ATTENTION: Guide Holders

March 31, 1994 Update to the GUIDE

Reflecting Secretary O'Leary's focus on occupational safety and health, the Office of Occupational Safety is pleased to provide you with the latest update to the **DOE Interpretations Guide to OSH Standards**. The Guide was developed in cooperation with the Occupational Safety and Health Administration, which continued its support during this last revision by facilitating access to the interpretations found on the OSHA Computerized Information System (OCIS).

This update contains 123 formal interpretation letters written by OSHA. As a result of the unique requests received by the 1-800 Response Line, this update also contains 38 interpretations developed by DOE. This new occupational safety and health information adds still more important guidance to the four volume reference set that you presently have in your possession.

As with the last update, you are requested to follow the attached instructions on incorporating this update into your current set of binders. The feedback from those Guide holders who took a few minutes to fill out the questionnaire accompanying the last update was appreciated and suggested improvements incorporated where possible. It was reassuring to learn that many of you use the Guide regularly. The preference for maintaining a hard copy version along with an electronic version was stronger than we anticipated, too.

As mentioned in the last update, the entire Guide will soon be available on Technical Information Service (TIS), a new computer service containing occupational safety and health databases. This will permit users to rapidly search for information contained in the Guide. Any questions about the Guide should be directed to Raymond Rogers of the Technical Support Division, EH-312 at (301) 903-7331.

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DOE Interpretations Guide to OSH Standards
March 31, 1994
• Recording and Reporting Occupational Injuries & Illnesses-1904
• Shipyard Employment Occupational Safety & Health Standards-1915
• Longshoring Occupational Safety & Health Standards-1918
• Agriculture Occupational Safety & Health Standards-1928
• Other OSH requirements not covered under OSHA Standards or Adopted Standards.

2.1.1 Compliance Directives

The DOE Interpretations Guide consists of several types of OSHA-issued compliance directives. DOE selected from the list of current compliance directives, referenced in OSHA Notice ADM 8, those which are applicable to DOE facilities and operations. Consequently, all of the compliance directives are not contained in the DOE Interpretations Guide. DOE has selected the following types of compliance directives:

CPL - instructions to OSHA compliance officers on how to enforce standards. CPLs do not exist for each OSHA standard.

STD - clarification and guidance on a particular standard. STDs are not primarily intended for OSHA compliance officers. They are issued as a result of increased requests for clarification and guidance.

STP - instructions to the Regional Offices and to State OSHA programs describing a Federal Program change. They are issued by OSHA's Federal Office of State Programs and affect State programs.

PUB - instructions and technical support guidelines for OSHA standards. They are issued by OSHA's Federal Office of Technical Support.

REP - instructions establishing policies and assigning responsibilities. They are issued by OSHA's Federal Office of Human Resources and Organizational Management.

2.1.2 Interpretations of OSHA Standards

Interpretations are formal answers to questions from individuals concerned with OSHA compliance. As with the compliance directives, interpretations do not exist for each standard. Interpretations are normally issued by OSHA headquarters.

OSHA provided the following definition of an interpretation in Compliance Directive STD 8.1, dated September 15, 1980:

Interpretations are explanations of standards and their workplace application, addressing scope and limitation, and any other questions which may arise regarding application to situations.

When an interpretation is issued, OSHA develops an abstract of the interpretation and identifies the appropriate OSHA standards involved. The interpretation is then entered into OSHA's Computer Information System (OCIS) where it is assigned a record identification number, or "Record ID."

The Guide is comprised of a selected number of the interpretations captured on OSHA's OCIS database. As part of DOE's updating system (see section 2.5), new interpretations
The volume, page number, and corresponding record ID are identified for each interpretation. If an OSHA standard is not listed in Index A, there are no interpretations or compliance directives associated with it in the DOE Interpretations Guide. Those Record ID numbers having a "D" in them, have been written by DOE.

2.2.1.2 Index B

Index B is a key word or subject index. It lists the OSHA standard name (as it is printed in the Code of Federal Regulations) in capital letters. The indenting reflects the OSHA hierarchy of standards. For example in, general industry standard Asbestos, Tremolite, Anthophyllite, and Actinolite 1910.1001(f)(1)(i):

29 CFR verbiage:  
(f) Methods of compliance - (1) Engineering controls and work practices. (l) The employer shall institute engineering controls and work practices to reduce and maintain employee exposure to or below the TWA and/or excursion limit, prescribed in paragraph (c) of this section, except to the extent that such controls are not feasible.

If an interpretation or compliance directive concerns issues of 1910.1001(f)(1)(i) then the Key Word Index would appear:

ASBESTOS, TREMOLITE, ANTHOPHYLLITE, AND ACTINOLITE

Methods of Compliance
engineering controls and work practices
reducing employee exposures below PEL

The terminology used in Index B closely follows that found in the OSHA standards. If a user is not familiar with the specific names of the OSHA Standard, as printed in the Federal Register, they should refer to Index D for a complete title listing of OSHA standards.

Subjects in the Key Word Index that have "N/A" listed as the standard number are not addressed by any OSHA standard. These are the Alpha Interpretations.

2.2.1.3 Index C

Index C is the compliance directives index. This index lists all the compliance directives DOE has included in the Guide, along with a brief description and corresponding page number. All of the OSHA issued compliance directives are not contained in Index C nor are they included in the DOE Interpretations Guide. For a complete listing of all OSHA's compliance directives, refer to the most current issue of OSHA Notice ADM-8.

2.2.1.4 Index D

Index D is the listing of OSHA Standard names and corresponding numbers as printed in the Code of Federal Regulations.
should instead be used to offer insight into handling situations that closely resemble those of the users. This does not apply to interpretations issued directly by DOE.

As stated in section 2.1 DOE made only slight modifications to the interpretations before they were included in the DOE Interpretations Guide. Users may observe references to outdated compliance directives throughout the document that were not altered so that the integrity of the interpretation would not change. Also, several interpretations reference compliance directives that either no longer exist on OSHA Notice ADM 8 or were not selected for inclusion in the Guide. For an accurate listing of the most recent version of a particular compliance directive that is included in the DOE Interpretations Guide, refer to Index C.

2.5 Updates to the DOE Interpretations Guide

2.5.1 Updates

As OSHA issues new compliance directives and interpretations on OCIS, EH will periodically review them for relevance to DOE facilities and operations, and if appropriate, make them part of the DOE Interpretations Guide. EH will also be developing its own guidance and interpretations as a result of questions received on the 1-800 Response Line that cannot be answered. Updates of all newly issued or adopted interpretations will be distributed to registered users of the Guide.

The users will be able to distinguish DOE-developed additions to the DOE Interpretations Guide from additions from OSHA's OCIS system by the Record ID number. DOE developed additions will have the "D" designation in the first position of the Record ID.

2.5.2 Registered Users

A registered user is a person who was mailed a numbered copy of the DOE Interpretations Guide and has completed the User Receipt Registration Card located in the front of volume 1. Only those persons registered will receive quarterly updates to the DOE Interpretations Guide.

2.5.3 Point of Contact

Feel free to direct any question, comment, or recommendation to the 1-800 Response line (800-292-8061) or the Technical Support Division (EH-312) at (301)903-7331.
OSHA Instruction STD 3-1.1

June 22, 1987

SUBJECT: Citation Policy Regarding 29 CFR 1926.20, 29 CFR 1926.21 and Related General Safety and Health Provisions


B. Scope. This instruction applies OSHA-wide.

C. Action. OSHA Regional Administrators and Area Directors shall ensure that the policy set forth in this instruction is applied in enforcing the referenced standards for the construction industry.

D. Federal Program Change. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this change is promptly forwarded to each State designee.

2. Explain the technical content of this change to the State designee as requested.

3. Ensure that State designees are asked to acknowledge receipt of this Federal program change in writing, within 30 days of notification, to the Regional Administrator. This acknowledgment should include a description either of the State's plan to implement the change or of the reasons why the change should not apply to that State.

4. Review policies, instructions and guidelines issued by the State to determine that this change has been communicated to State personnel. Routine monitoring shall also be used to determine if this change has been implemented in actual performance.

E. Interpretation. When a construction inspection is performed, the following guidelines will be followed:

1. An evaluation of the safety and health program will be completed. (See sample guidelines in Appendix A.) These guidelines will be modified, based on the CSHO's professional judgment, to account for size and type of construction. A key indicator of an effective program will be the degree of knowledge which employees have of potential site specific safety and health hazards. This knowledge requires training (site familiarization) of skilled as well as non-skilled crafts in hazard recognition based on the employee's specific work environment and job related hazards.

2. Program deficiencies such as lack of management policy, safety and health rules, inadequate assignment of responsibility, or poor employee awareness/participation shall be discussed with the employer.

3. Violations of the requirements for instruction, first aid, recordkeeping, and identification and control of hazards shall be cited as indicated in the appropriate section of 29 CFR 1926.20, 29 CFR 1926.21, 29 CFR 1926.23, or 29 CFR 1904.2.

4. Where the conditions warrant a citation for violation of 1926.20 or 1926.21, it may be issued even if additional 29 CFR 1926 alleged violations were not documented. Note that 1926.21(b) requires only safety and health instructions. Employers are required to implement a safety and health program in accordance with the above mentioned standards. However, employers should be encouraged to implement a formal safety and health training program with the guidelines in Appendix A.
OSHA Instruction STD 3-1.1 (cont.)

5. Violations for 29 CFR 1926.20(b) in a routine inspection may be cited as other-than-serious or serious as circumstances warrant.

6. Recordkeeping violations (29 CFR 1904) shall be cited where records are not available for the individual site. Where construction employees are subject to common supervision, but do not report or work at a fixed establishment on a regular basis or where employees are engaged in physically dispersed activities, records for such employees shall be maintained as follows:
   a. Records must be maintained either at the field office or at the mobile base of operations.
   b. Records may also be maintained at an established central location. If records are maintained centrally:
      (1) The address and telephone number of the place where the records are kept must be available at the worksite, and
      (2) There must be personnel available at the central location during normal business hours to provide information from the records.

NOTE: The sections above describe the proper location of OSHA records. Although the supplementary record and the summary must be maintained according to the aforementioned criteria, it is possible to prepare and maintain the log at an alternate location or by means of data processing equipment, or both. Two criteria must be met:

(1) Sufficient information must be available at the alternate location to complete the log within 6 workdays after receipt of information that a recordable case has occurred, and

(2) A copy of the log updated to within 45 calendar days must be present at all times in the establishment.

F. Background. Due to OSHA's increasing emphasis on preventing construction injuries and illnesses, OSHA is reemphasizing the review of the contractor's safety citation policy regarding 29 CFR 1926.20 through 1926.23 and 29 CFR 1904.2. It also provides uniform field procedures for evaluation of safety and health programs in the construction industry.
OSHA Instruction STD 3-1.1 (cont.)

Appendix A

EMPLOYER'S SAFETY AND HEALTH PROGRAM

Yes or No

A. Management Commitment and Leadership.
   1. Policy statement: goals established, issued, and communicated to employees.
   2. Program revised annually.
   3. Participation in safety meetings, inspections; agenda item in meetings.
   4. Commitment of resources is adequate.
   5. Safety rules and procedures incorporated into site operations.

B. Assignment of Responsibility.
   1. Safety designee on site, knowledgeable, and accountable.
   2. Supervisors (including foremen) safety and health responsibilities understood.
   3. Employees adhere to safety rules.

C. Identification and Control of Hazards.
   1. Periodic site safety inspection program involves supervisors.
   2. Preventative controls in place (PPE, maintenance, engineering controls).
   3. Action taken to address hazards.
   4. Safety Committee, where appropriate.
   5. Technical references available.
   6. Enforcement procedures by management.

D. Training and Education.
   1. Supervisors receive basic training.
   2. Specialized training taken when needed.
   3. Employee training program exists, is ongoing, and is effective.

E. Recordkeeping and Hazard Analysis.
   1. Records maintained of employee illnesses, injuries, and posted.
   2. Supervisors perform accident investigations, determine causes and propose corrective action.
   3. Injuries, near misses, and illnesses are evaluated for trends, similar causes; corrective action initiated.

F. First Aid and Medical Assistance.
   1. First aid supplies and medical service available.
   2. Employees informed of medical results.
   3. Emergency procedures and training, where necessary.
Subject: Occupational Medical Technical Briefing on Noise

February 24, 1983

At this time there is no Agency definition of noise-induced hearing loss. It is however, a recordable illness.

29 CFR 1904.2(a); 1910.95; 1910.95(g)(10)

In the absence of an official definition of a recordable noise induced hearing loss, this office and the Office of Field Coordination will remain available to consult and advise on individual problems in this area as they arise.
RECORD ID 1886

STANDARD NUMBER 1904.2(a); 1904.12(c)(3)
INFORMATION DATE 890417

ABSTRACT A situation where an employee, due to an injury, now sits 100 percent of the time while working, rather than the normal 33 percent, is a restriction of work activity. This type of injury must be reported on an OSHA 200 log as a restriction of work activity.

INTERPRETATION 29 CFR 1904.2(a), 1904.12(c)(3)

APR 17, 1989

This is in response to your letter of March 28, in which you requested the Occupational Safety and Health Administration's (OSHA) interpretation of whether your "hypothetical fact situation" injury constituted a restriction of work activity. You also stated that OSHA regulations provided little guidance in this matter and that the Bureau of Labor Statistics' (BLS) "Recordkeeping Guidelines for Occupational Injuries and Illness" (copy enclosed) did not precisely cover your situation.

We have reviewed the BLS Guidelines booklet, the instructions printed on the OSHA 200 log, your letter, and the additional information you provided to my staff during an April 6 telephone discussion. It is OSHA's position that your described injury should be recorded on the OSHA 200 log as a restriction of work or motion. This view is based on the following pages and sections in the BLS booklet: page 43, 3; page 48, 2; page 49, B9; page 51, G20A; page 61, Definitions; and page 64 (IV), columns 5 and 12, section 3. Particular attention should be paid to the phrase "employee...is unable to perform all or any part of his or her normal assignment during all or any part of the working day or shift." This phrase is found in most of the excerpted sections of the booklet.

In your telephone conversation, you stated that your injured employee now spends 100 percent of his time sitting, rather than the normal 33 percent, a situation you stated was due to an injury. This situation, in our opinion, is a restriction of work activity, and falls within the guidelines that were excerpted from the BLS Guidelines booklet.

SOURCE LETTER

March 28, 1989
Re: OSHA Recordkeeping Requirements

We request OSHA to provide guidance on the appropriate interpretation of the phrase "restricted work activity" as used in the OSHA recordkeeping requirements and the OSHA 200 log. Our question pertains to when an employer should record a minor workplace injury to an employee as a day of "restricted work activity." The OSHA regulations provide little guidance on this matter, and the Bureau of Labor of Statistics Recordkeeping Guidelines do not precisely cover this situation.

Here is a hypothetical fact situation we would like you to address:

Assume that a company has employees assigned to two general job categories, Job Category A and Job Category B. Each of these two job categories consists of a number of different tasks or jobs, and individual employees are frequently and routinely shifted from one task to another within the same job category. These assignment changes occur solely within the same job category: an employee who works...
In a Job Category A job is never assigned to perform a task or job in Job Category B and vice versa. All employees working within the same job category earn the same wage.

The company accommodates employees who experience slight injuries on the job by permitting them to shift to other positions within their job category. For example, assume a Job Category A employee is currently performing a Category A job function which he would normally perform standing up. He suffers a slight ankle sprain on the job. There are several tasks in Job Category A that can be performed while sitting down. The injured employee occasionally performs these tasks as part of his overall job functions. After the ankle injury, the employee asks his supervisor if he can continue to work at one of the tasks in Job Category A which can be performed sitting down. The supervisor grants the request. There is no change in wage for the employee, and the new task is not "make work." Rather, it is a task that the employee has in fact performed as part of his regular work duties.

Should the above-described injury be recorded as restricted work activity" on the OSHA 200 log? We understand that the National Safety council also has a workplace injury recording system, and that the NSC would not regard this type of injury as a lost workday injury.
The following material responds to a request for a clearly-defined criterion for recording occupational hearing loss. On March 23, 1990 OSHA issued a draft document providing guidelines for enforcing the recording of occupational hearing loss on OSHA Form 200. OSHA agrees that a clearly-defined criterion for recording occupational hearing loss is needed and that consistency in enforcement policy is essential. OSHA is preparing a final field directive that will provide this guideline.

Thank you for your letter of December 14, 1990, regarding the recording of hearing loss on OSHA Form 200.

Your letter stated that you believe the Occupational Safety and Health Administration (OSHA) should issue a clearly-defined criterion for recording occupational hearing loss at the earliest possible time. Your contacts with various OSHA Regional Offices have resulted in differing responses concerning enforcement of the level at which hearing loss must be recorded. You recently became aware that OSHA issued a draft document on March 23, 1990, that provided guidelines for enforcing the recording of occupational hearing loss on OSHA Form 200. You related that you have some concerns about specific items in the draft document. You also commented that it would be useful to employers and hearing conservation professionals alike if consistency in enforcement policy could be established.

We agree that a clearly defined criterion for recording occupational hearing loss is needed and that consistency in enforcement policy is essential. We are preparing a final field directive that will serve these purposes. We will take your comments into consideration during this process. As soon as the directive is finalized, we will provide you with a copy.

ATTACHMENT: The following interpretation (Record ID 1603) was included as an attachment to this first instance of OSHA Standard 1904.2 as additional information.

This is in response to your letter of January 6, requesting a copy of an Occupational Safety and Health Administration (OSHA) written law requiring the inclusion on the OSHA Form 200, the Log and Summary
of Occupational Injuries and Illness, of employees who show a Standard Threshold Shift (STS) as defined by the OSHA 29 CFR 1910.95 Occupational Noise Exposure Standard.

There is no current written criterion describing what must be recorded on the OSHA Form 200 as occupational hearing loss. OSHA is currently investigating and considering various criteria for recording occupational hearing loss that have been suggested from both within and outside the Agency. Be assured the Agency will adopt a fair, clear definition of recordable hearing loss which will result in overall improved worker protection.

Further, the Standard Threshold Shift itself as it is defined in the 29 CFR 1910.95 Occupational Noise Exposure Standard is not under review.
RECORD ID 1176

STANDARD NUMBER 1904.2(a); 1910.1001; 1910.1001(m)(3); 1926.58; 1926.58(n)(3)
INFORMATION DATE 801105

ABSTRACT OSHA 200 Log requires recording of pleural plaques and calcifications as well as interstitial fibrosis.

(NOTE: The OSHA Asbestos Standard 1910.1001 was updated in 1986. The point about occupational illness is still valid.)

INTERPRETATION 29 CFR 1904.2(a); 1910.1001; 1910.1001(m)(3); 1926.58; 1926.58(n)(3)
November 5, 1980

SUBJECT: Amendment of the OSHA Form 200 for Purposes of Clarification
In response to inquiries and requests from field offices, a change in the Instructions for OSHA No. 200 has been made by the Bureau of Labor Statistics.

This revision is not a change in OSHA or BLS policy but is meant to provide clarification of and further emphasis on the employer's responsibility in recording asbestos-related diseases as occupational illness under the OSH Act of 1970. The inclusion of the term asbestos-related disease" encompasses not only interstitial fibrosis but also asbestos-induced pleural abnormalities (e.g., pleural plaques and calcifications). All of the asbestos-related diseases are subsumed under the definition of occupational illness as stated in Section VI of the BLS Instructions: "Occupational illness of an employee is any abnormal condition or disorder, other than one resulting from an occupational injury, caused by exposure to environmental factors associated with employment."

In addition, the publication entitled "What Every Employer Needs to Know About OSHA Recordkeeping" (USDOL Report 412-3) will contain a question specifically focusing on this issue (see enclosed). It should be noted, however, that Item 98 of this report addresses a similar inquiry with the statement: "any diagnosed occupational illness reported to the employer is recordable, whether or not medical treatment is given or lost workdays are involved."

Recommended Question to be Added to Report 412-3

Question:
The chest X-ray of an employee is found to have an abnormality due to an exposure at work. However, the abnormality does not impair his lung function or cause him to lose workdays. Is this recordable occupational illness?

Answer:
An occupational illness is defined as any abnormal condition or disorder, other than one resulting from an injury, caused by exposure to environmental factors associated with employment. Any such occupational illness reported to the employer is recordable, whether or not function impairment is present or lost workdays are involved.
ABSTRACT

An employer is not required to maintain blank OSHA-200 logs at the job site where there are no recordable injuries and illness. However, the summary portion of the OSHA-200 log for such job sites must be completed with zero entries and retained and posted yearly during the entire month of February. The summary forms must be retained at each jobsite where no recordable injuries or illness have occurred for a five (5) year period.

INTERPRETATION

29 CFR 1904.2(a)

APR 17, 1989

This is in response to your December 9, 1988, letter and to your telephone conversation with my staff, several weeks ago in which you sought the Occupational Safety and Health Administration's (OSHA) ruling as to whether blank OSHA-200 logs must be maintained at each jobsite where no recordable injuries or illness have occurred. The following guidelines are presented from the Bureau of Labor Statistics's Recordkeeping Guidelines for Occupational Injuries and Illness: (Copy enclosed)

a. An employer is not required to maintain blank OSHA-200 logs at the jobsite where there are no recordable injuries and illness. However, the summary portion of the OSHA-200 log for such jobsites must be completed with zero entries and retained for a five (5) year period. (See page 13, A-6; p.15, B-6.) The summary portion must be kept at the jobsite if the construction activity lasts one (1) year or more. Otherwise it can be kept at a field office or an established central location.

b. The summary portion of the OSHA-200 logs must be completed and posted for each establishment during the entire month of February. (See page 15, B-3.)

SUBJECT: Transfer of Request for Interpretation

Attached is a copy of a request for an interpretation of the recordkeeping requirement regarding the keeping of the OSHA 200 Log (Blank) on jobsites.

Please send your response directly to the requester and provide me with copies as well, to the attention of my staff. A copy of our response to the requester is also attached.

SOURCE LETTERS

DEC 23, 1988

This is an interim response to your letter of December 9, requesting an interpretation of the question as to whether blank Occupational Safety and Health Administration (OSHA) injury/illness logs are required at each jobsite.

We have referred a copy of your letter to the Directorate of Compliance Programs for appropriate attention. That office may be contacting you for further information on your interpretation request.
December 9, 1988

This letter is written in an effort to resolve a question on recordkeeping requirements. Background on this question is as follows:

(Corporation) is a holding company of several large companies involved in construction activities. The holding company provides a service to its operating units which includes generating and updating OSHA 200 logs for the various companies' jobs. This is accomplished via electronic data processing on a monthly basis. For a number of years, an OSHA 200 log was provided for every job with blank logs being generated for jobs on which no recordable injuries had occurred. Multiplying by hundreds of jobs throughout the (Corporation), this resulted in a large waste of paper, postage, computer/printer time, etc. In 1986 the (City)OSHA office was contacted about the necessity of providing blank OSHA 200 logs sheets to jobs on which no recordable injuries or illness had occurred. The interpretation received at that time was that blank logs were not required. Based on that discussion, a decision was made to discontinue the waste of generating blank OSHA 200 logs and sending to those jobs. Our computer program was modified accordingly to only print OSHA 200 logs and update when a recordable injury or illness was inputted.

In recent months our companies in some states have been cited for not having current blank log sheets. Further discussion with OSHA (City) and (City) have resulted in conflicting interpretations of the requirement for such items. While we wish to be in compliance, we understandably wish to reduce unnecessary paperwork and other associated costs.

Please provide the official interpretation of the question as to whether blank OSHA 200 logs are required at each jobsite.
RECORD ID 1343

STANDARD NUMBER 1904.2(a); 1910.1001; 1910.1001(m)(3); 1926.58; 1926.58(n)(3)
INFORMATION DATE 801017

ABSTRACT The term "asbestosis" on OSHA FORM 200 will be changed to "asbestos related diseases of the lung". Report 412-3 will be revised to reflect this.

INTERPRETATION 29 CFR 1904.2(a); 1910.1001; 1910.1001(m)(3); 1926.58; 1926.58(n)(3)

OCT 17, 1980

MEMORANDUM

SUBJECT: Providing Detail to Instructions on OSHA Form 200

This is in response to your memorandum of September 16 and discussions with Mr. R of my staff and Mr. H of the Office of the Solicitor regarding a modification to OSHA form 200 to provide more detail to the instructions for recording lung disorders arising from asbestos exposure.

Attached is a copy of the revised instruction for item 7b under the section titled, Occupation Illness. Hereafter, reproductions of the OSHA form 200 will contain the new language. You will recall that following your explanation of the issue, Mr. H indicated that no prior announcement in the Federal Register will be necessary since the modification in the language is only to provide useful detailed examples to aid employers to determine the types of dust diseases and does not involve a substantive or even interpretative change in the instructions. Your recommended question for inclusion in Report 412-3 will be added in the next revision of that periodical.

Vol. 1-12
On the Form 200 the term "asbestosis" should be replaced with "asbestos-related diseases of the lung." A question is recommended for addition to Report 412-3 to address this topic.

SEP 16, 1980

MEMORANDUM

SUBJECT: Amendment of the OSHA Form 200 for Purposes of Clarification

The industrial medical community has made numerous inquiries and expressed confusion regarding the recording of lung disorders resulting from asbestos exposure. In response to these, the Office of Medical Affairs feels that a change should be made in the example given under Section VI of the Instructions for OSHA Form No. 200 for the sole purpose of clarification. Specifically, under 7B. Dust Diseases of the lungs (pneumoconioses), the term "asbestosis," which infers interstitial fibrosis often with functional impairment, should be replaced by the broader term "asbestos-related diseases of the lung." The latter nomenclature is more recent and encompasses not only asbestos-induced interstitial fibrosis but also asbestos-induced pleural abnormalities, pleural effusion and mesothelioma. A reference for the use of this term in the medical literature is to be found in the book LUNG DISEASE - STATE OF THE ART, edited by Dr. M., M.D., and published by the American Lung Association, N.Y., N.Y., 1977 Chapter 3, page 55, is entitled: "Asbestos-related diseases of the lung and other organs: Their epidemiology and implications for clinical practice," and is written by Mrs. B.

We wish to point out that this change in terminology would reflect any change in the Bureau of Labor Statistics reporting policy. All of the asbestos-related diseases of the lung are included under the definition of occupational illness as stated in Section VI: "any abnormal condition or disorder, other than one resulting from an occupational injury, caused by exposure to environmental factors associated with employment."

Attachment to Memo

In the publication designed to accompany the OSHA Form No. 200 titled, "What Every Employer needs to Know About OSHA Recordkeeping," USDOL Report 412-3, 1978, further information regarding requirements for recording of occupational illness if provided. In question 98 of this report, it is stated that "any diagnosed occupational illness reported to the employer is recordable, whether or not medical treatment is given or lost workdays are involved." As a point of further clarification especially directed toward the accountability of asbestos-related pleural abnormalities, we would recommend the addition of a question that would address this topic (see enclosure) perhaps under the Accountability Section.

Enclosure

Recommended Question to Be Added to Report 412-3
Question

The chest x-ray of an employee is found to have an abnormality due to an exposure at work. However, the abnormality does not impair his lung function or cause him to lose workdays. Is this a recordable occupational illness?

Answer

An occupational illness is defined as any abnormal condition or disorder, other than one resulting from an injury, caused by exposure to environmental factors associated with employment. Any such occupational illness reported to the employer is recordable, whether or not functional impairment is present or lost workdays are involved.
ABSTRACT
The administration of oxygen necessitated by exposure to noxious or irritating gases or fumes must be done under the supervision of a physician. The casual use of oxygen for fatigue is a dangerous practice. If an individual has pulmonary disease, the careless administration of oxygen can result in narcosis and even death. Administering oxygen to "simply refresh an individual" is not warranted. All instances of oxygen administration must be recorded on OSHA form 200.

INTERPRETATION
29 CFR 1904.12(c)(3)

JUL 13, 1990.

This is in response to your letter of May 11, in which you sought the Occupational Safety and Health Administration's (OSHA) interpretation of whether the use of oxygen for "minor exposures to noxious or irritating gases/fumes, to alleviate symptoms of fatigue, or to refresh an individual should be recordable for OSHA recordkeeping purposes. As you pointed out, the Bureau of Labor Statistics (BLS) Guidelines for Occupational Injuries and Illness make no mention of the use of oxygen.

Firstly, we do not believe that oxygen should be administered for trivial reasons. If there is a need to administer oxygen because of exposure to noxious or irritating gases or fumes, then that must be done under the supervision of a physician. The casual use of oxygen for fatigue is a dangerous practice. If an individual has pulmonary disease, the careless administration of oxygen can result in narcosis and even death. This is well known to physicians, particularly those who deal with chronic lung problems.

Secondly, the use of oxygen to "simply refresh an individual" is a waste of time and money. Those TV shots of athletes breathing in oxygen after harrowing experiences on football fields may look impressive but, it is very doubtful if the athletes gain anything from breathing pure oxygen, unless of course the ambient air is so bad that everyone, including the spectators, is affected. For these reasons, oxygen administration must be recorded.
OSHA Instruction STP 2-1.111

JUNE 20, 1983
Office of State Programs

SUBJECT: Exemption from Requirements for Recording Occupational Injuries and Illnesses: Final Rule and Amendment (29 CFR 1904)

A. PURPOSE. This instruction describes a Federal program change to the Regions and State designees.

B. SCOPE. This instruction applies OSHA-wide.

C. FEDERAL PROGRAM CHANGE. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this instruction is forwarded to each State designee.
2. Provide a copy of the Federal Register notice to the State designee upon request.
3. Explain the technical content of the Federal Register notice at 47 FR 57699, which includes 29 CFR 1904 Requirements for Recording Occupational Injuries and Illnesses.
4. Inform each State designee that the adoption of OSHA's exemption for low-hazard industries, while encouraged, is not required. However, States should notify the Regional Administrator, within 30 days of receipt of this instruction, as to the action they plan to take. If the exemption is adopted, a plan supplement should be submitted to the Regional Administrator as soon as possible, but in no case later than 6 months from issuance of this instruction.

D. BACKGROUND

1. Final Rules and Regulations, 29 CFR 1904, Requirements for Recording Occupational Injuries and Illnesses: Final Rule and Amendment, was published in the Federal Register, December 28, 1982. This rule amends Part 1904 to exempt employer establishments in retail trades, finance, insurance and real estate, and services (unless notified in advance of their inclusion in the annual survey) from requirements to: (1) maintain, retain and provide access to the log and Summary of occupational injuries and illnesses; (2) maintain, retain and make available for inspection the supplementary record of occupational injuries and illnesses; and (3) post the annual Summary of Occupational injuries and Illnesses of each establishment.

2. This exemption relieves a large number of employers of a paperwork burden that is unnecessary from the agency's point of view, without lessening on-the-job safety and health protection for workers.

3. States are required to maintain "substantially identical" employed recordkeeping and reporting requirements (29 CFR 1902.3(k) and 1952.4). However, in 1977, Section 1952.4 was amended to provide that states are not "precluded from imposing stricter recordkeeping requirements." Although this revision was intended specifically to address the Federal recordkeeping exemption for employees of 10 or fewer employees, the same principle should apply to this more recent Federal exemption. Thus, in response to State comments, States may but are not required to adopt the Federal recordkeeping exemption of employers in low-hazard industries. States should consider the impact on multi-State employers and the problems associated with prenotification of employers regarding the annual survey in making their decision.
OSHA Instruction STP 2-1.135

FEB 9, 1987
Office of State Programs

SUBJECT: BLS Guides - Recordkeeping Requirements for Occupational Injuries and Illnesses

A. PURPOSE. This instruction describes a Federal program change to the Regions and State designees.

B. SCOPE. This instruction applies OSHA-wide.

C. FEDERAL PROGRAM CHANGE. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this instruction is forwarded to each State designee.

2. Provide a copy of the publications "A Brief Guide to Recordkeeping Requirements for Occupational Injuries and Illnesses" (June 1986) and "Recordkeeping Guidelines for Occupational Injuries and Illnesses" (September 1986) to the State designee.

3. Explain the technical content of the publications to the State designee upon request.

4. Ensure that each State designee acknowledges receipt of this instruction in writing, within 30 days of notification, to the Regional Administrator.

5. Inform each State designee that a plan supplement is not required; however, States must follow the guidelines and interpretations contained in these publications in interpreting their recordkeeping requirements comparable to 29 CFR Part 1904, in accordance with section 18(c)(7) of the Occupational Safety and Health Act of 1970.

6. Review policies, instructions and guidelines issued by the State to determine that these guidelines are followed.

D. EXPLANATION.

1. These publications, (effective April 1986) dated June 1986 and September 1986, respectively, deal with the requirements of the Occupational Safety and Health Act of 1970 (the Act) and Part 1904 of Title 29, Code of Federal Regulations, for recording and reporting occupational injuries and illnesses.

2. Section 18(c)(7) of the Act requires employers in all States, including those with OSHA-approved State plans, to make reports to the Secretary in the same manner and to the same extent. Pursuant to 29 CFR 1902.3(k) of OSHA's State plan approval regulations, a State plan must, therefore, adopt and enforce requirements that employers covered by the plan maintain records and make reports in the same manner as required under 29 CFR Part 1904.

3. The pamphlet "A Brief Guide to Recordkeeping Requirements for Occupational Injuries and Illnesses" summarizes the OSHA recordkeeping requirements of 29 CFR Part 1904, and provides basic instructions and guidelines to assist employers in fulfilling their recordkeeping and reporting obligations.
4. In the publication "Recordkeeping Guidelines for Occupational Injuries and Illnesses" BLS has issued more detailed guidelines which provide official agency interpretations, answers, and explanations to questions employers most frequently ask about recordkeeping and the reporting of occupational injuries and illnesses. The Office of Management and Budget has indicated that the guidelines, which it has applied, are not regulations but rather supplemental instructions to the OSHA recordkeeping forms. This document replaces all previous editions of the BLS recordkeeping guidelines.

5. Copies of these publications were mailed to State designees via a November 19, 1986 memorandum from Bruce Hillenbrand, Director, Federal-State Operations.
This interpretation letter addresses the DOE-adopted Occupational Safety and Health recordkeeping requirements contained in 29 CFR 1904 and U.S. Department of Labor guidance documents as they related to the recording of restricted work days.

This interpretation is in response to a January 1993, request from a DOE Field Office asking for clarification of the U.S. Department of Labor (DOL)- Bureau of Labor Statistics, guidance on the recording of work restricted cases. The requestor stated in their letter that a DOE contractor had taken the approach to classifying job related injuries or illnesses as restricted work activity even though the employee was capable of performing unrestricted work in another job that he or she was qualified to perform. It was normal for this employee to be transferred from time to time to different jobs as operational needs demanded.

The question centers on the DOL requirement that an employee be considered restricted if they can not perform all of the duties connected with their normal assignment. An employees' normal assignment could include performing a variety of different jobs throughout the year. If, due to an occupational injury or illness, the employee was restricted from doing some components of a particular job he or she was required to perform, but was capable of performing other jobs that are in compliance with the work restriction, should this time be considered as restricted.

The Department of Labor (DOL) guidance document "Recordkeeping Guidelines for Occupational Injuries and Illnesses" does not provide a definition for "normal job duties." However, the contractor has defined the "normal job duties" as the activities the individual was performing and those activities he or she was scheduled to perform. The contractor established a policy to classify job-related injuries and illnesses as work related when the injury or illness results in restrictions that prevent the employee from performing activities that he was scheduled to perform during the period of the restriction.

The Department of Energy (DOE) has adopted the DOL interpretation of "normal job duties," which states that normal job duties include any task or activity which the employee would perform during the calendar year. This definition is NOT provided in the DOL guidance document.

Therefore, if the employee could not do a work activity that he or she would have been expected to perform during the year, it would be correct to record any work days in the time period as restricted, even though the employee was working at another job.
December 20, 1991

Dear Mr. K:

Thank you for your letter of January 16, concerning where the Occupational Safety and Health Administration (OSHA) 200 Form needs to be maintained. I apologize for the delay in responding to your inquiry.

As addressed in the enclosed Recordkeeping Guidelines for Occupational Injuries and Illnesses, 1986, on page 21, question B-4; "Generally, any operation at a given site for more than 1 year is considered a fixed establishment." Records for employees working at fixed locations should be kept at the work location. A location exemption is addressed in 29 CFR 1904.2 Log and Summary of Occupational Injuries and Illnesses:

1. Any employer may maintain the log of occupational injuries and illnesses at a place other than the establishment or by means of data-processing equipment, or both, under the following circumstances:

2. There is available at the place where the log is maintained sufficient information to complete the log to a date within 6 working days after receiving information that a recordable case has occurred, as required by paragraph (a) of this section.

3. At each of the employer's establishments, there is available a copy of the log which reflects separately the injury and illness experience of that establishment complete and current to a date within 45 calendar days.

Therefore, a copy of the log updated to within 45 calendar days must be present at the fixed site. In this regard, facsimile machine access and overnight mail would not meet the requirement for the records to be "immediately available."

Any site of less than 1 year should be treated as a non-fixed establishment. Section B-2 of the same page addresses this situation. It states:

1. Records may be kept at the field office or mobile base of operations.

2. Records may also be kept at an established central location. If the records are kept centrally: (1) The address and telephone number of the place where the records are kept must be available at the worksite; and (2) there must be someone available at the central location during normal business hours to provide information from the records."
Also, applicable to employees with non-fixed worksites is question B-9 of page 15; "During the posting period, employers are required to present or mail a copy of the annual summary to employees with no fixed worksite."

If we can be of further assistance, please contact R. F. G. or D. C. of my staff in the office of Construction and Maritime Compliance Assistance at (202) 523-8136.
OSHA Instruction STP 2-1.160

September 24, 1990
Office of State Programs

Subject: Electrical Safety-Related Work Practices; Final Rule

A. Purpose. This instruction describes a Federal Program Change to the Regions and State designees.

B. Scope. This instruction applies OSHA-wide.

C. Reference.

1. OSHA Instruction STP 2-1.117, August 31, 1984, State Standards.

D. Federal Program Change. This instruction describes a Federal Program Change which affects State programs. Each Regional Administrator shall:

1. Ensure that this instruction is forwarded to each State designee.

2. Provide a copy of the Federal Register notice to the State designee upon request.

3. Explain the technical content of the Federal Register Notice at 55 FR 31984, August 6, 1990, Electrical Safety-Related Work Practices; Final Rule, to the State designees upon request.

4. Ensure that each State designee acknowledges receipt of this instruction in writing, within 30 days of notification, to the Regional Administrator. The acknowledgment should include (a) the State's plan to adopt and implement the standard change, (b) the State's plan to develop an alternative change, which is as effective, or (c) the reasons why no change is necessary to maintain a program which is as effective as the Federal program.

5. Inform each State designee that the State must within six months of the date of Federal publication amend its final rule or adopt the final rule to ensure that the State standard is at least as effective as the Final Rule for Electrical Safety-Related Work Practices in 29 CFR 1910. The State must submit a plan supplement to the Regional Administrator within 30 days of State promulgation.

E. Different State Standards. Section 18(c)(2) of the Act requires that State standards be "at least as effective" as the Federal and, when applicable to products used or distributed in interstate commerce, the standards must be required by compelling local conditions and not unduly burden interstate commerce. In addition to the "at least as effective" criterion, this "product clause test" will be applied to State standards with substantively different requirements from the comparable Federal standard, as described in STP 2-1.117. A State standard expanded in scope from the Federal is considered to be a substantively different standard.

F. Interim Enforcement. Under 29 CFR 1953.23(a) and (b), State plan States are provided up to six months from publication of the Federal standard in the Federal Register to promulgate an identical or "at least as effective as" standard. If a State, for whatever reason, is unable to promulgate a standard in a timely manner (six months for a permanent standard, 30 days for an emergency temporary standard) the State shall be expected to provide assurance that it will enforce the substantive provisions of the new or revised Federal standard through such means as use of its general duty clause or equivalent, temporary adoption of an identical standard, or an alternative, specified enforcement mechanism.

G. Effective Date. The final rule, except for section 1910.332, becomes effective on December 4, 1990. Section 1910.332 becomes effective on August 6, 1991. The initial effective date for an identical or different State standard may be no later than the date of State promulgation or the Federal effective date, whichever is later.

H. Explanation.

1. On August 6, 1990, OSHA issued a final rule for electrical safety-related work practices.
OSHA Instruction STP 2-1.160 (cont.)

2. The final standard is a new standard on electrical safety-related work practices for general industry. These performance-oriented regulations complement the existing electrical installation standards. The new standard includes requirements for work performed on or near exposed energized and de-energized parts of electric equipment; use of electrical protective equipment; and the safe use of electric equipment. Compliance with these safe work practices will reduce the number of electrical accidents resulting from unsafe work practices by employees.

3. OSHA is also amending miscellaneous provisions in the general industry standards to:

   a. Change existing regulations referring to the 1971 National Electrical Code so that they will refer instead to OSHA's electrical standards;

   b. Remove existing electrical work-practices requirements from other parts of the general industry standards so that all general electrical safety-related work practices will be covered in the electrical safety standards; and

   c. Remove an existing provision relating to construction from the general industry electrical safety standards.

These changes promote uniformity and reduce redundancy among the general industry standards.

4. Under 29 CFR 1953.23(a) and (b), State are provided up to six months from the publication in the Federal Register for adoption of parallel State standards and amendments.
**ABSTRACT**

This letter addresses the application of OSHA standards 1910 and 1926 to Operating Plant Services. The general standards at 29 CFR 1910 are applicable at all workplaces unless explicitly prohibited or preempted by a specific standard which is directly related to the ongoing employee activities. Therefore, "Operating Plant Services", which include functions such as general plant maintenance, plant improvement, refurbishment, and some construction activities, are regulated under those general or specific standards which are most applicable to the circumstances at the workplace.

**INTERPRETATION**

29 CFR 1910; 1926

FEB 19, 1991

This is in further response to your letter of December 21, 1990, concerning the application of the Occupational Safety and Health Administration (OSHA) standards 29 CFR 1910 and 29 CFR 1926 to "Operating Plant Services".

The proper application of the standards at 29 CFR 1910 and 29 CFR 1926 depend upon the circumstances at the work site. In most instances, either or both sets of standards can be expected to be applicable to the operations of your company.

OSHA standards are promulgated in two general categories. General standards which may be applicable to any workplace situation are promulgated at 29 CFR 1910. Specific standards promulgated at 29 CFR 1915 through 1919 addresses maritime workplaces exclusively. Additionally, specific standards are promulgated at 29 CFR 1926 and at 29 CFR 1928 to address construction and agricultural workplaces respectively.

The general standards at 29 CFR 1910 are applicable at all workplaces unless specifically prohibited or preempted by a specific standard which is directly related to the ongoing employee activities. Therefore, "Operating Plant Services", as described by your letter, which include functions such as general plant maintenance, plant betterment, refurbishment, and some construction activities, are regulated under those general or specific standards which are most applicable to the circumstances at the workplace. Additionally, under Section 5(a)(1) of the Occupational Safety and Health Act (OSH Act), employers are obligated to provide a workplace free of recognized hazards which may cause employee death or serious injury even when no standard has been promulgated by OSHA to address the circumstance.

The 29 CFR 1926 standards apply to construction, alteration, and/or repair, including painting and decorating, as those terms are defined under the Davis-Bacon Act, U.S.C. 276a, which authorizes the Secretary of Labor to set wage standards for federal contracts for construction, alteration, and/or repair, including painting and decorating. Interpretation of the terms "construction, alteration, and/or repair, including painting and decorating" under Davis-Bacon appear at 29 CFR Part 5. At section 5.2(i), construction building or work does not include manufacturing, furnishing of materials, or servicing and maintenance, but it does include without limitation, buildings, structures and improvements of all types, rehabilitation and reactivation of plants.

OSHA inspection of operations which result in the issuance of citations can be anticipated to include primarily the application of 29 CFR 1910 and 29 CFR 1926 standards. However, maritime and agricultural standards could also become applicable should the workplace circumstances justify their use.
SOURCE LETTER

December 21, 1990

For several months now we have been getting questions from our customers on which OSHA standard(s) apply to Operating Plant Services. As you are aware, we, like many other contractors, perform general plant maintenance, plant betterment, refurbishment, and some new construction in operating nuclear generating stations. We perform this work under the General Presidents Maintenance Agreement which the (Corporation) has with the Building and Construction Trades Department.

With the above in mind, could you define for us which standards (1910 or 1926) applies to the type of work we are performing. When we have CSHO’S conduct inspections of these facilities, some utilize 1926, others 1910, and a few cite a combination of both.

Once we receive your interpretation, we can be uniform in our implementation of our safety and health program.
This Interpretation letter addresses the appropriate standards that would apply to wearing seat belts for occupants of motor vehicles used for general industry applications.

The use of seat belts is required by almost all state laws; these laws, along with the proposed 29 CFR 1910.139 (Occupant Protection in Motor Vehicles) requirements, would result in the use of safety belts being a requirement for general industry.

This Interpretation is in response to your letter dated August 9, 1993, requesting clarification of the requirements to use seat belts.

Although 29 CFR 1910 does not have specific requirements for the use of seat belts, a proposed standard exists. Proposed 29 CFR 1910.139 (c) (1) (Occupant Protection in Motor Vehicles) states, "The employer shall require that each employee on official business, operating or occupying a motor vehicle equipped with safety belts or otherwise required by federal regulations to have safety belts, to have an occupant safety belt properly fastened at all times while the vehicle is in motion." In addition, forty-two state laws require the use of safety belts.

To answer your question, almost all states have laws that require the use of safety belts. These laws, along with the proposed 29 CFR 1910.139, would result in the use of seat belts for general industry being a requirement.
RECORD ID  D9308019

STANDARD NUMBER  1910, 1910.120 (b)(1)(II)(C, (b)(4)
INFORMATION DATE  930917

ABSTRACT  This interpretation letter addresses the acceptability of merely stating in a facility's safety and health plan that Occupational Safety and Health (OSHA) standards are being followed without providing any specific details.

It is the Department of Energy's (DOE) position that safety and health plans at its facilities shall be site-specific and that it is not sufficient to simply state in the plans that OSHA standards are being followed.

INTERPRETATION  29 CFR 1910, 1910.120

This interpretation is in response to your letter of August 13, 1993, asking if it is acceptable to just state in safety and health plans that OSHA's standards are being followed.

Currently, Federal OSHA does not specifically require that an employer have a single written all-inclusive safety and health plan, however a standard may have a provision that calls for certain activities and procedures to be documented, such as training, operating procedures, and inspection records. An example of this requirement can be found in the standard for operations at hazardous waste sites (1910.120). Also, it is usually required that implementing plans under these standards incorporate site-specific items or the method by which the employer is complying with the standard.

It is DOE's position that any safety and health plans or procedures developed by DOE facilities be specific to the facility and provide some related details and not merely indicate that OSHA's standards are being followed. It is therefore not sufficient to simply state that you are complying with OSHA, some indication as to how compliance is achieved is needed.
STANDARD NUMBER 1910 (a);1917.1 (a)(2)(l);1918.0
INFORMATION DATE 19920130

ABSTRACT
An interpretation letter regarding whether the Coast Guard or OSHA has authority over the bulk storage, handling and transfer of dangerous cargo, oil or hazardous material which involves vessel loading or discharging. Section 4(b)(1) of OSH Act provides that OSHA has no authority over a working condition if another Federal agency has a regulation dealing with that working condition.

INTERPRETATION
29 CFR 1910 (a);1917.1 (a)(2)(l);1918.0
January 30, 1992

This clarification is in response to your memorandum dated November 18, 1991, on the subject classification by Exxon.

The principal issue in this matter is whether the Coast Guard or OSHA has authority over the bulk storage, handling and transfer of dangerous cargo, oil or hazardous material which involves vessel loading or discharging. Section 4(b)(1) of the OSH Act provides that OSHA has no authority over a working condition if another Federal agency has a regulation dealing with that working condition.

Pursuant to 33 U.S.C. Section 1231, a provision of the Ports and Waterways Safety Act, the Coast Guard has promulgated regulations (33 CFR Part 126) dealing with working conditions for the loading and discharging of vessels at waterfront facilities involving the handling and storage of "dangerous cargo", "designated dangerous cargo" or "cargo of a particular hazard." Further, pursuant to this same section, the Coast Guard has promulgated regulations (33 CFR Part 154) for working conditions involving facilities capable of transferring oil or hazardous material, in bulk, to or from a vessel. If the cargo handled at the facility is of the type specified in these Coast Guard regulations (33 CFR Part 126 and 154), then OSHA authority is preempted with respect to the bulk transfer and storage operations.

It is noted that OSHA is preempted only at facilities used solely for bulk storage, handling and transfer operations. Vessels being loaded or discharged at facilities performing functions other than the bulk storage, handling and transfer of dangerous/hazardous cargos are subject to OSHA regulation for other functional areas (e.g.; production, manufacturing). Should the marine facility in question not involve the transfer or storage of the above referenced bulk cargos then applicable OSHA regulations under 29 CFR 1910, 1917 and 1918 apply. Applicable electrical regulations at an OSHA designated "marine terminal" are covered by 29 CFR 1910 per 29 CFR 1917.1(a)(2)(l).
This interpretation letter addresses whether employer drug abuse/screening programs satisfy the OSHA standard on Access to Employee Exposure and Medical Records.

(NOTE: 29 CFR 1910.20 amended June 1990. This interpretation letter, although written in 1985, does apply to the recent standard 1910.20(c)(5)(ii), (c)(6)(ii)(D)).

29 CFR 1910.20

May 7, 1985

This is in response to your letter of March 28 regarding the Occupational Safety and Health Administration (OSHA) standard 29 CFR 1910.20, Access to Employee Exposure and Medical Records.

You relate that your company is planning to implement a drug abuse screening program at its offshore oil and gas operations. The program would involve collecting urine samples and, in some cases, blood samples from employees of (company) and (company) contractors while they are working offshore. The samples would be analyzed for a number of drugs, including legal drugs such as caffeine and Tylenol, as well as illegal substances such as cocaine and THC (the active ingredient in marijuana). You ask whether the laboratory reports of analysis (positive or negative) would fall within the definition of "employee exposure or medical record" in 29 CFR 1910.20. Such records fall outside the standard's definition of employee exposure or medical records. The intent of 29 CFR 1910.20 is to require retention of and access to employee exposure and medical records relating to stress agents existing in the work environment.

March 28, 1985

Re: Access to Employee Exposure and Medical Records 29 CFR 1910.20

This is to follow-up our telephone conversation of March 26, 1985, regarding whether the referenced regulation applies to a program planned for implementation with regard to this company's offshore oil and gas operations.

As I described to you by telephone, company management is concerned about the potential hazards posed by persons employed in the course of our exploration and production operations who abuse drugs while offshore. Therefore, a drug abuse screening program is tentatively planned which would operate as follows: urine samples and, in some cases, blood samples would be collected from employees of (company) and (company) contractors while they are working offshore. These samples would be sent to a commercial laboratory for analysis for the presence of a number of drugs, including legal drugs such as caffeine and Tylenol, as well as illegal substances such as cocaine and THC (the active ingredient in marijuana).

Our preference is to receive only "positive" reports from the laboratory; that is, we would prefer that the laboratory not provide report of analysis to us unless the analysis shows a detectable quantity of any of the substances analyzed for (in the case of THC, a "positive" report would be an analysis showing THC in a concentration high enough to warrant a conclusion that the person has been abusing marijuana recently, i.e., while working offshore). As I mentioned, it may turn out that for purposes of maintaining its accreditation, the laboratory will need to send us negative reports as well. After reviewing this planned program with you by telephone, I asked whether the laboratory reports of analysis (positive or negative) would fall within the definition of "employee exposure or medical record" in the referenced regulation.
Your response was that this kind of record, dealing with substances not present in the workplace environment, was not the type of record contemplated by the regulation, and therefore was not an "employee exposure or medical record".
RECORD ID 2333

STANDARD NUMBER 1910.20(b)
INFORMATION DATE 851119

ABSTRACT Under provisions of 29 CFR 1910.20, Executive Order 12196 mandates that all Federal agencies will comply with standards issued under Section 6 of the OSHA Act except where the Secretary of Labor approves alternate standards. OPM has issued a notice for the establishment of OPM/Govt-10 Employees Medical File System Records (50 FR 15253, April 17, 1985) which is now final. This notice provides for routine uses of records maintained in the employee medical system records. No alternate standard for 29 CFR 1910.20 has been approved for any Federal agency.


INTERPRETATION 29 CFR 1910.20(b)

Nov 19, 1985

This is in response to your letter of October 31 to the Acting Assistant Secretary concerning access to employee exposure and medical records.

In regard to your question as to whether or not Federal agencies, and specifically the Department of Interior, are bound to comply with the provisions of 29 CFR 1910.20, you correctly noted that Executive Order 12196 mandates that all standards issued under Section 6 of the Occupational Safety and Health Act will be complied with by Federal agencies except where the Secretary of Labor approves alternate standards. You should also be aware that the Office of Personnel Management (OPM) has issued a notice for the establishment of OPM/Govt-10 Employees Medical File System Records (50 FR 15253, April 17, 1985). We have been informed that this notice has become final. OMP/Govt-10 provides, among other things, for routine uses of records maintained in the employee medical system records. Among the routine uses provided for is disclosure to officials of labor organizations recognized under 5 U.S.C. Chapter 71 in accordance with the Occupational Safety and Health Administration's records access rules. We are enclosing a copy of this notice for your information.

In regard to your question as to whether or not any alternate standard related to 29 CFR 1910.20 for the Department of Interior has been approved, the answer is not. No alternate standard for 29 CFR 1910.20 has been approved for any Federal agency.

You also asked whether or not the standards you are concerned with apply to the Department of Interior as an employer. It is mandated, as stated previously, that agencies must comply with all standards issued under Section 6 of the Act.

SOURCE LETTER

October 31, 1985

The (Company) requests the official position of the Occupational Safety and Health Administration regarding a matter within OSHA's jurisdiction. Is a Federal agency, specifically the U.S. Department of the Interior, bound to comply with the provisions of 29 CFR 1910.20 concerning "Access to Employee Exposure and Medical Records?"

This question arose in collective bargaining with the Bureau of Indian Affairs. Management representatives claimed that privacy considerations and special rules regarding medical records of Federal employees would preclude the union from even receiving sanitized records regarding employee exposure to such substances as lead and asbestos. The union referred the Agency to Section 1-201(d) of Executive Order 12196 which requires the head of each Federal agency to "comply with all standards issued under Section 6 of the Act, except where the Secretary approves compliance with alternative standards." We also referred the Agency to 29 CFR 1960.8 which states "The head of each agency shall
comply with the Occupational Safety and Health Administration standards applicable to the Agency."

Finally, we referred to 29 CFR 1910.20(e)(1)(i) which states, "Whenever an employee or designated representative requests access to a medical record, the employer shall assure that access is provided in a reasonable time, place, and manner, but in no event later than fifteen (15) days after the request for access is made." The Agency replied that it did not believe that the provisions of 29 CFR 1910.20, nor the specific provisions in 29 CFR 1910.1001(i)(2) (asbestos exposure records) and 1910.1025(n)(4)(ii) (lead exposure records) applied to the Department of the Interior.

Has the Secretary of Labor approved application of alternative standards to those cited above for the U.S. Department of the Interior? Do the above-cited standards apply to the Department as an employer? We would appreciate your prompt response to these questions as the parties are currently in negotiations and this information will aid in a speedy conclusion of bargaining.
This interpretation letter regarding 1910.20 does not require retention of x-rays done for fractures or other reasons not associated with exposure to toxic substances or harmful physical agents.


This is in response to your letter of November 30, 1989, concerning the required retention of x-ray films under 29 CFR 1910.20.

Standard 29 CFR 1910.20 does not require retention of x-rays done for fractures or other reasons not associated with exposure to toxic substances or harmful physical agents.
This interpretation focuses on 1910.20 and its implications for workplace drug testing results. The standard addresses exposure and medical records of all employees exposed to toxic substances and harmful physical agents in the course of employment. It does not apply to situations where the only exposure to toxic substances or harmful physical agents in the workplace is no different from typical non-occupational situations. An employee's medical record, including results of drug testing, is not included in the requirements of 1910.20 unless all relevant definitions in 1910.20(c) are met.

Employees who are covered by the standard are entitled to direct access to all the information in their medical records, including drug testing results, unless a physician representing the employer believes that direct access to certain information would be detrimental to the employee's health. These employees can still obtain access to withheld information indirectly by designating a representative who has the employee's specific written consent to obtain access to this information (29 CFR 1910.20(e)(2)(ii)(D)).

OSHA also has access to complete medical records, including drug test results, when there is a justifiable occupational safety and health need. If personally identifiable drug testing records are part of medical records then OSHA's access order procedures are applicable (29 CFR 1913.10). Agency rule 1913.10(b) states that medical access orders apply to all requests by OSHA for access to employee medical information "whether or not pursuant to the access provisions of 29 CFR 1910.20(e)."

SOURCE LETTER

DATE: December 11, 1989

MEMORANDUM

SUBJECT: Workplace Drug Testing Results - Applicability Under 1910.20

The question has been raised, under 29 CFR 1910.20 "Access to Employee Exposure and Medical Records", if workplace drug testing results would be available to the following parties:

a) Private sector employees desiring to know their own results from a routine screening or results from an accident investigation report;
b) OSHA compliance personnel reviewing results from a routine screening or results from an accident investigation report.

These questions result from mandatory drug testing programs that are now in effect in many areas of employment.
This interpretation letter addresses retention of medical records for companies that are no longer in business. Each employer is responsible for assuring compliance with the OSHA Access to Employee Exposure and Medical Records standard (29 CFR 1910.20), but the activities required for compliance can be carried out on behalf of the employer by the physician or other health care personnel in charge of employee medical records. Because the clinic is the holder of employee medical records, it is recommended that they follow the requirements in section (h)(3).

29 CFR 1910.20(h)(1)

JUN 13, 1990

This is in response to your inquiry of April 20 concerning your obligations under the Occupational Safety and Health Administration (OSHA) for retention of medical records on companies that are no longer in business.

As my staff discussed with you, the OSHA Access to Employee Exposure and Medical Records standard (29 CFR 1910.20) regulates the preservation of employee medical records for those employees assigned or transferred to work where there will be exposure to toxic substances or harmful physical agents. The requirements for the transfer of records when an employer is ceasing to do business are in section (h) of the standard. For your assistance I have enclosed a copy of the standard.

Each employer is responsible for assuring compliance with this standard, but the activities involved in complying can be carried out on behalf of the employer by the physician or other health care personnel in charge of employee medical records. Since the Medical Screening Clinic is the holder of employee medical records we recommend that you follow the requirements in section (h)(3).

April 20, 1990

We perform physicals on many petrochemical and other companies in our area.

At this time, we are finding that we are holding medical records and x-ray films on companies that no longer are in business. Due to this I am asking you to please give me information on what our obligation is to these records and films. We have tried tracking down the companies to no avail.

September 29, 1988

Section (h) Transfer of records.

1. Whenever an employer is ceasing to do business the employer shall transfer all records subject to this section to the successor employer. The Successor employer shall receive and maintain these records.

2. Whenever an employer is ceasing to do business and there is no successor employer to receive and maintain the records subject to this standard, the employer shall notify affected current employees of their rights of access to records at least three (3) months prior to the cessation of the employer's business.

3. Whenever an employer either is ceasing to do business and there is no successor employer to receive and maintain the records, or intends to dispose of any records required to be preserved for at least thirty (30) years, the employer shall:

(i) Transfer the records to the Director of the National Institute for Occupational Safety and Health (NIOSH) if so required by a specific occupational safety and health standard; or
(ii) Notify the Director of NIOSH in writing of the impending disposal of records at least three (3) months prior to the disposal of the records.

(4) Where an employer regularly disposes of records required to be preserved for at least thirty (30) years, the employer may, with at least (3) months notice, notify the Director of NIOSH on an annual basis of the records intended to be disposed of in the coming year.
Workers' compensation records are treated as health insurance claims.

(NOTE: 29 CFR 1910.20 was amended June 1990. In the 1990 amended standard, there is no mention of workers' compensation. It is interpreted, however, as in the 1980 letter. Workers' compensation falls under the class of health insurance claims and, therefore, under (i)(A).)

December 8, 1980

The Regional Administrator has asked me to respond to your inquiry concerning access to employee exposure and medical records, 29 CFR 1910.20. Specifically your question pertains to the applicability of this standard to workers' compensation records. Records are treated as health insurance claims under 29 CFR 1910.20. Thus, some types of workers' compensation records fall under the scope of 29 CFR 1910.20, although the standard is not applicable for all types. The following factors contribute to the analysis of which types of workers' compensation records apply:

1. A determination of whether the standard, in general, applies to the employer (see 29 CFR 1910.20(b). For example, workers' compensation records would not be covered by 29 CFR 1910.20 for typical office working conditions where the only exposures are to safety hazards (e.g., tripping, falls, or cut.).

2. A determination of whether the workers' compensation record falls under the definition of "employee medical record" (see 29 CFR 1910.20(c)(6)); that is, whether the record (or any attachments to it) concerns the health status of an employee, and is made or maintained by health care personnel or technicians.

Where 29 CFR 1910.20 applies to the employer, and the workers' compensation record falls under the definition of "employee medical record," then there is the consideration of whether the workers' compensation record is accessible to the employer by employee name or other direct personal identifier, and whether the records are maintained with the employees' medical records.

1. If the workers' compensation records are maintained separately from the employer's medical program and its records, and are not accessible to the employer, then 29 CFR 1910.20 does not apply.
This interpretation letter states that 1910.20 does not apply to work situations with just safety hazards, first-aid treatment, or x-rays of bones taken only as a result of a safety hazard.

(NO1E: 29 CFR 1910.20 amended June 1990. The interpretation letter, although written in 1981, is consistent with more recent interpretations of similar questions.)

April 24, 1981

This is in response to your inquiry regarding the preservation of medical records pursuant to OSHA's Access to Employee Exposure and Medical Records Standard (29 CFR 1910.20).

Under this standard, each employer must assure that all employee medical records of employees exposed to toxic substances or harmful physical agents are preserved and maintained for at least the duration of the employee's employment, plus 30 years.

29 CFR 1910.20 does not apply to:

1. Working conditions where employees are only exposed to safety hazards (e.g., trips, falls, cuts); or
2. First-aid treatment (one-time treatment and subsequent observation of minor scratches, cuts, burns, splinters, and so forth, which do not ordinarily require medical care) even though provided by a physician or registered professional personnel.
3. X-rays of bones taken only as a result of safety hazard (e.g., trip, fall) and when the accident is clearly unrelated to exposures to toxic substances and harmful physical agents. The evaluation of this relationship must be made by an examining physician to whom the employer has supplied:
   a. A description of the affected employee's duties as they relate to the employee's exposure to toxic substances and harmful physical agents; and
   b. The employee's exposure level or anticipated exposure level to any toxic substance or harmful physical agent (if applicable).

Whenever such X-rays are destroyed, however, the X-ray report or physician's interpretation of the X-ray must nevertheless be retained as a portion of the worker's medical record for the length of employment plus 30 years.

Other than the above, for employees exposed to toxic substances or harmful physical agents, OSHA does not exclude any medical records (including any other type of X-ray) concerning on-the-job accidents or injuries from being preserved under this standard. Such information may have later significance in assessing occupational health issues.

The preamble accompanying the final standard (FEDERAL REGISTER, Vol. 45, pp. 35263-4) explains that occupational exposure to toxic substances and harmful physical agents can result in practically every form of apparent "non-occupational" health problem, including cuts, falls, bruises, dizziness or headaches.
Orthopedic x-rays need not be retained provided they do not pertain to employees exposed to toxic substances or harmful physical agents. If office workers are exposed to unregulated toxic substances, then medical records pertaining to their exposure must be retained. If office workers are not exposed to toxic substances or harmful physical agents, their medical records need not be retained.

This is in response to your letter of October 4, 1989, concerning retention requirements for medical records.

Medical records that employers must retain are contained in 29 CFR 1910.20(b), which is the scope and application portion of the standard captioned "access to employee exposure and medical records". Orthopedic x-rays do not have to be retained provided that are not pertaining to employees exposed to toxic substances or harmful physical agents. If office workers are exposed to unregulated toxic substances, then medical records pertaining to their exposure must be retained. If office workers are not exposed to toxic substances or harmful physical agents, their medical records do not have to be retained.
This interpretation letter regarding X-rays states that the employer is not required to copy them for employees; the employer may restrict access to the original X-rays to their facility or make arrangements for a temporary loan for review.

(NOTE: 29 CFR 1910.20 amended June 1990. Although the interpretation letter was written in 1981, the interpretation is consistent with the amended standard.)

I am writing in response to your letter concerning the examination and copying of x-rays under the OSHA records access rule, 29 CFR 1910.20. OSHA has concluded that the DP policy providing on-site examination of the original x-ray in lieu of providing a free copy of the x-ray is permitted under the rule. We arrive at this conclusion, however, based on a somewhat different reasoning than suggested in your letter.

In our view, original x-rays are clearly part of an employee's medical record. The definition of "employee medical record" includes "the results of medical examinations...and laboratory tests (including x-ray examinations...)." 29 CFR 1910.20(c)(6)(i)(B). OSHA considers the x-ray itself, in addition to the written description, to be the result of an x-ray examination. The fact that he definition of "record," 29 CFR 1910.20(c)(9), includes "x-ray film," and the rule requires x-rays to be kept in their original state, 29 CFR 1910.20(d)(2), makes clear that original x-rays are considered to be part of the employee's medical record. Furthermore, x-rays are not considered to be physical specimens, which fall outside the definition of "employee medical record" to the extent they are "routinely discarded as a part of normal medical practice and not required to be maintained by other legal requirements." 29 CFR 1910.20(6)(ii)(A). OSHA required that x-rays be kept in their original state because it concluded that with currently available technology "appreciable detail is clearly lost when an original film is microfilmed or otherwise copied." (45 FR 35271.) This is in contrast to other parts of the medical record, which may be kept in any form. Since only the original x-ray can satisfy the requirement to maintain the medical record for the preservation period, only the original x-ray, in addition to any radiologist's report, must be made available upon request to an employee or designated representative.
This interpretation letter addresses 29 CFR 1910.20. The previous final rule included all employee X-rays as medical records regardless of the reason they were taken. The new rule considers only those X-rays taken to establish a baseline or determine specific occupational illness as part of the medical record. The employer may preserve the records in any form, manner, or process as long as the information contained in the record is preserved and retrievable. Chest X-ray films are exempted, must be preserved in their original form, and may not be microfilmed.


INTERPRETATION

29 CFR 1910.20(c)(6)(i)(B)¹

MAR 13, 1990

This is in response to your February 1 letter. You requested clarification of the Occupational Safety and Health Administration's (OSHA) requirement that chest X-rays of employees be retained.

The definition of "employee" covered by this standard specifies workers whose occupation includes exposure to toxic substances or harmful physical agents (Section (c)(4)). Thus employees who have no hazardous exposures, such as clerical staff in some circumstances, are not covered under the scope of this standard. Their medical records are, therefore, also not covered. 29 CFR 1910.20 ("Access to Employee Exposure and Medical Records") was revised on September 29, 1988. The previous final rule included all employee X-rays in the definition of employee medical records, regardless of the purpose for which they were taken. The new rule modifies this requirement by considering only those X-rays taken for purposes of establishing a baseline or determining specific occupational illness as part of the medical record (Section (c)(6)(i)(B)). This revision removes from coverage X-rays taken to detect or treat broken bones due to falls or other traumatic occurrences.

Section (d)(iii)(2) of the standard allows an employer to preserve the records in any form, manner, or process he or she chooses as long as the information contained in the record is preserved and retrievable. Chest X-ray films, however, are exempted from this section and must be preserved in their original form and may not be microfilmed.

SOURCE LETTER

February 1, 1990

Request clarification of the required retention of chest X-ray films of employees as it relates to the above captioned standard. It is understood that X-rays done for other reasons not associated with hazardous material exposure need not be retained.

Are all hospital employee chest X-rays required to be retained in their original state for the duration of their employment plus 30 years?

Is there any latitude in the standard which allows microfilming of chest X-rays, or maintaining chest X-rays of those employees who have limited material exposure i.e.: clerical staff.
ABSTRACT This interpretation letter regarding employers clarifies that medical
records must be preserved by physicians when such services are contracted outside of the company.


INTERPRETATION 29 CFR 1910.20(d)(1)

May 12, 1981

OSHA's (City) Regional Office has asked me to respond to your March 6, 1981, inquiry concerning
OSHA's Access to Employee Exposure and Medical Records standard (29 CFR 1910.20). Specifically,
your question pertains to retention requirements when companies contract outside physicians, hospitals,
and clinics to conduct physicals and treat employees for illness and injuries.

Subparagraph (b)(3) of 29 CFR 1910.20, and the phrase "contracts for" in (b)(1) of this standard, were
added to express clearly the Agency's intention that the standard applies to records generated or
maintained by contractors of the employer, as well as by in-house employees. The activities involved in
complying with the standard's provisions on access and retention of medical records can be carried out,
on behalf of the employer, by the physician or other health care personnel in charge of employee medical
records. Thus, it is up to the employer to assure that employee medical records are preserved regardless
of who generates or maintains the records.

While we are continuing to enforce 29 CFR 1910.20 in this manner, this standard is currently undergoing
review. We appreciate your concerns and your comments will be considered during the review process.
Former employees may have access to exposure and medical records and may file a formal complaint for the purpose.

(NOTE: 29 CFR 1910.20 amended June 1990. The 1980 interpretation letter is still applicable. The amended standard at section (c)(4) defines employee to include current, former, reassigned, and transferred employees.)

INTERPRETATION 29 CFR 1910.20(e)(2)

December 1, 1980

MEMORANDUM FOR: ALL REGIONAL ADMINISTRATORS


This is in response to requests from Regional Offices for a clarification of the procedures for handling complaints submitted by former employees for alleged violations of 29 CFR 1910.20(e)(2).

The needs of former employees for access to exposure and medical records relevant to their current or future health status are as compelling as the needs of current employees. Thus, 29 CFR 1910.20 makes no distinction between former and current employees. Accordingly, for the purposes of processing complaints of alleged violations of 29 CFR 1910.20(e)(2), no distinction shall be made between complaints submitted by former and current employees.

The complaint processing procedures outlined in OSHA Instruction CPL 2.45 shall be followed, except for the following modified definition of "employee." For the purposes of submitting a complaint for an alleged violation of 29 CFR 1910.20(e)(2), "employee" means either a present or former employee of the employer about whose establishment the complaint is being made.

There must be effective screening and evaluation when determining whether complaints of alleged violations of 29 CFR 1910.20(e)(2) satisfy the "formal complaint" criteria set forth in B.2 of OSHA Instruction CPL 2.45. In addition to the pertinent information outlined in paragraph E of that instruction, the following information should be obtained from complainants whenever possible:

1. An explanation of what attempt was made by the employee to obtain his/her records.

2. An explanation of why the employer allegedly denied employee access to his/her records.

NOTE: These explanations should include any appropriate documentation, e.g., copies of any written correspondence between the employee and the employer.

The final directive on inspection and compliance procedures for implementing 29 CFR 1910.20 will incorporate this clarification. In addition, OSHA Instruction CPL 2.45 will be amended accordingly in the near future.
STANDARD NUMBER 1910.21(a)(1); 1910.23(e)(4)

INFORMATION DATE 841102

ABSTRACT

This Interpretation letter addresses safeguarding of floor holes between a platform and equipment that moves due to thermal expansion or for other reasons. Floor holes in restricted access areas which meet the definition of 1910.21(a)(1), enclosed, are regarded as a de minimis violation of OSHA standards at 1910.23 and do not require further safeguarding if such floor holes are provided with standard toeboards (1910.23(e)(4)).

(NOTE: 1910.21 has not been amended since issuance. 1910.23 was last amended in 1984.)

INTERPRETATION

29 CFR 1910.21(q)(8)(1); 1910.23(e)(4)

November 2, 1984

This is in response to your letter of August 17, 1984, in which you requested an interpretation of an Occupational Safety and Health Administration (OSHA) standard pertaining to walking and working surfaces. Specifically, your request concerns the safeguarding of floor holes between a platform and equipment that moves due to thermal expansion or for other reasons.

As you are aware, OSHA is in the process of revising Subpart D of 29 CFR 1910. Current drafts of Subpart D permit a 12-inch maximum clearance between machinery, piping, or other equipment (such as boilers) and the platforms through which they pass. Only toeboards will be required around the perimeter of the opening where the equipment prevents physical access to falls. The toeboard is intended to prevent the feet of employees in near proximity to the hole from falling into the opening, and will prevent tools from accidentally falling upon employees below.

Accordingly, floor holes in restricted access areas which meet the definition of 29 CFR 1910.21(a)(1), enclosed, are regarded as a de minimis violation of our standards at 29 CFR 1910.23 and do not require further safeguarding if such floor holes are provided with standard toeboards. The toeboards are intended to prevent tools from falling upon employees below and to prevent an employee from accidentally falling into the opening.
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DOE Interpretations Guide to OSH Standards
July 1, 1992
OSHA Instruction STD 1-1.4

OCT 30, 1978

OSHA PROGRAM DIRECTIVE #100-60

Subject: 29 CFR 1910.22(b)(2), Markings For Aisles and Passageways

1. Purpose

To provide an interpretation of "appropriately marked" as applies to permanent aisles and passageways where there are dirt floors or floors having continuous concentrations of sand or fine dusts.

2. Documentation Affected

None.

3. Background

a. In some instances, 29 CFR.1910.22(b)(2) has been narrowly interpreted to mean that aisles and passageways must be marked by painted floors lines.

b. The intent of "appropriately marked" is not to restrict the markings to one method only. It would be impractical to paint lines on dirt floors or floors that have continuous concentrations of sand or other dusts. These conditions may exist in such industries as foundries, scrap salvage operations or motor winding facilities.

4. Action

Painted lines remain the most feasible method of marking, where practical, since they may last several years without maintenance or repainting. Other appropriate methods such as marking pillars, powder stripping, flags, traffic cones or barrels are acceptable, when the training programs for vehicle operators and employees include the recognition of such markings.

5. Effective Date

This directive is effective immediately upon receipt and will remain in effect until canceled or superseded.
ABSTRACT  This interpretation letter addresses Floor Loading Protection. A de minimis violation will be issued if the requirements of 1910.22(d)(1) dealing with structural adequacy appraisals to protect employees against overloading are not satisfied.

(Note: This standard has not been amended since issuance.)

INTERPRETATION  29 CFR 1910.22(d)(1)

September 27, 1977

Dear Sir:

This is in response to your letter of August 29, 1977, concerning floor loading protection.

The Occupational Safety and Health Administration (OSHA) General Industry Standard, 1910.22(d)(1) presently requires in every building or other structure, or part thereof, used for mercantile, business, industrial, or storage purposes, the loads approved by the building official shall be marked on plates of approved design which shall be supplied and securely affixed by the owner of the building, or his duly authorized agent, in a conspicuous place in each space to which they relate. Such plates shall not be removed or defaced but, if lost, removed, or defaced, shall be replaced by the owner or his agent.

Your present procedure of reviewing and approving the structural adequacy of garages requiring a change of occupancy would appear to protect employees against some floor overloading failures. However, unless the loading plates are displayed as required by the aforementioned standard, the standard would be violated, but would no doubt be considered a de minimis violation at this time.

As indicated in your letter, OSHA's Office of Standards Development is drafting a new Subpart D, Walking-Working Surfaces, which will be published in the Federal Register later this year for public comment. Your comments concerning floor loading protection, pro or con, would be appreciated at that time. It is possible that any reference to loading plate requirements may be modified in that proposal.
This Interpretation provides guidance on OSHA’s requirements for
marking floor loading limits and the applicability of the standard.

This is in response to your letter of October 8, 1993 requesting a variance from the OSHA requirements
for marking floor loading limits contained in 29 CFR 1910.145(d)(1). This Interpretation is being provided
in lieu of a variance for the following reasons.

In your specific case you noted that the “floor loading” sign requirement was written at a time when using
wooden construction was the dominate means of building and that now in the age of steel and concrete
structures it is not important for the occupants (layperson) to know floor loading limits. You also stated that
the language required on the signs was confusing and therefore made the signs meaningless to plant
personnel. You further stated that your company’s procedures mandate a structural assessment by
qualified engineers to determine if a floor could support the new load.

While these may be valid opinions, no indication has been given that it is technically infeasible to install the
required signs. Technical Infeasibility is the chief, and usually the sole, reason for the DOE to issue a
variance. As such, the prerequisite needed by DOE for it to grant a variance has not been satisfied.

With respect to the standard, OSHA does not make a distinction between the structural materials used
when mandating the floor load marking requirements. Floor loading signs are required for all facilities as
stated above regardless of the structural materials used to construct it.

It is DOE’s position that the particular contractor who is legally responsible to the DOE for the structure,
must ensure that any floor/roof loading does not exceed approved load limits. If individuals are in a
position to place, cause to be placed or permit loads to be placed in areas where the loads may exceed the
approved load limits, the contractor must ensure that these individuals fully understand the signs and the
importance of not overloading the floor. Having a company policy for a pre-move structural analysis is very
important in preventing overloading, however, it does not abrogate the companies responsibility for
posting load limits.

Although a variance is not appropriate, an interpretation of the standard that covers the condition in
question is provided for guidance in determining what can be considered de minimis.

If both a policy and procedure exist to ensure that all changes to floor/roof loads (i.e., equipment,
machinery, furniture, storage and/or material containers, personnel, etc.) are reviewed for potential
overloading and this fact is appropriately documented, the absence of signs could be termed de minimis.
Accordingly, no further action at the DOE Headquarters level will be taken on your request for a variance.
OSHA Instruction STD 1-1.1
October 30, 1978

March 23, 1972

OSHA PROGRAM DIRECTIVE #100-4

Subject: Defining the Term "Nominal Diameter"

1. Purpose. To clarify the use of the term "nominal diameter" in Section 1910.23(e)(3)(ii), and to direct answers to inquiries.

2. Background. This requirement establishes the size of pipe acceptable for use in the construction of guard rails. Numerous requests for clarification have been received, principally from employers and field staff.

3. Interpretation. The term "Nominal Diameter" when used to describe the size (diameter) of pipe used in construction of standard railings and posts means the outside diameter. The requirements that pipe railings and posts shall be at least one and one-half inches nominal diameter means that the outside diameter of such shall be not less than one and one-half inches.

4. Effective Date. This instruction is effective immediately, and will remain in effect until canceled or superseded.
OSHA Instruction STD 1-1.5
October 30, 1978

JAN 31, 1978

OSHA PROGRAM DIRECTIVE #100-76

Subject: 29 CFR 1910.23(c)(1), Protection of Open-sided Floors, Platforms and Runways; Guardrails--Loading Rack Platforms

1. Purpose

The purpose of this directive is to clarify 29 CFR 1910.23(c)(1) as it relates to guardrails on loading rack platforms.

2. Documentation Affected

This directive supersedes Field Information Memorandum #74-84 dated October 22, 1974.

3. Background

a. Strict interpretation of 29 CFR 1910.23(c)(1) would result in having all petroleum loading racks (and similar installations) protected with guardrails on the outside edge of the loading platform above the top of the tank truck. Several citations have been issued for failure to have such guardrails and the Review Commission has ruled against OSHA in contested cases.

b. The standard does not provide that there may be a surface other than "adjacent floor or ground level" which might be within 4 feet of the platform floor. When loading petroleum product tank trucks, the top of the tank is adjacent to and within 4 feet from the floor of the platform.

c. The principal reason why guardrails are impractical is that truck tanks are of different configurations and the several loading hatches make it necessary for employees to be able to step from the platform (or use a runway from the platform onto the tank) at any place in order to go onto the tank. It is necessary to go onto the tank to open and close hatches and to place and remove filler spouts. Safety belts and lanyards should not be used when loading flammable liquids because the employee should be able to move freely in case of a fire.

d. Some clarification of the referenced standard was included in the proposed standards changes on Walking-Working Surfaces published in the Federal Register on April 23, 1976. It is intended that the final changes to the section will provide clarification that such platforms will not have guardrails on platform sides adjacent to the top of tank trucks.

4. Action

If it is necessary to cite an employer for an alleged violation of 29 CFR 1910.23(c)(1) involving loading platforms where there is an adjacent truck surface which could be considered as an "adjacent floor", the violation is to be considered de minimis.

5. Effective Date

This directive is effective immediately and will remain in effect until canceled or superseded.
OSHA Instruction STD 1-1.6
October 30, 1978

OSHA PROGRAM DIRECTIVE #100-83

Subject: 29 CFR 1910.23(e)(5)(iii), Clearance of Handrails and Railings--General Industry

1. Purpose

The purpose of this directive is to provide guidelines on citing 29CFR 1910.23(e)(5)(iii).

2. Documentation Affected

This directive supersedes Field Information Memorandum #75-18 dated March 6, 1975.

3. Background

a. The present Standard, 29CFR 1910.23(e)(5)(iii), states in part: "The length of brackets shall be such as will give a clearance between handrail and wall or any projection thereon of at least 3 inches. 29CFR 1910.23(e)(6) states: "All handrails and railings shall be provided with a clearance of not less than 3 inches between the handrail or railing and any other object."

b. The proposed changes to Walking-Working Surfaces, will allow all handrails and railings to have a clearance of at least one and one-half inches between the handrail or railing and any other object.

Pending final approval of the proposed changes in the standards, any violation of the clearance requirement of handrails and railings required in 29CFR 1910.23 shall be considered de minimis, if the clearance is at least 1-1/2 inches.

4. Effective Date

This directive is effective immediately and will remain in effect until canceled or superseded.
OSHA Instruction STD 1-1.7  
October 30, 1978  

Jan 31, 1978

OSHA PROGRAM DIRECTIVE #100-89

Subject: 29 CFR 1910.23, Guarding Floor and Wall Opening and Holes -- General Industry

1. Purpose

The purpose of this directive is to provide guidance to field personnel when encountering situations where the rules of another Federal agency may be met.

2. Documentation Affected

This directive supersedes Field Information Memorandum #75-40 dated June 8, 1975.

3. Background

The present standard, 29 CFR 1910.23(c)(1), requires platforms and runways four(4) feet or more above adjacent floor or ground level be guarded by a standard railing or the equivalent as specified in 29 CFR 1910.23(e)(3). The proposed changes to Walking-Working Surfaces, 29 CFR 1910.23, states in part that when standard railings are not feasible because it would result in an impairment of the work being performed or because some accommodation is needed so that the rules of another Federal agency may be met, alternative protection may be provided for employees which is as safe as that which would be afforded by 29 CFR 1910.23(c)(1).

4. Action

Pending final approval of the proposed changes in the standards, any violation of the requirement for a standard railing or equivalent in 29 CFR 1910.23(c)(1) shall be considered de minimis provided that the use of guard rails are not feasible and that alternate protection is provided. In some instances alternate protection may include, but is not limited to a tie off system using safety belts and lanyard.

5. Effective Date

This directive is effective immediately and shall remain in effect until canceled or superseded.
OSHA Instruction STD 1-1.8

October 30, 1978

OSHA PROGRAM DIRECTIVE #100-97

JAN 31 1978

Subject: 29 CFR 1910.23(c), Metal Pouring Platforms--Protection of Open-sided Floors, Platforms and Runways

1. Purpose

The purpose of this directive is to advise field personnel that 29 CFR 1910.23(c) should not be applied to metal pouring platforms in hot metal pouring operations, except upon consultation with the Office of Compliance Programs.

2. Documentation Affected

This directive supersedes Field Information Memorandum #76-27 dated October 26, 1976.

3. Background

a. The provisions of 29 CFR 1910.23(c) requiring railing and toeboards on the open sides of platforms or runways shall not apply to open sides of hot metal poking platforms (teeming platforms) or runways in areas where work is performed in preparation for, during, or in the completion of hot metal pouring operations.

b. We are presently revising the standard to exclude this operation from 29 CFR 1910.23, and to provide a stand for feasible protection. The nonenforcement policy shall continue during the pending rule making proceeding.

c. An extension of time was granted the rule making process on standards relating to Walking-Working Surfaces by a Notice appearing in the Federal Register on June 22, 1976.

4. Action

29 CFR 1910.23(c) shall be considered de minimis relative to metal pouring platforms in hot metal pouring operations except upon consultation with the Office of Compliance Programs.

5. Effective Date

This directive is effective immediately and will remain in effect until canceled or superseded by either a later directive or change in the standards.
OSHA Instruction STD 1-1.10

June 30, 1981

Subject: Height of Guardrails in General Industry Applications

A. Purpose. This instruction provides guidance for the equitable enforcement of 29CFR 1910.23(e)(1) as it pertains to the acceptable height of guardrails.

B. Scope. This instruction applies OSHA-wide.

C. Action. OSHA Regional Administrators/Area Directors shall classify technical violations of 29CFR 1910.23(e)(1) as de minimis violations, where the employer has provided guardrails which meet the following specifications:

1. Existing guardrails shall consist of a top rail, intermediate rail, and posts, or equivalent, and shall have a minimum vertical height of 36 inches to 44 inches from the upper surface of the top rail to the floor, platform, runway or ramp level.

2. Guardrails with heights greater than 44 inches are permissible provided the extra height does not create a dangerous situation for employees. Openings beneath the top rail that would permit the passage of a 19 inch or larger spherical object would create an unsafe condition, therefore, additional mid-rails may be necessary.

3. Deviations from the standard which are deemed to be de minimis violations, as herein described, apply only to the General Industry standards, 29CFR 1910, and do not affect the specified requirements for guardrails set forth in the Maritime or Construction standards.

D. Federal Program Change. This instruction describes a Federal program change which affects State Programs. Each Regional Administrator shall:

1. Ensure that this change is forwarded to each State designee.

2. Explain the technical content of the change to the State designee as requested.

3. Ensure that State designees are asked to acknowledge receipt of this Federal program change in writing, within 30 days of notification, to the Regional Administrator. This acknowledgment should include a description either of the State’s plan to implement the change or of the reasons why the change should not apply to that state.

4. Review policies, instructions and guidelines issued by the State to determine if this change has been communicated to State program personnel. Routine monitoring activities (accompanied inspections and case file reviews) shall also be used to determine if this change has been implemented in actual performance.

E. Background. A Field Information Memorandum (FIM) #74-87 was previously issued regarding the height of guardrails. At the time FIM’s were reissued and converted to OSHA #100 Series Program Directives, FIM #74-87 was not converted pending the issuance of a major revision to Subpart D of 29CFR 1910. The intended revision is not yet available; therefore, to provide equitable enforcement which does not place unnecessary cost burdens upon employers, or have a direct or immediate effect upon the safety or health of employees, this instruction reissues the previous policy of FIM #74-87 and presents compatible criteria to the anticipated revision of Subpart D.

1. The stipulations set forth herein provide for compatible specifications between ANSI, the NFPA, and OSHA, regarding the acceptable height of guardrails in workplaces.

2. In consideration of the findings by the National Bureau of Standards research study, Report Number NBSIR 76-1139, Investigation of Guardrails for the Protection of Employees from Occupational Hazards, dated July 1976, this instruction permits the application of some applicable determinations in advance of the eventual promulgation of a revision to Subpart D of 29CFR 1910.
OSHA Instruction STD 1-1.13
April 16, 1984

Subject: Fall Protection in General Industry: 29 CFR 1910.23(c)(1), (c)(3), and 29 CFR 1910.132(a)

A. Purpose. This instruction clarifies the applicability of 29 CFR 1910.23(c)(1), (c)(3) and 1910.132(a) where employees are exposed to falling hazards while performing various tasks including maintenance from elevated surfaces.

B. Scope. This instruction applies OSHA-wide.

C. Action. Regional Administrators and Area Directors shall ensure that the interpretations in F. and the guidelines in G. of this instruction are adhered to when inspecting general industry facilities where employees are exposed to the hazard of falling from elevated surfaces.

D. Federal Program Change. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this change is forwarded to each State designee.

2. Explain the technical content of the change to the State designee as requested.

3. Ensure that State designees are asked to acknowledge receipt of this Federal program change in writing, within 30 days of notification, to the Regional Administrator. This acknowledgment should include a description either of the State’s plan to implement the change or of the reasons why the change should not apply to that State.

4. Review policies, instructions and guidelines issued by the State to determine that this change has been communicated to State program personnel. Routine monitoring shall also be used to determine if this change has been implemented in actual performance.

E. Background. Adjudicated decisions concerning employee exposures to falls from elevated surfaces have been inconsistent. As a result, OSHA has cited employers for violations of 29 CFR 1910.23(c)(1) or of Section 5(a)(1) of the OSH Act when employees have been engaged in various tasks which include inspections, service, repairs and maintenance on elevated surfaces such as, but not limited to, conveyors, tops of machinery and other structures not normally considered “walking and working” surfaces.

1. Although 29 CFR 1910.23(c)(1) requires the safeguarding of “platforms” used by employees, there has been disagreement as to when an “elevated surface” constitutes a platform within the meaning of the standard.

2. In at least one instance (General Electric Company v. OSHRC, 583 F. 2d 61 (2d Cir. 1978)) the court noted the need for increased clarity of definition OSHA regarding its intended meaning of the term “platform”. Therefore, this instruction clarifies and defines the conditions and circumstances under which a “platform” is deemed to exist, and where the requirements of 29 CFR 1910.23(c) apply.

F. Interpretation. The following interpretations are established for uniform enforcement and application of G. of this instruction.

1. Platforms are interpreted to be any elevated surface designed or used primarily as a walking or working surface, and any other elevated surfaces upon which employees are required or allowed to walk or work while performing assigned tasks on a predictable and regular basis (See 29 CFR 1910.21(a)(4) for definition of "platform").

2. Predictable and regular basis means employee functions such as, but not limited to, inspections, service, repair and maintenance which are performed.
OSHA Instruction STD 1-1.13 (cont.)

a. At least once every 2 weeks, or

b. For a total of 4 man-hours or more during any sequential 4-week period (e.g., 2 employees once every 4 weeks for 2 hours = 4 man-hours per 4-week period).

G. Guidelines. The following guidelines are established for the uniform enforcement of 29 CFR 1910.23(c)(1), 1910.23(c)(3) and 1910.132(a) regarding employee exposures to falls from elevated surfaces.

1. Employee exposures to falls from platforms (interpreted in F.1.) are regulated by the following OSHA standards:

   a. 29 CFR 1910.23(c)(1), or

   b. 29 CFR 1910.23(c)(3).

2. In situations where the safeguarding requirements of G.1. are not applicable because employees are exposed to falls from an elevated surface other than a predictable and regular basis, personal protective equipment as required by 29 CFR 1910.132(a) or other effective fall protection shall be provided.
RECORD ID 4175

STANDARD NUMBER 1910.23(c)
INFORMATION DATE 910307

ABSTRACT This letter is an interpretation of OSHA's standards regarding the construction of a permanent handrail at a point between the edge of a platform installed inside a chimney or silo. Although the handrail is required in OSHA's general industry regulations, it is not required in OSHA's recently published notices of proposed rule making on this and allied subjects because the space between the chimney and the platform is less than 12 inches and is protected by a toe board. OSHA's policy is to accept compliance with the most recently proposed OSHA rules.

(NOTE: This standard was last amended in 1984.)

INTERPRETATION 29 CFR 1910.23(c)

MAR 7, 1991

Dear Sir:

In your letters of October 30, 1989 and January 8, 1990, addressed to Mr. B, you asked for an interpretation of OSHA's standards regarding the construction of a permanent handrail at a point between the edge of a platform installed inside a chimney or silo of your manufacture. Please excuse the delay in responding.

Although the handrail such as you describe is required in OSHA's general industry regulations 29 CFR 1910.23(a)(8), it is not required in OSHA's recently published notices of proposed rule making on this and allied subjects because the space you describe between the chimney and the platform is a restricted access space less than 12 inches and is protected by a toeboard.

On April 10, 1990, a Notice of Proposed Rulemaking affecting 29 CFR 1910.22, entitled Walking and Working Surfaces and Personal Protective Equipment (Fall Protection Systems), was published in the Federal Register. We enclose a copy of this publication for your information and use. The part that addresses your concern appears in Section 1910.27(b)(4) on page 13401. Since OSHA's policy is to accept compliance with the most recently proposed OSHA rules, OSHA will not require you to install a handrail at the point in question.

ATTACHMENT: The following interpretation (Record ID 1522) was included as an attachment to this first instance of OSHA Standard 1910.23 as additional information.

RECORD ID 1522

STANDARD NUMBER 1910.66(e)(3); 1910.23(c); 1910.145(c)(3)
INFORMATION DATE 870813

ABSTRACT The standards at 29 CFR 1910.23 are applicable to all workplaces and do not exempt old installations. Employers are required to provide perimeter protection or fall protection for all employees exposed to hazardous falls from height, such as from roofs. A clarification is provided for the inspection requirements of powered platforms for exterior building servicing, as specified in 29 CFR 1910.66(g). Inspections need not be conducted on 30 day intervals when the intended usage of the equipment is less frequent than every 30 days. However, the equipment must be placarded and locked-out.
INTERPRETATION

29 CFR 1910.66(e)(3); 1910.23(c); 1910.145(c)(3)

AUG 13, 1987

This is in response to your letters of July 30, 1987, concerning perimeter protection along roofs and the necessary inspection cycle required by 29 CFR 1910.66(e)(3).

The Occupational Safety and Health Administration (OSHA) standards at 29 CFR 1910.23 are applicable to all workplaces and do not exempt old installations. Employers are required to provide perimeter protection or fall protection for all employees exposed to hazardous falls from height, such as from roofs. The enclosed OSHA Instruction STD 1-1.13 clarifies the requirements for fall protection in general industry situations.

In regard to your concern for the inspection requirements of powered platforms for exterior building servicing as specified by 29 CFR 1910.66(d)(3), we provide the following clarification. Periodic inspections and tests need not be conducted on 30 day intervals when the intended usage of the equipment is less frequent than every 30 days. However, the equipment must be placarded as required by 29 CFR 1910.145(c)(3), instructing potential users that the equipment must be inspected and tested as required by applicable portions of 29 CFR 1910.66(e) prior to each use. Furthermore, the equipment should be locked-out so that occasional unsupervised use is impossible. Employers who comply with such a placarded instruction, and lockout procedure, although in technical violation of the standard, would not create a hazard for employees and would not be subject to citation under the rules for a de minimis violation.

Dormant equipment which is not available for use by employees can not be hazardous or in violation of the Occupational Safety and Health Act.

(No Date)

We have an unusual case wherein a client has two high rise office buildings that were erected prior to 1970.

At issue is the applicability of your Standard 29 CFR 1910.23(c), which requires Perimeter Protection for employees that are required to work at or near the edge of building roofs.

Are the OSHA Standards retroactive for situations that were in place prior to the effective date of the standards?

July 30, 1987

In reviewing my file, I find that to date I have not received a response to my letter of May 6, 1987, a copy of which is enclosed for your reference.

This is an important subject in that our clients are obligated to comply with your standards, but the specific requirements of 1910.66(e)(3) have been superseded by the state of the art, due to the cost of doing business.

May 6, 1987

In reviewing OSHA's Standard 1910.66(e)(3) Maintenance Inspection and Tests, we note that each installation is required to undergo a maintenance and test every 30 days, except where the cleaning cycle is less than 30 days such inspection and tests shall be made prior to each cleaning cycle.

However, this paragraph does not relate to equipment installations where the cleaning cycles occur only three or four times a year, which is normal for all present installations, due to the relatively high cost of cleaning windows.

We request that in the latter case, the equipment be allowed to have a maintenance inspection and test prior to each cleaning cycle in that the cost of monthly maintenance inspection and tests cannot be justified for dormant equipment.
An interpretation letter regarding the guarding requirements for skylights.

A skylight is regarded by OSHA as a hatchway (i.e., an opening in the roof of a building through which a person may fall) and, therefore, should be guarded.

(NOTE: This standard was last amended in 1984.)

February 16, 1984

Dear Sir:

This is in response to your letter of December 21, 1983, regarding skylights as regulated by the Occupational Safety and Health Administration (OSHA). This response provides an interpretation and clarification of the General Industry Standard 29 CFR 1910.23(a)(4) and (e)(8).

These regulations are included in 29 CFR 1910, Subpart D--Walking-Working Surfaces. 29 CFR 1910.21(a)(1)(2) of the same Subpart defines floor opening as: An opening measuring 12 inches or more in its least dimension, in any floor, platform, pavement, or yard through which persons may fall, such as a hatchway, stair or ladder opening, pit, or large manhole.

Moreover, a definition given in Webster's New Collegiate Dictionary (1977 edition) for "hatch" is "an opening in the...floor or roof of a building;" the same entry gives "hatchway" as a synonym.

Using these definitions, therefore, OSHA concludes that a skylight should be regarded as a hatchway, i.e., an opening in the roof of a building through which persons may fall. 29 CFR 1910.23(a)(4) therefore requires that skylights in the roof of buildings through which persons may fall while walking or working shall be guarded by a standard skylight screen or a fixed standard railing on all exposed sides.

When a skylight screen is selected for safeguarding the opening, and in the event the skylight is constructed of plastic material subject to fracture (as glass would be), then the skylight must at a minimum be provided with a skylight screen capable of withstanding a load of at least 200 pounds applied perpendicularly at any one area on the screen. On the other hand, a plastic skylight which can provide the necessary structural integrity to support the 200-pound load would not be required to be further safeguarded, since it would meet the intended function of a screen as well.

As expressed in 29 CFR 1910.23(e)(8), the primary function of the screen is to support at least a 200-pound load such as a person may place upon it. This provision further relates that the screen shall provide a minimum deflection so as not to break the glass; but that portion of the requirement may be inapplicable when no glass is present. (The concern for breaking the glass results from the possible fragment exposure to persons beneath the skylight.)
Dear Sir:

This is in response to your letter of July 7, 1983, requesting a clarification of 29 CFR 1910.23(a)(9) as it applies to fixed ladders and platforms. This also confirms your telephone conversation with a member of my staff, Mr. S. The answer to your specific questions follow.

1. 29 CFR 1910.23(a)(9) does apply to the distance between a vessel wall and a platform toeboard; however, the condition detailed in your letter appears to be a de minimis violation of the standard. I am enclosing a portion of OSHA Instruction CPL 2.45A, which defines a de minimis violation. Citations are not issued for de minimis violations, penalties are not proposed, and abatement of the violation is not required of the employer.

2. A vertical barrier, i.e., toeboard, terminates the walking/working surface of the platform, as illustrated on your Diagram D. This appears to be a de minimis violation of 29 CFR 1910.23(a)(9).

3. 29 CFR 1910.23(b)(5) and 29 CFR 1910.27(d)(2)(ii) are both applicable for platforms used with fixed ladder.

4. 29 CFR 1910.23(b)(5) addresses the condition where a wall normally provides the equivalent protection of a toeboard but, because of a wall hole at the toeboard elevation, a toeboard or an enclosing screen must be used to cover the wall hole, when the far side of the hole is more than 5 feet above the next lower level.

SOURCE LETTER

(No Date)

Dear Sir:

Request occupational safety and health 29 CFR 1910.23(a)(9) standard clarification as to application of fixed ladders and platform in the attached Diagram A-D, "illustration only".

1. Does 29 CFR 1910.23(a)(9), April, 1981, quote, "every floor hole into which persons cannot accidentally walk (on account of fixed machinery, equipment, or walls) shall be protected by a cover that leaves no openings more than one (1) inch wide. The cover shall be securely held in place to prevent tolls or materials from falling through," unquote, apply to the distance between (as illustrated in attached Diagram B, C, and D) vessel wall and platform toeboard?

2. Does the installation of a vertical barrier i.e. toeboard terminate the walking/working surface of a floor or roof, as attached in Diagram D?
3. Does specific 29 CFR 1910 standards over ride the requirement of 20 CFR 1910.23(a)(9) such as 29 CFR 1910.27(d)(2)(ii) for fixed ladders?

4. Request standard clarification for 29 CFR 1910.23(b)(5) by diagram, photo, illustration, etc... if possible.
ABSTRACT

This interpretation letter addresses guardrail and toeboard requirements for antenna platforms that will be used by trained technicians every 6 months. The specific platform configuration cited will be elevated approximately 13 feet above the supporting structure and protected with a guardrail system of 36” posts, with a top and midrails of chain and a 3” toeboard. It appears to meet the intent of 29 CFR 1910.23(c)(1).

INTERPRETATION

29 CFR 1910.23(c)(1)

June 3, 1983

Dear Sir:

This is in response to your letter of May 10, 1983, addressed to OSHA's Regional Office in city, which was forwarded to this office for response. This also confirms your telephone conversation with Mr. S of my staff.

You requested review and approval of the construction of your 9 meter mount platform, which will be located on large commercial earth station antennas, with specific regard to guardrail and toeboard heights. The platform will be used by trained technicians approximately every six months, without any employee exposure below the platform.

Your illustration shows that the platform will be elevated approximately 13 feet above the supporting structure and protected with a guardrail system of 36” posts, with a top and midrails of chain and a 3” toeboard. This appears to meet the intent of 29 CFR 1910.23(c)(1). As specified in the standard, the anchoring of posts and installation of chains for railings must be of such construction that the completed structure shall be capable of withstanding a load of at least 200 pounds applied in any direction at any point on the top rail.

OSHA standards do not prohibit the use of diamond-back grating for platforms if it is requested by your customers.
ABSTRACT

Interpretation letter of requirements for stair railings. This interpretation letter addresses requirements for stair railings -- configuration of the top rail vs. the handrail.

(NOTE: Section 1910.23(e)(2)(v) states that in the most recent standard, the stair railing shall be of construction similar to a standard hand railing, but the vertical height shall vary from not more than 34" high, but at least 30" high for stair rails vs at least 42" for standard hand rails.)

INTERPRETATION

29 CFR 1910.23(e)(3)(v)

September 16, 1976

Dear Sir:

Reference is made to the meeting between members of your firm and staff members of this agency in Washington, D.C. on June 16, 1976, as well as subsequent correspondence relative to the Occupational Safety and Health Administration's (OSHA) requirements for stair railings. This is to confirm the statement made at that meeting, which is:

"Securing of the upper rail to the inner side of the upright for an open sided stair rail is in substantial compliance with 29CFR 1910.23(e)(3)(v) of OSHA's requirements."

This is true as the standard is presently written. However, the intent of the standard is that the top rail of the stair railing should conform to the same configuration as that required for a handrail. Subpart D is now under revision and will be proposed for promulgation in accord with Section 6(b) of the Act. The pertinent sections of 29 CFR 1910.23 are being revised in a manner to preclude the possibility of any misinterpretation. The proposed requirements will be similar to what is presently required in 29 CFR 1910.265(c)(5) of the sawmill standards, as well as meeting the design criteria of the National Association of Metal Manufacturer's code.

A Field Information Memorandum will not be issued because it will conflict with the proposed revision of the standard, as well as conflicting with the present stair railing requirements of 29 CFR 1910.265(c)(5).

Therefore, it is strongly recommended now, as it was suggested in the meeting, that you investigate your manufacturing processes so that your top rail will meet the present requirements for handrails as stated in 29 CFR 1910.23(e)(6).
This interpretation letter addresses perimeter protection at setback roof levels. A 29 inch high roof parapet is not adequate fall protection. Temporary portable sections of guardrail with a minimum height combined with other safety controls would be permitted.

February 9, 1983

Dear Sir:

This is in response to your letter of January 28, 1983, concerning perimeter protection at setback roof levels.

A parapet height of 29 inches, where employees are exposed to falls from a roof, does not comply with the height requirement in 29 CFR 1910.23(e)(1) and can not be considered acceptable by OSHA. The employer may install a temporary portable section of guardrail which will comply with 29 CFR 1910.23(e)(3)(v) and provide a minimum height of 36 inches at the exposure locations. Employers may also use a safety belt and rope tie-off system in this type of exposure.
ABSTRACT

This interpretation letter addresses provisions for mounting lighting on guardrails. If hand rails are for maintaining balance while traversing from one elevation to another, 1.5 inch clearance versus the 3 inch clearance referenced (e)(5)) must be maintained, as specified by STD 1-1.6. If the railing is a guard to prevent falls, clearance between the handrail or railing and any other object is not important and lighting may be mounted on the railing.

INTERPRETATION

29 CFR 1910.23(e)(5)(iii)

July 28, 1982

Dear Sir:

Thank you for your letter of July 1, 1982, concerning handrail and railing clearance for stanchion-mounted lights on stairways and platforms. Your letter was referred to this office for reply.

The OSHA National Office concurs with the clearance interpretation as stated in our Chicago Regional Office's May 10, 1979 letter. Accordingly, OSHA's nationwide interpretive position is the following:

A handrail as used on stairs, incline ramps, fixed industrial stairs, ships ladders, and other similar types, where the handrail is used to assist in maintaining balance in traversing from one elevation to another, should be designed to maintain the desired clearance. OSHA STD 1-1.6 (enclosed) allows 1 1/2 inch clearance.

Where railings are used on platforms and other surfaces to act as a perimeter guard to prevent falls from working and walking surfaces, the maintaining of the clearance is not as important. Therefore, it should not be considered a violation of the standard to mount lighting stands to the top railing and toeboard to illuminate the platform.
An interpretation letter regarding ship's ladders in restricted spaces considered de minimis violations. This interpretation letter states that a fixed stairway (classified as a ship's ladder) at an angle of 67° is a de minimis violation due to 9/6/73 proposed revision which recognized ship's ladders in restricted spaces.

(Note: The interpretation letter discusses changes to be made to 1910.24 that would deal with restricted spaces. In 1978 Section (1)(c) was removed. In 1984 Section (j) was removed and sections (f) and (g) were amended. It is quite possible that these sections addressed the points of the interpretation letter. The standard which hasn't been amended since 1984, does not address the interpretation letter. In addition, the letter does state that a 67° angle to the horizontal is in compliance with (c).)

August 20, 1982

Dear Sir:

The Assistant Secretary has asked me to respond to your letter dated July 23, 1982, requesting a permanent variance from Section 1910.24(e) - Fixed Industrial Stairs, Angle of Stairway Rise, of the Occupational Safety and Health Standards.

The fixed stairways you referenced in your application are at angles of approximately 67° rather than the 30° to 50° required by Section 1910.24(e). Your stairways would be classified as ship's ladders.

The present Subpart D - Walking-Working Surfaces standard does not recognize ship's ladders. However, a proposed revision published in the Federal Register on September 6, 1973, recognized the use of a ship's ladder in restricted spaces in which a fixed industrial stairway cannot be fitted.

Unfortunately, the proposed revision of Subpart D was withdrawn by the new procedure published in the Federal Register on April 23, 1976. This publication does not address the subject of utilizing a ship's ladder in those instances where due to restricted space, the use of a standard industrial stairway is not feasible. However, a forthcoming proposal to modify this standard will contain this requirement.

Pending the modification of Subpart D the enforcement of the requirements of existing standards will continue. In those instances where ship's ladders meet the criteria contained in the proposed revision to Subpart D, dated September 6, 1973, and do not adversely affect the safety of the employees, their use may be considered a DE MINIMIS violation. A DE MINIMIS violation carries no penalty and does not require abatement.

It would appear from the information you have supplied that the subject ship's ladders being used at your workplace would meet the DE MINIMIS criteria delineated above. Therefore, a variance from Section 1910.24(e) would not be required. The (City) Area Director concurs with our decision on your variance application. Affected employees and their authorized representatives shall be advised of this clarification in the same manner they were informed of your application for a variance.

No further action will be taken on your request for a variance.
This interpretation letter provides clarification of the applicability of 29 CFR 1910.23 (c) (Protection of open-sided floors, platforms, and runways) to tanker trucks.

OSHA's Review Commission has determined that 29 CFR 1910.23(c) does not apply to tanker trucks, although management should still ensure that work on tanker trucks is evaluated to eliminate any potential fall hazard.

INTERPRETATION

This interpretation is in response to your letter dated September 7, 1993, requesting clarification of the requirements of 29 CFR 1910.23 (c) (Protection of open-sided floors, platforms, and runways) and whether this standard applies to tanker trucks.

OSHA has used 29 CFR 1910.23 (c) in its strictest interpretation to require handrails/guardrails above the top of tanker trucks, but the Review Commission has ruled against OSHA in contested cases. The principal reason why handrails/guardrails are impractical is that tanker trucks are of different configurations and have several loading hatches. It is necessary to go onto the tanks to open and close hatches and to place and remove filler spouts. Safety belts and lanyards should not be used when loading flammable liquids because the employee must be able to move freely in case of a fire.

Although OSHA's Review Commission has ruled against OSHA in contested cases for the use of 29 CFR 1910.23(c) for tanker trucks, one must still look at the potential hazards when working on tanker trucks.

Management should evaluate work on tanker trucks and the potential fall hazards. When employees are unable to maintain three point contact, a fall prevention system should be utilized unless it creates a greater hazard.
An interpretation letter pertaining to protection for ladderway floor openings. OSHA standard at 29 CFR 1910.23(a)(2) requires that every ladderway floor opening be guarded by a standard railing with standard toeboards on all exposed sides. This means both standard railing and standard toeboard are required to satisfy the standard. A single vertically rising bar which must be pivoted approximately 80 degrees from the horizontal does not comply with the OSHA standard at 29 CFR 1910.23(a)(2).

May 12, 1992

Dear Ms. O:

Thank you for your inquiry of April 10, requesting interpretation of the Occupational Safety and Health Administration (OSHA) standard at 29 CFR 1910.23(a)(2) as it pertains to protection for ladderway floor openings.

You specifically request clarification of the following items:

1. Does the phrase "except at entrance to opening" refer exclusively to standard toeboard or to both standard railing and standard toeboard?

2. Can a single vertically rising bar which must be pivoted approximately 80 degrees from the horizontal comply with the OSHA standard at 1910.23(a)(2)?

In response to item 1., the OSHA standard at 29 CFR 1910.23(a)(2) requires that every ladderway floor opening be guarded by a standard railing with standard toeboards on all exposed sides. This means both standard railing and standard toeboard are required to satisfy the standard.

In response to item 2., a single vertically rising bar which must be pivoted approximately 80 degrees from the horizontal does not comply with the OSHA standard at 29 CFR 1910.23(a)(2). This standard requires a passage through the railing with a swinging gate, or so offset that a person cannot walk directly into the opening.

We appreciate your interest in employee safety and health. If we can be of further assistance, please do not hesitate to contact us.
An interpretation letter confirming that 29 CFR 1910.23 and 1910.27 are both applicable to communication towers for safe access, egress and walking and working surfaces. When it is not feasible to comply with these standards the employer must provide appropriate alternative methods which provide equivalent or greater protection for his employees. Old towers with improper ladder clearances, no safety devices, or unusable safety devices are not in compliance with current standards.

INTERPRETATION

29 CFR 1910.23 (a)(2), (a); 1910.27 (a)

March 26, 1993

This is in response to your memorandum of January 28, in which you requested applicable standards for ladders, platforms, and climbing devices on and in communication towers.

Our response to Mr. B. is attached.

Attachment

March 26, 1993

Dear Mr. B

Thank you for your inquiry of January 8, addressed to C. G. of our Seattle Regional Office, which was forwarded to this office for response. You requested interpretation of the standards at 29 CFR 1910.23, Guarding floor and wall openings and holes, and 29 CFR 1910.27, Fixed ladders, as they pertain to communication towers. We apologize for the delay in this response.

The standards referenced above are both applicable to communication towers for safe access, egress and walking and working surfaces. When it is not feasible to comply with these standards the employer must provide appropriate alternative methods which provide equivalent or greater protection for his employees.

Where there is exposure to falls or to falling equipment and/or tools off the lattice tower platforms where employees stand and perform work, employers are required to protect ladderway floor openings by a standard guardrail system on all sides. A gate equivalent to a guardrail system may be used provided at the access opening, or a guardrail system around the floor opening ladderway may be so offset that a person cannot walk directly into the opening. Single bar gates may not be used in this situation. An open-sided platform where employees stand and perform work and is accessed by a caged fixed ladder on one side of the platform, and where the ladder's cage is at least as high as the guardrail system protecting the work platform, must have the access opening to the ladder protected by a gate equivalent to a guardrail system. A single bar gate may be used only when the platform is used for access to other work locations at different levels. In the event of an OSHA inspection, compliance officers will evaluate the situation in terms of employee exposure, frequency of use, cage diameter, width of opening, height of bar, the type of work usually performed on the platform and any other relevant factors to determine whether a cited hazard exists.

Older towers with improper ladder clearances, no safety devices, or unusable safety devices are not in compliance with current Safety and Health Administration (OSHA) standards. Such towers must be modified to comply with 29 CFR 1910.23, and 29 CFR 1910.27, or provide equivalent or better protection against fall hazards.
Enclosed is proposed 29 CFR 1910, Walking and working surfaces and Personal Protective Equipment (Fall Protection Systems); Notice of Proposed Rulemaking, which will be applicable to communication towers when it is finalized. If sections 1910.22, .23, .24, .25, .27 and .28 of the proposed standard are met, the employer is considered to be in compliance with the OSH Act in regard to the hazards addressed by the proposed standards.

We appreciate your interest in employee safety and health. If we can be of any further assistance, please do not hesitate to contact us.
INTRODUCTION

July 25, 1983

This is in response to your letter of May 6, 1983, concerning instruction and warning labels on a four-foot step ladder.

The Occupational Safety and Health Administration (OSHA) ladder standards do not require manufacturers to label ladders with instructions and warnings. Manufacturers of ladders attach the labels to provide information for safe use, and to protect themselves in liability action from any misuse of the ladder.
OSHA Instruction STD 1-1.3

October 30, 1978

OSHA PROGRAM DIRECTIVE #100-57


1. Purpose

The purpose of the directive is to give guidelines on citing 29 CFR 1910.27(d)(5) or 29 CFR 1926.450(a)(5) Ladders, General Requirements, which adopts ANSI A14.3-1956, Safety Code for Fixed Ladders, Section 6.5 Ladder Safety Devices.

2. Directives Affected

None (for original issuance). 1926.450 has since been put in "Reserved" status, replaced by 1926.1053.

3. Background

A recent Review Commission Judge's decision vacating the Secretary's citation for violation of 29 CFR 1910.27(d)(5) raised questions about OSHA's interpretation of the standard.

1910.27(d)(5) and ANSI A14.3-1956, Section 6.5 provides:

Ladder safety devices. Ladder safety devices may be used on tower, water tank and chimney ladders over 20 feet in unbroken length in lieu of cage protection. No landing platform is required in these cases. All ladder safety devices such as those that incorporate lifebells, friction brakes, and sliding attachments shall meet the design requirements of the ladders which they serve.

4. Action

a. OSHA's past position to cite employers for violation of 29 CFR 1910.27(d)(5) or 29 CFR 1926.450(a)(5) whenever an employer was utilizing a counterweight device without a friction brake is hereby rescinded. 1910.27(d)(5) or 1926.450(a)(5) does not require an employer to utilize any ladder safety device and therefore employers should not be cited under this standard for failure to have such devices or for failure to have a device which satisfies the definition of ladder safety device as set forth at 29 CFR 1910.27(e)(13), or ANSI A14.3-1956, Section 2.13. Employers shall, however, be cited under 1910.27(d)(5) or 1926.450(a)(5) where they are utilizing a ladder safety device which does not meet the design requirements of the ladders which they serve.

b. Under conditions where the ladder safety device does not meet the requirements for a ladder safety device as defined by 29 CFR 1910.27(e)(13) or ANSI A14.3-1956, Section 2.13 or where no ladder safety device is provided, appropriate standards in 29 CFR 1910.27(d)(1), Cages or Wells, and (d)(2) Landing platforms, or 29 CFR 1926.450(a)(5) shall be cited.

5. Effective Date

This directive is effective upon receipt and will remain in effect until canceled or superseded.
OSHA Instruction STD 1-1.9

December 29, 1978

SUBJECT: 29 CFR 1910.27, Clarification of Fixed Ladders, Relative to Manhole (Rungs) Steps

A. Purpose. This instruction revises OSHA Instruction STD 1-1.2, paragraph 4.b. by including spacing dimensions for individual rungs or steps meeting good engineering practices.

B. Scope. This instruction applies OSHA-wide.

C. Cancellation. OSHA Instruction STD 1-1.2 dated July 3, 1976, (previously OSHA Program Directive #100-33), is canceled.

D. Action.

1. The CSHO shall continue to enforce the standard as written for fixed ladders in all instances except for manhole steps in walls or risers or conical top sections of manholes.

2. The CSHO shall assure that individual rungs or steps used for access or egress, embedded in the walls of risers or the conical top sections of manholes shall be safe, well constructed and installed in accordance with good engineering practices. Specifically, individual rungs or steps shall be uniformly spaced from 12 inches to 16 1/2 inches.

   a. The CSHO will cite the use of manhole steps in manholes not designed to prevent the foot from sliding off the end as a violation of both the present and proposed standards.

   b. The CSHO will cite the use of steps found to be unsafe due to corrosion as a violation of the General Duty Clause, if the conditions warrant it.

E. Federal Program Change. This directive describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this change is forwarded to each State designee.

2. Explain the technical content of the change to the State designee as requested.

3. Ensure that State designees are asked to acknowledge receipt of the plan change in writing, within 30 days of notification, to the Regional Administrator. This acknowledgment should include a description either of the State's plan to implement the change or of the reasons why the change should not apply to that State.

4. Review policies, instruction, and guidelines issued by the State to determine that this change has been communicated to State program personnel. Routine monitoring activities (accompanied inspections, spot check visits, and case file reviews) shall also be used to determine if this change has been implemented in actual performance.

F. Background. Some OSHA personnel have been enforcing the suggested design, Figure D-1, depicted in 29 CFR 1910.27, as the overall design criteria for fixed rungs installed in the walls or risers or conical top sections of manholes. This is in error, since:

1. On December 13, 1971, the Office of Standards Development advised the American Concrete Pipe Association that the language used in 29 CFR 1910.27 does not indicate specifications for manhole steps in conical-shaped sanitary sewer manholes.

2. The American Society for Testing Material (ASTM) specifications for "Precast Reinforced Concrete Manhole Sections," C-478, specifies wall thicknesses according to design requirements, thereby approving walls as thin as 4 inches and precluding the 6-inch embedments as suggested in Figure D-1. Appurtenances penetrating the manhole walls are forbidden, thus the requirements for at least 3-inch embedment for individual steps as specified in the proposed standard are reasonable.
3. The proposed revision of Subpart D, "Walking and Working Surfaces," Federal Register, September 6, 1973, addresses itself to the design specifications for fixed embedded steps in walls or risers or in the conical top sections of manholes. The dimensions are entirely different from those depicted in Figure D-1.
OSHA Instruction STD 1-1.12

JUN 20, 1983

Subject: Application of 29 CFR 1910.27, Fixed Ladders, to Fixed Ladders Used In Emergency Situations

A. Purpose. This instruction clarifies the meaning of 29 CFR 1910.27 as it applies to the protection of employees exposed to falling from fixed ladders used only as a means of escape from fire and other emergency situations.

B. Scope. This instruction applies OSHA-wide.


D. Action. Regional Administrators and Area Directors shall ensure that the interpretative guidelines given in this instruction are addressed when inspecting sites with fixed ladders used only during fire and other emergency situations.

E. Federal Program Change. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this change is forwarded to each State designee.
2. Explain the technical content of the change to the State designee as requested.
3. Ensure that State designees are asked to acknowledge receipt of this Federal program change in writing, within 30 days of notification, to the Regional Administrator. This acknowledgment should include a description either of the State's plan to implement the change or of the reasons why the change should not apply to that State.
4. Review policies, instructions and guidelines issued by the State to determine that this change has been communicated to State program personnel. Routine monitoring activities (accompanied inspections and case file reviews) shall also be used to determine if this change has been implemented in actual performance.

F. Background. OSHA has historically established that the requirements of 29 CFR 1910.27 for cages, platforms, or similar fall prevention protection devices are not appropriate for fixed ladders on structures where the fixed ladders are used only as a means of access by fire fighters, other emergency personnel, or escape for employees in fire and other emergency situations. Sometimes these ladders are not provided with employee protection as presently required in 29 CFR 1910.27, when they are intended to be used only in an emergency. In these circumstances, it is sometimes more hazardous to install a cage, well, landing platform or ladder safety device pursuant to the standard than it is not to comply. A cage, or well, etc., may interfere with fire fighting or other rescue equipment, or employee escape from fire or other emergency situations.

G. Guidelines. This instruction provides performance criteria for fixed ladders used only as a means of access for fire fighters and other emergency personnel, or escape for employees in fire and other emergency situations.

1. Employers must establish and implement adequate administrative controls such as barricades and signs to prevent non-emergency use of fixed ladders which are meant for fire fighter use and emergency escape only.
2. In the event the employer does not provide adequate administrative controls such as barricades or signs and employees use an emergency ladder for other than its intended purpose, the employer may be appropriately cited under 29 CFR 1910.27.
3. Fixed ladders not equipped with cages, landing platforms, ladder safety devices, or other forms of employee protection, in some situations may be allowed as a means of access for fire fighters and other emergency personnel, or escape for employees in fire and other emergency situations. These guidelines are provided because it may be more hazardous to comply with 29 CFR 1910.27 than not to comply.
This interpretation letter states that the fixed ladder standard, 1910.27, does not apply to fixed ladders used for safe means of egress from bulk storage elevators and other like structures. However, a violation of the general duty clause may be warranted where employees misuse emergency egress ladders.

(NOTE: This standard has not been amended since issuance.)

INTERPRETATION 29 CFR 1910.27
April 29, 1977

MEMORANDUM
SUBJECT: Application of 29 CFR 1910.27 Fixed Ladders, to Fixed Ladders Used Only as a Safe Means of Egress from Fire and Like Emergencies from Bulk Storage Structures

This is in response to your communication of March 17, 1977, regarding previously issued interpretative information on the Subject and the current interpretation.

OSHA has historically established that 29 CFR 1910.27 Fixed Ladders, does not apply to fixed ladders on grain or other bulk storage elevators and structures where the ladders are used only as a safe means of egress from fire and like emergencies. As your communication indicated, the National Office, (City) Regional Office and the (City) Regional Office have established the position. In addition, the news media and trade publication have disseminated OSHA's position.

Since it has been historically established that OSHA’s fixed ladder standard does not apply to the described situations; a violation of the General Duty Clause of the Act may be considered where conditions warrant. One example, as you indicated, is where an employee misused an emergency ladder and the employer had no administrative controls to prevent its misuse. In your communication, the employer's inquiry of January 12, 1977, refers to fixed exterior ladders with a height of approximately 140 feet to the bin roof. Ladders of this height that are not equipped with cages, landing platforms, safety devices, or other forms of employee protection are considered hazardous when used. The Life Safety Code (NFPA 101-1976) recognizes this hazard in Section 15-4.3, Special Provisions for Grain or Other Bulk Storage Elevators. The Section requires an exterior stair or a basket (caged) ladder type fire escape from the roof of each storage annex to ground level.

Hopefully, the revision of Subpart D of Part 1910 will address this situation.
This letter addresses whether a separate line is required when raising or lowering an employee in a full body harness attached to a winch line and whether a winch line can be used as a safety line for an employee ascending or descending a fixed ladder. OSHA does not presently have a standard covering these issues. Therefore, OSHA addresses the issues through its enforcement of Section 5(a)(1) of the OSH Act. OSHA requires a separate safety line as a back-up personal fall protection system for employees suspended in full body harness from winches. The single point suspension system and the separate safety line system need to be attached to independently supported separate anchor points. Also, a winch line can be used as a safety line for an employee ascending or descending a fixed ladder.

Under Section 5(a)(1) OSHA requires a separate safety line as a back-up personal fall protection system for employees suspended in full body harness from winches. The single point suspension system and the separate safety line system need to be attached to independently supported separate anchor points.

The OSHA safety standard 29 CFR 1910.27, fixed ladders, requires cages, wells, or ladder safety devices on ladders of more than 20 feet in length. When an employee is ascending or descending a fixed ladder, a winch line may be attached to an employee's full body harness to act as a personal fall protection system without an additional safety line being required, when the supporting cable is straight for its entire length and the operator does not sway the employee or fix the cable to any intermediate points to change his original path of travel. The winch line must be continuously adjusted in length during such use, to avoid excessive vertical forces on the employee, tripping hazards, and falls against a slack winch line.

OSHA will accept protection to employees from hazards when the employer's action provides equal or greater employee protection than that required by an applicable standard. This authority is provided through the enclosed de minimis violations policy. For lengths of climb on fixed ladders which under 29 CFR 1910.27 require ladder cages or safety devices, the use of a winch line supporting an employee in full body harness would constitute a de minimis violation.
ABSTRACT This memorandum addresses rung spacing for fixed ladders. A rung spacing of 13.75 inches is acceptable, even though it does not coincide with 1910.27(b)(ii), but should be noted as a de minimis violation.

INTERPRETATION 29 CFR 1910.27(b)(1)(ii)

February 26, 1982

MEMORANDUM

SUBJECT: 29 CFR 1910.27(b)(1)(ii) (Rung Spacing)

29 CFR 1910.27(b)(1)(ii) requires the distance between rungs, cleats, and steps shall not exceed 12 inches and shall be uniform throughout the length of the ladder. However, the 13.75 inch uniform spacing is acceptable and should be noted as a de minimis violation.
This interpretation letter discusses de minimis notices for ladders with rung lengths that do not comply with the Fixed Ladders standard. A de minimis notice may be issued if the clear minimum 16" length of rungs is not in strict compliance with the Fixed Ladders standard, 1910.27.

(NOTE: The standard is known as the "Fixed Ladders" standard.)

This is in reference to your request for a variance from Section 1910.27(b)(1)(iii) - Fixed Ladders, Rungs and Cleats, of the Occupational Safety and Health Standards.

You have indicated that your 37 foot fixed metal ladder meets all the specifications of 29 CFR 1910.27(b)(1)(iii) in that the clear length of rungs are 14 1/2" rather than 16" as required by the standard.

A review of your application indicates that a variance is not the proper procedure in this situation. A Program Directive has recently been issued to provide guidance to the OSHA field offices concerning the use of de minimis notices. A de minimis notice may be issued in a situation where there is not strict compliance with a standard, and the deviation from strict compliance does not affect safety and health. A de minimis notice carries no penalty and requires no abatement.

After studying your variance application and having discussion with the (City) Area Office, it has been determined that your situation would appear to meet the conditions for a de minimis notice.

No further action will be taken on your request for a variance.
This interpretation letter addresses rung spacing for fixed ladders. Standard, 1910.27(b)(1)(ii) for "Ladders, Rungs, Cleats, and Steps" is met in the case where a uniform maximum spacing of 12" is achieved and should be considered a de minimis violation.

March 20, 1975

Mr. X has asked me to respond to your letter dated March 10, 1975, requesting a variance from Section 1910.27(b)(1)(ii) Fixed Ladders - Rungs and Cleats, of the Occupational Safety and Health Standards.

Our technical staff has carefully reviewed your application. It has been determined that you are meeting the intent of the standard which is to provide a uniform clear distance of 12" equally spaced between rungs of your ladders on the described project.

You have stated that your first step will vary from 4" to 12" above the concrete slab at grade or above the lower platform landing. You have further stated, that the top of the ladder and the center line of the top rung would be at the same elevation. All other rungs on your fixed ladders will be equally spaced at 12". It would appear that you are providing uniform spacing of rungs for the user of the ladders.

The intent of this standard is to eliminate a continuing change of the uniform distance between rungs. This is not the case in your situation. Therefore, a variance is unnecessary.
STANDARD NUMBER: 1910.27(d)(2)
INFORMATION DATE: 830225

ABSTRACT: This interpretation letter states that hinged rest platforms cannot be used for fixed ladders. Furthermore, hinged rest platforms cannot be used in lieu of landing platforms on fixed ladders. Fixed ladders used exclusively for emergency escape are exempted from the platform requirements.

INTERPRETATION: 29 CFR 1910.27(d)(2)

February 25, 1983

This is in response to your communication of February 8, 1983, addressed to Mr. S, regarding an illustration of a fixed ladder with cage using a hinged rest platform. This also confirms a telephone conversation with a member of my staff on February 23, 1983.

The Occupational Safety and Health Administration (OSHA) standard on fixed ladders, 29 CFR 1910.27, does not allow the use of hinged rest platforms, as illustrated in your design drawing, in lieu of landing platforms. Fixed ladders used exclusively for emergency escape are exempted from the 29 CFR 1910.27 platform requirements.

The three (or more) national manufacturing firms currently building and selling a similar type of ladder cage rest platform under a disclaimer; "complies with OSHA requirements" have apparently been misinformed in this matter. If you will mail to me the names and addresses of the three manufacturers, we will provide them with our position for the landing platform requirements.
platfor

OSHA regulation 1910.27(d)(2) and ANSI A14.3-1956 Safety Code for Fixed Ladders call for rest
platforms whenever ladders are in excess of 20 feet. We are currently working on a storm sewer project
Centimeter

Inches

MANUFACTURED TO AIIM STANDARDS
BY APPLIED IMAGE, INC.
which includes ten manholes which exceed 20 feet in depth. These manholes vary in depth from 20'-5" to 28'-10" with the majority being in the 24'-25' range.

