

Diesel-Powered Equipment in Underground Coal Mines

OMB Control Number: 1219-0119

OMB Expiration Date: 2/28/2025

**Supporting Statement for
Diesel-Powered Equipment in Underground Coal Mines
Paperwork Reduction Act Submission**

This information collection request (ICR) seeks to extend, without change, a currently approved information collection.

OMB Control Number: 1219-0119

Information Collection Request Title: Diesel-Powered Equipment in Underground Coal Mines

Type of OMB Review: Extension

Authority:

Part 75- Mandatory Safety Standards—Underground Coal Mines

Subpart T - Diesel-Powered Equipment

30 CFR 75.1901 - Diesel fuel requirements

30 CFR 75.1904 - Underground diesel fuel tanks and safety cans

30 CFR 75.1906 - Transport of diesel fuel

30 CFR 75.1911 - Fire suppression systems for diesel-powered equipment and fuel transportation units

30 CFR 75.1912 - Fire suppression systems for permanent underground diesel fuel storage facilities

30 CFR 75.1914 - Maintenance of diesel-powered equipment

30 CFR 75.1915 - Training and qualification of persons working on diesel-powered equipment

Collection Instrument(s): None

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 the question “Does this ICR contain surveys, censuses or employ statistical methods” 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.

Specific Instructions

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, as amended (the Mine Act), 30 U.S.C. 813(h), 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. Further, section 101(a) of the Mine Act, 30 U.S.C. 811(a), 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, metal, and nonmetal mines.

In order to fulfil the statutory mandates to promote miners' health and safety, MSHA requires the collection of information entitled Diesel-Powered Equipment in Underground Coal Mines. The information collection addressed by this notice is intended to assist MSHA in determining compliance and to provide useful information to mine operators and miners' representatives about the performance of diesel engines and any deterioration or defective condition of these engines needing corrective action.

The engines powering diesel equipment are potential contributors to fires and explosion hazards in the confined environment of an underground coal mine where combustible coal dust and explosive methane gas are present. Diesel exhaust is a lung carcinogen in humans, and diesel equipment operating in underground coal mines can pose serious health risks to miners from exposure to diesel exhaust emissions, including diesel particulates, oxides of nitrogen, and carbon monoxide. MSHA requires mine operators to provide important safety and health protections to underground coal miners who work on and around diesel-powered equipment. Safety requirements for diesel-powered equipment include many of the proven features required in existing standards for electric-powered mobile equipment, such as cabs or canopies, methane monitors, brakes, and lights. Sampling of diesel exhaust emissions is required to protect miners from overexposure to carbon monoxide and nitrogen dioxide contained in diesel exhaust.

This information collection includes records for use and maintenance of diesel equipment; testing and maintenance of fire suppression systems on both the equipment and at fueling stations; exhaust gas sampling; essential testing and maintenance of diesel-powered equipment conducted regularly by qualified persons; corrective actions taken; and the persons performing the maintenance, repairs, examinations, and tests trained to perform such tasks.

I. Records of Diesel Fuel Purchases

Under 30 CFR 75.1901(a), the mine operator must provide to MSHA, upon request, evidence that the diesel fuel purchased for use in diesel-powered equipment underground meets the requirements of having a sulfur content no greater than 0.05 percent and a flash point of 100 °F (38 °C) or greater.

II. Markings of Underground Diesel Fuel Tanks and Safety Cans

Under 30 CFR 75.1904(b)(4)(i), underground diesel fuel tanks and safety cans must be provided with liquid tight connections for all tank openings that are identified by conspicuous markings that specify the function.

III. Markings of Diesel Fuel Transportation Unit Tanks and Safety Cans

Under 30 CFR 75.1906(d), diesel fuel transportation unit tanks and safety cans must be conspicuously marked as containing diesel fuel.

IV. Inspections and Recordkeeping of Fire Suppression Systems for Diesel-powered Equipment and Fuel Transportation Units

Under 30 CFR 75.1911(i), each fire suppression system for diesel-powered equipment and fuel transportation units must be tested and maintained in accordance with the manufacturer's recommendation and as required by the nationally recognized independent testing laboratory listing or approval, and be visually inspected at least once each week by a person trained to make such inspections. Under 30 CFR 75.1911(j), persons performing inspections and tests of fire suppression systems must make a record when a fire suppression system does not meet the installation or maintenance requirements. Under 30 CFR 75.1911(j)(1), the record must include the equipment or facility, the defect found, and the corrective action taken. Under 30 CFR 75.1911(j)(2), records are to be kept in a secure manner that is not susceptible to alteration. Under 30 CFR 75.1911(j)(3), records must be maintained at a surface location at the mine for one year and made available for inspection by MSHA and miners' representatives.

