



Testimony to DOL

PB92-139088



TESTIMONY OF THE
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
ON
THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S
PROPOSED RULE ON
OCCUPATIONAL EXPOSURE TO ASBESTOS, TREMOLITE, ANTHOPHYLLITE,
AND ACTINOLITE

29 CFR Parts 1910 and 1926
Docket No. H-033-e

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16. Abstract (Limit: 200 words) This testimony contains the comments of NIOSH regarding the proposed rule on occupational exposure to asbestos (1332214), tremolite (14567738), anthophyllite (17068789) and actinolite (77536664) exposures. NIOSH supports OSHA in proposing changes to the existing asbestos standard to minimize the risk of asbestos related diseases in workers. The current standard is insufficient to protect the health of workers exposed to asbestos, and the proposed changes represent a prudent and necessary approach to accomplish this goal. Specific topics addressed in this testimony include exposure limits for asbestos; methods for sampling and analysis of airborne fibers; use of time weighted averages to measure exposure; use of engineering controls, good work practices and personal protective equipment; use of engineering controls and work practices for brake and clutch repair and service; required use of specific work practices during maintenance of vinyl asbestos floor tile; housekeeping; definitions of small scale and short duration operations; exemption of roofing operations from the requirement for negative pressure enclosures; communication among employers and owners; regulated areas for asbestos removal, maintenance, demolition, and renovation operations; use of glove bags; definition of competent person; and notification to OSHA and method of notification.					
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I am Richard A. Lemen, Assistant Director of the National Institute for Occupational Safety and Health (NIOSH). With me today are senior staff from NIOSH. Our purpose for appearing at this hearing is to provide testimony to the Occupational Safety and Health Administration (OSHA) regarding the changes proposed to its existing regulation for occupational exposure to asbestos, tremolite, anthophyllite, and actinolite in general [29 CFR 1910] and construction industries [29 CFR 1926].

I. BACKGROUND

Several issues regarding the regulation of asbestos were remanded to OSHA by the U.S. Court of Appeals. Four of these issues would require new OSHA rulemaking: (1) the establishment of operation-specific permissible exposure limits (PELs), (2) the extension of requirements for reporting and information transfer, (3) the expansion of the competent person^{*} requirement to all construction operations, and (4) clarification of the exemption for small-scale, short-duration operations. Specifically, OSHA has proposed the following:

- that a PEL of 0.1 fiber/cc (100,000 fibers/m³) for asbestos be adopted for all general and construction industry workers
- that operation-specific work practices and controls be mandated to reduce exposures
- that additional requirements be established for communicating asbestos hazards among building owners, employers, and workers
- that OSHA be notified before the commencement of any removal, demolition, or renovation operation with potential exposures to asbestos
- that all construction operations with potential exposure to asbestos be overseen by a competent person
- that the definition of a small-scale, short-duration operation be more specific
- that the exemptions from the use of negative-pressure enclosures be made more explicit

NIOSH supports OSHA in proposing changes to the existing asbestos standard to minimize the risk of asbestos-related diseases in workers. The current standard is insufficient to protect the health of workers exposed to asbestos and the proposed changes represent a prudent and necessary approach to accomplish this goal.

^{*}A competent person is defined in the current asbestos construction standard [29 CFR 1926.58(b)] as "...one who is capable of identifying existing asbestos...hazards in the workplace and has the authority to take prompt corrective measures to eliminate them...".

II. NIOSH STATEMENT OF POLICY

On June 21, 1984, and May 9, 1990, NIOSH testified at the OSHA public hearings on occupational exposure to asbestos and presented supporting evidence that there is no safe airborne concentration of fibers for any asbestos mineral [NIOSH 1984; NIOSH 1990a]. NIOSH stated that not even the lowest fiber exposure limit could assure workers of absolute protection from exposure-related cancer. This conclusion was consistent with previous positions taken by NIOSH in the 1976 criteria document on asbestos [NIOSH 1976] and the joint NIOSH/OSHA report of 1980 [NIOSH/OSHA 1980]. In its 1984 testimony, NIOSH urged that the goal be to eliminate exposures to asbestos fibers or, where they cannot be eliminated, to limit them to the lowest possible concentration [NIOSH 1984].

