

SUPPORTING STATEMENT SAFETY STANDARDS FOR ROOF BOLTS IN
METAL AND NONMETAL MINES AND UNDERGROUND COAL MINES

This Information Collection Request (ICR) seeks to extend, without change, a currently approved information collection.

Collection Instruments/Form Number(s): None

Authority: 30 CFR

<u>Citations</u>	<u>Title</u>
56.3203	Rock fixtures
57.3203	Rock fixtures
75.204(a)(1) and (f)(6)	Roof bolting

General Instructions

A Supporting Statement, including the text of the notice to the public required by 5 CFR 1320.5(a)(i)(iv) and its actual or estimated date of publication in the *Federal Register*, must accompany each request for approval of a collection of information. The Supporting Statement must be prepared in the format described below, and must contain the information specified in Section A below. If an item is not applicable, provide a brief explanation. When the question “Does this ICR contain surveys, censuses or employ statistical methods” is checked "Yes", Section B of the Supporting Statement must be completed. OMB reserves the right to require the submission of additional information with respect to any request for approval.

Specific Instructions

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.

Section 103(h) of the Federal Mine Safety and Health Act of 1977 (Mine Act), 30 U.S.C. 813(h), authorizes the Mine Safety and Health Administration (MSHA) to collect information necessary

to carry out its duty in protecting the safety and health of miners. Further, section 101(a) of the Mine Act, 30 U.S.C. 811, authorizes the Secretary of Labor (Secretary) to develop, promulgate, and revise as may be appropriate, improved mandatory health or safety standards for the protection of life and prevention of injuries in coal and metal and nonmetal (M/NM) mines.

Accidents involving falls of mine 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 and time. Roof and rock bolts and accessories are integral parts of ground control systems and are used to prevent the fall of roof, face, and rib. Advancements in the 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.

Title 30 CFR parts 56 and 57 Subpart B-Ground Control, sections 56.3203 and 57.3203, and part 75 Subpart C-Roof Support, section 75.204, address the quality of roof and rock bolts and accessories and their installation. These regulations 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.

Sections 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.

Sections 56.3203(h) and 57.3203(h) require that if the mine operator uses other tensioned and non-tensioned fixtures and accessories for ground control that are not addressed by the applicable ASTM standard listed in sections 56.3203(a) and 57.3203(a), test methods must be established by the mine operator and used to verify their ground control effectiveness. Sections 56.3203(i) and 57.3203(i) require the mine operator to certify that the tests developed under sections 56.3203(h) and 57.3203(h) were conducted and such certifications be made available to an authorized representative of the Secretary.

Section 75.204(f)(6) requires that the mine operator or a person designated by the operator certify by signature and date that the measurements required by paragraph (f)(5) of this section have been made. Paragraph (f)(5) requires that in working places from which coal is produced during any portion of a 24-hour period, the actual torque or tension on at least 1 out of every 10 previously installed mechanically anchored tensioned roof bolts is measured from the outby corner of the last open crosscut to the face in each advancing section. This certification must be

maintained for at least 1 year and must be made available to an authorized representative of the Secretary and representative of miners. The certification requirements are necessary to ensure compliance with the requirements for roof and rock bolts and accessories.

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 roof and 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.

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 A.2 above.

No similar or duplicate information exists. The certifications are a result of the purchase of roof and rock bolts and accessories from specific manufacturers 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. The section 75.204(f)(6) certification of torque measurements taken under section 75.204(f)(5) are unique to each mine.

5. If the collection of information impacts small businesses or other small entities, describe any methods used to minimize burden.

This information does not have a significant impact on small businesses or other 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' safety.

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 secrets, 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 date 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 published a 60-day *Federal Register* notice on August 31, 2021 (86 FR 48768). MSHA received no public comments.

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

MSHA does not 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.**

*** 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 under Item 13.**

All information related to quantities and inspection rates are estimated by MSHA's Headquarters Enforcement Division based on field experience with different types of mining operations, sizes of mines, and the frequency of inspections dictated by statute. Mine operators provide MSHA Headquarters Enforcement Division the number of mines and employment, and from this

information MSHA tracks the number of active and inactive mines and mine types throughout the United States.

