

SUPPORTING STATEMENT

Safety Standards for Roof Bolts in Metal and Nonmetal Mines and Underground Coal Mines

A. Justification

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.

Accidents involving falls of roof, face, and rib in underground mines or falls of highwall in surface mines, historically, have been among the leading causes of injuries and deaths. Prevention or control of falls of roof, face, and rib is uniquely difficult because of the variety of conditions encountered in mines that can affect the stability of various types of strata and the changing nature of the forces affecting ground stability at any given operation at any given time. Roof and rock bolts and accessories are an integral part of ground control systems and are used to prevent the fall of roof, face, and rib. Advancements in technology of roof and rock bolts and accessories have aided in reducing the hazards associated with falls of roof, face, and rib.

The American Society for Testing and Materials (ASTM) publication "Standard Specification for Roof and Rock Bolts and Accessories" is a consensus standard used throughout the United States. It contains specifications for the chemical, mechanical, and dimensional requirements for roof and rock bolts and accessories used for ground support systems. The ASTM standard for roof and rock bolts and accessories is updated periodically to reflect advances in technology. MSHA published a final rule on April 28, 1998, replacing the references to outdated ASTM F432-83 and ASTM F432-88 with a new reference to ASTM F432-95.

Title 30 Code of Federal Regulations (30 CFR), Parts 56 and 57 Subpart B-Ground Control, 56.3203 and 57.3203, and Part 75 Subpart C-Roof Support, 75.204, address the quality of roof and rock bolts and accessories and their installation. MSHA's objective in these regulations is to ensure the quality and effectiveness of roof and rock bolts and accessories and, as technology evolves, to allow for the use of new materials which are proven to be reliable and effective in controlling the mine roof, face, and rib.

56.3203(a), 57.3203(a), and 75.204(a) require: (1) that mine operators obtain a certification from the manufacturer that roof and rock bolts and accessories are manufactured and tested in accordance with the applicable ASTM specifications, and (2) that the manufacturer's certification is made available to an authorized representative of the Secretary. MSHA has found that the certification requirement has been successful in maintaining compliance with requirements for roof and rock bolts and accessories. Collections of such information are authorized under Section 103(h) of the Federal Mine Safety and Health Act of 1977 (Mine Act).

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

The manufacturer's certification assures mine operators that the material they use meets technical requirements established to promote safety and eliminates the concern that mine operators need to have the same engineering knowledge of the ASTM standard as manufacturers. The certifications also are made available to an authorized representative of the Secretary to attest to the appropriate testing and manufacture of the rock bolts and accessories.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.

No improved information technology has been identified that would reduce the burden. However, in order to comply with the Government Paperwork Elimination Act, mine operators may submit the plan to MSHA electronically and retain the records in whatever method they chose. This may include utilizing computer technology. The regulation does not include any specifications with respect to the use of electronic technology for record storage.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.

No similar or duplicate information exists. The certifications are a result of the purchase of roof or rock bolts and accessories from a specific manufacturer by the mine operator. Whereas a single mine operator may collect unique certification statements from each roof and rock bolt manufacturer, the manufacturers are able to use the same certification statement for all mine operators purchasing their products.

5. If the collection of information impacts small businesses or other small entities (Item 5 of OMB Form 83-I), describe any methods used to minimize burden.

The provisions of the Mine Act and MSHA regulations apply to all operations because accidents, injuries, and illnesses can occur at any mine regardless of size. Congress intended that the law be enforced at all mining operations within its jurisdiction, regardless of size, and that information collection and recordkeeping requirements be consistent with efficient and effective enforcement of the Mine Act (S. Rep. 181, 95th Cong., 1st Sess. 28 (1977)). Congress recognized, however, that small operations may face problems in complying with some of the provisions of the Mine Act. Section 103(e) of the Mine Act directs the Secretary of Labor not to impose an unreasonable burden on small businesses in obtaining any information under the Mine Act. Accordingly, MSHA takes this into consideration when developing regulatory requirements and, when appropriate and consistent with assuring the health and safety of this nation's miners, different requirements for small and large mines exist. To provide distinct information collection requirements for small mines in the regulation at hand, however, would not promote the Mine Act's objectives because the information collection burden already has been

reduced to as little as possible without compromising the safety of miners. This information collection does not have a significant impact on a substantial number of small entities.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

MSHA believes that these information collection requirements are the minimum necessary to ensure that mine roof, face, and rib are adequately supported and that ground control systems are effective. Reduction in these requirements may result in unsafe conditions developing in the mine, thus jeopardizing miners. Section 101(a)(9) of the Mine Act forbids the Agency to reduce the protection given miners by any existing regulation.

