection even though they had initialed and dated the same test in both previous and subsequent inspections. We found instances of tests marked as “not applicable” for important and universally applicable ERP components, such as escapeways, post-accident communication and tracking systems, communications, and records and postings for mine rescue and emergency evacuation. Inspectors need to document completion of all required inspection tests because they are important to ensure a mine has fully implemented its ERP.

Inspectors appeared to incorrectly use “not applicable” as shorthand for “did not complete this test.” This became especially evident when we found inspectors incorrectly entering “not applicable” for tests they were unable to complete during the October 2014 government shutdown. Overall, the incorrect use of “not applicable” appeared to be a common practice among inspectors, at least in the inspection reports we reviewed.

We also found instances in which inspectors marked two mutually exclusive items as “completed.” For example, MSHA categorizes mines either as “small” or “large.” Two items in the review checklist apply to either small or large mines, and these items are by definition mutually exclusive. Inspectors should only have completed the items applying to the type of mine at issue. Nonetheless, we found several instances in which inspectors marked two mutually exclusive items as completed in the checklist for the same mine. In addition, although the inspection reports showed the inspections were incomplete, the inspector’s supervisor had certified they had reviewed the inspector’s report.

MSHA’s *General Inspection Procedures Handbook* requires inspectors to date and initial entries for tests they performed during inspections or mark tests as “not

applicable.” In addition, both the *General Inspection Procedures Handbook* and *Supervisor’s Handbook* require MSHA supervisors to review and certify inspectors’ reports.

These issues occurred because MSHA had not provided sufficient guidance or training on how to complete the inspection report and supervisors had not sufficiently reviewed the inspection reports. Since the inspection reports showed the ERP components marked as “not applicable” were not tested, MSHA had no assurance those ERP components were properly implemented or functioning adequately. Not completing all the required tests in an inspection increases the risk that components of the ERP are not working properly, which puts miners’ lives at increased risk in an emergency.

MSHA agreed with our recommendation to provide refresher training, but did not believe additional written guidance was necessary.

Although we believe training will help, the variations and inconsistency of entries we saw in the inspection reports indicated that existing guidance is not sufficient. Until MSHA issues additional guidance for inspectors and supervisors, we expect inconsistent inspection documentation will continue in the future.

MSHA agreed with the spirit of our recommendation to provide periodic oversight of ERP reviews and said it would add the ERP plan to the plan review form. MSHA proposed to add the ERP to a list of checks the supervisor does. Although MSHA’s proposed action may help improve the effectiveness of supervisors, it does not implement a sufficient monitoring internal control to meet the recommendation’s intent.

INSUFFICIENT TRACKING OF ERP REVIEWS

MSHA could not demonstrate it had conducted all of the reviews required by the MINER Act, partly because it did not properly enter all completed reviews into an automated tracking system MSHA maintains to track initial and subsequent reviews of ERPs or monitor system-generated tracking reports. Maintaining an accurate record of dates of ERP reviews is critical, as it is evidence MSHA is meeting its requirement under the MINER Act to review ERPs every six months and allows MSHA to determine which ERPs are due for a review.

GAO’s *Standards for Internal Control in the Federal Government* (Standards) require management to use reliable and error-free information to manage its operations. However, data in the MSHA tracking system for ERP reviews were neither reliable nor error-free. The Standards also require management to perform ongoing monitoring and evaluate results. MSHA personnel were not sufficiently monitoring the reports available in the tracking system.

Inconsistent Inputting of Review Dates

MSHA personnel were inconsistently recording dates of completed ERP reviews into the tracking system. Districts used different criteria when entering inspection completion dates into their systems, such as the inspector's signature date, the supervisor's signature date, the date the administrative assistant received the paperwork, or the date the administrative assistant recorded the date into the system. Sometimes, these dates differed by as much as two months. There was no consistency among the districts on what represented the actual date a review was completed.

Inconsistent Updating and Lack of Monitoring of System Reports

MSHA personnel were not sufficiently updating the tracking system. MSHA's tracking system included a feature that allowed users to schedule future reviews and receive email reminders at the time the next review was due. Not all districts were using the scheduling feature and as a result, not all districts were receiving notifications of reviews coming due. The MINER Act requires reviews of ERPs every six months. A report we obtained from MSHA's tracking system indicated 154 ERP reviews were "overdue." However, we found the report was potentially misleading because it only included a subset of the potential universe of reviews. The report included only mines for which MSHA had: (a) scheduled future review dates, (b) missed one or more scheduled reviews, and (c) failed to update the system when a review was subsequently conducted. The report was inaccurate largely because MSHA did not consistently schedule reviews in the system and update the status as it completed reviews. In addition, MSHA did not regularly monitor the system-generated reports to discover overdue reviews and ensure district personnel were taking timely corrective action.

Documentation of Compliance with MINER Act Missing

When we calculated the actual number of reviews that were potentially overdue based on review dates in the tracking system, we found 668 potential reviews not completed in a timely manner. Of those 668, we requested documentation for 117 of them. MSHA provided documentation showing reviews had occurred in a timely manner for 105 of the 117 reviews, but was unable to provide documentation for the remaining 12. As a result, MSHA was unable to demonstrate it complied with the MINER Act requirement to conduct reviews of ERPs every six months for those 12 reviews (which included 11 mines).¹³

The fact that MSHA had to find documentation to support so many reviews indicates significant lapses in entering ERP reviews into the tracking system. In addition, and perhaps more importantly, MSHA could not demonstrate it had completed 12 ERP reviews in a timely manner.

¹³ In order to ensure these 11 mines were not operating without a currently reviewed ERP, we analyzed MSHA's records and determined their ERPs had been reviewed after the time period(s) during which there were lapses.

Districts entered inconsistent review dates and did not properly update the ERP tracking system because MSHA had not standardized processes for doing so across districts, had not developed sufficient guidance or training on the topic, and had not provided sufficient oversight of the tracking system by reviewing available reports.¹⁴ MSHA's tracking system produces reports that are intended to help identify mines with missing ERPs, completed ERP reviews, and overdue ERPs reviews. However, MSHA was not effectively using these reports because agency management did not emphasize sufficient oversight of the program, a problem GAO had identified in its 2008 report. Effective use of available reports would have caught the fact that MSHA districts were not entering all reviews into the tracking system and had overdue reviews. As a result, the data in the system was incomplete and unreliable, and MSHA had no assurance it was meeting its MINER Act requirement to review ERPs every six months.

In its response to our report recommendation to standardize ERP review processes across districts, MSHA said the current approval process is consistent with the plan concept as contemplated by Congress in the MINER Act. MSHA used this as an argument against establishing consistent processes for its district personnel to use when reviewing and approving ERPs or entering data in its tracking system.

We disagree with MSHA's assertion that the uniqueness of each mine prevents MSHA from standardizing its review and approval processes. A mine's uniqueness has no effect on whether a district uses a specialist, inspector, or both to review the ERP. Nor does mine uniqueness affect what dates the district staff enter into the tracking system or if MSHA can develop instructions on where to obtain each date. MSHA's unwillingness to implement internal controls listed in the Standards will result in its ERP program remaining a high-risk area in the future.

MSHA agreed with the spirit of our recommendation to implement a process to more effectively manage the ERP process and said it will provide training for district personnel, but did not believe a new written process was necessary.

During our audit, MSHA headquarters personnel were not monitoring the oversight reports for ERPs. This is a critical monitoring internal control to ensure district personnel are performing sufficient oversight. Because a headquarters review was not already in place, it would be a new process and control activity. Principle 12 of the Standards states management should implement control activities through policies.

