

**SUPPORTING STATEMENT FOR PROXIMITY DETECTION SYSTEMS FOR  
CONTINUOUS MINING MACHINES IN UNDERGROUND COAL MINES**

**OMB CONTROL NO. 1219-0148**

**This ICR seeks to extend, without change, an existing information collection.**

**Provisions:** 30 CFR 75.1732(d)(1), 75.1732(d)(2), 75.1732(d)(3), 75.1732(d)(4), and 75.1732(d)(5)

**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.**

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 duties 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 (Secretary) 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 or other mines.

MSHA requires underground coal mine operators to equip continuous mining machines, except full-face continuous mining machines, with proximity detection systems. Miners working near continuous mining machines face pinning, crushing, and striking hazards that result in accidents involving life-threatening injuries and death. Proximity detection is a technology that uses electronic sensors to detect the motion or the location of one object relative to another. Proximity detection systems provide a warning and stop continuous mining machines before a pinning, crushing, or striking accident occurs that could result in injury or death to a miner.

Section 75.1732(d)(1) requires that at the completion of the check of the machine-mounted components of the proximity detection system under section 75.1732(c)(1), a certified person under section 75.100 must certify by initials, date, and time that the check was conducted. Defects found as a result of the check, including corrective actions and dates of corrective actions, must be recorded before the end of the shift.

Section 75.1732(d)(2) requires the operator to make a record of the defects found as a

result of the checks of miner-wearable components required under section 75.1732(c)(2), including corrective actions and dates of corrective actions.

Section 75.1732(d)(3) requires the operator to make a record of the persons trained in the installation and maintenance of proximity detection systems under section 75.1732(b)(6).

Section 75.1732(d)(4) requires the operator to maintain records in a secure book or electronically in a secure computer system not susceptible to alteration.

Section 75.1732(d)(5) requires the operator to retain records for at least 1 year and make them available for inspection by authorized representatives of the Secretary and representatives of miners.

**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.**

Records of defects and corrective actions required under section 75.1732(d)(1) provide a history of the defects of machine-mounted components documented at the mine. MSHA and mine management use the records to evaluate whether the same conditions or problems, if any, are recurring, and whether corrective measures are effective. The certification required under section 75.1732(d)(1) helps ensure compliance, and for miners on the section, to confirm that the required check was made.

Records of defects and corrective actions required under section 75.1732(d)(2) provide a history of the defects of miner-wearable components documented at the mine. MSHA and mine management use the records to evaluate whether the same conditions or problems, if any, are recurring, and whether corrective measures are effective.

Making records of personnel trained in the installation and maintenance of proximity detection systems required under section 75.1732(d)(3) helps ensure that persons assigned to install and perform maintenance on proximity detection systems were trained.

**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.**

This information collection does not specify how records are to be kept. They could be kept in the traditional manner or stored electronically, provided they are secure and not

susceptible to loss or alteration. MSHA encourages mine operators who store records electronically to provide a mechanism to allow the continued storage and retrieval of records for a number of years. MSHA estimates that 1 percent of operators will keep records electronically.

**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 A.2 above.**

The information collection requirements are not duplicative of any other MSHA requirements. The requirements to collect and maintain information are specific to each mine operator and no other source or agency duplicates these requirements or can make the required information available to MSHA. West Virginia has adopted State requirements that mirror the standards in this Proximity Detection Systems for Continuous Mining Machines in Underground Coal Mines information collection request. Compliance with the parallel West Virginia requirements would also constitute compliance with those established by MSHA. For purposes of this information collection, MSHA has assumed the parallel burden.

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

This information collection does not have an 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.**

Reduction of the information collection requirements could allow unsafe equipment to be placed or remain in operation and thereby jeopardize the safety of 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 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.**

This collection of information is consistent with the guidelines in 5 CFR 1320.5.

#### **8. Federal Register Notice:**

**a. Provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice 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.**

**b. 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.**

**c. Describe consultations with representatives of those from whom information is to be obtained or those who must compile records. Consultation**

**should occur at least once every three years, even if the collection of information activities 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 December 4, 2020 (85 FR 78364). 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 payments or gifts to respondents in exchange for a benefit sought.

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

There is no assurance of confidentiality provided to respondents beyond that required by the Freedom of Information Act (5 U.S.C. 522).

