

## SUPPORTING STATEMENT

30 C.F.R. Part 57, Subpart T; 30 C.F.R. §§ 57.22004(c), 57.22229, 57.22230, 57.22231, and 57.22239, Methane Detected in Mine Atmosphere. (Applies to underground metal and nonmetal mines)

### 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 of each regulation mandating or authorizing the collection of information.**

Methane is a flammable gas found in underground mining. Although methane is often associated with underground coal mines, it also occurs in some metal and nonmetal mines. The potential for methane exists in every underground mine in the United States. Methane is a colorless, odorless, tasteless gas, and it tends to rise to the roof of a mine because it is lighter than air. Although methane itself is nontoxic, its presence reduces the oxygen content by dilution when mixed with air, and consequently can act as an asphyxiant when present in large quantities.

Methane may enter the mining environment from a variety of sources including fractures, faults, or shear zones overlying or underlying the strata that surround the ore body, or from the ore body itself. It may occur as an occluded gas within the ore body. Methane mixed with air is explosive in the range of 5 to 15 percent, provided that 12 percent or more oxygen is present. The presence of dust containing volatile matter in the mine atmosphere may further enhance the explosion potential of methane in a mine. Section 103(I) of the Federal Mine Safety and Health Act of 1977 (Mine Act) requires additional inspections to be conducted at mines depending on the amount of methane liberated from a mine.

Title 30 C.F.R. § 57.22004(c) requires operators of underground metal and nonmetal mines to notify Mine Safety and Health Administration (MSHA) as soon as possible if any of the following events occur: (a) there is an outburst that results in 0.25 percent or more methane in the mine atmosphere, (b) there is a blowout that results in 0.25 percent or more methane in the mine atmosphere, (c) there is an ignition of methane, or (d) air sample results indicate 0.25 percent or more methane in the mine atmosphere of a I-B, I-C, II-B, V-B, or Category VI mine. Under §§ 57.22239 and 57.22231, if methane reaches 2.0 percent in a Category IV mine or methane reaches 0.25 percent in the mine atmosphere of a Subcategory I-B, II-B, V-B, or VI mine MSHA shall be notified immediately. Although the standards do not specify how MSHA is to be notified, MSHA anticipates that the notifications would be made by telephone.

Title 30 C.F.R. §§ 57.22229 and 57.22230 require that the mine atmosphere be tested for methane and carbon dioxide at least once every seven days by a competent person or atmospheric monitoring system or a combination of both. Where examinations disclose hazardous conditions, affected miners must be informed. Title 30 C.F.R. §§ 57.22229(d) and 57.22230(c) require that the person performing the tests certify by signature and date that the tests have been conducted. Certifications of examinations shall be kept for at least one year and made available to authorized representatives of the Secretary of Labor.

**2. Indicate how, by whom, how frequently, and for what purpose the information is to be used. For revisions, extensions, and reinstatements of a currently approved collection, indicate the actual use the**

**agency has made of the information received from the current collection.**

MSHA estimates that a methane event will occur once every five years that would require notification under 30 C.F.R. §§ 57.22004(c), 57.22231, and 57.22239. If a methane event occurs that requires notification pursuant to standard 57.22004(c), the Administrator for Metal and Nonmetal Mine Safety and Health is required to appoint a MSHA committee to investigate the occurrence. Based on the written findings of that investigation, the Administrator decides if the mine is classified in the appropriate category as specified in 57.22003 and 57.22004.

If notification is made pursuant to § 57.22231 or § 57.22239, the MSHA District Manager of the district in which the mine is located decides whether the event requires any action by the Agency.

Certifications made under §§ 57.22229(d) and 57.22230(c) are reviewed by MSHA inspectors during on-site inspections to verify that weekly tests are being conducted. Certification records are reviewed at least once each calendar quarter.

**3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.**

No improved information technology has been identified that would reduce the burden. However, in order to comply with the Government Paperwork Elimination Act, mine operators may retain the 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 2 above.**

There is no similar or duplicate information that could be used. The information reported pertains to a particular methane occurrence at the mine.

**5. If the collection of information has a significant impact on a substantial number of small businesses or other small entities (item 15 of the Paperwork Reduction Act Submission form), describe the methods used to minimize burden.**

This collection of information does not have a significant impact on small businesses or other small entities.

**6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently.**

MSHA has determined that these requirements are the minimum necessary to ensure safety. Reduction of these requirements could allow unsafe conditions to develop. Section 101(a)(9) of the Mine Act prohibits any regulatory action that would reduce the protection given miners by an existing regulation.

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.

Requirements are consistent with the general information collection guidelines in 5 C.F.R. § 1320.5. This information collection request does not contain any specific requirements for respondents to report more than quarterly. However, operators must report to MSHA whenever an event occurs as described above.

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 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 March 6, 2009 (Volume 74, Number 43, Pages 9831-9832, 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 form of compensation to the respondents.

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

No assurance of confidentiality is 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.**

The requirements contain no questions of a sensitive nature.