¹⁴ MSHA previously issued procedure instruction letter (PIL) I09-V-03-*Procedures for Implementing the Mine Plan Approval Database System*, requiring the "date the periodic review was completed." However, this PIL expired on March 31, 2011, and MSHA did not reissue it. Regardless, the guidance in the expired PIL would not have been sufficient if it was still active because it required districts to enter the "date received" and the "date they completed a review," but it did not tell the district how to identify those dates.

MSHA'S ERP GUIDANCE HAD GAPS

MSHA's ERP guidance did not address certain important information mine operators needed to have when preparing and implementing their ERPs. As a result, miners could be working in a mine where an ERP had not yet been properly approved, putting them at risk in an emergency.

The Standards require management to use policies to implement proper controls over operations. However, MSHA's ERP guidance did not address the following:

- When mine operators should submit an ERP,
- Whether a district needed to approve an ERP prior to miners working underground, and
- Whether mine operators could exclude certain information from the ERP.

MSHA had not issued a regulation or guidance stating when a mine operator must submit an ERP. The MINER Act only required an ERP to be submitted "not later than 60 days after the date of enactment of the MINER Act of 2006." This language did not address the timeframe a mine operator would need to know when opening or reactivating a mine. For example, MSHA should inform mine operators how many days prior to beginning work underground an ERP should be submitted for approval. MSHA had not yet defined this milestone. By contrast, other government agencies that approve products or documents submitted by third parties, such as the U.S. Patent Office, publish detailed guidance on timelines for submitting processing those documents.¹⁵ This transparency enhances accountability and provides agency "customers" (in this case mine operators) information they need.

MSHA had not clarified whether a district must approve an ERP before miners begin working underground. The MINER Act does not address this matter, and until April 2016, MSHA had not issued clarifying guidance. We believe this criterion is critical. Without clear guidance, a mine operator could endanger miners' lives by sending workers underground prior to MSHA approving the ERP. MSHA's review and approval processes are necessary controls to ensure ERPs address all six required components, meet the MINER Act's requirements and MSHA guidance, and include sufficient safety measures for the mine's environment.

As we previously noted, MSHA had issued guidance stating districts did not need to approve certain elements in three ERP components required by the MINER Act. This guidance may have confused some readers and resulted in ERPs not addressing all required components.

¹⁵ For example, see <https://www.uspto.gov/trademark/trademark-timelines/section-1b-timeline-application-based-intent-use>.

During our audit, MSHA issued PPL P16-V-01 – *Implementation of Section 2 of the Mine Improvement and New Emergency Response Act of 2006*, which stated, “All operators of existing, new, or reactivated mines must have an approved ERP before miners start work underground.” This language clarified a district must approve ERPs before miners begin working underground.

In its response to our report recommendation to issue guidance making mine operators aware when ERPs must be submitted and what they must include, MSHA said it did not believe the issuance of regulations or additional guidance was necessary because of PPL P16-V-01. However, PPL P16-V-01 still included the confusing sentence that resulted in ERPs omitting some required components. Without additional clarification, it is likely future ERPs will still omit required components, and required elements within the components. In addition, mine operators would still not know how far in advance of a desired date to work underground that they needed to submit their ERPs.

PREVIOUS RECOMMENDATION

In our alert memorandum, we recommended the Assistant Secretary for Mine Safety and Health immediately take steps to ensure telephone numbers listed in ERPs were correct.

MSHA personnel disagreed with our recommendation, but took corrective action. They disagreed because:

- There were regulations requiring separate call lists be posted at the mine.
- The operating status of 17 mines changed during the audit to a status that no longer required an ERP.
- Some of the phone numbers we listed as incorrect included volunteer fire departments and ambulance services that may not have permanent staff serving on a 24/7 basis.

MSHA’s corrective actions included:

- Directing district personnel to conduct mine inspections,
- Verifying mine operators were complying with the requirements for having up-to-date contact numbers for emergency purposes, in accordance with various guidance,
- Contacting mine operators to update the local coordination section of the identified ERPs,
- Reviewing and approving ERP addendums,
- Inspecting underground coal mines for accurate postings, and
- Issuing citations for non-compliance where necessary.

OIG RECOMMENDATIONS

We recommend the Deputy Assistant Secretary for Mine Safety and Health:

1. Reissue PPL P16-V-01 to clarify the mine operators' responsibility for local coordination under the MINER Act. The revision should:
 - a. Inform mine operators to insert language in their ERP referencing the call lists posted at the mine if the ERP does not include them.
 - b. Clarify how a mine operator establishes procedures for coordination and communication between the operator, mine rescue teams, and local emergency response personnel and makes provisions for familiarizing local rescue personnel with surface functions that may be required in the course of mine rescue work.
2. Maintain an ERP review checklist on MSHA's website that is updated when requirements change.
3. Standardize the ERP review and approval processes and tools across MSHA districts. At minimum, the procedures should specify the:
 - a. Type of reviews (specialist and/or inspector) the districts should be completing and the frequency for each type of review.
 - b. Steps the reviewer should take for a specialist review versus an inspector review and the tools (e.g., standardized review checklist) to use during each review.
 - c. Dates (e.g., Date Received and Decision Date) to enter into the tracking system and instructions on where to obtain each date.
4. Issue additional guidance and provide refresher training on how to enter ERP data into the tracking system and use the tracking system to provide oversight.
5. Implement a process for headquarters and district personnel to manage the ERP program more effectively by periodically (e.g., quarterly or semi-annually) reviewing reports from the tracking system.
6. Complete periodic internal reviews to verify the accuracy and use of the tracking system.
7. Issue additional guidance and provide refresher training on how to sufficiently document completion of inspection results in the inspection report and how to sufficiently review the inspection report and certify an inspection.
8. Complete periodic internal reviews to verify the accuracy and completeness of inspection reports and first line supervisor certifications

and ensure MSHA is meeting the requirement in the MINER Act to review ERPs every six months.

9. Issue regulations or guidance to make mine operators aware of tools currently available on MSHA's website they can use when developing their ERPs and clarify when mine operators should submit an ERP and whether mine operators can exclude certain information from the ERP.

MANAGEMENT RESPONSE

In its response to our draft report, MSHA disagreed with several of our findings and recommendations. As a general point, MSHA stated ERPs need not contain all required elements because the agency evaluates mines' emergency response and preparedness through physical inspections. We disagree. Although inspections are the best way to determine if ERP elements have been properly implemented, the MINER Act requires MSHA not just to inspect mines, but also to review and approve ERPs. MSHA further disagreed with several specific findings and recommendations, which we addressed throughout this report. None of MSHA's comments caused us to modify our report or recommendations. We included management's response to our draft report in its entirety in Appendix C.

We appreciate the cooperation and courtesies MSHA personnel extended to the Office of Inspector General during this audit. OIG personnel who made major contributions to this report are listed in Appendix D.



Elliot P. Lewis
Assistant Inspector General
for Audit

Exhibit

Exhibit

This table shows details of ERPs missing requirements listed in the MINER Act, related regulations, and MSHA guidance.

