

U.S. Department of Labor

Office of Inspector General—Office of Audit

MINE SAFETY AND HEALTH ADMINISTRATION



**MSHA MUST MORE CONSISTENTLY
DETERMINE THE NUMBER OF REQUIRED
INSPECTIONS AND MORE TRANSPARENTLY
REPORT INSPECTION RESULTS FOR METAL
AND NONMETAL MINES**

Date Issued: September 29, 2011
Report Number: 05-11-004-06-001

BRIEFLY...

Highlights of Report Number 05-11-004-06-001,
issued to the Assistant Secretary of Mine Safety
and Health.

WHY READ THE REPORT

Under provisions of the Federal Mine Safety and Health Act of 1977, as amended (Mine Act), MSHA is mandated to conduct regular inspections of all mines. During fiscal year (FY) 2010, MSHA's Office of Metal and Nonmetal Mine Safety and Health (MNMS&H) conducted 16,143 regular safety and health inspections at 11,068 mines.

Between October 2007 and April 2011, the OIG received four separate, but similar written complaints related to MNMS&H's completion of regular safety and health inspections. These complaints alleged that MNMS&H was (a) intentionally leaving active mines "off the books" or misclassifying the operating status of mines to reduce the number of required inspections and (b) recording a completed inspection when no inspection had been performed.

WHY OIG CONDUCTED THE AUDIT

As part of our audit oversight responsibility and in response to the complaints we received, the OIG performed work to answer the following questions:

1. Did MNMS&H assign the appropriate operating status to each mine?
2. Did MNMS&H conduct the correct number of required regular safety and health inspections for each mine?
3. Was there evidence that each recorded regular safety and health inspection was performed?

Our audit work covered all regular safety and health inspections mandated by the Mine Act for metal/nonmetal mines during FY 2010.

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/2011/05-11-004-06-001.pdf>.

September 2011

MSHA MUST MORE CONSISTENTLY DETERMINE THE NUMBER OF REQUIRED INSPECTIONS AND MORE TRANSPARENTLY REPORT INSPECTION RESULTS FOR METAL AND NONMETAL MINES

WHAT OIG FOUND

We found no evidence that individual MNMS&H inspectors or supervisors had intentionally manipulated the mine inventory or mine status assignments to reduce the number of required inspections. However, MNMS&H's policies and practices resulted in the understatement of the number of required regular safety and health inspections and the overstatement of the reported inspection completion rate. Specifically,

- We could not determine the appropriateness of MNMS&H's assignments of mine status because it did not issue clear, objective criteria for determining a mine's status.
- MNMS&H's business rules allowed an "attempted inspection" to eliminate the requirement to complete a regular safety and health inspection at 732 mines that reported mining activity.
- MNMS&H often counted inspections in its computation of the inspection completion rate before they received supervisory review.

WHAT OIG RECOMMENDED

We recommended the Assistant Secretary for Mine Safety and Health direct MNMS&H to:

- design objective criteria for assigning a mine status and implement a system of controls to assure the consistent implementation of these criteria;
- design and implement procedures to assure that information on all new mines is communicated to the responsible field office in a timely manner;
- examine and implement ways to increase the probability that inspectors will arrive for regular safety and health inspections on days that a mine is operational;
- more clearly and completely report the actual results of its efforts to conduct regular safety and health inspections;
- require supervisors to document their review and acceptance of each regular safety and health inspection report before it is included in MNMS&H's computation of its inspection completion rate.

The Assistant Secretary agreed with our recommendations and committed to developing and implementing corrective actions.

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U.S. Department of Labor

Office of Inspector General
Washington, D.C. 20210



September 29, 2011

Assistant Inspector General's Report

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The Office of Inspector General (OIG), Office of Audit, conducted a performance audit of the regular safety and health inspection process managed by the Mine Safety and Health Administration's (MSHA) Office of Metal and Nonmetal Mine Safety and Health (MNMS&H).

MNMS&H performs these inspections to protect miner safety and health. The Federal Mine Safety and Health Act of 1977 (Mine Act), as amended, requires MNMS&H to conduct regular safety and health inspections of the Nation's metal/nonmetal mines—four times per year at underground mines and twice per year at surface mines. During fiscal year (FY) 2010, MNMS&H conducted 16,143 regular safety and health inspections¹ at 11,068 mines.

For each year from 1977 to 2007, MNMS&H reported that it had not completed all of the required regular safety and health inspections. In October 2007, MSHA implemented the "100 Percent Plan" to ensure the agency completed all mandatory inspections by the end of each FY. In each subsequent FY (2008 – 2010), MNMS&H has reported completing all required regular safety and health inspections. See Appendix A for more background information.

Between October 2007 and April 2011, the OIG received four separate, but similar written complaints related to MNMS&H's completion of regular safety and health inspections. These complaints alleged that MNMS&H was (a) intentionally leaving active mines "off the books" or misclassifying the operating status of mines to reduce the number of required inspections and (b) recording a completed inspection when no inspection had been performed.

As part of our audit oversight responsibility and in response to the complaints we received, the OIG performed work to answer the following questions:

¹ MSHA identifies varying inspection activities with specific "activity codes". This audit focused on Regular Safety and Health inspections, coded as E01 activities.

1. Did MNMS&H assign the appropriate operating status to each mine?
2. Did MNMS&H conduct the correct number of required regular safety and health inspections for each mine?
3. Was there evidence that each recorded regular safety and health inspection was performed?

