

Roof Control Plan for Underground Coal Mines  
OMB Control Number 1219-0004  
OMB Expiration Date: 2/28/2022

**SUPPORTING STATEMENT FOR  
ROOF CONTROL PLAN FOR UNDERGROUND COAL MINES**

**OMB CONTROL NO. 1219-0004**

**This ICR seeks to extend, without change, an existing information collection.**

**Collection Instrument(s):** None

<b><u>OMB Control</u></b>	<b><u>30 CFR Citations</u></b>	<b><u>Title</u></b>
1219-0004	75.215	Longwall mining systems
	75.220(a)(1)	Roof control plan
	75.221(a)	Roof control plan information
	75.222(a)	Roof control plan-approval criteria
	75.223(a), (b), & (d)	Evaluation and revision of roof control plan

**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 or other mines.

Section 302(a) of the Mine Act, 30 U.S.C. 862, requires that a roof control plan and revisions thereof suitable to the roof conditions and mining system of each coal mine be first approved by the Secretary before implementation by the operator. The plan must show the type of support and spacing approved by the Secretary, and the plan must be reviewed at least every 6 months by the Secretary.

Title 30 CFR 75.220(a)(1) requires each mine operator to develop and follow a roof control plan, approved by the District Manager, that is suitable for the prevailing geological conditions and the

mining system to be used at the mine. The standard also requires that additional measures are to be taken to protect persons if unusual hazards are encountered.

Title 30 CFR 75.221(a) requires specific information be submitted in the roof control plan to include the following: (1) the name and address of the company; (2) the name, address, mine identification number and location of the mine; (3) the name and title of the company official responsible for the plan; (4) a description of the mine strata; (5) a description and drawings of the sequence of installation and spacing of supports for each method of mining used; (6) the maximum distance that an automated temporary roof support (ATRS) system is to be set beyond the last row of permanent support (if applicable); (7) specifications and installation procedures for liners or arches (if applicable); (8) drawings indicating the planned width of openings, size of pillars, method of pillar recovery, and the sequence of mining pillars; (9) a list of all support materials required to be used in the roof, face, and rib control system; (10) the intervals at which test holes will be drilled when mechanically anchored tensioned roof bolts are used; (11) a description of the methods to be used for the protection of persons from falling material at drift openings and when mining approaches within 150 feet of an outcrop; and (12) a description of the roof and rib support for location of refuge alternatives. Under 30 CFR 75.215, the roof control plan for each longwall mining section is required to specify the methods that will be used to maintain a safe travelway out of the section through the tailgate side of the longwall and the procedures that will be followed if a ground failure prevents travel out of the section through the tailgate side of the longwall.

Roof control plans, and revisions to those plans, are evaluated by MSHA specialists in accordance with the criteria set forth in 30 CFR 75.222. The District Manager may require additional measures in plans and may approve roof control plans that do not conform to the applicable criteria in this section, provided that effective control of the roof, face, and ribs can be maintained.

Title 30 CFR 75.223(a) requires a mine operator to propose revisions to the roof control plan when conditions indicate that the plan is not suitable for controlling the roof, face, ribs, or coal or rock bursts, or when accident and injury experience at the mine indicates the plan is inadequate. This section also requires the accident and injury experience at each mine to be reviewed at least every 6 months. Under section 75.223(b), operators are also required to plot on a mine map each unplanned roof or rib fall and coal or rock burst that occurs in the active workings when certain criteria are met. Section 75.223(d) requires MSHA to review the plan every 6 months. This review requires MSHA to take into consideration any falls of the roof, face, and ribs and the adequacy of the support systems used at the time.

**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.**

Roof control plans provide the means to instruct miners in the proper use and placement of roof supports. The plan also provides a reference for mine supervisors to ensure that the mine is in compliance with MSHA regulations relating to roof control. Roof control plans are evaluated by MSHA personnel to ensure that mine operators have complied with the regulatory provisions outlined in 30 CFR 75.202 through 75.223. MSHA inspectors also refer to the plans when they are conducting safety and health inspections at the mines.

Approved roof control plans from the different Mine Safety and Health Enforcement districts are reviewed by MSHA roof control specialists to determine compliance with the regulations and to evaluate the roof and rib support methods used to provide a safe working environment. As roof control questions arise, the review of different roof control plans can provide solutions to problems that have been successfully addressed by other districts. The sharing of roof control plans within the Agency also allows inspectors to communicate the latest mining technology to the nation's mine operators and miners. It allows operators and miners to take advantage of MSHA's technical ground support group that conducts studies on mining and support methods and evaluates their effectiveness. The success of this program is supported by the fact that MSHA's Technical Support group has evaluated numerous, hazardous ground conditions at the nation's mining operations and suggested proven methods of support based on scientific ground control methods.

