

SUPPORTING STATEMENT

30 CFR 75.350, 75.351, 75.352, 75.371 Safety Standards for Underground Coal Mine Ventilation - Belt Entry Used as an Intake Air Course to Ventilate Working Sections And Areas Where Mechanized Mining Equipment Is Being Installed or Removed.

A. JUSTIFICATION

- 1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and of each regulation mandating or authorizing the collection of information.**

Section 103(h) of the Federal Mine Safety and Health Act of 1977 (Mine Act), 30 U.S.C. § 813, authorizes MSHA to collect information necessary to carry out its duty in protecting the safety and health of miners

The Safety Standards for Underground Coal Mine Ventilation - Belt Entry rule provides safety requirements for the use of the conveyor belt entry as a ventilation intake to course fresh air to working sections and areas where mechanized mining equipment is being installed or removed in mines with three or more entries. Currently, 45 underground coal mines employing approximately 4,100 miners use belt air to ventilate working sections. This rule is a voluntary standard. If the mine operators choose to use belt air to ventilate working places, the provisions will maintain the level of safety in underground mines while allowing them to implement advances in mining atmospheric monitoring technology. This rule establishes alternate provisions that mine operators need to follow if they want to use belt air to ventilate working sections.

Section 75.351(b)(3) requires the posting at the surface location of an up-to-date map or schematic showing air flow directions and the location and type of all Atmospheric Monitoring System (AMS) sensors. Section 75.351(n)(1) requires that sensors used to detect CO or smoke be visually examined at least once each shift, when belts are operated as part of a production shift. If hazardous conditions are found during the visual exam, then a log of such conditions must be filed under existing Section 75.363(b) - Hazardous conditions; posting, correcting and recording (OMB approval 1219-0088).

Sections 75.351(n)(2) and 75.351(n)(3) require that a log be kept of every seven-day alarm test and every 31-day CO, smoke, or methane sensor calibration, respectively.

Section 75.351(o)(1)(i) requires that a record be made if the AMS emits an alert or alarm signal. The record would consist of the date, time, location, and type of sensor, and the reason for its activation. Section (o)(1)(ii) requires that, if a malfunction in the system occurs, a record be made of the malfunction and the corrective action to return the system to proper operating condition. We (MSHA) believe that such records are useful to the miner, the mine operator, and the Agency in determining areas of recurring problems. This will aid in ensuring proper operation of AMSs.

Section 75.351(o)(1)(iii) requires that the persons doing the weekly test of alert and alarm signals, the monthly calibration, or maintenance of the system make a record of these tests, calibrations, or maintenance. Section § 75.351(o)(3) requires that all records concerning the AMS be kept in a book or electronically in a computer system, that is secure and not susceptible to alteration. Section 75.351(p) requires the mine operator to keep these records for at least one year at a surface location and to make them available for inspection by authorized representatives of the Secretary and representatives of miners.

Section 75.351(q) requires that a record of annual AMS operator training be kept. The record will include the content of training, the person conducting the training, and the date the training is conducted. The record needs to be maintained at the mine site by the mine operator for at least one year.

Sections 75.352(a) and 75.352(b) require the designated AMS operator or other appropriate personnel to take actions promptly when malfunction, alert, or alarm signals are received. These requirements are parallel to those of Section 75.351(o).

Numerous provisions require action to modify the mine ventilation plan. Provisions under Section 75.371 Mine Ventilation Plan include: Section 75.371(ii) requires the locations where dust measurements are made in the belt entry, in accordance with Section 75.350(b)(3) be included in the mine ventilation plan; Section 75.371(jj) requires the locations where velocities in the belt entry exceed limits set forth in Section 75.350(a)(2), and the maximum approved velocity for each location must be shown in the mine ventilation plan; Section 75.371(kk) requires the locations where air quantities are measured as set forth in Section 75.350(b)(6) be included in the mine ventilation plan; Section 75.371(ll) requires the inclusion of point feed locations and their use in the mine ventilation plan; and Sections 75.371(nn), 75.371(oo), and 75.371(pp) require modification of the mine ventilation plan to show the length of the time delay or any other method used for reducing the number of non-fire related alert and alarm signals from CO sensors, the lower alert and alarm setting for CO sensors, and the alternate

instrument and the alert and alarm levels associated with the instrument, respectively.

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.

The respondents are mine operators that elect to use belt air to ventilate working sections and areas where mechanized equipment is being installed or removed. The records will be used by coal mine supervisors and employees, State mine inspectors, and Federal mine inspectors. The records show that the examinations and tests were conducted and give insight into the hazardous conditions that have been encountered and those that may be encountered. The records of inspections greatly assist those who use them in making decisions that will ultimately affect the safety and health of miners working in belt air mines.

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.

Mine operators may retain the records either in a secure book that is not susceptible to alteration, or electronically in a computer system that is secure and not susceptible to alteration. MSHA encourages operators who store records electronically to provide a mechanism which will allow the continued storage and retrieval of records. MSHA currently accepts automatic printing of alert and alarm signals and automatic storage of some data. No other 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 purpose(s) described in 2 above.

MSHA knows of no other Federal or State reporting requirements that duplicate the reporting requirements contained in this section.

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.

This information collection does not have a significant impact on a substantial number of small entities. However, MSHA has made available on our web-site various sources of information, such as "Technical Assistance," "Best Practices," and an "Accident Prevention" site. These 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.

Reduction of these requirements could result in increased hazards to miners. If the information collections are not conducted, the consequences could be severe. A reduction in the frequency of examinations and tests associated with these information collections could allow unsafe conditions to develop, jeopardizing the safety of the miners.

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

- requiring respondents to report information to the agency more often than quarterly;
- requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it; NA
- 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 C.F.R. § 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.

In accordance with 5 CFR 1320.8 (d), MSHA will publish the proposed information collection requirements in the Federal Register, notifying the public that these information collection requirements are being reviewed in accordance with the Paperwork Reduction Act of 1995, and giving interested persons sixty days to submit comments.

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

MSHA will not provide payments or gifts to respondents identified by 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. Records are maintained by the mine operator and reviewed by MSHA inspectors during routine inspections.