Detailed Results of Attribute Testing of 116 ERPs		
Authority	Attribute Description	Count of ERPs Missing Attribute
Memorandum HQ-08-125-A	Translation services for miners and their families	116
PPL P13-V-01	Procedures for notifying key personnel, such as call lists for mine rescue teams, local emergency responders, mine personnel, state and federal officials, and other parties that may be needed in an emergency	2
MINER Act	Contain provisions for training on self-contained self-rescuers (SCSRs) that includes switching from one unit to another and ensuring a proper fit	31
PPL P13-V-01	Provide the location, number, and type of SCSRs stored underground as identified on maps	42
MINER Act	Provide procedures for coordination and communication between the operator, mine rescue teams, and local emergency response personnel	38
PPL P13-V-01	Provide or clearly identify the post-accident logistics at least including the location, necessary equipment, security of command center, facilities available to miners' families, location of press, and arrangements for traffic control	35
PPL P13-V-01	State that SCSRs will be maintained according to manufacturers' recommendations	19
PPL P13-V-01	Identify the type and storage location for one-hour rated SCSRs	18
PPL P13-V-01	Plan for replacement of SCSRs as more technologically advanced SCSRs become commercially available	17
PPL P13-V-01	State that SCSRs will be routinely examined according to manufacturers' recommendations	13
PPL P13-V-09	Specify the administrative controls used to eliminate interference with blasting circuits and other electrical systems while maintaining effective communication and tracking capability	11

PPL P13-V-01	Indicate a method of determining storage locations of additional SCSRs	9
PPL P13-V-01	Provide for advanced notice of on-site activities related to local emergency response coordination so that MSHA can observe or participate	6
MINER Act	Contain two or more independent communications systems	6
MINER Act	Provide plans for familiarizing local rescue personnel with surface functions that may be required during the course of mine rescue work	6
PPL P13-V-01	Contain a list of readily available suppliers of mine emergency and rescue equipment (e.g. copy of MSHA's mine emergency operations database)	6
PPL P13-V-01	State that SCSRs will be stored properly in accordance to manufacturers' recommendations	6
PPL P13-V-01	State that SCSRs will be retired according to manufacturers' recommendations	6
MINER Act	Have an approved post-accident tracking system	4
30 CFR, §75.1507	State that refuge alternative (RA) is stocked with a minimum of 2,000 calories of food and 2.25 quarts of potable water per person per day in approved containers sufficient to sustain the maximum number of persons reasonable expected to use the RA for at least 96 hours	3
30 CFR, §75.1507	State that RA is stocked with a manual that contains sufficient detail for each RA or component address in-mine transportation, operation, and maintenance of the unit	4
MINER Act	Contain an approved alternative wireless communication system	3
30 CFR, §75.1507	State that RA is stocked with sufficient quantities of materials and tools to repair components	3
30 CFR, §75.1507	State that RA is stocked with first aid supplies	2
30 CFR, §75.1506	Have an RA	1

Appendices

APPENDIX A

OBJECTIVE, SCOPE, METHODOLOGY, AND CRITERIA

OBJECTIVE

Has MSHA provided sufficient oversight of emergency response plans?

SCOPE

We reviewed a sample of ERPs, ERP review and approval documentation, training records, and inspection records. Our scope for each record was:

- Current version of ERP at time of receipt (May – July 2015);
- Mine Plan Approval reports from 2006-2015;
- ERP review and approval documentation from October 1, 2011, to April 1, 2015;
- Training records for most recent completed training cycle (Fiscal Years 2013-2014);
- Inspection records from October 1, 2011, to December 31, 2014; and
- Inspection reports from October 1, 2013, to December 31, 2014.

We statistically sampled 124 underground coal mines with a status of active and non-producing active from across all 11 districts. We reviewed 116 ERPs for mines in our statistical sample, as 8 mines did not have a current ERP at the time of our request.¹⁶ In addition, we visited four districts (Coal District 2 in Mount Pleasant, PA, Coal District 3 in Morgantown, WV, Coal District 4 in Mount Hope, WV, and Coal District 12 in Beaver, WV) to verify ERP review and approval documentation, inspection records, and training documentation for inspectors and specialists.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

¹⁶ From this sample, we tested 51 ERPs when calling phone numbers. We did not test all 116 ERPs because we stopped testing after finding a large number of incorrect phone numbers in those 51 ERPs and issued an alert memo.

METHODOLOGY

To answer our objective, we:

- Interviewed MSHA headquarters and district personnel.
 - At headquarters, we interviewed personnel in various program areas: Coal Mine Safety & Health; Educational Policy and Development; Program Evaluation and Information Resources; Office of Standards, Regulations, and Variances; and the Office of Assessments.
 - We did site work at Districts 2, 3, 4, and 12. At the districts visited, we interviewed the District Managers, Assistant District Managers for Technical Division, Assistant District Managers for Enforcement Division, Technical Division Group Supervisors (Electrical, Ventilation, and Health), and an Electrical Specialist.
- Selected a statistical sample of 124 mines across all 11 districts. Our sample included mines with a:
 - Status of active or non-producing active;
 - Mine type of underground; and
 - Primary commodity of coal (anthracite, bituminous, or lignite).
- Reviewed ERPs, ERP review and approval documentation, Mine Plan Approval reports, inspection records, and training records.

We assessed the reliability of computer-processed data. We found two data reliability issues we were able to work around to complete our audit. Therefore, we found the data we used was sufficiently reliable for the purpose of this report.

The first data reliability issue involved incomplete data in MSHA's list of mines. We used this data to identify our statistical sample of mines. During this process, we found 331 mines with a blank entry for mine type (e.g. underground, facility, or surface). Because most of these 331 mines had a status of "new mine" or "abandoned" (or abandoned-sealed), this data reliability issue did not affect our ability to identify our statistical sample; however, it did affect our ability to identify the total population of underground mines. In addition, we found 439 mines with a blank entry for primary commodity (e.g. coal, gold, nickel, silver, etc.). Using another field (coal/metal indicator), we identified 207 mines that had an indicator of metal mines and 232 that had an indicator of coal mines. Since our audit only dealt with underground coal mines, the 207 metal mines did not affect the audit. Because all of the 232 coal mines had a status of "new mine," this data reliability issue did not affect our ability to identify our statistical sample. However, it did affect our ability to identify the total population of underground coal mines using the primary commodity field. We addressed these data reliability issues with MSHA headquarters personnel in April 2015.

The second data reliability issue concerned incomplete and inaccurate data in MSHA's ERP tracking system. We used this data to identify gaps of at least 210 days between completed reviews for each mine in our statistical sample to determine if they met the MINER Act requirement for completing reviews every six months. When tracing entries

to source documents and completing other audit tests, we found district personnel entered incorrect dates and did not update the tracking system with all completed reviews. We discussed this issue in detail in the report section titled, “Insufficient Tracking of ERP Reviews,” and overcame this data reliability issue by requesting additional support from the districts showing completed reviews during the gaps. By doing this, we received forms where district personnel incorrectly entered dates and we were able to use the correct date. In addition, this mitigated the incompleteness issue because we received forms that district personnel had not entered into the ERP tracking system. We made recommendations in this report to correct these data reliability issues with the ERP tracking system.

CRITERIA

We used the following criteria to answer our audit objective.

- MINER Act of 2006
- Title 30 of the Code of Federal Regulations, Parts 49, 50, and 75
- MSHA’s *Coal Mine Safety and Health General Inspection Procedures Handbook* (PH13-V-1 February 2013)
- MSHA’s *Coal Mine Safety and Health Supervisor’s Handbook* (AH14-III-4 January 2014)
- MSHA’s *Coal Uniform Mine File Procedures Handbook* (PH14-V-1 January 2014)
- MSHA’s *Citation and Order Writing Handbook for Coal Mines and Metal and Nonmetal Mines* (PH13-I-1(1) December 2013)
- Various MSHA guidance to include:
 - Program Information Bulletins
 - Program Policy Letters
 - Procedure Instruction Letters
 - Question and Answers
- Various MSHA user manuals to include:
 - ITS – Inspection Tracking Application User Guide Version 1.1 January 2015
 - Mine Plan Tracking section of MSIS User Manual
 - Inspectors Portable Applications for Laptops (IPAL) User’s Manual Version 3.0.18 July 2014

ALERT MEMORANDUM TO MSHA

U.S. Department of Labor

Office of Inspector General
Washington, D.C. 20210



October 9, 2015

MEMORANDUM FOR: JOSEPH A. MAIN
Assistant Secretary for Mine Safety and Health

FROM: *Elliot P. Lewis*
ELLIOT P. LEWIS
Assistant Inspector General for Audit

SUBJECT: Transmittal of Alert Memorandum Regarding Incorrect
Telephone Numbers in Mine Emergency Response
Plans and MSHA's Interim Response

Attached is our Alert Memorandum, Incorrect Telephone Numbers in Mine Emergency Response Plans, Report No. 05-16-001-06-001, issued to MSHA on October 7, 2015, together with MSHA's interim response to the memo dated October 8, 2015. We are providing this transmittal to respond to certain statements MSHA made in its interim response.