If these regulations apply to the manholes, a rest platform would be required at the mid-point of each manhole. We believe that this platform would be a dangerous hazard rather than a safety device in this particular application. When a man descends into a storm manhole, he is required to wear a safety harness attached to a cable, and to have a second person standing at the top of the manhole. The most common hazard in descending into the sewer system is to be overcome by sewer gases that are common in this type of system. When this occurs, the man at the surface must pull the worker out of the manhole. A rest platform would be detrimental to this process, and could actually prevent the worker from escaping the manhole. Therefore, we are quite concerned about the danger posed by the installation of a landing platform.

This matter was discussed with Mr. R. at the (City) Office at the Department of Labor - OSHA, and he checked with your office for an interpretation. It is my understanding that this interpretation agreed that a landing platform was not applicable to this application, but that a ladder safety device, as described in ANSI standard A14.3-1974, Article 6 would be required. Our design is proceeding on the basis of a ladder safety device, but we would appreciate confirmation of your interpretation to this effect in writing as soon as possible.
This interpretation letter addresses the DOE-adopted Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1910.27(c)(6) concerning the minimum step across distance from the nearest edge of a ladder to the nearest edge of equipment or portion of a structure.

This interpretation is in response to a January 25, 1993, request from a DOE Site Office regarding the appropriateness of classifying as a de minimis nonconformance a platform landing that extends 1 inch over the top rung of a ladder into the climber's side of the ladder. This translates into a step across distance of MINUS 1 inch. The following was stated by the requestor: "An earlier review ... by the DOE Site Office identified the nonconformances [480] as items not within the de minimis scope of the Department of Energy (DOE) OSHA Implementation Guide".

The minimum step across distance of 2 1/2 inches as stated in 29 CFR 1910.27(c)(6) is necessary for hand space and to eliminate potential trip hazards that could result in serious injuries. The information provided in the facility's "Fixed Ladder Interpretation Data Sheet, for Ladder: #L-326-CF- L17B" states the ladder has a step across distance of "minus 1 inch". This 1 inch-protrusion creates a trip and/or fall hazard that poses the potential for serious injury.

The definition of de minimis is stated in CPL 2.45B CH3, June 15 1992, as: "De minimis violations are violations of standards which have no direct or immediate relationship to [employee] safety or health." In contrast, an other than serious nonconformance is one in which there is a direct and immediate relationship between the nonconformance condition and employee safety and health but not to the extent that the resultant injury is death or serious physical harm. A serious nonconformance indicates that a substantial probability of death or serious physical harm could result.

Therefore, since it may cause an injury, the condition of this particular ladder as described by the facility, does not meet the criteria of a de minimis nonconformance. Any step across distances less than the required 2 1/2 inches but no closer than 1 1/2 inches to the top rung of the ladder may be considered as de minimis. However, the rationale for doing so would have to consider the potential, if any, for physical harm or injury. A case by case on-site review should be conducted by a qualified individual, who looks at the most credible outcome that could result from a mishap associated with the nonconformance condition. When performing such a review, maximum professional discretion must be exercised in determining the point at which nonconformance with this standard can be viewed as de minimis.
This interpretation concerns the acceptability of using a four-inch steel channel as a stringer (side rail) on a fixed ladder. Using such a channel would be acceptable if it provides an adequate gripping surface and does not present a hazard to the employee.

The Occupational Safety and Health Administration (OSHA) standard 29 CFR 1910.27 (b)(2) states that rails for fixed ladders shall have adequate gripping surfaces without sharp edges, splinters, or burrs. Therefore, the answer to your question would depend on the employee's ability to grip the rail surface. If the channel provides an adequate gripping surface with no hazard to the employee, then it would be an acceptable side rail.
OSHA Instruction STD 1-3.3

NOV 12, 1985

Subject: Building Anchors Used for Intermittent Stabilization of a Suspended Powered Platform in Window Washing Operations and Light Building Maintenance

A. Purpose. This instruction provides guidance to ensure appropriate enforcement of certain requirements pertaining to powered platforms for exterior straight face building maintenance. This instruction does not apply to construction nor two-point suspension scaffolds used in general industry. Requirements for scaffolds used in construction are contained in 29 CFR 1926.451, and general industry application of two-point scaffolds are contained in 29 CFR 1910.28.

B. Scope. This instruction applies OSHA-wide.

C. Reference. OSHA Instruction CPL 2.45A, April 18, 1983.

D. Action. OSHA Regional Administrators/Area Directors shall ensure that the guidelines in this instruction are adhered to in complying with 29 CFR 1910.66(b)(3), Powered Platforms for Exterior Building Maintenance.

E. Federal Program Change. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this change is forwarded to each State designee.

2. Explain the technical content of the change to the State designee as requested.

3. Ensure that State designees are asked to acknowledge receipt of this Federal program change in writing, within 30 days of notification, to the Regional Administrator. This acknowledgment should include a description either of the State's plan to implement the change or of the reasons why the change should not apply to that State.

4. Review policies, instructions and guidelines issued by the State to determine that this change has been communicated to State program personnel. Routine monitoring activities (accompanied inspections and case file reviews) shall also be used to determine if this change has been implemented in actual performance.

F. Guidelines.

1. Intermittent Tie-in Stabilization System. The building anchor system will be installed as described herein.

   a. The building anchors will be located in vertical rows, with an attachment of maximum elevation at every third floor (approximately 45 feet) and spaced horizontally to allow a stabilization attachment for each of the two platform suspension wire ropes. The minimum tensile strength of the anchor bolt shall be 600 pounds.

   b. As the suspended platform descends past the elevation of each anchorage, each of the two platform occupants will secure a "quick connect - quick disconnect stabilizer-tie" between a suspension wire rope and a building anchor. Each stabilizer-tie will contain an adjustable lanyard to allow positioning each suspension wire rope vertically at a predetermined angulation that will provide at least 10 pounds of pressure against the building at the lowest point of the tie-in span. The process will be repeated as each elevation of tie-in anchorage is reached during the descent of the platform.

   c. This process will be reversed, that is, the stabilizers will be removed as each elevation of the stabilization tie-ins is reached as the platform ascends. Said removal is ensured in that the platform will be provided with electrical interlocks to interrupt power to its hoists in the event either interlock contacts a stabilizer during the ascent of the platform.
e. The engineering analysis documented by a professional engineer will substantiate the method of intermittent stabilization for a suspended powered platform system. Further, such design and method shall provide a condition for employment that will be as safe and healthful as required by the referenced standard.

(1) Platform. The platform will be provided with a taut 5/16-inch diameter horizontal galvanized wire rope static line secured to a structural member at both ends of the platform and at the mid-point of the rear guardrail system so that each section of the wire rope static line acts as an independent wire rope lifeline to support either operator in case of a suspension rope failure. The configuration of the attachment must be such that the combined loads of two persons will not be exerted on any attachment at the same time in an emergency. The structural member for the attachment must sustain at least a static load of 4,000 pounds.

(a) This powered platform (scaffold) must not be used during any period of wind velocity above twenty-five (25) miles per hour. An instrument which will accurately measure wind velocity shall be located on the roof of the building.

(b) The suspension rope angulation shall be designed into the suspension system and the tie-in lanyard so that the platform shall exert a minimum force of approximately 10 pounds against the face of the building.

(c) The platform floor shall have openings or gaps to facilitate upward air flow.

(d) The platform shall be no greater than 32 feet in length nor 3 feet in width.

(e) The platform shall also be equipped with building face rollers.

(f) The platform shall be provided with a sensing device that will interrupt its power supply in the event that the platform contacts the tie-in lanyard assembly, to prevent further ascent and ensure that the lanyard assembly can be disengaged from the building anchor.

(2) Safety Monitor. The employer shall designate a safety monitor capable of identifying and correcting hazards associated with the intermittent tie-in system for powered platforms.

(a) The individual designated to be a monitor may be a supervisor, or a co-worker engaged in the performance of work on the powered platform. The monitor must be trained and capable of identifying existing and predictable conditions and actions, which are hazardous to employees utilizing the intermittent tie-in system. These hazardous conditions may involve platform and auxiliary equipment, building anchors, anemometer, personal protective equipment, electrical systems and communications. Employee actions that must be monitored are adherence to established procedures, use of personal protective equipment and radio communications with building management personnel.

(b) The monitor will warn employees of hazardous conditions and unsafe actions on a roof or a powered platform, when it appears to the monitor that they are unaware of a hazard or are acting in an unsafe manner.

(c) The monitor must be authorized to take prompt corrective action in eliminating hazardous conditions. The monitor must then report to the employer any hazardous conditions which were observed and corrected; and submit recommendations to the employer for any condition which needs future correction.
(d) The monitor must be able to observe employees and be close enough to verbally communicate with them.

(3) Personal Protective Equipment. Each employee on the working platform of powered platforms shall be provided with personal protective equipment as follows:

(a) A body harness with a short lanyard and an automatic locking grab attached to a horizontal static line on the working platform. The locking grab must have a minimum breaking strength of 4,000 pounds.

   i The body harness, the lanyard and other components, including fastening means and anchorages to the working platform, shall have a minimum breaking strength of 4,000 pounds.

   ii The attachment to the static line on the platform must have a breaking strength of 4,000 pounds suitable for one person.

(b) Fastening devices on the lanyard shall be of the self-closing tapes equipped with a double locking device to prevent accidental opening of the fastening device.

2. Employee Training. Operators of powered platforms shall have the knowledge and training to operate equipment in accordance with manufacturer's recommendations and to perform all operations of the intermittent stabilization system.

3. Additional Employer Responsibilities. The employer shall comply with all provisions contained in this instruction and with all other applicable provisions of 29 CFR 1910.66, such as requirements for emergency communications, maintenance inspections and tests, etc.

4. Procedures. The employer shall ensure that all procedures required for the proper and safe functioning of the intermittent stabilization system are carried out.

G. Background. In many high-rise buildings constructed prior to passage of the Occupational Safety and Health Act of 1970, building face guiding members were not installed for powered platforms intended to be used for exterior building maintenance, which included window washing. In addition, some newly constructed buildings, because of the design, types of materials used for exterior walls and the aesthetics, are not constructed with building face guiding members. In situations where it is not practical to install the building face guides as required in 29 CFR 1910.66(b)(3), powered platforms installed and used in a safe manner as described in this instruction will provide an alternative safe system.
OSHA Instruction STD 1-3.3 CH-1

Subject: Page Change for OSHA Instruction STD 1-3.3

A. Purpose. This instruction transmits a page change to OSHA Instruction STD 1-3.3, November 1, 1982.

B. Scope. This instruction applies OSHA-wide.

C. Action. Replace pages 1 and 2 of OSHA Instruction STD 1-3.3, November 1, 1982, with the attached new pages. File this transmittal page after the signature page of the instruction.

D. Explanation. The reference to OSHA Instruction CPL 2.11A has been changed to the Field Operations Manual (FOM), OSHA Instruction CPL 2.45A. The guidelines on de minimis violations were incorporated into the FOM thereby canceling OSHA Instruction CPL 2.11A in an OSHA Notice CPL 2 which was issued on April 11, 1983. This instruction does not apply to two-point suspension scaffolds which are appropriately covered in the General Industry standard, 29 CFR 1910.28.
Installation of exterior building maintenance equipment described by existing OSHA standards (1910.28, 1910.66) must provide for at least the specified minimum employee safeguards for exterior building work platforms used for window washing. There is no restriction on the maximum height of either two-point suspension scaffolds or powered platforms. Installation of new system concepts must be constructed to assure employee safety and must be free of recognized hazards.

29 CFR 1910.28(g); 1910.66

July 17, 1985

This is in response to your letter of June 10, 1985, in which you request clarification and the applicability of regulations pertaining to exterior building work platforms used for window washing.

The Occupational Safety and Health Administration (OSHA) standards do not specify requirements to which buildings must be constructed. The Occupational Safety and Health Act of 1970 (the Act) requires employers to: (1) furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees; and (2) comply with OSHA standards. Therefore, employers must comply with existing OSHA standards where they are applicable to the circumstances. However, the employer is not limited only to those workplace procedures for which an OSHA standard is applicable. In any event, the employer remains obligated under the Act to provide workplaces free of recognized hazards. A copy of the Act is enclosed for your reference.

What this all means to individuals in the process of designing and constructing a building which will require exterior building maintenance equipment is the following:

1. Installation of exterior building maintenance equipment described by existing OSHA standards must provide for at least the specified minimum employee safeguards. Temporary installations are regulated by 29 CFR 1910.28, and permanent installations by 29 CFR 1910.66. Presently, there is no restriction upon the maximum height of either two-point suspension scaffolds or powered platforms.

2. Installation of new system concepts, to which existing OSHA standards are not applicable, must be constructed to assure employee safety and must be free of recognized hazards that are causing or are likely to cause death or serious physical harm to employees.

The architects, engineers, design consultants, and owners may select any form of exterior building maintenance equipment that is appropriate. It is not the intent of OSHA to stifle imaginative ingenuity in regard to the use of new concepts for exterior building maintenance; however, the legal obligation of the Act requires that the safety of exposed employees must be assured.

Design codes for exterior building maintenance equipment may be specified by various State and local governments. Where local codes are in effect, they are generally more specific and more stringent than applicable OSHA regulations. They are usually restricted to design and construction parameters and stipulate design constraints. Compatibility with OSHA regulations is seldom an issue. It is prudent to ascertain the local building and safety requirements before considering the impact of OSHA regulations upon a new installation.

Most new buildings and major alterations of older buildings are fitted with exterior building maintenance equipment which complies principally with ANSI A120.1 or ANSI A10.8. Other new imaginative concepts beyond the scope of even the current ANSI standards may also be viable considerations.
OSHA issued an Instruction STD 1-3.3, dated November 1, 1982 (copy enclosed), which specifically addresses an alternative system describing intermittent stabilization of suspended powered platforms regulated under 29 CFR 1910.66. (29 CFR 1910.66 was adopted from ANSI A120.1.) The alternative described is only for use with powered platforms described by 29 CFR 1910.66 and does not permit this option for use with suspended scaffolds regulated under 29 CFR 1910.28. (29 CFR 1910.28 was adopted from ANSI A10.8.) Furthermore, a documented engineering analysis which substantiates the safety aspects of the alternative system is required to be provided by a professional engineer knowledgeable in the field.
This interpretation responds to a letter addressing dangers of wire rope clips used for fastenings while rigging suspended scaffolds. Included is a request to OSHA for adoption of a position concerning the use of wire rope clips (U-clips & fist grips) for powered platforms for exterior building maintenance.

NOTE: The interpretation letter discusses the "Suspended Scaffolding Standard." It is now known as "Safety Requirements for Scaffolding". Additionally, further research on OCIS shows there is no additional supporting documentation for this particular Record ID.

June 18, 1984

Re: Suspended Scaffolds

I am writing this letter following my conversation with Mr. J, Safety Engineer with the Office of Safety Abatement Assistance, and also Ms. J of that office. I had the opportunity to speak with Mr. J in detail about the inherent dangers of wire rope clips used for fastenings while rigging suspended scaffolds (or powered platforms for exterior building maintenance).

I am the attorney for Mr. L, now deceased, and Mr. C, both of (City) who were working as window washers at (Street, City) on (Date), when the suspended scaffold upon which they were working, 12 stories high, collapsed. Mr. L died immediately from this incident, and Mr. C is still hospitalized at the hospital, after both legs have been amputated, and still paralyzed! This incident occurred when the wire rope pulled loose from the wire rope "U-clips."

I have spent the last few months looking into the inherent dangers of wire rope clips. Two basic types are available: (1) U-clips and (2) fist grips. The U-clips are capable of being put on the wrong end, greatly reducing the efficiency of the clip (i.e., the dead end of the cable should never be placed against the saddle of the clip). The fist grip is a newer, more idiot proof clip. Yet, both types carry the inherent danger of under-torquing, over-torquing, or simply tampering. Further, according to the Accident Prevention Manual for Industrial Operations put out by the National Safety Council in Chicago, wire rope clips are the least efficient method of rigging this kind of equipment.

My review of OSHA's Safety and Health Standards 29 CFR 1910.28, entitled "Suspended Scaffolds" reveals no mention at all of wire rope clips. I would like to know whether OSHA approves the use of wire rope clips for powered platforms for exterior building maintenance. Since the standards are apparently silent as the wire rope clips, it is my respectful suggestion that OSHA adopt a position concerning their use.

The American National Standards Institute (ANSI) has, in fact, adopted a position concerning their use. ANSI A 120.1 (1970) 15.7 states as follows:

(d) Wire rope clips (screw or wedge clamps) shall not be used for such fastenings.

Apparently, the ANSI Committee long ago considered the inherent dangers of wire rope clips many years ago. Yet, the manufacturers of these wire rope clips, who must be aware of this ANSI standard, continue to promote the use of these clips for suspended scaffolds. Further, I will bet that over 99% of the users of suspended scaffolds for industrial operations use at least one type of wire rope clip to rig their equipment, probably because they are the quickest and least expensive way to do it.
I know that OSHA shares my alarm at the frequency of serious injuries and deaths that have recently occurred on suspended scaffolds. In the case that I am handling here in Washington, a different type of wire rope fitting would have saved these two men from disaster. I don't know how many other lives have been lost due to the deficiency in wire rope clips.
ABSTRACT  The species of wood to be used for speciality system designed scaffolding is no longer specified. Minimum rough full-dimensioned 2" x 9" planks of Dense Select Structural Grade or equivalent must be used for a plank span up to 10 feet, based on the working load exerted on it.

(NOTE: Plank width and span length requirements have changed. Refer to the chart in 1910.28(a)(9).)

INTERPRETATION  29 CFR 1910.28(a)(9)

November 13, 1981

This is in response to your letter of October 22, 1981, concerning the use of Southern Yellow Pine versus the use of Douglas Fir.

Please be advised that we no longer specify what species of wood should be used for speciality system designed scaffolding. Instead, when the plank span is extended to 10' 6" the planks must be rough full-dimensioned 2" x 12' planks of Dense Select Structural Grade or equivalent.
ABSTRACT This memorandum addresses grading designations and the grading system for southern pine scaffold planks. Dense Industrial 72 Scaffold Plank and Dense Industrial 65 Scaffold Plank refers to wood in which 72% and 65%, respectively, is equal in its load carrying capability to clear straight grained Southern Pine.

INTERPRETATION 29 CFR 1910.28(a)(9)

October 23, 1990

MEMORANDUM

1. Mr. J, Lumber Division, Southern Pine Inspection Bureau provided the following information on the designation of scaffold plank under the SPIB rules:

Dense Industrial 72 Scaffold Plank and Dense Industrial 65 Scaffold Plank refers to wood in which 72% and 65% respectively is equal in its load carrying capability to clear straight grained Southern Pine.
This interpretation letter addresses the attachment requirements for window washing equipment. An explanation is provided concerning attachment requirements for window washing equipment as specified in Safety requirements for scaffolding, 29 CFR 1910.28.

(NOTE: Paragraph 4 of the interpretation letter mentions a proposed change to 1910.66. The changes discussed have been made and are described in appendix C of that standard, found in the 1990 edition of Title 29 CFR.)

This is in response to your letter of October 27, 1986, concerning attachment requirements for window washing equipment as required by the Occupational Safety and Health Administration (OSHA) and further confirms your conversation with Mr. J.

Building roof anchorages intended for the support of window washing devices and various suspension systems shall be a permanent part of the structure and shall be sound, rigid and capable of supporting the maximum intended loading without displacement or deformation. (Ref. 29 CFR 1910.28(a)(2) & (a)(26).)

Completely separate anchorages shall be provided to attach worker safety lines (lifelines), which will safely suspend the worker in case of a fall. (Ref. 29 CFR 1910.28(g)(9) & (g)(4).) Additionally, the American National Standards Institute, Inc. (ANSI) has specified in ANSI A10.14, Requirements for Safety Belts, Harnesses, Lanyards, Lifesaving, and Drop Lines for Construction and Industrial Use, that such anchorages must be capable of supporting a minimum dead weight load of 8400 pounds. (Ref. ANSI A10.14-1975, Section 2.5.)

Currently proposed revisions to the OSHA standards at 29 CFR 1910.66 intend to require as a minimum that lifeline anchorages provide for supporting the potential impact load of an employee's fall. However, lanyards and vertical lifelines shall be capable of sustaining a minimum load of 5,000 pounds. (Ref. CFR Vol. 50, No. 14, January 22, 1985, page 2935, Appendix D, paragraph 1(c)(3) & (7).)

Roof anchorages provided to support portable suspension equipment such as boatswains chairs, single point suspension scaffolds and two point suspension scaffolds, shall provide for support, without deformation or failure, of at least four (4) times the maximum intended load and shall be independent of anchorages provided for fall protection systems. (Ref. 29 CFR 1910.28(a)(4),(g)(9), and (j)(4).)

It is therefore logical to assume that the minimum design dead weight load to be expected at roof anchorages will be 5,000 pounds. In any event, conscientious building owners will identify each roof anchorage and the loading it is capable of withstanding. Under 29 CFR 1910.145(c)(3), safety signs shall be used where there is a need for general instructions and suggestions relative to safety measures. The safety sign standard is applicable to the identification of anchorages.
This interpretation letter addresses single point suspension systems used for support of employees while window cleaning. A memo dated March 12, 1991 clarifies statements made in a memo of December 5, 1989 to the (association) in answer to their inquiry of Oct. 16, 1989 concerning single point suspension systems used by window cleaners. In the absence of any other industry consensus safety standard explicitly developed for window cleaning operations, OSHA recognizes ANSI A39.1-A 1988, Safety Requirements for Window Cleaning, as the most up-to-date industry requirements. Until a new standard is promulgated by OSHA, compliance staff will apply Section 5(a)(1) of the OSH Act. OSHA plans to revise 29 CFR 1910, Subpart D, fall protection systems.

MEMORANDUM

SUBJECT: December 5, 1989 letter from Mr. T to Mr. C regarding Descent Control Devices

The purpose of this memorandum is to clarify statements made in the above-referenced letter (attached) regarding the use of descent control equipment by employees performing building exterior cleaning, inspection and maintenance.

Descent control equipment (friction devices such as "(product)s", "racks" and "figure eights") is not covered by existing Occupational Safety and Health Administration (OSHA) standards. Therefore, the Agency addresses the safety of descent control devices through its enforcement of section 5(a)(1) of the OSH Act. Under this approach, OSHA references the safety principles applicable to similar equipment (in this case, boatswains' chairs, single-point and two-point suspended scaffolds) and national consensus standards (such as ANSI A39.1-1987, with addenda A through C, "Safety Requirements for Window Cleaning") insofar as they are pertinent to the subject matter.

As indicated in the December 5, 1989 letter, OSHA allows employees to use descent control equipment, provided that the equipment is used in accordance with the instructions, warnings and design limitations set by manufacturers or distributors. In addition, the Agency expects employers whose employees use descent control devices to implement procedures and precautions, as follows:

1. Training of employees in the use of the equipment before it is used;
2. Inspection of equipment each day before use;
3. Proper rigging, including sound anchorages and tiebacks, in all cases, with particular emphasis on providing tiebacks when counterweights, cornice hooks, or similar non-permanent anchorage systems are used;
4. Use of a separate fall arrest system (including bodybelt, sit harness, or full body harness; rope grab or similar device; lifeline; and anchorage (all of which are completely independent of the friction device and its support system)), so that any failure in a friction device, support seat (or harness), support line, or anchorage system will not affect the ability of the fall arrest system to operate and quickly stop the employee's fall;
5. All lines installed (such as by using knots, swages or eye splices) when rigging descent control devices shall be capable of sustaining a minimum tensile load of 5,000 pounds.
6. Provisions are made for rescue;
7. Ropes are effectively padded where they contact edges of the building, anchorage, obstructions, or other surfaces which might cut or weaken the rope;

8. Provisions are made for intermittent stabilization for descent in excess of 130 feet.

In accordance with ANSI A39.1-1987 (and addenda a-c), emergency descent devices are prohibited for use in window cleaning. That statement pertains to devices designed only for emergency use. The statement would not preclude the use of descent control equipment designed to be used for window cleaning, nor would it preclude the use of devices that are designed for both window cleaning and emergency descent, provided these devices are used in accordance with the guidance outlined in this memorandum.

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SOURCE LETTERS
DEC 5, 1989

This is in response to your letter of October 16, regarding single point suspension systems used for the support of employees while window cleaning.

The Occupational Safety and Health Administration (OSHA) is concerned for the safety of window washing workers. OSHA does not intend to prohibit safe work practices used by window cleaners.

In the absence of any other industry consensus safety standard explicitly developed for window cleaning operations OSHA recognizes the ANSI A39.1a-1988, Safety Requirements for Window Cleaning, as the most up to date industry requirements. It is the only authoritative source available to OSHA which delineates the safety requirements pertinent to this industry, and with respect to the hazards addressed by that ANSI standard, OSHA treats compliance with that standard as compliance with the Occupational Safety and Health Act (OSH Act).

The general duty clause of the OSH Act, section 5(a)(1) provides: "Each employer shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees". In the context of window cleaning, the danger of injury or death which results from the failure, malfunction or misuse of suspension equipment is, we believe, a well recognized hazard within the meaning of the general duty clause. A major focus, therefore, of an OSHA inspection of window cleaning operations is to determine whether the employer has rendered the workplace "free from" this recognized hazard.

When OSHA issues a citation under the general duty clause it may use, among other information, an industry consensus standard such as the ANSI A39.1A-1988, Safety Requirements for Window Cleaning, as evidence of both the recognition of the hazard and the feasible measures that may be taken to eliminate or at least reduce that hazard. For example, the consensus standard, ANSI A39.1(a) at section 6.2, describes the use of fall protection equipment independent from the primary support system, which is strong evidence that serious fall hazards are associated with the use of suspension systems. Therefore, OSHA may determine a violation of the OSH Act exists regarding the use of single point suspension systems, wherever their use does not comply with the requirements of the ANSI A39.1A-1988 standard and whenever alternative precautionary measures are not being used to prevent the occurrence of a serious injury or death of a worker.

We also believe that the consensus standard provides strong evidence of feasible and useful measures which window cleaning employers may take to meet their statutory obligation under the general duty clause. However, it is perhaps well to note that, under the general duty clause an employer is free to use whatever means and methods he chooses so long as the statutory mandate of making the workplace free from recognized hazards is met. Although OSHA regards compliance with the provisions of ANSI A39.1A-1988, as meeting the window cleaning employer's duties under section 5(a)(1), an employer could conceivably fulfill his statutory obligation by taking other measures. Please be aware, however, that OSHA would look very closely at such alternative measures to determine whether the hazard previously described has truly been eliminated from the workplace. It is for that reason that we believe that most employers will be best served by adhering to the ANSI consensus standard provisions.

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Several companies engaged in window cleaning which require the use of single point suspension systems by their employees have implemented very demanding safety procedures which are acceptable under the OSH Act. The most notable procedures used by these companies include: extensive training required of employees before they are permitted to descend along a building, complete inspection of equipment before each days use, proper rigging, the use of an emergency lifeline (drop line) lanyard and body belt or harness which is wholly independent of the primary support system and a rescue system for workers in need. It is apparent that workers who are fully qualified riggers, physically fit, provided with adequate and reliable equipment, and not time constrained on the job, can accomplish the tasks safely.

Reports indicate that damaged equipment components, misuse of support ropes and improper rigging exist. OSHA concern for the safety of these workers is heightened by the knowledge of several fatal falls by window cleaners while suspended from single point suspension systems. Specific incidents are noted by Enclosure A.

Until a new standard is promulgated by OSHA, compliance staff will apply Section 5(a)(1) of the OSH Act to single point suspension systems used by window washers. Workers suspended by these systems should be secured to the sides of the building in a manner that will stabilize the suspension system. (In contrast, note Enclosure B) The ANSI A39.1 standard provides that powered single point and two point suspension scaffolds utilize intermittent stabilization for descents of greater than 130 feet. (Ref. ANSI A39.1, Sections 10.4.2(c) and 10.4.3(b)) and powered boatswain's chairs utilize intermittent stabilization where drop heights exceed 75 feet (Section 6.1.3). Therefore, OSHA believes that, all suspension systems should be stabilized when drops of more than 130 feet are attempted.

Building owners must be aware that, roof attachment points shall be identified and labeled in accordance with 29 CFR 1910.145(c)(3), as noted in Enclosure C, and must provide sufficient structural support to securely anchor suspension system components. Rigging should effectively comply with section 6.3 of ANSI A39.1A-1988. Independent safety belts and lifelines should provide for sufficient worker support such as described by Section 6.2 of ANSI A39.1A-1988 or at 29 CFR 1910.56(i), as noted in Enclosure D. Emergency recovery procedures should be provided for safe emergency recovery of persons from suspended work locations. Recovery equipment which is necessary for implementation of the recovery procedure should be available at each job location.

Among the issues OSHA plans to address in a proposed revision of 29 CFR 1910, Subpart D, Walking and Working Surfaces, include possible application of the requirements for powered platforms (29 CFR 1910.66) to suspended scaffolds and the question of limiting the height at which suspended scaffolds may be used. The proposed revision to Subpart D should be published in the Federal Register during the first quarter of 1990. Your comments on the issues with supporting data will be appreciated and should be submitted, at that time, in response to the Federal Register notice.

In summary, OSHA does not prohibit the safe conduct of window washing from single point suspension systems. OSHA encourages companies and individuals to participate in the development of the new standard for Subpart D of 29 CFR 1910.

October 16, 1989

We have received calls from members of our association from California, Illinois, and other states indicating that you are going to enforce, possibly with fines, the ASME-ANSI - A 39.1 code on the prevention of descent control devices. I happen to be an alternate on the A. 39.1 Committee and have sat on this committee for the last 5 years. Among the few other clauses in this code we do not agree with is this prohibition. All of the North American Contractors, excluding New York City, use descent control systems. Being an international Association, we know our members use these systems in both Canada and Mexico. There has been a subcommittee formed by the A 39.1 Committee to study descent control devices. Our association is also planning to write a code which will cover all window cleaning across the country for existing buildings and new construction.

We request that you wait until this standard can be written which will include the safe and accepted use of descent control systems before you prohibit equipment that you have no statistics to prove unsafe.
An Aluminum Pole Jack Scaffold may be used at a 50 foot shoulder working height. This determination should be considered a good faith review of materials submitted, and does not constitute approval or endorsement of this product by OSHA.

This is in response to your letter of December 8, 1983, requesting a 50-foot shoulder working height for your aluminum pole pump Jack Scaffold.

We have reviewed the test report, photographs, and promotional brochure you sent to this office. It is our opinion that, if the Aluminum Pole Pump Jack Scaffold is used in accordance with the intent of the applicable OSHA Standard 29 CFR 1910.28(a) and 29 CFR 1926.451(y) but at a 50 foot shoulder working height, an employer will be in compliance with the Occupational Safety and Health Act. However, this determination should be considered a good faith review of materials submitted, and does not constitute approval or endorsement of this product by OSHA.

The variable working conditions at jobsites and possible alteration or misapplication of an otherwise safe piece of equipment could easily create a hazardous condition beyond the control of the equipment manufacturer. For those reasons, it is the policy of OSHA not to approve or endorse products.
ABSTRACT
This interpretation letter provides supplemental information regarding 1910.28(j) which serves as a guideline for use of the Sky Genie. 1910.28(j) and 29 CFR 1926.451(I) pertaining to boatswains' chairs are not directly applicable to the "Sky Genie" device manufactured by (Company), but may be used as guidelines for application of the device. The "Sky Genie" can suffice as a personal fall protection device, if properly rigged and can meet OSHA requirements for the function. In addition, the device appears to have application as an emergency escape system when used by trained and qualified personnel, if it meets the OSHA requirements for emergency escape. A single "Sky Genie" system, without other equipment, would not meet the intent of the OSHA requirements as a suspended scaffold or a boatswains' chair. The ANSI/ASME A39.1-1987 prohibits the use of emergency descent equipment for window cleaning operations. Employers may be found in violation of the Act, when window cleaners use such prohibited equipment as the primary means of support.

INTERPRETATION
29 CFR 1910.28(j); 1926.451

January 25, 1989

This is in response to your letter of September 22, addressed to the Assistant Secretary, concerning the (product) device manufactured by (company).

As you are aware, the Federal Trade Commission (FTC) required (company), to revise its claims and advertising methods relative to the device know and "(product)" During a period when the company operated under Chapter Eleven restructuring. The safety warnings and technical advice presently being provided by you to your customers are required under that agreement. Therefore, approval of those notices should come from the FTC. workplace applications of the "(product)" descent control device are required to be in compliance with the regulations of the Occupational Safety and Health Administration (OSHA), or must provide for compliance with the Occupational Safety and Health Act (the Act). In order to comply with the Act, the device shall not subject an employee to a recognized hazard which may cause serious injury or death.

The "(product)" device is presently being advertised as a variable descent system for work, escape and rescue. Unfortunately, the use of the "seatboard system" does not comply with any OSHA regulation or industry consensus standard. The "(product), Seatboard system" should not be confused with a boatswains' chair system since it is not supported by block and tackle and is incapable of upward travel. For that reason, the OSHA standards at 29 CFR 1910.28(j) and 29 CFR 1926.451(I) pertaining to boatswains' chairs are not directly applicable to the "(product)" device, but may be used as guidelines for application of the device.

The "(product)" can suffice as a personal fall protection device, if properly rigged and can meet OSHA requirements for the function. In addition, the device appears to have application as an emergency escape system when used by trained and qualified personnel, if it meets the OSHA requirements for emergency escape (See DFR 1910.272, Appendix 1, 11, enclosed). A single "(product)" system, without other equipment, would not meet the intent of the OSHA requirements as a suspended scaffold or a boatswains' chair.

On June 4, 1987, the American National Standards Institute, Inc. (ANSI), published a new safety standard for window cleaning. That new standard was developed by industry members of the American Society of Mechanical Engineers and is identified as ANSI/ASME A39.1-1987. Copies are obtainable from either of the following sources.

American National Standards Institute, Inc.
1430 Broadway
New York, New York 10018
American Society of Mechanical Engineers  
345 East 47th Street  
New York, New York 10017

The ANSI/ASME A39.1-1987 prohibits the use of emergency descent equipment (equipment which is operational in the down directional only for window cleaning operations. Furthermore, that standard limits the maximum drop height for various fiber rope suspension systems. Based upon this new standard, OSHA believes that it is recognized by industry as a whole that emergency descent equipment is not appropriate for use as the primary support system for window cleaner workers. Therefore, employers may be found to be in violation of the Act, when window cleaners are using such prohibited equipment as the primary means of support.

Other applications of a "(product)" system require alternative employee support via a completely independent support system.

The use of twin lines with a single "(product)" system (without other equipment) is unacceptable since a single failure of the device could cause a worker to fall. The employee would need to be provided with a use, a properly rigged lifeline, lanyard, and body belt or harness, completely separate from and in addition to "(product)" system components. The primary support line of the "(product)" system must be correctly affixed to a hazardous abrasion, especially at a parapet. The primary support system attachment hardware must be capable of not less than 4 times the working loads placed upon it, shall not rely upon knots and shall be augmented with a lifeline/bodybelt system capable of restraining a load of not less that 5400 pounds.

In addition, workplace systems of the "(product)" type, even if used with other fall protection equipment, could be determined to present a serious hazard to employees if the drop height exceeds 75 feet. A portion of ANSI A39,1-1987 concerning this maximum drop height consideration is enclosed.

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SOURCE LETTERS

September 22, 1988

We are not aware of any products failure in our 25 years in business. All accidents or near accidents that we have been made aware of involved user error. With this in mind we will continue to pursue product improvements and will put out an increased effort to reach the user and educate him. Any ideas your agency has in this area would be of great interest to me.

It may be of interest to you to know that several changes in our seatboard system over the years to improve safety came to us as suggestions from OSHA Compliance Officers working in the field.

September 21, 1988

We continue to hear reports back from the field of unsafe practices employed by window cleaners using "(product)" equipment on high rise buildings.

The most common safety infraction is not using at least two (2) lines connected to separate anchor points capable of withstanding a dead weight pull of 5400 pounds.

Anchor points remain a very vital link in the (product) System. The quality of the anchor points is often overlooked by the window cleaner.

Our Technical bulletin covers many safety and operational subjects. I will need not try to cover them all but I will point out a few of them that need additional attention. I would suggest you send a letter all your (product) users reminding them of these points and to study and understand the complete subject matter of our Instruction Manual and Technical Bulletin.

A. Always use at least two (2) lines.

B. Each line must be anchored to separate anchors, each capable of withstanding a dead weight pull of 5400 pounds.

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C. Never use any line that is two (2) years old. There is a natural degradation that occurs from use, ultra violet rays, chemical and etc. Each line is dated on the steel wedges.

D. Inspect your lines daily. Take them out of service if they are two years old or show any evidence of excessive wear or deterioration. See page 1 of our Instruction Manual and Technical bulletin of additional instruction for inspection of rope. Page 7 lists the following 7 points warning:

1. Use only (product) line with (product) variable descent system.

2. (product) line which is a component of the descent system should be replaced after two (2) rapid descent at a speed n excess of 15 feet per second.

3. (product) line must be immediately replaced after two (2) rapid descent at a speed in excess of 15 feet per second.

4. (product) line must be replaced immediately if exposed to any of the following chemicals or other chemicals that would be adversely affect nylon line:
   
   Hydrochloric acid  Acetic acid
   Nitric acid        Oxalic acid
   Muriatic acid     Phenol
   Sulfuric acid     Nitrobenzene

5. (product) line cannot be used as a safety line if it has been used for a utility line.

6. (product) variable descent system are not appropriate or safe for use as a personal emergency or self-rescue devices by individuals who are not familiar with the proper use and application of the device.

7. The safety and speed of descent of users of (product) variable descent system is dependent upon manual control by the user.

E. Only fully trained persons to use (product) equipment.

F. Read and Understand the Instruction Manual and Technical Bulletin before using. A review of this booklet by all persons using equipment is recommended monthly.

G. Offer your 800 number to be kept handy for users to call you to discuss any situation that comes up that might effect their safe operation of this equipment. You can refer anyone to me who may require more detail technical answers than you feel you are qualified to give. My number is 800- 643-2539.

March 5, 1985

Our records show that you have purchased a (product) descent system. Recently, it has come to our attention that users of this product may not be aware of necessary precautions to ensure safe use. Therefore, as a result of an agreement with the Federal Trade Commission, we are contacting all of our (product) customers to alert them about the following precautions

1. THE LINE MAY BREAK if used more than two (2) times or rapid descent at speeds in excess of fifteen (15) feet per second (for example, rappelling or using it as a climbing rope). Replace the line after two (2) rapid descents.

2. DO NOT use the rope as a safety line if it as ever been used as a utility line.

3. Replace the line IMMEDIATELY after it has been used to arrest a free fall of two (2) feet or more.

4. Replace the line IMMEDIATELY if it has been exposed to any of the following chemicals:
5. The number of turns of the line around the shaft of the (product) will NOT automatically ensure a controlled rate of descent. The user must be prepared to manually control the descent in order to prevent an uncontrolled fall.

6. The durability and life of the line will vary significantly depending on how and where it is used. In order to ensure safe use in an emergency, inspect the line carefully before each use. Look for broken, cut or pulled strands, worn fibers, or any hardening or discoloring of portions of the line may break.

AN AMERICAN NATION/STANDARD SAFETY REQUIREMENTS FOR WINDOW CLEANING
ASME/ANSI A39.1-1987

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS
United Engineering Center 345 East 47th Street New York, N.Y. 10017

ASME/ANSI A39.1a-1988

SAFETY REQUIREMENTS FOR WINDOW CLEANING

Provided for every person on such platforms for the attachment of the lanyard from the person's safety belt or safety harness. Lifelines shall conform with ANSI A10.14. Suitable padding shall be provided on all ropes, where necessary, to prevent chafing.

5.3 Rigging

5.3.1 Every manual swinging scaffold shall be rigged and operated under direct supervision of a person experience in rigging such equipment. Means shall be provided to prevent manual swinging scaffolds from swaying.

5.3.2 Roof irons or hooks shall be securely anchored and shall be provided with tiebacks with a breaking strength of 5400 lb or better, so installed that the tension is at right angles to the face of the building. Where the upper block hook does not directly engage the rope of proper strength but not less than 5/16 in. in diameter. Roof irons used over parapet walls shall only be permitted where the structural integrity of the parapet wall is assured by a qualified person.

5.3.3 Other rigging devices shall conform with the applicable portions of a para. 10.3

5.4 Specifications

5.4.1 Manual swinging scaffolds and their components shall be capable of supporting without failure at least four times the total suspended load for which they are intended.

5.4.2 Manual swinging scaffold shall be not less than 20 in. nor more than 30 in. wide, overall. Hangers or stirrups shall be a width to fit the platform. The platform shall be securely fastened to the hangers by U-bolts passed around the hangers and bolted up tightly, or by other equivalent means.

5.4.3 Stirrups or hangers shall be of mild steel, or material of equivalent strength, and shall be placed between 6 in. and 18 in. from the ends of the stringers. Each such anger shall be provided with an eye to receive the tackle hooks and be provided with a means to receive a guardrail, mid-rail, and toeboard. Center irons or other support shall be provided to support the guard rail, mid-rail, and toeboard at intervals of not more than 8 ft.

5.4.4 Roof irons or hooks shall be of mild steel or material of equal strength, and of proper size and design to support their intended load with a factor of safety of four against failure.

5.4.5 Guardrails and tow boards shall be provided at the outside of every manual swinging scaffold. The guardrail shall be not less than 42 in. or more than 45 in. above the platform. A toeboard not less than 3 1/2 in. shall be provided on the outer edge of the platform.
5.4.6 Any fiber hoisting rope shall have a breaking strength of 5400 lb or better. Suitable padding shall be provided on all ropes, where necessary, to prevent chafing.

a) Wire hoisting rope shall be used with a hoisting drum.

b) Where drum hoist are used, they shall be of an accepted design and a pawl shall be provided to engage a ratchet on the winding drum completely. In addition to the pawl, there shall be provided to engage a ratchet on the winding drum completely. In addition to the pawl, there shall be provided a secondary locking device to hold the platform at any level. A positive crank force is required to lower the hoist.

c) Where a hoist other than a drum hoist is used, it shall be of an accepted design and shall be provided with a secondary brake.

6 BOATSWAIN'S CHAIRS

6.1 Use and Application

6.1.1 Boatswain's chairs may be used for window cleaning operations only where the windows cannot be cleaned safely and practicably by other means.

6.1.2 Manual Boatswain's chairs shall not be used where the height of suspension exceeds 75 ft.

6.1.3 When a powered boatswain's chair is used to support persons engaged in window cleaning, its use and design shall comply with the requirements ANSI A10.8. Where the height of suspension exceeds 75 ft, powered boatswain's chairs shall have continuous tie-ins or intermittent stabilization.

6.1.4 Persons shall be trained in the use of boatswain's chairs before they are permitted to use such equipment.

6.1.5 When a boatswain's chair is suspended over an area traversed by pedestrian or vehicular traffic, the ground area immediately below shall be completely blocked by barricades, or an attendant shall be stationed to keep the area clear.

6.2 Safety Belts or Body Harness and Lines

Anyone suspended by a boatswain's chair shall be provided, and shall use, safety belt or harness and a lifeline with a breaking strength of 5400 lb or better. The lifeline shall extend from a separate roof anchorage to grade and must be separate from the rest of the rigging. Lifelines shall conform with ANSI A10.14.

6.3 Rigging

6.3.1 Rope attachment to a block shall be by a thimble an eye splice. Safety hooks shall be used to prevent accidental disengagement.

6.3.2 Work station tie-ins shall be provided and used for all boatswain's chairs to prevent them from swaying during the window cleaning operation.

6.3.3 When a block and tackle is used to support a manual boatswain's chair, a person shall be stationed beneath at all times to assist the window cleaner on the boatswain's chair. Any other means of support must be specifically accepted by the enforcing authority.

6.3.4 All rigging devices shall conform with the applicable portions of parts. 5.3 or 10.3.

6.4 Specifications -- Manual Boatswain's Chairs
6.4.1 Each chair shall be suspended from its four corners by means of rope slings. It shall have a seat not less than 24 in. long by 10 in. wide and, if of soft wood, 2 in. thick (1 1/8 in. if of oak or ash). It shall be reinforced across the full width by cleats securely fastened to each end. A rope or strap guard across the front and rear and 18 in. above the seat shall be provided. The seat may be constructed of material other than wood, provided the material is equivalent in strength to 2 in. of soft wood or 1 1/8 in. of oak or ash. If constructed of material of equivalent in strength, cleats across the full width of the seat shall be provided, unless structural analysis indicates they are not necessary. Other design and construction may be substituted if they can be demonstrated to provide equal safety and strength.

6.4.2 Manual boatswain's chairs, their supports, and all accessories shall be capable of supporting without failure a load of four times the intended load but not less than 1200 lb.

6.4.3 Tackle shall consist of rope with a breaking strength of 5400 lb or better, as well as properly sized blocks.

7 SECTIONAL LADDERS

7.1 Use and Application

7.1.1 Ladders may be used for window cleaning. Ladders shall not be used to clean a window whose top is more than 35 ft above the floor, adjoining ground, or flat roof, or which is so placed or obstructed as to make the method unsafe. Sectional ladders shall not be erected to an assembled length of ladder more than is allowable in accordance with ANSI A14.1.

7.1.2 At all times when a cleaner is working on a ladder over 18 ft long, an additional person shall stand at the foot of it, face it, and hold it with both hands.

7.1.3 All ladders shall be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is one-quarter the assembled length of the ladder (the length along the ladder between the foot and the top support).

7.1.4 Nonslip bases are not intended as a substitute for care in safely placing, lashing, or holding a ladder that is being used on oily, metal, concrete, or slippery surfaces.

7.1.5 Metal ladders shall not be used where direct contact with an electrical installation is possible.

7.1.6 Each ladder shall be inspected daily and those which have defects shall be withdrawn from service for repair or destruction and shall be tagged or marked "Dangerous, Do Not Use." Improvised repairs shall not be made.

7.1.7 Ladders shall be stored in such a manner as to provide ease of access or inspection, and to prevent danger of accident when withdrawing a ladder for use. Ladders, when not in use, should be stored at a location where they will not be exposed to the elements but where there is good ventilation. Wood ladders shall not be stored near radiators, stoves, steam pipes, or other places subjected to excessive heat or dampness. Rungs shall be kept free of grease and oil.

7.1.8 Sectional ladders shall not be used by more than one person at a time nor with ladder jacks and scaffold planks.

7.1.9 The top rest for the ladder shall be rigid and shall have ample strength to support the applied load. Ladders shall not be placed in front of the doors unless the door is blocked open, locked, or guarded. Ladders shall not be placed on boxes, barrels, or other unstable bases to obtain additional height.

7.1.10 When ascending, working upon, or descending the ladder, the user shall face the ladder and should never lean out far to one side.

7.1.11 The hanging of ladders with hooks attached on or over a parapet wall or other projection is prohibited in window cleaning operations.
11. Emergency Escape

The Standard specifies that at least two means of escape must be provided from galleries (bin decks). Means of emergency escape may include any available means of egress (consisting of three components, exit access, exit and exit discharge as defined in 1910.35), the use of controlled descent devices with landing velocities not to exceed 15 ft/sec., or emergency escape ladders from galleries. Importantly, the means of emergency escape are to be addressed in facility emergency action plan. Employees are to know the location of the nearest means of emergency escape and the action they must take during an emergency.
Adjustable mobile work platforms meeting the requirements of ANSI A92.3-1980 do not fall within the scope of 29 CFR 1910.29. Hazardous conditions involving the use of such equipment at the worksite are regulated by the general duty clause.

Apr 15, 1985

This is in response to your letter of March 12, 1985, in which you request our opinion of which Occupational Safety and Health Administration (OSHA) standard is applicable to the manually propelled elevating work platform described by your figure.

The device described by your figure (copy enclosed) appears to be an adjustable mobile work platform within the stated scope of ANSI A92.3-1980. It is not within the scope of 29 CFR 1910.29, which was adopted from ANSI A92.1-1971. Therefore, no specific OSHA standard pertains to this particular type of equipment. Hazardous conditions involving the use of such equipment at the worksite are regulated by the general duty clause, Section 5(a)(1) of the OSH Act. Adjustable mobile work platforms meeting the requirements of ANSI A92.3-1980 would not be in violation of the Act.
ABSTRACT  A variance cannot be granted to use scaffolds without guardrails (1910.29(a)(3)(vii)). Guardrails which are readily raised and lowered may be acceptable.

INTERPRETATION  29 CFR 1910.29(a)(3)(vii); 1905.11

April 20, 1980

This is in response to your letter dated March 17, 1980, requesting a variance from Section 1910.29(a)(3)(vii) - Manually Propelled Mobile Ladder Stands and Scaffold (Towers); Work Levels, of the Occupational Safety and Health Standards.

The requirements of 29 CFR 1905.11(b)(4) are that the conditions, practices, means, methods, operations, or processes used or proposed to be used would provide employment and places of employment to employees which are as safe and healthful as those required by the standard from which a variance is sought.

It appears that you are requesting an exemption from the standard rather than meeting the requirements for a variance. This is not permitted.

We suggest, however, that you investigate the possible use of guardrails which can readily be raised and lowered as necessary, as a solution to your situation. The employees will have to be protected during the time the rails are in a lowered position (such as by a tie-off system) but this should not be a major problem since it would appear that the lowering of the guardrail would only be necessary while the mobile scaffold is being moved to another work location.

Affected employees and their authorized representatives shall be informed of this decision in the same manner they were informed of your request for a variance.
OSHA Instruction STD 1-2.1

October 30, 1978

OSHA Program Directive #100-67

Subject: 29 CFR 1910.36(b)(8) Means of Egress; Fundamental Requirements Relative to Workover Rigs Used to Service Oil Wells

1. Purpose

The purpose of this directive is to provide guidance to the field on the applicability of 29 CFR 1910.36(b)(8) to workover rigs used to service oil wells.

2. Documentation Affected

None.

3. Background

a. The term "workover rigs" as used in this directive means telescoping derricks permanently attached to trucks which are used to service oil wells. Several recent legal decisions have vacated citations issued for violations of 29 CFR 1910.36(b)(8) on workover rigs. Basically, the standard provides for at least two means of egress remote from each other.

b. The citations were vacated on the basis of the exemption in 29 CFR 1910.36(a), which provides:

Exits from vehicles, vessels, or other mobile structures are not covered by this subpart (on means of egress).

4. Action

a. The standards in Subpart E - Means of Egress, Part 1910, shall not be applied to workover rigs because they are mobile structures and parts of vehicles within the exemption set forth in 29 CFR 1910.36(a).

b. Section 5(a)(1) of the Act shall be cited when workover rigs have no means of egress or the means of egress is inadequate, when such conditions present recognized hazards causing or likely to cause death or serious physical harm. The determination whether such conditions pose such hazards must be made on a case-by-case basis.

5. Effective Date

This directive is effective upon receipt and will remain in effect until canceled or superseded.
OSHA Instruction STP 2-2.8B

June 20, 1983
Office of State Programs

Subject: Fire Protection; Means of Egress; Hazardous Materials

A. Purpose. This instruction informs the Regions and State designees that OSHA has promulgated a new standard and establishes requirements for extension of coverage to State and local government employees.

B. Scope. This instruction applies OSHA-wide.

C. Cancellation. OSHA Instruction STP 2-2.8A, January 19, 1981, is canceled.

D. Action. Each Regional Administrator shall ensure that E. of this instruction is followed and implemented.

E. Federal Program Change. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this change is forwarded to each State designee.

2. Explain the technical content of the standard to the State designee as requested.

3. Inform the State that adoption of the standard or of a standard which is at least as effective, is required within 6 months of the date of publication of the Federal standard in the Federal Register.

4. Ensure that the State submits a plan supplement to the Regional Administrator for approval.

5. Inform each State designee that:

   a. Notwithstanding the exemption of State and local governments from coverage of the Federal standard, the State must either promulgate a standard which applies to both the public (State and local government) and private sectors or promulgate two separate standards.

   b. With respect to the private sector, the State:

      (1) Must establish an effective date for its standard which is not more than 6 months from the date of publication of the Federal standard, and

      (2) May delay the effective date for provisions of its standard when the comparable Federal provisions have a delayed effective date, with the provision that the delayed effective date of a State provision may be no later than the effective date of the comparable Federal provisions.

   c. With respect to the public sector (State and local government):

      (1) The State may establish effective dates which are later than the Federal effective dates when the unique circumstances of the public sector justify it. Justification of any later dates must be provided in the standards comparison submitted by the State.

      (2) Each State is required to determine whether "volunteer" fire fighters are deemed employees of the State or local governments for the purpose of coverage under the standard. State designees who are uncertain about coverage under the standard should request an opinion from the State's Attorney General. If the Attorney General's opinion is required to determine
OSHA Instruction STP 2-2.8B (cont.)

coverage, the State shall submit a copy of the opinion to the Regional
Administrator along with the standards package.

(3) States may promulgate a separate standard covering public sector employees
which differs from the State standard for the private sector.

F. Background.

1. Final Rules and Regulations for Fire Protection; Means of Egress; Hazardous Materials, were

2. Under 29 CFR 1953.23(a)(1), States are provided up to 6 months for adoption of this change,
but until State adoption is effected, Federal OSHA will assume enforcement responsibility in all
States.

3. The scope of the Federal standard exempts employees of the State and local governments
because OSHA's authority under the Act does not apply to those governments. However, 29
CFR 1952.11(a)(2) requires that a State provide a program of protection for State and local
government employees which is as effective as the standards contained in the approved plan
applicable to private employers. Therefore, when a State adopts a standard comparable to the
subject Federal standard, it must ensure either that employees of State and local governments
are included within the scope of the standard, or that these employees are covered in a separate
standard.

4. Although the Federal Fire Protection standard does not apply to volunteer fire departments,
the applicability of the Fire Protection standard to volunteer fire departments in State Plan States
depends upon whether volunteer fire fighters are deemed employees of State and local
governments under applicable State law. The question of coverage under State law can
appropriately be addressed by the State's Attorney General. State designees who are uncertain
about coverage under the standard should request such an opinion.

5. There are situations where volunteer fire fighters receive pay for their time spent on-the-job,
receive other types of remuneration, and/or are covered under workers' compensation provisions.
Such factors as these may impact on whether a volunteer is an employee. If volunteer fire fighters
are deemed public employees under State law, then coverage of volunteer fire departments
under the State's public sector would be required. If volunteer firefighters are not considered
public employees under State law, then coverage would not be expected.

6. A memorandum was sent to the State designees requesting their comments on this OSHA
Instruction concerning the coverage of volunteer fire fighters. Generally, the comments
expressed concern for the States to have the flexibility to develop a standard for the public sector
that is different from the OSHA fire protection standard. This instruction will clarify that States may
promulgate a separate standard covering public sector employees (including the volunteer fire
fighters, if they are deemed public employees under State law) which is different from the State
fire protection standard for the private sector.

7. In the private sector, establishment of delayed effective dates in a State's standard which are
later than Federal dates would delay further the time by which the State can assume responsibility
for enforcement of each of the various provisions of the standard, and would make it impossible
for the State to provide protection under its standard for its employees which is as effective as
protection under the Federal standard. However, in State and local governments, in which the
Federal Government lacks jurisdiction, unique conditions (such as the greater expense for
protective clothing occasioned by the larger number of fire fighters in many local governments)
may justify later effective dates.
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DOE Interpretations Guide to OSH Standards

July 1, 1992

Vol. 1-99
ABSTRACT
This interpretation letter addresses locks and exit signs for emergency exits. Specific issues are means of egress: locking devices and exit sign illumination.

(NOTE: Subpart E, Means of Egress, which includes 1910.36 and 1910.37, has been amended subsequent to this 1973 interpretation letter.)

INTERPRETATION
29 CFR 1910.36(b)(4); 1910.37(q)(6)
February 27, 1973
This is in reply to your memo of September 28, 1972, to Mr. B

Item #1 - 1910.36(b)(4)

To quote a portion of this standard: "No lock or fastening device to prevent free escape from the inside of any building SHALL BE INSTALLED except in manual, penal, or corrective institutions where supervisory personnel is continuously on duty and protective provisions are made to remove occupants in case of fire or other emergency."

Q. a) Is the above statement intended to mean that no locking device may be installed on the inside of a door whether the lock is bolted or open?

Concerning Section 1910.36(b)(4), we are recommending a proposed rule making that would amend the subparagraph to permit the installation of locking devices on doors in a means of egress. The following lettered answers conform to your lettered questions pertaining to Section 1910.36(b)(4).

A. a) Currently - Yes. See above statement concerning a proposed modification.

Q. b) Are panic type hardware the only permissible locking devices? What types of locking devices are allowable inside of a fire exit door?

A. b) No. The latch of a door in a means of egress can also be retracted by knob, handle or other simple type of releasing device, the method of operation of which is obvious even in darkness.

Q. c) During evening hours, when the plant is locked, and a watchman makes his rounds, is it a violation to keep the exit doors locked while he is making his rounds?

A. c) (First line of text unreadable:) in a means of egress must be maintained openable from the side from which egress is to be made without the use of a key. Such doors may be locked against opening from the opposite direction.

Q. d) Do hangers on the door jamb, to accommodate a bar across the door, constitute a locking device? Is this a violation?

A. d) Yes. Currently the installation of the hangers would be a violation but would be permitted by the mentioned proposed rule making.
Q. e) Does installation of dead-locks on the inside of an exit door constitute a violation?
A. e) If the "dead-locks" can be actuated to prevent opening from the side from which egress is to be made, they would currently be in violation. Such locks would be permitted by the mentioned proposed rule making.

Item 2 - 1910.37(q)(6)

"Every exit sign shall be suitably illuminated by a reliable light source giving a value of not less than five foot candles on the illuminated surface. Artificial lights giving illumination to exit signs other than the internally illuminated types, etc."

Q. a) Does the above portion of the standard mean that every exit light must have its own source of reliable illumination? Does each exit light require its own bulb? Must the source of power be obtained from the high side of the fuse?
A. a) The first question is unclear since the term, "exit light" is used, whereas the standard uses the term "exit sign" of the externally and internally illuminated types. In answering the second question, we will assume that, in this instance, where the term "exit light" is used: "internally illuminated exit sign" is intended. With the mentioned change, the answer is "yes"; however, such signs normally have two bulbs. In order to answer the third question, we need further information on the circuit arrangement(s) contemplated by the question.

Q. b) Can this standard be interpreted to mean that as long as there is a reliable light source in the room, hall, vestibule or enclosure that provides 5 C.P. of illuminated surface on the exit sign, as read from our light meter, these conditions will meet the requirements of this standard?
A. b) Yes; however, the location indicating light is still required. The location indicating light must have the required 25 square inch area of red or other designating color translucent material visible from the side of approach.
ABSTRACT The requirements of 29 CFR 1910.36(b)(4) (deals with building arrangement and maintenance to provide free and unobstructed egress from all parts of the building or structure at all times when it is occupied. No locks or fasteners to prevent free escape from inside of any building shall be installed except in mental, penal, or correctional facilities). These requirements do not conflict with Bureau of Customs Regulation 19.4. The Office of Standards is proposing a change of 1910.36(b)(4) which will require one exit from every floor, in addition to the normal access route.

(NOTE: Subpart E, Means of Egress (which includes 1910.36) was amended subsequent to this 1975 interpretation letter.)

INTERPRETATION 29 CFR 1910.36(b)(4)

February 28, 1975

MEMORANDUM

This is in response to your letter dated December 19, 1974, regarding the conflict of OSHA and Bureau of Customs regulations.

The Office of Standards is currently proposing a change of 29 CFR 1910.36(b)(4) which will require at least one exit from every floor, in addition to the normal access route. During working periods in any work area, the exit will be unlocked and will provide fire emergency egress to the exit discharge. At completion of work, these exits may be locked. If the fire emergency egress is inside the building, the above conditions must be met to provide egress to the exit discharge.

A meeting has been held between representatives of OSHA and the Bureau of Customs. The Bureau of Customs agrees that requirement as stated in 29 CFR 1910.36(b)(4) would not conflict with current Customs regulations.

OSHA will continue to cite 1910.36(b)(4), if apparent violations are found during inspection activities.
**ABSTRACT**

This Interpretation letter addresses the DOE - adopted Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1910.36 (b) (8) which states that at least two means of egress are necessary from all areas within a building or structure.

**INTERPRETATION**

29 CFR 1910.36 (b)(8)

This Interpretation is in response to an October 6, 1993, request from a DOE Contractor asking how this regulation should be applied to a specific incidence where one exit is provided from an assembly room which is located within the basement of a business occupancy. The caller identified that this particular arrangement would comply with the current Life Safety Code Standard of The National Fire Protection Association (NFPA 101).

Requirements for two means of egress were fundamentally established by NFPA 101 in 1970 and subsequently adopted by OSHA in regulation 29 CFR 1910.36 (b) (8). This regulation states that at least two remotely located means of egress are necessary from "Every building or structure, section or area thereof of such size, occupancy, and arrangement that the reasonable safety of numbers of occupants may be endangered by the blocking of any single means of egress due to fire or smoke...". The regulation does not define size, occupancy or arrangement of the space requiring such exiting provisions. These were identified by NFPA, but never fully adopted by OSHA.

Because OSHA adopted fundamental exiting requirements, there are few details to indicate what the egress arrangements must be in specific buildings. A recent NFPA Fire Journal article points out the following situations that are not addressed in the current OSHA regulations: the limits on travel distances, dead ends, or common paths of travel; which occupancies require sprinkler protection; what specific areas of occupancies are considered hazardous; what occupant load factors to use in determining the number of persons for whom exits must be provided; which egress components are permitted in each occupancy; when a fire alarm system is required; when emergency lighting is required; what class interior finish is permitted; when corridors must be fire rated; and when a single exit is permitted.

The 1991 edition of NFPA 101 allows a single means of egress to exist, under certain conditions. Section 27-2.2.2 for example, allows an existing business occupancy to have a single room exit as long as the common travel path to the exit access point does not exceed 75 ft. Since small assembly rooms (less than 50 persons) in a business occupancy are classed as business according to section 9-1.2.2, a single means of egress meeting section 27-2.2 would also be acceptable.

The issue of resolving exiting conflicts between 29 CFR 1910 and NFPA 101 has already been addressed in DOE Order 5480.7A, "Fire Protection". Section 9 b. (2) states that compliance with NFPA 101 shall be considered to satisfy the exit requirements of the applicable building code and OSHA 29 CFR 1910. A single means of egress therefore provides equal protection to OSHA regulation 29 CFR 1910.36 (b) (8) as long as it is allowable under NFPA 101 requirements.
This interpretation letter addresses standards for use of cranes during high wind conditions. There are no construction standards for the use of cranes during high wind conditions. The "Marine Terminal" standard, 1917.45(g)(3), could be used as a guideline for construction cranes. As a separate issue, a clarification of exit sign requirements is given.

March 26, 1985

There is not a construction standard for the use of cranes during high wind conditions. There is a standard in the new "Marine Terminal" standard paragraph 1917.45(g)(3) - (Attachment 1). Note this standard is for rail mounted cranes. In our discussions during Cal/OSHA advisory meetings, the cranes on the docks usually follow the procedure set in the table 2-A (Attachment 2). The dock workers start getting concerned at 20-25 mph because in the Bay Area there are a lot of gusts, it is not steady winds. The two documents could be used as guidelines for construction cranes.

This is also what is used for scaffold requirements as incorporated into the construction standards, 1910.28 (a)(18).

The requirement for exit signs is not the number of employees in an establishment, but the physical layout of the building.

The interpretation of 1910.37(q)(1) is vital "...where the exit or way to reach it is not immediately visible to the occupants." If you have a square room with windows and no partitions, an exit sign would not be needed.

The same floor space, made up of individually separate rooms, in a maze configuration, with no windows, illuminated exit signs may be required to allow employees a safe means of egress.

The important words are immediately visible. If the inspector gets "lost" you need exit signs. If the inspector can immediately find the exit, no exit sign would be required.

Source - Federal Register, Vol. 218 No. 129, 30918-9

(g) Rail-mounted cranes (excluding locomotive types).

(1) For the purpose of this section, rail-mounted cranes include bridge cranes and portal cranes.

(2) Rated load marking. The rated loads of bridge cranes shall be plainly marked on each side of the crane and in the cab. If there is more than one hoisting unit, each hoist shall have its rated load marked on it or on its load block. Marking shall be legible from the ground level.

(3) Wind-indicating devices.

(i) After October 3, 1983, each rail-mounted bridge and portal crane located outside of an enclosed structure shall be fitted with an operable wind-indicating device.

(ii) The wind indicating device shall provide a visible or audible warning to alert the operator of high wind conditions. That warning shall be transmitted whenever the following circumstances are present:

(A) When wind velocity reaches the warning speed, not exceeding the crane manufacturer's recommendations; and
(B) When wind velocity reaches the shutdown speed, not exceeding the crane manufacturer's recommendations, at which work is to be stopped and the crane secured.

(iii) Instructions. The employer shall post operating instructions for high wind conditions in the operator's cab of each crane. Operators shall be directed to comply with these instructions. The instructions shall include procedures for responding to high wind alerts and for any coordination necessary with other cranes.

(4) Securing of cranes in high winds.
(i) When the wind reaches the crane's warning speed:
   (A) Gantry travel shall be stopped; and
   (B) The crane shall be readied for shutdown.

(ii) When the wind reaches the crane's shutdown speed:
   (A) Any portion of the crane spanning or partially spanning a vessel shall be moved clear of the vessel if safe to do so; and
   (B) The crane shall be secured against travel, using all available means of securing.

(5) The employer shall monitor local weather conditions by subscribing to a weather service or using equally effective means.

(6) Stops and bumpers.
   (i) The ends of all tracks shall be equipped with stops or bumpers. If a stop engages the tread of the wheel, it shall be of a height not less than the radius of the wheel.

   (ii) When more than one crane operates on the same runway or more than one trolley on the same bridge, each crane or trolley shall be equipped with bumpers or equivalent devices at adjacent ends subject to impact.

(7) Employee exposure to crane movement. When employees may be in the vicinity of the tracks, crane trucks shall be equipped with personnel-deflecting guards.

(8) Pedestrian clearance. If the track area is used for employee passage or for work, a minimum clearance of three feet (0.9 m) shall be provided between trucks or the structures of rail-mounted cranes and any other structure or obstruction. When the required clearance is not available on at least one side of the crane's trucks, the area shall not be used and shall be marked and identified.

(9) Warning devices. Rail-mounted cranes shall be equipped with an effective travel warning device which shall be used to warn employees who may be in the path of the moving crane.

(10) Communications. Means of communication shall be provided between the operator's cab and the base of the gantry of all rail-mounted cranes. This requirement may be met by telephone, radio, sound-signalling system or other effective methods, but not solely by hand-signalling.

(No date provided.)

Table 2-A

FORCE OF WIND FOR GIVEN VELOCITIES

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SOURCE LETTER

March 21, 1985

The question concerning wind conditions closing down the job on cranes, etc., in the construction of high-rise buildings has been presented to us recently.

Do you know of any standards or interpretations concerning this subject? I would appreciate your expertise in this matter. Also, with regards to 1910.37(q) are there any deviations from this standard that you know about? For example, if a small company (10 or fewer employees) trains its employees as to the locations of exits, may they then disregard the need for exit marking?
Dear Mr. B:

This is in response to your letter of November 26, 1984, in which you request a review of your (Product) sign and state that a response to your February 2, 1983, inquiry was never received by you.

On March 16, 1983, Mr. B, Director of Safety Standards Programs, dispatched a response to your February inquiry, a copy of which is enclosed.

In further response, the Occupational Safety and Health Administration (OSHA) deems any equipment regulated by our standards as being in compliance of the standard. Or if, as is the case with your signs, the equipment complies with the current applicable industry consensus standard, such as NFPA-101, and has no direct or immediate relationship to safety or health, it may be determined a de minimis violation, which requires no abatement and results in no penalty. We have enclosed a portion of our Field Operations Manual (CPL 2.45A) which superseded the OSHA Instruction CPL 2.11A.

Until such a time when our standards can be altered to accommodate new innovations recognized by the current consensus standards, OSHA will continue to use the de minimis violation category for the recognition of state of the art developments which either improve or do not affect employee safety and health.

SOURCE LETTERS

NOV 26, 1984

Dear Mr. A:

On February 2, 1983, I wrote to your office to request your review of our testing documents and a determination that our (Product) Exit Sign meets OSHA standards. We have not yet received a response to our letter and are requesting that you review the matter again. For your information a copy of our earlier letter is enclosed, as well as copies of the report by Drs. J, P.E. and L, P.E., and a letter of November 18, 1982 from the National Fire Protection Association.

(Company) has been marketing the (Product) sign successfully for more than a year, but both we and our customers would like the assurance that the sign meets OSHA standards. Very shortly we will be producing the (Product) 120V exit sign unit in a steel box frame suitable for installation in a new construction site.

One of our consultants, Mr. R, P.E., Safety Consultant, had detailed discussions with Occupational Safety and Health Administration staff in the fall of 1982 regarding the (Product) unit, and our letter to you was a follow-up of his efforts.

We are enclosing also an exploded view of the (Product) unit and a brochure about the unit.
Dear Mr. A:

We have developed an exit sign which will greatly conserve energy and which will greatly enhance the safety of workers. Our (Product) Exit Sign has a ten year expected life, which far surpasses the 2000 hour life expectancy of most incandescent bulbs currently being used. This freedom of maintenance helps assure that (Product) Exit Signs will be illuminated in the event of an emergency.

One of our prototype signs was tested by Dr's J, Ph.D., P.E., and L, Ph.D., P.E., who have done considerable work evaluating exit signs. Their report, dated June 11, 1982, (copy attached) was extremely favorable to our product. They made a few recommendations which we have incorporated into our present product. One important fact which they noted is that our sign is more than five times brighter than signs illuminated by radioactive material. These radioactive signs meet current OSHA Standards.

We presented our (Product) Sign to the Subcommittee on Means of Egress for the Life Safety Code of the National Fire Protection Association. In answering our request for a formal interpretation, the Subcommittee in their letter of November 18, 1982, (copy attached) allows the use of signs having the characteristics of (Product) in both new and existing installations.

We ask that you review our documents and determine that our (Product) Exit Sign meets OSHA Standards.
ABSTRACT
A de minimis citation is appropriate when height of egress corridors are slightly lower than specified in 1910.37(i).

(NOTE: Even though the OSHA Program Directive 200 is obsolete, the rationale stated in the interpretation letter is consistent with the current standard. The standard has not been amended since 1980.)

INTERPRETATION
29 CFR 1910.37(i)

January 21, 1981

This is in response to your letter dated January 7, 1981, requesting a variance from or a clarification of the intent of Section 1910.37(i) concerning Means of Egress - Headroom, of the Occupational Safety and Health Standards.

You have stated that your new headquarters building located at (street), (city), (state) contain certain areas in some of the egress corridors that measure from 7'4" 7/8" to 7'6" depending on the particular area measured. You have further stated that the average distance from the floor to the bottom of the projection (ceiling cover) is 7 feet five and one quarter inches. You contend that this minor deviation does not impose any obstruction whatever to egress in the event of the hazards set forth in Section 1910.36(b).

Based upon your letter and the supporting material contained therein, it appears that the slight or minor deviation from Section 1910.37(i) would meet the conditions of a de minimis violation as described in OSHA Program Directive #200-67 dated October 24, 1978, paragraph 4.a. A de minimis violation recognizes minor technical deviations (height requirement) which have no direct or immediate relationship to the safety and health of the employees.

Based on the above clarification of this matter, a variance from Section 1910.37(i) will be unnecessary.
ABSTRACT

Doorways not strictly complying with the Means of Egress (Headroom) standard height but that have padded top purlins, are subject to limited traffic, are not the only means of exit, and are posted with warning signs may only receive a de minimis notice.

(NOTE: This standard has not been amended since 1981).

INTERPRETATION

29 CFR 1910.37(i)

May 1, 1975

This is in reference to your application for a variance from Section 1910.37(i) Means of Egress - Headroom, of the Occupational Safety and Health Standards.

You have stated that two doorways, one leading to the lunch-locker room and one to the third floor of the plant, are 5' 6" in height. The top purlin of these doorways have been padded with 1/2" to 3/4" foam rubber, painted yellow, and signs reading "Danger, Low Clearance, Watch Your Head" have been posted on each side of these purlins. You have also stated that these are not the only means of egress from these two areas.

As you know, a visit was made to your workplace for the purpose of obtaining first-hand information concerning the doorways. This report confirms that there are four exits from the second floor and three from the third floor. In addition, each floor has an elevator with two exits flanking it. The second floor lunchroom is used by approximately 35 employees and the third floor area is used by 10 employees. The secondary use of the doorways, the fact that the top purlins of the doorways are padded and warning signs are posted, and the small number of employees involved indicates that the low doorways do not affect the safety and health of the employees.

In such a situation an Area Director has the authority to issue a de minimis notice of violation. A de minimis notice carries no penalty and requires no abatement. The report from the Regional Office contained a recommendation that, as long as the padding, signs, and occupancy continue as they are, the violation be termed de minimis. Accordingly, no further action will be taken on your request for a variance. The interim order which granted is now moot.
ABSTRACT This interpretation letter addresses means of egress that are not substantially level. Where a means of egress is not level, such differences in elevation shall be negotiated by stairs or ramps.

(NOTE: This standard has not been amended since 1980.)

INTERPRETATION 29 CFR 1910.37(j)

August 12, 1975

This is in response to your letter dated July 24, 1975, which supplied additional information relative to your request for variance from Section 1910.37(j) Means of Egress- Changes in Elevation, of the Occupational Safety and Health Standards.

Your request for a variance from the means of egress guarding requirements of the above standard has been carefully evaluated by our technical staff and we have concluded that a variance is not required.

You have stated that a remote exit located in the Northwest corner of your building "B" has a 35" elevation change from plant floor to grade. This door is not used as a normal means of egress due to the presence of a railroad abutting the building. Although not required, this door could be used as an emergency exit.

The above standard requires that, "Where a means of egress is not substantially level, such differences in elevation shall be negotiated by stairs or ramps." Your installation of the special purpose pivoting fixed ladder would appear to meet the intent of this standard. Therefore, a variance is not required.

No further action will be taken on your request for a variance from Section 1910.37(j).
This information provides clarification on fire door requirements of NFPA 101, which was adopted by DOE Order 5480.7A in lieu of the Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1910.37 for means of egress provisions.

29 CFR 1910.37 (a)(3), (q)(6)

This information is in response to your inquiry of August 12, 1993, asking if the 50-pound force to set the door in motion (starting force) is required for all fire doors in accordance with the provisions of The Life Safety Code. Also, a question was asked on the marking of all fire doors within a rated enclosure. The inquiry indicated that this particular arrangement involves a manually operated, side-hinged, swinging fire door within a means of egress that exceeds a 50-pound starting force.

If the door is considered a component of the means of egress then it must comply with the requirements of The Life Safety Code. Section 5-2.1.4.4 (Exception No. 1) states that the opening force for doors in existing buildings shall not exceed 50 lbf (222 N) applied to the latch stile. Doors within the means of egress that exceed this force need to be either adjusted or replaced with a code-acceptable type; otherwise, an equivalency or an exemption request must be processed to allow its continued use.

Additionally, section 5-10 of The Life Safety Code requires the marking of exits, as well as the means of egress, with appropriately sized illuminated signs that are equipped with an emergency power source. This section also refers to the particular occupancy chapter when determining exit sign locations.
An employer is considered to be in compliance with 1910.157 when he or she provides portable fire extinguishers, as specified, for the use of all employees in the workplace or satisfies one of the other specified operations. These other specified options, either explicitly or implicitly, require the employer to have for his or her workplace an employee emergency action plan and a fire protection plan which meet the requirements of 1910.38.

June 24, 1992

This is in response to your October 23, 1991 memorandum for subject clarifications. Please accept our apology for the delay in response.

In your memorandum, you reference the Directorate of Compliance Programs' memorandum of March 5, 1991 to all Regional Administrators which provided subject guidance apparently inconsistent with guidance provided previously in the Directorate of Field Operations' memorandum of July 1, 1985 to the Regional Administrator of Region II. You are correct that the last paragraph in each of these references provides identical scenarios but different conclusions and citation recommendations, and that the most recent guidance does not rescind or supersede the previous guidance.

Also, in your memorandum you include two scenarios and question which of the subject standards should be cited, as follows:

Scenario #1: An employer provides fire extinguishers in the workplace, but indicates that they are not intended for employee use. The employer indicates that all employees would be required to evacuate the worksite during an emergency; however, the employer has an emergency action plan which does not meet all of the requirements of 1910.38(a) and (b), or completely lacks an emergency action plan. The provisions of 1910.157 do not require the implementation of a plan.

Question: Should citations for 1910.157(g) or 1910.38(a) and (b) be issued?

Scenario #2: An employer provides fire extinguishers in the workplace, and specific employees have been designated to use the equipment for incipient-stage fires only. The employer indicates that all other employees would be required to evacuate the area; however, no emergency action plan which meets the requirements of 1910.38(a) and (b) is provided for employees.

Question: Should citations for 1910.38(a) and (b) be issued for the lack of an emergency action plan for those employees who evacuate the area?

The following reply (which is consistent with the policy provided by the July 1, 1985 memorandum) is applicable to both questions.

An employer is considered to be in compliance with 1910.157 when he or she provides portable fire extinguishers, as specified, for the use of all his or her employees in the workplace or satisfies one of the other specified operations. These other specified options, either explicitly or implicitly, require the employer to have for his or her workplace an employee emergency action plan and a fire protection plan which meet the requirements of 1910.38.
When the employer has chosen or intends to pursue one of the other specified options, he or she shall be issued citations under 1910.38 rather than for deficiencies under 1910.157 for not having a written employee emergency action plan or a fire protection plan or for having an employee emergency action plan or a fire protection plan that does not meet all of the 1910.38 requirements.

Likewise, when the employer has chosen or intends to provide an emergency action plan and not the emergency response plan required by the provisions of 1910.120 (that is, 1910.120(l)(iii), 1910.120 (p)(5)(l), 1910.120(q)(l) and 1910.120(q)(2)(11)(l)) which reference 1910.38(e), he or she shall be issued citations under 1910.38 rather than for deficiencies under 1910.120 for not having a written employee emergency action plan or for having an employee emergency action plan that does not meet all of the 1910.38 requirements.

This citation policy is predicated on the Compliance Safety and Health Officer (CSHO) determining the employer's intention (that is, which option he or she has chosen or intends to pursue) to comply with 1910.157 and, when applicable, 1910.120. This determination shall be documented by the CSHO on the Narrative (OSHA-1A Form) used to record inspection related information and on the Worksheet (OSHA-1B Form) when citations are issued.

This citation policy supersedes the guidance provided by the March 5, 1991 memorandum addressing workplace applications subject to 1910.120 standards. Thank you for pointing out the policy discrepancy in the aforementioned memorandums.
Dear Mr. K:

This is in response to your letter dated March 10, and our meeting of June 16. We regret the delay in responding to your letter.

Your letter contained many detailed questions concerning compliance with various Occupational Safety and Health Administration (OSHA) standards which require alarm systems for employee evacuation and/or emergency response. We will first discuss the broader issues on compliance alarm systems, and then address your particular question in the order they were asked.

The language of the standards you referenced is performance oriented, which means that their requirements depend, to some extent, on the circumstances of the particular worksite. There is a broad array of facilities to which these standards apply and consequently a broad array of systems which would be deemed in compliance; i.e., not cited by a compliance officer in the course of an inspection.

The complexity and sophistication of the alarm system required depends on the number and size of operations and the associated degree of hazard for a given facility. A small, single-process plant may only require a simple siren to call for evacuations. In a larger more complex facility, where multiple contingent responses or multiple contingent evacuation routes may be required of employees, the alarm system should convey clearly the information necessary to allow employees to respond or evacuate in a safe and appropriate manner. Depending on the facility, this may require communicating the location of the release, the type of the release (i.e., vapor, gas, liquid), the ambient conditions that may affect response or evacuation options, and ultimately, which contingent response or evacuation procedure is to be followed.

The level of training required for employees regarding the alarm system increases directly with the complexity and sophistication of the system. Training would be required to cover how and what the alarm system communicates to employees during an emergency. A facility, although having an adequate alarm system, and found to be in compliance with all of the pertinent OSHA hardware regulations, may not have trained its employees in the proper contingent responses indicated by the alarm system. This would be a deficiency in the required training program (e.g. 29 CFR 1910.1200(h)(2)(ii) or 1910.120(q)(6)), and would be so cited by OSHA.
OSHA does not certify alarm systems as to their "meeting compliance". The employer is responsible for analyzing the circumstances of the facility and choosing a system that meets the requirements of the law. OSHA will provide guidance and interpretation as to the standard's intent; however, OSHA does not endorse any products nor design systems.

Now, we will turn to your specific questions:

Question #1

OSHA concurs with the three stated "Alarm system function and performance requirements" on page 2 with the substitution of "emergency action plan or emergency response plan" for the phrase "emergency response plan" in point #3.

Question #2

OSHA concurs with the statements in the introductory paragraphs preceding question 2. However, it may be instructive to examine the language to which your question refers. The following has the language from your letter in bold face type and indented while OSHA's comments are in standard type inserted at points in your language which require discussion. Your letter then asked:

2. Are the statements in the [following section] correct?

CONTINGENT ACTIONS AND ALARM FUNCTION IN EMERGENCY RESPONSE

The emergency response plan must define contingent actions for different types of emergencies under different conditions. The reasoning for this is simple. There is the possibility for more than one type of emergency at a given site. This possibility is recognized by OSHA. 29 CFR 1910.38, Appendix to Subpart [E], Section 1 and 2 state:

For sites where different types of emergencies or ambient conditions could occur which would require differing responses or evacuation procedures, the emergency response plan (ERP) or emergency action plan (EAP) must address the required contingent actions. However, some larger - and many smaller - facilities may have only a few hazardous substances and have the same ERP or EAP for all scenarios or emergency situations; i.e., hazardous substance release, fire, etc. In this case, a single siren or alarm may be appropriate.

1. The employer should also develop and explain in detail what rescue and medical first aid duties are to be performed and by whom. All employees are to be told what actions they are to take in these emergency situations that the employer anticipates may occur in the workplace.

2. Emergency evacuation. At the time of an emergency, employees should know what type of evacuation is necessary and what their role is in carrying out the plan. In some cases where the emergency is very grave, total and immediate evacuation of all employees is necessary. In other emergencies, a partial evacuation of nonessential employees with a delayed evacuation of others may be necessary for continued plant operation. In some cases, only those employees in the immediate area of the fire may be expected to evacuate or move to a safe area such as when a local application fire suppression system discharge employee alarm is sounded. Employees must be sure that they know what is expected of them in all such emergency possibilities which have been planned in order to provide assurance of their safety from fire or other emergency.

Emergency response regulations contain plan elements stipulating evacuation and escape procedures, and mitigation procedures to be carried out by non-evacuees. These are located in 29 CFR 1910.38(a)(2) and in 29 CFR 1910.120(1)(p) and (q).

It is pertinent to note that 1910.38 "Appendix to Subpart E - Means of Egress" is a nonmandatory guideline to help employers understand the intent of the standard.
Where emergency action plans are required by particular OSHA standards, employees must be notified of their expected duties during an emergency before the emergency occurs. This notification must be preplanned before the alarm ever goes off. Employees must know where the predesignated places of refuge are, although the alarm system should assist employees in determining where to go, and where not to go, during the emergency.

29 CFR 1910.185(b)(3) states: "The employee alarm system shall be distinctive and recognizable as a signal to evacuate the work area or to perform actions designated under the emergency action plan." This portion of the regulation emphasizes the need for the signal to be "distinctive and recognizable". Following is an excerpt from 29 CFR 1910.185 "Summary And Explanation of Final Rule:"

Section 1910.185 Employee Alarm Systems paragraph (b)(3) of the proposal provided that employee alarms be distinctive and recognizable to employees as signals to perform actions designated in the emergency action plan. OSHA has decided to adopt the proposed language with minor corrections as the final requirement. In addition, OSHA does not intend that the final requirement mean that each signal must be generated by a separate device or system; rather, OSHA will recognize a single system with distinctive code signals or a voice communication system.

Alarm system function, where contingent actions are stipulated by the emergency response plan, can be stated this way:

At those sites where the emergency response plan contains multiple contingent responses the alarm system must provide distinctive and recognizable signals as necessary for proper action as designated in the emergency response plan.

The "Employee Alarm Systems" standard requires employers to design a system, appropriate for their workplace, that must provide warning for necessary emergency action. For facilities that have developed several contingent responses or evacuation procedures, the alarm system "must provide distinctive and recognizable signals as necessary for proper action as designated in the emergency response plan."

Question #3 (Scenario #1)

A scenario in which an emergency response plan has the potential of instructing an employee to move into a danger area during an emergency would not be in compliance with OSHA standards. Depending on the circumstances, it could result in a citation of any one of the standards and specific provisions you listed, or the general duty clause of the OSH Act.

In general, this type of scenario would probably result in citations of other provisions of OSHA regulations, such as 1910.38, 1910.119 or 1910.120, not just those requiring alarm systems. For example, facilities falling under the scope of the Hazardous Waste Operations and Emergency Response standard (29 CFR 1910.120), would most likely be cited for an inadequate emergency response plan, 1910.120(q)(1), or inadequate preplanning, 1910.120(q)(2)(i) or inadequate evacuation routes and procedures 1910.120(q)(iv).

Question #4 - #6

Please see the response to question #3.

Question #7 (Scenario #5)

The alarm system you describe in scenario #5 conveys the minimum information necessary to all affected employees, allowing them to take the correct contingent evacuation or response action in the event of an emergency. This alarm system would meet the intent of OSHA standards and therefore, would be found to be in compliance with all of the standards and individual provisions listed in your letter. This response merely refers to the alarm system, not to other aspects of emergency response or evacuation.
Question #8  (Figure 6)

As stated above, the complexity and sophistication of the alarm system is a function of the complexity and sophistication of the facility. The standard's performance-oriented language requires that the "warning" and "notification" be communicated through the alarm system or through some other form of communication (i.e. verbally at muster points) in order to allow adequate "reaction time for safe escape of employees from the workplace or the immediate work area".

In your first example in Figure 6 you indicate that all employees are given notification and warning in sufficient time to escape before the "critical moment", which you define as the point at which the emergency becomes injury- or life-threatening. This would meet compliance with the intent of the standards and provisions you listed.

The following two examples have the alarm system, ERP or EAP affording communication of the "warning", which you define as "the information required for an employee to select an appropriate response", either at or after the "critical moment". This would expose employees to an injury- or life-threatening situation because the warning comes too late. Therefore, examples 2 and 3 would, depending on the specific circumstances, constitute violations of the standards and provisions which you listed.

OSHA recognizes that there may be emergencies in which the alarm is sounded after the critical moment for a certain group of employees in the immediate incident area. The alarm is intended to warn others more remote from the incident. For example, a fire or explosion may occur followed by an alarm to warn others to take action or evacuate. This is not a violation of the standard.

OSHA concurs with your statement that the language of 29 CFR 1910.165(b)(1) creates a performance standard for the amount of time allotted for the alarm system to accomplish its task. Alarm systems must inform employees not only that an emergency exists, but where contingent responses or evacuation procedures are in place, what they are expected to do in response to the alarm system's warning. This information must be relayed by the alarm system to the employee in sufficient time to provide for reaction time for safe escape of employees from the workplace or immediate work area.

Question #9

Yes. For systems not having a battery back-up, the use of an alternate source of power such as a generator or noninterruptable power supply would be necessary.

Question #10

Manually operated actuation devices, such as pull boxes, are not required but if used must be evident and readily accessible.

Yes, the telephone is an acceptable alternative to the use of manually operated actuation devices.

No, the communication device need not be supervised.

Your interest in insuring a safe and healthful workplace is appreciated. If you have any further questions please feel free to contact J.A. of my staff at (202) 523-8033.

Vol. 1-110.1.6
OSHA Instruction STP 2-1.158

September 25, 1989
Office of State Programs

Subject: Powered Platforms for Building Maintenance, Final Rule

A. Purpose. This instruction describes a Federal Program Change to the Regions and State designee.

B. Scope. This instruction applies OSHA-wide.

C. Reference. OSHA Instruction STP 2-1.117, August 31, 1984, State Standards.

D. Federal Program Change. This instruction describes a Federal Program Change which affects State programs. Each Regional Administrator shall:

1. Ensure that this instruction is forwarded to each State designee.

2. Provide a copy of the Federal Register notice to the State designee upon request.


4. Ensure that each State designee acknowledge receipt of this instruction in writing, within 30 days of notification, to the Regional Administrator. The acknowledgment should include (a) the State's plan to adopt and implement the standard change, (b) the State's plan to develop an alternative change, which is as effective, or (c) the reasons why no change is necessary to maintain a program which is as effective.

5. Inform each State designee that the State must amend the State's standard to ensure that it remains at least as effective as the amended 29 CFR 1910.66 and submit a plan supplement within 6 months of the date of Federal publication.

E. Different Standards. Section 18(c)(2) of the act requires that standards be "at least as effective" as Federal and, when applicable to products used or distributed in interstate commerce, be required by compelling local conditions and not unduly burden interstate commerce. In addition to the "at least as effective" criterion, this "product clause test" will be applied to State standards with substantially different requirements from the comparable Federal standard, as described in STP 2-1.117. A State standard expanded in scope from the Federal is considered to be a substantially different standard.

F. Interim Enforcement. Under 29 CFR 1953.23(a) and (b), State plan States are provided up to 6 months from publication of the Federal standard in the Federal Register to promulgate an identical or "at least as effective" as standard. If a State, for whatever reason, is unable to promulgate a standard in a timely manner (6 months for a permanent standard, 30 days for an emergency temporary standard) the State shall be expected to provide assurance that it will enforce the substantive provisions of the new or revised Federal standard through such means as use of its general duty clause or equivalent, temporary adoption of an identical standard, or an alternative, specified enforcement mechanism.

G. Delayed Effective Date. The State may delay the effective date for those particular provisions of its standard for which the comparable Federal provisions delay effective dates; however, the delayed effective date of a State provision may be no later than the effective date of the comparable Federal provisions.

H. Effective Date: The final rule is effective on January 24, 1990.

I. Explanation.

1. On July 28, 1989, OSHA amended its Standard for Powered Platforms for Building Maintenance, 29 CFR 1910.66, Subpart F, to allow the use of alternative stabilization systems. The standard had allowed only stabilization systems which provided continuous positive means of
engagement between the platform and the building facade. Such systems had proven to be infeasible for application to many new buildings with discontinuous vertical facades.

2. In addition, the amendment updates existing requirements using performance-oriented language, expands the scope to include coverage of interior installations (atriums) and includes requirements for emergency planning, employee training and personal fall protection for employees using powered platforms.

3. Under 29 CFR 1953.23(a) and (b), States are provided up to 6 months from publication in Federal Register for adoption of parallel State standards and amendments.
ABSTRACT  This interpretation letter addresses the proper wheel radius in manually propelled carriages to comply with the 40 pound limit for horizontal force. This letter is in response to a concern from Mr. H. regarding compliance with 1910.66(f)(3)(c) in the powered platform standard. This provision states that "the initiation of a traversing movement for a manually propelled carriage on a smooth level surface shall not require a person to exert a horizontal force greater than 40 pounds." Mr. H. lacked the engineering resources to redesign his equipment to meet the requirement. Unfortunately, the OSHA consultation program is not funded to help with engineering but suggested that he might increase the size of the wheel radius on the roof carriage which would help reduce the force necessary to move the carriage.


MAR 7, 1991

This is in response to your letter of September 20, 1990, to Mr. C regarding your concern, as a manufacturer, about complying with the requirements of 29 CFR 1910.66(f)(3), (l)(c) in the powered platform standard. This provision states that "the initiation of a traversing movement for a manually propelled carriage on a smooth level surface shall not require a person to exert a horizontal force greater than 40 pounds (444.8 n)." We apologize for the delay in our response.

In your phone conversation of October 4, 1990, with Mr. C, you indicated that you lacked the engineering resources to redesign your equipment to meet the above requirement. Unfortunately, the Occupational Safety and Health Administration's consultation program is not funded to respond to engineering assistance requests from manufacturers.

This office, however, can offer some suggestions which you may consider in addressing your problem. First, it is unlikely that the average window washer would be able to generate one hundred pounds of force to overcome the initial inertia of the carriage. Since you claim that employees are moving the roof carriage now without injury, it is quite possible they are generating less than one hundred pounds of force per person. Therefore, your first step is to determine the actual force generated by those employees in the initial movement of the carriage. You may find that the force is less than one hundred pounds, but greater than forty pounds.

Second, once you have determined the amount of excess force over forty pounds being generated, you should take the necessary steps to reduce it to forty pounds. One method to accomplish this might be to increase the wheel radius on the roof carriage. Since the radius of these wheels is similar to the moment arm of a lever, any increase in wheel radius would increase the mechanical advantage that can be obtained. Therefore, a proper wheel radius should help reduce the force necessary to move the roof carriage.
ABSTRACT The standards at 29 CFR 1910.23 are applicable to all workplaces and do not exempt old installations. Employers are required to provide perimeter protection or fall protection for all employees exposed to hazardous falls from height, such as from roofs. A clarification is provided for the inspection requirements of powered platforms for exterior building servicing, as specified in 29 CFR 1910.66(g). Inspections need not be conducted on 30 day intervals when the intended usage of the equipment is less frequent than every 30 days. However, the equipment must be placarded and locked-out.

INTERPRETATION 29 CFR 1910.66(e)(3); 1910.23(c); 1910.145(c)(3)

AUG 13, 1987

This is in response to your letters of July 30, 1987, concerning perimeter protection along roofs and the necessary inspection cycle required by 29 CFR 1910.66(e)(3).

The Occupational Safety and Health Administration (OSHA) standards at 29 CFR 1910.23 are applicable to all workplaces and do not exempt old installations. Employers are required to provide perimeter protection or fall protection for all employees exposed to hazardous falls from height, such as from roofs. The enclosed OSHA Instruction STD 1-1.13 clarifies the requirements for fall protection in general industry situations.

In regard to your concern for the inspection requirements of powered platforms for exterior building servicing as specified by 29 CFR 1910.66(d)(3), we provide the following clarification. Periodic inspections and tests need not be conducted on 30 day intervals when the intended usage of the equipment is less frequent than every 30 days. However, the equipment must be placarded as required by 29 CFR 1910.145(c)(3), instructing potential users that the equipment must be inspected and tested as required by applicable portions of 29 CFR 1910.66(e) prior to each use. Furthermore, the equipment should be locked-out so that occasional unsupervised use is impossible. Employers who comply with such a placarded instruction, and lockout procedure, although in technical violation of the standard, would not create a hazard for employees and would not be subject to citation under the rules for a de minimis violation.

Dormant equipment which is not available for use by employees can not be hazardous or in violation of the Occupational Safety and Health Act.

SOURCE LETTERS

(No Date)

We have an unusual case wherein a client has two high rise office buildings that were erected prior to 1970.

At issue is the applicability of your Standard 29 CFR 1910.23 (c), which requires Perimeter Protection for employees that are required to work at or near the edge of building roofs.

Are the OSHA Standards retroactive for situations that were in place prior to the effective date of the standards?
July 30, 1987

In reviewing my file, I find that to date I have not received a response to my letter of May 6, 1987, a copy of which is enclosed for your reference.

This is an important subject in that our clients are obligated to comply with your standards, but the specific requirements of 1910.66 (e) (3) have been superseded by the state of the art, due to the cost of doing business.

May 6, 1987

In reviewing OSHA's Standard 1910.66(e)(3) Maintenance Inspection and Tests, we note that each installation is required to undergo a maintenance and test every 30 days, except where the cleaning cycle is less than 30 days such inspection and tests shall be made prior to each cleaning cycle.

However, this paragraph does not relate to equipment installations where the cleaning cycles occur only three or four times a year, which is normal for all present installations, due to the relatively high cost of cleaning windows.

We request that in the latter case, the equipment be allowed to have a maintenance inspection and test prior to each cleaning cycle in that the cost of monthly maintenance inspection and tests cannot be justified for dormant equipment.
This interpretation requests OSHA to recognize secondary wire rope scaffold suspension systems as equivalent to vertical lifeline systems for fall protection in the construction industry. OSHA agrees that a properly rigged secondary wire rope suspension system that complies with the provisions of 1910.66(f)(5)(i)(L) or ANSI A10.8-1988, provides equivalent fall protection to that provided by conventional vertical lifeline systems. Violations of those regulations that require independent vertical lifeline systems to be used on suspended scaffolds will be considered to be de minimis when secondary wire rope suspension systems, meeting the requirements, are used on suspended scaffolds in the construction industry.

Dear Mr. S:

This is in response to your August 7 letter requesting the Occupational Safety and Health Administration (OSHA) to recognize secondary wire rope scaffold suspension systems as equivalent to vertical lifeline systems for fall protection in the construction industry. I apologize for the delay in responding to your request.

After reviewing the information provided, we agree that a properly rigged secondary wire rope suspension system that complies with the provisions of 29 CFR 1910.66(f)(5)(i)(L) and (M) or ANSI A10.8-1988, paragraph 6.5, provides equivalent fall protection to that provided by conventional vertical lifeline systems. We also agree that this is the case for single stage as well as multi-stage situations. Consequently, violations of those regulations that require independent vertical lifeline systems to be used on suspended scaffolds will be considered to be de minimis when secondary wire rope suspension systems, meeting the above requirements, are used on suspended scaffolds in the construction industry.

If you have any further questions, please do not hesitate to contact me or Mr. D. C. of my staff at (202) 219-8136.
ABSTRACT  An interpretation letter clarifying the applicability of OSHA's standard at 29 CFR 1910.66 on powered platforms for building maintenance to "a permanently installed suspended scaffold." The scope of the powered platforms for building maintenance standard does not apply to suspended scaffolds (swinging scaffolds). A competent person shall perform periodic inspections and testing of powered platforms permanently dedicated to building maintenance.

Dear Mr. B:

This is in response to your September 15, letter to Ms. P. K. C., former Director of the Directorate of Compliance Programs. In your letter you requested clarification on the applicability of OSHA's standard at 29 CFR 1910.66 on powered platforms for building maintenance to "a permanently installed suspended scaffold." We apologize for the delay in responding.

Please note by the definition in 1910.66(d) that a "suspended scaffold" means a scaffold supported on wire or other ropes, used for work on, or providing access to, vertical sides of structures on a temporary basis. The scope of the powered platforms for building maintenance standard (See: 1910.66(a)) does not apply to suspended scaffolds (swinging scaffolds).

The standard at 1910.66(g)(2) requires that a competent person perform periodic inspections and testing of powered platforms permanently dedicated to building maintenance. By the definition in 1910.66(d), a competent person means a person who, because of training and experience, is capable of identifying hazardous and dangerous condition in powered platform installations. The building owner's assurance required by 1910.66(c)(1) shall be based, in part, on these periodic inspections and tests in compliance with 1910.66(c)(2).

Thank you for your interest in occupational safety and health. If we may be of further assistance please contact us.
This interpretation letter provides an alert of potential structural problems of fiberglass upper booms on cranes. Special instructions provided for CSHO's conducting inspections of these cranes.

NOTE: The standard has not been amended since 1975.

INTERPRETATION 29 CFR 1910.67(b)(1)(v); (b)(2); 1926.556(a)(1); (a)(1)(v)

Oct. 31, 1984

MEMORANDUM

SUBJECT: Potential Structural Problems of Fiberglass Upper Booms product - ALERT

Field personnel are alerted to potential hazards resulting from improper use and maintenance of fiberglass booms on aerial devices identified as products presently manufactured by (company) of (city), (state), and previously manufactured by the (company) of (city), (state).

Of concern are the structurally bonded joints between the fiberglass upper boom and the steel members. An incident of failure of the lower fiberglass to metal joint has been documented. The fiberglass to metal joint is accomplished through a three-inch epoxy bonded overlap with 54 counter-sunk screws. In-service failure of the joint resulted in fatalities of employees suspended aloft by the equipment.

Reliable structural integrity of the boom joints is crucial to the safety of workers lifted aloft. Although the structural bonding in this application has given rise to controversy among engineers, OSHA's responsibility for the safety of in-use equipment is the major concern.

In order to assure the safe use of the equipment, (company), notified users of necessary safety inspection procedures and ordered that the equipment be placarded per ANSI A92.2-1969, Section 3.1.4(5). (The placard is affixed to the lower control location). OSHA compliance staff shall verify that observed equipment is mounted with a decal warning of the fiberglass boom inspection procedures. Compliance staff shall further verify that inspections are being conducted by users and that suspect equipment is removed from service for repair.

Compliance staff inspections of the fiberglass boom joints shall verify at least that:

1. The junction between the steel boom and the fiberglass boom shall be free of cracks along the bonded joint.

2. There shall be no visible signs of corrosion (rust) along the joint. Rust at this location has been shown to be indicative of separation of the bond from the steel boom.

3. There shall be no indication that the bond has separated permitting motion between the steel and fiberglass booms. (The joint shall not be loose.)

4. The counter-sunk screw fasteners along the joint shall be properly seated with no indication of damage to the fiberglass around the screw. (No cracks shall be present and the screw heads shall not have pulled down through the counter-sunk hole. Experience indicates that the screws will pull through after failure of the bonded joint.)
In-service (product) observed to have a suspect fiberglass boom joint shall be considered imminent dangers and appropriate action shall be taken to remove the equipment from service until effective repairs are made.

Repairs shall be made per the manufacturer’s maintenance bulletin MB-1109, dated December 19, 1980, or shall comply with 1910.67(b)(2) or 1926.556(a)(2) as applicable. Under the direction provided by 1910.67(b)(2) and 1926.556(a)(2), acceptable field modification and repair may be made by the manufacturer or any equivalent entity such as a nationally recognized testing laboratory or under the supervision of a professional engineer.

Current models of subject aerial devices (since December 1982) are manufactured by (company), (city), (state).

Regional Administrators shall forward a copy of this memorandum to each State Designee and each consultation project manager.
This interpretation letter addresses regulations for vehicle-mounted elevating and rotating work platforms used near high voltage energized lines. Section (b)(4) is accompanied by the statement that the regulations are performance requirements. Therefore, OSHA does not require in all work conditions that the lower boom of an aerial lift be insulated in addition to the upper half of the boom.

**INTERPRETATION**

29 CFR 1910.67(b)(4); 1910.333(c)(3)

September 20, 1983

This is in response to your letter of August 24, 1983, on behalf of Mr. D, regarding OSHA regulations for vehicle-mounted elevating and rotating work platforms. In connection with your inquiry, a member of my staff spoke with Mr. D by telephone on September 2, 1983.

The regulation in question, 29 CFR 1910.67(b)(4)(i)(C), addresses employers of utility workers exposed to high voltage energized power lines to comply with the following requirements:

(b)(4) When operating aerial lifts proximate to, under, over, by or near electric power lines, the requirements of this paragraph (b)(4) shall apply.

(i) The following clearance shall be maintained:

(A) For lines rated at 50kV or less, the minimum clearance between the lines and any part of the aerial lift shall be at least 10 feet;

(B) When the lines are rated in excess of 50kV, the minimum clearance between the lines and any part of the aerial lift shall be at least 10 feet plus 0.4 inch for each kilovolt in excess of 50kV, or twice the length of the line insulator, but never less than 10 feet;

(C) The requirements set forth in paragraph (b)(4)(i) of this section do not apply (1) where the work is performed from an aerial device insulated for the work, and the work is performed by either telecommunication employees, line-clearance tree-trimming employees, or electric utility employees; or (2) where the electric power transmission or distribution lines have been deenergized and visibly grounded at the point of work, or where insulating barriers, not a part of or an attachment to the aerial lift, have been erected to prevent physical contact with the lines.

(ii) Proximity warning devices may be used, but not in lieu of meeting the requirements contained in paragraph (b)(4)(i) of this section.

(iii) The owner of the lines or his authorized representative shall be notified and provided with all pertinent information before the commencement of operations near electrical lines.

(iv) Any overhead wire shall be considered to be an energized line until the owner of the line or his authorized representative states that it is deenergized.

The OSHA regulations mentioned above are performance requirements; thus, they do not require in all work conditions that the lower boom of an aerial lift be insulated in addition to the upper half of the boom, when it is used to hoist a utility worker aloft to work on a high voltage energized line.

As you requested, a copy of OSHA's current standards for general industry has been sent to Mr. D. In addition, a copy of Mr. D's letter has been forwarded to OSHA's Directorate of Safety Standards Programs.
for consideration in future modifications of the vehicle-mounted elevating and rotating work platforms standard.
ABSTRACT There is no specific OSHA standard requiring that an aerial lift be insulated. However, where the aerial lift is insulated and the employee working from the aerial lift is insulated or guarded from the energized parts, Table R-2 in 29 CFR 1910.268 would apply. Where the aerial device is not insulated, the 29 CFR 1910.67(b)(4)(i) requirement shall specify at least 10 feet plus 0.4 inches for each kilovolt in excess of 50 KVA, or twice the length of the line insulator, but never less than 10 ft.

(NOTE: This standard has not been amended since 1975.)

INTERPRETATION 29 CFR 1910.67(b)(4)(i); 1910.268
DEC 26, 1990

This is in response to your letter of November 6, requesting clarification on whether or not an aerial lift must be insulated.

29 CFR 1910.67(b)(1) requires that insulated aerial devices shall be designed, constructed, or modified in conformance with the applicable requirements of the American National Standard (ANSI) A 92.2-1969.

There is no specific Occupational Safety and Health Administration general industry standard requiring that an aerial lift be insulated. However, where the aerial lift is insulated and the employee working from the aerial lift is insulated or guarded from the energized parts, Table R-2 in 29 CFR 1910.268 would apply.

Where the aerial device is not insulated the 29 CFR 1910.67(b)(4)(i) requirements of 10 feet or more minimum clearance apply.
This interpretation letter responds to a request for exemption of employees from maintaining 10 foot clearance from electrical lines.

(NOTE: This standard has not been amended since 1975.)

INTERPRETATION

29 CFR 1910.67(b)(4)(i)(c)(1); 1910.67(b)(4)(i)(c)(2)

July 28, 1975

This is in response to your letter of May 23, 1975, addressed to Mr. P, but subsequently forwarded to this office for reply. You requested a clarification of the exceptions listed in 29 CFR 1910.67(b)(4)(i)(c), especially in regard to "electric utility employees."

The intent of 29 CFR 1910.67(b)(4)(i)(c)(1) is to exempt telecommunications workers, line-clearance tree trimmers and electric utility workers from maintaining a minimum clearance of 10 feet between the aerial device and electric power lines. This exemption for certain employees is because of their training, experience, familiarity with the hazards and techniques associated with working on or near energized lines, and the necessity for these types of employees often to work closer than 10 feet to the lines.

Industries (not necessarily electric power companies), with electric utility department employees trained and equipped to handle electric power lines and equipment, would be expected to comply with Tables V-1 and V-2 in Subpart V of 29 CFR 1926, when applicable. As a reminder, the standards in Subpart V of 29 CFR 1926 apply to the erection of new electric transmission and distribution lines and equipment, as well as the alteration, repair, conversion, and improvement of existing electric transmission and distribution lines and equipment.

For these employees that do not meet the "exemption for certain employees" meaning of "electric utility workers" and are, therefore, operating aerial lifts in apparent violation of 29 CFR 1910.67(b)(4)(i); the apparent violation could be corrected by either one of the methods specified in 29 CFR 1910.67(b)(4)(i)(c)(2).
OSHA Instruction STD 1-3.1

October 30, 1978
OSHA PROGRAM DIRECTIVE #100-74

Subject: Citation for 5(a)(1) Violation When 29 CFR 1910.68 Is Inapplicable

1. Purpose

The purpose of this directive is to insure judicious enforcement and clarify the confusion concerning using 5(a)(1) where 29 CFR 1910.68 is inapplicable because the manlift in question was installed prior to August 27, 1971.

2. Documentation Affected

This directive supersedes Field Information Memorandum #74-76 dated September 30, 1974.

3. Background

It has been determined that a citation for 5(a)(1) is appropriate where the condition is a recognized imminent danger or serious hazard.

4. Action

a. Citations would be issued where the hazardous condition is easily identifiable. If the manlift is merely an inch narrower than the width specified in the standard, a citation for 5(a)(1) should not be issued. On the other hand, if 14 out of 20 steps on which the employees are to stand are missing, a citation for 5(a)(1) should be issued because the danger to employees is obvious.

b. The CSHO shall consult with the appropriate Regional Solicitor where there is any doubt regarding the issuance of a 5(a)(1) citation for manlift hazards. This is important because the ANSI standard, which usually can be used to demonstrate that the hazard is a recognized one, is also grandfathered.

5. Effective Date

This directive is effective immediately and will remain in effect until canceled or superseded.
MEMORANDUM

This is in response to your memorandum dated September 4, 1975, concerning the subject matter. It also confirms the telephone conversation on October 15, 1975, when you requested a written response.

The intent of this standard, prohibiting transporting of freight, packaged goods, pipe, lumber, or construction materials of any kind on manlifts was to restrict their use by personnel only. Although lunchboxes are not specifically mentioned in the standard, carrying them on a manlift would present the same hazard and in a broad interpretation could be considered as freight or packaged goods. Two reasons for restricting carrying toolboxes on a manlift would be:

1) if the box was dropped or caught between the lift and landing, it may drop on a person below and,
2) one hand must be free to operate the pull stop rope in case of emergency.

The same restrictions could apply to lunchboxes. Carrying of tools or other items that protrude from the pockets is also prohibited which would include tool belts and items such as toolboxes (or lunchboxes) on a belt.
Thank you for your letter of November 18, 1985, concerning isocyanate spray paints. I am happy to reply to your questions about safety and health practice in the case of isocyanate containing paints. Although my experience with the oligomers of isocyanates is very limited, I was fortunate to find two articles that should be some interest with regard to your first question. These I have enclosed along with a newspaper article.
With regard to the second, OSHA enforces the minimum maintained velocities in Table G-10 of Parts 1910.94(c)(6)(l) and 1910.107(b)(5)(l) for spray booths and also requires that "the total air volume exhausted through a spray booth shall be such as to dilute solvent vapor to at least 25 percent of the lower explosive limit of the solvent being sprayed" (1910.94(c)(6)(ii) and to below the Permissible Exposure Limit (29 CFR 1910.1000 Table Z-1, as enclosed) of any toxic material being sprayed.

The scope of the Standards does not apply to "small portable spraying apparatus not used repeatedly in the same location." In answer to your third question, I do not think the Standard (Part 1910.94) would apply to the conditions you describe.

As far as respirators are concerned, OSHA recommends supplied-air full-face respirators with isocyanate paints in addition to the general ventilation prescribed in the Standards (Part 1910.94 and Part 1910.107).

The answer to your last question awaits further discussion with safety professionals in the painter's union. Within the upcoming month, I hope also to find more materials that could clarify the OSHA position on spray booths and isocyanate paints.
The term "oxygen deficient atmosphere" is interpreted to mean any atmosphere containing less than 19.5 percent oxygen. 29 CFR 1910.94(d)(9)(vi) and 1910.94(d)(11)(iii) specifically refer to 19.5 percent as the appropriate measure of oxygen sufficiency in an atmosphere.

(NOTE: The standard was last amended in 1984.)

Jun 16, 1983

This is in response to your letter of April 12, 1983, requesting an interpretation of the term "oxygen deficient atmosphere."

The Occupational Safety and Health Administration interprets "oxygen deficient atmosphere" to mean an atmosphere containing less than 19.5 percent oxygen when the term is used in 29 CFR 1910 (the general industry standards). 29 CFR 1910.94(d)(9)(vi) and 1910.94(d)(11)(iii) specifically refer to 19.5 percent as the appropriate measure of oxygen sufficiency in an atmosphere.

For acclimatized individuals, this interpretation holds regardless of the altitude. For individuals at altitudes above that to which they are acclimatized, any atmosphere containing a lower percentage of oxygen than in the ambient outside air may be hazardous.

April 12, 1983

As we at (company) have worked to further improve our respiratory protection programs and maintain compliance with both the letter and intent in the law, we have found a problem in dealing with the lack of clarity regarding what constitutes an oxygen deficient atmosphere. The only regulation of which we are aware which attempts a definition is 30 CFR 11.3 (as), which defines an "oxygen deficient atmosphere" as one..." which contains an oxygen partial pressure of less than 148 millimeters of mercury..." This definition is not only scientifically indefensible but also makes any location which is more than 2,000 feet above sea level permanently oxygen deficient. In 29 CFR 1910.134, there is a somewhat conflicting statement prohibiting the use of canister respirators in atmospheres containing less than 16 percent oxygen. Also, the ANSI standard of 1969 which OSHA incorporated by reference in 1910.134 is not at all clear as to what is defined as oxygen deficient.

We, therefore, request that OSHA clarify the definition of an "oxygen deficient atmosphere" through a program directive or similar communication and that the term be specifically defined when 1910.134 is revised. We recommend adoption of the definition contained in ANSI standard Z88.2-1980, which states that atmospheres containing an oxygen partial pressure of less than 100 mm Hg are oxygen deficient.

This definition is backed by considerable evidence, and corresponds precisely with the limit which has long been successfully used by the Federal Aviation Administration, which permits unlimited aircrew exposures at cabin altitudes up to 12,500 feet above sea level (where the oxygen partial pressure is 100 mm Hg) without supplemental oxygen.
Interpretation: 29 CFR 1910.94(a)(1)(ii)

July 28, 1982

RE: Your letter of July 13, 1982, requesting information on powered air purifying respirators approved for abrasive blasting

Continuous flow supplied air respirators and powered air purifying respirators have many test criteria in common. Both types of respirators must meet the same minimum air flow requirements and the same maximum noise level requirements. General construction requirements for breathing tubes, helmets, and hoods are also the same.

The basic difference between supplied air respirators designed for protection against abrasive blasting and other supplied air respirators is the requirement for "additional devices designed to protect the wearer's head and neck against impact and abrasion from rebounding abrasive material, and with shielding material such as plastic, glass, woven wire, sheet metal, or other suitable material to protect window(s) of face pieces, hoods and helmets" (30 CFR 11; 11.110(a)(6)). This requirement has been used as an additional requirement to those in Subpart K for a powered air purifier approved for abrasive blasting.

Source Letter

July 13, 1982

We have received several inquiries from our compliance staff in the field concerning the acceptance of MSHA-NIOSH approved powered air-purifying respirators (PAPR's) for abrasive blasting.

Under our standard on ventilation for abrasive blasting operations, the abrasive blasting respirator is defined as a continuous flow air-line respirator constructed so that it will cover the wearer's head, neck and shoulders to protect him from rebounding abrasive, 29 CFR 1910.94(a)(1)(ii). We understand that NIOSH has tested and approved several powered air-purifying respirators for abrasive blasting under testing schedule 21C for particulate respirators rather than schedule 19C for continuous flow supplied air respirators. Upon reviewing Subpart K of 30 CFR 11 where all particulate respirators are approved under schedule 21C, we could not find any testing requirements for abrasive blasting PAPR's.

We would appreciate it if NIOSH could provide us with clarification concerning PAPR's for abrasive blasting and whether they have been tested in accordance with the requirements prescribed for continuous flow supplied air respirators (Subpart J of 30 CFR 11). If not, would the requirements prescribed in Subpart K of 30 CFR 11 (schedule 21C) for PAPR's provide the same degree of respiratory and personal protection as a continuous flow supplied air respirator?
1910.94(a)(3)(i)(D) requires safety glass protected by screening for observation windows, where hard deep-cutting abrasives are used. However, employers using a plastic material with equivalent or greater strength and the same optical clarity of safety glass, protected by screening, would meet the intent of this standard.

29 CFR 1910.94(a)(3)(i)(D) does require safety glass protected by screening to be used in observation windows, where hard deep-cutting abrasives are used. However, employers using a plastic material with equivalent or greater strength and the same optical clarity of safety glass, protected by screening and properly maintained, would meet the intent of this standard.

Employers using the plastic material in lieu of safety glass could be in technical violation of 29 CFR 1910.94(a)(3)(i)(D). This technical departure from the standard would be noted as a de minimis violations, penalties are not proposed, and abatement of the violation is not required of the employer.

By way of this letter I am hereby petitioning for the promulgation, modification, or revocation of an OSHA standard. The standard I refer to is Section 1910.94 (a)(3)(i) (D) of the Occupational Safety and Health Standards which states:

"Safety glass protected by screening shall be used in observation windows, where hard deep-cutting abrasives are used."

A question arises regarding the language in this statement, namely, does the reference to “safety glass” necessarily rule out other materials? The plastics industry has developed several materials that are more abrasion resistant and shatterproof than glass while maintaining the same optical clarity. We would like to investigate the use of these materials for blast cabinet windows.
This interpretation letter responds to Mr. N of (Organization) concerning respiratory protection and Permissible Exposure Limits (PEL) for abrasive blasting with silica sand.

(NOTE: This standard was last amended in 1984.)

Provision 29 CFR 1910.94(a)(5)(ii)(B) of the ventilation standard requires that "abrasive-blasting respirators" shall be worn by all abrasive-blasting operators when using silica sand in manual blasting operations where the nozzle and blast are not physically separated from the operator in an exhaust ventilated enclosure. This is a work practice provision. That is, whenever the described operation takes place, "abrasive-blasting respirators" must be worn.

The Occupational Safety and Health Administration (OSHA) interprets provision 29 CFR 1910.94(a)(5)(iii)(b) as providing for a limited deviation from this requirement by permitting the use of "dust-filter respirators" as interim protection for an operator while "abrasive-blasting respirators" are temporarily unavailable for use for a justifiable reason. A "dust-filter respirator" may not be used as interim protection, however, if the airborne concentration of crystalline silica exceeds the protection factor allotted the respirator. If the "dust-filter respirator" is not designed to protect the operator's eyes and face from the impact of abrasives, supplementary equipment providing such protection will have to be provided in accordance with 29 CFR 1910.94(a)(5)(v)(B).

March 28, 1985

I am requesting an interpretation of 29 CFR 1910.94(a) pertaining to the use of negative-pressure, air purifying dust filter respirators for silica sand blasting.

Where silica sand is the abrasive and the nozzle and blast are not physically separated from the operator by an exhaust-ventilated enclosure, 1910.94(a)(5)(B) requires that an approved continuous flow, supplied-air respirator (presumably Type CE) be worn by the operator; no minimum blasting time (e.g., 15 minutes or less) is specified before such respirator use is required. With regard to negative-pressure dust filter respirators, 1910.94(a)(5)(iii) states they may be used for "short, intermittent, or occasional dust exposure such as cleanup, dumping of dust collectors, or unloading shipments of sand at a receiving point;" I note that short-term (e.g., 15 minutes or less) blasting with silica sand is not one of the "short, intermittent, or occasional dust exposures" given as an example for permissible use of negative-pressure dust filter respirators. Therefore, 1910.94 (a)(5)(ii)(B) and 1910.94(a)(5)(iii) appear consistent in not permitting the use of negative-pressure dust filter respirators when manually blasting with silica sand, even for short time periods (e.g., 15 minutes or less), where the nozzle and blast are not physically separated from the operator by an exhaust-ventilated enclosure. Further, the language is that of a design standard; that is, a continuous flow, supplied-air respirator (presumably Type CE) is required without regard to the silica dust concentration (and without the need to demonstrate an exposure above the permissible exposure limit for silica-containing dust) where silica sand is the abrasive and the nozzle and blast are not physically separated from the operator by an exhaust-ventilated enclosure.
However, 1910.94(a)(5)(iii)(B) subsequently states that negative pressure dust filter respirators shall not be used for "continuous protection" where silica sand is the abrasive. The term "continuous protection" is ambiguous in that it appears to allow negative-pressure dust filter respirator use for "non-continuous" protection, for example, for a 15 minute manual blasting operation with silica sand where the nozzle and blast are not physically separated from the operator by an exhaust-ventilated enclosure. Yet such "non-continuous" use of a negative-pressure dust filter respirator would be inconsistent with the respirator use practice intended by 1910.94(a)(5)(iii).

Please note that I have already discussed this apparent inconsistency with Mr. W, who was chairman of the subcommittee which developed the ANSI Z9.4-1979 standard; the 1979 standard is identical to the 1968 standard (on which 1910.94(a) is based) with respect to the specific respirator provisions in question. If I may paraphrase part of our conversation, Mr. W recollected that ANSI Section 6.2 (corresponding to 1910.94(a)(5)(iii)) specifically required a positive-pressure respirator for manual blasting with silica sand because the ANSI committee considered silica to be "such a bad actor", and that silica was specifically singled out from other toxic dusts due to the ANSI committee's concern with silica's pulmonary toxicity. He also stated that the "continuous protection" language in ANSI Section 6.3.2 (corresponding to 1910.94(a)(5)(iii)(B)) did not appear to be consistent with the respirator use practice specified in ANSI Section 6.2; however he could not locate any ANSI committee meeting comments on this respirator question.

Given this preface, my questions are the following:

1) Does 1910.94(a) permit the use of a negative-pressure dust filter respirator for manual blasting with silica sand for short time periods where the nozzle and blast are not physically separated from the operator by an exhaust-ventilated enclosure?

2) If the answer to question (1) is affirmative, for what time period (e.g., 15 minutes, 120 minutes, etc) during an 8-hour shift is negative-pressure dust filter respirator use permitted for manual blasting with silica sand where the nozzle and blast are not physically separated from the operator by an exhaust-ventilated enclosure?

3) If the answer to question (1) is affirmative, up to what silica dust exposure level (e.g., 10 times the PEL) is negative-pressure dust filter respirator use permitted during manual blasting with silica sand where the nozzle and blast are not physically separated from the operator by an exhaust-ventilated enclosure? (I note that 1910.94(a)(5)(ii)(C) requires the use of a continuous flow, supplied-air respirator (presumably Type CE) where concentrations of toxic dust (presumably including crystalline free silica) exceed one-time the PEL and the nozzle and blast are not physically separated from the operator by an exhaust-ventilated enclosure).

4) If the answer to question (1) is affirmative, and given that you specify some multiple of the PEL in your answer to question (3), is the employer required to demonstrate by records of personal exposure monitoring during similar previous manual blasting operations, or by use of a "real time" aerosol mass monitor (with a conservative assumption regarding the percent crystalline free silica content of the aerosol), that the silica dust exposure is below this multiple of the PEL?
ABSTRACT The use of dual concentric tanks with cyanide in the inner tank is a satisfactory method of controlling leakage from the inner tank.

(NOTE: This standard was last amended in 1984.)

INTERPRETATION 29 CFR 1910.94(d)(10)

November 9, 1983

This letter was prepared in response to your written inquiry (copy attached) of October 28, 1983 regarding cyanide electroplating baths. You questioned the need for diking around the tank in cases where there are dual concentric tanks; i.e., a tank within a tank. In the latter case leakage of cyanide from the inner tank would appear in a sight glass in the outer tank and/or sound an alarm at some predetermined level of leakage. You also questioned whether it is necessary to separate rinse streams.

As you are aware, the hazard from cyanide is primarily toxicity and not fire or explosion for which regulation by the Flammable and Combustible Liquid standard, 29 CFR 1910.106, is intended. Diking or drainage requirements pertain to this standard.

It appears, therefore, that your approach to handling tank cyanide leakage is satisfactory to OSHA. Also, we have no requirement for separating rinse streams. If you have additional questions please contact the Technical Support Group of this office.
July 28, 1992

Dear Mr. M:

This is in further response to your letter of January 23 to P. K. C., Director, Directorate of Compliance Programs, requesting interpretations of the Occupational Safety and Health standard for spray painting under 29 CFR 1910.107(n), relating to vehicle maintenance operations. Please accept our apologies for the delay in responding.

It is important to note the source standard for 29 CFR 1910.107 is NFPA No. 33-1969, Standard for Spray Finishing Using Flammable and Combustible Materials, which was most recently revised in 1989. The OSHA standard is applicable; however, compliance with NFPA No. 33-1989 is acceptable so long as equal or greater protection is provided. Our responses to your questions are provided as listed below.

Question 1: What, for the purposes of 1910.107, is considered to be small portable spraying apparatus?

Reply: The scope of 1910.107 standard does not specifically define small portable spraying apparatus. This standard applies to all spraying areas and does not categorize the application equipment with respect to size.

Question 2: What would be considered "frequent" or "repeated" spraying in the same location?

Reply: Generally when the word "frequent" is used in 1910 it is understood to mean daily to monthly intervals. For the purpose of 1910.107(n), the words "repeated" or "repeatedly" have been interpreted as meaning once a week or more.

Question 3: Could one use a small portable spraying apparatus with flammable paint to paint a fender or door of a truck inside an automotive maintenance garage?

Reply: It is permissible to use a small portable spraying apparatus providing the requirements of the latest applicable consensus standard, NFPA No. 33-1989 are met. Particular attention must be given to ventilation requirements, as well as electrical and other sources of ignition. Other related safety and health concerns are addressed by the following standards: 1910.134(a) for respiratory protection, 1910.252 for welding, cutting or brazing in the area adjacent to the painting operation, 1910.1000 for air contaminants related to the toxic and hazardous substances being used, and 1910.1200 for hazard communication.

Question 4: Is it permissible to use an aerosol paint can (flammable paint) to touch up a fender or door of a truck inside an automotive maintenance garage?

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Reply: Yes, providing the same requirements are met as listed in item 3. above. The same related safety and health concerns as mentioned in item 3. above need to be considered.

Question 5: Will the requirements of 1910.107 allow one to use a small portable spraying apparatus (with flammable paint) to paint a fender or door of a truck outdoors three times a week?

Reply: Consensus standard NFPA No. 33-1989 does not address outside spray painting operations. We recommend that any outside spray painting operation be located in the downstream air from the employee. It should also be an appreciable distance away from any area that could accumulate the mist or fumes, and from any potential explosive or fire hazards. Appropriate respiratory protection must be provided by the employer and worn by the employee during the spraying operation. If an enclosure of any type, such as a roof and/or sides is used outdoors to protect vehicles while they are being painted, 1910.107 would apply because they would no longer be considered as being outdoors.

Question 6: Can one use an aerosol paint can (flammable paint) to touch up a fender or door of a truck outdoors three times a week and still meet the requirements of 1910.107?

Reply: As stated above, 1910.107 does not address outside spray painting operations. It is permissible to spray outside, and we suggest that the recommendations made above in item 5 be considered before any outside operations begin.

Question 7: Could you use a small portable spraying apparatus and one gallon of flammable paint to spray a fender and door of a truck outdoors, if one painted one day by the northwest corner of the garage and two days later painted outside by the southwest corner of the garage? The maximum painting would probably be no more than three times in any given week.

Reply: See 5 above.

Question 8: Would a room set aside exclusively for painting meet OSHA requirements if it has Class I, Division I, wiring and light, non-combustible walls of one hour rating, and is provided with a mechanical exhaust and make-up air system?

Reply: Although 1910.107 does not define a spray room, the room you describe would be considered a spray area as defined in the NFPA No. 33-1989. Under the OSHA standard 1910.94 Ventilation, a spray room is a room in which spray-finishing operations not conducted in a spray booth are performed separately from other areas. A room can be set aside exclusively for painting provided it meets the requirements you have mentioned, NFPA 33-1989, and 1910.94.

If I can be of further assistance, please do not hesitate to contact me.
STANDARD NUMBER 1910.95(g)(5)
INFORMATION DATE 840326

ABSTRACT An interpretation letter regarding baseline audiograms must be established or attempted to be established within 6 months of an employer's first exposure at or above the action level, even if a medical problem or otoscopic abnormality exists.

INTERPRETATION 29 CFR 1910.95(g)(5)
March 26, 1984

MEMORANDUM


Your assessment of the situation is correct. It is imperative that a baseline audiogram be established or be attempted to be established for each employee. Medical referrals should be made on the basis of this audiogram and other supporting evidence such as an otoscopic examination.

SOURCE LETTER
February 14, 1984

MEMORANDUM

SUBJECT: Interpretation of Hearing Conservation Amendment

I have received a request for assistance on the 29 CFR 1910.95(c)-(p) Hearing Conservation Amendment from Ms. Z of clinic in the attached correspondence. Ms. Z indicates that an otoscopic examination is taken before any audiometric test is administered. If there are abnormalities; i.e., impacted wax, perforation, infection, then the employee is instructed to go to an ear specialist. The audiometric test is not administered until the employee has seen a specialist and has a release from the specialist.

Ms. Z further indicates that many employees refuse to go to the specialist because the employer will not pay for the exam and they do not have the money. It is my feeling that the purpose of the baseline and annual examination is to establish the hearing threshold of the employee. Even if there is a medical problem such as a perforation, the hearing level must be established to document future improvement or changes. A medical referral should be made on the basis of the audiogram and other supporting evidence such as an otoscopic examination.
ABSTRACT 1910.95(a) is not adjusted for workshifts exceeding 8 hours. This information is based on Table G-16. It is the information from Table G-16 which dictates when a combination of administrative and engineering controls are to be used based on the sound pressure level and to an 8 hour day. 1910. 95(c)-(n) is adjusted for work shifts exceeding 8 hours, as specified in Appendix A, Table G-16a. This table is used to establish the action level exposure or the noise exposure computation.