Our audit work covered all regular safety and health inspections mandated by the Mine Act for metal/nonmetal mines during FY 2010. To gain an understanding of MNMS&H's inspection process, we reviewed federal laws and regulations and MNMS&H policies and procedures; interviewed key MNMS&H headquarters, district, and field office officials; and analyzed and identified key processes and critical decision and control points. For a random sample of 182 mines, we reviewed mine operating statuses, the number of regular safety and health inspections required, and inspection documents. Our objectives, scope, methodology, and criteria are detailed in Appendix B.

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.

RESULTS IN BRIEF

The audit found no evidence that individual MNMS&H inspectors or supervisors had intentionally manipulated the mine inventory or mine status assignments to reduce the number of required inspections. However, MNMS&H's policies and practices resulted in the understatement of the number of required regular safety and health inspections and the overstatement of the reported inspection completion rate. This occurred because the mine status definitions established by MNMS&H national office were interpreted differently by individual districts and because MNMS&H "business rules" reduced the number of regular safety and health inspections required. In addition, MNMS&H counted inspections as completed prior to supervisory review. As a result, although MNMS&H reported an inspection completion rate of 100 percent in FY 2010, 732 out of 13,081 mines (5.6 percent) the OIG determined to be in an inspectable status received only an "attempted inspection."

We could not determine the appropriateness of the "mine status" assigned and used by MNMS&H to determine the number of required regular safety and health inspections at each mine. This occurred because vague national definitions resulted in districts using varied criteria to make mine status determinations, and because MNMS&H did not require districts to document the rationale for setting or changing a mine's status. In addition, a problem with MSHA's online process for registering new mines may have diminished the ability of field offices to timely monitor these mines. As a result,

MNMS&H had no assurance that it was computing the correct number of required inspections at each mine.

In addition, MNMS&H's business rules allowed an "attempted inspection"² to eliminate the requirement to complete a regular safety and health inspection. An attempted inspection was typically recorded when the inspector found no one at the mine during the unannounced visit to conduct a regular safety and health inspection. This occurred because many metal/nonmetal mines operate on an irregular or less-than-full-time schedule. While inspectors often returned and conducted an inspection at these mines at a later date, MNMS&H policy did not require them to do so. During FY 2010, MNMS&H recorded attempted inspections at 2,226 mines. Of these, 732 mines (33 percent) with reported miner work hours did not receive a regular safety and health inspection during the year.

Regular safety and health inspections recorded in MSHA's inspection database were documented by inspector notes and reports. However, in 29 out of 32 (91 percent) of the cases that we reviewed, MNMS&H included the inspections in its computation of its inspection completion rate prior to supervisory review. Since supervisory review can result in a determination that additional inspection work should be performed, inspections should not be included in the computation of MNMS&H's inspection completion rate until a supervisor has reviewed and accepted the work.

We made five recommendations to the Assistant Secretary for Mine Safety and Health. In summary, we recommended that MNMS&H design objective criteria for assigning a mine status; implement procedures to assure that information on all new mines is communicated to the responsible field office; examine and implement ways to increase the probability that inspectors will arrive for regular safety and health inspections on days that a mine is operational; more completely report the actual results of its efforts to conduct regular safety and health inspections; and require supervisors to document their review and acceptance of each regular safety and health inspection report before it is included in MNMS&H's computation of its inspection completion rate.

In responding to our draft report, the Assistant Secretary for Mine Safety and Health agreed with all of our recommendations and stated that MSHA was fully committed to addressing the issues that are identified in this report. His response pointed out the MNMS&H had begun developing a plan for determining mine status classification based on objective criteria prior to our audit and they are working with MSHA's Program Evaluation and Information Resources (PEIR) to develop a report (Mine Status Review Report) that identifies mine status using these objective criteria. He also stated that in the future MNMS&H will report the number of completed inspections and the number of attempted inspections to present more transparency in the agencies inspection completion rate.

² An event identified in this report as an attempted inspection is referred to by MSHA as a Mine Idle activity and coded as an E28 event.

The Assistant Secretary expressed concern with our statement that MNMS&H performs inspections to protect miner safety and health. He emphasized that Congress gave “mine operators with the assistance of miners the primary responsibility to prevent unsafe and unhealthful conditions and practices in mines.” Our statement and conclusion are based on the requirements of the Mine Act that describe MSHA’s roles and responsibilities in setting safety and health standards, identifying instances of noncompliance (including patterns of violations), and compelling mine operators to take timely corrective actions. These are integral components of the overall system for providing miners with a safe and healthy work environment.

The Assistant Secretary’s entire response is contained in Appendix D.

RESULTS AND FINDINGS

We found no evidence that individual MNMS&H inspectors or supervisors had intentionally manipulated the mine inventory or mine status assignments to reduce the number of required inspections. However, MNMS&H’s policies and practices resulted in the overstatement of the reported inspection completion rate. Although MNMS&H reported an inspection completion rate of 100 percent in FY 2010, 732 mines (5.6 percent) received only an “attempted inspection.”

Objective 1 — Did MNMS&H assign the appropriate operating status to each mine?

MNMS&H lacked assurance it was computing the number of required regular safety and health inspections based on an appropriate mine status.

Finding 1 — The validity of MNMS&H’s mine status assignments could not be confirmed.

We could not determine the appropriateness of MNMS&H’s assignments of mine status because it did not issue clear, objective criteria for determining a mine’s status, and did not require inspectors to justify the basis for changes in a mine status. Moreover, a problem in the online system for registering new mines may diminish the ability of the appropriate field office from timely monitoring these mines for changes in operating status. As a result, MNMS&H lacked assurance it was computing and performing the correct number of required regular safety and health inspections.