- 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 13.**

The 45 Respondents listed is the number of existing and new mines using “Belt Air” and/or “Point Feeding”. These calculations are based on actual data collected from each of the eleven coal districts as of February 2007.

§ 75.351(j) Non-Zero CO Ambient Levels of an AMS

Section 75.351(j) requires approval of the CO ambient levels, and the means to determine those levels, in the mine ventilation plan.

Since only 50% of mines are expected to establish non-zero CO ambient levels, the number of affected belt-air operations is only 50% of the 45 mines using belt air.

MSHA estimates 8 hours of burden time per affected belt-air mine, at a supervisor's wage rate of \$62.50 per hour.

$$8 \text{ hours} \times 22.5 \text{ operations} = 180 \text{ hours}$$

$$180 \text{ hours} \times \$62.50 = \$11,250$$

§ 75.351(j) Burden for § 75.371(hh) Reporting of Non-Zero CO Ambient Levels of an AMS

Existing § 75.371(hh) requires reporting (as opposed to justification) within the mine ventilation plan of the "ambient level in parts per million of carbon monoxide, and the method for determining the ambient level, in all areas where carbon monoxide sensors are installed." This provision is impacted by § 75.351(j).

Since only 50% of mines are estimated to have established non-zero CO ambient levels, the number of affected belt-air operations is only 50% of the 45 mines using belt air.

MSHA estimates 0.25 hour of burden time per affected belt-air mine, at a supervisor's wage rate of \$62.50 per hour.

$$\begin{aligned} .25 \text{ hours} \times 22.5 \text{ operations} &= 5.63 \text{ hours} \\ 5.63 \text{ hours} \times \$62.50 &= \$352 \end{aligned}$$

§ 75.351(m) Initial Justification of Time Delay or Other Method Used with an AMS

Section 75.351(m) permits a mine to incorporate time delays into the AMS, or to use other methods for reducing non-fire alerts and alarm levels, provided they are specified and approved in the mine ventilation plan. Permission for such time delays, or other methods of reducing non-fire alerts and alarms, would be associated documentation that justifies these changes.

MSHA estimates that only 40% of diesel mines use time delays, and no non-diesel mines would use time delays. Hence, the number of affected belt-air operations is only a fraction of the 45 mines using belt air.

MSHA estimates 8 hours of burden time per affected belt-air mine, at a supervisor's wage rate of \$62.50 per hour. MSHA estimates annualized values of 144 burden hours for the 18 mines.

$$\begin{aligned} 8 \text{ hours} \times 18 \text{ operations} &= 144 \text{ hours} \\ 144 \text{ hours} \times \$62.50 &= \$9,000 \end{aligned}$$

§ 75.351(n)(2) Weekly Testing of an AMS

Section 75.351(n)(2) requires weekly testing of the alarms for an AMS. This weekly testing is accompanied by a documentation requirement in § 75.351(o)(1)(iii).

MSHA estimates 32.5 hours annually of burden time per affected belt-air mine annually, depending on mine size. This time is priced at the supervisor's wage rate of \$62.50 per hour.

$$\begin{aligned} 32.5 \text{ hours} \times 45 \text{ operations} &= 1,426.5 \text{ hours} \\ 1,426.5 \text{ hours} \times \$62.50 &= \$91,406 \end{aligned}$$

§ 75.351(n)(3) Monthly Calibration of an AMS

Section 75.351(n)(3)(i) requires monthly calibration of the CO sensors for an AMS. This monthly calibration is accompanied by a documentation requirement in § 75.351(o)(1)(iii).

MSHA estimates 128 hours annually of burden time per affected belt-air mine annually, depending on mine size. This time is priced at the supervisor's wage rate of \$62.50 per hour.

$$\begin{aligned} 128 \text{ hours} \times 45 \text{ operations} &= 5,760 \text{ hours} \\ 5,760 \text{ hours} \times \$62.50 &= \$360,000 \end{aligned}$$

§§ 75.351(o)(1)(i) and (o)(1)(ii) Recordkeeping for Alerts, Alarms, and Malfunctions of an AMS

Section 75.351(o)(1)(i) requires a record of all alerts and alarms of an AMS. Section 75.351(o)(1)(ii) requires a record of all malfunctions of an AMS.

MSHA estimates 8.33 hours of burden time per affected belt-air mine annually, depending on mine size. This time is priced at the miner's wage rate of \$25.98 per hour.

$$\begin{aligned} 8.33 \text{ hours} \times 45 \text{ operations} &= 374.85 \text{ hours} \\ 374.85 \text{ hours} \times \$25.98 &= \$9,739 \end{aligned}$$

§ 75.351(o)(1)(iii) Recordkeeping for Testing, Calibration, and Maintenance of an AMS

Section 75.351(o)(1)(iii) requires a record of all testing, calibration, and malfunctions of an AMS. These three recordkeeping requirements are analyzed separately below.

Recordkeeping for Weekly Testing of an AMS

MSHA estimates 1.74 hours annually of burden time per affected belt-air mine annually, depending on mine size. This time is priced at the supervisor's wage rate of \$62.50 per hour.

1.74 hours x 45 operations = 78.3 hours
78.3 hours x \$62.50 = \$4,894

Recordkeeping for Monthly Calibration of an AMS

MSHA estimates 6.4 hours of burden time per affected belt-air mine annually, depending on mine size. This time is priced at the supervisor's wage rate of \$62.50 per hour.

6.4 hours x 45 operations = 288 hours
288 hours x \$62.50 = \$18,000

Recordkeeping for Maintenance of an AMS

MSHA estimates 2.4 hours of burden time per affected belt-air mine, depending on mine size. This time is priced at the supervisor's wage rate of \$62.50 per hour.

2.4 hours x 45 operations = 108 hours
108 hours x \$62.50 = \$6,750

§ 75.351(q) Training of AMS Operators

Section 75.351(q) requires annual training of all AMS operators in the proper operation of the AMS, and that a record be kept of such training. This involves two types of burden hours. First, there is the time spent by the AMS operators in learning. Second, there is the time spent by the AMS trainer in teaching and recordkeeping. These are analyzed separately below.