INTERPRETATION 29 CFR 1910.95(a)

March 26, 1982

This is in response to your inquiry of January 8, 1982, to Ms. F concerning OSHA's noise standard (29 CFR 1910.95). Please accept my apology for our delay in giving you written confirmation of the information Ms. G conveyed to you over the telephone on February 11, 1982.

Specifically, your question is whether the noise standard is adjusted for work shifts greater than 8 hours. The answer is no for provisions which reference Table G-16 of 1910.95, and yes whenever the standard refers to the 85 decibel (dB) time- weighted average (TWA) "action level".

Table G-16 is used for determining when engineering or administrative controls (1910.95(b)(1)) are required, and -- where there is no significant threshold shift -- when mandatory hearing protectors (1910.95(a)) are required to reduce noise levels. This table does not go below 90 dB, thus, it does not adjust for exposures greater than 8 hours in a workshift. For any 8-hour period of exposure within the extended workshift, exposures are required to be limited to a TWA of 90 dB.

On the other hand, Appendix A of 1910.95 is used to determine the "action level" of an 8-hour TWA of 85 dB referred to in 1910.95(c)-(s). Table G-16a of this Appendix is adjusted for workshifts greater or less than 8 hours. Thus, the "action level" could be greater than 85 db for exposures less than 8 hours, or less than 85 dB for exposures greater than 8 hours in a workshift.
RECORD ID 1248

STANDARD NUMBER 1910.95(o); 1910.5(c)(2); 1910.266(c)(1)(vi)
INFORMATION DATE 820713

ABSTRACT Applying 1910.5 to the extent that the 1910.266(c)(1)(iv) provisions do not duplicate or conflict with 1910.95 standards, the 1910.95 standards apply to pulpwood logging.

INTERPRETATION 29 CFR 1910.95(o); 1910.5(c)(2); 1910.266(c)(1)(vi)

July 13, 1982

MEMORANDUM

This is in response to your question regarding the applicability of the noise standard (29 CFR 1910.95) to pulpwood logging. Paragraph (c)(2) of 29 CFR 1910.5 (Applicability of standards) states that "any standard shall apply...even though particular standards are also prescribed for the industry, as in...Subpart R of this part, to the extent that none of such particular standards applies." The pulpwood logging standard (29 CFR 1910.266) is part of Subpart R.

Applying 1910.5 to this case, to the extent the 1910.266 provisions do not duplicate or conflict with 1910.95 standards, the 1910.95 standards would apply to pulpwood logging. Paragraph 1910.266(c)(1)(vi) essentially duplicated 1910.95(a), so for violations of this provision 1910.266 would control. However, since no 1910.266 provisions duplicate or conflict with 1910.95(b)-(s), these 1910.95 standards would apply to pulpwood logging.
September 15, 1981

This is in response to your inquiry of July 10, 1981, to Mr. M concerning the application of OSHA's existing and new hearing conservation program requirements. As you requested in a telephone conversation with a member of my staff, this reply was delayed until after OSHA's publication of the revised hearing conservation amendment on August 21, 1981 (copy enclosed). This revised amendment went into effect on August 22, 1981, and covers all workers, except those in construction and agriculture, who are exposed to eight-hour, time-weighted average levels of 85 decibels (dB) or greater.

For compliance purposes, OSHA samples employees in high noise areas, selecting those employees with the highest expected exposure in each job classification, where possible. Where noise levels predictably vary throughout a work week, the compliance officer attempts to monitor employees on the noisiest day.

If OSHA finds employees who are exposed to eight-hour, time-weighted average levels of 85 dB or greater, then we would investigate compliance with the requirements for a hearing conservation program. It should be noted, however, that the completion date for obtaining noise measurements of employees exposed at or above 85 dB (29 CFR 1910.95(e)(1)) is February 22, 1981. In addition, the completion date for baseline audiograms required by (j) of the amendment is August 22, 1982. Thus, OSHA will take these completion dates into consideration when determining compliance with the new hearing conservation amendment in the interim.

Where noise levels predictably vary throughout the work week (from less than 85 dBA (TWA) to greater than 90 dBA (TWA)) a hearing conservation program would be required. The number of times exposures exceed these noise levels is irrelevant, as long as the employer could have reasonably expected exposure levels to exceed the limits that day (e.g., the noisiest equipment and gauge of metal were being used).

OSHA has reopened the hearing conservation record for additional public comment on various provisions, including those whose feasibility or cost-effectiveness deserves further consideration.
Relief from audiometric testing requirements is offered for transient and seasonal work forces based on how the regulation is interpreted and re-written. Based on the fact that (g)(5)(i)(ii) allows a large time between initial exposure at or above the action level and establishing a baseline audiogram. The mere fact that most employees will not be around for 6 months to a year gives relief to audiometric testing.

March 29, 1983

MEMORANDUM

SUBJECT: Arborists

Attached is a letter dated March 25, 1983, to the association., concerning their earliest request for relief from the audiometric testing provisions of the hearing conservation program. The letter describes the nature of the workforce in the arborist industry and how the requirements for baseline and annual audiometric testing under the hearing conservation program (29 CFR 1910.95(c)-(p)) apply to this industry.

In light of the above, no further action is being taken on the proposed instruction on this subject, which was forwarded for comment on December 6, 1982.

(No date provided.)

This is in reference to your several communications with the Occupational Safety and Health Administration (OSHA) for relief from the audiometric testing requirements of the hearing conservation program of the occupational noise standard.

Your request for relief is based on the particular nature of the arborist industry. In light of the fact that the employees typically comprise a transient workforce with high turnover, your position that the audiometric testing requirement is an undue burden has merit. OSHA recently, on March 8, 1983, published an amendment to its hearing conservation program, 29 CFR 1910.95 (c) -(p). I have enclosed for your information, a copy of the amendment, a copy of a press release explaining many of the amendment's provisions and its history, and the pamphlet "Hearing Conservation" (OSHA 3074).

A consideration during the amendment's review process was the requirements to perform baseline and annual audio-metric testing on transient and seasonal employees such as those encountered in your industry.

The revised hearing conservation program is performance-oriented, giving employers the flexibility they need to find the most cost- effective means of providing protection to workers. Of particular interest to your organization is OSHA's determination that a period of less than one year in which to perform initial baseline audiograms would be restrictive and include many transient and seasonal employees under the audiometric testing requirements. Since the period of employment of workers in your industry is usually short, the requirement for follow-up annual audiometric testing would not apply. Thus the use of baseline audiograms in the arborist industry seemed to have little merit. The final standard provides for your industry by requiring that where employers utilize mobile audiometric test vans to obtain audiograms, baseline audiograms must be completed within one year after an employee's first exposure to workplace noise at or above a time-weighted average of 85dB. The annual audiograms must be conducted within one year of the baseline.
We believe that, since most of the employees in the arborist industry are transient or seasonal with less than one year of continuous employment, baseline audiograms will not have to be performed and, as a result, annual audiograms will not be necessary.
An electroacoustic ear can be used in place of the testing requirements for an audiometer and must comply with the parameters of Appendix C and E of 1910.95. The listening check must still be performed by a person to make sure the audiometer is free from unwanted sounds or distortion.

29 CFR 1910.95(h)(5)(i)

April 6, 1983

Thank you for your letter of March 25, 1983, concerning the use of an electroacoustic ear to perform the required daily functional check. This functional check requires that the audiometer be tested using a person with known stable hearing and that a listening check be performed. The electroacoustic ear can be used in place of the testing requirement, but the listening check still must be performed to make sure that the signal is free of unwanted sounds or distortion, and that the general functioning of the audiometer is satisfactory. The position was stated in the preamble of the August 21, 1981, Hearing Conservation Amendment (pgs. 42628-42629) and remains in effect for the final hearing conservation amendment as published on March 8, 1983.
ABSTRACT
The hearing conservation amendment does not contain a time limit for the period from the date of the annual audiogram to the time a standard threshold shift determination is made.

(NOTE: Since this 1983 interpretation letter, the standard has been amended.)

INTERPRETATION

April 6, 1983

Your letter of March 16, 1983, to Mr. F, Office of Information, has been referred to this office for response. Paragraph (g)(8)(i) of 29 CFR 1910.95, requires that employees be informed in writing within 21 days of the determination of a standard threshold shift (STS). This section is a restatement of section (j)(8)(iv)(A) contained in the August 21, 1981, hearing conservation amendment. The discussion regarding this paragraph contained in the preamble to the August 1981 amendment still applies.

The hearing conservation amendment does not contain a time limit for the period from the date of the annual audiogram to the time an STS determination is made. A time limit of 21 days is set for informing employees in writing that an STS occurred once an STS determination has been made. Determining whether an STS has occurred is a medical decision which should be made as quickly as possible after the annual audiogram is given so that required protective measures can be taken. OSHA recognizes that logistical problems associated with testing the many employees in your plants could result in slightly varying times from plant to plant determining whether an STS has occurred. Your planned use of a computer to compare annual audiograms to baseline audiograms should help you reduce this time for determining an STS to a minimum.
An interpretation letter regarding methods of training for microprocessor audiometer technicians. The hearing conservation amendment allows two methods of training microprocessor audiometer technicians. First is completion of a certified training course, second is demonstration of competence to the professional supervising the audiometric testing program. If this method of training is selected per (g)(3) of the standard or technicians who operate microprocessors audiometers. Then they must be directly responsible by an audiologist, otolaryngologist or physician.

April 26, 1983

Thank you for your letter of April 8, 1983, regarding the certification of microprocessor audiometer technicians.

The hearing conservation amendment recognizes two methods for persons to become trained in administering audiometric tests. The first is to complete a training course certified by the Council of Accreditation for Occupational Hearing Conservation or other recognized training organization. The second method involves demonstration, to the satisfaction of the professional supervising the audiometric testing program, that competence has been achieved in the following:

1. administering audiometric exams,
2. obtaining valid audiograms and
3. properly using, maintaining and checking the calibration and proper functioning of the audiometers being used.

Microprocessor audiometer technicians, like all other audiometric technicians, need not be certified if they meet the requirements outlined in this second method.

As you know, the issue of audiometric technician certification was addressed during the rule making, and is discussed in the preamble to the final hearing conservation amendment (48 FR 9753). After reviewing all of the evidence in the record, including your comments (Exh. 331-48), the decision presented above was reached.
ABSTRACT
An interpretation letter regarding comparison to baseline audiograms, annual audiograms, and retest audiograms per sections (g)(6-10). The hearing conservation amendment provides for comparing an annual audiogram against a baseline audiogram per section (g)(7). If a possible temporary threshold shift has occurred a retest audiogram can be taken within 30 days and the retest audiogram results can be considered rather than the annual audiogram.

INTERPRETATION
29 CFR 1910.95(g)(7);1910.95(g)(7)(ii)

May 24, 1983

Thank you for your letter of May 5, 1983, asking for a clarification of the hearing conservation amendment provisions for baseline, annual, and revised baseline audiograms.

An annual audiogram must be taken and compared against the baseline audiogram to determine whether a standard threshold shift (STS) has occurred. There is no requirement for 14 hours without exposure to workplace noise for annual audiograms as there is for baseline audiograms. A temporary threshold shift (TTS) could possible contaminate the annual audiogram if an employee was exposed to workplace noise prior to taking the audiogram. It is this audiogram which is compared to the baseline audiogram to determine whether an STS has occurred. The audiologist, otolaryngologist, or physician cannot override this STS determination simply because of possible TTS contamination. Only a retest audiogram, taken within 30 days of the annual audiogram, can be used to replace the annual audiogram and the STS determination.

If TTS contamination is a problem, the retest audiogram should be proceeded by 14 hours free from workplace noise, but this is not required by the standard. If no retest is done, the annual audiogram and its STS determination are conclusive, and the follow-up procedures and written notification of the STS determination to the employee must be done. The annual audiogram can be substituted for the baseline audiogram when the audiologist, otolaryngologist, or physician who evaluates the audiogram determines that the STS is persistent.
ABSTRACT
An interpretation letter regarding employee noise exposure assessment records; they are part of audiometric test records. Personnel employee noise exposure assessment records are part of the audiometric test record and must be kept for the duration of the employee's employment. Area noise monitoring measurements must be kept for two years.

INTERPRETATION
29 CFR 1910.95(m)(1); (m)(2); (m)(3)(i); (m)(3)(ii)

May 11, 1983

Thank you for your letter of April 19, 1983, requesting information on the recordkeeping requirements for employee noise monitoring data contained in the March 8, 1983, hearing conservation amendment.

The employer is required to maintain an accurate record of all area or personal noise monitoring measurements taken. These noise exposure measurements records must be kept on file for at least two years, but do not necessarily have to be entered into each employee's personnel file. The employer is also required to perform an assessment of each employee's noise exposure, the actual noise exposure measured for that employee or the representative exposure attributed to that employee. This assessment is part of the audiometric test record and must be retained for the duration of the affected employee's employment. The employer can enter this assessment into each employee's audiometric test record or the information can be maintained in a separate document that is kept or filed with the audiometric test results.
ABSTRACT
An interpretation letter regarding the use of an electroacoustic ear; it can be used for daily testing of an audiometer. An electroacoustic ear can be used for daily testing of an audiometer, however, a listening check must also be performed daily using an individual with a known stable threshold per section (h)(5).

INTERPRETATION
29 CFR 1910.95(h)(5)(i)

March 29, 1983

Subject: Use of Electroacoustic Ears

This is to confirm our telephone conversation of this date that we are correct in our interpretation of the Occupational Noise Exposure; Hearing Conservation Amendment; Final Rule, regarding audiometer biological calibration and a listening check.

Federal Register, March 8, 1983, Vol. 48, No. 46, FR 9768 Audiometer Calibration. "The agency's position on this issue was discussed in the August Federal Register document and an interpretation consistent with the above discussion was given (see 46 FR 42628-42629)."

Federal Register, August 21, 1981, Vol. 46, FR 2628-42629. "One comment interpreted the procedure prescribed in the preamble for checking the functional operation of the audiometer to preclude use of the electroacoustic ear. The standard's requirement for a daily functional check is two fold; a person with known stable hearing must be tested, and a listening check must also be performed. The electroacoustic ear can be used in place of the testing requirement, but the listening check must be performed to make sure that the signal is free of unwanted sounds or distortion, and that the general functioning of the audiometer is satisfactory."
ABSTRACT An interpretation letter notifying requirements for standard threshold shifts. Employees must be notified every time an audiogram shows an STS, even if the same shift was found and notification provided the previous year. There is a provision for the substitution of a revised baseline after repeated audiograms which show a consistent threshold shift.

INTERPRETATION 29 CFR 1910.95(g)(8)(i); (g)(9)(2)

September 27, 1983


Paragraph (g)(8)(2) requires that employees be informed in writing within 21 days of the determination that a standard threshold shift (STS) has occurred. Every annual audiogram which, when compared to the baseline audiogram, shows an STS requires employee notification. The only way to avoid picking up this same STS on each subsequent annual audiogram is to revise the baseline as provided in paragraph (g)(9)(i). Your letter states that you will be requiring that three audiograms show the same STS before you will establish a new baseline. Therefore, when the second annual audiogram (Year 3) shows an STS, the employee must be informed. The notification should emphasize that this second latter only confirms the original STS determination of the previous year, providing no further hearing loss was found. When the third annual audiogram confirms the STS, the baseline audiogram will be revised, and the original STS will no longer be repeatedly identified for the same employee.
This is in response to your letter of June 17 concerning audiometric testing.

The standard for occupational noise exposure, 29 CFR 1910.95, requires employers to make free audiometric testing available to all their employees who are exposed in a workday to at least the equivalence of 8 hours of noise of a constant sound pressure level of 85 dBA.

The Occupational Safety and Health Administration (OSHA) hopes that employees will take advantage of this free testing made available to them by law for their benefit, but it is not mandatory that they do so.

To assure that all employees are afforded access to acceptable audiometric testing programs, OSHA included a number of requirements that the programs employers offer must meet. Of course, some of the requirements, such as obtaining a valid baseline audiogram for an employee within 6 months of the employee's first exposure at or above the action level do not pertain for an employee who does not want audiometric testing.
A response to a letter requesting an interpretation of the phrase annual medical examination. An annual medical examination is a recurring medical examination that is given at 12-month intervals.

This is in response to your letter of June 26 requesting an interpretation of an annual medical examination. An annual medical examination is a recurring medical examination that is given at 12-month intervals.
Provision 29 CFR 1910.95(g)(7)(ii) allows, but does not require, an audiometric retest within 30 days if the annual audiogram shows that an employee has suffered a standard threshold shift. An employer wishing to retest under these conditions may consider the retest audiogram as the annual audiogram as provided at (g)(9). Therefore, if a valid retest audiogram does not show that the employee has suffered a standard threshold shift, no follow-up procedures need be implemented as listed at (g)(8)(ii).

June 18, 1985

This is in response to your letter of March 7 concerning audiograms conducted in accordance with the hearing conservation amendment, 29 CFR 1910.95 (c)-(p). We wish to inform you that the Occupational Safety and Health Administration (OSHA) resumed enforcement of the hearing conservation amendment on April 15, 1985.

Provision 29 CFR 1910.95(g)(7)(ii) allows but does not require an audiometric retest within 30 days in the event that the annual audiogram shows that an employee has suffered a standard threshold shift. An employer wishing to retest under these conditions may consider the retest audiogram as the annual audiogram. Therefore, if a valid retest audiogram does not show that the employee has suffered a standard threshold shift, no follow-up procedures need be implemented. This provision permits employers and the audiologists, otolaryngologists, or physicians who direct their audiometric testing programs to decide, on a case-by-case basis, whether a retest audiogram is necessary or desirable.

You related that occasionally an annual audiogram will show that an employee has suffered a standard threshold shift in only one ear, but that when a retest is done, the second audiogram will show a standard threshold shift in the second ear, as well as confirm the standard threshold shift in the first ear. In such a situation, OSHA requires that the second audiogram be treated as providing the annual audiometric test results for both ears. The employee must be notified that there is a standard threshold shift of hearing in both his/her ears.

Before a baseline audiogram may be revised due to a standard threshold shift, the shift must be persistent in the judgment of the professional evaluating the audiograms. In the situation you related, perhaps there is sufficient information for the professional evaluating the audiograms to make a judgment about the persistency of the standard threshold shift in the first ear, but there is probably not enough information for the professional to make the judgment call for the second ear. If, in fact, in the judgment of the professional evaluating the audiograms, the standard threshold shift in the first ear is persistent, but the persistency of the shift in the second ear is inconclusive, then the baseline audiogram may be revised for the first ear, but it may not be revised for the second ear.
Many of our clients conduct a thirty (30) day retest upon being notified by us that an OSHA standard threshold shift has occurred. This 30 day retest is again evaluated by us to determine if the shift is confirmed or is no longer present (we call it "shift repealed"). In many instances, a confirmed shift is in one ear. In conjunction with the confirmed shift in one ear, there may now also be a new OSHA shift in the other ear (quite frequently this new shift is the result of only a 5 dB change at one frequency that brings the average at 2000, 3000 and 4000 Hz to 10 dB). In any case, this new OSHA shift theoretically requires another 30 day retest.

In effect then, the employee described in the above situation will have been tested three times in approximately two months. That is, the routine annual test, the first 30 day retest and second 30 day retest. It is at this point that plant managers, plant physicians and others raise questions.

Our question to you concerning the situation presented above is what is OSHA's position concerning the second OSHA shift? Would it be satisfactory for the employer to notify the employee of the confirmed shift and for the baseline to be changed at that time to the last test? This in effect would disregard the second OSHA shift but the primary requirements would have been met. That is, the employee was notified and all educational counselling of the employee conducted as required.
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An interpretation letter regarding current written criterion describing what must be recorded on the OSHA form 200 as occupational hearing loss. OSHA is currently considering various criteria for recording occupational hearing loss.

Feb 5, 1988

This is in response to your letter of January 6, requesting a copy of an Occupational Safety and Health Administration (OSHA) written law requiring the inclusion on the OSHA Form 200, the Log and Summary of Occupational Injuries and Illness, of employees who show a Standard Threshold Shift (STS) as defined by the OSHA 29 CFR 1910.95 Occupational Noise Exposure Standard.

There is no current written criterion describing what must be recorded on the OSHA Form 200 as occupational hearing loss. OSHA is currently investigating and considering various criteria for recording occupational hearing loss that have been suggested from both within and outside the Agency. Be assured the Agency will adopt a fair, clear definition of recordable hearing loss which will result in overall improved worker protection.

Further, the Standard Threshold Shift itself as it is defined in the 29 CFR 1910.95 Occupational Noise Exposure Standard is not under review.
An interpretation letter regarding response to an inquiry about "ear blasts" on communications headsets. "Ear blast" is spurious noise on communications headsets. It would be regulated as an impulsive or impact noise not to exceed a peak sound pressure level of 140 dB. Voltage limiters in headset circuitry will eliminate "ear blast".

Dec 3, 1987

This is in response to your letter of November 20, to Dr. Y of the Occupational Safety and Health Administration (OSHA) Office of Occupational Medicine inquiring about hearing conservation programs and "ear blasts" on communications headsets. Dr. Y asked me to answer your questions.

Enclosed for your information are copies of the OSHA 29 CFR 1910.95 Occupational Noise Exposure Regulation and its March 8, 1983 hearing conservation amendment. The hearing conservation amendment begins on page 9776 of the enclosed Federal Register notice. Please note that this regulation describes the rudiments of an effective hearing conservation program and sets forth the conditions (average eight hour exposures greater than 85 dB(a)) requiring implementation of such a program.

"Ear blast" occurs when spurious noise signals other than speech occur in the earphone(s) or ear insert(s) of communications headsets. It is, of course, quite possible for these sounds to be quite intense even though they may not necessarily contribute to much of an average exposure. In such cases, there would be a danger of possible acoustic trauma. The OSHA noise exposure regulation states that exposure to impulse sounds above 140 dB is not allowed.

A rather simple solution to "ear blast" signals is the incorporation of voltage limiters in headset circuitry.
ABSTRACT An interpretation letter regarding reduction of noise exposure for metal spray operations. A special spray room is the most complete engineering control for noise from metal spraying. Noise may also be reduced by using isolation booths or source barriers.

INTERPRETATION 29 CFR 1910.95(b)(1)

NOV 20, 1987

This is in response to your inquiry of October 30, to the U.S. Occupational Safety and Health Administration (OSHA) requesting information on the OSHA occupational noise exposure standard and publications regarding metal spray operations safety (presumably from the effects of noise). Your letter was forwarded to the Directorate of Technical Support for reply.

The OSHA 29 CFR 1910.95 Occupational Noise Exposure standard limits employee noise exposure to 90 dB(A) averaged over an eight hour workday measured at the employee's hearing zone. The allowable exposure time is halved for each 5 dB of increased exposure - thus 95 dB(A) is allowed for four hours, 100 dB(A) for two hours, etc. Furthermore, the standard mandates employee inclusion in a hearing conservation program if the employee is exposed to an average of 85 dB(A) or more for a workday.

Enclosed for your information is a translation of an article published by the (institute), (city), (country), "Noise in Plasma Spray Coating and Hygienic Measures to Improve the Technique." Also enclosed is a copy of a technical bulletin from (company), (city), (state), (country), that describes a typical spray room used in the control of processes such as metal spraying. Please note that use of a special room is probably the most complete engineering control available for metal spraying noise emissions. It may be possible in certain applications to achieve favorable noise emission reductions using simpler controls such as employee isolation booths or source barriers.
An interpretation letter regarding a response to a letter for calculating hearing threshold shifts. The change in hearing threshold occurring at 4,000 Hz is included in calculating the average shift because the loss at this frequency is typically greater than the amount of loss at 2,000 and 3,000 Hertz.

(NOTE: Figure G-9 in section (a) of 1910.95 which shows the 4000 Hz dip.)

MAR 18, 1987

This is in response to your letter of December 17, 1986, regarding the calculating of hearing threshold shift.

In a telephone conversation with a member of my staff you indicated that on occasion you test individuals who cannot hear the maximum 4,000 Hertz signal that your audiometers produce, which is 99 dBA, yet these individuals can hear the 2,000 and 3,000 Hertz signals. You inquire in your letter about the appropriate method for calculating the hearing threshold shifts they incur.

The Occupational Safety and Health Administration (OSHA) agrees with your opinion that the correct method of calculating the shifts is to take the average of just the measurable changes in hearing threshold occurring at 2,000 and 3,000 Hertz. The numerical value obtained by the calculation indicates a greater hearing loss than the same numerical value obtained for a normally calculated hearing shift that includes the change in hearing threshold occurring at 4,000 Hertz, however. This is so because, as you may be aware, the amount of hearing loss at 4,000 Hertz is typically greater than the amount of loss at the 2,000 and 3,000 Hertz frequencies.

Therefore, the follow up procedures presented at 29 CFR 1910.95(g)(9) should be triggered by a calculated change in hearing threshold of less than 10 dB the calculated change must be, because this issue was not addressed during rule making proceedings. Accordingly, at the present time, the amount of calculated change in hearing threshold that triggers follow up procedures is left to the professional judgment of the audiologist, otolaryngologist, or physician responsible for the audiometric testing program.

SOURCE LETTER

December 17, 1986

I am an industrial audiologist in need of an interpretation of the Federal Register: Hearing Conservation Amendment.

I would like to know OSHA's opinion in the handling of those employees that have no measurable hearing at one or more frequencies. Specifically, if an employee has no response at the limits of the audiometer for 4,000 Hz, do we still need to average that frequency (2k + 3k + 4k divided by 3) or can we just average those frequencies in which thresholds were obtained (2k + 3k divided by 2)? It seems to me that if we only average those frequencies in which thresholds have been obtained, our high frequency average becomes more sensitive; thus of greater accuracy when determining the presence of a Standard Threshold Shift.
RECORD ID 1746

STANDARD NUMBER 1910.95(a)
INFORMATION DATE 870401

ABSTRACT An interpretation letter discussing applicability of 1910.95 to cotton gins operations at facility owned or leased operations. A cotton ginning operation conducted at a facility owned or leased by a grower of cotton to process only the grower's own produce is an agricultural operation 1910.95 does not apply. However, 1910.95 does apply to a cotton ginning operation conducted at a facility that is not owned or leased by the grower of the cotton being processed.

INTERPRETATION 29 CFR 1910.95(a)

APR 1, 1987

This is in response to your letter of March 27 concerning the applicability of the standard for occupational noise exposure, 29 CFR 1910.95, to cotton gins.

A cotton ginning operation conducted at a facility owned or leased by a grower of cotton to process only the grower's own produce is an agricultural operation, and due to that fact, the standard for occupational noise exposure does not apply. However, a cotton ginning operation conducted at a facility that is not owned or leased by the grower of the cotton being processed is a general industry operation to which the standard for occupational noise exposure does apply.
ABSTRACT
An interpretation letter regarding requirement for instituting engineering and administrative controls for noise. The standard for occupational exposure to noise requires employers to utilize feasible administrative or engineering controls for noise when any employee exposures during a workday exceed the equivalent of a constant sound pressure level of 90 dBA for eight hours or other durations of sound pressure levels established in (b)(2) Table G-16.

INTERPRETATION
29 CFR 1910.95(b)(1)
JUN 9, 1987

This is in response to your letter of February 27 addressed to Mr. M concerning the requirement for instituting engineering and administrative controls for noise.

The standard for occupational exposure to noise requires employers to utilize feasible administrative or engineering controls for noise when any employee exposures during a workday exceed the equivalent of a constant sound pressure level of 90 dBA for eight hours. This basic requirement can only be changed through rule making.

What the Occupational Safety and Health Administration (OSHA) has done is provide our compliance officers with guidelines for executing a U.S. Court of Appeals decision (D vs. C and C) concerning the feasibility of utilizing engineering and administrative controls for noise.

In D vs. C and C and the Occupational Safety and Health Review Commission, the U.S. Court of Appeals for the Ninth Circuit held that implementation of engineering or administrative controls could not be required without comparing the relative costs and effectiveness of this approach with the alternative approach of using personal protective equipment.

OSHA's current policy for enforcing the use of engineering and administrative controls for noise is contained in the Agency's Field Operations Manual and the appendix to OSHA Instruction CPL 2-2.35A. A copy of this information is enclosed.
RECORD ID 1770

STANDARD NUMBER 1910.95(b)(1); (i)(1)
INFORMATION DATE 860410

ABSTRACT A general review of the OSHA noise standard. Review of provisions of the OSHA noise standard including requirements for audiometric tests, engineering and administrative controls, and personal hearing protection devices.

INTERPRETATION 29 CFR 1910.95(b)(1); (i)(1)

APR 10, 1986

This is in response to your inquiry of July 23 concerning the Occupational Safety and Health Administration's (OSHA) standard for occupational noise exposure.

The standard was first issued on April 17, 1971. On March 8, 1983, it was expanded by adding provisions (c) through (p), called the "Hearing Conservation Amendment." It is mandatory for employers to comply with the standard. OSHA enforces it by conducting unannounced inspections and issuing citations if employers are found not to be in compliance. A copy of the standard is enclosed.

The standard limits employee noise exposure in accordance with a 5-dB exchange rate. Specifically, a 5-dB increase in sound pressure level is permitted for each having of duration of exposure. It is not permissible to expose any employee in excess of the 90-dBA criterion, which means that no employee may be exposed to the equivalence of a constant sound pressure level of 90 dBA for more than 8 hours, or to the equivalence of a constant sound pressure level 95 dBA for more than 4 hours, and so on.

Employers must make audiometric tests available to employees whose exposure exceeds an 85-dBA criterion, which means that tests must be made available where the exposure to the equivalence of a constant sound pressure level 90 dBA last more than 4 hours, and so on. Any employee whose audiogram reveals a standard threshold shift (STS), as defined at (g) (10) of the standard, may not be exposed in excess of the 85-dBA criterion.

Employers must use feasible engineering and administrative controls to eliminate employee exposures in excess of the 90-dBA criterion. If the feasible engineering and administrative controls are not fully effective, then the remainder of required protections must be obtained by providing employees with and requiring that they use personal hearing protection devices.

In the case of employees who may not be exposed in excess of the 85-dBA criterion, it is acceptable to reduce their exposure from an amount equaling the 90-dBA criterion to the permissible amount by using personal hearing protection devices.

SOURCE LETTER

July 23, 1985

Please help us, answering a request on noise legislation in USA:

1. Are OSHA noise regulations mandatory? (Date of issue?)
2. Who is responsible for the implementation? And for inspection?
3. Is the noise exposure still measured as equivalent continuous sound pressure level with q - 5 dB?
4. Which noise limits are in force?
5. Is there priority to noise abatement?
6. Are the wearing of hearing protectors and screening audiometry required in second priority?
ABSTRACT Response to a request for information on field calibration of noise dosimeters to ensure measurement accuracy (d)(2)(ii). The manufacturer's instructions should be followed for field calibration of noise dosimeters. In addition to field calibrations, all OSHA noise measurement instruments are returned yearly to the OSHA Measurement and Calibration Laboratory in Cincinnati, Ohio for checkup and calibration.

INTERPRETATION 29 CFR 1910.95(d)(2)(ii)

OCT 10, 1986

This is in response to your letter of July 31, to Mr. M, Director, Directorate of Field Operations, Occupational Safety and Health Administration (OSHA), asking: "How do I calibrate the Type II dosimeter in the field to be positive that it is accurately integrating the impulse noise, as mandated by the Hearing Conservation Amendment?" Your letter was forwarded to this office for response.

OSHA does not specify exactly how monitoring instruments should be calibrated. Paragraph 29 CFR 1910.95(d)(2)(ii) of the OSHA Hearing Conservation Amendment states that: "Instruments used to measure employee noise exposure shall be calibrated to ensure measurement accuracy."

In your letter you also raised a question regarding what method OSHA uses to calibrate its noise dosimeters. Please note on page 1-14 of OSHA Instruction CPL 2.20A., March 30, 1984, the Industrial Hygiene Technical Manual, that OSHA requires its compliance officers to "follow the manufacturer's instructions" for the calibration of (company), (company), and (company) noise dosimeters. This dictum applies also to the (company) and (company) dosimeters used by OSHA personnel. In addition to field calibrations, all OSHA noise measurement instruments are returned yearly to the OSHA Measurement and Calibration Laboratory in Cincinnati, Ohio for checkup and calibration.
An interpretation letter regarding calibration of noise dosimeters.

Response to the question, "How does OSHA calibrate its dosimeters to see if they respond accurately to impulsive signals or noise?" This is a question that does not apply to calibration, especially field calibration, of noise dosimeters, but rather to the intrinsic measurement abilities of such instruments themselves. The question can best be answered directly by instrument manufacturers. The standard (d)(2)(ii) simply states that instruments used to measure employee noise exposures shall be calibrated to ensure measurement accuracy. How they are to be calibrated is not defined.

29 CFR 1910.95(d)(2)(ii)

DEC 10, 1986

This is in response to your letter of November 5, to Mr. M, Director, Directorate of Field Operations, Occupational Safety and Health Administration (OSHA) asking: "How does OSHA calibrate its dosimeters to see if they respond accurately to impulsive signals or noise?" Your letter was forwarded to this office for response. Note that on October 10 this office (the Directorate of Technical Support) responded to a similar letter from you to Mr. M dated July 31.

The OSHA policy regarding field calibration procedures of noise measurement instruments was explained in our October 10 letter, namely that field calibrations on all OSHA noise measurement instruments are performed according to manufacturers' instructions and that all such instruments are returned yearly to the OSHA Measurement and Calibration Laboratory in Cincinnati, Ohio for checkup and calibration.

The restrictive clause in your inquiry - "to see if they respond accurately to impulsive signals or noise" - is a question that does not apply to calibration, especially field calibration, of noise dosimeters, but rather to the intrinsic measurement abilities of such instruments themselves. This is a question that can best be answered directly by instrument manufacturers.

Measurements made by any noise measurement device employing A-weighted slow response of a pulse train output (106 dB for .5 seconds and 86 dB for 9.5 seconds) form a product can not result in a workshift time-weighted average of 90 dB. Please note that both Table G-16 and Table G-16a of the OSHA 29 CFR 1910.95 Occupational Noise Exposure regulations refer to measured dBA slow response sound levels.

This is clearly spelled out in both paragraph 1910.95(a) and the equation for reference duration, T, in section I.(3) of 1910.95 Appendix A. Your calculated 90 dB time-weighted average clearly results from the arbitrary choice of a response time effectively equal to zero.
ABSTRACT  An interpretation letter regarding the accuracy of the noise standard to environments with undue atmospheric pressure. OSHA makes no distinction about occupational noise exposures in unusual environments such as those with undue atmospheric pressure. All environments are included in the occupational noise standard as determined in sections (a) and (b) of 1910.95. There are no special civil service exams for audiologists, however, there is appropriate certification described in section (g)(3) that is required.

INTERPRETATION  29 CFR 1910.95(a): (g)(3)

JUN 16, 1986

This is in response to your inquiry of May 22, to the Health Standards Directorate of the Occupational Safety and Health Administration (OSHA) regarding hearing loss, noise, and civil service exams for audiologists.

Enclosed for your information are the OSHA 29 CFR 1910.95 occupational noise exposure standard and its March 8, 1983, hearing conservation amendment. The amendment replaces paragraph (b)(3) of the standard with paragraphs (c) through (g) and Appendices A through I. These begin on page 9776 of the enclosed Federal Register notice. As you can see, OSHA makes no distinction about occupational noise exposures in unusual environments such as those with undue atmospheric pressure. All environments are included in the OSHA occupational noise standard.

Furthermore, we are not aware of any special civil service exams for audiologists. If your concern lies in the area of certification or licensing for audiometric technicians, please refer to paragraph 1910.85(g)(3) of the hearing conservation amendment. This is found on page 9777 of the enclosed notice.
A clarification of the time period given in the Hearing Conservation Amendment for notifying employees of a standard threshold shift (STS) in their hearing ability. Employees must be notified of their STS within 21 calendar days from the date that the determination is made that their audiometric test showed the STS.

This is in response to your letter of October 7, asking for clarification of the time period given in the Hearing Conservation Amendment for notifying employees of a standard threshold shift (STS) in their hearing ability. Please accept my apology for the delay in response.

Employees must be notified of their STS within 21 calendar days from the date that the determination is made that their audiometric test showed the STS.

Recently I have received a number of questions concerning OSHA's Hearing Conservation Amendment. Some organizations are concerned about OSHA's interpretation of the time period allowed after an audiometric test, before an employee must be notified of the existence of a Standard Threshold Shift (STS).

The standard says that: "If a comparison of the annual audiogram to the baseline audiogram indicates a standard threshold shift as defined in paragraph (g)(10) of this section has occurred, the employee shall be informed of this fact in writing, within 21 days of the determination."

The questioners want to know whether the 21 day period begins the day the audiogram was taken? 21 days from the time the (Company A) receives the results of the test from the testing service? 21 days from the time the (Company A) makes its determination that a STS has occurred, (after having received test results)? Finally, are the 21 days, working of calendar days?
ABSTRACT

The occupational noise exposure standard allows for valid baselines to be revised when a standard threshold shift (STS) is persistent or an annual audiogram shows significant improvement (g)(9). If it is later discovered and sufficiently documented that the baseline was not valid then the first valid audiogram becomes the valid baseline or the purposes of comparing future audiograms. Thus, it may be acceptable to revise baselines that are discovered to be invalid due to improper testing procedures. Employers must notify employees of any STS's that occurred prior to the revision of the baseline per (8)(i).

INTERPRETATION

29 CFR 1910.95(g)(7)(i); (g)(8)(i); (g)(9)

JUL 19, 1989

MEMORANDUM

SUBJECT: Policy concerning OSHA's Hearing Conservation Amendment

This is in response to your request for assistance with an inquiry concerning OSHA's Hearing Conservation Amendment (29 CFR 1910.95). We are providing you with the following information which should assist in your reply to the inquirer.

It appears that the policy issues are:

1. Is it acceptable to revise baselines that are discovered to be invalid due to improper testing procedures; and
2. Must employees be notified of hearing loss if none occurred once the invalid baselines are revised.

The standard allows for valid baselines to be revised when:

1. A standard threshold shift (STS) is persistent; or
2. An annual audiogram shows significant improvement.

In order for an audiogram to be valid it must, in addition to other factors, meet the audiometric test requirements of the standard (1910.95(h)). If it is later discovered and sufficiently documented that the baseline was not valid then the first valid audiogram becomes the valid baseline for the purposes of comparing future audiograms. Thus, it may be acceptable to revise baselines that are discovered to be invalid due to improper testing procedures. However, we are confused as to how the company can show by using more recent audiograms that the original baselines should have shown the employees had worse hearing.

Employers must have notified employees, however, of any STS's that occurred prior to the revision of the baseline. Notification of the occurrence of a STS must be within 21 days of the determination. Thus, there should not be underreporting of STS's. If it is later determined that the baseline is invalid and that actually no STS's occurred, then the employer should notify all affected employees of the new results. In addition, all audiometric test records, including any invalid ones, must be retained for the duration of the affected employee's employment.
ABSTRACT
This interpretation letter clarifies the March 1, 1984 deadline for baseline audiograms. In section (p), the standard states that valid baseline audiograms are required by section (g)(5) and shall be completed by March 1, 1984 when a mobile test van service is used.

INTERPRETATION
29 CFR 1910.95(p)

February 3, 1984

This will provide a correction to my letter to you of January 16, 1984, regarding the date by which employers must establish a valid baseline audiogram for their employees requiring them, when a mobile test van service is used.

I stated that, for such employers, the deadline date intended by the standard would be September 1, 1984. This is in error. The March 1, 1984, date given at 29 CFR 1910.95(p) for completing baseline audiograms applies to all employers, including those who require mobile test van services. A company would not have complied with this provision if it had merely contracted for the service by the March 1 date, and the baseline audiograms were completed after this deadline.

OSHA recognizes the practical limitations posed by the use of mobile test vans and the logistical problems that could arise. In the preamble to the hearing conservation amendment, published in the Federal Register on March 8, 1983, OSHA agreed "that companies using mobile testing services to satisfy their audiometric testing obligations...should be allowed one year to obtain baseline audiograms."

Thus, the interpretation given in the second paragraph of this letter applies to current employees of an employer who require baseline audiograms. For new employees, or employees newly exposed to noise at or above levels of 85 dBA, 8- hour, time-weighted average (the action level), an employer using a mobile test van service has one year from the date of an employee's first exposure to noise at or above the action level to establish a valid baseline audiogram. As required at 29 CFR 1910.95(g)(5)(ii), however, such employees must wear hearing protectors for any period exceeding six months after first exposure until the baseline audiogram is obtained.

SOURCE LETTER
January 16, 1984

This is in response to your letter of December 7, 1983, concerning the date by which employers must establish valid baseline audiograms for their employees requiring them, when a mobile test van service is used.

The March 1, 1984, date given at 29 CFR 1910.95(p) for completing baseline audiograms applies to employers who do not require mobile test van service. The corresponding date for employers who require mobile test van service, while not explicitly given, is September 1, 1984 (i.e., six months later).

December 7, 1983
Re: 29 CFR 1910

We are scheduling baseline audiograms for companies seeking to comply with 29 CFR 1910, using our mobile testing vans. Some question has arisen as to whether companies contracting for testing before March 1, 1984 will be in compliance even though our mobile van does not actually visit until after the deadline.
Would you please resolve this question. If this is acceptable, please advise us as to the time limits for completion of baselines contracted on this basis.
This interpretation letter addresses the use of the "hold" switch on audiometers when background noise levels exceed the criteria in Table D-1. OSHA approves the use of the "hold" switch on the audiometer to temporarily stop recording of the hearing test when high levels of ambient noise intermittently cause the background levels in the test room to exceed the criteria in Table D-1.

(NOTE: The standard has not been amended since the 1984 interpretation letter.)

Appendix D of the Noise Standard

January 3, 1984

Thank you for your letter of December 12, 1983, in which you requested an official interpretation from the Occupational Safety and Health Administration (OSHA) concerning Appendix D of the OSHA Noise Standard: Audiometric Test Rooms.

OSHA approves the use of the "hold" switch on the audiometer to temporarily stop recording of the hearing test when high levels of ambient noise intermittently cause the background levels in the test room to exceed the criteria in Table D-1.

Please note that when the recording is resumed, the audiometer must remain at the respective test frequency for 30 seconds, in accordance with Appendix C: Audiometric Measuring Instruments.
The examples given on the enclosed page illustrate the application of a 50 percent safety factor to the "laboratory-based noise reduction" for a hearing protector.
An interpretation letter regarding administrative controls and PPE used to reduce exposure below limits if engineering controls are not feasible per (b)(1). If it is determined that feasible engineering techniques are not available to reduce sound levels below limits prescribed in Table G-16, administrative controls and personal protective equipment shall be utilized to achieve applicable reductions.

March 19, 1975

The Assistant Secretary has asked me to respond to your letter dated February 21, 1975, requesting a variance from Section 1910.95 Occupational Noise Exposure, of the Occupational Safety and Health Standards.

As you were advised in your telephone discussion with Mr. F of this office, we cannot consider your request for variance from Section 1910.95. This standard as written provides relief to an employer, if it is determined that there are no feasible engineering techniques available to reduce sound levels below the limits of Table G-16. Other provisions of the standard shall be utilized such as administrative controls and personal protective equipment to reduce sound levels below the limits of Table G-16.

In the event of a compliance inspection of your workplace, a copy of your engineering feasibility study and your plan to abate the noise problem should be made available to the compliance officer at the time of the inspection.

The utilization of administrative controls and personal protective equipment is mandatory until the engineering problems are solved.

No further action will be taken on your variance application.
ABSTRACT
Response to a request for information on noise exposure to longshoremen on docks and shipyards, especially during loading and unloading operations. 1910.15(b)(2)(iii) states that longshoring and marine terminals are covered under 1910.95.

INTERPRETATION
29 CFR 1910.95(a); 1910.16(b)(2)(iii)

SEP 14, 1987

This is in response to your letter of August 12, addressed to the Office of the Solicitor, Attention: Ms. P., requesting copies of studies, reports, and/or manuals that the Department may have regarding noise exposure to longshoremen on docks and shipyards, especially during loading and unloading operations. Your letter was forwarded to the Occupational Safety and Health Administration (OSHA) Directorate of Technical Support for reply.

OSHA performed or commissioned no studies specifically regarding noise exposure to longshoremen or dockworkers at docks or shipyards during any of its rulemaking procedures for either the 1970 29 CFR 1910.95 "Occupational Noise Exposure" standard (copy enclosed) or the 1983 "Hearing Conservation Amendment" to the standard. A check of the OSHA Technical Data Center Technical Information Retrieval System (TIRS) showed that no submittals have been made to the OSHA noise docket by outside commenters on the same subjects. However, section 29 CFR 1910.16 (b)(2)(iii) of OSHA General Industry Standards states that 29 CFR 1910.95 is applicable to longshoring and marine terminals.

Enclosed are abstracts obtained from information searches performed by the OSHA Technical Data Center on the National Technical Information Service (NTIS) and National Institute for Occupational Safety and Health Technical Information Center (N. JSHTIC) data bases. The National Technical Information Service is a clearinghouse for technical papers and reports published by all Federal agencies. The National Institute for Occupational Safety and Health has amassed a large collection of studies on various occupational safety and health topics. The searches were performed using the topics of "noise," "longshoremen," "docks," and "shipyards." Further information on abstracts of interest to you can be obtained directly from:

National Technical Information Service
5289 Port Royal Road
Springfield, Virginia 22161

National Institute for Occupational Safety and Health
4676 Columbia Parkway
Cincinnati, Ohio 45226
In regard to re-certify technicians who do audiometric testing and pulmonary function testing, OSHA defers to the certification retention rules of the accepted certifying groups. OSHA considers a technician to be certified as long as the certifying group recognizes the technician's certificate as valid. Conversely, OSHA would consider a technician whose certificate has expired to be not certified.

This is in response to your letter of April 7 addressed to Mr. A, Director of Health Standards Programs. You inquired about the need to recertify your company's technicians who do the audiometric testing and pulmonary function testing that standard 29 CFR 1910.95, regulating occupational noise exposure, and standard 29 CFR 1926.58, regulating asbestos, tremolite, anthophyrite, and actinolite exposure in construction work, respectively, require employers to make available to their employees.

The Occupational Safety and Health Administration (OSHA) defers to the certification retention rules of the accepted certifying groups. That is, OSHA adopts the given certifying group's position on the need for recertification. OSHA considers a technician to be certified as long as the certifying group recognizes the technician's certificate as valid. Conversely, OSHA would consider a technician whose certificate has expired to be not certified.
ABSTRACT

This interpretation letter addresses the banning of portable stereo headsets by some employers. Employees wearing lightweight portable stereo headsets can easily be exposed to sound above the 90 dB(A) noise PEL and the 85 dB(A) action level. OSHA does not have the authority to ban equipment; therefore, some employers have banned stereo headsets at worksites. The reasoning is that it is impractical to control individual volume settings for such devices.

INTERPRETATION

29 CFR 1910.95(b)(1)

Aug 15, 1985

This is in response to your letter of July 23, to the Occupational Safety and Health Administration (OSHA) commenting on the wide-spread use of lightweight portable stereo headsets and questioning their possible safety liabilities and their possible damaging effects on the ear.

Enclosed are the OSHA 29 CFR 1910.95 occupational noise exposure standard and its March 8, 1983 hearing conservation amendment. Note that the allowable limit for occupational noise exposure is 90 dB(A) averaged over an eight hour period. Note also that a hearing conservation program is mandated if the exposure exceeds 85 dB(A) for an eight hour period. These levels can easily be exceeded by any of the headsets on the market.

OSHA is responsible for assuring safe and healthful conditions in the workplace. OSHA, however, is not empowered to ban the use of certain equipment except when determined unsafe through rulemaking process. According to the Occupational Safety and Health Act of 1970, the employer is responsible for employee safety and health. Therefore, a number of employers have simply resorted to the outright banning of stereo headsets at worksites, since it is impractical to control individual volume settings for such devices.

SOURCE LETTER

July 23, 1985

Why not a ban on "bananas in the ear?" Namely, Walkman's, etc. Walkers, joggers, bike riders, truck and auto drivers, and you name 'em, are all listening at perhaps the expense of safety - and - surely ear damage.

May I suggest you writing to the institute in the city area and their counterparts around our nation. There are several. Secure medical opinions and do something positive if in fact future hearing is being damaged. Rock and roll concerts are bad enough. Why create problems. Isn't that what EPA and OSHA are all about?
This interpretation letter addresses OSHA instructions and safety factors for personal hearing protection devices. OSHA Instruction CPL 2-2.35A was cancelled, except for Appendix F, by OSHA Instruction CPL 2.45A CH-3. Safety factors for personal hearing protection devices are discussed. The criterion of safety factors for hearing protectors are discussed as an alternative to engineering controls for noise exposure protection.

February 5, 1985

MEMORANDUM

SUBJECT: Noise Control

This is in response to your memorandum of October 2, 1984, requesting clarification of some of the guidance contained in OSHA Instruction CPL 2-2.35A for enforcing the standard for Occupational Noise Exposure.

Please note that on January 27, 1984, OSHA Instruction CPL 2-2.35A was canceled, except for Appendix A, by OSHA Instruction CPL 2.45A CH-3. With some modifications, the information in the Instruction has been incorporated into the Field Operations Manual at pages IV-31 to IV-34. At this time Appendix A is in effect, but it has not been incorporated into another document. The policy presented in the foregoing sources does not apply to the construction industry.

The information that follows should be read in conjunction with the memorandum of December 5, 1984, for all Regional Administrators. The memorandum gives guidance on how to proceed with enforcement and other activities following the invalidation of the Hearing Conservation Amendment (29 CFR 1910.95(c)-(p)) by the U.S. Court of Appeals for the Fourth Circuit on November 7, 1984.

An employer providing personal hearing protection devices not having at least a 50 percent safety factor for attenuating sound pressures may not be cited for violating 29 CFR 1910.95(a). The 50 percent safety factor described in Appendix A is one criterion that must be met before OSHA will accept, on the grounds of economic feasibility, that when engineering controls are the more expensive way of protecting employees from excessive sound pressure levels, then hearing protectors may be used in the alternative. The note under 1.b. of Appendix A provides guidance on using a safety factor other than 50 percent.
This interpretation letter addresses OSHA's product endorsement policy and telephone headsets. OSHA's long-standing policy and practice has been to refrain from endorsing any commercial products. While some manufacturers may claim their products are "OSHA-approved," this claim is not accurate. Testing organizations are private facilities not operated by OSHA, although they must meet certain OSHA-specified criteria. The OSHA noise standard at 1910.95, which applies to occupational noise exposure found in industry, would apply indirectly to telephone headsets. The primary objective of a (University) study was to develop a methodology for measuring employee noise exposure while wearing telephone headsets. Testing of manufacturer's equipment was not performed as part of the OSHA contract.

29 CFR 1910.95; 1910.7(b); 1910.7(Appendix A)

AUG 24, 1990

Re: Telephone Headsets

I am writing to formally respond to questions you raised in the course of a discussion we had on August 21, 1990. Your questions pertained to the general policy of the Occupational Safety and Health Administration (OSHA) on product endorsement, and application of the occupational noise exposure standard to telephone headsets.

It has been OSHA's long-standing policy and practice not to endorse any commercial products. While it has come to our attention that some manufacturers may claim their products are "OSHA-approved," this claim is not accurate since the Agency does not endorse products. At this juncture I should point out that while certain OSHA standards and regulations do require that in certain circumstances employers use equipment which has been listed or certified by a "nationally recognized testing laboratory," 29 C.F.R. 1910.7 such testing organizations are private facilities not operated by OSHA, although they must meet certain OSHA-specified criteria in order to be recognized as nationally recognized testing laboratories within the meaning of the regulation. To the best of my knowledge, employers do not need to use telephone headsets which have been listed or certified, and even if they did, such testing or certification would be done by a nationally recognized testing laboratory, not by OSHA.

You also inquired as to whether OSHA has prescribed a separate noise standard that would apply to telephone headsets. As I stated during the course of our August 21 discussion, OSHA does not have such a separate standard. The OSHA noise standard at 29 C.F.R. 1910.95, which applies to occupational noise exposure found in industry, would apply indirectly to telephone headsets. That standard requires employers to protect their employees from noise in excess of the permissible exposure limit which is 90 dBA, measured as an 8 hour time-weighted average. Employers whose employees are subjected to 85 dBA or greater (8-hour time-weighted average) are also required to provide a hearing conservation program including audiometric testing on an annual basis for such employees, 29 C.F.R. 1910.95(c). To the extent that employees who wear telephone headsets are subject to noise exposures at or above 85 dBA, their employers would be required to comply with the provisions of this standard.

Finally, regarding the university study that you inquired about, I can state that this study was commissioned pursuant to a contract let by OSHA to the university. The primary objective of the study is to develop a methodology for measuring employee exposure to noise while wearing telephone headsets; the purpose is not to test any manufacturer's equipment, and no such testing was performed as part of the OSHA contract.
STANDARD NUMBER 1910.95(c); (d); (j)(2); (m)(2)(ii)(E)
INFORMATION DATE 820119

ABSTRACT An interpretation letter regarding provisions to assure that workers are adequately protected from noise exposure. Workplace noise monitoring requirement is flexible when all employees have audiograms and compliance with the other requirements in the standard for each employee are covered in the hearing conservation program.

INTERPRETATION 29 CFR 1910.95(c); (d); (j)(2); (m)(2)(ii)(E)

January 19, 1982

Dr. S has asked me to respond to your inquiry concerning compliance with the monitoring requirement of the new hearing conservation amendment (29 CFR 1910.95(d)(1)). Please accept my apology for the delay in our response.

The intent of the requirement for workplace noise monitoring is to identify employees who need to be included in the hearing conservation program. Employers have some flexibility in how they achieve this regulatory goal.

Thus, companies may choose to include all workers (regardless of individual noise exposure levels) in the hearing conservation program, as long as all of the other provisions of the standard are followed for each employee.

As your letter indicates, some of these provisions may require some monitoring of the noise levels to assure that workers are adequately protected. For example:

1. Hearing protectors must attenuate employee noise exposure at least to a time-weighted average (TWA) of 90 decibels. (29 CFR 1910.95(j)(2))

2. For employees who have experienced a significant threshold shift, hearing protectors must attenuate employee noise exposures to a TWA of 85 decibels or below. (29 CFR 1910.95(j)(3))

3. Hearing protectors are mandatory for employees who are exposed to a TWA of 85 decibels or greater and who have experienced a significant threshold shift. (29 CFR 1910.95(j)(2)(ii)(B))

4. An employee's audiogram record shall include the employee's most recent noise exposure assessment. (29 CFR 1910.95(m)(2)(ii)(E))

We appreciate your bringing this concern to our attention. OSHA is striving to ensure a minimum of interference with the activities of employers, while at the same time ensuring that necessary actions are taken to protect the safety and health of workers.
RECORD ID 1453

STANDARD NUMBER 1910.95(g)(8)(ii); (g)(10); 1904.2
INFORMATION DATE 830318

ABSTRACT
An interpretation letter regarding a positive determination of work-relatedness of standard threshold shift not required. OSHA does not require positive determination of work relatedness of a Standard Threshold shift, which would require a physicians diagnosis. However, there are steps that each employer must face when a threshold shift is detected (g)(8)(ii) and there has not been a determination of work relatedness.

INTERPRETATION 29 CFR 1910.95(g)(8)(ii); (g)(10); 1904.2

Re: Occupational Noise Exposure; Hearing Conservation Amendment; Final Rule

(Letter undated)

This is in response to your letter of March 16, 1983, to Assistant Secretary A regarding responsibility for determining that a standard threshold shift (STS) is not work-related under the hearing conservation amendment.

As published in the Federal Register on August 21, 1981, the hearing conservation amendment continued the stay pending further comment and evaluation on the requirement that an audiologist, otolaryngologist or qualified physician review audiograms to determine whether an STS is work-related and that work-related STS's be recorded on the Occupational Safety and Health Administration (OSHA) Form 200. Numerous comments, including yours (Exh. 327-154), were received and reviewed in reaching a decision regarding the determination of work-relatedness. Many commenters described the difficulties in making this determination.

OSHA revoked the requirement for the need to make a positive determination of work-relatedness in part because such a determination is not necessary in order to take steps to protect a worker's hearing. However, it was felt that under certain, perhaps unique, circumstances a negative determination might avoid costly and inappropriate follow-ups. Several commenters suggested that such a determination is, in fact, a medical diagnosis that legally could be made only by a physician (See Exh. 325-130, and 325-179). This provision will not be exercised very often given the difficulties commenters raised in determining work-relatedness. It was felt that such a finding, if made at all, would most appropriately be made by a physician. Audiologists will continue to play a major role in hearing conservation programs since they are allowed to perform audiometric tests, run the program, evaluate audiograms and review problem audiograms.
RECORD ID 2196

STANDARD NUMBER 1910.95(c)(1)
INFORMATION DATE 851010

ABSTRACT The Federal Railroad Administration has jurisdiction for health and safety matters affecting employees of Metra. The Federal Railroad Administration must determine permissible noise exposures applicable to (Company).

INTERPRETATION 1910.95(c)(1)
OCT 10, 1985

This is in response to your letter of August 7, which was referred to this office by Senator (X). In your letter you expressed concern about the permissible exposure limit set forth in the Occupational Safety and Health Administration's (OSHA) standard for occupational noise exposure (29 CFR 1910.95). Please excuse the delay in responding.

First, it should be noted that health matters affecting employees of (Company) are under the jurisdiction of the Federal Railroad Administration. You may wish to contact Mr. J., Associate Administrator for Safety, Federal Railroad Administration, 400 7th Street, S.W., Washington, D.C., 20590, Telephone (202)-426-4366, to express your concerns.

For your information, however, the permissible exposure limit set forth by OSHA in 1910.95 is 90 decibels (dB) rather than 95 dB as your letter suggests. When employee noise exposures are in excess of 90 dB, engineering controls must be utilized, where feasible, to reduce noise levels.

On March 8, 1983, OSHA amended the noise standard to include specific requirements for hearing conservation programs. The hearing conservation amendment specifies an 85 dB action level at which such programs must be implemented. Each program must include provisions for audiometric testing, wearing of hearing protectors, and employee training and education. This amendment will provide additional protection to those employees exposed between 85 and 90 dB. I have enclosed a copy of the Hearing Conservation Amendment for your information. Please bear in mind, however, that your workplace is covered by the Federal Railroad Administration and it is they who must determine what specific rules apply.
RECORD ID 4495

STANDARD NUMBER 1910.95(g)(7)(ii); (g)(10)(i)
INFORMATION DATE 910904

ABSTRACT
OSHA is currently not enforcing the recording of hearing loss on OSHA Form 200 unless the shift from the original baseline audiogram averages 25 dB or more in either ear at frequencies of 2,000, 3,000, and 4,000 Hz. If an audiogram shows a hearing loss that is recordable on OSHA Form 200, the date that must be entered in column (B) is the date the employee was tested. A retest audiogram may not be substituted for an initial audiogram unless it is obtained within 30 calendar days of the date of the initial audiogram.

INTERPRETATION
29 CFR 1910.95(g)(7)(ii); (g)(10)(i)
SEP 4 1991

Dear Mr. W:

This is in response to your letter requesting clarification of some issues related to a Standard Threshold Shift (STS) in hearing level. Before we answer your questions we wish to inform you that the Occupational Safety and Health Administration (OSHA) is currently not enforcing the recording of hearing loss on OSHA Form 200 unless the shift from the original baseline audiogram at frequencies 2,000, 3,000, and 4,000 Hz averages 25 dB or greater in either ear.

1. If an audiogram shows a hearing loss that is recordable on OSHA Form 200, the date must be entered in column (B) is the date the employee was tested. If a retest performed within 30 calendar days of the initial test shows the hearing loss is not recordable on OSHA Form 200, the original entry may be deleted by drawing a line through it.

2. A retest audiogram may not be substituted for an initial audiogram unless it is obtained within thirty calendar days of the date of initial audiogram regardless of the fact that an outside evaluating concern is used.

3. The thirty (30) day retest time limit was adopted to enable employees to learn about their state of hearing as soon as practicable.

SOURCE LETTER
24 June 1991

Dear Ms. C:

Recently a couple questions arose within my company that require clarification from your office on the Occupational Noise Exposure Standard contents. It would be appreciated if you could advise me of the following so that we can ensure compliance with these regulations.

1. What date would be entered in column (B) on the OSHA 200 Form if a Standard Threshold Shift (STS) is indicated on the annual exam? If you use an outside audiologist to evaluate your audiograms and you perform the 30 day re-test when STSs are indicated, would this have any effect on the "initial diagnosis" OSHA 200 Form entry date?

2. With regard to the 30 day retest [sub paragraph (?) (ii)], are work days or calendar days used for the count? Also, what date would be used to "start the clock" if you use an outside evaluating concern -- the date of the rest or the date of notification of the STS?
3. What is so magical about the 30 day time frame for the STS re-test? If the re-test was performed 45, 60 or even 120 days afterward and verified that an STS really did not occur, wouldn’t this still be valid? I would like to request that the rationale for this be provided.

Thank you for your review and provision of a written response to the above questions.
Guidance for enforcing the recording of hearing loss on OSHA Form 200 includes the following: For OSHA record-keeping purposes, a work relationship is established if an event or exposure in the work environment either causes, aggravates, or contributes to the hearing loss. The 25-dB average change in hearing at 2,000, 3,000, and 4,000 Hz is calculated using the employee’s original baseline, not the revised baseline. A correction for presbycusis may be made when determining whether the 25-dB shift has occurred. However, 29 CFR 1904.2 requires employers to record occupational injuries or illnesses with 6 days of receiving knowledge. Therefore, if a retest performed within 30 days refutes the 25-dB shift, the entry should be "lined out" or removed from the OSH Form 200 log. The Hearing Conservation Amendment to the Occupational Noise Exposure standard required completion of all baseline audiograms for all covered employees by March 1, 1984.

Your Interpretation: The 25 dB average change in hearing at 2,000, 3,000, and 4,000 Hz is calculated utilizing the current baseline. Therefore, if an employee has had a previously confirmed standard threshold shift (STS) and the baseline has been revised, then the 25 dB average change in hearing for recording on the OSHA Form 200 would be based on calculations from the revised baseline.

Comment: The issue in this situation was unclear in the memorandum to which you referred. OSHA has subsequently clarified that the 25 dB average change in hearing at 2,000, 3,000, and 4,000 Hz is calculated utilizing the employee’s original baseline.

Your Interpretation: If an otologist determines that the change in hearing is due to causes other than exposure to occupational noise, the employee’s hearing loss does not have to be entered on OSHA Form 200.

Comment: An entry on OSHA Form 200 is not required only if the otologist determined that the employee’s hearing loss was not even aggravated by occupational noise exposure. For OSHA record-keeping purposes, a work relationship is established if an event or exposure in the work environment either caused, aggravated or contributed to the hearing loss.

Your Interpretation: The 25 dB criterion is a shift from the baseline and not the employee’s hearing threshold level.

Comment: Correct. The 25 dB average change in hearing is calculated utilizing the employee’s original baseline.

Your Interpretation: A correction for presbycusis may be made when determining whether the 25 dB shift has occurred.
Comment:
Correct.

Your Interpretation:
The effective date for recording the 25 dB shift is June 4, the date of the memorandum.

Comment:
The Hearing Conservation Amendment to the Occupational Noise Exposure standard required completion of all baseline audiograms for all covered employees by March 1, 1984. Any shift of 25 dB from the expected norm would have been recordable at that time if the loss could be attributed to exposure in the work environment. We should note, however, that the effective date for recording any case(s) of significant material impairment (a 25 dB shift) is the effective date for 29 CFR 1904. In those limited cases prior to March 1, 1984, where an employer had knowledge of a 25 dB shift in an employees' hearing and the loss was caused or aggravated by the work environment, such cases would be recordable.

Your Interpretation:
The 30-day retests to judge the stability of the hearing change is still permitted.

Comment:
Correct. A 30 day retest to judge the stability of the change is permitted. However, 1904.2 requires employers to record occupational injuries or illnesses with 6 days of receiving knowledge. Therefore, if a retest performed within 30 days refutes the 25 dB shift, then the entry should be "lined out" or removed from the 200 log.

Your Interpretation:
If "after-the-fact" retesting or medical interpretation shows the shift is not persistent, or is not occupationally related, the occupational illness entry may be struck from the OSHA Form 200.

Comment:
Correct. The entry should be "lined out" or removed from the OSHA Form 200.

We appreciate the opportunity to clarify this matter for you. If you have further questions please do not hesitate to contact us.

August 21, 1991

MEMORANDUM

SUBJECT: Comments/Suggestion on Ms. C Letter

1. We concur. The original baseline concept has been proposed in the hearing loss recording control correspondence. It looks as though this concept will pass, but the control correspondence has not been signed yet.

2. We agree with you conceptually, but would like to recommend the following change in wording: For OSHA record-keeping purposes, a work relationship is established if an event or exposure in the work environment either caused, aggravated or contributed to the hearing loss.

3. We concur: you may want to restate the "original" baseline concept.

4. We concur: the audiogram may still be corrected for presbycusis.

5. The effective date represents a small problem. The 25 dB criteria was first utilized in the B case during 1988. Another issue is that employers were not required to maintain baseline or other records prior to 1984. The effective date for this policy may not be 1971.

6. 30 day retests to judge the stability of the change are permitted. However, 1904.2 requires employers to record occupational injuries or illnesses within 6 days of receiving knowledge. Therefore, if a retest performed within 30 days refutes the 25 dB shift, then the entry should be "lined out" or removed from the 200 Log.
SOURCE LETTER

June 11, 1991

Dear Ms. C:

Pursuant to the recent memorandum from your office dated June 4, 1991 regarding the recording of hearing changes, we request acknowledgement of our interpretation of this memorandum:

1. That the 25 dB average change in hearing at 2,000, 3,000, and 4,000 Hz, is to be calculated utilizing the current baseline. Therefore, if an employee has had a previously confirmed standard threshold shift and the baseline has been revised, then the 25 dB average change in hearing for recording on the OSHA 200 logs would be based upon calculations from the revised baseline.

2. In addition, that if in the opinion of an otologist the change in hearing is due to causes other than exposure to occupational noise, the employees name does not have to be entered on the OSHA 200 log.

3. That the 25 dB criteria is "shift from baseline" and not "hearing threshold level."

4. That correction for presbycusis will still be allowed in the 25 dB shift calculation.

5. That the effective date is the date of the memorandum (6/4/91).

6. That 30 day retests to judge the stability of the change will still be permitted.

7. That if after-the-fact retesting or medical interpretation shows the shift is not persistent, or is not occupationally related, the name may be struck from the log.

If the above is correct and conforms to the intentions of the memorandum please notify me at your earliest convenience. I would appreciate a prompt reply due to the time needed to implement these additions to our system. Should you have questions, please notify me.
Dear Dr. S:

Thank you for your letter of July 15 that provides us with your views on the recordability of occupational hearing loss. The Occupational Safety and Health Administration (OSHA) respects and values the opinion of professional organizations such as the American Speech-Language-Hearing Association, the National Hearing Conservation Association, the American College of Occupational Medicine, The Council for Accreditation in Occupational Hearing Conservation and the American Academy of Otolaryngology - Head and Neck Surgery.

Title 29 of the code of Federal regulations, Part 1904, entitled "Recording and Reporting Occupational Injuries and Illnesses," is the controlling regulation for determining when hearing loss cases must be recorded on the OSHA Form No. 200. The Recordkeeping Guidelines for Occupational Injuries and Illnesses, 1986, provide the department of Labor's official interpretation of the relevant requirements of the Occupational Safety and Health (OSH) ACT and 29 CFR Part 1904.

The guidelines provide clear criteria for recording these conditions if they result from instantaneous events (i.e., these are considered injuries and are recorded when they result in medical treatment, loss of consciousness, restriction of work or motion, or transfer to another job).

However as you are aware, most cases of occupational hearing loss result from exposures that are not instantaneous, and are therefore considered occupational illnesses. These are considered work related (for OSHA record-keeping purposes) if an exposure in the work environment either caused, aggravated or contributed to the case.

As you have noted, there are a number of complex issues surrounding the recording of hearing loss cases on the OSHA 200 log. OSHA will attempt to resolve these and other record-keeping issues through formal rulemaking and revision of the entire record-keeping system scheduled to begin later this year, which will include revision of the record-keeping regulations, guidelines and forms. By dealing with this matter in a regulatory context, OSHA will insure full public input during the decision making process.

Until such a formal decision is made, OSHA will continue its current practice for issuing citations to employers for failing to record work related shifts in hearing. Currently, employers are cited for not recording work related hearing loss cases (determined to be occupational illnesses) when age corrected shifts in hearing from the employee's original baseline average 25 dB or more in either ear at 2000, 3000, and 4000 hertz (Hz). Until the proposed injury and illness record-keeping regulation and guideline revision is implemented, OSHA will not issue citations to employers for failure to record cases involving average shifts below 25 dB.
If you have any questions or comments on specific issues that you would like addressed as we approach formal rulemaking, or at any time throughout the process, please contact Mr. N, Acting Director of the OSHA Office of Statistics at (202) 523-1463.

SOURCE LETTER

July 15, 1991

Dear Ms. C:

I am writing in reference to the memorandum, dated June 4, 1991, which was issued by your office and addressed to regional administrators. The subject of the memorandum was the recording of hearing loss and cumulative trauma disorders on the OSHA 200 Log.

As you are well aware, under 29 CFR 1910.95, employers are required to implement specific activities in response to employee Standard Threshold Shift, which has been defined with an average change of 10 dB or more at 2000, 3000, and 4000 Hz. in either ear.

Under the current rule, those of us throughout the United States in the practice of industrial audiology have continually strived for the past nine years to encourage employers to report Standard Threshold Shift as defined by the rule as a recordable injury on the OSHA 200 Log.

As a result, your directive of June 4, 1991 appears to be patently absurd in requiring the recording of Standard Threshold Shift only when it equals or exceeds 25 dB. The difference between a threshold shift of 10 dB and a threshold shift of 25 dB represents a very significant degree of additional hearing impairment for employees, and one which bears the attention of employers as well as the Federal Regulatory process (OSHA).

I am appalled that such a drastic change in policy has been undertaken in the absence of widespread expert input regarding the issue. It is my understanding that numerous organizations are now in the process of directing similar complaints to your office. I certainly hope that reversal of this policy will be considered, and that appropriate professional input will be sought prior to implementation.
An interpretation letter regarding variable day to day exposures; they cannot be averaged for compliance with action level. Variable day to day noise exposures cannot be averaged to determine compliance with 85 dBA TWA action level.

This is in response to your inquiry of December 7, 1981, regarding interpretation of the Hearing Conservation Amendment to OSHA's noise standard, 29 CFR 1910.95.

While it may be more difficult to track the noise exposure of some because of their mobility in their jobs, no employee is to be excluded from the hearing conservation program because of intermittent or variable exposures. In arriving at each employee's exposure, employers may use any approach involving measurements or calculations that are considered appropriate. Compliance with the 8-hour, time-weighted average 85 dB exposure level is determined through the integration of all continuous, intermittent and impulsive sounds between 80 dB and 130 dB.

The use of averages in determining noise exposures may exclude from the program some employees who should be included. In enforcing the standard, OSHA will use monitoring to determine whether employers have failed to include in the hearing conservation program all employees whose exposure equal or exceed a TWA of 85 dB. In addition, since employees covered by the hearing conservation program must be given an annual audiometric test, your present program may not meet this frequency in all cases where audiometric tests are required.
August 4, 1983

Your letter of May 17, 1983, to the Assistant Secretary, regarding the certification of microprocessor audiometer technicians was referred to this office for reply.

You expressed concern in your letter that the statement in the noise standard that microprocessor technicians need not be certified, might allow untrained, unsupervised technicians to be part of the hearing conservation program. However, this is not really the case.

The hearing conservation amendment recognizes two methods for persons to become trained in administering audiometric tests. The first is to complete a training course certified by your organization, association, or another recognized training organization. The second method involves demonstrating, to the satisfaction of the professional supervising the audiometric testing program, that competence has been achieved in: (1) administering audiometric exams, (2) obtaining valid audiograms and (3) properly using, maintaining and checking the calibration and proper functioning of the particular type of audiometer being used. Microprocessor audiometer technicians, like all other audiometric technicians, need not be certified if they meet the requirements outlined in this second method.

At the time the hearing conservation amendment was formulated, OSHA was not aware of a certified training course that specifically covered microprocessor audiometers. The intent was that audiometric technicians show competence in performing tests with the particular type of audiometer they would be using, rather than with audiometers in general. Requiring certification for microprocessor audiometer technicians when no certification course was available would have effectively banned the use of microprocessor audiometers. This was not our intent, and the sentence stating that microprocessor audiometer technicians need not be certified was added to clarify this fact.

As noted above, microprocessor audiometer technicians, or any other audiometric technician, need not be certified if they can demonstrate their competence to the satisfaction of the audiologist, (word unreadable), or physician supervising the hearing conservation program. The professional in charge of the program is responsible for the competence of the technicians working under his or her supervision. Technicians are permitted to perform only those duties that the professional in charge finds them competent to perform. As you note, frequently the audiometric technician issues personal protection equipment and assists in employee education, among other things. Any technician assigned to perform such tasks would have to be acceptable to the professional in charge of the program.

I hope this information has helped to clarify the audiometric technician certification requirements for you. If you have any further questions, please do not hesitate to contact us.
ABSTRACT
This interpretation letter addresses the hearing conservation standard in relation to the poultry processing industry. The requirements of the Department of Agriculture for hard, non-absorbent surfaces are not in conflict with the standard.

(NOTE: The standard was last amended in 1989. Even though the topic of the letter deals with the poultry processing industry, the theme relates to hearing conservation and the level at which it is initiated).

INTERPRETATION
29 CFR 1910.95(c)(1); 1910.134(a)(1)

(Date unreadable)

Thank you for your letter of June 3, 1982, on behalf of your constituent, Mr. G, President of the association, concerning the Occupational Safety and Health Administration's (OSHA) hearing conservation amendment to the occupational noise exposure standard.

In recent public hearings, OSHA received testimony from the National Broiler Council, and the Agency has also received numerous comments and letters from poultry slaughtering and processing companies. We are pleased to receive their comments and we have entered them into the public record of the noise standard and the hearing conservation amendment. OSHA staff members will take these comments into consideration as they draft the final decisions on certain elements of the standard.

With respect to the problem of the U.S. Department of Agriculture's (USDA) requirement for non-absorbent (and therefore reflective) surfaces, we feel that there is no regulatory conflict in this case. The hearing conservation amendment does not require that the noise level be reduced to 85 dB, only that a hearing conservation program be implemented. We do recognize that hard surfaces produce reverberant conditions that tend to augment existing noise levels, and that this condition makes higher exposures, consequently increasing the need for poultry processors to maintain hearing conservation programs.

As you know, this administration is sensitive to the problems of business, and to those of small business in particular, and the Agency is searching for cost-effective solutions to problems that also will be protective of workers' health and safety. In light of the high cost of engineering controls, the Agency believes that hearing conservation programs provide a cost-effective method of protecting workers' hearing for those who are exposed to average noise levels between 85 and 90 dB, and for workers exposed above those levels when engineering controls are infeasible.

The 85 dB action level, which triggers audiometric testing and other elements of the hearing conservation program, was selected on the basis of evidence showing that significant numbers of people will develop handicapping hearing losses when exposed to levels above 85 dB over a working lifetime. In fact, OSHA estimates that approximately 940,000 workers exposed over a working lifetime would still suffer substantial hearing loss when complying with the current 90 dB permissible exposure level. Effective hearing conservation programs are expected to reduce this number to approximately 100,000. Therefore, to identify and to protect the more susceptible members of the population exposed to levels between 85 and 90 dB, audiometric testing and appropriate follow-up procedures are needed.
No citation will be issued if a noise monitoring program is in place and all worker's exposed to 85 dB or above are included in the hearing conservation program and provided with proper hearing protectors.

August 15, 1983

This is in response to a recent telephone conversation you had with Ms. G of my staff and Mr. B of OSHA's (City) Regional Office. You requested further clarification concerning our July 26, 1983, letter to you which discusses monitoring procedures for determining employee noise exposure in the workplace.

The requirement for monitoring noise exposure is a performance requirement. Although a technical violation may exist, we do not contemplate issuing a citation under the monitoring provisions of the noise standard (29 CFR 1910.95(d)) when OSHA samples for noise exposure and finds:

1. Everyone who should be is included in the hearing conservation program;

2. Proper hearing protectors are provided; and

3. The employer has a noise monitoring program.

As you are aware, this letter is not intended to give approval or disapproval to the long term averaging technique used by your firm.
ABSTRACT

According to 1910.95(f), the employer must provide affected employees or their representatives with an opportunity to observe any noise measurements conducted pursuant to the occupational noise exposure standard. OSHA interprets the provision to require employers to inform affected employees or their representatives of all pending noise measurements relating to complying with this standard so they may observe the process.

(NOTE: This standard was last amended in 1989.)

INTERPRETATION

29 CFR 1910.95(f)

MAR 5, 1990

This is in response to your letter of December 16, 1989, requesting an interpretation of the observation of monitoring requirement at 29 CFR 1910.95(f) in the occupational noise exposure standard.

As you related, according to 29 CFR 1910.95(f), the employer must provide affected employees or their representatives with an opportunity to observe any noise measurements conducted pursuant to the occupational noise exposure standard.

The Occupational Safety and Health Administration (OSHA) interprets the provision to place a requirement on employers to inform affected employees or their representatives of all pending noise measurements relating to complying with the occupational noise exposure standard. Otherwise affected employees or their representatives may not know about noise measurements before they take place and therefore lose the opportunity to observe the process.

Since the occupational noise exposure standard requires employers to institute feasible engineering controls to prevent or reduce employee overexposure to noise, area noise measurements made exclusively for the evaluation of the effectiveness or need for engineering controls are "measurements conducted pursuant to" the standard. Therefore, employers must provide affected employees or their representatives with an opportunity to observe these types of noise measurements also.

SOURCE LETTER

December 16, 1989

My organization recently completed a review of our compliance with 1910.95, the occupational noise regulations. This produced questions with respect to OSHA's interpretation of section (f) which reads: "OBSERVATION OF MONITORING. The employer shall provide affected employees or their representatives with an opportunity to observe any noise measurements conducted pursuant to this section."

Does this mean that:

1. Employers are expected to inform "employee representatives" prior to every monitoring activity regardless of whether the employee representative has requested this or not.

2. "Any noise measurements" includes area measurements made exclusively for the evaluation of the effectiveness or need for engineering control and not to be used for determining employee exposure. (ie. "A" weighted short term measurements, octave band analysis or sound intensity evaluations of noise sources)
If an annual audiogram shows that an employee has suffered a Standard Threshold Shift, an employer may obtain a retest. In order to consider the result of a retest as the annual audiogram, the retesting must be performed within 30 calendar days of the original test. States are encouraged to assume responsibility for their own occupational safety and health programs under a plan approved and closely monitored by Federal OSHA. As a condition of plan approval, states must adopt and enforce standards that are identical to, or at least as effective as, Federal standards and interpretations.

INTERPRETATION

29 CFR 1910.95(g)(7)(ii)

APR 17, 1991

Dear Mr. C:

This is in response to your letter of April 5, concerning retesting when the annual audiograms show that employees have suffered a Standard Threshold Shift (STS).

According to 29 CFR 1910.95(g)(7)(ii), "If the annual audiogram shows that an employee has suffered a Standard Threshold Shift, the employer may obtain a retest within 30 days and consider the result of the retest as the annual audiogram." You requested an interpretation of this provision.

The provision establishes that in order to consider the result of a retest as the annual audiogram, the retesting must be performed within 30 calendar days of the original test.

Under the Occupational Safety and Health Act, States are encouraged to assume responsibility for their own occupational safety and health programs under a plan approved and closely monitored by Federal OSHA. The North Carolina Department of Labor has operated such a plan since 1973 and is responsible for the enforcement of occupational safety and health standards in the State.

As a condition of plan approval, States are required to adopt and enforce standards that are either identical to or "at least as effective" as the Federal standards, as well as interpretations.
STANDARD NUMBER 1910.95(g)(10)(i)
INFORMATION DATE 850606

STANDARD NUMBER
STAN
DARD

ABSTRACT This interpretation letter clarifies the term "effective hearing conservation program." The program is designed to avoid workplace noise from producing a standard threshold shift as defined in 1910.95(g)(10)(i) in the hearing ability of any employees.

INTERPRETATION 29 CFR 1910.95(g)(10)(i)

June 6, 1985

This is in response to your letter of April 30 requesting an official interpretation for the term "effective hearing conservation program".

The Occupational Safety and Health Administration (OSHA) has used this term in administrative documents prepared by the National Office to guide field offices in enforcing provisions contained in the standard for occupational noise exposure, 29 CFR 1910.95. The term means a hearing conservation program that prevents workplace noise from producing a standard threshold shift in the hearing ability of any employees. The OSHA definition of standard threshold shift is given at 29 CFR 1910.95(g)(10)(i).

SOURCE LETTER

April 30, 1985

I received a phone call from Mr. B in response to my letter of 3/12/85 to you regarding a question on your memorandum to Regional Administrators dated 12/5/84. I appreciate Mr. B's call. He indicated that the hearing conservation amendment is being enforced again.

In the event that the Fourth Circuit Court of Appeals strikes down the amendment, we would still like to have an official definition for the term "effective hearing conservation program". I am again looking forward to a prompt reply from your office.
This interpretation letter addresses identification of a standard threshold shift (STS) in hearing ability for individuals with a very poor sense of hearing. An STS is defined at 29 CFR 1910.95(g)(10) as "... a change in hearing threshold relative to the baseline audiogram of an average of 10 dB or more at 2000, 3000, and 4000 Hz in either ear." This definition applies regardless of the hearing threshold values in the baseline audiogram.

This is in response to your letter of October 12, 1989, addressed to Ms. G, concerning the identification of a standard threshold shift (STS) in hearing ability for individuals with a very poor sense of hearing.

An STS is defined at 29 CFR 1910.95(g)(10) in the occupational noise exposure standard as "... a change in hearing threshold relative to the baseline audiogram of an average of 10 dB or more at 2000, 3000, and 4000 Hz in either ear." This definition applies regardless of the hearing threshold values in the baseline audiogram. Therefore, if, for example, an employee’s baseline audiogram showed hearing thresholds of -10 dB at all three frequencies and the employee’s first annual audiogram showed hearing thresholds of 0 dB at all three frequencies, the employee has had a change in hearing threshold of an average of 10 dB relative to the baseline audiogram and has suffered an STS.

In the case of an employee whose baseline audiogram shows hearing thresholds of 90 dB at all three test frequencies, the determination of an STS would have to be done with an audiometer having an output of at least 100 dB at all three frequencies. Only persons qualified to do clinical audiological evaluations should make such determinations.
This interpretation letter discusses specific circumstances in which baseline audiograms may be revised under the General Industry Noise Standard (g)(9)(i) and (ii). There are concerns that indiscriminate or excessive revision of baseline audiograms without substantive data could be used to conceal the existence of standard threshold shifts (STS).

May 9, 1989

MEMORANDUM

SUBJECT: Policy for the Revision of Baseline Audiograms Incorrectly Obtained under 29 CFR 1910.95

Appended please find a letter from Mr. C of company dated April 11, 1989 to Dr. B of my staff requesting a written opinion relative to an OSHA acceptable method to revise invalid baseline audiograms due to improper testing procedures.

The General Industry Noise Standard, 29 CFR 1910.95 is very specific in when a baseline audiogram may be revised; namely, (g)(9)(i) when a STS is persistent or (g)(9)(ii) when the annual audiogram shows significant improvement. Indirectly, section (g)(5)(i), which requires the employer to establish a valid baseline audiogram, could also be used. That is, if the employer finds the original baseline to be invalid, a retest audiogram could be substituted for the invalid baseline if there is sufficient documentation such as improper or invalid testing technique on high background noise levels. What concerns us is that indiscriminate revision of baselines or excessive revision of baselines can be used to conceal the existence of standard threshold shifts.

Since this interpretation request has national significance, as HCNC is a nation-wide consultant, and since the client's identity and location for the plant with severe compliance problems is unknown, the letter is being forwarded to your office for reply.

SOURCE LETTER

April 11, 1989

Approximately one year ago I had spoken to you briefly regarding situations concerning possible invalid baseline hearing tests. We have a few clients that used mobile hearing testing and it has been determined that the van technician used improper testing procedures for the baseline tests. Originally there was no reason to question the validity of these tests. Retests by another mobile service with known procedures are resulting in an extremely high incidence of OSHA STS. We are hesitant to revise the baselines plant-wide in that we feel some of the hearing tests may indeed be valid. It is our opinion that the baselines will be adjusted over a two-year period to identify all of those that were invalid and consequently revised. In the meantime, the plant appears to have a severe compliance problem.

Based upon our previous conversations regarding this issue, it was felt that the problem will resolve itself once we have identified the invalid baselines and made the proper revisions. It was also decided that due to the frequencies involved and the nature of noise-induced types of hearing changes that employee notification should be made only when appropriate and only in those instances where the change in hearing could be noise related. Would the OSHA representative concur with this procedure or are there avenues of consideration? Could you please provide me some written opinion that I can forward?
"Persistent STS" means a standard threshold shift (STS) that is subsequently confirmed by another audiogram. In accordance with 1910.95(g)(9)(i), an audiologist, otolaryngologist, or physician evaluating the audiogram may substitute an annual audiogram for the baseline audiogram when they judge that the annual audiogram reveals that an STS is persistent.

If you are supervising the audiometric testing program, then, in accordance with 29 CFR 1910.95(g)(9)(i), you as an audiologist may substitute an annual audiogram for the baseline audiogram when in your judgment the annual audiogram reveals that an STS is persistent. It is not mandatory that you make the substitution, but whenever you conclude that it is appropriate, the above cited provision permits that the substitution be made.

I am an audiologist working in the field of industrial hearing conservation. I would like to receive a statement from you as to the meaning of "persistent STS" (Federal Register, Vol. 48, No. 46, page 9766).

Evidently, a "persistent STS" could be interpreted in two different ways. Could a persistent STS mean a permanent STS or a progressive hearing loss? That is, will those employees who demonstrate a progressive hearing loss (sensorineural) be considered to have a persistent STS every other year? If so, should their baseline audiograms be revised every other year?

As I interpret the standard, a persistent STS means a permanent threshold shift which has been confirmed by subsequent audiograms. An annual audiogram should not be substituted for the baseline audiogram if thresholds are fluctuating (shifting every year).
An interpretation letter regarding audiometer calibration requirements which are listed in (h)(5), with further explanation given in Appendix E. The unit shall be checked daily using two criteria: 1) testing an individual with known stable hearing thresholds and, 2) listening to the output for deviations.

June 8, 1983

Thank you for your letters of April 28, 1983, regarding the audiometer calibration requirement of the March 8, 1983, hearing conservation amendment.

The hearing conservation amendment requires that audiometric tests as pure tone, air conduction, hearing threshold examinations, with test frequencies including, as a minimum, 500, 1000, 2000, 3000, 4000, and 6000 Hertz. This requirement can be met by using a wide range audiometer, limited range audiometer, or a narrow range audiometer that has the required test frequencies.

Audiometers must be calibrated according to the procedures contained in Appendix E, and in accordance with sections 4.1.2, 4.1.3, 4.1.4.3, 4.4.1, 4.4.2, 4.4.3, and 4.5 of the American National Standard Specification for Audiometers, S3.6-1969.

Wide range audiometers and some limited range audiometers can meet the requirements of 4.1.3 for an output hearing threshold level of 100 decibels (dB). Since limited range audiometers, according to the ANSI 2.1.2 definition, are only required to have an output level of at least 70 dB, these audiometers are calibrated at their maximum output level or the 100 dB level required in 4.1.3., whichever is smaller.

The requirements in Appendix C apply to pulse tone and self-recording audiometers that interrupt the tone signal automatically. This automatically pulsed tone must have an on-time of at least 200 milliseconds. Audiometers of this type are generally available. As an example, the Beltone 100 series audiometers have a pulse on-time of 230 milliseconds. The manufacturer's technical specifications for the audiometer being used must be examined to be sure that the pulsed tone meets the specifications of Appendix C. If your pulse tone audiometer does not meet the requirements of Appendix C, it must be modified or replaced. Any modifications should be discussed with the manufacturer.

The linearity check requirements of Appendix E are based on those contained in ANSI S3.6-1969. Paragraph 4.1.4.1 of S3.6 gives the range of allowable variation.

"The measured difference between two successive designations of hearing threshold level shall not differ from the dial-indicated difference by more than (1) three-tenths of the dial interval measured in decibels, or (2) 1 dB, whichever is larger."

The manufacturer's specifications for attenuator linearity should be taken into account when determining linearity since these may be stricter than those contained in S3.6.

A discussion of the exhaustive calibration trigger level of 15 dB or greater is contained in the preamble to the final hearing conservation amendment (48 FR 9768). The requirement contained in paragraph (h)(5)(iii) is correct: deviations of 15 dB or greater require an exhaustive calibration. The trigger level of greater than 10 dB contained in Appendix E is incorrect, since it could be interpreted as requiring an exhaustive calibration for 11 dB deviation. An exhaustive calibration is necessary when an acoustic calibration results in deviations of 15 dB or greater.
ABSTRACT

Twenty different Walkman type headsets were evaluated for noise attenuation. The NRR varied from a low of 0.3 dB to a high of 2.6 dB with an average NRR of 1 dB. Therefore, such headsets afford no ear protection. If Walkman headsets are worn over otherwise effective ear protection, then the unit's volume control has to be adjusted to exceed the hearing protector's field attenuation. This thwarts the effectiveness of the ear protection and is a violation of the noise standard 29 CFR 1910.95(i)(2) or (ii).

INTERPRETATION

29 CFR 1910.95(i)(2); (j)(2)

April 14, 1987

MEMORANDUM

SUBJECT: Use of Walkman Radio, Tape, or CD Players and Their Effect When Hearing Protection Is In Use - Inspection No. 100499150

Your technical request has been reviewed by Dr. B who presents the following information:

Twenty different Walkman type headsets were evaluated for noise attenuation at N University. The NRR varied from a low of 0.3 dB to a high of 2.6 dB with an average NRR of 1 dB. Therefore, such headsets afford no ear protection.

If Walkman headsets are worn over otherwise effective ear protection, then the unit's volume control has to be adjusted to exceed the hearing protector's field attenuation. This obviates the effectiveness of the ear protection and is a violation of the noise standard 29 CFR 1910.95(i)(2) or (ii).

The N University study also found the following facts. The typical commercial Walkman headset provided the following A-weighted decibel levels for these volume settings: 64 dBA/25%, 81 dBA/50%, 91 dBA/75%, and 96 dBA/100%. In a North Carolina textile mill where the TWA was 87 dBA NCSU researchers found the median Walkman level to be 84 dBA with 20% of the workers listening at 90 dBA or greater. The industrial hygiene department of GM found typical headset output levels of 99 to 100 dBA in auto workers with a maximum exposure level of 117 dBA. Most of the commercially-available headsets for Walkman will produce 100 to 103 dB SPL for an output voltage of 1 mV. Therefore, listening to a Walkman unit at more than 50% to 75% rated output will generate sound levels in excess of the OSHA PEL creating a threat to the wearer's hearing and this may also produce a safety hazard by masking environmental sounds that need to be heard.

The United States Postal Service has developed special ear muffs equipped with volume-limited music for use in monotonous high noise jobs to protect employee hearing but at the same time allowing them to enjoy background music. Such devices are in compliance with OSHA regulations if they meet the attenuation requirements relative to the workplace noise levels and their average music output is less than 90 dBA.

In summary, the following compliance direction can be put forward. Use of walkman in noise environments in excess of Tables G-16 and D-1 is a violation. Use of Walkman over required ear protection is a violation. Use of Walkman in occupational noise less than Tables G-16 or D-1 is at managerial discretion unless its use causes a serious safety hazard to warrant issuance of a 5(a)(1). Management and employees must be made aware that Walkman type devices do pose a hazard to hearing if they are played too loud for any significant length of time whether on or off the job: The energy, not the esthetics, of sound poses the threat to human hearing sensitivity.

Vol. 1-192
SOURCE LETTER

March 31, 1987

MEMORANDUM

SUBJECT: Use of a Walkman Radio and Its Effect On Hearing Protection is In Use.

During an informal conference concerning a noise citation issued to the U.S. Postal Service, a question arose regarding the use of a walkman radio and its effect on hearing.

Employees of the Postal Service exposed to noise levels between 85 - 90 dBA routinely use walkman radios at their work stations. The Postal Service requested clarification on whether or not this practice has any adverse impact on hearing.

I am requesting clarification on this issue. Please forward your response to my attention (Inspection No. 100409150).
Employees shall be able to select a hearing protector from a variety of suitable hearing protectors provided at no cost by the employer as specified in section 1910.95(i)(3).

October 17, 1983

This is in response to your letter of September 20, 1983, requesting an interpretation of a provision of the hearing conservation amendment to the occupational noise standard.

The provision, 29 CFR 1910.95(i)(3), states: "Employees shall be given the opportunity to select their hearing protectors from a variety of suitable hearing protectors provided by the employer." In this instance, OSHA did not intend to specify the number of types or variety of hearing protectors from which employees may make their selection. Instead OSHA included this performance language recognizing that there be several reasons why employees should be allowed to select from a variety of hearing protectors.

Plant conditions such as dust, temperature, and humidity can cause one type of protector to be more suitable than another. For example, ear plugs can be more comfortable in a hot, humid environment, than ear muffs. Also, individual ear canals come in all shapes and sizes. For people with unusually shaped ear canals, fitting may be difficult, and commonly-used insert protectors may be very uncomfortable.

In general, employers are advised to give workers a choice between at least one type of ear plug and one type of muff since individuals may be more comfortable in one type of protection than in the other.

However, the number of different hearing protectors required to constitute an adequate variety is simply the number needed to supply each employee that requires a hearing protector a suitable one. The term "suitable hearing protectors" as used in the provision means protectors that are comfortable to wear and that offer sufficient attenuation to prevent hearing loss.
A film can be used to meet training requirements of the noise standard section (k) provided a supervisor is present to answer questions.

February 16, 1984

As requested in your telephone conversation with Ms. F of the Occupational Safety and Health Administration's (OSHA) Directorate of Health Standard Programs, I am writing to provide you with an official interpretation concerning the Hearing Conservation Amendment. Specifically, you requested an official response with regard to training and audiometric testing.

OSHA approves the use of a film to meet the training requirements of the amendment as long as the supervisor is present to address employee questions, the material is updated appropriately, and the training is offered annually. It is not necessary at the viewing of the film to provide a display of hearing protectors and to individually fit and train each employee about the use of hearing protectors at the time the hearing protector is fitted on the employee.

With regard to audiometric testing, the standard requires the employer to establish a valid audiogram. The professional in charge of the program should review audiograms where thresholds are questionable and use his/her professional judgement to determine whether there is a need for further testing.
OSHA Instruction STP 2-1.110

May 9, 1983
Office of State Programs

SUBJECT: Occupational Noise Exposure: Hearing Conservation Amendment

A. PURPOSE. This instruction describes a Federal program change to the Regions and State designees.

B. SCOPE. This instruction applies OSHA-wide.

C. FEDERAL PROGRAM CHANGE. This instruction describes a Federal program change which affects State Programs. Each Regional Administrator shall:

1. Ensure that this instruction is forwarded to each State designee.

2. Provide a copy of the Federal Register notice to the State designee upon request.

3. Explain the technical content of the standard at 48 FR 9738, which includes revisions to Paragraphs (c) through (p) and Appendices A through I of 29 CFR 1910.95, Occupational Noise Exposure: Hearing Conservation Amendment.

4. Ensure that each State designee acknowledges receipt of this instruction in writing, within 30 days of notification, to the Regional Administrator. The acknowledgment should include (a) the State's plan to adopt and implement the standard change, (b) the State's plan to develop an alternative standard change which is as effective, or (c) the reasons why no standard change is necessary to maintain a program which is as effective.

5. Inform each State designee that the State must amend the State's standard within 6 months of the date of Federal publication to ensure that it remains at least as effective as the amended 29 CFR 1910.95, and submit a plan supplement to the Regional Administrator, unless the State has demonstrated that no change is necessary.

D. BACKGROUND.

1. Final Rule and Regulation, Occupational Noise Exposure: Hearing Conservation, was published at 48 FR 9738, March 8, 1983. This rule completes various aspects of the hearing conservation amendment to the occupational noise exposure standard. It revokes many of the stayed provisions of the hearing conservation amendment; lifts the administrative stay as to other portions of the amendment; and makes certain changes and corrections of a technical nature. The hearing conservation amendment to the OSHA noise standard establishes a comprehensive hearing conservation program, including exposure monitoring, audiometric testing, and training for employees with significant workplace noise exposures.

2. Under 29 CFR 1953.23(a) and (b), States are provided up to 6 months from publication in the Federal Register for adoption of parallel State standards and amendments.
ABSTRACT
Under the Occupational noise exposure standard, 29 CFR 1910.95, the thirty (30) day time limitation for annual audiogram retests starts from the date of the evaluation of the audiogram that shows a standard threshold shift.

INTERPRETATION
29 CFR 1910.95 (g)(7)(ii)

February 8, 1993

Dear Dr. B:

Thank you for your letter of November 30, 1992 addressed to the Occupational Safety and Health Administration (OSHA) regarding the Occupational noise exposure standard, 29 CFR 1910.95.

You inquired whether the thirty (30) day time limitation for annual audiogram retests that show a standard threshold shift (STS), starts from the date of the audiogram or from the date of the evaluation of the audiogram.

The thirty (30) day time limitation starts from the date of the evaluation of the audiogram that shows a standard threshold shift. This time period allows employers who used outside consultants or mobile test vans for the annual audiogram, adequate time to have the tests evaluated and to plan for retests.

Thank you for the opportunity to clarify this issue for you.

SOURCE LETTER

November 30, 1992

Dear Ms. M:

I am an audiologist who works with industry in the area of noise abatement. Recently I was confronted with an interpretation of the OSHA Occupational Noise Exposure: Hearing Conservation Amendment (29 CFR 1910), which is not in keeping with my personal opinion which I have been using since the Amendment became law.

According to Part 1910, Paragraphs (c) through (p), specifically (g)(7), if the annual audiogram shows that an employee has suffered a standard threshold shift, the employer may obtain a retest within 30 days and consider the results of the retest as the annual audiogram. I have always interpreted the 30 day period from the time the annual audiogram was taken. A recent encounter with an employer stated that the 30 days did not go into effect until after the annual audiogram was compared with the baseline which in and of itself could take several weeks, depending on how and when the interpretations are done. My question to you is, when do we start counting the 30 days? If the 30 days does not start until after the interpretation then how do we monitor this? Employers could shelve the audiograms and get around to them when they wished. In the meantime, employees could be losing more hearing.

I would greatly appreciate your interpretation of this part of the amendment. I thank you in advance for your consideration of this matter.
An interpretation letter regarding the permissible radiation exposure levels can be found in the OSHA standard for ionizing radiation, 29 CFR 1910.96, Table G-18. The levels are independent of any job classification or category, and apply equally to all employees who are covered by the standard. The only exceptions to the levels are specified in 29 CFR 1910.96(b)(2).

This is in response to your letter of October 11, regarding permissible radiation exposure levels. The Occupational Safety and Health Administration's (OSHA) standard for ionizing radiation can be found in 29 CFR 1910.96, copy enclosed.

The permissible radiation exposure levels are contained in Table G-18 of the standard. As you can see, the levels are independent of any job classification or category, and apply equally to all employees who are covered by the standard. The only exceptions to the levels presented in Table G-18 are specified in 29 CFR 1910.96(b)(2) which states:

(2) An employer may permit an individual in a restricted area to receive doses to the whole body greater than those permitted under subparagraph (1) of this paragraph, so long as:

(i) During any calendar quarter the dose to the whole body shall not exceed 3 rem; and

(ii) The dose to the whole body, when added to accumulated occupational dose to the whole body, shall not exceed 5 \((N-18)\) rem, where \(N\) equals the individual's age in years at his last birthday; and

(iii) The employer maintains adequate past and current exposure records which show that the addition of such a dose will not cause the individual to exceed the amount authorized in this subparagraph. As used in this sub- paragraph "Dose to the whole body" shall be deemed to include any dose to the whole body, gonad, active blood-forming organs, head and trunk, or lens of the eye.
April 17, 1991

Dear Senator M:

This is in further response to your letter of February 11, to the Occupational Safety and Health Administration (OSHA) concerning radon.

My letter of January 17, to Mr. W of (Corporation), related that an employer must conduct the survey described at 29 CFR 1910.96(d)(1) of the ionizing radiation standard if he or she knows, or could have known through reasonable diligence, of the existence of artificially enhanced concentrations of environmental radon-222 in the workplace. A case for employer accountability could be made if the media reported excessive radon exposure in the area where the employer's business was located. A duty on the part of an employer to test, or at least make further inquiry about the presence of radon in or near his place of business, could arise if the employer received an EPA report citing a finding of radon in the structures in the surrounding area. OSHA's definition of "reasonable diligence" is not based solely on the percent of structures found to contain levels of radon exceeding the standard, however. Reasonable diligence is determined on a case-by-case basis.

The answer to your question concerning the definition of "reasonable diligence" depends upon facts specific to each individual case. In this case, OSHA's definition would not be based solely on the percent of structures found to contain levels of radon exceeding the standard. However, given a situation in which an employer is provided with a copy of the referenced EPA report, it could be argued that knowledge of this incidence of radon, plus the fact that his workplace is within the confines of the geographical area surveyed, could give rise to a duty to test, or at a minimum, to make further inquiry. In addition, an employer could know of a potential hazard with the exercise of reasonable diligence if the media has reported excessive radon exposure in the area where the workplace is located.

We appreciate the opportunity to clarify this matter for you.
MAR 5 1991

Dear Senator M:

This is an interim response to your letter of February 11, to the Occupational Safety and Health Administration (OSHA) concerning radon.

In order to address your concerns fully, we are in the process of gathering information. We expect to provide you with a full response shortly.

Thank you for your patience.

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SOURCE LETTER

February 11, 1991

Dear Mr. S:

I'm writing on behalf of some of my constituents regarding interpretation of 29 CFR 1910.96(d)(1) relative to OSHA's radon standards.

In your letter to Mr. W of (Corporation) you stated that an employer must conduct a survey as specified in 29 CFR 1910.96 if he "knows, or could have known with exercise of reasonable diligence of the existence of artificially enhanced concentrations of environmental radon-222 in its workplace". Specifically I have three questions that need to be addressed. 1) What is the definition of "reasonable diligence" within the context of 29 CFR 1910.96? 2) If ten percent of the structures surveyed in an EPA study area are found to exceed the radon standard, does "reasonable diligence" require an employer to conduct a survey to determine concentrations of radon in his or her workplace? 3) If ten percent is not the threshold requirement, what specific incidence of radon would require an employer to test his or her workplace for radon levels to demonstrate "reasonable diligence" according to OSHA standards?

I would appreciate it if you could send your response to the attention of MR. R in my Washington office.

Thanks in advance for your assistance in interpreting these regulations.

SEP 27, 1990

This is in response to your letter of July 24 to Mr. S of my staff concerning the Occupational Safety and Health Administration (OSHA) standard 29 CFR 1910.96 ionizing radiation.

Please be advised that 29 CFR 1910.96 applies to all workplaces except state and local governments, marine terminals, agricultural operations, construction operations and workplaces exempted from OSHA jurisdiction by section 4(b)(1) of the Occupational Safety and Health Act of 1970. Section 4(b)(1) reads:

Nothing in this Act shall apply to working conditions of employees with respect to which other Federal agencies, and State agencies acting under section 274 of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2021), exercise statutory authority to prescribe or enforce standards or regulations affecting occupational safety or health.


You also asked several questions in your letter and in your meeting with Mr. S concerning the application of 29 CFR 1910.96 to conditions in the workplace. For your information I have enclosed a copy of an OSHA memorandum dated August 16, 1989 addressed to the OSHA Training Institute. This document provides current OSHA policy on the requirements for application of 29 CFR 1910.96 to radon in the workplace.

SOURCE LETTERS

AUG 16, 1989

MEMORANDUM


This is in response to your memorandum of October 20, 1988, requesting some interpretations and policy determinations for the standard for ionizing radiation, 29 CFR 1910.96.

Neither 29 CFR 1910.96 nor the original standard on which it is based, 10 CFR 20, define restricted areas for ionizing radiation or airborne radioactive materials in terms of the potential level of exposure. "Unrestricted area" is defined at 10 CFR 20.105(b)(1) and (2) and at 10 CFR 20.106(a), however. It follows, therefore, that areas that cannot qualify as "unrestricted areas" are "restricted areas."

"Unrestricted areas" for ionizing radiation are areas where even if an employee were continuously present in the area (1) the dose received in any one hour could not exceed two millirems, or (2) the dose received...
in any seven consecutive days could not exceed 100 millirems. "Unrestricted areas" for airborne radioactive materials are areas where concentrations do not exceed the limits specified in Table 2 of Appendix B to 10 CFR 20. The concentrations may be averaged over a period not greater than one year.

Standard 29 CFR 1910.96 defines three types of restricted areas that must be identified and have their boundaries demarcated with special warning signs. They are "radiation area," "high radiation area," and "airborne radioactive area."

An employer possesses radioactive material and comes under the scope of 29 CFR 1910.96 if there are artificially enhanced concentrations of environmental radon-222 in the workplace. If environmental radon-222 concentrations have not been artificially enhanced, they are very much lower than the permissible exposure limit (PEL) Accordingly, only artificially enhanced concentrations of environmental radon-222 would be sufficiently high that provisions of 29 CFR 1910.96 would go into effect. The most common places for significant artificial enhancement of radon-222 concentrations to occur are the inside of buildings or other types of enclosures constructed on or in the ground.

As you noted, footnote 3 to Table 1 of Appendix B to 10 CFR 20 states that "the limit on exposure to radon-222 concentrations in restricted areas may be based on an annual average." OSHA must permit employers to follow this option.

OSHA obviously cannot spare enough resources to measure the annual average concentration of airborne radon-222 exposure received by an employee. It is not necessary for OSHA to do this measurement in order to determine and enforce compliance with the exposure limit, however. Rather, OSHA can reach these objectives by enforcing compliance with the survey requirement described at 29 CFR 1910.96(d) and assuring that employers take appropriate corrective action when their measurements show any employees overexposed to radon-222.

A survey is defined as "... an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions. When appropriate such evaluation includes measurements of concentrations of radioactive material present." An employer's evaluation of a radon-222 hazard will frequently have to be done in two stages. The first stage would consist of several short duration samples intended to find any areas where radon-222 concentrations may be excessive. The second stage would involve long duration sampling to accurately determine the long-term, time-weighted average radon-222 concentrations in the areas where short duration samples indicated that the concentrations might be excessive.

Before citing an employer for not doing a survey to evaluate the radiation hazard incident to the presence of radon-222 gas, OSHA will have to obtain information supporting the need for the survey. Usually OSHA will have to produce this information through its own exploratory measurements of radon-222 concentration levels.

Decisions on when to sample for radon-222 may be done in the area offices at the level of the supervisory industrial hygienist. You will note that the exposure limits for airborne radioactive materials listed in Appendix B to 10 CFR 20 are expressed as concentrations above natural background radioactivity. However, true background radioactivity is so small relative to the limit for radon-222 in Table I, that it may be disregarded. We have referred your inquiry about sampling instruments and procedures to the Directorate of Technical Support.

Twenty-nine states have entered into agreements with the Nuclear Regulatory Commission (NRC). All twenty-nine states operate regulatory programs covering all ionizing radiation hazards, but their agreements with NRC pertain only to specific materials called "agreement materials." Agreement materials are (1) source material, special nuclear material, and byproduct material, as these terms are defined in 10 CFR Part 20, and (2) uranium and thorium tailings resulting from recovery operations. A circular issued by NRC in June, 1987, entitled, "Summary Of the Nuclear Regulatory Commission's Agreement State Program," (copy enclosed) identifies the current NRC agreement States.

NRC periodically reviews agreement State programs for adequacy and compatibility. NRC's authority over agreement States pertain only to agreement materials, however. Thus NRC considers only activities involving agreement materials when determining the acceptability of an agreement State's regulatory program. Consequently, an agreement State that maintains a satisfactory regulatory program for agreement materials will retain the regulatory authority granted by NRC even if it operates a poor program.
Instruction STD 1-4.1 and OSHA Instruction STP 2.8 with its attached memorandum from NRC contain correct information and the policy and guidelines contained in them must still be observed.

Some individuals, perhaps even some State officials, may construe 29 CFR 1910.96(p)(3)(ii) to transfer OSHA's authority for regulating ionizing radiation to NRC agreement States, provided their program for controlling nonagreement materials is compatible with 29 standard CFR 1910.96. This is a misinterpretation of 29 CFR 1910.96(p)(3)(ii), however. It does not transfer authority, but describes the conditions when compliance with State requirements will also comply with Federal OSHA requirements.

No NRC agreement State that is not an OSHA State Plan State has had a recent formal determination by the Assistant Secretary of Labor as to whether the State's program for controlling nonagreement materials is compatible with 29 CFR 1910.96. The lack of a recent determination has no practical effect on OSHA enforcement responsibility, however. That is, OSHA will issue citations to employers not in compliance with 29 CFR 1910.96 regardless of whether the State's regulatory program is compatible with 29 CFR 1910.96.

OSHA does not have jurisdiction over Department of Defense ionizing radiation sources that are part of uniquely military equipment, systems, or operations. The use of an ionizing radiation source for medical purposes is not a uniquely military operation so OSHA has jurisdiction over those sources that are not licensed by NRC. In the case where radioactive isotopes are used as a radiation source for medical purposes, any isotopes not produced by nuclear reactors come under the jurisdiction of OSHA as they are not licensed by NRC.

Attachment:


July 24, 1990

It was a pleasure to meet with you on Friday, July 20 to discuss CFR 29 1910.96. I am very interested in your offices interpretation of section (c) (1) and (2) along with section (e)(4). I have included highlighted copies of these sections as well as a highlighted copy of 1910.5 (c) (2) which, I believe, indicates that the regulations listed in section 1910 pertain to "any industry".

Particular questions of concern are:

1. Do the regulations detailed in section (c)(1) and (2) pertain to research laboratories, mining operations, nuclear facilities and other facilities with restricted access or is it, in accordance to section 1910.5(c)(2), applicable to "any industry"?
2. Many employers are currently hiring private environmental assessment firms to perform compliance audits to assist the employer in determining whether a safe working environment exists for their employees. In section 1910.96(e)(4)(b) an employer is required to post a sign or signs if radon levels are in excess of 7.5 pCi/l. Does section 1910.96(e)(4)(b) pertain to "any industry" as described in the description of 1910.5(c)(2)? If not, what industries does this section pertain to?
3. The Environmental Protection Agency has recommended that every home and classroom in the nation test for radon. Congress mandated that every federal office building be tested for radon. Certainly the regulations cited here should warrant employers to include radon testing of the workplace to determine worker exposure and post warnings and notices where applicable.

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During some of the recent reviews of Agreement State radiation control programs, we became aware of the overlapping of enforcement actions taken under State agreements with the Nuclear Regulatory Commission and OSHA approved State plans.

This problem was discussed at a recent meeting between the OSHA and State Agreements Branch staffs. It appears that some of the problems may have originated from a misunderstanding and some because of "gray" areas where the two Federal regulatory programs interface.

An understanding was reached that violations arising from noncompliance with Agreement State radiation control regulations for agreement material must be cited against the Agreement State radiation control regulations. Violations of occupational safety and health standards for nonagreement materials and sources of radiation would be cited under appropriate OSHA standards and procedures in those States which have OSHA approved State plans.

Further understanding was reached that citations would be predicated upon a determination whether air agreement materials or nonagreement materials were the major contributor to the violation, i.e., citation against radiation control regulations for agreement materials and occupational safety and health standards for nonagreement sources of radiation. Dual citations should not be made.

TWO EXAMPLES OF EXTREME SITUATIONS ARE:

1. There is an overexposure in a nuclear medicine department which also possesses small nonagreement calibration sources. The citation should be made under the Agency's radiation control regulations.

2. A technician works in both the x-ray and nuclear medicine departments. The technician's overexposure has been determined to have been primarily from x-rays. The citation in this case should be under the OSHA standard.

Any cases involving mixed exposures which cannot be resolved by the State Agency or Agencies involved may be relayed to this Branch. The State Agreements Branch staff will review such cases with appropriate OSHA personnel for resolution.

October 30, 1978

FIELD INFORMATION MEMORANDUM #76-19
TO ALL REGIONAL ADMINISTRATORS

SUBJECT: State Plan Enforcement of Radiation Standards

The Nuclear Regulatory Commission (NRC) has brought to our attention possible inappropriate enforcement actions by States having both NRC agreements and OSHA State plan programs. A letter from NRC headquarters to agreement State participants is enclosed for your information and transmittal to approved State plan designees.

State OSHA enforcement action is appropriate only where violations relate to non-NRC regulated materials and sources. Regional monitoring should review this aspect of State plan enforcement to assure the appropriate application of State OSHA radiation standards. A revision to Program Directive #73-5, "OSHA Coverage of Ionizing Radiation Sources Not Covered by Atomic Energy Act of 1954," will also be forthcoming.
RECORD ID 92100601

STANDARD NUMBER 1910.96 (c)(1), (e)(4)(l)
INFORMATION DATE 19921006

ABSTRACT 1910.96 applies to all employers covered by the Occupational Safety and Health Act, except agriculture employers, who possess, use, or radioactive material not licensed by the Nuclear Regulatory Commission (NRC). The definition of airborne radioactivity area applies to areas that contain airborne Naturally Occurring Radioactivity Material (NORM).

INTERPRETATION 29 CFR 1910.96 (c)(1), (e)(4)(l)

October 6, 1992

Dear Mr. S:

We regret the delay in responding to your letter of March 19, to Ms. C. W., Atlanta Regional Office, requesting clarification of the Occupational Safety and Health Administration's (OSHA) Ionizing Radiation Standard, 29 CFR 1910.96.

Regarding the definition of "airborne radioactivity area" in 1910.96(e)(4)(l)(a-b), an area is to be posted as an airborne radioactivity area if an employee is in the area for 40 hours during a week and is exposed to radioactive levels in excess of 25 percent of the concentration specified in column 1 of Table 1 of Appendix B to 10 CFR 20.

For example, an airborne radioactivity area would exist in an area where an employee worked for 40 hours per week and the radon-222 concentration in the area exceeded 7.5 picocuries per liter. An airborne radioactivity area requires employee monitoring and restricted access to the area by the public.

We will answer your specific questions in the order that you asked them.

1. Does this regulation apply to all businesses not specifically excluded now?

The standard applies to all employers covered by the Occupational Safety and Health Act, except agriculture employers, who (1) possess, use, or transfer sources of ionizing radiation, or (2) possess, use, or transport radioactive material not licensed by the Nuclear Regulatory Commission (NRC).

2. Is it the intent of this regulation to apply the definition of "airborne radioactivity area" to areas with airborne Naturally Occurring Radioactivity Material (NORM)?

29 CFR 1910.96 covers NORM. Accordingly, the definition of airborne radioactivity area applies to areas that contain airborne NORM.

3. Is it the intent of the regulation to use inhalation values of the referenced 10 CFR 20 since the regulation has been revised?

The inhalation values incorporated in 29 CFR 1910.96 are those that were in 10 CFR 20 in 1971 when OSHA promulgated the standard.

We appreciate the opportunity to clarify these matters for you.
March 19, 1992

Dear Ms. W:

I have recently reviewed the Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1910.96 titled "Ionizing Radiation". In particular, the definition of "airborne radioactivity area" (1910.96(e)(4)(I)(a and b)) has raised several concerns. The definition for this class of restricted area states that the simple presence of airborne radioactive material will require employee monitoring and restriction of free access by the general public to the area. The regulation appears to require any business which has normal work areas with radon-222 concentrations of 7.5 pCi/l or greater or radon-220 concentrations of 2.25 pCi/l or greater to be designated as "airborne radioactivity areas". The definition of "airborne radioactivity area" requires only the presence of radioactive material without regard to licensure. Section 1910.96(l)(1) states that this regulation applies to all employers except Atomic Energy Commission (now the NRC) or Agreement State licensees. Unfortunately, the issue is further complicated by the incorrect reference to 10 CFR 20 since that regulation has changed. The table column referenced is for ingestion, not inhalation.

Therefore, the Georgia Radon Program requests written interpretation of 29 CFR 1910.96 on the following questions:

1. Does this regulation apply to all businesses not specifically excluded now?
2. Is it the intent of this regulation to apply the definition of "airborne radioactivity area" to areas with airborne NORM (Naturally Occurring Radioactivity Material) and;
3. Is it the intent of the regulation to use inhalation values of the referenced 10 CFR 20 since that regulation has been revised?

It is the opinion of the Georgia Radon Program that this regulation applies to all businesses where radon-222 or radon-220 concentrations are present in excess of the values cited. The implication is that employers must test the work place to determine if the definition of "airborne radioactivity area" applies. If it were to apply, then the employer should mitigate the radon concentration to below the stated levels to avoid the monitoring and record keeping required. Additionally, with mitigation the employer need not restrict access of the public to these areas as a defined "restricted area" would require.

Please provide a written interpretation on these questions at your earliest opportunity. A number of radon public information programs will need such an OSHA interpretation on this issue for presentation. The response may be sent to:

Georgia Radon Program
DHR Environmental Health
878 Peachtree Street, NE - Room 100
Atlanta, Georgia 30309-3917

Thank you for your consideration on this issue. If there are any questions, please contact me at (404) 894-6644.
OSHA does not have a specific standard that regulates supermarket laser scanning equipment. However, OSHA regulates exposure to non-ionizing radiation in 29 CFR 1910.97. The Center for Devices and Radiological Health of the Food and Drug Administration is involved in research regarding the health effects and appropriate precaution with respect to laser equipment.

(NOTE: This standard has not been amended since issuance.)

INTERPRETATION 29 CFR 1910.97

Apr 29, 1985

This is in response to your March 19 letter, addressed to Ms. K, Acting Director, Intra-Governmental Affairs, which transmitted correspondence from your constituent, Mr. Z. Mr. Z contends that harmful radiation emissions are being released from supermarket laser scanning equipment presently in use in some food stores in the (City, State) area.

As you are aware, the Occupational Safety and Health Administration (OSHA) was established to ensure safe and healthful working conditions for the working men and women of the Nation. Section 18 of the Federal Occupational Safety and Health Act of 1970 encourages States to assume responsibility for their own safety and health programs under a plan approved by the U.S. Department of Labor and subject to Federal monitoring. The (State) Department of Labor and the Department of Public Health administer such a plan and have responsibility for the enforcement of safety and health standards in the State.

Neither OSHA nor the (State) plan has specific standards that regulate supermarket laser scanning equipment. However, OSHA regulates exposure to nonionizing radiation in its General Industry standards, 29 CFR 1910.97 (copy enclosed). This standard specifies that worker exposure to nonionizing radiation not exceed 10 mW/cm² in the frequency range 10 MHz to 100 GHz (defined in the standard as radio frequency/microwave radiation). (State) has adopted the same requirement under its State plan.

It is my understanding that the Center for Devices and Radiological Health of the Food and Drug Administration is involved in research regarding health effects and appropriate precautions with respect to laser equipment. For further information, Mr. Z can contact the Center directly at the following address:

Food and Drug Administration
Center for Devices and Radiological Health
Office of the Director
5700 Fishers Lane
Rockville, Maryland 20857
Telephone: 301-443-4690
The ANSI nonionizing radiation warning sign, a yellow triangle with a black symbol of a "radiator," has been used extensively in this country since 1982. Since the ANSI nonionizing radiation warning sign more clearly depicts the radio frequency hazard and is recognized and accepted by general industry, it provides equal or greater protection compared to the nonionizing radiation warning signs required by OSHA standard 1910.97. Therefore, an employer who displays the ANSI nonionizing radiation warning sign to warn employees about specific radio frequency radiation hazards is considered not to be in violation of 1910.97.

As Chairman of Subcommittee 2 of the Institute of Electrical and Electronics Engineers (IEEE) Standards Coordinating Committee 28 on Non-Ionizing Radiation, you recommend in your letter that OSHA recognize use of nonionizing warning signs which meet the American National Standards Institutes (ANSI) standard, ANSI C95.2-1982. You point out that the ANSI nonionizing radiation warning sign, that is, a yellow triangle with a black symbol of a "radiator" has been used extensively in this country since 1982. Since the ANSI nonionizing radiation warning sign more clearly depicts the hazard and is recognized and accepted by general industry, it provides equal or greater protection compared to the nonionizing radiation warning signs required by OSHA standards at 29 CFR 1910.97. Therefore, an employer who displays the ANSI nonionizing radiation warning sign to warn employees about specific radio frequency radiation hazards is considered not to be in violation of 1910.97.

Thank you for your interest in Occupational Safety and Health. If we may be of further assistance please let us know.

November 14, 1991

I am writing you in my capacity as Chairman of Subcommittee 2 of the IEEE Standards Coordinating Committee 28 on Non-Ionizing Radiation. Subcommittee 2 is responsible for standards on "warning symbols" or signs among other things. I am requesting action by OSHA which would get around a technicality in OSHA regulations which prevents industry from using freely the most modern accepted signs and symbols.

The first C95 standard on warning symbols related to radio frequency energy ("non-ionizing radiation") was adopted in 1966 (ANSI C95.2-1966). This specified a sign in red and black colors featuring a lightning-bolt symbol. This symbol was adopted in the OSHA standard 1910.97 when first promulgated in 1970. The requirements in the OSHA standard relative to radio frequency energy have not changed since then. On the other hand, the ANSI C95 standards have been revised many times since 1966.

In 1988-1989, the Accredited Standards Committee C95 converted to an IEEE Standards Coordinating Committee. It is the sole means for developing consensus standards on non-ionizing radiation in the
United States. The C95 standards are the only national (now transnational under IEEE) standards on the subject of non-ionizing radiation (scope is 0 to 300 GHz in frequency).

The enclosed standard, ANSI C95.2-1982, introduced a symbol based on a yellow triangle with a black symbol of a "radiator." This has been in extensive use in this country since 1982. This standard was reaffirmed under the IEEE SCC 28 umbrella in 1989-1990. It represents the consensus view in the U.S.

There have been occasions recently where employers have been cited as in violation of the OSHA standard 1910.97 because they use this yellow triangle sign instead of the red and black symbol still carried in OSHA 1910.97, even though the red and black symbol is considered obsolete by the relevant consensus groups in the United States.

We believe this regulatory catch 22 can be obviated if OSHA were to either adopt the new standard or at least for the time being issue an "interpretation" that would make the use of the new sign a "de minimis" violation of the OSHA standard. We request your assistance in arranging for such action(s) to take place.
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DOE Interpretations Guide to OSH Standards
July 1, 1992
OSHA Instruction PUB 8-1.7

August 5, 1991
Directorate of Technical Support

Subject: Guidelines for Laser Safety and Hazard Assessment

A. PURPOSE. This instruction provides guidelines to Federal OSHA and Plan States compliance officers, 7(c)(1) consultants, and employees for the assessment of laser safety.

B. SCOPE. This instruction applies OSHA-wide.

C. ACTION. Regional Administrators and Area Directors shall provide copies of the attached Guides for Laser Safety and Hazard Assessment to the appropriate State and Federal personnel and shall ensure that copies are available for distribution to the public upon request.

D. FEDERAL PROGRAM CHANGE.

This instruction describes a change in the Federal program for which a state response is not required. Each Regional Administrator, however, shall:

1. Ensure that this change is promptly forwarded to each state designee.
2. Explain the technical content of this change to the state as requested.
3. Inform the state designee that they are encouraged to make available the Guidelines to State Plan personnel and appropriate employers.

E. STATE CONSULTATION PROJECTS.

1. Regional Administrators shall forward a copy of this instruction to each consultation project manager and explain the technical content when requested.
2. Consultation Project Managers shall ensure that the information in the Guidelines is provided to appropriate employers and ensure that copies are available for distribution to the public upon request.

F. BACKGROUND. With the increase development, manufacturing, and use of devices and systems based on stimulated emissions of radiation (Lasers) in industrial applications, the compliance officer is now, more than ever, in need of a comprehensive laser reference. Because some primary users often misunderstood the different orders of magnitude of intensity levels found in the operational environment and the probability of potential accidental exposure, it was necessary for this reference laser document to be comprehensive, easily read and understood.

The remainder of this compliance directive has not been included due to the number of pages it contains. Users requesting this compliance directive or further assistance may contact Federal or State OSHA offices. The DOE OSH Standards Interpretations Response Line is also a valuable resource of information and may be contacted at 1-800-292-8061, Monday - Friday, 8:00 a.m. - 4:00 p.m. EST.

Vol. 1-204.1
This interpretation deals with the application of 1910.101 to the Nupro 316-DC-RD cylinder valve. Under the standard, compressed gas cylinders are required, as a minimum, to comply with Compressed Gas Association (CGA) Pamphlets P-1-1965, C-6-1968, and C-8-1962. Further, the regulation requires that compressed gas cylinders have pressure relief devices in accordance with CGA Pamphlets S-1.1-1963 and 1965 addenda and S-1.2-1963. Visual and other inspections must be conducted in accordance with hazardous materials regulations of DOT, 49 CFR Parts 171-179 and 14 CFR Part 103.

**INTERPRETATION** 29 CFR 1910.101

**MAY 16, 1986**

This is in response to your recent request for an interpretation of the acceptability of the (Company) (Product), drawing enclosed, relative to the Occupational Safety and Health Administration (OSHA) regulations at 29 CFR 1910.

As you are aware, OSHA regulates the use of compressed (Product) on which an outlet valve is affixed, per 29 CFR 1910.101. Under that standard compressed (Product) are required, as a minimum, to comply with Compressed Gas Association (CGA) Pamphlets P-1-1965, C-6-1968 and C-8-1962. Further, the regulation requires that compressed gas cylinders have pressure relief devices in accordance with CGA Pamphlets S-1.1-1963 and 1965 addenda and S-1.2-1963.

The Occupational Safety and Health Act (the Act) was not intended to suppress the ingenuity of our industry, but rather to assure safe and healthful workplaces for our workers. In that regard, new technology which provides for improved safety, health and industrial productivity is not in conflict with the Act and may provide acceptable alternatives.

It is understood that, as a minimum, the (Company) (Product) is equipped as follows:

1. The pressure relief device conforms to the specifications of the CGA Pamphlets S-1.1-1963 and 1965 addenda, S-1.2-1963, and with 49 CFR 100-199.

2. The (Product) inlet connection conforms to the specifications of the American National Standards Institute, Inc. (ANSI B57.1-977) for a standard NGT thread.

3. The outlet connection utilizes a "keyed VCR" outlet fitting which meets the requirements of CGA Pamphlet P-1-1965, Section 3.4.

The OSHA standards at 29 CFR 1910.101(b) adopt the CGA Pamphlet P-1-1965, copy enclosed. A review of the adopted standard reveals that use of the (Company) (Product), is not in conflict with the requirements. Therefore, proper use of the (Company) (Product), is not in violation of the OSHA standards at 29 CFR 1910.101.

Alteration or misapplication of an otherwise safe piece of equipment could create a hazardous condition beyond the control of the manufacturer. Compliance of a device or process with the Act can only be determined by the safety or health professional when related to the specific use circumstances. Therefore, users of the (Company) (Product) with compressed (Product) should be cautioned to train employees in the proper applications of the (Product) in accord with manufacturer's recommendations and requirements. Procedural and administrative controls which assure employee safety and health are mandatory under the Act.
OSHA PROGRAM DIRECTIVE #100-61

OCT 30, 1976

Subject: 29 CFR 1910.104(b)(3)(iii), Oxygen; Bulk Oxygen Systems; Distance Between Systems and Exposures; Fire Resistant Structures

1. Purpose


2. Directives Affected

None.

3. Background

a. Inquiries from various sources have been received regarding OSHA enforcement of 29 CFR 1910.104(b)(3)(iii) which prescribes the following minimum distance between any bulk oxygen storage container and fire resistant structure:

   Fire resistant structures twenty-five feet from any structure with fire resistant exterior walls or buildings with sprinkler systems of other construction, but not less than one-half the height of adjacent side wall of the structure.

b. These inquiries have noted that the source standard for 29 CFR 1910.104(b)(3)(iii) was National Fire Protection Association (NFPA) No. 566-1965, Standard for the Installation of Bulk Oxygen Systems. This was redesignated at NFPA No. 50, paragraph 5-1-2, with the 1971 edition, which states:

   Not less than one foot (or other distance to permit system maintenance) from buildings or other than wood frame construction, including fire resistant, heavy timber, noncombustible, and ordinary construction.

c. 29 CFR 1910.104(b)(3)(xviii) states the twenty-five foot distance requirement between structures with fire-resistive exterior walls or buildings with sprinkler systems of other construction and bulk oxygen storage containers:

   (does) not apply where protective structures such as firewalls of adequate height to safe-guard the oxygen storage systems are located between the bulk oxygen storage installation and the exposure. In such cases, the bulk oxygen storage installations may be a minimum distance of 1 foot from the firewall.

d. A "firewall" has been defined by various sources. The National Building Code, 1967 Edition, Section 23.2.A states:

   Firewalls shall be of a noncombustible material having a fire resistance rating of not less that 4 hours, and have sufficient standard stability under fire conditions to allow collapse of construction on either side without collapse of the wall.