Controlling Regulations

In its response, MSHA stated, "call lists that mine operators would use in the case of a mine emergency are separately required to be maintained at the mine and mandated to be updated by specific regulations." No regulation MSHA cited requires these call lists to be updated, and the only call lists specifically mandated to be posted under the regulations MSHA cited are for "emergency medical assistance and transportation for injured persons." Other contact numbers included in the ERPs that are essential for mine emergencies, such as fire departments, mine rescue teams, and evacuation equipment suppliers, are not specifically required to be posted under the regulations or policies MSHA cited. Moreover, we have not verified, and MSHA has not demonstrated, that the telephone numbers on the call lists are accurate or different from those included in the ERPs. Most importantly, any inconsistencies between lists of emergency telephone numbers could result in confusion during an emergency. Therefore, it is critical that any lists prepared be maintained complete and accurate at all times.

Working for America's Workforce

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Incorrect Contact Telephone Numbers

MSHA alleged 25 percent of the telephone numbers OIG identified as incorrect were working numbers, but offered no support for this assertion. OIG made three test calls over a period of several days to each of the telephone numbers our Alert Memorandum identified as incorrect or not answered. We concluded this was sufficient testing to determine the status of telephone numbers. In an emergency situation, personnel should not be expected to have to call a number multiple times.

MSHA emphasized the 98 fire departments and ambulance numbers OIG identified as "incorrect" included volunteer fire and ambulance services that may not have permanent staff serving on a 24/7 basis. We question whether a fire or ambulance service would have no contact number that is monitored 24/7 to respond to emergencies. Regardless, we are particularly concerned MSHA would consider this an acceptable response to our finding, particularly because the regulation on arrangements with ambulance services does require 24-hour operation.

Operating Status of Mines

MSHA stated 17 of the 43 (40 percent) mines whose call lists we tested were not active. As we noted in the Alert Memorandum, based on the data provided by MSHA, all of the mines in our sample were required to have ERPs at the time they were selected for review (March 27, 2015). According to data in MSHA's Mine Data Retrieval System as of October 8, 2015, 14 of these 17 mines had employees underground during the period covered by our review.

In particular, for the 3 mines that were abandoned subsequent to our test period, all 3 reported employees underground during the first and second quarters of 2015. One had an average underground employee count of 28 for the first quarter of 2015 and 6 for the second quarter. One had an average underground employee count of 21 for the first and second quarters. The third had an average underground employee count of 18 for the first quarter and 20 for the second quarter.

For the 12 mines MSHA noted were non-producing, 10 mines reported average underground employee counts in the first and/or second quarter of 2015. For example, one mine reported an average underground employee count of 24 for both quarters; one reported 40 for the first quarter and 11 for the second quarter; one reported 44 for both quarters; and one reported 61 for the first quarter and 43 for the second quarter.

The mine MSHA stated was temporarily idle reported an average underground employee count of 11 for the first quarter of 2015.

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Nothing in MSHA's interim response changes the findings in our Alert Memorandum. Obviously, the status of mines can and does change from time to time. However, our sample clearly shows a significant number of call lists contained in ERPs were incorrect as of the point in time covered by the sample. If even one employee may be underground in a mine, it is imperative that complete and accurate emergency call lists be maintained and that there be no inconsistencies between call lists.

MSHA stated in its interim response that it is taking corrective actions to address this situation, and has requested mine operators to update their ERP call lists. We will evaluate MSHA's actions after receipt of its final response to the alert memorandum, which is due October 22, 2015.

Attachments

cc: Patricia Silvey
Marisela Sookraj
Syed Hafeez
Monique Gregory
Nancy Rooney

U.S. Department of Labor

Office of Inspector General
Washington, DC 20210



October 7, 2015

MEMORANDUM FOR: JOSEPH A. MAIN
Assistant Secretary for Mine Safety and Health

FROM: 
ELLIOT P. LEWIS
Assistant Inspector General for Audit

SUBJECT: Alert Memorandum: Incorrect Telephone Numbers in
Mine Emergency Response Plans
Report No. 05-16-001-06-001

The purpose of this memorandum is to alert you to an issue we found during our ongoing audit of emergency response plans (ERPs). This issue requires immediate corrective action. We will provide the overall results of our audit when all work is complete.

The MINER Act of 2006, §2(3)(b)(E)(vi), requires mines to prepare ERPs containing procedures for coordinating and communicating with local emergency responders. MSHA program policy letter (PPL) P13-V-01, *Implementation of Section 2 of the Mine Improvement and New Emergency Response Act of 2006*, states:

“Consistent with the MINER Act, the ERP must include procedures for notifying key personnel, such as a call list for mine rescue teams, local emergency responders, mine personnel, state and federal officials, and other parties that may be needed in an emergency.”

In addition, the PPL states:

“The ERP should include a list of readily available suppliers of mine emergency and rescue equipment.”

We found mine operators were not consistently updating telephone numbers in the local coordination section of the ERP. Moreover, MSHA’s periodic ERP review process has not been correcting this issue.

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As part of our audit, we statistically sampled 124 ERPs from mines listed in MSHA's system as "active" and "nonproducing/active" as of March 27, 2015.¹ From those 124 ERPs, we judgmentally selected 51 to verify the accuracy of telephone numbers listed in the local coordination section. From each ERP, we randomly selected telephone numbers that included mine rescue teams, fire departments, hospitals, police, suppliers, mine personnel, and federal and state officials.

We called 779 emergency contact telephone numbers listed in the ERPs, and found many incorrect numbers. We verified our results by calling each of the incorrect numbers on three separate occasions. From these calls, we found:

- 3 mine rescue team numbers were incorrect;
- 98 fire department and ambulance numbers were incorrect;
- 4 hospital numbers were incorrect;
- 3 police department numbers were incorrect; and
- 69 other (e.g., suppliers, federal and state officials, mine personnel, etc.) numbers were incorrect.

In addition, 83 phones were not answered and/or did not offer a means of identification, such as a personalized voicemail greeting. These 83 primarily consisted of numbers listed in the ERPs as fire department and ambulance (35) and other as defined above (45).

In total, 260 (33 percent) of the emergency contacts we tried to reach were incorrect or unidentifiable. Additionally, many of the same emergency contacts were included in more than one ERP. As a result, 44 of the 51 ERPs (86 percent) we tested included at least one incorrect or unidentifiable number.

