

**Supporting Statement for
Paperwork Reduction Act Submissions**

Information Collection Title: Ventilation Plan and Main Fan Maintenance Record

Collection Instrument(s): None

Authority: 30 CFR 57.8520 and 57.8525 (pertains to metal and nonmetal underground mines)

A. JUSTIFICATION

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection.

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 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 mines.

Underground metal and nonmetal (MNM) mines usually present harsh and hostile working environments. The ventilation system is the most vital life support system in underground mining and a properly operating ventilation system is essential for maintaining a safe and healthful working environment. A well planned mine ventilation system is necessary to ensure a fresh air supply to miners at all working places, to control the amounts of harmful airborne contaminants in the mine atmosphere, and to dilute possible accumulation of explosive gases.

Lack of adequate ventilation in underground MNM mines has resulted in fatalities from asphyxiation and/or explosions due to a buildup of explosive gases. Inadequate ventilation can be a primary factor for deaths caused by disease of the lungs (e.g. silicosis). In addition, poor working conditions from lack of adequate ventilation

1219-0016
Ventilation Plan and Main Fan Maintenance Record
2020

contribute to accidents resulting from heat stress, limited visibility, or impaired judgment caused by contaminants.

Section 57.8520 (Ventilation plan) requires the mine operator to prepare a written plan of the mine ventilation system. The plan is required to be updated at least annually. Upon written request of the District Manager, the plan or revisions must be submitted to MSHA for review and comment. The requested plan must include a current mine map or schematic, or a series of mine maps or schematics, mine fan data, diagram or description or sketches showing how ventilation is accomplished, and the number and type of internal combustion engine units used underground.

The main mine fans constitute the major components of a ventilation system for the entire underground mining operation. Section 57.8525 (Main fan maintenance) requires that the main ventilation fans for an underground mine be maintained according to either the manufacturers' recommendations or a written periodic schedule. Upon request of MSHA, this fan maintenance schedule must be made available for review.

The air flow provided by the fans ensures fresh air to the miners at working faces, reduces the chance of contaminants in the air reaching threshold limit values for airborne contaminants, and dilutes accumulations of possible explosive gases. A regular fan maintenance schedule is necessary to ensure an uninterrupted and vital supply of air. The maintenance is normally scheduled as recommended by the fan manufacturers. The standard recognizes, however, that mine conditions may justify more or less maintenance than recommended by the manufacturer. Regardless of maintenance schedule, based on the loads of individual fans, the records ensure compliance with the standard and may serve as a warning mechanism for possible ventilation problems before they occur.

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

The information collected under section 57.8520 is used to: (a) ensure that each operator of an underground MNM mine routinely plans, reviews, and updates the mine's ventilation system; (b) ensure the availability of accurate and current ventilation information; and (c) provide MSHA with the opportunity to alert the mine operator to potential hazards.

The information collected under section 57.8525 is maintained by the mine operator for use at the mine. Ventilation personnel may use the information when called upon to solve a problem. MSHA uses the information to determine whether the fans have been adequately maintained in compliance with the standard.

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.

In order to comply with the Government Paperwork Elimination Act (GPEA), MSHA permits mine operators to retain these records in whatever method they choose, which may include utilizing computer technology.

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

The ventilation plan and main fan maintenance record are unique for each mine. There is no duplicate information available.

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

This information collection 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.

Without this information, MSHA would not be able to verify compliance with 30 CFR 57.8520 and 57.8525.

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.**

In the event of a mine accident or similar emergency situation, MSHA representatives may require this information to be provided more frequently than quarterly or require respondents to submit proprietary, trade secret, or other confidential information in order to ensure the safety and health of miners. The standards require that mine operators make the ventilation plan and fan maintenance schedules available to MSHA upon request.

This collection of information is otherwise consistent with 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 Section 1320.8(d), soliciting comments on the information collection prior to submission to OMB.

MSHA published a 60-day *Federal Register* notice on September 20, 2019 (84 FR 49559). 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 any payment or gift to respondents.

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

MSHA makes no assurances of privacy to mine operators regarding these records.