   A firewall may be broadly defined as a wall erected to prevent the spread of fire. To be effective, firewalls must have sufficient fire resistance to withstand the effects of the most severe fire that might be expected to occur in the building and must provide a complete barrier to the spread of fire. Any openings in a firewall must be suitably protected.
OSHA Instruction STD 1-5.8 (cont.)

f. 29 CFR 1910.106(e)(3)(iii), Flammable and Combustible Liquids; Industrial Plants; Unit Physical Operations; Chemical Processes; establishes that a firewall may have a 2-hour fire resistance rating.

4. Action

a. There appears to be a distinction between structures or walls that are fire resistive (in which case 29 CFR 1910.104(b)(3)(iii) requires a distance of 25 feet between the structure or wall and bulk oxygen storage containers) and those that are firewalls (in which case the exception in 29 CFR 1910.104(b)(xviii) allows a minimum distance of one foot from the container). For the purposes of determining whether a citation is appropriate a fire resistive wall shall be deemed to be one made of fire resistive materials. On the other hand a firewall within the exception provided must be:

   (1) at least a wall made of noncombustible material, self-supporting and with a fire resistance rating of not less than 2 hours, and generally constructed in accordance with the definitions provided by local Building Codes and The Fire Protection Handbook provisions cited herein; the wall may be the exterior wall of the structure exposed to the bulk oxygen storage installation;

   (2) Any openings in the wall are properly protected:

   (3) The wall is of adequate height to safeguard the oxygen storage systems

b. Before citations are issued under 29 CFR 1910.104(b)(3)(iii) for violation of the 25 foot requirement, the compliance officer should assure himself that the wall or structure does not come within the exception provided for in 29 CFR 1910.104(b)(xviii), in which case only the 1 foot distance requirement is applicable.

5. Effective Date

This directive is effective upon receipt and will remain in effect until canceled or superseded.
OSHA Instruction STD 1-5.2
October 30, 1978

October 10, 1972

OSHA PROGRAM DIRECTIVE #100-11

Subject: Drainage, Dikes, and Walls for Aboveground Tanks (29 CFR 1910.106(b)(2)(vii))

1. Purpose. To clarify the applicability of 1910.106(b)(2)(vii) and to direct answers to inquiries.

2. Background. This paragraph establishes the requirements for drainage facilities of dikes for the area surrounding aboveground flammable liquid storage tanks. Numerous requests for clarification, objections to, and informal petitions for deletion of the subject requirements have been received on the basis that it is concerned primarily with public safety and property damage and not employee safety.

3. Interpretation. The primary and expressed purpose of the standard, is to avoid harm to adjoining property and to waterways. Any resulting benefit to the safety and health of employees appears to be secondary. Therefore, paragraph 1910.106(b)(2)(vii) is not intended to apply where its requirements do not have a substantial relationship to the safety and health of employees. Each case will have to be considered on its own merits.

4. Effective Date. This instruction is effective immediately, and will remain in effect until canceled or superseded.
OSHA Instruction STD 1-5.4
October 30, 1978

November 7, 1972

OSHA PROGRAM DIRECTIVE #100-14

Subject: Application of Section 1910.106, Flammable and Combustible Liquids and Particularly Diking Requirements of Section 1910.106 (b)(2)(vii)(c)(4)

1. Purpose. To reiterate exception provided by 1910.106 (j)(2).

2. Background. A number of variances have been requested by power companies relating to diking storage tanks for their power generating stations.

3. Interpretation. Section 1910.106(j)(2) exempts oil burning equipment, including tanks, from the application of 1910.106. This includes oil tanks at power generating plants. NFPA 30, the parent document to Section 1910.106, in making this exception, directed attention to NFPA 31, Standard for the Installation of Oil Burning Equipment. Inquiries about the application of OSHA standards to oil burning equipment installations should be advised that 1910.106 does not apply, but that adoption of NFPA 31 is being considered. As presently constituted, NFPA 31 does not have a "grandfather clause." We have not decided how to adopt, at this time. It should be noted that NFPA 31 contains similar provisions on diking above ground storage tanks.

4. Effective Date. This instruction is effective immediately, and will remain in effect until canceled or superseded.

Vol. 1-209
OSHA Instruction STD 1-5.7
OCTOBER 30, 1978
OSHA Program Directive #100-36

Subject: 29 CFR 1910.106(e)(2) Individual Plants--Incidental Storage or Use of Flammable and Combustible Liquids

1. Purpose

To provide additional information on the application of 29 CFR 1910.106(e)(2).

2. Directive Affected

None.

3. Background

a. A review of various OSHA documents concerning the application of the requirements of CFR 1910.106(e)(2) has shown evidence of inconsistency in the use of interpretations.

b. This information is in accordance with the intent of the consensus standards committee of the source standard, National Fire Protection Association, Sectional Committee on General Storage of Flammable Liquids, as indicated in the Flammable and Combustible Liquid Code NFPA #30, 1973.

4. Action

Pending a revision of 29 CFR 1910.106 and these requirements. CSHO should be guided by the following:

a. When the only operation involved is the storage of flammables in containers or tanks that are closed and remain closed throughout the storage, the storage area shall be considered to refer to a warehouse as shown in paragraph (d)(5). In this instance, Tables H-14 and H-15 shall be used.

b. When the procedure involved is mixing, transferring or other exposure of liquid to vaporization through operational procedures in which the containers do not remain closed in the storage area, 29 CFR 1910.106(e)(2)(ii)(a) shall be considered to refer to a storage area as shown in paragraph (d)(4). In this instance, Table H-13 shall be used to determine permissible quantities.

This directive is effective on receipt and until the revised 29 CFR 1910.106 is promulgated.
OSHA Instruction STD 1-5.9
OCTOBER 30, 1978
OSHA PROGRAM DIRECTIVE #100-65
JULY 21, 1977
Subject: 29 CFR 1910.106 (a) (14), "Flashpoint" - Acceptable Method of Determining Flashpoints

1. Purpose
To provide additional guidelines in the application of the subject standard as it relates to the various methods for determination of "flashpoint" acceptable to the Occupational Safety and Health Administration (OSHA).

2. Documentation Affected
None.

3. Background
   a. An OSHA staff member has been active on the American Society for Testing of Materials (ASTM) Ad-Hoc Committee on Flash Point Methodology and Government Response. This committee has been actively engaged in a program that would lead to the standardization of methods for determining flashpoints that would be acceptable throughout the world. The committee chairman has petitioned OSHA to amend 29 CFR 1910.106 (a) (14) to permit the Setaflash tester methods to be used as alternates to the Tag and Pensky-Martens closed testers methods contained in the definition of flammable and combustible liquids.

   b. The Setaflash method, ASTM D3278-73 (Flashpoint of Liquids by Setaflash Closed Tester), has been accepted by the U.S. Department of Transportation and the National Fire Protection Association as an acceptable method for determining the flashpoint of liquids.

   c. The adoption by OSHA of the Setaflash method as an acceptable method of determining the flashpoint of liquids would result in this agency being in conformity with other regulatory agencies. In addition, the Setaflash method for determining the flashpoint of liquids, ASTM D3278-73, will not have a lessening effect on the safety and health of employees conducting the tests or the eventual users of the liquids under the standard.

4. Action
Until such time as the referenced standard is revised to incorporate the use of Setaflash Testing Methods, the use of such methods will be cited as de minimis under the standard.

5. Effective Date
This Directive is effective immediately and will remain in effect until rescinded of canceled by standards changes.
OSHA Instruction STD 1-5.13

October 30, 1978

OSHA PROGRAM DIRECTIVE #100-99

SUBJECT: 29 CFR 1910.106(h)(8)(iii); or, 29 CFR 1910.107(g)(3); or, 29 CFR 1910.108(f)(2) - Relative to Metal Waste Cans

1. Purpose

The purpose of this directive is to give guidance on citing for the use of approved nonmetallic waste cans, where the OSHA standard requires a metal waste can.

2. Documentation Affected

None.

3. Background

   a. There are several OSHA standards that require approved metal waste cans or metal waste cans. Presently, there are approved nonmetallic waste cans on the market.

   b. It is not the intent of OSHA to discriminate or restrict employers from using new materials or products providing the products are approved or listed by nationally recognized testing laboratories for the particular use or exposure at the worksite.

4. Action

Where the employer is found using an approved nonmetallic waste can that is approved for its particular use or exposure at the worksite by a nationally recognized testing laboratory; and, the nonmetallic waste can is in violation of an OSHA standard requiring a metal waste can, the violation shall be considered "de minimis."

NOTE: A nonmetallic container may be approved for the temporary storage indoors of Class A combustible waste free of grease, oil, solvents, or other flammable liquids, and not be approved for the temporary storage of oil or solvent soaked waste.
OSHA Instruction STD 1-5.14A

October 24, 1980


A. Purpose. This instruction permits the use of DOT specification, not specified polyethylene, and not regulated containers for storing COMBUSTIBLE and/or FLAMMABLE liquids at inside storage areas under certain conditions.

B. Scope. This instruction applies OSHA-wide.

C. Cancellation. OSHA Instruction STD 1-5.14, April 20, 1979, is canceled.

D. Action. OSHA Regional Administrators/Area Directors shall take action permitting the use of polyethylene containers for combustible and flammable liquids in accordance with referenced DOT exemptions and guidelines, as set forth in F of this instruction.

E. Federal Program Change. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this change is forwarded to each State designee.

2. Explain the technical content of the change to the State designee as requested.

3. Ensure that State designees are asked to acknowledge receipt of the Federal programs change in writing, within 30 days of notification, to the Regional Administrator. This acknowledgment should include a description either of the State's plan to implement the change or of the reason why the change should not apply to that State.

4. Review policies, instructions and guidelines issued by the State to determine that this change has been communicated to State program personnel. Routine monitoring activities (accompanied inspections and case file reviews) shall also be used to determine if this change has been implemented in actual performance.

F. Guidelines. This instruction is based upon the need to resolve the inconsistencies presently found involving the DOT exemptions which permit the shipping of certain liquids in plastic containers. Under 29 CFR 1910.106 OSHA prohibits the use of DOT nonmetal containers. However, OSHA has determined that it is a de minimis violation of 1910.106(d)(2)(I) to store COMBUSTIBLE and FLAMMABLE liquids in polyethylene containers under certain conditions. It is thus permissible to use the DOT specification, not specified polyethylene and not regulated containers for storing FLAMMABLE and COMBUSTIBLE liquids at inside storage areas under the following conditions:

1. The liquid within the container has a DOT exemption in effect for shipment in polyethylene containers and is identified as meeting the requirements of the DOT exemption.

2. The container storage area is provided with a fire detection system designed and installed to detect incipient stage fires and interconnected with an employee emergency alarm system, which will effectively alert employees when fire is detected.

3. In locations where employees are expected to perform fire fighting, the container storage area is provided with a fixed automatic fire suppression system designed and installed to control, if not extinguish, a fire involving the stored polyethylene containers.

4. Employees, except members on fire brigades, will be totally evacuated from the container storage area at the time of initial fire detection. Where fire brigades are provided, member employees will be trained in the specific methods for fighting fires involving polyethylene drums or containers, and in the recognition of hazards associated with fire fighting in such storage areas.
5. In general purpose warehouses, the container storage area is provided with diking, or curbing and drainage, which will contain the volume of stored liquids and the anticipated flow of fire extinguishing agent, and drain it to a remote impounding area having no employee exposure. Employee emergency exit routes may not intersect or pass over or under open drainage paths.

G. Background.

1. U.S. Department of Transportation exemptions permit the use of DOT specification and not specified polyethylene containers and not regulated containers for transporting specifically identified Class B poisonous liquid and combustible and/or flammable liquids in motor vehicles, rail freight and cargo vessels. OSHA does not permit the storage of these liquids in DOT or non-Dot specification plastic containers. Therefore, a conflict exists and OSHA is trying to resolve it by accepting plastic containers under certain conditions.

2. OSHA has determined that it is a de minimis departure from 29 CFR 1910.106 to store all COMBUSTIBLE and FLAMMABLE liquids in plastic containers if the conditions set forth in F of this instruction are met. The terms combustible and flammable liquids are defined in the National Fire Protection Association Flammable and Combustible Liquids Code, NFPA No. 30, Chapter 1.
OSHA Instruction STD 1-5.15

NOV 9, 1979

SUBJECT: 29 CFR 1910.106(e)(2)(ii)(b), Clarification of the Quantity of Liquid That May Be Located Outside of an Inside Storage Room or Storage Cabinet in a Building or in Any One Fire Area of a Building.

A. Purpose. This instruction provides guidelines for citing alleged violations resulting from the requirements of 29 CFR 1910.106(e)(2)(ii)(b).

B. Scope. This instruction applies OSHA-Wide.

C. Action. OSHA Regional Administrators/Area Directors shall ensure that the enforcement of 29 CFR 1910.106(e)(2)(ii)(b) is consistent with the interpretation in paragraph E. of this instruction.

D. Federal Program Change. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this change is forwarded to each State designee.

2. Explain the technical content of the change to the State designee as requested.

3. Ensure that State designees are asked to acknowledge receipt of this Federal program change in writing, within 30 days of notification, to the Regional Administrator. The acknowledgment should include a description either of the State's plan to implement the change or of the reasons why the change should not apply to that State.

4. Review policies, instructions and guidelines issued by the State to determine that this change has been communicated to State program personnel. Routine monitoring activities (accompanied inspections and case file reviews) shall also be used to determine if this change has been implemented in actual performance.

E. Requirements.

1. 29 CFR 1910.106(e)(2)(ii)(b) requires that the quantity of liquid that may be located outside of an inside storage room or storage cabinet in a building, or in any one fire area of a building shall not exceed:

   a. 25 gallons of Class IA liquids in containers.

   b. 120 gallons of Class IB, IC, or II or III liquids in containers.

   c. 660 gallons of Class IB, IC, II or III liquids in a single portable tank.

2. Some Area Directors have interpreted these requirements to permit employers the choice of one of the three options. In other words, under this interpretation, if 25 gallons of Class IA liquids was stored in containers outside of an inside storage room or storage cabinet in a building, no additional quantity of Class IB, IC, II, or III liquids would be allowed. This is contrary to the intended meaning of this standard.

3. The source document, NFPA No. 30-1969 Flammable and Combustible Liquids Code, requires the following:

   The quantity of liquid that may be located outside of an inside storage room or storage cabinet in a building shall not exceed that given in (a), (b) and (c).

   This means that any combination of the permitted quantities of various classes of flammable liquids is allowed so long as the maximum permitted quantity for any one of the three categories not exceeded.
OSHA Instruction STD 3-4.1A

Sept. 16, 1980

SUBJECT: De Minimis for Absence of a Flame Arrester Screen In a Safety Can

A. Purpose. This Instruction establishes that the absence of a flame arrester screen in the pouring or spout of a safety can is treated as de minimis.

B. Scope. This Instruction applies OSHA-wide.

C. Cancellation. OSHA Instruction STD 3-4.1, June 17, 1980, is canceled.

D. Action. The Regional Administrators and Area Directors shall assure that the absence of a flame arrester screen in an approved safety can is considered de minimis.

E. Background. 29 CFR 1926.155(l) defines a safety can and requirements a flash arresting screen as one of the criteria for approval. 29 CFR 1910.106(a)(29) contains the same definition of safety can, except that it does not require a flame arrester screen. Both 29 CFR 1926.155(a) and 1910.106(a)(35) require approval by Underwriters' Laboratories, Inc., (UL) or the Factory Mutual Engineering Corp., (FM). In addition, 29 CFR 1926.155(a) also accepts approval by Federal agencies such as the Bureau of Mines or the US Coast Guard. The Factory Mutual Engineering Corp. requires flame arrester screens in safety can spouts for approval, but Underwriters' Laboratories, Inc., does not require them in safety cans for approval. Moreover, the NFPA Standard No. 30, Flammable Liquids, recognizes approval of UL or FM. Also, 25 CFR 1926.155(l) and 29 CFR 1926.155(a) are inconsistent because UL approval does not require a flame arrester screen. On the other hand, 29 CFR 1910.106(a)(29) and 29 CFR 1910.106(a)(35) are inconsistent because FM approval does require a flame arrester screen. Some believe that flame arrester screens in the pouring and filling openings of safety cans provide little additional protection to the user. Moreover, the General Industry standards were promulgated under Section 6(a) of the Act and Part 1926 standards were promulgated in accordance with the Administrative Procedures Act (public hearings). Also, the Bureau of Labor Standards elected to provide for the additional coverage by requiring flame arrestors.

F. Explanation of Correction. This instruction includes "and 1910.106(a) (35)" which was inadvertently omitted from the Background paragraph, line 6, of OSHA Instruction STD 3-4.1. The correction is indicated by a vertical line in the left margin of the paragraph.
In flammable liquid storage, a one gallon can be considered the equivalent to 4 liters, in agreement with DOT.

(Note: This standard was last amended in 1988.)

This is in response to your inquiry concerning flammable liquid storage.

The Occupational Safety and Health Administration concurs with the Department of Transportation Standard 49 CFR 173.28(a), in that one gallon can be considered equivalent to four liters for this purpose.
ABSTRACT: This interpretation letter reviews (16 pages) of standards relating to flammable and combustible liquids. Included are:

1) definitions of flammable classes and other terms,
2) requirements of flammable classes and other terms,
3) requirements for spray painting operations, and
4) requirements for dip tank and vapor degreasers.


August 15, 1983

MEMORANDUM

SUBJECT: Overview of the Flammable Liquid Standards

The attached document on flammable and combustible liquids was developed by Mr. X of the (City) Area Office. Region I has found the document to be useful as a reference guide in dealing with 1910.106, 1910.107, and 1910.108. I am forwarding it to you for distribution to the Area Office and State designees. Copies have been sent to various offices in the National Office, including the OSHA Training Institute.

I am confident that anyone dealing with the flammable liquid standards will appreciate Mr. K's effort in compiling this guide.

PRESENTATION OF FLAMMABLE AND COMBUSTIBLE LIQUID STANDARDS

REVIEW OF 1910.106, 1910.107, and 1910.108

The following information is intended to provide a reference guide for the enforcement of the FLAMMABLE and COMBUSTIBLE liquids code. This standard is rather confusing and there is evidence that some important information was not included. This summary does not include all of the elements of the standard but rather it focuses on the more common items that one would find while conducting an inspection of the various establishments. The approach one must employ is to define the situation as it exists and use the various sections as they apply. Before the standard can be applied, it is necessary to define some common terms. The following is a brief list:

CLASS I. This is a location where flammable gases or vapors are or may be present in the air in quantities sufficient to produce an ignitable or explosive mixture.

CLASS I DIV 1. A location in which hazardous concentration of flammable gases or vapors exist continuously, intermittently, or periodically under normal operating conditions. This includes frequent repair or maintenance operations that may present such conditions and cases where leakage may be a problem. Faulty equipment or processes are also included in this category.

CLASS I DIV 2. This is a location in which volatile flammable liquids or gases are handled, processed, or used but one in which the hazardous liquids, vapors or gases will normally be confined within closed containers or closed systems from which they can escape only in the case of accidental failure of equipment or ventilation system(s).

CLASS II. This is a location where combustible dust exists. The divisions are a previously stated.

CLASS III. This is a location where easily ignitable fibers exist.

CHEMICAL PLANT. A large integrated plant or that portion of such a plant other than a refinery or distillery where flammable or combustible liquids are produced by chemical reaction or used in chemical reactions.
BASEMENT. A story of a building or structure having one half or more of its height below ground level and to which access for fire fighting purposes is unduly restricted.

BULK PLANT. That portion of a property where flammable or combustible liquids are received by tank vessel, pipe lines, tank car, or tank vehicle, and are stored or blended in bulk for the purpose of distributing such liquids by tank vessel, pipeline, tank car, tank vehicle, or container.

FIRE AREA. An area of a building separated from the remainder of the building by construction having a fire resistance rating of at least one hour and having all communication openings properly protected by an assembly having a fire resistance of at least one hour.

LIQUIDS. The following is a classification of flammable and combustible liquids:

<table>
<thead>
<tr>
<th>Class</th>
<th>Flash Point (°F)</th>
<th>Fire Point (°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IA</td>
<td>&lt; 73°F</td>
<td>&lt; 100°F</td>
</tr>
<tr>
<td>IB</td>
<td>&lt; 73°F</td>
<td>≥ 100°F</td>
</tr>
<tr>
<td>IC</td>
<td>≥ 73°F and &lt; 100°F</td>
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</tr>
<tr>
<td>II</td>
<td>≥ 100°F and &lt; 140°F</td>
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<td>IIIA</td>
<td>≥ 140°F and &lt; 140°F</td>
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<tr>
<td>IIIB</td>
<td>≥ 200°F</td>
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</tr>
</tbody>
</table>

PORTABLE TANK. A closed container having a liquid capacity over 60 U.S. gallons and not intended for fixed installation.

STORAGE CABINET. Metal flammable liquid storage cabinets shall be constructed with at least 18 ga. sheet iron and double walled with 1 1/2 in. air space. A 2 in. sill shall be provided at the bottom. A single layer of plywood (at least 1 inch in thickness) is acceptable for wooden cabinets.

The application of this regulation to flammable storage rooms requires an interpretation of an inside room. There are four types of flammable storage rooms (ref. NFPA 30-1981):

1. INSIDE ROOM. A room totally enclosed within a building and having no exterior walls.
2. CUTOFF ROOM. A room within a building having at least one exterior wall.
3. ATTACHED BLDG. A building having only one common wall with a building having other type occupancies.
4. OUTSIDE STORAGE: A building having no common walls with another (STAND ALONE BLDG.) building.

These four cases are depicted below:

A. GENERAL REQUIREMENTS (inside rooms)

(1) Check room for compliance with the following table:

<table>
<thead>
<tr>
<th>Automatic Fire Protection</th>
<th>Fire Resistance Rating</th>
<th>Max. Floor Area Sq. Ft.</th>
<th>Total Qty Gals/sqft</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>2 hr</td>
<td>500</td>
<td>10</td>
</tr>
<tr>
<td>NO</td>
<td>2 hr</td>
<td>500</td>
<td>4</td>
</tr>
<tr>
<td>YES</td>
<td>1 hr</td>
<td>150</td>
<td>5</td>
</tr>
<tr>
<td>NO</td>
<td>1 hr</td>
<td>150</td>
<td>2</td>
</tr>
</tbody>
</table>

(2) Openings to other rooms or buildings shall be provided with noncombustible liquid tight raised sills or ramps at least 4 in. in height or the room shall be 4 in. below the surrounding floor or an open grated trench draining to a safe location shall be used ((d)(4)(i)).
(3) Openings shall be provided with approved self-closing fire doors ((d)(4)(i)). (Doors may be left open during material handling operations if they are designed to close automatically in a fire.)

(4) Windows, if any, must be fire windows (((d)(4)(i)).

(5) Wiring and equipment located inside the room shall be approved for Class I Div. 2 locations ((d)(4)(iii)).

(6) The ventilation inside the room must provide at least six air changes per hour. This may be accomplished either by gravity or mechanical exhaust. In general, if no mechanical exhaust is provided, then it is almost certain that the required exchange rate is not being met. Check to see if an air inlet exists ((d)(4)(iv)). (Section 4-4.1.6. of NFPA 30-1981 provides additional guidelines for proper design of ventilation systems.)

(7) If mechanical ventilation exists, it should be controlled by a switch located outside the door. The ventilation and lighting fixtures shall be operated by the same switch ((d)(4)(iv)).

(8) If Class I flammables are dispensed, a pilot light should be installed adjacent to the switch ((d)(4)(iv)).

(9) An aisle of at least three feet wide must be maintained ((d)(4)(v)).

(10) Containers over 30 gal. capacity shall not be stacked one upon the other ((d)(4)(v)).

(11) Dispensing shall be by approved pump or if by gravity, then through a self-closing valve ((d)(4)(v)).

(12) A fire extinguisher must be located outside the door of the room ((e)(7)(l)(a)).

(13) No smoking or open flames in flammable and combustible liquid storage areas ((d)(7)(iii)).

(14) Water-reactive materials (See Appendix B) shall not be stored in the same room as flammable and combustible liquids ((d)(7)(iv)).

B. CUTOFF ROOM

The OSHA standard does not differentiate between cutoff rooms and inside storage rooms. The following is a synopsis of NFPA 30-1981 dealing with cutoff rooms:

(1) The room may exceed 500 sq. ft.

(2) Dispensing of Class I liquids is not permitted in cutoff rooms exceeding 1000 sq. ft.

(3) Explosion venting must be provided.

(4) The maximum quantities of flammables that may be stored is limited. (See Table 4-4.2.7.)

(5) Ventilation must be provided in dispensing areas.

C. ATTACHED BUILDING

This case requires the same consideration as in B. above.

D. STAND ALONE BUILDING

Neither the OSHA standard or NFPA 30-1981 have specific requirements for this case.

E. BASEMENT AREAS

Class I flammable liquids shall not be permitted in basement areas ((d)(5)(v)).
F. WAREHOUSING

Flammable and combustible liquid storage room where dispensing does not occur is called Warehousing. See NFPA 30, Sections 4-5.6 and 4-5.7 for spacing and quantity requirements.

NOTE: Before applying the above elements, first determine if a flammable storage room is legally necessary. You are allowed up to 25 gal. of Class IA flammable liquids, 120 gals. of Class 1B, 1C, II or III liquids in containers, and 660 gals. of Class 1B, 1C, II or III liquids in a single portable tank in any one fire area.

HANDLING OF FLAMMABLE LIQUIDS

Classify operation according to the following:

1.) Industrial Plants
   
   a.) Incidental storage or use of flammable or combustible liquids
   
   b.) Unit physical operations

2.) Processing Plants

3.) Bulk Plants

Industrial Plants

This applies to cases where the use of flammable or combustible liquids is incidental to the principal business or where flammable or combustible liquids are used or handled in unit physical operations, such as mixing, drying, evaporating, filtering, distillation and similar operations which do not involve chemical reaction. The elements applicable are not to be used for chemical plants (i.e., processes involving chemical reactions).

1) Incidental storage or use of flammable or combustible liquids is incidental to the principal business or where flammable or combustible liquids are used or handled in unit physical operations, such as mixing, drying, evaporating, filtering, distillation and similar operations which do not involve chemical reaction. The elements applicable are not to be used for chemical plants (i.e., processes involving chemical reactions).

2) When large quantities are necessary, portable storage tanks may be used (((e)(2)(ii)(c)).

3) Flammable liquids shall be kept in covered containers when not actually in use (((e)(2)(iv)(a)).

4) There shall be no open flames or other sources of ignition within the vapor path (((e)(2)(iv)(c)).

5) Transfer of liquids shall be accomplished by using a closed piping system, by gravity through a self-closing valve, or by safety cans (((e)(2)(iv)(d)).

General Requirements

1) All spraying areas shall be provided with adequate mechanical ventilation. The fan element shall be non-ferrous. (((d)(2), (d)(4), (d)(5)).

2) All flammable and combustible liquid storage shall comply with 1910.106. (((e)(1)).

3) The quantity of flammable and combustible liquids in any spray area should not exceed the amount required for one day or one shift. (107 (e)(2)) or 120 gallons (NFPA 33, Section 6-1.4).

4) All spraying area shall be provided with an adequate number of fire extinguishers located outside of, but near, the area. (((f)(4)).

5) All spraying areas shall be kept free from the accumulation of deposits of combustible material. (((g)(2)).

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6) "NO SMOKING" signs shall be posted at all paint spraying areas and paint storage rooms. ((g)(7).)

7) The transfer of flammable liquids shall be done using appropriate bonding and grounding of containers. ((e)(9).)

8) Containers supplying spray nozzles (i.e., spray guns, etc.) shall be kept closed. ((e)(5).)

9) Exterior illumination for spraying areas shall be done by fixed lighting units only. The lights shall be protected from breakage by a non-combustible material (i.e., glass or plastic panels). (10))

10) There shall be no sources of ignition (flame or spark producing) in any spraying area, nor within 20 ft. unless separated by a partition. ((c)(2).)

11) Hot surfaces (steam pipes, etc.) shall not be located in a spraying area where combustible residues may accumulate. ((c)(3).)

12) Electrical equipment located within a spraying area shall be approved for Class I Div 1 locations. Electrical equipment adjacent to a spraying area and not separated by a partition shall be approved for Class I Div 2 locations. See diagrams on Pages 9 and 10.

13) Portable lamps shall not be used in any spraying area unless it is specifically for a maintenance operation. If used for maintenance, they must conform to Class I Div 1 locations. ((c)(8).)

14) Airless spray guns and any conductive equipment being sprayed should be grounded. ((c)(9)(ii).)

Unit Physical Operations

1) Areas using Class I liquids shall be ventilated at a rate of not less than one cubic foot per minute per sq. ft. of floor area ((e)(3)(v)(a)).

2) Storage shall be according to that previously outlined (industrial plants).

Processing Plants

This applies to establishments which contain chemical operations, such as oxidation, reduction, halogenation, hydrogenation, alkylation, polymerization, and other chemical processes, but does not include chemical plants, refineries, or distilleries.

1) Proper portable fire extinguishers shall be provided (16)(i)).

2) The plant shall have an approved automatic sprinkler system or equivalent extinguishing system (16)(ii)(c)).

3) An approved alarm system shall be provided to notify employees within the plant and a local Fire Dept. (16)(iii).

General Items for all of the Above Operations

1) Adequate precautions shall be taken to prevent the ignition of flammable vapors ((e)(7)(j)(a)).

2) Class I liquids shall not be dispensed into containers unless the nozzle and container are electrically interconnected ((e)(7)(j)(b)).
3) Locations where flammable vapor-air mixtures may exist under normal operations shall be classified as Class I Div 1. The Division 1 area shall extend 5 ft. in all directions from all points of vapor liberation. All areas within pits shall be classified as Div. 1 if any part of the pit is within Div. 1 or Div. 2 classified areas unless the pit has mechanical ventilation. Locations where flammable vapor-air mixtures may exist under abnormal conditions and for a distance beyond Div. 1 locations shall be classified as Div 2. These locations include an area with 20 ft. horizontally, 3 ft. vertically beyond a Div. 1 area (8 ft.) and up to 3 ft. above floor level or grade level within 25 ft. indoors or 10 ft. if outdoors. Pits provided with mechanical ventilation within a Div 1 or Div 2 area shall be classified as Div 2. If only Class II or III liquids are handled, then ordinary electrical equipment is satisfactory though care should be taken to prevent hot metal from falling into open equipment. ((e)(7)(iii)(b).)

4) Maintenance operations involving hot work or the use of spark producing tools may be done if the area has been checked before the event and the work is supervised.

5) Housekeeping, i.e., cleaning of spills and leakage control ((e)(8)(i)).

6) Waste or residue shall be stored in covered metal containers ((e)(8)(iii)).

**Bulk Plants**

1) Class I liquids shall be stored in closed containers or in storage tanks above ground outside of buildings or underground. ((f)(1)(i)).

2) Class II and III liquids shall be stored in containers or tanks within buildings or in above- or below-ground tanks outside of buildings. ((f)(1)(ii)).

3) If rooms containing Class I liquids are heated it shall be done by the use of steam or hot water. ((f)(2)(iii)).

4) Ventilation shall be provided for all pumping and dispensing operations taking place within a room. This applies to Class I liquids only. If natural ventilation is not adequate then mechanical ventilation must be used. ((f)(2)(iii)).

**FINAL NOTE**

The definitions of chemical plant and processing plant are not clear since they both refer to the handling of flammable liquids in the same way. Refer to Chapter 5 of the NFPA Flammable and Combustible Liquid Code Handbook by Martin Henry for an explanation of chemical and processing plants.

**REVIEW OF 1910.107**

In order to enforce the standards relative the application of flammable and combustible liquids and powders (1910.107 and 1910.94) when applied as a spray by compressed air, airless, or electrostatic methods, it is necessary to use both 1910.107 and 1910.94. Water-base coatings are not covered by the standard, but the residue left after evaporation if combustible is covered by the standard.

**DEFINITION**

**SPRAY AREA:** An area where dangerous quantities of flammable vapors, mists, combustible residues, dusts, or deposits are present due to the operation of spraying processes. A spray area includes:

a) Interiors of spray booths and rooms

b) Interior of exhaust ducts for spraying purposes

c) Any area in the direct path of spraying operations.
FLAMMABLE LIQUID: A liquid having a flash point below 100 F closed cup and/or a vapor pressure less than or equal to 40 psi Absolute (2068.6 mm Hg) at 100 F.

COMBUSTIBLE LIQUID: A liquid having a flash point at or above 100 F.

SPRAY ROOM: A mechanically ventilated structure provided to enclose a spraying operation and used exclusively for spraying operations. The entire room is a spray area.

GENERAL

When spray finishing operations are conducted in a spray booth, the spraying area will usually not extend beyond the boundaries of the booth enclosure. If a spraying operation is not confined to a well defined and adequately ventilated area, the spraying area may include the entire room containing the spraying operations.

OPEN SPRAYING

(This is a Figure which cannot by typed. Can be found on page 9 of the report.)

SPRAY PAINTING IN A BOOTH

Designation of Hazardous Locations NFPA 33-1977

This is a sketch and is too difficult to type. Can be found on page 10 of the report.

SPRAY BOOTH AND SPRAY ROOM REQUIREMENTS

1) The spray booth shall be constructed of a non-combustible material, such as steel, concrete, or masonry. For low volume spraying, aluminum or other non-combustible material may be used. ((b)(1).)

2) The floor surface shall be a non-combustible material or covered with a non-combustible material. ((b)(3).)

3) For dry-type overspray collectors, the booth face velocity shall be at least 100 ft./min. ((b)(5)(i).)

4) The booth shall be protected with sprinklers on the upstream and downstream sides of the filters if dry-type overspray collectors are used. ((b)(5)(iv).)

5) When dry-type overspray filters are used a device such as an alarm or pressure drop gauge shall be installed to indicate often sure that the required velocity is maintained. ((b)(5)(i).)

6) Spray rooms shall be constructed of non-combustible material.((94)(c)(4)(i).)

7) Spray rooms shall have non-combustible fire doors and shutters ((94)(c)(4)(ii).)

8) Adequate mechanical ventilation shall be provided to dilute vapor levels to at least 25% of the PEL. ((94)(c)(4)(iii).)

9) Spray rooms used for production spray finishing shall meet the requirements for spray booths. ((94)(c)(4)(iv).)

NOTE: When spray booths use conveyors to bring in articles through the sides of the booth, there may be a problem in measuring booth face velocity. This is due to the infiltration of air through the sides of the booth. In this case, use a smoke tube to observe the flow profile. The conveyor openings shall be made as small as practical. ((b)(7).)

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ELECTROSTATIC HAND SPRAYING

1) The handle of the spray gun shall be electrically connected to ground and the operator shall be in contact with the ground. ((i)(5).)

2) All electrical equipment shall be interlocked with the ventilation of the spraying area. ((i)(8).)

3) The spraying area shall be adequately ventilated. ((i)(9).)

AUTOMOBILE UNDERCOATING

Automobile undercoating in areas having adequate natural or mechanical ventilation are exempt for the requirements pertaining to spray finishing operations when using materials not more hazardous than kerosene or undercoating solvents having a flash point in excess of 100 F (k).

ORGANIC PEROXIDES

All spraying operations involving the use of organic peroxides (i.e., ME!, peroxide) and other dual component coatings shall be conducted in approved sprinklered spray booths meeting the requirements of 1910.107(m).

1) Smoking is prohibited and "NO SMOKING" signs are required in areas where organic peroxides are stored, mixed, or applied ((m)(2)).

REVIEW OF 1910.108

This standard applies to operations in which articles or materials are passed through the contents of tanks, vats, or containers of flammable or combustible liquids including coating, finishing, treating, and similar processes (NFPA Vol. 3 1979).

DEFINITIONS

DIP TANK: A tank, vat, or container of flammable or combustible liquid in which articles or materials are immersed for the purpose of coating, finishing, treating, or similar processes.

VAPOR AREA: Any area containing dangerous quantities of flammable vapors in the vicinity of dip tanks, their drain boards, or associated drying, conveying, or other equipment, during operation or shut down periods.

GENERAL REQUIREMENTS

1) A properly designed ventilation system shall maintain the vapor area to the smallest practical space ((b)(1)).

2) Processes utilizing a dipping conveyor system shall shut down when the ventilation system fails ((b)(1)).

3) Dip tanks shall be constructed of a non-combustible material ((c)(1)).

4) Dip tanks having a capacity in excess of 150 gal. or a surface area greater than 10 sq. ft. shall be equipped with a properly trapped overflow pipe leading to a safe location outside the building ((c)(2)(i)).

5) Overflow pipes shall not be less than 3 in. in diameter ((c)(2)(ii)).

6) The overflow pipe entrance shall be at least 6 in. below the top of the tank ((c)(2)(iv)).

7) Dip tanks over 500 gal. capacity shall be equipped with bottom drains to quickly drain the tank in the event of fire ((c)(3)(i)).
The bottom drain shall be as follows ((c)(3)(iii)):

<table>
<thead>
<tr>
<th>Gallons</th>
<th>Inches (min.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>500-750</td>
<td>3</td>
</tr>
<tr>
<td>750-1000</td>
<td>4</td>
</tr>
<tr>
<td>1000-2500</td>
<td>5</td>
</tr>
<tr>
<td>2500-4000</td>
<td>6</td>
</tr>
<tr>
<td>Over 4000</td>
<td>8</td>
</tr>
</tbody>
</table>

9) All dip tanks in excess of 150 gal. or having a liquid surface area exceeding 4 sq. ft. shall be protected with an automatic extinguishing facility (one of the following) ((c)(5)):
   - automatic water spray
   - automatic foam extinguishing
   - automatic carbon dioxide
   - dry chemical
   - automatic covers

10) Dip tanks utilizing a conveyor system shall have a means to shut down the conveyor in the event of fire. Dip tanks in excess of 500 gals. shall have the bottom drains open automatically ((c)(6)).

11) The storage of flammable and combustible liquids in connection with dipping operations shall conform to the requirements of 1910.106 where applicable. When portable tanks are used to replenish dip tanks, the container and tank shall be grounded and bonded (d).

12) There shall be no flame or spark producing sources within any vapor area. All electrical equipment in a vapor area shall be Class I Div 1 ((e)(1)(i)).

13) Equipment subject to deposits of readily ignitable residue and splashing shall be Class I Div 1 ((e)(1)(ii)).

14) Areas within 20 ft. horizontally and 3 ft. vertically, but outside the vapor area, are classified as Class I Div 2 and, therefore, flame or spark producing sources shall not be permitted ((e)(2)). (See NFPA 34-1979, Chapter 6 for additional guidelines.)

15) Areas in the vicinity of dip tanks shall be kept as clean as practical from combustible debris (f).

16) Disposal of waste or rags shall be in metal containers ((f)(2)).

17) *NO SMOKING* signs shall be posted in the vicinity of dip tanks ((f)(4)).

18) Quench tanks shall have high temperature alarms ((h)(1)(iii)).

ROLL COATING

The process of roll coating, spreading, and impregnating, ink which the fabric, paper, or other materials are passed through a tank or through containing flammable or combustible liquids or over the surface of a roller that revolves partially submerged in a Class I or Class II liquid shall conform to the previously defined elements ((h)(4)(i)). The standard does not apply to printing presses.
APPENDIX A

Brief list of Class I, II, and III liquids (all temperatures in °F)

<table>
<thead>
<tr>
<th>CLASS IA</th>
<th>FLASH PT.</th>
<th>BOILING PT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaldehyde</td>
<td>-36</td>
<td>70</td>
</tr>
<tr>
<td>Ethylamine</td>
<td>0</td>
<td>62</td>
</tr>
<tr>
<td>Ethyl chloride</td>
<td>-58</td>
<td>54</td>
</tr>
<tr>
<td>Ethyl ether</td>
<td>-49</td>
<td>95</td>
</tr>
<tr>
<td>Ethylene oxide</td>
<td>0</td>
<td>51</td>
</tr>
<tr>
<td>Methyl ethyl ether</td>
<td>35</td>
<td>51</td>
</tr>
<tr>
<td>Pentane</td>
<td>-40</td>
<td>97</td>
</tr>
<tr>
<td>Petroleum naphtha</td>
<td>-40</td>
<td>35-40</td>
</tr>
<tr>
<td>Propylene oxide</td>
<td>-35</td>
<td>95</td>
</tr>
<tr>
<td>Vinyl ethyl ether</td>
<td>-50</td>
<td>96</td>
</tr>
</tbody>
</table>

CLASS I

<table>
<thead>
<tr>
<th>CLASS I</th>
<th>FLASH PT.</th>
<th>BOILING PT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>0</td>
<td>134</td>
</tr>
<tr>
<td>Acrolein</td>
<td>-15</td>
<td>121</td>
</tr>
<tr>
<td>Acrylonitrile</td>
<td>32</td>
<td>171</td>
</tr>
<tr>
<td>Allyl alcohol</td>
<td>0</td>
<td>206</td>
</tr>
<tr>
<td>Allylamine</td>
<td>-20</td>
<td>128</td>
</tr>
<tr>
<td>Benzene</td>
<td>12</td>
<td>176</td>
</tr>
<tr>
<td>Butadiene Monoxide</td>
<td>-58</td>
<td>151</td>
</tr>
<tr>
<td>Butyl acetate</td>
<td>72</td>
<td>260</td>
</tr>
<tr>
<td>Butyl chloride</td>
<td>15</td>
<td>170</td>
</tr>
<tr>
<td>Carbon disulfide</td>
<td>-22</td>
<td>115</td>
</tr>
<tr>
<td>Cyclohexane</td>
<td>-4</td>
<td>179</td>
</tr>
<tr>
<td>Denatured alcohol</td>
<td>60</td>
<td>175</td>
</tr>
<tr>
<td>Dichloroethylene</td>
<td>43</td>
<td>141</td>
</tr>
<tr>
<td>Diethylamine</td>
<td>0</td>
<td>134</td>
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<tr>
<td>Ethyl acetate</td>
<td>24</td>
<td>171</td>
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<tr>
<td>Ethyl alcohol</td>
<td>55</td>
<td>173+</td>
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<tr>
<td>Gasoline</td>
<td>-145</td>
<td>100+</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>25</td>
<td>209</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>-7</td>
<td>156</td>
</tr>
<tr>
<td>Isopropyl ether</td>
<td>-18</td>
<td>156</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>53</td>
<td>181</td>
</tr>
<tr>
<td>Methyl acetate</td>
<td>14</td>
<td>140</td>
</tr>
<tr>
<td>Methyl alcohol</td>
<td>52</td>
<td>147</td>
</tr>
<tr>
<td>Methyl ethyl ketone</td>
<td>21</td>
<td>176</td>
</tr>
<tr>
<td>Naphtha V.M.P.</td>
<td>28</td>
<td>212+</td>
</tr>
<tr>
<td>Octane</td>
<td>56</td>
<td>258</td>
</tr>
<tr>
<td>Tertbutyl alcohol</td>
<td>52</td>
<td>181</td>
</tr>
<tr>
<td>Toluene</td>
<td>40</td>
<td>231</td>
</tr>
<tr>
<td>Triethylamine</td>
<td>20</td>
<td>76</td>
</tr>
</tbody>
</table>
APPENDIX B

Water-Reactive Substances

Water-sensitive chemicals react with water to produce flammable gases and heat. In some cases, the heat of reactions may be great enough to ignite these flammable gases. The table below lists some common water-reactive substances:

TABLE I

| Alkalai Metals (Li, K, Na, Ce) | Arsenides                  |
| Borides                        | Carbides                   |
| Calcium                        | Decaborane                 |
| Hydrides (Inorganic and organic)| Nitrides                   |
| Phosphides                     | Phosphorous Trichloride    |
| Phosphorous Pentasulfide       | Selenides                  |
| Tellurides                     |

When storing such materials, it is necessary to provide a water-free storage area. Thus, one should not store such materials where sprinklers are in place. Also, as previously stated in 1910.106, these materials should not be stored with flammable liquids.
Several questions about 1910.106 are answered in this interpretation letter. The terms "large quantity" and "transfer" are clarified. 1910.106(h)(4) is intended to minimize the quantity of liquid or vapor accidently released.

SUBJECT: Request for Interpretations of 29 CFR 1910.106

In reference to your February 9, 1983 memorandum and a telephone conversation on the subject matter between your staff and my staff, the answer to your eight numbered questions are as follows:

1, 7, and 8: The term, "large quantity", used in 1910.106(h)(4)(iii)(a) must be interpreted in the same way as it is used in 1910.106(e)(2)(ii)(c), in reference to the quantity, by liquid class and container or tank type, in 1910.106(e)(2)(ii)(b)(1), (2), and (3). The quantity located outside of an inside storage room or storage cabinet becomes large when it exceeds respectively any one of the following:

- (1) 25 gallons of Class IA liquids in containers.
- (2) 120 gallons of Class IB, IC, II, or III liquids in containers.
- (3) 660 gallons of Class IB, IC, II, or III liquids in a single portable tank.

For example, as little as 26 gallons of Class IA liquid or liquids in containers would be considered a large quantity. As a corollary, a quantity of flammable liquid is small when it does not exceed respectively the quantities in Items (1), (2) and (3) above. For example, the sum of the gallons in Items (1), (2), and (3) above could be as much as 805 gallons, and still be considered a small quantity, as long as not one of the three maximum quantities in Items (1), (2), and (3); viz., 25, 120 and 660 gallons, is respectively exceeded.

2: 1910.106(h)(4) is concerned with liquid handling hazards that may lead to fire and/or explosion of flammable and combustible liquids.

3: 1910.106(h)(4) intends to reduce the unintentional escape of flammable or combustible liquids and vapors and to minimize the quantity of liquid or vapor in case of accidental release. The open bucket transfer of Class 1 flammables, allowing for vapor release and potential spills, violates the intent of 1910.106(h)(4), but is in specific violation of 1910.106(e)(2)(iv)(d).


5 and 6: The term "transfer" in 1910.106(h)(4)(iii)(a) is not intended to be limited to a single quick transfer. Since neither the amount per transfer nor the time interval between transfers is specified, the determination of "large quantities" in applying 1910.106(h)(4)(iii)(a) rests with the good judgement of the safety and health officer in evaluating the hazards of the employer's operation. For example, the intermittent transfer during an eight-hour shift of more than 660 gallons of Class IB, IC, II or III liquids from two portable 660-gallon tanks, (allowing one tank to replace the other, when empty, to maintain compliance with 1910.106(e)(2)(ii)(b)(3), into single vessel with unacceptable 5-gallon open pails would appear to be a poor operation practice. It could be cited using 1910.106(e)(3)(vi) and 1910.106(h)(4)(iii)(a) for unit physical operations.
INTERPRETATION

29 CFR 1910.106(h)(4)(i); (h)(4)(i)(B); (4)(i)(D)

May 12, 1988

SUBJECT: Application of 29 CFR 1910.106 and/or NFPA 30-1987 to Flammable Liquid Storage and Dispensing Operations of Polyester Resin

The circumstances of your ongoing inspection, as described by your memorandum of March 23, 1988, have been evaluated.

The specific requirements of the standard at 29 CFR 1910.106 need to be tempered by the current guidance of the NFPA 30-1987. This is particularly necessary in instances where polyester resin is involved. As you are aware, increased workplace usage of compounds such as polyester resin have occurred since the earlier adoption of NFPA 30-1969 by OSHA. Furthermore, the issuance of the Haz/Com standard has made available specific handling data now disseminated to all users. Field personnel are therefore advised that reference must be made to the guidance in the current consensus standards and the available safety data sheets when evaluating workplace hazards involving polyester resin.

Response to your questions are presented in the same order as given in your memorandum, and are as follows:

1. 29 CFR 1910.106(h)(4)(i)(b) pertains to fixed above ground tanks. However, applicable provisions of 1910.106(b) also pertain to portable tanks used in unit physical operations. The provisions pertaining to the control of fire due to potential spillage or tank rupture are of concern. Therefore, 1910.106(b) (4) through (7) are partly applicable to portable tanks less than 660 gals in size. (Ref. paragraph 1910.106(h) (4) via 1910.106 (e)(3)(vi).)

2. 29 CFR 1910.106(h)(4)(i)(d) applies to both portable containers and portable tanks. Applicable portions of 1910.106(d) must be evaluated relative to the portable tanks observed.

3. Yes

4. & 5. Portions of 1910.106(b) and (d) are applicable as noted in 1 and 2 above.

6. The emergency vent noted by your enclosure (B Industries, Inc., 16x10 PAF Manhole) is in compliance since it opens fully at 5 psig to vent 180,000 Cu. Ft. Free Air per Hr. Earlier opening of the vent at 3 psig is acceptable. The functional condition of the vent is of far greater concern. (Ref. to response No. 8, below.)

7. 29 CFR 1910.106 is silent regarding this question. However, various sources suggest appropriate solutions.

(a) The National Safety Council Data Sheet No. 1-627-Rev. 82, paragraph 21, indicates that styrene monomer must be inhibited for shipment and storage. The basic
compound is therefore not unstable; however, uninhibited styrene is always present in
the vapor form and requires special care. (Refer to paragraph 26-30 of the NSC Data
Sheet.)

(b) Should an acceptable sprinkler system be available then an additional factor of safety
can be derived if a tank temperature warning device is installed. (Ref. NSC, paragraph
57; also NFPA 30-1987, section 2-2.5.7.)

(c) MSDS by GP No. 351, recommends that unstable liquids be inerted with nitrogen while
in storage.

8. NFPA 30-1987, section 2-2.5.4 recommends appropriate venting. A self-closing manhole
cover is recommended for use. It should be noted that a vent with a fusible link is not listed.
In this case, a fusible link relief device is definitely not advisable, since the material would
polymerize and likely explode at temperatures above 150 F. (Ref. VCH Data Sheet No.
1509.) It is recommended that the care of the relief device conform to the recommendations
of MCA (presently CMA) Data Sheet SD-37, paragraph 6.6. The manufacturer (supplier)
should be contacted to obtain inspection and cleaning procedures and requirements.

Maintaining the functional integrity of the pressure relief device is paramount to the safety of
storage and handling of polyester resin. Furthermore, it is imperative that the inhibitor be
maintained at an acceptable level. (Ref. MCA Data Sheet, SD-37, paragraph 5.1.2.3 and 5.2.)

9. OSHA Instruction STD 1-5.7 is inapplicable to the subject operations.

10. A portable tank meeting the requirements of DOT Spec 57 is in compliance with 29 CFR
1910.106(d)(2).

The recommendations and requirements of the current NFPA 30-1987 must be considered when
evaluating any facility in which polyester resin is stored and used. The NFPA now classifies the unstable
component, uninhibited styrene, of polyester resin as a Class 1A liquid. (Ref. NFPA 30-1987, section 4-
1.3.) Therefore, all areas in which the liquid is used or stored must be safe for Class 1A liquids since the
vent, if activated, would release uninhibited styrene. Section 2-4.1.1 of NFPA 30-1987 specifies the
facility requirements for the handling and storage of flammables at inside locations. It is recommended that
these requirements are applicable to the storage and handling of polyester resin in portable tanks.

Section 2-6 of NFPA 30-1987, Source of ignition and 1910.106 (e)(5) through (9) are applicable.

The following reference documents are attached:

1. NFPA 30-1987
2. MCA Chem. Data Sheet SD-37
3. VCH Data Sheet 1509
4. GP Data Sheet No. 351, Rev. B
5. M. Corp., Data Sheet No. MAR-Glass
6. NSC, Data Sheet 1-627-Rev. 82

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SOURCE LETTERS
MAR 23, 1988
SUBJECT: Application of 29 CFR 1910.106 to a Flammable Liquid Storage and Dispensing Operation

During an ongoing inspection a CSHO encountered a flammable liquid storage and dispensing operation
where it was not clear which portions of 29 CFR 1910.106 applied. Due to the complexities of the issues
involved and because the determination will impact on operations outside of Region III, this request
regarding applicability is being sent to you for your review.
The employer is engaged in a procedure that appears to be a unit physical operation. (For specific details and specifications please refer to the enclosed copy of correspondence dated March 7, from the (City) District Office of Region ABC.) The employer is dispensing a Class 1c liquid from a low pressure portable tank (307 gallon capacity--filled with approximately 260 gallons of liquid) that is inside a building. When the tank's contents are depleted the tank is sent back to the supplier to be refilled. This procedure apparently is beneficial to the parties involved in that it eliminates the need to dispose of a container that contained a hazardous material.

The following questions have been posed regarding the applicability of portions of 29 CFR 1910.106:

1. Does paragraph (h)(4)(ii) of 29 CFR 1910.106, which indicates that the storage of flammable and combustible liquids in tanks shall be in accordance with paragraph (b) of 29 CFR 1910.106, which is referenced by paragraph (e)(3)(iv) of 29 CFR 1910.106, apply to portable tanks used in conjunction with unit physical operations?

2. Does paragraph (h)(4)(i)(d) of 29 CFR 1910.106, which references paragraph (d) of 29 CFR 1910.106, apply to both containers and portable tanks or to only containers? This question is posed because the language of paragraph (h)(4)(i)(d) of 29 CFR 1910.106 speaks only of containers but paragraph (d)(2) of 29 CFR 1910.106 speaks of both containers and portable tanks.

3. Do both paragraphs (b) and (d) of 29 CFR 1910.106 apply to portable tanks being utilized in unit physical operations?

4. Is it required that the portable tanks being used, as described in the enclosed attachment, comply with paragraphs (b)(4)(ii); (b)(4)(iii), and (b)(4)(iv)(c) of 29 CFR 1910.106; or

5. are such portable tanks only required to comply with the requirements of paragraph (d) of 29 CFR 1910.106?

6. Is it unsafe that the emergency venting mechanism of the tank is set to open at not less than 3 psig rather than not less than 5 psig?

7. What safety factor in regards to total venting capacity should be required for low pressure tanks containing unstable liquids (i.e., uninhibited styrene component of "polyester" resin)?

8. What type of a safety relief valve should be required for low pressure tanks containing materials (i.e., styrene monomers) that present a potential clogging hazard when polymers may form in the tank vents?

9. Is OSHA Instruction STD 1-5.7 applicable to the operation described in the enclosed attachment?

10. Does the fact that this tank complies with DDT specification 57, Tariff 15 DOT Regulations for Transportation of Hazardous Materials, bring it into compliance with paragraphs (a)(32) and (d)(2) of 29 CFR 1910.106?

March 7, 1988


Your prompt response to these issues would be appreciated in order to expedite the correction of these conditions.(Attachments not included)
This Interpretation letter is a response concerning the OSHA standard on stored combustible liquids and heating them to within 300 degrees F of their respective flashpoints. The intended meaning of "heat" is also addressed.

(NOITE: This standard was last amended in 1988.)

29 CFR 1910.106(d)(1)(ii)

September 14, 1984

As I described to you on the phone, the fire protection technical experts researched the intent of the OSHA standard dealing with stored combustible liquids, their respective flashpoints, and the precautions required if heat caused them to be heated to within 300 degrees F of the flashpoint.

They concluded that the standard was not intended to consider natural or atmospheric "heat", i.e., air temperature as a heat source, only artificial heat. Proper storage containers and good ventilation are important to ensure that accidental combustion does not occur, although the additional measures are not called for in this case.
There is no general exemption in coverage of Class III B combustible liquids in 29 CFR 1910.108 as there is in 29 CFR 1910.106. Therefore, any combustible liquid, no matter how high the flashpoint, would be covered by 29 CFR 1910.108(c)(5). A dip tank meeting the criteria of 1910.108(c)(5) must have at least one automatic extinguishing facility.

Furthermore, the scope in the source standard NFPA No. 34-1966 pertinently only states: "... 4. This standard does not apply to dip tanks containing noncombustible liquids." The 1974 and later editions of NFPA No. 34 adds to this quotation and pertinently states in its scope: "This standard does not apply to dip tanks containing noncombustible liquids. Certain water type finishes, however, although involving little or no hazard in the liquid state may leave highly combustible residues upon evaporation of the liquid carrier. The provisions of this standard for minimizing the hazards of combustible residue shall be followed irrespective of the characteristics of the liquid."

In light of the above, the employer substituting Dolphon CC-1105 with a flash point of 329 deg. F would not have abated the requirement of an automatic extinguishing system in 29 CFR 1910.108(c)(5) and would continue to be in violation.
Centimeter

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 mm

Inches

1.0 1.1 1.25 1.4 1.6

MANUFACTURED TO AIIM STANDARDS
BY APPLIED IMAGE, INC.
The prohibition of sources of ignition in a flammable liquid storage area does not apply to welding for emergency repair work if appropriate safety procedures are implemented.

April 8, 1980

This is in reference to the telephone conversation between you and my staff concerning the Federal Register notice granting Freeport Chemical Company a variance from Section 1910.106(b)(1)(i)(B) to allow the storage of an organic extraction solvent in a fiber glass reinforce plastic tank. This letter also acknowledges the receipt of the Uncle Sam Safety Manual's procedures and tests (Safety Procedures No. 2 - Gas Testing and Safety Procedure No. 10 - Hot Work Permit) used when certain maintenance and repair work is performed at the uranium plant.

You contend that compliance with requirement No. 8 of the order which prohibits sources of ignition such as open flames, sparks, and smoking in the storage area, will seriously disrupt operation at the plant. You state that sources of ignition such as welding is required for emergency preventive maintenance and repair work, that are vital to the efficient, economic, and safe operation of the plant.

Please be advised that this requirement does not apply when maintenance and repair work are performed in accordance with the safety procedures you have submitted. However, those procedures shall be fully implemented to assure that the employees are working in a safe environment at all times.
This memorandum was prepared in response to your written request of October 28, 1983 for interpretation of 1910.106(c)(1)(i) as stated in the written inquiry (copy attached) of X Corporation dated October 25, 1983. The specific question referred to compliance with the applicable provisions of Pressure Piping, ANSI B31 and "the provisions of this paragraph" as indication of prima facie evidence of compliance with the foregoing provisions, specifically 1910.106(b)(7) on testing.

Our interpretation is in general agreement with the position of CSHO Eugene Ford; i.e., all piping, valves, and fittings meeting the design requirements of ANSI B31 and the provisions of 1910.106(c)(1)(i) will by implication meet the testing requirements of 1910.106(b)(7) and all other applicable provisions of 1910.106(b) on tank storage.
Class II combustible paint thinner, used as a Class II combustible, can be stored in approved plastic one-gallon containers.

**ABSTRACT**

Class II combustible paint thinner, used as a Class II combustible, can be stored in approved plastic one-gallon containers.

**INTERPRETATION**

29 CFR 1910.106(d)(2)

March 29, 1983

Thank you for your letter of March 1, 1983, concerning the storage of paint thinner in plastic one-gallon containers in a retail store.

According to Table H-12 of 29 CFR 1910.106(d)(2), paint thinner with a flash point of 105 F, being a Class II combustible, would be permitted to be stored in approved plastic one-gallon containers. In any case, when being retailed, paint thinner would be considered a common consumer item, and according to the note below Table H-12, would be exempt when packaged in approved plastic containers.

Other possible items to be considered as common consumer items would have to be individually evaluated.
OSHA has determined that storing combustible liquids in polyethylene containers is a de minimis violation of 1910.106(d)(2)(i), if the guidelines specified in OSHA Instruction STD 1-5.14A are followed.

This is in response to your letter of February 1, 1989, requesting an interpretation of 29 CFR 1910.106(d)(2)(i), as it applies to the storage of combustible liquids in plastic, e.g., polyethylene, containers.

The Occupational Safety and Health Administration (OSHA) has determined that it is a de minimis violation of 29 CFR 1910.106(d)(2)(i) to store combustible liquids in polyethylene containers, if the guidelines specified in the enclosed OSHA Instruction STD 1-5.14A are followed. The de minimis violation is merely a record kept by OSHA to verify compliance.

We are requesting your assistance in interpreting 29 CFR 1910.106(d)(2). Specifically we wish to determine if combustible liquids (flash points between 100 deg. F and 200 deg. F) can be stored in plastic (e.g., Polyethylene) containers of less than 60 gallons or plastic lined fiber drums of less than 60 gallons. These containers can be used to ship combustible liquids under the U.S. Department of Transportation rules due to an exclusion. 49 CFR 173.118a excludes combustible liquids in containers having a rated capacity of 110 gallons or less (unless the liquid is also a hazardous substance as defined by DOT in 49 CFR 171.8). These containers are technically "approved" by DOT, but they are not "metal" containers.

If you would fall back to another standard or reference (e.g., NFPA 30) for compliance purposes then we are respectfully requesting the citation and your interpretation of the standard or reference.
ABSTRACT
This interpretation letter addresses the inside storage requirements for consumer commodities consisting of less than 50% alcohol. A de minimis violation would be used for consumer commodities made of 50% or less alcohol or other water-miscible liquids that are not stored in accordance with aisle width and distance from aisle requirements, as found in note #2 to Table H-14.

INTERPRETATION
29 CFR 1910.106(d)(5)

February 16, 1982

Thank you for your letter of January 27, 1982, regarding indoor container storage requirements.

In reference to your next to the last paragraph, we confirm your understanding that under current directions to OSHA field personnel, such requirements constitute only a de minimis violation with no dollar penalties or abatement requirements. OSHA Instruction CPL 2.11A, De Minimis Violations, (copy enclosed), directs CSHO's to recognize insignificant standards and minor technical deviations which have no direct or immediate relationship to safety and health of the employee as de minimis violations.

SOURCE LETTER
January 27, 1982

Table H-14 of the flammable and combustible liquids standard in 1910.106 describes indoor container storage requirements, in terms of maximum allowable gallonage per storage pile. Note 2 to that table reads: "Aisles shall be provided so that no container is more than 12 feet from an aisle. Main aisles shall be at least 8 feet wide and side aisles at least 4 feet wide." Note 3 to the table declares: "Each pile shall be separated from each other by at least 4 feet."

There are no apparent exceptions to these aisle requirements other than those in Section 1910.106(d)(ii). These include all "bulk plants, service stations, refineries, chemical plants, and distilleries"; "Class I or Class II liquids in the fuel tanks of a motor vehicle, aircraft, boat, or portable or stationary engine"; "Flammable or combustible paints, oils, varnishes, and similar mixtures used for painting or maintenance when not kept for a period in excess of 30 days"; and "Beverages when packaged in individual containers not exceeding 1 gallon in size."

The implication of the standard is that consumer commodities such as medicines, foodstuffs, cosmetics, and toiletries in processing plants and warehouses must be stacked with these aisle widths, with no container more than 12 feet from an aisle. Table H-14 is not accompanied by a note such as that appearing in Table H-12: "Container exemptions: Medicines, beverages, foodstuffs, cosmetics, and other common consumer items, when packaged according to commonly accepted practices, shall be exempt from the requirements of Section 1910.106(2)(i) and (ii)." In my view, such a note ought to follow Table H-14 as well, but it does not.

This standard was drawn from the NFPA Code 30 many years ago. In the intervening decade, the NFPA Code has undergone substantial modifications, including one for which I petitioned in the early 1970s. That modification is now designated Section 4-1.2(d) of NFPA Code 30, 1981 edition, and reads: "Medicines, foodstuffs, cosmetics and other consumer products containing not more than 50 percent by volume of water miscible liquids and with the remainder of the solution not being flammable when packaged in individual containers not exceeding one gallon in size" are not subject to any of the container storage requirements. In other words, under the latest relevant consensus standard, aisle widths and distances from the aisle are not required for consumer commodities made of 50% or less alcohol or other water-miscible liquids.
I would appreciate your confirmation of my understanding, that under current directions to OSHA field personnel, such requirements constitute only a "de minimis" violation, as that term is used in Section 1903.14. That is, these are "violations which have no direct or immediate relationship to safety or health," and are not subject to dollar penalties or abatement requirements.
RECORD ID 1778

STANDARD NUMBER 1910.106(e)(6)(ii); (h)(7)(i)(b)
INFORMATION DATE 861006

ABSTRACT The transfer of Class IA liquids from polyethylene drums and containers complies with 1910.106(e)(6)(ii) and (h)(7)(i)(b) when a polyethylene drum is equipped with an approved metallic suction pump and draw tube for taking liquid through the top of the drum and the pump is electrically grounded, or the drum or container is provided with a metallic self closed faucet which is electrically grounded.

INTERPRETATION 29 CFR 1910.106(e)(6)(ii); (h)(7)(i)(b)
OCT 6, 1986

MEMORANDUM

In response to your request the following clarification is provided as discussed.

OSHA Instruction STD 1-5.14A, dated October 24, 1980, permits storage and use of flammable and combustible liquids in DOT specification polyethylene containers. However, since these containers are not equipped with a means for electrical grounding, provisions for the safe transfer of Class IA liquids requires clarification.

The transfer of Class IA liquids from polyethylene drums and containers may be safely accomplished and is deemed to comply with the intent of the standards at 29 CFR 1910.106(e)(6)(ii) and (h)(7)(i)(b) when:

1. A polyethylene drum is equipped with an approved metallic suction pump and draw tube for taking liquid through the top of the drum and the pump is electrically grounded, or

2. The drum or container is provided with a metallic self closing faucet which is electrically grounded.
RECORD ID 1521

STANDARD NUMBER 1910.106(e)(2)(iv)(D); (f)(3)(iii)
INFORMATION DATE 870814

ABSTRACT 29 CFR 1910.106(f)(3)(iii) pertains only to manually controlled top loading operations of tank vehicles which require the operator to hold the valve open and observe the fill marker. OSHA regulates current methods for filling tank vehicles employing advanced top or bottom fill techniques through the authority of the general duty clause. NFPA 30-1984, Sections 6-3.4 and 6.3.5, are used by OSHA field staff in this instance. Dispensing valves used in industrial plants for Class I liquids must be self closing throughout their operating range when used for liquid dispensing in accord with the requirements of 29 CFR 1910.106(e)(2)(iv)(D).

INTERPRETATION 29 CFR 1910.106(e)(2)(iv)(D); (f)(3)(iii)
AUG 14, 1987


The Occupational Safety and Health Administration (OSHA) standard at 29 CFR 1910.106 was adopted during the initial months of OSHA from the NFPA 30-1969, Flammable and Combustible Liquids Code. Section 6230 of Section 62, Loading and Unloading Facilities, was adopted and concerned the loading of tank vehicles. Unfortunately, that standard made no differentiation between top or bottom loading procedures, since only manual procedures for top loading were addressed. It must therefore be noted that the NFPA 30-1969 and the current OSHA requirements at 29 CFR 1910.106(f)(3)(iii) pertain only to manually controlled top loading operations which require the operator to hold the valve open and observe the fill marker. Furthermore, the provision for filling a preset amount has not been deemed to be completely adequate alone, and additional safeguards are necessary.

OSHA recognizes that current methods for filling tank vehicles employ advanced top or bottom fill techniques. Therefore, OSHA regulates such operations under applicable standards through the authority of the general duty clause, Section 5(a)(1) of the Occupational Safety and Health Act. NFPA 30-1984, Sections 6-3.4 and 6-3.5, are used by OSHA field staff in this instance. (Portions of the NFPA 30-969 and 1984 code enclosed.) OSHA recommends and expects that employers will abide by the safety recommendations and requirements of the current NFPA 30 code where and when that code pertains to their operations. Where compliance with an updated current consensus safety standard is in conflict with an existing OSHA standard, the circumstances are likely to be a de minimis violation, as addressed in the enclosed guidance on de minimis violations.

Dispensing valves used in industrial plants for Class I liquids must be self closing throughout their operating range when used for liquid dispensing in accord with the requirements of 29 CFR 1910.106(e)(2)(iv)(D).
September 13, 1978

This is in reference to your application for variance from Section 1910.106(h)(5) Tank Vehicle and Tank Car Loading and Unloading, of the Occupational Safety and Health Standards.

The above standard states, in part, that tank vehicle and tank car loading or unloading facilities be separated from above ground tanks, warehouses, other plant buildings, or nearest line of adjoining property which may be built upon by a distance of 25 feet for Class I liquids measured from the nearest position of any fill stem. One of the purposes of this provision is to protect properly from exposure to fire or explosion in the loading and unloading racks by setting minimum distances for construction.

You are requesting a variance to continue the use of your tank wagon loading operation on both sides of the South Finishing Ink Tank Storage Building where the fill stems are located between five and six feet from the building.

A variance inspection by OSHA representatives revealed that sufficient space is not available to relocate the tank fill stems. However, you have abated the hazard by enclosing your above ground storage tanks in a building in which the walls exceed the three hour fire resistance rating. Additionally, you have installed a canopy in both tank fill areas to control atmospheric conditions; installed heat activated sprinklers, minimized employee exposure; purchased three large wheeled dry chemical extinguishers to protect the adjacent yards; installed tank truck loading arms with automatic fire link valves that close in case of fire; and, posted "No Smoking" and "No Flammable Liquid Storage" signs. Therefore, we have determined that both the fire walls and the additional safeguards provide the same degree of safety as the 25' distance requirement of the standard, and thereby meets the intent of the standard. Accordingly, no further action will be taken on your variance request from Section 1910.106(h)(5).

In addition, the following procedures must be implemented:

1) Forklift trucks shall not be left running idle in the tank fill areas;
2) Grounding and bonding shall be performed before and during work;
3) Control or eliminate all ignition sources; and,
4) Consideration shall be given to environmental conditions such as wind direction and speed and surrounding topographical conditions which could lead to vapor entrapment.

Affected employees and their authorized representatives shall be notified of this clarification in the same manner they were informed of your request for variance.
ABSTRACT

An interpretation letter deriving a request to exempt the storage of ethyl alcohol which subsequently is supplied to pharmaceutical manufacturing customers from 1910.106 (d)(2). However, OSHA has determined that it is a "de minimis" violation of 1910.106 (d)(2) to store combustible and flammable liquids in plastic containers in the workplace under certain conditions.

INTERPRETATION


December 09, 1992

Dear Mr. L:

This is in response to your letter of May 29 to the Technical Data Center of the Occupational Safety and Health Administration (OSHA). Your letter was forwarded to the Directorate of Compliance Programs for response. We apologize for the delay in responding.

In your letter you requested guidance on the possibility of obtaining an exemption from the 29 CFR 1910.106(d)(2) standard, which limits the use of plastic containers (which must be approved), to no more than one quart (0.9l) capacity when used for Class IB flammable liquids.

The standard at 1910.106(d) is applicable to industrial plants and processing plants covered by 1910.106(e) and (l) respectively but not to bulk plants, service stations, refineries, chemical plants and distilleries, which are otherwise covered by 1910.106. In addition to 1910.106(d)(2), the standards at 1910.106(d)(5)(i), (ii) and (vi) are applicable to the detached storage buildings referenced in your letter.

You made reference to the container exemption note (medicines, beverages, foodstuff, etc.) for Table H-12 in 1910.106 and asked whether it is possible to extend this exemption to the storage of ethyl alcohol which subsequently is supplied to pharmaceutical manufacturing customers. Only through the rulemaking process could such an extension be provided. However, OSHA has determined that it is a "de minimis" violation of 1910.106(d)(2) to store combustible and flammable liquids in plastic containers in the workplace under certain conditions, which follow. [De minimis violations are violations of existing OSHA standards which have no direct or immediate relationship to safety or health. Such violations of the OSHA standards result in no citation, no penalty and no required abatement.]

Department of Transportation (DOT) specification, non-specification polyethylene and non-regulated containers for storing combustible and flammable liquids are permissible under the following conditions:

1. The liquid within the plastic container has a DOT exemption in effect for shipment in such containers and is identified as meeting the requirements of the DOT exemption.

2. The plastic container storage area is provided with a fire detection system designed and installed to detect incipient stage fires and interconnected with an employee emergency alarm system which will effectively alert employees when fire is detected.

3. In locations where employees are expected to perform fire fighting, the plastic container storage area is provided with a fixed automatic fire suppression system designed and installed to control, if not extinguish, a fire involving the stored plastic containers.

4. Employees, except members of fire brigades, will be totally evacuated from the plastic container storage area at the time of initial fire detection. Where fire brigades are provided, member employees
will be trained in the specific methods for fighting fires involving plastic containers, and in the recognition of hazards associated with fire fighting in such storage areas.

5. For storage buildings, the plastic container storage areas are provided with diking, or curbing and drainage, which will contain the volume of stored liquids and the anticipated flow of fire extinguishing agent, and drain it to a remote impounding area having no employee exposure. Employee emergency exit routes may not intersect or pass over or under open drainage paths.

The Factory Mutual Research Corporation Data Sheet 7-29 requirements for storage in and dispensing of flammable liquids from plastic drums in detached buildings with automatic fire suppression systems diking or curbing to contain the volume of stored liquids does not address and therefore does not satisfy all of the preceding conditions.

We appreciate your interest in occupational safety and health. If we can be of further assistance, please do not hesitate to contact us.
Subject: Fire Protection System for Electrostatic Spraying

1. Purpose. To clarify applicability of 29 CFR 1910.107(h)(12) and to direct answers to inquiries.

2. Background. This paragraph permits other types of fixed fire protection systems to be used in lieu of sprinkler systems for the protection of electrostatic spraying areas. A number of requests for clarifications of this paragraph have been received.

3. Interpretation. The subject paragraph contains the clause "where this protection is available." this clause means that where a sufficient water supply is readily available within 50 feet or so of the spraying area in the form of an automatic sprinkler system, then the spraying area must be sprinkled. An automatic sprinkler system is the preferred protection for electrostatic spraying areas. If such facilities are not available then other automatic extinguishing systems shall be provided such as a fixed CO₂ system or a dry chemical system.

4. Action. Inquiries about this paragraph should be handled in accordance with this instruction.

5. Revisions and comments should be directed to the Assistant Secretary, Attn: OCSD.

6. Effective Date. This instruction is effective upon receipt and will remain in effect until canceled or superseded.
MEMORANDUM FOR: REGIONAL ADMINISTRATORS/OSHA

OSHA Instruction STD 1-5.10

June 1, 1973

SUBJECT: Clarification of 29 CFR 1910.107 (b)(5)(i) Average Air Velocity of Spray Booths

The average air velocity requirements over the open face of the booth stated in this paragraph for spray finishing operations using flammable and combustible liquids were taken from NFPA-33-1969 and pertain to those hazards associated with fire protection or the removal of flammable vapor accumulation from the interior of the booth during spraying operations. This paragraph applies to maintaining the concentration of flammable vapors below the lower explosive limit (LEL) in a spray booth but does not apply to maintaining operator exposures to within the permissible exposure limits (PEL). The paragraph does not apply to the determination of feasible engineering controls of potential health hazards found from the use of toxic materials (i.e. zinc chromate, toluene, etc.).

In areas where a health hazard has been established the CSHO/IH shall determine on a case by case what is to be adequate engineering controls and effective work practices that would reduce employees exposure to within the health standards. This may include modification or new booth design, modification in application, or increasing the air velocity beyond that stated in 107(b)(5)(i).
OSHA Program Directive #100-86


1. Purpose. The purpose of this directive is to assure uniformity within all Regions in the interpretation of 29 CFR 1910.107(b)(5)(iv) and 1910.107(f)(1) as relates to automatic fire extinguishing systems.

2. Documentation Affected. This directive supersedes Field Information Memorandum #75-26 dated March 20, 1975.

3. Background. The proposed revision of 29 CFR 1910.107 will incorporate the following by cross-reference:

   a. Those spray areas requiring protection by an automatic sprinkler system, whether the building is sprinklered or not, shall be considered as meeting the sprinkler requirements provided a system as indicated in paragraphs 3.a., or c. is installed.
   b. Until the standard has been revised, any violation of the subject referenced standards shall be considered de minimis, if the preceding requirements are met.

5. Effective Date. This directive is effective immediately and shall remain in effect until canceled or superseded.
OSHA Instruction STD 1-5.13

October 30, 1978

OSHA PROGRAM DIRECTIVE #100-99

SUBJECT: 29 CFR 1910.106(h)(8)(iii); or, 29 CFR 1910.107(g)(3); or, 29 CFR 1910.108(f)(2) - Relative to Metal Waste Cans

1. Purpose

The purpose of this directive is to give guidance on citing for the use of approved nonmetallic waste cans, where the OSHA standard requires a metal waste can.

2. Documentation Affected

None.

3. Background

a. There are several OSHA standards that require approved metal waste cans or metal waste cans. Presently, there are approved nonmetallic waste cans on the market.

b. It is not the intent of OSHA to discriminate or restrict employers from using new materials or products providing the products are approved or listed by nationally recognized testing laboratories for the particular use or exposure at the worksite.

4. Action

Where the employer is found using an approved nonmetallic waste can that is approved for its particular use or exposure at the worksite by a nationally recognized testing laboratory; and, the nonmetallic waste can is in violation of an OSHA standard requiring a metal waste can, the violation shall be considered "de minimis."

NOTE: A nonmetallic container may be approved for the temporary storage indoors of Class A combustible waste free of grease, oil, solvents, or other flammable liquids, and not be approved for the temporary storage of oil or solvent soaked waste.
RECORD ID 4184

STANDARD NUMBER 1910.107(n)
INFORMATION DATE 910401

ABSTRACT This interpretation letter addresses whether 1910.107 applies to non-finishing spraying of contact cement to wood and to laminae which are to be joined and so bonded. 1910.107 is based on the National Fire Protection Association (NFPA) Standard, NFPA-33 (1969) entitled Spray Application Using Flammable and Combustible Materials. If contact cement fails into either the "flammable" or "combustible" category as defined in NFPA 33 1989, then it would fall under the scope of 1910.107.

INTERPRETATION 29 CFR 1910.107(n)
(No date provided)

This is in response to your letter of January 23, in which you inquired whether 29 CFR 1910.107 "Spray Finishing using Flammable and Combustible Materials" applies to non-finishing spraying of contact cement to wood and to laminae which are to be joined and so bonded.


If the contact cement you are using in your operation falls into either the "flammable" or "combustible" category as defined in NFPA 33 1989 (copy enclosed), then your operation would fall under the scope of 29 CFR 1910.107.

ATTACHMENT: The following interpretation (Record ID 1515) is included as supplemental information for the first instance of OSHA Standard 1910.107.

RECORD ID 1515

STANDARD NUMBER 1910.1000; 1910.94(c)(6)(i); 1910.107(b)(5)(i); 1910.134(c); 1910.1000(a)
INFORMATION DATE 860107

ABSTRACT OSHA enforces the minimum maintained velocities in table G-10 of Parts 1910.94(c)(6)(i) and 1910.107(b)(5)(i) for spray booths when spray painting with isocyanate containing paints. OSHA recommends supplied-air full-facepiece respirators when using isocyanate paints. The interpretation letter discusses paint spray velocities in spray paint booths, especially when isocyanate paints are used, and recommends respiratory protection for spray paint booth operations.

INTERPRETATION 29 CFR 1910.1000; 1910.94(c)(6)(i); 1910.107(b)(5)(i); 1910.134(c); 1910.1000(a)
JAN 7, 1986

Thank you for your letter of November 18, 1985, concerning isocyanate spray paints. I am happy to reply to your questions about safety and health practice in the case of isocyanate containing paints. Although my experience with the oligomers of isocyanates is very limited, I was fortunate to find two articles that should be some interest with regard to your first question. These I have enclosed along with a newspaper article.
With regard to the second, OSHA enforces the minimum maintained velocities in Table G-10 of Parts 1910.94(c)(6)(i) and 1910.107(b)(5)(i) for spray booths and also requires that "the total air volume exhausted through a spray booth shall be such as to dilute solvent vapor to at least 25 percent of the lower explosive limit of the solvent being sprayed" (1910.94(c)(6)(ii) and to below the Permissible Exposure Limit (29 CFR 1910.1000 Table Z-1, as enclosed) of any toxic material being sprayed.

The scope of the Standards does not apply to "small portable spraying apparatus not used repeatedly in the same location." In answer to your third question, I do not think the Standard (Part 1910.94) would apply to the conditions you describe.

As far as respirators are concerned, OSHA recommends supplied-air full-face respirators with isocyanate paints in addition to the general ventilation prescribed in the Standards (Part 1910.94 and Part 1910.107).

The answer to your last question awaits further discussion with safety professionals in the painter's union. Within the upcoming month, I hope also to find more materials that could clarify the OSHA position on spray booths and isocyanate paints.
A clarification is given for definitions of "substantial noncombustible material" (b)(1) and "facilitate cleaning and washing" (b)(2).

I am responding to your request for the definition of "substantial non-combustible material" and "facilitate cleaning and washing."

The two paragraphs, (b)(1) and (b)(2), would have to be used in conjunction with each other to get the desired material to meet both paragraphs.

In paragraph (b)(1), the examples are metals or concrete, therefore, any other material would have to be similar, not including drywall or particle board. Also the aluminum or other material can only be used when intermittent or low volume, spraying is done. If the booth is used daily, it would not apply.

In paragraph (b)(2), the material would have to prevent pocketing and facilitate cleaning; drywall would not provide either function satisfactorily.

On drywall you would have a continuous build-up of over-spray creating a fire hazard, an unacceptable consequence.
The use of a fire treated cardboard on the floors & lower portion of the walls of a spray booth to facilitate the daily cleanup of overspray & residue buildup meets the intent of the standard.

(NOTE: The (b)(3) section is consistent with the 1975 interpretation letter, but says the floor surface of a spray booth and operators' working area, if combustible, shall be covered with non-combustible mats of such characteristics as to facilitate the safe cleaning and removal of residues.)

The Assistant Secretary has asked me to respond to your letter dated December 23, 1974, requesting a permanent variance and interim order from Section 1910.107(b)(3) concerning Spray Booths, of the Occupational Safety and Health Standards.

Your operation involves the use of chopper guns which spray polyester resins and chopped fiberglass roving into prepared molds. This process creates considerable overspray and residue buildup on the booth floor and/or walls. To facilitate the required daily clean up, you are using fire treated cardboard on the floor and extreme lower portion of the walls. It is for the use of this treated cardboard that a variance is sought.

After a careful study of your application, and consultation with both yourself and our Area Director, we have concluded that your use of the treated cardboard as described, meets the intent of the above standard. Therefore, a variance is not required.

Your have stated that the booths meet all other OSHA standards in their construction including being fully sprinklered. In addition, you have had the treated cardboard tested for burn rate by an independent testing laboratory. In order to insure the integrity of the treated cardboard, we suggest that your quality control procedures of visually inspecting the material prior to use be continued.
ABSTRACT

1910.107(d)(9) prohibits recirculating air discharged from spray operations. A de minimis violation may be granted if the requirements of NFPA 33-1985 paragraph 5-6.1 are met or exceeded which does allow for the recirculation of exhaust air that has been decontaminated. Air cleaning requirements are reviewed.

INTERPRETATION

29 CFR 1910.107(d)(9)

Oct 16, 1987

This is a follow-up to our September 18 response to your letter dated September 1, addressed to Chairman, Occupational Safety and Health Review Commission, concerning the recirculation of air discharged from paint booths and the use of electronic air filters to filter the recirculated air. Your letter has been referred to the Occupational Safety and Health Administration (OSHA) for response.

Section 29 CFR 1910.107 of OSHA's General Industry Standards applies to spray finishing operations using flammable and combustible materials. Paragraph (d)(9) of this Section (copy enclosed) specifically prohibits recirculating air discharged from spray operations. However, if the workplace is in compliance with a current industry consensus standard, or if the employer's workplace is at the state-of-the-art and provides equal or greater safety and health protection to the workers but differ from OSHA's requirements, a violation of the applicable OSHA standard may be considered to be de minimis (see enclosure).

The National Fire Protection Association (NFPA) 33-1985 standard paragraph 5-6.1 allows the recirculation of air discharged from a spray operation if the recirculated air has been decontaminated to an acceptable level. In addition, the same NFPA standard required that the decontaminated air stream be monitored by approved equipment that signal the operator and automatically shutdown the spray operation in the event of failure of the decontamination equipment. Therefore, if you desire to recirculate air discharged from paint spray booths, you must meet or exceed the requirements of NFPA 33-1985 paragraph 5-6.1.

There are several air cleaning mechanisms in use including filtration, absorption, adsorption, centrifuging, electrostatic precipitation (electronic filter), and incineration. Electrostatic precipitators are mainly used to collect particulates and not gases and vapors. For your purpose, to remove gases, vapors and particulates, a combination of electronic and absorption cleaning devices may be necessary.

Section 29 CFR 1910.107(c)(5) of OSHA's General Industry Standards in part reads, "Unless specifically approved for locations containing both deposits of readily ignitable residue and explosive vapors, there shall be no electrical equipment in any spraying area, whereon deposits of combustible residues may readily accumulate..." Therefore, since electrostatic precipitators produce sparks, the use of such devices in a spray area where flammable liquids are used must be engineered to meet the requirements of the above standard.

OSHA does not endorse or promote any products. Therefore, we cannot recommend any particular manufacturer of electronic air filters. The Thomas Register of American Manufacturers does contain names, telephone numbers, and addresses of the manufacturers of air cleaning equipment, electronic air filters and air contaminant monitors. You may wish to contact these firms for the information you need. Thomas Registers are available in most public libraries. We recommend, however, that you check with the manufacturer of the electronic air filter of your choice to assure that the equipment will safely remove the type of contaminant in your spray area. Additionally, you may explore the feasibility of using heat pumps to extract heat from the air discharged from your spray booth.
SOURCE LETTER

September 1, 1987

I own a body shop and am losing a lot of heat due to my paint booth. Currently, I use a blower (with common air filters) to supply shop air to the paint booth and another blower forces the paint-contaminated air out an exhaust vent.

What I would like to do is recirculate the air back into the shop and prevent any heat loss. I can use filters to catch the paint particles, but I am not sure if an electronic air filter will remove paint fumes.

It is my understanding that there are industrial electronic air filters and they are capable of removing all types of toxic fumes. If at all possible, would you please supply me the names and addresses of companies which manufacture industrial electronic air filters? Also, would you please recommend a couple models?

Incidentally, if I can safely recirculate the paint booth's air back into my shop area, are there any devices I can buy which will permit me to monitor the air to ensure my industrial electronic air filter is working properly?
July 23, 1979

Dear Mr. R:

This is in response to your letter dated May 21, 1979, requesting a permanent variance from Section 1910.107(e)(2) Flammable and Combustible Liquids - Storage Quantity, of the Occupational Safety and Health Standards.

You have requested a permanent variance to allow you to store a 55 gallon drum of each required paint color, thereby, exceeding a one shift supply of paint in an open area as limited by Section 1910.107(e)(2) because of the following reasons:

1. The satellite paint areas range from 1000 to 2000 feet from the main storage facility.
2. The limited space available at the satellite paint areas make it impractical to establish storage facilities.

Our technical staff has determined that the installation of storage cabinets meeting the design, construction, and capacity of Section 1910.106(d)(3)(i) and (ii) will eliminate your need for a variance from Section 1910.107(e)(2).

As Mr. S advised Mr. K of my staff in a telephone conversation on July 13, 1979, the appropriate number of storage cabinets will be installed to accommodate the 55 gallon drums of paint in your satellite paint facilities. Therefore, a variance will be unnecessary. This matter has been discussed with our Area Office Director, who concurs with our decision.

Affected employees and their authorized representatives shall be notified of this decision in the same manner they were informed of your request for a variance.
A glue finish preparatory to lamination is covered by Spray Finishing Using Flammable and Combustible Materials as defined by NFPA-33 codes.

29 CFR 1910.107(n)
March 17, 1983

MEMORANDUM

SUBJECT: Request for Interpretation of Scope of 29 CFR 1910.107 (Spray Finishing Using Flammable and Combustible Materials as it Applies to Glue Spraying Operations)

The essence of the problem raised in your March 2, 1983 memorandum, on the above subject, is stated in the "Scope," 29 CFR 1910.107(n), as the application of "finishing materials."

Since the "finishing materials" are not identified or limited in 29 CFR 1910.107(n), a glue finish preparatory to lamination would be covered by 29 CFR 1910.107 as well as the example, commonly used, of the primer and paint coatings.

It has always been the intent of the NFPA-33 Committee to cover all spray application of flammable and combustible materials. The 1969 NFPA-33 source code was titled "Spray Finishing Using Flammable and Combustible Materials," but because of confusion as to what might be considered "Finishing," the title was changed in the 1973 NFPA-33 code to "Spray Application Using Flammable and Combustible Materials."
OSHA Instruction STD 1-5.5
October 30, 1978

February 20, 1973

OSHA PROGRAM DIRECTIVE #100-22

Subject: Sinks Used for Cleaning Operations


2. Background. There has been confusion as to whether sinks containing flammable or combustible liquids used for cleaning of parts are "dip tanks" under Section 1910.108(a)(1).

3. Interpretation. Dip tanks are described in great detail in Section 1910.108. These specifications indicate that dip tanks are not of the same nature as sinks containing flammable and combustible liquids used for parts-cleaning, which are therefore not subject to Section 1910.108. The handling and storage of flammable and combustible liquids are covered by Section 1910.106.

4. Effective Date. This instruction is effective upon receipt and will remain in effect until canceled or superseded.
OSHA Instruction STD 1-5.6A

NOV 26, 1979

SUBJECT: 29 CFR 1910.108(c)(3) Bottom Drains

A. Purpose. This instruction provides guidance for the enforcement of 29 CFR 1910.108(c)(3) and specific requirements for omitting bottom drains from dip tanks. The word "automatic" is inserted in the guidelines, F.1.a.-c. of this instruction, because it was omitted from the previous instruction.

B. Scope. This instruction applies OSHA-wide.

C. Cancellation. OSHA Instruction STD 1-5.6, October 30, 1978, is canceled.

D. Action. OSHA Regional Administrators/Area Directors shall enforce 29 CFR 1910.108(c)(3) in accordance with F.1. of this instruction.

E. Federal Program Change. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this change is forwarded to each State designee.

2. Explain the technical content of the change to the State designee as requested.

3. Ensure that State designees are asked to acknowledge receipt of this Federal program change in writing, within 30 days of notification, to the Regional Administrator. This acknowledgment should include a description either of the State's plan to implement the change or of the reasons why the change should not apply to that State.

4. Review policies, instructions and guidelines issued by the State to determine that this change has been communicated to State program personnel. Routine monitoring activities (accompanied inspections and case file reviews) shall also be used to determine if this change has been implemented in actual performance.

F. Guidelines. In all cases, an evacuation plan shall be implemented for employees working in the dip tank area. A copy of the evacuation plan shall be available at the establishment for inspection at all times. Every employee shall be made aware of the evacuation plan and know what to do in the event of an emergency and be evacuated in accordance with the plan.

1. The combinations of extinguishing systems, paragraphs a.-c below, when used in conjunction with the evacuation plan as stated above will generally be acceptable in place of bottom drains. Thus, establishments equipped with a combination of these types of extinguishment systems in conjunction with the evacuation plan will be considered a de minimis violation of 29 CFR 1910.108(c)(3). No citation shall be issued unless the compliance officer determines that due to conditions existing in a particular establishment the absence of a bottom drain as required in 1910.108(c)(3) poses a hazard to employees. Extinguishment systems which are acceptable in lieu of bottom drains are as follows:

a. A dip tank cover with an automatic foam extinguishing system under the cover, or an automatic carbon dioxide system, or an automatic dry chemical extinguishing system, or an automatic water spray extinguishing system.

b. An automatic dry chemical extinguishing system with an automatic carbon dioxide system, or a second automatic dry chemical extinguishing system, or an automatic foam extinguishing system.
OSHA Instruction STD 1-5.6A (cont.)

c. An automatic carbon dioxide system with a second automatic carbon dioxide system, or an automatic foam extinguishing system.

2. The automatic water spray extinguishing systems, automatic foam extinguishing systems and dip tank covers shall conform with the requirements of 29 CFR 1910.108.

3. The automatic carbon dioxide systems and dry chemical extinguishing system shall conform with the requirement found in 29 CFR Part 1910, Subpart L.

G. Background. There have been several variance requests for dip tanks containing over 500 gallons of flammable or combustible liquids to be exempted from bottom drains as required by OSHA standard 29 CFR 1910.108(c)(3).
OSHA Instruction STD 1-5.13
October 30, 1978

OSHA PROGRAM DIRECTIVE #100-99

SUBJECT: 29 CFR 1910.106(h)(8)(iii); or, 29 CFR 1910.107(g)(3); or, 29 CFR 1910.108(f)(2) - Relative to Metal Waste Cans

1. Purpose. The purpose of this directive is to give guidance on citing for the use of approved nonmetallic waste cans, where the OSHA standard requires a metal waste can.

2. Documentation Affected. None.

3. Background:
   a. There are several OSHA standards that require approved metal waste cans or metal waste cans. Presently, there are approved nonmetallic waste cans on the market.
   b. It is not the intent of OSHA to discriminate or restrict employers from using new materials or products providing the products are approved or listed by nationally recognized testing laboratories for the particular use or exposure at the worksite.

4. Action. Where the employer is found using an approved nonmetallic waste can that is approved for its particular use or exposure at the worksite by a nationally recognized testing laboratory; and, the nonmetallic waste can is in violation of an OSHA standard requiring a metal waste can, the violation shall be considered "de minimis."

NOTE: A nonmetallic container may be approved for the temporary storage indoors of Class A combustible waste free of grease, oil, solvents, or other flammable liquids, and not be approved for the temporary storage of oil or solvent soaked waste.
STANDARD NUMBER 1910.108(b)(1); (e)(2); (c)(2)(l); (c)(3); 1910.132(a); 1910.133(a)(1)

INFORMATION DATE 790611

ABSTRACT Motor varnishes are combustible unless the user adds extra solvents to them and changes their composition. Dip tanks and curing ovens require special attention.

INTERPRETATION 29 CFR1910.108(b)(1); (e)(2); (c)(2)(l); (c)(3); 1910.132(a); 1910.133(a)(1)

DATE: June 11, 1979

SUBJECT: 1910.108, As Applied to Dip Tanks Containing Varnish for Electric Motor Coating

The following information was researched, prepared, and written by a Safety Specialist. It summarizes a telephone conversation with Mr. X and concerns a Technical Support request. This correspondence is provided for information purposes only, and is not a request for Regional Office response.

It has come to our attention, as a result of an inspection of a motor repair shop, that several varnishes used for electric motor coating are flammable. The usual method of application is via dip tank/curing oven method.

The varnishes appear to be anywhere from 48% to 90% nonvolatile when obtained from suppliers. The remaining 52% to 10% is usually xylol, naphtha, mineral spirits, or some combination of these solvents. Supplier recommendations also suggest to users that infinite amounts of xylol, naphtha, or mineral spirits can be added to enhance various varnish characteristics. Flash points for the supplied varnishes with these solvents are 85°F Tag Closed Cup and 90°F Seta Closed Cup. Specific gravity at 21°C is 912 - .922 and the viscosity at 25°C is 225 - 375 Brookfield (centipoises).

The sections of 1910.108 requiring special attention by compliance officers in recognizing potential exposures are as follows:

(a) Paragraph (b)(1) - most motor varnishes are combustible only. They may be made flammable by user adding solvents in quantity sufficient to change original flash point. CSHO should obtain supplier Material Safety Data Sheets for varnishes and solvents used prior to citing.

(b) Paragraph (c)(2)(l) - CSHO should determine if potential exists for the varnish to overflow the tank during application of water during fire fighting and, if so, are employees endangered. In most cases, this will be a de minimis problem with motor varnishes, as water extinguishing methods are not used.

(c) Paragraph (c)(3) - the actions listed in STD 1-5.6 should be brought to the attention of employers by the CSHO as an alternate means of abatement.

(d) Paragraph (e)(2) - CSHO should note location of the curing ovens for these dip tanks as a potential ignition source. In accordance with NFPA 86A, solvent atmosphere ovens must have a prominently displayed oven safety data form which lists the oven manufacturer's and owner's use instructions which are not to be deviated from. If these ovens are natural or fuel gas supplied, the location of the pilot light to the tank as well as the electrical controls for the oven should be considered as potential hazards as the solvents used are generally heavier than air.

(e) Paragraph .132(a) and .133(a)(1) - Due to solvent content of varnishes, manufacturer's recommend protective handwear/aprons and protective eye and face equipment and exposure may exist depending on the dipping method used.
Violations of 1910.108(c)(2)(i), derived from NFPA 34-1966 will be cited as de minimis if in compliance with updated NFPA 34-1974 per program directive 200-67.

**Interpretation**

29 CFR 1910.108(c)(2)(i)

July 18, 1979

The Assistant Secretary has asked me to respond to your letters of June 1 and 12, 1979, requesting a permanent variance from Section 1910.108(c)(2)(i) Dip Tanks Containing Flammable and Combustible Liquids - Overflow Pipes, of the Occupational Safety and Health Standards.

The above standard (derived from NFPA 34-1966) requires that "dip tanks of over 150 gallons in capacity or 10 square feet in liquid surface area shall be equipped with a properly trapped overflow pipe leading to a safe location outside buildings". The updated NFPA publication (NFPA 34-1974) requires "...properly trapped overflow pipes leading to a safe location."

You have requested a variance to install a 1380 gallon dip tank within a sand-filled pit which holds a volume of 3905 gallons. The top of the tank will be 36" above floor level. An overflow pipe will be no closer than 6" to the top of the tank. You state that the tank will be in compliance with all applicable provisions of NFPA 34-1974.

The enclosed Program Directive #200-67 has been issued to the Occupational Safety and Health Administration's (OSHA) field offices to provide guidance concerning de minimis violations. The Directive authorized the use of de minimis violations in situations where OSHA standards (derived from such consensus groups as NFPA, ANSI, etc.) have been updated in later consensus publications in accord with new technology or equipment. However, the updated consensus standards shall provide equal or greater safety and health protection to the employees. A de minimis violation carries no penalty and no abatement is necessary.

From the information contained in your application and a discussion with the Area Director, it has been determined that your proposed dip tank installation appears to meet the conditions of a de minimis violation under the terms of Program Directive #200-67 and NFPA 34-1974. Therefore, a variance is unnecessary and no further action will be taken on your request for variance.

A copy of the Federal Register proposal dated December 22, 1978, which set forth (among other things), the requirements for emergency evacuation plans and fire brigades and a copy of the Federal Register notice of hearing on the proposed standard for fire brigades are also enclosed for your information.

Affected employees and their authorized representatives shall be notified of our decision on your application in the same manner they were informed of your request for a variance.
RECORD ID 1191

STANDARD NUMBER 1910.108(c)(7)
INFORMATION DATE 770718

ABSTRACT The standard for heating dip tank liquids refers to "artificially heated" liquids and does not address a natural adjustment to ambient air temperature.

INTERPRETATION 29 CFR 1910.108(c)(7)
July 18, 1977

MEMORANDUM
SUBJECT: Heating Dip Tank Liquids
This is in response to your letter dated February 8, 1977, regarding the above subject. In addition, this confirms a telephone conversation with a member of my staff.

Note that standard 29 CFR 1910.108(c)(7) refers to "artificially heated." The standard does not address natural heating arising from a natural adjustment to the ambient air temperature. Otherwise, we concur with your reasoning.

SOURCE LETTER
February 8, 1977
MEMORANDUM
SUBJECT: Heating Dip Tank Liquids
Paragraph 1910.108(c)(7) requires provisions "to prevent a temperature rise greater than 50°F. below the flashpoint of the liquid" when dip tank liquids are artificially heated by dipping heated articles or other application of heat to the liquid.

This appears to mean that dip tank liquids in a room at 70°F. must have a flashpoint exceeding 120°F. (70°F. plus the 50°F rise specified in the standard). A recent inspection revealed items being transferred from an oven to a Xylene dip tank. Since Xylene has a flash point of about 85°F., this appeared to be a violation. But conversation with the employer revealed that Xylene was frequently used for such applications, leading us to wonder what the writer of NFPA 34-1966 had in mind.

We checked the source standard, NFPA 34-1966, and found the same wording as as the OSHA standard. NFPA 34-1971 retains the same wording. But NFPA 34-1974 has made a significant change, with the dip tank temperature now limited to the boiling point of the liquid or to 100°F. below the auto ignition temperature of the liquid (NFPA 34-1974, paragraph 4-9). This would bring the allowable temperature of Xylene up to about 280°F.

Since NFPA 34-1974 would be expected to represent the most up to date thinking, it would appear that 1910.108(c)(7) does not necessarily describe a fire hazard and might be considered a de minimis situation in dip tanks complying with NFPA 34-1974. This, of course, would not relieve the employer from compliance with 1910.1000 (air contaminants) or 1910.309 (National Electric Code).
OSHA Instruction STD 1-5.12

OCTOBER 30, 1978

OSHA PROGRAM DIRECTIVE #100-90

Subject: 29 CFR 1910.109, Explosives and Blasting Agents, Proposed Standards Modifications

1. Purpose. The purpose of this directive is to provide additional advisory information and guidance on proposed future changes to 29 CFR 1910.109.

2. Documentation Affected. This directive supersedes Field Information Memorandum #75-48 dated September 2, 1975.

3. Background.

a. Questions have arisen concerning standards promulgated in 29 CFR 1910.109, Explosives and blasting agents. Conflicts with other Federal agencies explosives regulations have been noted. OSHA is attempting to resolve these differences. In addition, clarification has been sought on the requirement specified in 29 CFR 1910.109(e)(1)(v) that all blasting operations shall be conducted during daylight hours. The latest edition of NFPA No. 495, the source for 29 CFR 1910.109, eases this requirement to reflect the unusual conditions which necessitate blasting at other times.

b. In view of these problem areas in 29 CFR 1910.109, we will propose to revise the entire section. We plan to incorporate the relevant revisions, of the NFPA code; resolve, where possible, major conflicts with other Federal agencies and modify the "use of explosives" paragraph. Changes such as the following will be proposed:

(1) The simultaneous transportation of blasting caps with other explosives on the same vehicle will be permitted under certain conditions. This is presently allowed by the Department of Transportation in 49 CFR 177.835(g).

(2) Major difference between explosives storage regulations in 29 CFR 1910.109(c) and those of the Alcohol, Tobacco, and Firearms Division, Internal Revenue Service, specified in 27 CFR Part 181, are being studied. It is planned to use Alcohol, Tobacco, and Firearms format (five types of storage facilities for explosives) with equivalent construction requirements. Present omissions in 29 CFR 1910.109(c), such as unencased distances in Table H-21, will be remedied.

(3) The scope of 29 CFR 1910.109 will be clarified to apply only to commercial explosives. It will not apply to the manufacture and storage of bombs, projectiles, or other encased explosives used in ordinance.

(4) Seismographic geophysical surveys for gas and oil exploration involving explosives and blasting will be covered under 29 CFR 1926, Construction standards.

(5) Blasting will be permitted at times other than during daylight hours, for unusual operations. Operations for blasting slag pockets and dust catchers will fall within this category and will be permitted at night where proper illumination is provided and other appropriate requirements are met.

(6) All surface blasting operations shall be performed during daylight hours.
OSHA Instruction STD 1-5.12 (cont.)

(7) Unusual blasting operations associated with industrial processes that are performed inside buildings shall be permitted regardless of time of day if both of the following conditions are met:

(a) All requirements concerning the use of explosives during normal blasting operations are implemented

(b) A minimum illumination density of 20 foot candles is provided within a 5-foot radius of where explosive charges are being assembled, where explosive charges are being placed and where explosive materials are being attached to initiating devices.

4. Action. Pending final approval of the proposed changes in the standards, any violation of a requirement of 29 CFR 1910.109 which is inconsistent with regulations promulgated by the Department of Transportation, Standard or Alcohol, Tobacco, and Firearms Division, Internal Revenue Service, as discussed in paragraph 3.b., shall be considered de minimis, provided that the employer is in compliance with the relevant regulations of these agencies.

5. Effective Date. This directive is effective immediately and will remain in effect until the revised 29 CFR 1910.109 is promulgated.
OSHA Instruction STD 1-5.18

AUG 4, 1986


A. Purpose. This instruction permits the transportation of specially designed and equipped select fire oil-well perforating guns with detonators affixed under certain conditions.

B. Scope. This instruction applies OSHA-wide.


D. Action. OSHA Regional Administrators/Area Directors shall take action to permit the transportation of specially designed and equipped select fire oil-well perforating guns, with detonators affixed, when covered by DOT Exemption DOT-E 8845 and guidelines as set forth in F of this instruction.

E. Federal Program Change. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this change is forwarded to each State designee.

2. Explain the technical content of the change to the State designee as requested.

3. Ensure that State designees are asked to acknowledge receipt of the Federal program change in writing, within 30 days of notification, to the Regional Administrator. This acknowledgment should include a description either of the State's plan to implement the change or of the reason why the change should not apply to that State.

4. Review policies, instructions and guidelines issued by the state to determine that this change has been communicated to State program personnel. Routine monitoring activities shall also be used to determine if this change has been implemented in actual performance.

F. Guidelines. This instruction is based upon the need to resolve the potential inconsistency in applying OSHA standard 1910.109(b)(1) and a DOT exemption which permits under certain specific conditions the transportation of Pengo charged oil-well guns with detonators attached. Under 29 CFR 1910.109 (d)(1)(iv), OSHA requires that detonators and explosives be transported separately over the highways. While this standard only covers public highways regulated by DOT, OSHA believes transport of these devices in many off-highway situations may violate 1910.109(b)(1). However, OSHA has determined that it is a de minimis violation of 1910.109 (b)(1) to transport directly to the oil well site charged oil-well guns with detonators attached, if the gun is covered by DOT Exemption DOT-E 8845 and the Detonation Interruption Device (DID) is in place between each detonator and the primacord leading to the individual jet perforator. It is thus permissible to use the DOT Exemption DOT-E 8845 in the transportation of charged oil-well guns with detonators attached. The provisions of the DOT exemption include:

1. The charged oil-well guns classed as Class A or Class C explosive are identified as "Select Fire Hollow Steel Carriers" and "Select Fire Retrievable Tubing Guns" and are the only ones so exempted.

2. Transportation must be by motor vehicle or cargo vessel and only by private carriers engaged in oil-well operations.
OSHA Instruction STD 1-5.18 (cont.)

3. Transportation is authorized only from the gun assembly site (wireline shop) to the jobsite.

4. Vehicle operator must be instructed as to the necessary safeguards and proper procedure in the event of an unusual delay, fire or accident.

5. A copy of the Exemption DOT-E 8845 must be carried aboard each motor vehicle and vessel used to transport packages covered by this exemption, attesting that the wireline operator has been granted the Exemption DOT-E 8845 certificate.

G. Background.

1. The United States Department of Transportation (DOT) has granted Exemption DOT-E 8845 to the Pengo Industries, Inc., Fort Worth, Texas, to transport from the gun assembly site (wireline shop) to the jobsite, specially designed and equipped select fire oil-well perforating guns with detonators affixed. They believe that the hazard in transporting the particular assembled gun over the highway has been eliminated. Other companies have received party status to the exemption.

2. OSHA concurs with DOT on the highway transportation from the assembly shop to the jobsite and allows further transportation on the jobsite directly to the oil well site, under certain conditions, as cited in F. Pengo also provides to its customers procedures for the safe handling and use of the select fire guns.
This is in response to your letter of June 17, concerning the (Product) emulsion to be manufactured by (Company). Review of the material provided by you has been accomplished by our technical staff. As the result of our review, the Occupational Safety and Health Administration (OSHA) concludes that the (Product) emulsion which contains ammonium nitrate (76.36% by weight); water (15.64%); and oil and emulsifiers (8%); is regulated as an ammonium nitrate mixture which is not a blasting agent.

Storage of the (Product) shall, as a minimum, comply with the requirements specified at 29 CFR 1910.109(l), Storage of ammonium nitrate. However, OSHA recommends that storage comply with the requirements and recommendations of NFPA 490-1986, Code for the Storage of Ammonium Nitrate, copy enclosed, which describes the current industry state-of-art specifications. Any new facility should meet or exceed the current National Fire Protection Association, Inc., (NFPA) requirements. Such facilities which so comply, but which deviate in part from OSHA standards, would be considered de minimis violations as described by an enclosure.
Clarification of 29 CFR 1910.109 as it applies to steel mill explosive devices such as a "Jet Tapper Assembly" Explosive Actuated Power Device with firing Train Interrupter, and jet tappers and electric blasting caps which require assembly by plant personnel and do not contain a firing train interrupter.

29 CFR 1910.109(c); (c)(1)(ii); (e)(1)

JUL 14, 1983

This is in response to your letter of June 15, 1983, requesting a clarification of 29 CFR 1910.109 as it applies to two kinds of explosive devices used in steel mills. The two devices are (1) the "Jet Tapper Assembly", which you say creates a new explosive category called Explosive Actuated Power Device with firing Train Interrupter, and (2) the plain jet tappers and electric blasting caps which require assembly by plant personnel and do not contain a firing train interrupter.

The "Jet Tapper Assembly" does not comply with the intent of 29 CFR 1910.109(c)(1)(ii) and 29 CFR 1910.109(d)(1)(iv). 29 CFR 1910.109(c)(1)(ii) intended that blasting case, electric blasting caps, detonating primers, and primed cartridges not be stored in the same magazine with other explosives. 29 CFR 1910.109(c)(1)(iv) intended that blasting caps or electric blasting caps not be transported over the highways on the same vehicles with other explosives.

The plain jet tappers and electric blasting caps which require assembly by plant personnel, and which do not contain a firing train interrupter, may meet the intent of the standard if used in accordance with the applicable requirements in 29 CFR 1910.109. Plain jet tappers assemble to electric blasting caps in the steel mills, plant personnel, and then stored up to three days or more with primed charges on the open hearth floors in cabinets, would be in violation of 29 CFR 1910.109(e)(4)(iii). As you acknowledge in your letter, the above-mentioned standard requires primers to be made up only as required for each round of blasting. It appears that our standard does present a practical problem in open hearth steel mills as job described.

Because there are problem areas in 29 CFR 1910.109, OSHA is preparing to review this standard. This process would incorporate the relevant revision of this NFBA Codes; resolve, where possible; major conflicts with the regulations of other Federal agencies; and modify the "use of explosives" paragraph. In the interim, OSHA Instruction STD 1-5.12 (Formerly OSHA Program Directive 100-90) will be used for information and guidance in the enforcement of 29 CFR 1910.109 (copy enclosed).

Also enclosed is a portion of OSHA instruction CPL 2.45A, which defines a deminimis violation. Citations are not issued for deminimis violations, penalties are not proposed, and statement of the violation is not required of the employer.

Steel mill employers may apply for a variance from the provisions of 29 CFR 1910.109 concerning explosive and blasting agents.
ABSTRACT 29 CFR 1910.109(h) applies to ammonium nitrate based emulsion type blasting agents and explosives.  1910.109(h)(3)(iii)(e) prohibits peroxides and chlorates as ingredients of water gels for water gel (slurry) explosives and blasting agents.


MEMORANDUM

SUBJECT: Interpretation of 29 CFR 1910.109 Relative to Peroxides and Chlorates in Blasting Agents, Slurries, and Emulsions

This is in response to your memorandum of November 14, attaching a request for interpretation of 29 CFR 1910.109 for Mr. J.

The Occupational Safety and Health Administration (OSHA) does not approve or certify end products.

We will answer the questions in the order that they were presented. First, does 29 CFR 1910.109(h)(3)(iii)(e) apply to ammonium nitrate based emulsion type blasting agents and explosives? Yes, 29 CFR 1910.109(h) applies to these blasting agents, water gel (slurry), and emulsion type explosive materials.

Second, regarding the prohibition of peroxides and chlorates in blasting agents, 29 CFR 1910.109(h)(3)(iii)(e) prohibits peroxides and chlorates as part of the oxidizer system of these materials.

Third, what percent concentration of peroxide chlorate is permissible in water gel-slurry explosives and blasting agents, if not part of the oxidizer system? OSHA has no specific permissible concentration of peroxide or chlorate in water gel- slurry explosives and blasting agents not part of the oxidizer system.

Fourth, is it permissible to add small amounts of peroxides or chlorates to blasting agents, if they decompose harmlessly within a short period of time? No, 29 CFR 1910.109(h)(3)(iii)(e) prohibits any addition or use of peroxides or chlorates. How long a decomposition time would be acceptable? OSHA has not set a decomposition time limit.

Fifth, is it permissible to use in water gel blasting agents or explosives small amounts of chemicals which may be peroxide or chlorate at some time...? 29 CFR 1910.109(h)(3)(iii)(e) again prohibits the use of peroxides or chlorates in blasting agents and explosive materials.
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DOE Interpretations Guide to OSH Standards

July 1, 1992
OSHA Instruction STD 1-5.16

OCT 16, 1980

SUBJECT: Venting LP-Gas to the Atmosphere

A. Purpose. This instruction provides guidance to insure appropriate enforcement of 29 CFR 1910.110(b)(14)(iv) in transferring LP-Gas from storage containers to fuel containers of industrial trucks (including lift trucks).

B. Scope. This instruction applies OSHA-wide.

C. Action. OSHA Regional Administrators/Area Directors shall assure that the enforcement of 29 CFR 1910.110(b)(14)(iv) is consistent with the guidelines in E. of this instruction.

D. Federal Program Change. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this change is forwarded to each State designee.

2. Explain the technical content of the change to the State designee as requested.

3. Ensure that State designees are asked to acknowledge receipt of this Federal program change in writing, within 30 days of notification, to the Regional Administrator. This acknowledgment should include a description either of the State's plan to implement the change or of the reasons why the change should not apply to that State.

4. Review policies, instructions and guidelines issued by the State to determine that this change has been communicated to State program personnel. Routine monitoring activities (accompanied inspections and case file reviews) shall also be used to determine if this change has been implemented in actual performance.

E. Guidelines. Fixed liquid level gages shall not be vented to the atmosphere to assist in transferring LP-Gas from the storage container to the fuel container of industrial trucks (including lift trucks) except under the following conditions:

1. The vented gas from the fixed liquid level gage does not exceed the maximum flow provided from a No. 54 drill orifice (referenced in latest NFPA 58).

2. The filling operation is performed outdoors, not less than 10 feet from the nearest masonry-walled building, or not less than 25 feet from the nearest building or other construction and, in any event, not less than 25 feet from any building opening.

3. The engine of the industrial truck is shut off, and the operator is off the truck during refueling. Industrial trucks which have portable LP-Gas containers may their fuel containers removed prior to refueling. The conditions set forth in numbers 1, 2, and 4 of these guidelines shall also be followed.

4. Only trained and designated personnel shall refill or exchange LP-Gas containers.

F. Background. 29 CFR 1910.110(b)(14)(iv) requires that the venting of fuel to the atmosphere not be permitted except under certain conditions. These conditions are not clearly stated in the 29 CFR 1910 standards, but the intent of the standards supports the position of this instruction and provides equivalent protection for exposed employees.
ABSTRACT This is a response to a memorandum of January 30, requesting an interpretation of 1910.110(b)(6)(ii) in separation of LPG containers from, and a definition of, "important buildings", and whether or not OSHA can use Table H-23 to cite distances between LPG containers. "Important building", as used by OSHA and NFPA, does not have a singular meaning. Value is the basic criteria for defining an important building and can range from the building's contents to its importance in fire fighting. OSHA defines "important building" as any building where employees may be exposed to potential or actual hazards. Spacing violation should be cited under 5(a)(1) of the OSHA Act, and not Table H-23 of 1910.110.

INTERPRETATION 29 CFR 1910.110(b)(6)(ii)

APR 10, 1991

SUBJECT: Interpretation of 29 CFR 1910.110(b)(6)(ii)

This is in response to your memorandum of January 30, in which you requested an interpretation of 29 CFR 1910.110(b)(6)(ii) with respect to the separation of LPG containers from--and a definition of--"important buildings", and whether or not OSHA can use Table H-23 of the above mentioned standard to cite distances between LPG containers.

First, "important building", as used by OSHA and NFPA, does not have a singular meaning. According to Mr. Z NFPA's Gases Engineer and technical expert for LPG, value is the basic criteria for defining an important building. Value can range from the building's contents to its importance in fire fighting. OSHA defines "important building" as any building where employees may be exposed to potential or actual hazards.

Second, the spacing of the containers with regard to each other should not be cited under our 1910.110(b)(6)(ii) standard due to the ambiguity of Table H-23, but instead should be cited as a 5(a)(1) violation based on the clarified language of NFPA 59-25, 1986 Edition, Section 3-2.2.2. The language of our current OSHA standard, taken from NFPA 58, 1969, the most current standard at the time of OSHA's adoption, is not clear enough to use as a basis for citing under .110 of the standard. A copy of the 1986 Edition is attached for your information.
ABSTRACT

Having two 500 gallon propane tanks located ten (10) feet from a building and separated from each other by three (3) feet is in compliance with the requirements of Table H-23.

INTERPRETATION

29 CFR 1910.110(b)(6)(ii)

February 10, 1975

We are in receipt of your letter dated January 20, 1975, in which you supplied additional information relative to your application for variance from Section 1910.110(b)(6) Storage and Handling of Liquefied Gas - Table H-23, of the Occupational Safety and Health Standards.

You have stated that you have two (2) 500 gallon propane gas tanks located ten (10) feet from one of your buildings. These tanks are separated from each other by three (3) feet. You further state that this does not meet the distances requirements of the above standard. It is from this requirement that a variance is sought.

The requirements of Table H-23 are based on the water capacity per container. The exception to this rule are those containers having a water capacity of less than 125 gallons which are figured in the aggregate amount as delineated in Note 1 of the table. Your containers are based on the per container rule, therefore, the present location of your two (2) 500 gallon containers does meet the requirements of Table H-23 (copy of Table H-23 enclosed).
ABSTRACT

According to OSHA regulations, propane tanks must not be placed in the trunk of passenger carrying vehicles, without sealing off the trunk from the passenger and radio equipment area.

INTERPRETATION

29 CFR 1910.110(e)(4)(i)

November 17, 1983

This is in response to your letter of November 3, 1983, requesting advice on the installation of the new type Propane Tank (with the Safety Seal Valve Cover System) in the trunk of passenger-carrying vehicles, without sealing off the trunk area from passengers and radio equipment.

We have reviewed our regulations and find that the installation you suggest, would violate 29 CFR 1910.110(e)(4)(i) which states in part:

"...Fuel containers on passenger carrying vehicles shall be installed as far from the engine as is practicable, and the passenger space and any space containing radio equipment shall be sealed to prevent direct seepage of gas to these spaces. The container compartment shall be vented to the outside."
ABSTRACT
Portable D.O.T. containers (cylinder) of anhydrous ammonia which are in-use and/or manifolded to an approved and listed blueprint reproduction machine, such as the (Product) machine manufactured by (company), are not regulated under the storage requirements specified at 29 CFR 1910.111(b). Therefore, there is no OSHA requirement that employers provide gas masks, water, or showers in the vicinity of such reproduction machines. However, properly manifolded D.O.T. cylinders connected to in-use reproduction machines shall comply with the requirements of 29 CFR 1910.111(e).

INTERPRETATION
29 CFR 1910.111(b); (e)
OCT 29, 1986
This is in response to your letter of September 16, concerning your desire for a directive which would clarify the Occupational Safety and Health Administration (OSHA) requirements relative to the use of anhydrous ammonia in (company) machines. An OSHA directive is unnecessary, since this letter clarifies the situation and provides an official interpretation relative to the matter.

Portable D.O.T. containers (cylinder) of anhydrous ammonia which are in-use and/or manifolded to an approved and listed blueprint reproduction machine, such as the (company) machine manufactured by OZALID, are not regulated under the storage requirements specified at 29 CFR 1910.111(b). Therefore, there is no OSHA requirement that employers provide gas masks, water, or showers in the vicinity of such reproduction machines. However, properly manifolded D.O.T. cylinders connected to in-use reproduction machines shall comply with the requirements of 29 CFR 1910.111(e).

It is acknowledged that due to the repugnant odor of ammonia, reproduction machines which develop slight leaks would cause operators and clerical staff to shut down such defective equipment and leave the area before levels of 10 PPM were attained. Since the standards at 29 CFR 1910.1000, table Z-1, require exposure levels to be less than 50 PPM T.W.A., it is unlikely that employee exposure in excess of the OSHA standard would result from the use of an approved and listed blueprint reproduction machine.
To recap our phone conversation of November 20, 1990:

- 29 CFR 1910.111(b)(7)(iv), which address non-refrigerated ammonia piping, states in part: "Threaded connections shall not be back-welded."
ANSI K61.1 - 1989 addresses piping practices in 5.6.3 and specifies conformance to ASME B31.3 for non-refrigerated piping and ASME B31.5 for refrigerated piping. ASME 31.3 (328.5.3) and 31.5(537.4.5) specifically permit seal welding of threaded connections.

Question: If we have seal welded threaded connections in compliance with ANSI K61.1 - 1989 (and the referenced ASME codes), are we in compliance with 29 CPR 1910.111?
OSHA Instruction CPL 2-2.45A

September 28, 1992
Directorate of Compliance Programs


B. SCOPE. This instruction applies OSHA-wide.

C. REFERENCES.


The remainder of this compliance directive has not been included due to the number of pages it contains. Users requesting this compliance directive or further assistance may contact Federal or State OSHA offices. The DOE OSH Standards Interpretations Response Line is also a valuable resource of information and may be contacted at 1-800-292-8061, Monday - Friday, 8:00 a.m. - 4:00 p.m. EST.
This letter is in response to a request for a written clarification on "Formaldehyde (Formalin)". This highly hazardous chemical should be listed to read: Formaldehyde (37% by weight or greater). The PSM standard will be revised to reflect this change in the near future.

July 28, 1992

Dear Mr. F:

This is in response to your letter of June 24, regarding the Final Rule on Process Safety Management (PSM) of Highly Hazardous Chemicals published in Volume 57, Number 36 of the Federal Register on Monday, February 24, 1992.

In your letter you requested written clarification on what is meant by "Formaldehyde (Formalin)" listed in Appendix A of the PSM standard. This highly hazardous chemical should be listed to read: Formaldehyde (37% by weight or greater). The PSM standard will be revised to reflect this change in the near future. Any amount of mixture of Formaldehyde, less than 37% by weight, in solution would not be covered by the PSM standard.

Presently, the Occupational Safety and Health Administration is developing a directive which will provide interpretative guidance and inspection procedures to our field staff. When the directive is completed in the near future, we will send you a copy to assist you in your stated direction to continue efforts towards employer compliance with the PSM standard.

Thank you for your interest in occupational safety and health. If we may be of further assistance, please contact us.
Dear Mr. A:

This is in response to your letter of July 30, addressed to Secretary of Labor L. M., in which you enclosed a copy of your letter addressed to United States Senator F. M. Your letter and attachment were forwarded to the Occupational Safety and Health Administration (OSHA) for response. Please accept our apology for the delay in responding.

In your letter to Senator M., you stated that you were unable to gain employment due to what you described as a lack of training that was required by OSHA's standard on Process Safety Management (PSM) of Highly Hazardous Chemicals. This standard was published as a Final Rule in Volume 57, Number 36 of the Federal Register on Monday, February 24, 1992, and became effective on May 26, 1992. It was developed to prevent or minimize the consequences of exposing employees to the hazards of toxicity, fires, and explosions from catastrophic releases of highly hazardous chemicals. Workplace facilities that include processes involving threshold or greater quantities of highly hazardous chemicals are subject to the PSM standard.

Please refer to the training requirements in the PSM standard at 1910.119(g) "Training" and 1910.119(h) "Contractors." The PSM Standard requires on site employers and contractor employers to assure that their employees are trained in safe and healthful work practices which are necessary to perform their jobs in consideration of the hazards associated with processes involving highly hazardous chemicals. The PSM Standard does not require employers to direct employees to undertake specific training courses nor does it specify who pays for the training. The training may be provided directly by the employer or by an outside vendor. In either case the employer must assure that the training meets the requirements of the standard, including training in the specific safety and health aspects of each process for which training is provided. I am enclosing a copy of the standard for your information.

The State of Alaska operates its own occupational safety and health program under a plan approved by the U. S. Department of Labor pursuant to Section 18 of the Occupational Safety and Health Act of 1970. The Alaska program is responsible for the protection of the working men and women in Alaska, including the enforcement of occupational safety and health standards and the investigation of workplace complaints and accidents. To address the employment concerns addressed in your letter further, you can contact your state agency at:

Commissioner
Alaska Department of Labor
P. O. Box 21149
Juneau, Alaska 99801
Telephone: 907-465-2700
ABSTRACT  An interpretation letter regarding the applicability of the Process Safety Management (PSM) Standard to laboratory and research operations. A "laboratory" as defined in 29 CFR 1910.119 (b) as a facility where the "laboratory use of hazardous chemicals" occurs. It is a workplace where relatively small quantities of hazardous chemicals are used on a non-product basis. Relatively small quantities are quantities less than the threshold quantities of highly hazardous chemicals listed in Appendix A of the PSM. Although not applicable to laboratories, the PSM standards are applicable to other site facilities which contain processes involving highly hazardous chemicals at or above the threshold quantities.

INTERPRETATION  1910.119 (a), (b); 1910.1450 (b)

June 24, 1992

Dear Ms. R:

This is in response to your letter of April 29 to Mr. J. F. F., Director of the Office of Information in the Occupational Safety and Health Administration (OSHA). Your letter was forwarded to the Directorate of Compliance Programs for response.

In your letter you requested written confirmation that the Final Rule on Process Safety Management (PSM) of Highly Hazardous Chemicals published in Volume 57, Number 35 of the Federal Register on Monday, February 24, 1992 does not apply to laboratory and research operations. Also, you indicate in your letter that "an OSHA staff member stated over the phone that, because of the Laboratory Standard's coverage, these operations were not intended to be subject to the Process Safety Management rule."

A "laboratory" as defined in 29 CFR 1910.1450(b) is not subject to the PSM standards at 29 CFR 1910.119. "Laboratory" means a facility where the "laboratory use of hazardous chemicals" occurs. It is a workplace where relatively small quantities of hazardous chemicals are used on a non-product basis. Relatively small quantities are quantities less than the threshold quantities of highly hazardous chemicals listed in Appendix A of the PSM.

By 29 CFR 1910.119(b), "process" means any activity or combination of activities including the use, storage, manufacture, handling or on-site movement of highly hazardous chemicals to which the PSM standards apply. Also by 29 CFR 1910.119(b), "facility" means the buildings, containers or equipment which contain a process. Although not applicable to laboratories, the PSM standards are applicable to other site facilities which contain processes involving highly hazardous chemicals at or above the threshold quantities.

A directive is being developed by OSHA to provide interpretive guidance and inspection procedures to our field staff. The interpretations and clarifications addressed in this letter will be incorporated in that directive. We will send you a copy of the directive when it is completed in the near future.

Thank you for your interest in occupational safety and health. If we can be of further assistance please do not hesitate to contact us.
ABSTRACT
An interpretation letter regarding whether single well processing facilities with equipment including separators, heat-treaters and storage tanks used in gas production (from non-H(2)S containing petroleum fluids) operations would be exempt from employer compliance with the Process Safety Management standard within the context of 1910.119(a)(2)(ii), which excludes oil and gas well drilling and servicing operations. The 1910.119(a)(ii) exemption of oil or gas well drilling or servicing operations is intended to cover all drilling operations and any well servicing operation including acidizing.

INTERPRETATION
August 26, 1992

Dear Mr. W:

This is in response to your May 11, letter to Mr. G. J. S., Dallas Regional Administrator for the Occupational Safety and Health Administration (OSHA). Your letter was forwarded to the Directorate of Compliance Programs for response.

In your letter you requested an interpretation of the Final Rule on Process Safety Management (PSM) of Highly Hazardous Chemicals published in Volume 57, Number 35 of the Federal Register on Monday, February 24, 1992. In particular, you questioned whether single well processing facilities with equipment including separators, heat-treaters and storage tanks used in gas production (from non-H(2)S containing petroleum fluids) operations would be exempt from employer compliance with the PSM standard within the context of 1910.119(a)(2)(ii), which excludes oil and gas well drilling and servicing operations.

The 1910.119(a)(ii) exemption of oil or gas well drilling or servicing operations is intended to cover all drilling operations and any well servicing operation including acidizing. Additionally, water separation facilities adjacent to or near the well (including tanks used primarily for water separation in conjunction with oil or gas well production) are not covered by the PSM Standard.

The following processes, when they involve at least threshold quantities of oil or gas, are covered by the PSM standard. Oil or gas well production fluids from several wells are processed by heating the fluids and physically separating the water from the gas or oil. The water is returned to the ground via a "down hole well" for disposal return to the strata from which it came. But if these oil or gas well drilling operations take place at "normally unoccupied remote facilities", then according to 1910.119(a)(2)(iii), they are exempt from PSM standard coverage.