Regulations require mines to designate a responsible person to take charge during mine emergencies. The same regulations require this responsible person to have current knowledge of the mine's ERP and take an annual course on mine emergency topics such as contacting and communicating with emergency personnel.² Other regulations require mines to make advanced arrangements for transporting injured persons, obtaining medical assistance, notifying mine rescue teams and posting the contact information for these providers at the mine.³ According to MSHA, these on-site postings are the primary source of information

¹ The MINER Act requires all underground coal mine operators to maintain an ERP for each mine they operate. Between the date of our sample, March 27, 2015, and the date of this memorandum, some mines in our sample were abandoned and were no longer required to have ERPs; however, based on the data provided by MSHA, all of the mines in our sample were required to have ERPs at the time they were selected for review.

² 30 CFR §75.1501(a)(1),(2)

³ 30 CFR §§75.1713. 49.19

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when responding to a mine emergency. However, we noted the regulations referenced by MSHA for posting contact information at the mine only includes emergency medical assistance, transportation of injured persons, and contacts for mine rescue teams, not all of the types of contacts listed in the ERP.

According to MSHA, the contact lists maintained as part of the mine's ERP serve as a back up to these postings,⁴ and a mine's Emergency Response Plan is not the primary source a mine would refer to in an emergency.⁵ Regardless, it is critical that all contact information maintained as part of the ERP is correct and up to date in case a mine emergency requires it. The inability to immediately reach emergency personnel during an accident could delay the arrival of rescue personnel and put miners at further risk.

We request you take immediate action to address these issues. It is our understanding that MSHA intends to provide an immediate interim response to this memorandum, and we request a final response within 15 days. If you have any questions, please contact Nicholas Christopher, Audit Director, at (312) 353-2176.

⁴ We have not verified the accuracy or completeness of any information posted at mines, or whether such information differs in any way from that included in the ERP.

⁵ 30 CFR 75.1501(a)(1)

U.S. Department of Labor

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

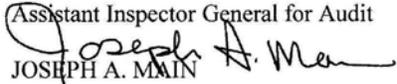


OCT 08 2015

MEMORANDUM FOR

ELLIOT P. LEWIS
Assistant Inspector General for Audit

FROM:


JOSEPH A. MAIN
Assistant Secretary of Labor for
Mine Safety and Health

SUBJECT:

MSHA's Interim Response to OIG's Alert Memorandum:
Incorrect Telephone Numbers in Mine Emergency Response
Plans, Report No. 05-16-001-06-001

Thank you for the opportunity to respond to your alert memorandum of October 7, 2015, Incorrect Telephone Numbers in Mine Emergency Response Plans.

We have reviewed the memorandum and are providing MSHA's interim response to your request. Although we appreciate your finding that some of the telephone numbers in the call lists in the Emergency Response Plans (ERPs) for underground coal mines are inaccurate, the call lists that mine operators would use in the case of a mine emergency are separately required to be maintained at the mine and mandated to be updated by specific regulations. Please see the attached List of Controlling Regulations previously forwarded to your Office on October 6, 2015. These regulatory standards long pre-date the Mine Improvement and New Emergency Response Act of 2006 (MINER Act) and ERPs. Mine operators have historically relied upon and followed these requirements. These standards provide appropriate protections in the event of an underground mine emergency. For these reasons, MSHA does not agree that the incorrect telephone numbers you identified put miners at "further risk" or rise to the level of an alert memorandum requiring immediate attention. However, the Agency recognizes that there are issues that need to be resolved. Furthermore, as we have previously highlighted for you, we believe there are inaccuracies in the OIG's analysis and results.

Immediately upon receipt of the OIG's list of incorrect numbers, Coal Enforcement began contacting all the operators identified, and those operators are in the process of updating their ERP call lists. MSHA also did further review of the OIG sample, and found that 17 of the 43, or 40%, of the mines on your list are not active. Specifically, 3 of the 17 are abandoned or sealed; 1 is temporarily idled; 1 is a facility previously attached to an underground mine that is currently sealed; and 12 are in non-producing status - not mining coal. MSHA does not dispute that mines listed as nonproducing/active are required to have an ERP if there are miners working underground as intended by the MINER Act. There are no miners at abandoned/sealed or temporarily idled mines and a minimal presence of miners at non-producing mines. Additionally, 25% of the numbers the OIG identified as incorrect or disconnected are working numbers. Further, a large number of mines in this country are located in rural or remote areas. The 98 fire departments and ambulance numbers that the OIG identified as "incorrect" include volunteer fire
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and ambulance departments/services that may not have permanent staff serving on a 24/7 basis. MSHA is evaluating changes in the ERP process to address the rural/remote fire department issue. Additionally, in the case of any emergency, MSHA is evaluating whether the Agency should require that operators use “911” (consistent with the national practice for any emergency) as a default in the event any emergency number is not reached.

I also directed MSHA district personnel to conduct inspections at the mines and verify that mine operators are in compliance with the requirements for having up-to-date contact numbers for emergency purposes. Those requirements are contained in 30 C.F.R. § 75.1713-1, § 75.1713-2 and other standards. Section 75.1713-1(e) includes the contact list requirements relied upon during mine emergencies. Under this more stringent standard, an operator must immediately post any changes or updates to the emergency contact information at the mine, unlike the ERP call list which is reviewed every six months. The ERP call list does not supersede the regulatory requirements on maintaining up-to-date lists posted at the mine. MSHA will be taking appropriate enforcement actions in cases where it finds noncompliance with § 75.1713-1(e) - the controlling regulation for having up-to-date lists of emergency contacts -and continue to ensure there is no real risk to miners.

As background, it is important to understand that the Federal Mine Safety and Health Act of 1977 (Mine Act), as amended by the MINER Act and its implementing regulations and policies, include redundant protections designed to assure that emergency personnel are available to respond in the event of an emergency at an underground coal mine. These protections do not rely on the contact information mine operators submit to MSHA in their ERPs. In fact, the MINER Act does not specifically dictate that ERPs include specific emergency numbers or information on suppliers and rescue equipment. That was additional general policy guidance. Operators must update their ERPs with any substantive changes in mine operations, advances in technology or other similar considerations as they occur. The review of ERPs occurs every six months. However, MSHA has specific regulatory provisions that require a list of emergency numbers, that the numbers be kept up-to-date and that the numbers be posted at the mine site.

Under Section 2 of the MINER Act, operators are required to have “procedures for coordination and communication between the operator, mine rescue teams, and local emergency response personnel and make provisions for familiarizing local rescue personnel with surface functions that may be required in the course of mine rescue work.” Under MSHA’s Program Policy Letter No. P13-V-01, operators ensure ERPs “include procedures for notifying key personnel, such as a call list for mine rescue teams, local emergency responders, mine personnel, state and federal officials, and other parties that may be needed in an emergency.” However, this is guidance, and was not intended and did not replace the requirements of 30 C.F.R. § 75.1713 or other applicable regulations relating to communication in the event of an emergency at an underground coal mine.

Under Federal standards, the required postings described below would be used by persons responsible for communicating in the event of a mine emergency, and by miners as well.

(1) Arrangements for Emergency Medical Assistance and Transportation – Under § 75.1713-1(a) and (e), Arrangements for Emergency Medical Assistance and Transportation for Injured

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Persons; Agreements; Reporting Requirements; Posting Requirements, each operator of an underground coal mine is required to make arrangements with a licensed physician, medical service, medical clinic or hospital to provide 24-hour emergency medical assistance for any person injured at the mine. Each operator is also required to post at appropriate places at the mine the names, titles, addresses and phone numbers of all persons or services currently available under such arrangements to provide medical assistance and transportation at the mine.

(2) Emergency Communications – Under §75.1713-2, Emergency Communications; Requirements, each operator of an underground coal mine is required to establish and maintain a communication system from the mine to the nearest point of medical assistance for use in an emergency. The emergency communication system required to be maintained under paragraph (a) of this § 75.1713-2 may be established by telephone or radio transmission or by any other means of prompt communication to any facility (for example, the local sheriff, the State highway patrol or local hospital), which has available the means of communication with the person or persons providing emergency medical assistance or transportation in accordance with the provisions of § 75.1713-1.

