

Mine Operator Requirements under 30 CFR 56/57.5002

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Topics

- 30 CFR 56/57.5002
- Program Policy Letter
- Procedure Instruction Letter
- Surveys
- Frequency of Surveys
- Evidence of Surveys
- Assistance
- Questions/Discussion

News Release – December 2010

News Release



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Phone: 202-693-9423

MSHA increases focus on implementation of exposure monitoring at metal and nonmetal mines *Operators play important role to ensure miners not overexposed to harmful contaminants*

ARLINGTON, Va. – The U.S. Department of Labor’s Mine Safety and Health Administration today announced an increased focus on exposure monitoring at metal and nonmetal mines throughout the country to ensure better worker protection from overexposure to harmful airborne contaminants. Agency efforts will include stakeholder outreach, education and training, and enhanced implementation of existing standards. In particular, MSHA will focus on 30 Code of Federal Regulations 56.5002 and 57.5002, which require mine operators to conduct dust, gas, mist and fume surveys for harmful airborne contaminants’ fumes to determine the adequacy of control measures. A stakeholder briefing was held today at MSHA headquarters in Arlington, Va., to outline the initiative aimed at reducing illnesses and diseases due to such overexposures, and explain MSHA’s enforcement approach on complying with the standards.

“We want to ensure that miners are protected from overexposure to harmful contaminants and mine operators have required safety and health programs in place to meet that objective,” said Joseph A. Main, assistant secretary of labor for mine safety and health.

“A number of diseases and illnesses can be caused by overexposure to harmful airborne contaminants, including lead poisoning, nervous system damage, lung cancer, asbestosis, lung inflammation and scarring, bronchitis and metal fume fever,” said Dr. Gregory Wagner, deputy assistant secretary for mine safety and health. “Some health conditions can take a long time to develop and may not be apparent at the time of exposure. Exposure monitoring programs to identify unhealthy levels of contaminants are critical to disease prevention.”

In a program policy letter issued in October, MSHA reiterated that mine operators have the primary responsibility for protecting the health of miners and must demonstrate compliance rather than rely on enforcement interventions. By conducting surveys in the workplace to determine the adequacy of exposure controls, miners are much less likely to be affected by the hazardous materials they encounter at work.

“This is a first step that includes a wide variety of industry stakeholder outreach, education, development of training programs and enhanced enforcement of existing standards,” said Main. “We will be working closely with the mining community, national and state mining associations, labor organizations, MSHA’s Small Mines Office and others to implement this initiative. Ultimately, the goal is improved health protection for metal and nonmetal miners, and help for all mine operators to better understand and meet the requirements of this standard.”

A procedure instruction letter has been issued to provide mine inspectors instructions on determining compliance with MSHA’s standards for surface and underground metal and nonmetal mines pertaining to surveys for airborne contaminants required under 30 C.F.R. 56.5002 and 57.5002, available at <http://www.msha.gov/regs/compliance/PILS/2010/PIL10-IV-01.asp>. Mine operator assistance in planning and implementing a system to conduct surveys to determine the adequacy of control measures is available at www.msha.gov/S&HINFO/ExposureGuidance/ExposureGuidance.asp.

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PIL NO.I10-IV-01, Issued 12/10/2011

ISSUE DATE: 12/16/10

EXPIRATION DATE: 03/31/2012

PROCEDURE INSTRUCTION LETTER NO. I10-IV-01

FROM: NEAL H. MERRIFIELD 
Administrator for Metal and Nonmetal
Mine Safety and Health

SUBJECT: Determining compliance under 30 C.F.R. §§ 56.5002 and 57.5002

Scope

This Procedure Instruction Letter (PIL) applies to all Metal and Nonmetal Mine Safety and Health enforcement personnel. This PIL applies to those air contaminants covered under 30 C.F.R. §§ 56/57.5001(a) and (b) and does not apply to standards for radon, diesel particulate matter, or noise since those standards contain specific monitoring requirements.

Purpose

The purpose of this PIL is to provide instructions to inspectors on MSHA's standards for surface and underground metal and nonmetal mines pertaining to surveys for airborne contaminants under 30 C.F.R. §§ 56/57.5002.

Procedure Instructions

Inspectors should consult with their supervisors, the district health specialists, or appropriate personnel from the Division of Health or the Directorate of Technical Support in their review and evaluation of an operator's procedures for conducting surveys.

In reviewing operator procedures for implementing 30 C.F.R. §§ 56/57.5002, inspectors should determine the following:

- (1) Is the operator conducting surveys?

Inspectors should determine if surveys are being or were conducted (e.g. employee knowledge, records, management knowledge, general appearance of the facility). Inspectors should consider any methods used by the operator in determining whether surveys are being conducted.

