

**U.S. Department of Labor  
Mine Safety and Health Administration  
J. Davitt McAteer  
Assistant Secretary  
December 1997**

## Report Summary

On November 14, 1996, the Secretary of Labor's Advisory Committee on the Elimination of Pneumoconiosis Among Coal Mine Workers submitted its report to the Secretary. The report contained recommendations comprised of more than 100 specific action items related to the federal program to protect miners from coal workers' pneumoconiosis and silicosis. MSHA reviewed each recommendation carefully and prioritized them according to the type of action needed to implement the recommendation and its potential impact on miners' health. This process resulted in five categories of recommendations: (1) those already implemented by existing regulations, policies, and procedures; (2) those that could be implemented through administrative or policy changes; (3) those that require public notice and comment rulemaking; (4) those that require both rulemaking and administrative action; and (5) those that require further review and

consideration by MSHA. As recommended by the Advisory Committee, MSHA is making this report available to the public to share the Agency's progress toward addressing the Advisory Committee's recommendations.

MSHA has made significant progress in implementing the Advisory Committee's recommendations. These include:

- (1) initiating a pilot program to expand federal sampling for respirable coal mine dust and quartz to 75 percent of the nation's coal mines beyond once annually;
- (2) conducting spot inspections on at least a monthly basis at mines identified as having difficulty complying with respirable dust standards;
- (3) initiating a nationwide awareness program on the hazards associated with exposure to excessive levels of respirable coal mine and quartz dust and on ways to prevent occupational lung diseases;
- (4)

revising the criteria used for targeting mines requiring increased health enforcement emphasis; and (5) finalizing federal register notices to enable inspection personnel to make noncompliance determinations based on the results of a single-sample measurement.

The Advisory Committee made a number of recommendations which will require public notice and comment rulemaking. MSHA has begun working first on those proposed regulations that the Agency believes will have the greatest impact on improving miners' health and safety. Specifically, MSHA has begun work to (1) develop a separate permissible exposure

limit for silica; (2) require mine operators to collect samples to verify the adequacy of plan development to control respirable dust; and (3) extend medical testing (chest x-rays only) of underground coal miners to surface miners.

The following table lists each of the Advisory Committee's recommendations, the status of each, and the specific actions MSHA has taken to address the recommendation. For further information regarding MSHA's activities related to the Advisory Committee report, please contact Ronald Schell, Chief, Division of Health, Coal Mine Safety and Health at (703) 235-1358, or at [RSchell@msha.gov](mailto:RSchell@msha.gov).

**Issue I: Permissible Exposure Limits**  
**Issue II: Controls Needed to Comply with Permissible Exposure Limits**

		<b>Recommendation</b>	<b>Status *</b>	<b>Synopses of Agency Actions</b>
No. 1	A	Consider lowering the level of allowable exposure to coal mine dust.	R	MSHA is reviewing the NIOSH Criteria Document which recommends lowering the PEL to less than 1.0 mg/m <sup>3</sup> .
	B	In the interim, develop program to assure compliance with current Permissible Exposure Level (PEL).	C	Expanded MSHA sampling beyond once annually to 75% of nation's coal mines.
			O	Initiated new program involving monthly spot inspections at mines. [12/97]
			O	Revised criteria for identifying mines requiring special health enforcement activity.
			O	Instituted program to analyze inspector low-weight samples for quartz. [4/95]
			O	Distributed 'DataRAM Real-Time Aerosol Monitor' for dust surveillance at surface mines and facilities. [4/97]
			O	Developed & distributed 'Health Hazard Information' cards.
			O	Issued directive & hazard information card re: Performing On-shift Exams. [6/97]
			O	Issued directive re: Maintenance of roof bolter dust controls & scubbers. [6/97]
			C	Issued directive re: Follow-up inspections on samples w/>100 ug/m3 Qtz. [6/97]
			C	Drafted Federal Register notices on use of single samples for noncompliance determinations. [9/97]
			O	Initiated "Silica Awareness Campaign" [11/94] and special emphasis program to eliminate Black Lung. [12/97]
			C	Conducted surface sweep to evaluate compliance w/ new drill dust standard. [4/97]
			C	Issued directive re: Sampling of contractor & construction sites. [6/97]
No. 2	A	Develop & enforce separate PELs for exposure to silica & coal mine dust.	O	Initiated rulemaking on separate silica PEL. [8/97]
	B	Exposure limits for mixtures of silica and coal mine dust.	R	
No. 3	A	Lower silica exposure of miners (comply w/current PEL).	C	See 1B.
				Completed health screening of some 1500 surface miners in PA, WV and OK between 1994 and 1997.
	B	Review adequacy of current PEL for silica.	O	Held staff-level discussions with NIOSH officials re: agency response. [6/97]
	C	Confirm accuracy of silica analytical procedure.	O	MSHA's Pitts. lab received AIHA Industrial Hygiene lab accreditation. [11/97]