NIOSH concluded that (1) for regulatory purposes, phase contrast microscopy (PCM) was still the most practical technique for assessing exposures to asbestos fibers when using the criteria in NIOSH Analytical Method 7400 and (2) no distinction should be made between airborne exposures to asbestos fibers and their nonasbestiform analogs when they meet the criteria of a fiber as defined on a microscopic level [NIOSH 1990a]. NIOSH also recognized that PCM lacks specificity when asbestos and other fibers occur in the same environment, and that PCM cannot detect fibers with diameters less than approximately 0.25 micrometer. NIOSH further stated that it might be necessary to analyze air samples by electron microscopy where both electron diffraction and microchemical analysis can be used to help identify the type and concentration of asbestos fibers.

III. NIOSH RESPONSE TO THE REGULATORY RESPONSES PROPOSED BY OSHA

A. 29 CFR Parts 1910 and 1926 - Reduction of the Asbestos PEL to 0.1 Fiber/cc

1. Exposure Limit for Asbestos

NIOSH supports OSHA's proposed rule to reduce the PEL for asbestos from 0.2 to 0.1 fiber/cc for all workers. Lowering the time-weighted average (TWA) PEL from the current standard of 0.2 to 0.1 fiber/cc will substantially reduce the health risk; however, even at this concentration, the resulting number of cancer deaths estimated by OSHA would still be excessive. If exposures are reduced to 0.1 fiber/cc, OSHA estimates that the mortality risk would be 3.4 deaths per 1,000 workers for a lifetime of exposure to asbestos, and 2.3 deaths per 1,000 for 20 years of exposure. Although the ultimate goal is to eliminate all possible exposures to asbestos, such a recommendation is not currently feasible in all workplaces. Where fiber exposures cannot be eliminated, exposures must be controlled to concentrations below 0.1 fiber/cc.

2. Methods for Sampling and Analysis of Airborne Fibers

Using NIOSH analytical Method 7400, NIOSH has been able to measure airborne fiber concentrations lower than 0.1 fiber/cc in some occupational environments (Note: NIOSH will provide OSHA with these data at a later date). However, unlike most industrial and construction work sites, these environments had minimal nonasbestos contamination to interfere with the counting of fibers. The limits of fiber detection and quantitation using Method 7400 depend on the sample volume and the quantity of interfering dust. The limit of detection is 0.01 fiber/cc in a 1,000-liter air sample from environments free of interferences. The quantitative working range of the method is 0.04 to 0.5 fiber/cc in a 1,000-liter air sample.

A significant consideration in establishing a PEL should be the lowest concentration that can be accurately measured using currently available analytical techniques. NIOSH has concluded that (1) for regulatory purposes, PCM is the most practical technique for assessing asbestos fiber exposures when using the criteria given in NIOSH analytical Method 7400, and (2) concentrations below 0.1 fiber/cc can be accurately measured in certain occupational environments. NIOSH recognizes that mixed-fiber exposures may occur in the workplace and that fibers may need to be identified. In such cases, Method 7400 can be supplemented with electron microscopy as described in Method 7402, using electron diffraction and microchemical analysis to improve the specificity of the fiber determinations [NIOSH 1990a].

In NIOSH's judgment, the establishment of a PEL or action level below 0.1 fiber/cc for most industrial or construction work sites would be difficult at this time. However, any detectable concentration of asbestos found in the workplace warrants further evaluation and, if necessary, the implementation of measures to reduce exposures.

3. Use of TWAs to Measure Exposures

OSHA has proposed that the 0.1-fiber/cc PEL for asbestos be based on an 8-hour TWA concentration. Although TWAs are the generally acceptable method for measuring exposures, we recommend the use of alternative approaches for evaluating airborne exposures to asbestos. In fact, an alternative approach may be necessary to measure exposures more precisely for short-duration tasks. As stated in our testimony to OSHA in 1984 [NIOSH 1984], one way to ascertain the effectiveness of controls is to restrict the period over which workplace concentrations can be averaged. For example, personal sampling pumps with a flow rate of 4 liters/min are available and would allow a sampling time of 100 min to achieve the minimum 400-liter sample. This sampling strategy will ensure that exposures are being limited to the lowest fiber concentration that can be ascertained by Method 7400.

NIOSH is presently reviewing the OSHA analytical method ID 160 (Ex. 1-129) and will provide comments to OSHA at a later date.