- (2) If MSHA sampling indicates an overexposure, inspectors should consider the adequacy and frequency of surveys.

30 CFR 56/57.5002, Exposure Monitoring

- “Dust, gas, mist and fume surveys shall be conducted as frequently as necessary to determine the adequacy of control measures”



Questions to answer

- Who conducts surveys?
- What constitutes a survey?
- How frequent is frequent enough?
- How to verify surveys are being conducted?

Program Policy Letter (PPL)

- Issued 10/22/2010 and available at <http://www.msha.gov/REGS/COMPLIAN/PPLMEN.HTM>
- Mine operators have the primary responsibility for protecting the health of miners
 - Conducted by mine operator
 - Conducted by third party
- Mine operators must demonstrate compliance rather than relying on enforcement interventions
- Emphasize:
 - Plan
 - Prevent
 - Protect

Policy

- During MSHA inspections, MSHA inspectors will be evaluating operator activities to verify evidence of surveys and whether those surveys are being conducted frequent enough to ensure adequacy of controls.

Procedure Instruction Letter (PIL)

- Issued 12/16/2010 and available at <http://www.msha.gov/regs/complian/PILS/2010/PIL10-IV-01.asp>
- Provides general instructions for assessing compliance with the requirements of 56/57.5002

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THINK SAFETY

WORK SAFELY

What constitutes a survey?

- The term survey denotes any information collection method that
 - Yields information as to miner exposures
 - Yields information as to the effectiveness of controls
- Trained and knowledgeable persons should conduct surveys

Surveys

- Exposure monitoring
- Workplace inspections
- Inspection of equipment
- Injury, illness, incident tracking and/or reports
- Worker input
- Occupational health assessments
- Other methods

Surveys – (Cont.)

- Some surveys provide a direct measurement of worker exposures and is called Exposure Monitoring.
- Exposure monitoring should be conducted in accordance with established NIOSH, OSHA, or other acceptable sampling and analytical method.

Surveys – (Cont.)

- Workplace inspections can include walk-through visual inspections before and/or during a shift with a focus on observing or identifying potential hazards.
- For example, if workplace inspection reveals that excessive dust is present, then a potential for excessive exposure to respirable dust may be present.

Surveys - (cont.)

- Inspection of Equipment – to ensure such equipment is functioning in accordance with manufacturer specifications.
- This also includes any scheduled and/or routine maintenance of equipment.

Surveys (Cont.)

- Injury, illness, and incident tracking – can also be considered a survey technique for determining the adequacy of controls.
- Employees – can also provide input, incident reporting, safety meetings, etc.
- Occupational Health Assessments – including medical surveillance, wipe samples.

Example of Exposure Monitoring

PERSONNEL AIR MONITORING FIELD LOG

Date : 09/21/2010	Plant / Facility : ██████████ Roof Repair – Asbestos work	Site Location : ██████████
Sampling Conducted By : Ron Knight		Analyte(s) : Asbestos Fiber Count – NIOSH Method 7400A/B (PCM)

Sample #	Pump #	Cassette Serial #	Cassette	Start Time	End Time	Run Time	Average Flow	Volume	Identification Description of Duties	Analytical Results	OSHA-MSHA PEL 8hr-TWA
092110-01	A-1	BQ 766338	0.8u PCM	6:28 a.m.	2:40 p.m.	492 Min.	2.0 LPM	984 Liters	██████████ - Ironworker Removal of existing roof panels west Side of Bldg. at Section #4 B	< 0.0050 f/cc < 0.0080 UCL	0.1 f/cc (f)
092110-02	A-2	BQ 756356	0.8u PCM	6:29 a.m.	2:42 p.m.	493 Min.	2.0 LPM	986 Liters	██████████ - Metal Trades Helper Removal of existing roof panels west Side of Bldg. at Section #4 B	< 0.0050 f/cc < 0.0080 UCL	0.1 f/cc (f)
092110-03	A-3	BQ 756351	0.8u PCM	6:30 a.m.	2:43 p.m.	493 Min.	2.0 LPM	986 Liters	██████████ - Laborer Removal of existing roof panels west Side of Bldg. at Section #4 B	< 0.0050 f/cc < 0.0080 UCL	0.1 f/cc (f)
092110-04	A-4	BQ 756175	0.8u PCM	6:31 a.m.	2:44 p.m.	493 Min.	2.0 LPM	986 Liters	██████████ - Supervisor Removal of existing roof panels west Side of Bldg. at Section #4 B	< 0.0050 f/cc < 0.0080 UCL	0.1 f/cc (f)
092110-05	A-5	BQ 756318	0.8u PCM	6:32 a.m.	2:44 p.m.	492 Min.	2.0 LPM	984 Liters	Area Sample – Section #4 –B monitor placed on I-beam column west of Supervisors Office – 2 nd floor	< 0.0050 f/cc < 0.0080 UCL	0.1 f/cc (f)
092110-06	N/A	BQ 756788	0.8u PCM	-----	-----	-----	N/A	N/A	CONTROL SAMPLE	-----	0.1 f/cc (f)

The following Analytic Results were conducted by Analytics Corporation, the yellow column represents actual results from Personnel Air Monitoring conducted at the above Ashton Project. The Red column represents the established OSHA/MSHA Permissible Exposure Limits (PEL's) for an 8-Hour Time Weighted Average.