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		<b>Recommendation</b>	<b>Status*</b>	<b>Synopses of Agency Actions</b>
No. 4	A	Continue to retain primacy of environmental controls as primary means of maintaining compliance.	C	Required by Mine Act.
No. 5	A	Develop administrative review process for approving plans.	P	Drafted directive re: Procedures for Reviewing, Changing, Evaluating and Approving Respirable Dust Controls Parameters Contained in Underground Coal Mine Ventilation Plans. [11/97] Directive to be issued during 1st qtr. 1998.
				Issued directives re: Respirator protection programs [5/95] and distributed dust control handbooks. [9/97]
	B	Define required range of production levels during plan verification.	O	Require increased production level during sampling as part of new "pilot" program in assessing compliance.
	C	Develop criteria when a plan should be modified & verified.	P	Drafted directive re: Procedures for Reviewing, Changing, Evaluating and Approving Respirable Dust Control Parameters Contained in Underground Coal Mine ventilation Plans. [11/97] Directive to be issued during 1st qtr. 1998.
	D	Require operator to collect samples to verify plan adequacy.	O	Initiated rulemaking to require operators to verify adequacy of plans. [8/97]
	E	Independent MSHA sampling to verify operator's plan.	R	Requires new policy after rulemaking.
	F	Dev. performance requirements for operator monitoring of plan adequacy.	R	
	G	Operator records dust results & dust control parameters & production.	C	Posting of operator dust and associated production data currently required by regulation.
	H	Operator performs on-shift exams & maintains records.	C	Issued directive & hazard information card re: Performing On-shift Exams. [6/97]
	I	Operator to correct deficiencies if not complying w/ventilation plan.	C	Required by regulation. Also issued new directive and hazard information card re: Performing On-shift Exams. [6/97]
	J	Operator review plan adequacy & upgrade to achieve and maintain compliance.	C	Bimonthly samples used by MSHA to verify the continued adequacy of dust control parameters. If samples show noncompliance, MSHA may require the plan to be upgraded. Analysis may also trigger follow-up sampling by MSHA to evaluate plan adequacy.
	K	MSHA reviews recorded data, dust conc., controls in place, & miner input regarding representativeness of controls & production.	C	Required by current inspection procedures, except for miner input.
	L	MSHA examines operational data, dust levels & dust controls in place as part of on-going & 6-month reviews of ventilation plans.	P	Drafted directive re: Procedures for Reviewing, Changing, Evaluating and Approving Respirable Dust Controls Parameters Contained in Underground Coal Mine Ventilation Plans. [11/97] Directive to be issued during 1st qtr. 1998

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		<b>Recommendation</b>	<b>Status*</b>	<b>Synopses of Agency Actions</b>
No. 6		103(f) walk-around rights during MSHA plan reverification.	C	Walk-around rights available if reverification is performed as part of an inspection.
No. 7	A	Specify circumstances when plans are needed for surface operations.	C	Dust control plan required by regulation following abatement of dust violation.
	B	Develop plan parameter guidelines for surface dust control plans.	P	Drafted directive re: Availability of dust controls & practices for surface operations.
	C	Develop process for verification of surface dust control plans.		
		-- by mine operators	R	
		-- by MSHA	P	Drafted directive re: Procedures for reviewing, approving & verifying plans.
	D	Conduct dust surveillance at surface facilities & surface areas of u.g. mines.	O	Dust surveillance being conducted once annually under current policy. Frequency of sampling being expanded to twice annually in six districts under a pilot program.
	E	Require surface dust control plans when dust conc. are at or above ½ the PEL.	R	
	F	Plan should be verified as part of operator's daily inspection requirements of 77.1713.	R	

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### Issue III: Sampling Practices