V. Inspections and Recordkeeping of Fire Suppression Systems for Permanent Underground Diesel Fuel Storage Facilities

Under 30 CFR 75.1912(h), each fire suppression system for permanent underground diesel fuel storage facilities must be tested and maintained in accordance with the manufacturer's recommendation and as required by the nationally recognized independent testing laboratory listing or approval, and visually inspected at least once each week by a person trained to make such inspections. Under 30 CFR 75.1912(i), persons performing inspections and tests of fire suppression systems must make a record when a fire suppression system does not meet the installation or maintenance requirements. Under 30 CFR 75.1912(i)(1), the record must include the equipment or facility, the defect found, and the corrective action taken. Under 30 CFR 75.1912(i)(2) and (i)(3), records are to be kept in a secure manner and maintained at a surface location at the mine for one year and made available for inspection by MSHA and miners' representatives.

VI. Inspections and Recordkeeping of Diesel-powered Equipment

Under 30 CFR 75.1914(f), all diesel-powered equipment must be examined and tested weekly by a qualified person. Under 30 CFR 75.1914(f)(2), persons performing weekly examinations and tests of diesel-powered equipment must make a record when the equipment is not in approved or safe condition. The record must include the equipment, the defect found, and the corrective action taken.

VII. Development of SOP and Recordkeeping for Testing Undiluted Exhaust Emissions of Diesel-powered Equipment

Under 30 CFR 75.1914(g), undiluted exhaust emissions of diesel engines in diesel-powered equipment and heavy-duty nonpermissible diesel-powered equipment used in underground coal mines must be tested and evaluated weekly by a trained person. Under 30 CFR 75.1914(g)(1)-(4), the mine operator must develop and implement written standard operating procedures (SOP) for testing and evaluation including methods of achieving repeatable loaded engine operating condition, sampling, analytics, evaluation and interpretation, and concentration of carbon monoxide. The SOP must also specify the maintenance of records necessary to track engine performance as required in 30 CFR 75.1914(g)(5).

Under 30 CFR 75.1914(h)(1) and (h)(2), weekly examinations and tests of diesel-powered equipment and undiluted exhaust emissions of diesel engines must be recorded securely and retained at a surface location at the mine for at least one year and made available for inspection by MSHA and miners' representatives.

VIII. Training Program of Persons Working on Diesel-powered Equipment

Under 30 CFR 75.1915(b)(5), a training and qualification program of persons working on diesel-powered equipment must be in writing, including a description of the course content, materials, and teaching methods for initial training and retraining. Under 30 CFR 75.1915(c), the operator is required to maintain a copy of the training and qualification program and a record of the names of all persons qualified under the program. Under 30 CFR 75.1915 (c)(1) and (c)(2), these records must be kept in a secure manner and maintained at surface location of the mine and made available for inspection by MSHA and miners' representatives.

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.

This information collection provides important information about the exhaust output of a diesel engine and its ventilation needs. This information is valuable for selecting engines and monitoring their performance in service. This information collection also helps to identify deteriorating engine performance that indicates the need for equipment repair or maintenance, thus preventing overexposure of miners to the health hazards resulting from diesel exhaust. In

addition, miners' representatives may use this information to verify that necessary repairs are made to diesel-powered equipment.

The examinations and testing associated with these standards must be performed on a regular basis. Less frequent examinations and testing would not ensure that conditions requiring immediate attention are promptly detected, such as inadequate air quantities ventilating diesel-powered equipment or equipment defects that create a hazard. Records of equipment examinations are required only when defects are found during inspections of fire suppression system or diesel-powered equipment.

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 existing burden. The information gathered is required to be recorded, maintained for the period specified, and made accessible, upon request, to authorized representatives of the Secretary and miners' representatives. This may be done in a traditional manner by recording this information in a book, or electronically by computer.

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.

No similar or duplicate information is available or submitted to MSHA.

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

The information collection provisions apply to all mine operations, both large and small. Congress intended that the Secretary enforce the law at all mining operations within the Agency's jurisdiction regardless of size and that information collection and recordkeeping requirements be consistent with efficient and effective enforcement of the Mine Act. [S. Rep. No. 95-181, 28 (1977)]. Section 103(e) of the Mine Act, 30 U.S.C. 813(e), directs the Secretary not to impose an unreasonable burden on small businesses when obtaining any information under the Mine Act. MSHA considered the burden on small mines when developing the collection. Hence, MSHA believes that these information collection requirements are imposed on all mining operations and do not have a significant impact on a substantial number of small business or their 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 these recordkeeping requirements would increase the likelihood that unsafe and unhealthy conditions would go undetected and uncorrected in underground coal mines. Less frequent data gathering would not provide the monitoring necessary to ensure that dangerous conditions requiring immediate attention are identified and corrected. The recordkeeping requirements provided by these standards are the minimum necessary to ensure the safe and healthful operation of diesel-powered equipment in underground coal mines. The information requirements in these standards not only monitor and verify compliance, but also provide important information to mine operators and miners' representatives about safety and health conditions in miners' workplaces.

