# SUPPORTING STATEMENT

## Emergency Temporary Standard: Sealing of Abandoned Areas

30 CFR § 75.335 - Seal requirements.

30 CFR § 75.336 - Seal design applications and installation approval.

30 CFR § 75.337 - Construction and repair of seals.

## 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.

The Mine Safety and Health Administration (MSHA) is issuing an emergency temporary standard under section 101(b) of the Federal Mine Safety and Health Act of 1977 in response to the grave danger which miners face when seals fail. MSHA has concluded from its investigations of the 2006 mine explosions and other reports that additional action is necessary to protect miners from the grave danger that they face when seals of abandoned areas of mines fail. This ETS includes requirements to strengthen the design and construction of new seals and the maintenance and repair of all seals. It also increases the level of overpressure for new seals, thus implementing the new requirements of the Mine Improvement and New Emergency Response (MINER) Act of 2006.

Section 103(h) of the Federal Mine Safety and Health Act of 1977 (Mine Act) authorizes MSHA to collect information necessary to carryout its duty in protecting the safety and health of miners, as follows:

> (h) In addition to such records as are specifically required by this Act, every operator of a coal or other mine shall establish and maintain such records, make such reports, and provide such information, as the Secretary or the Secretary of Health, Education, and Welfare may reasonably require from time to time to enable him to perform his functions under this Act. * * *

*The following ETS provisions will affect information collection package, OMB 1219-0088 - Ventilation Plans, Tests and Examinations in Underground Coal Mines.*

§ 75.335(b). This provision requires that for seals constructed prior to the effective date of the ETS and for seals designed for 50 pounds per square inch (psi) overpressure, mine operators must develop a protocol to monitor

methane and oxygen concentrations. The protocol shall be approved in the ventilation plan.

§ 75.335(b)(1). This provision, in part, requires the mine operator to revise the protocol specified in the ventilation plan if repeated sampling indicates that a seal is not likely to outgas.

§ 75.335(b)(5). This provision sets forth what the sampling protocol must address. Such protocols will be specified in their mine ventilation plans.

§ 75.335(b)(6). Any hazardous conditions discovered during oxygen and methane sampling required under § 75.335(b)(6) must be recorded in accordance with existing § 75.363.

§ 75.336(b). This provision requires the use of an MSHA-approved seal design, provided its installation is approved in the ventilation plan.

§ 75.336(b)(3). Mine operators must supply information concerning seals, for approval in the ventilation plan.

Any hazardous condition found from sampling required by § 75.335(b)(6) must be recorded in accordance with existing § 75.363. The remaining requirements, noted above, will require revisions to the mine ventilation plan that affect existing § 75.370(a)(2), which requires any revisions to the mine's ventilation plan be submitted, in writing, to the District Manager; § 75.370(a)(3), which, if requested, the mine operator must supply a copy of the ventilation plan to the representative of miners at the time of notification; and § 75.370(f)(3), which requires that mine operators post a copy of their proposed and approved ventilation plan revisions.

*Some of the ETS requirements are not covered under an OMB approved information collection. These requirements, listed below, will comprise a new OMB information collection.*

§ 75.335(b)(2). Under ETS § 75.335(b)(2), the mine operator must include a certification that certified persons conducting sampling have been trained in sampling procedures. The training to certify persons conducting sampling will need to be done initially under this provision and then repeated annually due to mine personnel turnover. In addition, as the sampling protocol changes, the training of such personnel must be updated.

§ 75.335(b)(5)(iii). Operators must sample to establish a baseline analysis of oxygen and methane concentrations at each sampling point over a 14-day sampling period.

§ 75.335(b)(6). Under ETS § 75.335(b)(6) a certified person must record each sampling result, including location of the sampling points, and oxygen and methane concentrations.

§ 75.336(a). ETS § 75.336(a) sets forth application procedures for an approval of seal designs submitted to MSHA.

§ 75.336(a)(1)(ii). An engineering design application shall…(ii) Be certified by a professional engineer that the design of the seal is in accordance with current, prudent engineering practices; There are no burden hours associated with this provision. The applicant would contract out the professional engineer services for this requirement. Therefore, the costs associated with this provision appear as burden costs in the answer to question 13.

§ 75.336(a)(3). MSHA will notify the applicant if additional information or testing is required. The applicant must provide this information, arrange any additional or repeat tests, and notify MSHA of the location, date, and time of the test(s). MSHA assumes that the applicants will include all relevant information in the application. Therefore, burden hours associated with this provision are included under § 75.336(a).

§ 75.336(b)(2). Designate a professional engineer to certify that the provisions in the approved seal design specified in paragraph (a) of this section have been addressed. No burden hours are associated with professional engineering services. The mine operator would contract out the professional engineer services. Therefore, the costs associated with these services appear as burden costs in the answer to question 13.

§§ 75.337(b)(4) and 75.337(b)(5). Certification of the examinations required by ETS §§ 75.337(b)(1)-(b)(3) must be made under § 75.337(b)(4). This certification must include the initials of the examiner, and date and time of the examination. The certified person, under § 75.337(b)(5), must make a record of the examination at the completion of any shift during which an examination was conducted. The record shall include each deficiency and the corrective action taken. In addition, the record shall be countersigned by the mine foreman or equivalent mine official by the end of the mine foreman’s or equivalent mine official’s next regularly scheduled working shift. The record shall be kept at the mine for one year.

§ 75.337(c). This provision requires a senior mine management official to certify that materials used to construct seals and seal installation were in accordance with specifications in the approved ventilation plan.

§ 75.337(d). Under ETS § 75.337(d), the mine operator will need to notify MSHA of activities concerning the construction of a set of seals. ETS § 75.337(d)(1) requires the mine operator to notify the local MSHA field office

between 2 and 14 days prior to commencement of seal construction. ETS § 75.337(d)(2) requires the mine operator to notify the District Manager, in writing, within five days of completion of a set of seals. ETS § 75.337(d)(3) requires the mine operator to submit a copy of quality control results for seal material properties to the District Manager.

§ 75.337(e). Under ETS § 75.337(e), the mine operator must certify the date of construction or repair seal training provided to each miner, certified person, and senior management official. Under ETS § 75.337(e), additional training would need to be provided for miner turnover or when seal installation procedures change.

*The following ETS provisions appear to have paperwork implications; however, MSHA has determined that they do not entail burden.*

§ 75.335(a)(3)(iv). This provision requires that, when the conditions in (i), (ii), or (iii) are encountered, the operator must revise the ventilation plan to address the potential hazards and submit the modified plan to the District Manager. The plan will include seal strength sufficient to address the conditions. At this time, MSHA believes that it is doubtful that a mine operator would get representative sample results throughout a sealed area which would indicate the need for a seal greater than 120 psi. Therefore, MSHA has not projected that any mine would construct seals with an overpressure greater than 120 psi. Thus there is no burden for this provision.

§ 75.336(a)(2)(i)-(v). § 75.336(a)(2) requires that each application based on full-scale explosion tests address the following requirements to ensure that a seal can reliably withstand the overpressures provided by § 75.335-

(i) Certification by a professional engineer knowledgeable in structural engineering, that the testing was done in accordance with current, prudent engineering practices and its applicability in a coal mine;

(ii) Technical information related to the methods and materials;

(iii) Proper documentation;

(iv) An engineering analysis to address differences between the seal support during test conditions and the range of conditions in a coal mine; and

(v) The application shall include a Seal Design Table that discusses characteristics related to mine specific seal construction.

MSHA has projected that applicants will not conduct full-scale explosion testing due to the cost of such testing. Thus, there is no burden for this provision.

§ 75.336(a)(5). This provision requires seal design approval holders to promptly notify MSHA, in writing, of all deficiencies in an approved seal design of which they become aware. MSHA believes that the paperwork burden due to this provision is negligible since it is expected to be a rare occurrence.

**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.**

Seals must be designed to withstand elevated pressures from explosions and the atmosphere behind the seal must be monitored to prevent the sealed atmosphere from reaching the explosive range. Adequate seal design and the monitoring of the area behind the seal are crucial to contain explosions and prevent potentially explosive or toxic gasses from migrating into the active working areas of underground coal mines. Miners rely on seals to protect them from the hazardous, and sometimes explosive, environments within the sealed area.

*Current Collection: OMB 1219-0088*

Revisions to the mine ventilation plan under the current collection, OMB 1219-0088 - Ventilation Plans, Tests and Examinations in Underground Coal Mines, will be modified to include the sampling protocol (which includes an action plan) and certification requirements included in this ETS. In addition, hazardous conditions found from oxygen and methane sampling required by the ETS will be recorded under OMB 1219-0088. The information is available to all interested persons at the mine to assure them that the seals constructed in mines are designed according to standards and that the atmosphere behind the seals is being monitored by certified personnel. MSHA inspectors use the records to determine that tests and examinations, required by the standards, are being done correctly.

*New Information Collection*

Records that will be collected under this ETS will help assure that the construction and maintenance of seals are done correctly; certified persons conducting sampling in sealed areas have been adequately trained; and results from sampling in sealed areas are recorded.

**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.**

The ETS does not specify how records must be kept, and operators may retain them using whatever method they choose. Records could be kept in the

traditional manner or stored electronically, provided they are secure and not susceptible to loss or alteration. 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.**

The information collection requirements in the ETS: revisions to the mine ventilation plan that concern seals; certifications for seal construction and repair training; certifications for training pertaining to sampling behind seals; procedures for submitting seal design applications, recordkeeping for seal construction and repair; and recording results of sampling behind seals, are not duplicative of any existing MSHA requirements.