		<b>Recommendation</b>	<b>Status*</b>	<b>Synopses of Agency Actions</b>
No. 8	A	Complete R&D on continuous dust monitor & verify reliability of technology. The continuous monitor will provide a constant read-out of the dust levels to which miners are exposed in every mine.	O	Prototype tested in an u.g. mine in November 1996. Results were used to finalize design of production unit. Developed protocol for in-mine study and solicited input from labor & industry. First production unit currently undergoing performance evaluation in NIOSH. Efforts underway to secure industry cooperation for in-mine study.
	B	Once verified, use monitor for surveillance & for dust control evaluation.	O	Monitor use to depend on results of in-mine study.
	C	MSHA should use monitor data to assess operator compliance efforts.	R	
	D	MSHA should consider use of monitor data directly in compliance.	R	
	E	Expedite development & field tests of a continuous personal dust monitor.	O	Requested NIOSH to expedite R&D effort. NIOSH is exploring various development options and identifying performance criteria, as well as cost-sharing options with industry and other federal agencies.
No. 15		MSHA reliance on sampling for compliance to be based on appropriate balance of personal, occupational & environmental sampling.	C	Provided for by current inspection procedures & regulations.
No. 16	A1	MSHA should adjust PELs to account for extended work weeks.	R	
	A2	MSHA should develop a formal mechanism to target problem mines for more frequent sampling.	C	Revised criteria in January and December 1997, for identifying mines requiring special health enforcement activity under the "Health Standards Compliance" program.
	A3	Explore ways to enhance MSHA presence for compliance sampling.	O	Expanded "pilot" program to six districts (or 75 % of the Nations mines) to evaluate feasibility of increasing MSHA sampling from once annually to 4X-underground & 2X-surface mines.
				Instituted improved targeting program & spot inspections, thereby increasing inspector presence.
	A4	Modify dust data card to record operator control parameters at time of sampling.	R	
	A5	MSHA should compare actual vs. plan parameters when reviewing results of each compliance inspection.	C	Procedures in effect since the 80's require the inspector to compare actual vs. plan parameters and resulting dust concentrations. Additional guidance to be provided in revised inspection procedures handbook to be issued in early 1998.
	A6	Revise sampling flow rate to be consistent w/ international standards.	R	
	A7	Identify miner wearing sampler unit on the dust data card.	R	
	A8	All dust sampling technology be designed tamper-resistant.	C	Inspectors began using pumps w/ elapsed time counter & redesigned cassettes in December 1992.

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		<b>Recommendation</b>	<b>Status*</b>	<b>Synopses of Agency Actions</b>
A9		Develop education & training materials on need to maintain sampling equipment in a tamperproof state & consequences for failure to do so.	O	Course materials, "Industrial Hygiene: Respirable Coal Dust and Silica Sampling" and "Control-Coal Refresher Training" are currently being developed to address all aspects of sampling, including penalties associated with tampering with samples and/or equipment. This material will be available for MSHA and industry training in March 1998.
B		Operator funding of MSHA takeover of all compliance sampling.	O	Held staff-level discussions w/Solicitor's Office (SOL) re: legal issues. [6/97]
C1		MSHA conduct all compliance sampling at present operator & MSHA frequency.	O	Developed draft protocol to assess cost of operator compliance sampling. [5/97]
C2		In interim, operator sampling should continue with improvements.	C	Continuing program of screening samples to identify & void suspect opr. samples. Began using in 1993 new cassettes w/ tamper-resistant features.
				Instituted monitoring inspections in the fall of 1991 to observe operator sampling at 25% of the u.g. mines. Approximately 50% of the u.g. mines, or twice as many as required, were monitored during FY 1997.
				New sampling pumps equipped with elapsed-time counter. First generation of these pumps were introduced in December 1992. Currently, the only pump approved for use in coal mines that is available for purchase is equipped with a digital elapsed time indicator.
D1		MSHA should increase number of samples collected to determine compliance.	O	Expanded "pilot" program to six districts (or 75 % of the Nations mines) to evaluate feasibility of increasing MSHA sampling from once annually to 4X-underground & 2X-surface mines.
				Instituted improved targeting program & spot inspections, thereby increasing inspector presence.
D2		MSHA should use single, full-shift samples to determine compliance.	P	Finalized single-sample notices. [9/97]
E		Make no upward adjust. of PEL to account for measurement uncertainty.	C	Agency adopted upward adjustment on technical & legal basis. [9/97]
F		Revise process for investigating submission of unrepresentative dust samples.	P	Drafted directive re: Program to monitor & evaluate operator dust sampling. [6/97]
G1		Operators should continue compliance sampling of DOs, DWPs & DAs.	C	Required by regulations (30 CFR Part 70, 71, & 90).
G2		Mine operators should sample as part of plan verification.	R	Initiated rulemaking to require operators to verify adequacy of plans. [8/97]
G3		Operator surface sampling increased to bimonthly as in u.g. mines.	R	
G4		Operators should sample for purposes other than compliance.	C	Provided for in current regulation if reported to MSHA. Such sampling has been conducted by operators since 1980 and continues today for evaluating controls and for comparing with MSHA sampling results.
				MSA has agreed to make available a cassette that differs in appearance thus eliminating the need to comply w/ reporting requirements of 70.209(d). MSHA will notify industry when such are available for purchase, which is anticipated to be early 1998.