Note: All samples were submitted to Analytics Corporation for Asbestos Fiber Count, NIOSH 7400A or B / PCM Analysis
Analytics Corporation is Accredited by the American Industrial Hygiene Association (ACGIH (Lab # 100631).

References: OSHA 1910.1001, MSHA Federal Register 2/14/2008, ACGIH TLV's and BEI, NIOSH, Hazardous Chemicals Desk Reference - 3rd Edition.

How frequent is frequent enough?

- 30 CFR 56/57.5002 does not require specific frequency of surveys
- Mine operator determines frequency based on several factors or triggers.

Conducting annual survey's is generally an accepted practice, other triggers may suggest that more frequent survey's need to be considered.

While these triggers do not necessarily require survey's to be conducted more frequent, they are intended to provide information so the inspector can make a determination on whether or not survey's are being conducted frequent enough to verify the adequacy of controls.

Parameters that impact frequency

- Sampling results and established TLVs (under 30 CFR 56/57.5001)
- Changes in the job
- Changes in the hazard
- Results of inspections and/or routine/special maintenance
- Worker identified issues
- Injury and/or illness reports and/or incidents

Survey Frequency

- Changes in Job – could also trigger frequency. Such changes can include job class, job task, production schedules / rates, increased shifts, personnel changes, equipment changes – additions, modifications.
- Changes in Hazards – Change to production process, added or deleted equipment.

Example: If a S&G Operator increased production from 250TPH to 400TPH and added a scrubber or dust collector. An additional survey and personnel monitoring would be highly recommended.

Sampling Results

- MSHA collects samples to determine compliance with specific TLV under 56/57.5001.
- In addition, operators may also collect exposure samples to determine if they have exposures in excess of the TLVs.
- If either MSHA or operator sampling is close to the established TLV listed in 56/57.5001, then the operator may need to consider more frequent sampling.

Evidence of Surveys

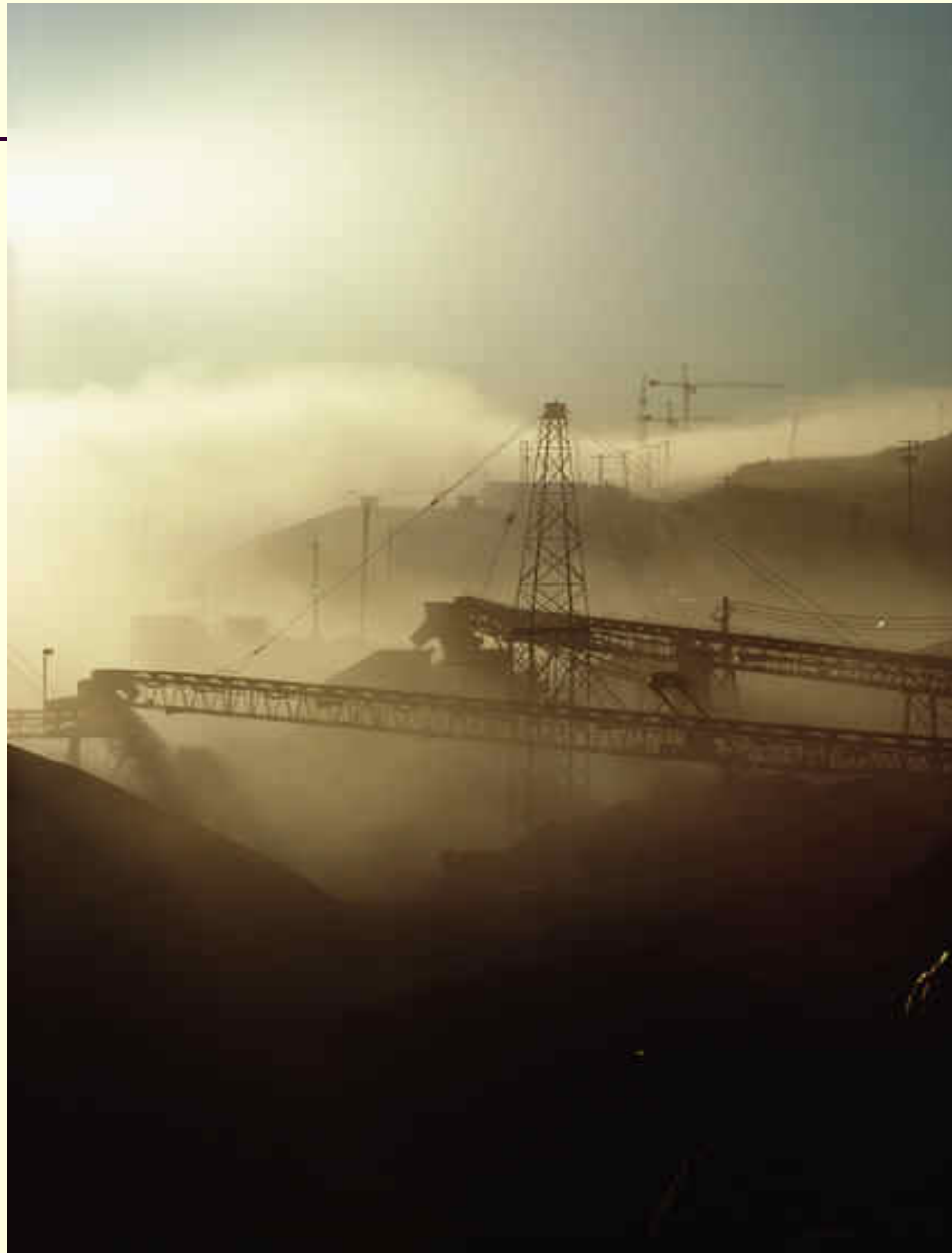
- 30 CFR 56/57.5002 does not specify any record keeping requirements
- Examples of evidence
 - Exposure monitoring records
 - Maintenance records
 - Interviews
 - Visual inspection
 - Other evidence presented by the operator