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

MSHA has made available on our homepage, at http://www.msha.gov, various sources of information, such as “Technical Assistance,” “Best Practices,” "Training Plan Advisor," and “Accident Prevention.” To assist with compliance, these sites 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.**

MSHA has concluded from its investigations of the 2006 mine explosions and other reports that additional action is necessary to protect miners from the grave danger that they face when seals of abandoned areas of underground coal mines fail. This ETS includes requirements that specify the design and construction of new seals, and the maintenance and repair of all seals. It also requires the monitoring of the atmosphere behind seals. The ETS increases the strength for new seals, thus, implementing the new requirements of the Mine Improvement and New Emergency Response (MINER) Act of 2006. An important part of this emergency rulemaking includes the certifications of training, revisions to mine ventilation plans, seal design, construction, and maintenance, and monitoring the atmosphere behind seals. MSHA experience indicates that failure of a seal can be catastrophic and pose a grave danger to underground miners. It is imperative that the recordkeeping requirements contained in § 75.335 - Seal requirements; § 75.336 - Seal design applications and installation approval; and § 75.337 - Construction and repair of seals be kept intact.

**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.**

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

**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 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 will publish the notice soliciting comments to the information collection requirements in the preamble of the ETS. A Federal Register notice will notify the public that this information collection requirement (ICR) is being reviewed in accordance with the Paperwork Reduction Act of 1995, and give interested persons 45 days to submit comments. Comments received will be addressed in the Preamble to the Final Rule, and, if necessary, a revised ICR will be submitted.

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

MSHA has provided no payments or gifts to the respondents identified in this collection.

**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 in Item 13 of OMB Form 83-I.**
- **Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included in Item 14.**

This ETS will apply to 372 underground coal mines that will utilize seals.

Under ETS § 75.335(b)(2), the mine operator must include a certification that certified persons conducting sampling have been trained in sampling procedures. Mines that will sample and thus need to train personnel are: 83 mines with 1-19 employees; 279 mines with 20-500 employees; and 10 mines with 501+ employees. MSHA estimates that it will take 0.1 hours (6 minutes) for a supervisor, earning $62.50 per hour, to certify the date and content of training provided to those trained. Table 1 shows, by mine size, the burden hours and cost to certify miners trained in the sampling procedures listed in the mine ventilation plan as required by ETS § 75.335(b)(2).

Table 1: Burden Hours and Cost to Certify Miners Trained in Sampling Procedures under ETS §75.335(b)(2)

| Mine Size | No. of Mines that Will Sample Seals | Time to Certify (in hrs.) | First Year Burden Hours | Supervisor Hourly Wage Rate | First Year Burden Cost | Annualized Burden Cost [a] |
|---|---|---|---|---|---|---|
| 1-19 | 83 | 0.1 | 8 | $62.50 | $519 | $127 |
| 20-500 | 279 | 0.1 | 28 | $62.50 | $1,744 | $425 |
| 501+ | 10 | 0.1 | 1 | $62.50 | $63 | $15 |
| Total | 372 | | 37 | | $2,325 | $567 |

[a] Annualized Cost = first year costs x 0.244, where 0.244 is the annualization factor.

The initial training to certify persons conducting sampling will need to be conducted yearly due to mine personnel turnover. Therefore, MSHA assumes that training will be conducted individually due to turnover and will need to be certified. On average, MSHA estimates an annual turnover rate of 7 percent. Table 2 shows, by mine size, the burden hours and cost to certify training due to turnover of mine personnel.

Table 2: Burden Hours and Cost to Certify Miners Trained in Sampling Procedures Under ETS §75.335(b)(2) Due to Mine Personnel Turnover

| Mine Size | No. of Mines that Will Sample Seals | No. of Certified Persons to Train per Mine | Turn-over Rate | Time to Certify (in hrs.) | Annual Burden Hours | Supervisor Hourly Wage Rate | Annual Burden Cost |
|---|---|---|---|---|---|---|---|
| 1-19 | 83 | 2 | 0.07 | 0.1 | 1 | $62.50 | $73 |
| 20-500 | 279 | 4 | 0.07 | 0.1 | 8 | $62.50 | $488 |
| 501+ | 10 | 6 | 0.07 | 0.1 | 0 | $62.50 | $26 |
| Total | 372 | | | | 9 | | $587 |

ETS § 75.335(b)(2) also requires that annual retraining be provided. This training must also be certified. Table 3 shows, by mine size, the burden hours and cost to certify annual retraining.

Table 3: Burden Hours and Cost For Certifying Annual Retraining For Sampling under ETS §75.335(b)(2)

| Mine Size | No. of Mines that Will Sample Seals | Time to Certify (in hrs.) | Annual Burden Hours | Supervisor Hourly Wage Rate | Annual Burden Cost |
|---|---|---|---|---|---|
| 1-19 | 83 | 0.1 | 8 | $62.50 | $519 |
| 20-500 | 279 | 0.1 | 28 | $62.50 | $1,744 |
| 501+ | 10 | 0.1 | 1 | $62.50 | $63 |
| Total | 372 | | 37 | | $2,325 |

Under § 75.335(b)(5)(iii) mine operators must sample to establish a baseline analysis of oxygen and methane concentrations at each sampling point over a 14-day period. Operators are required to have one sampling pipe with one

sampling point for each set of existing seals. Therefore, 2 samples (1 oxygen and 1 methane sample) must be taken for each of the 14 days, for a total of 28 samples at existing seals that have sampling pipes. In addition, MSHA assumes that 5 percent of the samples taken will involve recording a hazardous condition (to be abated with additional baseline sampling). MSHA estimates that, on average, the number of existing seal sets are approximately: 2 seal sets per mine for mines with 1-19 employees, 7 seal sets per mine for mines with 20-500 employees, and 14 seal sets per mine for mines with 501+ employees. MSHA estimates that a certified person, earning $62.50 per hour, will take 0.075 hours (4.5 minutes) to take a sample, 0.05 hours (3 minutes) to make a record of sample concentrations, and an additional 0.05 hours (3 minutes) to record a hazardous condition in those samples where a hazardous condition was found. Table 4 shows, by mine size, the burden hours and cost for sampling to establish a baseline for existing seals.

Table 4: Burden Hours and Cost for Sampling to Establish a Baseline under § 75.335(b)(5)(iii) for Existing Sets of Seals

| Mine Size | No. of Mines that Will Seal | No. of Samples Taken Over 14 Day Period [a] | No. of Sets of Seals per Mine | No. of Samples to Establish the Baseline [b] | No. of Samples that Involve a Hazardous Condition [c] | Time to Take Sample and Make a Record that Does Not Involve a Hazardous Condition (in hrs.) [d] | Additional Time to Make a Record that Involves a Hazardous Condition (in hrs.) | First Year Burden Hours [e] | Certified Person Hourly Wage Rate | First Year Cost | Annualized Cost [f] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-19 | 83 | 28 | 2 | 4,648 | 232 | 0.125 | 0.05 | 593 | $62.50 | $37,038 | $9,037 |
| 20-500 | 279 | 28 | 7 | 54,684 | 2,734 | 0.125 | 0.05 | 6,972 | $62.50 | $435,763 | $106,326 |
| 501+ | 10 | 28 | 14 | 3,920 | 196 | 0.125 | 0.05 | 500 | $62.50 | $31,238 | $7,622 |
| Total | 372 | | | 63,252 | 3,162 | | | 8,065 | | $504,038 | $122,985 |

[a] The sampling pipe in an existing seal has one sampling point in it; thus 2 samples (1 oxygen and 1 methane sample) will be taken for each of the 14 days, for a total of 28 samples.

[b] No. of Samples to Establish the Baseline = no. of mines that will seal x no. of samples taken over 14 day period x no. of sets of seals per mine.

[c] No. of Samples that Involve a Hazardous Condition = no. of samples to establish the baseline x 5 percent.

[d] 0.125 hrs. = 0.075 hrs. (4.5 minutes) to take a sample + 0.05 hrs. (3 minutes) to make record of sample concentrations.

[e] First Year Burden Hours = (no. of samples to establish the baseline x time to take sample and make a record that does not involve a hazardous condition) + (no. of samples that involve a hazardous condition x additional time to make a record that involves a hazardous condition).

[f] Annualized Cost = first year cost x 0.244, where 0.244 is the annualization factor reflecting a 5-year amortization period.

Also, sampling to establish a baseline would need to be conducted for newly constructed seals built each year. The ETS requires under § 75.335(d) that for new seals at least two sampling pipes be installed in each seal. Therefore, 4 samples (2 oxygen and 2 methane samples) are taken for each of the 14 days, for a total of 56 samples at new seals that have sampling pipes. In addition, MSHA assumes that 5 percent of the samples taken will involve recording a hazardous condition that will be abated with additional baseline sampling. MSHA estimates that, on average, the number of new seals built annually is: 3 seals per mine for mines with 1-19 employees, 9 seals per mine for mines with 20-500 employees, and 14 seals per mine for mines with 501+ employees. MSHA estimates that a certified person, earning $62.50 per hour, will take 0.075 hours (4.5 minutes) to take a sample, 0.05 hours (3 minutes) to make a record of sample concentrations, and an additional 0.05 hours (3 minutes) to record a hazardous condition in those samples where a hazardous condition was found. Table 5 shows, by mine size, the burden hours and cost for sampling to establish a baseline for new seals.

Table 5: Burden Hours and Cost For Sampling to Establish a Baseline under § 75.335(b)(5)(iii) for Newly Constructed Seals

| Mine Size | No. of Mines that Will Seal | No. of Samples Taken Over 14 Day Period [a] | No. of Seals Built per Yr. per Mine | No. of Samples to Establish the Baseline [b] | No. of Samples that Involve a Hazardous Condition [c] | Time to Take Sample and Make a Record that Does Not Involve a Hazardous Condition (in hrs.) [d] | Additional Time to Make a Record that Involves a Hazardous Condition (in hrs.) | Annual Burden Hours[e] | Certified Person Hourly Wage Rate | Annual Cost |
|---|---|---|---|---|---|---|---|---|---|---|
| 1-19 | 83 | 56 | 3 | 13,944 | 697 | 0.125 | 0.05 | 1,778 | $62.50 | $111,116 |
| 20-500 | 279 | 56 | 9 | 140,616 | 7,031 | 0.125 | 0.05 | 17,929 | $62.50 | $1,120,534 |
| 501+ | 10 | 56 | 14 | 7,840 | 392 | 0.125 | 0.05 | 1,000 | $62.50 | $62,475 |
| Total | 372 | | | 162,400 | 8,120 | | | 20,706 | | $1,294,125 |

[a] The sampling pipe in a new seal has two sampling points in it; thus 4 samples (2 oxygen and 2 methane sample) will be taken for each of the 14 days, for a total of 56 samples.