B. 29 CFR 1910.1001(f)--Use of Engineering Controls, Good Work Practices, and Personal Protective Equipment

1. Methods of Compliance

NIOSH strongly recommends that whenever possible workers and employers eliminate asbestos exposures completely through engineering controls (including substitution), and good work practices rather than protect themselves with personal protective equipment, including respiratory protection.

In our previous comments and testimony to the OSHA docket on the proposed rule for methods of compliance, NIOSH stated its strong support to the existing OSHA policy for controlling exposures to hazardous agents [NIOSH 1989a; NIOSH 1990b]. This policy states that, whenever feasible, engineering controls and work practices should be used to prevent exposures, and that personal protective equipment, including respiratory protection, should be used only when engineering controls are not feasible. Because of the many deficiencies of respiratory protection in reducing worker exposure to airborne asbestos, NIOSH continues to recommend that respiratory protection be used only when engineering controls are not feasible for reducing exposures to below the PEL. In comments to the OSHA docket on methods of compliance, NIOSH discussed several deficiencies regarding respiratory protection, including uncertainty in the level of protection provided by respirators, the physiological and psychological burden to the respirator wearer, the difficulty of implementing and enforcing a respirator user program, safety concerns for the respirator wearer, and numerous other deficiencies.

2. Respiratory Protection

Because asbestos is a known human carcinogen, NIOSH recommends that only the most protective respirators be worn when exposures exceed the NIOSH recommended exposure limit (REL) of 0.1 fiber/cc. These respirators are specified as follows in the NIOSH Respirator Decision Logic (RDL) [NIOSH 1987]:

- Any self-contained respirator equipped with a full facepiece and operated in a pressure-demand or other positive pressure mode, or;
- Any supplied-air respirator equipped with a full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary, self-contained breathing apparatus operated in a pressure-demand or other positive-pressure mode.

Where exposure concentrations have been documented to be below 0.1 fiber/cc, or where certain small scale, short-duration tasks must be performed (e.g., maintenance and repair), or where the most protective respirators cannot be feasibly used, the most protective air-purifying respirators (APRs) could be permitted. The most protective APRs are the tight-fitting, high efficiency, powered air-purifying respirators (PAPRs) and the non-powered, full facepiece, high efficiency respirator. These respirators have assigned protection factors (APF) of 50. The loose-fitting PAPR has an APF of 25 and is less protective [NIOSH 1987]. Among air-purifying respirators, the PAPR class of respirator has the distinct advantage of using the battery-powered blower to provide a filtered airstream to the wearer. Thus, unlike the wearers of nonpowered, air-purifying respirators, the wearers of PAPRs have less breathing resistance which results in less physiological burden to the respirator wearer. The airstream of the PAPR also provides a cooling effect in warm temperatures.

C. 29 CFR 1910.1001(f)(1)(x)--Use of Engineering Controls and Work Practices for Brake and Clutch Repair and Service

1. Recommended Controls

NIOSH supports OSHA in requiring the use of specific controls (e.g., enclosures and high-efficiency particulate air [HEPA] filter vacuum systems) during automotive brake and clutch repairs. As documented by NIOSH [Ex. 1-113], the proper use of these engineering controls and work practices can control airborne asbestos concentrations below 0.1 fiber/cc. When citing the NIOSH report, Control of Asbestos Exposure During Brake Drum Service (Ex. 1-113) in the proposed rule, OSHA incorrectly cited some of the results. Specifically, the proposed rule states the following (page 29725):

"Also it must be demonstrated that the 'equivalent' method results in exposures which are equal or less than the exposures resulting from the use of Method A, the Enclosed Cylinder/HEPA Vacuum System Method, as set forth in Ex. 1-112."

In our report (Ex. 1-112) the Enclosed Cylinder/HEPA Vacuum System Method is Method B, and the Glove Box/Vacuum Method (described on page 29724 of the proposed rule) is Method A.