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 13.**

1219-0016
Ventilation Plan and Main Fan Maintenance Record
2020

Section 57.8520 requires the mine operator to prepare a written plan of the mine ventilation system. The plan is required to be updated at least annually. As of June, 2019, MSHA records indicate that 193 underground MNM mines are subject to this standard. In addition, MSHA estimates that 4 new mines will open annually and thus require the development of a new plan. MSHA estimates that a mine supervisor¹, earning \$52.87 per hour², will take 24 hours to: develop a mine plan for a new mine; or revise and update a plan for an existing mine. Also, a clerical employee, earning \$28.98 per hour³, will take 6 minutes to prepare each submission. MSHA estimates the following burden hours and related costs.

Develop new plan

4 new plans x 24 hours	= 96 hours
4 new plans x 6 minutes	= 1 hour
Burden Hours	= 97 hours

96 hours x \$52.87 per hour	= \$5,076
1 hour x \$28.98 per hour	= \$29
Burden Hour Costs	= \$5,105

Review and update existing plan

193 existing plans x 24 hours	= 4,632 hours
193 existing plans x 6 minutes	= 19 hours
Burden Hours	= 4,651 hours

4,632 hours x \$52.87 per hour	= \$244,894
19 hours x \$28.98 per hour	= \$551
Burden Hour Costs	= \$245,445

Section 57.8520 Burden

¹ For all wage rates, MSHA uses the relevant precision throughout the calculation to avoid compound rounding errors and rounds at the final rate value. Displayed intermediate calculation values are presented to explain the calculation and are representative but the final rate value reflects the correct rounding and final estimate.

² For the MNM mining supervisor hourly wage rates, MSHA used the employment weighted mean hourly wage from the OES May 2018 survey (www.bls.gov/oes), for 4 first-line supervisor occupations from Standard Occupational Classification (SOC) major group codes 47, 49, 51, and 53 and industry codes 212200 and 212300 of the North American Industry Classification System (NAICS) codes historically represented in the approval requests. The weighted mean was adjusted for benefits and inflation to obtain a fully loaded rate of \$52.87 (\$34.79 x 1.49 x 1.02) for a MNM mining supervisor.

³ For the MNM mining clerical employee hourly wage rates, MSHA used the employment weighted mean hourly wage from the OES May 2018 survey (www.bls.gov/oes), for 4 clerical occupations from Standard Occupational Classification (SOC) major group code 43 and industry codes 212200 and 212300 of the North American Industry Classification System (NAICS) codes historically represented in the approval requests. The weighted mean was adjusted for benefits and inflation to obtain a fully loaded rate of \$28.98 (\$19.07 x 1.49 x 1.02) for a MNM mining clerical employee.

Responses = 197
Burden Hours = 4,748 hours
Burden Hour Costs = \$250,550

30 CFR Section 57.8525

Section 57.8525 requires that the main ventilation fans for an underground mine be maintained according to either the manufacturers' recommendations or a written periodic schedule. As of June, 2019, there were approximately 193 underground MNM mines. Approximately 7 of these mines rely on natural ventilation of air movement and, therefore, have no fans. MSHA estimates that the remaining 186 mines have an average of 1.5 main fans per mine, for a total of 279 main fans (186 x 1.5) which must be maintained according to either the manufacturer's recommendations or a written periodic schedule adopted by the mine operator. Based on experience, MSHA estimates that approximately 90 percent of these fans are maintained, as a normal business practice, according to the manufacturer's recommendation. Therefore, such mine operators would incur no burden associated with adopting a written, periodic maintenance schedule adopted by the mine operator. See 5 CFR 1320.3(b)(2).

The remaining 28 fans (279 x 10 percent) are maintained according to written periodic schedules adopted by mine operators, which are reviewed regularly by MSHA inspectors. MSHA estimates that of the 28 fans, written maintenance schedules would need to be developed or revised for about one-third or 9 fans each year. MSHA estimates that a mine maintenance supervisor, earning \$52.87 per hour, will take one hour to develop or revise a written periodic maintenance schedule for a main fan; and a clerical person, earning \$28.98 per hour, will take 30 minutes to type, copy, and distribute the schedule. MSHA estimates the following burden hours and related costs.