[b] No. of Samples to Establish the Baseline = no. of mines that will seal x no. of samples taken over 14 day period x no. of seals built per yr. per mine.

[c] No. of Samples that Involve a Hazardous Condition = no. of samples to establish the baseline x 5 percent.

[d] 0.125 hrs. = 0.075 hrs. (4.5 minutes) to take a sample + 0.05 hrs. (3 minutes) to make record of sample concentrations.

[e] Annual Burden Hours = (no. of samples to establish the baseline x time to take sample and make a record that does not involve a hazardous condition) + (no. of samples that involve a hazardous condition x additional time to make a record that involves a hazardous condition).

Oxygen and methane samples will be taken under the ETS. MSHA estimates that the annual number of oxygen and methane samples taken, in each mine size category, will be: 23,936 samples in the mines with 1-19 employees,

284,816 samples in the mines with 20-500 employees, and 20,440 samples in the mines with 501+ employees. MSHA estimates that a sample takes 0.075 hours (4.5 minutes) to conduct. A certified person, earning a supervisory wage of $62.50 per hour, will take the samples. Table 6 shows, by mine size, the burden hours and cost to take oxygen and methane samples as required by ETS § 75.335(b).

Table 6: Burden Hours and Cost of Sampling under ETS §75.335(b)

| Mine Size | Total No. of Annual Samples [a] | Time to Take Sample (in hrs.) | Annual Burden Hours | Certified Person Hourly Wage Rate | Annual Burden Cost |
|---|---|---|---|---|---|
| 1-19 | 23,936 | 0.075 | 1,795 | $62.50 | $112,200 |
| 20-500 | 284,816 | 0.075 | 21,361 | $62.50 | $1,335,075 |
| 501+ | 20,440 | 0.075 | 1,533 | $62.50 | $95,813 |
| Total | 329,192 | | 24,689 | | $1,543,088 |

[a] Source: REA Table IV-B6.

Under ETS § 75.335(b)(6) a certified person must record each sampling result, including location of the sampling points, and oxygen and methane concentrations. Also, any hazardous conditions found must be corrected and recorded in accordance with existing § 75.363. Hazardous conditions that are not corrected immediately must be posted. MSHA estimates that mines that sample once per week will not require the recording of a hazardous condition. Approximately 15 percent of the samples in mines that sample 5 times per week and those that sample under § 75.335(b)(4) will involve samples that need to record a hazardous condition: 1,250 samples in mines with 1-19 employees; 15,313 samples in mines with 20-500 employees; and 1,100 samples in mines with 501+ employees.

MSHA estimates that the time to make a record is: 0.05 hours (3 minutes) when there is no hazardous condition and an additional 0.05 hours (3 minutes) when a hazardous condition needs to be recorded. Table 7 shows, by mine size, the burden hours and cost of making a sampling record.

Table 7: Burden Hours and Cost to Make a Sampling Record under ETS §75.335(b)(6)

| Mine Size | Total No. of Annual Samples [a] | No. of Annual Samples that Involve a Hazardous Condition [a] | Time to Make a Record that Does Not Involve a Hazardous Condition (in hrs.) | Additional Time to Make a Record that Involves a Hazardous Condition (in hrs.) | Annual Burden Hours | Certified Persons Hourly Wage Rate | Annual Burden Cost |
|---|---|---|---|---|---|---|---|
| 1-19 | 23,936 | 1,250 | 0.05 | 0.05 | 1,259 | $62.50 | $78,706 |
| 20-500 | 284,816 | 15,313 | 0.05 | 0.05 | 15,006 | $62.50 | $937,903 |
| 501+ | 20,440 | 1,100 | 0.05 | 0.05 | 1,077 | $62.50 | $67,313 |
| Total | 329,192 | 17,663 | | | 17,343 | | $1,083,922 |

[a] Source: REA Table IV-B8.

ETS § 75.336(a) provides procedures for the approval of seal designs. MSHA estimates that in the first year 10 applications would be filed, and in the second year and every year thereafter 2 applications would be filed. On average, a supervisor, earning $62.50 per hour, would spend 2 hours on each application, and a clerical employee earning $21.74 per hour, would spend 1 hour preparing and submitting the application. Table 8 shows seal approval burden hours and costs for the first year and every year thereafter.

Table 8: Burden Hours and Cost for Seal Approval Applications under §75.336(a)

| Year | No. of Seal Applications | Supervisor Time (in hrs.) | Clerical Time (in hrs.) | Supervisor Burden Hours | Clerical Burden Hours | Supervisor Hourly Wage Rate | Clerical Hourly Wage Rate | Annual Burden Cost |
|---|---|---|---|---|---|---|---|---|
| First | 10 | 2 | 1 | 20 | 10 | $62.50 | $21.74 | $1,467 |
| Second | 2 | 2 | 1 | 4 | 2 | $62.50 | $21.74 | $293 |
| Third | 2 | 2 | 1 | 4 | 2 | $62.50 | $21.74 | $293 |

Under ETS § 75.337(b)(1)-(b)((5), a certified person must perform several tasks during seal construction and repair, and a mine foreman or equivalent must countersign the record. MSHA estimates that it will take 0.85 hours (51 minutes) to perform these functions. The 0.85 hours will consist of: 0.75 hours (45 minutes) for the certified person to perform the requirements, which include making the record but not countersigning it; and 0.1 hours (6 minutes) for a mine foreman or equivalent mine official to countersign the record. MSHA estimates that the certified person and mine foreman earn $62.50 per hour.

ETS § 75.337(c) requires that a senior mine management official certify that construction, installation, and materials used were in accordance with the approved ventilation plan. MSHA estimates that a senior mine management official, earning $80.17 per hour, will take 0.25 hours to perform this certification.

The requirements of ETS § 75.337(b) and (c) apply to both the construction of seals and the repair of existing seals. MSHA estimates that the mines that will seal are: 83 mines with 1-19 employees; 279 mines with 20 to 500 employees; and 10 mines with 501+ employees.

With respect to new seals, MSHA estimates that, on average, the annual number of new seals that will be built is: 3 seals per mine with 1-19 employees; 9 seals per mine with 20-500 employees; and 14 seals per mine with 501+ employees. For existing seals, MSHA's 2006 data on the number of existing seals shows that, on average, there are approximately: 13 existing seals per mine in mines with 1-19 employees; 44 existing seals per mine in mines with 20-500 employees; and 74 existing seals per mine in mines with 501+ employees. MSHA assumes that 3 percent of these seals will need to be repaired annually. Consequently, the number of existing seals to be repaired in the average mine will be: 0.4 seals per mine with 1-19 employees; 1.3 seals per mine with 20-500 employees; and 2.2 seals per mine with 501+ employees.

Table 9 shows, by mine size, the burden hours and cost for mine operators to perform the requirements under ETS § 75.337(b) and (c).

Table 9: Burden Hours and Cost to Examine, Certify, Record and Countersign Seal
Construction and Repair under ETS §§75.337(b) and 75.337(c)

| Mine Size | No. of Mines that Will Seal | Annual No. of Seals Built per Mine | Annual No. of Seals Repaired per Mine | Time to Examine, Certify, Record, and Countersign (in hrs.) [a] | Time to Certify by Senior Mine Official (in hrs.) [b] | Certified Person Annual Burden Hours | Senior Mine Official Annual Burden Hours | Certified Person Hourly Wage Rate | Senior Mine Official Hourly Wage Rate | Annual Burden Cost |
|---|---|---|---|---|---|---|---|---|---|---|
| 1-19 | 83 | 3 | 0.4 | 0.85 | 0.25 | 240 | 71 | $62.50 | $80.17 | $20,648 |
| 20-500 | 279 | 9 | 1.3 | 0.85 | 0.25 | 2,443 | 718 | $62.50 | $80.17 | $210,261 |
| 501+ | 10 | 14 | 2.2 | 0.85 | 0.25 | 138 | 41 | $62.50 | $80.17 | $11,853 |
| Total | 372 | | | | | 2,820 | 829 | | | $242,762 |

[a] 0.85 hrs. = 0.75 hrs. for a certified person to examine seal site prior to construction or repair, examine seal during construction or repair, examine seal upon completion of construction or repair, certify at the seal site that examinations were made, and to make a record + 0.1 hrs. for mine foreman to countersign record.

[b] 0.25 hrs. for senior mine management official to certify that construction, installation, and materials used were in accordance with approved ventilation plan.

Under ETS § 75.337(d), the mine operator will need to notify MSHA of certain activities concerning the construction of a set of seals. ETS § 75.337(d)(1) requires the mine operator to notify the local MSHA field office between 48 and 72 hours prior to commencement of seal construction. ETS § 75.337(d)(2) requires the mine operator to notify the District Manager, in writing, within five days of completion of a set of seals. ETS § 75.337(d)(3) requires the mine operator to submit a copy of quality control test results.

MSHA estimates that, on average, the number of sets of seals per year will be 0.5 sets of seal in a mine with 1-19 employees; 1.5 sets in a mine with 20-500 employees; and 1 set of seals in a mine with 501+ employees.

MSHA estimates that a supervisor, earning $62.50 per hour, will take 0.05 hours (3 minutes) to notify the local MSHA field office between 2 and 14 days prior to commencement of seal construction. Also, MSHA estimates that it will take a clerical employee, earning $21.74 per hour, a total of 0.2 hours

(12 minutes) to type and send a letter notifying of the completion of a set of seals and to copy and send the quality control test results.

Table 10 shows, by mine size, the annual costs to notify and submit material to MSHA pursuant to the requirements in the ETS § 75.337(d).