Learning Time for Training of AMS Operators

MSHA estimates 10 hours of burden time per affected belt-air mine, depending on mine size. This time is priced at the miner's wage rate of \$25.98 per hour.

10 hours x 45 operations = 450 hours
450 hours x \$25.98 = \$11,691

Teaching Time and Recordkeeping for Training of AMS Operators

MSHA estimates 5 hours of burden time for training and 0.25 hour of burden time for recordkeeping. This totals to 5.25 hours of burden time per affected belt-air mine. This time is priced at the supervisor's wage rate of \$62.50 per hour.

Training

5 hours x 45 operations = 225 hours

Recordkeeping

.25 x 45 operations = 11.25

$$236.25 \text{ hours} \times \$62.50 = \$14,766$$

§§ 75.352(a), (b), and (c) Response Procedures for Alerts, Alarms, and Malfunctions of an AMS

Sections 75.352(a), (b), and (c) require procedures to be followed in response to all alerts, alarms, and malfunction signals of an AMS. These procedures are accompanied by a documentation requirement in §§ 75.351(o)(1)(i) and (ii).

MSHA estimates 15.21 hours of burden time per affected belt-air mine, depending on mine size. This time is priced at the miner's wage rate of \$25.98 per hour.

$$15.21 \text{ hours} \times 45 \text{ operations} = 684.45 \text{ hours}$$
$$684.45 \text{ hours} \times \$25.98 = \$17,782$$

§ 75.371(kk) Reporting of Locations Where Air Quantities Are Measured

Section 75.371(kk) requires reporting within the mine ventilation plan of the "locations where air quantities are measured as set forth in § 75.350(b)(6)." The burden hours and costs of the initial documenting are shown in Table 13. The burden hours and costs of the subsequent documenting are shown in Table 14.

MSHA estimates 0.17 hour of burden time per affected belt-air mine, at a supervisor's wage rate of \$62.50 per hour.

$$.17 \text{ hours} \times 45 \text{ operations} = 7.65$$
$$7.65 \times \$62.50 = \$478$$

§ 75.371(ll) Reporting of Locations and Uses of Point-Feed Regulators

Section 75.371(ll) requires reporting within the mine ventilation plan of the "locations and use of point-feed regulators, in accordance with §§ 75.350(c) and 75.350(d)(5)."

MSHA estimates 0.17 hour of burden time per affected belt-air mine, at a supervisor's wage rate of \$62.50 per hour.

$$.17 \text{ hours} \times 45 \text{ operations} = 7.65$$
$$7.65 \times \$62.50 = \$478$$

§ 75.371(nn) Initial Reporting of Time Delay or Other Method Used with an AMS

Section 75.371(nn) requires reporting (as opposed to justification) within the mine ventilation plan of the "length of the time delay or any other method used for reducing the number of non-fire related alert and alarm signals from carbon monoxide sensors, in accordance with § 75.351(m)."

MSHA expects that only 40% of diesel mines would use time delays, and no non-diesel mines would use time delays. Hence, the number of affected belt-air operations is only 18 of the 45 mines using belt air.

MSHA estimates 0.25 hour of burden time per affected belt-air mine, at a supervisor's wage rate of \$62.50 per hour.

$$\begin{aligned} .25 \text{ hours} \times 18 \text{ operations} &= 4.5 \text{ hours} \\ 4.5 \text{ hours} \times \$62.50 &= \$281 \end{aligned}$$

§ 75.371(o) Initial Reporting of Reduced CO Alert and Alarm Levels of an AMS

Section 75.371(o) requires reporting (as opposed to justification) within the mine ventilation plan of the “lower alert and alarm settings for carbon monoxide sensors, § 75.351(m).”

Since only 5% of mines are expected to reduce alert and alarm levels, the number of affected operations is only 2.25 of the 45 mines using belt air.

MSHA estimates 0.25 hour of burden time per affected belt-air mine, at a supervisor's wage rate of \$62.50 per hour.

$$\begin{aligned} .25 \text{ hours} \times 2.25 \text{ operations} &= .6 \text{ hours} \\ .6 \text{ hours} \times \$62.50 &= \$38 \end{aligned}$$

§ 75.371(p) Initial Reporting of Emergency Detectors for AMS Failure

Section 75.371(p) requires reporting within the mine ventilation plan of the “alternate detector and the alert and alarm levels associated with the detector, § 75.352(e)(7).”

Since only 10% of mines are expected to use smoke detectors that require substitute hand-held detectors for emergency use, the number of affected belt-air operations is only 4.5 of the 45 mines using belt air.

MSHA estimates 0.25 hour of burden time per affected belt-air mine, at a supervisor's wage rate of \$62.50 per hour.

$$\begin{aligned} .25 \text{ hours} \times 4.5 \text{ operations} &= 1.13 \text{ hours} \\ 1.13 \text{ hours} \times \$62.50 &= \$71 \end{aligned}$$

$$\begin{aligned} \text{Total Burden Hours} &= 9,758 \\ \text{Total Burden Hour Cost} &= \$556,974 \end{aligned}$$

Total Burden Hours and Costs Summarized By Provision

Section	Respondents	Burden Hours	Burden Hour Costs
75.351(j)	22.5	180	\$11,250

75.351(j) 75.371(hh)	22.5	5.6	\$350
75.351(m)	18	144	\$9,000
75.351(n)(2)	45	1,426.5	\$91,406
75.351(n)(3)	45	5,760	\$360,000
75.351(o)(1)(i) & 75.351(o)(1)(ii)	45	375	\$9,739
75.351(o)(1)(iii) weekly	45	78	\$4,894
75.351(o)(1)(iii) monthly	45	288	\$18,000
75.351(o)(1)(iii) maintenance	45	108	\$6,750
75.351(q) learning	45	450	\$11,691
75.351(q) teaching /recording	45	236	\$14,766
75.351(a), 75.351(b) & 75.352(c)	45	684	\$17,782
75.371(kk)	45	8	\$478
75.371(ll)	45	8	\$478
75.371(nn)	18	5	\$281
75.371(oo)	2.3	1	\$38
75.371(pp)	4.5	1	\$71
Total	//////////	9,758.1	\$556,974

13. Provide an estimate of the total annual cost burden to respondents or recordkeepers resulting from the collection of information. (Do not include the cost of any hour burden shown in Items 13 and 15.)