OSHA is developing a directive which will provide interpretive guidance and inspection procedures to our field staff. We will send you a copy of the directive when it is completed in the near future. Please refer to that directive for additional PSM standard interpretations and clarifications, for example, on what constitutes a normally unoccupied remote facility.

Thank you for your interest in occupational safety and health. If we may be of further assistance, please do not hesitate to contact us.
June 14, 1993

Dear Mr. R:

This is in response to your November 17, 1992 letter, requesting interpretation of the Process Safety Management (PSM) of Highly Hazardous Chemicals standard at 29 CFR 1910.119 with respect to the fabrication of a variety of weapons systems, research vehicles and components for the U.S. Department of Defense. Please accept our apology for the lateness of this reply.

As published in Volume 57, Number 26 of the Federal Register on Monday, February 24, 1992, the 29 CFR 1910.109 - Explosives and blasting agents standard was amended to cover the manufacture of explosives under the PSM standard. (See page 6403 of this Federal Register, a copy of which is enclosed for your use). In 1910.109(a)(3), an explosive is defined as any chemical compound, mixture, or device, the primary or common purpose of which is to function by explosion, that is, with substantially instantaneous release of gas and heat. Additionally, OSHA considers the manufacture of explosives to mean: mixing, blending, extruding, synthesizing, assembling, disassembling, and other activities involved in the making of a product or device which is intended to explode. In your letter you identified some weapon systems which are fabricated at AT Inc. and which are explosive devices by the preceding definition.

The PSM standard covers manufacturing processes when the resulting finished products or devices are intended to explode. For example, an employer obtains an explosive device manufactured by another employer. This explosive device is a subassembly for a weapon which is manufactured by the employer. Both employers must comply with the PSM standard since the explosive device and the weapons are finished products or devices which are intended to explode.

The PSM standard would not apply to the highly hazardous chemical(a)(1) intended to propel the weapon, (2) manufactured elsewhere and delivered to the weapon manufacturing worksite, and (3) not otherwise covered as a flammable liquid or gas, or toxic or reactive highly hazardous chemical as specified by threshold quantities and concentrations (when applicable) in the PSM standard.

Any amount of explosive chemicals made, for example, by synthesizing or blending chemical compounds is considered to be explosives manufacturing which is covered by the PSM standard. Use of these explosive chemicals by AT Inc. in research and test evaluation of various weapon designs is covered by the explosives standards at 1910.109, but not the PSM standard at 1910.119. These interpretations are predicated on the intent of the PSM standard to eliminate or mitigate catastrophic releases of highly hazardous chemicals and resulting employee exposure to explosion, fire and toxic hazards in the workplace. Thank you for your interest in occupational safety and health.
OSHA Instruction CPL 2-2.51

NOV 5, 1990

Subject: Inspection Guidelines for Post-Emergency Response Operations Under 29 CFR 1910.120

A. Purpose. This instruction provides procedures for ensuring uniform enforcement of training under the Hazardous Waste Operations and Emergency Response standard for employees involved in post-emergency response operations.

B. Scope. This instruction applies OSHA-wide.

C. References.


D. Action. OSHA Regional Administrators and Area Directors shall utilize the guidelines in this instruction to ensure uniform enforcement.

E. Federal Program Change. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that a copy of this change is promptly forwarded to each State designee, using a format consistent with the Plan Change Two-way Memorandum in Appendix P, OSHA Instruction STP 2.22A, CH-2.

2. Explain the technical content of this change to the State designees as requested.

3. Ensure that State designees are asked to acknowledge receipt of this Federal program change in writing to the Regional Administrator as soon as the State's intention is known, but not later than 70 calendar days after the date of issuance (10 days for mailing and 60 days for response). This acknowledgment must include a description either of the State's plan to implement the change or of the reasons why this change should not apply to that State.

4. Ensure that the State designees submit a plan supplement, in accordance with OSHA Instruction STP 2.22A, CH-3, as appropriate, following the established schedule that is agreed upon by the State and Regional Administrator to submit non-Field Operations Manual/OSHA Technical Manual Federal program changes.

a. If a State intends to follow OSHA's policy described in this instruction, the State must submit either a revised version of this instruction, adapted as appropriate to reference State law, regulations and administrative structure, or a cover sheet describing how references in this instruction correspond to the State's structure. The State's acknowledgment of the Plan Change Two-way Memorandum may fulfill the plan supplement requirement if the appropriate documentation is provided.

b. If the State adopts an alternative to Federal guidelines, the State's submission must identify and provide a rationale for all substantial differences from Federal guidelines to allow OSHA to judge whether a different State procedure is as effective as comparable Federal guidelines.

5. Advise the State designees that, in implementing the State policy, they are encouraged to follow the enforcement guidelines in paragraphs G.1, 2, and 3 of this instruction.
OSHA Instruction CPL 2-2.51 (cont.)

6. Advise the State designees that they may consult with the OSHA Regional Office for technical assistance and questions relating to post-emergency response operations under 29 CFR 1910.120.

7. Review policies, instructions, and guidelines issued by the State to determine that this change has been communicated to State personnel.

F. Background. A final standard for Hazardous Waste Operations and Emergency Response (29 CFR 1910.120) became effective March 6, 1990. In addition to many other requirements, the standard regulates worker safety and health during post-emergency response operations.

1. The standard defines post-emergency response as:
   that portion of an emergency response performed after the immediate threat of a release has been stabilized or eliminated and clean-up of the site has begun. If post-emergency response is performed by an employer's own employees who were part of the initial emergency response, it is considered to be part of the initial response and not post-emergency response. However, if a group of an employer's own employees, separate from the group providing initial response, performs the clean-up operation, then the separate group of employees would be considered to be performing post-emergency response and subject to paragraph (q)(11) of this section.

2. The employer conducting the clean-up must comply with all the requirements in (b)-(o) of the standard (29 CFR 1910.120(q)(11)(i)) unless the clean-up is done on plant property using plant or workplace employees. The requirements under (b)-(o) of the standard specify a minimum of 24 hours of off-site training. If the cleanup is done on plant property using plant or workplace employees, the employer must comply with the training requirements of 29 CFR 1910.38(a), 1910.134, 1910.1200, and other appropriate training made necessary by the tasks they are expected to perform (29 CFR 1910.120(q)(11)(ii)).

3. Based on experience with the standard during oil spills off the coasts of Texas, Alaska, and California, the hazards to employees vary widely in severity of potential injury or illness. For job duties and responsibilities with a low magnitude of risk, fewer than 24 hours of training may be appropriate for these post-emergency clean-up workers. It is our expectation that though the number of hours of training may vary, a minimum of 4 hours would be appropriate in most situations. Moreover, petroleum spills are unique in that many people who assist in the clean-up operations may not engage in this activity on a recurring basis. In addition, for maximum protection of the environment, petroleum spills dictate clean-up must be completed as soon as possible.

4. The U.S. Coast Guard and other concerned parties have requested flexibility in the amount of employee training required for petroleum spill clean-ups and other types of clean-up operations which follow emergency situations.

5. The person with responsibility for making assessments when fewer than 24 hours of training is required is the OSHA Regional Response Team representative.

G. Enforcement Guidelines.

1. Policy Background. If an employer complies with the clear intent of a standard but deviates from its particular requirements in a manner that has no direct or immediate relationship to employee safety or health, OSHA's FOM directs that such a violation be characterized as de minimis. Citations are not issued for de minimis violations.

2. Policy. Compliance with the intent of the training requirements of 29 CFR 1910.120(q)(11)(i) is achieved when an employer provides sufficient training as outlined in paragraph G.3 below, but the exact specifications of OSHA standards are not met (i.e., the specific number of hours required by the standard is not given). In such cases a de minimis violation exists and no citation will be issued. Violations of 29 CFR 1910.120(q)(11)(i) can be abated by compliance with the criteria specified in G.3.
OSHA Instruction CPL 2-2.51(cont.)

3. De Minimis Criteria. All of the following criteria must be met in order to classify violations of the training requirements of 29 CFR 1910.120(q)(11)(i) as de minimis:

   a. Clean-up is performed in an area that has been monitored and fully characterized by a qualified person indicating that exposures are presently and can be expected to remain under permissible exposure limits and other published exposure limits;

   b. Health risks from skin absorption are minimal;

   c. Employees have completed the training requirements of 29 CFR 1910.38(a) and 1910.1200, including refresher training as appropriate;

   d. Employees have completed other safety and health training made necessary by the tasks they are expected to perform such as, but not limited to, operating procedures, decontamination procedures, water safety, hypothermia, heat stress, and safety hazard controls;

   e. There is adequate on-site supervision by employees who meet the training requirements of 29 CFR 1910.120(e)(4).
In Section (a) of 1910.120, the final rule provides latitude for an exemption for employers conducting operations at a hazardous waste site during the initial early phase of job initiation or during the late final phase of job closure when the site poses no threat to employees. Section (e) of the standard discusses tiered training requirements and also addresses potential risk of exposure.

May 10, 1989

I am responding to your request of March 16, requesting clarification on 29 CFR 1910.120.

The statement in the scope statement of the final rule that you have identified is intended to exempt those workplaces from coverage under the rule where the employer can demonstrate that no hazard exists. To receive this exemption the employer must be able to demonstrate to OSHA that the entire worksite does not contain operations where employees are exposed or likely to be exposed to safety and health hazards related to this rule. If there is neither a hazard nor an exposure, OSHA is considering the worksite safe with respect to 1910.120 and the need to comply with the rule is not necessary. The intent of this exemption is to provide relief to those employers conducting operations at a hazardous waste site during the initial early phase of job initiation or during the late final phase of job closure when the site poses no threat to employees.

The new tiered training requirements under paragraph (e) are intended to provide effective training to employees who work at regulated sites where the risk of exposure to safety and health hazards exists in varying degrees. In some cases, at a particular time, for a particular employee or group of employees, the exposure may not be present, however; because the risk of exposure at a later time continues to exist in the workplace, OSHA is not considering the site to be "hazard free" within the intent of the exception in paragraph (a). In this case the applicable parts of 1910.120 would apply.

With regard to your question on enforcement, it has been OSHA’s policy in the past to recognize compliance with a new final rule prior to its effective date as a “good faith” compliance effort.

In the case of 29 CFR 1910.120, compliance with the new permanent final rule will be considered acceptable prior to its effective date under the “de minimis” guidelines in OSHA’s Field Operations Manual.
The employer can show by documentation or certification that an employee's work experience and/or training meets the requirements of 1910.120(e)(6); (9).

INTERPRETATION

29 CFR 1910.120(e)(6); (9)

JUN 30, 1989

This is response to your inquiry concerning the training certification requirements of the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response rule (29 CFR 1910.120). Specifically, you are interested in whether there is some agency and/or individual who could review your qualifications to determine whether they meet the requirements of the rule.

It is the employer who can show by documentation or certification that an employee's work experience and/or training meets the requirements of the rule. If you are the employer, then you can certify yourself. OSHA does not certify individuals. This summer, OSHA expects to propose in the Federal Register a program for certifying courses under the rule. There will be an opportunity for interested parties to comment on the proposal and participate in public hearings.
Employers are required to put in place a method to become aware of new technologies involving hazardous waste operations (including storage) and introduce them into their workplaces if appropriate for their operations.

This is in response to your letter of June 13, concerning the relationship of several paragraphs within the 29 CFR 1910.120 Standard.

After further study of the paragraphs in question (i.e., 1910.120(p)(1), (p)(5) and (6)), I believe my telephone response was not quite accurate. Paragraph (p)(5) would take precedence over paragraph (p)(1) which uses the phrase "as appropriate" and would require that employers put in place a method to become aware of new technologies involving hazardous waste operations (including storage) and introduce them into their workplaces if appropriate for their operations.

The same would hold true for paragraph (p)(6). Employers would need to follow the referenced requirements of paragraph (j), if appropriate, to their operations.

Thus contrary to my telephone response to you, the phrase "as appropriate" applies to the specifics of paragraphs (p)(5) and (p)(6), and does not give the option to not have the programs called for in these paragraphs.
ABSTRACT
Application of 1910.120 to the construction of a building on property
where it is assumed that the ground water beneath it would be classified as hazardous waste (ex: contains
perchloroethylene (PCE).) Any activity during the construction project which is related to cleaning up of
hazardous waste would be covered by 29 CFR 1910.120 unless the employer can demonstrate that the
operation does not involve employee exposure. 24 hours of training would be sufficient for workers who
will not be exposed above permissible exposure limits and there is no possibility of an hazardous
substance emergency developing.

INTERPRETATION
29 CFR 1910.120(a)(1); (a)(1)(i); (e)(3)(iii)
AUG 15, 1989

This is in response to your July 14, 1989 inquiry concerning the application of OSHA's Hazardous Waste
Operations and Emergency Response Operations final standard to the construction of a building on
property previously occupied by a dry cleaning facility.

For the purposes of this letter you asked us to assume that the ground water would be classified as
hazardous waste (contains perchloroethylene (PCE)) and that the ground water beneath the property has
been designated by a local agency for cleanup. Because the ground water containing PCE is
considerably below the surface of the property, excavation activities are not expected to encounter
ground water containing PCE. To install caissons, however, it is necessary to bore holes into the ground
that will pass through areas of the subsurface which have PCE-containing ground water.

Any activity during the construction project which is related to cleaning up of hazardous waste would be
covered by 29 CFR 1910.120 unless the employer can demonstrate that the operation does not involve
employee exposure or the reasonable possibility for employee exposure to safety or health hazards. A
minimum of 24 hours of training would be sufficient for workers who will not be exposed above permissible
exposure limits and there is no possibility of an emergency developing as a result of an uncontrolled
release of a hazardous substance.

As you may be aware, since 1973 the State of (state) has administered its own occupational safety and
health program (XXX/OSHA) under the provisions of the Occupational Safety and Health Act. In February
1987, funding was deleted from the State's budget for private sector activities of that program, and
XXX/OSHA ceased private sector enforcement coverage on July 1, 1987. However, XXX/OSHA
continued to administer its occupational safety and health program for public employees of the State and
its political subdivisions. On November 8, 1988, (State's) voters passed Proposition 97, which added a
section to the State Labor Code mandating (State's) implementation of a full State plan. On May 1, the
State of (state) began phased resumption of private sector enforcement and is responding to
occupational safety and health complaints and accidents. (State)'s full resumption of private sector
activities is expected by October 1.

SOURCE LETTER
July 14, 1989

Application of 29 C.F.R. Part 1910.120

I am writing to request a determination by OSHA that 29 C.F.R. Part 1910.120 (Hazardous waste
operations and emergency response) is not applicable to a particular situation.
A client of our firm is planning to construct a building on property previously occupied by a dry cleaning facility. Ground water beneath the property contains perchloroethylene (PCE) in concentrations of up to 8 parts per million (8 ppm); unsaturated soils beneath the building contains only trace concentrations of PCE. For purposes of this letter, it should be assumed that the ground water would be classified as a hazardous waste under 40 C.F.R. 261.3 and that the ground water beneath the property has been designated by a local agency for cleanup.

Because the ground water containing PCE is considerably below the surface of the property, excavation activities are not expected to encounter ground water containing PCE. To install caissons, however, it is necessary to bore holes into the ground that will pass through areas of the subsurface which have PCE-containing ground water. Some of this ground water may come to the surface when the caissons are installed.

Special drilling procedures and other measures have been taken to minimize the amount of ground water that will be displaced and come into contact with air during the caisson installation activities. Using these procedures, expected PCE concentrations in air on the property are expected not to exceed 0.00063 mg/m(3) during caisson installation. During other construction activities, PCE concentration in air are not expected to exceed 0.0000066 mg/m(3). These concentrations are orders of magnitude below both federal and California OSHA standards (680 mg/m(3)TWA and 170 mg/m(3)TWA, respectively).

On the basis of these calculations, the client's site safety consultant has concluded that no significant health risk is posed by PCE, either by inhalation or dermal exposure. Consequently, the site safety consultant has concluded that, from a health and safety viewpoint, there is no need for workers to be required to undertake 40 hours of training or otherwise be subject to the requirements of 29 C.F.R. Part 1910.120. Nevertheless, it is planned that gloves, boots and other protective clothing will be used by construction workers to minimize direct contact with ground water containing PCE. Additionally, training pursuant to the hazard communication standard of 29 C.F.R. Part 1910.1200 will be conducted. Air monitoring will be conducted to confirm that actual concentrations of PCE are in accordance with calculated concentrations.

Although Part 1910.120 does not include an express exemption for hazardous waste operations on sites where there is no potential of an exposure near or exceeding OSHA standards, it appears to us that such an exemption is necessarily implied. A "standard" is defined by OSHA regulations as conditions or practices "reasonably necessary and appropriate" for safe or healthful employment. 29 C.F.R. 1910.2(f). In this case, the requirements of Part 1910.120, particularly the 40 hour training requirements, are neither necessary nor appropriate to the site conditions. Rather, the requirements impose a substantial burden of time and expense without a corresponding health and safety benefit.

We request that OSHA issue a letter confirming that 29 C.F.R. Part 1910.120 is not applicable to this construction site in these circumstances. In the event that OSHA does not agree with our interpretation, we request that it render a letter determination expressing that the 25 hour training requirement set forth at 29 C.F.R. 1910.120(e)(3)(iii) (effective March 6, 1990) constitutes sufficient training in such circumstances, and that the agency would not find a violation of Part 1910.120 to exist if 25 hours of training (rather than the 40 hour program set forth by the interim regulation) was provided.
ABSTRACT

An interpretation on the question of whether site specific safety and health plans as specified in 1910.120 apply to contractors involved in the assessment and remediation of gasoline leaks from underground storage tanks at service stations. The answer is yes if the activity falls within the scope of paragraphs (a)(1)(i) through (a)(1)(iii) of the standard or if the activity is the result of a post-emergency response activity. Assessments for determining whether there are leaks of underground storage tanks would not fall under the standard unless there was reason to believe there were leaks and the assessment was to determine the extent of the leaks.

INTERPRETATION

29 CFR 1910.120(a)(1)(i); (ii); (iii); (b)(4)(i)

SEP 7, 1989

SUBJECT: 29 CFR 1910.120 Application to Underground Storage Tanks at Service Stations

This is in response to your region's request for our review of a letter from (company) which concerns the application of Hazardous Waste Operations and Emergency Response final standard (29 CFR 1910.120).

The question is whether site specific safety and health plans as specified in 29 CFR 1910.120 apply to contractors involved in the assessment and remediation of gasoline leaks from underground storage tanks at service stations. The answer is yes if the activity falls within the scope of paragraphs (a)(1)(i) through (a)(1)(iii) of the final standard or if the activity is the result of a post-emergency response activity.

In general, assessments for determining whether there are leaks of underground storage tanks would not fall under the scope of these paragraphs unless there was reason to believe there are leaks and the assessment is to determine the extent of the leaks. Other OSHA standards would be applicable such as the Hazard Communication Standard (29 CFR 1910.1200). Remediation activity, on the other hand, could likely fall under the scope of 29 CFR 1910.120(a)(1)(ii) which includes closures and corrective actions involving underground storage tanks.
ABSTRACT
The eight hour minimum training requirement for first responders at the operational level assumes an eight hour work day with sufficient time for lunch and other breaks. OSHA's suggestion is to develop a one-day or longer course depending on the needs of the workers so they are competent to perform their emergency response duties.

INTERPRETATION
29 CFR 1910.120(q)(6)(ii)
NOV 22, 1989

This is in response to your inquiry concerning the training requirements under the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final standard (29 CFR 1910.120).

Your specific question is whether the eight hour minimal training requirement for first responders at the operational level is for eight contact hours or a "normal" work day. The eight hours assumes an eight hour work day with sufficient time for lunch and other breaks. Our suggestion is to develop a one-day or longer course depending on the needs of the workers so they are competent to perform their emergency response job duties.
This interpretation applies to certain provisions of 1910.120 in light of specific emergency response requirements under the Resource Conservation and Recovery Act (RCRA) rules. An explanation is given for the application of OSHA's emergency response provisions under 1910.120 to affected employees for different RCRA classifications of hazardous waste generators.

JAN 9, 1990

This is an update to our interim response to your letter concerning the Hazardous Waste Operations and Emergency Response final rule (29 CFR 1910.120). Your question concerns the application of certain provisions of this standard in light of specific emergency response requirements under the Resource Conservation and Recovery Act (RCRA) rules.

Under the emergency response program for generators of hazardous waste OSHA allows a conditional exemption from the emergency response requirements:

Employers who will evacuate their employees from the worksite location when an emergency occurs, and who do not permit any of their employees to assist in handling the emergency are exempt from the requirements of this paragraph if they provide an emergency action plan complying with 29 CFR 1910.38(a) of this part. (29 CFR 1910.120(q)(1) and (p)(8))

Generators of more than 1,000 kilograms per month (kg./mo.) of hazardous waste (or more than 1 kg./mo. of acutely hazardous waste) who accumulate waste on site, must comply with certain requirements in 40 CFR Part 265 pertaining to contingency plans, emergency procedures, and personnel training (40 CFR 262.34(a)(4)). The generator's training program must be:

Designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including, where applicable: (i) Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment... (40 CFR 265.16(a)(2))

In addition, generators are required to have an employee designated as the emergency coordinator (40 CFR 265.55). The emergency coordinator's responsibilities include taking "all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include, where applicable .... "collecting and containing released waste ..." (40 CFR 265.55).

It is clear that the EPA requirements contemplate active employee involvement in controlling emergencies and that the OSHA conditional exemption would not be applicable to all employees for generators of more than 1,000 kg./mo. of hazardous waste (or more than 1 kg./mo. of acutely hazardous waste) who accumulate waste on site.

The exceptions listed for small quantity generators and generators who store for less than 90 days (29 CFR 1910.120(a)(2)(iii) are confusing. These generators were singled out to complement EPA's RCRA exemptions. OSHA, however, did not distinguish between small quantity generators (generators of more than 100 kg./mo. but less than 1000 kg./mo. of hazardous waste) and conditionally exempt small quantity generators (generators of less than 100 kg./mo. of non-acutely hazardous waste). EPA requires small quantity generators but not conditionally exempt small quantity generators to comply with emergency preparedness and training requirements including the designation of an emergency coordinator. Since small quantity generators are required to have at least some level of involvement in emergency response
the emergency response provisions of 29 CFR 1910.120 would apply to those affected employees. The conditional exemption in (q)(1) and (p)(8) of the final standard would not be applicable for all employees.

Likewise, EPA requires generators of hazardous waste who store for less than 90 days and are not exempt small quantity generators to have at least some level of involvement in emergency response. Thus, OSHA's emergency response provisions under 29 CFR 1910.120 would also apply to affected employees for these generators.
This interpretation addresses application of the Hazardous Waste Operation and Emergency response HAZWOPER rule to clean-up of water-borne releases of hazardous substances. Jurisdiction for OSHA and the Coast Guard for water-borne releases is clarified. OSHA is assuming jurisdiction for the safety and health of employees involved as emergency responders and those in the clean-up of water-borne releases of hazardous substances. This jurisdictional division is consistent with the National Response Team (NRT) Policy.

Oct 10, 1989

I apologize for the delay in responding to your May 18 letter requesting clarification of several issues related to our Hazardous Waste Operation and Emergency Response rule.

In response to the specific concerns given in your letter to Safety Standards, I offer the following. First, the Occupational Safety and Health Administration (OSHA) is assuming jurisdiction for the safety and health of employees involved as emergency responders and those in the clean-up of water-borne releases of hazardous substances which is consistent with the National Response Team (NRT) Policy (Attachment A). Spills that occur on the U.S. territorial waters covered by the Outer Continental Shelf (OCS) Lands Act, are not covered by OSHA (See Attachment B). I understand that the Coast Guard has jurisdiction for releases that remain solely water-borne on the OCS. Also the Coast Guard, under the NRT, will have the lead responsibility for water pollution concerns on navigable waterways (See Attachment C). As for ships' crews (See Attachment C) the Coast Guard has the coverage for crews on vessels that have a current and valid certificate of inspection. Also most oil transport vessels are certificated vessels. As for non-certificated vessels, these ships' crews are covered jointly by OSHA and the Coast Guard. However, all waters in-shore of the OCS are covered by OSHA.

Second, we certainly agree that securing a release and containing the released product is of importance to first responders. Our primary concern is that first responders making the initial containment response have the necessary training and proper equipment to safely conduct that response.

Employees who provide the initial emergency response to releases of hazardous substances outside their immediate work area and who are within OSHA jurisdiction must meet the requirements of 29 CFR 1910.120. Employers such as oil clean-up cooperatives, who we believe are similar in nature and operation to mutual-aid organizations, must provide their employees with the proper training and equipment required in 29 CFR 1910.120. Ships' crews, on the other hand, are much like flight crews on airplanes or train crews on the railroads, and these employees are protected by regulations issued by the U.S. Department of Transportation (DOT) as previously discussed. OSHA would be preempted from coverage of these employees when DOT has issued such rules.

Third, second responders who arrive hours or days after an event may fall into two categories. The first group would be those employees of the employer who is responsible for the release of a hazardous substance and may function as specialist employees. Any employees in this group would be considered part of the emergency response group and would be covered by 29 CFR 1910.120(q). The second group would be those employees of contractors called in to help with clean-up after the emergency is controlled or over. This group of employees would be covered by (q)(11)(l).

With regard to your specific example of using local fishermen, we would consider those types of workers to be "skilled support personnel" regulated under (q)(4). This category of worker was included in paragraph (q) to recognize the need at times for fast-response assistance by individuals who possess needed skills and equipment to an emergency scene.
Finally, with respect to clean-up work performed by unskilled labor and volunteers, we still require proper training and equipment for those individuals who meet the definition of "employee" and are being exposed to hazardous substances. Some volunteers may be outside the OSHA "employer-employee" relationship, however, they still deserve the necessary protection for their own health and safety.

You also asked about generic plans for "post-emergency" clean-up operations. I believe that Ms. C addressed this issue in her response to you, and we support and concur in that response.

SOURCE LETTER

May 18, 1989

During an ORC meeting with your staff on April 19, ORC was told that OSHA is considering preparation of a "correction notice" regarding the Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) that was published March 6, 1989. We request that you consider the following during your deliberations about the content of that notice. It is not clear to ORC whether OSHA or the Coast Guard or Mineral Management Service (MMS) has jurisdiction over oil spills on water. If OSHA determines that HAZWOPER applies to such an event, we ask that OSHA consider the following:

Our most significant concern is about the application of HAZWOPER to petroleum spills on water, which are not the focus of the Standard, but which are apparently covered. The implications of the Standard are most serious in the early stages of the event when rapid action is crucial. This is also the time when the oil is most volatile. The following are ways in which the Standard could affect/delay effective response:

a. Securing the leak and containing the spilled oil are the first responders' objectives immediately following the spill. These actions may make a great difference in the ultimate environmental impacts of the spill. First responders may include crews from the spilling company (e.g., ship's crews) or field crews from onshore, oil clean-up cooperatives, or the U.S. Coast Guard or other responders. Cooperatives generally have a small cadre of trained people, who could receive HAZWOPER training prior to an accident. Ship's crews could also receive prior training, but this standard would have to be added to current programs and U.S. Coast Guard regulations governing merchant marine personnel and vessel operations.

b. Second responders (those arriving hours or days after the event) are concerned with recovery of the oil from the water surface, protection of sensitive areas, dispersal operations, bird and mammal rescue, and clean-up. For a large spill on water, fishermen may be used to deploy booms. Their knowledge of local conditions and currents may be very important in protecting sensitive areas such as fish hatcheries. Certain provision of HAZWOPER, including training and site-specific planning and perhaps others, would significantly delay this response.

Clean-up is often done using unskilled labor. Such personnel, as well as volunteers, have been used in the bird and mammal rescue efforts. Training of such clean-up personnel would be feasible if appropriate and more focused training was allowed for clean-up, and would not significantly jeopardize clean-up. Second responders include, in addition, operating company and corporate response team members as well as contractors, and consultants.

As is evident, this is an extremely complex area. ORC requests that OSHA investigate the application of the Standard and clarify how marine spills of petroleum products were intended to be covered by this standard in the correction notice. In addition, it is important that OSHA coordinate this issue with EPA and the U.S. Coast Guard.

Second, ORC requests that OSHA clearly provide for generic plans for post-emergency operations. Paragraph (q)(11) of the Standard addresses "Post Emergency Response Operations." In the event of a hazardous substance release resulting in emergency response activities and post emergency response operations, there is a potential threat to the environment as well as to employees. Because of this, time is of the essence in eliminating the source of, and containing the environmental contamination. Preparation of the lengthy site-specific plan required by paragraphs (b) - (c) would take considerable time and resources.
Therefore, OSHA should make it clear that it is permissible for employers to develop a "generic plan" for post-emergency clean-up operations. This would be a detailed plan addressing appropriate elements of paragraphs (b) - (o), which can be filled in with specifics when an event occurs. Since these types of operations are not as extensive as those at hazardous waste sites, it is likely that some elements of (b) - (o) will not be necessary at a particular workplace and others will have only limited applicability. Inspectors should therefore not cite employers for including only relevant elements or (b) - (o) in a particular plan.

A third concern regards the proposed regulation your office is currently developing for training certification under HAZWOPER.

This rule will have significant impact on industry across the board, as well as on local emergency response agencies when EPA adopts it. The application of the training and certification amendment to operations conducted under the Resource Conservation and Recovery Act of 1976, (paragraph (p) of the HAZWOPER standard) is unclear. It is important that if these requirements are applied to such employees, OSHA should recognize that maintenance work is a special case and should receive special consideration.
MEMORANDUM

SUBJECT: Interpretations of 29 CFR 1910.120

This is in response to your inquiry of February 5, concerning paragraph (q) of the Hazardous Waste Operations and Emergency Response final rule (29 CFR 1910.120). Please accept my apology for the delay in this reply.

The first scenario described in your memo, the coal fire at a public utility, does fall under the scope of 1910.120 as defined in paragraph (a). Fire involving spills or releases of substances which before combustion were defined as a hazardous substance are covered by paragraph (q) of 1910.120. Coal is listed as a hazardous material by the Department of Transportation under 49 CFR 172.101. Conversely, fires involving spills or releases of substances not classified as hazardous substances before combustion are not included in the scope of 1910.120. Similarly, structural fires, houses, wood, etc., burning would not normally be covered by 1910.120.

The second scenario described in your memo, the ammonia leak at a local food processing facility, would fall under 1910.120 paragraph (q) The contractor activity you described appears to be part of the emergency response to the leak and could be required that these personnel be given an initial briefing at the site prior to their participation in any emergency response. The initial briefing shall include instruction in the wearing of appropriate personal protective equipment, what chemical hazards are involved, and what duties are to be performed.

In general, the "on scene incident commander" of the emergency response is charged with deciding when the emergency response is over. The Dr. B letter, dated June 20, 1989, is current and correct in its explanation of the distinction between an emergency response and a post-emergency response. An exception is during some National or Regional Response Team incidents where the lead federal agency may remain in charge during the entire post-emergency cleanup phase. Post-emergency response begins when the immediate threat of a release has been stabilized or eliminated and cleanup of the site has begun. OSHA concur with your assessment that the contractors in the ammonia leak emergency were involved in emergency response activity.
This is in response to your inquiry requesting interpretations of OSHA's final standard for Hazardous Waste Operations and Emergency Response (29 CFR 1910.120). For the sake of clarity, I will enumerate and respond to your questions in the order you raised them:

1. **Generic Plans for Post-Emergency Operations.**

   We concur with your understanding that it is permissible to develop generic plans for post-emergency cleanup operations. This would be a plan addressing appropriate elements of paragraphs (b)-(o), which can be filled in with specific details when an event occurs. It is possible that some of the elements of (b)-(o) will not be necessary at a particular workplace and others will have limited applicability. For example, if there are no confined space entry situations or potential situations, then confined space entry procedures do not need to be addressed.

2. **Distinction between Emergency and Post-Emergency Operations.**

   As long as an emergency response team is still in control of the site and a safety or health hazard exists, the emergency situation continues to be in effect. For example, if a vacuum truck arrives to remove spilled gasoline while an emergency response team is managing the activity, the vacuum truck operator's activity is part of the emergency response operations. Once the emergency response team has declared the response activity over or finished and has left the site, any remaining cleanup would be considered a post-emergency operation.

3. **When the Standard Applies.**

   A. "Emergency Situation." Responses to releases when there are no potential safety or health hazards are not considered emergency responses even if an alarm is sounded. Team responses to releases where there are potential safety and health hazards are not considered "emergency responses" under 29 CFR 1910.120 when the team does not take control of the site (i.e., the substances can be absorbed, neutralized, or otherwise controlled by employees in the immediate release area).

   B. "Immediate Release Area." For the purposes of 29 CFR 1910.120 "Immediate release area" is a term used in the definition of emergency response to help clarify when an incident is an emergency. Incidental spills that could be cleaned up or stabilized by the employees working in the immediate spill area without the need of a coordinated spill-control response is not considered an emergency incident. Such employees would have training under the Hazard Communication Standard and other appropriate training made necessary by the tasks they are expected to perform. The term "Immediate release area" is not meant to either classify something as an emergency if immediate attention is not warranted, or encourage employees in the immediate work area to respond to incidental releases without the proper training and equipment.

   The "Immediate release area" can be the entire geographic boundary of the employee's assigned work area. On a case-by-case basis, OSHA will determine whether such employees are capable of responding to incidental releases and will evaluate the emergency response plan, including an evacuation plan, if an emergency situation is possible.

   Maintenance personnel responding to releases or potential releases for the purpose of stopping the leak are performing emergency response activities under the rule unless the upset condition:

   (1.) Results from routine maintenance activity and the small leak can be readily repaired; or

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(2.) Does not need to be taken care of immediately. That is, the safety and health of the employees are not threatened if immediate response is not initiated.

C. "General Application." In general, the standard applies to all operations described in the scope (29 CFR 1910.120 (a)) unless the employer can demonstrate that the operation does not involve employee exposure or the reasonable possibility for employee exposure to safety or health hazards. Thus, if potential for exposure is extremely unlikely the standard would not apply. The term "exposure" here has the same definition as in the Hazard Communication Standard.


Each contractor/subcontractor is responsible for compliance with all safety and health protection requirements for their employees. An employer's safety and health plan can be used by contractors/subcontractors at the site if it appropriately addresses their activity and potential safety and health hazards. In general, a site plan organized as a single document, with component sections/appendices covering all tasks, operations, and contractors/subcontractors, may promote use efficiency; enhance completeness, clarity and coordination among all affected parties.

5. Training Requirements.

The interim final rule does not have a provision regarding training of less than 40 hours for employees involved in activities at cleanup sites. Prior to the publication of the final rule, OSHA has stated that for non-cleanup activities at designated cleanup sites the determination of the amount of training necessary for the workers to safely perform their job duties will be made on a case-by-case basis. As you are aware, the final standard addresses the issue of when less than 40 hours of training may be appropriate. It does not, however, provide for less than 24 hours of training. In general, OSHA will be enforcing the need for a minimum of 24 hours of training regardless of the nature of the job. There may be isolated cases where OSHA's variance procedures may be appropriate, or where OSHA would determine that a situation warrants a de minimis violation. (Note: Depending on the job duties of the workers involved in an emergency response, less than 24 hours of training is allowable under the standard.)

6. Employee Classification.

You mentioned that in many cases companies have a specialist trained and expert in, for example, tank truck accidents. When an emergency arises, this individual could be called on to provide guidance and technical assistance. Such an employee would be considered a "specialist employee" under 29 CFR 1910.120(q)(5) and must receive training or demonstrate competency in the area of their specialization annually.

7. Training Requirements for Management Personnel.

Management personnel who during an emergency situation stay out of the hazardous area and who are not taking charge of the incident, and are not specialist employees under 29 CFR 1910.120(q)(5) are not covered by 29 CFR 1910.120.


OSHA does not apply its standards to seamen performing work on vessels which have been inspected and certificated by the U.S. Coast Guard ("inspected vessels") because the Coast Guard has issued comprehensive standards regulating the safety and health of these workers. OSHA has recognized the Coast Guard's jurisdiction over inspected vessels in a Memorandum of Understanding between the two agencies. The Coast Guard has also issued some standards affecting the safety of seamen on uninspected vessels. OSHA would apply its standards to any working conditions not addressed by the Coast Guard.

With these exceptions, OSHA has jurisdiction for seamen aboard vessels located on the waters within the three-mile limit, or in the case of Florida and Texas, within the limit of three marine leagues (the territorial waters). OSHA also has jurisdiction for workers performing work on shore or

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at other locations not aboard a vessel but within the territorial waters of the United States. OSHA
does not have jurisdiction over vessels outside the territorial waters.


Example 1. 10,000 lbs of sodium saccharin (artificial sweetener) are spilled from a silo
across a plant fence line into a stream bed. About 4000 lbs reach the water. As a
CERCLA Hazardous Substance released above its Reportable Quantity (one pound) the
release is reported to the National Response Center, which in turn notifies the
predesignated Federal On-Scene Coordinator (OSC). The OSC responds to evaluate
the situation and monitors the proper cleanup of the sodium saccharin by the plant
owner/operator. What portions of the final rule apply?
Answer: Sections (b) through (o) of the rule are applicable for sites where a Federal OSC
is overlooking the cleanup unless the employer can demonstrate that the operation does
not involve employee exposure or the reasonable possibility for employee exposure to
safety or health hazards.

Example 2. A company manufactures ammonium nitrate fertilizer, which is listed and
regulated in 49 CFR 172.101 as an oxidizer. A fire occurs in a corner of the warehouse
and is extinguished by a local fire department. Would the subsequent removal of the
ammonium nitrate from the warehouse by employees of the company be covered by the
final rule as a post-emergency response operation?
Answer: A hazard would still be present thus the post-emergency response provisions of
the rule would be applicable.

SOURCE LETTERS

May 18, 1989

Dear Ms. C:

We thank you for making Ms. G available to meet with the Organization Resources Counselors (ORC)
Hazardous Waste and Emergency Response Task Force on April 19, 1989, to discuss important issues
regarding interpretation of OSHA's final standard for Hazardous Waste Operations and Emergency
Response (published March 6, 1989).

This regulation will affect greatly the hazardous waste and emergency response activities in all industries.
ORC encourages OSHA to develop a comprehensive compliance directive for this rule so that its
compliance officers will be able to enforce it consistently among all industries. In addition, compliance
directives are useful to industry as well.

In order for employers to develop and implement effective compliance programs, it is essential that they
have a clear understanding of the requirements of the Standard. We would appreciate your comments on
the assumptions ORC members are currently using to develop their programs, and your response to
questions of interpretation.

1. Generic Plans for Post-Emergency Operations

Paragraph (q)(11) of the Standard addresses "Post Emergency Response Operations." In the event of a
hazardous substance release resulting in emergency response activities and post-emergency response
operations, there is a potential threat to the environment as well as to employees. Because of this, time is
of the essence in eliminating the source of, and containing the environmental contamination. Preparation
of the lengthy site-specific plan required by paragraphs (b)-(o) would take considerable time and
resources. Therefore, OSHA should make it clear that it is permissible for employers to develop a
"generic plan" for post-emergency cleanup operations. This would be a detailed plan addressing
appropriate elements of paragraphs (b)-(o), which can be filled in with specifics when an event occurs.
Since these types of operations are not as extensive as those at hazardous waste sites, it is likely that
some elements of (b)-(o) will not be necessary at a particular workplace and others will have only limited
applicability. Inspectors should therefore not cite employers for including only relevant elements of (b)-(o)
in a particular plan.

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2. Distinction between Emergency and Post-Emergency Operations

There has been considerable discussion about when an emergency ends and when post-emergency operations commence. Since the requirements for post-emergency operations are far more detailed, it is important for employers to understand where the line will be drawn.

It is ORC's understanding that as long as an emergency response team is still on site, and a safety or health hazard exists, the emergency situation continues to be in effect. For example, if a vacuum truck arrives to remove spilled gasoline while an emergency response team is managing the activity, the vacuum truck operator's activity is part of the emergency response operations. Once the emergency response team has left the site, any remaining cleanup would be considered a post-emergency operation. We would appreciate your confirming this understanding.

3. When the Standard Applies

a. "Emergency Situation"

Most ORC member companies use the conservative approach of instructing operating employees to sound the alarm as soon as a potential emergency situation arises, before proceeding to stop the release or take other appropriate action. In many cases, the operating employees are able to handle the situation, so that no "actual emergency" exists. ORC understands that in those situations, the requirements of the Standard are not applicable. Does OSHA agree with this interpretation?

Similarly, do the requirements of the standard apply to situations in which employees are actually exposed to hazardous substances, where there is potential for exposure, or where a hazardous substance is merely "present," as in the Hazard Communication Standard?

ORC understands that the standard applies when there is either actual or potential exposure to hazardous substances. However, if the potential is extremely unlikely (e.g., contaminated soil is present eight feet below the surface, but no employee is disturbing it), there is no emergency or post-emergency response, and it is reasonable that the standard would not apply. Are we correct in this interpretation?

b. "Immediate Work Area"

There is a question about what situations trigger employer compliance with the requirement of the Standard. In the proposed rule, if employees were called from outside their normal work area to respond to an emergency, and they were exposed to a hazardous substance above the PEL they were covered by the Standard.

In the final rule, no such clear-cut, quantifiable criteria exist for application of the rule. Although the definition of "emergency response" or "responding to emergencies" is provided, there remains some question about what is an "immediate work area" and how OSHA will determine that an employee is outside his or her immediate work area.

ORC understands that production or maintenance employees are considered as responding to releases within their "immediate work area" when they are within the geographic boundary of their assigned work area, and have the knowledge and necessary personal protective equipment available so that they are able to stop a release, by performing a task such as turning a valve in a leaking line; such employees need not be within a few feet or within site of the release when it occurs as long as they are in their assigned work area. These employees would have been trained in hazard communication and standard operating procedures for their area, and would not necessarily be designated emergency responders at the level of hazardous materials technician or higher.

Such releases may warrant evacuation of personnel not working to contain or control the release, in accordance with 1910.38, but the responses to the releases would not require activation of the Incident Command System and possibly post emergency response operations in accordance with 1910.120. For releases that are of such a nature that their severity could escalate (such as leaks in liquid anhydrous ammonia or liquid chlorine lines), the designated emergency responders could be put on "standby" or could actually be called to the site in anticipation of a full "emergency response operation." This approach for responding to releases could apply to facilities that only have emergency plans in accordance with 1910.38, choosing to have an outside agency respond to releases beyond their knowledge and ability to control. Is ORC correct in its interpretation of "immediate work area" for production or maintenance employees?
4. Preparation for Meeting Requirements of Paragraphs (b)-(o)

For hazardous waste sites, detailed plans must be developed to comply with requirements or paragraphs (b)-(o) of the Standard. In those cases in which a contractor has developed such a detailed plan, and one or two employees from another company are present at the location, ORC understands that these individuals would be covered by the contractor's plan, even though they are not employees of the contractor. At major Superfund sites, where many employers may be represented, this would eliminate the problem of overlapping, redundant, and potentially contradicting plans. This should be specifically addressed as a "multi-employer work site" issue.

5. Training Requirements

ORC understands that OSHA will adopt a case-by-case approach to determine whether employers have complied with the training requirements. For example, if an employee is cleaning up a single substance or a limited number of substances at a RCRA or CERCLA facility, it may not take a full 40 hours of training for him or her to be adequately trained. ORC understands that OSHA inspectors will be able to look at the task being performed by the employee (e.g., PCB removal) and determine whether the full 40 hours of training was necessary before issuing a citation. In addition, the 24 hour training requirement may be excessive for emergency response training for a single substance or process. We suggest that guidance be provided to compliance officers to undertake this case-by-case approach.

6. Employee Classification

In many cases, companies have a specialist trained and expert in, for example tank truck accidents. When an emergency arises, this individual would be called on to provide guidance and technical assistance. ORC assumes that this individual would not need additional training.

7. Training Requirements for Management Personnel

In some cases, management staff are present at a location (either hazardous waste site or location of emergency response operations), and they are not actually engaging in any emergency response operation, other than providing corporate oversight and administrative support to the incident commander. If these personnel are serving in such an oversight or administrative capacity, ORC believes that 24 hours of training is not necessary. Are we correct?

8. Marine Operations

If there is a large spill of petroleum or petroleum products in U.S. territorial waters or beyond U.S. territorial waters, does the standard apply? Or do Mineral Management Service of the U.S. Department of Interior and U.S. Coast Guard regulations govern? (See attached letter to Mr. S.)

9. What Are Covered Substances and Situations?

Example 1. 10,000 lbs of sodium saccharin (artificial sweetener) are spilled from a silo across a plant fence line into a stream bed. About 4000 lbs reach the water. As a CERCLA Hazardous Substance released above its Reportable Quantity (one pound) the release is reported to the National Response Center, which in turn notifies the predesignated Federal On-Scene Coordinator (OSC) The OSC responds to evaluate the situation and monitors the proper clean up of the sodium saccharin by the plant owner/operator. What portions of the final rule apply?

Example 2. A company manufactures ammonium nitrate fertilizer, which is listed and regulated in 49 CFR 172.101 as an Oxidizer. A fire occurs in a corner of the warehouse and is extinguished by a local fire department. Would the subsequent removal of the ammonium nitrate from the warehouse by employees of the company be covered by the final rule as a post emergency response operation?

Should you or your staff require further information or expansion of the issues we have raised, we would be pleased to meet with you at your convenience. ORC and its member companies look forward to your response.

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This interpretation addresses the application of the Hazardous Waste standard, 29 CFR 1910.120, to a firm which offers "services for the cleanup of nuclear and hazardous waste," and has engaged "primarily in the removal of contaminated concrete and/or coatings in industrial facilities." Employees who remove the contaminated surfaces, package the contaminants, and present the packages to the facility operator for disposal are exposed to nuclear or hazardous waste. The definition of clean-up operation includes the removal, containment, incineration, neutralization, stabilization, and processing or handling "in any other manner" of hazardous substances. Therefore, it is very likely that the training requirements of 1910.120(c)(3) would apply.

This is in response to your letter of November 29, 1989 to the Occupational and Safety and Health Administration's (OSHA) (City) regional office, concerning the Hazardous Waste standard, 29 CFR 1910.120. Your letter was recently forwarded to our office for reply.

According to your letter, your firm offers "services for the cleanup of nuclear and hazardous waste," and to date has engaged "primarily in the removal of contaminated concrete and/or coatings in industrial facilities." First, it is not clear from your letter whether your employees are engaged in emergency response, clean-up operations, or both. As explained below, the standard applies to each situation, and the requirements of the standard differ depending upon which situation applies. Second, assuming it is an emergency response situation, it is also not clear from your letter whether or not the emergency response or post emergency response is actually completed.

You state that your operation "begins only after emergency spill response actions have been taken and post spill recovery actions, including waste removal, have been completed." However, "contaminants remain in the spill area" and your service removes the contaminated surfaces, packages the contaminants, and presents the packages to the facility operator for disposal. The definition of clean-up operation includes the removal, containment, incineration, neutralization, stabilization, and processing or handling "in any other manner" of hazardous substances. Thus, your employees are exposed to nuclear or hazardous waste.

Therefore, it is very likely that the training requirements of 29 C.F.R. 1910.120 would apply. The scope of the standard is outlined in 29 C.F.R. 1910.120(a), and includes clean-up operations at uncontrolled hazardous waste sites that are required by governmental bodies, as well as voluntary clean-ups at sites simply recognized by any governmental body as an uncontrolled hazardous waste site. Certain operations and actions regulated by RCRA are also within the coverage of the standard, as are emergency operations for the release of hazardous substances "without regard to the location of the hazard."

November 29, 1989

(Company) is an engineering consulting firm specializing in products and services for the cleanup of nuclear and hazardous waste. We have been reviewing OSHA regulations in an effort to determine if our activities are regulated under 29 CFR 1910.120 which covers employers and employees engaged in hazardous waste operations. This review indicates that these regulations do not apply to our work. However, we request a ruling on our situation by OSHA to help ensure we are in compliance with the regulations.
To date, (Company) activities have been limited primarily to the removal of contaminated concrete and/or coatings in industrial facilities. Contaminants have included radioactive isotopes, lead-based paint, and PCB's. (Company) role in cleanup operations begins only after emergency spill response actions have been taken, and post spill recovery actions, including waste removal, have been completed. Typically, contaminants remain in the spill area only because they have penetrated porous concrete. (Company) service is limited to the physical removal of the contaminated surface concrete and/or coatings. The waste generated by this operation is collected and packaged by our special vacuum systems, and presented to the facility operator for disposal. Air monitoring, verification of cleanup, and other site management functions are performed by the facility operator.

Our work crews are trained in the proper use of the decontamination tools used in their work, and in standard safety procedures. They are also trained to understand the risks associated with contamination, and learn to use personal protective equipment. Many of our employees have worked in nuclear power plants, and have received certification as radiation workers prior to their assignment to work in a radioactive environment.

(Company) makes every effort to ensure the safety of its workers, and to comply with OSHA regulations. When gray areas exist we normally choose the more conservative option, however, the training requirements of 1910.120 (e) represent a significant investment of resources which we seek to make only if necessary.

I would appreciate an assessment of our current situation with regards to training, and also of whether this would change if we began working at sites designated for cleanup by CERCLA, RCRA, or other authority. Please call me so that I can clarify the nature of our work, and discuss training requirements.
INTERPRETATION

29 CFR 1910.120(e)(2); (e)(5); (q)(6)(i); 1200(h)

APR 5, 1990

This is in response to your recent letters in January to the Occupational Safety and Health Administration concerning the Hazardous Waste Operations and Emergency Response, 29 CFR 1910.120. The answers to your questions are as follows:

1. First Responder Awareness (FRA) Level are those individuals who "are likely to witness or discover" the release of a hazardous substance and "who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release." It is their duty to notify the proper authorities of the release.

In applying OSHA's standards, it is important to look to the statutory purpose which is to protect workers. The training requirements of both the Hazard Communication Standard, 29 CFR 1910.1200 (HAZCOM) and the Hazardous Waste Operations and Emergency Response standards must be applied in a way which will provide meaningful and adequate training to the workers to ensure their safety. More employees are likely to be covered by the training requirements of HAZCOM than the population of First Responders under 29 CFR 1910.120. However, it is important that the population of adequately trained First Responders be large enough to provide the necessary protection in the event of an emergency.

2. The requirements for HAZCOM and the Hazardous Waste Operations standard are different. Different items must be covered to meet the training requirements of each. The extent of the overlap of the training requirements will vary depending upon the workplace situation. What is imperative is that the training be adequate, which in some instances may be achieved by consolidated training under both standards and sometimes may not. Again, the training must be tailored to meet the workplace situation.

3. The requirements of the standard, including the training of employees, must be met by the effective date of the standard, March 6, 1990. The final standard was published in March 1989, and the interim standard has been in effect since December 1989.

4. Currently, 29 CFR 1910.120 does not include a formal certification program for trainers. On January 26, 1990, OSHA published a Notice of Proposed Rulemaking on the Accreditation of Training Programs for Hazardous Waste Operations. OSHA did not propose accreditation requirements for Emergency Response, but it "welcomed public comment on this issue. See 55 Federal Register 2776 (January 26, 1990) for additional information on the proposal. What is essential is that employees are properly trained. If certain (company) members are able to competently train other employees, such training would be sufficient.

5. A video-only approach would be sufficient only if it can fully assure employee knowledge and skills. Providing someone to respond to employees' questions after the video presentations could meet this goal.

6. The proposal was published in Federal Register notice of January 26, 1990. The 90-day comment period ends on April 26, 1990.
Employees are not covered by the standard if they work exclusively within uncontaminated areas of the hazardous waste site; do not enter areas where hazardous waste may exist, are stored, or are processed; and are not exposed to health or safety hazards related to hazardous waste operations. Workers, such as clerical or support personnel, or those engaged in construction activities in uncontaminated areas who meet all the conditions described above, are not required to be trained under the standard. However, if employees' work activities do not meet all of the exclusion criteria described above, employees must be trained for the duration and in the subjects specified in paragraph 1910.120(e).

This is in response to your letter of February 12, concerning the application of training requirements in the Hazardous Waste Operations and Emergency Response standard (29 CFR 1910.120) to hazardous waste cleanup operations.

Employees are not covered by the standard if they:

1. Work exclusively within uncontaminated areas of the hazardous waste site.
2. Do not enter areas where hazardous waste may exist, are stored or are processed; and
3. Are not exposed to health or safety hazards related to hazardous waste operations.

Consequently, it appears that workers in your example (a), such as clerical or support personnel, or those engaged in construction activities in uncontaminated areas who meet all the conditions described above are not required to be trained under the standard. However if employees' work activities do not meet all of the exclusion criteria described above, employees must be trained for the duration and in the subjects specified in paragraph 1910.120(e).

It is unclear in your example (b) whether the workers remain exclusively within the uncontaminated areas. The requirements stated above can also be used to determine coverage for these employees.

The U.S. Army Corps of Engineers River Division, Hazardous and Toxic Waste Design Center, is responsible for the design and oversight of government mandated hazardous waste site cleanup operations (military and Superfund) nationwide. Contractors have posed questions to us regarding the applicability, if any, of training requirements set forth in 29 CFR 1910.120(e) for employees performing duties in locations which appear to be "non-hazardous" at hazardous waste sites. We are seeking interpretation in this regard in order that we may provide proper contract specification and guidance, specifically, as to the degree of formal training required (i.e. 40 hours, 24 hours, or none) in these situations. In general, are employees working exclusively in the Support Zone areas, defined as the uncontaminated areas where workers should not be exposed to hazardous conditions (Reference: Occupational Safety & Health Guidance Manual for Hazardous Waste Site Activities - NIOSH, OSHA, USCG, EPA - October 1985), required to have formal training under 120(e) and, if so, to what extent?
The following examples are provided to illustrate the point in question:

a. There are situations in which an employee's work activity is strictly confined to the Support Zone, defined via prior characterization. Examples of such include: (1) a secretary working in a job-site administration trailer, located within the Support Zone, who is instructed never to enter the Exclusion Zone or Contamination Reduction Zone; (2) employees involved in the construction of a water treatment plant or other site facilities on documented uncontaminated areas of the site.

b. There are instances in which the boundaries of the Exclusion (contaminated) Zone are changing during remediation, such as during the "capping" of a landfill. The area of contamination recedes as soil cover is being hauled in over clean fill and is dumped along the periphery of the Exclusion Zone. Truck drivers hauling the cover material remain technically within the non-contaminated zone and should, therefore, not be exposed to hazardous conditions. Likewise, once the initial cap cover has been installed (i.e. 6 inches to 2 feet of fill), employees installing geotextile membranes/liners on top of the placed clean cover material are essentially working in non-contaminated areas although still within the boundaries of the "site".

We should point out that employees working on Corps projects receive site-specific emergency preparedness training regardless of work zone assignment. Their lack of exposure, in situations as described, would be documented through periodic air sampling and exposure monitoring at the interface between contaminated site areas (Exclusion Zone and Contamination Reduction Zone) and the uncontaminated Support Zone areas.
that contain or have contained petroleum products. Thus, this standard could apply to contractors removing underground storage tanks that contain or have contained petroleum products. Sections (b) through (o) of the standard apply to closures and corrective actions involving the removal of underground storage tanks. The training for these activities would be covered under 1910.120(q)(6).

**INTERPRETATION** 29 CFR 1910.120(a)(1); (e)(1)(i)

MAR 30, 1990

This is in response to your letter of March 12 requesting an interpretation of the application of 29 CFR 1910.120 to the removal of underground storage tanks.

Petroleum products are included in the definition of hazardous substance under 29 CFR 1910.120. Thus, this standard could apply to contractors removing underground storage tanks that contain or have contained petroleum products. Section (b) through (o) of the standard apply to closures and corrective actions involving the removal of underground storage tanks and (q) would apply to any other type of removal activity where there is a potential for an emergency involving hazardous substances.

I am responding to your letter of March 12, 1990 requesting an OSHA interpretation of the training requirements in 29 CFR 1910.120 paragraph (e) for removal of underground petroleum storage tanks.

OSHA policy requires written interpretations to be issued through our Office of Compliance Programs. I have therefore forwarded your request to that office for reply. You should hear from them soon.

**SOURCE LETTER**

March 12, 1990

In January of 1990 I spoke with a representative of Federal OSHA about the applicability of the regulations found in 29 CFR 1910.120 (Hazardous Waste Operations and Emergency Response) to contractors removing underground storage tanks that contain, or have contained petroleum products. At that time, the representative of OSHA that I spoke with informed me that the standard applied to contractors removing underground storage tanks that contain or have contained petroleum products since under the final rule for 29 CFR 1910.120 OSHA included petroleum products in their definition of hazardous substances.

Since my conversations with the OSHA representative, I have heard rumors to the effect that the regulations found in 29 CFR 1910.120 do not apply to contractors removing underground storage tanks that contain or have contained petroleum products.
ABSTRACT

This interpretation provides clarification for a number of provisions contained in OSHA's final standard for Hazardous Waste Operations and Emergency Response. Issues addressed are the definition of emergency response, assessment of hazards when determining the potential for emergency situations, skin absorption in a potential emergency sce.nario, the role of professional judgment in emergency response situations, definition of an uncontrolled release in relation to environmental issues, emergency responses in TSD's, and responses to various emergency scenarios.

INTERPRETATION

SEP 4, 1990

This is an update to our interim response to your inquiry requesting interpretations of OSHA's final standard for Hazardous Waste Operations and Emergency Response (29 CFR 1910.120).

1. Definition of Emergency Response. All of the criteria outlined in your letter are not necessary for a situation to be an emergency under the standard. For the definition of "emergency response" to be satisfied (and therefore applicable):

- The release or situation must pose an emergency. Examples are: it may cause high levels of exposures to toxic substances, it is life or injury threatening, employees must evacuate the area, it poses conditions which are immediately dangerous to life or health (IDLH), it poses a fire and explosion hazard (exceeds or has potential to exceed 25% of the Lower Explosive Limit (LEL)), it requires immediate attention because of danger, or presents an oxygen deficient condition. Nuisance spills, minor releases, etc., which do not require immediate attention (due to danger to employees) are not considered emergencies.

- An ordinary spill that can be safely handled by the workers is not an emergency. Such employees must have the proper equipment and training under other OSHA standards such as the Hazard Communication Standard.

A. "Assigned work area". The term "assigned work area" is not in the 29 CFR 1910.120 definition of emergency response. We used this term in our July 28, 1989, letter to you where we stated that the "immediate release area" can be the entire geographic boundary of the employee's assigned work area. The application of that clarification is for responses to incidental releases.

B. Location of the incident. The answer to A. above also addresses this question.

C. Potential for a Safety or Health Hazard. Assessment of hazards is a case-by-case or substance evaluation when determining a potential for emergency situations. Certainly the potential for IDLH conditions due to high vapor pressure, toxicity, or oxygen displacement properties is a primary concern. With flammable or combustible substances, the potential for explosive concentrations during a release and the proximity to ignition sources are important. Corrosiveness and other potentials for bodily impairment or damage also would contribute to the evaluation of emergency potential. For levels set to protect chronic exposures such as some Permissible Exposure Limits (PEL), the connection of the potential for an overexposure to these and an emergency situation is not necessarily automatic and needs further attention. One needs to consider whether exposures will be slightly over the PEL or substantially over it; if one is uncertain how much over the exposure limit, it is prudent to treat the situation as an emergency.
Other factors which need consideration include other routes of exposure, exposure to breakdown products, synergistic or additive effects, or safety concerns that could create a situation where the health and safety of the employees are seriously jeopardized unless immediate action is taken. Further, by its nature, an emergency requires quick action, and if the situation is unclear or data is lacking on important factors then it is prudent to treat the situation as an emergency.

You asked us to consider the following circumstances and your conclusions regarding them for a worker who accidentally spills a 55 gallon drum of toluene at his work station (undiked area) during the summer. Toluene is a toxic and flammable material, so there are two aspects of hazards to evaluate in assessing this situation. There is employee exposure to toxic vapors and employee exposure to fire if the toluene vapors become ignited. If the situation dealt with a non-flammable but still toxic material such as trichloroethylene (TCE) the answers to the question could be different. Thus, we are providing comments for both toluene and TCE.

Scenario 1: With help from persons outside his work area, the worker is able to contain the spill area with spill pillows. However, due to the temperature outside, the employees may be exposed to greater than the 100 ppm PEL during the response. It is our understanding that this would clearly be an emergency because of the existence of a potential health hazard and the need for a coordinated response from persons outside of the work area.

Toluene

Emergency Response (ER) aspects: It is an emergency in that, a toxic and flammable material is spilled in a large quantity. A definite fire and toxic exposure is possible to employees in the area and in the response role. It is probably desirable to contain and clean up this material immediately. In addition, employees outside the immediate release area are needed to assist in the control and there is a potential for overexposure to TCE, the criteria for defining an ER have been met.

Trichloroethylene (TCE)

ER aspects: Since the TCE is not flammable, the fire hazard to employees is not present, but the toxic hazard still is. Because it is probably desirable to control the spill immediately and employees from outside the area are needed to assist in the control and there is a potential for overexposure to TCE, the criteria for defining an ER have been met.

Scenario 2: If the same scenario occurred during the winter and no exposure greater than the PEL was expected, we would not consider this an emergency response even though persons outside the work area were called in, because there is no potential exposure hazard.

Toluene

ER aspects: Even though there is no potential for employee overexposure to toluene, there is a potential for employee exposure to a fire hazard. This situation is still considered an ER.

TCE

ER aspects: Since there is no fire hazard and the toxicity hazard is low, this probably does not require an immediate response because of hazards to employee life and health, therefore the criteria defining an ER are not met, so this is not considered an ER.

Scenario 3: Suppose the worker is able to contain the spill area with spill pillows, but due to the temperature outside he may be exposed to greater than the 100 ppm PEL during the response and clean-up. We would also not consider this an emergency response solely on the basis of the potential health hazard.

Toluene

ER aspects: OSHA would consider this an emergency because of the size of the spill of a flammable material which is life threatening.
TCE

ER aspects: Since there is no fire hazard it would have to be determined if there is a significant possibility of overexposure to employees not involved in the response. If not, and if as you postulate an IDLH condition does not exist, then the employee responder in the immediate release area could control and clean up the spill alone, and this would not be considered an ER. Such an employee must be properly trained under the Hazard Communication Standard. If there is a potential for substantial overexposure to employees it would be considered an ER.

D. Skin absorption. In response to your question concerning skin absorption as the major hazard of a potential emergency scenario, assume a spill of a phenol such as pentachlorophenol where there is no likelihood for a fire hazard if the phenol is not in a flammable carrier. The "penta" is a toxic hazard in that it can be absorbed through the skin and inhalation is not a potential exposure route. Immediate response is probably required for a major spill to prevent contamination of employees and equipment. This would meet the criteria for an ER since employees from outside the immediate release area are required to safely respond and control the spill. Inhalation of toxic materials is not the only criteria for an emergency. Hazards of fire, explosion, skin absorption toxins, oxygen deficiency, etc. are also hazards to employees and are considered in ER criteria. Pentachlorophenol spills of a lesser degree (not major) would not be considered on ER, however all participants would need skin protection.

E. Professional judgement. Professional judgement of levels of toxic materials to which employees could be exposed is necessary to provide the correct personal protective equipment to prevent employee overexposure. Professional judgement may, in many cases, be to overprotect employees until actual measurements can be made to determine the exact level of protection necessary. In emergency cases, an error in professional judgement may result in death or serious harm to employees, so the safest professional judgement regarding employee protection is to be conservative. Usually level B protection is necessary until measurements or other evaluations can be made which indicate a lower level of protection is adequate.

F. Uncontrolled release. An uncontrolled release is the accidental release of a hazardous substance from its container. If not contained, stopped, and removed, the release would pose a hazard to employees in the immediate area or in areas in the path of the release, or from its by-products or its effects (such as toxic vapors, fire, over pressurization, toxic gases or toxic particulates).

An incidental release is one that does not cause a health or safety hazard to employees and does not need to be cleaned up immediately to prevent death or serious injury to employees.

OSHA does not necessarily address environmental issues (pollution) except in cases where employees are exposed to the substances by reason of their job requirements. Environmental emergencies are the jurisdiction of other government agencies.

G. RCRA Treatment, Storage and Disposal (TSD). If an area is used primarily for treatment, storage, or disposal of hazardous substances, any emergency response operations in that TSD area shall comply with paragraph (p)(8) if the response is performed by a team dedicated to responding only in the TSD area. In other areas not used primarily for treatment, storage, or disposal, any emergency response operations shall comply with paragraph (q). Compliance with the requirements of paragraph (q) will be deemed to be in compliance with the requirements of paragraph (p)(8). This is clarified in the correction notice issued April 13, 1990 in the Federal Register.

H. In response to your observation about what constitutes an emergency response situation, the key factor which must be considered on a case-by-case basis is the actual or estimated exposure or degree of danger to responders, other workers, neighbors, etc. In order to determine this, other factors such as the size of the spill/release, the material spilled and the location the incident (e.g., confined space) play a significant role.

While it may be obvious, it is crucial that planning take place prior to any emergency incident. An employer must determine all likely potentials for emergencies using worst-case assumptions and plan response procedures accordingly.
II. Scenarios. You have asked how the standard applies in the following circumstances:

Scenario A - In a herbicide manufacturing plant a large silo containing 24,000 lbs of ammonium sulfamate (PEL 10 mg/m³ RO = 5000 lbs) splits due to age. The raw material is transferred by workers into small rail cars and drums. Exposure is below the PEL, but an organized response to transfer the material is made. Is this an emergency response? What if the spill occurred during a rain storm? Would that constitute an emergency because of the high solubility of the material and potential for run-off? If the rupture occurred during the first shift at the plant and an immediate response was made by workers in another area to transfer the material, would that be an emergency response? What if the same spill occurred on the third shift and due to the small crew size it was covered and left until the first shift? Would that change the answer?

Answer: Ammonium Sulfamate is a solid which except when heated to above 160 degrees F. or exposed to acids (fume or liquid) is of low hazard. Heat or acids cause a chemical reaction in which sulfur oxides are formed which can cause a corrosive or respiratory hazard. The PEL of 10 mg/m³ is 67% that of nuisance dust. Ammonium sulfamate is of low human toxicity.

Even though an organized response is made by employees from outside the immediate release area, there is no worker health or safety reason to clean up the material immediately, so no emergency (1910.120) response is in effect. A rain storm would not change the character of the release under the 1910.120 in that rain water would not react with the material to form more hazardous materials.

If leaving the cleanup until the next shift does not create a hazard then an emergency situation does not exist, since an emergency is associated with the need to take immediate action.

Scenario B - During a shift, a pipeline containing chlorinated solvents develops a leak at a joint. A nearby worker trained to the level of a First Responder Operations Level notices this and on his way to get spill pillows and notify the emergency staff he turns off the valve of the pipe, thereby stopping the leak. Does his active participation to stop the leak mean he should have been trained to HazMat Technician level or was training at First Responder Operations Level adequate since it was in his work area, it is part of his duties and training to prevent the spreading of the spill?

Answer: The answer depends on whether the employee is or would be taking action to stop the release during a true emergency or whether the employee would only take such action when the situation is not a true emergency. Taking an aggressive role to stop a leak during an emergency requires training at least at the hazardous material technician level. On the other hand, taking an aggressive role to stop a leak prior to an emergency requires training at least at the first responder awareness level in order to meet 29 CFR 1910.120 or 29 CFR 1910.1200. (Note: Your example does not provide sufficient facts upon which to render a definitive answer to whether the situation is an emergency.)

Scenario C - If response to incidental spills/releases are part of a trained operator's "normal duties," how long should the worker attempt to clean up or contain the spill before it becomes an emergency? What if two other trained workers from his area help - is this now an emergency response? If maintenance is initially called to clean up the spill (regardless of material or quantity) - does this make it an emergency response?

Answer: Anyone working with hazardous substances where there is a potential for a release needs to know what action to take during a release. The employer determines the job duties and responsibilities of each worker and must train workers accordingly. If an employee is trained to respond to non-emergency spills but an emergency situation could develop then the employee must also be trained on recognizing when a situation has a potential for becoming an emergency and the appropriate action to take in order to implement emergency procedures. Employees who respond to only non-emergency releases when there is no potential for an emergency are not covered by the emergency response provisions of 1910.120. Other OSHA standards, such as 29 CFR 1910.1200, would be applicable.

Scenario D - See answer to question 1.G.
FEB 21, 1990

This is an interim response to your inquiry of January 24, requesting interpretations of OSHA's final standard for Hazardous Waste Operations and Emergency Response (29 CFR 1910.120). In order to address your concerns, we are in the process of discussing the issues you have raised with the drafters of the standard and staff from the Office of the Solicitor of Labor. Due to the lengthy questions and complex issues raised we expect to provide you with a full response in approximately two months.

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SOURCE LETTER

January 24, 1990

This is a request for clarification of a number of provisions contained in OSHA's final standard for Hazardous Waste Operations and Emergency Response (CFR 1910.120). With the effective date of the standard fast approaching, need for guidance becomes increasingly urgent. (Company) has compiled the following list of questions regarding 1910.120.

Question 1:

Definition of Emergency Response - The definition of Emergency Response is unclear. After a thorough review of the preamble, text of the standard and written interpretations from OSHA on 1910.120, we have concluded that all of the following five criteria must occur for an incident to be considered an emergency response under the standard. Is this understanding correct?

1. People responding to the incident are from outside the immediate release area\(^1\), e.g., outside the "entire geographic boundary of the employee's assigned work area".\(^2\)

2. There is a potential safety or health hazard\(^3\) e.g., fire, explosion,\(^4\) or at least one valid study indicating acute/chronic adverse health effect.\(^5\)

3. The incident is or could likely result in an uncontrolled release of a hazardous substance.\(^6\)

4. There is need for a coordinated spill control response.\(^7\)

5. The spill/leak cannot be absorbed, neutralized or otherwise controlled at the time of release.\(^8\)

If this understanding is correct, it raises several other questions and concerns.

A. How does the Agency define an employee's "assigned work area?" For instance, if a mechanic or electrician could work in any of four different production units in a plant depending on daily need, we presume that all four units would be considered his "assigned work area" rather that only the one unit he is assigned to on a given day. Is this correct?

If an operator handles a spill in his own plant, he is in his work area and knows the hazards of his materials as required under 29 CFR 1910.1200. It is already part of the job. This is also true of the plant engineer. He also knows the hazards and handling methods for the same materials. Is it correct to conclude that if the plant engineer responds from another similar production unit within the plant, he would be "within the entire geographic boundary" of his work area, trained accordingly, and therefore would not be conducting an emergency response?

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1 1910.120 (a)(3) definition of Emergency Response.
2 July 28, 1989 letter to ORC from OSHA Directorate of Compliance Programs.
3 1910.120 (a)(3) definition of Emergency Response.
4 Ibid
5 1910.(a)(3) definition of Health Hazard.
6 1910.120 (a)(3) definition of Emergency Response.
7 July 28, 1989 letter to XXX from OSHA Directorate of Compliance Programs.
8 1910.120 (a)(3) definition of Emergency Response.

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If an operator, during the course of his normal duties, occasionally makes a trip to the tank farm, an area with its own operators, would the tank farm still be considered his assigned work area? (Company) assumes that so long as the employee has been trained regarding the hazards of the tank farm, it would be considered his assigned work area. Is this correct?

B. Is the location of the incident specifically a factor in determining whether the incident constitutes an emergency response? For example, a tank farm operator handles a tank car leaking from a burst rupture disk. The tank car is in his work area and it is a normal part of his job for which he is trained. It is not an emergency response. The same tank car is parked just outside the plant fence (technically the rail yard property) and starts leaking from a burst rupture disk. He is the plant person who responds. Assuming the other four criteria outlined on page 2 of this letter are met also, is this now an emergency response?

C. To what extent does the Agency mean to factor in exposure -- real or potential? There are very few materials which do not present a potential safety or health hazard. For instance, 10 gallons of Fluorocarbon 113 (a degreasing agent) spills outside on concrete in Louisiana heat. No exposure in excess of the PEL would be anticipated. Therefore, one would normally not consider this an emergency response. But if the same 10 gallons of FC-113 spilled in a confined space, it might be reasonable to expect exposure greater than the PEL during cleanup. Assuming all the other criteria are met, would this then be an emergency response? Suppose a worker accidentally spills a 55 gallon drum of toluene at his work station (undiked area) during the summer. Please consider the following circumstances and our conclusions regarding them:

1) With help from persons outside his work area, the worker is able to contain the spill area with spill pillows. However, due to the temperature outside the employees may be exposed to greater than the 100 ppm PEL during the response. It is our understanding that this would clearly be an emergency response situation because of the existence of a potential health hazard and the need for a coordinated response from persons outside of the work area.

2) If the same scenario occurred during the winter and no exposure greater than the PEL was expected, we would not consider this an emergency response even though persons outside the work area were called in, because there is no potential exposure hazard.

3) Suppose the worker is able to contain the spill area with spill pillows, but due to the temperature outside he may be exposed to greater than the 100 ppm PEL during the response and clean-up. We would also not consider this an emergency response solely on the basis of the potential health hazard.

Is our interpretation of the standard correct in these cases?

D. When the major hazard of the material is skin absorption, and inhalation is not a risk, a spill can usually be handled without airborne exposure. When does a release of this nature become an emergency response situation?

E. Does the Standard allow for the use of professional judgment in determining exposure? Even where inhalation is a factor, years of handling experience with materials may lead to the conclusion that exposure is not likely and there is no risk to the responders, and therefore, no emergency. In many cases, because equipment is not readily available or there are no direct reading instruments for the material of concern, no exposure measurement can actually be taken.

F. What is an "uncontrolled release?" A spill or leak that is not incidental? How does the Agency define incidental? Is risk to the environment alone enough criteria to establish a situation as an emergency under 1910.120? (For example, small quantity run-off to a waterway?) Based on the above criteria, we presume not.
G. There is general confusion regarding how 1910.120 applies when a plant not handling TSD waste is located within a RCRA TSD facility. Often, because of ease of permitting, an entire site is permitted as a RCRA TSD facility even though several units within the facility do not involve TSD activities. It is our understanding that, in this situation, employees working with RCRA regulated TSD waste are subject to training requirements in paragraph (p) while those not involved with TSD waste are not. Is this correct?

H. In light of the above questions and scenarios, (Company) believes that OSHA should ensure that the following factors be considered, on a case by case basis, when determining whether an incident constitutes emergency response situation:

1. Size of the spill release. One pound of hydrogen fluoride in the air is quite a different problem from 100 pounds.
2. The material spilled. A spill of a 55-gallon drum of calcium hydroxide is quite a different problem than a 55-gallon spill of phenol.
3. Cause of the spill/leak. A solvent spilled from a leaking pump during process operations is incidental, but the same solvent spilled by a container falling off a truck is not.
4. Actual or estimated exposure (to responder, to neighbors, etc.).
5. Level of emergency response training and knowledge of the particular process or operation and its hazard potential.
6. Location of the incident.

Question 2.

Scenarios - OSHA's interpretation of how the standard applies in the following circumstances would be helpful:

Scenario A - In a herbicide manufacturing plant a large silo containing 24,000 lbs of ammonium sulfamate (PEL 10 mg/m3, RQ = 5000 lbs) spills due to age. The raw material is transferred by workers into small rail cars and drums. Exposure is below the PEL, but an organized response to transfer the material is made. Is this an emergency response? What if the spill occurred during a rain storm? Would that constitute an emergency because of the high solubility of the material and potential for run-off?

If the rupture occurred during the first shift at the plant and an immediate response was made by workers in another area to transfer the material, would that be an emergency response? What if the same spill occurred on third shift and due to the small crew size it was covered and left until the first shift? Would that change the answer?

Scenario B - During a shift, a pipeline containing chlorinated solvents develops a leak at a joint. A nearby worker trained to the level of a First Responder Operations Level notices this and on his way to get spill pillows and notify the emergency staff he turns off the valve on that pipe, thereby stopping the leak.

Does his active participation to stop the leak mean he should have been trained to HazMat Technician level or was training at First Responder Operations Level adequate since it was in his work area, it is part of his duties and training to prevent the spreading of the spill?

Scenario C - If response to incidental spills/releases are part of a trained operator's "normal duties," how long should the worker attempt to clean up or contain the spill before it becomes an emergency? What if two other trained workers from his area help - is this now an emergency response? If maintenance is initially called to clean up the spill (regardless of material or quantity) - does this make it an emergency response?
Scenario D - A large facility holds a RCRA TSD (Part B) permit for operation of a boiler which is fueled by a process waste stream. The plant has an emergency brigade to handle emergencies at the production units in the plant but also those which might occur at the boiler. Which of the following training requirements apply to the brigade?

Because the plant is subject to a TSD permit, training for emergency response is included under training requirement of paragraph (p) "Employee members of TSD facility ER organizations shall be trained to a level of competence..."

OR

Paragraph (p) applies only to TSD related activities at TSD facilities; that is, permitted operations involving hazardous waste. A brigade which responds to non-TSD related incidents would be subject to paragraph (q) of the rule. "24 hours initial and annual refresher of sufficient content/duration to maintain competency or yearly demonstration of competency..."
ABSTRACT
This interpretation responds to an inquiry concerning the application of the Hazardous Waste Operations and Emergency Response Standard, 29 CFR 1910.120, to cleaning petroleum storage tanks located in tank terminals and refineries. Tank cleaning is covered by 1910.120 if any of the following apply: a government body requires the tank to be removed because of the potential threat to the environment or the public; the activities are necessary to complete a corrective action under RCRA; a governmental body has recognized the site to be contaminated with hazardous substances; or there is a need for emergency response procedures.

INTERPRETATION
29 CFR 1910.120(a)(1)
DEC 11, 1990
This is in response to your inquiry concerning the application of the Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120) to cleaning petroleum storage tanks located in tank terminals and refineries.

Tank cleaning is covered by 29 CFR 1910.120 if any of the following apply:

1. A government body is requiring the tank to be removed because of the potential threat to the environment or the public;

2. The activities are necessary to complete a corrective action under the Resource Conservation and Recovery Act and amendments.

3. A governmental body has recognized the site to be contaminated with hazardous substances; or

4. There is a need for emergency response procedures.

Note: It is not a requirement that a release must have occurred in order to meet the above triggering elements.

On the other hand, where 1910.120 does not apply other OSHA standards, including 5(a)(1) of the Act would be applicable.
ABSTRACT This response addresses the applicability of 1910.120 to general industry. Only 1910.120(q) applies to general industrial workplaces that have a potential for emergencies resulting from hazardous substance. Employers have the option of using employees to respond to emergencies and to meet the requirements in (q) or of evacuating employees from the hazardous area when an emergency occurs and developing an emergency action plan in accordance with 29 CFR 1910.38(a). The intent of the exception listed under 1910.120(a)(2)(iii) is to explain that the application of paragraph (p) of the standard is limited to TSD operations required by the EPA to have a permit or interim status. Employers who have TSD areas but are not required to have a TSD permit or interim status have the option of complying with only sections (p)(8) or (q) of the standard for any emergency response operations at those areas. A response team trained under (q) can be used to respond in a permitted area and for the rest of the facility.

INTERPRETATION 29 CFR 1910.120(a)(1)(iv); (a)(2)(iii); (p)(8); 1910.38(a)(1)

DEC 21, 1990

This is an update to our response to your letter of October 19, on behalf of Mr. D and Ms. D of the (Company), regarding the application of the Hazardous Waste Operations and Emergency Response standard (29 CFR 1910.120) to general industry. Please accept our apology for the delay in this reply.

The Occupational Safety and Health Administration (OSHA) believes that the scope and application of this standard as outlined below carries out the intent of Congress and is consistent with good occupational safety and health policy.

Operations

Clean-up of hazardous substances. (b)-(o)

Licensed or interim status

hazardous waste treatment, storage, or disposal (TSD) facilities. (p)

Emergency response situations involving hazardous substances that occur at locations other than hazardous waste sites and TSD facilities. (q)

As you can see, only section (q) of the standard applies to general industrial workplaces that have a potential for emergencies resulting from hazardous substance. Furthermore, this standard provides employers the option of using employees to respond to emergencies and meet the requirements in (q) or evacuate their employees from the hazardous area when an emergency occurs and provide an emergency action plan in accordance with 29 CFR 1910.38(a).

The Intent of the exception listed under 29 CFR 1910.120(a)(2)(iii) is to explain that the application of paragraph (p) of the standard is limited to TSD operations required by the Environmental Protection Agency (EPA) to have a permit or interim status. Employers who have areas of a facility used primarily for treatment, storage, or disposal but are not required to have a TSD permit or interim status have the option of complying with only sections (p)(8) or (q) of the standard for any emergency response operations at those areas. Since it does not always make sense to maintain two emergency response teams - one for the permitted area and the other for the rest of the facility (although such a practice is not precluded) - one can use a response team trained under (q) to respond throughout the whole facility.
We regret if you received confusing direction on these issues. We cannot, however, consider violations de minimis unless there is no immediate relationship to employee safety or health.

NOV 16, 1990

This is an interim response to your letter of October 19, on behalf of Mr. D and Ms. D of (Company) regarding the Occupational Safety and Health Administration Hazardous Waste Operations and Emergency Response standard (29 CFR 1910.120).

October 19, 1990

Attached are copies of the correspondence that I have received from Mr. D and Ms. D regarding OSHA's interpretation of 29 CFR 1910.120, dealing with hazardous waste operations.

October 4, 1990

Attached you will find a copy of a letter we sent to Mr. X regarding OSHA's interpretation of 29 CFR 1910.120, dealing with hazardous waste operations. When this regulation was initially proposed and mandated by Congress, the intent was to protect workers at hazardous waste sites and to have only minimal impact on industry. The regulation was expanded to include industrial operations and employees who might be required to clean up a spill of hazardous materials within their workplace.

OSHA has now expanded the requirements to include training far in excess of what would be necessary to properly and adequately protect industrial workers by mandating the same level of training as would be required at a facility treating and disposing of hazardous waste. We believe this provides an unnecessary burden on the manufacturing segment and has forced many companies to abandon their first response position to hazardous waste spills. Rather than train their employees to contain a spill they have elected to walk away from a spill and simply call an outside firm to come in and stop the leak or spill of hazardous materials and/or clean up the material after such a spill. This is not in the best interest of either the government or our environment. This action is, however, in full compliance with OSHA's current requirements.

SOURCE LETTER

October 4, 1990

It has recently come to our attention that there appears to be a serious discrepancy in the interpretation of the OSHA Standard on Hazardous Waste Operations and Emergency Response (1910.120) in regard to the coverage of industries that are regulated as generators and small quantities of hazardous waste.

In the original Final Standard published in the March 6, 1989 Federal Register there was an exemption in a (2)(iii) that discussed large and small quantity generators with regard to their being covered under p(8) of the standard. While this exemption was located in a confusing section, it seemed apparent to us that there was an intent to limit the coverage of this standard for the normal industrial workplace. The RCRA classifications of these workplaces were described and we could think of no other meaning for this exemption other than to basically require only "RCRA type" spill training for these workers.

Because some of our clients were also confused by this exemption and by the entire standard, we called OSHA in Washington on March 8, 1990 and spoke to Mrs. X to request clarification. At that time she stated there was a great deal of confusion about that exemption and that shortly there would be a clarification published in the Federal Register.

On April 13, 1990 the correction to the rule was published. This preamble to the correction clearly states "Certain employers ("excepted employers") are not required to have a permit or interim status because they are conditionally exempt small quantity generators under 40 CFR 261.5 or are generators who qualify under 262.34 for exemptions from regulation under 40 CFR parts 264, 265 and 270." In the final preamble and standard, OSHA has summarily referred to these employers as small quantity generators and as large quantity generators of hazardous waste who store for less than 90 days. These excepted employers are not covered by paragraphs (p)(1) through (p)(7) of this section. Excepted employers only need comply with paragraph (p)(8).
The preamble to the correction goes on to explain that excepted employers who are required by EPA or the state to engage in emergency response are covered by (p)(8) and those that are not so required are generally exempt entirely.

In the actual correction to the standard there is a new paragraph (C) in (a)(2)(iii) which serves to confuse rather than clarify what was stated in the preamble. This states that emergency response in areas used for treatment, storage and disposal of hazardous waste only is covered by (p)(8) but in other areas emergency response is covered by (q). Since technically speaking as soon as a "hazardous substance" is spilled it becomes a hazardous waste it could be interpreted that all emergency response in a RCRA facility would occur in an area used for treatment, storage and disposal of hazardous waste. Therefore all emergency response should fall under paragraph (p)(8).

Recently, a company in the (State) area was cited by the Area office for failure to meet the requirement of paragraph (q) though they are a large quantity generator and have a program that complies with the requirements of paragraph (p)(8) of this standard. This company's SPCC calls for employees only to dike to control a spill, to evacuate from the danger area, and to call for a professional Haz Mat team to clean-up the spill.

When we called Mr. X in the (State) OSHA office to discuss this he stated that it is OSHA's policy to require employees who are generators of hazardous waste to comply with the requirements of (q). He refused to explain why there was this apparent discrepancy in interpretation and said that "they" did not write the April 13 correction and did not agree with it.

We are offended that employers have been placed in the position of having to guess what OSHA wants to be in compliance with this standard. If the intent of the exemption in the standard was not to limit the coverage for industrial facilities where the hazards are very well known and storage and use well controlled, then what does this mumbo-jumbo mean. In following the history of this standard it is clear that this was never meant to impose unnecessary and expensive requirements on general industry.

Following OSHA's current interpretation of the requirements for generators and small quantity generators leads to some very inconsistent and ridiculous situations. For example:

The employee working for an emergency response company who never knows what kind of hazard that he/she may encounter when they arrive at a site will have the same level of training as the industrial employee responding to known materials.

The industrial facility employee where the kinds of waste and raw materials are the same day after day will require the same level of training as the TSD employee where the waste streams are constantly changing.

If after reviewing this situation you do not agree with our feeling that this current interpretation is incorrect, we would greatly appreciate a thorough explanation, not only to us but to industry. In addition, we believe that since OSHA has now misled industry in how this standard applies to them several times that violations that result from this situation be classified as de minimis and no fines assessed. OSHA should also take immediate steps to correct this misinformation by widely publicizing this new interpretation.
Employers may certify safety and health professionals as “equivalently trained” to carry out occasional work at an RCRA-permitted Treatment, Storage, and Disposal Facility (TSDF) if the personnel are sufficiently informed about both general and site-specific health and safety information pertinent to TSDFs. In some cases, previous training and experience may be sufficient to demonstrate that it was equivalent to the initial training required under 29 CFR 1910.120(p)(7)(ii). However, some personnel may need site-specific health and safety information to satisfy the initial 24 hours of training requirement. All personnel assigned to RCRA-permitted TSDF areas must have at least 8 hours of refresher training per year in safety and health information specific to their TSDF job responsibilities.

Employers who can show by an employee's previous work experience and/or training that the employee has had training equivalent to the initial training required by this paragraph, shall be considered as meeting the initial training requirements of this paragraph as to that employee. Current employees shall receive eight hours of refresher training annually.

OSHA interprets this subparagraph to mean that you may certify your safety and health personnel as “equivalently trained” if they are sufficiently informed about both general and site-specific health and safety information pertinent to TSDFs. Previous training and experience may fulfill both training requirements. However, it is likely that site-specific health and safety information may be necessary in order to satisfy the initial 24 hours of training requirement. All personnel assigned to RCRA permitted Treatment, Storage, and Disposal areas must also have at least 8 hours of refresher training per year in safety and health information specific to their job responsibilities at your TSDF.

Dear Mr. P:

This is in response to your telephone inquiry of Thursday, April 11, 1991 concerning the Occupational Safety and Health Administration’s (OSHA) Hazardous Waste Operations and Emergency Response final rule (29 CFR 1910.120). Please accept my apology for the delay in this reply.

Your specific question relates to the training requirements for your health and safety professionals and specifically if their previous training can be used to certify these professionals for occasional work responsibilities in your RCRA permitted Treatment, Storage, and Disposal Facility (TSDF).

Section 1910.120(p)(7)(ii) describes the training requirements for current employees. This subparagraph states:

MAY 15, 1991

Dear Mr. P:

This is in response to your telephone inquiry of Thursday, April 11, 1991 concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule (29 CFR 1910.120). Please accept my apology for the delay in this reply.

Your specific question relates to the training requirements for your health and safety professionals and specifically if their previous training can be used to certify these professionals for occasional work responsibilities in your RCRA permitted Treatment, Storage, and Disposal Facility (TSDF).

Section 1910.120(p)(7)(ii) describes the training requirements for current employees. This subparagraph states:

Employers who can show by an employee's previous work experience and/or training that the employee has had training equivalent to the initial training required by this paragraph, shall be considered as meeting the initial training requirements of this paragraph as to that employee. Current employees shall receive eight hours of refresher training annually.

OSHA interprets this subparagraph to mean that you may certify your safety and health personnel as "equivalently trained" if they are sufficiently informed about both general and site specific health and safety information pertinent to TSDFs. Previous training and experience may fulfill both training requirements. However, it is likely that site specific health and safety information may be necessary in order to satisfy the initial 24 hours of training requirement. All personnel assigned to RCRA permitted Treatment, Storage, and Disposal areas must also have at least 8 hours of refresher training per year in safety and health information specific to their job responsibilities at your TSDF.

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Hazardous Waste Operations and Emergency Response training must be based on the duties and function that each emergency respondent will perform. Thus training may be generic when providing health and safety background, but must be site-specific with regard to such elements as the employer's emergency response plan. For emergency responders, site-specific training increases with the level of activity, e.g., that of a hazardous materials technician. OSHA field compliance officers have two options when citing an employer for insufficient site-specific training under paragraph (q) of 29 CFR 1910.120: Either the training is not based on the duties and functions to be performed; or responders hired after the effective date of the standard did not receive sufficient training to achieve the skill and knowledge levels needed before they took part in an actual emergency response.

Where training on personal protective equipment (PPE) involves only one brand, OSHA recognizes the training as adequate for use of other brands of personal protective equipment, although training programs should include an array of PPE brands. Review of PPE and equipment available to employees during emergencies is an important part of OSHA's evaluation. The absence of specific emergency response equipment does not necessarily imply a lack of training in its use.

This is in response to your inquiry of April 23, 1991, concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule (29 CFR 1910.120).

You had three specific questions, which are addressed below.

First, you asked:

1) To what degree must the HAZWOPER training for emergency response within industry be site-specific? If an employer has an employee attend a generic course, what actions or additional training must be provided, and if this step is not taken, what will OSHA compliance do in the event of an inspection?

Required training under section (q) of HAZWOPER for emergency response may be general in part but must include some site specific elements. This is required in the first sentence of paragraph (q) section (6), which reads:

Training. Training shall be based on the duties and functions to be performed by each responder of an emergency response organization.

For emergency response teams at an industrial facility this necessarily includes site specific elements. That is to say that the "duties and functions" are a function of site specific parameters. For example, the emergency responders must be trained in the employer's emergency response plan. However, more elements can be covered in a general training. For example, personal protective equipment (PPE), knowledge and terminology of basic hazard assessment and general confinement procedures.

Thus, there are two components to the required training: general health and safety background and on site specific safety and health information. The former component, may be covered by the "generic" training courses you described.

For emergency responders, the site specific training required increases with the level of training. You will note that the hazardous materials technician level of training requires that the employee "know how to
implement the employer's emergency response plan". The hazardous materials specialist duties "require a more directed or specific knowledge of the various substances they may be called upon to contain".

OSHA field compliance officers have two options for citing an employer that did not include sufficient site specific training in the training required under paragraph (q) of the final rule. They may use either citation depending on what seems most appropriate to them from their observations in the field, or they may write their own citation. The exact language is contained in OSHA's Standard Alleged Violations Elements (SAVEs) Manual. The options read as follows:

- **Option 1**: 29 CFR 1910.120(q)(6): Training was not based on the duties and function to be performed by each responder of an emergency response organization.

- **Option 2**: 29 CFR 1910.120(q)(6): The skill and knowledge levels required for all new responders, those hired after the effective date of this standard, were not conveyed to them through training before they were permitted to take part in an actual emergency operations on an incident.

Your second question reads as follows:

2) If an employee is trained on examples of PPE and not on the specific equipment used by the employee (i.e. type of chemical protection suit) will OSHA compliance conclude that the training provided was inadequate?

If an employee is trained on a representative sample of personal protective equipment, OSHA will consider the employee adequately trained for use of other brands of the same level of protective equipment. However, OSHA encourages all employers to familiarize employees with the specific PPE they will be expected to use. Additionally, training programs should include an array of brands of personal protective equipment used for demonstration purposes.

Your third question reads as follows:

3) During inspections will OSHA compliance inspect or review the emergency equipment available to employees? If a deficiency is found, under what standard will the violation be cited and will the corresponding training be determined as improper?

Review of PPE and equipment available to employees for use during emergencies is an important part of OSHA's evaluation of emergency response procedures. If a deficiency is found, there are several citation options such as 1910.120(q)(1), 1910.120(q)(2)(xi), 1910.120(q)(10) and 1910.134.

The corresponding training would not necessarily be determined as improper. The absence of specific emergency response equipment does not necessarily imply a lack of training in its use. If the OSHA Compliance Officer determined that the training was lacking in regard to that specific piece of emergency equipment, the employer could then be cited under paragraph (q) subparagraph (6).

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**SOURCE LETTER**

April 23, 1991

Dear Ms. C:

I am requesting a written interpretation of section(s) of the OSHA HAZWOPER (29 CFR 1910.120) standard. Concern for employers that participate in "generic" HAZWOPER training is increasing due to the various interpretations of the training requirements specified within paragraph (q)(6) of this standard.

No where in the standard does OSHA stipulate that training must be site specific. The intent of the standard and prudent practices suggest site specific training; however, the letter of the regulation is vague. Certain uninformed or cost conscious employers are reading this as a "loophole" that allows them to take the easy way out (i.e., employees attending a program that is not customized to their operation - EPA sponsored Fire Fighter training, Community College courses...). I am requesting compliance clarification for the following questions. Your responses may be quoted within my monthly newsletters and magazine articles.
1) To what degree must the HAZWOPER training for emergency response within industry be site specific. If an employer has employees attend a generic course what actions or additional training must be provided and if this step is not taken what will OSHA compliance do in the event of inspection?

2) If the employer is trained on examples of PPE and not on the specific equipment used by the employee (i.e., type of chemical protection suit) will OSHA compliance conclude that the training provided was inadequate?

3) During inspections will OSHA compliance inspect or review the emergency equipment available to employees? If a deficiency is found, under what standard will the violation be cited and will the corresponding training be determined as improper?

I have enclosed a self addressed envelope for your convenience and in the hope to quicken your reply.
RECORD ID 4360

STANDARD NUMBER 1910.120(a)(2)(ii); (p); (p)(8)(i); (p)(8)(ii); (p)(8)(iii); (q); (q)(1); (q)(2)(ii); (q)(3)(i); (q)(5); (q)(6)(i); (q)(6)(ii); (q)(6)(iii); (q)(6)(iv); (q)(6)(v); (q)(7)

INFORMATION DATE 910510

ABSTRACT
An employer's plan to have an in-house engineer train employees in Hazardous Waste Operations and Emergency Response requirements up through those placed on hazardous material technicians raises concern. The staff engineer should be trained to the on-scene incident command level and designated as such. Ultimate responsibility for directing an emergency response is in the hands of the on-scene incident commander. If an employer concludes that, based on documentation, its current employees can objectively demonstrate competency in the areas described in 29 CFR 1910.120(q)(6)(i) and (q)(6)(ii), the employer may certify those employees as trained to the first responder awareness level or first responder operations level, respectively. However, the hazardous material technician, hazardous material specialist, and on-scene incident commander levels all require a minimum of 24-hours training regardless of experience. OSHA is working on a new regulation concerning certification of a HAZWOPER final rule to be promulgated in the future.

INTERPRETATION
29 CFR 1910.120(a)(2)(ii); (p); (p)(8)(i); (p)(8)(ii); (p)(8)(iii); (q); (q)(1); (q)(2)(ii); (q)(3)(i); (q)(5); (q)(6)(i); (q)(6)(ii); (q)(6)(iii); (q)(6)(iv); (q)(6)(v); (q)(7)

MAY 10 1991

Dear Mr. M:

Thank you for your inquiry of March 12 concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule (29 CFR 1910.120). Please accept my apology for the delay in this reply.

Your specific question relates to the scope of the rule specific to your company, the ability of your engineering personnel to conduct in-house training and previous experience in regard to the 24-hour training requirement.

(Company), Inc., as an employer of employees who may potentially be involved in "emergency response operations for releases of, or substantial threats of release of, hazardous substances, without regard to the location of the hazard" (i.e., ammonia from your refrigeration system), does fall under the scope of 1910.120. Your status as a "conditionally exempt small quantity generator" allows exception from requirements under section (p)(1) through (p)(7) of 1910.120. However, this does not exempt the employer from the requirements in section (p)(8) or (q). If your emergency response plan calls for evacuation of all employees in the danger area you may be exempt from the requirements in danger section (q). Please refer to enclosures A and 8 for an in depth discussion of exceptions from 1910.120 and whether sections (p)(8) or (q) applies.

If (Company) Inc. believes that a "staff engineer with an Engineering degree", satisfies the language of section (q)(7), that engineer can conduct an in house training program. The exact language of the regulation concerning trainers can be found in 1910.120(q)(7). The final rule states:

"(7) Trainers. Trainers who teach any of the above training subjects [section q(6)(i-v)] shall have satisfactorily completed a training course for teaching the subjects they are expected to teach, such as the courses offered by the U.S. National Fire Academy or they shall have training and/or academic credentials and instructional experience necessary to demonstrate competent instructional skills and a good command of the subject matter of the courses they are to teach.

You mention in point 2 of your letter that you intend to have the engineer train your employees through the requirements for a hazardous material technician (section q(6)(iii)). This raises concern at OSHA as it makes no allowance for training of the "on scene incident commander," who will direct the emergency response beyond the first responder level. This individual is the key player of the (Name) team. Section (q) requires that someone be identified as the on-scene incident commander and trained to a level
commensurate with his duties as such (the level of training required is described in section (q)(6)(v)). Perhaps, your "staff engineer with an Engineering degree," who will perform your in-house training program should be trained to the on-scene incident command level and designated as such.

Prior to the arrival of outside assistance, the senior emergency response official responding to an emergency shall become the individual in charge of the incident command system. The note to section (q)(3)(i) in the final rule clearly delineates from that point forward.

Note to (q)(3)(i) - The "senior official" at an emergency response is the most senior official on the site who has the responsibility for controlling the operations at the site. Initially, it is the senior officer on the first due responding emergency apparatus to arrive on the incident scene. As more senior officers arrive (e.g., battalion chief, fire chief, state law enforcement official, site coordinator) the position is passed up the line of authority, which has been previously established.

Section (q)(1) requires a written emergency response plan. This emergency response plan "shall be developed and implemented to handle anticipated emergencies prior to the announcement of emergency response operations." This plan would identify the "on-scene incident commander" and clearly delineate lines of authority and procedures to be followed. Section (q)(6) has different training requirements because different roles are to be assigned to different employees in anticipation of an emergency response to release of a hazardous substance. Those employees that will be required to notify the proper authority of the release and take no further action would only be required to have "first responder awareness" level training. Those informed of the incident and who take an aggressive role to stop the release of hazardous substance must be trained at least to the "hazardous materials technician" level. In your specific situation, i.e., having only one hazardous substance, there is really no difference between the "hazardous material technician" level and the "hazardous materials specialist" level. Ultimate responsibility for directing the emergency response is in the hands of the "on-scene incident commander".

The issue of training requirements for experienced current employees is addressed in section (q)(6)(i) through (q)(6)(v) Sections (q)(6)(i) and (q)(6)(ii) require training "or" "sufficient experience" whereas sections (q)(6)(iii) through (q)(6)(v) require "at least 24 hours of training" in addition to demonstrating competencies. Therefore, if (Company) Inc. concludes based on documentation its current employees can objectively demonstrate competency in the areas described in section (q)(6)(ii) and (q)(6)(ii) they may certify those employees as trained to the first responder awareness level or first responder operations level respectively. However, the hazardous material technician, hazardous material specialist, and on scene incident commander levels all require a minimum of 24 hours training regardless of experience.

This guidance pertains to a current interpretation of the HAZWOPER final rule (1910.120). OSHA is working on a new regulation concerning certification of HAZWOPER training programs (1910.121), which will be promulgated in the future. Currently, this new rule is in rule making. Hearings have already taken place. Therefore, (Company) Inc. may want to monitor the progress of this new standard and anticipate needed changes in your training and certification programs to insure continued compliance by your training division.

Attachment A:


HAZWOPER was amended April 13, 1990, and the following exceptions to training requirements were more clearly delineated in corrected paragraph (a)(2)(iii). The exceptions sub paragraph reads as follows:

Notes and Exceptions: (A) All provisions of paragraph (p) of this section cover any treatment, storage of disposal (TSD) facility regulated by 40 CFR parts 264 and 265 or by state law authorized under RCRA and required to have a permit or interim status from EPA pursuant to 40 CFR 270.1 or from a state agency pursuant to RCRA. (B) Employers who are not required to have a permit or interim status because they are conditionally exempt small quantity generators under 40 CFR 261.5 or are generators who qualify under 40 CFR 262.34 for exemptions from regulation under 40 CFR parts 264, 265, and 270 ("excepted employers") are not covered by paragraphs (p)(1) through (p)(7) of this section. Excepted employers who are required by the EPA or state agency to have their employees engage in emergency response or who direct their employees to engage in emergency response are covered by paragraph (p)(8) of this section and cannot be exempted by (P)(8)(i) of this section. Excepted employers who are not required to
have employees engage in emergency response, who direct their employees to evacuate in the case of such emergencies and who meet the requirements of paragraph (p)(8)(l) of this section are exempt from the balance of paragraph (p)(8) of this section. (C) If an area is used primarily for treatment storage and disposal any emergency response operations in that area shall comply with paragraph (p)(8) of this section. In other areas not primarily used for treatment storage or disposal any emergency response operations shall comply with paragraph (q) of this section. Compliance with the requirements of paragraph (q) of this section shall be deemed to be in compliance with the requirements of paragraph (p)(8) of this section.

The Resource Conservation and Recovery Act defines a conditionally exempt small quantity generator in section 261.5, which reads as follows:

(a) a generator is a conditionally exempt small quantity generator in a calendar month if he generates no more than 100 kg of hazardous waste in that month. (b) Except for those wastes identified in paragraphs (e), (f), (g) and (j) of this section a conditionally exempt small quantity generator’s wastes are not subject to regulation under parts 262 through 266, 268 and parts 270 and 124 of this chapter and the notification requirements of section 3010 of RCRA, provided the generator complies with the requirements of paragraphs (f), (g) and (j) of this section.

Section 262.34 of RCRA, covers accumulation time and criteria for exception from various parts of RCRA:

(a) Except as provided by paragraphs (d), (e) and (f) of this section, a generator may accumulate hazardous waste on site for 90 days or less without a permit or without having interim status, provided that:

The provisions include storing wastes in RCRA approved tanks and containers, which must be labeled with the start date of accumulation, and have a sign identifying the container as containing "Hazardous Waste.

For more information in the specific provisions entailed in (a) above, or for general information concerning the Resource Conservation and Recovery Act (RCRA) call the RCRA Hotline at 1-800-424-9346 from 8:30 am to 7:30 pm eastern standard time.
ABSTRACT The Hazardous Waste Operations and Emergency Response (HAZWOPER) rule applies to five distinct groups of workers as listed in paragraph (a) of the standard. Any employees who are exposed or potentially exposed to hazardous substances including hazardous waste and who are engaged in one of the five operations are covered. The training requirements set out under 29 CFR 1910.120 apply according to which of the five operations an employer and its work force are performing. In general, hazardous material generators who are using, packaging and transporting hazardous materials may be required to train their employees as set out in 29 CFR 1910.120 and 1910.120, depending on the chemicals they work with and the actions they are required to take during an emergency; the content and objective of the training required by the two standards are different. HAZWOPER only covers employees at hazardous waste sites, treatment, storage and disposal facilities and those employees who will respond to emergencies involving the spill of hazardous material. The Hazard Communication Standard covers all employees who work near chemicals. 29 CFR 1910.134 details the training required of those using personal protective equipment. No specific requirements for training supervisors exist under 1910.1200. The maximum allowable penalty for each willful or repeated violation of 29 CFR 1910.120 or 1910.1200 is $70,000.

INTERPRETATION 29 CFR 1910.120(a)(1); (p); (q)(6); 1910.134(e)(5); 1910.1200(b)(1); 1910.1200(h)(2); (h)(2)(i); (h)(2)(ii)

JUN 10 1991

Dear Mr. W:

This is in response to your inquiry of April 13, concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule (29 CFR 1910.120) (HAZWOPER) and the Hazard Communication Standard (29 CFR 1910.1200) (HCS). Please accept my apology for the delay in this reply.

Thank you for your interest in these regulations and for your dedication to insuring a safe and healthful work place for you and your colleagues.

Your first question relates to the scope of 1910.120 and 1910.1200. It reads as follows:

1.) Are hazardous materials generators who are using, packaging and transporting hazardous materials to 90 day storage areas required to have training as specified in 29 CFR 1910.120 or 1910.1200?

The Hazardous Waste Operations and Emergency Response Rule applies to five distinct groups of workers as listed in paragraph (a) of the standard. Any employees who are exposed or potentially exposed to hazardous substances including hazardous waste and who are engaged in one of the following operations are covered as discussed below:

(1) Clean-up operations required by a governmental body, whether federal, state, local or other involving hazardous substances that are conducted at uncontrolled hazardous waste sites (including but not limited to EPA's National Priorities List (NPL), state priority lists, sites recommended for the EPA NPL and initial investigations of government identified sites which are conducted before the presence or absence of hazardous substances is ascertained);

(2) Corrective actions taken in clean-up operations at sites covered by the Resource Conservation and Recovery Act of 1976 (RCRA) as amended (42 U.S.C 6901 et seq.);

(3) Voluntary clean-up operations at sites recognized by federal, state, local governmental bodies as uncontrolled hazardous waste sites.
(4) Operations involving hazardous wastes that are conducted at treatment, storage and disposal (TSD) facilities regulated by 40 CFR 264 and 265 pursuant to RCRA, or by agencies under agreement with U.S.E.P.A. to implement RCRA regulation; and

(5) Emergency response operations for releases of, or substantial threats of release of, hazardous substances, without regard to the location of the hazard.

The applicable training requirements under 1910.120 depend on which above listed operations are involved. From your letter it appears that your workplace may potentially fall into either category (4) or (5). For operations in (4) and (5) above the requirements are specified in 1910.120 paragraphs (p) and (q) respectively.

There are exceptions to paragraphs (p)(1) through (p)(7) which are discussed in attachment A to this letter. It appears from your letter that hazardous waste is stored at your facility for less than 90 days. Therefore, your facility may not be required to have a RCRA permit. If that is the case, paragraphs (p)(1) through (p)(7) of 1910.120 would not be required of your employers.

Paragraph (p)(8) and/or (q) of 1910.120 would apply to your workplace if the employees are at substantial threat of releases of the hazardous substances you listed in your letter and provide emergency response.

Paragraph (p)(8) applies in areas used for treatment, storage or disposal of hazardous waste. In other areas not used primarily for treatment, storage or disposal of hazardous waste, any employers with employees involved in emergency response operations must comply with (q). The employer may choose to comply with (q) throughout the facility which would satisfy the requirements of paragraph (p)(8). There are also exceptions to some of paragraph (q) requirements that are discussed in attachment B to this letter.

Paragraph (q) of 1910.120 requires different levels of training depending on the employees assigned role during an emergency response. The required training and competencies for each level of emergency response are described in detail in paragraph (q)(6) of the final rule, which is enclosed.

The Hazard Communication Standard (HCS) also requires training for employees exposed or potentially exposed to hazardous chemicals. The Hazard Communication Standard does not, however, cover hazardous wastes as defined and regulated by the EPA. For other hazardous chemicals known to be present at the workplace, the standard states that health hazard information is required to be transmitted from the chemical manufacturer or importer and flow “downstream” with the substance as it is used by industry.

For your further information, I am enclosing the OSHA booklet “Chemical Hazard Communication” which will provide you with information on the requirements of the HCS, including required workplace training.

In general, “hazardous materials generators who are using, packaging and transporting hazardous materials” may be required to train their employees by 1910.1200 and by 1910.120, depending on the chemicals they work with and the actions they are required to take during an emergency. The content and objective of the required training from the two standards are different.

Your second question reads as follows:

2.) Please explain the difference between 29 CFR 1910.120 and 1910.1200 as it applies to the individual employee.

The required Hazard Communication covers all employees who work near chemicals. It requires the employer to train workers about workplace specific safety and health hazards, how the employee can access information pertaining to those hazards and how the employee can use the information effectively to protect his or her health. The Hazard Communication Standard has limited training requirements with regard to emergency procedures. The employer must provide employees with training on recognizing hazardous incidents and how to evacuate during an emergency.

In contrast, HAZWOPER only covers employees at hazardous waste sites. Treatment, Storage and Disposal Facilities and those employees that will respond during to emergencies involving the spill of hazardous material. For emergency responders there are five different levels of training for five different levels of responsibility during an emergency response. These levels and training requirements for each can be found in paragraph (q)(6) of the final rule which is enclosed.
Your third question reads as follows:

3.) Please specify all training required by the Code of Federal Regulations that pertain to your area of concern.

Besides 1910.120 and 1910.1200 training requirements, there are specific training requirements for those employees required to wear personal protective equipment (PPE). The training required depends on the equipment to be used by the employee. Please refer to 29 CFR 1910.134 for a more in depth discussion of required training for those using PPE.

Your fourth question reads as follows:

4.) Please advise of any training required for supervisors in charge of employees who use, package and transport hazardous materials to 90 day hazardous storage areas.

Under 1910.1200 there are no specific requirements for training supervisors per se. Any employee exposed or potentially exposed to hazardous chemicals must be trained on those hazards regardless of his job title. The level of training required by 1910.120 paragraph (q) is dependent on the role the employee will play when involved in a response to an emergency incident as discussed above.

Your fifth question reads as follows:

5) What are the penalties associated with violations of use, packaging, or transporting of hazardous waste without the proper training as specified in 29 CFR 1910.120 or 1910.1200 which ever one may apply? (minimum and maximum)

The Budget Reconciliation Act passed by the 101st Congress stipulated a seven-fold increase in the maximum limits for OSHA civil monetary penalties. The maximum allowable penalty is now $70,000 for each willful or repeated violation. For further information regarding the new OSHA civil penalties policy I have enclosed fact sheet NO. OSHA 91-36.

Attachment A:


HAZWOPER was amended April 13, 1990, and the following exceptions to training requirements were more clearly delineated in corrected paragraph (a)(2)(iii). The exceptions sub paragraph reads as follows:

Notes and Exception:

(A) All provisions of paragraph (p) of this section cover any treatment, storage of disposal (TSD) facility regulated by 40 CFR parts 264 and 265 or by state law authorized under RCRA and required to have a permit or interim status from EPA pursuant to 40 CFR 270.1 or from a state agency pursuant to RCRA.

(B) Employers who are not required to have a permit or interim status because they are conditionally exempt small quantity generators under 40 CFR 261.5 or are generators who qualify under 40 CFR 262.34 for exemptions from regulation under 40 CFR parts 264, 265, and 270 ("excepted employers") are not covered by paragraphs (p)(1) through (p)(7) of this section. Excepted employers who are required by the EPA or state agency to have their employees engage in emergency response or who direct their employees to engage in emergency response are covered by paragraph (p)(8) of this section and cannot be exempted by (p)(8)(i) of this section. Excepted employers who are not required to have employees engage in emergency response, who direct their employees to evacuate in the case of such emergencies and who meet the requirements of paragraph (p)(8)(i) of this section are exempt from the balance of paragraph (p)(8) of this section*.

(C) If an area is used primarily for treatment storage and disposal any emergency response operations in that area shall comply with paragraph (p)(8) of this section. In other areas not primarily used for treatment storage or disposal any emergency response operations shall comply with paragraph (p)(8) of this section.
with paragraph (q) of this section. Compliance with the requirements of paragraph (q) of this section shall be deemed to be in compliance with the requirements of paragraph (p)(8) of this section.

The Resource Conservation and Recovery Act defines a conditionally exempt small quantity generator in section 261.5, which reads as follows:

(a) a generator is a conditionally exempt small quantity generator in a calendar month if he generates no more than 100 kg of hazardous waste in that month.

(b) Except for those wastes identified in paragraphs (e), (f), (g) and (j) of this section a conditionally exempt small quantity generator's wastes are not subject to regulation under parts 262 through 266, 268 and parts 270 and 124 of this chapter and the notification requirements of section 3010 of RCRA, provided the generator complies with the requirements of paragraphs (f), (g) and (j) of this section.

Section 262.34 of RCRA, covers accumulation time and criteria for exception from various parts of RCRA:

(a) Except as provided by paragraphs (d), (e) and (f) of this section, a generator may accumulate hazardous waste on site for 90 days or less without a permit or without having interim status, provided that:

The provisions include storing wastes in RCRA approved tanks and containers, which must be labeled with the start date of accumulation, and have a sign identifying the container as containing "Hazardous Waste". For more information in the specific provisions entitled in (a) above, or for general information concerning the Resource Conservation and Recovery Act (RCRA) call the RCRA Hotline at 1-800-424-5346 from 8:30 am to 7:30 pm eastern standard time.

Attachment B:

Exceptions from paragraph (q) of the Hazardous Waste Operations and Emergency Response Final Rule (1910.120), as amended April 13, 1990.

There are two areas relating to exceptions from the requirements of 1910.120 paragraph (q).

Incidental spills in manufacturing locations that could be cleaned-up or stabilized by employees working in the immediate spill area without need of a coordinated spill control response are not considered emergency incidents under 29 CFR 1910.120 and therefore do not require employees to be trained. Such employees would have training requirements under the Hazard Communication Standard (1910.1200) and other appropriate training made necessary by the tasks they are expected to perform.

An additional exception from paragraph (q) requirements can be found in paragraph (q)(1) which reads:

Employers who will evacuate their employees from the danger area when an emergency occurs, and who do not permit any of their employees to assist in handling the emergency, are exempt from the requirements of this paragraph if they provide an emergency action plan complying with section 1910.38(a) of this part.

The exceptions from paragraph (q) are allowable. However there is a certain level of knowledge, which could be interpreted as at least awareness level training, required to distinguish between incidental spills that can be handled in house and spills that require evacuation and the assistance of a (Name) team.

OSHA would prefer to see all potentially exposed employees trained to at least the awareness level, regardless, of the employers intention to evacuate in the event of an emergency release incident.

Attachment C:


(2) Mortality among a Cohort of US Man-Made Mineral Fiber Workers: 1985 Follow-up (Gary M. Marsh, PhD; Philip E. Enterline, PhD; Roslyn A. Stone, PhD; and Vivian L. Henderson, MS(Hyg)) Pages 594-603.

Vol. 1-326
April 13, 1991

To whom it may concern:

My name is Mr. W and I am employed by (Company), Inc of (City, State). I work in the Instrument Dept Metrology Lab and use certain chemicals, which I have a partial listing of these chemicals on the preceding page. In the everyday use of these Chemicals we generate waste, which we treat as Hazardous Waste and are required to transport this waste to a 90 day Hazardous Waste storage area.

To date there is a difference of opinion, between Myself and (Company), as to the training required for a Hazardous Waste Generator who uses, packages and/or transports this Hazardous Waste. I have listed five questions on the preceding page, for which I feel, will help to remove the difference of opinion once and for all on both sides. I would appreciate your reply to each question I have listed and any other information you may feel will help.

I am the Union Steward for the Instrument Dept and have tried to work with the (Company), in securing the answers to these questions from your office and to date I have only received road blocks. It seems we are the only ones who are concerned about the answers to these questions. I have recently spoke with Mr. G, OSHA, and our conversation prompted me to secure the proper interpretation of these questions from you. I feel that you, as the Subject Matter Experts, will be able to remove any concern the (Company), or Myself may have in the interpretation of the stated laws.

Thank you for all your time and concern.

April 13, 1991

1.) Are Hazardous Materials Generators who are USING, PACKAGING, AND TRANSPORTING Hazardous Materials to 90 day Hazardous storage areas required to have training as specified in 29 CFR 1910.120 or 1910.1200?

2.) Please explain the difference between 29CFR 1910.120 and 1910.1200 as it applys to the individual employee.

3.) Please specify all training required by the Code Of Federal Regulations that pertains to your area of concern.

4.) Please advise of any training required for supervisors in charge of employees who USE, PACKAGE AND TRANSPORT Hazardous Materials to 90 day Hazardous storage areas.

5.) What are the penalties associated with violations of USE, PACKAGING OR TRANSPORTING of Hazardous Waste without the proper training as specified in 29 CFR 1910.120 or 1910.1200 which ever one may apply? (minimum and maximum)

Listed below is a partial list of Chemicals that we work with!!!

ACIDS: HCl, H2SO4, HNO3
SOLVENTS: Isopropanol, Acetone, MEK, Freon-113, 1,1,1-TCA Mercury Fluorine (Acute)
GlycerinPotassium Sodium Tartrate H2O2Paint NH4OH Phosphoric Acid NaCL4 Ammonium Carbonate Lye (NaOH) Acetone Soldering Flux (Fluoride Salts)
This letter is in response to an inquiry concerning the HAZWOPER standard 1910.120. The specific question asked relates to the responsibilities for hospitals to comply with the HAZWOPER standard "taking into consideration the types of chemicals found in the hospitals and the use of the fire department for emergency response." Hospitals are not specifically exempted from coverage under the HAZWOPER standard 1910.120. OSHA interprets the scope of 1910.120 to cover hospitals in at least three scenarios:

1) When hospitals have an internal release of a hazardous substance that requires an emergency response.

2) When hospitals respond as an integral unit of a community-wide emergency response to a release of a hazardous substance.

3) When a hospital is a RCRA permitted Treatment, Storage and Disposal Facility (TSDF).

This is in response to your inquiry of February 21 concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule (29 CFR 1910.120). Please accept my apology for the delay in this reply.

Your specific question relates to the responsibilities for hospitals to comply with the Hazardous Waste Operations Emergency Response (HAZWOPER) standard (1910.120) "taking into consideration the types of chemicals found in the hospitals and the use of the fire department for emergency response." Hospitals are not specifically exempted from coverage under 1910.120.

After considerable review OSHA interprets the scope of 1910.120 to cover hospitals in at least three scenarios:

1) when hospitals have an internal release of a hazardous substance which requires an emergency response,
2) when hospitals respond as an integral unit of a community-wide emergency response to a release of hazardous substance and,
3) if a hospital is a RCRA permitted Treatment, Storage and Disposal Facility.

The first scenario, albeit rare, includes the accidental release of hazardous substance within a hospital, that requires an emergency response. Incidental releases that can be safely handled by the workers who spilled the substance are not considered emergency responses and therefore are not covered under 1910.120. However, other training requirements, such as those found in the Hazard Communication Standard (1910.1200) would apply.

Spills or releases inside a hospital that require emergency response are covered in paragraph (q) of 1910.120. There are several different levels of training required for emergency responders. The level of training required is a function of the responsibilities the individual will assume during an emergency response.

It is pertinent to note that the definition of "hazardous substance" used in the standard was corrected on April 13, 1990 to include: "(B) any biological agent and other disease causing agent which after release into the environment and upon, exposure, ingestion, inhalation, or assimilation into any person, either
directly from the environment or indirectly by ingestion through food chains, will or may be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations in such persons or their offsprings.*

Therefore hospitals must include medical wastes in their effort to comply with paragraph (q) of HAZWOPER.

Your letter mentions the use of the fire department in the event of an emergency. The employer may enlist outside assistance in the event of an emergency. However, the assistance of outside emergency responders should be coordinated in the emergency response plan prior to an emergency response incident. There are other requirements of the plan such as designating personnel roles, the "senior official" and lines of authority. The emergency response plan may include evacuation procedures for employees and patients and may be a part of the hospital's internal disaster plan.

The second scenario covers hospitals in their role as a part of a community wide emergency response to the release of a hazardous substance. Under the Superfund Amendments and Reauthorization Act of 1986, Title III, communities must prepare an emergency response action plan. It is mandated by the statute that the local hospital participate in the planning process.

If the community emergency response plan identifies a hospital as having decontamination facilities in the event of an emergency, designated hospital personnel must have emergency responder training as outlined in 1910.120 paragraph (q). The level of training required for a particular individual depends on the role he or she will be expected to play in the event of an emergency response. However, the designated hospital employee who will set up and operate the decontamination facility must have at least first responder operations level training.

Although, hospitals that may be involved in emergency response are required to designate emergency responders and train them accordingly, other hospital personnel that may have to enter the decontamination area may not have to be trained as emergency responders. There is an exception to paragraph (q) training requirements for "skilled support personnel." These employees are not required to have had emergency responder training; however, they must be given an initial briefing at the time of the incident, including instruction in the wearing of appropriate personal protective equipment, what chemical hazards are involved and what duties are to be performed. This category might include emergency room personnel as well as doctors and technicians.

Hospitals that employ emergency medical service personnel (i.e. ambulance personnel) may be required by paragraph (q) to train these personnel depending on the role they will be expected to play in the event of a hazardous substance release incident.

The third scenario involves hospitals that are RCRA permitted Treatment, Storage and Disposal Facilities (TSDF) for hazardous waste. If a hospital has a RCRA permitted facility, the employees working at that facility (the TSD facility, not the entire hospital) must be trained in accord with 1910.120 paragraph (p).

As you may be aware, (your) state administers its own occupational safety and health program under the provision of the Occupational Safety and Health Act of 1970.

To further assist you with the training requirements under this standard, I have enclosed a copy of the following OSHA article, "Hazardous Waste Operations and Emergency Response: A Closeup Look at Training.*

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SOURCE LETTER
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February 21, 1991

Dear Ms. A:

As I discussed with you on the telephone recently, I would like to request a written interpretation from OSHA regarding the responsibility for hospitals to comply with the HAZWOPER (1910.120) standard. Taking into consideration the types of chemicals found in the hospitals and the use of the fire department for emergency response, are the educational requirements mandated for hospital personnel?
Your attention and response is greatly appreciated. The Risk Management Department functions as a resource for over 100 hospitals. Please consider as soon as possible.
Paragraph (e)(9) of 29 CFR 1910.120 delineates the requirements for certifying an employee with previous experience and training in hazardous waste operations as equivalently trained. These employees will not be required to complete the initial 40-hour training. This allows organizations to develop internal criteria specific to their needs for certifying current employees as equivalently trained. All employees who are certified as equivalently trained and are new to a site must also receive appropriate site-specific training before site entry and have appropriate supervised field experience at the new site.

Dear Mr. E:

This is in response to your inquiry of May 8, concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule (29 CFR 1910.120). Please accept my apology for the delay in the reply to your letter of January 30.

Your specific question relates to the certification of current employees with previous experience and training in hazardous waste operations and training certificates for employees trained in house.

Paragraph (e)(9) delineates the requirements for certifying an employee as equivalently trained, who, will then not be required to complete the initial 40 hour training. This paragraph is written with performance language to allow organizations to develop internal criteria specific to their needs for certifying current employees as equivalently trained.

Your criteria for certifying a current employee as equivalently trained appears adequate. All employees certified as equivalently trained, and new to a site, must also receive appropriate site specific training before site entry and have appropriate supervised field experience at the new site. These employees would be required to have 8 hours of refresher training per year. OSHA concurs with your intention to issue training certificates to those employees that have attended a 40 hour in house training course but whom did not receive a certificate from their instructor, assuming that these employees have also completed the required supervised field experience.
Abstract

Employees who are not exposed to health or safety hazards related to hazardous waste operations are not covered by the HAZWOPER standard (1910.120). Employees who are covered by the standard may be certified as "equivalently trained" if employers can show, by documentation or certification, that an employee's work experience and/or training has resulted in training equivalent to the required training. Employers need not provide the initial training to such employees. However, all potentially exposed personnel entering the hazardous waste site would require 8 hours of refresher training on a yearly basis.

Interpretation

29 CFR 1910.120(a)(1); (e)(8); (e)(9)

JUN 7 1991

Dear Mr. U:

This is in response to your inquiry of February 27, 1990 and subsequent correspondence concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule (29 CFR 1910.120). Please accept my profound apology for the delay in this reply. The file containing your correspondence somehow found its way into the docket file where it has languished until most recently.

Your specific question relates to the training requirements for drivers hauling hazardous waste that do not interact with the waste other than to transport it. Employees are not covered by the standard if they are not exposed to health or safety hazards related to hazardous waste operations. It is unclear from your letter whether the driver's work activities meet this exclusion criteria. For your assistance, I have enclosed a brief summary of the 1910.120 training requirements.

There is an equivalent training clause in paragraph (e) of HAZWOPER which reads: (9) Equivalent training. Employers who can show by documentation or certification that an employee's work experience and/or training has resulted in training equivalent to that training required in paragraphs (e)(1) through (e)(4) of this section shall not be required to provide the initial training requirements of those paragraphs to such employees.

Therefore if covered by the standard you may be able to certify some of your employees as "equivalently trained" because of the past trainings they have attended and their on the job training as described in your letter. However, all potentially exposed personnel entering the hazardous waste site would require 8 hours of refresher training on a yearly basis.

November 29, 1990

Dear Mr. U:

Thank you for your follow-up on our March 20, 1990 letter to you concerning an interpretation of the training requirements in 29 CFR 1910 paragraph (e).

I hand carried a copy of your letter and note down to the Office of Health Compliance today and checked on the status of their response. The individual who is preparing the response to your request is Ms. G. She is somewhat logistically overwhelmed by the number of formal requests for interpretations on 1910.120, however, she is working to get responses out as quickly as possible.
2/11/91
Mr. M -
I called Ms. G on 1/16/91 to see if she had a response yet. She said she had not seen this letter.
Can I please get an answer?
Mr. U
MAR 20 1990
Dear Mr. U:
I am responding to your letter of February 27, 1990 requesting an OSHA interpretation of the training requirements in 29 CFR 1910.120 paragraph (e).
OSHA policy requires written interpretations to be issued through our Office of Compliance Programs. I have therefore forwarded your request to that office for reply. You should hear from them soon.
If you should not hear from them in a reasonable amount of time, please contact me and I will follow up on your request.
Mr. M, Safety Engineer: Sent 11/19/91
Mr. M:
I originally wrote to you on 2/27/90 questioning training requirements as they apply to our company. I received your letter above on 3/20/90. As of yet, 11/19/90 I have not had a response on my original letter. I am sending a copy of the letter again as we would appreciate a response.
Mr. U

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SOURCE LETTER
February 27, 1990
Dear Mr. M:
I am writing to request your interpretation on 29 CFR Part 1910.120 Paragraph E (Training).
Our Company has been involved in the transportation of solid hazardous waste in dump trailers since 1981 with an in house training program which covers manifesting, DOT rules & regs., respirator use & care, use of disposable clothing and eyewash use. The training also covers use of the Emergency Response Guide, placarding & labeling and use of our Company's Contingency spill plan. Our company also has annual Safety meetings to update training and refresh subjects.
In mid 1989 when I became aware of the 24 & 40 hour training requirements I called OSHA to ask if these training requirements applied to a trucking company who only transports the material and otherwise has only minimal if any exposure to the waste. I was told that this regulation was not applicable to transporters.
Recently a customer of ours asked if our drivers had been thru the 24 hour training and this customer insisted that this was required of our company. I explained that our drivers remain in the vehicle in a hot zone while being loaded and they unload by dumping. We do not do emergency response cleanup work and OSHA had told me that transporters are not covered by this rule.
Would you please advise specifically if additional training is required and if so, what we must do to be in compliance. I await your response.
ABSTRACT
An Interpretive Letter addressing the proposed accreditation of training programs for Hazardous Waste Operations Standard, 29 CFR 1910.120. This proposed regulation does not include accreditation for emergency response training under 1910.120(q). OSHA has adopted a policy of not reviewing or holding any training programs until after a final rule is published. Training is based on the duties and functions to be performed by each member of an emergency response organization. If organization members may be exposed to asbestos, then training about asbestos must be included in a training program. Employees of fire departments are exempt from Federal OSHA standards because they are public employees. However, if they are state or local government employees, they are covered by USEPA regulations identical to the OSHA final rule.

INTERPRÉTATION
29 CFR 1910.120(e)(1); (e)(1)(ii); (q)(6)

NOV 29, 1990

This is in response to your inquiry concerning the Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120) and the proposed Accreditation of Training Programs for Hazardous Waste Operations standard (29 CFR 1910.121). Please accept my apology for the delay in this reply.

You have requested OSHA to review your program for accreditation. In addition, you have asked whether Hazardous Material Response Teams need an asbestos training course and if so, which one(s).

As you know, 29 CFR 1910.121 is a proposed regulation which at this time does not include accreditation for emergency response training under 29 CFR 1910.120(q). Consequently, OSHA is not reviewing programs for accreditation at the present time. In order to ensure fairness to all applicants for accreditation, we have adopted a policy not to review or hold any training programs until after the final rule is published. In the interim, you may be interested in participating in informal hearings on the proposal. I am enclosing information on the hearing dates and locations.