MNMS&H Policy Lacked Clear Objective Criteria

MNMS&H policy defined five possible mine status designations as follows (underlining added for emphasis):

Active - A mine that operates on a full-time basis. Temporary closure due to unusual or unforeseen circumstances, such as strikes, mine disasters,

temporary maintenance shutdowns, etc. does not change this status. These are mines/mills where you could reasonably expect to conduct the statutory four or two regular inspections.

Intermittent - An intermittent mine can reasonably be expected to operate sometime during the year. These operation times will vary due to the demand for the product(s) or seasonal conditions. These are operations where two inspections per year for underground mines and one per year for surface mines and/or facilities would reasonably be expected to occur.

Non-Producing - A non-producing mine is an operation where production has not yet begun or has ceased, but employees perform some work at the mine/mill. These are operations where two inspections per year for underground mines and one per year for surface mines and/or facilities would reasonably be expected to occur.

New Mine - A new mine has been assigned a mine identification number but no work has begun at the mine site. Once physical development has begun, a status change is required.

Abandoned - An abandoned mine will be abandoned for the foreseeable future.

These definitions were subject to individual interpretation. As a result, MNMS&H districts used their own unwritten criteria for defining a mine's operating status. Districts defined a mine status based on one or more factors, such as mine employee hours, number of mine employees, or conditions related to the weather or economy. A number of MNMS&H district and field office officials stated that individual inspector judgment also played a role in determining each mine's operating status. Table 1 illustrates the varying criteria used by three districts to define an active mine.

Table 1

<i>Districts Defined Active Status Differently (FY 2010)</i>	
MNMS&H District	Criteria Used to Define Active Mine
Rocky Mountain	520 mine employee hours or greater per quarter
North Central	Consistent number of mine hours and employees reported per quarter
Southeastern	Any mine employee hours reported per quarter

Within the same district, field offices were also inconsistent in their definitions of mine operating statuses. Table 2 illustrates the inconsistent criteria used by two field offices within the same district to define an intermittent mine.

Table 2

<i>Field Offices Defined Intermittent Status Differently (FY 2010)</i>	
North Central Field Offices	Criteria Used to Define Intermittent Mine
Fort Dodge, Iowa	No mine employee hours reported for 1 or 2 quarters
Peru, Illinois	Mine shut down during the winter

As a result of these varying criteria, MNMS&H assigned different mine statuses to mines with similar operating characteristics. Table 3 illustrates examples of this inconsistency.

Table 3

District	<i>Miner Work Hours (# of Miners)</i>				Assigned Mine Status (Required Inspections)
	Quarter 1 FY 2010	Quarter 2 FY 2010	Quarter 3 FY 2010	Quarter 4 FY 2010	
Southeast	3,325 (7)	2,417 (6)	4,187 (6)	2,868 (5)	Active (2)
N. Central	4,192 (7)	2,037 (5)	3,489 (7)	3,809 (7)	Intermittent (1)
Southeast	1,107 (2)	1,092 (6)	1,813 (3)	1,069 (2)	Active (2)
N. Central	2,072 (6)	2,523 (5)	1,838 (5)	2,351 (5)	Intermittent (1)

MNMS&H officials stated that they have been working for the past 7 months to develop more specific, data driven criteria for assigning a mine's status. This effort has been aimed at reducing the inconsistency in mine status determinations, reducing and providing better oversight of the discretion exercised by district officials in assigning a mine status, and more effectively allocating inspection resources. MNMS&H anticipates implementing these criteria following the issuance of our audit report.

Mine Status Changes Lacked Adequate Documentation

MNMS&H policy does not require (a) inspectors to justify setting or changing a mine status, and (b) field office supervisors to approve mine status changes made by inspectors. Since mine status changes impact the number of required regular safety and health inspections, the absence of these controls creates a risk that inspectors could inappropriately reduce their workloads by changing a mine status without justification or oversight.

For 96 of 108 mines³ (89 percent), we found that inspectors did not justify the basis for setting or changing a mine's operating status by attaching supporting source documentation (such as copies of emails or summaries of telephone calls from mine operators).

Inspectors set or change a mine status simply by checking a box on the mine information form. This form does not require any explanation to justify the basis for a mine status change and an inspector may change a mine's operating status without physically visiting a mine in order to validate information provided by the mine operator. While we were told that field office supervisors review and approve a sample of mine status changes, we found no evidence to support this. In fact, the form itself has no place to record supervisory review or concurrence.

³ Of the 182 mine files sampled, 108 contained an MSHA Form 2000-209 documenting the mine's operating status.

MNMS&H Field Offices May Not Have Been Aware of All New Mines Registrations

A deficiency in the online process that operators may use to request a Mine ID for a new mine may result in MNMS&H field offices being unaware of some new mines. This reduces the ability of field office inspectors to monitor these mines and identify changes in operational status that would initiate required safety and health inspections.

When an operator notifies MSHA of the intention to open a new metal or nonmetal mine, MSHA issues a Mine ID and assigns the new mine to the appropriate MNMS&H district and related field office. The operator has 30 days to complete a legal identity document (LID) and is obligated to notify MNMS&H when site development begins. Although new mines do not require a regular safety and health inspection, site development would cause a change in the mine's operating status and initiate inspections. MNMS&H uses the "Mines without LID Submitted" report to identify and monitor the status of new mines that have not submitted an LID. However, according to MSHA officials, the MSHA Standardized Information System (MSIS) e-gov interface for Mine ID requests submitted online does not include an ability to assign the mine to a field office at the time the request is processed. In turn, the absence of a field office designation results in the mine being incorrectly omitted from the "Mines without LID Submitted" report. This creates a risk that new mines will not be identified and monitored in a timely manner by the appropriate field office.