(3) Availability of Mine Rescue Teams – Under § 49.12, Availability of Mine Rescue Teams, every operator of an underground mine (except where alternative compliance is permitted for small and remote mines) is required to establish at least two mine rescue teams, which are available at all times when miners are underground; or enter into an arrangement for mine rescue services, which assures that at least two mine rescue teams are available at all times when miners are underground.

Under § 49.19, Mine Emergency Notification Plan, each underground mine is required to have a mine rescue notification plan outlining the procedures to follow in notifying the mine rescue teams when there is an emergency that requires their services. A copy of the mine rescue notification plan is required to be posted at the mine.

(4) Designation of Responsible Person – As you noted in your memorandum, regulations require mines to have a responsible person in attendance, designated to take charge during mine emergencies. Specifically, under § 75.1501, Emergency Evacuations, operators are required to designate a responsible person to take charge during mine emergencies involving a fire, explosion, or gas or water inundation for each shift that miners work underground. While the responsible person is required to have current knowledge of the mine's ERP, in the event of an emergency, the responsible person would use the emergency contact lists posted at the mine per regulatory requirement.

Under § 75.1600-1, Communication Facilities; Main Portals; Installation Requirements, at least one of the communication facilities (telephone or equivalent two-way) is required to be at a location where a responsible person who is always on duty when men are underground can hear the facility and respond immediately in the event of an emergency.

(5) Availability of MSHA's Toll-Free Phone Number – In addition to the standards discussed above, MSHA has additional checks and balances. Per § 50.10, operators are required to contact

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MSHA at once without delay and within 15 minutes at a toll-free number once the operator knows or should know that an accident has occurred involving (a) a death of an individual at the mine; (b) an injury of an individual at the mine, which has a reasonable potential to cause death; (c) an entrapment which has a reasonable potential to cause death, or (d) any other accident. The toll-free emergency reporting number, which is posted at the mine site can be used to contact MSHA officials and deploy mine rescue teams.

As noted above, MSHA informed the OIG that the Agency found inaccuracies in the OIG's analysis and results. MSHA is in the process of investigating these inaccuracies further and will provide more detailed information of its findings in the Agency's 15-day response.

Again, we appreciate the information the OIG has provided during the course of this audit, which will help the Agency continue to improve miners' safety and health. If you have any questions or need further information, please contact Patricia W. Silvey, Deputy Assistant Secretary for Operations at (202) 693-9414.

Attachment

List of Controlling Regulations

Emergency Contact Information

I. Arrangements for Emergency Medical Assistance and Transportation

§ 75.1713-1, *Arrangements for emergency medical assistance and transportation for injured persons; agreements; reporting requirements; posting requirements*

(a) Each operator of an underground coal mine shall make arrangements with a licensed physician, medical service, medical clinic, or hospital to provide 24-hour emergency medical assistance for any person injured at the mine.

(b) Each operator of an underground coal mine shall make arrangements with an ambulance service, or otherwise provide, for 24-hour emergency transportation for any person injured at the mine.

(c) Each operator shall, on or before December 30, 1970, report to the District Manager for the district in which the mine is located the name, title and address of the physician, medical service, medical clinic, hospital or ambulance service with whom arrangements have been made, or otherwise provided, in accordance with the provisions of paragraphs (a) and (b) of this § 75.1713-1.

(d) Each operator shall, within 10 days after any change of the arrangements required to be reported under the provisions of this § 75.1713-1, report such changes to the District Manager. If such changes involve a substitution of persons, the operator shall provide the name, title, and address of the person substituted together with the name and address of the medical service, medical clinic, hospital, or ambulance service with which such person or persons are associated.

(e) Each operator shall, immediately after making an arrangement required under the provisions of paragraphs (a) and (b) of this § 75.1713-1, or immediately after any change of such arrangement, post at appropriate places at the mine the names, titles, addresses, and telephone numbers of all persons or services currently available under such arrangements to provide medical assistance and transportation at the mine.

§ 75.1713-2, *Emergency communications; requirements*

(a) Each operator of an underground coal mine shall establish and maintain a communication system from the mine to the nearest point of medical assistance for use in an emergency.

(b) The emergency communication system required to be maintained under paragraph (a) of this § 75.1713-2 may be established by telephone or radio transmission or by any other means of prompt communication to any facility (for example, the local sheriff, the State highway patrol, or local hospital) which has available the means of communication with the person or persons providing emergency medical assistance or transportation in accordance with the provisions of § 75.1713-1.

II. Availability of Mine Rescue Teams

§ 49.12, *Availability of mine rescue teams*

(a) Except where alternative compliance is permitted for small and remote mines (§ 49.13), every operator of an underground mine shall: (1) Establish at least two mine rescue teams which are available at all times when miners are underground; or (2) Enter into an arrangement for mine rescue services which assures that at least two mine rescue teams are available at all times when miners are underground.

(b) Each mine rescue team shall consist of five members and one alternate who are fully qualified, trained, and equipped for providing emergency mine rescue service. Mine rescue teams for anthracite coal mines, which have no electrical equipment at the face or working section, shall consist of at least three members per team and one alternate that may be shared between both teams.

(c) To be considered for membership on a mine rescue team, each person must have been employed in an underground mine for a minimum of 1 year within the past 5 years, except that members of contract mine rescue teams shall have a minimum of 3 years underground coal mine experience that shall have occurred within the 10-year period preceding their employment on the contract mine rescue team. For the purpose of mine rescue work only, miners who are employed on the surface but work regularly underground shall meet the experience requirement. The underground experience requirement is waived for those miners on a mine rescue team on February 8, 2008.

(d) Each operator shall arrange, in advance, ground transportation for rescue teams and equipment to the mine or mines served.

(e) The required rescue capability shall be present at all existing underground mines, upon initial excavation of a new underground mine entrance, or the re-opening of an existing underground mine.

(f) No mine served by a mine rescue team shall be located more than 1 hour ground travel time from the mine rescue station with which the rescue team is associated.

(g) As used in this subpart, mine rescue teams shall be considered available where teams are capable of presenting themselves at the mine site(s) within a reasonable time after notification of an occurrence which might require their services. Rescue team members will be considered available even though performing regular work duties or in an off-duty capacity. The requirement that mine rescue teams be available shall not apply when teams are participating in mine rescue contests or providing services to another mine.

(h) Each operator of an underground mine who provides rescue teams under this section shall send the District Manager a statement describing the mine's method of compliance with this subpart. The statement shall disclose whether the operator has independently provided mine rescue teams or entered into an agreement for the services of mine rescue teams. The name of the provider and the location of the services shall be included in the statement. A copy of the statement shall be posted at the mine for the miners' information. Where a miners' representative has been designated, the operator shall also provide the representative with a copy of the statement.

§ 49.19, *Mine emergency notification plan*

(a) Each underground mine shall have a mine rescue notification plan outlining the procedures to follow in notifying the mine rescue teams when there is an emergency that requires their services.

(b) A copy of the mine rescue notification plan shall be posted at the mine for the miners' information. Where a miners' representative has been designated, the operator shall also provide the representative with a copy of the plan.

III. Designation of Responsible Person

§ 75.1501, *Emergency evacuations*

(a) For each shift that miners work underground, there shall be in attendance a responsible person designated by the mine operator to take charge during mine emergencies involving a fire, explosion, or gas or water inundation.