Under the training requirements for emergency responders (29 CFR 1910.120(q)), we do not mention specific courses that must be taken since the training needs to be based on the duties and functions to be performed for each responder of an emergency response organization. If responders may be exposed to asbestos, then this hazardous substance must be included in the training program. In addition, if the responders may be involved in removal of the asbestos, then the training requirements under 29 CFR 1926.58 (Occupational Exposure to Asbestos, Tremolite, Anthophylite, and Actinolite) may also apply.

Employees of your fire department are exempt from Federal OSHA standards because they are public employees. However, with respect to 29 CFR 1910.120, state and local government employees are covered by regulations identical to our final rule that have been issued by the U.S. Environmental Protection Agency (EPA).
This response provides clarification of 1910.120 as it pertains to nuclear power plants. Because radioactive materials are listed as hazardous materials by the USDOT, they are also "hazardous substances under 1910.120(a)." Responses to incidents involving radioactive materials would be covered. Under the terms of an agreement with OSHA, the Nuclear Regulatory Commission (NRC) has primary on-site worker safety and health responsibilities at fixed nuclear facilities.

This is in response to your letter of November 30, 1990, addressed to the Directorate of Safety Standards Programs, concerning the emergency response provisions of the Occupational Safety and Health Administration (OSHA) Standard, 29 CFR 1910.120.

As suggested in your letter, a member of my staff has discussed your inquiry with your office, and Ms. W has provided us with supplemental information pertinent to your questions. After reviewing the supplemental information, we concur with the technical interpretations provided in the December 21, 1990, response to you from Deputy Commissioner of the (State) Department of Labor.

As you may be aware, the (State) Department of Labor administers an OSHA-approved state occupational safety and health program for both private and public sector employers and employees in (State). The state OSHA program is responsible for effectively implementing all facets of the Occupational Safety and Health Act of North Carolina including providing interpretations of safety and health standards. Federal OSHA monitors state activities to ensure effective state program performance.

To understand the full scope and application of 29 CFR 1910.120 and assure compliance with OSHA's Hazardous Waste Operations and Emergency Response Standard, you should consider utilizing the services of the (State) Division of Consultative Services. On-site consultation on safety and health matters are available, upon request, from the (State) Department of Labor.

December 21, 1990

This is in response to your letters dated September 14, 1990 and November 30, 1990 which were received in Commissioner's office on September 18, 1990 and December 5, 1990, respectively. Your letters raise their points: (1) varying interpretations of the OSH Hazardous Waste Operations and Emergency Response Standard, 29 CFR 1910.120 (hereafter, 1910.120), (2) the application of 1910.120 to "the participation of fire departments, rescue squads, county EMS agencies, and law enforcement in exercises and actual response to an incident at a nuclear power plant," and (3) "defining the initial 'hot zone' in the case of a release at a nuclear plant."

With regard to the issue of varying interpretation being given by different persons, we regret that this may be occurring. Unfortunately, we cannot control statements and interpretations of the 1910.120 Standard which are made by persons who are not employees of the north Carolina Department of Labor. We can, and do, endeavor to assure that interpretations of 1910.120 which issue from within the Department of Labor are consistent and as correct as possible. We would remind you that the only authoritative source of interpretations for 1910.120 in (State) is the (State) Department of Labor.

As you know, the Department has provided a great deal of training with regard to this particular Standard. With your assistance, we were able to put on ten seminars across the state before the Final Standard became effective. It is regrettable that although all emergency response agencies in the state were invited, only a little more than 1,000 individuals took advantage of those workshops. Since then, members of our staff have presented further workshops and programs on 1910.120 to hundreds of other...
emergency responders. Thus, attendees at these programs were given official interpretations of the 1910.120 Standard.

In some respects, the interpretation of the Standard is problematic as there is, as yet, no compliance guidance from federal OSHA. Although we will not necessarily adopt the federal compliance guidance verbatim when it is issued, we will probably rely upon it to some degree. In the absence of federal guidance which would aid in interpreting the 1910.120 Standard, our staff examines each question thoroughly and exercises its best professional judgement in interpreting the Standard. In any instance in which there appear to be significant policy issues or disputes involved in the interpretation of the 1910.120 Standard, senior members of our staff confer and, if necessary, bring the matter to my personal attention. Any questions which arise concerning the Standard should be addressed to Director, Occupational Safety and Health Division, or to Director, Right to Know Division.

With regard to your questions about 1910.120 and nuclear plant exercises and incidents, there are a number of factors which we must take into account. First, our understanding is that because radioactive materials are listed as hazardous materials by the United States Department of Transportation, they are also "hazardous substances" under 1910.120(a). Hazardous materials emergency incidents involving "hazardous substances" are covered under 1910.120(q). Responses to incidents involving radioactive materials would therefore, be covered under 1910.120. Second, exercises would not technically fall within the definition of "emergency response" found in paragraph (a) of the 1910.120 Standard. However, we would expect that exercises aimed at training emergency responders for hazardous materials incidents would be conducted in a fashion which would adequately protect employees and which would also prepare them to perform at the level designated by their employer in an actual hazardous materials incident. Third, under the terms of an agreement with: OSHA, the Nuclear Regulatory Commission would have primary on-site worker safety and health responsibilities at fixed nuclear facilities. In addition, in dealing with workers exposed to radiological hazards, the Department of Labor works closely with the Radiation Protection Division of the Department of Environment, Health and Natural Resources.

Finally, I would note that we appreciate your provision to us of the interpretation letter from the regional Federal Emergency Management Agency (FEMA) and the regional OSHA office. We would like to make a couple of comments about those letters. First, as noted in the FEMA letter, (State) is an OSH state-plan state. As the FEMA letter indicates, and as previously noted in this letter, the (State) Department of Labor is the only agency empowered to give an authoritative interpretation of, and to enforce, the OSH Act of (State) and standards promulgated pursuant to that Act. Second, we do not concur with the following statement which was made in the OSHA Regional Office letter: "firefighters and emergency medical service personnel are required at a minimum to be trained at the first responder operational level." It is the position of the (State) Department of Labor that it is the responsibility of the employer to determine the level of training which an employee must receive. The employer's determination as to training level should be based on the duties and functions which the employer expects the employee to perform. Thus, while it is possible that some emergency medical service personnel should be trained at the operations level, it is also possible that some employers will decide that all those employees will be expected to do is recognize the existence of a hazardous materials incident, call for help, and take no further action. Those employees would then train at the Awareness Level. We have also taken the position that, with respect to public sector employers, there should be coordination with the Local Emergency Planning Committee regarding the level of response needed by the community. That decision on level of response needed by the community should also be presented to local elected officials because it is, ultimately, a policy decision.

With regard to your question concerning "hot zones," 1910.120 does not specifically mention "hot zones." 1910.120 does, however, delineate the responsibilities of the Incident Commander and require use of an Incident Command System. One duty of the Incident Commander is to "limit the number of emergency response personnel ... in those areas of potential or actual exposure to incident or site hazards." (29 CFR 1910.120(q)(3)(v)). Thus, the determination of restricted entry areas is the responsibility of the Incident Commander. It would be possible to have a pre-determined initial restricted zone for a fixed facility if all parties clearly understand that the Incident Commander has the authority to expand or contract it. In any case, the (State) Department of Labor would not make that determination in advance.

Vol. 1-336
December 13, 1990

MEMORANDUM

SUBJECT: Distribution of the Response by FEMA to Issues Raised by the Conference of Radiation Control Program Directors (CRCPD)

Attached for your Information and use is a copy of the FEMA response of October 4, 1990, to the Chairperson of the Executive Board of CRCPD. The CRCPD raised many policy and program questions on various aspects of our Radiological Emergency Preparedness (REP) Program.

RESPONSE OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) TO ISSUES RAISED BY THE EXECUTIVE BOARD OF THE CONFERENCE OF RADIATION CONTROL PROGRAM DIRECTORS (CRCPD), INC. IN ITS APRIL 25, 1990, CORRESPONDENCE CONCERNING RADIOLoGICAL EMERGENCY PREPAREDNESS.

GENERAL COMMENTS. FEMA's response impacts not only FEMA but also other Federal agencies. Therefore, as Chair of the Federal Radiological Preparedness Coordinating Committee (FRPCC), we have coordinated our response with other Federal agencies that have responsibilities for the stated areas of concern, including the Department of Defense (DOD), the Department of Energy (DOE), the Environmental Protection Agency (EPA) and the Nuclear Regulatory Commission (NRC).

The first four issues raised should be addressed with respect to NUREG-0654/FEMA-REP-1, Revision 1 ("0654") and Supplement 1, since this is the joint regulatory and guidance basis for both the NRC and FEMA. The planning standards of "0654" are incorporated in the NRC regulation 10 CFR 50.47(b)(1-16). These standards are also incorporated into FEMA's rule 44 CFR 350.5(a)(1-16). Since FEMA provides findings to the NRC based on the criterion of reasonable assurance, it is imperative that off-site radiological emergency preparedness meet the intent of the applicable "0654" planning standards.

FEMA recognizes that an important difference exists between the 16 planning standards of "0654" as incorporated into NRC (and FEMA) regulations and their supporting evaluation criteria. The difference may simply be that the planning standards constitute regulatory requirements and the evaluation criteria represent recommended guidance for meeting the intent of the planning standards for off-site radiological emergency planning and preparedness. As guidance, alternative methods and approaches for meeting the intent of the planning standards may be proposed to FEMA as was done in correspondence from the CRCPD for the first four issues. Our response to recommended alternative for issue 2 is provided below.

1. Estimation of Total Population Exposure (Objective 31)

CRCPD Comments

Objective 31 of the Exercise Evaluation Methodology (EEM) is not an emergency action and, therefore, is not used during an emergency. The calculation of the total population dose is a Federal responsibility.

FEMA Response

The function of estimating total population exposure is based on evaluation criterion M.4. of "0654" and is identified as a State and licensee responsibility. In accordance with M.4., states are given the responsibility of establishing a means for the periodic estimation of total population exposure. Since M.4. is an evaluation criterion of planning standard M, it is essential that the capability for this function be developed.

We agree that the estimation of total population exposure is not an emergency action. Consistent with this view, FEMA had already decided to take Objective 31 out of the EEM since this objective can be demonstrated by providing a report 30 to 45 days after exercises. FEMA is now prepared to propose to the NRC that this function be totally disassociated from exercises. However, since states are charged with this responsibility in "0654", they would still be expected to develop a methodology for independently estimating total population exposure for use after actual radiological emergencies. Documentation of the methods developed by states for carrying out this function will still need to be incorporated into State plans. Guidance for developing this methodology will still be provided at a later date. FEMA intends to discuss this proposed change with the NRC in order to resolve this issue. We anticipate that this changed position will become effective as national policy concurrently with the issuance of the
final EEM in December 1990. If exercises are scheduled between now and the end of the year in which states are to demonstrate Objective 31, FEMA is prepared to grant exemptions to any State that requests an exemption.

It is true that the Federal Government will also undertake estimates of total population exposure after accidents involving releases of radioactivity into the environment. In fact, more than one Federal agency will likely make such estimates. However, as indicated above, State governments are also vested with this responsibility.

2. Contamination Surveys of Off-site Persons

CRCPD Comments

A contradiction exists between the 12-hour radiological monitoring provision for evacuees at reception centers and the need to immediately monitor contaminated injured persons and ambulances or other vehicles prior to transport to medical facilities. Put another way, if a 12-hour period is permitted to ensue before surveying the last evacuee for contamination, why is it so critical that contaminated injured persons and transport vehicles be immediately monitored? Also, if one can wait 12 hours for evacuees at reception centers, then there is no need for ambulance personnel to survey the transport vehicles or injured persons. The surveys do not need to be made of persons transported to medical facilities as they can be performed at the medical facilities.

FEMA Response

The two referenced provisions for radiological monitoring are based on "0654" evaluation criteria J.12. for monitoring of evacuees at reception centers and L.1, L.3, and L.4. for monitoring of contaminated injured persons in transport and at medical facilities. Additional guidance is provided in the FEMA Guidance Memorandum MS-1, "Medical Services."

The 12-hour period set forth in J.12., "0654", is the time frame for monitoring all evacuees arriving at reception centers, starting with the first evacuee and ending with the last. This period is intended, therefore, to assure that all evacuees arriving at reception centers are monitored. As interpreted in subsequent guidance and supported by the NRC, the number of evacuees established for planning purposes is 20% of the population in the plume pathway emergency planning zone. Monitoring of this potential population within 12 hours will require monitoring of all arriving evacuees to screen them for contamination and, if required, decontamination and medical treatment. Since the planning basis assumed in "0654" encompasses a spectrum of accidents ranging from no radioactive releases to low probability, high consequence accidents, it is essential that State and local governments have the capability to effectively radiologically monitor off-site populations. The establishment of a 12-hour period is also intended to assure that evacuees who go to reception centers are not delayed from proceeding to congregate care centers or effecting other personal arrangements.

The monitoring of persons that are being transported to medical facilities for injuries is undertaken (1) to assure that both ambulance and medical facility personnel are aware not only of the physical status of incoming persons, but also their radiological condition and, (2) if the persons are contaminated, to effect appropriate contamination control measures.

If the transporters of contaminated injured persons prefer not to monitor their patients, as you propose, then the ambulance personnel must meet the following conditions: (1) They should assume that their patients are contaminated and take appropriate contamination control actions. (2) The receiving medical facility personnel must assume that the patients are contaminated and, also effect appropriate contamination controls and monitor them. (3) The transport vehicle should not be put back into service until it has been surveyed and, if required, decontaminated. It is also recognized that life-threatening injuries take priority over the need to monitor persons or vehicles for contamination as well as to effect contamination control measures. While we can support your recommended alternative, it is our understanding that ambulance personnel would prefer to know if their patients are contaminated prior to transport and medical facility personnel would prefer to know if their incoming patients are contaminated.

Thus, FEMA can support two approaches: either monitor persons prior to transport or defer monitoring to medical facility staff.

In conclusion, we do not believe a contradiction exists between current guidance for radiologically monitoring evacuees at reception centers and monitoring contaminated injured persons requiring
transport to medical facilities. Also, we support the recommendation that the radiological monitoring of persons be deferred to medical facility staff provided that the conditions above are met.

3. CRCPD Comments

The function of "plume chasing" should only be considered as a "last resort." Consideration should be given to having utility survey teams undertake field monitoring instead of State governments. It is noted that not all health physics professionals share these concerns.

FEMA Response

We prefer to characterize the activity mentioned as "field monitoring." State governments and licensees are given "his responsibility under "0654" evaluation criteria l.8., l.10. and l.11. We believe field monitoring should be viewed within two contexts of protective action decision making (PAD); initial PADs and subsequent PADs. For initial PADs, decisions should be based solely on plant status parameters. However, for subsequent PADs, decisions should be based on considerations of both plant status parameters and field monitoring data. In the latter case, the function of field monitoring is twofold: (1) to confirm dose projections based on plant status parameters and (2) to determine if protective actions need to be expanded during the emergency phase.

We do not agree that this responsibility should be vested solely with licensee personnel. As stated, the referenced evaluation criteria l.8. and l.11. are applied to State governments. While not referenced in your comments, Federal radiological monitoring teams will also be available after the initial emergency phase to support State governments.

Consequently, as reflected in "0654", State governments should develop and maintain field radiological monitoring capabilities as the primary governmental authority for the protection of public health and safety. An independent assessment of data is important for State governments to verify and confirm data from other sources (i.e., licensee and Federal personnel). Finally, we share your belief that field monitoring data must be carefully assessed and that decisions based on such data alone be supported by an appropriate and sound data base.

4. Ingestion Pathway Measures

CRCPD Comments

No evaluations should be made of ingestion pathway planning and preparedness until the appropriate Federal agencies fully participate in ingestion-related exercises. National standardized procedures for the sampling and analysis of ingestion-related measures should be developed.

FEMA Response

State governments are charged with the responsibility to undertake radiological emergency planning and preparedness for ingestion pathway measures under evaluation criteria J.9. and J.11. States should have an independent capability to obtain samples and sample results in order to independently verify data obtained from sampling activities by other organizations including DOE and EPA. We agree that it would be helpful if there could be greater Federal participation in ingestion exercises. From a strictly fiscal view, it just does not appear to be feasible for significant Federal participation in every ingestion exercise. Resources limitations among Federal agencies have been a principal constraint in the participation level by these agencies to date, in other than Federal Field Exercises and tabletop exercises.

FEMA, through the Instrumentation Subcommittee of the FRPCC, has prepared guidance documents for the sampling and instrumentation necessary to analyze the amount of radioactive contamination in milk, water and other non-dairy foods. FEMA REP-12 (September 1987) and FEMA REP-13 (May 1990) establish criteria that will permit standardized procedures to be completed for sampling and analyzing ingestion-related measures. Also, EPA is engaged in an ongoing effort to develop standardized sampling and analysis procedures for Federal response.
5. Radiological Emergency Plan for Reentry of Radioactive Space Debris

CRCPD Comments

The development of the COSMOS 1900 procedures for the reentry of radioactive space debris is incomplete and should be completed. Also, it is recommended that members of the CRCPD continue to participate in the Health Effects Advisory Group.

FEMA Response

The development of the COSMOS 1900 procedures in support of the Federal Radiological Emergency Response Plan (FRERP) was a positive step in the direction of shared Federal and State participation in anticipation of a radiological emergency that could impact the United States as a result of the reentry of radioactive space debris. The revisions to the FRERP will include a description of the process by which Federal cooperation with appropriate State radiological health and other personnel will be accomplished for such events. Further details are to be provided in the form of agency-specific procedures in support of the FRERP by the involved Federal agencies. FEMA has requested that this work be coordinated through the CRCPD on a continuing basis.


CRCPD Comments

The DOD should develop and test off-site radiation emergency plans and preparedness for their nuclear facilities such as those developed for commercial nuclear power plants.

FEMA Response

Since the CRCPD did not forward the April 25, 1990, letter to the DOD, we have provided a copy to our FRPCC DOD representative. It should be noted that commanders of some DOD facilities with nuclear facilities are engaged in radiological emergency preparedness activities in concert with State and local governments and other Federal agencies, including FEMA Regional staff.

7. Application of the Superfund Amendments and Reauthorization Act (SARA)/Title III Provisions to Radiological Emergencies and to State and Federal Responders

CRCPD Comments

Does Title III of the SARA legislation apply to responders to radiological emergencies? If so, then many problems need to be addressed such as the need to institute annual physical examinations for emergency staff, annual training for use of self-contained breathing equipment, additional record keeping and determination of responsibility for costs. Also, if this law does apply to such emergencies, what responsibility will states have to assure that all Federal responders have received the necessary training to enter restricted areas?

FEMA Response

Based on conversations with EPA staff, it is our understanding that the SARA legislation does not apply to radiological emergencies; therefore, Title III of SARA is not applicable to responders to radiological emergencies. We are also aware that you have also directed your comments to EPA. EPA will provide additional information on this matter in their reply to you.

MEMORANDUM

SUBJECT: Request for Official Interpretation of 1910.120

My office received the attached request from Director, (State) Department of Crime Control and Public Safety for an interpretation of several questions on 29 CFR 1910.120. Since this request requires a written response we are forwarding it to your office for reply in accordance with Agency policy for official interpretations.
SOURCE LETTERS

November 30, 1990

In the State of (State), a number of questions have arisen concerning the impact of CFR 1910.120 upon local emergency responders and their participation in the Radiological Emergency Preparedness Program. In particular, the requirements which they must meet prior to participating in either an exercise or actual response to an off-site emergency at a nuclear power plant. We would greatly appreciate any assistance you could provide in clarifying the issues of concern to local emergency responders.

Unfortunately, local responders are being given a number of interpretations of what CFR 1910.120 says and how it impacts their particular organization's response capabilities. This issue is further compounded by the liability factors which place the burden for compliance upon the chiefs of the various local response organizations. The organizations we are referring to are: Fire Departments, Rescue Squads, Emergency Medical Services, and Law Enforcement Agencies. There are three primary issues which need to be resolved:

The first issue is a matter of 1910.120 Emergency Responder Classification Levels. We need a ruling in writing as to what classification levels our emergency responders would be assigned based upon the duties and responsibilities they perform and the type of environment in which they would be working during a nuclear power plant incident. The amount and types of training required is dependent upon their classification level. Once the proper classification is determined, then we would like to know how or if the training requirements in NUREG-0854, Rev. 1 can be integrated into the 1910.120 training requirements to satisfy both regulations.

The second question concerns the "hot zone". In a nuclear power plant release, what standards should be applied in initially defining the "hot zone"? Would or should it initially include the entire ten-mile Emergency Planning Zone, until such time as the Division of Radiation Protection Field Teams can pinpoint the "hot-spots"?

The final issue centers around medical questions. As we understand the regulation, only designated Hazardous Material teams and specialists are required to have annual baseline physicals and medical surveillance. In the Radiological Emergency Response Program to Nuclear Power Plant accidents, is there any agency either at the State or local level which would require annual baseline physicals and medical surveillance?

Any assistance you could give us in getting the answers we need to put an end to the potential for further misinterpretations of CFR 1910.120 would be greatly appreciated. Because a majority of our responders involved are volunteers, the time required for training and the money needed for baseline physicals are of particular concern. I believe it is essential that we adequately and correctly classify our emergency responders in order to ensure the future of our Radiological Emergency Preparedness Program.

Attached is a copy of the interpretation received from FEMA Region IV and the Office of the U.S. Department of Labor.

Attachment:
(No date provided.)

We have received your request for FEMA assistance in the clarification of the impact of 29 CFR 1910.120 on local emergency response personnel, particularly as it pertains to their participation in nuclear power plant exercises and actual off-site emergency response. Your questions centered on appropriate training levels and need for base line physicals.

As you are aware, the Hazardous Waste Operations and Emergency Response final rule was issued on March 6, 1989, by the Occupational Health and Safety Administration (OSHA). Section 18 of OSHA's Act provides that a state may develop it's own occupational safety and health program that provides, among other things, worker protection "at least as effective as" that protection provided under the Federal program. (State) has an OSHA-approved safety and health program that meets that provision and may have promulgated standards that exceed the federal requirements.

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We met with the (City) Regional OSHA Office staff and received the attached policy interpretation. Please note that it is based directly on the Federal OSHA standard. We understand that you have requested a similar interpretation from the (State) Department of Labor which may or may not exceed this policy.

October 17, 1990

MEMORANDUM

SUBJECT: Interpretation of the Hazardous Waste Operations and Emergency Response Standard

This is in response to the October 16, 1990 meeting you had with my staff. The following information is provided regarding the (State) Department of Crime Control and Public Safety concerning the training of emergency responders, firefighters and emergency medical service personnel, and whether they are required to participate in a medical surveillance program.

The training requirements for employees responding to an emergency involving the release of hazardous substance(s) are outlined in 29 CFR 1910.120(q)(6). The training requirements for emergency response personnel will be dependent upon the duties and functions to be performed by each responder. Firefighters and emergency medical service personnel are required at a minimum to be trained at the “first responder operational level.” Again, their duties and functions will determine the level of training to be received.

29 CFR 1910.120(q)(9)-Medical surveillance and consultation states that “members of an organized and designated HAZMAT team and hazardous materials specialists shall receive a baseline physical examination and be provided with medical surveillance as required in paragraph (f) of this section.” This standard does not require firefighters or emergency medical service personnel to participate in a medical surveillance program unless (1) they meet the requirements of (q)(9) or (2) the emergency response personnel exhibits signs or symptoms which may have resulted from exposure to hazardous substances during the course of emergency incident.
ABSTRACT

In an instance when an employer who has a potential for an emergency resulting from hazardous substances does not have an emergency response plan or an emergency action plan, one would cite 1910.120 even if the employer claims that the plan is to evacuate all employees from the danger area and that employees do not assist in handling the emergency. If an OSHA inspection reveals that an employer has portable fire extinguishers which meet 1910.157(c)-(f) requirements and claims the fire extinguishers are not for employees use and all of the requirements of 1910.38 are not met, one would cite 1910.157(g). The standard contemplates that the fire extinguishers are available for employee use unless all of the requirements in 1910.38 are met. The employer can abate, however, by showing that the exemption criterion specified in 1910.157(a) is met.

INTERPRETATION

29 CFR 1910.120(q)(1); (q)(2)(vi); 1910.38(a)(1); 1910.157(a); (b)(1)

MAR 5, 1991

MEMORANDUM

SUBJECT: Citation Policy for 29 CFR 1910.120 and 29 CFR 1910.157 where 29 CFR 1910.38 is Referenced

This is in response to questions from the Regional office on the following two scenarios.

1. 29 CFR 1910.120(q)/29 CFR 1910.38(a). During an OSHA inspection it is discovered that an employer who has a potential for an emergency resulting from hazardous substances does not have an emergency response plan or an emergency action plan. Does one cite 1910.120(q) and/or 1910.38(a)?

Answer: One would cite 1910.120(q) even if the employer claims that their plan is to evacuate all employees from the danger area and employees do not assist in handling the emergency. The requirements in 1910.38(a) are not cited since an employer must be in compliance with 1910.38(a) in order to be eligible for the exemption from the expanded 1910.120(q) requirements. It may not be necessary to include any reference to 1910.38(a) in the citation. The employer can abate, however, by showing that they have met the exemption criteria specified in 1910.120(q)(1). (If the employer during the closing conference expresses his intent to comply with 1910.38(a), it may be helpful to inform the employer during the closing conference or in the citation abatement notes of 1910.38(a) deficiencies.)

NOTE: The citation policy outlined above would be the same for all the other provisions in 1910.120 which reference 1910.38(a)(i.e., 1910.120(l)(1)(ii), 1910.120(p)(8)(i), and (q)(11)(ii)). The SAVES issued for 1910.120 (see OSHA instruction CPL 2.35 CH-14) will be revised to reflect this policy.

2. 29 CFR 1910.157(a)/29 CFR 1910.38. During an OSHA inspection it is discovered that an employer has portable fire extinguishers which meet 1910.157(c)-(f) requirements. The employer claims the fire extinguishers are not for employee use, however, all of the requirements of 1910.38 are not met. Does one cite 1910.157 and/or 1910.38?

Answer: One would cite 1910.157(g). The standard contemplates that the fire extinguishers are available for employee use unless all of the requirements in 1910.38 are met. The employer can abate, however, by showing that the exemption criteria specified in 1910.157(a) is met.
ABSTRACT. This response addresses whether checking for compliance with 1910.120 will be mandated for every inspection in the same way that it is now required for the Hazard Communication Standard. OSHA is updating the enforcement guidelines on this standard. The issue is being considered during this process. In the interim, general inspection procedures in the OSHA Field Operations Manual address the evaluation of an employer's emergency response procedures.

INTERPRETATION 29 CFR 1910.120(a); 1910.1200(b)(1)

JAN 30, 1991

This is in response to your most recent inquiry of January 8, concerning enforcement guidelines for the Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120).

You have asked whether checking for compliance with this standard would be mandated for every inspection in the same way that it is now required for the Hazard Communication Standard (29 CFR 1910.1200). As I mentioned in our October 31, 1990 letter to you, we are updating the enforcement guidelines on this standard. The issue you raised is being considered during this process. In the interim, general inspection procedures in our Field Operations Manual address the evaluation of an employer's emergency response procedures. (Copies of pertinent sections are enclosed.)
The Uranium Mill Tailings Radiation Control Act of 1978, 42 U.S.C. 790 (et seq.) does not grant occupational safety and health statutory authority to the Department of Energy. Therefore, OSHA standards are applicable. The intent of 29 CFR 1910.120(a)(1)(i) is to include government mandated clean-ups of hazardous substances. OSHA's definition of hazardous substance in this standard includes any substance listed by the United States Department of Transportation as hazardous material under 49 CFR 172.101 and appendices. Radioactive materials are included under this 29 DOT reference. Thus, 29 CFR 1910.120 is applicable to the Uranium Mill Tailings Remedial Action Project.

29 CFR 1910.120(a)(1)(i); (a)(3)

This is an update to our initial response dated October 15, 1990 to your 29 August, 1990 letter concerning the application of the Hazardous Waste Operations and Emergency Response standard (29 CFR 1910.120) to the Uranium Mill Tailings Remedial Action Project.

As you are aware, the Uranium Mill Tailings Radiation Control Act of 1978, 42 U.S.C. 790 (et seq.) does not grant occupational safety and health statutory authority to the Department of Energy. Therefore, the Occupational Safety and Health Administration (OSHA) standards are applicable.

The intent of 29 CFR 1910.120(a)(1)(i) is to include government mandated clean-ups of hazardous substances. In the definition of "uncontrolled hazardous waste site" it should read "...means an area where an accumulation of hazardous substance...." OSHA is in the process of correcting this inadvertent error. OSHA's definition of hazardous substance in this standard includes any substance listed by the United States Department of Transportation (DOT) as hazardous materials under 49 CFR 172.101 and appendices. Radioactive materials are included under this DOT reference. Thus, 29 CFR 1910.120 is applicable to the Uranium Mill Tailings Remedial Action Project.

Of the states you mention in your letter, (State A), (State B), and (State C) administer their own occupational safety and health programs. As part of those programs, the states are responsible for the enforcement of occupational safety and health standards, subject to monitoring by Federal OSHA.

This is an interim response to your letter of August 29, concerning the Hazardous Waste Operations and Emergency Response standard (29 CFR 1910.120).

In order to fully address your concerns we are reviewing the application of this standard to the Uranium Mill Tailings Remedial Action Project. As soon as we complete our review, you will be promptly notified.

SOURCE LETTERS

August 29, 1990

SUBJECT: Applicability of OSHA Standard 29 CFR 1910.120 to the UMTRA Project

(Company) is submitting this letter with Attachment 1 to serve as a formal request for a regulatory interpretation of the applicability of OSHA standard 29 CFR 1910.120, "Hazardous Waste Operations and Emergency Response: Final Rule" to the Uranium Mill Tailings Remedial Action (UMTRA) Project. The (Company) posits that the UMTRA project is not covered by 1910.120. your concurrence is requested.

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Provided for your information and review is Attachment 1 entitled "(Company) Interpretation of Applicability of 29 CFR 1910.120 to the UMTRA project." This attachment includes background information on this project, a regulatory overview, and a discussion of the applicability of 1910.120 to the (Name) project. This should be helpful in your appraisal by defining the unique circumstances of the UMTRA project.

(COMPANY) INTERPRETATION OF APPLICABILITY OF 29 CFR 1910.120 TO THE UMTRA PROJECT

BACKGROUND

The Department of Energy (DOE) is authorized under the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRC Act), Public Law 95-604, to regulate and remediate uranium mill tailings at certain designated inactive mill operations. The UMTRC Act identifies for remedial action twenty-four (24) inactive mill operations located in ten (10) states. Currently eight (8) sites are complete with remedial action required at Mexican Hat, Utah; Durango, Colorado; Grand Junction, Colorado; Rifle, Colorado; Gunnison, Colorado; Naturita, Colorado; Maybell, Colorado; Slick Rock, Colorado; Ambrosia Lake, New Mexico; Falls City, Texas; Monument Valley, Arizona; Lowman, Idaho; Belfield, North Dakota; and Bowman, North Dakota. Remedial action pertains to construction activities for the stabilization disposal, and control of tailings that are in a reasonably sound manner in order to prevent or minimize the diffusion of radon and other hazards such as gamma radiation from the tailings.

(Company) is the Remedial Action Contractor (RAC) for the DOE providing project construction management and engineering services, and ensuring compliance with regulatory and design requirements. Project activities are construction-oriented involving earthmoving equipment and other heavy equipment used to construct tailings disposal cells. REGULATORY OVERVIEW

The UMTRC Act was promulgated on November 8, 1978, as an amendment to the Atomic Energy Act of 1954. This act regulates uranium mill tailings resulting from the processing of ores for the extraction of uranium as "residual radioactive material" (RRM). The Uranium Mill Tailings Remedial Action (UMTRA) Project is neither a RCRA corrective action clean-up, nor a CERCLA site clean-up, and uranium mill tailings are not classified as, or considered, hazardous wastes. The UMTRA Project is separately funded by government appropriation as designated by the UMTRC Act. The final disposition of these tailings is regulated by the UMTRC Act as a separate governmental remedial action project which sets forth other clean-up and disposal requirements than those required by RCRA and CERCLA.

The UMTRA Project complies with the applicable DOE occupational radiation protection order for workers, DOE Order 5480.11, through implementation of DOE-approved Health Physics proceedings. These approved procedures include acceptable internal dose monitoring, worker training, strict site access control, and occupational worker protection programs.

29 CFR 1910.120 APPLICABILITY TO UMTRA

On March 6, 1990, OSHA promulgated 29 CFR 1910.120, "Hazardous Waste Operations and Emergency Response: Final Rule." (Company) performed an in-house review of 1910.120 to determine its applicability to the UMTRA Project. The outcome of this review determined that 1910.120 is not applicable because the UMTRA project as mandated by the UMTRC Act is not included in the scope, application, and definition section of 1910.120(a). The scope of 1910.120(a) covers five (5) major areas of hazardous waste operations and emergency response operations which require compliance. (Company's) interpretation of the applicability of these five (5) areas is provided for comparison with OSHA's regulatory interpretation as requested:

1) "Clean-up operations required by a governmental body, whether Federal, state, local or other involving hazardous substances that are conducted at uncontrolled hazardous waste sites." 1910.120(a)(1)(i) The UMTRA Project is considered a remedial action operation required by a governmental body, in this case the DOE. However, these operations do not occur at "uncontrolled hazardous waste sites" or at any other CERCLA site, as defined in 1910.120(a)(3). The definition of "uncontrolled hazardous waste sites" means "areas where an accumulation of hazardous wastes creates a threat to the health and safety of individuals, or the environment, or both. The uranium mill tailings are not defined by RCRA in 40 CFR 261.3 as a hazardous waste and are specifically exempted from RCRA in 40 CFR 261.4(b)(7). The tailings are not defined by the DOT in 49 CFR 171.8 as a hazardous waste or as a reportable quantity of radionuclides contained in one package, and releases of tailings are specifically exempted by CERCLA, under Title I, Section 101 (22). Therefore, it is our position that this portion of the regulatory scope does not apply.

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The UMTRA Project is not a RCRA corrective action involving clean-up operations. The UMTRA Project is mandated by the Uranium Mill Tailings Radiation Control Act of 1978, Public Law 95-624, to provide for the final deposition of uranium mill tailings. The UMTRC Act is a law separate from RCRA, and therefore it is our position that this portion of the regulatory scope does not apply.

3) "Voluntary clean-up operations at sites recognized by Federal, state, local, or other governmental bodies as uncontrolled hazardous waste sites." 1910.120(a)(1)(iii)
The UMTRA Project is not a voluntary clean-up operation, nor are the designated uranium mill tailings sites recognized as uncontrolled hazardous waste sites as discussed in Item 1. The UMTRA Project is mandated under federal law to stabilize, dispose, and control uranium tailings which are classified as residual radioactive material, not hazardous waste. Therefore, it is our position that this portion of the regulatory scope does not apply.

4) "Operations involving hazardous wastes that are conducted at treatment, storage, and disposal (TSD) facilities regulated by 40 CFR Parts 264 and 265 pursuant to RCRA; or by agencies under agreement with U.S. E.P.A.: in implement RCRA regulations." 1910.120(a)(1)(iv)
The UMTRA Project sites are not classified as TSD facilities and they do not engage in any activities subject to the requirements of 40 CFR Parts 264 and 265. The UMTRC Act mandates disposal of uranium mill tailings under other requirements set forth in 40 CFR Part 192, "Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings." Therefore, disposal of tailings is not subject to 40 CFR Parts 264 and 265, and it is our position that this portion of the regulatory scope does not apply.

5) "Emergency response operations for releases of, or substantial threats of releases of, hazardous substances without regard to the location of the hazard." 1910.120(a)(1)(v).

Employees involved on UMTRA Project sites are not encouraged or directed to participate in, or are in any way made responsible for, emergency response actions. (Company) does not allow site personnel to respond to emergencies that involve chemical spills, threatening fires, or other threatening circumstances. Specific site procedures are in place that meet requirements of 29 CFR 1910.38, "Employee Emergency Plans and Fire Prevention." These plans set requirements for implementing area evacuations and notification of local emergency response agencies such as the fire department, police department, hospital, and ambulance, depending on specific circumstances. These local agencies are kept apprised of current site activities and are often available for response trial runs. Since no emergency response occurs as defined in 1910.120(c)(3) by UMTRA Project personnel, it is our position that this portion of the regulatory scope does not apply.

CONCLUSION:

The UMTRA Project as mandated under the UMTRC Act of 1978 is not included within the scope of 29 CFR 1910.120(a)(1), and therefore is not covered by 1910.120. The UMTRC Act of 1978 is a stand alone federal regulation and, in conjunction with 40 CFR 192, takes into account the very specific nature of the remedial action operations. The UMTRA Project is committed to the health and safety of workers, protection of the environment, and compliance with all applicable EPA and OSHA relations. This commitment is reflected in the project's excellent safety record, and the positive outcome of compliance inspections and DOE audits, including those performed by the National Academy of Sciences.

September 7, 1990

This is in response to your letter dated August 29, 1990, received in this office on September 4, 1990, questioning the applicability of 29 CFR 1910.120 to UMTRA sites.

Since several of the sites you listed are outside of this Region, I am forwarding your letter Acting Director of Compliance Programs, U.S. Department of Labor - Occupational Safety and Health Administration, 200 Constitution Avenue, NW, Room N-3471 Frances Perkins Building, Washington, D.C. 20210, for response.
MEMORANDUM
SUBJECT: Voluntary Clean-up Operations Under 29 CFR 1910.120

This is in response to your request for a clarification of 29 CFR 1910.120 (a)(1)(iii):

"Voluntary clean-up operations at sites recognized by Federal, state, local or other governmental bodies as uncontrolled hazardous waste sites;"

The term "recognized by a governmental body" means the hazardous waste site has been acknowledged by a government agency in writing or the agency would be willing to acknowledge in writing that the site contains hazardous substances as defined in 29 CFR 1910.120. For example, all sites listed on EPA's CERCLIS list are "recognized".

If a site does not have recognition but should have been recognized by a government agency, OSHA could still have coverage. This could mean making several phone calls to determine an agency's recognition of the site and receiving a letter to that effect.

The site would not have to be scheduled for cleanup by the government agency.
This interpretation provides clarification of the definition section under emergency response regarding exemption of "incidental" spills cleaned up by maintenance personnel. Hazardous substance spills for which there is no potential safety and health hazard are not considered emergencies and are not covered in the 1910.120 standard. The volume of the spill, the type of material spilled, and the location of the spill must be considered in evaluating the hazard of the release to employees. "Emergency response" provisions apply if the release or resulting situation pose an emergency as defined in 1910.120(a)(3). An ordinary spill that can be safely handled by the workers trained in accordance with 1910.120(g)(6) is not an emergency.

29 CFR 1910.120(a)(3); (e)(1)(i); (p)(7); (q)(5); (q)(6); (q)(11); 1910.38(a)

JUL 31, 1990

This is in response to your letter of April 12 requesting clarifications of the Occupational Safety and Health Administration (OSHA) standard for Hazardous Waste Operations and Emergency Response (29 CFR 1910.120).

You mentioned that the definition section under emergency response appears to exempt "incidental" spills cleaned up by maintenance personnel. The intent is that spills without emergency consequences are not covered by the emergency response provisions of this standard. As you may be aware, the quantity of product spilled does not by itself determine if an incidental spill has occurred. Several variables, including the volume of the spill, must be considered in evaluating the hazard of the release to employees. Examples of other variables include the type of material spilled and the location of the spill. Other OSHA standards such as the Hazard Communication Standard (29 CFR 1910.1200) would be applicable for incidental spills.

For the definition of "emergency response" to be satisfied:

1. The release or situation must pose an emergency. Examples are: it may cause high levels of exposures to toxic substances, it is life or injury threatening, employees must evacuate the area, it poses "immediately dangerous to life or health" (IDLH) conditions, it poses a fire and explosion hazard (exceeds or has potential to exceed 25% of the "lower explosive limit" (LEL)), it requires immediate attention because of danger, or presents an oxygen deficient condition. Nuisance spills, minor releases, etc., which do not require immediate attention (due to danger to employees) are not considered emergencies.

2. An ordinary spill that can be safely handled by the workers is not an emergency. Such employees must have the proper equipment and training under other OSHA standards such as the Hazard Communication Standard.

The training requirements for employees responding to control a spill which could result in an emergency situation are outlined in section (q)(6) of the standard. The amount of training specified is based on the duties and functions to be performed by each responder. The requirements for post-emergency cleanups are set forth in (q)(11) of the standard.

Where applicable, all employees involved in an emergency response must be trained under 29 CFR 1910.120. Thus, your options are to ensure employees are adequately trained to respond or use emergency response contractors for small and large spills and provide an emergency action plan in accordance with 29 CFR 1910.38(a). To further assist you with the training requirements under this standard, I have enclosed (starting on the next page) a copy of the following OSHA article, "Hazardous Waste Operations and Emergency Response: A Close-up Look at Training."
HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE:
A CLOSEUP LOOK AT TRAINING

On March 6, 1989, OSHA promulgated a final rule on Hazardous Waste Operations and Emergency Response (29 CFR Part 1910). The rule, which will take effect on March 6, 1990, is a direct result of the Superfund Amendments and Reauthorization Act of 1986 (SARA).

SARA (42 USC 9601, Titles I-IV) set the nation on a path toward better preparedness in dealing with emergencies involving the release of hazardous substances. The law also strengthened the nation's efforts to clean up hazardous waste and deal with other issues on hazardous chemicals. SARA required OSHA to develop interim and final rules, and Congress identified specific criteria for the agency to follow in establishing regulations for hazardous waste operations and emergency response activities.

For example, Title I of SARA specifies safety and health requirements for employers and Title III deals with local community emergency response plans. These two sections are examined here with respect to the OSHA standard and, in particular, their training requirements. The training requirements are significant because this is the first time that OSHA has mandated a specific number of training hours in a final rule.

Title I, Section 126 of SARA required OSHA to develop a standard that would set minimum safety and health requirements for (1) employers in hazardous waste or substance clean-up activities at government identified sites; (2) employers involved in storing, treating, or disposing of hazardous waste; and (3) employers involved in emergency response to the release of hazardous substances.

SARA required that the OSHA standards include, at a minimum, the following areas: site analysis, training, medical surveillance, protective equipment, engineering controls, maximum exposure limits, information, hazardous waste handling, new technologies, decontamination procedures, and emergency response.

Although each of these issues is important in protecting workers, the purpose of this article is to examine, in some detail, the training requirements of the final rule for each of the three categories of employers covered.

Hazardous Waste Cleanup Operations

Paragraph (e) of the standard establishes the initial training requirements for employees and supervisors who are or will be involved in hazardous waste/substance cleanup operations at government-identified sites.

The training requirements are organized in a tiered arrangement (see Table 1). In the first tier are employees and supervisors who remove or excavate hazardous substances at the site. For example, this category includes laborers, operating engineers and their supervisors.

Before beginning work, these individuals must have 40 hours of training off-site and then 24 hours of on-the-job training with a trained and experienced supervisor. All supervisors who will be working in these operations must have eight additional hours of specialized training in managing hazardous waste operations.

The required training for supervisors concerns safety and health issues, such as the supervisor's role and responsibilities in the employer's safety and health program, the medical surveillance program, and the training program.

The second tier sets forth the criteria for training employees who are on-site only occasionally to do a specific job (paragraph (e)(3)(ii)). For example, this would cover employees surveying the perimeter of a site to make a plat or to mark boundaries.

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1 See Federal Register 51:4564, December 19, 1986.
2 Examples include the National Priority List of sites as well as those listed by other Federal agencies and by State or local governments.
Workers who are on-site for short periods, and thus are unlikely to be exposed above any permissible exposure limit (PEL), are required to have a minimum of 24 hours of training off-site and then 8 hours of on-the-job training on-site by a trained and experienced supervisor.

Likewise, paragraph (e)(3)(iii) covers workers who will be on-site on a more regular basis, but who do not risk exposure above the PEL's or to any other health hazard and are not subjected to the possibility of an emergency situation.

For example, such individuals might include those involved in the final work activities in completing a closure operation on a site before it is removed from the government list.

These workers are required to have 24 hours of training off-site, and then 8 hours of on-the-job training by a trained and experienced supervisor. In either case, the required training is to be taken before employees may perform their regular job duties without close supervision.

Supervisors or managers who work at cleanup sites must receive eight hours of training beyond the initial basic training requirements. This additional training includes areas such as their employer's occupational safety and health program and their role in the program.

Workers and supervisors at all three levels of exposure are also required to receive eight additional hours of annual refresher training.

As appropriate, experienced incumbent employees may substitute prior training and experience for initial training requirements in the same subject.

Treatment, Storage and Disposal Sites

The next group of employers covered are those who store hazardous waste on their premises for more than 90 days, or are involved in treating or disposing of hazardous waste. These employers are covered under paragraph (p) of the standard. The applicable training requirements for employees of these employers are in paragraphs (p)(7) and (p)(8)(iii). (See Table 2.)

Initial training of at least 24 hours is mandatory for all new employees in this category. The training is expected to cover the employer's safety and health program, medical surveillance, decontamination, emergency response, hazard communication, new technology, and employee training, among others. The initial training is to inform and instruct new employees about their assigned duties and any related hazards and about their employer's safety and health policies and procedures. Moreover, employees who may be involved in emergency response operations need additional training.

At any rate, all employees on the permitted site area are to be provided eight hours of refresher training annually. Incumbent employees who are experienced and who have received training before the standard takes effect may substitute their prior training, where appropriate.

Other Emergency Response Staff

Employers of emergency response personnel are covered by the training requirements of paragraph (q) of the final rule. These employees respond from their typical work area to an emergency where hazardous substances are released or may be released (see Table 3).

In promulgating these requirements, OSHA used the National Fire Protection Association's Standard as a model. OSHA's final rule also includes training criteria for the on-the-scene incident commander, specialist employees and skilled support employees. These types of position classifications were not included in the National Fire Protection Association Standard.

The OSHA standard establishes a continuum of training requirements for emergency responders, progressing from the "first-responder awareness level," at the lower, or first, level to the "hazardous materials specialist" and "incident commander" at the higher, or fifth, level.

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At the first-responder awareness level, the competency level of training is directed toward the police, guard service personnel, night watchmen, emergency medical responders including ambulance personnel, and others who are likely to discover or respond to emergency incidents involving hazardous substances.  

The training is targeted at teaching employees to recognize the human hazards present during these emergencies and how to protect themselves against such hazards. The required training also includes how to accurately and fully report the necessary information to an “alarm dispatcher” so that subsequent emergency responders are fully informed. Many first-responder awareness training courses presently run from 4 to 12 hours, but the standard does not set a mandatory minimum.

The next level of training is for “first-responder operations.” This is the level at which fire departments and fire brigade units typically operate. Such fire fighting teams usually have complete ensembles of firefighter protective clothing and positive-pressure respiratory protective equipment available to them.

Eight hours of training is mandatory for the first-responder operations level, in addition to worker competency at the first-responder awareness level. The required training is to prepare these employees to perform digging, ditching, and similar activities of a defensive nature -- activities that do not require chemical protective clothing.

Where a fire occurs at the operations level, offensive actions may be taken to extinguish the fire provided that no chemical protective clothing is required. For example, in the case of a liquefied petroleum gas fire, personnel at the first-responder operations level would work to shut off the gas flow and extinguish the fire once it was determined that no other chemicals are present and that offensive actions are required.

When these employees are expected to handle emergencies involving flammable liquids and gases in an offensive mode, then additional training is necessary and a minimum of 24 hours of training at the first-responder operations level is recommended. Such a 24-hour operations level training course will prepare those wishing to move up to the technician level of the on-scene commander level.

Next in the training hierarchy are the requirements for “hazardous materials technicians” and “hazardous material specialists.” These are the employees OSHA expects to be used to staff “hazardous materials teams” (hazmat teams), spill control teams, and similar groups. Consequently, these employees must have chemical protective clothing available for their use.

The skill requirements for the hazardous material technicians are somewhat lower than those for the hazardous materials specialists. Hazardous materials technicians must have 24 hours of training at the first-responder operations level in addition to the knowledge and skills training the standard sets forth as necessary for these technicians.

The standard requires that hazardous materials technicians know, among other things, how to implement the employer’s emergency response plan, how to properly select and use specialized chemical personal protective equipment and clothing, and how to implement proper decontamination procedures for hazardous substances.

The more skilled hazardous materials specialists will generally serve as the senior members of hazmat teams. At this level are the most highly skilled and trained responders having the broadest knowledge of hazardous substances.

The training required for a hazardous material specialist includes at least 24 hours of training at the technician level and such additional training or experience as necessary to acquire the knowledge and skills set forth in the standard.

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4 Section 126 of SARA, paragraph (f), requires that the Environmental Protection Agency (EPA) promulgate regulations to provide protection equal to that found in OSHA’s standard for State and local government workers who would not be covered by OSHA-approved state plans. See Worker Protection Standards for Hazardous Waste Operations and Emergency Response, 40 CFR Part 311, et seq., issued by the EPA on June 23, 1989. Also notice that EPA’s regulations define covered employees as including “compensated or non-compensated workers...controlled directly by State or local government” (40 CFR Part 311.2)
The necessary skills and knowledge are to include, among other things, (1) how to implement the emergency response portions of the local emergency response plan developed under SARA Title III, (2) how to develop a site safety and control plan for hazardous substances emergencies, (3) how to properly use and calibrate hazardous substance sampling instruments (such as multiple organic vapor analyzers and the photolization detectors), and (4) an understanding of the emergency response portions of the state emergency response plan developed under SARA Title III.

The on-scene incident commander, or officer in charge of the overall operations at the scene of an incident, should be a generalist with a broad knowledge of managing emergency incidents.

The commander level requires at least 24 hours of training at the first-responder operations level, with additional training or experience in how to manage emergency incidents involving hazardous substances.

At a minimum, the additional training is to include an understanding of (1) how to implement the employer's incident command system and the employer's emergency response plan, (2) the hazards and risks that are faced by responders working in chemical protective clothing, (3) how to implement the relevant parts of the local emergency response plan created under SARA Title III, and (4) the importance of following decontamination procedures.

Other categories of emergency responders identified in the standard include the "skilled support person," and "specialist employee." Skilled support personnel are those who may occasionally assist the incident commander by operating cranes, backhoes, or trucks. Since many of these workers do not expect to help in such incidents and do not have even minimal awareness training, attention must be given to their proper safety and health protection at the scene before they participate in the incident. This can be accomplished by an on-site briefing that includes a discussion of the hazards present, the personal protective clothing and equipment to be used, how the equipment is used, and the exact task they are expected to perform.

The "specialist employee" is an expert who may assist, counsel, or advise the incident commander. Specialist employees may provide technical assistance in operations such as servicing specific valves on a tank car, or in similarly skilled areas, in addition to offering advice. Specialist employees could also be medical or environmental experts.

Even though specialist employees are experts in their respective areas, they must be trained in how to interact within the incident command structure, and how to follow the operating procedures established by their employer. Their required training also is to inform them of the hazards that may be present at an emergency site.

All emergency response personnel covered by paragraph (q) must receive refresher training, at least annually, to ensure that their skills and competencies do not deteriorate and are not forgotten. Training that expands the knowledge of emergency responders upward along the continuum is acceptable to meet the annual refresher training requirements for the year during which the training was received.

It should be mentioned that the OSHA interim final rule requires 24 hours of training annually for emergency responders. The emergency responders who received training under the interim final rule should be able to apply a good portion of that training towards meeting the requirements of the final rule for their specific level of response.

For example, fire department or fire brigade members who received training at the first-responder operations level under the interim final rule may use those training hours that are relevant to their assigned duties to meet their obligations under the final rule. This is also true for hazardous materials team members and on-scene incident commanders.

As a result, some additional training for experienced emergency responders may be necessary to comply fully with the training requirements for their response level. Newly employed personnel, however, will need to comply fully with all the hours of training and related competencies for the level of work they are expected to perform.
Summary

Title III of SARA, "The Emergency Planning and Community Right to Know Act of 1986," focuses on numerous issues that complement OSHA's standard. This law prescribes in detail the efforts to be made by states and local planning districts to develop and implement effective emergency response plans for their communities. The planning efforts are now, and will continue to be, of major significance in helping employers and emergency response organizations develop complete, quality plans, and to utilize such plans effectively.

Local emergency response plans must include training schedules, and schedules for conducting drills and exercises of the local district plans. Drills and exercises may be used, in part, to help meet the annual refresher training requirements for covered employees.

As discussed above, OSHA's hazardous waste standard requires that various responders be trained according to their responsibilities so they are knowledgeable of local emergency response plans, and are able to effectively implement the plan. These OSHA requirements and those of Title III of SARA interact effectively and support each objective in achieving the ultimate goals of ensuring the safety and health of emergency responders, as well as providing improved coordination and protection for local communities.

Bibliography:


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<tr>
<td>8 hours hazardous waste management</td>
</tr>
<tr>
<td>8 hours annual refresher</td>
</tr>
<tr>
<td>o Routine site employees (minimal exposure)</td>
</tr>
<tr>
<td>40 hours initial</td>
</tr>
<tr>
<td>8 hours field*</td>
</tr>
<tr>
<td>8 hours hazardous waste management</td>
</tr>
<tr>
<td>8 hours annual refresher</td>
</tr>
<tr>
<td>o Non-routine site employees</td>
</tr>
<tr>
<td>24 hours initial</td>
</tr>
<tr>
<td>8 hours field*</td>
</tr>
<tr>
<td>8 hours hazardous waste management</td>
</tr>
<tr>
<td>8 hours annual refresher</td>
</tr>
</tbody>
</table>

*Note: See 29 CFR 1910.120(e).*

*Refers to on-the-job training.*
# Table 2. Treatment, Storage, and Disposal Sites Training Requirements

<table>
<thead>
<tr>
<th>Staff</th>
</tr>
</thead>
</table>
| o General permit site employees  
24 hours initial or equivalent  
8 hours annual refresher |
| o Emergency response personnel  
  Trained to a level of competency for assigned duties  
  Annual refresher |

Note: See CFR 1910.120(p)(7) and (p)(8).
Table 3. Other Emergency Response Staff Training Requirements

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
<th>Training Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>First responder (awareness level)</td>
<td>Sufficient training or proven experience in specific competencies&lt;br&gt;Annual Refresher</td>
</tr>
<tr>
<td>Level 2</td>
<td>First responder (operations level)</td>
<td>Level 1 competency and 8 hours initial or proven experience in specific competencies&lt;br&gt;Annual refresher</td>
</tr>
<tr>
<td>Level 3</td>
<td>HAZMAT technician</td>
<td>24 hours of Level 2 and proven experience in specific competencies&lt;br&gt;Annual refresher</td>
</tr>
<tr>
<td>Level 4</td>
<td>HAZMAT specialist</td>
<td>24 hours of Level 3 and proven experience in specific competencies&lt;br&gt;Annual refresher</td>
</tr>
<tr>
<td>Level 5</td>
<td>On-the-scene incident commander</td>
<td>24 hours of Level 2 and additional competencies&lt;br&gt;Annual refresher</td>
</tr>
</tbody>
</table>

Note: See 29 CFR 1910.120 (q)(6).

---

1 Witnesses or discovers a release of hazardous materials and who are trained to notify the proper authorities.
2 Responds to releases of hazardous substances in a defensive manner, without trying to stop the releases.
3 Responds aggressively to stop the release of hazardous substances.
4 Responds with and in support to HAZMAT technicians, but who have specific knowledge of various hazardous substances.
5 Assumes control of the incident scene beyond the first-responder awareness level.
ABSTRACT

This letter clarifies applicability of 29 CFR 1910.120 to activities in "clean areas" of a site designated for clean-up by a governmental body. The entire geographic area of the site could fall under 29 CFR 1910.120. Once areas are characterized following the criteria outlined in 1910.120(c), employees are not covered by the standard if they work exclusively within uncontaminated areas of the hazardous waste site, do not enter areas where hazardous wastes may exist, are stored or are processed; or are not exposed or potentially exposed to health or safety hazards related to hazardous waste operations. Individuals engaged in construction activities in uncontaminated areas which meet the above conditions are not required to be trained under the standard. Those employees engaged in working in contaminated areas must follow the training requirements of 1910.120(e).

INTERPRETATION

29 CFR 1910.120; 1910.120(e)(3)(iii)

JUL 30, 1990

This is in response to your letter to Mr. J, (City) Regional Administrator, concerning the standard for Hazardous Waste Operations and Emergency Response (29 CFR 1910.120).

Your question concerns the application of this standard to activity on "clean areas" of a site designated for clean-up by a governmental body. Potentially the entire geographic area of the site designated for clean-up by a governmental body could fall under 1910.120. Once areas are characterized, however, employees are not covered by the standard if they:

1. Work exclusively within uncontaminated areas of the hazardous waste site.

2. Do not enter areas where hazardous waste may exist, are stored or are processed; and

3. Are not exposed or potentially exposed to health or safety hazards related to hazardous waste operations.

Consequently, those engaged in construction activities in uncontaminated areas which meet all of the conditions described above are not required to be trained under the standard. However, if employees' work activities do not meet all of the exclusion criteria described above, employees must be trained for the duration and in the subjects specified in paragraph 1910.120(e).

It is the responsibility of the employers of any workers at the site to ensure adequate site characterization. The information that is needed to be gathered is set forth in 1910.120(c). As a result of this process, employers are able to designate contaminated (hot zones) and uncontaminated areas. If site activities or weather conditions change, employers must have ongoing site characterization programs.

SOURCE LETTER

July 2, 1990

As you no doubt are already aware, a meeting occurred on June 11, 1990 with OSHA personnel in your Area Office regarding the Superfund Site. Representatives of labor, (the contractor), and the Corps of Engineers were represented at the meeting.

The purpose of the meeting was to obtain guidance from OSHA with regard to 29 CFR 1910.120 in specific regard to OSHA compliance policy vis-a-vis designation of "clean" areas within designated hazardous waste sites and whether compliance with 1910.120 was required therein. We were informed that no Compliance Directive has been issued covering 1910.120, that no written policy is available, and
that verbal policy from headquarters indicates that there can be "clean" areas within hazardous waste sites-wherein compliance with 1910.120 is not required.

While we were astounded at this statement for a host of reasons we were further frustrated by the fact that OSHA personnel were unwilling to state, or even suggest, what criteria was appropriate to delineate the clean-dirty boundary.

In discussing this issue with Mr. A and Mr. B at the Advisory Committee on Construction Safety and Health meeting last week, Ms. C indicated that I could begin the process to obtain an OSHA policy statement on these issues by writing to you, which is the purpose of this letter.

In the meantime, workers are on the site doing preliminary clearing, etc. We are attempting to pursue an approach to resolving the site specific issues with the Corps, EPA, and the contractor in a time frame to avoid any unanticipated worker exposures. OSHA's lack of support and guidance has unfortunately, severely compromised these efforts.
RECORD ID 3200

STANDARD NUMBER 1910.120(c)(5)(ii)
INFORMATION DATE 900501

ABSTRACT If a determination is made prior to site entry that respiratory protection is warranted, escape self-contained breathing apparatus of at least 5- minutes duration must be worn by employees during initial site entry. If the preliminary site evaluation does not produce sufficient information to identify the hazards or suspect hazards, then level 3 protection is required, which includes positive pressure full facepiece, self contained breathing apparatus. At all other times possible emergency use of respirators must be anticipated and planned for. For operations in which air purifying respirators are in use after initial entry is made, an escape self-contained breathing apparatus may also be necessary.

INTERPRETATION 29 CFR 1910.120(c)(5)(ii)

MAY 1, 1990


You asked for a clarification of the following provision of this standard; (c)(4)(ii): "If positive pressure self-contained breathing apparatus is not used as part of the entry ensemble, and if respiratory protection is warranted by the potential hazards identified during the preliminary site evaluations, an escape self-contained breathing apparatus at least five minutes duration shall be carried by employees during initial site entry."

If it is determined by sufficient information prior to site entry that respiratory protection is warranted but positive-pressure self-contained breathing apparatus is not necessary, then an escape self-contained breathing apparatus of at least 5-minutes duration must be worn by employees during initial site entry. (See also 29 CFR 1910.120(c)(5)(i) and (iii)).

While (c)(4)(ii) of the standard only applies to initial site entry, at all other times possible emergency use of respirators must be anticipated and planned for. An escape self-contained breathing apparatus may be necessary at operations performed using air purifying apparatus after initial entry is made. (See 29 CFR 1910.120(g) and 29 CFR 1910.134.)

SOURCE LETTER

March 23, 1990

On Friday, March 23, I spoke to Mr. W about the interpretation of a regulation in the Federal Register pertaining to personal protective equipment (used in hazardous waste operation. The regulation under Federal Register Volume 54, Number 42, of Monday, March 6, 1989 states under paragraph 5(ii), pg. 9320 "If positive pressure self-contained breathing apparatus is not used as part of the entry ensemble, and if respiratory protection is warranted by the potential hazard identified during the preliminary site evaluation, an escape self-contained breathing apparatus of at least five minutes duration shall be carried by employees during initial site entry."

It seems that we have encountered some discrepancies as to what is being required. I interpreted this rule to be saying that if initial entry is made into an area and a positive pressure self-contained breathing apparatus is not used, and an air purifying respirator is used, a five minute escape pack must also be worn by the employee. I also concluded that this only applies to initial site entry and not to operations performed using air purifying apparatus after the initial entry is made.

Mr. W verbally confirmed my interpretation, however, he referred me to your office in order to get a written interpretation of this rule.
This Interpretation addresses the training requirements under CFR 1910.120(e) for underwater divers. OSHA considers preliminary investigations, such as identifying the location of drums, part of the clean-up operation. Training in 29 CFR 1910.120 applies unless the employer can demonstrate that the operation does not involve potential employee exposure to safety or health hazards. The training requirements of 1910.120(e) provide for 24 or 40 hours of training depending on the anticipated levels of employee exposure and the length of time employees are on the site.

This is in response to your Inquiry of August 3 regarding the application of the training requirements under the Hazardous Waste Operations and Emergency Response Final standard (29 CFR 1910.120(e)) to underwater divers.

You explained that the divers will be working on a site performing preliminary investigations to identify the location(s) of drums deposited underwater along the side of a creek. The work will involve the use of metal detection units to facilitate drum location. The employees will be wearing dry suits and S.C.U.B.A. No direct contact with the drum contents is planned as part of the investigation.

OSHA considers preliminary investigations, such as identifying the location of drums, part of the clean-up operation. Thus, if the site falls under the scope of 29 CFR 1910.120(a)(1)(i) - (iii) then the training requirements in 29 CFR 1910.120 apply unless the employer can demonstrate that the operation does not involve potential employee exposure to safety or health hazards. The training requirements of 29 CFR 1910.120(e) provide for 24 or 40 hours of training depending on the anticipated levels of employee exposure and the length of time employees are on the site.

The final standard was issued March 6, 1989, and becomes effective March 6, 1990. OSHA in its enforcement discretion will not issue citations under the interim final rule if an employer is in compliance with the final standard.
ABSTRACT: Employees who work at the perimeter of a hazardous waste site; do not enter areas where hazardous wastes may exist, are stored, or are processed; and are not exposed to health or safety hazards related to hazardous waste operations are not covered by the hazardous waste operations and the emergency response standard.

INTERPRETATION: 29 CFR 1910.120(e)(3)

DEC 28, 1989

This is in response to your letter of November 27. We believe the following explanation will resolve your concerns. Please write again if you wish a more detailed explanation or other actions by the Occupational Safety and Health Administration (OSHA)

Employees who work at the perimeter of a hazardous waste site, do not enter areas where hazardous waste may exist, are stored or are processed and are not exposed to health or safety hazards related to hazardous waste operations are not covered by the standard. Consequently clerical personnel or support personnel meeting the above requirements are not covered by the standard including its training requirements. Delivery persons who leave off the delivered items in perimeter areas and meet the above requirements also are not covered. A truck driver delivering clean fill may not be covered if the area where the fill is delivered is not where hazardous wastes are located and if the driver is not exposed to health or safety hazards resulting from hazardous waste operations.

However, if clerical employees, support personnel or drivers are in areas where there may be exposure to health or safety hazards resulting from hazardous waste operations, they are covered by the standard. Training would have to be 40 hours or 24 hours depending upon which provision of paragraph 1910.120(e) covers them.

SOURCE LETTER

November 27, 1989

The XXXXX requests a petition for review of certain sections of the final OSHA 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response. The over one hundred hazardous waste engineering firms we represent are committed to compliance with OSHA throughout their hazardous waste practices. However, the new language in the final standard regarding employee training at hazardous waste operations is ambiguous, and requires clarification.

We request an interpretation of the final 29 CFR 1910.120 requirements with regard to individuals required to have training. Specifically, Section 1910.120(a)(1) (Scope) and Section 1910.120(e)(3)(ii) (Training) and Section 1910.120(e)(iii) (Training) appear to be in conflict. As indicated in the Scope section, training would not be required for employees unless exposed to safety and health hazards. However, twenty-four hours of training would be required for non-exposed employees if sections (e)(3)(ii) and (e)(3)(iii) were followed. These sections could be interpreted to mean that non-exposed employees such as delivery, clerical, and related support personnel (including truck drivers who deliver clean fill to support zones) would be required to have twenty-four hours of training.

The three paragraphs of concern are new to the final standard issued March 6, 1989, and hence were not available for comment during public hearings. If member firms were required to train non-exposed employees, major logistic and planning problems would result. A clarification is needed as soon as possible and certainly prior to the March 1990 effective date of the standard. Response should be directed to my attention.

Vol. 1-362
ABSTRACT
This interpretation responds to a question on the number of hours of training required under the hazardous waste operations and emergency response standard for people who may enter areas where hazardous waste may exist but who will not be exposed to health or safety hazards. The training requirements under this standard do not apply to employees who have no likelihood of being exposed to safety or health hazards and who would not participate in emergency response activities.

INTERPRETATION
29 CFR 1910.120(e)
SEP 5, 1990
This is a follow-up response to your letter of July 24, concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response Standard 29 CFR 1910.120.

Specifically you have asked for the number of hours of training required under this standard for people who may enter areas where hazardous waste may exist but will not be exposed to health or safety hazards. The training requirements under this standard do not apply to employees who have no probable likelihood of being exposed to safety or health hazards and would not participate in emergency response activities.

AUG 2, 1990
This is an interim response to your letter of July 24, concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response Standard 29 CFR 1910.120.

SOURCE LETTER
July 24, 1990
Re: Interpretation of 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response

I am legal counsel to a professional engineering consulting firm that may be subject to the above-referenced regulation in its hazardous waste practice. On behalf of my client, I request an interpretation of the 29 CFR 1910.120 requirements with regard to the training requirement for certain individuals.

Specifically, clarification is requested regarding the number of hours of training required for personnel who may enter areas where hazardous waste may exist but will not be exposed to health or safety hazards. For example, a security guard at the site stationed outside the perimeter may be required to enter within the perimeter in the event of a trespasser. Alternatively, a representative from the federal, state or local government may enter within the perimeter to perform a "walk-through" but may not be exposed to health or safety hazards simply by walking on the site. In both instances, though personnel may be within the perimeter, project toxicologists reasonably believe that no exposure to health or safety hazards would result. However, the language of the reference standard is ambiguous as to the training required for these types of individuals. Therefore, we seek clarification as to whether such personnel are covered by the standard and the number of hours of training, if any, which is required.
This response clarifies the criteria used to determine whether or not employees are exposed or potentially exposed thereby triggering the training requirements of 1910.120(e). The employer of any workers at the site is responsible for ensuring adequate site characterization prior to the initiation of work. Employees who have minimal (low risk) exposures or low probability of exposures to hazardous substances are covered by the training requirements of other standards such as 1910.1200. Where employee exposures approach permissible exposure limits or published exposure levels, or there is a potential for an emergency, the training requirements under 1910.120 are applicable. Also, training requirements are guided more by job functions at the site and the exposures associated with jobs than by employee exposures.

INTERPRETATION

29 CFR 1910.120(c)(3); (c)(7); (e)(1)(ii); 1910.1200(h)(1)

OCT 3, 1990

This is in response to your most recent letter concerning the Occupational Safety and Health Administration (OSHA) standard for Hazardous Waste Operations and Emergency Response (29 CFR 1910.120).

You restated several questions on the application of the training requirements for clean-up workers (29 CFR 1910.120(e)). Specifically you have asked what criteria one uses to determine whether or not employees are exposed or potentially exposed in order to trigger the training requirements.

The definition of the term “employee exposure” utilized in the scope and application section (29 CFR 1910.120(a)(1)) is consistent with the definition provided in OSHA's Hazard Communication Standard at 29 CFR 1910.1200(e) which includes potential (e.g. accidental or possible) exposure. This broad definition is necessary to characterize sites in order to identify site hazards and select worker protection methods.

As I mentioned in my previous letter, it is the responsibility of the employers of any workers at the site to ensure adequate site characterization. The information that is needed to be gathered is set forth in 1910.120(c). As a result of this process, employers are able to designate contaminated (hot zones) and uncontaminated areas (low hazard areas where no special personal protective equipment is necessary). If site activities or weather conditions change, employers must have ongoing site characterization programs.

Employees who have minimal (low risk) exposures or low probability of exposures to hazardous substances, as determined by the site characterization requirements under 29 CFR 1910.120(c), are covered by the training requirements of other standards such as 29 CFR 1910.1200. Where employee exposures approach permissible exposure limits or published exposure levels, or there is a potential for an emergency, then the training requirements under 29 CFR 1910.120 are applicable.

Thus, anyone who enters a hazardous waste site must recognize and understand any potential hazards to health and safety associated with cleanup of that site. The level of training provided must be consistent with the worker's job functions and responsibilities, the toxicity of the materials, the levels of exposure and the potential for an emergency to develop. The Hazardous Waste Operations and Emergency Response Standard along with other OSHA standards ensure this training.

In response to your concerns regarding compliance policy, you should be aware that we work closely with the Environmental Protection Agency (EPA) on issues relating to our equivalent worker protection standard. All letters of interpretations under 29 CFR 1910.120 including our correspondence with you are shared with them and OSHA Regional and Area Offices. All interpretations are fully reviewed prior to issuance and offer guidance in response to questions submitted to OSHA. As some questions are general in nature, our response must also be general in nature. This Directorate is presently engaged in developing an OSHA Instruction to provide further field compliance guidance on 29 CFR 1910.120.
SOURCE LETTER

August 7, 1990

Thank you for your response of July 30, 1990 to my letter regarding the OSHA standard for Hazardous Waster Operations and Emergency Response under 29 CFR 1910.120.

Apparenty my letter was not obvious with regard to the two issues of importance:

1. OSHA compliance policy with regard to designated hazardous waste sites with specific reference to whether compliance with 1910.120 is required in so called "clean zones" on or within such sites.

2. What compliance criteria applies with regard to determining clean - contaminated zone boundaries? More simply put, what criteria is appropriate to determine "potentially exposed to health or safety hazards" particularly as much is not included in 1910.120 (a)(3) Definitions?

Your July 30, 1990 letter addresses issue number 1. You have stated that OSHA policy is that "clean areas" within a designated hazardous waste site do not require that the employer comply with 1910.120. Further, that such "clean areas" are those where employees "are not exposed or potentially exposed to health or safety hazards". One is quite clearly left with the practical, real, field dilemma however, associated with the need to understand what "potentially exposed" means.

When this issue was raised on June 11, 1990 with OSHA personnel in the (City) Area Office, we were provided with no information, guidance, recommendations, or suggestions. Your letter likewise fails to even address this obvious issue. Meanwhile we have a "clean zone" project underway wherein low levels of contamination of groundwater with pollutants known to be present in the contiguous hazardous waste site are evident. The lack of OSHA compliance guidance on this issue is conspicuous by its absence, particularly as it has been repeatedly sought.

As we learned during the OSHA inspection of hazardous waste sites last year and in the cases involving the contested citations of one of the contractors on each of those sites, 29 CFR 1910.120 is essentially unenforceable in several key regards by the compliance staff/Area Directors and unenforceably vague in other regards from the perspective of the Solicitors office. The compliance policy you outlined in your letter essentially makes 1910.120 even more unenforceable. This issue is further exacerbated by the failure to provide a policy with regard to defining "potentially exposed".

This failure to provide compliance direction is further resulting in a wide range of interpretation of 1910.120 by your field compliance staff. Significant differences have occurred in OSHA Area Offices in Louisiana, Idaho, Massachusetts, Colorado, New York, and Ohio for example. Your compliance policy stated in your July 30 letter also appears to differ from the U.S. EPA policy. Meanwhile workers are exposed, potentially exposed, or unknowingly exposed while contractors, owners, and worker representatives try to develop a reasoned decision making rationale for a regulation which OSHA appears to have no interest in whatsoever.
ABSTRACT. Employees who contain fires at a safe distance rather than fight them aggressively are not required to have medical surveillance under 1910.120. Employees who aggressively fight fires where hazardous materials may be involved and members of HAZMAT teams shall be enrolled in a medical surveillance program in accordance with 1910.120(f). At least 24 hours of annual training conducted on a monthly basis is required under 29 CFR 1910.120(l)(3) for a non-cleanup company that has an emergency response team that responds to releases of hazardous substances on the company's property.

INTERPRETATION. 29 CFR 1910.120(e)(3); (f)(2); (q)(9)

MAY 23, 1989

This is in response to a letter (dated February 28, 1989) on behalf of a Corporation. This inquiry requests interpretations of specific provisions of OSHA's Hazardous Waste Operations and Emergency Response interim final rule (29 CFR 1910.120).

The first question asks which of the following emergency response personnel are required under 29 CFR 1910.120 to be included in a medical surveillance program:

a. Employees who contain fires as opposed to taking aggressive action to fight fires?

b. Employees who take aggressive action to fight fires?

c. Employees that may be required to perform emergency repairs wearing self-contained breathing apparatus to protect against the inhalation of toxic vapors?

Employees in a. above are not covered by 29 CFR 1910.120(f) if their function is to contain the release from a safe distance. Regardless of 29 CFR 1910.120 coverage, employers are required under 29 CFR 1910.156(b)(2) to assure that employees who are expected to do interior structural fire fighting are physically capable of performing duties which may be assigned to them during emergencies.

Employees in b. and c. above are covered by 29 CFR 1910.120(f), as a result of 29 CFR 1910.120(l)(4)(ii), if incidents may involve hazardous substances as defined in 29 CFR 1910.120.

The second and final question concerns what training provisions under 29 CFR 1910.120 are applicable for a non-cleanup company that has an emergency response team that responds to releases of or substantial threats of releases of hazardous substances on the company's property.

Under the interim final standard, at least 24 hours of annual training conducted on a monthly basis is required under 29 CFR 1910.120(l)(3). For further guidance, paragraph (q) of the final standard (copy attached) specifies various levels of training depending on the job functions of the employees. The final standard was issued March 6, 1989, and becomes effective March 6, 1990. OSHA in its enforcement discretion will not issue citations under the interim final rule if an employer is in compliance with the final standard.

SOURCE LETTER

February 28, 1989

We are writing on behalf of our client to request interpretations of specific provisions of 29 CFR 1910.120. We would appreciate your providing written interpretations at your earliest convenience to:
The two issues on which we are requesting interpretations are as follows:

1. Medical Surveillance - Paragraph (f)

Which of the following emergency response personnel should be included in a medical surveillance program (all are company employees and none would be requested to respond to emergencies off of plant property):

   a. Employees who may be called upon to staff a fire brigade if the fire brigade's responsibilities are to contain fires as opposed to taking aggressive action to fight fires? These personnel may be required to wear heat-protective clothing (bunker gear) and, possibly, self-contained breathing apparatus to prevent inhalation of toxic fumes associated with the fire.

   b. Employees as described in 1.a. above that may take aggressive action to fight fires, such as entering an emergency area under cover of a fog spray that protects them from heat exposures and allows the fire to be fought from close quarters.

   c. Employees that may be required to perform emergency repairs wearing self-contained breathing apparatus to protect against the inhalation of toxic vapors.

None of the above personnel would be expected to wear a respirator 30 or more days per year or be exposed to toxic chemicals over established safe levels for 30 or more days per year.

2. Training - Paragraph (i)(3) and (i)(4)

Would employees of a private corporation who may serve as part of an on-site emergency response team, fire brigade or spill response team be required to receive the additional 24 hour/year, monthly training? These employees would not respond to any off-site incidents but may provide the varying level of support described in 1.a., 1.b., or 1.c. above. Would the training requirement (with regard to (i)(3)) vary between the three examples provided?

Also, can routine skills training, such as those handling drills, be counted as part of the 24 hour/year monthly training?

Please note that we have received differing verbal interpretations of these questions from personnel in your Dallas and Washington, D.C. offices.
Employers are obligated under 1910.120 to make medical surveillance and medical consultation available, but OSHA does not require employees to participate. Mandatory participation in the medical program can be made a condition of employment. Training requirements in the standard are mandatory for all covered employees and must include, along with other subjects, the purpose and content of the medical surveillance requirements of the standard.

MAY 22, 1990

The (City) Regional Office of the Occupational Safety and Health Administration (OSHA) has requested that we respond to your statement addressed in an April 10 letter to them concerning medical surveillance provisions in the Hazardous Waste Operations and Emergency Response standard (29 CFR 1910.120).

Employers are obligated under 29 CFR 1910.120 to make medical surveillance and medical consultation available, but OSHA does not require employees to participate. Mandatory participation in the medical program can, as suggested in your letter, be made a condition of employment. Training requirements in the standard are mandatory for all covered employees and must include along with other subjects the purpose and content of the medical surveillance requirements of the standard.

APR 30, 1990

Memorandum

Subject: Medical Surveillance under the Hazardous Waste and Emergency Response Standard 29 CFR 1910.120

We are enclosing a copy of a letter dated April 10, 1990. We call your attention to page 2, the second indented main point. Section (f)(2) of 29 CFR 1910.120 required all employees to undergo the pre-assignment and annual physical examinations without exception lest they be prevented from site entry. In a later telephone conversation it became apparent that national policy is moving towards interpreting this section in concert with the other health standards that require medical examinations. Namely, the employer need only make the exam available at no cost to the employee but need not compel the employee to submit to the physical against his or her will. Since requests for interpretation of this section are frequently posed by employers and have national significance, we are forwarding her letter to your office for response.

SOURCE LETTER

April 10, 1990

Pursuant to our phone conversation on April 9, 1990, I am writing to confirm several points of understanding from our discussion regarding medical monitoring programs for employees and the application of OSHA's Hazardous Waste Operations and Emergency Response regulation Title 29, Code of Federal Regulations (CFR), Part 1910.120.

As you know we provide a variety of environmental consulting services to our clients. Recently an engineering client and consultant affiliate of ours had a request from an employee to be excluded from the company's recently revised medical monitoring program. The program is directed primarily toward those employees whose consultations require their presence on hazardous waste sites, at waste treatment facilities, or on other sites where the potential exists for exposure to hazardous materials. The employer has established this program in compliance with the requirements set forth in 29 CFR 1910.120 (f) and
Our discussion on April 9th focused on three main points with regard to this situation:

- OSHA does not have jurisdiction over municipl's employers, but does have jurisdiction over employers otherwise covered by OSHA who perform work for municipalities on a contract basis. Therefore the client is subject to compliance with OSHA regulations, including health and safety provisions for those employees performing contract work for municipalities.

- Medical surveillance and medical consultation revisions for all OSHA regulations except 29 CFR 1910.120 are optional at the employee's discretion. The training and medical surveillance requirements of this standard are mandatory for all covered employees.

- It is within an employer's rights to make compliance with health and safety requirements a condition of employment when those requirements are relevant to the work performed by the employee.

Additional points in our discussion included the interpretation that the hazardous substances referred to in 29 CFR 1910.120 (f) (2) include the OSHA hazardous substance list (the "Z" Tables) along with physical agents. We also understands that OSHA has not yet provided official guidance and interpretation of all aspects of the subject standard.

Please review the summation of our April 9th conversation given above. If I receive no reply from you within ten working days of your receipt of this letter I will assume that its contents accurately reflect the essence of our phone conversation and will act accordingly. If, however, this summary does not accurately reflect our conversation, or if you have acquired additional information since our last conversation, please contact me.
This response addresses improper decontamination of equipment used on hazardous waste sites. Section 1910.120 requires in paragraph (k) that a decontamination plan be developed and implemented before any employees or equipment may enter areas in hazardous waste sites where the potential for exposure to hazardous substances exists. All equipment must be decontaminated before leaving a contaminated area or disposed of. The decontamination program must be monitored by the site safety and health supervisor to ensure its effectiveness. Employees performing or participating in the decontamination process must have received the appropriate training.

Thank you for your inquiry of December 31, 1990, on behalf of your constituent. Your constituent expressed concerns about improper decontamination of equipment used on hazardous waste sites.

Because of the safety and health hazards related to hazardous waste operations, the Occupational Safety and Health Administration (OSHA) issued a final standard (29 CFR 1910.120) specifically developed to protect workers in this environment and to help them handle hazardous wastes safely and effectively. This standard requires in paragraph (k) a decontamination plan to be developed and implemented before any employees or equipment may enter areas on hazardous waste sites where potential exists for exposure to hazardous substances. All equipment must be decontaminated or disposed of before leaving a contaminated area. These provisions are required so that contaminated equipment does not leave the "hot zone" and thereby expose other employees or persons to hazardous substances.

The decontamination program must be effective and it must be monitored by the site safety and health supervisor to maintain its effectiveness. Employees performing or participating in the decontamination process must be adequately trained. Violations of these requirements may lead to citation by OSHA.

These regulatory requirements were based on the comments and testimony received in a full rulemaking proceeding. Public hearings were held and representatives from unions, industry, academia and regulatory agencies presented expert testimony on these and other relevant issues.
This interpretation applies to coverage of maintenance employees who will enter the RCRA TSD designated facility to repair and perform periodic maintenance on mechanical or electrical equipment, to conduct general housekeeping duties, and to transfer materials between a storage tank or container and a licensed waste hauler. Maintenance employees who have regular (periodic) duties in the permitted areas would be covered by section (p) of 29 CFR 1910.120.

FEB 13, 1991

This is in response to your inquiry concerning the application of the Hazardous Waste Operations and Emergency Response standard (29 CFR 1910.120).

Your specific question is the coverage of maintenance employees who "will enter the RCRA TSD designated facility to repair and perform periodic maintenance on mechanical or electrical equipment, conduct general housekeeping duties, and transfer materials between a storage tank on container and a licensed waste hauler." Maintenance employees who have regular (periodic) duties in the permitted areas would be covered by section (p) of the standard.

The Occupational Safety and Health Administration Regulation 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response, was strongly supported during the comment stage and we feel our company is in compliance with the standard. On several occasions questions have risen relating to extent of scope within our operation and to the specific worker population considered to be covered by this rulemaking.

I have previously contacted Mr. X of your office to obtain verbal interpretations of several general requirements and am very appreciative of his assistance. At this time I would like to obtain a written interpretation of the rulemaking relating to a specific population of Company employees.

We have four operations considered to be "Operations involving hazardous wastes that are conducted at treatment, storage, and disposal (TSD) facilities regulated by 40 CFR Parts 264 and 265 pursuant to RCRA" (29 CFR 1910.120 (a)(1)(iv). The employees operating these facilities are considered to be encompassed by the rulemaking and receive 24 hours of initial training and 8 hours of annual refresher training as required by 29 CFR 1910.120 (p)(7)(i).

On occasion, maintenance employees will enter the RCRA designated TSD facility to repair and perform periodic maintenance on mechanical or electrical equipment, conduct general housekeeping duties, and transfer materials between a storage tank or container and a licensed waste hauler. These maintenance employees receive training as required by the Hazard Communication Program, 29 CFR 1910.120, personnel training in Hazardous Waste Operations as required by 40 CFR 264.16, and training in the various personal protective equipment they may be required to wear.

We consider this training to be more than adequate to provide for the safety and health of the maintenance employees. We have approximately 75 personnel falling under the category previously described and who currently receive extensive safety and health training. If these individuals are to be included under the scope of 29 CFR 1910.120, a major adverse impact on the ability of McDonnell Aircraft to perform facility repairs and periodic maintenance on equipment would be sustained.
We feel the Hazardous Waste Operations and Emergency Response standard was not promulgated to include off-site maintenance employees or non-operator personnel who may enter the site. We are requesting an interpretation of the standard regarding this employee group.
ABSTRACT

This interpretation addresses the applicability of 1910.120(p)(2) to a RCRA TSD hazardous waste site handling Polychlorinated biphenyls (PCB's). PCB's are not defined as hazardous waste under RCRA, and therefore do not meet the exemption for coverage under 1910.1200(b)(6)(i). The employer must implement a hazard communication program at that site. If the PCB's are being handled at a permitted (under RCRA) TSD area and no hazard communication program has been implemented, then a violation of both 1910.120(p)(2) and

INTERPRETATION

29 CFR 1910.120(p)(2); 1910.1200(b)(6)(i)

FEB 15, 1991

MEMORANDUM

SUBJECT: Interpretation of 1910.120(p)(2) and 1910.1200(b)(6)(i)

This is in response to your memo of December 18, 1990, requesting a clarification or interpretation of the applicability of 29 CFR 1910.120(p)(2) a RCRA treatment, storage and disposal (TSD) hazardous waste site. The inspection was conducted out of your Area Office.

Polychlorinated biphenyls (PCB's) are not defined as hazardous waste under RCRA, and therefore do not meet the exemption for coverage under the Hazard Communication Standard 29 CFR 1910.1200 (see subparagraph (b)(6)(i)). The employer must comply with the requirements of 1910.1200 and must implement a hazard communication program at that site. If the PCB's are being handled at a permitted (under RCRA) TSD area and no hazard communication program has been implemented, then a violation of both 1910.120(p)(2) and 1910.1200 exist. These violations may be grouped, as appropriate, on any citation issued.
ABSTRACT  This letter clarifies the application of training requirements in the Hazardous Waste Operations and Emergency Response standard to employees doing occasional maintenance or service repair work on a disposal site. Employees are not covered by the standard if they work exclusively within uncontaminated areas of the hazardous waste site; do not enter areas where hazardous wastes may exist, are stored, or are processed; and are not exposed to health or safety hazards related to hazardous waste operations. If employees' work activities do not meet all of the exclusion criteria then employees must be trained in the subjects specified in 1910.120(p)(7).

INTERPRETATION  29 CFR 1910.120(a)(1); (p)(7)

JUL 18, 1990

This is in response to your inquiry of June 11 concerning the application of training requirements in the Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120) to employees doing occasional maintenance or service repair work on a disposal site.

Employees are not covered by the standard if they:

1. Work exclusively within uncontaminated areas of the hazardous waste site.
2. Do not enter areas where hazardous waste may exist, are stored or are processed; and
3. Are not exposed to health or safety hazards related to hazardous waste operations.

It is unclear from your letter whether the workers remain exclusively within uncontaminated areas. If employees' work activities do not meet all of the exclusion criteria described above and the disposal site falls under the scope of the standard (see 1910.120(a)(1)(iv)) then employees must be trained for the duration and in the subjects specified in 1910.120(p)(7).

SOURCE LETTER

June 11, 1990

I am writing to you at the suggestion of the Office of Information and Consumer Affairs with regard to a written interpretation of our company status with regard to Law 1910.120.

To explain our position you should know that your company is engaged in the sales and service of heavy construction equipment. We have, on occasion, sold some of this equipment to companies engaged in the refuse disposal business, which necessitates our appearing on a disposal site on occasion to do maintenance or service repair work.

Last week, we had an occasion to go onto a site to install a safety belt in an operator's cab. The Safety Compliance person on the site refused our mechanic admission, stating that it was necessary for him to have 40 continuous hours of hazard waste training and at least three days experience on a site in the tow of an experienced employee.

This was the first occasion we have had this demand made of our service employees. I have ordered and read a copy of the 1910.120 law and nowhere in that law does it specifically identify that a company, such as ours engaged in infrequent service trips to a site, must incur the cost of such an extensive training program.

I explained this situation to your representative and he said that it was not the intent of the law to include people such as ourselves or the people who put soda in the pop machines and other occasional visitors to come under this training program and that with the normal hazard recognition and instruction the waste...
site operator is to impart to any visitor that our people should be adequately covered for their short period of exposure.

He suggested that I write to you to get a letter of official interpretation that would suffice when presented to the site operator that our employees were exempt from this extensive training.
Under the post-emergency response operations requirements of 29 CFR 1910.120(q)(11), an employer has the option of meeting all of the requirements of paragraphs (b) through (o) of 1910.120; or, where the cleanup is done on plant property using plant or workplace employees, such employees shall have completed the training requirements of the following: 29 CFR 1910.38(a), 1910.134, 1910.1200, and any other appropriate safety and health training made necessary by the tasks that they are expected to perform (eg. personal protective equipment and decontamination procedures).

This is in response to your letter dated June 6 addressed to the Acting Assistant Secretary concerning the application of 29 CFR 1910.120 to post-emergency clean-up operations including oil spill clean-ups.

As you are aware, under the post-emergency response operations requirements of 29 CFR 1910.120(q)(11) an employer has the option of complying with one of the following:

1. Meet all of the requirements of paragraphs (b) through (o) of 29 CFR 1910.120; or

2. Where the cleanup is done on plant property using plant or workplace employees, such employees shall have completed the training requirements of the following: 29 CFR 1910.38(a); 1910.134; 1910.1200, and any other appropriate safety and health training made necessary by the tasks that they are expected to be performed such as personal protective equipment and decontamination procedures.

It appears that the relief you are requesting is for the Occupational Safety and Health Administration (OSHA) to allow employers involved in the clean-up of oil spills to comply with option 2 above. Since the standard explicitly makes the distinction between activity done on plant property versus activity off the plant site, we believe that a compliance directive is not the appropriate medium for addressing your request.

I have forwarded a copy of your letter to the Director of Safety Standards Programs. As you know, the standard is being challenged in the United States Court of Appeals for the District of Columbia Circuit, AFL-CIO et al v OSHA, No. 89-1296. Training is one of several provisions that the Court is being asked to review in that case. In addition, OSHA intends to publish a Notice of Proposed Rulemaking setting forth requirements that initial training for employees be given only through training programs with OSHA certification.

In general, OSHA will be enforcing the need for a minimum of 24 or 40 hours of training as specified in 29 CFR 1910.120(a). There may be cases where OSHA's variance procedures may be appropriate or where OSHA would determine that a specific situation at a worksite warrants a de minimis violation.

June 6, 1989

The (Association) is a trade association representing over 200 companies involved in all aspects of the petroleum and petrochemical industry, including exploration, production, transportation, refining, and marketing.
As you are aware, Section 126 of SARA Title I required OSHA to develop regulations to protect workers involved in hazardous waste operations at uncontrolled hazardous waste sites. OSHA published interim regulations (December 19, 1986); proposed permanent regulations (August 10, 1987); and promulgated final regulations (March 6, 1989). These final regulations (29 CFR 1910.120) became effective March 6, 1990. In the course of the regulatory development, OSHA also addressed emergency response to spills of hazardous substances.

The final rule can be interpreted to require implementation of a comprehensive plan complying with section 1910.120 paragraphs (b) through (o) intended for hazardous waste sites, to satisfy the post-emergency clean-up provisions following an emergency response to a hazardous substance release see section 1910.120 (q)(11). Under such an interpretation, a comprehensive plan meeting the requirements of paragraphs (b) through (o) would be required before spill clean-up operations could begin. Further, it could be read as requiring employees involved with the clean-up to have 40 hours of training plus 24 hours of directly supervised field activities (total 8 days) before performing clean-up operations.

We accept the need for appropriate training of post-emergency response clean-up workers. However, interpreting the rule to require oil spill clean-up workers to have five days of advance training (as is required for workers at hazardous waste sites) may delay and hamper efforts to contain such spills, begin recovery, and protect the environment. These could be large volume spills requiring large numbers of clean-up workers and the rule mandates enormous training requirements which would be exacerbated by the high turnover in the type of work involved.

Training for clean-up workers can be accomplished more efficiently and in a much more timely fashion by dealing directly with the relevant hazards. Such training can address safety issues, health issues, personal protective equipment, decontamination, general operational safety, emergencies, and respiratory protection (if needed). A general outline of such a training plan is attached.

In summary, it is important that member companies ensure the protection of employees and those who do contract work for us. At the same time, we believe we have an obligation to rapidly control spills and any subsequent environmental impacts when they occur.

We believe this is a matter which requires your consideration. One possible solution would be to note with some specificity in the compliance directives presently being prepared on this subject that training requirements for oil spill clean-up persons working in the post emergency response mode should be oriented around an agenda such as attached, but not be time constrained.
OIL SPILL CLEAN-UP HEALTH AND SAFETY TRAINING PROGRAM

I. INTRODUCTION
A. Training Objective
B. Operations Overview. Description of problem, clean-up activities, logistical problem and reporting relationship

II. SAFETY ISSUES
A. Hazards
   Slipping and tripping, water safety, air safety, buddy system, proper lifting, shoreline safety, equipment safety, and wildlife
B. Accidents
   Reporting, first-aid, emergency evacuation

III. HEALTH ISSUES
A. Chemical Identification Fresh vs. weathered crude.
B. Hazard Communication. Skin hazards, benzene hazards, and MSDS (training tape)
C. Physical Agents: Hypothermia, Noise and Heat stress
D. Confined Space Entry. Policy and permitting
E. Industrial Hygiene Monitoring. Objective, type and communication of results
F. Medical Surveillance. Implementation criteria and record handling
G. Personal Hygiene. Dermal contamination and cleanup, sanitary facilities, water supply and waste disposal

IV. PERSONAL PROTECTIVE EQUIPMENT
A. General Requirements. Eye protection, hard hats, respirators, flotation devices, caring protection and clothing/gear
B. Each Component Discussed in Detail with Demos

V. DECONTAMINATION
A. Scope. Where, when and why must be done
B. Procedure. Detailed description with demo

VI. OTHER ISSUES
A. Alcohol and Drug Consumption. Banned
B. Firearm Policy. Requires written approval
C. Wildlife Policy. Live animals/bear alert and dead animals according to U.S. Dept. of Interior
D. Archaeological Sites. Identification indicates no disturbance allowed
E. Earthquake Safety
F. Avalanche and Rock Slide Safety

REFRESHER TRAINING
A. Project Status Report
B. Work practice/Conditions Update
C. Health and Safety Update. Exposure data and accident review
D. Training Session Review. Safety and health issues, personal protective equipment and decontamination
This is in response to your letter of June 7 concerning the application of the Hazardous Waste Operations and Emergency Response standard (29 CFR 1910.120) to specific operations.

This standard covers clean-up operations of hazardous substances, licensed or interim status hazardous waste treatment, storage, or disposal (TSD) facilities, emergency response activities at these two operations in addition to emergency response situations involving hazardous substances that occur at locations other than hazardous waste sites and TSD facilities. All other pertinent standards, including those involving hazardous materials, also apply to these operations. If there is a conflict or overlap, the provision more protective of employee safety and health apply. (See 29 CFR 1910.120 (a)(2)(i)).

Section (q) of the standard applies to the following examples you gave in your letter of operations which use hazardous substances in a manner where there may be potential emergencies:

1. Anhydrous ammonia used as a cooling agent;
2. Manufacturing, processing, and storing of agricultural farm chemicals; and
3. Chlorine used as a bleaching agent during the processing of flour for baking.

Nuisance spills, minor releases, etc. which do not require immediate attention (due to danger to employees) are not considered emergencies. Where applicable, all employees involved in an emergency response must be trained under 29 CFR 1910.120. The type and amount of training is based on the duties and functions to be performed by the employees. To assist you with the training requirements under this standard, I have enclosed a copy of the following OSHA article, "Hazardous Waste Operations and Emergency Response: A Close-up Look at Training."
HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE:
A CLOSEUP LOOK AT TRAINING

On March 6, 1989, OSHA promulgated a final rule on Hazardous Waste Operations and Emergency Response (29 CFR Part 1910). The rule, which will take effect on March 6, 1990, is a direct result of the Superfund Amendments and Reauthorization Act of 1986 (SARA).

SARA (42 USC 9601, Titles I-IV) set the nation on a path toward better preparedness in dealing with emergencies involving the release of hazardous substances. The law also strengthened the nation's efforts to clean up hazardous waste and deal with other issues on hazardous chemicals. SARA required OSHA to develop interim¹ and final rules, and Congress identified specific criteria for the agency to follow in establishing regulations for hazardous waste operations and emergency response activities.

For example, Title I of SARA specifies safety and health requirements for employers and Title III deals with local community emergency response plans. These two sections are examined here with respect to the OSHA standard and, in particular, their training requirements. The training requirements are significant because this is the first time that OSHA has mandated a specific number of training hours in a final rule.

Title I, Section 128 of SARA required OSHA to develop a standard that would set minimum safety and health requirements for (1) employers in hazardous waste or substance clean-up activities at government identified sites;² (2) employers involved in storing, treating, or disposing of hazardous waste; and (3) employers involved in emergency response to the release of hazardous substances.

SARA required that the OSHA standards include, at a minimum, the following areas: site analysis, training, medical surveillance, protective equipment, engineering controls, maximum exposure limits, information, hazardous waste handling, new technologies, decontamination procedures, and emergency response.

Although each of these issues is important in protecting workers, the purpose of this article is to examine, in some detail, the training requirements of the final rule for each of the three categories of employers covered.

Hazardous Waste Cleanup Operations

Paragraph (e) of the standard establishes the initial training requirements for employees and supervisors who are or will be involved in hazardous waste/substance cleanup operations at government-identified sites.

The training requirements are organized in a tiered arrangement (see Table 1). In the first tier are employees and supervisors who remove or excavate hazardous substances at the site. For example, this category includes laborers, operating engineers and their supervisors.

Before beginning work, these individuals must have 40 hours of training off-site and then 24 hours of on-the-job training with a trained and experienced supervisor. All supervisors who will be working in these operations must have eight additional hours of specialized training in managing hazardous waste operations.

The required training for supervisors concerns safety and health issues, such as the supervisor's role and responsibilities in the employer's safety and health program, the medical surveillance program, and the training program.

The second tier sets forth the criteria for training employees who are on-site only occasionally to do a specific job (paragraph (e)(3)(ii)). For example, this would cover employees surveying the perimeter of a site to make a plat or to mark boundaries.

² Examples include the National Priority List of sites as well as those listed by other Federal agencies and by State or local governments.
Workers who are on-site for short periods, and thus are unlikely to be exposed above any permissible exposure limit (PEL), are required to have a minimum of 24 hours of training off-site and then 8 hours of on-the-job training on-site by a trained and experienced supervisor.

Likewise, paragraph (e)(3)(iii) covers workers who will be on-site on a more regular basis, but who do not risk exposure above the PEL's or to any other health hazard and are not subjected to the possibility of an emergency situation.

For example, such individuals might include those involved in the final work activities in completing a closure operation on a site before it is removed from the government list.

These workers are required to have 24 hours of training off-site, and then 8 hours of on-the-job training by a trained and experienced supervisor. In either case, the required training is to be taken before employees may perform their regular job duties without close supervision.

Supervisors or managers who work at cleanup sites must receive eight hours of training beyond the initial basic training requirements. This additional training includes areas such as their employer's occupational safety and health program and their role in the program.

Workers and supervisors at all three levels of exposure are also required to receive eight additional hours of annual refresher training.

As appropriate, experienced incumbent employees may substitute prior training and experience for initial training requirements in the same subject.

Treatment, Storage and Disposal Sites

The next group of employers covered are those who store hazardous waste on their premises for more than 90 days, or are involved in treating or disposing of hazardous waste. These employers are covered under paragraph (p) of the standard. The applicable training requirements for employees of these employers are in paragraphs (p)(7) and (p)(8)(iii). (See Table 2.)

Initial training of at least 24 hours is mandatory for all new employees in this category. The training is expected to cover the employer's safety and health program, medical surveillance, decontamination, emergency response, hazard communication, new technology, and employee training, among others. The initial training is to inform and instruct new employees about their assigned duties and any related hazards and about their employer's safety and health policies and procedures. Moreover, employees who may be involved in emergency response operations need additional training.

At any rate, all employees on the permitted site area are to be provided eight hours of refresher training annually. Incumbent employees who are experienced and who have received training before the standard takes effect may substitute their prior training, where appropriate.

Other Emergency Response Staff

Employers of emergency response personnel are covered by the training requirements of paragraph (q) of the final rule. These employees respond from their typical work area to an emergency where hazardous substances are released or may be released (see Table 3).

In promulgating these requirements, OSHA used the National Fire Protection Association's Standard as a model. OSHA's final rule also includes training criteria for the on-the-scene incident commander, specialist employees and skilled support employees. These types of position classifications were not included in the National Fire Protection Association Standard.

The OSHA standard establishes a continuum of training requirements for emergency responders, progressing from the "first-responder awareness level," at the lower, or first, level to the "hazardous materials specialist" and "incident commander" at the higher, or fifth, level.

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At the first-responder awareness level, the competency level of training is directed toward the police, guard service personnel, night watchmen, emergency medical responders including ambulance personnel, and others who are likely to discover or respond to emergency incidents involving hazardous substances.  

The training is targeted at teaching employees to recognize the human hazards present during these emergencies and how to protect themselves against such hazards. The required training also includes how to accurately and fully report the necessary information to an "alarm dispatcher" so that subsequent emergency responders are fully informed. Many first-responder awareness training courses presently run from 4 to 12 hours, but the standard does not set a mandatory minimum.

The next level of training is for "first-responder operations." This is the level at which fire departments and fire brigade units typically operate. Such fire fighting teams usually have complete ensembles of firefighter protective clothing and positive-pressure respiratory protective equipment available to them.

Eight hours of training is mandatory for the first-responder operations level, in addition to worker competency at the first-responder awareness level. The required training is to prepare these employees to perform digging, ditching, and similar activities of a defensive nature -- activities that do not require chemical protective clothing.

Where a fire occurs at the operations level, offensive actions may be taken to extinguish the fire provided that no chemical protective clothing is required. For example, in the case of a liquefied petroleum gas fire, personnel at the first-responder operations level would work to shut off the gas flow and extinguish the fire once it was determined that no other chemicals are present and that offensive actions are required.

When these employees are expected to handle emergencies involving flammable liquids and gases in an offensive mode, then additional training is necessary and a minimum of 24 hours of training at the first-responder operations level is recommended. Such a 24-hour operations level training course will prepare those wishing to move up to the technician level of the on-scene commander level.

Next in the training hierarchy are the requirements for "hazardous materials technicians" and "hazardous material specialists." These are the employees OSHA expects to be used to staff "hazardous materials teams" (hazmat teams), spill control teams, and similar groups. Consequently, these employees must have chemical protective clothing available for their use.

The skill requirements for the hazardous material technicians are somewhat lower than those for the hazardous materials specialists. Hazardous materials technicians must have 24 hours of training at the first-responder operations level in addition to the knowledge and skills training the standard sets forth as necessary for these technicians.

The standard requires that hazardous materials technicians know, among other things, how to implement the employer's emergency response plan, how to properly select and use specialized chemical personal protective equipment and clothing, and how to implement proper decontamination procedures for hazardous substances.

The more skilled hazardous materials specialists will generally serve as the senior members of hazmat teams. At this level are the most highly skilled and trained responders having the broadest knowledge of hazardous substances.

The training required for a hazardous material specialist includes at least 24 hours of training at the technician level and such additional training or experience as necessary to acquire the knowledge and skills set forth in the standard.

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4 Section 126 of SARA, paragraph (f), requires that the Environmental Protection Agency (EPA) promulgate regulations to provide protection equal to that found in OSHA's standard for State and local government workers who would not be covered by OSHA-approved state plans. See Worker Protection Standards for Hazardous Waste Operations and Emergency Response, 40 CFR Part 311, et seq., issued by the EPA on June 23, 1989. Also notice that EPA's regulations define covered employees as including "compensated or non-compensated workers...controlled directly by State or local government" (40 CFR Part 311.2)
The necessary skills and knowledge are to include, among other things, (1) how to implement the emergency response portions of the local emergency response plan developed under SARA Title III, (2) how to develop a site safety and control plan for hazardous substances emergency incidents, (3) how to properly use and calibrate hazardous substance sampling instruments (such as multiple organic vapor analyzers and the photolization detectors), and (4) an understanding of the emergency response portions of the state emergency response plan developed under SARA Title III.

The on-scene incident commander, or officer in charge of the overall operations at the scene of an incident, should be a generalist with a broad knowledge of managing emergency incidents.

The commander level requires at least 24 hours of training at the first-responder operations level, with additional training or experience in how to manage emergency incidents involving hazardous substances.

At a minimum, the additional training is to include an understanding of (1) how to implement the employer's incident command system and the employer's emergency response plan, (2) the hazards and risks that are faced by responders working in chemical protective clothing, (3) how to implement the relevant parts of the local emergency response plan created under SARA Title III, and (4) the importance of following decontamination procedures.

Other categories of emergency responders identified in the standard include the "skilled support person," and "specialist employee." Skilled support personnel are those who may occasionally assist the incident commander by operating cranes, backhoes, or trucks. Since many of these workers do not expect to help in such incidents and do not have even minimal awareness training, attention must be given to their proper safety and health protection at the scene before they participate in the incident. This can be accomplished by an on-site briefing that includes a discussion of the hazards present, the personal protective clothing and equipment to be used, how the equipment is used, and the exact task they are expected to perform.

The "specialist employee" is an expert who may assist, counsel, or advise the incident commander. Specialist employees may provide technical assistance in operations such as servicing specific valves on a tank car, or in similarly skilled areas, in addition to offering advice. Specialist employees could also be medical or environmental experts.

Even though specialist employees are experts in their respective areas, they must be trained in how to interact within the incident command structure, and how to follow the operating procedures established by their employer. Their required training also is to inform them of the hazards that may be present at an emergency site.

All emergency response personnel covered by paragraph (q) must receive refresher training, at least annually, to ensure that their skills and competences do not deteriorate and are not forgotten. Training that expands the knowledge of emergency responders upward along the continuum is acceptable to meet the annual refresher training requirements for the year during which the training was received.

It should be mentioned that the OSHA interim final rule requires 24 hours of training annually for emergency responders. The emergency responders who received training under the interim final rule should be able to apply a good portion of that training towards meeting the requirements of the final rule for their specific level of response.

For example, fire department or fire brigade members who received training at the first-responder operations level under the interim final rule may use those training hours that are relevant to their assigned duties to meet their obligations under the final rule. This is also true for hazardous materials team members and on-scene incident commanders.

As a result, some additional training for experienced emergency responders may be necessary to comply fully with the training requirements for their response level. Newly employed personnel, however, will need to comply fully with all the hours of training and related competencies for the level of work they are expected to perform.
Summary

Title III of SARA, "The Emergency Planning and Community Right to Know Act of 1986," focuses on numerous issues that complement OSHA's standard. This law prescribes in detail the efforts to be made by states and local planning districts to develop and implement effective emergency response plans for their communities. The planning efforts are now, and will continue to be, of major significance in helping employers and emergency response organizations develop complete, quality plans, and to utilize such plans effectively.

Local emergency response plans must include training schedules, and schedules for conducting drills and exercises of the local district plans. Drills and exercises may be used, in part, to help meet the annual refresher training requirements for covered employees.

As discussed above, OSHA's hazardous waste standard requires that various responders be trained according to their responsibilities so they are knowledgeable of local emergency response plans, and are able to effectively implement the plan. These OSHA requirements and those of Title III of SARA interact effectively and support each objective in achieving the ultimate goals of ensuring the safety and health of emergency responders, as well as providing improved coordination and protection for local communities.

Bibliography:


Table 1. Hazardous Waste Clean-Up Sites Training Requirements

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<tr>
<td>24 hours field*</td>
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<tr>
<td>8 hours annual refresher</td>
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<td>8 hours annual refresher</td>
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<td>8 hours hazardous waste management</td>
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Note: See 29 CFR 1910.120(e).
*Refers to on-the-job training.
Table 2. Treatment, Storage, and Disposal Sites Training Requirements

<table>
<thead>
<tr>
<th>Staff</th>
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</table>
| o General permit site employees  
  24 hours initial or equivalent  
  8 hours annual refresher |
| o Emergency response personnel  
  Trained to a level of competency for assigned duties  
  Annual refresher |

Note: See CFR 1910.120(p)(7) and (p)(8).
Table 3. Other Emergency Response Staff Training Requirements

<table>
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<tr>
<th>Level</th>
<th>Description</th>
<th>Training Requirements</th>
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<tbody>
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<td>Level 1</td>
<td>First responder (awareness level)&lt;sup&gt;1&lt;/sup&gt;</td>
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<td>Annual Refresher</td>
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<td>Level 2</td>
<td>First responder (operations level)&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Level 1 competency and 8 hours initial or proven experience in specific competencies</td>
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<td>24 hours of Level 2 and proven experience in specific competencies</td>
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<td>Annual refresher</td>
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<td>Level 4</td>
<td>HAZMAT specialist&lt;sup&gt;4&lt;/sup&gt;</td>
<td>24 hours of Level 3 and proven experience in specific competencies</td>
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<td>Annual refresher</td>
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<td>Level 5</td>
<td>On-the-scene incident commander&lt;sup&gt;5&lt;/sup&gt;</td>
<td>24 hours of Level 2 and additional competencies</td>
</tr>
<tr>
<td></td>
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<td>Annual refresher</td>
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</tbody>
</table>

Note: See 29 CFR 1910.120 (q)(6).

<sup>1</sup> Witnesses or discovers a release of hazardous materials and who are trained to notify the proper authorities.
<sup>2</sup> Responds to releases of hazardous substances in a defensive manner, without trying to stop the releases.
<sup>3</sup> Responds aggressively to stop the release of hazardous substances.
<sup>4</sup> Responds with and in support to HAZMAT technicians, but who have specific knowledge of various hazardous substances.
<sup>5</sup> Assumes control of the incident scene beyond the first-responder awareness level.
SOURCE LETTER

June 7, 1990

RE: DEPARTMENT OF LABOR/OSHA 29 CFR PART 1910 HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE: FINAL RULE DOCKET NO. S-760A

After reading and re-reading the 1910.120 hazardous waste operations and emergency response standard final rule, I find that there is still some question about how to interpret the rule when related to a release of a chemical substance while in a normal work place. Rather than "guess" at the typical double talk, and the true intent of the standard, I would like to hear where your department really thinks the standard applies, and where the standard separates from hazardous waste site operations and general industry. In addition further define any typical emergency response personnel, from those who would respond to an emergency in what is normally a non-hazardous work place.

Our company has several facilities that process food products; fresh and frozen meat, fresh and frozen fish, fresh and frozen poultry, and convenience food groups found in typical food markets for consumers. In addition our company is engaged in agricultural chemicals, in which the product produced, packaged, distributed, and sold, ultimately reaches the farm sector. Also our company processes all types of flour, and uses a bleaching agent in this process called chlorine. This now sets the stage for my questions.

Inside many of these facilities we have coolers, which use a product known as anhydrous ammonia as a cooling agent in our refrigeration units. Anhydrous ammonia is listed on the chemical hazardous substance list. Our company recognizes the inherent dangers associated with this process of using the chemical anhydrous ammonia as a cooling agent, and therefore has prepared an emergency action plan for these facilities, which includes trained personnel to respond to any type release, should the system fail, leak, or otherwise operate outside the engineered design or purpose. These "response personnel" may be maintenance persons, a trained watchman, or employees who have been given supervision about what, when or where some type action may isolate an abnormal condition. Does this standard apply in this instance?

Another segment of our company manufactures, processes, distributes and stores agricultural farm chemical. Many of these substances are hazardous materials. We recognize the hazards of these substances and have health, life safety, and emergency action plans. As required by other regulations, our employees are trained about the dangers of these chemicals, as well as what to do in the event of an emergency. Some of these employees would respond to the emergency in some instances, others would evacuate, and others would be responsible for clean-up. Assuming the emergency is not catastrophic, but not expected, and definitely would require some type of "response people" of which are our employees, but not that of the fire department, or haz-mat team. Does the 1910.120 standard apply in this instance?

Finally, our company process all types of flour for baking. During this process we use a hazardous material known as chlorine as a bleaching agent. We recognize the hazards of chlorine, and have emergency action plans to handle conditions abnormal to the process. We have certain employees trained in the handling of this product, and they would respond to an incident. These persons will likely have other job functions which would be part of processing the flour. These same persons are not classified as "response persons" but they certainly know who would do what, where and when, during an emergency involving the product chlorine. Does this same standard apply in this scenario?

Is the standard written with the intent to protect those people whose job function requires emergency response type action, or those persons who work in the clean-up of hazardous work sites as their sole employment? Is OSHA trying to apply this standard to general industry, in such a fashion as to cover and overlap other OSHA regulations involving hazardous materials?
ABSTRACT This Interpretation addresses whether contractors who routinely work at a plant facility can meet the requirements of 29 CFR 1910.120 (q)(11)(ii) versus the more lengthy requirements of (q)(11)(i). Contract personnel assigned full time at a plant facility are considered "plant or workplace employees" for the purposes of (q)(11)(ii) when such workers are conducting clean-up in areas where they routinely work. Contractors brought in specifically for clean-up are covered by (q)(11)(i).

INTERPRETATION 29 CFR 1910.120(q)(11)(i); (q)(11)(ii); 1910.38(b)(4)(i); 1910.134(e)(5)(i); 1910.1200(h)

OCT 23, 1990

This is in response to your inquiry concerning paragraph (q)(11) of the final standard on Hazardous Waste Operations and Emergency Response (29 CFR 1910.120).

The specific question is whether contractors who routinely work at a plant facility can meet the requirements of 29 CFR 1910.120 (q)(11)(ii) versus the more lengthy requirements of (q)(11)(i). Contract personnel assigned full time at a plant facility are considered "plant or workplace employees" for the purposes of (q)(11)(ii) when such workers are conducting clean-up in areas where they routinely work. Contractors brought in specifically for clean-up are covered by (q)(11)(i).

SOURCE LETTER

We respectfully requests an interpretation of paragraph (q)(11) of OSHA's final standard on Hazardous Waste Operations & Emergency Response (29 CFR 1910.120) in regards to the use of contract personnel for post-emergency response (clean-up) operations.

To comply with (q)(11), it is our understanding that contractors conducting clean-up must meet all of the requirements of paragraphs (b)-(o); but plant or workplace employees performing clean-up on plant property only have to complete the training requirements of 29 CFR 1910.38(a), 1910.134, 1910.120(h) and other appropriate safety and health training.

It is our belief that OSHA intended compliance with (b)-(o) to only apply to personnel who are not familiar with the materials and hazards at the sites where clean-up operations are conducted. If this is OSHA's intent, it logically follows that contract personnel who routinely work at facilities and are familiar with the hazards should be allowed to meet the (q)(11) requirements in the same manner as plant or workplace employees, i.e. by completing the training requirements previously mentioned.

Is this a correct interpretation of paragraph (q)(11)?
ABSTRACT. This interpretation addresses a scenario in which a substance leaks at night when no employees are present. The spill is discovered the next morning. Clean up is accomplished by on-site employees as well as employees from another location who have the same training as the on-site employees. Assuming the manufacturing site is subject to the training requirements of 1910.120(q), 1910.120(q)(11)(ii) would apply only if the employees' actions fall within the definition of post-emergency response, and are taken after "completion of the emergency response," and by employees other than those involved in the initial emergency response.

INTERPRETATION

29 CFR 1910.120(a)(1)(i); (q)(11)(i); (q)(11)(ii)

FEB 5, 1990

This is in response to your request for an interpretation of OSHA's Hazardous Waste Operations and Emergency Response standard (29 CFR 1910.120) as it applies to the following scenario at a manufacturing site which is not a hazardous waste site.

The scenario you gave is as follows:

Stored in tanks at the manufacturing site are large quantities of gasoline, acids, corrosives, and other potentially hazardous substances. During the weekend or middle of the night, when no employees are present, one of the substance leaks from its tank and seeps onto the ground, contaminating the soil on plant property.

When the employees arrive for the next scheduled workshift, the tank is empty and the contamination discovered. The employer determines that the on-site employees have met all training requirements specified in paragraph (q)(11)(ii), including "other appropriate safety and health training made necessary by the tasks that they are expected to be sic performed such as personal protective equipment and decontamination procedures."

In addition, the employer calls in his employees from another location to assist in the cleanup. These employees have received training that is identical to that provided to on-site employees.

Your letter does not provide sufficient facts upon which to render a determinative answer to your question of whether your interpretation that "only paragraph (q)(11)(ii), applies is correct. First, it is not clear whether the actions taken by the employees fall within the definition of post emergency response. Second, even if the employees' actions fall within the definition of post emergency response, when such actions are performed by employees involved in the initial emergency response it "is considered to be part of the initial response" and the employees are not subject to paragraph (q)(11). See 29 CFR 1910.120(a)(3) for definitions. Third, as stated in the standard and explained in the preamble, the training requirements of 29 CFR 1910.120(q) do not cover employees engaged in operations specified in paragraphs (a)(1)(i) through (a)(1)(iv). See 29 CFR 1910.120(q) and the Preamble, 54 Fed. Reg. 9294, March 6, 1989. However, the standard includes other training requirements in addition to those in 29 CFR 1910.120(q). See 29 CFR 1910.120(e) and 29 CFR 1910.120(p)(7).

Thus, assuming that your manufacturing site is subject to the training requirements of 29 CFR 1910.120(q), then 29 CFR 1910.120(q)(11)(ii) would apply only if the employees' actions fall within the definition of post emergency response, and are taken after "completion of the emergency response," and by employees other than those involved in the initial emergency response.
March 6, 1989.

Re: Request for Interpretation: Hazardous Waste Operations and Emergency Response; Final Rule, 29 CFR 1910.120 ; 54 FR 9293-9336,

I am writing to request an official interpretation of the captioned standard as it applies to the following scenario at a manufacturing site which is not a hazardous waste site.

Scenario:

Stored in tanks at the manufacturing site are large quantities of gasoline, acids, corrosives, and other potentially hazardous substances. During the weekend or middle of the night, when no employees are present, one of the substance leaks from its tank and seeps onto the ground, contaminating the soil on plant property.

When the employees arrive for the next scheduled workshift, the tank is empty and the contamination discovered. The employer determines that the on-site employees have met all training requirements specified in paragraph (q)(11)(ii), including "other appropriate safety and health training made necessary by the tasks that they are expected to be sic performed such as personal protective equipment and decontamination procedures."

In addition, the employer calls in his employees from another location to assist in the cleanup. These employees have received training that is identical to that provided to on-site employees.

None of the employees have met all requirements specified in other parts of the standard (paragraphs (b) through (o)). The employer removes the contaminated soil using both on-site and off-site employees.

Interpretation:

The employer is subject to and in compliance with 29 CFR 1910.120, but only paragraph (q)(11)(ii): no other portions of 1910.120 apply under these circumstances.
RECORD ID: 4167

STANDARD NUMBER: 1910.120(q)(11)(ii)
INFORMATION DATE: 910225

ABSTRACT: The intent of this letter is to ensure uniform enforcement of training under the Hazardous Waste Operations and Emergency Response standard, 1910.120, for employees involved in post-emergency response operations regardless of the duration. A minimum of 24 or 40 hours of training is generally required for post-emergency clean-up workers unless the clean-up is done on plant property using plant or workplace employees. It is the responsibility of the employer to comply with OSHA standards. Thus, employers should determine the worst-case clean-up scenarios that employees may participate in and train them accordingly.

INTERPRETATION: 29 CFR 1910.120(q)(11)(ii)
FEB 25, 1991

This is an update to your inquiry of December 20, 1990, concerning guidelines recently issued by the Occupational Safety and Health Administration (OSHA). We appreciate the opportunity to give you information on the intent of these guidelines (OSHA Instruction CPL 2-2.51).

The intent of this instruction is to ensure uniform enforcement of training under the Hazardous Waste Operations and Emergency Response standard (29 CFR 1910.120) for employees involved in post-emergency response operations. When sufficient training on safety and health issues pertinent to specific work-site is provided to cleanup workers but the specific number of hours required by the standard (29 CFR 1910.120 (q)(11)(ii)) is not given, a de minimis violation may exist. This policy only applies where there is a low magnitude of risk to the post-emergency clean-up workers. Strict criteria, as outlined in G.3. of the instruction, must be met in order to classify such violations as de minimis. A minimum of 24 or 40 hours of training is required for all other post-emergency clean-up workers unless the cleanup is done on plant property using plant or workplace employees (see 29 CFR 1910.120 (q)(11)(ii)). Thus, at a site off the plant property where there are varying magnitudes of risks to the post-emergency clean-up workers, low-risk employees must have at least 4 hours of training while 24 or 40 hours may be appropriate for other workers.

It is the responsibility of the employer to comply with OSHA standards. Thus, employers should determine to the extent feasible, worst-case clean-up scenarios (i.e., those with the highest safety and health risk) that employees may participate in and train them accordingly. If there is uncertainty as to the potential safety and health risks to the workers then it is prudent that the employer err on the side of more training for the workers. Generally, OSHA's involvement with this policy will be during safety and health inspections. OSHA's Regional Response Team members are responsible for reviewing de minimis citations proposed by OSHA field offices to ensure uniform OSHA implementation of the guidelines.

The guidelines do not differentiate between occasional versus longer duration jobs during post-emergency response cleanup. The policy applies to both if the low risk and other criteria is met. If the criteria is not met, employees involved in either short or long duration cleanup would need a minimum of 24 or 40 hours of training depending on the anticipated level of exposure to safety and health hazards.

You inquired why the de minimis policy does not extend to initial responses for spills of relatively innocuous materials. Emergency response provisions in 29 CFR 1910.120 (q) already address tiered training requirements (varying hours of training hours) based on the anticipated job duties and responsibilities of the responders. I want to stress again that it is important that emergency responders be trained for the worst-case scenario they may be asked to assist. Employees who are only involved in spill cleanups of hazardous substances where there is no probable likelihood of an emergency would not be covered by 29 CFR 1910.120; other OSHA standards, such as the Hazard Communications Standard (29 CFR 1910.1200), would be applicable.
This response was precipitated by a request for definition of the term "advance first aid" as used in the Hazardous Waste and Emergency Response rules, 29 CFR 1910.120 (q)(3)(vi). Information from the Red Cross and Department of Transportation is expected to provide the necessary explanation for a full response.

(NOTE: The interpretation letter does not answer the question. It does state that a response from the Red Cross is pending. The answer to the question about 1910.120 (q)(3)(vi) should help define "advance first aid."

INTERPRETATION
29 CFR 1910.120(q)(3)(vi); 1910.151
February 28, 1990

MEMORANDUM

SUBJECT: Request for Interpretation, Hazardous Waste Operations and Emergency Response

Attached is a copy of a letter we received from OR-OSHA wherein they request an interpretation of the first aid requirements for emergency response at 29 CFR 1910.120 (q)(3)(vi).

We have reviewed this request and have determined that the issues in question go beyond the scope of the discussion contained in the preamble to the final rule of March 6, 1989. As such, this matter is being referred to your office for a response. Please do not hesitate to contact this office if further information is needed.

SOURCE LETTER

February 14, 1990

Subject: Request for Rule Interpretation Hazardous Waste and Emergency Response

In developing our question and answers manual for the hazardous waste and emergency response rules, our Technical Services Section received the following question:

What is meant by the statement, "Advance first-aid support personnel, as a minimum, shall also stand by with medical equipment and transportation capability?" 29 CFR 1910.120 (q)(3)(vi)

We formulated the following response:

"Advance first-aid" means Advanced Life Support (ALS) certification level (ALS certified equals (1) EMT-3 or higher). "Medical equipment" and "transportation capability" means those specifically required as outlined by ALS. Private ambulance providers are required to have ALS certification training. Law enforcement personnel are not required to have ALS training; however, ALS must be made available. Public highway workers or municipal waste treatment workers who discover a release are not required to have ALS certification. However, incident commanders at emergency responses must require an ALS provider to stand by at the scene.

However, emergency responders have requested that we revise our response:

"Advance first-aid" means advanced first-aid as certified by the American Red Cross. The rules require these personnel to be standing by with medical equipment and transportation capability at hazardous
materials incidents. This means that a Basic Life Support (BLS) ambulance is required; and, it must be staffed by a minimum of two personnel who are certified at EMT-1 or higher.

The responders argue that the revised interpretation is achievable in Oregon and that our initial interpretation is not. Does this revision meet the intent of the OSHA rules? If not, what would meet the intent of the rules? Page 9309 of the March 6, 1989, Federal Register is vague in defining what advance first-aid is for emergency response operations.

Additionally, it has come to our attention that federal OSHA will be issuing formal clarifications on the large quantity generator exemption and other issues. Your timely response on the advance first aid question and the impending clarifications would be greatly appreciated.
ABSTRACT

General firefighters and police officers who have the emergency response responsibilities described in 29 CFR 1910.120 (a)(3) are subject to the standard and the specified training programs. Generally, police officers are the first-responder awareness level since they are likely to witness or discover a hazardous substance release. General firefighters are usually considered first responders at the operations level since they respond to releases or potential releases as part of the initial response to the site for protecting nearby persons, property, and the environment from the effects of the release. Paragraphs (q)(6)(i) and (ii) of the standard describe the training requirements for these personnel.

INTERPRETATION

29 CFR 1910.120(q)(6)(i); (q)(6)(ii)

FEB 2, 1990

Thank you for your letter of January 2 to the Occupational Safety and Health Administration, concerning training requirements of OSHA's Hazardous Waste and Emergency Response Standard, 29 CFR 1910.120.

General firefighters and police officers who have the emergency response responsibilities described in 29 CFR 1910.120 (a)(3) are subject to the standard. Training requirements for all classifications of responders are based on "the duties and function to be performed by each responder" and the standard sets forth five general categories of responders and the training requirements for each. See 29 CFR 1910.120 (q)(6).

Generally, police officers are the first-responder awareness level (Level I of Table 2 referenced in your letter), since they are likely to witness or discover a hazardous substance release. General firefighters are usually considered to be first responders at the operations level (Level 2 of Table 2 referenced in your letter), since they are individuals who respond to releases -potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. Paragraphs (q)(6)(i) and (ii) of the standard describe the training requirements for these personnel.

At the first-responder awareness level, the training is geared to teaching employees to recognize the hazards to humans present during these emergencies and how to protect themselves from such hazards. The required training also includes instruction on how to accurately and fully report the necessary information to an "alarm dispatcher" so that subsequent emergency responders are fully informed. The standard does not set a mandatory minimum number of hours for this training, but such courses often run from 4 to 12 hours. The mandatory result of the training, regardless of its duration, is that the trained employees be able "to objectively demonstrate competency" in the six areas of knowledge listed in the standard. See 1910.120 (q)(6).

First responders at the operational level shall have received at least eight hours of training or have sufficient experience to objectively demonstrate competency in the following areas in addition to those listed for the awareness level (1910.120 (q)(6)(i)) and the employer shall so certify:

(A) Knowledge of the basic hazard and risk assessment techniques.

(B) Know how to select and use proper personal protective equipment provided to the first responder operational level.

(C) An understanding of basic hazardous materials terms.

(D) Know how to perform basic control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available with their unit.
(E) Know how to implement basic decontamination procedures.

(F) An understanding of the relevant standard operating procedures and termination procedures.

Training and competency requirements for on scene incident commanders who will assume control of the incident scene beyond the first responder awareness level are delineated in 29 CFR 1910.120 (q) (6) (v). Incident commanders shall receive at least 24 hours of training equal to the first responder operations level and in addition have competency in the following areas and the employer shall so certify:

(A) Know and be able to implement the employer's incident command system.

(B) Know how to implement the employer's emergency response plan.

(C) Know and understand the hazards and risks associated with employees working in chemical protective clothing.

(D) Know how to implement the local emergency response plan.

(E) Know of the state emergency response plan and of the Federal Regional Response Team.

Refresher training requirements are found at 1910.120 (q)(8). All employees trained in accordance with 29 CFR 1910.120 (q) (6) must "receive annual refresher training of sufficient content and duration to maintain their competencies, or shall demonstrate competency in those areas at least yearly."

A certain state does not have an OSHA state plan. Therefore, employees of state and local governments in that state who engage in hazardous waste operations and emergency response are covered by the EPA regulation. The applicable EPA regulations are identical to those under OSHA, but are administered and enforced by the EPA.

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SOURCE LETTER
January 2, 1990

RE: 1910.120 - Hazardous Waste & Emergency Response

Under Section Q6 with reference to training requirements, I would like to receive clarification as to what type of personnel are in the following five levels.

Are general firefighters and police officers included in the first training level that may be likely to come into contact with hazardous material incidents. What level are these individuals to be trained? Do they fit into level one as indicated on the attached table or do they fit into level two - First responder?

Also, the standard says sufficient training or personal experience for specific competencies". What are the levels or hours required for training?

What are the refreshers that are listed under level five for on-scene incident command. Does this man that the fire chief, or incident commander, must receive 24 hours of 1st responder training and, at what additional competencies are required?

