

# U.S. Department of Labor

Office of Inspector General—Office of Audit

**MINE SAFETY AND HEALTH  
ADMINISTRATION**



**MSHA HAS IMPROVED ITS ROOF CONTROL  
PLAN REVIEW AND MONITORING PROCESS BUT  
COULD DO MORE**

Date Issued:  
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March 29, 2013  
05-13-002-06-001

## BRIEFLY...

Highlights of Report Number 05-13-002-06-001, issued to the Assistant Secretary for Mine Safety and Health.

### WHY READ THE REPORT

The Assistant Secretary for Mine Safety and Health is responsible for ensuring that the office of Coal Mine Safety and Health reviews and approves roof control plans for coal mines. Roof control plans identify how mines intend to control or prevent shifting of the roof, face, or ribs and collapses, such as the one that occurred in the Crandall Canyon Mine.

The Office of Inspector General (OIG) conducted a follow-up audit of audit report number 05-08-003-06-001, "MSHA Could Not Show It Made the Right Decision in Approving the Roof Control Plan at Crandall Canyon Mine," which assessed the Mine Safety and Health Administration's (MSHA) process for reviewing, approving, and overseeing the Crandall Canyon Mine's roof control plan.

### WHY OIG CONDUCTED THE AUDIT

As part of our oversight responsibilities, we performed this follow-up audit to determine if MSHA's actions in response to the OIG's 2008 audit report improved the coal mine roof control plan review, approval, and oversight processes.

The OIG's 2008 audit made 9 recommendations to MSHA. These included: (1-5) developing a rigorous, standard, and transparent process for the evaluation and approval of roof control plans, including active management oversight; (6) requiring inspectors to document the work they perform in effectively questioning miners on mining activities and conditions in the mines; (7) issuing a policy on allowing non-rescue activities and personnel on site during active rescue operations; (8) establishing a Memorandum of Understanding with the Bureau of Land Management; and (9) conducting a new review, consistent with these recommendations of all existing roof control plans.

### 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/2013/05-13-002-06-001.pdf>.

March 2013

## MSHA HAS IMPROVED ITS ROOF CONTROL PLAN REVIEW AND MONITORING PROCESS BUT COULD DO MORE

### WHAT OIG FOUND

The OIG found that MSHA's processes for reviewing, approving, and overseeing coal mine roof control plans have improved since our 2008 report because MSHA has developed guidance and checklists for reviewing and approving roof control plans; performed roof control plan reviews more frequently and undertook an effort to re-examine all roof control plans in effect at the time of the 2008 audit; issued policy regarding non-rescue activities and personnel on site during active rescue operations; and established a Memorandum of Understanding with the Bureau of Land Management to ensure information on mine conditions is shared.

However, despite these efforts, we found:

- Districts still operated under incomplete Roof Control Plan Standard Operating Procedures (SOPs);
- District Managers did not always document the rationale for their roof control plan decisions; and
- Enforcement personnel monitoring activities lacked required documentation.

In its response, MSHA disagreed with the OIG's interpretation of certain policies, but agreed to revise them to clarify their intent. MSHA also believes that the documentation issues identified by the OIG were administrative in nature, and that the agency has significantly improved its performance with respect to roof control plan approvals and monitoring, as evidenced by the decrease in accidents related to this type of cause. MSHA also stated that it took proactive efforts by including specific training for inspectors and continuing training for roof control specialists.

### WHAT OIG RECOMMENDED

The OIG recommended that the Assistant Secretary for Mine Safety and Health make improvements in the areas of developing policies and procedures, implementing SOPs, and training. MSHA said it agreed with the recommendations and recently overhauled its centralized directives functions. MSHA will also clarify documentation guidance of inspections and investigations and will provide training to individuals involved in the roof control plan review and approval process. MSHA disagreed that controls must be included in district SOPs because it is a major undertaking in a time of limited resources.

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**U.S. Department of Labor**

Office of Inspector General  
Washington, D.C. 20210



March 29, 2013

**Assistant Inspector General's Report**

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On August 6, 2007, a roof collapsed at the Crandall Canyon Mine in Emery County, Utah, resulting in the deaths of 6 miners and 3 rescue workers. On March 31, 2008, the Office of Inspector General (OIG) issued audit report number 05-08-003-06-001, "MSHA Could Not Show It Made the Right Decision in Approving the Roof Control Plan at Crandall Canyon Mine," which assessed the Mine Safety and Health Administration's (MSHA) process for reviewing, approving, and overseeing the Crandall Canyon Mine's roof control plan (see Appendix A for summaries of the 9 report recommendations). The report mainly found MSHA needed to improve its operating procedures, especially those related to documenting the results of roof control inspections. As part of our oversight responsibilities, we performed this follow-up audit to answer the following question:

Have MSHA's actions in response to the OIG's 2008 audit report improved the coal mine roof control plan review, approval, and oversight processes?

We selected 176 of the 3,483 roof control plans or revisions MSHA reviewed during Fiscal Years (FY) 2011 and 2012, covering 6 of the 12 coal mining District Offices (Districts). For these 176 roof control plans, we reviewed documentation for MSHA's review of those roof control plans, Safety and Health Inspections (E01), and Roof Control Technical Investigations (E20). We also reviewed federal laws and regulations and Coal Mine Safety and Health (CMS&H) policies and procedures; interviewed key CMS&H Headquarters, District, and Field Office officials; and analyzed and identified key processes and critical decision and control points. We did not perform any audit work on recommendations 7 and 9 from our 2008 audit report because they did not directly address the roof control plan review and approval process.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require 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 objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

## Results In Brief

MSHA's processes for reviewing, approving, and overseeing coal mine roof control plans have improved since our 2008 report because MSHA developed guidance and checklists for reviewing and approving roof control plans; performed roof control plan reviews more frequently and undertook an effort to re-examine all roof control plans in effect at the time of the 2008 audit; issued policy regarding non-rescue activities and personnel on site during active rescue operations; and established a Memorandum of Understanding with the Bureau of Land Management to ensure information on mine conditions is shared. However, despite these significant efforts, we found:

- 1) Districts still operated under incomplete Roof Control Plan Standard Operating Procedures (SOPs);
- 2) District Managers did not always document the rationale for their roof control plan decisions; and
- 3) Enforcement personnel monitoring activities lacked required documentation.

### *Incomplete Roof Control Plan Standard Operating Procedures*

Our 2008 report recommended MSHA develop a standard and transparent process for evaluating and approving proposed coal mine roof control plans. Although MSHA created new policies, criteria, and guidance, its process is still not standard or transparent because MSHA has not updated the Program Policy Manual (Manual) or developed any other comprehensive roof control handbook. As a result, CMS&H Districts do not have access to a centralized repository from which to accurately update their roof control plan SOPs.

Our 2008 report also found that none of the Districts addressed all twenty controls required by the Manual for the plan and program approval process. Similarly, this audit found only two of the twelve Districts included all twenty controls in their SOPs.