(1) The responsible person shall have current knowledge of the assigned location and expected movements of miners underground, the operation of the mine ventilation system, the locations of the mine escapeways and refuge alternatives, the mine communications system, any mine monitoring system if used, locations of firefighting equipment, the mine's Emergency Response Plan, the Mine Rescue Notification Plan, and the Mine Emergency Evacuation and Firefighting Program of Instruction.

(2) The responsible person shall be trained annually in a course of instruction in mine emergency response, as prescribed by MSHA's Office of Educational Policy and Development. The course will include topics such as the following:

- (i) Organizing a command center;
- (ii) Coordinating firefighting personnel;
- (iii) Deploying firefighting equipment;
- (iv) Coordinating mine rescue personnel;
- (v) Establishing fresh air base;
- (vi) Deploying mine rescue teams;
- (vii) Providing for mine gas sampling and analysis;
- (viii) Establishing security;
- (ix) Initiating an emergency mine evacuation;
- (x) Contacting emergency personnel; and
- (xi) Communicating appropriate information related to the emergency.

(3) The operator shall certify by signature and date after each responsible person has completed the training and keep the certification at the mine for 1 year.

(b) The responsible person shall initiate and conduct an immediate mine evacuation when there is a mine emergency which presents an imminent danger to miners due to fire or explosion or gas or water inundation. Only properly trained and equipped persons essential to respond to the mine emergency may remain underground.

(c) The mine operator shall instruct all miners of the identity of the responsible person designated by the operator for their workshift. The mine operator shall instruct miners of any change in the identity of the responsible person before the start of their workshift.

(d) Nothing in this section shall be construed to restrict the ability of other persons in the mine to warn of an imminent danger which warrants evacuation.

§ 75.1600-1, Communication facilities; main portals; installation requirements

A telephone or equivalent two-way communication facility shall be located on the surface within 500 feet of all main portals, and shall be installed either in a building or in a box-like structure designed to protect the facilities from damage by inclement weather. At least one of these communication facilities shall be at a location where a responsible person who is always on duty when men are underground can hear the facility and respond immediately in the event of an emergency.

§ 75.351, Atmospheric monitoring systems

(a) AMS operation. Whenever personnel are underground and an AMS is used to fulfill the requirements of §§ 75.323(d)(1)(ii), 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), 75.350(d), or 75.362(f), the AMS must be operating and a designated AMS operator must be on duty at a location on the surface of the mine where audible and visual signals from the AMS must be seen or heard and the AMS operator can promptly respond to these signals.

(b) Designated surface location and AMS operator. When an AMS is used to comply with §§ 75.323(d)(1)(ii), 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), 75.350(d), or 75.362(f), the following requirements apply:

(1) The mine operator must designate a surface location at the mine where signals from the AMS will be received and two-way voice communication is maintained with each working section, with areas where mechanized mining equipment is being installed or removed, and with other areas designated in the approved emergency evacuation and firefighting program of instruction (§ 75.1502).

(2) The mine operator must designate an AMS operator to monitor and promptly respond to all AMS signals. The AMS operator must have as a primary duty the responsibility to monitor the malfunction, alert and alarm signals of the AMS, and to notify appropriate personnel of these signals. In the event of an emergency, the sole responsibility of the AMS operator shall be to respond to the emergency.

(3) A map or schematic must be provided at the designated surface location that shows the locations and type of AMS sensor at each location, and the intended air flow direction at these locations. This map or schematic must be updated within 24 hours of any change in this information.

MSHA'S RESPONSE

U.S. Department of Labor

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



MAR 22 2017

MEMORANDUM FOR ELLIOT P. LEWIS

Assistant Inspector General for Audit

FROM:

Patricia W. Silvey
PATRICIA W. SILVEY

Deputy Assistant Secretary for
Mine Safety and Health Administration

SUBJECT:

Response to OIG's Draft Audit Report, *MSHA Needs To Provide Better Oversight of Emergency Response Plans*
(Draft Report No. 05-17-002-06-001)

MSHA appreciates the work the OIG has done to assist in evaluating our enforcement of Emergency Response Plan (ERP) requirements of the Mine Improvement and New Emergency Response Act of 2006 (MINER Act). Like the framers of the MINER Act, MSHA's goal is one of optimizing safety and survivability of miners in underground coal mines, but doing so in a practical and sensible manner. This OIG audit has helped with the development of new guidance, Program Policy Letter (PPL) P16-V-01, *Implementation of Section 2 of the Mine Improvement and New Emergency Response Act of 2006* (April 21, 2016). This PPL addressed some of the OIG's concerns by clarifying that ERPs must be approved before miners start work underground and by advising that calling 911 is the best way to alert local emergency responders.

An ERP is one of many protections in place in the event of a mine emergency. The Federal Mine Safety and Health Act of 1977 (Mine Act), as amended by the MINER Act, and its implementing regulations and policies, include redundant protections to assure that emergency personnel are available to respond in the event of an emergency at an underground coal mine. The MINER Act, which was passed on June 15, 2006, in response to a series of underground coal mine disasters earlier that year, requires underground coal mine operators to develop and adopt an ERP and submit it to the appropriate MSHA District Manager for approval. The MINER Act also requires that an ERP address both the evacuation of miners endangered by an emergency and the maintenance of miners trapped underground. To be approved, mine operators must develop ERPs that include six elements. These elements are: 1) post-accident communications, 2) post-accident tracking, 3) post-accident breathable air, 4) post-accident lifelines, 5) training, and 6) local coordination.

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When Congress passed the MINER Act, it explicitly recognized that each mine is different and might have different needs in the event of an emergency. As such, Congress established an “individual plan approach” creating minimum requirements so that operators would have flexibility in formulating plans to meet their unique circumstances. As the Senate Committee on Health, Education, Labor and Pensions stated in its Report (no. 109-365, p. 4) on the legislation:

The committee recognizes that each underground coal environment is unique and that what works effectively in one setting may not be optimal in the next. Accordingly, the committee believes an approach that sets minimum standards but also enables operators to achieve safety goals with some degree of latitude will best effectuate the purposes of the act. The goals of optimizing safety and survivability must be unchanging, but the manner for doing so must be practical and sensible.

This same approach is also extended to those who review and approve the ERPs:

The individual plan model contemplates that safety solutions and risk-management plans will be designed and reviewed by those who are “on the ground”, and therefore most familiar with the unique circumstances and most practical approaches. This envisions that operators, in formulating their plans and MSHA field personnel, in reviewing and approving them, think creatively and practically.

Subsequent to the passage of the MINER Act, MSHA promulgated a number of standards, such as its Emergency Mine Evacuation, Refuge Alternatives for Underground Coal Mines, and Mine Rescue Teams standards that addressed many of the elements required in an ERP much more comprehensively than the MINER Act did. MSHA agrees that a good written plan is important for long-term continuity and planning; however, the Agency believes that the protections required by the MINER Act, which include the seven regulations referenced in MSHA’s response to the OIG’s Alert Memorandum (October 8, 2015), are more specific and critical to reducing miners’ risk. MSHA evaluates emergency preparedness and response through physical inspections of mines. If a physical inspection validates that elements of an ERP are in place, no increased risk to miners exists even if these elements are not referenced in the ERP.