Develop or Revise Written Schedule, Prepare and Distribute

9 written schedules x 1 hour	= 9 hours
9 written schedules x 30 minutes	= 5 hours
Burden Hours	= 14 hours
9 hours x \$52.87 per hour	= \$476
5 hours x \$28.98 per hour	= \$145
Burden Hour Costs	= \$621

Section 57.8525 Burden

Responses = 9
Burden Hours = 14 hours
Burden Hour Costs = \$621

1219-0016
 Ventilation Plan and Main Fan Maintenance Record
 2020

Grand Total Burden Hours and Costs

Respondents = 197
Responses = 206
Grand Total Burden Hours = 4,762
Grand Total Burden Hour Costs = \$251,171

QUESTION 12 ANNUAL BURDEN

Type of Respondent	Form/Regulation	No. of Respondents	No. of Responses per Respondent	Total No. of Responses (rounded)	Avg. Burden per Response (in hours)	Total Annual Burden (in hours/rounded to whole numbers)
Business or other for-profit	57.8520 (New Plan)	4	1	4	24 hours	96 (record-keeping h)
Business or other for-profit	57.8520 (New Plan, Clerical Prep)	4	1	4	6 minutes	1 (record-keeping h)
Business or other for-profit	57.8520 (Existing Plan)	193	1	193	24 hours	4,632 (record-keeping h)
Business or other for-profit	57.8520 (Existing Plan, Clerical Prep)	193	1	193	6 minutes	19 (record-keeping h)

1219-0016
Ventilation Plan and Main Fan Maintenance Record
2020

Business or other for-profit	57.8525 (Written Schedule)	9	1	9	1 hour	9 (record-keeping h)
Business or other for-profit	57.8525 (Written Schedule, Clerical Prep)	9	1	9	30 minutes	5 (record-keeping h)
Total				206		4,762

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.

There is no annual cost burden to respondents or recordkeepers resulting from this collection of information.

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.

As of June, 2019, MSHA records indicated that 193 underground MNM mines are subject to this standard. MSHA estimates that each of these mines would revise their plan once each year. In addition, it is estimated that 4 new mines will open and thus require the development of a new plan.

Section 57.8520 requires that a plan of the mine ventilation system shall be set out by the operator in written form. Revisions of the ventilation system shall be noted and updated at least annually. The ventilation plan or revisions thereto shall be submitted to the District Manager for review and comments upon his request. MSHA estimates that it will take 8 hours by Agency personnel to review either a new or revised plan. MSHA estimates that a technical specialist (GS-12), earning \$56.62 per hour⁴, will take 8 hours to review a submitted plan or revision.

$(4 \text{ new plans} + 193 \text{ revised plans}) \times 8 \text{ hours} \times \$56.62 = \mathbf{\$89,233}$

15. Explain the reasons for any program changes or adjustments reported on the burden worksheet.

Burden hours decreased from 5,606 to 4,762 due to a decrease in the number of mines. Respondents decreased from 232 to 197, and responses decreased from 241 to 206. Burden costs remain the same at zero.

⁴ Hourly wage rate developed from Office of Personnel Management (OPM) March 2018 *FedScope* employment cube, <http://www.fedscope.opm.gov/>. Average annual salary of \$84,469 obtained from DOL-MSHA employees. Data search qualifiers are: agency = DLMS, occupation = 1822, Salary Grade = GS-12. In order to include the cost of benefits, this annual average salary was multiplied by a benefits scaler of 1.399 computed from MSHA's 2020 budget submission. The final hourly wage rate was derived by dividing the adjusted annual average salary by 2,087 hours [$\$56.62 = (\$84,469 \times 1.399) \div 2,087 \text{ annual hours}$]

16. For collections of information whose results are planned to 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 are not scheduled for publication.

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 required forms associated with this collection.

18. Explain each exception to the certification statement identified in the "Certification for Paperwork Reduction Act Submissions".

B Statistical Methods

There is no statistical methodology involved in this collection.