Table 10: Burden Hours and Cost to Notify MSHA Concerning Constructing Sets of Seals under ETS §75.337(d)

| Mine Size | No. of Mines that Will Seal | Annual Number of Sets of Seals to Be Built per Mine | Time to Notify MSHA per Mine (in hrs.) [a] | Time to Submit Data to MSHA per Mine (in hrs.) [b] | Supervisor Annual Burden Hours | Clerical Annual Burden Hours | Supervisor Hourly Wage Rate | Clerical Hourly Wage Rate | Annual Burden Cost |
|---|---|---|---|---|---|---|---|---|---|
| 1-19 | 83 | 0.5 | 0.05 | 0.2 | 2 | 8 | $62.50 | $21.74 | $310 |
| 20-500 | 279 | 1.5 | 0.05 | 0.2 | 21 | 84 | $62.50 | $21.74 | $3,127 |
| 501+ | 10 | 1 | 0.05 | 0.2 | 1 | 2 | $62.50 | $21.74 | $75 |
| Total | 372 | | | | 24 | 94 | | | $3,512 |

[a] 0.05 hrs = the time for a supervisor to notify the local MSHA field office between 2 and 14 days prior to commencement of seal construction.

[b] 0.2 hrs. = 0.1 hrs. for clerical employee to type and send a letter which notifies of the completion of a set of seals + 0.1 hrs. for clerical employee to copy and send the quality control test results.

Under ETS § 75.337(e), miners constructing and repairing seals and certified persons in ETS § 75.337(b) will need to be trained prior to constructing a seal. The training will address material and procedures in the approved seal design and ventilation plan.

All mines that now have seals will need the training required by ETS § 75.337(e) because they will be constructing new seals in the future and maintaining existing seals. The numbers of mines that will need to provide training under ETS § 75.337(e) is estimated to be 83 mines with 1-19 employees, 279 mines with 20-500 employees, and 10 mines with 501+ employees.

MSHA estimates that of the mines with 1-19 employees, 80 percent will contract out training and 20 percent will train in-house; of those with 20-500 employees, 30 percent will contract out training and 70 percent will train in-house; and of those with 501+ employees, 10 percent will contract out training and 90 percent will train in-house.
For those mines that provide training in-house, MSHA estimates that a chief engineer, earning $60.58 per hour, will take 4 hours to prepare for the

training. Table 11 shows, by mine size, the burden hours and cost to prepare for training.

Table 11: Burden Hours and Cost to Prepare for Training under ETS §75.337(e)

| Mine Size | No. of Mines that Will Build or Repair Seals | Percentage of Mines that will Receive Training In-House | Time to Prepare for Training (in hrs.) | Annual Burden Hours | Chief Engineer Hourly Wage Rate | First Burden Year Cost | Annualized Burden Cost [a] |
|---|---|---|---|---|---|---|---|
| 1-19 | 83 | 20% | 4 | 66 | $60.58 | $4,023 | $981 |
| 20-500 | 279 | 70% | 4 | 781 | $60.58 | $47,325 | $11,547 |
| 501+ | 10 | 90% | 4 | 36 | $60.58 | $2,181 | $532 |
| Total | 372 | | | 884 | | $53,528 | $13,061 |

[a] Annualized Burden Cost =first Year costs x 0.244, where 0.244 is the annualization factor reflecting a 5-year amortization period.

The training under § 75.337(e) must be certified. Mine operators will incur burden hours related to certifying the training for in-house training. The hourly wage rate of the person providing the training is estimated to be $60.58 when the training is provided in-house. The certification is estimated to take 0.1 hours (6 minutes). Table 12 shows, by mine size, the burden hours and cost for certifying the training under ETS § 75.337(e).

Table 12: Burden Hours and Cost for Certifying Training under ETS §75.337(e)

| Mine Size | No. of Mines that Will Build or Repair Seals | Percent Training Done In-House [a] | Time to Certify (in hrs.) | Annual Burden Hours | Instructor Hourly Wage Rate | First Year Burden Cost | Annualized Burden Cost [b] |
|---|---|---|---|---|---|---|---|
| 1-19 | 83 | 20% | 0.1 | 2 | $60.58 | $101 | $25 |
| 20-500 | 279 | 70% | 0.1 | 20 | $60.58 | $1,183 | $289 |
| 501+ | 10 | 90% | 0.1 | 1 | $60.58 | $55 | $13 |
| Total | 372 | | | 22 | | $1,338 | $327 |

[a] The number of mines conducting in-house training is estimated to be: 20 percent of mines with 1-19 employees, 70 percent of mines with 20-500 employees, and 90 percent of mines with 501+ employees

[b] Annualized Burden Costs = first year costs x 0.244, where 0.244 is the annualization factor, reflecting a 5 year amortization period.

Initial training will need to be conducted annually due to mine personnel turnover. MSHA estimates an annual turnover rate of 0.07 and that these miners will be trained individually. This training will also need to be certified. The certification is estimated to take 0.1 hours (6 minutes). Table 13 shows, by mine size, the burden hours and cost for certifying training due to turnover of mine personnel.

Table 13: Burden Hours and Cost for Certifying Training under ETS §75.337(e) Due to Mine Personnel Turnover

| Mine Size | No. of Mines that Will Build or Repair Seals | No. of Miners to Train | No. of Certified Persons to Train | No. of Senior Mine Officials to Train | Turn-over Rate | Percent Training Done In-House [a] | Time to Certify (in hrs.) | Annual Burden Hours [b] | Instructor Hourly Wage Rate | Annual Burden Cost |
|---|---|---|---|---|---|---|---|---|---|---|
| 1-19 | 83 | 2 | 1 | 1 | 0.07 | 20% | 0.1 | 1 | $60.58 | $61 |
| 20-500 | 279 | 4 | 2 | 1 | 0.07 | 70% | 0.1 | 10 | $60.58 | $580 |
| 501+ | 10 | 4 | 2 | 1 | 0.07 | 90% | 0.1 | 1 | $60.58 | $61 |
| Total | 372 | | | | | | | 12 | | $701 |

[a] The number of mines conducting in-house training are estimated to be: 20 percent of mines with 1-19 employees, 70 percent of mines with 20-500 employees, and 90 percent of mines with 501+ employees

[b] Annual Burden Hours = (no. of mines that will build or repair seals x percent training done in-house) x ((no. of miners to train + no. of certified persons to train +no. of senior mine officials to train) x turnover rate) x time to certify.

Under ETS § 75.337(e), additional training would need to be provided when seal installation procedures change. MSHA assumes that applicable procedures would change, on average, once annually. This training will need to be certified. The certification is estimated to take 0.1 hours (6 minutes). Table 14 shows, by mine size, the burden hour and cost for certifying ETS § 75.337(e) training performed as a result of changes to training procedures.

Table 14: Burden Hours and Cost for Certifying Annual Retraining under ETS §75.337(e)

| Mine Size | No. of Mines that Will Build or Repair Seals | Percent Training Done In-House [a] | Time to Certify (in hrs.) | Annual Burden Hours | Instructor Hourly Wage Rate | Annual Burden Cost |
|---|---|---|---|---|---|---|
| 1-19 | 83 | 20% | 0.1 | 2 | $60.58 | $101 |
| 20-500 | 279 | 70% | 0.1 | 20 | $60.58 | $1,183 |
| 501+ | 10 | 90% | 0.1 | 1 | $60.58 | $55 |
| Total | 372 | | | 22 | | $1,338 |

[a] The number of mines conducting in-house training are estimated to be: 20 percent of mines with 1-19 employees, 70 percent of mines with 20-500 employees, and 90 percent of mines with 501+ employees.

Under ETS § 75.335(b)(5), all mine operators that currently have seals must develop a sampling protocol which includes an action plan to monitor methane and oxygen concentrations in sealed areas. The sampling protocol and action plan must be included in the mine ventilation plan. In addition, mine operators that continue to construct seals must provide the sealing procedure information listed in ETS § 75.336(b)(3).
MSHA estimates that, after the ETS becomes effective, 83 mines with 1-19 employees, 279 mines with 20-500 employees, and 10 mines with 501+ employees will continue to seal. For these mines, MSHA estimates that a supervisor, earning $62.50 per hour, will take 8 hours in a mine with 1-19 employees, 16 hours in a mine with 20-500 employees, and 24 hours in a mine with 501+ employees to revise the ventilation plan. In addition, a clerical employee, earning $21.74 per hour, is estimated to take 0.25 hours (15 minutes) to copy and submit the revised materials.

The Agency assumes that the District Manager, in reviewing proposed ventilation plan revisions, will require some changes to the proposed revisions. The mine operator will need to make those changes and resubmit the revised ventilation plan for approval. A supervisor is estimated to spend 1 hour in mines with 1-19 employees, between 1 and 2 hours (for an average of 1.5 hours) in mines with 20-500 employees, and 2 hours in mines with 501+ employees making changes and resubmitting the revised ventilation plan.
Table 15 shows, by mine size, the burden hours and cost to revise the mine ventilation plan for those mines that will continue to seal after the ETS takes effect.

Table 15: Burden Hours and Cost to Revise, Copy, and Submit the Proposed and Approved Ventilation Plan Revisions For Mines that Will Continue to Seal[a]

| Mine Size | No. of Mines that Will Seal | Time to Revise Ventilation Plan (in hrs.) [b] | Time to Copy Revised Pages (in hrs.) | Supervisor Annual Burden Hours [c] | Clerical Annual Burden Hours [d] | Supervisor Hourly Wage Rate | Clerical Hourly Wage Rate | Annual Burden Cost [e] |
|---|---|---|---|---|---|---|---|---|
| 1-19 | 83 | 9 | 0.25 | 747 | 42 | $62.50 | $21.74 | $47,590 |
| 20-500 | 279 | 17.5 | 0.25 | 4,883 | 140 | $62.50 | $21.74 | $308,189 |
| 501+ | 10 | 26 | 0.25 | 260 | 5 | $62.50 | $21.74 | $16,359 |
| Total | 372 | | | 5,890 | 186 | | | $372,137 |

[a] As a result of the ETS, mine operators will be required to revise the mine ventilation plan at 30 CFR §75.370(a)(2).