In addition, the Enclosed Cylinder/HEPA Vacuum System Method was cited as a primary engineering control method, and the Glove Box/HEPA Vacuum Enclosure Method and the HEPA-Filter Equipped Vacuum Cleaner are listed as equivalent methods. The NIOSH report (Ex. 1-112) states that when using transmission electron microscopy (TEM), the arithmetic mean concentration for personal samples was 0.044 fiber/cc with the Enclosed Cylinder/HEPA Vacuum System Method; 0.021

fiber/cc with the Glove Box/HEPA Vacuum Enclosure Method (Method A); and 0.022 fiber/cc with the HEPA-Filter Equipped Vacuum Cleaner Method. Statistically, no significant difference occurred in asbestos exposures among these three engineering control methods. Currently, OSHA specifies, as mandatory, three of the five NIOSH control methods that were shown to be effective in the NIOSH study, while the other two methods, the Glove Box/HEPA Vacuum Enclosure and HEPA-Filter Equipped Vacuum Cleaner, are listed as equivalent methods. NIOSH recommends that OSHA specify, as mandatory, all five control methods specified in the NIOSH study. The data from this study suggest no objective basis for differentiating the relative effectiveness between the five methods in controlling exposures below 0.1 fiber/cc.

2. Documentation of the Effectiveness of Engineering Controls

As part of the recordkeeping and documentation requirements proposed by OSHA in Appendix F to 29 CFR 1910.1001, NIOSH recommends that OSHA also require employers to perform periodic maintenance inspections of engineering controls and to maintain a written log of their effectiveness and any actions taken to ensure their proper functioning.

3. Respiratory Protection

Where exposures have been documented to be below 0.1 fiber/cc, or where the most protective respirators cannot be feasibly used, the most protective APRs could be permitted. The most protective APRs are the tight-fitting, high-efficiency, powered air-purifying respirators (PAPRs) and the nonpowered, full facepiece, high-efficiency respirator. These respirators have APFs of 50.

D. 29 CFR 1910.1001(f)(1)(xi)--Required Use of Specific Work Practices During Maintenance of Vinyl Asbestos Floor Tile

NIOSH agrees that OSHA should require specific work practices to minimize the release of asbestos fibers during the routine maintenance of vinyl asbestos floor tile (VAT). In a study conducted by the Los Angeles Unified School District [LAUSD 1990] to assess airborne exposures to asbestos during the stripping and buffing of VAT with rotary-powered equipment, fibers were released by all methods employed. Fiber concentrations were below 0.1 fiber/cc when analyzed by PCM, but TEM revealed that concentrations often exceeded 70 structures*/mm².

*Structures are a microscopic bundle, cluster, fiber, or matrix that may contain asbestos [Public Law 99-519, 1986].

The results from this study suggest that the following work practices would help to minimize fiber exposures during the routine cleaning of VAT:

- Using chemical stripping products that do not require the use of power equipment to loosen and remove wax
- Refraining from buffing floors routinely
- Using only low-abrasion pads on powered equipment operating at 190 rpm or less when buffing is necessary
- Encouraging the routine damp-mopping of floors to remove excess dust and decrease the need for stripping
- At a minimum, workers should be required to wear the most protective air-purifying respirators as specified in III.C.3.

The proposed OSHA rule requires employers to inform their workers about the risk of exposure while cleaning VAT. NIOSH recommends that this section (1) clearly define the employer's responsibility in this area, and (2) specifically direct the employer to instruct workers about the proper cleaning of VAT according to the requirements of this section. This section should also provide for the revision of these work practices as safer methods of VAT cleaning are developed.

E. 29 CFR 1910.1001(k)(7)--Housekeeping

NIOSH endorses the proposed change in housekeeping requirements for primary and secondary asbestos operations. This change would require that the premises be cleaned at least once per shift with a HEPA vacuum and that wet methods be used where feasible. NIOSH agrees with this provision and its intent to prevent the reentrainment of asbestos into the air.