### *District Managers' rationale not always documented*

Our 2008 report recommended MSHA issue policy requiring District Managers to maintain documentation supporting their conclusions whenever they decided a plan would provide effective roof control. Therefore, in June 2008, MSHA supplemented the transmittal sheets it was already using with checklists that District Managers could have used to explain their rationale for roof control plan approvals. Despite this guidance, we found almost one-fifth of roof control approvals we reviewed lacked complete transmittal sheets or checklists.

### *Enforcement personnel monitoring activities lacked documentation*

Our 2008 report recommended MSHA require inspectors to document their questioning of miners on mining activities and mine conditions; the basis for their conclusions on the continued adequacy of coal mine roof control plans, as well as the completion rates and adequacy of miner training on such plans. As a result, on June 3, 2008, CMS&H issued a memorandum requiring inspectors to document their discussions with miners on the completeness and adequacy of their training. Despite this requirement, MSHA could not provide us documentation of such discussions for two-thirds of the E01 inspections and one-third of the E20 investigations we reviewed.<sup>1</sup>

We made recommendations to MSHA to make improvements in the areas of developing policies and procedures, implementing SOPs, and providing training.

### **MSHA Response**

In response to the draft report, the Assistant Secretary disagreed with the OIG's interpretation of MSHA's policy regarding the twenty controls referenced later in this report; nonetheless, MSHA agreed to revise this policy to clarify its intent. MSHA agreed that District SOPs and management systems need to be updated to incorporate new guidance.

MSHA believes the OIG's findings centered on administrative documentation issues, such as verifying that forms and checklists were completed. Instead of concentrating on documentation, MSHA claims it focused on implementing effective plans and proactive actions to prevent mining deaths and injuries.

MSHA said it changed its directives system effective March 22, 2013, and will assess how to streamline the guidance and address District SOP. MSHA also agreed with or agreed with the spirit of the other recommendations and will take steps to implement them.

### **OIG Conclusion**

Based on our reading of MSHA's policy, we stand by our interpretation that it mandates certain controls be included in all District SOPs. If MSHA had intended a different interpretation, it should have made this clear when the policy was issued. If we could not determine MSHA's actual intent, then neither could the Districts.

While we agree that the OIG's audit work focused on documentation, we did so because documentation represents the only evidence that a task was completed. Absent documentation, MSHA cannot be certain that inspectors performed all required

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<sup>1</sup> An E01 is a Regular Safety and Health Inspection that MSHA inspectors are required to conduct four times a year and an E20 is a Roof Control Technical Investigation that a specialist conducted on an ad hoc basis.

tasks. The fact that MSHA believes the focus should be on results does not excuse Districts from completing documentation to support their decisions.

## RESULTS AND FINDINGS

### **Objective — Have MSHA’s actions in response to the OIG’s 2008 audit report improved the coal mine roof control plan review, approval, and oversight processes?**

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*MSHA has improved its processes, but could do more to improve its policy process and documentation.*

As of March 16, 2012, MSHA had taken corrective action on all of the recommendations from our 2008 audit report.<sup>2</sup> The corrective actions improved MSHA’s processes for reviewing, approving, and overseeing coal mine roof control plans. Specifically, MSHA developed guidance and checklists for reviewing and approving roof control plans; performed roof control plan reviews more frequently and initiated an effort to re-examine all roof control plans in effect at the time of the 2008 audit; issued policy regarding non-rescue activities and personnel on site during active rescue operations; and established a Memorandum of Understanding with the Bureau of Land Management to ensure information on mine conditions is shared. However, MSHA needed to do more because CMS&H’s Districts were using incomplete roof control plan SOPs, District Managers could not always support their rationale for roof control plan decisions, and enforcement personnel did not always document their roof control plan monitoring activities.

#### **Finding 1 — CMS&H Districts used incomplete coal mine roof control plan SOPs.**

Since our 2008 report, MSHA has not: (1) updated its Manual; (2) ensured Districts updated their SOPs to include the 20 controls required by the Manual; or (3) ensured Districts updated their SOPs to include all new or revised policies.

*MSHA has not updated its Program Policy Manual*

MSHA has not updated its Manual since February 2003. Since our 2008 report, CMS&H has issued numerous Program Information Bulletins (PIBs), Program Policy Letters (PPLs), Technical Papers, Memos, and Procedure Instruction Letters (PILs) that addressed roof control issues and policies. However, MSHA has not updated the Manual to include any of these changes.<sup>3</sup>

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<sup>2</sup> *MSHA Could Not Show it Made the Right Decision in Approving the Roof Control Plan at Crandall Canyon Mine* (Report No. 05-08-003-06-001).

<sup>3</sup> The scope of our audit was limited to procedures relating to the roof control plan approval process; therefore, any references to MSHA or Districts’ policies and procedures refer only to those related to the roof control plan approval process.

*District SOPs did not always include the 20 controls required by the Manual*

MSHA's Manual required that each District's SOPs address 20 controls necessary for proper administration of the roof control plan approval process. The Manual stated these 20 controls "must be developed and written for each District" and "accomplish the following [list of 20 controls]." Senior MSHA officials told us these 20 controls were optional because the Manual said they should be "accomplished." However, we believe MSHA was arguing semantics and that the 20 controls were mandatory.

Our 2008 report found none of the Districts addressed all 20 controls. Therefore, we recommended MSHA develop a rigorous, standard, and transparent process to identify tasks, analyses, and information required for Districts to evaluate and approve proposed coal mine roof control plans.<sup>4</sup> MSHA concurred and agreed to develop standard, detailed, and comprehensive national checklists to assist District Managers in documenting decisions for all roof control plans.

However, in this follow-up audit, we found only 2 of the 12 Districts' SOPs included all 20 controls. On average, the Districts addressed only 16 of the 20 minimum controls. MSHA issued a memorandum on June 6, 2008,<sup>5</sup> setting forth the roof control plan approval process. The memorandum included various checklists for roof control plan reviews. MSHA told us these checklists addressed 12 of the 20 controls and partially met the Manual's 20-control requirement when used.<sup>6</sup> While this was true, the SOPs remained incomplete and did not comply with MSHA's Manual since it required District SOPs to include all 20 controls. Moreover, MSHA considered the June 6, 2008, memorandum as optional guidance, not requiring compliance by the Districts.

*District SOPs did not always include new or revised policies*

Each District developed its own SOPs for reviewing roof control plans; however, MSHA Headquarters did not review or approve these District SOPs. Without Headquarters oversight, the various Districts' SOPs were often improperly drafted because they were inconsistent, did not include all 20 controls, and relied on outdated criteria.

The risk associated with roof control during coal mining requires the highest degree of care, scrutiny, and transparency in MSHA's process for reviewing and monitoring roof control plans. Improperly drafted SOPs do not allow the Districts to effectively manage the roof control review and oversight processes. Without a central policy repository and a centralized policy and procedure review process, CMS&H Districts risk having inconsistent, incomplete, and outdated SOPs.

