

provisions should be provided for permitting CO alert and alarm levels greater than 5 and 10 ppm. One member of the Advisory Committee suggested that there may be times when the 5 and 10 ppm levels are not "practical," such as in mines using diesel-powered equipment which tend to have higher levels of CO in the air from the combustion of diesel fuel. Diesel-discriminating sensors have proven to be effective in reducing the frequency of false alert and alarm signals which are not the result of fire, but which are due to diesel exhaust. These sensors can allow operators to improve fire detection capabilities by lowering alert and alarm levels. Therefore, MSHA is proposing to limit CO alert and alarm levels to 5 and 10 ppm above ambient, respectively.

The proposed rule, consistent with the Advisory Committee recommendation, does not provide for approving alert and alarm levels for CO sensors installed in accordance with § 75.350(b)(1) greater than 5 and 10 ppm above the ambient level, respectively. This flexibility is not needed because the specified alert and alarm levels are above the ambient level, and because the proposed rule permits the use of time delays or other techniques to reduce non-fire related alert and alarm signals. Although one member of the Advisory Committee believed that higher alert and alarm levels may be more "practical," we do not believe that they provide the protection that is necessary to protect miners by giving them early warning in the case of a fire.

Proposed paragraph (i)(3) would establish alert and alarm levels when an AMS is used to conduct methane tests required by § 75.362(f). It would require the AMS to provide an alert signal at no more than 1.0 percent and an alarm at no more than 1.5 percent methane. This is consistent with the action levels stipulated under existing §§ 75.323(c)(1) and 75.323(c)(2) for methane in the immediate return. Since § 75.323(c) requires specific actions at these concentrations, personnel will receive timely notification with these alert and alarm levels. The proposed rule does not preclude the mine operator from using alert and alarm levels that are lower than those required by the proposed rule.

Proposed § 75.351(j)—Establishing CO ambient levels, would require that CO ambient levels and the means to determine these levels must be approved in the mine ventilation plan (§ 75.371(hh)) for sensors installed in accordance with §§ 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), and 75.350(c). In order for an AMS with CO sensors to

be effective, the ambient level must represent conditions over a broad range of mining activities. We recognize that the ambient level in the mine may vary because of mining conditions and activities. Since mining activities vary from mine to mine, we believe the mine ventilation plan is the most effective tool to set the ambient level. Therefore, the Agency chooses to continue the requirements contained in the petitions for modifications that the ambient level, and the method for determining the ambient level, be specified and approved in the mine ventilation plan. This provides flexibility by allowing more than one ambient level within the mine, and allowing the operator to reestablish ambient levels for some areas. Any changes in the ambient level(s) must be specified and approved in the mine ventilation plan. This is consistent with the existing rule at § 75.371(hh). Further information concerning the setting of an ambient level can be found in the discussion for the definition of CO ambient level.

Proposed paragraph (k) would require an AMS used to comply with §§ 75.323(d)(1)(ii), 340(a)(1)(ii), 340(a)(2)(ii), 75.350(b), 75.350(c), or 75.362(f) be installed and maintained by properly trained personnel. It also requires that the system be maintained in proper operating condition. The Advisory Committee recognized, and we agree, that proper functioning of an AMS is directly related to the quality of the maintenance provided. The Advisory Committee identified and recommended requiring specific skills training for maintenance personnel, such as system operation, calibration, troubleshooting, and system repairs. In paragraph (k) we have proposed that trained personnel perform the maintenance. Although we are not proposing a requirement for a specific training plan for maintenance personnel, as we explained earlier in this preamble, this training would be conducted under existing training programs.

Proposed § 75.351(l) specifies that sensors must be listed and installed in accordance with the recommendations of nationally recognized testing laboratories (NRTLs) approved by the Secretary or be of a type and installed in a manner approved by the Secretary under the procedures outlined in our Program Policy Manual, Volume V for parts 75.1101–5 through 75.1103–5. This volume of MSHA's Program Policy Manual can be found at <http://www.msha.gov/REGS/COMPLIAN/PPM/PMVOL5J.HTM#123>. See Section III. Background for further discussion on using accuracy and performance

requirements instead of proposing an approval schedule. Proposed paragraph (l) provides the requirements for CO, smoke, and methane sensors. This section is based on the existing § 75.1103–2(a) which requires components of automatic fire sensor systems in belt entries to be of a type and installed in a manner approved by the Secretary. Alternatively, the components are required to be of a type listed, and installed in accordance with the recommendations of a nationally recognized testing laboratory approved by the Secretary. This proposed rule merely expands the requirement to include methane sensors. The provision for approval by the Secretary is expected to be used for new technology, as MSHA does not have approval standards for these types of sensors. It is expected that NRTL approval of sensors will be the most prevalent vehicle for acceptance of the sensors. The NRTLs are expected to utilize American National Standards when approving or listing the sensors. A review of the standards shows that ANSI/ISA92.01 covers CO sensors; ANSI/ISA12.13 covers combustible gas detectors, including methane sensors; and ANSI/UL 268 covers smoke sensors. It is anticipated that the sensors will be compared to these standards by the NRTLs.

Paragraph (m) of the proposed rule would permit the use of reasonable time delays for preventing the alert or alarm signals from being triggered when the AMS detects non-fire produced CO. The Advisory Committee pointed out a need for reducing the number of non-fire signals to enhance miner confidence in the AMS. They suggested the use of time delays or other computer techniques to reduce the number of alert and alarm signals. MSHA has approved ventilation plans that have included time delays of up to 3 minutes. This practice is consistent with recent petitions and has effectively reduced the number of non-fire produced alert and alarm signals.

We are proposing that the use and length of the time delay be approved in the mine ventilation plan submitted under existing § 75.370. Before approval in the mine ventilation plan, a demonstrated need for time delays must be documented. The total time delay for any given sensor may not exceed three minutes. Agency experience showed this time to be the maximum delay necessary to eliminate diesel-powered generated alert and alarm signals. Consistent with the Advisory Committee report, the proposed rule also would permit other computer or administrative techniques (such as