Annual burden hours and related costs calculations are shown below. MSHA used data from the May 2020 Occupational Employment and Wage Statistics (OEWS) published by the Bureau of Labor Statistics (BLS) for hourly wage rates¹ and adjusted the rates for benefits² and wage inflation³.

Sections 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 F432-95. Sections 56.3203(h) and 57.3203(h) allow mine operators to use other tensioned and non-tensioned fixtures as long as test methods are established to verify their effectiveness. Certification of these tests are required under sections 56.3203(i) and 57.3203(i). Metal and Nonmetal mine operators have not exercised this option and use exclusively ASTM-compliant materials.

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 communication to the purchaser. In most, if not all cases, the manufacturer provides the required certifications at the time of shipment; 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 reviewed when a new rock bolting appliance or accessory 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 Headquarters Enforcement Division has provided estimates of the number of responses consistent with each of the mine types and

¹ Options for obtaining OEWS data are available at item "E3. How to get OEWS data. What are the different ways to obtain OEWS estimates from this website?" at https://www.bls.gov/oes/oes_ques.htm.

² The benefit-scaler comes from BLS Employer Costs for Employee Compensation access by menu <http://www.bls.gov/data/> or directly with <http://download.bls.gov/pub/time.series/cm/cm.data.0.Current>. The data series CMU2030000405000P, Private Industry Total benefits for Construction, extraction, farming, fishing, and forestry occupations, is divided by 100 to convert to a decimal value. MSHA used the latest 4-quarter moving average 2020 Qtr2-2021 Qtr1 to determine that 33.05 percent of total loaded wages are benefits. MSHA computes the scaling factor with a number of detailed calculations but it may be approximated with the formula and values $1 + (\text{benefit percentage}/(1-\text{benefit percentage})) = 1 + (.331)/(1-.331) = 1.49$.

³ Wage inflation is the change in Series ID: CIS2020000405000I; Seasonally adjusted; Series Title: Wages and salaries for Private industry workers in Construction, extraction, farming, fishing, and forestry occupations, Index. (<https://data.bls.gov/cgi-bin/srgate>); Qtr 1 2021/Qtr 1 2020; $142.4/140.20=1.016$)

standards.

Complete inspections are required under section 103(a) of the Mine Act four times per year for underground mines and two times per year for surface mines. MSHA estimates that it takes about three minutes to obtain, file, and show a certification form. For all calculations for question 12 MSHA summed the fractional hours and costs and then rounded at the grand total level.

Section 56.3203(a)(1) and (a)(2), MNM Surface Mines

MSHA estimates that in 2020 1 MNM surface mine obtains two certifications annually. In addition, the mine supervisor shows these certifications to authorized representatives twice a year. The wage rate⁴ for the mine supervisor is \$55.01.

Section 57.3203(a)(1) and (a)(2), MNM Underground Mines

MSHA estimates that in 2020 about 196 MNM underground mines obtained four certifications annually and that they showed these certifications to authorized representatives four times per year.

Section 75.204(a)(1) and (a)(2), Underground Coal Mines

MSHA estimates that in 2020 about 148 underground coal mines obtained four certifications annually and that they showed these certifications to authorized representatives four times per year. The wage rate for the mine supervisor⁵ is \$61.44.

Section 75.204(f)(6), Underground Coal Mines

Section 75.204(f)(6) requires that the mine operator or a person designated by the operator certify by signature and date that the measurements required by paragraph (f)(5) of this section have been made. In 2020, the average number of active producing underground coal mines over a 12 month period was 148. The average number of days per year these mines operated was 285. MSHA estimates that a person, designated by the operator, earning a mine operator's wage rate of \$82.04 per hour would take 30 seconds to certify by signature and date that the required inspection was done. The wage rate⁶ for the mine operator is \$82.04.

⁴ For MNM mines supervisor, MSHA used the employment weighted average of the rates for supervisors and managers SOCs code 47-1011, 49-1011, 51-1011, and 53-1048 from the BLS May 2020 OEWS data for NAICS codes 212200 and 212300. Weighted average rate \$55.01 = \$36.34 x 1.49 benefit adjustment x 1.016 inflation adjustment.