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 secrets, 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. 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 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 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.

In accordance with 5 CFR 1320.8(d), MSHA will publish the proposed information collection requirements in the Federal Register, notifying the public that these information collection requirements are being reviewed in accordance with the Paperwork Reduction Act of 1995, and provided 60 days for the public to submit comments. MSHA published a 60-day Federal Register notice on August 26, 2024 (89 FR 68471). 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 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:

- 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.**
- **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 under Item 13.**

Respondents

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, and from this information MSHA tracks the number of active and inactive mines and mine types throughout the United States.

Based on MSHA's internal data, there were 161 active underground coal mines (or respondents) in calendar year 2023, consisting of 118 large and 43 small mines, affected by this information collection requirement. A large mine is defined as any mine employing 26 or more workers, including office workers. A small mine is defined as any mine employing 25 or fewer workers, including office workers. An active mine is one that operates on a full-time basis, as designated by MSHA.

Wage Rates Determinations¹

MSHA used data from the May 2023 Occupational Employment and Wage Statistics (OEWS) published by the Bureau of Labor Statistics (BLS) for hourly wage rates² and adjusted the rates

¹ For all wage rates, including Federal wage rates, MSHA uses the relevant precision throughout the calculation to avoid compound rounding errors and rounds at the final rate value. Displayed intermediate calculation values are presented to explain the calculation and are representative, but the final rate value reflects the correct rounding and final estimate.

² To obtain OEWS data, follow BLS's directions in its Frequently Asked Questions: "E. How to get OEWS data. 4. What are the different ways to obtain OEWS estimates from this website?" at https://www.bls.gov/oes/oes_ques.htm. The average wage rate is calculated as the employment-weighted average of hourly mean wages for the occupation.

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for benefits,³ wage inflation,⁴ and overhead costs.⁵ The occupations listed below in Table 12-1 are those that were determined to be relevant for the cost calculations.

Table 12-1. Hourly Wage Rates

Occupation	NAICS Code	Average Wage Rate	Benefit Multiplier	Inflation Multiplier	Overhead Cost Multiplier	Loaded Hourly Wage Rate
		A	B	C	D	A x B x C x D
Mine Supervisor [a]	212100	\$52.52	1.470	1.018	1.01	\$79.38
Clerk [b]	212100	\$21.90	1.470	1.018	1.01	\$33.09
Miner [c]	212100	\$32.84	1.470	1.018	1.01	\$49.63
Fire Suppression Inspector [d]	212100	\$33.34	1.470	1.018	1.01	\$50.40

Notes: MSHA used the latest 4-quarter moving average 2023Q1-2023Q4 to determine that 32.0 percent of total loaded wages are benefits for private industry workers in construction, extraction, farming, fishing, and forestry occupations. The benefit multiplier is $1.470 = 1 + (0.320 / (1 - 0.320))$. The inflation multiplier was determined by using the employment price index from the most current quarter data is available, 2023Q4, divided by the base year and quarter of the OEWS employment and wage statistics, 2023Q2, for private industry workers in construction, extraction, farming, fishing, and forestry occupations, current dollar index. The inflation multiplier is $1.018 = 160.1 / 157.3$. MSHA used the overhead multiplier of 1.01.

[a] The Standard Occupation Codes (SOC) used for this occupation are (47-1011), (49-1011), and (51-1011).

[b] The Standard Occupation Codes (SOC) used for this occupation are (43-3031) and (43-9061).

[c] The Standard Occupation Codes (SOC) used for this occupation are (47-2073), (47-5081), (49-3031), (49-9041), (49-9043), (49-9071), and (49-9098).

[d] The Standard Occupation Codes (SOC) used for this occupation are (17-2081), (19-5011), (19-5012), (47-2073), (47-5049), (49-3031), (49-9041), (49-9043), (49-9071), (51-9061), and (51-9199).

I. Records of Diesel Fuel Purchases

Under 30 CFR 75.1901(a), mine operators are required to provide evidence to MSHA, upon request, that the diesel fuel purchased for use in diesel-powered equipment underground meets the requirements in 30 CFR 75.1901(a). The information requested is available on the purchase order when the mine operator purchases diesel fuel. MSHA estimates that, on average, operators purchase fuel 24 times per year, and that a clerk, earning \$33.09 per hour, takes 3 minutes to make a record of the purchase.