F. 29 CFR 1926.58(b)--Definitions of Small-Scale, Short-Duration Operations

Comments were requested concerning the definition of small-scale, short-duration operations in which workers may be exposed to asbestos. OSHA has proposed that such operations be exempted from the required establishment of full-size, negative-pressure enclosures. NIOSH recognizes that certain small-scale jobs may not permit the establishment of negative-pressure enclosures or other types of engineering controls; however, the Institute recommends that such controls be used whenever feasible. This recommendation is based on our concern that short-term, intermittent exposures to asbestos may occur and may (1) pose a health risk to workers and (2) contaminate other work areas if the operation is improperly performed. NIOSH

recommends that the following provisions be incorporated into OSHA's proposed rule for small-scale, short-duration operations:

1. Include a maximum surface area or volume limit for the repair or removal of asbestos on pipes.
2. Require the use of respiratory protection for all workers because of the potential for accidental exposure to asbestos. At a minimum, workers should be required to wear the most protective air-purifying respirator as specified in III.C.3.
3. Require workers to wear appropriate protective equipment. At a minimum, workers should wear disposable clothing and be afforded access to shower facilities.
4. Require a competent person to be present at each work site to ensure that all possible engineering controls are in place and working properly and that appropriate work practices and protective equipment are being used to minimize exposures.

G. 29 CFR 1926.58(e)(6)(iii)--Exemption of Roofing Operations from the Requirement for Negative-Pressure Enclosures

OSHA has also asked for comments about the proposal to exempt asbestos roofing removal from the requirement to provide negative-pressure enclosures. Studies have shown that airborne exposures to asbestos may occur during the removal of asbestos roofing [NIOSH 1985; Millar 1989; Mueller 1989], and that such operations may pose a health risk to workers. On the basis of these data, NIOSH recommends that all workers potentially exposed to asbestos during the removal of asbestos-containing roofing material be required to wear, at a minimum, the most protective air-purifying respirator as specified in III.C.3. In addition, workers should be required to wear protective equipment (including disposable clothing at a minimum) and should have access to shower facilities. NIOSH also recommends incorporating the following provisions into the proposed rule as a prudent approach to minimizing the release of asbestos fibers during the removal of asbestos roofing:

1. Cut or remove asbestos-roofing material by hand whenever possible.
2. Equip all powered tools with a HEPA filter vacuum system or, on flat roofs, a misting device.
3. Use a HEPA filter vacuum to collect all loose dust left by the sawing operation.
4. Double-bag all waste (i.e., wrap it in two layers of 6-mil polyethylene), or place it in sealed containers; use a hoist or crane to lower all bags, wrapped material, and drums to the ground.

5. Isolate all roof-level air intake and discharge sources, or shut down all mechanical systems and seal off all outside vents with two layers of 6-mil polyethylene.

H. 29 CFR 1926.58(d)--Communication Among Employers and Owners

OSHA has proposed that project managers or building owners be required to provide employers and workers with information about the presence, location, and quantity of asbestos-containing materials on a prospective job site, as cited in 29 CFR 1926.58(d). In addition, project and building owners must maintain records of all information provided pursuant to this section or otherwise concerning the presence, location, and quantity of asbestos-containing materials in the building. NIOSH supports the OSHA provisions for notification and recordkeeping and recommends that these provisions be applied to all operations with the potential for asbestos exposure.

I. 29 CFR 1926.58(e)(6)--Regulated Areas for Asbestos Removal, Maintenance, Demolition, and Renovation Operations

1. Negative-Pressure Enclosures

OSHA has proposed that negative-pressure enclosures be established in all regulated areas before commencing removal, demolition, maintenance, or renovation operations, except where negative-pressure enclosures are not feasible. In theory, such a requirement should effectively prevent contamination of personnel and areas outside of a properly designed, constructed, and maintained enclosure. However, NIOSH has observed the release of asbestos fibers from improperly designed, constructed, or maintained negative-pressure enclosures [NIOSH 1989b], and we are not aware of any studies evaluating their effectiveness or delineating important parameters such as minimum pressure differential, minimum air flow, or maximum volumes feasible for various barrier materials. NIOSH therefore recommends that the following design requirements be incorporated into the proposed rule for negative-pressure enclosures:

- Design air-flow patterns within the enclosure to move airborne particles away from the worker.
- Provide adequate filtration and filter maintenance to prevent asbestos from escaping in the air discharged from the enclosure.
- Take precautionary measures to prevent back-flow of airborne asbestos if the vacuum device fails.

When negative-pressure enclosures are used, precautionary measures are needed to ensure that workers who are constructing or working

inside the enclosures are wearing the appropriate protective clothing and respirators. In addition, adhesives commonly used during such construction may expose workers to high concentrations of methylene chloride [Fleeger and Lee 1988] and may therefore require the use of proper ventilation and respiratory equipment.