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<sup>4</sup> Recommendation 1.

<sup>5</sup> CMS&H Memo No. HQ-08-059-A (PRT-75).

<sup>6</sup> In our fieldwork, we did not ascertain whether or not the Districts actually applied the 12 controls in the checklists. Our objective was to determine if MSHA responded to the intent of our 2008 recommendation.

## **Finding 2 — District Managers could not support their rationale for all roof control plan decisions.**

Despite guidance, standardized checklists, and forms provided by CMS&H, District Managers did not consistently use or maintain documentation to explain their decisions for coal mine roof control plans. This occurred because MSHA had not updated its Manual and Districts had not updated their SOPs to include all mandatory policies and procedures.

Our 2008 report recommended MSHA issue a policy requiring District Managers to maintain documentation supporting their conclusions whenever they decided a plan would provide effective roof control.<sup>7</sup> Therefore, on June 6, 2008, CMS&H issued a memorandum<sup>8</sup> to all District Managers that explained the importance of justifying their rationale and included forms and checklists they could use to help document the basis for their decisions.

Despite MSHA's efforts, the conditions we identified in 2008 still existed during the course of this audit. Of the 176 coal mine roof control plan decision files we reviewed, 31 (18 percent) had incomplete or missing transmittal sheets or checklists, meaning they lacked supporting documentation for the rationale behind roof control plan decisions. Three of the files we reviewed had 2 issues each, for a total of 34 exceptions.

<b><i>Incomplete and Missing Documentation</i></b>			
<b>Element</b>	<b>Documentation</b>		<b>Total</b>
	<b>Incomplete<sup>9</sup></b>	<b>Missing</b>	
<b>Certified Transmittal Letter (Section D)</b>	5	0	5
<b>Quarterly Roof Control Plan Review</b>	0	1	1
<b>Six-Month Roof Control Plan Review</b>	0	2	2
<b>Roof Control Approval Process</b>	1	21 <sup>10</sup>	22
<b>Evaluation of Extended Cuts</b>	0	4	4
<b>TOTAL</b>	6	28	34

Additionally, of the 176 roof control plan submissions we reviewed, mine operators withdrew 13 and CMS&H Districts disapproved 20 (not included in the table above).

<sup>7</sup> Recommendation 5.

<sup>8</sup> Memo No. HQ-08-059-A (PRT-75).

<sup>9</sup> Incomplete documentation consisted of items such as checkboxes not completed, missing signatures, or other administrative controls.

<sup>10</sup> The District 8 office does not use checklists or maintain documentation to support the roof control plan addendum decision rationale.

CMS&H did not require District Managers to maintain supporting documentation for plans that had been withdrawn or disapproved. However, the Districts did not apply this policy consistently. We found documentation in about half (9 out of 20) of the disapproved cases. While we agree MSHA does not need to maintain documentation when an operator voluntarily withdraws its plan and while we make no formal recommendation to this effect, we believe maintaining a written record of the decision-making process in disapproved cases would be beneficial. MSHA has no official record of the disapproval other than the letter it sends to the mine operator and no way to audit the decision-making process if the documentation is discarded after review.

**Finding 3 — MSHA Enforcement Personnel Did Not Document All Required Roof Control Plan Monitoring Activities.**

CMS&H enforcement personnel (inspectors and roof control specialists) did not always comply with MSHA policies and procedures related to coal mine roof control plan monitoring activities. Specifically, enforcement personnel did not always document discussions with miners or their observations of mine roof/rib conditions. This occurred because the CMS&H Districts did not update their SOPs and MSHA did not update its Manual to include new criteria issued since 2008. It is imperative for enforcement personnel to have up-to-date policies and procedures in a centralized source to adequately perform their jobs.

Our 2008 report stated that MSHA did not ensure approved plans were properly implemented or adjusted because:

- None of the inspectors' notes for the inspections conducted at Crandall Canyon from December 2006 through July 2007 indicated that an inspector questioned miners about their training or about their knowledge of changes to the roof control plan; and
- Inspectors did not document their actual observations relative to the roof control plan requirements.

In 2008, we recommended MSHA require inspectors to document: (a) their questioning of miners on mining activities and conditions; and (b) the basis for their conclusions on the continued adequacy of coal mine roof control plans and on the completion rates and adequacy of miner training on such plans.<sup>11</sup> MSHA concurred with the recommendation and on June 3, 2008, CMS&H issued a memorandum<sup>12</sup> to reinforce documentation elements related to roof control plans. Enforcement personnel, as part of their E01 inspections or during E20 investigations,<sup>13</sup> were to:

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<sup>11</sup> Recommendation 6.

<sup>12</sup> CMS&H Memo No. HQ-08-055-A (ORM-8).

<sup>13</sup> An E01 is a Regular Safety and Health Inspection that MSHA inspectors are required to conduct four times a year and an E20 is a Roof Control Technical Investigation that a specialist conducted on an ad hoc basis.

- Question miners and discuss current mining activities and conditions to determine the basis for existing roof control plan protections and whether the roof control plan was adequate given current mining activities and conditions; and
- Question miners to determine if their training on roof control plans was completed and adequate.

Despite this memorandum, the conditions we identified in 2008 still existed during the course of this audit. MSHA never updated the General Coal Mine Inspection Procedures and Inspection Tracking System handbook. In addition, the Districts did not update their SOPs to include the requirements in the memorandum.

We found enforcement personnel were not always documenting discussions with miners in their field notes. Of the 123 E01 inspection notes we reviewed, two-thirds did not document the enforcement personnel’s discussion with miners about roof control plan training. Other issues included no documentation of discussions with miners regarding current mining activities and conditions; no evidence of supervisory reviews; and no evidence of the enforcement personnel’s roof/rib observations. To its credit, however, MSHA reviewed roof control plans during E01 inspections twice as often as required by law – four times per year.

<b><i>E01 Inspection Notes Lacked Documentation of Monitoring Activities</i></b>		
<b>E01 Inspections</b>		
<b>Reviewed</b>		<b>Deficiency</b>
<b>Number</b>	<b>Percentage</b>	
83	67%	Enforcement personnel did not document discussions/questions with miners regarding roof control plan training
18	15%	Enforcement personnel did not document discussions/questions with miners regarding current mining activities/conditions
12	10%	The supervisor did not sign and date the First-Line Supervisor E01 Certification
15	12%	Other Issues*
91	74%	Number of E01 inspections with an exception(s)
<b>123</b>	<b>Total Number of E01 Inspections Reviewed</b>	

\* Other issues identified were unsigned and dated MSHA Form 2000-204; no mine file review date documented; no observation of roof/rib control documented; and no supervisory review of inspection notes documented.