³ The benefit multiplier comes from BLS Employer Costs for Employee Compensation accessed by menu at <http://data.bls.gov/cgi-bin/srgate> or directly at <http://download.bls.gov/pub/time.series/cm/cm.data.0.Current>. Insert the data series CMU2030000405000D and CMU2030000405000P, Private Industry Total benefits for Construction, extraction, farming, fishing, and forestry occupations, which is divided by 100 to convert to a decimal value. MSHA used the latest 4-quarter moving average to determine what percent of total loaded wages are benefits. MSHA computes the benefit multiplier with a number of detailed calculations, but it may be approximated with the formula $1 + (\text{benefit percentage} / (1 - \text{benefit percentage}))$.

⁴ Wage inflation is the change in Series ID: CIS2020000405000I; Seasonally adjusted; Series Title: Wages and salaries for Private industry workers in Construction, extraction, farming, fishing, and forestry occupations, Index. (<https://data.bls.gov/cgi-bin/srgate> ; Inflation Multiplier = (Current Quarter Cost Index Value / OEWS Wage Base Quarter Index Value).

⁵ MSHA uses an overhead rate of 1 percent. The mining environment generally involves very little overhead, especially costs associated with workers engaged in administrative or clerical tasks.

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Table 12-2. Estimated Annual Respondent Hour and Cost Burden, Records of Diesel Fuel Purchase (30 CFR 75.1901(a))

Activity (Occupation)	Number of Respondents (Coal Mines)	Number of Responses per Respondent	Total Responses (Records)	Average Burden (Hours)	Total Burden (Hours)	Hourly Wage Rate	Total Burden Cost
Diesel fuel purchase records (Clerk)	161	24	3,864	0.05	193.20	\$33.09	\$6,393.69
Subtotal (Rounded)	161		3,864		193		\$6,394

II. Markings of Underground Diesel Fuel Tanks and Safety Cans

Under 30 CFR 75.1904(b)(4)(i), underground diesel fuel tank connections must be identified by conspicuous markings that specify the function. MSHA assumes on average there are 4 tanks per large mine and 2 tanks per small mine. MSHA estimates that a total of 558 tanks require markings, of which 472 tanks are in large mines (118 mines x 4 tanks per mine) and 86 tanks are in small mines (43 mines x 2 tanks per mine). MSHA estimates that a miner, earning \$49.63 per hour, takes 2 minutes to mark the connections per tank. The markings will last for 2 years, thus the average time spent on marking is halved to 1 minute per year.

Table 12-3. Estimated Annual Respondent Hour and Cost Burden, Markings of Underground Diesel Fuel Tanks and Safety Cans (30 CFR 75.1904(b)(4)(i))

Activity (Occupation)	Number of Respondents (Coal Mines)	Number of Responses per Respondent	Total Responses (Markings)	Average Burden (Hours)	Total Burden (Hours)	Hourly Wage Rate	Total Burden Cost
Markings - Large mines (Miner)	118	4	472	0.02	7.87	\$49.63	\$390.42
Markings - Small mines (Miner)	43	2	86	0.02	1.43	\$49.63	\$71.14
Subtotal (Rounded)	161		558		9		\$462

III. Markings of Diesel Fuel Transportation Unit Tanks and Safety Cans

Under 30 CFR 75.1906(d), diesel fuel transportation unit tanks and safety cans must be conspicuously marked as containing diesel fuel. MSHA estimates that there are 558 tanks in mines of which 472 tanks are in 118 large mines and 86 tanks in 43 small mines. In addition, MSHA estimates that there are 5,758 pieces of diesel fuel transportation equipment in large mines and 322 pieces in small mines. MSHA assumes that each piece of diesel fuel transportation equipment carries one safety can. It will take a miner, earning \$49.63 per hour, 2 minutes to mark each tank and safety can, hence 5,758 safety tanks in large mines and 322 tanks in small mines. The markings will last for 2 years, thus the average time spent on this is halved to 1 minute per year.

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Table 12-4. Estimated Annual Respondent Hour and Cost Burden, Markings of Diesel Fuel Transportation Unit Tanks and Safety Cans (30 CFR 75.1906(d))

Activity (Occupation)	Number of Respondents (Coal Mines)	Number of Responses per Respondent	Total Responses (Markings)	Average Burden (Hours)	Total Burden (Hours)	Hourly Wage Rate	Total Burden Cost
<i>Tank markings</i>							
Large mines (Miner)	118	4	472	0.02	7.87	\$49.63	\$390.42
Small mines (Miner)	43	2	86	0.02	1.43	\$49.63	\$71.14
<i>Can markings</i>							
Large mines (Miner)	118	48.8	5,758	0.02	95.97	\$49.63	\$4,762.75
Small mines (Miner)	43	7.5	322	0.02	5.37	\$49.63	\$266.34
Subtotal (Rounded)	161		6,638		111		\$5,491

Notes: The numbers for responses per respondent are not integers because they are calculated by dividing total responses by the number of respondents.