I am also under the impression that in Illinois, public employees, police, fire and emergency services receives protection under the Illinois department of Labor Standards, as well as Federal EPA Standards. In as much as we are trying to allocate time books for training and revenues your reply is requested.
Hazardous materials technicians and on-scene incident commanders must receive 24 hours training and have competence in the areas specified in the training requirements in the Hazardous Waste Operations and Emergency Response Standard. New Jersey has developed training, under a NIEHS grant, to meet the law requirements. These courses may be acceptable if there are potentials for emergencies from only a few types of hazardous materials. In general, more than 24 hours of training would be necessary to meet both the training and competence requirements.

This is an update to your request for an interpretation of the training requirements in the Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120).

Specifically, you have asked for our comments on New Jersey’s method for preparing course materials for hazardous materials technicians and on-scene incident commanders. Your letter states that these courses meet the requirement of 24 hours of training equal to the first responder operations level by requiring the 8 hour operations course as a prerequisite and integrating into the courses 16 more hours of operations level training which covers the necessary competencies for each.

The standard requires hazardous materials technicians and on-scene incident commanders to receive 24 hours of training and in addition have competency in the areas specified in the standard. The method you describe may be acceptable if there are potentials for emergencies from only a few types of hazardous materials. In general, more than 24 hours of training would be necessary to meet both the training and competencies requirements.

This is an interim response to your request, (dated) June 13, for a clarification of the training requirements in 29 CFR 1910.120. Since your letter requests a formal interpretation of an Occupational Safety and Health Administration rule, we have forwarded it to our Directorate of Compliance Programs for their response.

I am requesting a letter from your office clarifying 29 CFR 1910.120 (q)(6) with regards to the training hours required for specific levels. As you may be aware (the State of J) has developed training, under a NIEHS grant, to meet the law requirements.

(The State of J’s) method of integrating the required hours was explained in a telephone conversation on May 16, 1990. At that time he stated that our methods are acceptable, but suggested this letter to avoid future questions. (The State of J) has developed an 8 hour course for First Responder Operations as required in para. (q)(6)(ii). The state courses for Hazardous Materials Technician and On-Scene Incident Commander meet the requirement of 24 hours of training equal to the First Responder Operations by requiring the 8 hour Operations course as a prerequisite and integrating 16 more hours of Operations level training into the respective courses as they cover the necessary competencies for each. This allows the additional 16 hours to be slanted towards the target audiences. I request that you forward me a letter stating that this integration is acceptable.
The Chief of Underground Storage Tank Section of the Environmental Protection Agency wrote a letter intended to clarify the applicability of 29 CFR 1910.120 to state and local government employees working with underground storage tank facilities. The letter was submitted to OSHA for review and was found to need amendment in order to cite applicable sections of 1910.120 correctly and to include (State) in a list of state plans within Region (A). EPA has adopted a standard equivalent to 1910.120, which covers state and local workers in OSHA federal enforcement states.

MAY 07, 1991

Dear Mr. M:

We have reviewed your draft response concerning 1910.120 and leaking underground storage tanks and have the following comments:

The letter repeatedly refers to "OHSA", which should be corrected to read "OSHA". The first sentence of the first paragraph on the second page refers to "29 CFR 1910.120.1.(3)ii." The correct citation is 29 CFR 1910.120(e)(3)(ii) and (e)(3)(iii). Later, in the same paragraph 1910.120.1(3)i is cited when 1910.120(e)(3)(i) is the correct citation. The last sentence of this paragraph refers to 1910.q(5) which should read 1910.120(q)(8).

The last sentence of the third paragraph of page two should read: "... sufficient to maintain their competencies."

In the second to last paragraph of the letter, you list state plan states within Region (A). This list should be expanded to include (State), which is also a state plan state.

As you may be aware, EPA has adopted an equivalent standard for 1910.120 that covers state and local workers in OSHA federal enforcement states.

We have forwarded a copy of your letter to OSHA's Region (A), as well as EPA headquarters for their information and input.

MAY 07, 1991

Dear Ms. G:

I am writing to request your help in determining the applicability of 29 CFR 1910.120 to State and local government employees working at Underground Storage Tank (UST) facilities. Several State UST agencies in the Region have requested a written interpretation of these regulations.

Based on our review of the regulations and OSHA guidance and publications, we drafted a letter for State program managers (attached) with our interpretation of the regulations. This letter, in draft form, will be sent to the State program managers in Region 4.

Since EPA has signed a memorandum of understanding with OSHA regarding the interpretation of OSHA regulations for EPA, we would like your office to review this letter for us. Specifically, we would like you to help us ensure that we have accurately interpreted all the applicable requirements and properly cited references and other materials that will help managers and supervisors understand and comply with the regulations. We will inform the State program managers of your corrections or additions.

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The applicability of 29 CFR 1910.120 and other OHSA regulations to UST workers pose important questions to managers and supervisors working with USTs and contaminated sites. Your interpretation will be of interest to State and local UST agencies and private firms nationwide.

Enclosure

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SOURCE LETTER

(No Date)

Dear Director:

This is in response to a request for guidance on the health and safety training requirements of the Hazardous Waste Operations and Emergency Response standard (29 CFR 1910.120) as it applies to workers involved with underground storage tanks (USTs). This is based on EPA Region 4's interpretation of Occupational Health and Safety Administration's (OHSA) regulations. We have asked OHSA to review our interpretation and are providing this letter in "Draft" form pending that review. We will inform you of the results.

The OHSA standard covers workers employed in clean-up operations at hazardous waste sites and EPA licensed waste treatment, storage, and disposal facilities as well as workers responding to spills of hazardous materials. All on-site employees who are exposed to hazardous substances, health hazards, or safety hazards require training.

For UST activities, OHSA's interpretation of the regulations (see enclosed memorandum) requires training for any on-site workers (including State and local inspectors) involved in:

1. Tank closures, tank cleaning, and tank removal;
2. Clean-up operations and corrective actions; and

The standard also requires training for on-site workers involved in leak detection and other prevention activities when:

1. A tank must be removed because of a potential threat to the environment or public health; or
2. Uncontrolled hazardous wastes are present; or
3. There is a need for emergency response actions.

These workers must complete the training before working on-site and the training must meet OHSA's training requirements (29 CFR 1910.120 and 54 CFR 42.2924) covering the course duration and content. In addition, on January 26, 1990 OHSA published a proposed rule (29 CFR 1910.121) requiring the accreditation of training programs which may effect future training programs.

OHSA standard 29 CFR 1910.120.1.(3)ii requires twenty-four hours of training plus eight hours of supervised field work for workers receiving less than the permissible exposure limit (PEL) and where respirators are not necessary. The standard requires forty hours of training and twenty-four hours of supervised field work for workers who receive or have the potential to receive exposures above the PEL (29 CFR 1910.120.1.(3)ii). Emergency response personnel require up to twenty-four hours of training depending on their level of involvement in the response operation (29 CFR 1910.121).

Depending on their level of exposure, on-site managers and supervisors must meet either the twenty-four and eight or the forty and sixteen hour training requirements. In addition, they must receive eight hours of specialized training.

Besides the above requirements, all workers must receive an additional eight hours of refresher training annually. Emergency response personnel need annual refresher training sufficient to maintain of demonstrate competency.

These should be considered as the minimum training requirements for UST workers. The presence of special hazards such as trenches, confined spaces, and fire and explosion may warrant additional UST
specific training. Managers and supervisors may also want to consider the liability to themselves and their agency in the event of an accident when determining the level of training to provide their employees.

Training is just one part of the Hazardous Waste Operations and Emergency response standard. It also requires employers to develop a comprehensive safety and health program. This written program must identify, evaluate, and control safety and health hazards. This plan should address the following topics:

- An organizational workplan;
- Site evaluation and control;
- Site-specific programs;
- Information and training;
- Personal protective equipment;
- Monitoring;
- Medical surveillance;
- Decontamination procedures; and
- Emergency response.

The enclosed OHSA publication, Hazardous Waste and Emergency Response, includes a general overview and specific references to the OHSA requirements. This and additional publications on OHSA regulations are available through the OHSA Region IV office (404/347-3573).

As you know, these are Federal regulations. Many States operate OHSA approved programs. In Region (B), (State K), (State nC), and State sC) operate approved programs. You should check your State and local regulations for additional requirements.

If you have additional questions on the OHSA regulations, please do not hesitate to contact me or the Region(a)l OSHA office.
ABSTRACT

The HAZWOPER standard applies to police officers, who should be trained to the awareness level at a minimum. There is no specific number of hours of training required for the First Responder Awareness Level. The training requirements are performance-oriented, which means the training must develop certain competencies in an individual regardless of how long it takes. The regulation defines these competencies in 1910.120 paragraph (q)(6)(i).

INTERPRETATION

29 CFR 1910.120(g)(5); (q)(6)(i)

JUN 17 1991

Dear Mr. M:

This is in response to your inquiry of April 10, 1991 concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule (29 CFR 1910.120). Please accept my apology for the delay in this reply.

Your specific question relates to the application of this regulation to police officers and the minimum number of hours of training required for the awareness level. OSHA concurs with your assessment that police officers should be trained to the awareness level as a minimum.

There is no specific number of hours of training required for the First Responder Awareness Level. The training requirements are performance oriented, which means the training must develop certain competencies in an individual regardless of how long it takes. The regulation defines these competencies in paragraph (q)(6)(i) which reads:

... First responders at the awareness level shall have sufficient training or have had sufficient experience to objectively demonstrate competency in the following areas:

(A) An understanding of what hazardous materials are, and the risks associated with them in an incident.

(B) An understanding of the potential outcomes associated with an emergency created when hazardous materials are present.

(C) The ability to recognize the presence of hazardous materials in an emergency.

(D) The ability to identify the hazardous material if possible.

(E) An understanding of the role of the first responder awareness individual in an employer's emergency response plan including site security and control and the U.S. Department of Transportation's Emergency Response Guidebook.

(F) The ability to realize the need for additional resources, and to make appropriate notifications to the communications center.
Dear Mr. S:

Please accept my apology for the delay in updating our response to your letter concerning the application of the Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120) to radioactive wastes.

As stated in your letter, the U.S. Nuclear Regulatory Commission (NRC) has jurisdiction "inside the fence" at NRC licensed nuclear facilities for the risks involved with licensed radioactive materials, including emergency response procedures. OSHA also has jurisdiction "inside the fence" for non-licensed radioactive materials and non-radioactive safety and health hazards. This jurisdiction includes coverage under 29 CFR 1910.120. There may be both NRC and OSHA jurisdiction when there is an emergency involving mixed wastes "inside the fence." On the other hand, 29 CFR 1910.120 may be applicable "outside the fence" to emergency response and cleanup activities involving hazardous substances including radioactive wastes. Thus, considering the information you have provided, it appears that 29 CFR 1910.120 (q) would be applicable for your emergency response activities.

As you may know, the Occupational Safety and Health Act of 1970 gives no coverage for State employees and public sector workers. OSHA's jurisdiction includes the private sector and federal workers. However, the (State) has adopted the OSHA Act and in (State) there is an agency which does enforce OSHA regulations for public employees.

A copy of your letter and this response has been given to the OSHA Regional Office in (CITY).
OSHA's Hazardous Waste Operations and Emergency Response final rule (29 CFR 1910.120) does not apply to boilermakers who are rebuilding an incinerator in a clean area at a Superfund site if there is no potential for exposure to the hazardous substances involved in the cleanup process. If 1910.120 is not applicable, the boilermakers are still covered by other OSHA standards, such as the training requirements in 29 CFR 1926.21(b)(2). Regardless of which standards are applicable, the boilermakers must be capable of performing their job duties in a safe and healthful manner.

JUN 4 1991

Dear Mr. R:

This is in response to your letter of May 10, concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule (29 CFR 1910.120).

Your specific question relates to the scope of the final rule and a specific application concerning boilermakers rebuilding an incinerator in a clean area at a Superfund site. OSHA concurs with your interpretation that 1910.120 does not apply to these workers if there is no potential for exposure to the hazardous substances that are involved in the cleanup process. This requirement can be found in paragraph (a)(1) which reads as follows:

(1) Scope. This section covers the following operations, unless the employer can demonstrate that the operation does not involve employee exposure or the reasonable possibility of employee exposure to safety or health hazards:.

Therefore, it would add strength to your case for an exception if a competent person were to monitor and characterize the area around the incinerator, thereby, demonstrating the no exposure characteristics of the work area. The information that is needed to be gathered is set forth in 29 CFR 1910.120 (c). If the results of the monitoring change the boundaries of the exclusion zone then the site safety and health plan must be modified accordingly. If 1910.120 is not applicable the boilermakers are still covered by other OSHA standards such as the training requirements in 29 CFR 1926.21(b)(2). Thus regardless of which standards are applicable, the boilermakers must be capable of performing their job duties in a safe and healthful manner.

Vol. 1-403
ABSTRACT

Section (q)(6) of 29 CFR 1910.120 discusses the training requirements for five levels of emergency responders. If the victims have been thoroughly decontaminated and removed from the danger area, the emergency medical service (EMS) personnel treating these victims would not have specific training requirements. However, these personnel should be given an initial briefing at the site before they participate in the emergency response. Because EMS personnel are often the first on the scene, they should receive first responder awareness level training at a minimum, even if they are not expected to handle contaminated victims. If EMS personnel must handle victims who have been only superficially decontaminated or have not been decontaminated at all, training to the first responder operations level, as described in 1910.120 section (q)(6)(ii), would be required. The emergency response plan for the jurisdiction should clearly define who will be responsible for decontaminating victims during an emergency response. The EMS personnel should be trained in accordance with the responsibilities they will be expected to assume during an emergency response.

INTERPRETATION

29 CFR 1910.120(q)(1); (q)(2)(xi); (q)(6); (q)(6)(i); (q)(6)(ii); (q)(10);
1910.134(e)(3); (e)(5)

JUN 14 1991

Dear Mr. M:

This is in response to your letter of March 21, to Region I office concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule (29 CFR 1910.120). Please accept my apology for the delay in this reply.

Your specific question relates to the training requirements for emergency medical service personnel.

Section (q)(6) of 1910.120 discusses the training requirements for five levels of emergency responders. The specific training requirements for emergency medical service personnel depends on the duties they are expected to perform during an emergency response to a release of hazardous substance.

If the contaminated victims have been totally and thoroughly decontaminated and removed from the danger area, the emergency medical service personnel treating these victims would not have specific training requirements under 1910.120. However, these personnel should be given an initial briefing at the site prior to their participation in the emergency response.

Emergency Medical Service personnel are often the first on the scene and therefore should be given first responder awareness level training as a minimum even if they are not expected to handle contaminated victims.

If the emergency response personnel must handle victims whom have been only superficially decontaminated or have not been decontaminated at all, training to the first responder operations level as described in 1910.120 section (q)(6)(ii) would be required. The minimum amount of training required by this paragraph is 8 hours.

The emergency response plan for the jurisdiction should clearly define who will be responsible for decontaminating victims during an emergency response. The emergency medical service personnel should be trained in accordance with the responsibilities they will be expected to assume during an emergency response as described in the community emergency response plan.
(No Date)

Dear Mr. M:

The training required for emergency medical service personnel (EMS) at a hazardous substance emergency response would depend on the duties that these personnel are expected to perform. If the EMS must handle victims who have not been decontaminated or have only been superficially decontaminated, and/or they are near enough to the release that they could be exposed, then they would be considered operations level emergency responders and training would be required. If, however, by washing down you mean that the victims are nearly totally decontaminated and the EMS area is well away from the release, then it is conceivable that they would be skilled support personnel, and training would not be required. This would mean that other emergency responder personnel would be responsible for any necessary treatment on contaminated personnel or treatment in a contaminated zone. The emergency response plan for the jurisdiction should specify the role that the EMS are expected to perform.

I hope that this information has been of assistance. If you have any other questions, feel free to contact this office.

April 16, 1991

Dear Mr. B:

Your letter dated March 28, 1991 to Mr. T, our (City) Area Director, has been forwarded to this office for response.

The three incident scenarios which you stated in your letter have been evaluated by Dr. B, our regional coordinator for Hazardous Waste and Emergency Response Operations. Scenarios 1 and 2 clearly require first responder awareness level training. Scenario 3 will require first responder operations level training because your people become involved in the incident command structure.

In your letter you did not mention a fourth possible scenario; namely, treatment of victims in a contaminated area or treatment of undecontaminated people. Such a situation would require HAZMAT specialist training.

Since your unit is an element of (County) government, federal OSHA has no jurisdiction; however, under the Superfund Amendments and Reauthorization Act of 1986 (SARA), EPA is the enforcing authority. For information on EPA operations under 29 CFR 1910.120, you should contact EPA directly.

March 28, 1991

Mr. T:

I am writing you for clarification in regards to the OSHA standards for infection control and hazardous materials incidents. We have received copies of CFR 1910.120 and CPL2-2.44B, but our membership seems to have different interpretations of these standards.

Medic 3 could become involved at the following levels of a hazardous materials incident.

1. Medic 3 personnel could arrive on the scene of an incident as the first unit.

2. Medic 3 personnel could become involved in the medical care and transportation of injured patients after the decontamination process.

3. Medic 3 personnel could become involved in the incident command structure of a hazardous materials incident. The paramedic, being the highest certified emergency medical service person on the scene, should be designated the EMS officer within the incident command structure.

I would like your interpretation for the level of training our personnel should be given to prepare them for operations as described above. I would also appreciate any information in regards to fines for being non-compliant or causing further contamination of other persons or facilities. I feel this information would enlighten our membership as to the appropriate actions to take.

Vol. 1-405
SOURCE LETTER

(No Date)

MEMORANDUM

SUBJECT: Transmission of Attached Letter

Attached is a letter from a (State) Emergency Medical Service (EMS) company requesting an interpretation of the application of 1910.120(q) to EMS personnel in a hazardous substance emergency response. We are forwarding this to your office at the advice of Ms. G of your office, as she has informed us that you are presently developing policy on the application of 1910.120 to all the personnel in the emergency medical area.

Attachment:

March 21, 1991

Dear Mr. M:

On March 21, 1991, I called your office and spoke to a Mr. M, Senior Industrial Hygienist concerning requirements under SARA Title III for the training of emergency medical technicians. I specifically addressed an incident where ambulance services arrive on scene, contaminated victims are washed down initially by the fire personnel, and then brought to an EMS treatment area where emergency medical technicians must treat those individuals who may conceivably still have portions of the contaminant on their bodies. My question was whether these individuals should receive the first responder level training program (3 hours) or the operational level training program (8 hours). Mr. M and I both seem to agree that those individuals that must handle and treat victims of a hazardous materials spill should be trained at the 8 hour level.

I would appreciate it if you could send me a letter expressing that opinion, so that we can begin the establishment of the 8 hour programs in the Central (State) service area.
Region (A) of the Regional Response Team (RRT) reported that the (Federal Agency)'s Pacific Strike Force indicated 24 hours of training was required by OSHA for beach cleanup crews. While in certain operations this may be appropriate, fewer than 24 hours of training may be acceptable for other activities if the criteria in OSHA instruction CPL 2-2.51 are met. Region (B) is requested to coordinate with the Pacific Strike Force to minimize any ambiguity about training requirements for post-emergency response beach cleanup crews, and to notify Region (A) of the outcome.

29 CFR 1910.120(q)(6)

JUL 1, 1991

MEMORANDUM

SUBJECT: Pacific Strike Force 24 Hour Training Requirement.

In the attached memorandum from Region (A), it is reported that the (Federal Agency)'s Pacific Strike Force indicated 24 hours of training was required by OSHA for beach cleanup crews. While in certain operations this may be appropriate, fewer than 24 hours of training may be acceptable for other activity if the criteria in OSHA instruction CPL 2-2.51 is met.

We would like to request that Region (B) coordinate with the (Federal Agency) Pacific Strike Force in order to minimize any ambiguity in regards to training requirements for post emergency response beach cleanup crews. Please notify Region (A) of the outcome.

We would also like to request that any correspondence on this matter be sent to the Office of Health Compliance Assistance for our files.

March 22, 1991

MEMORANDUM

SUBJECT: Regional Response Team Meeting

In response to your memo requesting feedback on OSHA's CPL 2-2.51, Inspection Guidelines for Post-Emergency Response Operations, under 29 CFR 1910.120, at an RRT meeting, we are providing the following information. During region (A)’s recent RRT meeting, held in (City, State), 3/19 - 3/21/91, OSHA was given the opportunity to discuss our 1910.120 standard. The RRT participants response to this directive was overwhelmingly supportive.

However, a few questions/concerns were raised. Several concerns revolved around apparent inconsistencies in the application of this directive, particularly with State-plan OSHA states. At the recent oil spill scenario in (State C) the (Federal Agency) Pacific Strike Force indicated 24-hour training was required by OSHA for beach clean-up crews.

The (Federal Agency) is confused and unhappy with (State A)'s apparent initiation of an 80-hour training requirement for employees covered by OSHA's 1910.120 standard.

Some participants wanted further clarification between an initial emergency response and a post-emergency response with regard to an oil spill that flows further and further down a shore line. Is each new
breach of a beach considered a "new" initial emergency response? Or is everything subsequent to the spill considered post-emergency response?

NOV 20 1990

MEMORANDUM

SUBJECT: Regional Response Team Meeting

This is in response to a request made at the last meeting of the National Response Team And Regional Response Team (RRT) co-chairs. OSHA RRT representatives have been asked to review OSHA Instruction CPL 2-2.51, Inspection Guidelines for Post-Emergency Response Operations Under 29 CFR 1910.120, at a RRT meeting.

Please attempt to get OSHA on the agenda for the next meeting.

We would be interested in your written comments on how the directive was received by the RRT.

Thanks for your cooperation.
ABSTRACT

Work places located in areas prone to natural phenomena, such as earthquakes, tornadoes, and hurricanes, and subject to a substantial threat of release of hazardous substances, are covered by OSHA standard 1910.120. Paragraph (q)(1) of that standard states that emergency response plans shall be developed and implemented to handle anticipated emergencies prior to the commencement of emergency response operations. OSHA interprets this to mean that employers in areas prone to natural phenomena should anticipate whether such phenomena are likely to cause releases of hazardous substances and, if so, incorporate procedures for such natural phenomena into their emergency response plan. Employers who evacuate all employees during an emergency and do not permit any of their employees to assist in handling the emergency are not required under paragraph (q) to have an emergency response plan if they provide an emergency action plan in accordance with 1910.38(a).

INTERPRETATION

29 CFR 1910.120(a)(1)(v); (q)(1); (q)(6); 1910.38(a)(1)

JUN 26 1991

MEMORANDUM

SUBJECT: Natural Phenomenon and 1910.120

This is in response to the inquiry of April 12, to our (City) Area Office, written by Mr. F of (a National Paperworkers Organization), concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule (29 CFR 1910.120).

The specific question relates to evacuation of employees from a facility in the event of an imminent natural phenomenon that has the potential to threaten employee safety and health.

The Hazardous Waste Operations and Emergency Response Final Rule (1910.120) paragraph (a)(1)(v) covers;

"(v) Emergency response operations for releases of, or substantial threats of releases of, hazardous substance without regard to the location of the hazard."

Work places located in areas prone to natural phenomena, such as earthquakes, tornadoes and hurricanes, and subject to a "substantial threat of release of hazardous substances" are covered by 1910.120. The emergency response plan required in 1910.120(q)(1) should include responses to emergencies caused by such natural phenomena. The requirements of the emergency response plan clearly state in paragraph (q)(1), that emergency response plans "shall be developed and implemented to handle anticipated emergencies prior to the commencement of emergency response operations." OSHA interprets this to mean that employers in areas prone to natural phenomena should anticipate whether such natural phenomena are likely to cause releases of hazardous substances and if so incorporate emergency response procedures to such natural phenomenon in their emergency response plan.

Employers that evacuate all employees during an emergency and do not permit any of their employees to assist in handling the emergency incident are not required under paragraph (q) to have an emergency response plan if they provide an emergency action plan in accordance with 1910.38(a).

In the specific incident presented in the letter from Mr. F, it appears that the employer evacuated employees that were not subject to "substantial threat of release of hazardous substance" but at the same time did not evacuate those employees working with hazardous substances. If those employees were under substantial threat of release of hazardous substances, the incident would be defined as an emergency. Therefore, depending on the employers action concerning the requirements of paragraph (q)(1), it may have been mandatory to evacuate all employees from the danger area.
Obviously, the "substantial threat" posed by an imminent natural phenomenon would entail a judgement by the employer and therefore be difficult to enforce. However, if the employer takes emergency action, i.e., evacuates office personnel, but does so in a selective fashion, leaving personnel that have not been trained in emergency response procedures in the role of emergency responder, i.e., operating the facility during a natural phenomenon, the employer could be cited under 1910.120(q)(6).

Mr. F suggested possible use of the general duty clause in enforcing issues concerning weather. Although an employer has a general duty to provide a safe and healthful work place, OSHA prefers to cite more specific regulations when possible. Emergency response to natural phenomena may fall under the scope of 1910.120 if it involves the release or potential release of hazardous substances. Therefore the more specific regulation would be cited.

Attachment A:

The paragraph of 1910.38 referred to in 29 CFR 1910.120(q)(1) reads as follows:

1910.38 Employee emergency plans and fire prevention plans.

(a) Emergency action plan.

(1) Scope and application. This paragraph (a) applies to all emergency action plans required by a particular OSHA standard. The emergency action plan shall be in writing (except as provided in the last sentence of paragraph (a)(5)(iii) of this section and shall cover those designated actions employers and employees must take to ensure employee safety from fire and other emergencies.

(2) Elements. The following elements, at a minimum, shall be included in the plan:

(i) Emergency escape procedures and emergency escape route assignments;

(ii) Procedures to be followed by employees who remain to operate critical plant operations before they evacuate;

(iii) Procedures to account for all employees after emergency evacuation has been completed;

(iv) Rescue and medical duties for those employees who are to perform them;

(v) The preferred means of reporting fires and other emergencies; and

(vi) Names or regular job titles of persons or departments who can be contacted for further information or explanation of duties under the plan.

(3) Alarm system.

(i) The employer shall establish an employee alarm system which complies with 1910.165.

(ii) If the employee alarm system is used for alerting fire brigade members, or for other purposes, a distinctive signal for each purpose shall be used.

(4) Evacuation. The employer shall establish in the emergency action plan the types of evacuation to be used in emergency circumstances.

(5) Training.

(i) Before implementing the emergency action plan, the employer shall designate and train a sufficient number of persons to assist in the safe and orderly emergency evacuation of employees.

(ii) The employer shall review the plan with each employee covered by the plan at the following times:

(A) Initially when the plan is developed,

(B) Whenever the employee's responsibilities or designated actions under the plan change, and

(C) Whenever the plan is changed.
(iii) The employer shall review with each employee upon initial assignment those parts of the plan which the employee must know to protect the employee in the event of an emergency. The written plan shall be kept at the workplace and made available for employee review. For those employers with 10 or fewer employees the plan may be communicated orally to employees and employer need not to maintain a written plan.

April 23, 1991

MEMORANDUM

SUBJECT: Request For Interpretation Applicability Of OSHA Standards To Weather Emergencies

Attached are the two letters which prompted this request for citation guidance on weather emergencies. In this specific case it is noted in the Area Office memo that national policy is sought, since the parent company operates several manufacturing facilities across the country and the union representing the employees is also national in organization.

It is our opinion that both 1910.120 and 1910.38 do not specifically address weather emergencies. However, a weather emergency could cause or contribute to an "emergency" as defined in 1910.120 if an uncontrolled release of a hazardous substance occurred in a facility. When an employer assesses the potential for a 1910.120 emergency in their plant, would they be required to include the potential for a 1910.120 emergency caused by the weather? If the employer has chosen to respond to emergencies under HAZWOPER, they would respond no matter what caused the emergency. In addition, most employers do include weather emergencies and bomb threats in their emergency response plans.

We would appreciate a prompt response to the Regional Office.

Attachments:

(No Date)

This past week I had a conversation with Mr. G that pertained to our Disaster Control Plan at (Company), specifically tornadoes. In that conversation, I mentioned to Mr. G that two weeks ago the National Weather Bureau issued a tornado warning in our area. At our mill, the company saw fit to evacuate office personnel, converting employees, and other "non-essential" personnel. At the same time, they kept production and utilities running full strength, completely unaware of the developments outside the mill.

The question I have for you is this, what is OSHA's position on a situation such as this? Also, is there anything that they can be cited for under the General Duty Clause? Mr. G suggested that I should submit these requests in writing. Thanks for the info.

(No Date)

SUBJECT: Tornado Warnings

...should be considered as part of the national dispute involving these two parties. The union would definitely attempt to apply any interpretation received from the (City) Area Office on a national basis.

We are not aware of any interpretation relating to weather emergencies in neither 1910.120, 1910.38, nor the general duty clause. The question of whether operations should cease, plants should shut down, or employees at their job should be informed of the condition arises quite frequently. We are of the opinion that a national policy covering this issue would be appropriate.
OSHA Instruction CPL 2-2.59

DRAFT COPY; as of October 23, 1993
Office of Health Compliance Assistance


A. PURPOSE. This instruction establishes policies and provides clarification to ensure uniform enforcement of paragraph (q) of the Hazardous Waste Operations and Emergency Response standard (HAZWOPER), 29 CFR 1910.120, which covers emergency response operations for releases of, or substantial threats of releases of, hazardous substances without regard to the location of the hazard.

B. SCOPE. This instruction applies OSHA-wide.

C. REFERENCES. The reference materials for HAZWOPER are listed in Appendix G of this instruction.

D. ACTION. OSHA Regional Administrators and Area Directors shall use the guidelines in this instruction to ensure uniform enforcement of the HAZWOPER, 29 CFR 1910.120.

E. FEDERAL PROGRAM CHANGE. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that a copy of this change is promptly forwarded to each State designee, using a format consistent with the Plan Change-Two-Way Memorandum in Appendix P, OSHA Instruction STP 2.22A, CH-2.

2. Explain the technical content of this change to the State designees as requested.

3. Ensure that State designees are asked to acknowledge receipt of this Federal program change in writing to the Regional Administrator as soon as the State's intention is known, but not later than 70 calendar days after the date of issuance (10 days for mailing and 60 days for response). This acknowledgment must include a description either of the State's plan to implement the change or of the reasons why this change should not apply to that State.

4. Ensure that the State designees submit a plan supplement, in accordance with OSHA Instruction STP 2.22A, CH-3, as appropriate, following the established schedule that is agreed upon by the State and Regional Administrator to submit non-Field Operations Manual/OSHA Technical Manual Federal program changes.

   a. If a State intends to follow OSHA's policy described in this instruction, the State must submit either a revised version of this instruction, adapted as appropriate to reference State law, regulations and administrative structure, or a cover sheet describing how references in this instruction correspond to the State's structure. The State's acknowledgment of the Plan Change Two-Way Memorandum may fulfill the plan supplement requirement if the appropriate documentation is provided.

   b. If the State adopts an alternative to Federal guidelines, the State's submission must identify and provide a rationale for all substantial differences from Federal guidelines to allow OSHA to judge whether a different State procedure is as effective as comparable Federal guidelines.

5. Advise the State designees that, although they may adopt an alternative to the Federal guidelines, they are encouraged to follow the enforcement guidelines set forth in this instruction.
Centimeter

Inches

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F. BACKGROUND

The final Hazardous Waste Operations and Emergency Response standard, 29 CFR 1910.120, was published in the Federal Register on March 6, 1989, and became effective March 6, 1990. The U. S. Environmental Protection Agency (EPA) also promulgated the OSHA standard in 40 CFR Part 311 (Federal Register June 23, 1989) for coverage of public employees that are both compensated and non-compensated in States where Federal OSHA has enforcement authority.

1. Superfund Amendments and Reauthorization Act, Title I.
   a. OSHA was required to promulgate standards for the protection of employee health and safety during hazardous waste operations, including emergency responses to releases of hazardous substances, through the Superfund Amendments and Reauthorization Act of 1986 (SARA), Title I.
   b. OSHA published an interim final rule in December of 1986. In August of 1987 OSHA issued a Notice of Proposed Rulemaking and Public Hearings that set forth OSHA's proposed language, based on the outline given in SARA Title I, which eventually became the current final rule.

2. Superfund Amendments and Reauthorization Act, Title III.
   a. SARA Title III, also referred to as the "Emergency Planning and Community Right-to-Know Act of 1986," requires States and local jurisdictions to develop emergency response plans. In addition, certain facilities must share information about the hazardous substances they have on site with the community emergency response planners.
   b. SARA Title III directed Governors of each State to appoint a State emergency response commission (SERC), which would in turn appoint and coordinate the activities of local emergency planning committees (LEPC). The LEPCs must develop a community emergency response plan that contains emergency response methods and procedures to be followed by facility owners, local emergency responders and emergency medical personnel.

3. Interface Between HAZWOPER and SARA Title III.
   a. HAZWOPER and SARA Title III address the safety and health of two populations during an emergency: HAZWOPER protects employees, both in the facility and those who enter the facility to respond to an emergency, and SARA Title III is concerned with the community at large.
   b. Paragraph (q) of HAZWOPER requires facilities to plan for emergencies if there is a potential for an emergency involving hazardous substances. Under SARA Title III, LEPC's and SERC's must coordinate emergency responders, such as local fire departments, police departments and hospitals, and utilize information which facilities are required to give to them.
   c. Facilities with extremely hazardous substances in excess of a "threshold planning quantity" (as defined in SARA Title III) must comply with HAZWOPER. Facilities that do not have reportable quantities defined by SARA, but who will respond to releases of
hazardous substances that pose an emergency, must also comply with HAZWOPER and should consider informing their LEPC of the hazardous substances on site to further protect the community.

d. 29 CFR 1910.120(q) allows community responders to use the plan developed under SARA Title III in complying with OSHA. HAZWOPER paragraph (q) states that "...emergency response organizations who have developed and implemented programs equivalent to this paragraph for handling releases of hazardous substances pursuant to Section 303 of the SARA shall be deemed to have met the requirements of this paragraph."

G. GENERAL CONSIDERATION. The final standard, 29 CFR 1910.120, applies to all operations that require, or have the potential to require, emergency response operations involving exposure to hazardous substances.

1. HAZWOPER's provisions require facilities to consider both overall performance and specific elements when complying with the standard. HAZWOPER is referred to as a performance-oriented standard, which allows employers the flexibility to develop a safety and health program suitable for their particular facility. The standard offers work practice guidelines to protect employees from potential risks, but also has specific requirements. In evaluating compliance with 29 CFR 1910.120, Compliance Safety and Health Officers (CSHOs) shall consider both the specific requirements and whether the intent of the standard has been met.

2. The most important aspect of HAZWOPER paragraph (q) is planning for emergencies through the development of an emergency response plan and/or an emergency action plan.
   a. When reviewing an emergency response plan, the CSHO must evaluate the employer's ability to contain, control, and cleanup hazardous substance(s) if an emergency was to occur.
   b. If a facility does not have an emergency response plan or an emergency action plan, the employer must prove that the chemicals and the quantities used in the facility will not develop into an emergency incident if released in a (reasonably predictable) worst-case scenario. In other words, if there is a potential for an emergency the employer must plan for it, and if there is no potential then the employer does not fall within the scope of HAZWOPER. (See Appendix E of this instruction for guidance on releases that require an emergency response.)

3. Paragraph (q) of HAZWOPER lists seven emergency responder categories, which includes five principal training levels (beginning with the first responder awareness level and culminating to the on-scene incident commander), skilled support personnel and specialist employees. Employees responding to emergencies at different levels in the command structure are required by OSHA to have specific training, which is intended to ensure that emergency responders are properly trained and equipped to perform their assigned tasks.

4. OSHA Instruction CPL 2.94, "OSHA Responses to Significant Events of Potentially Catastrophic Consequences," offers guidance and procedures which will apply to many inspections covered under this instruction. In order to avoid duplication, the significant sections of CPL 2.94 have not been reprinted in this instruction. Prior to inspection of any emergency response, or in a routine review of the emergency response provisions of HAZWOPER, compliance staff are advised to review both this instruction and CPL 2.94 to ensure the safety and health of CSHO's and employees and to provide consistent and uniform application of OSHA policy.

H. INSPECTION GUIDELINES FOR EMERGENCY RESPONSE, PARAGRAPH (q). The following guidance provides a general framework to assist the CSHO in conducting an inspection (See Appendices A through E):
1. Request a briefing of the procedures to be followed in the event of an emergency. This shall be done to ensure that the CSHO is familiar with the emergency response procedures at the facility in the event an emergency occurs during the inspection. (See Appendix E of this instruction for guidance on releases that require an emergency response.)

2. Review the required elements of the emergency response plan, in accordance with 29 CFR 1910.120(q)(2), or the emergency action plan, in accordance with 29 CFR 1910.38(a), to determine if the response plan adequately addresses the elements in 29 CFR 1910.120(q)(2). (See Appendix A of this instruction for discussion on the different elements of an emergency response plan, and Appendix B of this instruction for audit guidelines.)

3. Identify the Incident Commander (IC), defined in the emergency response plan, and review how the incident command position is passed up the ranks to those in higher authority. It may be helpful to review the pertinent sections of the emergency response plan with the IC (or one of the ICs, since there may be several who will potentially become an IC). CSHOs shall also interview employees to determine the extent to which the plan is implemented. (See Appendix B of this instruction for audit guidelines.)

4. Evaluate the emergency responder training required in 29 CFR 1910.120(q)(5) and (q)(6), and the refresher training required in 29 CFR 1910.120(q)(8), to ensure compliance and interview the employer, employee representatives, and employees who may be involved in an emergency involving hazardous substances. (See Appendix B of this instruction for audit guidelines.)

5. Ensure that the employer is providing medical consultations and evaluations to those employees who are entitled to them, as detailed in 29 CFR 1910.120(q)(9). A sample of affected employees shall be interviewed to determine that medical evaluations/consultations are being conducted.

6. Evaluate the employer's Personal Protective Equipment (PPE) Program for compliance with 29 CFR 1910.120(q)(10), in addition to 29 CFR 1910 Subpart I. (Paragraph (q)(10) of HAZWOPER requires employers to meet the requirements of paragraph 1910.120(q)(5): Personal protective equipment (PPE) program.)

7. Call or verify selected emergency telephone numbers randomly in the Emergency Response Plan (and/or the Emergency Action Plan) to determine the accuracy of these numbers and whether the facility has coordinated with outside response parties. Ask if responders are trained to respond to hazards at the facility. Emergency dispatch phone numbers, such as fire departments, police, and ambulance, which should be used only in true emergencies should not be dialed.

8. Ask the employer if the facility has EPA reportable quantities and, if they do, has the facility notified the LEPC of the hazardous substances. This would establish the quantities and types of hazardous substances at a facility and provide documentation through EPA's reporting requirements. Referrals, as appropriate, shall be made in writing to the EPA Regional Office.

9. For inspections of an ongoing emergency response or post-emergency response where there has been a catastrophic event, or where OSHA is acting under the National Contingency Plan (NCP), Regional Administrators shall determine the overall role that OSHA will play. (See Appendix E for inspection guidance pertaining to on-going or recently completed emergency response operations.)

a. The Regional Administrator may delegate further responsibilities to Area Directors, OSHA Investigation Team Leaders, and other OSHA personnel.
b. The delegated OSHA personnel shall seek Regional guidance if there are problems or difficulties in performing OSHA's duties. Policies for notification, communication, and other procedures during an emergency are provided in OSHA Instruction CPL 2.94, "OSHA Response to Significant Events of Potentially Catastrophic Consequence," and OSHA Instruction CPL 2.45B, the Field Operations Manual (FOM), Chapter VIII. (See Appendices A through E in this instruction for further inspection guidelines.)

c. During an event that is covered by the NCP, OSHA has a responsibility (and has authority) to be both an enforcer of its regulations and a provider of technical advice and assistance to the Federal on-scene coordinator. One method of performing the two functions would be to have separate OSHA teams for enforcement and technical assistance.

10. Specific Provisions of 29 CFR 1910.120. Guidelines and clarifications relating to specific provisions of the standard are provided in Appendices A through F to assist CSHOs in conducting inspections.

- Appendix C--Inspections at Ongoing or Recently Completed Emergency Response Operations.
- Appendix D--Interpretive Guidance.
- Appendix E--Release that Require an Emergency Response.
- Appendix F--Relationship of 29 CFR 1910.120(q) with Other OSHA Standards and Other Agencies' Standards.
- Appendix G--List of Acronyms.
- Appendix H--Reference Materials for HAZWOPER.

I. CLASSIFICATION AND GROUPING OF VIOLATIONS. The procedures in the Field Operations Manual (FOM), Chapters IV, C.8., and V, C., shall be followed except as modified by this instruction.

1. If deviations appear appropriate, however, they shall be coordinated with the Directorate of Compliance Programs, Office of Health Compliance Assistance, through the Regional Office.

2. Serious violations shall be issued whenever a deficiency in the program can be contributed to a potential exposure capable of causing death or serious physical harm. In addition, the CSHO must document that the employer knew or should have known of the violation.

J. AUTHORIZATION TO REVIEW LIMITED MEDICAL INFORMATION. Appropriately qualified compliance personnel, under the direction of the OSHA Supervisory Industrial Hygienist, are authorized to review medical records and medical opinions pertinent to HAZWOPER. This authorization has limitations and procedures which must be followed as set forth in OSHA Instructions CPL 2-2.30, CPL 2-2.32, and CPL 2-2.33.

K. TRAINING FOR OSHA PERSONNEL.

1. For all inspections on a site where an ongoing emergency is not occurring, but where HAZWOPER applies because it is reasonable to anticipate an emergency (i.e., where 29 CFR 1910.120(q) would apply), OSHA personnel must be knowledgeable of:

a. Potential hazards they may encounter;

b. Site specific procedures to be followed in the event of an emergency (addressed in paragraph I.1 of this instruction);
OSHA Instruction CPL 2-2.59 (cont.)

c. Signs and symptoms of overexposure to hazardous substances, and the use of appropriate monitoring equipment (OSHA Training Institute, Course Number 331, satisfies this requirement);

d. The appropriate PPE to be worn. Each CSHO who will be expected to use PPE shall be trained in the proper care, use, and limitations of the PPE. (refer to OSHA Instruction CPL 2-2.54 for respirator use).

2. For all inspections on a site where OSHA personnel are investigating an emergency that involves hazardous sub-stances, OSHA personnel must be knowledgeable of the elements listed in paragraph K.1. a - d. (above). In addition, OSHA personnel must:

a. Have the appropriate training required by 29 CFR 1910.120 before entering danger areas (offered through the OSHA Training Institute, Course Number 331), and any applicable annual refresher training;

b. Be knowledgeable of the contents of OSHA Instruction CPL 2.94. OSHA Regional training shall provide an overview of OSHA's expected role during operations covered by the NCP, an overview of Regional Response Team (RRT) activities and interagency coordination pursuant to CPL 2.94; and

c. Be familiar with the applicable sections of the Regional Contingency Plan, or the local emergency response plan for the community, if available.

3. Regional and Area Offices shall include exercises and drills for CSHO's who will be participating in inspections or providing technical assistance during emergency incidents. (See OSHA Instruction CPL 2.94, G. 1.a.) This is crucial for the OSHA offices who expect to take part in NCP responses. OSHA's presence and acceptance during emergency response operations covered by the NCP will be greatly enhanced if other agencies, who are also responding under the NCP, are aware of and can plan for OSHA's role during an emergency response.

L. MEDICAL EXAMINATIONS FOR OSHA PERSONNEL.

1. Many of the hazards that CSHOs may encounter are already regulated by the medical surveillance requirements in other OSHA standards. In addition, Regional Administrators and Area Directors are responsible for implementing the CSHO medical examination program, which includes: Pre-Employment Examinations (OSHA Instruction PER 8-2.4), Annual Examinations (OSHA Instruction PER 8-2.5), and Emergency Treatment.

2. Ongoing medical surveillance (as opposed to medical consultation, discussed in L.2.), which is addressed in 29 CFR 1910.120(f), applies to designated hazardous material (HAZMAT) teams and hazardous materials specialists. OSHA personnel will not be expected to participate in an emergency in either of these capacities; therefore, the medical surveillance requirements of HAZWOPER would not apply.

3. The standard, 29 CFR 1910.120(q)(9)(ii), requires that any employee who exhibits signs or symptoms, which may have been a result of exposure to hazardous substances during the course of an emergency incident, be provided medical consultation. During any investigation of emergency incidents, any CSHO experiencing signs or symptoms shall be entitled to a medical consultation.

4. CSHO’s who are required to wear any respiratory protection and Level A or B PPE shall be medically cleared via the CSHO Physical Examination procedures.

M. PROTECTION OF OSHA PERSONNEL. The paramount concern addressed in this section is the protection of the CSHO. No enforcement action, on-site consultation, or on-site technical assistance is so important as to place the life and health of the CSHO in danger.
1. **Personal Protective Equipment (PPE).** If the appropriate PPE is not available, the CSHO shall not enter the danger area. It is recognized that situations will arise where entry into areas involving highly hazardous substances is necessary; however, it is permitted only when appropriate PPE is available.

   a. Regional Administrators and Area Directors shall ensure that appropriate PPE is available for the CSHO. Further guidance on the appropriate PPE will be addressed in another instruction. (The selection of appropriate PPE is covered in Appendix B, 29 CFR 1910.120, and OSHA Instruction CPL 2-2.54, *Respiratory Protection Program Manual.*)

      (1) Where respiratory protection will be necessary, the CSHO shall adhere to the guidance set forth in CPL 2-2.54, Respiratory Protection Program Manual.

   b. The Assistant Regional Administrator for Technical Support shall be consulted for assistance in determining the appropriateness of SCBA used in any planned entry requiring the use of SCBA.

      (1) Whenever CSHOs wear SCBA, a buddy system shall be employed wherein each CSHO who enters a danger area is accounted for by another identically equipped CSHO, who must remain in a safe location as a standby to assist in emergency rescue and decontamination if necessary. Two CSHOs, at a minimum, shall comprise a team to enter into the danger area while their respective buddies remain in a safe location.

      (2) Appropriately equipped and trained personnel other than CSHOs (e.g., EPA personnel) may be substituted for the required number of CSHOs under the buddy system.

   c. If additional PPE is necessary, the Regional Administrators and Area Directors shall ensure that it is obtained prior to exposure. Under no circumstances shall a CSHO be unprotected from any hazard encountered during the course of an investigation.

2. **Decontamination Procedures for OSHA Personnel.** Prior to site entry CSHOs shall determine if decontamination facilities exist, whether they are adequate for the expected conditions at the site, and if they will be available for OSHA use.

   a. When decontamination facilities exist at the inspection site CSHOs shall utilize them if, in their professional judgment, the facilities are adequate. In the event that decontamination facilities are nonexistent, inadequate or not available for use, or if someone is not available to assist in decontamination, CSHOs shall not proceed into areas where there would be a need for decontamination, but shall contact the CSHOs' supervisor immediately.

   b. The Area Director shall ensure that decontamination equipment is available to CSHOs. The decontamination equipment shall accompany CSHOs on each inspection where it is likely that the CSHOs will be required to wear special PPE before entering the emergency response site. (Refer to the *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities*, developed by the National Institute of Occupational Safety and Health (NIOSH), OSHA, the U.S. Coast Guard (USCG), and EPA, for guidance on decontamination equipment.)
A. Background. The Hazardous Waste Operations and Emergency Response (HAZWOPER) standard is a performance oriented standard. However, there are several parts of the standard that specify what the employer must do to be in compliance. This is particularly true of the requirements in 29 CFR 1910.120(q).

1. Paragraph (q) is the broadest in its scope of coverage. It applies to emergency responders such as fire department, police, emergency medical personnel, etc., and any place of employment which has a sufficient quantity of hazardous substance on hand capable of posing an emergency. There is a spectrum of compliance options ranging from evacuation of the area and calling outside assistance, to development of sophisticated hazardous material response teams.

2. The key to compliance with 29 CFR 1910.120(q) is the emergency response plan (ERP) required in 29 CFR 1910.120(q)(1), and elaborated on in (q)(2). It is this document which must be reviewed carefully to determine whether employers are in compliance with 29 CFR 1910.120. (An ERP is not required by HAZWOPER if employers elect to develop an emergency action plan in accordance with 29 CFR 1910.38(a) and evacuate all employees.)

3. It may be that some of the requirements of an ERP are not applicable to the place of employment in question. While OSHA does not expect the employer to meet requirements that are not applicable, an explanation of how the specific requirement is inappropriate, or is otherwise met, must be addressed in the ERP.

B. The Initial Inspection. The first step in a compliance inspection should be a paper review of the 29 CFR 1910.120 ERP, or the emergency action plan in accordance with 29 CFR 1910.38(a). If an employer does not have an ERP, he or she must have an emergency action plan and evacuate all employees when there is a release that would require an emergency response, or prove that the chemicals used will not require an emergency response if released in a reasonably predictable worst case scenario. (The CSHO must still document violations fully and be able to defend any citations.)

1. The CSHO can establish that the employer would fall under the scope of 29 CFR 1910.120 by documenting the existence of a hazardous substance that would cause, or could potentially cause, an emergency if released in an uncontrolled manner.

   a. CSHOs can establish the quantities of a hazardous substance before visiting a site by asking the local emergency planning committee (or the state emergency planning commission) to supply Tier I or Tier II reporting forms. These forms must be submitted by the employer in accordance with SARA Title III and offer useful documentation about the chemicals for enforcement purposes. (See section G.2. in this instruction.)

   b. CSHOs shall look at the employer's list of hazardous chemicals developed in accordance with 29 CFR 1910.1200.

   c. The CSHO may also inquire about the hazardous substances on site and the quantities in which they are stored as they observe tanks. A determination of quantities of a particular hazardous substance that warrant compliance with 29 CFR 1910.120(q) can be made later in the inspection.
d. The CSHO shall also examine whether chemicals are present that are incompatible with each other which could cause an emergency if accidentally mixed. For example if two vessels are stored close to each other, and one contains ammonia and the other bleach, the two solutions would generate toxic chlorine gas when they become accidentally mixed.

C. Review Procedures for Emergency Action Plans. Facilities that intend to evacuate their employees from the danger area when a release that required an emergency response occurred are not required to comply with the other provisions of 29 CFR 1910.120(q) if they provide an emergency action plan complying with 29 CFR 1910.38(a). (See N.3 of this instruction.)

1. If the employer expects employees to handle incidental releases of hazardous substances and the release incident escalates beyond an incidental release, the employees are then expected to evacuate in accordance with the employer's emergency action plan. The employer must have plans and procedures for these activities. The employer must provide the appropriate training and necessary PPE in order to minimize the risks to employees when they are expected to handle incidental releases. All employers, whose employees may be involved in these tasks, must be in compliance with 29 CFR 1910.120(q)(6)(i) first responder awareness level training, 29 CFR 1910.38(a), 29 CFR 1910.1200, 29 CFR 1910.132, and other applicable standards.

2. There is a certain level of knowledge which is needed to distinguish between incidental spills that can be handled by employees who are not trained to handle releases that would require an emergency response, and spills that require evacuation and the assistance of emergency responders. First responder awareness level training would meet this requirement.

   a. If the employer cannot utilize 29 CFR 1910.38(a) to ensure that employees can identify an emergency, at least one employee per shift should be given training equivalent to the first responder awareness level. This designated employee would determine whether a situation posed an emergency and whether all employees in the area needed to be evacuated. Employees must be told how to act when a release that required an emergency response occurred - if employees who are not trained as emergency responders were to take action during a release of hazardous substances that would pose an emergency, 29 CFR 1910.120(q)(6) shall be cited.

   b. Employers may choose to include the competencies described in 1910.120(q) (6)(i) - first responder awareness level - in their hazard communication training program. This must include training in recognizing when a situation has escalated beyond the employees capability.

3. In reviewing an emergency action plan, ask:

   a. What chemical releases have occurred at the facility in the past?

   b. Does HAZWOPER apply?

   c. Is the plan in writing?

   d. Are emergency escape procedures and emergency escape routes assigned? (For example, if wind direction is a factor, has the employer provided any wind direction indicators such as wind socks to help employees determine where to seek refuge.)

   e. Are procedures established to account for all employees after the emergency evacuation has been completed?

   f. Has an employee alarm system, which complies with 29 CFR 1910.165, been established?
g. If an employee alarm system is used for other purposes, have distinctive signals for each purpose been developed?

h. Has the employer designated and trained a sufficient number of persons to assist in the safe and orderly evacuation of employees?

i. Has the employer reviewed the emergency action plan with each employee covered by the plan initially, and when the plan or employee's responsibilities under the plan change?

j. Is the written plan kept at the workplace and made available for employee review?

k. Does the employer intend to have employees respond to emergencies in any way? Is the plan just a means to avoid compliance with 29 CFR 1910.120(q)?

D. Review Procedures for Emergency Response Plans. If an employer has chosen to have their own employees respond to releases that would require an emergency response, the employer must develop emergency response capabilities that are appropriate to their individual situation. The CSHO shall examine the ERP in terms of what is expected of the employees during an emergency response. Are all the employees that are expected to respond:

- Adequately trained for their intended job duties?
- Properly equipped for the intended tasks?
- Capable of responding in a safe manner?
- Managed by competent leaders?

1. The non-mandatory appendix to 29 CFR 1910.120, Appendix C, section 6., recommends that offensive action be composed of an on-scene Incident Commander (IC), and a minimum of two emergency responders. OSHA recommends that back-up personnel be available and ready to act in case rescue becomes necessary. Members of the team may play more than one role, for example the safety official may be played by the IC. This is a minimum response team that could be used for a limited emergency, and is not appropriate for releases at all facilities.

2. CSHO's shall review ERPs for the following 29 CFR 1910.120(q)(2) components:

(i) Pre-emergency planning and coordination with outside parties [for facilities that intend to call in outside responders].

a. During inspections, it is recommended that verification be made with the fire department, or other outside emergency response organizations. CSHOs may ask the following questions:

(1) Does the plan address coordination with outside emergency response organizations, such as fire departments and emergency medical services, as an absolute minimum?

(2) Have employers notified and coordinated their ERP with the organizations listed?

(3) Are telephone numbers and contact personnel for in plant officials and local authorities correct?

b. In addition, under SARA Title III, facilities are required to share information on hazardous chemicals on site with the local emergency planning committee. You may refer industry personnel to the SARA Title III hotline at 1-(800)-535-0202, or to the EPA Regional Offices. CSHOs are encouraged to refer EPA to facilities that have not complied with SARA Title III.
Personnel roles, lines of authority, training and communication.

Personnel roles must be defined clearly. One method of doing this is to list job titles and describe their projected role in emergency response operations. Although specific HAZWOPER titles are not required, employees should be designated to play roles that parallel to and are trained in accordance with 29 CFR 1910.120(q)(6). For example, an employer may use the job title "containment operator" to describe a responder whose responsibilities are equivalent to the first responder operations level. Employers would indicate in the ERP that the employee with this job title had acquired training equal to the first responder operations level, and CSHOs would cite any inadequacies in training under 29 CFR 1910.120 (q)(6)(ii).

Lines of authority must also be made clear in the ERP. The on-scene IC must be notified expeditiously by a predefined chain of communication in the event of a release that would require an emergency response. Although employees at the scene of the release may be expected to inform their supervisors (as opposed to the on-scene IC), the supervisor, unless properly trained, can do nothing other than call for the emergency response personnel and report what is known to be present.

Provisions for employee training should be incorporated into the ERP. This might include a general outline of the training to be completed for each of the various levels of emergency responders addressed in the ERP, or reference to the location of the training manual. The plan should also address a schedule for required annual refresher training.

The lines of communication need to be defined clearly in the ERP. Essentially all employees that may encounter a release that requires an emergency response should be addressed in the ERP and must understand to whom they are to report a release. These lines of communication can be developed for groups of employees in specific areas that would be required to report to the same individual in the event of an emergency. A system to communicate the need and method for evacuation of all employees who are not designated as emergency responders must be developed. These evacuation procedures should, at a minimum, meet the requirements of 29 CFR 1910.38(a).

Means of communication to be used during an emergency response must be established and written into the ERP. This might include dedicated radio frequencies, hand signals, and siren blasts.

Emergency recognition and prevention.

This section of an ERP must define the types of releases that could potentially require an emergency response and should define what types of releases would not be an emergency, i.e., what may be handled as an incidental release. (See Appendix E of this instruction for criteria.)

(1) The ERP should include an inventory of the hazardous substances found onsite, the quantities in which they are stored and the consequences of an uncontrolled release. Scenarios or circumstances that trigger activation of the ERP should be described for the various hazardous substances stored in sufficient quantities to cause a potential emergency. Reasonably predictable worst-case scenarios must be made in the planning phase.

(2) Employees such as chemical process operators may be required to shut down processes, close emergency valves and otherwise secure operations that are not in the hot zone or danger area before evacuating in the event of an emergency. (See 29 CFR 1910.38(a) (2) (ii).) These procedures need to be delineated carefully, and employees must be trained to be able to perform these
pre-evacuation procedures safely. Employees who perform these operations are not considered "emergency responders"; however, if they perform duties in the hot zone, or danger area, then they would be expected to be trained as emergency responders in accordance with 29 CFR 1910.120.

(3) Chemical process operators who have informed the incident command structure of an emergency, who have adequate PPE and training in the procedures they are to perform and who employ the buddy system, may take limited action in the danger area (e.g., turning a valve) before the emergency response team arrives. The limited action taken by process operators must be addressed in the Emergency Response Plan. Once the emergency response team arrives, these employees would be restricted to the actions that their training level allows.

• This limited action assumes that the emergency response team is on its way, their arrival is imminent, and that the action taken is necessary to prevent the incident from increasing in severity (i.e., to prevent a catastrophe). Employers must inform employees during their training that they are to evacuate when they lack the capabilities to respond in a safe manner and in accordance with the standard operating procedures defined in the emergency response plan.

• If the process operator takes action beyond what they have been trained to do, and the action was comparable to the aggressive role that a HAZMAT technician would take, CSHOs shall cite a violation of 29 CFR 1910.120(q)(6)(iii). If the operator takes action beyond that which they have been trained to do, and the action was comparable to the defensive role that a First Responder at the Operations level would take, CSHOs shall cite a violation of 29 CFR 1910.120 (q)(6)(ii).

(iv) Safe distances and places of refuge.

i. The ERP should contain a map with safe places of refuge identified for each section of the area where HAZMAT emergencies could occur, if possible. Ideally, the map should contain the location of all buildings, structures, equipment, emergency apparatus, first aid stations, routes of entry and exit, emergency exit routes and alternate routes, staging areas, and safe places of refuge. The adequacy of safe refuge areas needs to be determined for the worst-case scenario.

(1) The safe places of refuge should be the areas in which accounting of all employees will be performed. This can be critically important for identifying individuals that did not get out and for estimating where they may be.

(2) Information on safe places of refuge must be given to the emergency response organization in a timely fashion.

(v) Site security and control.

j. Areas surrounding the danger area need to be controlled during emergencies by prohibiting unauthorized personnel from entering the exclusion zone, or hot zone. Personnel expected to set up the exclusion zone must be trained to the first responder operations level. Once the exclusion zone is set, employees (preferably trained to the first responder awareness level) may control entry and exit in the area. An employee trained to first responder awareness may not set up safe distances because they lack knowledge regarding potential of exposure, explosion, or radiation. For example:

(1) In a traffic accident police trained to the first responder awareness level could divert traffic or control crowds; while
(2) A fire fighter trained to first responder operations level could set up the exclusion zone to determine how close to the accident cars should be permitted to drive.

k. Methods of excluding areas and defining various zones need to be addressed in the ERP. Emergency responses are coordinated from a command post a safe distance away from the exclusion zone. The way this command post is assembled and its functions must also be addressed in the ERP. (See 29 CFR 1910.120 Appendix C, section 7., for further guidance.)

(vi) Evacuation routes and procedures.

l. All employees that are not trained in emergency response and who will not be needed during the response operation should be evacuated from the exclusion and decontamination zones. This aspect of the emergency response plan should be in compliance with 29 CFR 1910.38(a) as described in D.9.b. and d. of this appendix. CSHOs must use 29 CFR 1910.38(a) as a model to evaluate the employer's "evacuation routes and procedures".

(vii) Decontamination.

m. The ERP must contain provisions for decontamination of emergency responders leaving the exclusion zone. Individuals who will assist the responders as they leave the exclusion area must be trained in decontamination procedures. These individuals should wear PPE at the same level or one level below the emergency responder. They are supporting.

(1) Decontamination of response equipment left in the exclusion zone and the contaminated area may be handled in the post-emergency response and, therefore, decontamination procedures for these areas and equipment does not necessarily need to be part of the ERP.

(2) If emergency responders are expected to decontaminate their own equipment or the contaminated area then the procedures to be followed must be included in the ERP. (See 29 CFR 1910.120, Appendix C, section 3., for further guidance.)

(viii) Emergency medical treatment and first aid.

n. This section of the ERP must provide for advance first aid personnel or better (which must be on standby, as per 29 CFR 1910.120(q)(3)(vi)), and list all qualified emergency medical personnel on site, their certifications and how best to contact them during an emergency. Additionally, hospitals that are capable of receiving accident victims that may arrive contaminated must be listed. (See Appendix D of this instruction.)

(ix) Emergency alerting and response procedures.

o. This section of the ERP should address how employees will be informed that an emergency exists and how they should respond. The alarm systems must inform "all affected employees" that an emergency exists and what their immediate response should be. There are three important questions that need to be addressed:

- Who needs to be made aware of the emergency?
- What do they need to be told to do?
- How will they be alerted?

(1) Depending on the size and the magnitude of the emergency "all affected employees" may include all employees, or just employees from a limited area. If
employers intend to evacuate people from a limited area, they must have alerting procedures in place that can communicate who must evacuate.

(2) The following list outlines the information necessary to inform the employees of what their immediate response should be. All of these criteria may not be applicable to all employers, depending on the size and nature of the place of work and the employer's pre-planning efforts:

- **Notification.** Making the existence of the emergency situation known.
- **Level & Type of Response.** The required response based on the extent and type of emergency.
- **Nature of the Response.** The type of emergency condition (explosion, chemical spill, medical).
- **Location.** Critically important in large facilities.
- **Ambient Environmental Conditions.** Environmental factors that influence evacuation or response procedures (wind speed and direction).

(x) Critique of response and follow-up.

p. Emergency response plans are based on site specific needs and experience. It is important to consider previous emergency incidents in preparing an ERP. It is just as important to consider new information, experience, and incidents with the goal of enhancing the effectiveness of the ERP and keeping it current.

(1) Formalized procedures for the critique of an emergency response must be written into the ERP. Appropriate changes should be made in the ERP in accordance with the results of a critique of a specific incident.

(2) Time spent by emergency response employees critiquing incidents can be credited toward their refresher training requirements.

(xi) PPE and emergency equipment.

q. This section of the ERP lists the inventory of PPE and emergency response equipment and materials. The ERP should include instructions on how the PPE and equipment and materials are to be used, their limitations, and when emergency responders will use them.

(1) HAZWOPER requires the IC to be aware of the equipment and PPE available during an emergency, and responders trained to the HAZMAT technician and HAZMAT specialist levels must be trained in the selection of and the proper use of PPE.

(2) Emergency responders must be made aware of the inventory in order to utilize the PPE and emergency response equipment effectively.

(xii) Emergency response organizations may use the local emergency response plan or the state emergency response plan or both, as part of their emergency response plan to avoid duplication. Those items of the emergency response plan that are being properly addressed by the SARA Title III plans may be substituted into their emergency plan or otherwise kept together for the employer and employee's use.
Community emergency response agencies should be integral components of the community ERP. The community wide ERP should spell out specific roles and responsibilities for various organizations or agencies, and will state which function each agency is expected to play in the event of an emergency. This predetermined role will be the basis for an agency's ERP.

(1) For example, local area police will provide security and traffic control at the scene, the emergency medical personnel will provide care and coordinate with local hospitals, and fire departments may be expected to respond to hazardous substance emergencies and assess and control the situation until the regional HAZMAT team arrives.

(2) The area fire department would then be expected to develop an ERP in keeping with that role. Fire fighters expected to be involved in assessment and control of the situation would be trained to the first responder operations level. The police and emergency medical personnel would be trained at least to the awareness level and know their role under the local community plan.

(3) The incident command structure will be detailed to provide for smooth transition of command at the emergency site.
Appendix B
Guidance for 29 CFR 1910.120 Emergency Response Compliance Inspection

The function of this non-mandatory appendix is to supply the compliance officer guidance on pertinent information to be collected relating to various subparagraph requirements in 1910.120(q) Emergency response to hazardous substance releases.

(Name of Site)

(Street Address or Geographic Location of Incident)

(City, State, Zip)

(Name of Manager/Owner)

(Phone Number)

1. **Review of The Emergency Response Plan (ERP):**
   (See Appendix A of this instruction for a discussion of Emergency Response Plan (ERP) requirements and strategies.)

   a. Do the provisions of 29 CFR 1910.120(q) apply to the employer? (Would the substances present on-site require an emergency response if released?) (See Appendix E)

   b. Which compliance strategy does the employer use—evacuation of all employees in accordance with 29 CFR 1910.38(a), or response procedures described in the facility’s emergency response plan?

   c. If the employer does not have an emergency response plan or an emergency action plan, cite paragraph (q)(1).
d. If the employer does not have an ERP or an emergency action plan, but expresses an intent to evacuate all and not allow any employees to respond, then 29 CFR 1910.38(a) shall be cited. The determination that the employer intends to evacuate all employees must be documented on the Narrative, OSHA-1A Form.

1910.38
(a)

If the employer does not have an emergency response plan and the emergency action plan is inadequate, 29 CFR 1910.38(a) should be cited.

1910.38
(a)

f. Emergency Action Plan compliance checklist:

1. Is the Plan in writing?
2. Is the written plan accessible to employees?
3. Are emergency escape procedures and emergency escape routes assigned?
4. Are procedures established to account for all employees after the emergency evacuation has been completed?
5. Has an employee alarm system which complies with 29 CFR 1910.165 1910.38 been established?
6. If an employee alarm system is used for other purposes, have distinctive signals for each purpose been developed?
7. Has the employer designated and trained a sufficient number of persons to assist in the safe and orderly evacuation of employees (generally one warden per 20 employees)? (See Appendix to Subpart E --Means of Egress, 3.)
8. Has the employer reviewed the emergency action plan with each employee covered by the plan initially, and when the plan or the employee's responsibilities under the plan change?
9. Is the written plan kept at the work-place and made available for employee review?
10. Is the plan real or just a subterfuge to avoid compliance with 1910.120(q)? Does the employer actually intend to have employees respond to emergencies?
11. Does the employer intend to have employees handle incidental releases? If so, are the training, tools, equipment and PPE appropriate for handling small releases of the hazardous substance available in the work area?
OSHA Instruction CPL 2-2.59 (cont.)

g. Is the Emergency Response Plan (ERP) in writing? (q)(1)

h. Is the ERP easily accessible to employees? (q)(1)

i. Does the employer make use of the local or State ERP in the company ERP? If so, does the local or State ERP adequately provide employee protection for this employer? (q)(2) (xii)

NOTE: Emergency response organizations may use the local or State ERP as part of their ERP to avoid duplication. However, the plan must address all of the provisions listed in 29 CFR 1910.120(q)(2) and (q)(3).

j. Does the ERP reflect pre-emergency planning and coordination with outside parties (including local fire department, police, emergency medical care, and skilled support personnel)? (q)(2) (i) (Suggestion: Verify telephone numbers listed in the ERP by calling several of the designated parties.)

k. Are personnel roles, lines of authority, training, and communication provided in the ERP? (Suggestion: Review personnel roles and lines of authority with the designated On-Scene Incident Commander if possible.) (q)(2) (ii)

l. Does the ERP address emergency recognition and prevention? (q)(2) (iii) (Suggestion: Determine if the employer established the kinds of emergencies that could occur in the workplace, trained employees to recognize potential emergencies, and/or installed monitoring devices to alert employees to an emergency.)

m. Does the ERP address safe distances and places of refuge adequate for all (q)(2)
employees who may need it? (iv)

n. Does the ERP designate equipment, people, and procedures to ensure site security and control? (q)(2) (v)

o. Are evacuation routes and procedures developed, and do they work well with the methods developed for emergency alerting and the designation of places of refuge? (q)(2) (vi)

(Suggestion: Check the evacuation routes and procedures against the requirements given in 29 CFR 1910.38(a), emergency action plans)

p. Does the ERP address the setting up of a decontamination station, and the decontamination of personnel and equipment? (q)(2) (vii)

q. Are emergency medical treatment and first aid available to employees during an emergency response? (q)(2) (viii)

(Suggestion: Are emergency medical personnel aware of their roles in an emergency and trained to fulfill their roles?)

r. Are emergency alerting and response procedures addressed in the ERP? (q)(2) (ix)

(Suggestion: If the emergency situation calls for special instructions, determine if the emergency alerting system indicates the location of the hazard, the direction employees should evacuate, what the hazard is, and any special PPE employees must don.)
OSHA Instruction CPL 2-2.59 (cont.)

s. Does the ERP address the types and uses of PPE and emergency response equipment to be used? (q)(2) (xi)

t. Does the ERP provide procedures for the critique of emergency responses? (q)(2) (x)

u. Are there any other features that are missing or should be addressed in the employer's ERP? (q)(1)

NOTE: The elements listed in (q)(2) are minimum requirements. The performance-oriented aspect of the ERP is in (q)(1), which states that the ERP "shall be developed and implemented to handle anticipated emergencies prior to the commencement of emergency response operations."

2. Review of Procedures for Handling Emergencies

a. Has a single individual been identified as the On-Scene Incident Commander? (q)(3)

b. Is there a system in place that passes the senior official position up the line of authority as more senior officials arrive on the scene. (q)(3)

NOTE: The senior official assists the On-Scene Incident Commander, "the individual in charge of the Incident Command System" in 29 CFR 1910.120(q)(3).

c. Has a safety official been identified? (q)(3) (vii)

NOTE: In smaller responses the On-Scene Incident Commander may play this role.
3. **Review of Training Requirements:**
   a. Has the employer certified that the employee has been provided training?  
      (q)(6) (ii)-(v)

   **NOTE:** The employee does not necessarily have to be provided with a certificate, although the employer must certify that employees who have successfully completed the first responder operations, HAZMAT technician, HAZMAT Specialist and On-Scene Incident Commander levels are trained by showing some form of documentation.

   b. If employee training is done in-house, the OSHA compliance officer may review the training materials to ensure that training is based on the specific duties and functions to be performed at the site.

   **NOTE:** Keep in mind that OSHA cannot endorse a training program, but can offer suggestions and cite the employer in deficiencies.

   c. Does the employer have a "statement of training" or "statement of competency" for annual refresher training or competency for all employees trained in emergency response?  
      (q)(8)

   **NOTE:** Methods of demonstrating competency include critiques of actual incidents or 'dress rehearsals' which identify any weakness and effectiveness of the response effort.

   d. If employee annual refresher training is done in-house, the OSHA compliance officer may review the training materials.  
      (q)(8)

   **NOTE:** Keep in mind that OSHA can not endorse a training program, but can offer suggestions and cite the employer in deficiencies.

4. **Review of Medical Surveillance:**
   a. Does the employer furnish the employee a written physician's opinion indicating medical results and whether the employee is capable of working with hazardous materials?  
      1910.20

   **NOTE:** Keep in mind that OSHA can not endorse a training program, but can offer suggestions and cite the employer in deficiencies.
b. Is medical recordkeeping done in a manner consistent with 29 CFR 1910.20, Access to Employee Exposure and Medical Records?  
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5. **Review of Personal Protective Equipment Program:**
A. Ask to review the written PPE Program required in 29 CFR 1910.120(q) (10) and 29 CFR 1910.120(g) (5).

NOTE: Subparagraph (q)(10) refers to the provisions for PPE in 29 CFR 1910.120(g)(3)-(g)(5).

a. Is the PPE chosen sufficiently protective of employees, based on hazards and potential hazards? (q)(10)
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b. Is the PPE maintained and inspected routinely? (q)(10)
---

c. Does the PPE appear to be in good condition and up to date? (q)(10)
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d. Is air monitoring equipment available to assist the Incident Commander in determining when to lower the level of PPE? (q)(3) (iv)
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6. **Employee Interview Questions:**
- **Opening questions:**

  (Employee's Name)

  (Home Address)

  (Home Phone Number) (Work Phone Number)

  (Employee Job Title)

  (Years Employed in Present Position)
OSHA Instruction CPL 2-2.59 (cont.)

a. Does the employee know where the ERP is kept? (q)(1)

b. Has the employee ever been through an emergency response drill or an evacuation drill? Is the employee aware of their evacuation route in the event of an emergency? (q)(2)(i)

NOTE: Drills may be required by SARA Title I if the facility or emergency response organization is designated to be part of a community emergency response.

c. Is the employee expected to take any action, other than evacuation, during an emergency? If so, what level of training does the employee have? (q)(6)

(Suggestion: Review with the employee the competencies for the level of training that the employee has received.)

d. Does the employee feel the training was sufficient to perform expected duties and functions during an emergency as an emergency responder? (q)(6)

e. Does the employee know how to select, use, and inspect the PPE designated for employee use during an emergency? (q)(6) (ii)-(iv)

f. Have the employees been fitted properly for PPE? (q)(10) 1910.133 1910.134

NOTE: Paragraph (q)(10), Chemical protective clothing, refers to the provisions in 29 CFR 1910.120(g) (3)-(5): PPE selection (which requires selection and use of PPE in compliance with 29 CFR Part 1910, Subpart I); totally-encapsulating chemical protective suits; and a written PPE program.
g. Does the employee know how to use the emergency response equipment designated for employee in use performing control, containment and/or confinement operations? 

h. If possible, interview the designated On-Scene Incident Commander to determine if the individual:

1. Is aware of the potential hazards and/or benefits associated with certain PPE and engineering controls; 

2. Is capable of implementing appropriate emergency operations; 

3. Can readily designate a safety official; 

4. Can implement appropriate decontamination procedures; 

5. Has received training as an On-Scene Incident Commander.

i. Has the employee gone through refresher training or demonstrated competency annually? 

j. Have employees who are entitled to a baseline physical and periodic consultations received them?

NOTE: Designated members of HAZMAT Teams and HAZMAT Specialists must receive baseline physicals and be part of a medical surveillance program.
k. Are employees offered medical consultation following the development of signs or symptoms resulting from exposure to hazardous substances during an emergency incident?
Appendix C

Inspection Procedures at Ongoing or Recently Completed Emergency Response Operations

The function of this appendix is to provide guidance for inspection activity at ongoing or recently completed emergency response operations. The focus of this appendix is a review and discussion of the requirements of 29 CFR 1910.120(q) (3) Procedures for handling emergency response.

At ongoing or recently completed emergency response operations there is a shift in emphasis from the planning requirements of the standard toward the procedural requirements of the standard. An inspection of an actual emergency response should focus on the appropriate implementation of the emergency response plan and compliance with the requirements of 1910.120(q) (3).

A. General Consideration
   1. The CSHO upon arriving at an emergency response incident should immediately seek out and report to the On Scene Incident Commander (IC) (or the On Scene Coordinator (OSC) if the NCP is activated), or the appropriate official within the incident command structure (ICS), such as the safety and health officer. The purpose of this meeting is to inform the IC/OSC of your presence and the purpose of your visit.
   2. The CSHO may find it necessary to form an abbreviated opening conference, during which the CSHO should obtain a copy of the emergency response plan.
   3. The CSHO must establish whether contamination zones have been created and if so must avoid entry into zones for which the CSHO has not been appropriately trained or equipped.
   4. Compliance Officers should make every effort to comply with the restrictions imposed by the IC/OSC.

B. Inspection Procedures
   1. HAZWOPER's Incident Command System:
      a. The primary question to be answered is whether the emergency response procedures been followed? These procedures are outlined in the emergency response plan as well as in 1910.120(q)(3) of the standard.
      b. Is there an Incident Command Structure? This is required in 1910.120(q) (3) (f).
      c. The standard requires one individual to be in charge of the incident from beginning to end. As a more senior official arrives on site the command position is passed up the hierarchy to the IC.
   2. Site Monitoring and Characterization
      a. The IC or designated safety officer has the responsibility to "identify, to the extent possible, all hazardous substances or conditions present and shall address as appropriate site analysis, use of engineering controls, maximum exposure limits hazardous substance handling procedures and the use of any new technologies."
      b. "To the extent possible" implies the IC has a responsibility to utilize all available resources to characterize the hazards associated with response activities. The information gathering/site characterization stage of an emergency response operation is critical in that it influences all other aspects of the response (delineation of contamination zones, personal protective equipment (PPE), etc.).
3. **Appropriate Emergency Response Operations**
   a. **Site Characterization.** Based on characterization of the site, the IC is responsible for implementing appropriate emergency response operations, and ensuring that appropriate PPE is used. To establish the appropriateness of the response operation the CSHO must ask the IC, or appropriate official within the ICS, what he/she knew about the hazardous substances present and how he/she knew it? Did the IC rely on placards, labels, manifests, information from plant? This is required in 29 CFR 1910.120(q)(3)(iii).
   b. **Lines of Communication:** The IC must establish and maintain lines of communication including links to the senior official present for each employer. If a senior official for an employer was not incorporated in the lines of communication there may have been a violation of 1910.120(q)(3)(i).
   c. **Coordination.** Adequate coordination of emergency responders is critical to a safe emergency response operation. The CSHO should explore any evidence of inadequate coordination of emergency responders. Were responders receiving direction from more than one source? Was there more than one command post? Did one employer's employees refuse to take direction from the IC?

4. **Positive Pressure Self Contained Breathing Apparatus (SCBA).**
   a. The standard requires that positive pressure SCBA be used "while engaged in emergency response, until such time that the individual in charge of the ICS determines through the use of air monitoring that a decreased level of respiratory protection will not result in hazardous exposure to employees," in 29 CFR 1910.120(q)(3)(iv). used then the employer is in violation of 1910.120(q)(3)(iv).
   b. If the IC is limited in his or her ability to monitor and characterize the site, positive pressure SCBA must be used. If the site has not been adequately characterized and respiratory protection less protective than positive pressure SCBA is used then the employer is in violation of 1910.120(q)(3)(iv).

5. **Limited Number of Emergency Response Individuals/ Buddy System**
   a. The number of individuals in areas of potential or actual exposure must be limited to those individuals actually engaged in emergency response operations. If there are excess personnel on site, or the facility was not properly evacuated there may be a violation of 1910.120(q)(3)(v).
   b. Although the IC has the responsibility to limit the number of emergency responders in areas of exposure or potential exposure the IC must employ the buddy system for all operations in the danger area. If the CSHO discovers that the buddy system was not used or that the buddy system used was ineffective, i.e. individuals in the danger area were out of sight of others, then the CSHO would cite 1910.120(q)(3)(v).

6. **Backup Personnel.** For emergency responders that enter the danger area there must be back up personnel standing by who are identically equipped (or have a higher level of protection).

7. **First Aid.** The standard requires that advanced first aid personnel and transportation also be standing by in CFR 1910.120(q)(3)(vi).
8. **Safety Official.**
   a. The IC has the responsibility to designate a safety official (the IC may designate him or herself as safety official). The safety official must have the following competencies as required by 1910.120(q) (3) (vii):

   (1) Be knowledgeable in the operations being implemented at the emergency response site.

   (2) Have ability to identify the hazards and to provide direction with respect to the safety of operations at hand.

   Note: There has been some inquiry regarding the adequacy of a Certified Industrial Hygienist playing the role of safety official. This should not be regarded an absolute criteria of eligibility. The safety official must have knowledge in the emergency response operations being performed at the site.

   b. When the safety official believes that there is a situation that poses an imminent danger to life or health, the safety official must be vested with the authority to suspend operations. Evidence to the contrary should be cited as a violation of 1910.120 (q) (3) (viii).

9. **Decontamination.** The IC has the responsibility to institute appropriate decontamination procedures as a part of the emergency response operations.

10. **Training Levels of Emergency Responders.**
    a. The IC, or appropriate official in the ICS, should be cognizant of the training levels of the various emergency responders under his command. Some HAZMAT teams have reportedly color coded their response personnel based on their HAZWOPER training level. This is not required, however, ICs do need to be informed as to the training levels of responders under their command.

    b. If the IC inappropriately orders an employee to take actions for which the employee has not been adequately trained, the employer would be cited for a violation of 191.120 (q) (6) training requirements.
APPENDIX D

HAZWOPER Interpretive Guidance

This appendix includes clarifications and interpretations which respond to the most frequently asked questions and points of common misunderstanding regarding 29 CFR 1910.120 paragraph (q) Emergency response to hazardous substance releases. Where possible, clarifications are keyed to the most applicable paragraph or subparagraph of the HAZWOPER standard.

29 CFR 1910.120(a): Scope, application, and definitions

How (a)(1) Scope affects certain employers who may be engaged in hazardous waste operations:

(a)(1)(v) Asbestos Removal. Occupational exposure to asbestos, including removal operations, falls under the scope of 29 CFR 1910.1001, the Asbestos, Tremolite, Anthophyl-lite, and Actinolite standard. Employees are covered under 29 CFR 1926.58 at construction sites. In emergency situations the HAZWOPER standard will apply; e.g., when asbestos is released during a transportation accident.

(i)-(v) HAZWOPER. This is explained in the application section of the HAZWOPER standard, 29 CFR 1910.120(a)(2)(i): "If there is a conflict or overlap, the provision more protective of employee safety and health shall apply...."

- If an employee on a construction site is directed to engage in emergency response involving hazardous substances, then the employer is subject to all of the provisions of 29 CFR 1910.120(q). However, most construction employers will direct all of their employees to evacuate in an emergency, and would comply with HAZWOPER paragraph (q) by having a written emergency action plan in accordance with 29 CFR 1910.38(a). (Employers who have 10 or fewer employees may communicate the emergency action plan verbally.)

(a)(1) Contractors: Contractor employees must receive HAZWOPER training if their duties or activities fall within the scope of the standard. If a contractor is expected to be part of an emergency response, the employer must comply with the provisions of 29 CFR 1910.120(q). Contractors who have employees that will be called in as specialists or skilled support personnel must act in accordance with the HAZWOPER standard.

Personnel Services

- Shared Responsibility. Both contractors and their clients are responsible for complying with the OSHA regulations. OSHA considers personnel providers/contractors who send their own employees to work at other facilities to be employers whose employees may be exposed to hazards, e.g. utility workers.

  - Since the contractor maintains a continuing relationship with employees, but it is the client who creates and controls the hazards, there is a shared responsibility for ensuring that employees are protected from workplace hazards. The client has the primary responsibility for such protection; however, the contractor-employer has a responsibility under the OSH Act.

- Contracts. It is in the interest of the contractor-employer to ensure that all steps required in the OSHA standards have been taken by the client employer to ensure a safe and healthful workplace for the contracted employees. Written contracts with clients should clearly describe the responsibility of both parties in order to ensure that all requirements
OSHA Instruction CPL 2-2.59 (cont.)

of the standards are met. (See OSHA Instruction CPL 2.45B, the FOM, on OSHA citation policy for multi-employer worksites.)

(a)(1) **Employee Exposure**: The term "exposure" for the scope section of this standard is consistent with the definition used in 29 CFR 1910.120, the Hazard Communication standard, given below:

"Exposure" or "exposed" means that an employee is subjected to a hazardous chemical in the course of employment through any route of entry (inhalation, ingestion, skin contact or absorption, etc.), and includes potential exposure.

NOTE: The definition of exposure is similar; however, the scopes of the respective standards cover different situations and substances.

(a)(1)(v) **Hospitals as Part of a Community Emergency Response**: Under the Superfund Amendments and Reauthorization Act (SARA) of 1986, the National Contingency Plan (NCP) was revised to require communities to prepare local emergency response plans. Designated local hospitals who will participate in the local planning committee are considered part of the emergency response organization.

**Hospitals with Responsibility Under the NCP**

- Hospitals, or other emergency medical services who are designated by the LEPC, SERC or local fire department, do not have to develop an entire emergency response plan for community emergency response because their role will be addressed in the contingency plan. The hospital should have designated decontamination areas, although areas dedicated solely to decontamination need not be set aside.

- In terms of a community emergency response, a hospital is not expected to comply with 29 CFR 1910.120 if it has not been designated by a planning committee or by a hazardous waste site as a decontamination facility. The hospital may have responsibility under 1910.120(q) in terms of the potential for an emergency caused by the release of hazardous substances used at the hospital.

**Training in Decontamination**

- Hospitals that will receive contaminated accident victims must stress decontamination and PPE in the training for personnel designated to set up decontamination. For medical personnel who will receive and decontaminate accident victims, employers may develop an in-house training course that would focus on decontamination and PPE or provide additional training in decontamination and PPE after sending personnel to a standard "first responder operations level" course.

**Emergency Medical Services at Release Area**

- Facilities that create an emergency response plan under 29 CFR 1910.120 must coordinate with hospitals or other medical care providers prior to emergencies in case victims will need to be decontaminated at a hospital (29 CFR 1910.120(q) (2) and (l) (2) lists "emergency medical treatment and first aid" as one of elements to be covered in the emergency response plan). If a hospital is selected by a facility, it must be made aware of a facility's intent to use its services so that the hospital may ensure that it is prepared for its duties (e.g., has PPE, methods of containing the hazardous material, waste water, etc.)

- Hospitals that employ emergency medical service personnel, who would be exposed to hazardous substances because they are expected to treat contaminated patients at the release area (i.e., ambulance personnel), are required by 29 CFR 1910.120(q) to train these personnel to safely perform these duties.
- Other medical personnel whose expected job duties do not include treating contaminated patients may be needed to respond to accidents where the chemicals hazards were unforeseen. These employees may be considered "skilled support personnel" and must be given an initial briefing which includes instruction in the wearing of appropriate PPE, any limitations of the PPE, the chemical hazards involved, and the facility's safety and health precautions.

**Jurisdictional Issues Involving the Provisions in 29 CFR 1910.120(a)(2) Application:**

(a)(2) **U.S. Department of Transportation.** The Hazardous Materials Transportation Uniform Safety Act (HMTUSA) of 1990 concerns the handling of hazardous materials in the transportation industry. Under Section 7 of that act the regulation entitled "Hazardous Materials; Training for Safe Transportation; Rule" (49 CFR 171-177), requires employers to train their employees in the safe loading, unloading, handling, storing, and transportation of hazardous materials.

- OSHA has limited jurisdiction for over-the-road vehicle operation. If operators of vehicles in transportation become actively involved in an emergency response to a release of hazardous substance, then they are covered by 29 CFR 1910.120(q).

- The operators of vehicles involved in an emergency response would need to be trained at least to the first responder awareness level to recognize an emergency situation, understand their role in an emergency response, and call predesignated author-ities for the containment and control of the release.

(a)(2) **U.S. Department of Transportation. U.S. Coast Guard (USCG).** The USCG has issued comprehensive standards regulating the safety and health of seamen (this term is intended to be non-gender specific and includes women) performing work on vessels which have been inspected and certified by the USCG ("inspected vessels"); therefore, OSHA does not apply its standards to these employees. The USCG has also issued some standards affecting the safety of seamen on uninspected vessels.

- With these exceptions, OSHA has jurisdiction for seamen aboard vessels located on the waters within a 3-mile limit, or in the case of Florida and Texas within the limit of three marine leagues (the territorial waters). OSHA also has jurisdiction for workers performing work on shore or at other locations not aboard a vessel but within U.S. territorial waters.

- OSHA is not prohibited from inspecting USCG "inspected vessels" if non-seamen (e.g., contractors) are on board. (See the "Memorandum of Understanding Between the United States Coast Guard, U.S. Department of Transportation, and the Occupational Safety and Health Administration, U.S. Department of Labor, Concerning their Authority to Prescribe and Enforce Standards or Regulations Affecting the Occupational Safety and Health of Seamen Aboard Vessels Inspected and Certified by the United States Coast Guard," effective March 8, 1983.)

(a)(2) **Employees of Governmental Agencies and Non-Compensated Workers.** Public sector employees in States with an OSHA-approved State plan are protected by the hazardous waste standards adopted by these state plans.

- The U.S. Environmental Protection Agency (EPA) promulgated a standard that adopts 29 CFR 1910.120 to protect employees who work in the public sector where there is no OSHA approved State program in place (40 CFR 311).

- In addition, EPA specifically included "noncompensated workers" (i.e., volunteer workers) who work for governmental agencies engaged in emergency response, such as volunteer fire fighters. Therefore, volunteers who will take part in operations involving hazardous substances must be trained in accordance with the applicable sections of 29 CFR 1910.120.
OSHA Instruction CPL 2-2.59 (cont.)

- States with OSHA-approved State plans are encouraged both by OSHA Instruction STP 2-1.154C and EPA's standard, 40 CFR 311, to cover volunteer workers engaged in hazardous waste operations, including emergency response.

- EPA and OSHA have agreed that interpretations regarding compliance with HAZWOPER will be made by OSHA.

Clarification and Interpretation of Terms Used in 29 CFR 1910.120(a)(3) Definitions:

(a)(3) Emergency Response. An "emergency response" is an organized response to an incident that is, or may pose, an emergency. Since every industry will experience different kinds of emergencies, OSHA will not attempt to create a formula into which all emergencies will fit. (See Appendix B of this instruction for further guidance.)

(a)(3) Immediate Release Area. The immediate release area is the area, process, or machine which is creating the hazardous spill. This term is not meant to be used exclusively to determine whether a situation is an emergency under this standard. The key factor which must be considered on a case-by-case basis is the actual or estimated exposure or degree of danger to responders, other employees, neighbors, etc. In order to determine this, factors such as the size of the spill/release, the material of the spill, and the location of the incident (e.g., confined space) play a significant role. Planning must take place prior to any releases that pose an emergency. An employer must determine all likely potentials for emergencies using worst-case assumptions and plan response procedures accordingly; past history of emergencies at the site should be used as a guide.

(a)(3) Hazardous Substance, Radioactive. The term "hazardous substance" as defined by 29 CFR 1910.120, includes radioactive waste in addition to hazardous waste, and should not be confused with 29 CFR 1910.1200, Hazard Communication, which specifically excludes any radioactive chemicals.

- The U.S. Nuclear Regulatory Commission (NRC) has jurisdiction "inside the fence" at NRC licensed nuclear facilities for the risks involved with licensed radioactive materials, including emergency response procedures. OSHA has jurisdiction "inside the fence" for non-licensed radioactive materials.

- There may be both NRC and OSHA jurisdiction when there is an emergency involving mixed wastes (i.e., licensed radioactive materials and other hazardous substances) "inside the fence." HAZWOPER may also be applicable "outside the fence" to emergency response and clean-up activities involving hazardous substances, including licensed radioactive wastes.

(a)(3) Infectious Materials. Employers must include infectious materials in their effort to comply with 29 CFR 1910.120(q) if there is a possibility that a release could cause an emergency.

- The definition of "hazardous substance" used in the standard was corrected in the Federal Register, April 13, 1990, to include:

(B) Any biological agent and other disease-causing agent, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any person, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations in such persons or their offspring.

- Employers with employees engaged in emergency response activities involving infectious materials must comply with the requirements in 29 CFR 1910.120(q), and may have to comply with the Bloodborne standard, 29 CFR 1910.1030, as well. If there is a
conflict or overlap, the provision that is more protective of employee safety and health applies.

(a)(3) **Mixtures Containing a Hazardous Substance.** The hazards of a mixture containing hazardous substances would be expected to be treated as a hazardous substance for compliance purposes, unless testing data on the mixture shows that the mixture does not possess hazardous characteristics.

**Interpretations of 29 CFR 1910.120(q) Emergency Response to Hazardous Substance Releases:**

(q)(2) **Lack of an Emergency Response Plan.** If a facility does not have an emergency response plan, the employer must at least have an emergency action plan and evacuate all employees. In the event that an employer does not plan for emergencies by not complying with either provision, the employer must prove that the chemicals used in the facility will not require an emergency response if released in a reasonably predictable worst-case scenario. CSHO's must still document violations fully and be able to defend any citations. Past history of emergencies at the site may be used as a guide.

(q)(2) **Evacuation Routes and Procedures.** Employers should incorporate the elements of the Emergency Action Plan, 29 CFR 1910.38(a) into the Emergency Response Plan. CSHOs shall use 29 CFR 1910.38(a) to serve as an example of what employers should address in the section of the Emergency Response Plan that requires "evacuation routes and procedures" to be addressed 29 CFR 1910.120(q)(2)(vi).

(q)(5) **Specialist Employees.** The "specialist employees" category is to be used for employees from off-site who assist or advise the on-scene Incident Commander. These employees may be individuals who work with and are trained in the hazards of a specific hazardous substance, but do not necessarily have all of the competencies of the HAZMAT technician or HAZMAT specialist.

- Specialist employees who may be sent to the scene of an emergency to advise and assist the person in charge must receive training or demonstrate competency annually. (See 29 CFR 1910.120, Appendix C, 2. Training, for more details.)

- Activities of all emergency responders responding to or on the scene of a release of a hazardous substance must be coordinated and controlled through the individual in charge of the Incident Command System, as per 29 CFR 1910.120(q)(3)(i). Specialist employees are not exempted from this requirement.
(q)(6) Training. Fire fighters and police officers who are expected to be engaged in responding to emergencies involving hazardous substances are subject to the HAZWOPER training requirement.

• Generally, police officers should be trained to the first responder awareness level, since they are likely to witness or discover a release of a hazardous substance.

• Fire fighters expected to respond to releases of hazardous substances must be trained to at least the first responder operations level, since they will respond to releases, or potential releases, of hazardous substances for the purpose of protecting nearby persons, property, or the environment.

(q)(6) First Responder Operations Level. Fire fighters responding to propane and gasoline fires:

• Fire fighters trained to the Operations level, who are also trained in the hazards of propane, may enter the danger area to shut off the valves that will starve the fire and thus extinguish it. Normally, employees trained to the operations level would be restricted from taking aggressive action. This is considered to be a special case. The principle hazards from propane are fire and explosion, not toxicity. Because propane fires are common, most fire fighters are fully trained and equipped to respond to propane fires, including taking aggressive action by shutting off the valves in the danger area.

  - If fire fighters are fully trained and equipped (which is a high degree of training), and have also received first responder operations level training, OSHA believes they have sufficient training to take aggressive action due to propane's relatively low toxicity.

  - It would be only a technical violation of 29 CFR 1910.120(q)(6) if a fire fighter took aggressive action in the danger area during a propane fire or leak, was fully trained and equipped to handle the fire and had First Responder Operations Level training, for not having the additional training required of a HAZMAT technician. In this circumstance OSHA would not issue a citation.

• Releases of gasoline similar to the example involving propane discussed above may be addressed by an operations level emergency responder if they have the required PPE, emergency response equipment, and specific training in the safety and health hazards associated with gasoline.

  - Employers who expect fire fighters to shut off a gasoline valve in the danger area, and who can show that employees are trained to the operations level and adequately trained in the hazards of gasoline, have committed a technical violation of 1910.120(q)(6)(ii) for such employees not having the training required of a HAZMAT technician.

NOTE: The fire and explosion hazards of propane and gasoline are very substantial. The interpretations herein are applicable only when fire fighters are fully trained and equipped to handle the explosion and fire hazards of propane, gasoline, or similar flammable gases and liquids.

• If an injury occurred during an emergency response involving these special responders (Operations level plus additional training) the CSHO would need to consider whether the responders' training and experience were sufficient for the tasks being performed.

  - A violation of training requirements that resulted in an actual injury to an employee during an emergency response by definition cannot be a "technical violation." Thus, if an injury occurred and the CSHO determined that the responders' training
and experience were not sufficient for the tasks being performed, then a citation should be issued noting a violation of 29 CFR 1910.120(q)(6)(iii) and carrying a penalty that requires abatement. Whether abatement should require full training in all of the competencies of the HAZMAT technician level, or whether certain training requirements could safely be omitted, would depend on the training needed to safely perform the tasks in question.

- If, however, the CSHO determined that the training which had been provided to the employees in question had been adequate, then the training violation would be considered a de minimis violation. In this situation the CSHO might determine that the cause of the injury was due to a violation of some other requirement of 29 CFR 1910.120 or other standards, for which a citation would be appropriate.

(q)(6)(iii) Process Operators Responding within a Facility.

Process operators who have; (1) informed the incident command structure of an emergency (defined in the facility's emergency response plan), (2) who have adequate PPE (3) who have adequate training in the procedures they are to perform and (4) who employ the buddy to the defensive role that a First Responder at the Operations level would take, CSHOs shall cite the employer for a violation of 29 CFR 1910.120(q)(6)(iii). If the operator team arrives, the limited action taken by process operators must be addressed in the Emergency Response Plan.

- Once the emergency response team arrives, these employees would be restricted to the actions that their training level allows.
- This limited action assumes that the emergency response team is on its way and that the action taken is necessary to prevent the incident from increasing in severity (i.e., to prevent a catastrophe).
- Employers must inform employees during their training that they are to evacuate when they lack the capabilities to respond in a safe manner and in accordance with the standard operating procedures defined in the emergency response plan.
- If the process operator takes action beyond what they have been trained to do, and the action was comparable to the aggressive role that a HAZMAT technician would take, CSHOs shall cite the employer for a violation of 29 CFR 1910.120(q)(6)(iii). If the operator takes action beyond what they have been trained to do, and the action was comparable to the defensive role that a First Responder at the Operations level would take, CSHOs shall cite the employer for a violation of 29 CFR 1910.120(q)(6)(ii).

(q)(6)(v) On Scene Incident Commander.

The intent of the standard is to provide an incident command system that is headed up by a single person who is well trained in managing emergencies of differing severity, as well as overseeing the HAZMAT team, but does not necessarily have extensive knowledge of certain technical aspects such as classification and verification of hazardous materials. Appendix C 6. of the standard explains:

"This enable[s] one individual to be in charge of managing the incident, rather than having several officers from different companies making separate, and sometimes conflicting, decisions. The individual in charge of the incident command system would delegate responsibility for performing various tasks..."

- Consequently, the Incident Commander requires more extensive training in general matters, plus extensive training in command and management.
- Training for the Incident Commander may require more than 24 hours of total training. The 24 hours covers 29 CFR 1910.120(q)(6)(ii)(A)-(F), and additional training would be needed for (6)(v)(A)-(F). The training hours suggested in the standard are minimums.
OSHA Instruction CPL 2-2.59 (cont.)

HAZWOPER training programs often must exceed the 8, 24, or 40 hours minimums in order to include all of the required subjects.

(q)(6) Limiting Training Components. An employer with a limited range of hazardous substances on-site may opt to supply their personnel with one type of PPE, and require employees to wear the entire complement of PPE for any response. This strategy would relieve that particular employer of the requirement of training HAZMAT technicians to be able to "select appropriate PPE," if employees are trained in the PPE which they are required to wear, and which will always provide sufficient protection.

NOTE: Employers must consider heat stress, physical constraints, maintenance, permeability and other factors if they choose to select just one type of PPE for all releases that require an emergency response.

• Another example of requirements specified in the standard that may not be universally applicable is found in 29 CFR 1910.120(q)(6)(iii)(B), training for HAZMAT technicians, where knowledge of "the classification, identification, and verification of known and unknown materials by using field survey instruments and equipment" is required. In many chemical manufacturing facilities this may not be necessary, because all hazardous substances that have a potential for being released are known.
  - The emergency response plan and training components may cover this by identifying the known hazardous substances that would cause, or have the potential to cause, an emergency if released.
  - Employees trained in this limited manner would only be able to respond to spills on site that involve the limited range of hazardous substances in which they are trained. For example, employees trained to respond only to releases of chlorine may not respond to a release of ethylene oxide, without broadening their limited training.

(q)(7) Training Alternatives for Employers. A video-only approach to train employees would not be sufficient, although videos could be used for part of the training if the employer can fully assure employee knowledge and skills. Providing an instructor to respond to the employees' questions after the video presentations, and evaluating employee understanding of the material would be required. Higher levels of training would require hands-on training and more interaction with the instructor.

• An in-house training program, among other options, may be developed. Credential requirements for trainers is defined in 29 CFR 1910.120(q)(7).

• Equivalent training for First Responder Awareness Level and First Responder Operations Level is acceptable, as per 1910.120 (q)(6)(i) and (ii), which states that employees must "have sufficient training or have had sufficient experience to objectively demonstrate competency in the following areas. . . ." However, the employer must ensure that the employee accomplishes all training objectives.

(q)(8) Refresher Training. Refresher training is required because employees must stay up-to-date in their skills and knowledge. If the employee has gone without refresher training, the employer must evaluate whether the initial comprehensive training may need to be repeated.

(q)(9) Medical Surveillance. Under 29 CFR 1910.120 employers are obligated to make medical surveillance and medical consultation available to specific employees without cost to the employees. However, OSHA does not require employees to participate. A record should be made in the employees' personnel files indicating that the employees voluntarily chose not to take part in the medical surveillance program. The CSHO may choose to interview the
employees entitled to medical surveil-lance whose personnel files indicate that they waived their right.

(q)(10) **Selection of Personal Protective Equipment.** PPE shall be selected and used with the intent to protect employ-ees from hazards and potential hazards.

- In situations where the type of hazard is fire or thermal energy then 29 CFR 1910.120(q)(3)(iii) must be followed, and when the type of chemical and its concentration are "totally unknown" or "somewhat known", the appropriate level of protec-tion must be based on experience, judgment, and professional knowledge.

- Obtaining air measurements with monitoring equip-ment for toxic concentrations of vapors, particu-lates, explosive potential, and the possibility of radiation exposure, would be appropriate in deter-mining the nature, degree, and extent of the hazards. Also, visual observation, reviewing the existing data, and past experience can help deter-mine the potential risks.

(q)(11) **Emergency Response/Post-Emergency Operation.** As long as an emergency response team is still in control of the site and a safety or health hazard exists, the emergency situation continues to be in effect. For example, if a vacuum truck arrives to remove spilled gasoline while an emergency response team is managing the activity, the vacuum truck operator's activity is part of the emergency response operations. Once the Incident Commander has declared the response activity over or finished, and the immediate threat has been stabilized, any remaining clean-up would be considered a post-emergency operation.

- In a large enough release, emergency response and post-emergency response activities may occur simultaneously, as in a marine oil spill. The Incident Commander must be careful to define the boundaries between the emergency response area and the post emergency response area in this scenario. (See OSHA Instruction CPL 2-2.51.)

- The Incident Commander must convey information on all of the hazards that may still remain at a post-emergency clean-up site to employees who are involved in the clean-up operations. The individuals who will take control of the site to perform the post-emergency response clean-up also have a responsibility to contact the Incident Commander to determine if there are any remaining hazards or any special conditions on the site. If the Incident Commander feels that the post-emergency response clean-up crews are not sufficiently trained or prepared to perform their duties, the Commander may notify the employer or OSHA.

(q)(11) **Post-Emergency Response for Contract Personnel.**

(i) & (ii)

- Contract personnel assigned full time at a plant facility are considered "plant or workplace employees" for the purposes of 29 CFR 1910.120(q)(11)(ii) when such employees are conducting clean-up in areas they routinely work.

- Contractors brought in specifically for clean-up are covered by 29 CFR 1910.120(q)(11)(i).

(q)(11) **Emergency Response During a Post-Emergency Response.** If an emergency release of a hazardous substance occurs during a post emergency response clean-up, the HAZWOPER emergency response provision that applies would depend upon who is handling the clean-up, who will be respond-ing, and whether the clean-up is done on plant property.

- If the emergency is responded to by an outside response team or responders, 29 CFR 1910.120(q) would apply.
OSHA Instruction CPL 2-2.59 (cont.)

- Employees who work at a hazardous waste clean-up site or RCRA corrective action (a post emergency response may be considered either), and are trained in accordance with 29 CFR 1910.120(e)(7), may respond to emergencies.

- The contractor hired for clean-up the procedure may respond to emergencies during the clean-up if the contractor's employees who are involved in the clean-up are trained in accordance with 29 CFR 1910.120(e)(7) and (l).
Appendix E

Releases of Hazardous Substance that Require an Emergency Response

The function of this appendix is to present a thorough discussion of the distinction between incidental releases of hazardous substances and releases that require an emergency response, and hence, compliance with the provisions of 1910.120(q) Emergency response to hazardous substance releases. This has been a point of considerable inquiry to and interpretation by OSHA.

An understanding of the distinction between an incidental release of a hazardous substance and a release that requires an emergency response is fundamental to proper compliance with the provisions of 29 CFR 1910.120. This part of the standard was written to cover a wide array of facilities and situations: "Emergency response operations for releases of, or substantial threats of releases of, hazardous substances without regard to the location of the hazard." (29 CFR 1910.120(a)(1)(v))

Potential releases of hazardous substances in the workplace can be categorized into three distinct groups in terms of compliance with 29 CFR 1910.120. These groups are:

1. Releases that are clearly incidental regardless of the circumstances,
2. Releases that may be incidental or may require an emergency response depending on the circumstances, and
3. Releases that clearly require an emergency response regardless of the circumstances.

Releases that are Clearly Incidental

The scope of the HAZWOPER standard does not cover the inevitable release of a hazardous substance that is limited in quantity and poses no emergency or significant threat to the safety and health of employees in the immediate vicinity. This type of release is referred to as an "incidental release" in 29 CFR 1910.120(a)(3), where "emergency response" is defined.

An incidental release is a release of hazardous substance which does not pose a significant safety or health hazard to employees in the immediate vicinity or to the employee cleaning it up, nor does it have the potential to become an emergency within a short time frame. Incidental releases are limited in quantity, exposure potential, or toxicity and present minor safety or health hazards to employees in the immediate work area or those assigned to clean them up.

If the hazardous substances that are in the work area are always stored in very small quantities, such as a laboratory which handles amounts in pint sizes down to test tubes, and the hazardous substances do not pose a significant safety and health threat at that volume, then the risks of having a release that escalates into an emergency are minimal. In this setting inci-dental releases will generally be the norm and employees will be trained to protect themselves in handling incidental releases per the training requirements of the Hazard Communication Standard (29 CFR 1910.1200).

Releases That May Be Incidental or Require an Emergency Response Depending on the Circumstances

The properties of hazardous substances, such as toxicity, volatility, flammability, explosiveness, corrosiveness, etc., as well as the particular circumstances of the release itself, such as quantity, confined space considerations, ventilation, etc., will have an impact on what employees can handle safely and what procedures should be followed. Additionally, there are other factors which may mitigate the hazards associated with a release and its remediation, such as the knowledge of the employee in the immediate work area, the response and personal protective equipment (PPE) at hand, and the pre-established standard operating procedures for responding to releases of hazardous substances. There are some engineering control measures that will mitigate the release which employees can activate to assist them in controlling and stopping the release.
OSHA Instruction CPL 2-2.59 (cont.)

These considerations (properties of the hazardous substance, the circumstances of the release, and the mitigating factors in the work area) combine to define the distinction between incidental releases and releases that require an emergency response. The distinction is facility-specific and is a function of the emergency response plan.

For Example: A spill of 10 gallons of the solvent toluene in a facility that manufactures toluene may not require an emergency response because of the advanced knowledge of the personnel in the immediate vicinity and equipment available to absorb and clean up the spill. However, the same 10-gallon spill inside a furniture refinishing shop with personnel that have had only the basic hazard communication training on toluene, may require an emergency response by more highly trained personnel. The furniture refinishing shop's emergency response plan in this case would call for evacuation for all but the most minor spills, while evacuation and emergency response would be necessary for only much larger spills at the chemical manufacturing facility.

Releases that Require an Emergency Response Regardless of the Circumstances

There are releases of hazardous substances that pose a significant enough threat to health and safety that, by their very nature, require an emergency response regardless of the circumstances surrounding the release or the mitigating factors. A summary of the interpretive guidance published by OSHA to date is found in Table E.1. of this appendix.

Table B.1: An emergency response includes, but is not limited to, the following situations:

1. The response comes from outside the immediate release area;
2. The release requires evacuation of employees in the area;
3. The release poses, or has the potential to pose, conditions that are immediately dangerous to life and health (IDLH);
4. The release poses a serious threat of fire or explosion (exceeds or has the potential to exceed the lower explosive limit or lower flammable limit);
5. The release requires immediate attention because of imminent danger;
6. The release may cause high levels of exposure to toxic substances;
7. There is uncertainty that the employee in the work area can handle the severity of the hazard with the PPE and equipment that has been provided and the exposure limit could easily be exceeded; and
8. The situation is unclear, or data is lacking on important factors.

Responders from Outside the Immediate Release Area

"Emergency response" is defined in 29 CFR 1910.120(a)(3) as follows:

"Emergency response" . . . means a response effort by employees from outside the immediate release area or by other designated responders (i.e., mutual-aid groups, local fire departments, etc.) to an occurrence which results, or is likely to result, in an uncontrolled release of a hazardous substance. Responses to incidental releases of hazardous substances where the substance can be absorbed, neutralized, or otherwise controlled at the time of release by employees in the immediate release area, or by maintenance personnel are not considered to be emergency responses with-in the scope of this standard. Responses to releases of hazardous substances where there is no potential safety or health hazard (i.e., fire, explosion, or chemical exposure) are not considered to be emergency responses.

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OSHA Instruction CPL 2-2.59 (cont.)

The standard covers responses "by other designated responders". The use of the "or" means that responders are a separate group, different from employees within the immediate release area, directed to respond to the emergency by the employer. Employees working in the immediate release area (not just outsiders) are covered if the employer designates them as emergency responders or 'specialist employees' who would assist during emergencies. The standard, 29 CFR 1910.120(q), uses the term "responders" generally to refer to employees who respond to emergencies.

The Superfund Amendments and Reauthorization Act (SARA), the statute that mandated HAZWOPER, directs broad coverage of all employees responding to emergencies with no limitation on their location. SARA states, "... standards shall set forth responding requirements for training of workers who are responsible for responding to hazardous emergency situations who may be exposed to toxic substances." (See SARA 126(d)(4)). For an emergency to be covered by the standard, conditions causing a dangerous situation which involve hazardous substances are sufficient, there need not be both an emergency and a response by outside responders before the employer prepares for an emergency.

For Example: A release of chlorine gas above the IDLH, obscuring visibility and moving through a facility is an emergency situation even if the initial responders are from the immediate release area. Employees who would respond to this hypothetical situation, whether they work in the immediate area or come from outside, would need to act in accordance with 29 CFR 1910.120(q). Employees must not be made to respond to releases in the immediate release area that would otherwise require outside assistance from a trained hazardous materials team merely because the definition of an emergency response states that an emergency response is "... a response effort by employees from outside the immediate release area."

Conversely, incidental releases of hazardous substances that are routinely cleaned up by those from outside the immediate release area need not be considered emergency responses solely because the employee responsible for cleaning it up comes from outside the immediate release area.

For Example: Paint thinner is spilled in an art studio and the janitor is called from outside the immediate release area to mop it up. The janitor does not have to respond in accordance with 29 CFR 1910.120, although the janitor would be expected to understand the hazards associated with paint thinner through the hazard communication training.

Other OSHA Standards

Other standards that impact emergency response to fires, chemical releases, or other incidents will help to determine how well prepared an employer is in addition to 29 CFR 1910.120. Flammable chemical spills and other small fires are covered by 29 CFR 1910.157 as well as 29 CFR 1910.156. The "Process Safety Management for Highly Hazardous Chemicals," 29 CFR 1910.119, and "Hazard Communication," 29 CFR 1910.1200, as well as some of the specific expanded health standards in Subpart Z would also apply. (See subparagraphs in O. of this instruction.)
Appendix F

Relationship of 29 CFR 1910.120 with other OSHA Standards and other Agency Regulations

The function of this appendix is to explain the HAZWOPER standard's interface with other OSHA standards and Federal agency regulations as well as consensus guideline documents.

A. Relationship of 29 CFR 1010.120 with other OSHA Standards

1. **Expanded Health Standards.** Paragraph 29 CFR 1910.120 (a) (2) (i) states that when there is a conflict or overlap of coverage between standards, the provision that is more protective of employee safety and health shall apply. Employers must comply with all safety and health standards that are applicable to their workplace; however, certain provisions of HAZWOPER may be more protective than the analogous provision of an expanded health standard. HAZWOPER does not completely supersede any standard; only those provisions of another standard that are addressed by HAZWOPER may be superseded if HAZWOPER is more protective.

   a. For example, Compliance Safety and Health Officers (CHSOs) may cite the provisions of one of two standards, the Ethylene Oxide (EO) standard and HAZWOPER, depending on which provision offers more protection. The EO standard provides instruction on exposure monitoring that is more protective than HAZWOPER; however, HAZWOPER offers more protection to employees responding to emergencies involving releases of EO through its incident command system and HAZMAT training requirements.

   b. A hospital that uses EO to sterilize instruments must create an emergency action plan, in accordance with 29 CFR 1910.38(A) if it evacuates all employees in the danger area and calls in outside assistance, or an emergency response plan in accordance with 29 CFR 1910.120(q) (1) if it expects its own employees to respond to releases.

   c. Other hazardous substances used by the hospital must also be addressed in their emergency response plan and/or emergency action plan, if there were a potential for a release that would cause an emergency.

2. **29 CFR 1910.1200, the Hazard Communication Standard (HCS).** The HCS requires that employers train employees who may be exposed or potentially exposed to hazardous chemicals. Employers are to train employees in (1) methods to detect a hazardous chemical; (2) the hazards of chemicals in the workplace; (3) measures employees can take to protect themselves; and (4) the details of the hazard communication program (further clarified in 29 CFR 1910.1200(h)). It is important to note the objectives of both HAZWOPER and the HCS, especially where the two standards require training:

   a. The HCS is designed to ensure that employees are informed of the hazards associated with hazardous chemicals in the workplace, so that they may make informed judgments to protect themselves from exposure. The HCS does not require the employer to develop emergency procedures; although, HCS does require training in emergency procedures if the employer has already developed them. For example, when another standard (such as the Formaldehyde standard) requires an employer to develop emergency procedures the employer would be required to incorporate those procedures into the HCS training program.

   b. Employers who fall under the scope of HAZWOPER must have either a written emergency response plan and/or an emergency action plan. (See N.\# of this instruction.) If employers expect their own employees to respond to a potential emergency involving hazardous substances, then the employer must create an emergency response plan and the employees must be trained to perform the duties expected of them. HAZWOPER does not cover responses to incidental spills that do not have the potential for becoming an emergency. OSHA enforces other applicable
other OSHA standards.

c. Once employees are required to respond to spills that have the potential for becoming
an emergency then all of the provisions of 29 CFR 1910.120(q) are applicable.
Therefore, in workplaces where there is a potential for emergencies, the employer's
HCS training program would have to address the HAZWOPER emergency response
plan and/or emergency action plan. (Note that the HCS training can be adapted easily
to encompass all of the required training competencies in 29 CFR 1910.120(q)(6)(i),
the first responder awareness level, and that a single training session could satisfy the
requirements of both standards.)

will evacuate all employees from the danger area, and who will not permit any employees to
assist in handling the emergency, have the option of creating a written emergency action
plan in accordance with 29 CFR 1910.38(a) (or, for employers with 10 or fewer employees,
communicating the plan orally) in lieu of an emergency response plan.

a. When used to meet the requirements of HAZWOPER, 29 CFR 1910.38(a) requires
employers to have an effective alarm system to alert employees of an emergency,
evacuate all employees and notify an emergency response team, such as a fire
department which is trained in accordance with HAZWOPER.

b. Employers who will train some of their employees to respond to an emergency release
must create an emergency response plan. (See Appendix A of this instruction.) An
emergency action plan is to be part of the emergency response plan for the evacuation
of all employees in the area that are not essential for the response to the emergency.

c. CHSOs shall follow the guidance below when citing an employer who has opted to
created an emergency action plan in lieu of an emergency response plan:

(1) The CSHO shall cite 29 CFR 1910.38(a) if an employer with more than 10
employees merely express the intent to evacuate all employees from the
danger area, and would not allow employees to assist in handling the emergency,
but does not have a written emergency action plan. This intent must
be conveyed to employees, which the CSHO may verify by employee interviews.

(2) The CSHO shall cite 29 CFR 1910.38(a) and 29 CFR 1910.165, the Employee
Alarm Systems standard (referenced in 29 CFR 1910.38(a)), if there are
deficiencies found in a written emergency action plan or alarm system.

(3) The CSHO shall cite 29 CFR 1910.120(q) (1) if the employer does not have a
written emergency action plan, and has not expressed any intention to
employees (i.e., the employer has done absolutely nothing in planning for
emergencies).

or releases of hazardous substances, emergency situations, etc., that occur inside a
laboratory under the purview of the Laboratory standard, 29 CFR 1910.1450, and require an
emergency response are covered by HAZWOPER. Incidental releases that can be safely
handled by employees working with a chemical are not considered emergency responses.
(For a discussion of the distinction between an incidental release and a release that requires
an emergency see Appendix E of this instruction.)

Standard for Process Safety Management of Highly Hazardous Chemicals (PSM) covers
facilities that contain specific highly hazardous chemicals stored or used in one place in
quantities at or above the threshold quantities specified in Appendix A of the standard. The purpose of the standard is to prevent catastrophic releases of highly hazardous chemicals.

a. Due to the nature of the facilities covered by the scope of the PSM standard, facilities covered by 29 CFR 1910.119 would have the potential for an emergency release.

b. Facilities that fall under the scope of PSM shall establish and implement an emergency action plan in accordance with 29 CFR 1910.38(a). Paragraph (n) of the PSM standard states that employers covered by PSM "may also be subject" to the hazardous waste emergency response provisions of 29 CFR 1910.120. If the employer plans to direct its employees to respond to emergency releases, the employer would be subject to 29 CFR 1910.120(q). (For further guidance see Appendix C in 29 CFR 1910.119 and OSHA Instruction CPL 2-2.45A, "Process Safety Management of Highly Hazardous Chemicals--Compliance Guidelines and Enforcement Procedures.")

c. The requirements of the PSM standard are geared toward preventing catastrophic releases, but they do not address the specific procedures for responding to such releases. HAZWOPER's emergency response provisions apply to the actual emergency response effort at facilities covered by the PSM standard.

6. 29 CFR 1910.1030 Occupational Exposure to Bloodborne Pathogens. The definition of "hazardous substance" found in HAZWOPER includes any biological agent or infectious material which may cause disease or death. The following are three scenarios where the Bloodborne Pathogens standard may interface with HAZWOPER:

- Cleanup of a hazardous waste site containing infectious waste (overlap with 29 CFR 1910.120(b)-(o) for cleanup operations);
- Operation of a RCRA-permitted incinerator that burns infectious waste (overlap with 29 CFR 1910.120(p) for treatment storage and disposal (TSD) facilities); and
- Response to an emergency caused by the uncontrolled release of an infectious waste, or where infectious waste is part of the release (overlap with 29 CFR 1910.120(q) for emergency responses not otherwise covered by the standard).

a. In the past, a medical waste incinerator was defined as a TSD facility by the Federal Environmental Protection Agency (EPA). However, recently Federal EPA allowed this definition to lapse and left the responsibility of specifying the status of a medical waste incinerator as a TSD facility to the State. Therefore, in States where medical waste incinerators are considered TSD facilities, 29 CFR 1910.120(p) applies.

b. 29 CFR 1910.120(q) may apply to any other medical waste incinerator. In addition to complying with the Bloodborne Pathogens standard, these employers would be expected to comply with 29 CFR 1910.120(q), which would require an emergency response plan and/or any emergency action plan. Employers may create one plan that would incorporate all of the applicable components of both standards.


a. The Fire Brigade standard uses broader language than HAZWOPER in 29 CFR 1910.156(c): "The employer shall provide training and education for all fire brigade members commensurate with those duties and functions that members are expected to perform."

b. The Fire Brigade standard addresses the need for industrial fire fighters to be aware of the MSDS, and requires written procedures and training for flammable, toxic and
B. Relationship of 29 CFR 1910.120 with Other Agencies' Standards.

1. Environmental Protection Agency, the Comprehensive Environmental Response Compensation and Recovery Act of 1980 (CERCLA). CERCLA, also known as Superfund, required the President to revise and republish the national contingency plan, which was originally published pursuant to the Federal Water Pollution Control Act, "for the removal of oil and hazardous substances." The current National Contingency Plan (NCP) was created out of this mandate.

a. The EPA addresses worker health and safety in their regulations on the NCP, found in 40 CFR Part 300.150. The following is excerpted from these regulations:

   (1) Response actions under the NCP will comply with the provisions for response action worker safety and health in 29 CFR 1910.120.

   (2) In a response action taken by a responsible party, the responsible party must assure that an occupational safety and health program consistent with 29 CFR 1910.120 is made available for the protection of workers at the response site.

   (3) IN a response taken under the NCP by a lead agency, an occupational safety and health program should be made available for the protection of workers at the response site, consistent with and to the extend required by, 29 CFR 1910.120. Contracts relating to a response action under the NCP should contain assurances that the contractor at the response site will comply with this program and with any applicable provisions of the OSH Act and State OSH laws.

   (4) When a State, or a political subdivision of a State, without an OSHA-approved State plan is the lead agency for response, the State or political subdivision must comply with standards in 40 CFR Part 311, promulgated by EPA pursuant to Section 126(f) of SARA.

   (5) Requirements, standards, and regulations of the Occupational Safety and Health Act of 1970 (29 USC 651 et seq.) (OSH Act) and of State laws with plans approved under Section 18 of the OSH Act (State OSH laws), not directly reference in paragraphs (a) through (d) of this section, must be complied with where applicable. Federal OSH Act requirements include among other things, Construction Standards (29 CFR Part 1926), General Industry Standards (29 CFR Part 1910), and the general duty requirement of section 5(a) (1) of the OSH Act. No action by the lead agency with respect to response activities under the NCP constitutes an exercise of statutory authority within the meaning of Section 4(b) (1) of the OSH Act. All governmental agencies and private employers are directly responsible for the health and safety of their own employees.

b. The NCP also states in 40 CFR Part 300.175(11) that "... on request, OSHA will provide advice and assistance to EPA and other NRT/RRT agencies as well as to the OSC/RPM (On-Scene Coordinator/Remedial Project Manager) regarding hazards to persons engaged in response activities. Technical assistance may include review of site safety plans and work practices, assistance with exposure monitoring, and help with other compliance questions." This advise and assistance will not take the place of OSHA's enforcement activities, but will be done in conjunction with OSHA's regular duties. (See I.9. of this instruction.)

c. Facilities must submit an EPA Tier I or Tier II inventory form to their SERC, LEPC and fire department with jurisdiction over the facility. Material safety data sheets (MSDS) must
also be submitted. (See G.2. of this instruction for more detail.) The MSDSs are available to the public, and Tier I and Tier II forms are available to State or local officials acting in an official capacity, by requesting the information from their local emergency planning committee.

2. **Superfund Amendments and Reauthorization Act, Title III.**

   a. SARA Title III, also referred to as the "Emergency Planning and Community Right-to-Know Act of 1986," requires States and local jurisdictions to develop emergency response plans. In addition, certain facilities must share information about the hazardous substances they have on site with the community emergency response planners.

   b. SARA Title III directed Governors of each State to appoint a State emergency response commission (SERC), which would in turn appoint and coordinate the activities of local emergency planning committees (LEPC). The LEPCs must develop a community emergency response plan that contains emergency response methods and procedures to be followed by facility owners, local emergency responders and emergency medical personnel.

   c. Facilities must submit an EPA Tier I or Tier II inventory form to their SERC, LEPC and local fire department. A material safety data sheet (MSDS), or alternative, must also be submitted in accordance with the following (defined in 40 CFR Part 370.20(b)):

   1. When hazardous chemicals (as defined in 29 CFR 1910.1200) are kept in amounts equal to or greater than 10,000 pounds;

   2. When "extremely hazardous substances" (a list is provided in Federal EPA's regulation, 40 CFR Part 355 - Appendix A) are present in amounts greater than or equal to 500 pounds, or greater than or equal to the "threshold planning quantity," whichever is lower;

   3. When facilities are requested to submit an MSDS or Tier II form by the SERC, LEPC or fire department (the minimum "threshold" for reporting in response to requests is zero; i.e., anytime the SERV or LEPC or fire department makes a request).

   NOTE: The facility's responsibility is further explained in 40 CFR Part 355 - Emergency Planning and Notification.

   d. Section 303 of SARA gives LEPCs minimum requirements which they are to include in their emergency response plan as follows:

   1. Identification of facilities with reportable quantities, routes likely to be used for the transportation of extremely hazardous substances, and facilities contributing or subjected to additional risk due to their proximity.

   2. Emergency response methods and procedures to be followed by facility owners, local emergency responders and emergency medical personnel.

   3. Designation of a community emergency coordinator and facility emergency coordinators, who shall make determinations necessary to implement the plan.

   4. Emergency notification procedures for the facility and community emergency coordinators.

   5. Methods for determining the occurrence of a release, and the population likely to be affected.

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OSH

A

4. Department of Transportation (DOT). Hazardous Material Transportation Uniform Safety Act of 1990 (HMTUSA). The handling of hazardous materials in the transportation industry is regulated by HMTUSA. (See Appendix F of this instruction for further explanation.) Training for the safe handling and safe transportation of hazardous materials is required in Section 7, which states that for purpose of Section 4(b) (1) of the OSH Act, no action taken by the Secretary of Transportation pursuant to Section 7 shall be deemed to be an exercise of statutory authority to prescribe or enforce standards or regulations affecting occupational safety and health.

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a. On May 15, 1992, DOT published the final rule "Hazardous Materials; Training for Safe Transportation" (49 CFR 171-177) to enhance training requirements for persons involved in the transportation of hazardous materials. The rule requires employers to train their employees in the safe loading, unloading, handling, storing, and transportation of hazardous materials. Such employees are primarily in the private sector but the DOT rule may apply to public sector employees if commerce is involved. The rule is also designed to improve emergency preparedness for responding to accidents or incidents involving the transportation of hazardous materials.

b. The new DOT rule does not preempt OSHA from enforcing occupational safety and health regulations, such as 29 CFR 1910.120, when employers fall under the scope of HMTUSA. HAZWOPER applies if transporters are handling hazardous waste that is on the way to a hazardous waste site or at a TSD facility, or when transporters become involved in emergency responses to the release of hazardous substances.

c. Training that is performed to satisfy OSHA, EPA, or DOT training requirements may be used to satisfy the training requirements of the other agency's rule. Duplicative training is not necessary.

d. In addition, DOT administering a training grant program under HMTUSA to help public emergency responders meet the HAZWOPER and NFPA (471 and 472) standards. DOT issued its grant regulations September 17, 1992, and will be using a national curriculum guide to evaluate training programs that will be eligible for funding.

5. United States Coast Guard (USCG). Oil Pollution Act of 1990 (OPA 90). The removal of an "oil discharge" according to Subtitle B of OPA 90, must be performed in accordance with the NCP and any appropriate Area Contingency Plan. (See K.1. of this instruction.) The OPA 90 further states that "the President shall prepare and publish a NCP," specifically for the removal of oil and hazardous substances on and near navigable waters.

a. The role of OSHA in responding to an oil spill, in accordance with OPA 90, is similar to the function it plays in the NCP. The NCP designates OSHA as the agency responsible for ensuring that employees are protected, and to determine if the site is in compliance with HAZWOPER. (See O.1. of this instruction.) The lead agency for the NCP (EPA or USCG) may request OSHA's assistance, but OSHA is not preempted from its regular enforcement duties.

b. The following interim final rules have been published and will soon be enforced by USCG:


Appendix G

List of Acronyms in this Document

CERCLA: Comprehensive Environmental Response Compensation and Recovery Act of 1980 (also, Superfund)

CFR: Code of Federal Regulations

CSHO: Compliance safety and health officer

DOT: U.S. Department of Transportation

EPA: U.S. Environmental Protection Agency

ERP: Emergency response plan

Eto: Ethylene oxide

FOM: Field Operations Manual


HAZMAT: Hazardous materials


IC: (On-scene) incident commander

IDLH: Immediately dangerous to life or health

LEPC: Local emergency planning committees

MOU: Memorandum of understanding

MSDS: Material safety data sheet

NCP: National Contingency Plan

NFPA: National Fire Protection Association

NIOSH: National Institute of Occupational Safety and Health

NRC: Nuclear Regulatory Commission

NRT: National response team

OPA 90: Oil Pollution Act of 1990

OSC: On-scene coordinator (term used in NCP)

OSHA: Occupational Safety and Health Administration

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OSHA Instruction CPL 2-2.59 (cont.)

OSH Act: Occupational Safety and Health Act of 1970

PPE: Personal protective equipment


RCRA: Resource Conservation and Recovery Act of 1976

RRT: Regional response team

SARA: Superfund Amendments and Reauthorization Act of 1986

SCBA: Self contained breathing apparatus

SERC: State emergency response commission

TSDF: Treatment, storage and disposal facility (also, "TSD facility")

USCG: U.S. Coast Guard

UST: Underground storage tank
Appendix H

Reference Materials for HAZWOPER


OSHA Instruction CPL 2.46, March 22, 1982, "Memorandum of Understanding Between the Occupational Safety and Health Administration and the United States Coast Guard."