MSHA agrees with the spirit of many, but not all, of the OIG’s findings, conclusions, and recommendations. The OIG found that 100 percent of the ERPs it examined were out of compliance because the plans failed to include a provision for translation services. However, there has never been a requirement that ERPs contain provisions for translation services. The OIG cites CMS&H Memo No. HQ-08-125-A, dated October 31, 2008, as the source of the provision for translation services. However, this memorandum simply served as documentation of corrective action taken to address translation service recommendations in the independent review report of MSHA’s actions at the Crandall Canyon Mine. The family members of three of the victims of the Crandall Canyon Mine accident required translation services at family briefings. While this corrective action was intended to address the specific issue in Crandall Canyon, which had to do with communicating with family members after an accident, MSHA did not intend for CMS&H memos to establish Agency policy for all underground coal mines. Nor did MSHA intend for translation services to be a required part of emergency preparedness. In addition, MSHA believes

that mine operators should not include translation services in their communications plans if an operator has no miners with family members who would need these services. MSHA does not believe that the OIG's report provides evidence that translation services were necessary at any of the mines for which the OIG reviewed ERPs.

OIG Recommendation No. 1: *Reissue PPL P16-V-01 to clarify the mine operators' responsibility for local coordination under the MINER Act. The revision should:*

- a. Inform mine operators to insert language in their ERP referencing the call lists posted at the mine if the ERP does not include them.*
- b. Clarify how a mine operator establishes procedures for coordination and communication between the operator, mine rescue teams, and local emergency response personnel and makes provisions for familiarizing local rescue personnel with surface functions that may be required in the course of mine rescue work.*

While MSHA agrees with the importance of mine operators' responsibility for local coordination under the MINER Act, MSHA notes that there is no requirement that ERPs contain call lists or incorporate them by reference. As previously mentioned, PPL P16-V-01 clarified that local emergency response coordination would normally include alerting 911 and appropriate Federal and State officials. The PPL states: "Calling 911, a universally accepted practice for notifying emergency responders in the United States, will alert local emergency responders (i.e. ambulance, police, and fire fighters), and place hospitals and doctors on alert as appropriate." It is MSHA's position that this policy meets the local coordination requirements of the MINER Act.

OIG Recommendation No. 2: *Maintain an ERP review checklist on MSHA's website that is updated when requirements change.*

While MSHA agrees with the spirit of this recommendation, the Agency believes that the intent of the MINER Act was to allow for operator flexibility in the design and formulation of ERPs, rather than using an MSHA-prescribed checklist.

As outlined in PPL P16-V-01, operators must develop and follow an ERP approved by the District Manager. Under the MINER Act, an ERP must be reviewed periodically, but at least every six months, by MSHA. As noted previously, MSHA approves ERPs based on requirements under the MINER Act that ERPs contain six elements related to communications, tracking, breathable air, lifelines, training and local coordination. Under the MINER Act, MSHA is also required to consider all comments submitted by miners or miners' representatives. When considering these comments, MSHA follows the process outlined for ventilation plans in 30 C.F.R. § 75.370.

MSHA does not believe that ERPs should be uniform among mines. MSHA District Managers should be allowed to approve ERPs based on specific mining conditions and mining systems at the mine. MSHA believes that the Agency's approval procedures provide this flexibility at no increased risk to miners.

OIG Recommendation No. 3: *Standardize the ERP review and approval processes and tools across MSHA districts. At minimum, the procedures should specify the:*

- a. Type of reviews (specialist and/or inspector) the districts should be completing and the frequency for each type of review.*
- b. Steps the reviewer should take for a specialist review versus an inspector review and the tools (e.g., standardized review checklist) to use during each review.*
- c. Dates (e.g., Date Received and Decision Date) to enter into the tracking system and instructions on where to obtain each date.*

As previously noted, under the MINER Act, an ERP must be reviewed periodically, but at least every six months, by MSHA and comments from miners and their representatives must be considered. As previously stated, PPL P16-V-01 outlines MSHA's approval procedure. The guidance specifies that: 1) an approved ERP must be suitable for conditions and mining systems at the mine; 2) proposed plans and any revision to the plan must be submitted in writing to the District Manager; 3) proposed plans or any revision to the plan can only be implemented after the District Manager has approved; and, 4) training on the ERP or revisions should be completed within 30 days of approval and before the ERP is implemented. In addition, an ERP must be designed to safely and expediently evacuate miners in the event of an emergency or, if evacuation is not possible, provide refuge alternatives that are capable of sustaining trapped miners for at least 96 hours, or for 48 hours if advanced arrangements are made.

MSHA believes that the Agency's approval procedures support Congress' vision to allow field personnel to "think creatively and practically" in consideration of "the unique circumstances and most practical approaches" regarding a mine when reviewing and approving its ERP.

The Agency believes its current approval process is consistent with the plan concept as contemplated by Congress in the MINER Act. Further, MSHA believes that the Agency's approach enables operators to meet the goals of "optimizing safety and survivability" in a manner that is "practical and sensible" as Congress intended.

OIG Recommendation No. 4: *Issue additional guidance and provide refresher training on how to enter ERP data into the tracking system and use the tracking system to provide oversight.*

MSHA agrees with the spirit of this recommendation. We will explore whether additional guidance is necessary and provide plan reviewers (including inspectors) and their supervisors with periodic refresher training on the use of the ERP tracking system.

OIG Recommendation No. 5: *Implement a process for headquarters and district personnel to manage the ERP program more effectively by periodically (e.g., quarterly or semi-annually) reviewing reports from the tracking system.*

MSHA agrees with the spirit of this recommendation. While MSHA does not believe that a new written process is necessary, the Agency will provide training for district personnel to periodically review reports from the existing tracking system.

OIG Recommendation No. 6: *Complete periodic internal reviews to verify the accuracy and use of the tracking system.*

MSHA agrees to periodically review the ERP tracking system to verify the accuracy of the data.

OIG Recommendation No. 7: *Issue additional guidance and provide refresher training on how to sufficiently document completion of inspection results in the inspection report and how to sufficiently review the inspection report and certify an inspection.*

MSHA agrees with the spirit of this recommendation. While MSHA does not believe additional written guidance is necessary, the Agency will provide refresher training on how to sufficiently document completion of inspection results in the inspection report and how to sufficiently review the inspection report and certify an inspection.

OIG Recommendation No. 8: *Complete periodic internal reviews to verify the accuracy and completeness of inspection reports and first line supervisor certifications and ensure MSHA is meeting the requirement in the MINER Act to review ERPs every six months.*

MSHA agrees with the spirit of this recommendation. MSHA will conduct periodic reviews to verify the accuracy and completeness of the data and first line supervisor certifications and ensure ERPs are being reviewed every six months. MSHA intends to add ERP plans to the plan review form for supervisor certifications. This form currently includes supervisor certifications for roof control and ventilation plans.

OIG Recommendation No. 9: *Issue regulations or guidance to make mine operators aware of tools currently available on MSHA's website they can use when developing their ERPs and clarify when mine operators should submit an ERP and whether mine operators can exclude certain information from the ERP.*

MSHA agrees with the spirit of this recommendation but does not believe the issuance of regulations or additional guidance is necessary to address this recommendation. As previously mentioned, PPL P16-V-01 has already addressed some of the OIG's concerns by clarifying that ERPs must be approved before miners start work underground. This PPL allows operators the flexibility to design a local coordination plan that fits the unique conditions and circumstances surrounding the mine and highlights which ERP provisions are covered under other MSHA standards and, to avoid unnecessary duplication, do not need to be repeated in the ERP.

Again, we appreciate the information the OIG has provided during the course of this audit, which will help the Agency continue to improve miners' safety and health. If you should have any questions or need further information, please contact Sheila McConnell, Director, Office of Standards, Regulations, and Variances, at (202) 693-9463.

APPENDIX D

ACKNOWLEDGEMENTS

Key contributors to this report were: Nicholas Christopher (Audit Director), Christopher Wenthold (Audit Manager), Jesse Blatz, Jennifer Dunbar, Barry Weiss, Richard Bryan, and Angela Stewart.

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