IV. Inspections and Recordkeeping of Fire Suppression Systems for Diesel-powered Equipment and Fuel Transportation Units

Under 30 CFR 75.1911(j), a record must be made when defects are found on certain diesel-powered equipment and fuel transportation units during weekly and manufacturer recommended fire suppression system inspections. Diesel ambulance equipment, firefighting equipment, and attended equipment, is not affected by this provision. These inspections are required under 30 CFR 75.1911(i).

MSHA assumes that 90 percent of diesel-powered equipment and fuel transportation units affected by this provision in large mines and 85 percent in small mines. MSHA estimates there are 5,456 pieces of equipment and units inspected for fire suppression systems, including 5,182 pieces in large mines (5,758 pieces x 90 percent) and 274 pieces in small mines (322 pieces x 85 percent).

MSHA further assumes that the number of inspections per year are 50 in large mines and 40 in small mines, including 2 manufacturer-recommended inspections in each type of mine. About 10 percent of the inspections will disclose a defect and require a record to be made. As a result, MSHA estimates that are 25,910 inspections disclosing defects in large mines and 1,096 such inspections in small mines.

MSHA estimates that each record takes 5 minutes by a miner trained in fire suppression system inspections who is earning \$50.40 per hour.

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Table 12-5a. Number of Fire Suppression System Inspections Disclosing Defects for Diesel-powered Equipment and Fuel Transportation Units

Activity	Piece of Equipment	Percent of Affected Equipment	Pieces of Affected Equipment	Number of Inspections per Year	Percent of Inspections Disclosing Defects	Number of Inspections Disclosing Defects
Large mines	5,758	90%	5,182	50	10%	25,910
Small mines	322	85%	274	40	10%	1,096
Subtotal (Rounded)	6,080		5,456			27,006

Table 12-5b. Estimated Annual Respondent Hour and Cost Burden, Inspections and Recordkeeping of Fire Suppression System Fire Suppression Systems for Diesel-powered Equipment and Fuel Transportation Units (30 CFR 75.1911(i) and (j))

Activity (Occupation)	Number of Respondents (Coal Mines)	Number of Responses per Respondent	Total Responses (Records)	Average Burden (Hours)	Total Burden (Hours)	Hourly Wage Rate	Total Burden Cost
Inspections - Large mines (Fire Suppression Inspector)	118	219.6	25,910	0.08	2,159.17	\$50.40	\$108,816.46
Inspections - Small mines (Fire Suppression Inspector)	43	25.5	1,096	0.08	91.33	\$50.40	\$4,602.97
Subtotal (Rounded)	161		27,006		2,251		\$113,419

Note: The numbers for responses per respondent are not integers because they are calculated by dividing total responses by the number of respondents.

V. Inspections and Recordkeeping of Fire Suppressions Systems for Permanent Underground Diesel Fuel Storage Facilities

Under 30 CFR 75.1912(i), a record must be made for each fire suppression system in which a defect is found when inspecting a permanent diesel fuel storage facility in an underground coal mine. A record is also required when a defect is found during a manufacturer recommended inspection of such facilities. These inspections are required under 30 CFR 75.1912(h).

MSHA assumes that 37 percent of large mines (44 mines = 118 mines x 0.37) and 28 percent of small mines (12 mines = 43 mines x 0.28) maintain permanent underground diesel fuel storage facilities. MSHA further assumes that the number of inspections per year are 50 in large mines and 40 in small mines, including 2 manufacturer-recommended inspections in each type of mine. About 10 percent of inspections will disclose a defect and require a record to be made. As a result, MSHA estimates that there are 220 inspections disclosing defects in large mines and 48 such inspections in small mines.

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MSHA estimates that each record takes 5 minutes by a miner trained in fire suppression system inspections, who is earning \$50.40 per hour.