[b] The time for a supervisor to revise the ventilation plan would be: 9 hrs. (8 hours for proposed revisions + 1 hour for approved revisions) in mines with 1-19 employees; 17.5 hrs. (16 hours for proposed revisions + 1.5 hours for approved revisions) in mines with 20-500 employees; and 26 hrs. (24 hours for proposed revisions + 2 hours for approved revisions) in mines with 501+ employees;

[c] Supervisor Annual Burden Hours = no. of mines that will seal x time to revise ventilation plan.

[d] Clerical Annual Burden Hours = no. of mines that will seal x time to copy revised pages x 2, where a factor of 2 is used to account for the proposed and approved revisions.

[e] Annual Burden Cost = (no. of mines that will seal x time to revise ventilation plan x supervisor hourly wage rate) + (no. of mines that will seal x time to copy and submit revised pages x clerical hourly wage rate x 2), where a factor of 2 is used to account for the proposed and approved revisions.

Mines that continue to seal after the ETS becomes effective will need to post a copy of their proposed and approved ventilation plan revisions submitted to MSHA. In addition, those mines that have a representative of miners must provide a copy of the revisions upon request. MSHA assumes that 30 percent of mines that continue to seal have a representative of miners and that all will request a copy of the revisions. MSHA estimates that it will take a clerical employee, earning $21.74 per hour, 0.35 hours (21 minutes) either: to copy and post the revisions, or to copy and provide a copy of the revisions to the representative of miners. Table 16 shows, by mine size, the burden hours and cost to copy and post and, when applicable, to provide a copy of the revisions to the representative of miners, for those mines that continue to seal after the ETS takes effect.

Table 16: Burden Hours and Cost to Copy and Post Proposed & Approved Ventilation Plan and Provide a Copy of Ventilation Plan to Representative of Miners
For Mines that Will Continue to Seal[a]

| Mine Size | No. of Mines that Will Seal | Time to Copy & Post or to Copy & Provide Plan to Rep. of Miners (in hrs.) | Percentage of Mines Providing a Copy of Plan to Rep. of Miners | Annual Burden Hours [b] | Clerical Hourly Wage Rate | Annual Burden Cost |
|---|---|---|---|---|---|---|
| 1-19 | 83 | 0.35 | 30% | 76 | $21.74 | $1,642 |
| 20-500 | 279 | 0.35 | 30% | 254 | $21.74 | $5,520 |
| 501+ | 10 | 0.35 | 30% | 9 | $21.74 | $198 |
| Total | 372 | | | 339 | | $7,359 |

[a] As a result of the ETS, mine operators will be required to revise the mine ventilation plan at 30 CFR §§75.370(a)(3) & 75.370(f).

[b] Annual Burden Hours = (no. of mines that will seal x time to copy & post or to copy & provide plan to representative of miners x 2) + (no. of mines that will seal x percentage of mines providing a copy of plan to representative of miners x time to copy & post or to copy & provide plan to representative of miners x 2), where a factor of 2 is used to account for the proposed and approved revisions.

## SUMMARY OF PAPERWORK BURDEN HOURS AND RELATED COSTS

### Question 12 Summary Tables

Table 17 provides a summary of the annual burden hours and costs that begin in year 1, and beginning in year 2 and every year thereafter. These burden and costs are for new mines only. Table 18 provides a summary of responses in year 1 and in year 2 and every year thereafter.

Table 17: Summary of Burden Hours

| ETS | Section | Burden Hours | |
|---|---|---|---|
| | | 1st Yr. | 2nd Yr. & Every Yr. Thereafter |
| Certify Sampling Training | §75.335(b)(2) | 37 | 0 |
| Certify Sampling Training (Turnover) | §75.335(b)(2) | 9 | 9 |
| Certify Sampling Retraining | §75.335(b)(2) | 37 | 37 |
| Baseline Sampling & Record | §75.335(b)(5)(iii) | 28,771 | 20,706 |
| Annual Sampling | §75.335(b) | 24,689 | 24,689 |
| Annual Sampling Record | §75.335(b)(6) | 17,343 | 17,343 |
| Seal Approval Applications | §75.336(a) | 30 | 6 |
| Exam, Certify, Record & Countersign Seal Construction & Repair | §§75.337(b) & 75.337(c) | 3,650 | 3,650 |
| Notification Concerning Seal Construction | §75.337(d) | 118 | 118 |
| Prepare for Seal Construction & Repair Training | §75.337(e) | 884 | 0 |
| Certify Seal Construction & Repair Training | §75.337(e) | 22 | 0 |
| Certify Seal Construction & Repair Training (Turnover) | §75.337(e) | 12 | 12 |
| Certify Annual Retraining of Construction & Repair | §75.337(e) | 22 | 22 |
| Submit Ventilation Plan for Mines that Seal | §§75.335(b)(5) & 75.336(b)(3) | 6,076 | 6,076 |
| Copy & Post Ventilation Plan or Provide Copy to Rep. of Miners for Mines that Seal | §§75.335(b)(5) & 75.336(b)(3) | 339 | 339 |
| Total Burden | | 82,037 | 73,006 |

Table 18: Summary of Responses

| ETS | Section | Units | Responses per Yr. per Mine | 1st Yr. Responses | 2nd Yr. & Every Yr. Thereafter Responses |
|---|---|---|---|---|---|
| Certify Sampling Training | §75.335(b)(2) | 372 | 1 | 372 | 0 |
| Certify Sampling Training (Turnover) | §75.335(b)(2) | 372 | 4 | 1,488 | 1,488 |
| Certify Sampling Retraining | §75.335(b)(2) | 372 | 1 | 372 | 372 |
| Baseline Samopling & Record | §75.335(b)(5)(iii) | 372 | 606.59 / 436.56 | 225,652 | 162,400 |
| Annual Sampling | §75.335(b) | 372 | 884.9247 | 329,192 | 329,192 |
| Annual Sampling Record | §75.335(b)(6) | 372 | 884.9237 | 329,192 | 329,192 |
| Seal Approval Applications | §75.336(a) | 10/2 | 1 | 10 | 2 |
| Exam, Certify, Record & Countersign Seal Construction & Repair | §§75.337(b) & 75.337(c) | 372 | 9 | 3,348 | 3,348 |
| Notification Concerning Seal Construction | §75.337(d) | 372 | 4 | 1,488 | 1,488 |
| Prepare for Seal Construction & Repair Training | §75.337(e) | 372 | 1 | 372 | 0 |
| Certify Seal Construction & Repair Training | §75.337(e) | 372 | 1 | 372 | 0 |
| Certify Seal Construction & Repair Training (Turnover) | §75.337(e) | 372 | 0.44 | 164 | 164 |
| Certify Annual Retraining of Construction & Repair | §75.337(e) | 372 | 1 | 372 | 372 |
| Submit Ventilation Plan for Mines that Seal | §§75.335(b)(5) & 75.336(b)(3) | 372 | 1 | 372 | 372 |
| Copy & Post Ventilation Plan or Provide Copy to Rep. of Miners for Mines that Seal | §§75.335(b)(5) & 75.336(b)(3) | 372 | 1 | 372 | 372 |
| Total Responses | | | | 893,137 | 828,761 |

**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).**

**• The cost estimate should be split into two components: (a) a total capital and start-up cost component (annualized over its expected useful life); and (b) a total operation and maintenance and purchase of services component. The estimates should take into account costs associated with generating, maintaining, and disclosing or providing the information. Include descriptions of methods used to estimate major cost factors including system and technology acquisition, expected useful life of capital equipment, the discount rate(s), and the time period over which costs will be incurred. Capital and start-up costs include, among other items, preparations for collecting information such as purchasing computers and software; monitoring, sampling, drilling and testing equipment; and record storage facilities.**

**• If cost estimates are expected to vary widely, agencies should present ranges of cost burdens and explain the reasons for the variance. The cost of purchasing or contracting out information**

**collection services should be a part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondents (fewer than 10), utilize the 60-day pre-OMB submission public comment process and use existing economic or regulatory impact analysis associated with the rulemaking containing the information collection, as appropriate.**

- **Generally, estimates should not include purchases of equipment or services, or portions thereof, made: (1) prior to October 1, 1995, (2) to achieve regulatory compliance with requirements not associated with the information collection, (3) for reasons other than to provide information or keep records for the government, or (4) as part of customary and usual business or private practices.**

ETS §75.335(b)(1) requires a certified person to sample atmospheres of sealed areas weekly when the barometric pressure is decreasing or the seal is outgassing. On average, the number of methane gas detectors needed per mine is estimated to be: 1 detector in mines with 1-19 employees; 1 to 2 detectors (an average of 1.5 detectors) in mines with 20-500 employees; and 2 detectors in mines with 501+ employees. The detectors (including tubing and calibration kit) are estimated to cost approximately $2,114. The detectors are estimated to last for 5 years. All mines that currently have seals will sample and will need to purchase a methane gas detector. These mines are estimated to be: 83 mines with 1-19 employees; 279 mines with 20-500 employees; and 10 mines with 501+ employees. Table 19 shows, by mine size, costs for mine operators to purchase methane detectors needed to perform the sampling required by ETS § 75.335(b).

Table 19: First Year and Annualized Cost for Methane Gas Detectors under ETS §75.335(b)

| Mine Size | No. of Mines that Will Sample Seals | No. of Methane Detectors per Mine | Purchase Cost per Methane Detector [a] | First Year Cost [b] | Annualized Cost [c] |
|---|---|---|---|---|---|
| 1-19 | 83 | 1 | $2,114 | $175,462 | $42,813 |
| 20-500 | 279 | 1.5 | $2,114 | $884,709 | $215,869 |
| 501+ | 10 | 2 | $2,114 | $42,280 | $10,316 |
| Total | 372 | | | $1,102,451 | $268,998 |

[a] Detection equipment = $1,775 for detector with carrying case; $8 for 10 ft. of tubing; and $331 for calibration kit (excluding gas cylinders).