For six new mines in our audit sample, the Southeastern District could locate only the electronic document requesting the Mine ID, but no corresponding LID. Yet, none of these mines appeared on the "Mines without LID Submitted" report. Based on our inquiry, MNMS&H identified 126 new mines, as of July 6, 2011, that were incorrectly omitted from this management report. As a result, the ability of the responsible field office to monitor the mine for changes in its operational status was diminished.

Objective 2 — Did MNMS&H conduct the correct number of required regular safety and health inspections for each mine?

MNMS&H's business rules inappropriately reduced the number of regular safety and health inspections required.

Finding 2 — MNMS&H did not complete required regular safety and health inspections at all metal/nonmetal mines.

MNMS&H's business rules understated the number of required regular safety and health inspections for 732 mines because they automatically removed the requirement to complete a regular safety and health inspection when an attempted inspection was recorded. As a result, MNMS&H's inspection completion rate was overstated by 5.6 percent. Missed inspections potentially place miners at risk because hazardous conditions in the mines may not be identified and corrected.

Attempted Inspections Removed the Requirement for a Regular Safety and Health Inspection

MNMS&H attempted but did not conduct regular safety and health inspections during FY 2010 at 732 mines that reported mining activity. However, because its policy allowed attempted inspections to remove the regular safety and health inspection requirement, MNMS&H reported an inspection completion rate of 100 percent. This practice resulted in some of these mines not receiving a regular safety and health inspection for multiple, consecutive years.

Many metal/nonmetal mines operate on an irregular or less than-full-time schedule. This means that an inspector arriving unannounced at a mine site to conduct a regular safety and health inspection, may be unable to perform the inspection because the mine is not operating on that day. In the case of these “attempted inspections,” MNMS&H’s business rules removed the requirement for that regular safety and health inspection. While inspectors could, and often did, return to the mine at another time to conduct a regular safety and health inspection, MNMS&H’s policy did not require them to do so. In FY 2010, MNMS&H inspectors recorded attempted inspections at 2,226 mines. We determined that 881 of these mines (40 percent) did not receive a regular safety and health inspection. As shown in Table 4, the number of times each district recorded attempted inspections and the frequency with which they successfully returned to complete a regular safety and health inspection varied.

Table 4

<i>Mines with an Attempted Inspection Recorded during FY 2010</i>			
	Mines having an Attempted Inspection	Mines having an Attempted Inspection, but no Regular Safety and Health Inspection	
District	Number	Number	Percentage
Northeastern	568	243	43
Southeastern	112	8	7
North Central	564	343	61
South Central	441	63	14
Rocky Mountain	219	76	35
Western	322	148	46
TOTAL	2226	881	40

Of the 881 mines where the required regular safety and health inspection was removed by an attempted inspection, 149 mines reported no miner work hours for the entire year. Therefore, the eliminated regular safety and health inspection posed no risk to miners. However, the remaining 732 mines all reported varying levels of mining activity during the year as summarized in the following table.

Table 5

<i>Indicators of Mining Activity Levels at Mines Receiving Only an Attempted Inspection</i>						
	# of Miner Hours Worked			# of Miners Employed		
	Total (732 Mines)	Average per Mine	Range	Total (732 Mines)	Average per Mine	Range
1st Quarter	314,643	429.8	0 – 8,485	1,408	1.9	0 - 27
2nd Quarter	135,823	185.6	0 – 5,753	731	1.0	0 - 15
3rd Quarter	307,678	420.3	0 – 7,571	1,239	1.7	0 - 13
4th Quarter	343,683	469.5	0 – 8,164	1,223	1.7	0 - 12
FY 2010 Total	1,101,827	1,505.2				
Average per Quarter	275,457	376.3		1,150	1.6	

Table 6 shows a breakdown of these 732 mines by the total miner work hours reported by each mine for FY 2010.

Table 6

<i>Breakdown of Mines Missing Regular Safety and Health Inspections by Total Miner Hours</i>	
FY 2010 Reported Miner Hours	Number of Mines
1 – 200	202
201 – 500	124
501 – 1000	125
1001 – 5000	238
5001 or more	43
TOTAL	732

This practice can result in individual mines operating for long time periods without a regular safety and health inspection because (a) MSHA's business rules require only one regular safety and health inspection per year at mines designated as "intermittent" and (b) attempted inspections could recur in consecutive inspection cycles. An analysis of a judgmental sample⁴ of 71 out of the 881 mines determined that as of July 26, 2011, the number of days that had elapsed since MNMS&H had completed a regular safety and health inspection at these mines ranged from 387 to 1,511 days with an average of 821 days. For example, MNMS&H recorded a completed regular safety and health inspection at an intermittent mine on November 26, 2008. It recorded an attempted inspection on July 13, 2010. The next regular safety and health inspection was recorded on October 12, 2010. This represented a span of 685 days between the two regular safety and health inspections. During FY 2010, this mine employed an average of 10 miners and reported a total of 25,728 miner work hours.

⁴ To obtain the 71 mines, we selected the first two (2) mines from each field office that missed an E01 inspection during FY 2010. If a field office did not have two (2) mines that missed an E01 inspection during FY 2010, then the one (1) mine that missed an E01 inspection was selected. The results of a judgmental sample cannot be statistically **projected** to the universe of 881 mines.

Objective 3 — Was there evidence that each recorded regular safety and health inspection was performed?

MNMS&H counted inspections as completed before they received supervisory review.