**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.**

Mine operators may submit the required information electronically. No improved information technology has been identified that would reduce the existing 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.**

Roof control plans are developed to address the unique roof conditions and mining methods at each mine. There is no similar or duplicate information that could be used.

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

This information collection does not have a significant impact on small businesses or other small entities. However, MSHA has made available on the Agency's website explicit criteria and guidance for assessing the quality of and potential safety risks associated with proposed roof

control plans. Checklists and a Roof Control Plan Approval and Ground Support Review Procedures handbook are located at:

<https://arlweb.msha.gov/READROOM/HANDBOOK/PH13-V-4.pdf>

**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.**

Roof control plans must be submitted by a mine operator when a new mine opens and when revisions are necessary. Revisions of an existing plan are necessary either due to conditions that indicate the plan is not suitable for controlling roof conditions (i.e., roof, face, ribs, or coal or rock bursts) or accident and injury experience at the mine indicates the plan is inadequate. MSHA reviews the plans every 6 months to ensure that the roof control methods are adequate for the conditions and mining methods used at the mine. Without an approved plan, MSHA would not be able to determine whether miners were being exposed to hazardous roof conditions that could jeopardize their safety.

**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.**

This collection of information is consistent with the guidelines found in 5 CFR 1320.5. While there is no specific provision requiring that roof control plans be maintained for more than 3 years, there must be an approved plan in effect for the entire time the mine is in operation. Without an approved plan, MSHA would not be able to determine whether miners were being exposed to hazardous roof conditions that could jeopardize their safety.

**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 July 6, 2021 (86 FR 35538). MSHA received no public comments.

**9. Explain any decision to provide any payments or gifts to respondents, other than remuneration of contractors or grantees.**

MSHA does not provide payment 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.**

**\* 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 14.**

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.

Title 30 CFR 75.220 requires that each underground coal mine operator develop a roof control plan. Title 30 CFR 75.221(a) lists 12 items of information required to be included in each roof control plan, ranging from mine name, address, mine identification number, and location of the mine to a typical columnar section of the mine strata which identifies the type of strata and shows the thickness of each stratum up to and including the main roof above the coal bed for a distance of at least 10 feet below the coal bed. Also, mine operators are required, under 30 CFR 75.215, to specify the methods in the roof control plan that will be used to maintain a safe travelway out of the longwall mining section through the tailgate side of the longwall and the procedures that will be followed if a ground failure prevents travel out of the section through the tailgate side of the longwall.

Some of the required information may be retrieved by the operator fairly easily although other information may require more research time, especially when developing a new plan.

Revisions to plans, because they are based on an existing plan, do not require as much time. Revisions may be required as a response to an existing problem, or when instituting new technology, or as a cost savings to the mine operator. Some revisions may be more complex than others.

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MSHA employees with experience preparing roof control plans while employed by industry have helped the Agency substantiate the time required to produce roof control plans.

Annual burden hours and related costs calculations are shown below. MSHA used data from the May 2019 Occupational Employment Statistics (OES) published by the Bureau of Labor Statistics (BLS) for hourly wage rates and adjusted the rates for benefits and wage inflation<sup>1</sup>.

According to MSHA records, there are 145 underground coal mines, all of which are required to develop and submit roof control plans. In 2020, 72 new roof control plans were submitted for 53 of those mines. While roof control plans vary according to the size and complexity of each individual mine, MSHA estimates that it takes approximately 12 hours for a mine operator to prepare a new roof control plan. The coal Supervisor wage rate of \$62.23 was used for these burden calculations.<sup>2</sup>

In addition, MSHA estimates that each mine operator may need to submit plan revisions. An operator may submit more than one revision if conditions require it. In 2020, MSHA received 426 plan revisions. MSHA estimates that it takes a mine operator approximately 4 hours to draft a plan revision.

Underground coal mine operators are also required to plot each unplanned roof fall, rib fall, and coal rock burst on a mine map when such incidents meet the criteria specified in 30 CFR 75.223(b). MSHA estimates that it takes 5 minutes to plot a roof fall or a coal or rock burst on a map. There were approximately 398 unplanned roof falls and coal or rock bursts which met such specified criteria and that occurred in underground coal mines in 2020.