- 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.

§ 75.351(1)(iii)(3). Record security of tests, calibrations, and maintenance.

Section 75.351(1)(1)(iii)(3) requires safekeeping of records for one year of all alerts, alarms, malfunctions, maintenance, examination, testing, and calibration for an AMS.

MSHA estimates \$16.38 of materials cost per affected mine, depending on mine size.

$$\$16.38 \text{ cost per mine} \times 45 \text{ mines} = \$737$$

75.351(n)(3) Monthly Calibration of an AMS

Section 75.351(n)(3)(i) requires monthly calibration of the CO sensors for an AMS. This monthly calibration is accompanied by a documentation requirement in § 75.351(o)(1)(iii). An AMS for a belt-air mine is assumed to have 40 sensors, depending on mine size, and estimates \$1,920 (40 sensors x \$48) in annual material costs per belt-air mine for calibration, depending on mine size.

$$40 \text{ sensors} \times 45 \text{ mines} = 1,800 \text{ sensors}$$

$$1,800 \text{ sensors} \times \$48 = \$86,400$$

$$\text{Total Annualized Cost Burden} = \$87,137$$

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.

There is no cost to the Federal Government.

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

Respondents: There has been a decrease of 118 respondents (163 to 45). This applies to underground coal mines. The amount of mines utilizing belt air was over estimated previously.

Hours: There has been a decrease of 12,987 hours (22,745 to 9,758). The amount of mines utilizing belt air was over estimated previously.

Costs: There has been a decrease of 127K (\$214K - \$87K). The amount of mines utilizing belt air was over estimated previously.

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.

MSHA has no forms associated with this collection of information on which to display an expiration date.

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 final information collection.

B. COLLECTIONS 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 method to be used. Data on the number of entities (e.g., establishments, State and local government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.

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 frequent 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 persons(s) who will actually collect and/or analyze the information for the agency.

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

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

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.

[Code of Federal Regulations]
[Title 30, Volume 1]
[Revised as of July 1, 2006]
From the U.S. Government Printing Office via GPO Access
[CITE: 30CFR75.350]
[Page 494-495]

TITLE 30--MINERAL RESOURCES

CHAPTER I--MINE SAFETY AND HEALTH ADMINISTRATION, DEPARTMENT OF LABOR
PART 75_MANDATORY SAFETY STANDARDS_UNDERGROUND COAL MINES--Table of
Subpart D_Ventilation

Sec. 75.350 Belt air course ventilation.

(a) The belt air course must not be used as a return air course; and except as provided in paragraph (b) of this section, the belt air course must not be used to provide air to working sections or to areas where mechanized mining equipment is being installed or removed.

(1) The belt air course must be separated with permanent ventilation controls from return air courses and from other intake air courses except as provided in paragraph (c) of this section.

(2) Air velocities must be compatible with all fire detection systems and fire suppression systems used in the belt entry.

(b) Air from a belt air course may be used to ventilate a working section or an area where mechanized mining equipment is being installed or removed, provided the following additional requirements are met:

(1) The belt entry must be equipped with an AMS that is installed, operated, examined, and maintained as specified in Sec. 75.351.

(2) All miners must be trained annually in the basic operating principles of the AMS, including the actions required in the event of activation of any AMS alert or alarm signal. This training must be conducted prior to working underground in a mine that uses belt air to ventilate working sections or areas where mechanized mining equipment is installed or removed. It must be conducted as part of a miner's 30 CFR part 48 new miner training (Sec. 48.5), experienced miner training (Sec. 48.6), or annual refresher training (Sec. 48.8).

(3) The average concentration of respirable dust in the belt air course, an intake air course, must be maintained at or below 1.0 mg/m³. A permanent designated area (DA) for dust measurements must be established at a point no greater than 50 feet upwind from the section loading point in the belt entry when the belt air flows over the loading point or no greater than 50 feet upwind from the point where belt air is mixed with air from another intake air course near the loading point.

The DA must be specified and approved in the ventilation plan.

(4) The primary escapeway must be monitored for carbon monoxide or smoke as specified in Sec. 75.351(f).

(5) The area of the mine with a belt air course must be developed with three or more entries.

(6) In areas of the mine developed after the effective date of this rule, unless approved by the district manager, no more than 50% of the total intake air, delivered to the working section or to areas where mechanized mining equipment is being installed or removed, can be supplied from the belt air course. The locations for measuring these air quantities must be approved in the mine ventilation plan.

(c) Notwithstanding the provisions of Sec. 75.380(g), additional

intake air may be added to the belt air course through a point-feed regulator. The location and use of point feeds must be approved in the mine ventilation plan.

(d) If the air through the point-feed regulator enters a belt air course which is used to ventilate a working section or an area where mechanized mining equipment is being installed or removed, the following conditions must be met:

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(1) The air current that will pass through the point-feed regulator must be monitored for carbon monoxide or smoke at a point within 50 feet upwind of the point-feed regulator;

(2) The air in the belt air course must be monitored for carbon monoxide or smoke upwind of the point-feed regulator. This sensor must be in the belt air course within 50 feet of the mixing point where air flowing through the point-feed regulator mixes with the belt air;

(3) The point-feed regulator must be provided with a means to close the regulator from the intake air course without requiring a person to enter the crosscut where the point-feed regulator is located. The point-feed regulator must also be provided with a means to close the regulator from a location in the belt air course immediately upwind of the crosscut containing the point-feed regulator;

(4) A minimum air velocity of 300 feet per minute must be maintained through the point-feed regulator;

(5) The location(s) and use of a point-feed regulator(s) must be approved in the mine ventilation plan and shown on the mine ventilation map; and

(6) An AMS must be installed, operated, examined, and maintained as specified in Sec. 75.351.