MSHA's existing regulations require mine operators to obtain a certification from the manufacturer that rock bolts and accessories are manufactured and tested in accordance with the applicable ASTM standard or, as an alternative for roof and rock bolts and accessories not addressed in the ASTM standard, to show that they have been successful in supporting the roof, face, or rib under similar ground strata, dimensions, and stresses.

7. Explain any special circumstances that would cause an information collection to be conducted in a manner:

- ❖ **requiring respondents to report information to the agency more often than quarterly;**
- ❖ **requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;**
- ❖ **requiring respondents to submit more than an original and two copies of any document;**
- ❖ **requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records for more than three years;**
- ❖ **in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;**
- ❖ **requiring the use of a statistical data classification that has not been reviewed and approved by OMB;**
- ❖ **that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or**

- ❖ **requiring respondents to submit proprietary trade secret, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.**

The information collection is consistent with the requirements in 5 CFR 1320.5.

8. If applicable, provide a copy and identify the data and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8(d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden.

Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every 3 years -- even if the collection of information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.

MSHA will publish a 60-day pre-clearance FEDERAL REGISTER notice, soliciting public comments regarding the reinstatement of this information collection.

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

MSHA has decided not to provide payments or gifts to respondents.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.

There is no assurance of confidentiality provided to respondents.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.

There are no questions of a sensitive nature.

12. Provide estimates of the hour burden of the collection of information. The statement should:

- ❖ **Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should**

not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices.

- ❖ If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens in Item 13 of OMB Form 83-I.
- ❖ Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included in Item 14.

30 CFR 56.3203(a)(1), 57.3203(a)(1), and 75.204(a)(1) require mine operators to obtain a manufacturer's certification that the material was manufactured and tested in accordance with the specifications of ASTM.

In general, the manufacturers of roof and rock bolts and accessories provide certification documents with each shipment of those items to mine operators or to vendors of their products. In some instances the certifications may be packed in the shipment; in other instances the certification documents may be sent with the billing or as a separate communications to the purchaser. In most, if not all cases, the manufacturers certifications are not signed. Therefore, the burden experienced in acquiring certification documents is minimal.

Similarly, the certification documents are required to be available for examination by authorized representatives of the Secretary and representative of miners. They are usually only reviewed when a new appliance is being introduced into the mine or an anomalous condition is observed which raises questions about the design of the appliance in use. As a consequence, the number of instances (responses) for receiving and filing certification documents and the number of instances those documents are examined by MSHA inspectors or miners representatives will vary greatly with the size of the mine and the rate at which the appliances are consumed and repurchased. MSHA has provided estimates of the number of responses consistent with and for each of the mine types and standards.

MSHA estimates that it takes about three minutes (0.05 hour) to obtain and file a certification form. The hourly wage for a supervisor is about \$44.93 per hour in metal and nonmetal mines and \$54.92 per hour in coal mines (based on figures from the U.S. Coal Mine and Metal and Mineral Industrial Mine Salaries, Wages, & Benefits Survey Results).

M/NM Surface Mines

MSHA estimates that about 20 metal and nonmetal surface mines obtain two certifications annually. In addition, mine operators show these certifications to authorized representatives twice a year.

Time to obtain certification, file certification, and show certification to authorized representative

$$20 \text{ mines} \times 2 \text{ times a year} \times 0.05 \text{ hour/mine} = 2 \text{ hours}$$

Cost to obtain certification , file certification, and show certification to authorized representative
 2 hours x \$44.93/hour = \$ 90

Metal and nonmetal Underground Mines

MSHA estimates that about 180 metal and nonmetal underground mines obtain four certifications annually and that they show these certifications to authorized representatives four times per year.

Time to obtain certification, file certification, and show certification to authorized representative
 180 mines x 4 times/yr 0.05 hour/mine = 36 hours

Cost to obtain certification, file certification, and show certification to authorized representative
 36 hours x \$44.93/hour = \$1,617

Coal Underground Mines

MSHA estimates that in 2001 about 893 underground coal mines obtain four certifications annually and that they show these certifications to authorized representatives four times per year.