We identified similar issues with the E20 investigations. Of the 88 E20 investigation notes we reviewed, one-third did not document the enforcement personnel’s discussion

with miners regarding coal mine roof control plan training.<sup>14</sup> Investigation notes were also missing from the records of the enforcement personnel's discussions with miners regarding current mining activities and conditions for 18 (20 percent) of the E20 investigations we reviewed. Because of the lack of documentation, we could not determine if enforcement personnel evaluated the adequacy of roof control plans during their investigations.

<b><i>E20 Investigation Notes Lacked Documentation of Monitoring Activities</i></b>		
<b>E20 Investigations Reviewed</b>		<b>Deficiency</b>
<b>Number</b>	<b>Percentage</b>	
29	33%	Enforcement personnel did not document discussions/questions with miners regarding roof control plan training
18	20%	Enforcement personnel did not document discussions/questions with miners regarding current mining activities/conditions
8	9%	Enforcement personnel did not document roof control plan evaluations
9	10%	The date of the mine file review was not documented
35	40%	Number of E20 investigations with an exception(s)
<b>88</b>		<b>Total Number of E20 Investigations Reviewed</b>

Documentation is important because it serves as evidence a task was performed. While MSHA took actions to improve its roof control monitoring and review processes since the Crandall Canyon roof collapse, MSHA did not consistently document some aspects of roof control plans reviews. As a result, it cannot positively demonstrate in many cases that miners received adequate roof control plan training or that enforcement personnel assessed the adequacy of roof control plans based on current mining activities and conditions.

<sup>14</sup> According to MSHA, enforcement personnel may not always have the opportunity to hold discussions with miners if, for example, no miners are present in the area. This may be particularly applicable to E20 investigations because these may involve a specific issue and not an overall inspection of a mine. We included all instances where no discussion was documented because MSHA's policy provides for no exceptions to the requirement to hold discussions.

## RECOMMENDATIONS

We recommend the Assistant Secretary for Mine Safety and Health:

1. Develop a centralized policy and procedure process for all program areas that:
  - requires Districts to update SOPs for all new or revised guidance;
  - includes a review of new or updated District-issued SOPs; and
  - incorporates a periodic review of all Districts' SOPs to ensure they include all mandated policies;
2. Require Districts to immediately implement steps that ensure:
  - roof control plan files contain complete documentation to support the rationale for roof control plan decisions;
  - E01 and E20 documentation includes all required activities; and
3. Ensure future training for roof control personnel involved in reviewing, approving, and monitoring roof control plans includes file documentation requirements and documentation of required discussions with miners.

We appreciate the cooperation and courtesies MSHA personnel extended us during this audit. OIG personnel who made major contributions to this report are listed in Appendix E.



Elliot P. Lewis  
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# Appendices

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**Appendix A****Background**

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On March 31, 2008, the OIG issued an audit report titled, “MSHA Could Not Show it Made the Right Decision in Approving the Roof Control Plan at Crandall Canyon Mine.” The report found that MSHA was negligent in carrying out its responsibilities to protect the safety of miners. Specifically, the OIG found that MSHA did not have a rigorous, transparent review and approval process for roof control plans consisting of explicit criteria and plan evaluation factors, appropriate documentation, and active oversight and supervision by Headquarters and [Coal] District 9 management. Further, MSHA did not ensure that subsequent inspections assessed compliance with, and the effectiveness of, approved plans in continuing to protect miners.

The OIG made nine recommendations to MSHA, summarized<sup>15</sup> as follows:

- Develop a rigorous, standard, and transparent process for the evaluation and approval of roof control plans, including active management oversight. This includes: (1) establishing policy requiring risk assessments prior to plan approval; (2) establishing criteria for assessing the quality of, and potential safety risk associated with, proposed plans; (3) issuing guidance on the use of computer models; and (4) issuing a policy mandating active oversight by District Managers by requiring documentation to support their conclusions. (Recommendations 1-5)
- Require inspectors to document the work they perform in effectively questioning miners on mining activities and conditions in the mine, and their basis for concluding on the continued adequacy of roof control plans and the completion and adequacy of miner training on such plans. (Recommendations 6)
- Issue a policy on allowing non-rescue activities and personnel on site during active rescue operations. (Recommendation 7)
- Establish a Memorandum of Understanding with the Bureau of Land Management to share inspection or other information on mine conditions affecting safety. (Recommendation 8)
- Conduct a new review, consistent with these recommendations of all existing roof control plans. (Recommendation 9)

MSHA concurred with the OIG’s recommendations and took corrective actions. All recommendations have been closed by the OIG.

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<sup>15</sup> Our current audit was geared toward roof control plan approval and monitoring activities. We did not perform testing related to allowing non-rescue personnel and activities (Recommendation 7) and conducting a review of all existing roof control plans (Recommendation 9) because they were not relevant to MSHA’s review, approval, and oversight of roof control plans.

The purpose of MSHA is to prevent death, disease, and injury from mining and to promote safe and healthful workplaces for the nation's miners. To assist in achieving this purpose, MSHA reviews and approves roof control plans submitted by all underground coal mine operators as required by the Federal Mine Safety and Health Act of 1977 (Mine Act), Section 302, and Title 30 of the Code of Federal Regulations (30 CFR), Part 75.220. Further, 30 CFR Parts 75.222 and 75.223 provide the criteria to be used when approving initial roof control plans and revisions.

Roof control plans identify the methods used in a mine to control and prevent the collapse or shifting of the roof, face, or ribs in underground mines. Each underground coal mine operator must develop and follow a roof control plan that is suitable to the prevailing geological conditions, and the mining system to be used at the mine. This proposed plan, and any subsequent revisions, is submitted in writing, to the MSHA District Manager. MSHA policy states that this approval authority is not to be re-delegated. Roof control plans for each mine are to be reviewed every six months.

CMS&H, a program area within MSHA, is responsible for enforcing the Mine Act at all coal mining operations in the United States. This includes reviewing, approving, and monitoring roof control plans submitted by mine operators. CMS&H is headquartered in Arlington, VA, and consists of 12 Districts and 45 Field Offices with 1,187 staff<sup>16</sup>. During calendar year 2011, there were over 1,900 coal mines located in 26 states throughout the United States. CMS&H received \$164.5 million for its FY 2012 budget – approximately a 2.58 percent increase over its FY 2011 budget (\$160.4 million).

Within MSHA, the Directorate of Technical Support (Tech Support) provides engineering and scientific expertise to assist MSHA, the states, and the mining industry in the resolution of safety and health issues. Tech Support provides roof control engineering support and technical assistance through the Pittsburgh Safety and Health Technology Center Roof Control Division, located in Bruceton, Pennsylvania. This division: (1) provides engineering and geological technical services concerning the evaluation of roof support systems; (2) maintains specialized laboratories for the testing of roof support products; and (3) monitors the applications of automated-temporary-roof support systems, cabs, and canopies to mining equipment.

The failure of underground coal mines to have an approved roof control plan has remained on MSHA's Top Twenty Most Frequently Cited Standards list since 2007. From January 2007 through September 2012, there were 15 roof fall fatalities.