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Sec. 75.351 Atmospheric monitoring systems.

(a) AMS operation. Whenever personnel are underground and an AMS is used to fulfill the requirements of Sec. Sec. 75.323(d)(1)(ii), 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), 75.350(d), or 75.362(f), the AMS must be operating and a designated AMS operator must be on duty at a location on the surface of the mine where audible and visual signals from the AMS must be seen or heard and the AMS operator can promptly respond to these signals.

(b) Designated surface location and AMS operator. When an AMS is used to comply with Sec. Sec. 75.323(d)(1)(ii), 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), 75.350(d), or 75.362(f), the following requirements apply:

(1) The mine operator must designate a surface location at the mine where signals from the AMS will be received and two-way voice communication is maintained with each working section, with areas where mechanized mining equipment is being installed or removed, and with other areas designated in the approved emergency evacuation and firefighting program of instruction (Sec. 75.1502).

(2) The mine operator must designate an AMS operator to monitor and promptly respond to all AMS signals.

(3) A map or schematic must be provided at the designated surface location that shows the locations and type of AMS sensor at each location, and the intended air flow direction at these locations. This map or schematic must be updated within 24 hours of any change in this information.

(4) The names of the designated AMS operators and other appropriate personnel, including the designated person responsible for initiating an emergency mine evacuation under Sec. 75.1501, and the method to contact these persons, must be provided at the designated surface location.

(c) Minimum operating requirements. AMSs used to comply with Sec. Sec. 75.323(d)(1)(ii), 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), 75.350(d), or 75.362(f) must:

(1) Automatically provide visual and audible signals at the designated surface location for any interruption of circuit continuity and any electrical malfunction of the system. These signals must be of sufficient magnitude to be seen or heard by the AMS operator.

(2) Automatically provide visual and audible signals at the designated surface location when the carbon monoxide concentration or methane concentration at any sensor reaches the alert level as specified in Sec. 75.351(i). These signals must be of sufficient magnitude to be seen or heard by the AMS operator.

(3) Automatically provide visual and audible signals at the designated surface location distinguishable from alert signals when the carbon monoxide, smoke, or methane concentration at any sensor reaches the alarm level as specified in Sec. 75.351(i). These signals must be of sufficient magnitude to be seen or heard by the AMS operator.

(4) Automatically provide visual and audible signals at all affected working sections and at all affected areas where mechanized mining equipment is being installed or removed when the carbon monoxide, smoke, or methane concentration at any sensor reaches the alarm level as specified in Sec. 75.351(i). These signals must be of sufficient magnitude to be seen or heard by miners working at these locations.

Methane signals must be distinguishable from other signals.

(5) Automatically provide visual and audible signals at other locations as specified in Mine Emergency Evacuation and Firefighting Program of Instruction (Sec. 75.1502) when the carbon monoxide, smoke, or methane concentration at any sensor reaches the alarm level as specified in Sec. 75.351(i). These signals must be seen or heard by miners working at these locations. Methane alarms must be distinguishable from other signals.

(6) Identify at the designated surface location the operational status of all sensors.

(7) Automatically provide visual and audible alarm signals at the designated surface location, at all affected working sections, and at all affected areas where mechanized mining equipment is being installed or removed when the carbon monoxide level at any two consecutive sensors alert at the same time. These signals must be seen or heard by the AMS operator and miners working at these locations.

(d) Location and installation of AMS sensors. (1) All AMS sensors, as specified in Sec. 75.351(e) through 75.351(h), must be located such that measurements are representative of the mine atmosphere in these locations.

(2) Carbon monoxide or smoke sensors must be installed near the center in the upper third of the entry, in a location that does not expose personnel working on the system to unsafe conditions. Sensors must not be located in abnormally high areas or in other locations where air flow patterns do not permit products of combustion to be carried to the sensors.

(3) Methane sensors must be installed near the center of the entry, at least 12 inches from the roof, ribs, and floor, in a location that would not expose personnel working on the system to unsafe conditions.

(e) Location of sensors--belt air course. In addition to the requirements of paragraph (d) of this section, any AMS used to monitor belt air courses under Sec. 75.350(b) must have sensors to monitor for carbon monoxide or smoke at the following locations:

(1) At or near the working section belt tailpiece in the air stream ventilating the belt entry. In longwall mining systems the sensor must be located upwind in the belt entry at a distance no greater than 150 feet from the mixing point where intake air is mixed with the belt air at or near the tailpiece;

(2) Upwind, a distance no greater than 50 feet from the point where the belt air course is combined with another air course or splits into multiple air courses;

(3) At intervals not to exceed 1,000 feet along each belt entry in areas where air velocities are maintained at 50 feet per minute or higher. In areas along each belt entry where air velocities are less than 50 feet per minute, the sensor spacing must not exceed 350 feet.

All sensors must be installed at the 1,000-foot spacing no later than August 2, 2004.

(4) Not more than 100 feet downwind of each belt drive unit, each tailpiece transfer point, and each belt take-up. If the belt drive, tailpiece, and/or take-up for a single transfer point are installed together in the same air course they may be monitored with one sensor located not more than 100 feet downwind of the last component; and

(5) At other locations in any entry that is part of the belt air course as required and specified in the mine ventilation plan.

(f) Locations of sensors--the primary escapeway. When used to monitor the primary escapeway under Sec. 75.350(b)(4), carbon monoxide or smoke sensors must be located in the primary escapeway within 500 feet of the working section and areas where mechanized mining equipment is being installed or removed. In addition, another sensor must be located within 500 feet inby the beginning of the panel. The point-feed sensor required by Sec. 75.350(d)(1) may be used as the sensor at the beginning of the panel if it is located within 500 feet inby the beginning of the panel.

(g) Location of sensors--return air splits. (1) If used to monitor return air splits under Sec. 75.362(f), a methane sensor must be installed in the return air split between the last working place, longwall or shortwall face ventilated by that air split, and the junction of the return air split with another air split, seal, or worked out area.