Finding 3 — Mine files contained evidence that regular safety and health inspections recorded had been performed, but supervisory review was not timely.

There were documents in MNMS&H mine files to show that regular safety and health inspections recorded in MSIS had been performed. However, MNMS&H often counted inspections in its computation of the inspection completion rate before they received supervisory review. This occurred because MNMS&H policy did not require supervisors to review and accept inspection reports before they became part of the inspection completion calculation.

Inspectors and field office supervisors explained that at the completion of inspection tasks, an inspector enters information into the Inspectors' Portable Applications for Laptop (IPAL) where it is subsequently uploaded into MSIS and becomes part of the FY completion rate. They stated that the upload of this information typically occurs before review and acceptance of the inspection report by a supervisor. Our audit work confirmed their explanation. We found evidence of supervisory review for 138 out of 142 regular safety and health inspections in our sample. However, analysis of a judgmental sample of inspection reports that contained both evidence of supervisory review and the date of that review, revealed that 29 of 32 (91 percent) were uploaded to MSIS (and therefore included in the inspection completion rate) prior to the date of the supervisory review. Since supervisors did sometimes require inspectors to perform additional inspection work as a result of their reviews, inspections should not be included in MNMS&H's computation of its regular safety and health inspection completion rate prior to final supervisory acceptance.

RECOMMENDATIONS

We recommend that the Assistant Secretary for Mine Safety and Health Administration:

1. Design objective, national criteria for assigning a mine status and implement a system of controls to assure the consistent implementation of these criteria;
2. Design and implement procedures to assure that information on all new mines is communicated to the responsible field office in a timely manner;
3. Examine and implement ways to increase the probability that inspectors will arrive for regular safety and health inspections on days that a mine is operational;

4. More clearly and completely report the actual results of its efforts to conduct regular safety and health inspections, including the number of mines that reported miner work hours, but did not receive a regular safety and health inspection; and
5. Require supervisors to document their review and acceptance of each regular safety and health inspection report before it is included in MNMS&H's computation of its inspection completion rate.

We appreciate the cooperation and courtesies that 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 E.



Elliot P. Lewis
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Appendices

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Appendix A**Background**

Mine Safety and Health Administration (MSHA)

MSHA's purpose is to prevent death, disease, and injury from mining and to promote safe and healthful workplaces for the Nation's miners. Under provisions of the Federal Mine Safety and Health Act of 1977, as amended, MSHA is mandated to (a) conduct regular inspections of all mines; (b) investigate mine accidents, complaints of retaliatory discrimination filed by miners, hazardous condition complaints, and petitions for modification of mandatory safety standards; (c) develop improved mandatory safety and health standards; (d) assess and collect civil monetary penalties for violations of mine safety and health standards; and (e) review for approval mine operators' mining plans and education and training programs.

MSHA's Office of Metal and Nonmetal Mine Safety and Health (MNMS&H) enforces the Mine Act at all metal/nonmetal mining operations in the United States. MNMS&H consists of a small headquarters office in Arlington, Va., 6 district offices, and 47 field offices and field duty stations located throughout the United States and Puerto Rico. During calendar year (CY) 2010, there were approximately 12,000 mines that employed over 225,000 miners and produced about 80 minerals and commodities.

Regular Safety and Health Inspections

Inspections are an important part of MSHA's oversight program. During unannounced visits to mine sites, MSHA inspectors verify mine operators' compliance with statutory requirements and determine whether an imminent danger exists. When inspectors observe violations of safety or health standards, they issue citations and/or orders to mine operators. Operators are required to correct the violation and may be assessed a monetary penalty.

Section 103(a) of the Mine Act requires MSHA to conduct regular safety and health inspections of the Nation's mines in their entirety—four times per year at underground mines and twice per year at surface mines. To effectively allocate its inspection resources, MSHA assigns and considers each mine's "status" in implementing this inspection requirement. MNMS&H policy establishes five different mine status classifications – active, intermittent, non-producing, new, and abandoned. Active mines receive the full complement of regular safety and health inspections prescribed in the Mine Act. Intermittent and non-producing mines receive half the number of regular safety and health inspections referenced in the Mine Act. New and abandoned mines do not receive regular safety and health inspections.

For each year from 1977 to 2007, MSHA did not complete all of the inspections mandated by law. In October 2007, MSHA implemented the "100 Percent Plan" to ensure the agency completed all mandatory inspections by the end of each fiscal year (FY). In each subsequent FY (2008 – 2010), MSHA has reported completing all

mandatory mine inspections. In addition, during CY 2010, MSHA reported that mandatory inspections at the Nation's more than 14,000 surface and underground mines resulted in 172,035 citations/orders and assessed monetary fines of \$146.4 million.

OIG Hotline Complaints

Between October 2007 and April 2011, the OIG received four separate, but similar complaints related to MNMS&H's completion of required regular safety and health inspections. In summary, the complaints alleged that:

- An MSHA supervisor was intentionally leaving new or operating mines "off the books" and misclassifying a mine's operating status as "intermittent" or "abandoned" to reduce the number of required inspections;
- MNMS&H officials had instructed supervisors to count an attempted inspection as a regular safety and health inspection; and
- MNMS&H inspectors did not inspect every mine in its entirety.

Appendix B**Objectives, Scope, Methodology, and Criteria**

Objectives

We performed audit work to determine whether MNMS&H performed all of the regular safety and health inspections required by the Mine Act during FY 2010. Specifically, we answered the following questions:

1. Did MNMS&H assign the appropriate operating status to each mine?
2. Did MNMS&H conduct the correct number of required regular safety and health inspections for each mine?
3. Was there evidence that each recorded regular safety and health inspection was performed?