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		<b>Recommendation</b>	<b>Status*</b>	<b>Synopses of Agency Actions</b>
	G5	Continue to require sampling over multiple shifts to abate citations.	C	Required by regulations.
	H	More MSHA oversight of operator sampling & auditing of program.	C	Required by inspection procedures. Operator samples currently being screened.
	I1	Compliance samples valid only if taken on a "normal production shift" (90% of last 30-prod. shift average).	R	
	I2	MSHA should require operators to maintain production records.	R	
	J	Adjust PELs to account for extended work shifts.	R	

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		<b>Recommendation</b>	<b>Status*</b>	<b>Synopses of Agency Actions</b>
No. 17		Use continuous dust control parameter monitor to evaluate & assess quality of dust controls as part of mine dust control plans.	R	On-site exam regulation provides for use of such monitors.
No. 19	A	Miners' representative participate w/no loss in pay, in operator compliance sampling.	O	Held staff-level discussions w/ SOL re: legal issues.
	B1	Miners' representative participation, w/no loss in pay, in operator plan verification.	O	Held staff-level discussions w/ SOL: re: legal issues.
	B2	Participation, w/no loss in pay, in activities involving the continuous monitor.	O	Held staff-level discussions w/ SOL re: legal issues.
	C	Miners' representative receive training & sampling certification paid by the operator.	O	Held staff-level discussions w/ SOL re: legal issues.
	D	Inform miners of work activities & dust levels on sampling days.	R	Note: Operator sampling results required to be posted under current regulations. Nineteen citations have been issued to operators in the past two years for failure to post sampling results.
	E1	Miners being sampled should receive from operator, data on their dust exposure along with information on sampling activities, dust parameters & production.	R	Note: Operator sampling results and production during sampling required to be posted. Other reporting requirements require rulemaking.
	E2	Posting of sampling data on mine bulletin board.	C	[Required by regulations]. Nineteen citations have been issued to operators in the past two years for failure to post sampling results.
		Posting of dust control parameter data on mine bulletin board.	R	Posting of parameters in place on day of operator bi-monthly sampling is not required to be reported or posted under current regulations.
	F	MSHA should audit & target mines w/no miner's representative for compliance sampling.	O	Criteria developed to identify problem mines being incorporated in a new national health data base for use by management & enforcement personnel.

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### Issue IV: Medical Surveillance