(2) If used to monitor a return air split under Sec. 75.323(d)(1)(ii), the methane sensors must be installed at the following locations:

(i) In the return air course opposite the section loading point, or, if exhausting auxiliary fan(s) are used, in the return air course no closer than 300 feet downwind from the fan exhaust and at a point opposite or immediately outby the section loading point; and

(ii) Immediately upwind from the location where the return air split meets another air split or immediately upwind of the location where an air split is used to ventilate seals or worked-out areas.

(h) Location of sensors--electrical installations. When monitoring the intake air ventilating underground transformer stations, battery charging stations, substations, rectifiers, or water pumps under Sec. 75.340(a)(1)(ii) or Sec. 75.340(a)(2)(ii), at least one sensor must be installed to monitor the mine atmosphere for carbon monoxide or smoke, located downwind and not greater than 50 feet from the electrical installation being monitored.

(i) Establishing alert and alarm levels. An AMS installed in accordance with the following paragraphs must initiate alert and alarm signals at the specified levels, as indicated:

(1) For Sec. 75.323(d)(1)(ii) alarm at 1.5% methane.

(2) For Sec. Sec. 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), and 75.350(d), alert at 5 ppm carbon monoxide above the ambient level and alarm at 10 ppm carbon monoxide above the ambient level when carbon monoxide sensors are used; and alarm at a smoke optical density of .022 per meter when smoke sensors are used. Reduced alert and alarm settings approved by the district manager may be required for carbon monoxide sensors identified in the mine ventilation plan, Sec. 75.371(nn).

(3) For Sec. 75.362(f), alert at 1.0% methane and alarm at 1.5% methane.

(j) Establishing carbon monoxide ambient levels. Carbon monoxide ambient levels and the means to determine these levels must be approved in the mine ventilation plan (Sec. 75.371(hh)) for monitors installed

in accordance with Sec. Sec. 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), and 75.350(d).

(k) Installation and maintenance. An AMS installed in accordance with Sec. Sec. 75.323(d)(1)(ii), 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), 75.350(d), or 75.362(f) must be installed and maintained by personnel trained in the installation and maintenance of the system. The system must be maintained in proper operating condition.

(l) Sensors. Sensors used to monitor for carbon monoxide, methane, and smoke must be either of a type listed and installed in accordance with the recommendations of a nationally recognized testing laboratory approved by the Secretary; or these sensors must be of a type, and installed in a manner, approved by the Secretary.

(m) Time delays. When a demonstrated need exists, time delays may be incorporated into the AMS. These time delays must only be used to account for non-fire related carbon monoxide alert and alarm sensor signals. These time delays are limited to no more than three minutes. The use and length of any time delays, or other techniques or methods which eliminate or reduce the need for time delays, must be specified and approved in the mine ventilation plan.

(n) Examination, testing, and calibration. (1) At least once each shift when belts are operated as part of a production shift, sensors used to detect carbon monoxide or smoke in accordance with Sec. Sec. 75.350(b), and 75.350(d), and alarms installed in accordance with Sec. 75.350(b) must be visually examined.

(2) At least once every seven days, alarms for AMS installed in accordance with Sec. Sec. 75.350(b), and 75.350(d) must be functionally tested for proper operation.

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(3) At intervals not to exceed 31 days--

(i) Each carbon monoxide sensor installed in accordance with Sec. Sec. 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), or 75.350(d) must be calibrated in accordance with the manufacturer's calibration specifications. Calibration must be done with a known concentration of carbon monoxide in air sufficient to activate the alarm;

(ii) Each smoke sensor installed in accordance with Sec. Sec. 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), or 75.350(d) must be functionally tested in accordance with the manufacturer's calibration specifications;

(iii) Each methane sensor installed in accordance with Sec. Sec. 75.323(d)(1)(ii) or 75.362(f) must be calibrated in accordance with the manufacturer's calibration specifications. Calibration must be done with a known concentration of methane in air sufficient to activate an alarm.

(iv) If the alert or alarm signals will be activated during calibration of sensors, the AMS operator must be notified prior to and upon completion of calibration. The AMS operator must notify miners on affected working sections, areas where mechanized mining equipment is being installed or removed, or other areas designated in the approved emergency evacuation and firefighting program of instruction (Sec. 75.1502) when calibration will activate alarms and when calibration is completed.

(4) Gases used for the testing and calibration of AMS sensors must be traceable to the National Institute of Standards and Technology reference standard for the specific gas. When these reference standards are not available for a specific gas, calibration gases must be traceable to an analytical standard which is prepared using a method traceable to the National Institute of Standards and Technology.

Calibration gases must be within <PLUS-MINUS2.0 percent of the indicated gas concentration.

(o) Recordkeeping. (1) When an AMS is used to comply with Sec. Sec. 75.323(d)(1)(ii), 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), 75.350(d), or 75.362(f), individuals designated by the operator must make the following records by the end of the shift in which the following event(s) occur:

(i) If an alert or alarm signal occurs, a record of the date, time, location and type of sensor, and the cause for the activation.

(ii) If an AMS malfunctions, a record of the date, the extent and cause of the malfunction, and the corrective action taken to return the system to proper operation.

(iii) A record of the seven-day tests of alert and alarm signals; calibrations; and maintenance of the AMS must be made by the person(s) performing these actions.

(2) The person entering the record must include their name, date, and signature in the record.

(3) The records required by this section must be kept either in a secure book that is not susceptible to alteration, or electronically in a computer system that is secure and not susceptible to alteration. These records must be maintained separately from other records and identifiable by a title, such as the `AMS log.'

(p) Retention period. Records must be retained for at least one year at a surface location at the mine and made available for inspection by miners and authorized representatives of the Secretary.

(q) Training. All AMS operators must be trained annually in the proper operation of the AMS. A record of the content of training, the person conducting the training, and the date the training was conducted, must be maintained at the mine for at least one year by the mine operator.

(r) Communications. When an AMS is used to comply with Sec. 75.350(b), a two-way voice communication system required by Sec. 75.1600 must be installed in an entry that is separate from the entry in which the AMS is installed no later than August 2, 2004. The two-way voice communication system may be installed in the entry where the intake sensors required by Sec. Sec. 75.350(b)(4) or 75.350(d)(1) are installed.