NIOSH is in the process of evaluating the effectiveness of negative-pressure glove bags and boxes in controlling exposures to airborne asbestos. Reports of these studies will be forwarded to OSHA upon their completion.

2. Glove Bags

NIOSH has found that airborne fibers are released in the workplace when glove bags are used to remove asbestos pipe lagging [NIOSH 1990c]. Although the reasons for these releases were not determined, the study indicated that glove bags did not control asbestos exposures as anticipated. Thus NIOSH strongly supports OSHA in requiring that negative-pressure enclosures be used in conjunction with glove bags. Furthermore, NIOSH recommends that OSHA require the use of respiratory protection whenever glove bags are used [EPA/NIOSH 1986]. At a minimum, NIOSH recommends that workers should be required to wear the most protective air-purifying respirator as specified in III.C.3.

J. 29 CFR 1926.58(o)--Competent Person

OSHA has proposed that a competent person be present at all work sites where workers are removing, demolishing, or renovating asbestos-containing materials. This person would be responsible for ensuring compliance with all requirements in the proposed standard (e.g., those concerning engineering controls, respiratory protection, notification, etc.). The competent person would also be required to receive appropriate training relevant to these provisions. The requirements for such training could be met through the completion of a course conducted by a U.S. Environmental Protection Agency (EPA) training center certified by EPA or through the completion of an equivalent course.

NIOSH recommends that a competent person be present at all sites where workers are demolishing, renovating, or removing asbestos materials where the potential exists for exposure. Training and certification through completion of an approved OSHA course should be required for all competent persons. Courses designed to meet the requirements of EPA's Asbestos Containing Materials in Schools Standard [40 CFR part 763] (particularly those developed for asbestos abatement supervisors and operations and maintenance personnel) provide only the minimum curricula needed for a competent person. An appropriate training curriculum for qualifying persons should cover the following subjects:

1. Identification of possible hazards at the work site, including asbestos-containing materials
2. Proper handling methods for asbestos-containing materials, including appropriate engineering and work practice controls specified in the standard
3. Reporting, recordkeeping, and record transfer requirements specified in the standard
4. Requirements for personal air monitoring and actions to be based on monitoring results
5. The selection of appropriate protective equipment (including respirators) and the feasibility of using them at various asbestos-related operations

All training should include both classroom time and hands-on experience. Course work should cover many of the possible work activities that OSHA defines for a regulated asbestos area, and it should include instruction about the requirements for small-scale, short-duration operations.

NIOSH also recommends that the successful completion of an approved training course be required for all workers who routinely handle asbestos-containing materials. At a minimum, such a training course should meet the requirements specified in EPA's Model Accreditation Plan for training asbestos abatement workers.

If OSHA adopts the requirements for mandatory training and certification of competent persons and workers, a model curriculum should be developed. NIOSH would assist OSHA in developing a training curriculum and would help reconcile any differences with the training requirements in EPA's rule on asbestos-containing materials in schools [52 FR 41826 (1987)].

K. 29 CFR 1926.58(p)--Notification to OSHA and Method of Notification

NIOSH supports OSHA's requirement for the employer to provide the OSHA area office with written notification within 10 working days of any planned demolition, renovation, removal or other related activity that would disturb asbestos-containing materials. This requirement should (1) help OSHA target and set priorities for inspections, and (2) heighten the employer's awareness of the applicable requirements of the standard. If OSHA adopts the NIOSH recommendation that an approved training curriculum be used for competent persons and other workers engaged in demolishing, renovating, or removing asbestos-containing materials, the notification to OSHA should acknowledge worker certification of this training.

Given the complexity of some demolition and renovation activities, asbestos-containing materials may not be identified until after the work has been initiated. Disturbance of these materials could pose a significant health risk to workers and require appropriate engineering controls, work practices and personal protective equipment. Therefore, the notification to OSHA should include (1) a description of procedures to be used if unexpected amounts of asbestos-containing materials are discovered at the work site, (2) a statement about the availability of a competent person, and (3) verification that involvement will be limited to workers certified in handling asbestos-containing materials. A written description of a contingency plan would enable the OSHA area office to evaluate whether the employer is prepared to handle such a situation adequately.

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Enclosures and/or attachments that are not included are available free of charge from the NIOSH Docket Office (513/533-8450).