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1 Options for obtaining OES data are available at item “E3. How to get OES data. What are the different ways to obtain OES estimates from this website?” at [https://www.bls.gov/oes/oes\\_ques.htm](https://www.bls.gov/oes/oes_ques.htm). The benefit-scaler comes from BLS Employer Costs for Employee Compensation access by menu <https://data.bls.gov/cgi-bin/srgate>. 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 2019Qtr4-2020Qtr3 to determine that 33.1 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  $1 + (\text{benefit percentage}/(1-\text{benefit percentage})) = 1 + (.331/(1-.331)) = 1.50$ . 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 4 2020/Qtr 2 2019; 140.0/135.9=1.030)

2 For the Coal Supervisor hourly wage rate, MSHA used the employment weighted mean hourly wage from the OES May 2019 survey, for 5 first-line supervisor occupations that are from 4 Standard Occupational Classification (SOC) major group codes (codes 47, 49, 51, and 53). The employment weighted mean was adjusted for benefits and inflation to obtain a fully loaded rate of \$62.23 ( $\$40.28 \times 1.50 \times 1.030$ ).

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Estimated Annualized Burden Hours and Costs								
Type of Respondent	Standard/ Collection Activity	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response	Total Annual Burden Hours	Avg. Hourly Wage Rate	Total Annual Respondent Cost
Business or other for-profit	30 CFR 75.220, 75.221(a), and 75.215/ Plans	53	1.36	72	12.00 h	864.00 h	\$62.23	\$53,776.72
Business or other for-profit	30 CFR 75.220, 75.221(a), and 75.215, 75.222 and 75.223(a)/ Plan Revisions	145	2.94	426	4.00 h	1,704.00 h	\$62.23	\$106,039.92
Business or other for-profit	30 CFR 75.223(b)/ Plots of Unplanned Roof Falls, Rib Falls, and Coal Rock Bursts	145	2.74	398	0.08 h	31.84 h	\$62.23	\$1,981.40
<b>Total</b>		<b>145*</b>		<b>896</b>		<b>2,600 hours (rounded)</b>		<b>\$161,798 (rounded)</b>

\*Total is not cumulative

**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 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.**

Operation and Maintenance: MSHA estimates that the average copying and mailing cost for a new roof control plan or a plan revision is \$5.

(72 new plans + 426 revised plans) x \$5 per plan = \$ 2,490.00

**Question 13 Rounded Total Annual Cost Burden = \$ 2,490**

**14. Provide estimates of the 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 into a single table.**

MSHA estimates that it takes approximately 16 hours to review and approve a new roof control plan. A salary (including benefits) of \$58.29 per hour was used for these calculations.<sup>3</sup>

72 new plans x 16 hours/plan x \$58.29 per hour = \$67,150.08

In 2020, MSHA received 426 roof control plan revisions. MSHA estimates that it takes approximately 4 hours to review a plan revision.

426 revisions x 4 hours/plan x \$58.29 per hour = \$99,326.16

**Question 14 Rounded Total Cost to the Government = \$166,476**

**15. Explain the reasons for any program changes.**

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<sup>3</sup> Hourly rate developed from Office of Personnel Management (OPM) June 2019 *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 \$58.29= \$86/897/2087 x 1.400

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**Respondents:** The number of underground coal mines requiring roof control plans decreased by 66 from 211 to 145. This decrease in roof control plans was due to the market decline in the number of underground coal mines.

**Responses:** The number of new roof control plans increased from 57 to 72; the number of plan revisions decreased from 948 to 426; and the number of unplanned roof falls and coal or rock bursts decreased from 445 to 398. This is an overall reduction in the number of responses of 554 (from 1,450 to 896) due to a decrease in respondents.

**Burden Costs:** Costs for this submission decreased by \$2,535 (from \$5,025 to \$2,490) due to a decrease in the number of plans and revisions submitted.

**Burden Hours:** The total number of burden hours decreased by 1,913 hours, from 4,513 hours to 2,600 hours due to a decrease in respondents.

Itemized Changes in Annual Burden Hours						
Regulation/ Data collection Activity	Program Change (hours currently on OMB Inventory)	Program Change (New)	Difference	Adjustment (hours currently on OMB Inventory)	Adjustment (New)	Difference
30 CFR 75.220, 75.221(a), and 75.215/ Plans				684	864	180
30 CFR 75.220, 75.221(a), and 75.215, 75.222 and 75.223(a)/ Plan Revisions				3,792	1,704	-2,088
30 CFR 75.223(b)/ Plots of unplanned roof falls, rib falls, and coal rock bursts				37	32	-5
<b>Total(s)</b>				<b>4,513</b>	<b>2,600</b>	<b>1,913</b>

**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.**

The results of this information collection will not be published.

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**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 is no form associated with this collection; therefore this question does not apply for this 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.**

There is no statistical methodology involved in this collection.