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Sec. 75.352 Actions in response to AMS malfunction, alert, or alarm signals.

(a) When a malfunction, alert, or alarm signal is received at the designated surface location, the sensor(s) that are activated must be identified and the AMS operator must promptly notify appropriate personnel.

(b) Upon notification of a malfunction, alert, or alarm signal, appropriate personnel must promptly initiate an investigation to determine the cause of the signal and take the required actions set forth in paragraphs (c), (d), or (e) of this section.

(c) If any sensor installed in accordance with Sec. Sec. 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), or 75.350(d) indicates an alarm or if any two consecutive sensors indicate alert at the same time, the following procedures must be followed unless the cause of the signal(s) is known not to be a hazard to miners:

(1) Appropriate personnel must notify miners in affected working sections, in affected areas where mechanized mining equipment is being installed or removed, and at other locations specified in the Sec. 75.1502 approved mine emergency evacuation and firefighting program of instruction; and

(2) All personnel in the affected areas, unless assigned other duties under Sec. 75.1502, must be withdrawn promptly to a safe location identified in the mine emergency evacuation and firefighting program of instruction.

(d) If there is an alert or alarm signal from a methane sensor installed in accordance with Sec. Sec. 75.323(d)(1)(ii) and 75.362(f), an investigation must be initiated to determine the cause of the signal, and the actions required under Sec. 75.323 must be taken.

(e) If any fire detection components of the AMS malfunction or are inoperative, immediate action must be taken to return the system to proper operation. While the AMS component repairs are being made, operation of the belt may continue if the following conditions are met:

(1) If one AMS sensor malfunctions or becomes inoperative, a trained person must continuously monitor for carbon monoxide or smoke at the inoperative sensor.

(2) If two or more adjacent AMS sensors malfunction or become inoperative, a trained person(s) must patrol and continuously monitor for carbon monoxide or smoke so that the affected areas will be traveled each hour in their entirety, or a trained person must be stationed to monitor at each inoperative sensor.

(3) If the complete AMS malfunctions or becomes inoperative, trained persons must patrol and continuously monitor for carbon monoxide or smoke so that the affected areas will be traveled each hour in their entirety.

(4) The trained person(s) monitoring under this section must, at a minimum, have two-way voice communication capabilities with the AMS operator at intervals not to exceed 2,000 feet and report contaminant levels to the AMS operator at intervals not to exceed 60 minutes.

(5) The trained person(s) monitoring under this section must report immediately to the AMS operator any concentration of the contaminant that reaches either the alert or alarm level specified in Sec. 75.351(i), or the alternate alert and alarm levels specified in paragraph (e)(7) of this section, unless the source of the contaminant is known not to present a hazard.

(6) Detectors used to monitor under this section must have a level of detectability equal to that required of the sensors in Sec. 75.351(l).

(7) For those AMSs using sensors other than carbon monoxide sensors, an alternate detector and the alert and alarm levels associated with that detector must be specified in the approved mine ventilation plan.

(f) If the 50-foot per minute minimum air velocity is not maintained when required under Sec. 75.351(e)(3), immediate action must be taken to return the ventilation system to proper operation. While the ventilation system is being corrected, operation of the belt may continue only while a trained person(s) patrols and continuously monitors for carbon monoxide or smoke as set forth in Sec. Sec. 75.352(e)(3) through (7), so that the affected areas will be traveled each hour in their entirety.

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Sec. 75.371 Mine ventilation plan; contents.

The mine ventilation plan shall contain the information described below and any additional provisions required by the district manager:

- (a) The mine name, company name, mine identification number, and the name of the individual submitting the plan information.
- (b) Planned main mine fan stoppages, other than those scheduled for testing, maintenance or adjustment, including procedures to be followed during these stoppages and subsequent restarts (see Sec. 75.311(a)) and the type of device to be used for monitoring main mine fan pressure, if other than a pressure recording device (see 75.310(a)(4)).
- (c) Methods of protecting main mine fans and associated components from the forces of an underground explosion if a 15-foot offset from the nearest side of the mine opening is not provided (see Sec. 75.310(a)(6)); and the methods of protecting main mine fans and intake air openings if combustible material will be within 100 feet of the area surrounding the fan or these openings (see Sec. 75.311(f)).
- (d) Persons that will be permitted to enter the mine, the work these persons will do while in the mine, and electric power circuits that will be energized when a back-up fan system is used that does not provide the ventilating quantity provided by the main mine fan (see Sec. 75.311(c)).
- (e) The locations and operating conditions of booster fans installed in anthracite mines (see Sec. 75.302).
- (f) Section and face ventilation systems used, including drawings illustrating how each system is used, and a description of each different dust suppression system used on equipment on working sections.
- (g) Locations where the air quantities must be greater than 3,000 cubic feet per minute (see Sec. 75.325(a)(1)).
- (h) In anthracite mines, locations where the air quantities must be greater than 1,500 cubic feet per minute (see Sec. 75.325(e)(1)).
- (i) Working places and working faces other than those where coal is being cut, mined, drilled for blasting or loaded, where a minimum air quantity will be maintained, and the air quantity at those locations (see Sec. 75.325(a)(1)).
- (j) The operating volume of machine mounted dust collectors or diffuser fans, if used (see Sec. 75.325(a)(3)).
- (k) The minimum mean entry air velocity in exhausting face ventilation systems where coal is being cut, mined, drilled for blasting, or loaded, if the velocity will be less than 60 feet per minute. Other working places where coal is not being cut, mined, drilled for blasting or loaded, where at least 60 feet per minute or

some other minimum mean entry air velocity will be maintained (see Sec. 75.326).

(l) The maximum distance if greater than 10 feet from each working face at which face ventilation control devices will be installed (see Sec. 75.330(b)(2)). The working places other than those where coal is being cut, mined, drilled for blasting or loaded, where face ventilation control devices will be used (see Sec. 75.330(b)(1)(ii)).

(m) The volume of air required in the last open crosscut or the quantity of air reaching the pillar line if greater than 9,000 cubic feet per minute (see Sec. 75.325(b)).