**11. Provide additional justification for any question 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.**

- **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.**

All information related to quantities and inspection rates are estimated by MSHA's Headquarters Enforcement Division based on field experience with different types of mining operations, sizes of mines, and the frequency of inspections dictated by statute. Mine operators provide MSHA Headquarters Enforcement Division the number of mines and employment.

MSHA Headquarters Enforcement Division estimates that approximately 116 unique respondents (116 underground coal mine operators) will respond to this collection of information. Wage Rates: The wages<sup>1</sup> used in this section are based on the hourly wage rates obtained from the Bureau of Labor Statistics (BLS), Occupation Employment Statistics (OES) May 2019 Survey. MSHA increased the OES hourly wage rates for benefits by a 1.49 benefit-scaler<sup>2</sup> and an inflation factor<sup>3</sup>. The underground coal mine hourly wage rates used in this answer are: \$61.51 for a mine supervisor<sup>4</sup>; \$25.52 for a clerical worker<sup>5</sup>; and \$44.71 composite wage rate (of miners and supervisors). A miner

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1 Options for obtaining OES data are available at item "E3. How to get OES Data. What are the different ways to obtain OES estimates from this website?" at [https://www.bls.gov/oes/oes\\_ques.htm](https://www.bls.gov/oes/oes_ques.htm)

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

2 The wage rate without benefits was increased for a benefit-scalar of 1.49. The benefit-scalar comes from BLS Employer Costs for Employee Compensation access by menu <http://www.bls.gov/data/> or directly with <http://download.bls.gov/pub/time.series/cm/cm.data.0.Current>. The data series CMU2030000405000P, Private Industry Total benefits for Construction, extraction, farming, fishing, and forestry occupations, is divided by 100 to convert to a decimal value. MSHA used the latest 4-quarter moving average 2019 Qtr. 2 – 2020 Qtr. 1 to determine that 33 percent of total loaded wages are benefits. The scaling factor is a detailed calculation, but may be approximated with the formula and values  $1 + (\text{benefit percentage}/(1-\text{benefit percentage})) = 1+(0.33/(1-0.33)) = 1.49$ .

3 Wage inflation is the change in Series ID: CIS2020000405000I, <https://data.bls.gov/cgi-bin/srgate>; Seasonally adjusted; Series Title: Wages and salaries for Private industry workers in Construction, extraction, farming, fishing, and forestry occupations, Index. (Qtr 2 2020/Qtr 2 2019 = 139.30/135.9 = 1.025).

4 For the Coal Supervisor hourly wage rate, MSHA used the employment weighted mean hourly wage from the OES May 2019 survey, for 5 first-line supervisor occupations that are from 4 Standard Occupational Classification (SOC) major group codes (codes 47-1011, 49-1011, 51-1011, and 53-1047). The weighted mean was adjusted for benefits and inflation to obtain a fully loaded rate of \$61.51 ( $\$40.28 \times 1.49 \times 1.025$ ).

5 For the Clerical Worker hourly wage rate, MSHA used the employment weighted mean hourly wage from the OES May 2019 survey, for 2 clerical worker occupations from SOC major group code (43-6014, 43-9061). The weighted mean was adjusted for benefits and inflation to obtain a fully loaded rate of \$25.52 ( $\$16.71 \times 1.49 \times 1.025$ ).

hourly wage rate<sup>6</sup> of \$41.75 was used to develop the composite hourly wage rate. The composite hourly wage rate is based on 15 percent of the miners being supervisors and the remaining 85 percent being miners [ $\$44.71 = (0.15 \times \$61.51/\text{hour}) + (0.85 \times \$41.75/\text{hour})$ ].

**Section 75.1732(d)(1) Records, Machine-mounted component**

Section 75.1732(d)(1) requires that at the completion of the check required under section 75.1732(c)(1), any defects found as a result of this check, including corrective actions and dates of corrective actions, be recorded.

MSHA estimates that the number of machines checked per year are: 21 machines at mines with 1-19 employees; 253 machines at mines with 20-500 employees; and 33 machines at mines with 500+ employees.

MSHA estimates that the number of checks per machine per year are: 200 at mines with 1-19 employees (200 workdays x 1 shift per workday); 600 at mines with 20-500 employees (300 workdays x 2 shifts per workday); and 1,050 at mines with 501+ employees (350 workdays x 3 shifts per workday).

MSHA estimates that for corrective actions identified in the check, it takes 10 seconds to certify by initials, date, and time. In addition, MSHA estimates that a corrective action will be needed once a year and to record a corrective action takes 2 minutes.