Scope

Our audit included MNMS&H inspection and oversight activity occurring in FY 2010. MNMS&H conducts 27 types of inspections. To answer our audit objectives, we focused on the specific inspection performed by MNMS&H inspectors to comply with Section 103(a) of the Mine Act, the regular safety and health inspection. Regular safety and health inspections are the most comprehensive inspections conducted of metal/nonmetal mines.

For objective 1, our scope covered an analysis of the operating statuses assigned by MNMS&H to a statistical sample of 182 mines for FY 2010. We also reviewed mine status data for (a) these 182 mines for FYs 2007-2010 and (b) a listing of 126 new mines provided by MNMS&H for FYs 2010-2011.

For objective 2, our scope covered an analysis of the regular safety and health inspections computed by MNMS&H for a statistical sample of 182 mines. We also reviewed 881 mines that received an attempted inspection but no corresponding regular safety and health inspection during FY 2010.

For objective 3, our scope covered an analysis of mine information forms, inspection reports, and inspector field notes for the 182 mines statistically sampled for FY 2010. From these 182 we also reviewed IPAL inspection upload dates, provided by MNMS&H, for a judgmental sample of 45 regular health and safety inspections conducted during FY 2010 at these mines.

To accomplish our audit objectives, we focused our review on whether there was any evidence to support that a regular safety and health inspection was performed. We did not address the thoroughness of an inspection, such as whether all required regular safety and health inspection procedures and activities were performed.

Methodology

To accomplish our objectives, we obtained an understanding of MNMS&H's regular safety and health inspection process. We reviewed federal laws and regulations and MNMS&H policies and procedures; interviewed key MNMS&H headquarters, district, and field office officials; and analyzed and identified key processes and critical decision and control points. In addition, we selected random samples of regular safety and health inspections and tested various attributes of the inspection process.

Data Reliability

In planning and performing the audit, we relied on computer-generated data from MSIS. For a sample of the mines listed in MSIS, we compared the information in selected data fields — mine identification number, mine name, mine status, mine status date(s), and regular safety and health inspections — with source documents in the mine files to assess the data's reliability. We determined the data to be sufficient and appropriate for the purpose of our audit.

Site Visits

We conducted site visits at MNMS&H's headquarters (Arlington, Va.), and three district offices - Rocky Mountain (Denver, Colo); North Central (Duluth, Minn); and Southeastern (Birmingham, Ala).

Sampling

To determine whether MNMS&H completed all regular safety and health inspections during FY 2010, we reviewed a stratified random sample of metal/nonmetal mines. The audit universe, based on a listing provided to us by MSHA, consisted of 16,456 mines assigned to six MNMS&H districts. We used a two-stage risk-based sampling approach.

In the first stage, we grouped the six districts into three strata – high risk, medium risk, and low risk – based on five factors related to the risk that regular safety and health inspections might not be performed. These risk factors included the a) ratio of required inspections to inspectors; b) number of abandoned mines; c) number of mine status changes leading to a decrease in the number of required inspections; d) number of mine idle inspections; and e) number of complaints received by the OIG. From each stratum, we randomly sampled one district: North Central (high risk), Rocky Mountain (medium risk), and Southeastern (low risk).

In the second stage, we stratified each of these three district's population of surface and underground mines into six strata based on their mine operating status as of September 30, 2010. These strata included mines classified as (i) active; (ii) non-producing active; (iii) new; (iv) intermittent; (v) abandoned during FY 2010; and (vi) abandoned during FYs 2007 through 2009. We eliminated from our universe mines that have been in an abandoned status prior to FY 2007 (i.e., before October 1, 2006).

Since these mines were in an abandoned status before the implementation of MSHA's 100 Percent Plan in FY 2008, we judged that there was a low risk that MNMS&H personnel had manipulated their operating status to benefit inspection completion rates.

We randomly selected a statistical sample of mines from each of these six strata resulting in a sample of 60-61 mines per district and a combined sample of 182 mines from all three districts for testing purposes. The table below shows our sample of 182 mines by district and mine status.

Audit Sample Composition								
Risk Level	MNM Districts	Mine Status						
		Active	Non-Producing Active	New	Intermittent	Abandoned 10/01/09 to 09/30/10	Abandoned 10/01/06 to 09/30/09	Total
High	North Central	10	5	5	21	10	10	61
Medium	Rocky Mountain	11	6	8	15	10	11	61
Low	Southeast	15	7	8	10	10	10	60
Total		36	18	21	46	30	31	182

For each mine in the sample, we determined if MNMS&H (1) assigned the appropriate mine operating status (per MSHA's criteria); (2) conducted the correct number of regular safety and health inspections based on our review of the Data Retrieval System mine employee and hours reported data; and (3) had documentation to indicate that each regular safety and health inspection recorded in its database had been performed. Specifically, we reviewed each mine's correspondence and inspection files.

Assignment of Mine Operating Status

To understand how MNMS&H assigned an operating status to a mine, we interviewed MNMS&H headquarters and district officials, reviewed definitions established in MSHA Form 2000-209 (Mine Information Form), and recorded specific criteria identified to us by officials in each district we visited. Based on this information, we independently determined an operating status for each of the 182 mines in the audit sample and compared it to the operating status MNMS&H had assigned. We sought explanations from district officials for any variances we identified.

Correct Number of Required Inspections

To evaluate if MNMS&H conducted the correct number of required inspections for a mine, we reviewed criteria established in MSHA's business rules, and interviewed MNMS&H headquarters and district officials.