Table 12-6a. Number of Fire Suppress System Inspections Disclosing Defects for Permanent Underground Diesel Fuel Storage Facilities

Activity	Number of Mines	Percent of Affected Mines	Number of Affected Mines	Number of Inspections per Year	Percent of Inspections Disclosing Defects	Number of Inspections Disclosing Defects
Large mines	118	37%	44	50	10%	220
Small mines	43	28%	12	40	10%	48
Subtotal (Rounded)	161		56			268

Table 12-6b. Estimated Annual Respondent Hour and Cost Burden, Inspections and Recordkeeping of Fire Suppression Systems for Permanent Underground Diesel Fuel Storage Facilities (30 CFR 75.1912(h) and (i))

Activity (Occupation)	Number of Respondents (Coal Mines)	Number of Responses per Respondent	Total Responses (Records)	Average Burden (Hours)	Total Burden (Hours)	Hourly Wage Rate	Total Burden Cost
Inspections - Large mines (Fire Suppression Inspector)	44	5	220	0.08	18.33	\$50.40	\$923.95
Inspections - Small mines (Fire Suppression Inspector)	12	4	48	0.08	4.00	\$50.40	\$201.59
Subtotal (Rounded)	56		268		22		\$1,126

VI. Inspections and Recordkeeping of Diesel-powered Equipment

Under 30 CFR 75.1914(f)(1), weekly examinations and tests must be performed on diesel-powered equipment. Under 30 CFR 75.1914(f)(2) and (h), mine operators are required to provide relevant recordkeeping. Only the results of those examinations disclosing a defect must be recorded. The record must include the machine examined, defect found, and corrective action taken. MSHA estimates that there are 5,758 pieces of diesel equipment in large mines and 322 pieces of diesel equipment in small mines. MSHA estimates that there are 50 annual inspections in large mines and 40 in small mines. About 25 percent of these inspections will disclose a defect. As a result, MSHA estimates that are 71,975 inspections disclosing defects in large mines and 3,220 such inspections in small mines.

MSHA estimates that each record takes 5 minutes by a miner earning \$49.63 per hour.

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Table 12-7a. Number of Inspections Disclosing Defects for Diesel-powered Equipment

Activity	Piece of Equipment	Number of Inspections per Year	Percent of Inspections Disclosing Defects	Number of Inspections Disclosing Defects
Large mines	5,758	50	25%	71,975
Small mines	322	40	25%	3,220
Subtotal (Rounded)	6,080			75,195

Table 12-7b. Estimated Annual Respondent Hour and Cost Burden, Inspections and Recordkeeping of Diesel-powered Equipment (30 CFR 75.1914(f)(1), (f)(2), and (h))

Activity (Occupation)	Number of Respondents (Coal Mines)	Number of Responses per Respondent	Total Responses (Records)	Average Burden (Hours)	Total Burden (Hours)	Hourly Wage Rate	Total Burden Cost
Inspections - Large mines (Miner)	118	610.0	71,975	0.08	5,997.92	\$49.63	\$297,671.96
Inspections - Small mines (Miner)	43	74.9	3,220	0.08	268.33	\$49.63	\$13,317.18
Subtotal (Rounded)	161		75,195		6,266		\$310,989

Note: The numbers for responses per respondent are not integers because they are calculated by dividing total responses by the number of respondents.

VII. Development of SOP and Recordkeeping for Testing Undiluted Diesel Exhaust Emissions of Diesel-powered Equipment

Under 30 CFR 75.1914(g), mine operators must develop, in writing, SOPs for testing undiluted diesel exhaust emissions in diesel-powered equipment and heavy-duty nonpermissible diesel-powered equipment used in underground coal mines. To account for new mines which will require the development of these SOPs, MSHA assumes that each year 1.5 percent of all large mines are new and 5 percent of all small mines are new. MSHA assumes that 50 percent of new large mines and 10 percent of new small mines will use diesel equipment and thus require SOPs.

Applying these percentages to the 118 large mines and 43 small mines in this package would result in less than 1 large mine and less than 1 small mine being impacted and are required to prepare SOPs. Therefore, MSHA estimates that 1 new large mine and 1 new small mine will be affected by these provisions annually. On average, MSHA estimates that there are 8 different models of diesel-powered equipment in a large mine and 2 different models of diesel-powered equipment in a small mine. Written procedures are similar for the same model of diesel-powered equipment, but will vary when the diesel machines are different models. Therefore, there will be 8 SOPs for 1 large mine and 2 SOPs for 1 small mine each year.

MSHA estimates that a supervisor, earning \$79.38 per hour, takes 2 hours to develop and maintain the testing procedures for each model of diesel-powered equipment.