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<sup>16</sup> Unless otherwise stated, all information presented refers to FY 2012.

**Appendix B**

**Objective, Scope, Methodology, and Criteria**

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**Objective**

Have MSHA's actions in response to the OIG's 2008 audit report improved the coal mine roof control plan review, approval, and oversight processes?

**Scope**

We audited MSHA's review, approval, and oversight of all roof control plans or revisions to previously-approved roof control plans submitted and reviewed as mandated by the Mine Act and other federal laws and regulations for underground CMS&H mines during FYs 2011 and 2012. In addition, we reviewed MSHA's documentation for the most current regular safety and health inspection (E01) and roof control investigation (E20).

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 objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

**Methodology**

To determine MSHA's roof control plan review, approval, and oversight processes, we reviewed MSHA's policies and procedures, Districts' SOPs, checklists, Program Information Bulletins, Program Policy Letters, Technical Papers, Memos, and Procedure Instruction Letters and interviewed key CMS&H Headquarters, District Office, and Field Office officials.

To determine if policies and procedures were consistent, we: 1) obtained MSHA policies and procedures, CMS&H District Office SOPs, and the checklists for roof control plan approvals; 2) compared and analyzed the policies and procedures used to evaluate and approve roof control plans; and 3) determined if these policies and procedures adequately address the 2008 report's recommendations.

To determine if CMS&H is adequately evaluating roof control plans, we tested a sample of roof control plans to verify if MSHA evaluated each roof control plan to ensure it complies with Federal requirements and MSHA policies and procedures.

We used a two-stage cluster sampling approach to select a sample of 176 from the 3,483 roof control plans or revisions MSHA reviewed during FYs 2011 and 2012. In the first stage, we classified the twelve CMS&H Districts into three strata based on geographic location. Strata 1 and 2 consisted of five Districts each and stratum 3 consisted of two Districts. We randomly selected two Districts from each stratum for a

total of six Districts. In the second stage, we classified each selected District Office into two strata based on the type of roof control plan, basic or complex. We selected a random statistical sample of roof control plans from each stratum.

To determine if CMS&H is adequately monitoring roof control plans, we tested a sample of E01 inspections and E20 investigations. We reviewed the most recent E01 inspection and E20 investigation (if applicable) conducted at the mines in our sample. For each inspection or investigation, we analyzed how CMS&H inspectors or specialists documented their review of the roof control plan (e.g., inspection or investigation notes, MSHA Form 2000-204, etc.).

### *Data Reliability*

To determine the reliability of MSHA's roof control plan data for selecting our sample, we: 1) identified specific data elements from the MSHA Standardized Information System (MSIS) that were critical to supporting our audit analyses; 2) obtained the universe of roof control plans received during FYs 2011 and 2012; 3) obtained the number of coal mines with roof control plans in each CMS&H District Office for FYs 2011 and 2012; 4) developed and completed steps to assess the completeness and accuracy (i.e., reliability) of the universe; and 5) followed up with CMS&H officials to address discrepancies identified.

### *Internal Controls*

In planning and performing our audit, we considered MSHA's internal control relevant to our audit objectives by obtaining an understanding of those controls, and assessing risk for the purpose of achieving our objectives. The objective of our audit was not to provide assurance of the internal control; therefore, we did not express an opinion on MSHA's internal control. Our consideration of internal control for reviewing, approving, and monitoring coal mine roof control plans would not necessarily disclose all matters that might be significant deficiencies. Because of the inherent limitations on internal control, or misstatements, noncompliance may occur and not be detected.

### **Criteria**

- Federal Mine Safety and Health Act of 1977, Section 302
- Title 30 Code of Federal Regulations, Parts 75.220 through 75.223
- MSHA Program Policy Manual, Volume V (February 2003)
- MSHA General Coal Mine Inspection Procedures and Inspection Tracking System Handbook, January 2008
- CMS&H Memo No. HQ-08-055-A (ORM-8), June 3, 2008

- CMS&H Memo No. HQ-08-059-A (PRT-75), June 6, 2008
- General Accounting Office, Standards for Internal Control in the Federal Government, November 1999

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**Appendix C**

**Acronyms and Abbreviations**

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BLM	Bureau of Land Management
CMS&H	Coal Mine Safety and Health
Districts	District Offices
FY	Fiscal Year
Manual	Program Policy Manual
Mine Act	Federal Mine Safety and Health Act of 1977
MSHA	Mine Safety and Health Administration
OIG	Office of Inspector General
PIB	Program Information Bulletins
PIL	Procedure Instruction Letters
PPL	Program Policy Letters
SOP	Standard Operating Procedures

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MSHA Response to Draft Report

U.S. Department of Labor

Mine Safety and Health Administration  
1100 Wilson Boulevard  
Arlington, Virginia 22209-3939



MAR 28 2013

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 Response to OIG Draft Report – “MSHA Has Improved Its Roof Control Plan Review and Monitoring Process But Could Do More” No. 05-13-002-06-001

MSHA reviewed your Draft Report *MSHA Has Improved Its Roof Control Plan Review and Monitoring Process But Could Do More* (05-13-002-06-001). We appreciate the opportunity to provide comments to the draft report.

The “Results in Brief” section of the Report states that, “MSHA’s processes for reviewing, approving, and overseeing coal mine roof control plans have improved since our 2008 report...” To put the Report in a proper context, MSHA believes it is important that the Report reflect the proactive actions the Agency has taken since the Crandall Canyon tragedy, which have improved roof/rib control safety for miners. It should also state these actions have resulted in a dramatic decline in roof/rib fatalities, roof/rib injuries, and roof falls. Your audit addressed administrative and record keeping issues and did not analyze or address the substance of the specific actions MSHA has undertaken since the 2007 Crandall Canyon tragedy and the improvements in miner safety that have resulted, which were significant. That should be noted in the report so that readers have a better understanding of the report and the context of the findings. MSHA believes it needs to continue to stay focused on the implementation of actions it has undertaken to protect the nation’s miners and to sustain the improvements made, and intends to do so.

MSHA compared the injury and fatality data associated with roof control hazards for the most recent five-year period, 2008-2012, to the previous two five-year periods. The comparison shows:

- There was one retreat mining roof-rib fatality in an underground bituminous coal mine during 2008-2012, compared with 13 during 2003-2007. During the five-year period prior to that, 1998-2002, there were 12 roof/rib fatalities during retreat mining.
- There were 19 roof/rib fatalities during 2008-2012, compared with 37 during 2003-2007.

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- Comparing the 2003-2007 and the 2008-2012 periods, the number of roof fall injuries was reduced by 24% (a 38% reduction in the rate), and the number of reportable non-injury roof falls was reduced by 24% (a 38% reduction in the rate).