For each of the 182 selected mines, we reviewed and compared the operating status, as determined by the OIG; the number of required inspections based on an application of the business rules; and the number of regular safety and health inspections conducted, as provided by MNMS&H.

We also received from MNMS&H a list of attempted inspections conducted at 2,226 mines for FY 2010. We analyzed mine and inspection activity data for FY 2010 for 881 of these mines that received an attempted inspection but no corresponding regular safety and health inspection.

Evidence that Each Mandatory Inspection was Performed

To evaluate if MNMS&H documented that each regular safety and health inspection was performed, we reviewed inspection and oversight criteria established in the Mine Act and MSHA policy (e.g., inspection and supervisor handbooks) and interviewed MNMS&H headquarters and district officials. For each of the 182 selected mines, we determined whether there was documentation in the MNMS&H inspection files to indicate that an inspection was performed. Specifically, we reviewed the physical folder for each regular safety and health inspection conducted and checked for an inspection event report, inspector field notes, and evidence of supervisory review.

In addition, we evaluated whether regular safety and health inspections were reviewed by a supervisor prior to being included in MNMS&H's calculation of its inspection completion rate. To accomplish this, we selected a judgmental sample of 45 completed regular safety and health inspections from the 3 districts we visited, and compared the date of supervisory review with the date the completed regular safety and health inspection was uploaded to MSIS from IPAL. Of these, only 32 had a corresponding supervisory review date that we were able to compare to the IPAL upload date provided by MNMS&H.

In planning and performing our audit, we considered MSHA's internal controls that were relevant to our audit objectives by obtaining an understanding of those controls, and assessing control risk for the purposes of achieving our objectives. The objective of our audit was not to provide assurance on the internal controls. Therefore, we did not express an opinion on the internal controls as a whole. Our consideration of MSHA's internal controls relevant to our audit objectives would not necessarily disclose all matters that might be reportable conditions. Because of the inherent limitations on internal controls, noncompliance may nevertheless occur and not be detected.

We conducted our audit in accordance with generally accepted government auditing standards for performance audits. 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 sufficient basis for our findings and conclusions based on our audit objectives.

Criteria

We used the following criteria to perform this audit:

- Federal Mine Safety and Health Act of 1977, Section 103 (a) and (h), as amended

- Title 30 Code of Federal Regulations (CFR) Part 41, Notification of Legal Identity
- Title 30 CFR Part 50, Notification, Investigation, Reports and Records of Accidents, Injuries, Illnesses, Employment, and Coal Production in Mines
- Title 30 CFR Part 56, Safety and Health Standards -- Surface Metal and Nonmetal Mines
- Title 30 CFR Part 57, Safety and Health Standards -- Underground Metal and Nonmetal Mines
- Title 30 CFR Part 58, Health Standards for Metal and Nonmetal Mines
- General Accountability Office, Standards for Internal Control in the Federal Government, dated November 1999
- MSHA Program Policy Manual, Volumes I and IV, dated February 2003
- MSHA Regular Safety and Health Inspection Business Rules, dated March 2005
- MSHA Form 2000-209, dated September 2006
- MSHA 100 Percent Inspection Completion Plan, dated February 2008
- MSHA Accountability Program Handbook, dated March 2008
- MSHA Metal and Nonmetal Supervisors' Handbook, dated June 2009
- MSHA Performance Management Plan for Managers and Supervisors, dated September 2009
- MSHA Metal and Nonmetal General Inspection Procedures Handbook, dated October 2009
- Inspectors' Portable Applications for Laptop (IPAL) User's Manual, dated April 2011
- MNMS&H Proposed Mine Classification Status Matrix and Definitions, dated June 2011

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Appendix C

Acronyms and Abbreviations

CY	Calendar Year
e-gov	Electronic Government
FY	Fiscal Year
IPAL	Inspector's Portable Application for Laptop
LID	Legal Identity
Mine ID	Mine Identification
MNMS&H	Office of Metal and Nonmetal Mine Safety and Health
MSHA	Mine Safety and Health Administration
MSIS	MSHA Standardized Information System
OIG	Office of Inspector General

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Appendix D

MSHA Response to Draft Report

U.S. Department of Labor

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



SEP 27 2011

MEMORANDUM FOR ELLIOT P. LEWIS

Assistant Inspector General of Audit

FROM:

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

A handwritten signature in black ink, appearing to read "Joseph A. Main".

SUBJECT:

Response to OIG Draft Audit Report No. 05-11-004-06-001:
MSHA Must More Consistently Determine the Number of
Required Inspections and More Transparently Report Inspection
Results for Metal and Nonmetal Mines

Thank you for the opportunity to review your draft audit report. The Mine Safety and Health Administration (MSHA) will use the audit results to help the Agency improve the monitoring and completion of Metal and Nonmetal's (MNM) mandatory regular safety and health inspections. We are fully committed to addressing the issues identified in your report.

Below are specific responses to your recommendations.

OIG Recommendation No 1: *Design objective, national criteria for assigning a mine status and implement a system of controls to assure the consistent implementation of these criteria.*

AGREE

We agree with your recommendation, but it is important to note that the existing definitions for mine classification for MNM mines have been in effect for over 30 years. Since I became Assistant Secretary, we have been reviewing policies and procedures to update and improve them. As noted in your report, many mines work intermittently, some less than 1000 hours a year and several less than 200 hours a year. This creates a real challenge for MSHA because it is difficult for inspectors to find these intermittent mines in an operational status when miners are working and potentially exposed to safety and health hazards.