Time to obtain certification, file certification, and show certification to authorized representative
 893 mines x 4 times/yr x 0.05 hour/mine = 179 hours

Cost to obtain certification, file certification, and show certification to authorized representative
 179 hours x \$54.92 = \$ 9,831

Mine Type	Respon- dents Last Rpt	Responses Last Rpt	Hrs Last Rpt	Costs Last Rpt	Respon- dents This Rpt	Responses This Rpt	Hrs. per Response	Hrs This Rpt	Total Cost
M/NM Surface	252	40	50.4	\$2,308	20	40	0.05	2	\$90
M/NM Uground	190	720	76	\$1,617	180	720	0.05	36	\$1,617
Coal Uground	761	6,088	304.4	\$15,972	893	3,572	0.05	179	\$9,831
	1,203	8,616	430.8	\$19,897	1,093	4,332		217	\$11,538

13. Provide an estimate of the total annual cost burden to respondents or recordkeepers resulting from the collection of information. (Do not include the cost of any hour burden shown in Items 12 and 14).

- ❖ **The cost estimate should be split into two components: (a) a total capital and start-up cost component (annualized over its expected useful life); and (b) a total operation and maintenance and purchase of services component. The estimates should take into account costs associated with generating, maintaining, and disclosing or providing the information. Include descriptions of methods used to estimate major cost factors**

including system and technology acquisition, expected useful life of capital equipment, the discount rate(s), and the time period over which costs will be incurred. Capital and start-up costs include, among other items, preparations for collecting information such as purchasing computers and software; monitoring, sampling, drilling and testing equipment; and record storage facilities.

- ❖ If cost estimates are expected to vary widely, agencies should present ranges of cost burdens and explain the reasons for the variance. The cost of purchasing or contracting out information collection services should be a part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondents (fewer than 10), utilize the 60-day pre-OMB submission public comment process and use existing economic or regulatory impact analysis associated with the rulemaking containing the information collection, as appropriate.
- ❖ Generally, estimates should not include purchases of equipment or services, or portions thereof, made: (1) prior to October 1, 1995, (2) to achieve regulatory compliance with requirements not associated with the information collection, (3) for reasons other than to provide information or keep records for the government, or (4) as part of customary and usual business or private practices.

MSHA does not anticipate that there will be any costs associated with this information collection other than those designated under number 12 above.

14. Provide estimates of annualized cost to the Federal government. Also, provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff), and any other expense that would not have been incurred without this collection of information. Agencies also may aggregate cost estimates from Items 12, 13, and 14 in a single table.

The inspecting of roof and rock bolts is just one aspect of a mine inspection. Complete inspections are required under § 103(a) of the Mine Act 4 times per year for underground mines and 2 times per year for surface mines. The review of the manufacturer’s certification is estimated to take about 3 minutes (0.05 hour) per mine per inspection. The average grade and salary of an inspector is GS 12/5 at about \$27.13 per hour.

The recurring cost to the Federal Government is estimated to be:

M/NM Surface Mines

$$20 \text{ mines} \times 2 \text{ inspections/year} \times 0.05 \text{ hour/inspection} \times \$27.13/\text{hour} = \$ 54$$

M/NM Underground Mines

$$180 \text{ mines} \times 4 \text{ inspection/year} \times 0.05 \text{ hour/inspection} \times \$27.13/\text{hour} = \$ 977$$

Coal Underground Mines

893 mines x 4 inspection/year x 0.05 hour/inspection x \$27.13/hour	=	
		\$4,845
Total Costs for Mine Inspectors	=	\$5,876

15. Explain the reasons for any program changes or adjustments reporting in Items 13 or 14 of the OMB Form 83-I.

Respondents: There has been a decrease of 110 Respondents (1,203 to 1,093). This is due to the decrease in the number of surface metal and nonmetal mines utilizing rock bolts.

Responses: There has been a decrease of 4,284 Responses (8,616 to 4,332). This is due in part from the decrease in the number of Respondents and in large part due to an error in calculation. For example, although the last report stated that the mine operator showed the certifications to authorized representatives twice a year, the actual calculations doubled that number, i.e. four times per year.

Hours: There has been a 214 hours decrease (431 to 217). This is a direct result of the error explained above.

Costs: The cost has remained unchanged at \$0.

16. For collections of information whose results will be published, outline plans for tabulation, and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

MSHA does not intend to publish the results of this information collection.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

There are no forms associated with this information collection.

18. Explain each exception to the certification statement identified in Item 19, "Certification for Paperwork Reduction Act Submission," of OMB 83-I.

There are no certification exceptions identified with this information collection.