Evidence of Surveys

- Visual Inspection

Inspectors can determine if surveys are being conducted by the visual appearance of the operation. For example, excessive dust and/or waste can indicate that surveys are not being conducted.

Do you think surveys are being conducted?



Assistance

- MSHA continues to work with stakeholders
- MSHA working with other organizations
 - Training and guidance with focus on small mines
- MSHA Websites
 - <http://www.msha.gov/SiteIndex/MNMSiteIndex.asp>

Health Information

- **Operator Survey Requirements Under 30 CFR 56/57.5002**
 - MSHA Increased Emphasis on Improved Implementation of Surveys at MNM Mines Presentation
 - [Powerpoint Version](#) [PDF Version](#)
 - [Procedure Instruction Letter I10-IV-01](#)
 - [Metal/Nonmetal Operators Exposure Monitoring Requirements Guidance](#)
 - [News Release](#)
- **Noise Exposure**
 - [A Re-Look at Noise Exposure](#)
 - [Health Standards for Occupational Noise Exposure Resources Page](#)
- [Asbestos Single Source Page](#)
- [Health Standards](#)
- [Diesel Particulate](#)
- [Toolbox to Reduce Diesel Exposure](#)
- [IG 103](#) - A Practical Guide to an Occupational Health Program for Respirable Crystalline Silica
- [2010 Metal/Nonmetal Health Sampling Program](#)
- [NIOSH IC 9521](#) - Best Practices for Dust Control in Metal/Nonmetal Mining
- [MNM Health Inspection Procedures Manual](#)

Accident Prevention Tips by Mine Type



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Metal/Nonmetal Operators Exposure Monitoring Requirements Guidance



Consistent with the Secretary's vision of "Good Jobs for Everyone" and her goal for safe and healthful workplaces, MSHA is placing increased emphasis on identifying and controlling health hazards in the mining workplace. In accordance with 30 CFR 56.5002 and 57.5002, MSHA encourages all metal and nonmetal operators to conduct dust, gas, mist and fume surveys as frequently as necessary to determine if their controls are adequately protecting miners. In Agency inspections, MSHA will be evaluating operator activities to verify evidence of surveys. MSHA has placed resources on this website, including "best practices" for dust in Metal and Nonmetal Mines.

MSHA, in its inspection activities, will place an increased emphasis on mine operators' surveying of health hazards. This is a shift from reacting to MSHA's enforcement of overexposures to MSHA enforcement of the mine operators' requirement to conduct health hazard surveys and make appropriate changes to ensure miners are not overexposed to

Quiz!

- Are you ready for a Test?

Is a Survey Required.



What is the Health Hazard ?

Is a survey required?



What is the
Health Hazard?

Is there an exposure here?



Do you think a survey has been conducted?



Best Management Practices



Pre-Watering



Treatment of Haul Roads

Best Management Practices



Spray Bars on Screens, Transfer Points and surge/ stock piles. Housekeeping is also a key to minimizing exposures.

Conclusion

- Questions
- Comments
- Open Discussion