Consistent with our ongoing review of MSHA policies and procedures, MNM began an analysis in February 2011, to develop a plan for determining mine status classification based on objective criteria. As you recognize in your report, this effort began before the

You can now file your MSHA forms online at www.MSHA.gov. It's easy, it's fast, and it saves you money!

OIG audit. MSHA provided the OIG the draft "Mine Status Criteria" for review and appreciates the audit team's feedback on the draft criteria.

MNM is working with MSHA's Program Evaluation and Information Resources (PEIR) Directorate to develop a report (*Mine Status Review Report*) that identifies mine status using these objective criteria. The report will generate a list of mines and display the existing designated mine status as well as the revised status using the objective criteria. MNM senior management will review the report on a quarterly basis to determine appropriate mine status changes.

OIG Recommendation No. 2: *Design and implement procedures to assure that information on all new mines is communicated to the responsible field office in a timely manner.*

AGREE

MSHA is aware of minor issues in MSHA's Standardized Information System (MSIS) associated with mine identification numbers requested by mine operators online and with an internal report to identify mine operators that have not submitted legal identity reports. MNM is currently working with PEIR to correct these issues. Additionally, mines assigned New Mine status will be included in the planned Mine Status Review Report to assure that mines reporting hours will be included. Mines identified as a result of these changes will receive a status change, as appropriate, and be included in inspection calculations.

It is important to note that mines assigned an MSHA identification number may never begin operating or report hours. For example, a mine in the South Central District involved an operator who was unable to obtain financing and never began operation.

OIG Recommendation No. 3: *Examine and implement ways to increase the probability that inspectors will arrive for regular safety and health inspections on days that a mine is operational.*

AGREE

Existing MNM standard, 30 CFR §§56/57.1000 (Notification of commencement of operations and closing of mines) requires mine operators to notify MSHA of their mining operational status, whether temporary or permanent. MSHA will reiterate, to the metal and nonmetal mining community, an operator's responsibility under the existing standard. Many mine operators comply with the standard by contacting the district or field office directly via phone, fax, or mail. MSHA will provide additional alternatives for operators to notify the Agency of operating status changes. One alternative available to mine operators will be a web-based reporting interface. The other alternative will use MSHA's toll free number. This "One Call Does It All" approach will allow a mine

operator to call the toll free number and provide their start-up or shut-down information. A customer service representative at the National Contact Center will receive and process the information. MNM will explore other alternatives to assist the Agency in identifying operating mines, including collaborating with state and local entities. MSHA will conduct outreach activities to make the mining community aware of these alternatives.

OIG Recommendation No. 4: *More clearly and completely report the actual results of its efforts to conduct regular safety and health inspections, including the number of mines that reported miner work hours, but did not receive a regular safety and health inspection.*

AGREE

We believe that our responses to recommendations 1 through 3 help address this recommendation. However, MNM will report the number of completed inspections and the number of attempted inspections in order to present more transparency in the Agency's inspection completion rate.

OIG Recommendation No. 5: *Require supervisors to document their review and acceptance of each regular safety and health inspection report before it is included in MNMS&H's computation of its inspection completion rate.*

AGREE

While we agree with your recommendation, it is important that we clarify how we plan to change our existing procedure to respond to the recommendation.

In accordance with Agency policy and procedures, MNM supervisors review all inspection reports for compliance with policies and procedures; supervisors initial the reports to indicate that the review and inspection was conducted. MNM policy does not require supervisors to review these reports prior to the inspector's upload into the data base. Inspectors are authorized representatives of the Secretary of Labor and journeyman level professionals trained to conduct complete inspections as required by the Mine Act. Upon completion of the inspection, the inspector conducts a close-out conference with the mine operator and miners' representative, as appropriate, to review all enforcement actions. A submitted inspection report documents the inspection and the data are entered into MSIS.

In response to the recommendation of the IG, MSHA will consider inspection data preliminary until the supervisor can validate the inspection report. MSHA is exploring ways to expedite the supervisor's review and final data entry.

We appreciate your acknowledgement that MSHA officials had identified mine status classifications as an issue and have been working for the past 7 months to develop

more objective, data driven criteria for assigning a mine's status. This effort will promote consistency in mine status determinations and allow MSHA to more effectively allocate limited inspection resources.

Although we welcome the independent analysis provided by the OIG, we would like to clarify one statement in your report. The draft report stated that "MNMS&H performs these inspections to protect miner safety and health." Although all of MSHA's activities are taken to protect miner safety and health, Congress gave "mine operators, with the assistance of miners, the primary responsibility to prevent unsafe and unhealthful conditions and practices in mines." We are concerned that your characterization of MSHA's responsibilities may convey the wrong message relative to primary responsibility for miners' safety and health. MSHA cannot be in every mine, every day, on every shift. That is why miners are safest when operators take responsibility for anticipating, recognizing, and eliminating or controlling hazards. Operators cannot wait to correct hazards until after MSHA cites them. Operators' failure to recognize and eliminate or control hazards -- whether MSHA cites them or not -- is what puts miners at risk. A more appropriate statement would be: "MNMS&H performs these inspections to promote safe and healthful workplaces for the Nation's miners."

On page 7 in the second paragraph you identified the Southwest District, which should be corrected as South Central District.

Appendix E

Acknowledgements

Key contributors to this report were Charles Allberry (Audit Director), S. Marisela Sookraj (Audit Manager), Eric Rann, Charmane Miller, Kathleen Mitomi, Cassie Galang, Carmelle Paytes, Mary Lou Casazza, and Ajit Buttar.

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