Table 12-8a. Number of SOPs for Testing Undiluted Diesel Exhaust Emissions of Diesel-powered Equipment

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Activity	Number of Mines	Percent of New Mines	Percent of New Mines Using Diesel-powered Equipment	Number of New Mines Requiring SOPs	Number of Diesel-powered Equipment Models per Mine	Number of Diesel-powered Equipment Models
Large mines	118	1.5%	50%	1	8	8
Small mines	43	5.0%	10%	1	2	2
Subtotal (Rounded)	161			2		10

Table 12-8b. Estimated Annual Respondent Hour and Cost Burden, Development of SOPs for Testing Undiluted Diesel Exhaust Emissions of Diesel-powered Equipment (30 CFR 75.1914(g) and (h))

Activity (Occupation)	Number of Respondents (Coal Mines)	Number of Responses per Respondent	Total Responses (SOPs)	Average Burden (Hours)	Total Burden (Hours)	Hourly Wage Rate	Total Burden Cost
SOPs - Large mines (Mine Supervisor)	1	8	8	2.00	16.00	\$79.38	\$1,270.15
SOPs - Small mines (Mine Supervisor)	1	2	2	2.00	4.00	\$79.38	\$317.54
Subtotal (Rounded)	2		10		20		\$1,588

Under 30 CFR 75.1914(g)(5) and (h), records must be kept of weekly exams and tests of the undiluted exhaust emissions on certain pieces of diesel-powered equipment. Exempt from this provision are diesel engines in diesel-powered equipment approved under 30 CFR part 36 and heavy-duty nonpermissible diesel-powered equipment as defined in 30 CFR 75.1908(a).

MSHA assumes that 35 percent of diesel-powered equipment is affected by these provisions, resulting in 2,015 pieces of diesel equipment in large mines (5,758 pieces x 35 percent) and 113 pieces of diesel equipment in small mines (322 pieces x 35 percent). Annually, MSHA estimates that there are 50 exam weeks in a large mine and 40 exam weeks in a small mine. For each piece of diesel equipment a miner, earning \$49.63 per hour, will take 5 minutes to follow the requirements to record weekly exams and tests.

Table 12-9a. Number of Weekly Tests of Undiluted Exhaust Emissions of Diesel-powered Equipment

Activity	Pieces of Equipment	Percent of Affected Equipment	Pieces of Affected Equipment	Number of Tests per Year	Number of Tests
Large mines	5,758	35%	2,015	50	100,750
Small mines	322	35%	113	40	4,520
Subtotal (Rounded)	6,080		2,128		105,270

Table 12-9b. Estimated Annual Respondent Hour and Cost Burden, Recordkeeping of Weekly Tests of Undiluted Exhaust Emissions of Diesel-powered Equipment (30 CFR 75.1914(g)(5) and (h))

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Activity (Occupation)	Number of Respondents (Coal Mines)	Number of Responses per Respondent	Total Responses (Tests)	Average Burden (Hours)	Total Burden (Hours)	Hourly Wage Rate	Total Burden Cost
Tests - Large mines (Miner)	118	853.8	100,750	0.08	8,395.83	\$49.63	\$416,678.71
Tests - Small mines (Miner)	43	105.1	4,520	0.08	376.67	\$49.63	\$18,693.67
Subtotal (Rounded)	161		105,270		8,773		\$435,372

Note: The numbers for responses per respondent are not integers because they are calculated by dividing total responses by the number of respondents.

VIII. Training Program of Persons Working on Diesel-powered Equipment

Under 30 CFR 75.1915(b)(5) and (c), the mine operator must develop an initial training and retraining program to qualify persons to perform maintenance, repairs, examinations, and tests on diesel-powered equipment, as required by 30 CFR 75.1915(a). Paragraph (c) sets forth requirements concerning the records to be made and maintained. MSHA estimates that 1 new large mine and 1 new small mine using diesel equipment will begin operation per year and require the development of a training program.

MSHA estimates that a supervisor, earning \$79.38 per hour, takes 16 hours in a large mine and 12 hours in a small mine to develop and maintain the training program.

Table 12-10. Estimated Annual Respondent Hour and Cost Burden, Development and Maintenance of Training Programs for Diesel-powered Equipment (30 CFR 75.1915(b)(5) and (c))

Activity (Occupation)	Number of Respondents (Coal Mines)	Number of Responses per Respondent	Total Responses (Training Programs)	Average Burden (Hours)	Total Burden (Hours)	Hourly Wage Rate	Total Burden Cost
Training Programs - Large mines (Mine Supervisor)	1	1	1	16.00	16.00	\$79.38	\$1,270.15
Training Programs - Small mines (Mine Supervisor)	1	1	1	12.00	12.00	\$79.38	\$952.61
Subtotal (Rounded)	2		2		28		\$2,223

Hour Burden Summary

The annual respondent hour and cost burden is summarized in Table 12-11.