[b] First Year Costs = no. of mines that will sample seals x no. of methane detectors per mine x cost of methane detection equipment.

[c] Annualized Costs = first year costs x 0.244, where 0.244 is the annualization factor to reflect a 5-year life of the equipment.

Maintenance for the methane detector consists of: calibrating the detector approximately once a month, purchasing a probe filter once per year, and performing a bump test before use. Table 20 shows, by mine size, costs to maintain the methane gas detectors purchased under ETS § 75.335(b).

Table 20: Annual Cost to Maintain Methane Gas Detectors under ETS §75.335(b)

| Mine Size | No. of Mines that Will Sample Seals | No. of Methane Detectors per Mine | Workdays per year | Maintenance Cost per Methane Detector [a] | Annual Cost [b] |
|---|---|---|---|---|---|
| 1-19 | 83 | 1 | 260 | $202 | $16,783 |
| 20-500 | 279 | 1.5 | 260 | $202 | $84,625 |
| 501+ | 10 | 2 | 365 | $275 | $5,493 |
| Total | 372 | | | | $106,902 |

[a] Annual maintenance cost per detector = {$1.38 per liter of methane x[(1 liter x 12 calibrations per year) + ( 0.5 liter x 1 bump test x no. of workdays per year)]} + 1 probe filter @ $6.25.

[b] Annual Cost = no. of mines that will sample seals x no. of methane detectors per mine x maintenance cost per methane detector).

In the rare situation where a hazardous condition identified during sampling cannot be corrected immediately, the mine operator will need to post a danger sign. MSHA estimates that 2 signs will be posted in each area where a hazardous condition was found though sampling. The cost of a danger sign is estimated to be $8 (which includes the labor to put up the signs). Table 21 shows, by mine size, the annual cost to place danger signs in areas that have been sampled and a hazardous condition was found.

Table 21: Annual Costs to Post Danger Signs [a]

| Mine Size | No. of Annual Samples that Involve Recording a Hazardous Condition and Result in Posting a Danger Sign [b] | No. of Signs to Post at each Sampled Site | Cost per Sign (includes Labor cost) | Annual Cost |
|---|---|---|---|---|
| 1-19 | 6 | 2 | $8 | $96 |
| 20-500 | 77 | 2 | $8 | $1,232 |
| 501+ | 6 | 2 | $8 | $96 |
| Total | 89 | | | $1,424 |

[a] The requirement to post danger signs is under §75.363(a). This regulation has not been changed.

[b] Source: REA Table IV-B9.

ETS § 75.336(a) provides procedures for the approval of seal designs submitted to MSHA. MSHA estimates that in the first year 10 applications would be filed, and in the second year and every year thereafter 2 applications would be filed. Under ETS § 75.336(a)(1)(ii) for each application filed a professional engineer must certify that the design of the seal is in accordance with current, prudent engineering practices. The professional

engineer would be a contractor who works for the company filing the seal application. MSHA estimates that a professional engineer, earning $100 per hour, would need 80 hours to review the application and perform the certification. In addition, each application would need to have 30 quality control tests analyzed at a price of $90 for each test. Two copies are assumed to be made of the application at a cost of $20 ($10 per copy), and postage is estimated at $16 per application. Table 22 shows the estimated costs for the engineer's time.

Table 22: Yearly Cost for Engineer's Input to Seal Approval Application under §75.336(a)

| Year | Seal Applications | Eng. Time (in hrs.) | Eng. Hourly wage Rate | Material Testing [a] | Copy and Postage | Yearly Costs |
|---|---|---|---|---|---|---|
| First | 10 | 80 | $100 | $2,700 | $36 | $107,360 |
| Second | 2 | 80 | $100 | $2,700 | $36 | $21,472 |
| Third | 2 | 80 | $100 | $2,700 | $36 | $21,472 |

[a] Material Testing = 30 tests x $90 per test.

[b] Copy and Posting = (2 copies at $10 per copy) + $16 for postage.

The underground coal mine operator would need to contract out to a registered professional engineer, earning $100 per hour, to oversee and certify installation per set of seals. Table 23 shows the estimated costs for the registered professional engineer.

Table 23: Cost of Professional Engineers to Conduct or Oversee and to Certify Mine-Specific Seal Installations

| Mine Size | Hours to Conduct or Oversee and Certify Seal Installation | Wage Rate of Professional Engineer | Cost of Professional Engineer for Mine-Specific Seal-Set Installation | No. of New Seal-Sets Per Year | Annual Cost of Professional Engineers for Mine-Specific Seal-Set Installations |
|---|---|---|---|---|---|
| 1-19 | 24 | $100 | $2,400 | 42 | $99,600 |
| 20-500 | 40 | $100 | $4,000 | 419 | $1,674,000 |
| 501+ | 56 | $100 | $5,600 | 10 | $56,000 |
| Total | | | | 470 | $1,829,600 |

Under ETS § 75.337(d), the mine operator will need to notify MSHA of certain activities concerning the construction of a set of seals. ETS § 75.337(d)(1) requires the mine operator to notify the local MSHA field office between 2 and 14 days prior to commencement of seal construction. ETS § 75.337(d)(2) requires the mine operator to notify the District Manager, in writing, within five days of completion of a set of seals. ETS § 75.337(d)(3) requires the mine operator to submit a copy of quality control test results.

MSHA estimated that, on average, the number of sets of seals per year will be 0.5 sets of seal in a mine with 1-19 employees; 1.5 sets in a mine with 20-500 employees; and 1 set of seals in a mine with 501+ employees.

In addition, a copy of the letter of completion of a set of seals is estimated to be 1 page and a copy of the quality control test results is estimated to be 15 pages. MSHA estimates that copy costs are $0.15 per page and postage costs are $1. Postage will be charged twice because the letter of completion of a set of seals is not sent at the same time as the other material. Thus, total copy and postage costs will be $4.40 [(16 pages x $0.15) + $2 postage). Table 24 shows, by mine size, the annual postage costs to notify and submit material to MSHA pursuant to the requirements in the ETS § 75.337(d).

Table 24: Annual Postage Cost to Notify MSHA of Constructing Sets of Seals under ETS §75.337(d)

| Mine Size | No. of Mines that Will Seal | Annual Number of Sets of Seals to Be Built per Mine | Copy & Postage Cost [a] | Annual Postage Costs |
|---|---|---|---|---|
| 1-19 | 83 | 0.5 | $4.40 | $183 |
| 20-500 | 279 | 1.5 | $4.40 | $1,841 |
| 501+ | 10 | 1 | $4.40 | $44 |
| Total | | | | $2,068 |

[a] $4.40 = $1.15 + $3.25, where $1.15 = [(1 pg. notification of completion of a set of seals x $0.15 copy cost) +($1 for postage] and $2.25 = [15 pgs. Of test results x $0.15 copy costs) + $1 for postage].

The training under § 75.337(e) must be certified. Mine operators will incur costs for contractors to certify the training. The hourly wage rate of the instructor providing the training is estimated to be $90.87 when the training is contracted out. The certification is estimated to take 0.1 hours (6 minutes). Table 25 shows, by mine size, the burden hours and cost for certifying the training under ETS § 75.337(e).

Table 25: Cost for Certifying Training under ETS §75.337(e)

| Mine Size | No. of Mines that Will Build or Repair Seals | Percent of Training Contracted out [a] | Time to Certify (in hrs.) | Instructor Hourly Wage Rate | First Year Cost | Annualized Cost [b] |
|---|---|---|---|---|---|---|
| 1-19 | 83 | 80% | 0.1 | $90.87 | $603 | $147 |
| 20-500 | 279 | 30% | 0.1 | $90.87 | $761 | $186 |
| 501+ | 10 | 10% | 0.1 | $90.87 | $9 | $2 |
| Total | 372 | | | | $1,373 | $335 |

[a] The number of mines contracting out training are estimated to be: 80 percent of mines with 1-19 employees, 30 percent of mines with 20-500 employees, and 10 percent of mines with 501+ employees

[b] Annualized Costs = first year costs x 0.244, where 0.244 is the annualization factor, reflecting a 5 year amortization period.

Initial training will need to be conducted annually due to mine personnel turnover. This training will also need to be certified. MSHA estimates an annual turnover rate of 7 percent, and that miners will be trained individually. The certification is estimated to take 0.1 hours (6 minutes). Table 26 shows, by mine size, the burden hour and cost for contractors to certify training due to turnover of mine personnel.

Table 26: Cost for Certifying Training under ETS §75.337(e) Due to Mine Personnel Turnover

| Mine Size | No. of Mines that Will Build or Repair Seals | No. of Miners to Train | No. of Certified Persons to Train | No. of Senior Mine Officials to Train | Turn-over Rate | Percent of Training Contracted Out [a] | Time to Certify (in hrs.) | Instructor Hourly Wage Rate | Annual Cost [b] |
|---|---|---|---|---|---|---|---|---|---|
| 1-19 | 83 | 2 | 1 | 1 | 0.07 | 80% | 0.1 | $90.87 | $169 |
| 20-500 | 279 | 4 | 2 | 1 | 0.07 | 30% | 0.1 | $90.87 | $373 |
| 501+ | 10 | 4 | 2 | 1 | 0.07 | 10% | 0.1 | $90.87 | $4 |
| Total | 372 | | | | | | | | $546 |

[a] The number of mines contracting out training are estimated to be: 80 percent of mines with 1-19 employees, 30 percent of mines with 20-500 employees, and 10 percent of mines with 501+ employees

[b] Annual Cost = ((no. of mines that will build or repair seals x percent of training contracted out) x ((no. of miners to train + no. of certified persons to train +no. of senior mine officials to train) x turnover rate) x time to certify) x Instructor hourly wage rate.

Under ETS § 75.337(e), additional training would need to be provided when seal installation procedures change. MSHA assumes that applicable procedures would change, on average, once annually. This training will need to be certified. The certification is estimated to take 0.1 hours (6 minutes). Table 27 shows, by mine size, the burden hour and cost for contractors to certify ETS § 75.337(e) training performed as a result of changes to training procedures.

