

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.

30 C.F.R. § 57.8525 requires that the main ventilation fans for an underground mine be maintained either according to 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 main mine fans are the major life support system for the entire underground mining operation.

The air-flow provided by the fans assures fresh air to the miners at working faces,
July 2007

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 this 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 device 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 pursuant to 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. Since MSHA has given the mine operators the choice in how to retain this information, it has given the decision to use information technology to reduce the burden to the mine operator.

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. MSHA does not believe that there are any technical or legal obstacles to reducing burden, other than the fact that MSHA would be less able to fulfill its statutory mandate to protect miners.

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 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. Summarize public comments received in response to that notice and describe actions taken by the agency in response to the 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 preclearance Federal Register notice on May 7, 2007 (Volume 72, Number 87, Pages 25784-25785, soliciting public comments regarding the extension of this information collection. 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 2007

information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.

There are no questions of a sensitive nature.

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

- **Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices.**
- **If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens in Item 13 of OMB Form 83-I.**
- **Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included in Item 14.**

30 C.F.R. § 57.8520

MSHA's records, as of January 1, 2007, indicate that 242 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 - 2005 Survey Results, MSHA estimates that a mine supervisor earning \$47.10 per hour would require 3 work days to develop a mine plan for a new underground metal and nonmetal mine. MSHA estimates that a mine supervisor would require 3 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
120 hours x \$47.10	=	\$5,652

Review and update existing plan

242 existing plans x 24 hours	=	5,808 hours
5,808 hours x \$47.10	=	\$273,557

Total Burden Hours 30 C.F.R. § 57.8520:		5,928
Total Burden Hour Costs 30 C.F.R. § 57.8520:		\$ 279,209

30 C.F.R. § 57.8525

As of January 1, 2007, there were approximately 242 underground metal and nonmetal mines. About 60 of these mines rely on natural ventilation for air movement and, therefore, have no fans. MSHA's technical staff estimates that the remaining 182 mines have an average of 1.5 main fans each, for a total of 273 main fans which must be maintained according to either the manufacturer's recommendations or a written periodic schedule adopted by the mine operator. Based upon the on-site experience of MSHA's technical staff, it is estimated that at least 90% of these fans are maintained according to the manufacturer's recommendations. Therefore, such mine operators would incur no burden.

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

Based on information obtained from the U.S. Metal & Industrial Mineral Mine Salaries, Wages, & Benefits - 2005 Survey Results, MSHA's technical staff estimate that it takes a mine maintenance supervisor earning \$47.10 per hour about one hour to develop or revise a written periodic maintenance schedule for a main fan, and a clerical person earning \$22.17 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 schedules per year x 1.0 hours per schedule (supervisor)	=	9 hours
9 schedules per year x 0.5 hours per schedule (clerical)	=	5 hours

Hour Burden Cost

9 supervisor hours x \$47.10 an hour	=	\$ 424
5 clerical hours x \$22.17 per hour	=	\$ 111

Total Burden Hours 30 C.F.R. § 57.8525:		14
Total Burden Hour Costs 30 C.F.R. § 57.8525:		\$ 535

July 2007

Grand Total Burden Hours:	5,942
Grand Total Burden Hour Costs:	\$279,744

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 1, 2007, indicate that 242 underground metal and nonmetal mines were subject to this standard. MSHA staff 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 it will take 8 hours by Agency personnel to review either a new or revised plan. MSHA estimates that about 10% of the metal and nonmetal mines will be required by district managers to submit that mines ventilation plan for Agency review due to unique circumstances or issues found by MSHA inspectors during their routine reviews of these documents. The calculation of Federal Government costs based on the average grade and salary of a MSHA mine inspector (GS12/5 - \$30.57 an hour), based on 2007 pay table (without locality pay) would be as follows:

$$(5 \text{ new plans} + 242 \text{ revised plans}) \times 10\% \times 8 \text{ hours} \times \$30.57 = \$6,041$$

MSHA's records as of January 1, 2007, indicate that no federal inspection costs have been associated specifically for 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 11 responses (from 267 to 256) and a decrease of 264 burden hours (6,206 to 5,942) due to fewer new mines. Burden costs remain at \$0.

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.

**Federal Mine Safety & Health Act of 1977,
Public Law 91-173,
as amended by Public Law 95-164**

An Act

INSPECTIONS, INVESTIGATIONS, AND RECORDKEEPING

Section 103 (h) In addition to such records as are specifically required by this Act, every operator of a coal or other mine shall establish and maintain such records, make such reports, and provide such information, as the Secretary or the Secretary of Health, Education, and Welfare may reasonably require from time to time to enable him to perform his functions under this Act. The Secretary or the Secretary of Health, Education, and Welfare is authorized to compile, analyze, and publish, either in summary or detailed form, such reports or information so obtained. Except to the extent otherwise specifically provided by this Act, all records, information, reports, findings, citations, notices, orders, or decisions required or issued pursuant to or under this Act may be published from time to time, may be released to any interested person, and shall be made available for public inspection.

30 CFR § 57.8520**Ventilation plan.****UNDERGROUND ONLY**

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. The plan shall, where applicable, contain the following:

- (a) The mine name.
- (b) The current mine map or schematic or series of mine maps or schematics of an appropriate scale, not greater than five hundred feet to the inch, showing:
 - (1) Direction and quantity of principal air flows;
 - (2) Locations of seals used to isolate abandoned workings;
 - (3) Locations of areas withdrawn from the ventilation system;
 - (4) Locations of all main, booster and auxiliary fans not shown in paragraph (d) of this standard.
 - (5) Locations of air regulators and stoppings and ventilation doors not shown in paragraph (d) of this standard;
 - (6) Locations of overcasts, undercasts and other airway crossover devices not shown in paragraph (d) of this standard;
 - (7) Locations of known oil or gas wells;
 - (8) Locations of known underground mine openings adjacent to the mine;
 - (9) Locations of permanent underground shops, diesel fuel storage depots, oil fuel storage depots, hoist rooms, compressors, battery charging stations and explosive storage facilities. Permanent facilities are those intended to exist for one year or more; and
 - (10) Significant changes in the ventilation system projected for one year.
- (c) Mine fan data for all active main and booster fans including manufacturer's name, type, size, fan speed, blade setting, approximate pressure at present operating point, and motor brake horsepower rating.

(d) Diagrams, descriptions or sketches showing how ventilation is accomplished in each typical type of working place including the approximate quantity of air provided, and typical size and type of auxiliary fans used.

(e) The number and type of internal combustion engine units used underground, including make and model of unit, type of engine, make and model of engine, brake horsepower rating of engine, and approval number.

[60 FR 33719, June 29, 1995]

30 CFR § 57.8525

Main fan maintenance.

Main fans shall be maintained according to either the manufacturer's recommendations or a written periodic schedule adopted by the operator which shall be available at the operation on request of the Secretary or his authorized representative.

[60 FR 33719, June 29, 1995]