Responses

21	Machines at mines with 1-19 employees	x	200	checks/machine	=	4,200
253	Machines at mines with 20-500 employees	x	600	checks/machine	=	151,800
33	Machines at mines with 501+ employees	x	1,050	checks/machine	=	34,650
307	Corrective actions	x	1	response/machine	=	307
					=	

Hour Burden

190,650	Checks	x	10	second/check	=	529.58 h
307	Corrective actions	x	2	minutes/corrective action	=	10.23 h

**Section 75.1732(d)(2) Record, Miner-Wearable components**

Section 75.1732(d)(2) requires the recording of defects, corrective actions, and dates of corrective actions, found as a result of the check in section 75.1732(c)(2) of the miner-

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<sup>6</sup> For the Coal Miner hourly wage rate, MSHA used the employment weighted mean hourly wage from the OES May 2019 survey, for 6 coal miner occupations that are from 4 SOC major group codes (codes 47-5041, 47-5043, 47-5044, 47-5081, 47-5098, 53-7011). The weighted mean was adjusted for benefits and inflation to obtain a fully loaded rate of \$41.75 ( $\$27.34 \times 1.49 \times 1.025$ ). The coal miner hourly wage rate of \$40.02 was only used to develop the composite hourly wage rate.

wearable component. MSHA estimates that 10 percent of the 2,149 miner wearable components that are checked annually (or 215) will require a corrective action to be made after the check, and a record to be made of that corrective action. MSHA estimates that it will take 30 seconds to make this record now because the test units for the proximity detection system equipment specific to the miner-wearable components are electronic and are now capable of electronically maintaining this record in a read only format that is protected from alteration.

**Section 75.1732(d)(3) Record, Installation and Maintenance Training**

Section 75.1732(d)(3) requires that a record be kept of personnel trained in the installation and maintenance of proximity detection systems. MSHA estimates an average of 116 mines create records, and that it takes 1 minute for a clerical employee to make a record of all trained personnel at each mine.

**Estimated Annualized Respondent Cost and Hour Burden**

Activity/ Section	No. of Respondents	No. of Responses Per Respondent	Total Responses	Average Burden per Response (Hours)	Total Burden (Hours)	Hourly Wage Rate	Total Burden Cost
75.1732(d) (1) (Checks)	116	190,650/ 116	190,650	10 seconds	529.58	\$61.51	\$32,574.47
75.1732(d) (1) (Corrective Actions)	116	307/116	307	2 min	10.23	\$61.51	\$629.25
75.1732(d) (2)	116	215/116	215	30 seconds	1.79	\$44.71	\$80.03
75.1732(d) (3)	116	1	116	1 min	1.93	\$25.52	\$49.25
<b>TOTAL</b>	<b>116</b>		<b>191,288</b>		<b>544 (rounded)</b>		<b>\$33,333 (rounded)</b>

**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 service 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 are no costs to respondents or record keepers resulting from this collection of information.

**14. Provide estimates of the 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), 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 into a single table.**

There are no additional costs to the Federal Government.

**15. Explain the reasons for any program changes or adjustments.**

The number of respondents decreased from 209 to 116. The number of responses decreased (from 291,137 to 191,288), and due to a decrease in frequency of response, (number of checks and number of corrective actions needed as a result of the checks)

burden hours decreased as well (828 to 544). Responses in this ICR are comprised of not just the number of checks required but also the current numbers of equipment and machines there are to receive the checks. While the number of checks per piece of machines and equipment remained the same, the number of machines and equipment decreased, therefore the total number of responses was less. There are no costs to respondents' record keepers resulting from this collection of information which remains at 0. The estimated time now for Section 75.1732(d)(2), Record, Miner-Wearable components, has been greatly reduced from 2 minutes to 30 seconds because the test units for the proximity detection system equipment specific to the miner-wearable components are electronic and are now capable of electronically maintaining this record in a read only format that is protected from alteration which contributed to the burden hour reduction.

**16. For collections of information whose results will be published, outline plans for tabulations, 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 outline plans for tabulation and publication of data for this information collection.

**17. If seeking approval not to display the expiration date for OMB approval of the information collection, explain reasons that display would be inappropriate.**

There are no forms in this collection. This collection does not seek approval to not display the expiration date for Office of Management and Budget approval.

**18. Explain each exception to the topics of the certification statement.**

There are no certification exceptions identified with this information collection.

**B. Collections of Information Employing Statistical Methods**

There is no statistical methodology involved in this collection.