Table 27: Cost for Certifying Annual Retraining under ETS §75.337(e), Due Changes in Training Procedures

| Mine Size | No. of Mines that Will Build or Repair Seals | Percent of Training Contracted Out [a] | Time to Certify (in hrs.) | Annual Burden Hours | Instructor Hourly Wage Rate | Annual Cost |
|---|---|---|---|---|---|---|
| 1-19 | 83 | 80% | 0.1 | 7 | $90.87 | $603 |
| 20-500 | 279 | 30% | 0.1 | 8 | $90.87 | $761 |
| 501+ | 10 | 10% | 0.1 | 0 | $90.87 | $9 |
| Total | 372 | | | 15 | | $1,373 |

[a] The number of mines contracting out training are estimated to be: 80 percent of mines with 1-19 employees, 30 percent of mines with 20-500 employees, and 10 percent of mines with 501+ employees.

Under ETS § 75.335(b)(5), all mine operators that currently have seals must develop a sampling protocol in their mine ventilation plan to monitor methane and oxygen concentrations in sealed areas. In addition, mine operators that continue to construct seals must provide the sealing procedure information listed in ETS § 75.336(b)(3).

MSHA estimates that after the ETS becomes effective 83 mines with 1-19 employees, 279 mines with 20-500 employees, and 10 mines with 501+ employees will continue to seal. The number of pages to be revised in the ventilation plan for these mines is estimated to be: 15 pages (5 pages for the sampling protocol + 10 pages for sealing procedures) in mines with 1-19 employees; 20 pages (5 pages for the sampling protocol + 15 pages for sealing procedures) for mines with 20-500 employees; and 30 pages (5 pages for the sampling protocol + 25 pages for sealing procedures) in mines with 501+ employees. Copy costs are estimated at $0.15 per page. Postage costs are estimated at $2. The Agency assumes that the District Manager, in reviewing proposed ventilation plan revisions will require some changes to the proposed revisions. The mine operator will need to make those changes and resubmit the revised ventilation plan for approval.

Table 28 shows, by mine size, the annual cost to resubmit the mine ventilation plan for those mines that will continue to seal after the ETS takes effect.

Table 28: Annual Cost to Revise, Copy, and Submit the Proposed and Approved Ventilation Plan Revisions For Mines That Will Continue to Seal

| Mine Size | No. of Mines That Will Seal | No. of Revised Pages | Copy Cost per page | Postage Cost | Annual Cost [b] |
|---|---|---|---|---|---|
| 1-19 | 83 | 15 | $0.15 | $2 | $706 |
| 20-500 | 279 | 20 | $0.15 | $2 | $2,790 |
| 501+ | 10 | 30 | $0.15 | $2 | $130 |
| Total | 372 | | | | $3,626 |

[a] As a result of the ETS, mine operators will be required to revise the mine ventilation plan at 30 CFR §75.370(a)(2); however, MSHA did not make any changes to this regulatory provision. The ventilation plan is referenced in the ETS at §§75.335(b) and 75.336(b).

[b] Annual Cost = no. of mines that will seal x (no. of revised pages x copy cost per page) + postage cost) x 2, where 2 is used to account for the proposed and approved revisions.

Mines that continue to seal after the ETS becomes effective will need to post a copy of their proposed and approved ventilation plan revisions submitted to MSHA. In addition, those mines that have a representative of miners must provide a copy of the revisions upon request. MSHA assumes that 30 percent of mines that continue to seal have a representative of miners and that all will request a copy of the revisions. The number of revised pages is estimated to be: 15 in mines with 1-19 employees, 20 pages in mines with 20-500 employees, and 30 pages in mines with 501+ employees. Estimated copy costs are $0.15 per page. Estimated postage costs are $2. Table 29 shows, by mine size, the cost to copy and post and, when applicable, to provide a copy of the revisions to the representative of miners, for those mines that continue to seal after the ETS takes effect.

Table 29: Cost to Copy and Post Proposed & Approved Ventilation Plan and

Provide a Copy of Ventilation Plan to Representative of Miners
For Mines That Will Continue to Seal

| Mine Size | No. of Mines That Will Seal | No. of Revised Pages | Percentage of Mines Providing a Copy of Plan to Rep of Miners | Copy Cost per page | Postage Cost | Clerical Hourly Wage Rate | Annual Cost [a] |
|---|---|---|---|---|---|---|---|
| 1-19 | 83 | 15 | 30% | $0.15 | $2 | $21.74 | $585 |
| 20-500 | 279 | 20 | 30% | $0.15 | $2 | $21.74 | $2,511 |
| 501+ | 10 | 30 | 30% | $0.15 | $2 | $21.74 | $129 |
| Total | 372 | | | | | | $3,225 |

[a] As a result of the ETS, mine operators will be required to revise the mine ventilation plan at 30 CFR §75.370(a)(3) & 75.370(f); however, MSHA did not make any changes to this regulatory provision. The ventilation plan is referenced in the ETS at §§75.335(b) and 75.336(b).

[b] Annual Cost = (no. of mines that will seal x (no. of revised pages x copy cost per page) x 2) + (no. of mines that will seal x percentage of mines providing a copy of plan to representative of miners x ((no. of revised pages x copy cost per page) + postage cost) x 2), where a factor of 2 is used to account for the proposed and approved revisions.

Table 30 provides an estimate of the total yearly cost burden to respondents for record keeping resulting from the collection of information under Question 13 of this package.

Table 30: Total Yearly Costs

| Description | Yearly Costs |
|---|---|
| Cost of Detectors | $268,998 |
| Maintenance Costs of Detectors | $106,902 |
| Cost to Post Signs | $1,424 |
| Engineer Costs Related to Seal Approvals | $107,360 |
| Engineer Costs Related to Mine Sepcific Installation | $1,829,600 |
| Costs to Notify About Seal Construction | $2,068 |
| Costs For Certifying Training | $335 |
| Cost for Training Turnover | $546 |
| Costs for Annual Retraining | $1,373 |
| Costs to Revise Ventilation Plan | $3,626 |
| Costs to Post &Provide Copy of Ventilation Plan | $3,225 |
| Total Yearly Costs | $2,325,456 |

**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.**

Applicants will need to submit seal designs to MSHA for approval. In addition, mine operators will need to modify their ventilation plans to address the requirements for sampling behind the seals, and seal design, construction, maintenance and repair. MSHA expects to review seal designs and ventilation plan revisions with existing personnel. Thus, there are no Federal costs associated with this collection of information package.

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

The new burden hours and cost burden result from information collection requirements contained in the ETS. The new collection will have an estimated 372 respondents. The responses for the first year are estimated at 893,137 and 828,761 each year thereafter. The burden hour estimate for the first year is 82,037 and 73,006 each year thereafter. MSHA will submit a non-substantive, non-material change request to adjust the burden accordingly after the first year. The annualized cost is $2,325,456 for this ETS. There are no Federal costs associated with this collection.

**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.**

MSHA does not intend to publish the results of 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.**

There are no additional forms associated with this information collection; therefore, MSHA is not seeking approval to not display the expiration date for OMB approval of this information collection.

**18. Explain each exception to the certification statement identified in Item 19, "Certification for Paperwork Reduction Act Submission," of OMB 83-I.**

There are no certification exceptions identified with this information collection.

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

**The agency should be prepared to justify its decision not to use statistical methods in any case where such methods might reduce burden or improve accuracy of results. 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 that it applies to the methods proposed:**

**1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection methods to be used. Data on the number of entities (e.g., establishments, State and local government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.**

**2. Describe the procedures for the collection of information including:**

- **Statistical methodology for stratification and sample selection,**
- **Estimation procedure,**
- **Degree of accuracy needed for the purpose described in the justification,**
- **Unusual problems requiring specialized sampling procedures, and**
- **Any use of periodic (less frequently than annual) data collection cycles to reduce burden.**

**3. Describe methods to maximize response rates and to deal with issues of non-response. The accuracy and reliability of information collected must be shown to be adequate for intended uses. For collections based on sampling, a special justification must be provided for any collection that will not yield "reliable" data that can be generalized to the universe studied.**

**4. Describe any tests of procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more respondents. A proposed test or set of tests may be submitted for approval separately or in combination with the main collection of information.**

**5. Provide the name and telephone number of individuals consulted on statistical aspects of the design and the name of the agency unit,**

**contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.**

The collection of this information does not employ statistical methods.

## RELEVANT STATUTORY AND REGULATORY PROVISIONS

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

# An Act

TITLE I--GENERAL
MANDATORY SAFETY AND HEALTH STANDARDS

SEC. 101. (b)(1) The Secretary shall provide, without regard to the requirements of chapter 5, title 5, United States Code, for an emergency temporary mandatory health or safety standard to take immediate effect upon publication in the Federal Register if he determines (A) that miners are exposed to grave danger from exposure to substances or agents determined to be toxic or physically harmful, or to other hazards, and (B) that such emergency standard is necessary to protect miners from such danger.

(2) A temporary mandatory health or safety standard shall be effective until superseded by a mandatory standard promulgated in accordance with the procedures prescribed in paragraph (3) of this subsection.

(3) Upon publication of such standard in the Federal Register, the Secretary shall commence a proceeding in accordance with section 101 (a), and the standards as published shall also serve as a proposed rule for the proceeding. The Secretary shall promulgate a mandatory health or safety standard under this paragraph no later than nine months after publication of the emergency temporary standard as provided in paragraph (2).

INSPECTIONS, INVESTIGATIONS, AND RECORDKEEPING

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

§ 75.335 Seal requirements.

Seals shall be designed, constructed, and maintained to protect miners from hazards related to sealed areas. Seal designs and the installation of each seal shall be approved in accordance with § 75.336.

