

December, 2012

**Supporting Statement for  
Paperwork Reduction Act Submissions**

**OMB Control Number:** 1219 - 0039

**Title:** Gamma Radiation Surveys

**Standard:** 30 CFR 57.5047

**General Instructions**

A Supporting Statement, including the text of the notice to the public required by 5 CFR 1320.5(a)(i)(iv) and its actual or estimated date of publication in the Federal Register, must accompany each request for approval of a collection of information. The Supporting Statement must be prepared in the format described below, and must contain the information specified in Section A below. If an item is not applicable, provide a brief explanation. When Item 17 or the OMB Form 83-I is checked "Yes", Section B of the Supporting Statement must be completed. OMB reserves the right to require the submission of additional information with respect to any request for approval.

**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.**

Under Section 103(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act), the Mine Safety and Health Administration (MSHA) is required to ". . . issue regulations requiring operators to maintain accurate records of employee exposures to potentially toxic materials or harmful physical agents which are required to be monitored or measured under any applicable mandatory health or safety standard promulgated under this Act." In addition, 30 C.F.R. 57.5047 (a) requires that gamma radiation surveys be conducted annually in all underground mines where radioactive ores are mined. (b) Surveys shall be in accordance with American National Standard (ANSI) N13.8-1973 entitled "Radiation Protection in Uranium Mines" ... (c) Where average gamma radiation measurements are in excess of 2.0 milliroentgens per hour in the working place, the standard requires that gamma radiation dosimeters be provided for all persons affected, and that records of cumulative individual gamma radiation exposures be kept. The

standard (d) also specifies that annual individual gamma radiation exposure shall not exceed 5 Rems.

Gamma radiation occurs where radioactive materials are present. Natural sources include uranium and other radioactive elements found in rocks, soils, and ground water. Gamma radiation hazards may also be found near radiation sources in underground mines operations using X-ray machines, weightometers, and nuclear and diffraction units. Such gauges contain radioactive materials and are mounted outside tanks, pipes, bins, hoppers or other types of vessels; gamma rays measure the level and density of liquids, slurries or solids.

Gamma rays penetrate the body and can cause cell death or damage in their path which can affect many of the body's organs. If a radioactive element is inhaled or ingested, gamma radiation can also be emitted and absorbed internally. The adverse health effects from exposure to gamma radiation vary depending upon the energy level of the radiation and the type of cell affected. Gamma radiation can cause many types of cancer.

Currently, there are three active and one intermittently producing underground uranium mines in the United States where radioactive ores are mined. There are also four (4) uranium mines that are in a maintenance only non producing status but these mines may begin production at any time in the future. There are no other underground mines for which gamma radiation surveys are required. Due to the uranium ore at these mines being a "low-grade" quality, the levels of gamma radiation are historically low; and radiation levels usually do not reach the level of 2 milliroentgens per hour in the workplace which would require mine operators to provide gamma radiation dosimeters and maintain a record of cumulative individual exposures pursuant to § 57.5047 (c). Consequently, we do not anticipate that individual gamma radiation levels will exceed the annual exposure limit of 5 Rems contained in § 57.5047(d).

**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.**

MSHA uses this information to evaluate the effectiveness of a mine operator's protection program in demonstrating compliance with the radiation standards. The collected information on cumulative occupational radiation exposures serves two purposes: it aids MSHA in their efforts to protect the health and safety of the workers, and, it aids MSHA in developing prevention and control methods for subsequent radiation exposure.

**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.

**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 2 above.**

Records are unique to each mine. No similar or duplicate information exists that could be used.

**5. If the collection of information impacts small businesses or other small entities (Item 5 of OMB Form 83-1), describe any methods used to minimize burden.**

This information does not have a significant impact on small businesses or other small entities. However, MSHA has made available on our web-site various sources of information, such as "Technical Assistance," "Best Practices," and an "Accident Prevention" site. To assist with compliance, these sources provide tips and general information on a number of various topics.