**12. Provide estimates of the hour burden of the collection of information.**

Although 30 C.F.R. §§ 57.22004(c), 57.22231, and 57.22239 do not specify how the mine operator is to notify MSHA, it is anticipated that a metal and nonmetal mine supervisor, with an estimated hourly salary of \$62.84, will notify MSHA by telephone and the telephone call would be about 15 minutes (0.25 hour) in duration. Salaries used in MSHA's calculations were derived from the U.S. Metal and Industrial Mineral Mine Salaries, Wages, and Benefits Results Survey 2007.

Burden hours:

$$1 \text{ occurrence} \times 0.25 \text{ hours} = .25 \text{ hours}$$

Burden cost:

$$.25 \text{ hours} \times \$62.84 = \$ 16$$

There are eight mines affected by standards 57.22229(d) and 57.22230(c). These mines use a combination of atmospheric monitoring systems and competent persons to perform the required tests. The atmospheric monitoring systems measure the mine atmosphere continuously at most testing locations. The weekly certification record is either computer generated or consists of a log containing signature and date entries by competent persons. Each weekly certification takes approximately 5 minutes (0.083 hour) and is completed by a metal and nonmetal mine supervisor with an estimated hourly salary of \$62.84 per hour.

**Hour Burden:**

$$8 \text{ mines} \times 52 \text{ certifications} \times 0.083 \text{ hours} = 34.5 \text{ hours}$$

**Hour Burden Cost:**

$$34.5 \text{ hours} \times \$62.84/\text{hour} = \$2,168$$

In addition, §§ 57.22229(c) and 57.22230(b) require mine operators to inform all affected miners when such examinations disclose hazardous conditions. Affected persons are informed by means of automatic warning devices triggered by an atmospheric monitoring system or by radio, telephone or word of mouth. Based on past experience, hazardous conditions are rarely found; however for burden calculations MSHA estimates one event per annum at each of the eight mines affected by the standards.

Approximate time to inform affected persons is 10 minutes (0.1667 hour) per occurrence. A mine management official with an estimated hourly salary of \$60.03 per hour would inform affected miners.

**Hour Burden:**

$$8 \text{ mines} \times 1 \text{ occurrence} \times 0.1667 \text{ hours} = 1.3 \text{ hours}$$

**Hour Burden Cost:**

$$1.3 \text{ hours} \times \$60.03/\text{hour} = \$ 78$$

$$\text{TOTAL BURDEN HOURS:} = 36 \text{ Hours}$$

$$\text{TOTAL BURDEN HOUR COSTS:} = \$2,262$$

**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).**

There are no costs to respondents or recordkeepers resulting from the collection of this 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.**

Federal inspection costs have not been associated specifically for §§ 57.22229(d) and 57.22230(c). The review of weekly certifications is just one aspect of MSHA's statutorily-required inspection. It is estimated that a typical review of weekly certifications takes five minutes per quarterly inspection. Complete inspections are required under Section 103(a) of the Mine Act and are required four times a year for underground mines.

Further, Section 103(i) of the Mine Act requires MSHA to partially inspect mines liberating specified amounts of methane on five, ten, or fifteen day intervals, depending on the amount of methane liberated. The certifications are reviewed by Agency enforcement personnel during those required inspections. For FY 2005, 2006 and 2007 an average of 225 § 103(i) inspections per year were conducted. These inspections took an average of 4.6 hours per inspection. The average grade and salary of an MSHA inspector is GS 12/5 for 2009, at \$32.25 per hour.

$$\begin{aligned} \$32.25/\text{hour} \times 4.6/\text{hours}/\text{inspection} &= \$148.35/\text{inspection} \\ \$148.35/\text{inspection} \times 225 \text{ inspections}/\text{year} &= \$33,378.75 \text{ year for } 103(i) \text{ inspections} \end{aligned}$$

**Annualized cost to the Federal government** = \$33,379

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

There is no change or adjustment in the responses, respondents, burden hours or burden cost.

**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.**

There are no statistical aspects.

**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 forms on which to display the expiration date.

**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.**

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

**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.**

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

## An Act

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That this Act may be cited as the "Federal Mine Safety and Health Act of 1977".*

### INSPECTIONS, INVESTIGATIONS, AND RECORDKEEPING

#### SEC. 103.

- (i) Whenever the Secretary finds that a coal or other mine liberates excessive quantities of methane or other explosive gases during its operations, or that a methane or other gas ignition or explosion has occurred in such mine which resulted in death or serious injury at any time during the previous five years, or that there exists in such mine some other especially hazardous condition, he shall provide a minimum of one spot inspection by his authorized representative of all or part of such mine during every five working days at irregular intervals. For purposes of this subsection, "liberation of excessive quantities of methane or other explosive gases" shall mean liberation of more than one million cubic feet of methane or other explosive gases during a 24-hour period. When the Secretary finds that a coal or other mine liberates more than five hundred thousand cubic feet of methane or other explosive gases during a 24-hour period, he shall provide a minimum of one spot inspection by his authorized representative of all or part of such mine every 10 working days at irregular intervals. When the Secretary finds that a coal or other mine liberates more than two hundred thousand cubic feet of methane or other explosive gases during a 24-hour period, he shall provide a minimum of one spot inspection by his authorized representative of all or part of such mine every 15 working days at irregular intervals.