(a) Seal strength requirements. Seals constructed on or after [Insert date of publication in the FEDERAL REGISTER] shall be designed, constructed, and maintained to withstand—

(1) 50 psi overpressure when the atmosphere in the sealed area is monitored and maintained inert in accordance with paragraph (b) of this section;

(2) 120 psi overpressure if the atmosphere is not monitored, and is not maintained inert, and the conditions in (3)(i)-(3)(iii) are not present; or

(3) an overpressure greater than 120 psi if the atmosphere is not monitored and is not maintained inert and;

(i) the atmosphere in the area to be sealed is likely to contain homogeneous mixtures of methane between 4.5 percent and 17.0 percent and oxygen exceeding 17.0 percent throughout the entire area;

(ii) pressure piling is likely due to opening restrictions near the proposed seal area; or

(iii) other conditions are encountered, such as the likelihood of a detonation in the proposed seal area.

(iv) Where the conditions in (i), (ii), or (iii) are encountered, the operator must revise the ventilation plan to be submitted to the District Manager to address the potential hazards. The plan shall include seal strength sufficient to address the conditions.

(b) Sampling and monitoring requirements. Effective [Insert date of publication in the FEDERAL REGISTER], a certified person as defined in § 75.100 shall monitor atmospheres of sealed areas. For seals constructed prior to [Insert date of publication in the FEDERAL REGISTER] and for seals designed for 50 psi overpressure, mine operators shall develop and follow a protocol to monitor methane and oxygen concentrations, and to maintain an inert atmosphere in the sealed area. The protocol shall be approved in the ventilation plan.

(1) A certified person shall sample atmospheres of sealed areas weekly when the barometric pressure is decreasing or the seal is outgassing. At least one sample shall be taken at each set of seals. If a seal is ingassing during the weekly examination, a sample shall be collected during the next weekly examination. If the seal is ingassing during the second consecutive weekly examination, the operator shall examine that seal daily until the seal is outgassing, unless the seal does not outgas. In this case, an alternative plan needs to be developed and submitted to the District Manager. The District Manager may approve different sampling frequencies and locations in the ventilation plan, or approve the use of atmospheric monitoring systems in lieu of weekly sampling. The mine operator shall revise the protocol, if repeated sampling indicates that a seal is not likely to outgas.

(2) Certified persons conducting sampling shall be trained in the sampling procedures included in the protocol, as provided by paragraph (b)(5) of this section, before they conduct sampling, and annually thereafter. The mine operator must certify the date and content of training provided certified persons and retain each certification for one year.

(3) The atmosphere shall be considered inert when—

(i) The oxygen concentration is less than 10.0 percent;

(ii) The methane concentration is less than 3.0 percent; or

(iii) The methane concentration is greater than 20.0 percent.

(4) When oxygen concentrations are 10.0 percent or greater and methane concentrations are from 3.0 percent to 20.0 percent in a sealed area, the mine operator shall take two additional gas samples at one-hour intervals. If the two additional gas samples are from 3.0 percent to 20.0 percent and oxygen is 10.0 percent or greater—

(i) The mine operator shall implement the action plan in the protocol; or

(ii) Persons shall be withdrawn from the affected area, except those persons referred to in § 104(c) of the Act.

(5) The protocol shall address—

i) Sampling procedures, including equipment and methods to be used;

(ii) Location of sampling points;

(iii) Procedures to establish a baseline analysis of oxygen and methane concentrations at each sampling point over a 14-day sampling period. The baseline shall be established after the atmosphere in the sealed area becomes inert or the trend reaches equilibrium;

(iv) Frequency of sampling;

(v) Size and conditions of the sealed area; and

(vi) Use of atmospheric monitoring systems, where applicable;

(vii) The protocol shall include an action plan that addresses the hazards presented and actions taken when gas samples indicate oxygen concentrations of 10.0 percent or greater for each of the following ranges of methane concentrations—

(A) 3.0 percent or greater but less than 4.5 percent; and

(B) 4.5 percent or greater but less than 17.0 percent; and

(C) 17.0 percent to 20 percent.

(6) The certified person shall promptly record each sampling result, including the location of the sampling points, and oxygen and methane concentrations. The results of oxygen and methane samples shall be recorded as the percentage of oxygen and methane measured by the certified person and any hazardous condition found, in accordance with § 75.363.

(7) The mine operator shall retain sampling records at the mine for at least one year from the date of sampling.

(c) Welding, cutting, and soldering with an arc or flame are prohibited within 150 feet of a seal.

(d) For seals constructed after [Insert date of publication in the FEDERAL REGISTER], at least two sampling pipes shall be installed in each seal. One pipe shall extend approximately 15 feet into the sealed area and another shall

extend into the center of the first connecting crosscut inby the seal. Each sampling pipe shall be equipped with a shut-off valve and appropriate fittings for taking gas samples.

(e) For each set of seals constructed after [Insert date of publication in the FEDERAL REGISTER], the seal at the lowest elevation shall have a corrosion—resistant water drainage system. Seals shall not impound water.

§ 75.336 Seal design applications and installation approval.

(a) Seal design applications from seal manufacturers or mine operators shall be in accordance with paragraphs (a)(1) or (a)(2) of this section and submitted for approval to MSHA's Office of Technical Support, Pittsburgh Safety and Health Technology Center, P.O. Box 18233, Cochrans Mill Road, Pittsburgh, PA 15236.

(1) An engineering design application shall:

(i) Address gas sampling pipes, water drainage systems, air leakage, fire resistance, flame spread index, pressure-time curve, entry size, engineering design and analysis, material properties, construction specifications, quality control, design references, and other information related to seal construction;

(ii) Be certified by a professional engineer that the design of the seal is in accordance with current, prudent engineering practices; and

(iii) Include a Seal Design Table that discusses characteristics related to mine specific seal construction.

(2) Each application based on full-scale explosion tests shall address the following requirements to ensure that a seal can reliably withstand the overpressures provided by § 75.335-

(i) Certification by a professional engineer knowledgeable in structural engineering, that the testing was done in accordance with current, prudent engineering practices and its applicability in a coal mine;

(ii) Technical information related to the methods and materials;

(iii) Proper documentation;

(iv) An engineering analysis to address differences between the seal support during test conditions and the range of conditions in a coal mine; and

(v) The application shall include a Seal Design Table that discusses characteristics related to mine specific seal construction.

(3) MSHA will notify the applicant if additional information or testing is required. The applicant must provide this information, arrange any additional or repeat tests, and notify MSHA of the location, date, and time of the test(s).

(4) MSHA will notify the applicant, in writing, whether the design is approved or denied. If the design is not approved, MSHA will specify, in writing, the deficiencies of the application, or necessary revisions.

(5) Once the seal design is approved, the approval holder must promptly notify MSHA, in writing, of all deficiencies of which they become aware.

(b) The mine operator shall use an approved seal design provided its installation is approved in the ventilation plan. The mine operator shall—

(1) Retain the seal design approval information for as

long as the seal is needed to serve the purpose for which it was built.

(2) Designate a professional engineer to conduct or have oversight of seal installation and certify that the provisions in the approved seal design specified in paragraph (a) of this section have been addressed.

A copy of the certification shall be submitted to the District Manager with the information provided in 75.336(b)(3) and retain the copy of the certification for as long as the seal is needed to serve the purpose for which it was built.

(3) Provide information for approval in the ventilation plan—

(i) The MSHA Technical Support Approval Number;

(ii) The mine map of the area to be sealed and proposed seal locations. This portion of the mine map shall be certified by a professional engineer;

(iii) Specific mine site information, including—

(A) Type of seal;

(B) Safety precautions taken prior to seal achieving full design strength;

(C) Methods to address site specific conditions that may affect the strength and applicability of the seal;

(D) The construction techniques;

(E) Site preparation;

(F) Sequence of seal installations;

(G) Projected date of completion of each set of seals;

(H) Supplemental roof support inby and outby each seal;

(I) Water flow estimation and dimensions of the water drainage system through the seals;

(J) Methods to ventilate the outby face of seals once completed;

(K) Methods and materials used to maintain each type of seal;

(L) Methods to address shafts and boreholes in the sealed area; and

(M) Additional information required by the District Manager.

§ 75.337 Construction and repair of seals.

(a) Prior to sealing, the mine operator shall—

(1) Remove insulated cables from the area to be sealed when constructing seals; and

(2) Remove metallic objects through or across seals, except water pipes, gas sampling pipes, and form ties approved in the seal design.

(b) A certified person designated by the mine operator shall directly supervise seal construction and repair and—

(1) Examine each seal site immediately prior to construction or repair to ensure that the site is in accordance with the approved ventilation plan;

(2) Examine each seal under construction or repair during each shift to ensure that the seal is being constructed or repaired in accordance with the approved ventilation plan;

(3) Examine each seal upon completion of construction or repair to ensure that construction or repair is in accordance with the approved ventilation plan;

(4) Certify by initials, date, and time that the examinations were made;

and

(5) Make a record of the examination at the completion of any shift during which an examination was conducted. The record shall include each deficiency and the corrective action taken. The record shall be countersigned by the mine foreman or equivalent mine official by the end of the mine foreman's or equivalent mine official's next regularly scheduled working shift. The record shall be kept at the mine for one year.

(c) Upon completion of construction of each seal, a senior mine management official, such as a mine manager or superintendent, shall certify that the construction, installation, and materials used were in accordance with the approved ventilation plan. The mine operator shall retain the certification for as long as the seal is needed to serve the purpose for which it was built.

(d) The mine operator shall—

(1) Notify the local MSHA field office between two and fourteen days prior to commencement of seal construction;

(2) Notify the District Manager, in writing, within five days of completion of a set of seals; and

(3) Submit a copy of quality control results to the District Manager for seal material properties specified by § 75.336.

(e) Miners constructing or repairing seals, certified persons under paragraph (b) of this section, and senior mine management officials under paragraph (c) of this section shall be trained prior to constructing or repairing a seal. The training shall address materials and procedures in the approved seal design and ventilation plan. The mine operator must certify the date of training provided each miner, certified person, and senior mine management official and retain each certification for one year.