These numbers reflect dramatic improvements in miner safety. The reduction in retreat mining roof fall fatalities is a particularly historic accomplishment because prior to 2007, roof fall fatalities typically occurred each year. See chart below:

Year	Retreat Roof Fall Fatal	Roof/Rib Fatal	Roof Fall Injuries	Non-Injury Roof Falls	Underground Hours Worked
1998-2002	12	48	3542	7454	377,312,796
2003-2007	13	37	2430	6806	392,844,874
2008-2012	1	19	1852	5144	481,896,089
<b>% Reduction in Numbers 2003-2007 vs. 2008-2012</b>	<b>92%</b>	<b>49%</b>	<b>24%</b>	<b>24%</b>	<b>23% increase</b>
<b>% Reduction in Rate 2003-2007 vs. 2008-2012</b>	<b>94%</b>	<b>58%</b>	<b>38%</b>	<b>38%</b>	
<b>% Reduction in Numbers 1998-2002 vs. 2008-2012</b>	<b>92%</b>	<b>60%</b>	<b>48%</b>	<b>31%</b>	
<b>% Reduction in Rate 1998-2002 vs. 2008-2012</b>	<b>93%</b>	<b>69%</b>	<b>59%</b>	<b>46%</b>	

In response to the OIG 2008 Report, MSHA took a number of actions to respond to the Crandall Canyon mine disaster that contributed to these improvements. These actions included: use of checklists for reviewing roof control plans, with a particular focus on retreat mining; improved evaluations of roof control plans; monthly inspections of all retreat mining sections; and involvement of MSHA Technical Support in review of complex and non-typical plans, primarily deep cover retreat mining plans.

Other actions MSHA has taken include:

1. The increased enforcement of roof control regulations: 30 CFR §§75.200 and 75.220(a)(1):

Year	Violations of 75.220(a)(1)	75.200 Violations
2003	1,260	3,842
2004	1,583	4,547
2005	1,631	4,631
2006	1,913	5,463
2007	1,895	5,551
2008	2,616	7,594
2009	2,826	7,771
2010	2,350	7,328
2011	2,102	6,433
2012	1,891	5,855
2003-2007	8,282	24,034
2008-2012	11,785	34,981
<b>% Reduction (-) / Increase (+) in Numbers</b>	<b>+ 42 %</b>	<b>+ 46 %</b>

2. MSHA took proactive efforts by including roof control specific training for inspectors and continuing training for roof control specialists on an annual basis, holding stakeholder outreach meetings, and raising the awareness of miners regarding roof control plans and roof/rib conditions. During the past two years, MSHA conducted eight seminars as part of its annual Preventive Roof / Rib Outreach Program (PROP). These seminars focused on preventing rib injuries, preventing roof bolter equipment related injuries, and reducing the number of roof falls related to issues such as weak roof in the Midwest and multiple seam mining in central Appalachia. In addition, MSHA conducted six hands-on computer training sessions on coal pillar design in a variety of coalfield locations.
3. MSHA issued policy directives that improved the quality of roof control plans and inspections. For example, in 2012 MSHA issued guidance for MSHA personnel in assessing the quality and potential safety risk associated with roof control plans, including evaluating the pillar design, mining technologies, and mining procedures for pillar recovery. Most recently, the Coal Mine Safety and Health General Inspection Procedures Handbook was revised to address recommendations identified by the Upper Big Branch Internal Review Report. The revised handbook now contains the requirements related to improved roof

control inspections and is scheduled to go into effect by April 2013. Appropriate inspector training has been conducted.

In your March 21, 2013, memorandum to me, you stated that the OIG performed this follow-up audit to answer the following question:

*Have MSHA's actions in response to the OIG's 2008 audit report improved the coal mine roof control plan review, approval, and oversight processes?*

As a result of the actions MSHA has taken and the significant improvements in mine safety for miners, the answer to that question is clearly yes.

In summary, MSHA believes that the substantial efforts it has made since Crandall Canyon have resulted in measurable improvements in roof control safety. MSHA does not believe that the OIG Draft Report presents a complete record of the progress the Agency has made since 2008.

MSHA's response to the Draft Report is attached.

Attachment

Attachment

### MSHA's Response to Specific Items in the Draft Report

It is important to reiterate that the OIG audit addresses administrative and recordkeeping issues related to the approval of coal mine roof control plans. It did not review the performance results related to miner safety following Crandall Canyon.

#### Results in Brief

MSHA's response to all issues addressed in the Results in Brief section of the Draft Report is included in the Results and Findings section of this attachment.

#### RESULTS AND FINDINGS

##### ***Finding 1 – CMS&H Districts used incomplete coal mine roof control plan SOPs.***

*District SOPs did not always include the 20 controls required by the Manual*

1. The Draft Report states on page 4:

*"MSHA's Manual required that each District's SOPs address 20 controls necessary for proper administration of the roof control plan approval process. The Manual stated these 20 controls "must be developed and written for each District" and "accomplish the following [list of 20 controls]." Senior MSHA officials told us these 20 controls were optional because the Manual said they should be "accomplished." However, we believe MSHA was arguing semantics and that the 20 controls were mandatory."*

**MSHA Response:** MSHA disagrees with the OIG's characterization that "MSHA was arguing semantics" about whether the 20 controls are mandatory in SOPs. MSHA believes that a regulatory agency has the responsibility to interpret its policies. It is MSHA's position that the 20 controls are not mandatory. Section 111 Policy Manuals of the Administrative Policy and Procedures Manual (APPM) states:

*"MSHA's Program Policy Manual and Administrative Policy and Procedures Manual contain written policy and guidelines for Agency employees and compliance requirements for members of the mining community, such as operators, miners, and product manufacturers...The Program Policy Manual contains policy concerning technical and enforcement programs of the Agency."*  
(see pages 7-8)

All of the 20 controls are in fact satisfied outside of the written SOPs that the OIG evaluated. For example, at least six of the controls relate to the "logging and tracking" of roof control plans. All of CMS&H Districts make use of MSHA's MSIS computerized tracking system, which satisfies the "logging and tracking" provision, whether or not it is

mentioned in their written SOPs. Twenty of the 20 controls are fulfilled through the consistent use of the Agency's checklists, transmittal sheet for roof control plan reviews and approvals and Mine Plan Approval System which provides for systematic administration of the District plan approval process.

MSHA acknowledges that the OIG's interpretation on the 20 management controls and district SOPs differs from the Agency's. To avoid any future misunderstanding, the Agency will clarify this guidance to CMS&H District Managers.