(n) In anthracite mines, the volume of air required in the last open crosscut or the quantity of air reaching the pillar line if greater than 5,000 cubic feet per minute (see Sec. 75.325(e)(2)).

(o) Locations where separations of intake and return air courses will be built and maintained to other than the third connecting crosscut outby each working face (see Sec. 75.333(b)(1)).

(p) The volume of air required at the intake to the longwall sections, if different than 30,000 cubic feet per minute (see Sec. 75.325(c)).

(q) The velocities of air on a longwall or shortwall face, and the locations where the velocities must be measured (see Sec. 75.325(c)(2)).

(r) The minimum quantity of air that will be provided during the installation and removal of mechanized mining equipment, the location where this quantity will be provided, and the ventilation controls that will be used (see Sec. 75.325(d), (g), and (i)).

(s) The locations and frequency of the methane tests if required more often by Sec. 75.362(d)(1)(iii) (see Sec. 75.362(d)(1)(iii)).

(t) The locations where samples for ``designated areas'' will be collected, including the specific location of each sampling device, and the respirable dust control measures used at the dust generating sources for these locations (see Sec. 70.208 of this chapter).

(u) The methane and dust control systems at underground dumps, crushers, transfer points, and haulageways.

(v) Areas in trolley haulage entries where the air velocity will be greater than 250 feet per minute and the velocity in these areas (see Sec. 75.327(b)).

(w) Locations where entries will be advanced less than 20 feet from the inby rib without a crosscut being provided where a line brattice will be required. (see Sec. 75.333(g)).

(x) A description of the bleeder system to be used, including its design (see Sec. 75.334).

(y) The means for determining the effectiveness of bleeder systems (see Sec. 75.334(c)(2)).

(z) The locations where measurements of methane and oxygen concentrations and air quantities and tests to determine whether the air is moving in the proper direction will be made to evaluate the ventilation of nonpillared worked-out areas (see Sec. 75.364(a)(1)) and the effectiveness of bleeder systems (see Sec. 75.364(a)(2)(iii)). Alternative methods of evaluation of the effectiveness of bleeder systems (Sec. 75.364(a)(2)(iv)).

(aa) The means for adequately maintaining bleeder entries free of obstructions such as roof falls and standing water (see Sec. 75.334(c)(3)).

(bb) The location of ventilation devices such as regulators,

stoppings and bleeder connectors used to control air movement through worked-out areas (see Sec. 75.334(c)(4)). The location and sequence of construction of proposed seals for each worked-out area. (see Sec. 75.334(e)).

(cc) In mines with a demonstrated history of spontaneous combustion: a description of the measures that will be used to detect methane, carbon monoxide, and oxygen concentration during and after pillar recovery and in worked-out areas where no pillars have been recovered (see Sec. 75.334(f)(1); and, the actions which will be taken to protect miners from the hazards associated with spontaneous combustion (see Sec. 75.334(f)(2). If a bleeder system will not be used, the methods that will be used to control spontaneous combustion, accumulations of methane-air mixtures, and other gases, dusts, and fumes in the worked-out area (see Sec. 75.334(f)(3)).

(dd) The location of all horizontal degasification holes that are longer than 1,000 feet and the location of all vertical degasification holes.

(ee) If methane drainage systems are used, a detailed sketch of each system, including a description of safety precautions used with the systems.

(ff) A description of the methods and materials to be used to seal worked-out areas if those methods or materials will be different from those specified by Sec. 75.335(a)(1).

(gg) The alternative location for the additional sensing device if the device will not be installed on the longwall shearing machine (see Sec. 75.342(a)(2)).

(hh) The ambient level in parts per million of carbon monoxide, and the method for determining the ambient level, in all areas where carbon monoxide sensors are installed.

(ii) The locations (designated areas) where dust measurements would be made in the belt entry when belt air is used to ventilate working sections or areas where mechanized mining equipment is being installed or removed, in accordance with Sec. 75.350(b)(3).

(jj) The locations where velocities in the belt entry exceed limits set forth in Sec. 75.350(a)(2), and the maximum approved velocity for each location.

(kk) The locations where air quantities are measured as set forth in Sec. 75.350(b)(6).

(ll) The locations and use of point-feed regulators, in accordance with Sec. Sec. 75.350(c) and 75.350(d)(5).

(mm) The location of any additional carbon monoxide or smoke sensor installed in the belt air course, in accordance with Sec. 75.351(e)(5).

(nn) The length of the time delay or any other method used to reduce the number of non-fire related alert and alarm signals from carbon monoxide sensors, in accordance with Sec. 75.351(m).

(oo) The reduced alert and alarm settings for carbon monoxide sensors, in accordance with Sec. 75.351(i)(2).

(pp) The alternate detector and the alert and alarm levels associated with the detector, in accordance with Sec. 75.352(e)(7).

(qq) The distance that separation between the primary escapeway and the belt or track haulage entries will be maintained if other than to the first connecting crosscut outby the section loading point (see Sec. 75.380(g)).

(rr) In anthracite mines, the dimensions of escapeways where the pitch of the coal seam does not permit escapeways to be maintained 4

feet by 5 feet and the locations where these dimensions must be maintained (see Sec. 75.381(c)(4)).

(ss) Areas designated by the district manager where measurements of CO and NO₂ concentrations will be made (see Sec. 70.1900(a)(4)).

(tt) Location where the air quantity will be maintained at the section loading point (see Sec. 75.325(f)(2)).

(uu) Any additional location(s) required by the district manager where a minimum air quantity must be maintained for an individual unit of diesel-powered equipment. (see Sec. 75.325(f)(5)).

(vv) The minimum air quantities that will be provided where multiple units of diesel-powered equipment are operated (see Sec. 75.325(g)(1)-(3) and (i)).

(ww) The diesel-powered mining equipment excluded from the calculation under Sec. 75.325(g). (see Sec. 75.325(h)).

(xx) Action levels higher than the 50 percent level specified by Sec. 70.1900(c). (see Sec. 75.325(j)).

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FR 17529, Apr. 2, 2004]