

SUPPORTING STATEMENT

Ventilation Plan and Main Fan Maintenance Record 30 C.F.R. § 57.8520, § 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, 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.

Underground 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 assure 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 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 contribute to accidents resulting from heat stress, limited visibility, or impaired judgment from contaminants.

30 C.F.R. § 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. 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. 30 C.F.R. § 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. Upon request of an Authorized Representative of the Secretary of Labor, this fan maintenance schedule must be made available for review.

The air-flow provided by the fans assures fresh air to the miners at working faces, reduces the chance of the air reaching threshold limit values of airborne contaminants, and dilutes accumulations of possible explosive gases. A regular fan maintenance schedule is necessary to assure an uninterrupted and vital supply of air. The maintenance is normally scheduled as recommended by the fan manufacturers. The standard recognizes, however, that some installations may justify a more liberal schedule, others a more stringent schedule. Regardless of regularity, based on the loads of individual fans, the records assure 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 30 C.F.R. § 57.8520 is used to: (a) assure that each operator of an underground metal and nonmetal mine routinely plans, reviews, and updates the mine's ventilation system; (b) insure the availability of accurate and current ventilation information; and (c) provide MSHA with the opportunity to alert the mine operator to potential hazards.

Regarding § 57.8525, the information is maintained by the mine operator for his or her use. 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 standards 30 C.F.R. § 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;**

July 2010

- **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 provide that the ventilation plan and fan maintenance schedules be made available to MSHA upon request.

This collection of information is otherwise consistent with 5 C.F.R. § 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 C.F.R. §1320.8(d), soliciting comments on the information collection prior to submission to OMB.

MSHA published a 60-day Federal Register notice on September 16, 2010 (Volume 75, No. 179, Page 56562 -56563), No comments were received.

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

July 2010

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.**

30 C.F.R. § 57.8520

MSHA's records, as of January 11, 2010, indicate that 240 underground metal and nonmetal mines were subject to this standard. In addition, it is estimated that 5 new mines covered by this standard will open annually and thus require the development of a new plan. Based on data from the U.S. Metal & Industrial Mineral Mine Salaries, Wages, & Benefits - 2009 Survey Results, MSHA estimates that a mine supervisor earning \$64.90 per hour would require 3 8-hour work days to develop a mine plan for a new underground metal and nonmetal mine. MSHA estimates that a mine supervisor would require 3 8-hour work days per year thereafter to update ventilation plans, whether at a new or existing mine. The recordkeeping burden is calculated as follows:

Develop new plan

5 new plans x 24 hours = 120 hours

July 2010

120 hours x \$64.90 = \$ 7,788

Review and update existing plan

240 existing plans x 24 hours = 5,760 hours

5,760 hours x \$64.90 = \$373,824

Total Burden Hours 30 C.F.R. § 57.8520: 5,880

Total Burden Hour Costs 30 C.F.R. § 57.8520: \$ 381,612

30 C.F.R. § 57.8525

As of January 11, 2010, there were approximately 240 underground metal and nonmetal mines. Approximately 60 of these mines rely on natural ventilation for air movement and, therefore, have no fans. MSHA estimates that the remaining 180 mines have an average of 1.5 main fans each, for a total of 270 main fans which must be maintained according to either the manufacturer's recommendations or a written periodic schedule adopted by the mine operator. Based on MSHA's experience, it is estimated that approximately 90% of these fans are maintained according to the manufacturer's recommendations. Therefore, such mine operators would incur no burden associated with adopting such a written, periodic maintenance schedule.

The remaining 27 fans are maintained according to written periodic schedules adopted by mine operators which are reviewed regularly by MSHA inspectors. MSHA estimates that written maintenance schedules would need to be developed or revised for about one-third or 9 of these fans each year.

Based on information obtained from the U.S. Metal & Industrial Mineral Mine Salaries, Wages, & Benefits - 2009 Survey Results, MSHA estimates that it takes a mine maintenance supervisor earning \$64.90 per hour about one hour to develop or revise a written periodic maintenance schedule for a main fan, and a clerical person earning \$23.62 about 0.5 hour to type, copy, and distribute the schedule. Accordingly, the hour burden and hour burden cost are as follows:

Hour Burden

9 main fan maintenance schedules are received
per year x 1.0 hour per schedule (supervisor)= 9 hours

9 main fan maintenance schedules are received
per year x 0.5 hour per schedule (clerical) = 4.5 hours

Hour Burden Cost

9 supervisor hours x \$64.90 an hour = \$ 584
4.5 clerical hours x \$23.62 per hour = \$ 106

Total Burden Hours 30 C.F.R. § 57.8525: 14
Total Burden Hour Costs 30 C.F.R. § 57.8525: \$ 690

Grand Total Burden Hours: 5,894
Grand Total Burden Hour Costs: \$ 382,302

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 record keepers 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.

MSHA's records as of January 11, 2010, indicate that 240 underground metal and nonmetal mines were subject to this standard. MSHA estimates that each of these mines would revise their plan, on average, once each year. In addition, it is estimated that 5 new mines will open and thus require the development of a new plan.

30 C.F.R. § 57.8520 requires that "A plan of the mine ventilation system shall be set out by the operator in written form. Revisions of the 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 written request."

MSHA estimates that about 10% of the metal and nonmetal mines will be required by district managers to submit that mine's ventilation plan for Agency review. MSHA further estimates that it will take 8 hours by Agency personnel to review either a new or revised plan. The calculation of Federal Government costs based on the average grade and salary of a MSHA mine inspector (GS12/5 - \$32.25 an hour), based on 2009 pay table (without locality pay) would be as follows:

$$25 (5 \text{ new plans} + 240 \text{ revised plans}) \times 10\% \times 8 \text{ hours} \times \$32.25 = \$6,450$$

MSHA's records as of January 1, 2010, indicate that no additional federal inspection costs have been associated specifically with this information collection. The review and inspection of main fan maintenance records is only one aspect of a mine inspection.

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

There is a decrease of 48 burden hours (5,942 to 5,894) due to fewer new mines. Burden costs remain at \$0.

July 2010

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 Item 19, "Certification for Paperwork Reduction Act Submissions," of OMB Form 83-I.

There are no certification exceptions identified with this information collection.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

- 1. Describe (including numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g., establishments, State and local government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.**
- 2. Describe the procedures for the collection of information including:**
 - Statistical methodology for stratification and sample selection,
 - Estimation procedure,
 - Degree of accuracy needed for the purpose described in the justification,
 - Unusual problems requiring specialized sampling procedures, and
 - Any use of periodic (less frequently than annual) data collection cycles to reduce burden.
- 3. Describe methods to maximize response rates and to deal with issues of non-response. The accuracy and reliability of information collected must be shown to be adequate for intended uses. For collections based on sampling, a special justification must be provided for any collection that will not yield "reliable" data that can be generalized to the universe studied.**
- 4. Describe any tests of procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more respondents. A proposed test or set of tests may be submitted for approval separately or in combination with the main collection of information.**
- 5. Provide the name and telephone number of individuals consulted on statistical aspects of the design and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.**

This collection of information does not employ statistical methods; therefore, this section is not applicable.