		<b>Recommendation</b>	<b>Status*</b>	<b>Synopses of Agency Actions</b>
No. 9	A	Require periodic collection of spirometry & questionnaire data.	R	
	B	NIOSH should share medical surveillance results w/MSHA.	C	Information being provided under an informal agreement with NIOSH.
	C	NIOSH should develop plan to determine which cases require follow-up.	O	Held staff-level discussions with NIOSH representatives re: Agency response.
	D	MSHA examine effectiveness of controls at mines w/new cases.	O	Initiated staff-level discussions of possible response strategies.
	E	Miners w/abnormal results may benefit from -- secondary prevention efforts and -- appropriate education re: nature of mining-related lung diseases.	O	Held staff-level discussions with NIOSH representatives re: Agency response.
	F	Extend medical testing of u.g. miners to surface miners.	O	Initiated rulemaking. [8/97]
No. 10	A	NIOSH oversee medical exams to achieve 85% participation rate.	O	Drafted directive re: Participation in periodic medical examination program. [6/97] Developed proposed media plan to promote participation in medical exams. [6/97]
	B	Frequency of periodic medical exams per NIOSH Criteria Document.	O	Held staff-level discussions with NIOSH representatives re: Agency response. [6/97]
	C	NIOSH should specify performance standards for medical tests, collect & analyze medical results, identify & investigate w/MSHA "hot spots."	O	Held staff-level discussions with NIOSH representatives re: Agency response. [7/97]
	D	MSHA should mandate operator medical examination programs.	C	Required by regulation in 42 CFR Part 37 Drafted directive re: Inspection procedures for assessing compliance w/ regulations.
	E	MSHA should supply exposure & employment data to NIOSH.	C	Instituted process for annual download of required data by NIOSH. [7/97]
	F	Mine operators should pay for mandated medical testing.	C	Required for u.g. miners by sec. 203 (c) of the Mine Act.
	G	Improve miner participation by easier access to exams, effectiveness, education, timely notification of results, & maintain confidentiality.	O	To improve miner participation, notification of periodic medical exams mailed directly to miners' residence by NIOSH.
	H	Promote the development of effective & accurate exposure classification.	O	Held staff-level discussions with NIOSH representatives re: Agency response.
	I	NIOSH should develop program to track & test former miners.	O	Held staff-level discussions with NIOSH representatives re: Agency response.
No. 11	A	Part 90 program should be evaluated to determine its effectiveness.	O	Held staff-level discussions with NIOSH representatives re: Agency response.
	B	Results of evaluation should be presented to an advisory committee.	O	Agency decision pending outcome of program evaluation.
No. 14	A	Protect construction workers, contract drillers & other workers.	O	Issued directive re: Sampling of contractors, construction sites and other employees.
	B	Expand medical surveillance & prevention research to contract workers.	P	Developed strategies for protecting the health of contractor employees.
	C	Assist OSHA to bring similar attention to exploratory drillers.	O	Established initial OSHA contacts.

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### Issue V: Training and Education

		<b>Recommendation</b>	<b>Status*</b>	<b>Synopses of Agency Actions</b>
No. 12	A	Training programs should be structured & staffed to carry out education & training functions related to dust control issues.	O	Identified specific education & training actions for Agency's consideration.
			O	Distributed pocket card on miner rights & operator obligations during nationwide sweep. [12/97]
	B	Evaluate content, duration, adequacy & method of training for each content area and if required, restructure or expand program.	O	Drafted directive re: Participation in periodic medical examination program. [6/97]
				Developed proposed media plan to promote participation in medical exams. [6/97]
	C	Study need for specific training programs for operators/supervisors.	O	Held staff-level discussions in July 1997 to identify topics to be incorporated in a new course whose development is currently under HQ review.
	D	MSHA personnel receive same dust education & training as miners/supervisors.	O	Course materials, "Industrial Hygiene: Respirable Coal Dust and Silica Sampling" and "Control-Coal Refresher Training" currently under development. Course materials to be available for MSHA and industry training in March 1998.
	E.	All affected miners & supervisors to be educated on any plan changes.	C	Issued directive & hazard info. card re: Performing On-shift Exams. [6/97]
	F	Certified trainers should use resulting education & training programs for training miners and operators.	O	Drafted directive re: Participation in periodic medical examination program. [6/97]
				Developed proposed media plan to promote participation in medical exams. [6/97]
	G	MSHA serve as resource for training materials for certified trainers.	C	Mining Academy serves as clearing house for training materials.
	H	Expand role of inspectors to improve operator & miner understanding of role of enforcement activities in control of dust & disease.	P	Drafted directive re: Use of inspectors to control dust & disease.
				Drafted pocket card to assist inspectors in discussions w/miners.
	I	Review, revise, & update dust sampling training & certification program.	R	
	J	Require annual update training for certification & maintenance.	R	
	K	Retrain/decertify if certified person fails to perform duties properly.	C	Procedures instituted to insure accurate operator samples.
<b>Status Codes: C - Effort(s) to address recommendation completed. P - Effort(s) completed but review &amp; approval pending. O - Effort(s) ongoing.  R - Requires rulemaking.</b>				

### Issue VI: Hazard Surveillance

		<b>Recommendation</b>	<b>Status</b>	<b>Synopses of Agency Actions</b>
No. 13	A	Developed hazard surveillance guides for operator in maintaining and improving controls.	O	Identified possible approaches for developing an MSHA surveillance program.
	B	Develop hazard surveillance guides for evaluating ventilation plan parameters.	O	Program based on MSHA data & operator bimonthly samples.
<b>Status Codes: C - Effort(s) to address recommendation completed. P - Effort(s) completed but review &amp; approval pending. O - Effort(s) ongoing. R - Requires rulemaking.</b>				

### Issue VII: Research Needs

Recommendation No. 18, which addresses the submission of an interim and final progress report, has been omitted from the table.