2. The Draft Report states on Page 4:

*"However, in this follow-up audit, we found only 2 of the 12 Districts' SOPs included all 20 controls. On average, the Districts addressed only 16 of the 20 minimum controls. MSHA issued a memorandum on June 6, 2008<sup>5</sup>, setting forth the roof control plan approval process. The memorandum included various checklists for roof control plan reviews. MSHA told us these checklists addressed 12 of the 20 controls and partially met the Manual's 20-control requirement when used.<sup>6</sup> While this was true, the SOPs remained incomplete and did not comply with MSHA's Manual since it required District SOPs to include all 20 controls. Moreover, MSHA considered the June 6, 2008, memorandum as optional guidance, not requiring compliance by the Districts."*

MSHA Response: MSHA's analysis of the same data reveals that 5 of the 12 districts, rather than 2, included all 20 controls in district SOPs or other management systems. On average, Coal districts addressed 19 of the 20 management controls. MSHA previously provided the OIG with Coal's Re-Analysis of the OIG's Exhibit A on management controls with the Agency's justification for suggested changes.

The OIG states that "MSHA considered the June 6, 2008, memorandum as optional guidance, not requiring compliance by the Districts" and misinterpreted MSHA's intent. On November 24, 2008, the Administrator for Coal Mine Safety and Health issued a clarification to the June 6 memo to District Managers.

"Regulatory requirements, safety precautions, and best practices are included in the checklists and not intended to be a "one size fits all" approach. Consequently, not all the items are applicable to each and every mine and not mandatory. Please refer to CMS&H Memo No. HQ-08-059-A (PRT-75)."

*District SOPs did not always include new or revised policies*

1. The Draft Report states on page 5:

*"Each District developed its own SOPs for reviewing roof control plans; however, MSHA Headquarters did not review or approve these District SOPs. Without Headquarters oversight, the various Districts' SOPs were often improperly*

*drafted because they were inconsistent, did not include all 20 controls, and relied on outdated criteria.”*

MSHA Response: We do not agree with the OIG’s assertion that all district SOPs need to be consistent, need to include all 20 controls, and need to be reviewed by MSHA Headquarters. Please see the discussion that follows.

Districts develop SOPs to guide district work processes in the handling, review, and approval of roof control plans. However, each District is unique due to its geographic size and the predominant type of mines that it inspects. District organizational structures vary to reflect these differences. District Managers implement SOP’s and management systems that address their specific needs, and not all 20 controls/elements are applicable to every District. District Managers, not Headquarters, are responsible for the processing, review and approval of roof control plans as outlined in 30 CFR §§ 75.220 – 75.223, Roof Control Plans.

MSHA Headquarters did provide necessary and appropriate oversight regarding how each District evaluated the technical adequacy and completeness of roof control plans. Headquarters guidance required each District, in approving plans, to: use the Best Practice checklists; request assistance from Technical Support when appropriate; use the MSIS logging and tracking system; and use standard plan transmittal routing sheets. Use of this guidance has made roof control plans far more effective in keeping miners safe, as evidenced by the data in the table on page 2 of this memorandum. MSHA agrees that District SOPs and management systems should be updated to incorporate new guidance, policies, and procedures on roof control. The Roof Control Plan Approval Handbook, will be implemented by December 31, 2013, and the Manual will serve as a central policy repository to govern the approval process, and provide clarity so as to avoid confusion.

***Finding 2 – District Managers could not support their rationale for all roof control plan decisions.***

1. The Draft Report states Finding 2 on page 5:

MSHA Response: This finding as stated does not accurately convey the audit’s findings, that is, that “District Managers’ rationale not always documented” as stated in the Results in Brief section on page 2 of the draft report. MSHA believes that the OIG analysis and audit report does not support this finding and mischaracterizes the type of documentation that was determined to be either incomplete or missing, i.e. missing checklists, transmittal sheets, and as noted in Footnote 9 on page 6: “<sup>9</sup> Incomplete documentation consisted of items such as checkboxes not completed, missing signatures, or other administrative controls.” To support the rationale behind the approval of the plan requires more than transmittal sheets and checklists and involves more than checking a box on a checklist or signing a review. MSHA recommends that, to avoid any confusion or inconsistency, the finding be changed and more accurately

stated as “District Managers’ rationale not always documented”. Please see MSHA’s comments in response in the next section.

2. The Draft Report states on page 5:

*“Despite MSHA’s efforts, the conditions we identified in 2008 still existed during the course of this audit. Of the 176 coal mine roof control plan decision files we reviewed, 31 (18 percent) had incomplete or missing transmittal sheets or checklists, meaning they lacked supporting documentation for the rationale behind roof control plan decisions. Three of the files we reviewed had 2 issues each, for a total of 34 exceptions.”*

**MSHA Response:** As the OIG acknowledged, they did not review the roof control plans to determine their effectiveness in controlling roof/rib fall hazards. The most important objective MSHA focused on was implementing effective plans and proactive actions to prevent mining deaths and injuries. MSHA believes that plans approved by the Agency since the 2008 OIG audit have accomplished this desired objective.

Of the 176 coal mine roof control plan decision files that the OIG reviewed in this audit, they state that 31 had incomplete or missing transmittal sheets or checklists. Six of the 31 had incomplete documentation consisting of missing signatures or initials, unmarked checkboxes, or other missing documentation:

- In three files, the signatures and dates were all there; however one box was not checked for the recommended action by one person.
- In one file, the field office supervisor did not sign the 2000-204 form; however no deficiencies were reported by the inspector.
- In one file, the extended cut checklist was missing for a plan; however, the plan contained all the necessary precautions and had no deficiencies.
- Some districts were unable to locate six files missing documentation related to checklists. However, the districts went back into their files and confirmed that the evaluation of extended cuts and quarterly and six-month reviews had been performed.
- One district used checklists to support the roof control plan addendum decisions, however, did not maintain checklists for 21 files. This practice has been corrected.

3. The Draft Report states on page 6:

*“Additionally, of the 176 roof control plan submissions we reviewed, mine operators withdrew 13 and CMS&H Districts disapproved 20 (not included in the table above). CMS&H did not require District Managers to maintain supporting documentation for plans that had been withdrawn or disapproved. However, the Districts did not apply this policy consistently. We found documentation in about half (9 out of 20) of the disapproved cases. While we agree MSHA does not need to maintain documentation when an operator voluntarily withdraws its plan and while we make no formal recommendation to this effect, we believe*

*maintaining a written record of the decision-making process in disapproved cases would be beneficial. MSHA has no official record of the disapproval other than the letter it sends to the mine operator and no way to audit the decision-making process if the documentation is discarded after review.”*

**MSHA Response:** MSHA agrees that there is no requirement, in regulation or policy, to document withdrawn or disapproved plans and we are pleased that the OIG did not recommend documentation in 2008 and is not recommending documentation in this draft report for these plans. It is important to note that MSHA guidance only requires that records be retained for approved plans. CMS&H Memo No.HQ-08-059-A states “all documentation (MSHA Form 2000-204, checklists, drawings, sketches, etc.) explaining the rationale and supporting the decision of the roof control plan approval and associated six-month plan review will be maintained as part of the roof control file for that mine.” Districts do not maintain copies of checklists and forms if operator roof control plans are either withdrawn or disapproved, nor are they required to do so. We do think it is important to emphasize that plans are sometimes withdrawn by the mine operators prior to an MSHA review. It is unreasonable to expect MSHA to maintain any written record other than an initial tracking sheet if there was no review conducted. For disapproved plans, MSHA specifically lists the reasons in the disapproval letter to the operator as to why the plan is being denied. That is considered the written record and is maintained in the files. The regulations mandate in 30 CFR 75.220(b)(2) that “When approval of a proposed plan or revision is denied, the deficiencies of the plan or revision and recommended changes will be specified and the mine operator will be afforded an opportunity to discuss the deficiencies and changes with the District Manager.”