Table 12-11. Estimated Annual Respondent Hour and Cost Burden, Summary Totals

Activity	Number of Respondents	Total Responses	Total Burden (Hours)	Total Burden Cost
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I. Records of Diesel Fuel Purchase	161	3,864	193.20	\$6,393.69
II. Markings of Underground Diesel Fuel Tanks and Safety Cans	161	558	9.30	\$461.55
III. Markings of Diesel Fuel Transportation Unit Tanks and Safety Cans	161	6,638	110.63	\$5,490.65
IV. Inspections of Fire Suppression Systems for Diesel-powered Equipment and Fuel Transportation Units	161	27,006	2250.50	\$113,419.42
V. Inspections of Fire Suppressions Systems for Permanent Underground Diesel Fuel Storage Facilities	56	268	22.33	\$1,125.54
VI. Inspections of Diesel-powered Equipment	161	75,195	6266.25	\$310,989.13
VII. Development of SOPs	2	10	20.00	\$1,587.69
VII. Tests of Undiluted Exhaust Emissions of Diesel-powered Equipment	161	105,270	8772.50	\$435,372.38
VIII. Records of Training programs	2	2	28.00	\$2,222.76
Total (Rounded)	161	218,811	17,673	\$877,063

Note: The sum of respondents is not a sum of respondents from each cost category. It corresponds to the number of active underground coal mines.

13. Provide an estimate for the total annual cost burden to respondents or recordkeepers resulting from the collection of information. (Do not include the cost of any hour burden already reflected on the burden worksheet).

- 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 collections 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.**

Under 30 CFR 75.1914(g)(5) and (h), mine operators will need to purchase an instantaneous gas analyzer that costs approximately \$3,000 per instrument to make records from weekly exams and tests of the undiluted exhaust emissions. Since the gas analyzer has a 10-year useful life, the purchase cost is annualized over 10 years at a 7 percent discount rate, resulting in an annualized cost of \$427.13 per year. Annual maintenance and calibration costs for a gas analyzer are approximately \$1,000. MSHA assumes that a large mine needs 2 gas analyzers and a small mine needs 1 analyzer. MSHA estimates that 279 gas analyzers will be purchased by operators, of which 236 will be in large mines (118 mines x 2 gas analyzers) and 43 will be in small mines (43 mines x 1 gas analyzer).

Table 13-1. Estimated Annual Respondent Recordkeeping Cost Burden, Purchase costs, Maintenance and Calibration Costs Related to Instantaneous Gas Analyzer (30 CFR 75.1914(g)(5) and (h))

Cost components	Number of Respondents (Coal Mines)	Number of Responses per Respondent	Number of Responses (Analyzers)	Unit Cost	Cost to Recordkeepers
<i>Purchase cost</i>					
Large mines	118	2	236	\$427.13	\$100,803.27
Small mines	43	1	43	\$427.13	\$18,366.70
<i>Annual Maintenance and Calibration Costs</i>					
Large mines	118	2	236	\$1,000.00	\$236,000.00
Small mines	43	1	43	\$1,000.00	\$43,000.00
Total (Rounded)	161		558		\$398,170

14. Provide estimates of annualized costs 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 may also aggregate cost estimates from Items 12, 13, and 14 in a single table.

There is no cost to the Federal government directly associated with these record keeping requirements. None of the records in this information collection are submitted to MSHA for review or approval. The records are examined during normal mandatory inspections and do not significantly add to the time required to conduct those mandatory inspections.

15. Explain the reasons for any program changes or adjustments reported on the burden worksheet.

Respondents: The estimated annual number of respondents increased from 126 to 161 due to an increase in the number of active underground coal mines.

Responses: The estimated annual number of responses increased from 172,599 to 218,811 due to an increase in the number of respondents.

Time Burden: The estimated annual time burden increased from 14,002 hours to 17,673 hours due to an increase in the number of responses.

Burden Costs: The estimated annual burden costs increased from \$552,903 to \$877,063 due to increased wages and the number of responses.

Other Burden Costs: The estimated annual other burden costs increased from \$312,294 to \$398,170 to an increase in the number of respondents.

Table 15-1. Summary of Changes

	Previous ICR	Currently Approved ICR	Difference
Number of Respondents	126	161	35
Number of Responses	172,599	218,811	46,212
Annual Time Burden	14,002	17,673	3,671
Annual Burden Costs	\$556,847	\$877,063	\$320,216
Annual Other Burden Costs	\$312,294	\$398,170	\$85,876

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.

There are no outline plans for tabulation and publication of data for this information collection.

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.

MSHA associates no forms with this collection.

18. Explain each exception to the topics of the certification statement identified in "Certification for Paperwork Reduction Act Submissions."

There are no certification exceptions identified with this information collection.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

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This information collection does not employ statistical methods.