⁵ For Coal mines supervisor, MSHA used the employment weighted average of the rates for supervisors and managers SOCs code 47-1011, 49-1011, 51-1011, and 53-1048 from the BLS May 2020 OEWS data for NAICS codes 212100. Weighted average rate \$61.44 = \$40.58 x 1.49 benefit adjustment x 1.016 inflation adjustment.

⁶ For Coal mines operators, MSHA used the employment weighted average of the rates for supervisors and managers SOCs code 11-1021, 11-3051, 47-1011, 49-1011, 51-1011, 53-1048, from the BLS May 2020 OES data for NAICS codes 212100. Weighted average rate \$82.04 = \$54.20 x 1.49 benefit adjustment x 1.016 inflation adjustment.

Estimated Annualized Respondent Cost and Hour Burden

Activity/ Section	No. of Respondents	No. of Responses Per Respondent	Total Responses	Average Burden per Response (Hours)	Total Burden (Hours)	Hourly Wage Rate	Total Burden Cost
56.3203 M/NM Surface	1	2	2	3 min	0.10	\$55.01	\$5.50
57.3203 M/NM Under- ground	196	4	784	3 min	39.20	\$55.01	\$2,156.39
75.204(a)(1) Coal Under- ground	148	4	592	3 min	29.60	\$61.44	\$1,818.62
75.204(f)(6) Coal Under- ground	148	285	42,180	30 sec	351.50	\$82.04	\$28,837.06
TOTAL	345*		43,558		420 (rounded)		\$32,818 (rounded)

*Only unique respondents are included in the summation.

13. Provide an estimate for 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 or 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 collections 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 to respondents or record keepers associated with this information collection.

14. Provide estimates of annualized costs 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 may also 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 section 103(a) of the Mine Act four times per year for underground mines and two times per year for surface mines. An inspector's review of the manufacturer's certification is estimated to take about 3 minutes per inspection per mine. The average salary, including benefits, of an inspector is \$61.59 per hour.⁷ The recurring cost to the Federal Government is estimated to be:

MNM Surface Mines

1 mine x 2 inspections/year x 3 min/inspection x \$61.59/hour = \$6.16

MNM Underground Mines

196 mines x 4 inspection/year x 3 min/inspection x \$61.59/hour = \$2,414.33

Coal Underground Mines

148 mines x 4 inspection/year x 3 min/inspection x \$61.59/hour = \$1,823.06

Total Rounded Costs for Federal Mine Inspectors = \$4,244

15. Explain the reasons for any program changes or adjustments.

The reason for the decreases below are directly related to the decrease in the number of respondents (active mines).

Responses: There was a decrease of 17,528 responses (from 61,086 to 43,558) due to the decrease in number of respondents.

⁷ Hourly rate developed from office of Personnel Management (OPM), December 2020 *FedScope* employment cube, <http://www.fedscope.opm.gov/>. Data search qualifiers were: Agency = DLMS, Occupation = 18xx, Work Schedule = Full-Time, Salary Grade = GS-12, Measure = Average Salary. The hourly wage is the annual salary divided by 2,087. In order to include the cost of benefits, MSHA multiplied the average annual salary by a federal benefit scaler for MSHA of 1.400 (FY 2021 budget submission). Rate equals \$61.59 = (\$91,807 / 2,087 x 1.400).

Safety Standards for Roof Bolts in Metal and Nonmetal Mines and Underground Coal Mines
OMB Control Number: 1219-0121
OMB Expiration Date: 4/30/2022

Respondents: There was a decrease of 107 respondents (from 452 to 345), due to the decrease in number of active mines.

Burden Hours: There was a decrease of 165 burden hours (from 585 to 420) due to a decrease in the number of responses.

Costs: The cost of \$0 remains unchanged.

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.

MSHA associates no forms with this information collection.

18. Explain each exception to the certification statement.

There are no certification exceptions identified with this information collection.

B. Collections of Information Employing Statistical Methods

As statistical analysis is not required by the regulation, questions 1 through 5 do not apply.