***Finding 3 – MSHA Enforcement Personnel Did Not Document All Required Roof Control Plan Monitoring Activities.***

1. The Draft Report states on page 7:

*“We found enforcement personnel were not always documenting discussions with miners in their field notes. Of the 123 E01 inspection notes we reviewed, two-thirds did not document the enforcement personnel’s discussion with miners about roof control plan training. Other issues included no documentation of discussions with miners regarding current mining activities and conditions; no evidence of supervisory reviews; and no evidence of the enforcement personnel’s roof/rib observations. To its credit however, MSHA reviewed roof control plans during E01 inspections twice as often as required by law--four times per year.”*

**MSHA Response:** Based on the Agency’s past enforcement practices, MSHA believes that the OIG has stated a very literal interpretation of what is required in inspector notes regarding questioning miners on roof control conditions and training. Based on that interpretation, and the information that the OIG accepted, two-thirds of the inspectors’ notes reviewed did not explicitly document discussions with miners.

When MSHA inspects a mining section, an inspector observes: roof conditions; the mining cycle; cites violations observed (including roof control); and discusses concerns miners may have with any plans, including the roof control plan and work practices. MSHA believes that these actions by the inspector adequately address the OIG recommendation dealing with questioning miners and addressing the adequacy of roof control plans and the miners' training. Inspectors also mention in their notes whether miners were knowledgeable about the roof control plan – again this is to reflect whether the training was adequate. If the inspector's assessment is that the miner's training is inadequate, an enforcement order is issued, and the miner is withdrawn, in accordance with the Mine Act, until the operator is able to produce evidence that the withdrawn miner has been trained. There are also instances where MSHA may not talk to miners regarding roof control due to the nature of the inspection and the availability of miners. Some of the required MSHA inspections occur in areas where no miners are working on that particular day. In addition, the CMS&H memorandum of June 30, 2008 does not require the level of specificity in the notes that the OIG recommends.

MSHA believes that additional clarification on E20 Technical Investigations is necessary. An E20 investigation is similar to a spot inspection because the investigation is directed to a specific purpose or area of the mine. E20 investigations are directed specifically to roof control. Contrary to the OIG footnote 1 on page 3, an E20 is not conducted on an *ad hoc* basis. Due to the fact that these investigations are directed to a specific purpose or area of the mine, they are usually short in duration with most being completed in one day. It is not uncommon, because of the defined nature of these investigations, that E20s occur in areas of the mine where miners do not normally work or travel. Examples of these types of investigations would be the evaluation of the support system utilized in a longwall tailgate entry or bleeder system, or an investigation of a roof fall. During these investigation activities, the inspector may not generally come in contact with anyone, and thus not be able to either discuss or question miners to determine whether the roof control plan is adequate or to question miners to determine whether their training on the roof control plan is complete and adequate.

MSHA acknowledges that there are instances where the questioning of miners and documentation has not occurred. MSHA recently updated the Coal Mine Safety and Health General Inspection Procedures Handbook and will implement the revised handbook on April 1, 2013. The handbook has been updated to include the June 30, 2008 memorandum and coal mine inspectors were retrained on the requirements.

MSHA acknowledges that the June 30, 2008 guidance was unclear on E01 and E20 and the Agency will clarify this guidance, particularly as to E20 investigations.

**RECOMMENDATIONS**

1. The Draft Report includes three recommendations on page 10:

*"We recommend the Assistant Secretary for Mine Safety and Health:*

1. *Develop a centralized policy and procedure process for all program areas that:*
  - *requires Districts to update SOPs for all new or revised guidance;*
  - *includes a review of new or updated District-issued SOPs; and*
  - *incorporates a periodic review of all Districts' SOPs to ensure they include all mandated policies;"*
2. *Require Districts to immediately implement steps that ensure:*
  - *roof control plan files contain complete documentation to support the rationale for roof control plan decisions;*
  - *E01 and E20 documentation includes all required activities; and*
3. *Ensure future training for roof control personnel involved in reviewing, approving, and monitoring roof control plans includes file documentation requirements and documentation of required discussions with miners.*

MSHA Response: MSHA has undertaken a major overhaul of the agency's directives system and reestablished, effective March 22, 2013, the centralized directives management functions for maintaining and overseeing the Directives System in MSHA's Office of Program Evaluation and Information Resources. MSHA will assess the best approach to address district SOP's so as to streamline the guidance and not create unnecessary burdens that detract from the Agency's mission and support improved mine safety.

MSHA has expressed disagreement with the OIG that these management controls must be included in district SOPs. As the Agency has discussed with the OIG, the management controls are included in other written management systems in addition to SOPs, such as the plan tracking system, plan transmittal sheets, and checklists. A review of all district SOPs, as recommended by the OIG, is a major undertaking in a time of limited resources. At the field level, SOPs are implemented for workflow and can be as varied as certifying timesheets to plan reviews. This recommendation does not make mines safer or the Agency's procedures more effective and efficient. Rather, it diverts valuable Headquarters and field resources from mission-critical work-- that can make mines safer-- to address administrative procedures. As noted, district SOPs are the domain of the District Manager and do not require oversight of Headquarters staff. However, in light of the concerns that OIG has raised, the Agency will revise the Manual to clarify guidance on management controls and district SOPs.

MSHA agrees with Recommendation 2. To address this recommendation, the Agency will revise instructions to the Districts to clarify the roof control documentation guidance on E01 inspections and E20 technical investigations. The new Roof Control Handbook and the revisions to the Program Policy Manual will be incorporated in the new MSHA centralized administrative policy and procedures review system for directives. Ongoing work to address the recommendations of the Upper Big Branch Internal Review Report will also address some of the items in the OIG follow-up audit on Crandall Canyon.

Recommendation 3. MSHA agrees with the spirit of this recommendation and, on an annual basis, provides training to individuals who are involved in roof control plan review and approval. The Agency will assess the best way to implement this recommendation so as not to create unnecessary burdens that detract from the Agency's mission and supports improved mine safety. The Agency has already provided training to address the documentation requirements discussed in the OIG report on roof control files and questioning miners.

**Appendix E**

**Acknowledgements**

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Key contributors to this report were Nicholas Christopher (Audit Director), Robert Swedberg (Audit Manager), Eric Rann, Charmane Miller, Aaron Talbert, John Schick, Norlean Kelly, Kathleen Mitomi, and Mary Lou Casazza.

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