**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.**

The standard requires that gamma radiation surveys be conducted annually in all underground mines where radioactive ores are mined. Where average gamma radiation measurements are in excess of 2.0 milliroentgens per hour, gamma radiation dosimeters shall be provided to all persons affected and records of cumulative individual gamma radiation exposure are required to be kept. MSHA believes that the monitoring of miners' exposures to gamma radiation is essential to the protection of their health at these underground mines. Inadequate or nonexistent gamma radiation exposure information may result in undetected and unremedied excessive exposures.

**7. Explain any special circumstances that would cause an information collection to be conducted in a manner:**

**(a) Requiring respondents to report information to the agency more often than quarterly.**

**(b) Requiring respondents to prepare a written response to a**

collection of information in fewer than 30 days after receipt of it.

**(c) Requiring respondents to submit more than an original and two copies of any document.**

**(d) Requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records for more than three years.**

**(e) 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.**

**(f) Requiring the use of a statistical data classification that has not been reviewed and approved by OMB.**

**(g) 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.**

**(h) 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.**

The special circumstances contained in item 7 of the supporting statement are not applicable to this information collection.

**8. If applicable, provide a copy and identify the data 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 record keeping, 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 October 12, 2012 (77 FR 62267). MSHA received no comments.

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

MSHA does not provide payments or gifts to the 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:**

- a. 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.**
- b. 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.**

- c. 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.**

The annual gamma radiation survey required by 30 CFR 57.5047(a) is typically completed by taking instant radiation readings with a Geiger counter at all active work places. Although the MSHA standard does not specify how the recordkeeping is to be conducted, it is an information collection activity, and the gamma radiation readings are recorded when taken to verify results and can be used to demonstrate compliance.

There are four underground mines where radioactive ores are mined. MSHA estimates that the survey would take a M/NM mine supervisor (estimated hourly salary of \$63.06, based on the U.S. Metal and Mineral Industrial Mine Salaries, Wages, and Benefits - 2010 Survey Results) approximately two hours at each mine to take and record the measurements. The wage used is fully-loaded.

Hour Burden:

$$4 \text{ mines} \times 2 \text{ hours} = 8 \text{ hours}$$

Hour Burden Cost:

$$8 \text{ hours} \times \$63.03 = \$504.48$$

Due to the low-grade of radioactive ores mined in the United States, there have been no mines where average gamma radiation measurements are in excess of 2.0 milliroentgens per hour in the working place, and none are expected. Therefore, because no gamma radiation dosimeters are provided and no records are kept of cumulative individual gamma radiation exposure under 30 CFR 57.5047(c), MSHA takes no burden for this activity.

Estimated Annualized Burden Hours and Costs								
Type of Respondent	Form Name/Form Number/Standard	No. of Respondents	No. of Responses per Respondent	Total No. of Responses (rounded to whole numbers)	Avg. Burden per Response (in hours)	Total Annual Burden (in hours/ rounded to whole numbers)	Avg. Hourly Wage Rate*	Total Annual Respondent Cost
Business or other for-profit	30 CFR 57.5047(a)	4	1	4	2 hours	8 hours	\$63.06	\$504.48
<b>Total</b>		<b>4</b>		<b>4</b>		<b>8</b>		<b>\$504.48</b>

**13. Provide an estimate of the total annual cost burden to respondents or record keepers resulting from the collection of information. (Do not include the cost of any hour burden shown in Items 12 and 14.)**

- a. 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.
- b. 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.

- c. **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.**

No Federal inspection costs have been associated specifically with this information collection. The examination of these records is just one aspect of the annual inspection. The Mine Act requires MSHA to conduct at least four inspections a year for underground mines and two inspections a year for surface operations.

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

The current burden hours on the OMB Inventory are the same as those in question 12 of this supporting statement. There is no change.

The current cost on the OMB Inventory as well as the annual cost burden to respondents or record keepers in question 13 of this Supporting Statement are both zero. There is no change.

**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 from the information gathered from this collection will not be published.

**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 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.**

When Item 17 on the Form OMB 83-I is checked “Yes”, the following documentation should be included in the Supporting Statement to the extent it applies to the methods proposed:

There is no statistical methodology involved in this collection.