OSHA Instruction CPL 2.30, November 14, 1980, "29 CFR 1913.10(b) (6), Authorization of Review of Medical Opinions."

OSHA Instruction CPL 2.32., January 19, 1981, "29 CFR 1913.10(b) (6), Authorization of Review of Specific Medical Information."


OSHA Instruction CPL 2-2.59 (cont.)


"Memorandum of Understanding Between the United States Coast Guard, U. S. Department of Transportation, and the Occupational Safety and Health Administration, U. S. Department of Labor, Concerning Their Authority to Prescribe and Enforce Standards or Regulations Affecting the Occupational Safety and Health of Seamen Aboard Vessels Inspected and Certified by the United States Coast Guard," March 4, 1983.


OSHA Instruction STP 2-1.154C

JUN 10, 1991
Office of State Programs

SUBJECT: Hazardous Waste Operations and Emergency Response; Final Rule and Corrections

A. PURPOSE. This instruction describes a Federal Program Change to the Regions and State designees.

B. SCOPE. This instruction applies OSHA-wide.

C. REFERENCE.


2. OSHA Instruction STP 2-1.117, August 31, 1984, State Standards.

D. CANCELLATION. OSHA Instruction STP 2-1.154B, September 17, 1989, Hazardous Waste Operations and Emergency Response; Final Rule and Corrections is canceled.

E. FEDERAL PROGRAM CHANGE. This instruction describes a Federal Program Change which affects State programs. Each Regional Administrator shall:

1. Ensure that this instruction is forwarded to each State designee.

2. Provide a copy of the Federal Register notice to the State designee upon request.


4. Ensure that each State designee acknowledges receipt of this instruction in writing, within 30 days of notification State's plan to adopt and implement the standard change, (b) the State's plan to develop an alternative change, which is as effective, or (c) the reasons why no change is necessary to maintain a program which is as effective as the Federal program.

5. Inform each State designee that the State must, within six months of the date of each Federal Register publication, amend its final rule or adopt the final rule and final rule corrections to ensure that the State standard is at least as effective as the Final Rule for Hazardous Waste Operations and Emergency Response in 29 CFR 1910.120, as corrected. The State must submit a plan supplement to the Regional Administrator within 30 days of State promulgation.

6. Encourage each State designee to cover volunteer workers engaged in hazardous waste operations, including emergency response, under the State's hazardous waste operations permanent final rule for purposes of national consistency. States that do not currently consider these volunteer workers to be employees under State law should consider taking action to extend coverage to volunteers.

7. Require each State designee to specify whether volunteer workers engaged in hazardous waste operations, including emergency response, are deemed employees for the purpose of coverage under the standard. State designees who are uncertain about coverage under the standard should request a legal opinion. The State shall submit a copy of the legal opinion or a statement on whether volunteer workers are covered to the Regional Administrator along with the standards package.

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F. INTERIM ENFORCEMENT. Under 29 CFR 1953.23(a) and (b), State plan States are provided up to six months from publication of the Federal standard in the Federal Register to promulgate an identical or "at least as effective" as standard. If a State, for whatever reason, is unable to promulgate a standard in a timely manner (six months for a permanent standard, 30 days for an emergency temporary standard) the State shall be expected to provide assurance that it will enforce the substantive provisions of the new or revised Federal standard through such means as use of its general duty clause or equivalent, temporary adoption of an identical standard, or an alternative, specified enforcement mechanism.

G. DIFFERENT STATE STANDARDS. Section 18(c)(2) of the Act requires that State standards be "at least as effective" as the Federal and, when applicable to products used or distributed in interstate commerce, the standards must be required by compelling local conditions and not unduly burden interstate commerce. In addition to the "at least as effective" criterion, this "product clause test" will be applied to State standards with substantively different requirements from the comparable Federal standard, as described in STP 2-1.117. A State standard expanded in scope from the Federal is considered to be a substantively different standard.

H. EFFECTIVE DATE. The final rule was effective on March 6, 1990. The interim final rule remained in effect until then. A State's effective date may be no later than the delayed Federal date or the date of the State promulgation, whichever is later.

I. EXPLANATION.

1. On March 6, 1989, OSHA issued a final rule which replaced its interim standard for hazardous waste operations and emergency response found in 29 CFR 1910.120. The final rule replaces the interim final rule required by Congress in the Superfund Amendments and Reauthorization Act of 1986 (as amended) (SARA) (Pub. L. 99-499, 29 U.S.C. 655 note). When the final rule became effective March 6, 1990, the interim final rule promulgated December 19, 1986 (51 FR 45654) was revoked.

2. The rule regulates the safety and health of employees involved in clean-up operations at uncontrolled hazardous waste sites cleaned up under government mandate, voluntary clean-up operations at sites recognized by Federal, State, local or other governmental bodies as uncontrolled hazardous waste sites, in certain hazardous waste treatment, storage, and disposal (TSD) operations conducted under the Resource Conservation and Recovery Act of 1976 as amended (RCRA) [42 U.S.C. 6901 et seq.], and in any emergency response to incidents involving hazardous substances as defined by OSHA in 29 CFR 1910.120.

3. State plan States are required to extend their coverage to all State and local government employees involved in hazardous waste cleanup and emergency response. Public sector employees involved in these operations in other States are protected under Title I, section 126(f) of SARA. On June 23, 1989, as required by section 126(f), the Environmental Protection Agency (EPA) issued a final rule (40 CFR 311) at 54 FR 26654 requiring the application of OSHA's permanent final rule on hazardous waste operations to employees of State and local governments in States without approved 18(b) State plans.

4. EPA has included volunteers within the scope of its rule because it believes that significant benefits accrue both to the communities that could be endangered by inadequately trained responders and to the responders themselves. The EPA rule defines an employee as a compensated or non-compensated worker who is controlled directly by a State or local government, as contrasted to an independent contractor. EPA's rule is effective March 6, 1990 for emergency response operations, but unlike OSHA's final rule, is effective September 21, 1989 for other hazardous waste operations.

5. State plan States are encouraged to cover volunteer workers engaged in hazardous waste operations, including emergency response, because of EPA's coverage of these workers in non-State plan States. State plan State coverage should include volunteer workers in the
private sector as well as the public sector if emergency responders in the State are organized as private entities or corporations.

6. There are situations where these volunteer workers receive pay for their time spent on-the-job, receive other types of remuneration, and/or are covered under workers' compensation provisions. Such factors as these help determine whether a volunteer is an employee. States that do not currently consider volunteer emergency response to be employees under State law should consider taking action to further extend coverage to avoid non-protection of this group of workers only in State plan States.

7. Under the amended OSHA standard, employee protection is provided during the initial site characterization and analysis, monitoring activities, materials handling activities, training, and emergency response.


9. As published, the preamble and standard contain typographical errors, incorrect citations and certain ambiguities which may prove to be misleading and are in need of clarification. The areas clarified by this correction, include:

   a. The definition of "hazardous substance" by directly including language, rather than incorporating it by reference;
   b. OSHA's intent that medical surveillance be provided to both hazardous waste operation employees and emergency response employees;
   c. The exception subparagraph regarding treatment, storage and disposal (TSD) operation;
   d. Coverage of certain excepted employers;
   e. The term "workplace" corrected to "danger area" in several provisions; and
   f. Some information added to the non-mandatory appendices.


11. As originally published, the standard contained two additional areas that may be misleading that have come to OSHA's attention and are in need of clarification. The areas clarified by this corrections include:

   a. The definition of "uncontrolled hazardous waste site"; and
   b. The definition of "equivalent training."

12. Under 29 CFR 1953.23(a) and (b), States are provided up to six months from publication in the Federal Register for adoption of parallel State standards and amendments.
OSHA Instruction STP 2-1.136A

JUN 8 1987
Office of State Programs

SUBJECT: Hazardous Waste Operations and Emergency Response; Interim Final Rule and Corrections

A. PURPOSE. This instruction describes a Federal program change to the Regions and State designees.

B. SCOPE. This instruction applies OSHA-wide.

C. CANCELLATION. OSHA Instruction STP 2-1.136, April 27, 1987, is canceled.

D. FEDERAL PROGRAM CHANGE. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this instruction is forwarded to each State designee.

2. Provide a copy of the Federal Register notice to the State designee upon request.


4. Ensure that each State designee acknowledges receipt of this instruction in writing, within 30 days of notification, to the Regional Administrator. The acknowledgment should include (a) the State's plan to adopt and implement the standard, (b) the State's plan to develop an alternative standard, which is as effective, or (c) the reasons why no standard is necessary to maintain a program which is as effective.

5. Inform each State designee that the State must promulgate a standard to ensure that it is at least as effective as the Occupational Safety and Health Administration (OSHA) interim final rule for hazardous waste operations and emergency response, as corrected, in Subpart H of 29 CFR Part 1910, and submit a plan as soon as possible, but not later than 6 months from the date of Federal publication.

E. DIFFERENT STATE STANDARDS. Section 18(C)(2) of the OSH Act requires that State standards be "at least as effective" as the Federal and, when applicable to products used or distributed in interstate commerce, be required by compelling local conditions and not unduly burden interstate commerce. In addition to the "at least as effective" criterion, this "product clause test" will be applied to State standards with substantively different requirements from the comparable Federal standards, as discussed in OSHA Instruction STP 2-1.117.

F. INTERIM ENFORCEMENT. Under 29 CFR 1953.23(a) and (b), State plan States are provided up to 6 months from publication of the Federal standard in the Federal Register to promulgate an identical or "at least as effective" as standard. If a State, for whatever reason, is unable to promulgate a standard in a timely manner (6 months for a permanent standard, 30 days for an emergency temporary standard) the State shall be expected to provide assurance that it will enforce the substantive provisions of the new or revised Federal standard through such means as use of its general duty clause or equivalent, temporary adoption of an identical standard, or an alternative, specified enforcement mechanism.

G. EFFECTIVE DATES. The initial effective date for an identical or different State standard may be no later than the date of State promulgation or the Federal effective date, whichever is later. Where a Federal standard contains delayed effective dates for various provisions, the State effective dates...
for these provisions may be no later than the delayed Federal dates or the date of State promulgation, whichever is later.

H. BACKGROUND.


2. The Federal Register notice at 52 FR 16241, May 4, 1987, corrects errors and incorrect citations, and clarifies ambiguities in both the regulatory text and the preamble.

3. The issuance of this interim final rule is mandated by section 126(e) of the "Superfund Amendments and Reauthorization Act of 1986" (SARA). The interim final rule will regulate employee safety and health at hazardous waste operations and during emergency response to hazardous substance incidents until a final standard is issued by OSHA and becomes effective.

4. Section 126 of SARA also mandates that OSHA promulgate a final standard. The agency expects in the near future to publish a proposed final standard on hazardous waste operations.

5. The interim final rule amends the OSHA standards for hazardous materials in Subpart H of 29 CFR 1910 by adding a new section 1910.120 containing employee protection requirements for workers engaged in hazardous waste operations including emergency response to hazardous substance incidents.

6. The interim final rule took immediate effect and remains in effect until one year after the issuance of the final OSHA standard. The final standard is expected to be published in October 1987 with an effective date of October 1988, at which time the interim final rule will no longer apply.

7. States which have elected to exclude private sector Superfund sites from their plan are required to adopt this standard because they must cover all other hazardous waste operations and emergency response as well as State and local government employees' activities at Superfund sites.

8. State plan States may continue to exclude private sector Superfund sites from their plan, although negotiations on the availability of Superfund money for State plan States are continuing.
This interpretation provides a clarification of OSHA's shower requirements for activities operating under the scope of 1910.120 and responds to a question about potential contamination following decontamination.

This is in response to your letter of August 2, 1993 requesting interpretation of the Occupational Safety and Health Administration (OSHA) standard for Hazardous Waste Operations and Emergency Response (HAZWOPER), 29 CFR 1910.120.

Your request identified four specific questions. They will be addressed separately for the sake of clarity.

Question 1:

What are the shower requirements for activities operating under the scope of 29 CFR 1910.120?

Answer:

Shower requirements are for two primary purposes in the OSHA standards, emergency flushing and decontamination. It is therefore, necessary to delineate the specific requirements of each.

29 CFR 1910.151(c) states "Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for the quick drenching or flushing of the eyes and body shall be provided within the work area for immediate use." Your letter indicates the materials you handle have pH ranges between 7.2 and 11.8. This material would be considered corrosive by standard definitions at the upper pH range.

The primary issue is the definition of "immediate use." Immediate use is not clearly defined in current OSHA regulations. The American National Standards Institute (ANSI), however, does define immediate use in their American National Standard for emergency eyewash and shower equipment Z358.1-1990. Z358.1-1990, paragraph 4.6.1 states "Emergency showers shall be in accessible locations that require no more than 10 seconds to reach and should be within a travel distance no greater than 30.5 meters (100 feet) from the hazard. ANSI further recommends the shower units be "...located as close to the hazard as possible... The maximum time required to reach the shower should be determined by the potential effect of the chemical. For example, exposure to a highly corrosive chemical might require showers to be installed within 3 to 6 meters (10-20) feet from the hazard." The path to the shower must be maintained clear and unobstructed at all times to allow for immediate use.

It is clear that the maximum distance to emergency showers is not to exceed 100 feet and local circumstances may require closer installation. This may be attained by the use of portable units meeting the necessary criteria. The quick removal of the material from the employee is of primary importance and the potential spread of contamination is a secondary consideration in such instances.

The second consideration regarding shower requirements of 29 CFR 1910.120 is related to the use of showers for decontamination purposes. The shower requirements contained in 29 CFR 1910.120(n)7 are applicable to temporary workplaces. Your facility does not appear to be a temporary workplace and therefore the applicable requirements are contained in 29 CFR 1910.120(k).
29 CFR 1910.120(k)(1) states "Procedures for all phases of decontamination shall be developed and implemented..." and 29 CFR 1910.120(k)(2)(iii) states "All employees leaving a contaminated area shall be appropriately decontaminated..." In 29 CFR 1910.120(k)(8) showers are required "Where the decontamination procedure indicates a need for regular showers and change rooms outside of a contaminated area, they shall be provided and meet the requirement of 29 CFR 1910.141." 29 CFR 1910.120(k)(3) states "Decontamination shall be performed in geographical areas that will minimize the exposure of uncontaminated employees and equipment."

The burden of determining the need for and location of showers for your operation rests upon the adequacy of your decontamination standard operating procedures prepared in accordance with 29 CFR 1910.120(k)(2)(ii) and the evaluation of those procedures resulting from the monitoring you are required to conduct pursuant to 29 CFR 1910.120(k)(2)(iv).

Question 2:

If an employee gets splashed with potentially contaminated hazardous material, is it acceptable to transport a worker to a shower after normal decontamination?

Answer:

To answer this question, the adequacy of decontamination procedures required by 29 CFR 1910.120(k) must be evaluated along with the definition of "normal decontamination." As defined by 29 CFR 1910.120 (a)(3), decontamination "means the removal of hazardous substances from employees and their equipment to the extent necessary to preclude the occurrence of foreseeable adverse health effects." This would include both chemical, radiological and biological hazards. A review of the decontamination procedure provided indicates the procedures address only the potential for radiological contamination.

Decontamination procedures must be developed and implemented based upon the potential hazards identified during the site characterization and analysis conducted in accordance with 29 CFR 1910.120(c). This includes all hazards, chemical, biological as well as radiological. These procedures must address the potential for emergency decontamination and removal of hazardous materials in the event of inadvertent employee contamination or contact.

The potential of contamination from these materials, as well as development of adequate protective and decontamination procedures, requires adequate attention during the development of the decontamination procedures and their subsequent evaluations conducted pursuant to 29 1910.120(b)(4)(iv).

Question 3:

Is it acceptable to transport workers to shower facilities located within the plant site but beyond the hazardous waste site?

Answer:

If decontamination procedures are adequate and effective as noted above, the transportation of employees to showers should not present a problem provided the requirements in 29 CFR 1910.120(k)(8) are met.

Question 4:

What is the potential for vehicle and chemical contamination if the decontamination procedures are followed?
Answer:

This question also is dependent upon the adequacy and effectiveness of the decontamination procedures. The potential for vehicle and chemical contamination should be addressed by the site safety and health supervisor during the reviews of the effectiveness of the site safety and health plans required in 29 CFR 1910.120(b)(4)(iv). By definition, the site safety and health supervisor is "... the individual located on a hazardous waste site who is responsible to the employer and has the authority and knowledge to implement the site safety and health plan and verify compliance with safety and health requirements." If decontamination procedures are adequate and their effectiveness assured, the potential for contamination should be minimized.
A company will be performing activities on a Superfund site. The company claims that "worker's exposed to health hazards related to hazardous waste is virtually non-existent." A written site safety and health plan is required by HAZWOPER. The site characterization must show that "the operation does not involve employee exposure or the reasonable possibility for employee exposure," to warrant exclusion from HAZWOPER training provisions. When there is indication that exposures have arisen, the company must reexamine the site's operations to fully comply with HAZWOPER. Employees must be notified of any changes on the site and how they affect their working conditions.

Your question concerns clarification on the applicability of the Hazardous Waste Operations and Emergency Response standard (HAZWOPER), codified as 29 CFR 1910.120, to a clean-up operation. The company will be performing activities on a Superfund site, some of which are clearly covered by HAZWOPER. The company claims that "workers' exposed to health hazards related to hazardous waste is virtually non-existent," for other activities.

A written site safety and health plan is required by HAZWOPER in paragraph (b), and guidance for characterizing and evaluating the hazards on site is given in paragraph (c). The site characterization must show that "the operation does not involve employee exposure or the reasonable possibility for employee exposure," as specified in the scope of 1910.120, to warrant exclusion from HAZWOPER training provisions. Site characterization is an ongoing process.

When there is an indication that exposures have risen, for example when excavation unexpectedly uncovers a section of earth that contains high levels of contamination, the company must reexamine the site's operations to fully comply with HAZWOPER. Employees must be notified of any changes on the site and how the changes affect their working conditions (workers may require personal protective equipment, training, medical surveillance, etc.).

Where there is a likelihood of exposure, but such exposure is below OSHA Permissible Exposure Limits (PEL) or published exposure limits, and respirators are not necessary, employees must receive 24 hours of training and one day of actual field experience. This requirement may apply to the clean-up operation described in the company's letter, since there is exposure which does not exceed the PEL. Based on the limited information in the letter, it is not possible for us to determine whether their employees would require 24 hours of training in accordance with paragraph (e).

Workers in areas that have been characterized as having no reasonable possibility of exposure, and therefore are not required to have HAZWOPER training, may be covered by other OSHA standards, such as the Hazard Communication standard.

We hope this information is helpful. If you have any further questions please contact the Office of Health Compliance Assistance at (202) 523-8036.
RECORD ID D9308017

STANDARD NUMBER 1910.120 (b)(1)(ii)(C), (b)(4); 1910
INFORMATION DATE 930917

ABSTRACT This interpretation letter addresses the appropriateness of stating in a facility's safety and health plan that OSHA standards are being followed.

DOE facilities shall have site-specific safety and health plans; it is not sufficient to simply state that you are following OSHA. (This interpretation also responds to Record ID 93-08-019.)

INTERPRETATION 29 CFR 1910.120; 1910

This interpretation is in response to your letter of August 13, 1993, asking if it is acceptable to state in safety and health plans that OSHA's standards are being followed.

OSHA requires that a written safety and health program incorporate a site-specific safety and health plan. To answer your question, DOE facilities' safety and health plans must be site-specific; it is not sufficient to simply state that you are following OSHA.
STANDARD NUMBER 1910.120 (q)(6)
INFORMATION DATE 931104

ABSTRACT The Accident Response Group and the Radiological Assistance Team provide radiological assistance in the event of an incident involving radioactive materials. These teams are more aggressively involved in spill clean-up than a first responder operations level. Consequently, the minimally acceptable level of training under 1910.120 is for the Hazardous Materials Technician category.

INTERPRETATION 29 CFR 1910.120 (q)(6)

This interpretation is in response to an inquiry about the level of training needed for members of the Department of Energy's emergency response teams: The Accident Response Group and the Radiological Assistance Team. These teams provide radiological assistance to Federal, state, tribal and major Nuclear Regulatory Commission licensees in the event of an incident involving radioactive materials.

DOE Order 5500.1B/A2 defines the Radiological Assistance Program (RAP) as a DOE program which provides for radiological assistance to Federal, state, tribal and major Nuclear Regulatory Commission licensees in the event of an incident involving radioactive materials. The Radiological Assistance Team (RAT) is defined in the same order as experienced DOE and/or DOE contractor professionals who are adequately equipped to conduct offsite radiological emergency monitoring. Radiological Assistance Teams are at all DOE operations offices, all national laboratories, and most area offices and associated contractors.

29 CFR 1910.120 does not directly address radiological contamination, however, an interpretation by Occupational Safety and Health Administration (OSHA) (designated as DOE/4159 in DOE's Interpretations Guide to OSH standards) indicated, "Because radioactive materials are listed as hazardous materials by the USDOT, they are also 'hazardous substances' under 29 CFR 1910.120(a). Responses to incidents involving radioactive materials would be covered."

Training requirements for DOE Radiological Assistance Teams, relative to the Hazardous Waste Operation and Emergency Response (Hazwoper) standard, are not discussed in any DOE Order. However, in 29 CFR 1910.120, OSHA defines first responders as "trained to respond in a defensive fashion." The typical actions that members of a DOE radiological emergency response team could reasonably be expected to perform during an incident would not normally be characterized as defensive. Consequently, the training needed to satisfy the Hazwoper standard should be at the level of a "hazardous materials technician", at a minimum.

It is important to note that portions of the extensive training that DOE response teams undergo may meet some of the requirements established by OSHA under 29 CFR 1910.120. These teams, when they are offsite, act under the direct control of DOE. The cognizant DOE management organization should review and determine the adequacy of the level of training that is being provided to the members of the teams that it operates.
An interpretation letter discussing "laboratory setting" relative to the applicability of 1910.120. If the laboratory is not within the confines of the treatment, storage and disposal (TSD) operations and deals with incidental release of hazardous substances, it is not considered to be an emergency response within the scope of 29 CFR 1910.120. If the release poses an emergency, then the emergency response provisions of 1910.120(q) apply. If the laboratory setting is within the confines of the TSD operations then the training provision of 1910.120(p) apply.

November 15, 1990

Dear Mr. B:

This is an update to our response to your inquiry requesting interpretation of OSHA's final standard for Hazardous Waste Operations and Emergency Response (29 CFR 1910.120).

Your letter does not provide sufficient facts upon which to render a determinative answer to your questions whether your "laboratory setting" is covered under the emergency response section of the standard.

If your "laboratory setting" is not within the confines of the treatment, storage and disposal (TSD) operations and deals with incidental release of hazardous substances, it is not considered to be an emergency response within the scope of 29 CFR 1910.120. Such employees, however, must have the proper equipment and training under other OSHA standards such as the Hazard Communication Standard (29 CFR 1910.1200) to handle this type of incident. If the release poses an emergency then you must comply with the training provision of the standard (29 CFR 1910.120(q)). When determining whether a situation constitutes an emergency the key factor which must be considered on a case-by-case basis is the actual or estimated exposure or degree of danger to responders, other workers, neighbors, etc. In order to determine this, other factors such as the size of the spill, the material spilled, and the location of the incident (e.g., confined space) play a significant role.

If the laboratory setting is within the confines of the TSD operations then the training provisions of (p) apply.

The State of California has administered its own occupational safety and health program since 1973, under the provisions of the Occupational Safety and Health Act of 1970. As part of that program, the State is responsible for the enforcement of occupational safety and health standards in the State of California, subject to monitoring by the Federal Occupational Safety and Health Administration (OSHA).

I hope that this helps in your concern.
SOURCE LETTER

August 3, 1990

Dear Mr. S:

I am writing to get an interpretation of 1910.120 to a work situation which I have. My need is brought about (besides my wishes to abide by the regulations) because two different vendors of training have told me two different things. One vendor has told me that I needed the 8 hour training while another has told me that I needed the 24 hour training. I believe the regulations could be interpreted that training under 1910.1200 is the applicable training.

The work situation is this. The work is performed in a laboratory setting within a fume hood. The workers use a 4% solution of Bromine in the job they are doing and when they are through they reduce the Bromine to the Bromide by the use of Sodium Thiosulfate. They do occasionally overfill the container they put this mixture in and are expected to clean it up.

What may complicate things is that we are permitted as a TSD facility. We permitted ourselves as a TSD facility to allow us the latitude to store hazardous waste for more than 90 days and to cover the "treatment" noted above.

We would appreciate your response as to which training is appropriate based upon the scenario presented. We would like an answer by early September.
INTERPRETATION

29 CFR 1910.120 (a)(3), (p)(8)(iii), (q)(6), (p)(2)

November 14, 1990

Dear Ms. B:

This is in response to your August 17, letter requesting clarification of several emergency response provisions of the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120). The answers to your questions are as follows:

1. Question: What are the limits of the phrase "immediate release area"?

Answer: "Immediate release area" is the area, process, or machine which is creating the hazardous spill. In your example, workers in different areas of the plant would be considered outside the "immediate release area." This term is not meant to be used exclusively to determine whether a situation is an emergency under this standard. The key factor which must be considered on a case-by-case basis is the actual or estimated exposure or degree of danger to responders, other workers, neighbors, etc. In order to determine this, factors such as the size of the spill/release, the material spilled and the location of the incident (e.g., confined space) play a significant role. While it may be obvious, it is crucial that planning take place prior to any emergency incident. An employer must determine all likely potentials for emergencies using worst-case assumptions and plan response procedures accordingly.

2. Question: Would the standard be applicable if an employee who happens to be present when an incidental spill occurs, but who does not normally work in that area, helps cleanup the spill?

Answer: Employees responding to incidental spills must have the proper equipment and training under other OSHA standards such as the Hazard Communication Standard (29 CFR 1910.1200).

3. Question: How does OSHA define an "uncontrolled release" of a hazardous substance?

Answer: Uncontrolled release is the release of a hazardous substance from its container. If not contained, stopped, and removed, the release would pose a hazard to the employees in the immediate area or in areas in the path of the release, or from its by-products or its effect (such as toxic vapors, fire, over-pressurization, toxic gases, or toxic particulate).

4. Question: Can maintenance personnel from any area of the plant respond to clean up a spill without being subject to the emergency response provisions of 29 CFR 1910.120?

Answer: Maintenance personnel who may respond to an emergency or potential emergency are covered by the emergency response training under 29 CFR 1910.120. For maintenance personnel who only
respond to incidental spills, training under other OSHA standards (e.g., Hazard Communications Standard) would be necessary.

5. Question: How is "incidental release" interpreted?

Answer: Incidental release is one that does not cause an imminent health or safety hazard to employees and does not have to be cleaned-up immediately to prevent death or serious injury to employees.

6. Question: What is meant by the phrases "no potential safety or health hazard" and no "chemical exposure"?

Answer: Your letter does not provide us with the specific sections of the standard you are referencing. A general answer is there is virtually no likelihood that employee(s) could be injured or exposed to a hazardous substance in the event of an uncontrolled release.

Please feel free to contact us again if we can be of further assistance.
RECORD ID 91081501

STANDARD NUMBER 1910.120 (e)(9), (e)(1)
INFORMATION DATE 19910815

ABSTRACT An interpretation letter relating to training certification of current employees with previous experience and training in the removal of underground storage tanks (USTs). Employees meeting the requirements of paragraph (e)(9) for certifying an employee as equivalently trained they will not be required to complete the initial 40 hour training.

INTERPRETATION 29 CFR 1910.120 (e)(9), (e)(1)
August 15, 1991
Dear Ms. S:

Thank you for your letter of July 18, concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule (29 CFR 1910.120).

Your specific question relates to training certification of current employees with previous experience and training in the removal of underground storage tanks (USTs).

If your subcontractors meet the requirements of paragraph (e)(9) for certifying an employee as equivalently trained they will not be required to complete the initial 40 hour training. This paragraph is written to allow organizations to certify current employees as equivalently trained if the employee's work experience and/or training has resulted in training equivalent to that training required in paragraph (e)(1) through (e)(4). The employee must have had sufficient training and/or experience to perform their expected duties safely.

Your subcontractors currently have specific skills for the removal of USTs. If you certify them under (e)(9) they may be able to perform removals of underground storage tanks. However, they will need further training if you require them to perform any other hazardous waste operation.

All employees certified as equivalently trained and new to a site must also receive appropriate site specific training before site entry and have appropriate supervised field experience at the new site. These employees would be required to have 8 hours of refresher training per year.

We hope this information is helpful. If you have any further questions please feel free to contact M. G. at (202) 523-8036.

SOURCE LETTER
July 18, 1991
Dear Assistant Secretary S:

ABB Environmental Services Inc. (ABB-ES) would like to request a clarification regarding the applicability of OSHA 29 CFR 1910.120, the Hazardous Waste Operations and Emergency Response Standard, to projects involved in the removal of underground storage tanks, specifically in regards to the training.

We have previously received a response from you stating that in general, when the removal of the tank involves contamination, the work is covered by the above standard. ABB-ES does not do the actual tank removal.
removal work, we hire subcontractors who we require to comply with the standard. Our question to you is in relation to equivalent training (1910.120(e)(9)). If a subcontractor has a large amount of experience in conducting tank removals (only), can they be grandfathered for the initial, 40-hour training if they meet the qualifications of the section in regards to tank work only?

An expeditious response would be greatly appreciated. If you or your people have questions or require further delineation of the issue, please feel free to contact me in Portland, Maine at (207) 775-7401.
An interpretation letter regarding how a comprehensive formal apprenticeship program applies toward certification requirements for hazardous waste operations. The provision of equivalency training in 29 CFR 1910.120 (e)(3) allow past work experiences to count toward some of the required subject matter in the standard.

August 19, 1991

Dear Mr. C:

This is in response to your inquiry of May 20, to Mr. T. H. concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule (29 CFR 1910.120).

Your specific question reads "how can I apply this training [a comprehensive formal apprenticeship program] toward the current certification requirements necessary for hazardous waste operations?"

Paragraph (e)(9) of 1910.120 discusses "equivalent training" and states:

(9) Equivalent training. Employees who can show by documentation or certification that an employee's work experience and/or training has resulted in training equivalent to that training required in paragraphs (e)(1) through (e)(4) of this section shall not be required to provide the initial training requirements of those paragraphs to such employees. However, certified employees new to a site shall receive appropriate, site specific training before site entry and have appropriate supervised field experience at the new site.

Therefore, your employer may decide, based on the course content, that your apprenticeship meets the requirements of the off site initial training. Your letter covered some of the topics in your apprenticeship, which your employer must compare to training program requirements. The training must adequately prepare an employee to perform his duties in a safe and healthful manner.

If your employer intends to certify you fully or partially as "equivalently trained," he should retain a copy of your training certificate and the comparison of training requirements in your personnel file. Before you can be certified as equivalently trained you must have the required hours of on the job supervised training. Additionally, the employer is required to supply the employee with 8 hours of refresher training per year.

Generally, if there has been a lapse of three years without refresher training since the initial training, the initial training should be repeated. Therefore, if you have received no additional training specific to hazardous waste operations since the end of your apprenticeship in 1977, it may be necessary for you to attend the initial 40 hour training course.

I hope this information is helpful. If you have any further questions please feel free to contact M. G. at (202) 523-8036.
October 02, 1991

Dear Mr. V:

This is in response to your letter of May 24, concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule 1910.120. The levels of training described in 1910.120 allow persons the ability to perform specific tasks at hazardous waste sites without completing special levels of training. Workers responsibilities are limited. The minimum level of training required for an emergency responder to a known hazmat incident would be the first responder operations level. Fire fighters can only respond at the level to which they have been trained. Operational level personnel generally may not enter the danger area, take aggressive action to stop the release, or implement the employer's emergency response plan. Generally, emergency responders respond in level A suits to unknown concentration levels and levels at or above one-half the "Immediate Danger to Life and Health" (IDLH) level., however, for ammonia, it may be more appropriate to respond in level A gear to exposures of 1/2 the threshold for skin irritation, or 5000 ppm.

Your second question reads as follows;

Question 2. If a person is trained to the operational level what is he able to do? Not able to do?
Emergency responders trained to the operational level are not necessarily able to do anything during an emergency response. Job responsibilities define training requirements, training does not define job responsibilities. Paragraph 1910.120(q)(6) states that "Training shall be based on the duties and function to be performed by each responder of an emergency response organization."

Therefore, if an emergency responder has not been trained in a specific procedure and/or informed that they will be asked to perform that procedure during an emergency response they are not "able" to perform that task regardless of their training level.

Although this point might seem academic it is a fundamental premise of the HAZWOPER final rule. In its simplest form, it means, if you haven't been trained in the procedure you cannot do it during an emergency response.

In a more general approach to your question, paragraph (q)(6)(ii) defines what operational level personnel can and cannot do. I refer you to that paragraph of the standard and highlight the following points here.

All of the following general abilities of operational level personnel are premised on the fact that those personnel have received training on how to safely perform the following operations. Operational level personnel are trained to take defensive action. They can work to contain the release from a safe distance, i.e. not in the danger area. They can build dikes at a safe distance from the spill. They can wear personal protective equipment. They can decontaminate other emergency responders coming out of the danger area. They are part of the initial response to the site for the purpose of protecting nearby persons, property or the environment from the effects of the release.

Operational level personnel generally may not enter the danger area, take aggressive action to stop the release, or implement the employers emergency response plan.

**Question 2a.** Can a person, trained at the operational level, be used in the hot zone for any functions?

Trained at the operational level, no. Trained at the operational level plus specific training in a specific action the emergency responder will be required to perform in the hot zone, yes, assuming that procedure supports at least technician level emergency responders.

**Question 2b.** Does a person need to be trained at the technician level to do any part of the technician level's function? In other words, could a person be at operational level and trained to perform functions beyond operational?

Yes, however, emergency responders can only be required to perform those duties for which they have had previous training and have been informed they will be expected to perform during an emergency response.

**Question 3.** At what level should a person be trained to dike with soda ash or other chemicals?

Outside of the danger area, operational level, inside the danger area technician level.

**Question 4.** At what parts per million (ppm) level of exposure would you expect a person responding to an ammonia leak to use a level A suit?

Generally, emergency responders respond in level A suits to unknown concentration levels and levels at or above one half the "Immediate Danger to Life and Health" (IDLH) level. The IDLH level for ammonia is 500 ppm and one half that level is 250 ppm. However, ammonia is an inhalation hazard at 1000 ppm and not a skin absorption hazard. Ammonia begins to effect moist skin at exposures greater than 10,000 ppm (1%) (mild irritation) and at concentrations greater than 30,000 ppm (3%) a stinging sensation is observed. Therefore, the general procedure of using level A equipment at 1/2 the IDLH may be unduly conservative for ammonia exposures. For ammonia, it may be more appropriate to respond in level A gear to exposures of 1/2 the threshold for skin irritation, or 5000 ppm.
Question 5. If you are to be trained to the technician level do you need to be trained to the awareness level, then have the added hours of operational level, then the added hours of technician?

The performance criteria and competencies for each level are additive. The training hour requirements are not.

We hope this information is helpful. If you have any further questions please feel free to contact us at (202) 523-8036.
An interpretation letter relating to the 8 hour refresher training for employees specified in 1910.120(e)(1), (e)(4), and (q)(9). The 8 hour training course does not need to be on the exact anniversary of the initial training. Employees should have the refresher course reasonably close to the anniversary date. OSHA agrees that the accumulated hours in your "on-site health and safety" briefings may be used as 8 hour refresher courses required by 1910.120 if they cover items specified in paragraph (e)(2) and (e)(4).

October 16, 1991

Dear Ms. T:

This is in response to your inquiry of September 5, concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule (29 CFR 1910.120).

Your specific question relates to the 8 hour refresher training for employees specified in 1910.120(e)(1), (e)(4), and (q)(9).

First, the 8 hour training course does not need to be on the exact anniversary of the initial training. Employees should have the refresher course reasonably close to the anniversary date, taking into consideration the company's and the employees' convenience in scheduling the course. However, if the training does not take place by the anniversary date there should be a record in the employee's file indicating why the training has been delayed and when the training will be completed.

You mention that your company currently holds "on-site health and safety briefings associated with environmental projects that are four (4) to eight (8) hours long." OSHA agrees that the accumulated hours in your "on-site health and safety" briefings may be used as 8 hour refresher courses required by 1910.120 if they cover items specified in paragraph (e)(2) and (e)(4).

We hope this information is helpful. If you have any further questions please feel free to contact us at (202) 523-8036.

September 5, 1991

Dear Ms. C,

In reference to 29 CFR 1910.120(e)(8) and 29 CFR 1910.120(q)(8) referencing the refresher training for employees specified in (e)(1), (e)(4), and (q)(6) of this regulation. Please define and/or interpret what is meant by annual or yearly refresher training.

LEHS has 40 offices and approximately 1,200 employees to train in accordance with 29 CFR 1910.120. All training is conducted in-house and due to scheduling problems with district offices and LEHS it is extremely difficult to conduct an 8-Hour Refresher Training Course on the exact anniversary of the 40-Hour Hazardous Waste Training. Our company and other companies in the same field have encountered
this dilemma on several occasions and wish to receive a written definition of OSHA's interpretation of the above sections.

Additionally, the question has arisen concerning the accumulation of on-site health and safety briefings associated with environmental projects that are four (4) to eight (8) hours long. These health and safety briefings are basically refresher that are directly related to field work undertaken by our employees and records of attendance can be proven. Are these accumulated hours over the year adequate and sufficient to be considered an 8-Hour refresher, if the proper documentation can be obtained?

If you have any questions regarding my request please contact me.
Dear Mr. G:

This is in further response to your letter of September 25, to the Occupational Safety and Health Administration (OSHA). Your letter requested an interpretation of the Hazardous Waste Operations Emergency Response standard (29 CFR 1910.120).

It is not the intent of the OSHA to define an emergency condition in terms of an arbitrary quantity of material released due to the diversity of workplace conditions, conditions of chemical use, and types of chemicals used.

When, as a consequence of a release of a hazardous substance the following conditions, or similar conditions, may develop, such situations would normally be considered emergency situations requiring an emergency response effort:

1. High concentrations of toxic substances.
2. Situation that is life or injury threatening.
3. Imminent Danger to Life and Health (IDLH) environments.
4. Situation that presents an oxygen deficient atmosphere.
5. Condition that poses a fire or explosion hazard.
6. Situation that required an evacuation of the area.
7. A situation that requires immediate attention because of the danger posed to employees in the area.

Incidental releases that can be handled safely by employees in the immediate area, without the aid of a coordinated response effort from employees outside the area, would not be considered an emergency incident under 29 CFR 1910.120.

Employers, who intend to evacuate employees from the danger zone when an emergency situation occurs and who do not expect employees to assist in handling the emergency, are exempt from developing an emergency response plan provided an emergency action plan is developed in accordance with 29 CFR 1910.38(a).

The intent of the standard is to protect employees from exposure to the health and physical hazards of hazardous substances associated with hazardous waste operations and emergency response activities. Absent testing data on the mixture as a whole, the hazards of a mixture containing hazardous substances would be expected to be treated as a hazardous substance for compliance purposes.

The determination of how much of a solvent mixture spill (containing 10-100 ppm of benzene) would represent an emergency, is dependent upon many factors. It is not possible to respond to your specific question based on the information provided. However, in general, a theoretical concentration for each component part can be calculated based on the quantity of solvent spilled, the percentage by weight of
component part can be calculated based on the quantity of solvent spilled, the percentage by weight of
volume of each component, and the size of the spill area. In the event the components of a mixture pose
an additive effect, the TLV for the mixture can be calculated. Dependent upon the quantity of a solvent
expected to be released and the size of the spill area, a determination could then be made as to whether
or not such a concentration would result.

When the concentration of the mixture as a whole or the concentration of the component parts poses a
condition previously described, an emergency situation would be anticipated requiring an emergency
response.

If you have any further questions please contact us at (202) 523-8036.

SOURCE LETTER

September 25, 1991

Dear Mr. S:

The purpose of this letter is to request an interpretation of the requirements in OSHA's regulations 29

With regard to the definitions in these regulations, the term "hazardous substance" is defined as follows:

"Hazardous substance" means any substance designated or listed under paragraphs (A) through (D) of
this definition, exposure to which results or may result in adverse affects on the health or safety of
employees:

1. Any substance defined under section 101(14) of CERCLA;
2. Any biological agent and other disease-causing agent which after release into the environment and
upon exposure, ingestion, inhalation, or assimilation into any person, either directly from the
environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to
cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions
(including malfunctions in reproduction) or physical deformations in such persons or their offspring;
3. Any substance listed by the U.S. Department of Transportation as hazardous materials under 49 CFR
172.101 and appendices; and
4. Hazardous waste as herein defined.

Further, the term "emergency response" is defined as follows:

"Emergency response" or "responding to emergencies" means a response effort by employees from
outside the immediate release area or by other designated responders - (i.e., mutual-aid groups, local fire
departments, etc.) to an occurrence which results, or is likely to result in an uncontrolled release of a
hazardous substance. Responses to incidental releases of hazardous substances where the substance
can be absorbed, neutralized, or otherwise controlled at the time of release by employees in the
immediate release area, or by maintenance personnel are not considered to be emergency responses
within the scope of this standard. Responses to releases of hazardous substances where there is no
potential safety or health hazard (i.e., fire, explosion, or chemical exposure) are not considered to be
emergency responses.

We are currently working with several private sector industrial clients to assist them in implementing their
"Hazardous Substance Emergency Response Plans". The following questions have been raised:
1. Excluding "incidental releases" as described by OSHA in the definition of Emergency Response, are there any criteria on the quantity or amount of a hazardous substance that has to be involved in a release for that incident to be considered as requiring an Emergency Response?

As an example, for the hazardous substances defined under section 101(14) of CERCLA, would an employer be required to be prepared for an Emergency Response if a release involved only "reportable quantities" of the hazardous substance?

Or, is the employer required to be prepared for an Emergency Response for any release, excluding "incidental releases", of a hazardous substance which results or may result in adverse affects on the health or safety of employees?

2. How does the definition of "hazardous substance" apply to mixtures?

As an example, a solvent blend has as a minor component (e.g. 10-100 ppm) a chemical (e.g. benzene) which appears on the designated lists of hazardous substances. How much solvent blend would have to be involved for the release to be considered as requiring an Emergency Response?

This type of situation could occur for numerous chemicals, including those used as protective coatings and for water treatment.

We would appreciate your review of these questions and a written reply stating how OSHA interprets the requirements of 29 CFR 1910.120.

Your prompt response will be appreciated. Please feel free to contact me should you need to discuss our inquiry.
An interpretation letter concerning the number of minimum training hours an On Scene Incident Commander must obtain before getting certified. The intent of the standard is to provide an incident command system that is headed up by a single person who does not necessarily have extensive knowledge about the classification and verification of hazardous materials, but rather who is able to manage emergencies of differing severity, as well as oversee the rest of the HAZMAT team.

Dear Mr. B:

This is in response to your inquiry of November 18, concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule (HAZWOPER), 29 CFR 1910.120.

Your question concerns the number of minimum training hours an On Scene Incident Commander must obtain before getting certified. You have perceptively pointed out that OSHA requires "...at least 24 hours of training equal to the first responder operations level and in addition have competency in the following areas...," but the minimum training hours that First Responder Operations Level must acquire is only 8.

The intent of the standard is to provide an incident command system that is headed up by a single person who does not necessarily have extensive knowledge about the classification and verification of hazardous materials, but rather who is able to manage emergencies of differing severity, as well as oversee the rest of the HAZMAT team. Appendix C explains: "This enable[s] one individual to be in charge of managing the incident, rather than having several officers from different companies making separate, and sometimes conflicting, decisions. The individual in charge of the [incident command system] would delegate responsibility for performing various tasks..." Consequently, the Incident Commander requires more extensive training in general matters, plus extensive training in command and management.

Hence, the Incident Commander will require more than 24 hours of total training. The training hours suggested in the standard are minimums; we often find that people developing training programs must go over the minimum 8, 24, or 40 hours to properly instruct employees on all of the required subjects.

We hope this information is helpful. If you have any further questions please feel free to contact us at (202) 523-8036.
ABSTRACT
An interpretation letter concerning oil spill response training required by the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response standard (HAZWOPER), 29 CFR 1910.120. OSHA does not certify individuals or approve training programs. It is the employer who must show by documentation or certification that an employee's work experience and/or training meets the requirements in HAZWOPER.

INTERpretATION
29 CFR 1910.120 (e)(5), (e)(1)

February 05, 1992

Dear Dr. A:

This is in response to your letter of January 17, concerning oil spill response training required by the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response standard (HAZWOPER), 29 CFR 1910.120.

Currently, OSHA does not certify individuals or approve training programs. It is the employer who must show by documentation or certification that an employee's work experience and/or training meets the requirements in HAZWOPER. There must be a written document which clearly identifies the employee, the person certifying the employee, and the training and/or past experience which meets the requirements. One possibility would be to include this information in the employee's personnel file. The preferred method is to include this information on a separate certificate for each employee.

The Accreditation of Training Programs for Hazardous Waste Operations standard (29 CFR 1910.121) is currently in rule making. You may want to monitor the progress of this new standard and anticipate needed changes in your training and certification programs to ensure continued compliance. Please find a copy of the Notice of Proposed Rulemaking enclosed.

The training programs required to be accredited under this proposed regulation are found in the Hazardous Waste Operations and Emergency Response standard, 29 CFR 1910.120, paragraphs (e) and (p). These training programs are required for employees involved in clean-up operations required by a government body involving hazardous substances; corrective actions involving cleanup operations at sites covered by the Resource Conservation and Recovery Act (RCRA); voluntary clean up operations at sites recognized by a governmental body; and operations involving hazardous waste that are conducted at RCRA permitted treatment storage and disposal (TSD) facilities. 29 CFR 1910.121 does not propose to accredit training programs for employees engaged in emergency response activities, although the final decision on this has not been made.

Enclosed, please find a the compliance directive for post emergency response operations, CPL 2-2.51, intended specifically for oil spill response organizations. Also enclosed are the OSHA instruction STP 2-1.154C; the Hazard Communication Standard; and the HAZWOPER standard.

For suggestions and assistance in developing training programs you may want to contact: the OSHA Training Institute at (708) 297-4810; your OSHA Regional Office at (404) 347-2281; or the OSHA Consultation Services for the Employer at (904) 488-3044.

We hope this information has helped you. If you have any further questions regarding current HAZWOPER training please feel free to contact M. G. at (202) 523-8036.
February 12, 1992

Dear Ms. C:

This is in response to your inquiry of December 3, 1991 concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule (HAZWOPER), 29 CFR 1910.120.

Your questions concern HAZWOPER training for employees at CERCLA and RCRA sites. We will answer your questions in the order that you asked them:

1. "Is there a minimum training requirement for personnel who work at CERCLA/RCRA sites but who do not enter the decontamination or hot zones? An example of such activity would be construction atop a base of clean fill." 29 CFR 1910.120 does not apply to workers where there is no potential for exposure to hazardous substances found at the cleanup site. In paragraph (a), the first sentence of the standard states: "This section [29 CFR 1910.120] covers the following operations, unless the employer can demonstrate that the operation does not involve employee exposure or the reasonable possibility of employee exposure to safety or health hazards."

Therefore, an exception may be made if the area around the facility is monitored and characterized, demonstrating that no exposure exists around the work area. 29 CFR 1910.120(c) explains how to evaluate sites to determine the appropriate safety and health control procedures. If the results of the monitoring change the boundaries of the hot zone then the site safety and health plan must be modified accordingly.

Employees who work on site, but do not work in contaminated areas, must be made aware of the facility's emergency response plan.

2. "Does such a requirement, if pertinent, include service personnel who are not actively participating in site activities? These individuals may include the UPS delivery men, the Domino's pizza driver, furniture delivery services, or the phone line stinger/installer."

Individuals who are on site and will not participate in site activities or enter contaminated areas, such as UPS delivery people and the Domino's pizza driver, do not need to be trained in accordance with 1910.120(e). However, these people should be made aware of the boundaries of exclusion and where the places of refuge are in case of an emergency.

I hope this information is helpful. If you have any further questions please contact M. G. at (202)-523-8036.
February 13, 1992

Dear Mr. S:

This is in response to your inquiry of December 3, 1991 forwarded to the Occupational Safety and Health Administration's (OSHA) Directorate of Compliance Programs by Ms. L.A., Regional Administrator of Region III. Your question concerns OSHA's Hazardous Waste Operations and Emergency Response final rule (HAZWOPER), 29 CFR 1910.120.

Initially you talked with Dr. J. B. of Federal OSHA's Region III Office, regarding training for employees on a site where there is a low magnitude of risk of exposure to hazardous substances. Dr. B. suggested that less than 24 hours would be necessary because of the low magnitude of risk and because the site is well characterized and will continue to be monitored by qualified people. This office agrees with Dr. B.'s opinion.

The HAZWOPER standard begins by stating that: "This section (29 CFR 1910.1203 covers the following operations, unless the employer can demonstrate that the operation does not involve employee exposure or the reasonable possibility of employee exposure to safety or health hazards." This exception may be made if an area at the site is monitored and characterized in accordance with paragraph (c) of HAZWOPER, demonstrating that a work area is sufficiently decontaminated and poses no health threat.

If the results of the ongoing site monitoring change, then the boundaries of various zones must be modified accordingly. This boundary change must be reflected in the site Safety and Health Plan, made available to employees, which will assign only adequately trained employees to work in designated zones. When the ongoing monitoring indicates that any health hazards exist the employees would need to be trained to the 24 hours or 40 hours, as specified by 1910.120(e).

Employees who work on site in areas designated as safe must be trained in other appropriate OSHA standards and must be made aware of the facility's emergency response plan. Even though a facility's activities may fall outside of the HAZWOPER standard's scope and application, the employer is still obligated to protect employees working within the facility by complying with the appropriate general industry standards. Moreover, it should be noted that the general duty clause, section 5(a)(1) of the Occupation Safety and Health Act of 1970, applies to all employers, requiring each employer to provide employees with a place of employment which is free from recognized hazards.

I hope this information is helpful. If you have any further questions please contact M. G. at (202)-523-8036.
ABSTRACT An interpretation letter concerns clarification of the annual 8 hour refresher training for employees who work on hazardous waste sites, required in paragraph (e) and if the program must be accredited. OSHA did not propose to require accreditation of refresher training, although the proposed regulation, printed in the January 26, 1990, issue of the Federal Register, is not a final rule. Regardless of the final rule's scope of coverage, your company may create its own 8 hour refresher training course by following the guidance given in the HAZWOPER standard.

INTERPRETATION 29 CFR 1910.120 (e)(8)

March 06, 1992

Dear Mr. F:

This is in response to your inquiry of February 10, concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule (HAZWOPER), 29 CFR 1910.120.

Your question concerns clarification of the annual 8 hour refresher training for employees who work on hazardous waste sites, required in paragraph (e). Your letter mentions that you could not find where accreditation for the 8 hour refresher course is required in the Notice of Proposed Rulemaking for Accreditation of Training Programs for Hazardous Waste Operations.

OSHA did not propose to require accreditation of refresher training, although the proposed regulation, printed in the January 26, 1990, issue of the Federal Register (enclosed), is not a final rule. Changes and additions may be made before the standard becomes effective. The question of whether or not refresher training should be accredited was an issue which received comment, as noted in the preamble of the proposed rulemaking. You may want to monitor the progress of the standard by contacting OSHA's Office of Safety Standards at (202) 523-8063.

Regardless of the final rule's scope of coverage, your company may create its own 8 hour refresher training course by following the guidance given in the HAZWOPER standard. If in the future the final rule for accreditation of training programs includes 8 hour refresher training, then your company may submit the training course that it developed prior to the final rule for accreditation.

I hope this information is helpful. If you have any further questions please contact M. G. at (202) 523-8036.
An interpretation concerning hazardous material training requirements for hazardous waste transportation companies. Most of the responsibility for regulation of over-the-road vehicle operations belongs to the Department of Transportation. Response to emergency spills of hazardous substances or driving hazardous waste sites, is regulated under OSHA's Hazardous Waste Operations and Emergency Response standard (HAZWOPER), 29 CFR 1910.120. If a driver becomes involved in an emergency response involving hazardous substances, the driver is considered an emergency responder and is covered by HAZWOPER's paragraph (q). It is the employer's responsibility to provide the necessary training and equipment free of cost, given during paid time.

April 02, 1992

Dear Mr. U:

This is in response to your letter of December 18, 1991, to your Congressman, the Honorable D. R. Congressman R. transferred your letter to the Occupational Safety and Health Administration (OSHA), and asked us to respond directly to your concerns. As an employee of a hazardous waste transportation company, you asked to be advised of any hazardous material training requirements for such work.

Most of the responsibility for regulation of over-the-road vehicle operations belongs to the Department of Transportation. However, if your employer gives you responsibility to respond to emergency spills of hazardous substances or directs you to drive onto hazardous waste sites, you are covered by OSHA's Hazardous Waste Operations and Emergency Response standard (HAZWOPER), cited in the Code of Federal Regulation as 29 CFR 1910.120. When a truck driver, such as yourself, becomes involved in an emergency response involving hazardous substances, the driver is considered an emergency responder and is covered by HAZWOPER's paragraph (q).

Your employer must have an Emergency Response Plan prior to an accident if shipping a hazardous substance which during transportation could cause an emergency; for example, an accident on the road causing barrels containing hazardous material to split open. Your part in the employer's Emergency Response Plan may be as simple as alerting a designated Hazardous Materials (HAZMAT) team to cleanup the hazardous material.

It is the employer's responsibility to provide you with the necessary training and equipment free of cost, given to you during paid time. Most drivers carrying hazardous materials will only need training to the first responder awareness level or the first responder operations level, described in HAZWOPER's subparagraph (q)(6). Training above these first two levels may be more technical than necessary, depending on the transportation company's expectations of the driver. OSHA stresses that employees must be trained to the appropriate level before performing emergency response operations. (Enclosed is a copy of HAZWOPER for a more technical perspective.)

Training for the "first responder awareness level" enables employees who are likely to witness releases of hazardous substances to recognize emergencies and notify authorities. The training class would cover an understanding of what their role is in the employer's Emergency Response Plan, who to contact in the event of an uncontrolled release and provides a basic understanding of hazardous materials and risks associated with them. Employees with this limited training must not attempt any actions themselves to control or clean up the release.
Employees trained to the "first responder operations level" may take defensive action only (such as diking or placing absorbent socks to prevent the spill from spreading) without trying to stop the release. The training course would cover basic hazard and risk assessment techniques, the selection and use of personal protective equipment, basic knowledge of containment and/or confinement operations, and basic procedures. If you are to drive onto the hot zone, also called the "exclusion zone," of a hazardous waste Site or to go close enough to actively fight a spill, additional training is required.

Congress passed the Hazardous Materials Transportation Uniform Safety Act (HMTUSA) of 1990, which concerns the handling of hazardous materials in the transportation industry. The Department of Transportation (DOT) is required to issue regulations within 18 months after the date of the enactment of HMTUSA. Training will be required to be given by all HAZMAT employers to their HAZMAT employees regarding the safe loading, unloading, handling, storing and transporting of hazardous materials and emergency preparedness for responding to accidents or incidents involving the transportation of hazardous materials.

DOT is required to consult both EPA and OSHA to ensure that these training requirements do not conflict with OSHA regulations, in particular the HAZWOPER standard. You may contact DOT for information regarding hazardous materials transportation and, as requested in your letter, training that might enhance or improve your driving skills:

United States Department of Transportation
Research and Special Programs
Office of Hazardous Materials Safety
Office of Hazardous Materials Standards
400 7th Street, SW
Washington, DC 20590

We hope this information is helpful. If you have any further question regarding HAZWOPER, please feel free to contact us at (202) 523-8036.

SOURCE LETTER

February 11, 1992

Dear T:

I received the enclosed letter from my constituent, J. U.. J. is a truck driver and works for a company that specializes in hauling hazardous waste and other hazardous substances. In his letter, he requests information on training requirements for such work.

Due to the technical nature of the subject, I would appreciate it if you would contact my constituent directly to respond to his inquiry.

I would appreciate it if you would also be so kind as to send a copy of your response to the attention of my Legislative Director, J. P.
An interpretation letter concerning clarification on the applicability of HAZWOPER standard to a clean-up operation at a solid waste management unit. The HAZWOPER standard is unique in one of its provisions: subparagraph (a)(2)(i) states that when there is a conflict or overlap of coverage between HAZWOPER and another OSHA standard, the regulation that is more protective of employee safety and health applies. OSHA does not intend the employer to duplicate efforts in complying with the standards. Where there is a likelihood of exposure, but such exposure is under permissible exposure limits or published exposure limits, and respirators are not necessary, employees must receive 24 hours of training and one day of actual field experience. Workers in areas that have been characterized as having no threat of exposure, and therefore are not required to have HAZWOPER training, may be covered by other OSHA standards, such as the Hazard Communication standard.

April 24, 1992

Dear Mr. K:

This is in response to your inquiry of April 6, concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule (HAZWOPER), 29 CFR 1910.120.

Your question concerns clarification on the applicability of the HAZWOPER standard to a clean-up operation at a solid waste management unit. Your company will be removing lead contaminated soil which you claim will pose "no exposure as defined by the OSHA lead standard, 1910.1025." Your letter indicated that there are exposures, although they are below the action level defined in 1910.1025.

Clean up activities, even though they are in locations away from the lead smelting refinery, are within the scope of 1910.120. The clean up activity you will be performing is considered a Resource Conservation and Recovery Act of 1976 (RCRA) corrective action, which is discussed in HAZWOPER's scope in subparagraph (a)(1)(ii).

The HAZWOPER standard is unique in one of its provisions: subparagraph (a)(2)(i) states that when there is a conflict or overlap of coverage between HAZWOPER and another OSHA standard, the regulation that is more protective of employee safety and health applies. HAZWOPER does not completely supersede any standard, and single substance standards do not completely supersede HAZWOPER.

Certain provisions of the lead standard may be superseded if HAZWOPER offers more protection to employee safety and health. OSHA's compliance officers may cite the provisions of both standards, depending on which standard offers the more protective provision. For example, 1910.1025 provides instruction on exposure monitoring that gives the employer more direction than the guidance given in HAZWOPER.

OSHA does not intend the employer to duplicate efforts in complying with the standards. Safety and health programs developed to meet other regulations, such as the written Compliance Program required in 1910.1025, are acceptable in meeting the requirements of HAZWOPER if the program is added to or rewritten to include all of the points required in HAZWOPER's written Safety and Health Program. Parts of
the training given to employees in order to comply with the lead standard may be considered "equivalent training," as long as all of the topics required to be conveyed to employees in (e) are covered.

A written site safety and health plan is required by HAZWOPER in paragraph (b), and guidance for characterizing and evaluating the hazards on site is given in paragraph (c). Employees are not required to be trained in accordance with paragraph (e) if an area in the site has been monitored and characterized, demonstrating that no exposure exists around the work area. If an event occurs that may change the level of exposure, or if monitoring results change, then the safety and health plan which is specific to a designated part of the site or a phase of the operation must be reevaluated and modified to comply with the HAZWOPER standard.

The site characterization by the D. R. Company must show that "the operation does not involve employee exposure or the reasonable possibility for employee exposure," as specified in the scope of 1910.120, to warrant exclusion from HAZWOPER. When there is an indication that exposures have risen, when excavation uncovers a section of earth that contains high levels of lead for example, the D. R. Company must reexamine the site's operations to fully comply with HAZWOPER, and notify employees of any changes.

Where there is a likelihood of exposure, but such exposure is under permissible exposure limits or published exposure limits, and respirators are not necessary, employees must receive 24 hours of training and one day of actual field experience. This requirement may apply to the clean-up operation which you described since there is lead exposure which does not exceed the PEL, although based on the information in your letter it is not possible for us to determine whether your employees require 24 hours of training in accordance with paragraph (e).

Workers in areas that have been characterized as having no threat of exposure, and therefore are not required to have HAZWOPER training, may be covered by other OSHA standards, such as the Hazard Communication standard.

We appreciate your concern with worker safety and health and your genuine effort in complying with HAZWOPER. We hope this information is helpful. If you have any further questions please contact M. G. at (202) 523-8036.
An interpretation letter to resolve any confusion concerning 1910.120's interface with other standards. The employer is required to develop emergency procedures in other standards such as 1910.120, 1910.38(a) where referenced, and health standards with emergency response provisions. OSHA considers 1910.120 to have a broad coverage for

May 08, 1992

Recently, it has come to our attention that there is some misunderstanding about the interface of 1910.120 and several other OSHA standards. The purpose of this communication is to resolve any confusion concerning 1910.120's interface with other standards.

1. HAZARD COMMUNICATION STANDARD

The Hazard Communication Standard, although it requires training in emergency procedures, does not require that emergency procedures be developed. The employer is required to develop emergency procedures in other standards such as 1910.120, 1910.38(a) where referenced, and health standards with emergency response provisions. The HAZCOM training must include information about emergency response procedures that have been developed. The next revision of the HAZCOM standard will clarify this position.

2. HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE STANDARD

It was never the intent to leave a coverage gap for emergency preplanning and training individuals who respond to emergencies. The first preplanning step under 1910.120(q) requires the employer to make a determination of whether they have a potential for an emergency resulting from hazardous substance. OSHA considers 1910.120 to have a broad coverage for emergency response, in the sense that it applies to all employers who will have their employees respond to an emergency. This broad coverage will necessitate flexibility in enforcement of the various provisions of 1910.120(q). Further guidance on this will follow.

3. EXPANDED HEALTH STANDARDS

1910.120 specifically states that in the event of an overlap between itself and another standard the more protective standard will apply. 1910.120 requires an evacuation of all workers during an emergency or development a comprehensive emergency response plan encompassing all hazardous substances that have the potential to cause an emergency if released. Compliance with emergency response provisions of specific health standards provide component pieces of the larger plan. If an employer intends to require their employees to respond to an emergency caused by the release of hazardous substance the employer must comply with both the requirements of the substance specific health standard, if it contains emergency response provisions and 1910.120 to the extent that any 1910.120 requirements are more protective or not addressed in the specific health standard. The Directorate of Health Standards Programs has been encouraged to reference 1910.120 in the specific health standards and, if necessary, incorporate substance specific guidance and requirements for emergencies caused by the release of the substance. This guidance will be particularly helpful when there are specific properties or hazards of a substance that need to be
considered in preparation for potential emergencies caused by an uncontrolled release of the substance. The substance specific emergency response guidance in individual health standards will serve to more clearly define the substance specific components of the larger 1910.120 emergency response plan.

4. INCIDENTAL SPILLS

1910.120(q) does not cover responses to incidental spills per se. OSHA will enforce other applicable standards such as 1910.1200, 1910.132, 1910.134, etc. for these situations to the extent that no emergencies could develop. Once workers are required to respond to incidental spills that have the potential for becoming an emergency then the appropriate requirements of 1910.120(q) are applicable. The level of training required is based on the responsibilities and duties expected of a worker during an emergency response operation.

Future enforcement guidelines will incorporate these determinations. Any questions you may have should be referred to the Office of Health Compliance Assistance at FTS 523-8036.
Dear Mr. G:

This is in response to your inquiry of March 3, concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response final rule (HAZWOPER), 29 CFR 1910.120.

We will address your questions in the order that you asked them:

1. After completing a 40-hour hazardous waste training course, an employee wishes to take both the 8-hour refresher course and the 8-hour supervisory course the very next year, must this employee complete 16 hours of training to satisfy this requirement? If no, why?

In general, OSHA would expect a general hazardous waste site worker who is becoming a supervisor or manager to receive at least 16 hours of training the year they become a supervisor: 8 hours of supervisory training in addition to 8 hours of employee refresher training.

Employers are given sole flexibility in developing the best approach for training their employees. OSHA recognizes that there may be some overlap in the objectives of the training for supervisors and the refresher training, and we do not expect a duplication of effort. Employees may also critique incidents that have occurred in the past year as part of their employee or supervisory refresher training. In the final analysis, though, the employer must demonstrate that all topics required to be covered are conveyed to employees.

2. Besides the 40-hour hazardous waste training course, is there any other prerequisite for employees who wish to complete the 8-hour supervisory training course?

HAZWOPER requires that supervisors and managers be trained and given supervised field experience to at least the level of the employees who they will oversee, and have at least eight additional hours of specialized training on the topics listed in (e)(4). Training courses must cover the provisions listed in paragraph (e) as a minimum; further site specific training may be necessary. Paragraph (e) stipulates that "employees shall not be permitted to participate in or supervise field activities until they have been trained to a level required by their job function and responsibility." In other words, employees must be instructed in the procedures they will be expected to perform, and informed of the safety and health risks of those procedures, before they begin work.

We hope this information is helpful. If you have any further questions please feel free to contact us at (202) 523-8036.
June 29, 1992

Dear Dr. A:

This is in further response to your letter of April 23, concerning the Occupational Safety and Health Administration's (OSHA's) Hazardous Waste Operations and Emergency Response final rule (HAZWOPER), 29 CFR 1910.120.

Your question concerns clarification on the definition of an emergency response.

The HAZWOPER standard was written to cover a wide array of facilities. Releases of hazardous substances may require differing emergency responses depending on the facility, knowledge of the employees in the immediate area, and the equipment at their disposal. However, there are certain parameters that OSHA has identified which clearly define releases of hazardous substances that can only be handled by emergency responders and a coordinated emergency response effort.

A release is covered by the HAZWOPER standard wherever conditions create an emergency. In other words, there need not be both an emergency and a response by outside responders. For example, a release of chlorine gas above the IDLH moving through a facility is an emergency situation even if the responders are from the immediate release area. Employees who would respond to this hypothetical situation, regardless of where they normally work, would need to act in accordance with 1910.120 paragraph (q).

Conversely, incidental releases of hazardous substances that are routinely cleaned up by those from outside the immediate release area need not be considered emergency responses solely because the employee responsible for cleaning it up comes from outside the immediate release area. For example, paint thinner is spilled in an art studio and the janitor is called from outside the immediate release area to mop it up. The janitor does not have to respond in accordance with HAZWOPER, although the janitor would be expected to understand the hazards associated with paint thinner through training required by the Hazard Communication Standard (20 CFR 1910.1200).

The HAZWOPER standard covers responses "by employees from outside the immediate release area or by other designated responders." The use of the "or" means that "responders" can be any persons so designated by the employer, including employees from within the immediate release area. Employees working in the area, not just outsiders, are covered if the employer expects those employees to perform emergency response operations for releases or substantial threats of releases of hazardous substances. HAZWOPER's paragraph (q) uses the term "responders" generally, which is interpreted to mean employees who respond to emergencies.
The Superfund Amendments and Reauthorization Act of 1986 (SARA), which required OSHA to create and implement HAZWOPER, directs OSHA to protect all employees responding to emergencies without specifying their location. Section 126(d)(4) of SARA states, "standards shall set forth requirements for the training of workers who are responsible for responding to hazardous emergency situations who may be exposed to toxic substances in carrying out their responsibilities."

The HAZWOPER standard does not fully address releases of hazardous substances that are limited in quantity and pose no emergency or threat to the safety and health of workers in the immediate vicinity. This type of release is referred to as an "incidental release" in paragraph 1910.120(a)(3), where "emergency response" or "responding to emergencies" is defined. Training in accordance with 1910.120(q) is not required for these spills. In such situations other OSHA standards do cover employees, such as the Hazard Communication Standard (1910.1200), standards for personal protective equipment (1910.132, 1910.134) or the Laboratory Standard (1910.1450).

We hope this information is helpful. If you have any further questions please feel free to contact us at (202) 523-8036.

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**SOURCE LETTER**

April 23, 1992

Dear Admin. S:

I would appreciate any interpretations OSHA may have made concerning the definition of "Emergency Response or Responding to Emergencies" as contained in 29 CFR 1910.120.

In particular, the issue of "responses to incidental releases of hazardous substances where the substance can... controlled at the time of release by employees in the immediate release area, or by maintenance personnel are not considered to be emergency responses within the scope of this standard".

In addition, I would like examples of releases of hazardous substances where there is no potential safety and health hazard (ie; fire, explosion, or chemical exposure) [underlining added for emphasis].
An Interpretation letter regarding how 29 CFR 1910.120 covers an employee who will perform work that is not necessarily related to clean-up or control efforts at the hazardous waste site and if these employees performing work during the period of time when a clean-up operation was not yet in progress. Workers, such as utility workers, who must perform duties at a hazardous waste site that has not yet been characterized but where contamination is expected, do fall under the scope of 29 CFR 1910.120. Employees must be provided training that prepares them for their job functions and responsibilities, as stated in the general requirements in 29 CFR 1910.120 (e).

September 08, 1992

Dear Mr. K:

This is in further response to your inquiry of June 8 addressed to Ms. L. A., Regional Administrator for Region III. Your letter was forwarded to the Occupational Safety and Health Administration's (OSHA's) Directorate of Compliance Programs. Your correspondence concerned clarification of the Hazardous Waste Operations and Emergency Response (HAZWOPER) regulation, 29 CFR 1910.120.

You have requested clarification on two points. First, you asked how 29 CFR 1910.120 covers an employee who will perform work that is not necessarily related to clean-up or control efforts at a hazardous waste site. You also inquired how this would be affected if these employees were performing work during the period of time when a clean-up operation was not yet in progress. You give the example of a utility worker digging up buried pipes between the investigation and remediation phases of a site, during a time when there is no on-site supervisor or a site-specific written safety and health plan.

Workers, such as utility workers, who must perform duties at a hazardous waste site that has not yet been characterized but where contamination is expected, do fall under the scope of 29 CFR 1910.120. These workers must work under the direction of an on-site supervisor and a site-specific safety and health plan, and must be fully trained and protected pursuant to the HAZWOPER standard. When additional information becomes available through site characterization which verifies that there is minimal or no risk of employee exposure to hazardous substances, a lesser degree of PPE and worker training may be acceptable.

When site characterization shows that the area to be serviced by workers is free of potential exposure, or the proposed work assignments would not expose any of the work crew to hazardous substances, the activity can be carried out as a normal maintenance or construction operation.

Your second question addresses training for workers who will perform duties that are not necessarily related to clean-up or control efforts at a hazardous waste site. You ask whether your hypothetical utility contractor is “bound to the number of training hours specified in 1910.120(e).”

The utility contractor is bound to provide at least the minimum number of training hours specified. On a hazardous waste site that has many site specific peculiarities the employer may need to train employees beyond the 40 or 24 hour minimum set by the standard. Employees must be provided training that prepares them for their job functions and responsibilities, as stated in the general requirements in 29 CFR 1910.120(e).
Training required by 29 CFR 1910.120(e) is also addressed in OSHA Instruction CPL 2-2.51, dated November 5, 1990 (enclosed). The employer would not compromise worker safety and health by following the de minimis criteria in section G.3 of this directive.

We hope this information is helpful. If you have any further questions please contact the Office of Health Compliance Assistance at (202) 523-8036.

**SOURCE LETTER**

April 30, 1992

Dear Commissioner K:

In response to your letter dated March 26, 1992, relative to compliance issues with the Hazardous Waste Operations and Emergency Response Standard, 29 CFR 1910.120, we present the following interpretations.

The sites which you have discussed in your letter all fall within the scope of the 1910.120 standard in that some element of government has designated them to be voluntary or involuntary clean-up actions relative to hazardous materials. Activities which are not necessarily related to hazardous materials abatement, clean-up, or control, but never-the-less may be hazardous work activities in of themselves are not specifically discussed in the text of the 120 standard. They are covered, however, in paragraphs (b), (c), and (d), the site safety and health program, site characterization, and site control.

Namely, the site-specific comprehensive written plan must address all work activities on site. Site characterization must identify and characterize all physical, biological, and chemical agents as well as all safety hazards that the site presents to any workers regardless of work activity. The site control procedures must limit all access to the site only to authorized employees or agents. Therefore, the site-specific plan must address work operations such as utility employees who dig up buried pipes and cables or read meters, turn on or shut off service and the like. The amount of training, ppe, work practices, and medical surveillance needs to be addressed in the plan or the on-site supervisor must address the situation on a case-by-case basis. Failure to do so when the work activity compromises the safety and health of the worker will result in appropriate apparent violations of 1910.120.

In summary, the site-specific written safety and health plan must discuss with particularity how both hazardous waste operations and non-related hazardous waste operations are to be conducted at the site. If the plan fails to discuss the issue adequately and/or the site supervisor fails to amend the plan appropriately, and this results in a compromise of worker protection, then sections of 29 CFR 1910.120 would be violated.
ABSTRACT
An interpretation letter regarding the three-days of field experience requirement and receiving eight hour refresher training recertification through correspondence courses. Three days of field experience at any uncontrolled hazardous waste site that is directly related to the work the employee will be expected to perform, and that is under the supervision of a trained supervisor, will satisfy the initial training requirement in 29 CFR 1910.120(e). Refresher training courses given through a correspondence course are not normally acceptable. However, if employees are permanently stationed outside of the United States, it may be acceptable to complete a correspondence course for their refresher training.

INTERPRETATION
29 CFR 1910.120 (e)(3), (e)(1), (e)(8)

September 11, 1992

Dear Mr. C:

This is in response to your inquiry of August 5, concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response regulation (HAZWOPER), 29 CFR 1910.120.

We will answer your questions in the order that you presented them:

1. Must an employee complete three days of field experience on a government-listed site in order to fulfill [the 1910.120 training] requirement? Does any related field experience under the scope and application of 1910.120 satisfy the standard?

Three days of field experience at any uncontrolled hazardous waste site that is directly related to the work the employee will be expected to perform, and that is under the supervision of a trained supervisor, will satisfy the initial training requirement in 29 CFR 1910.120(e). When employees begin work at a new site they would not be required to repeat the three days of supervised field experience, although Company X would need to make them aware of site-specific hazards.

2. Can 40-hour certified employees be given an annual 8-hour refresher certificate by proxy? Must a trainer be present at all times throughout the training? Out-of-country students have asked about maintaining recertification (8-hour certificate) through a correspondence course. Is it possible to hold correspondence courses for overseas personnel that cannot return to the United States? The only reasons these personnel would come to the United States is in the event of an emergency when they need their certification.

Refresher training courses given through a correspondence course are not normally acceptable. In your unique case, however, where employees are permanently stationed outside of the United States, it may be acceptable to complete a correspondence course for their refresher training.

Company X must ensure that employees are provided answers to any questions that may arise from the training to maintain their skills and knowledge. Company X would also have to take extra measures to make sure that their employees are indeed doing the reading and understand the training material.

Hazardous waste site employers are responsible for making sure that their employees are "trained to a level required by their job function and responsibility," as stated in 29 CFR 1910.120(e)(1) and (q)(8). Company X would have to evaluate the competencies of their overseas employees before allowing them
to work in the United States at a hazardous waste site or in an emergency situation, to ensure they are trained to perform their job safely.

We hope this information is helpful. If you have any further questions please feel free to contact us at (202) 523-8036.
An interpretation letter concerning clarification of personal protective equipment (PPE) for medical personnel treating victims contaminated with hazardous materials. Emergency response planning, including selection of PPE, is to be based on worst-case scenarios. If you were able to determine, in conjunction with the small industries in your community, that worst-case scenarios of contaminated victims arriving at your facility would not pose hazards requiring use of Level A gear, then a lower level of personal protective equipment would be appropriate.

29 CFR 1910.120 (g)(3)(iv); Appendix (B) Part B (I)

September 17, 1992

Dear Mr. M:

This is in response to your inquiry of August 5, concerning the Occupational Safety and Health Administration’s (OSHA) "Hazardous Waste Operations and Emergency response" (HAZWOPER) regulation, 29 CFR 1910.120.

Your question concerns clarification of personal protective equipment (PPE) for medical personnel treating victims contaminated with hazardous material, and, specifically, whether Level A PPE would be necessary.

Paragraph (g)(3)(iv) of the standard states that Level A totally encapsulating chemical protective suits "shall be used in conditions where skin absorption of a hazardous substance may result in a substantial possibility of immediate death, immediate serious illness or injury, or impair the ability to escape." Further, Appendix B, Part B(I), of the standard provides nonmandatory guidance on selection of the appropriate level of PPE, front which the following recommendations are drawn.

Level A protection offers the highest level of skin, eye, and respiratory protection and should be used whenever work functions involve a high potential for splash, immersion, or exposure via vapors, gases or particulates, to materials harmful to skin or capable of being absorbed through the skin.

Level B protection is appropriate when conditions require a high level of respiratory protection due to inhalation hazard but require less skin protection, because chemicals harmful to the skin or capable of absorption through the skin are not present as a splash or immersion hazard or in high concentrations in atmospheric contaminants.

Emergency response planning, including selection of PPE, is to be based on worst-case scenarios. If you were able to determine, in conjunction with the small industries in your community, that worst-case scenarios of contaminated victims arriving at your facility would not pose hazards requiring use of Level A gear, then a lower level of personal protective equipment would be appropriate.

We hope this information is helpful. If you have any further questions please feel free to contact us at (202) 523-8036.
Dear Mr. W:

This is in response to your inquiry of July 27, concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) regulation, 29 CFR 1910.120.

Your first question concerns clarification on the application of 29 CFR 1910.120 to manufacturing facilities where the potential exists for an emergency release of hazardous substances, and where, as hazardous waste generators, hazardous wastes are accumulated on-site for less than 90 days.

Manufacturing facilities which have the potential for an emergency to occur due to an uncontrolled release of hazardous substances or hazardous raw materials are covered by 29 CFR 1910.120 paragraph (q), which addresses emergency response to hazardous substance releases without regard to location.

Conditionally-exempt small quantity generators and generators who store hazardous wastes for less than 90 days are exempt from compliance with sections (p)(1) through (p)(7), and are thus covered only by section (p)(8), the emergency response program.

Employers who have hazardous waste storage areas in their facilities have the option of meeting the emergency response requirements of HAZWOPER by complying with either paragraph (p)(8) or paragraph (q) for those areas. The employer must meet the requirements of paragraph (q) for other areas of their facility which have potential for emergency releases of hazardous substances or hazardous raw materials.

Your second question inquires about exemption from employee training requirements under paragraph (p)(8) if the employer intends to evacuate employees in the event of an emergency. Paragraph (p)(8)(l), like paragraph (q)(1), provides an exemption from the emergency response requirements if the employer intends to evacuate all employees and provides an emergency action plan (i.e., an evacuation plan) in accordance with 29 CFR 1910.38(a).
However, the HAZWOPER standard states in paragraph (a)(2)(iii)(B) that "employers who are required by the EPA or state agency to have their employees engage in emergency response ... are covered by paragraph (p)(8) of this section, and cannot be exempted by (p)(8)(i) of this section."

It is our understanding that generators who are short term (less than 90 day) accumulators exempt from permit and interim status requirements under 40 CFR 262.34 are specifically required by EPA to have their employees participate in emergency procedures. Therefore, it would not be permissible for these generators to evacuate all of their employees in lieu of providing emergency response training. In contrast, conditionally-exempt small quantity generators exempt under 40 CFR 261.5 are not required by EPA to direct their employees to engage in emergency response activities, and thus would be allowed under HAZWOPER to evacuate in accordance with 29 CFR 1910.38(a) instead of training their employees to respond to emergencies. You may wish to contact EPA directly to verify this. The number for the RCRA Superfund Hotline is 1-(800)-424-9346.

Your third question asks which paragraph, (p) or (q), would apply to your facilities. Paragraph (q) would apply to the manufacturing facility as a whole, except for the hazardous waste storage area where the employer may choose to comply with either (p)(8) or (q). Please refer to our answer to your first question for a detailed response.

Finally, you asked us to specify employee training requirements. Training requirements are explained in detail in paragraph (q)(6). Paragraph (q)(6) describes five levels of tiered training requirements. All employees who work in an area where there is potential for an uncontrolled release must have sufficient awareness training to recognize that an emergency response situation exists and to initiate emergency response procedures by notifying the response team. You may find that you are able to integrate this awareness level training into the hazard communication program required by 29 CFR 1910.1200. Training requirements beyond first responder awareness level will depend on the roles you assign your employees in your emergency response plan. To determine the appropriate level of employee involvement and training for generators exempt under 40 CFR 262.34(a) and (d) it is necessary to refer to the EPA regulations, including 40 CFR 265 subparts C and D, and 40 CFR 262.34(d)(5), respectively, as well as the OSHA regulations cited above.

We hope this information is helpful. If you have any questions please feel free to contact us at (202) 523-8036.
Thank you for your letter of January 22, concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) regulation, 29 CFR 1910.120.

In your letter you questioned whether an outside HAZMAT emergency response team may be permitted access to all areas of a hazardous waste site in an emergency response action. It is OSHA's position that off-site responders responding to a hazardous substance emergency at a hazardous waste site be trained to handle the potential hazards of any area of a site that they may be asked to enter. Off-site emergency responders are subject to the requirements of paragraph (q). It is the responsibility of the HAZMAT team employer to comply with OSHA standards.

Training under paragraph (q)(6) "shall be based on the duties and function to be performed by each responder of an emergency response organization." The employer of the HAZMAT team must ensure that its employees are adequately trained in the hazards of the site to safely perform their emergency response duties. A HAZMAT team that has been adequately trained under paragraph (q) does not need the 40-hour or 24-hour training specified in paragraph (e) of the standard in order to respond to hazardous substance emergencies at a hazardous waste site.

The OSHA required safety and health training has two components: one is to provide a general background and the other is to provide site-specific information. The HAZMAT team members' extensive previous training would fulfill the general health and safety training requirements. The hazardous materials technician level of training requires that the employee knows how to implement the HAZMAT team's emergency response plan, and this must include site-specific information for each of the sites for which the HAZMAT team has been designated to respond.

If the briefing adequately covers all of the site-specific elements of the training requirements, then the HAZMAT team's training is sufficient to enable them to safely perform emergency response operations on all areas of the hazardous waste site.

However, based on the information presented in your letter it is not possible for OSHA to determine whether the briefing given to the HAZMAT team is sufficient for them to safely perform emergency response operations in all areas of the hazardous waste site.

Emergency responses at uncontrolled hazardous waste sites can be very dangerous and unpredictable; emergency preplanning is essential to ensure that outside responders are familiar with the relevant site-specific information. OSHA requires employers to coordinate their emergency planning and response activities with the local authorities. In addition, the Superfund Amendments and Reauthorization Act
(SARA), Title III, contains requirements for facilities to share information on hazardous chemicals on site with the local emergency planning committee. This coordination should take place before an emergency incident occurs, and the members of the HAZMAT team must be trained to handle any site-specific hazards to which they have been designated to respond.

It is the responsibility of the HAZMAT team employer to comply with OSHA standards. Thus employers should determine to the extent feasible, worst-case clean-up scenarios (i.e., those with the highest safety and health risk) in which employees may be asked to participate and train them accordingly. Again, HAZMAT team members must be trained to handle the potential hazards of any area of a site that they might be asked to enter.

This is the Federal OSHA interpretation of the HAZWOPER Standard. For your information, Federal OSHA jurisdiction is limited to private sector employees in those states that do not have OSHA State-plans. Under section 18(b) of the Occupational Safety and Health Act of 1970, States may elect to administer their own program for occupational safety and health. State-plan states cover both private and public sector workers. (Enclosed is a listing of the State-plan states.) In addition, the Environmental Protection Agency is responsible for enforcing their HAZWOPER standard to protect public employees in those states that do not have OSHA State-plans. For example, the EPA standard would be applicable to public emergency response organizations in the state of New Jersey, while Federal OSHA would have jurisdiction over private HAZMAT teams in that state. For further information on the EPA standard you can call 908-321-6724 or fax 908-321-6724.

We hope this information is helpful. If you have any further questions please contact us at (202) 219-8036.

__________________________

SOURCE LETTER

January 22, 1993

Dear Ms. G:

I would like to request your determination regarding the following situation relating to emergency response at Superfund sites. The local HAZMAT team is trained to at least the technician level in compliance with 29 CFR 1910.120(q), and in fact each member of the team has a minimum of 120 hours of training (most members have 400 plus hours of training). However, they do not have the specific 40-hour training required by (e) for hazardous waste site workers. The team has been briefed as to the specific hazards of the Site. Please advise as to whether they are allowed access to all areas of the Site in the event their emergency response assistance becomes necessary.
INFORMATION DATE 19930805

ABSTRACT An interpretation letter concerning questions about emergency response under OSHA's Hazardous Waste Operations and Emergency Response (HAZWOPER) regulation 29 CFR 1910.120, emergency responders, trained in 1910.120(q)(6), who took part in the initial emergency response may continue working through the clean-up operation. Post-emergency responders to oil spills are covered by paragraph (f). Petroleum products are covered by OSHA as "hazardous substance" in the scope of 29 CFR 1910.120(a)(3). Even though the toxicity and flammability of petroleum products are reduced after the first few hours of a spill into water or soil, it is still considered a hazardous substance, or a hazardous waste. A hazardous materials technician who is only expected to respond to incidental releases in his or her immediate work area would not be considered a member of a HAZMAT team.


August 05, 1993

Dear Mr. H:

This is in response to your inquiry of March 22, concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) regulation, 29 CFR 1910.120. We apologize for the delay in responding to your inquiry.

The employees of your oil production company are trained to meet the competencies listed in the Hazard Communication Standard, Employee Emergency Plans and Fire Prevention Plans Standard, Respiratory Protection Standard, HAZWOPER emergency response, and have additional training in the hazards of hydrogen sulfide. On site employees are trained to respond to and control releases of oil, and when the emergency is over request assistance from employees outside of the facility who are equivalently trained. The questions you raise regarding the post-emergency response and medical surveillance requirements of HAZWOPER are answered below.

Example A

Question #1: Is the training that additional personnel (company employees [from another facility]) have sufficient enough to allow them to participate in post-emergency response clean-up?

At the heart of your questions you seem to be asking whether an emergency responder can perform post-emergency response clean-up operations. The HAZWOPER standard allows emergency responders, trained in 1910.120(q)(6), who took part in the initial emergency response to continue working through the clean-up operation. Employees who do not work at the facility where the release occurred, and who arrive after the emergency is declared to be over, must be trained in accordance with 1910.120(e).

Response personnel with the training you describe who arrive from outside of the facility may be sufficiently trained to engage in post-emergency response clean-up operations, even if they had not participated in the initial emergency response. Employers must first ensure that employees trained as emergency responders in 1910.120(q) also meet the competencies listed in 1910.120(e)(2). Employers may find that they need to provide some additional training to bring HAZMAT Technicians into compliance with the standard, such as informing these employees of the names of personnel responsible for site safety and health.
As you are aware, the employees who work "on plant property," i.e. at the facility, only need to meet the training requirements listed in 1910.120(q)(11)(ii). The training requirements for these employees are relaxed because the people who work at the facility regularly are familiar with the hazards of substances that they work with, know how and where to evacuate, and can perform other standard operating procedures unique to the facility.

Question #2: Do all post-emergency response participants require medical surveillance?

No. Subparagraph (q)(9) requires that "members of an organized and designated HAZMAT team and hazardous materials specialists shall receive a baseline physical examination and be provided with medical surveillance as required in paragraph (f) of this section." Additionally, any emergency response employees who exhibit signs or symptoms which may have resulted from exposure to hazardous substances during the course of an emergency incident must be provided with medical consultation.

Post-emergency responders to oil spills who are covered by paragraph (f) may be more difficult to assess medically. Some petroleum "fractions" become relatively benign while others may continually pose a health threat. The employer's medical program should address the points covered in paragraph (f), taking into account the health hazards that employees will encounter. Subparagraph (f)(2)(ii) requires that all employees who wear a respirator for 30 days or more a year, or as required by 29 CFR 1910.134, shall be included in the medical surveillance program. This would apply to any post-emergency responder who falls into this category.

Example B

Question #3: Is the training that the additional response personnel (i.e., company personnel not part of the original response) have sufficient enough to allow them to participate in the post-emergency clean-up?

All employees who respond to a release of a hazardous substance that is not on plant property must be trained in accordance with 1910.120(q)(6) to respond to the initial emergency, and in accordance with 1910.120(e) to perform post-emergency response clean-up. See the answer to question #1.

Question #4: Do all post-emergency response participants require medical surveillance?

No. Please refer to question #2. The medical surveillance requirements for post-emergency response personnel in Example B are identical to those in Example A.

Example C

Question #5: Is the training that the additional response personnel (company employees) have sufficient enough to allow them to participate in the post-emergency clean-up?

Petroleum products are covered by OSHA as "hazardous substance" in the scope of 29 1910.120(a)(3). Even though the toxicity and flammability of petroleum products are reduced after the first few hours of a spill into water or soil, it is still considered a hazardous substance, or a hazardous waste.

OSHA issued a compliance directive, OSHA Instruction CPL 2-2.51, regarding the post-emergency response clean-up of low-hazard hazardous waste (enclosed).

Question #6: Do all post-emergency response participants require medical surveillance?

No. Refer to the answer to question #2. The medical surveillance requirements for post-emergency response participants in Example C are identical to those in examples A and B. However, if there is no inhalation hazard, there would not be any need for the employees to wear a respirator, so subparagraph (f)(2)(ii) would not apply in this example.

Example D
Question #7: Is a hazardous materials technician also considered a HAZMAT team member when everyone at the facility is trained to the 24-hour hazardous material technician level?

No. A hazardous materials technician would not necessarily be considered a HAZMAT team member when everyone at the facility is trained to the 24-hour hazardous material technician level. With respect to medical surveillance coverage, job duties and responsibilities determine whether an employee is a HAZMAT team member, not their job title. If the employer’s emergency response plan (or intent) requires an employee to respond to emergency releases of hazardous substances as part of an organized “team” of responders, then that employee would be considered a member of a HAZMAT team.

The medical surveillance requirements for members of HAZMAT teams are intended to protect workers who respond to emergency releases as part of their job duties and responsibilities. A hazardous materials technician who is only expected to respond to incidental releases in his or her immediate work area would not be considered a member of a HAZMAT team.

Question #8: Are these hazardous materials technicians required to receive medical surveillance per the requirements of a HAZMAT team member?

A HAZMAT Technician would be required to receive medical surveillance if he or she fell into one or more of the following categories: (1) member of an organized HAZMAT team; (2) exposed to hazardous substances at levels above the permissible exposure limit (PEL) or other published exposure levels, without regard to the use of respirators for 30 days or more a year; or (3) wears a respirator for 30 days or more a year or as required by 1910.134. Additionally, any employee who is injured, becomes ill or develops signs or symptoms due to possible overexposure from an emergency response is required to receive medical consultation and treatment.

In Example D, the employer’s emergency response plan must address worst-case release scenarios with standard operating procedures for responding to these releases. As stated above, if the job responsibilities of an employee require that he or she respond to a broad spectrum of releases throughout the facility as part of an organized “team”, then the employee must be included in the medical surveillance program. The employee need not be specifically labeled as a “HAZMAT team member” to be covered by the medical surveillance requirements.

Question #9: If the employer has a designated HAZMAT team (example, a subset of the fire brigade), but also trains other employees to the 24-hour hazardous materials technician level, are these other employees subject to the medical surveillance requirements of a HAZMAT team member?

No. If the employer has a designated HAZMAT team that will be called in to respond to emergency releases of hazardous substances, then these employees would be covered by the medical surveillance requirements of the standard. Other hazardous materials technicians who would be asked to respond only to incidental releases in their immediate work area would not require medical surveillance.

We hope this information is helpful. If you have any further questions please contact the Office of Health Compliance Assistance at (202) 219-8036.

SOURCE LETTER

March 24, 1993

Dear Ms. C:

We have several questions regarding OSHA 29 CFR 1910.120 (HAZWOPER) on post-emergency response training requirements and the medical surveillance requirements for hazardous materials technicians (HMT) and post-emergency responders.

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Logic would dictate that company employees that are trained to safely stop, contain, and control a hazardous substance should be able to clean up that substance regardless of the cleanup location, provided site/incident specific procedures are covered. Our review of the preamble and interpretive letters from OSHA indicates that the use of trained company emergency responders from company facilities other than the spill site for post-emergency clean-up is not clearly addressed. Consider the following examples:

Example A:

An oil production company has a number of separate gathering and treatment facilities.

Each facility processes crude oil and, depending on their location, the crude oil may contain hydrogen sulfide.

All employees in each facility have received identical training in the following areas:

- Hazard Communication 1910.1200;
- Emergency Training Under 1910.1200;
- Employee Emergency and Fire Prevention Plans 1910.38;
- Respirator Training for Self-Contained Breathing apparatus (SCBA) 1910.134;
- HAZWOPER 24-hour Hazardous Materials Technician 1910.120(q)(6)(iii);
- Additional Safety/Health Training Focusing on Hydrogen Sulfide

Emergency Scenario:

A crude oil spill containing hydrogen sulfide occurs at one of the company sites.

The on-site employees respond and stop, control and contain the release and, once the emergency is over, initiate clean-up.

The facility supervisor realizes that additional assistance will be needed for the clean-up and requests help from another nearby company facility.

These additional company employees (with the training indicated above) report to the spill site.

Additional on-site training is given, which includes the following:

- site/incident specific health and safety orientation;
- a review of the facility's emergency procedures;
- a review of the site safety and health plan.

On completion of the above, the additional company personnel assist the facility personnel in the post-emergency clean-up.

[Note: It should be understood that these "offsite" employees are trained to respond to the same exact incident and perform the same work with the same material with the same precautions, PPE, etc., and would be considered workplace employees had the incident occurred at their work facility.]

Questions:

1. Is the training that the additional response personnel (company employees) have sufficient enough to allow them to participate in the post-emergency clean-up?

2. Do all post-emergency response participants require medical surveillance?

Example B:

Same company operation and employee training is described in Example A.
Emergency Scenario:

The spill is caused by a leak of crude oil containing hydrogen sulfide in a pipeline not on company property.

HMT-trained company employees from the closest company facility respond, contain and control the leak and initiate clean-up.

Other company employees, with identical training to the responders as described above, are called in to assist with the clean-up. These employees come from one or more company facilities as described above.

Additional site/incident specific training as described in Example A is given.

Questions:

3. Is the training that the additional responders (i.e., company personnel not part of the original response) have sufficient enough to allow them to participate in the post-emergency clean-up?

4. Do all post-emergency response participants require medical surveillance?

Example C:

Same setup and emergency scenarios as Examples A and B except the spilled crude oil did not contain hydrogen sulfide, and the clean up involved weathered crude with no inhalation hazard.

Questions:

5. Is the training that the additional response personnel (company employees) have sufficient enough to allow them to participate in the post-emergency clean-up?

6. Do all post-emergency response participants require medical surveillance?

The definition of the duties of a hazardous materials technician and a HAZMAT team member appear similar, but a distinction is made for HAZMAT team members for medical surveillance. Consider the following example:

Example D:

An employer trains his employees to the 24-hour hazardous materials technician level in the event the employee needs to stop, prevent, or aggressively control and contain the release of a hazardous substance in his facility (but not necessarily in his immediate work area).

The employer will not establish a separate, designated team to respond to releases.

Questions:

7. Is a hazardous materials technician also considered a HAZMAT team member when everyone at the facility is trained to the 24-hour hazardous material technician level?

8. Are these hazardous materials technicians required to receive medical surveillance per the requirements of a HAZMAT team member?

9. If the employer has a designated HAZMAT team (example, a subset of the fire brigade), but also trains other employees to the 24-hour hazardous materials technician level, are these other employees subject to the medical surveillance requirements of a HAZMAT team member?
RECoRD ' ID 92070801

STANDARD NUMBER 1910.120 (a)(2), (a)(2)(l), (c), (e)(3), (f)(1), (f)(2), (f)(2)(l), (f)(4)(l), (f)(7)(l)(A), Appendix C; 1910.134 (b)(10); 1910.96(c); 1910.97(a)(2)

INFORMATION DATE 19920708

ABSTRACT If hazardous waste operations training entails the use of a respirator, the employer must comply with OSHA's Respiratory standard, 29 CFR 1910.134. Medical surveillance is required by 1910.120 for employees for whom the only known hazard exposure is radiation, if they are to be exposed above the permissible exposure limit for more than 30 days a year.


July 8, 1992

Dear Mr. F:

This is in response to your inquiry of March 26, concerning the Occupational Safety and Health Administration's (OSHA's) Hazardous Waste Operations and Emergency Response final rule (HAZWOPER), 29 CFR 1910.120.

Your questions concern clarification on medical surveillance requirements of the HAZWOPER standard. Briefly, the employer must make medical examinations and consultations available to employees under the following conditions:

- The employee has or may be exposed at or above the permissible exposure limits (or, where there is no permissible exposure limit, above the published exposure limit) for 30 or more days a year;
- The employee's job duties will require wearing a respirator for more than 30 days a year;
- The employee becomes ill or develops signs or symptoms due to possible overexposure;
- The employee is a member of a HAZMAT team.

Please note that one of the purposes of medical surveillance is to determine the employee's fitness for duty, including the ability to wear required PPE under conditions expected at the work site, for example, temperature extremes (1910.120(f)(4)). It is important to ascertain that an employee who will be expected to wear a respirator is medically fit to do so (e.g. the employee does not have a heart, lung or other medical condition which would make wearing a respirator inadvisable).

We will answer your specific questions in the order that you presented them:

1. OSHA Regulation 1910.120, paragraph (f)(l) states:

"Employers engaged in operations specified in paragraphs (a)(1)(i) through (a)(1)(iv) of this section, and not covered by (a)(2)(iii) exceptions, and employers of employees specified in paragraph (q)(9) shall institute a medical surveillance program in accordance with this paragraph."

Is it intended that medical surveillance be a pre- or co- requisite to training if training entails donning up and using a self-contained breathing apparatus as part of the training?
If hazardous waste operations training entails the use of a respirator, the employer must comply with OSHA's Respiratory standard, 29 CFR 1910.134. HAZWOPER's paragraph (a)(2)(i) states that where there is overlap between OSHA standards, the provision that is more protective of employee safety and health will apply.

In this case the Respiratory Protection standard does offer more guidance to the employer. OSHA interprets 1910.134(b)(10), which discusses employees' medical status before using a respirator, in the following manner:

a. The Respiratory Protection standard requires employers to determine, through the services of a local physician, the general employee health requirements of performing specific work assignments while wearing a specific type of respirator before employees use the respirator.

b. The standard advises employers against assigning employees to tasks requiring the use of respirators unless it has been determined that they are physically able to perform the assigned work and wear a respirator.

The use of respirators, however brief, may cause anxiety, heat stress, and difficulty in breathing. Employers who expect their employees to use respiratory protection are strongly encouraged to ensure employees are completely physically fit to use respirators.

2. OSHA Regulation 1910.120, paragraph (q)(11)(ii)8 states:

"Medical Surveillance Programs. Workers handling hazardous substances may be exposed to toxic chemicals, safety hazards, biological hazards, and radiation. Therefore, a medical surveillance program is essential to assess and monitor workers' health and fitness for employment in hazardous waste operations and during the course of work..."

Is it necessary for personnel who work in hazardous waste areas and are working in a radiation environment where radiation is the only known hazard to be in a medical surveillance program?

First, let us correct the citation in your question. The paragraph you cited, (q)(11)(ii), discusses clean-up procedures during a post emergency response. The section you actually quoted is found in paragraph (8) of Appendix C, which provides compliance guidelines to assist employers and employees.

Medical surveillance is required by 1910.120 for employees for whom the only known hazard exposure is radiation, if they are to be exposed above the permissible exposure limit for more than 30 days a year. The permissible exposure limits for ionizing and non-ionizing radiation are described in 29 CFR 1910.96 and 1910.97 respectively.

We hope this information is helpful. If you have any further questions please contact the Office of Health Compliance Assistance at (202) 523-8036.

SOURCE LETTER

March 26, 1992

Dear Ms. C:

Johnson Controls World Services Inc., is submitting the following inquiries for your clarification of the subject matter.

Inquiry No. 1: OSHA Regulation 1910.120, Paragraph (f)(i) states:
"Employers engaged in operations specified in Paragraphs (a)(1)(i) through (a)(1)(iv) of this section and not covered by (a)(2)(iii) exceptions and employers of employees specified in Paragraph (q)(9) shall institute a medical surveillance program in accordance with this paragraph."

Is it intended that medical surveillance be a pre- or co-requisite to training if training entails suiting up and using a self-contained breathing apparatus as part of the training?

Inquiry No. 2: OSHA Regulation 1910.120, Paragraph (q)(11)(ii) states:

"Medical Surveillance Programs. Workers handling hazardous substances may be exposed to toxic chemicals, safety hazards, biologic hazards, and radiation. Therefore, a medical surveillance program is essential to assess and monitor worker's health and fitness for employment in hazardous waste operations and during the course of work ..."

Is it necessary for personnel who work in hazardous waste areas and are working in a radiation environment where radiation is the only hazard be in a medical surveillance program?

Please send your response to the undersigned at the following address:

381 Eniwetok Drive, MS-JQAP
Los Alamos, NM 87544

If you have further questions, please contact the undersigned or G. W. at (505) 667-4581.
OSHA's intent in 1910.120 (e) is that employees should complete their refresher training within twelve months of their initial training. The time frame within which it would be necessary to provide extensive retraining for an individual who has not worked in the hazardous waste industry for some time must be determined on a case-by-case basis. Supervisory retraining is not necessary where the employee can demonstrate competency in the required training topics, but a supervisor new to a site would need site-specific training.

INTERPRETATION 29 CFR 1910.120 (e)(3), (e)(4), (e)(8)

March 12, 1993

Dear Mr. H:

This is in response to your inquiry of December 2, concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) regulation, 29 CFR 1910.120.

Your questions concern clarification on lapsed refresher training. We will answer your questions in the order stated in your letter.

1. In cases where an individual has completed a 40-hour or 24-hour health and safety training for hazardous waste sites, when must a refresher course be completed (e.g. if an individual completes the 40-hour or 24-hour course in March of one year, must the individual complete a refresher by March of the following year or may the individual complete the refresher any time during the following calendar year even up to December 31?)

OSHA's intent is that employees should complete their refresher training within twelve months of their initial training, although we do understand that courses may be missed due to unavoidable circumstances. The employee who misses a refresher training should attend the next available refresher course. Please note that in some states operating their own OSHA-approved state safety and health program, refresher training must be completed by the exact anniversary of the initial training. As you may be aware, 23 states operate their own state program.

2. In cases where an individual has not worked in the hazardous waste industry for a period of time, how does the individual become eligible to return to work on a hazardous waste site (i.e., may an individual be qualified to return to hazardous waste work with only a refresher course or must the individual take the 40-hour or 24-hour course over)? What are the time requirements to differentiate these different cases: Example: Is two years between training too long? Is it okay to just complete a refresher if the individual has been without training for seven or more years?

The time frame within which it would be necessary to provide extensive retraining for an individual who has not worked in the hazardous waste industry for some time must be determined on a case-by-case basis. Individual retention of information must be considered, which may be influenced by the duration of prior work in the hazardous waste industry. Workers who had very little work experience before leaving can not be expected to retain their skills to the extent a seasoned employee would. Another important factor is the applicability of past course content and work experience to the specific work activities and safety and health issues of hazardous waste sites to which the employee is to be assigned. Employees need not retrain in those training elements for which they can demonstrate competency.
In many cases, a two year absence from hazardous waste work would not necessitate repetition of the course materials of the initial 24-hour or 40-hour training, and refresher training by itself could be sufficient. However, a seven year absence would clearly indicate a need for extensive retraining, with particular attention given to new technology. In such cases the employer may wish to consider repeating the initial training course. In some cases, for example an individual who has been away for three or four years, the employer may determine that, while repeating all of the training materials in the initial course is not warranted, more than eight hours of training would be required to refresh the employee's knowledge and skills. In all cases employees new to a site would need to be given appropriate site-specific training before site entry and be given supervised field experience at the site to which they are assigned.

3. In cases where an individual has completed the required 40- or 24-hour training and supervisory training, then either no longer works as a supervisor or leaves the hazardous waste industry for a period of time and then returns to become a supervisor, must the individual retake the supervisory training?

Retraining is not necessary where the employee can demonstrate competency in the required training topics. Please note, however, that many of the training topics which are to be included in the supervisory training are site-specific in nature. Therefore, regardless of past supervisory training, a supervisor new to a site would need training to become familiar with the following, as required in paragraph (e)(4) of the standard:

"the employer's safety and health program and the associated employee training program, personal protective equipment program, spill containment program, and health hazard monitoring procedure and techniques."

4. In the case of individuals who after completing 40-hour or 24-hour training for whatever reason do not complete the required supervised field work requirement, is there any time limit placed on these individuals to complete this required supervised field work before their training becomes outdated and must be retaken?

Please refer to the answer to question (b). Supervised field experience is needed to reinforce knowledge and skills learned during training. Optimally, the individual should receive their supervised field experience as soon as possible after training. A case by case determination should be made, based on an assessment of the individual's competency in the specified training topics.

We hope this information is helpful. If you have any further questions please contact us at (202) 219-8036.

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**SOURCE LETTER**

December 2, 1992

Dear Sir:

In the performance of our work on hazardous waste sites and operations, questions have arisen about the allowable length of time between the completion of a 40-hour or 24-hour hazardous waste health and safety training course and 8-hour refresher courses. Specifically, the questions are as follows:

1. In cases where an individual has completed a 40-hour or 24-hour health and safety training for hazardous waste sites, when must a refresher course be completed (e.g. if an individual completes the 40-hour or 24-hour course in March of one year, must the individual complete a refresher by March of the following year or may the individual complete the refresher any time during the following calendar year even up to December 31)?

2. In cases where an individual has not worked in the hazardous waste industry for a period of time, how does the individual become eligible to return to work on a hazardous waste site (i.e. may an individual be qualified to return to hazardous waste work with only a refresher course or must the individual take
the 40-hour or 24-hour course over)? What are the time requirements to differentiate these different cases? Example: Is two years between training too long? Is it okay to just complete a refresher if the individual has been without training for seven or more years?

3. In cases where an individual has completed the required 40 or 24-hour training and supervisory training, then either no longer works as a supervisor or leaves the hazardous waste industry for a period of time and then returns to become a supervisor, must the individual retake the supervisory training?

4. In the case of individuals who after completing a 40-hour or 24-hour training for whatever reason do not complete the required supervised field work requirement, is there any time limit placed on these individuals to complete this required supervised field work before their training becomes outdated and must be retaken?

I would appreciate receiving your comments at your earliest convenience.
ABSTRACT When a government agency sets contractor performance standards on hazardous waste site, OSHA would only enforce its own standards. OSHA would require personal protective equipment (PPE) to be selected based upon personal protective monitoring designed to determine whether exposures exceed the PELs. Monitoring dust to assess lead exposure is acceptable only for the preliminary evaluation prior to site entry but must be followed by direct sampling for lead according to 1910.1025 (d)(6).

INTERPRETATION 29 CFR 1910.120 (a), (a)(2)(i), (c), (g)(1), (g)(1)(ii), (g)(2), (h)(1)(i), (h)(2), (h)(3); 1910.1000 (a); 1910.1025

March 24, 1993
Dear Mr. E:

This is in response to your inquiry of August 28, 1992, concerning the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) regulation, 29 CFR 1910.120. We apologize for the delay in this response. OSHA has reviewed your approach to preparing health and safety plans (HASP) for hazardous waste sites, and has the following comments.

Your reference to EPA "developing additional guidelines which dictate using their guidelines in our HASP" is unclear. OSHA has general legal authority to regulate worker safety and health in the areas you are discussing. While there are exceptions in which EPA has authority to regulate safety and health, they do not appear to be relevant to your case.

However, if an entity such as your firm enters into a contract agreement with an agency such as the EPA or the New York State Department of Environmental Conservation (DEC) to carry out more stringent safety and health procedures than those required by OSHA but which meet OSHA's requirements, you would be required by your contract to follow those stricter measures.

The New York State DEC would be the proper source for definitive interpretations of their requirements. Our understanding from your letter is that DEC is requiring that airborne concentrations of particulate matter of 10 micrometers (um) or less in size be limited to one hundred fifty micrograms per cubic meter (150 ug/m(3)), as measured over a 15-minute period in accordance with the U.S. Environmental Protection Agency's (EPA) perimeter management (PM(10)) standard. If dust levels exceed this value, the employer must initiate additional dust suppression procedures and corrective actions, including the use of additional personal protective equipment. If dust suppression techniques fail to achieve the 15-minute, 150 ug/m(3) limit, work must be suspended until "appropriate corrective measures are approved to remedy the situation."

EPA's preamble to the 1987 final ambient air quality standard makes clear that the PM(10) limit, which is expressed as a 24-hour average limit on fugitive dust levels, is designed to minimize the risk of mortality and respiratory disease among sensitive individuals who are exposed to excessive dust levels for prolonged periods of time:

"The intent of the margin of safety requirement (used by EPA to develop the standard) was to direct the Administrator to set air quality standards at pollution levels below those at which adverse health effects have been found or might be expected to occur in sensitive groups....The portions of population at

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greatest risk of premature mortality associated with particulate matter exposures...include the elderly and persons with pre-existing respiratory or cardiac disease." [52 FR 24641, 24643]

EPA also based their standard, in part, on evidence that small children and persons with chronic bronchitis may be adversely affected by prolonged exposure to dust levels exceeding the 150 ug/m(3) PM(10) standard.

In your letter, you express your opinion to OSHA that, while the PM(10) standard may have application for fenceline monitoring, it should not be enforced as a worker safety and health action level. OSHA would only enforce its own standards. The use of the PM(10) standard expressed as a 15-minute short-term action level for nuisance dusts would provide a conservative protective measure for workers at hazardous waste sites.

There is some concern that application of this action level for nuisance dusts may result in the use of personal protective equipment in areas where there is little or no possibility of exceeding a permissible exposure limit for workers. OSHA would only require that personal protective equipment (PPE) be selected based on personal air monitoring designed to determine whether employee exposures to hazardous substances are likely to exceed OSHA Permissible Exposure Limits (PELs) or other published exposure levels. As stated in 29 CFR 1910.120(g)(2), PPE selection for substances for which there is no OSHA PEL shall be based on published exposure levels in the National Institute for Occupational Safety and Health (NIOSH) "Recommendations for Occupational Health Standards" or, if none is specified, in the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values and Biological Exposure Indices," for substances for which there is no published exposure level, other published exposure information may be used. The site safety and health officer should take care to choose PPE so that employees are neither inadequately protected from exposures to hazardous substances, or conversely, must wear an excessive amount of protective equipment, thus needlessly exposing employees to hazards caused by heat stress, excessive fatigue, and restricted vision.

Accordingly, the approach taken by Blasland and Bouck appears reasonable, provided that safety and health plans also call for personal monitoring of exposure to hazardous substances at intervals sufficient to characterize employee exposures. OSHA's final determination of compliance would be based on a thorough evaluation of the safety and health plan with respect to its specific site application.

The employer must start by performing a thorough site characterization and analysis to determine the nature and extent of the actual hazards on a site. The information which must be gathered is set forth in 29 CFR 1910.120 paragraph (c). As a result of this process, the employer is able to designate uncontaminated areas, which are low hazard areas where no special protective equipment is necessary, and contaminated, or "hot" zones, where use of personal protective equipment (PPE) will be required. Since site conditions and activities or weather conditions may change, the employer must have an ongoing site characterization program, in which zone boundaries are modified accordingly.

Monitoring, as required in paragraph (h) of the standard, is an essential element of the ongoing site characterization process. Monitoring during initial site entry shall identify substances present in excess of the PEL (or other published exposure levels) as well as any other dangerous conditions. Once clean-up operations have begun, personal monitoring is required for all employees likely to be exposed above the PEL (or other published exposure levels). Representative sampling techniques may be used. Since selection of PPE is to be based on the results of the monitoring, methodologies which provide adequate information on actual exposure levels for individual contaminants must be used.

In the example you describe, you use the OSHA PEL for lead as your starting point and work backwards to calculate an acceptable dust exposure level, or "action level." The validity of this approach assumes that the lead content of the dust remains constant. Therefore this approach is acceptable only for the preliminary evaluation prior to site entry by employees, and must be followed by a detailed evaluation, including appropriate personal monitoring with direct sampling for lead.

Paragraph (a)(2)(i) of the HAZWOPER standard states that where 1910.120 overlaps with another OSHA standard, the provision which is more protective of employee safety and health shall apply. 29 CFR 1910.1025, Occupational Exposure to Lead, paragraph (d)(6) requires that personal monitoring be
conducted quarterly for employees exposed above the PEL, and once every six months for employees exposed above the action level. Additional monitoring is required whenever there has been a change which may result in new or additional exposures. 29 CFR 1910.120(h)(3) requires that monitoring be conducted whenever it is suspected that levels may have risen over the PEL since prior monitoring; for example, monitoring is indicated whenever work begins on a different portion of the site or a different type of operation is initiated. You must determine which of these requirements is more protective for the site in question.

Further, dust is, itself, a potential health hazard. (As you are aware, OSHA has established a PEL for dust, referred to as Particulates Not Otherwise Regulated (PNOR).) The PELs for PNOR are as follows: 15 mg/m³ for total dust and 5 mg/m³ for the respirable fraction. You must perform a separate evaluation for dust exposure using the PEL for PNOR.

You seem to imply that OSHA has regulated safety and health at hazardous waste sites for only 2 years. This is not the case. OSHA has exercised authority in these workplaces prior to the promulgation of HAZWOPER through the use our general industry and construction industry safety and health regulations, including standards specifying permissible exposure limits.

We hope this information is helpful. If you have any further questions please contact us at (202) 219-8036.

SOURCE LETTER

August 28, 1992

Dear Ms. C:

Attached for your review and comment is a document provided by the New York Department of Environmental Conservation (NYDEC) to the DECs Regional Hazardous Waste Remediation Engineers, etc., regarding dust suppression and monitoring programs at inactive hazardous waste sites. Please note that the DECs October 27, 1989 correspondence reference a July 1, 1987 EPA ambient air quality standard for particulate.

Over the last years we have prepared several health & safety plans (HASP) for investigative type projects in the State of New York. For projects involving potential generation of contaminated dust, and, consequently, potential occupational exposure to such dust, our HASPs contain provisions for dust monitoring, suppression, and the use of personal protective equipment (PPE). In all cases our HASPs reference 1910.120 as the basis for HASP development, and also 1910.1000 (or related substance specific standard) for the Permissible Exposure Limit (PEL). Our HASP will also contain a dust "action level" which is calculated utilizing the known soil concentration of the contaminant of concern and a safety factor. For example, a soil containing 10,000 mg/kg of lead will have a calculated action level of 1.0 mg/m³, calculated as follows:

\[
\text{Action Level (mg/m}^3\text{)} = \frac{(10^6 \text{ mg/kg}) \times (\text{PEL mg/m}^3)}{\text{(Soil Concentration mg/kg) \times (Safety Factor)}}
\]

In calculating the 1.0 mg/m³ action level, a safety factor of 4 was utilized.

Although the OSHA PEL for lead is 0.05 mg/m³ (which our calculated action level is based on), our interpretation of the calculated action level is that it would take at least 1.0 mg/m³ of total dust in the air to achieve a dust level which could potentially contain the lead PEL of 0.05 mg/m³. By calculation it would take approximately 0.750 mg/m³ total dust in air (using the same safety factor of 4) to achieve the OSHA action level of 0.03 mg/m³ lead in the dust cloud. In this case, our HASP would require we start work in Level C, monitor the ambient air with a aerosol monitor, and if dust levels did not exceed the calculated 1.0 mg/m³ action level, we would downgrade to Level D. Our HASP would also contain a number of dust suppression measures for controlling dispersion should the 1.0 mg/m³ action level be exceeded. Our
HASP would also include personal monitoring for lead as well as pre-site entry and post-site activity biological monitoring in the form of blood lead and zinc protoporphyrin.

The issue I have concerns the interpretation of 1910.120, specifically in regard to the use of PELs as required by 1910.120; and our response when another agency such as the EPA develops an additional guideline which dictates using their guideline in our HASP. AS per the attached document, the EPA has developed a PM(10) for fugitive dust whether contaminated or not of 0.15 mg/m(3). The same os considered "requisite to protect public health," and was actually developed as a 24-hour time weighted average. The guidance section of the documents suggests that the 0.15 mg/m(3) be considered a 15-minute STEL.

We believe that the PM(10) may have application for fence line monitoring, providing a guideline for perimeter monitoring and subsequent dust control; however, we do not believe such a guideline should be developed an enforced by an agency other than OSHA as a health and safety action level for inclusion in a HASP. HAZWOPER is very specific in that the regulation is contained in 29 CFR and not 40 CFR (other than Part 311 for employees of State and local government in States without approved State plans). In addition, HAZWOPER addresses occupational safety and health which requires a HASP and the use of OSHA PELs and not air quality standards initially developed by other agencies for purposes not related to occupational exposure.

Although OSHA has been in existence for over 20-years, the effective date of HAZWOPER is just slightly over 2-years old. Prior to OSHA entry into regulating safety and health of hazardous waste workers, many proactive companies conducting waste site activities utilized EPA standard operating procedures (SOPs) as guidance for worker safety and health. In many cases, and despite their absence in HAZWOPER, this is why we continue to see (and struggle with) the organic vapor action levels contained in EPA field operation manuals and used for upgrading levels of protection. Due to that prior guidance, many companies still do not understand the need to conduct personal air sampling upon potentially exposed site employees for comparison to corresponding PELs. Consequently, total organic vapor levels recorded with direct reading instrumentation are continuously and incorrectly used for comparison to established OSHA PELs. Many of these companies continue to take their lead from EPA despite OSHA role in regulating hazardous site worker safety and health in 1910.120.

Consequently, the use of the EPA PM(10) dust suppression and monitoring action level as an occupational health and safety exposure limit is an additional example of the need for clarification in the rules and responsibilities among the agencies. We believe that without additional clarification, such non-occupational guidance numbers will continue to be pulled off the shelf and incorrectly applied to worker safety and health. Despite the EPA PM(10) being more restrictive than our calculated action level in the above example, the use of the this EPA number is being inappropriately utilized. It should be noted that while the above example used lead (a well regulated, toxic metal having a low PEL), we have worked at other sites having materials considered as Particulate Not Otherwise Classified (PNOC) which OSHA currently regulates at 15 mg/m(3) in which the DEC has instructed us to again use the PM(10) as a particulate action level for dust suppression and Level C protection. The mandated use of inappropriate guidance numbers by agencies such as DEC will continue to create confusion and inconsistency in protecting the safety and health of waste sit workers.

What role and authority does an agency such as DEC have with respect to mandating exposure guidelines in HASPs developed in accordance with OSHA's 1910.120? In complying with 19.120, how should an environmental consulting firm balance the need to develop a HASP that complies with OSHA requirements (that protect the safety and health of field workers), with contradictory mandates from environmental agencies having project oversight, but not safety and health expertise?

I would appreciate your review of these issue. While the same may border on the "inter-agency gray area," and not be easily answered by reference to a specific section in HAZWOPER, they are nevertheless issues which need to be clarified. I believe that such issue can also impose additional liability on environmental firms without justification by imposing unnecessary exposure control levels, creating the need for unnecessary levels of protection which in turn create street on client relationships and also convey unnecessary messages to neighboring communities. Thank you for you time and input.
OSHA Instruction STD 1-1.13

April 16, 1984

Subject: Fall Protection in General Industry: 29 CFR 1910.23(c)(1), (c)(3), and 29 CFR 1910.132(a)

A. Purpose. This instruction clarifies the applicability of 29 CFR 1910.23(c)(1), (c)(3) and 1910.132(a) where employees are exposed to falling hazards while performing various tasks including maintenance from elevated surfaces.

B. Scope. This instruction applies OSHA-wide.

C. Action. Regional Administrators and Area Directors shall ensure that the interpretations in F. and the guidelines in G. of this instruction are adhered to when inspecting general industry facilities where employees are exposed to the hazard of falling from elevated surfaces.

D. Federal Program Change. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

   1. Ensure that this change is forwarded to each State designee.
   2. Explain the technical content of the change to the State designee as requested.
   3. Ensure that State designees are asked to acknowledge receipt of this Federal program change in writing, within 30 days of notification, to the Regional Administrator. This acknowledgment should include a description either of the State's plan to implement the change or of the reasons why the change should not apply to that State.
   4. Review policies, instructions and guidelines issued by the State to determine that this change has been communicated to State program personnel. Routine monitoring shall also be used to determine if this change has been implemented in actual performance.

E. Background. Adjudicated decisions concerning employee exposures to falls from elevated surfaces have been inconsistent. As a result, OSHA has cited employers for violations of 29 CFR 1910.23(c)(1) or of Section 5(a)(1) of the OSH Act when employees have been engaged in various tasks which include inspections, service, repairs and maintenance on elevated surfaces such as, but not limited to, conveyers, tops of machinery and other structures not normally considered "walking and working" surfaces.

   1. Although 29 CFR 1910.23(c)(1) requires the safeguarding of "platforms" used by employees, there has been disagreement as to when an "elevated surface" constitutes a platform within the meaning of the standard.
   2. In at least one instance (General Electric Company v. OSHRC, 583 F. 2d 61 (2d Cir. 1978)) the court noted the need for increased clarity of definition OSHA regarding its intended meaning of the term "platform". Therefore, this instruction clarifies and defines the conditions and circumstances under which a "platform" is deemed to exist, and where the requirements of 29 CFR 1910.23(c) apply.

F. Interpretation. The following interpretations are established for uniform enforcement and application of G. of this instruction.

   1. Platforms are interpreted to be any elevated surface designed or used primarily as a walking or working surface, and any other elevated surfaces upon which employees are required or allowed to walk or work while performing assigned tasks on a predictable and regular basis (See 29 CFR 1910.21(a)(4) for definition of "platform").
   2. Predictable and regular basis means employee functions such as, but not limited to, inspections, service, repair and maintenance which are performed:

      a. At least once every 2 weeks, or
      b. For a total of 4 man-hours or more during any sequential 4-week period (e.g., 2 employees once every 4 weeks for 2 hours = 4 man-hours per 4-week period).
OSHA Instruction STD 1-1.13 (cont.)

G. Guidelines. The following guidelines are established for the uniform enforcement of 29 CFR 1910.23(c)(1), 1910.23(c)(3) and 1910.132(a) regarding employee exposures to falls from elevated surfaces.

1. Employee exposures to falls from platforms (interpreted in F.1.) are regulated by the following OSHA standards:
   a. 29 CFR 1910.23(c)(1), or
   b. 29 CFR 1910.23(c)(3).

2. In situations where the safeguarding requirements of G.1. are not applicable because employees are exposed to falls from an elevated surface other than a predictable and regular basis, personal protective equipment as required by 29 CFR 1910.132(a) or other effective fall protection shall be provided.
ABSTRACT
This interpretation letter discusses compliance with the personal protective equipment (PPE) requirements of a plan to control workplace exposure to AIDS and hepatitis B. The letter also responds to a petition on behalf of the (Organization) requesting that OSHA issue an emergency temporary standard (ETS) to control workplace exposure to acquired immune deficiency syndrome (AIDS) and hepatitis B. OSHA determined that an ETS at this juncture was not warranted, but concluded that the supporting data was enough to initiate rulemaking. The following steps are planned: wide distribution of existing guidelines, enforcement of existing regulations, targeting of inspections, promulgation of a standard, and ongoing education programs.

INTRODUCTION

29 CFR 1910.132

OCT 21, 1987

This is in response to your September 19, 1986, petition on behalf of the (Organization) requesting that the Occupational Safety and Health Administration (OSHA) issue an Emergency Temporary Standard (ETS) to control workplace exposure to acquired immune deficiency syndrome (AIDS) and hepatitis B. You based your petition for an ETS on your conclusions that exposure to these viral diseases presents a grave danger to workers and that compliance with existing voluntary guidelines is lacking in health care worksites.

We agree that exposure to the viruses that cause hepatitis B and AIDS presents a well-recognized occupational hazard to workers who are exposed to contaminated blood or body fluids, especially those who are at risk of needle stick or other similar injury. We also recognize the gravity of the illnesses that may result from these viral infections. For these reasons, the Agency is acting immediately to ensure that both employers and employees are aware of these hazards and that steps are taken to protect workers from them.

The Department of Labor has formed a working group with the Department of Health and Human Services to develop an extensive and far-reaching plan regarding occupational exposure to the viruses that cause AIDS and hepatitis B. We plan to take the following steps:

• First, the Department of Labor and the Department of Health and Human Services will be issuing a notice to ensure that all interested parties are fully aware of the applicable guidelines, particularly those issued by the Centers for Disease Control.

• Second, we are currently implementing a targeted inspection program under the Occupational Safety and Health Act (the OSH Act) to determine compliance with existing OSHA standards, such as 29 CFR 1910.132 (personal protective equipment) and with Section 5(a)(1) of the OSH Act.

• Third, we will initiate rulemaking under Section 6(b) of the OSH Act. We have opened a docket (H-370) to receive all information on this subject; it now contains more than 250 entries. We intend to publish an Advance Notice of Proposed Rulemaking to gather information such as current protective practices and numbers and occupations of workers at risk.

• Fourth, the Department of Labor and the Department of Health and Human Services will jointly begin an education effort that will provide education, training and technical assistance to both employers and employees.

Wide distribution of the existing guidelines, enforcement of existing regulations and targeting of inspections will result in increased protection now; promulgation of a standard and ongoing education programs will ensure continuation of that protection in the future.

Vol. 1-415
OSHA has decided that an emergency temporary standard is not warranted in this case. Under Section 6(c) of the Occupational Safety and Health Act, the Secretary shall issue an ETS, to be effective immediately upon publication in the Federal Register, without going through public rulemaking proceedings, when he finds the following:

(A) that employees are exposed to grave danger from exposure to substances or agents determined to be toxic or physically harmful or from new hazards, and

(B) that such emergency temporary standard is necessary to protect employees from such danger.

The ETS remains in effect for a six-month period during which time the Secretary must complete work on a final standard. The ETS is then superseded by a standard promulgated under the OSH Act's regular rulemaking procedures, set forth in Section 6(b), which include notice and comment and an opportunity for public hearing. The Secretary must complete these proceedings and issue a permanent standard within six months of the issuance of the ETS.

Based on our analysis of the issues raised in your petition and the underlying data, OSHA finds that the currently available data are not sufficiently definitive in certain critical areas to support the need for an ETS, particularly in light of the extremely stringent statutory criteria for issuing and sustaining such an action. Courts have held that the ETS is to be "treated as extraordinary power to be used only in limited situations in which grave danger exists and then to be 'delicately exercised.'" Asbestos Information Association v. OSHA, 727 F.2d at 415, 422 (5th Circuit 1984)

OSHA's decision not to promulgate an emergency temporary standard is not based on a lack of evidence for "grave danger." Both diseases can have a fatal outcome, and the mortality rate for AIDS is extremely high. Our preliminary assessment indicates that hepatitis B infections occur in 10,000 to 12,000 high risk health care workers as a result of occupational exposure. Of these, 2,500 to 3,000 will develop clinical symptoms, 500 to 600 will be hospitalized, and 200 to 300 will die each year from fulminating hepatitis or cirrhosis or primary hepatocellular carcinoma. AIDS presents a new hazard in the workplace environment, one that was not recognized prior to 1980. To date, approximately 13 health care workers have been infected with the AIDS virus through occupational exposure. An AIDS researcher was recently reported to have become infected as the result of occupational exposure bringing the total number of individuals with clearly documented, occupationally derived AIDS virus infections to 14.

Despite these preliminary findings, our analysis indicates that an emergency temporary standard is not "necessary" to achieve the desired goal of significantly reducing disease. To ascertain what measures are necessary, OSHA has been required to consider what it could achieve without issuing an ETS. Asbestos Information Assn. v. OSHA, 727 F.2d at 426, 427 In this case, the steps outlined above, including enforcement of current occupational health and safety standards and Section 5(a)(1) of the Act at health care worksites, will reduce the transmission of bloodborne diseases. Risks will also be reduced as employees are made more aware of proper protective measures through the information, training and education programs that are being instituted by the Departments of Labor and Health and Human Services. OSHA does not know to what extent these and other actions will reduce risks, but the Agency believes the reduction may be substantial.

Secondly, the Agency believes that issuing an ETS is inappropriate because reducing exposures to bloodborne diseases raises unique issues which can best be resolved through OSHA's ordinary rulemaking procedures under Section 6(b) of the Act. For example, reducing exposure to bloodborne biological hazards presents an entirely different dilemma than reducing exposure to an airborne toxic chemical that is the usual subject of an OSHA health standard. In the case of toxic chemicals, a worker may don a respirator and achieve an immediate reduction in exposure. This is the usual abatement method that OSHA has required in an ETS regulating a toxic substance. Obviously, the use of a respirator to protect against hepatitis B and AIDS would be both inappropriate and ineffective.

Although there have been many programs for controlling infections at health care worksites, these voluntary programs alone have not been sufficient to resolve the problems. For example, most hospitals already have both written programs and either individuals or committees who are charged with the responsibility for infection control, but the incidence of occupationally acquired hepatitis B remains high. Moreover, there is evidence that there may be a low rate of acceptance of the hepatitis B vaccine even when it is available free of cost to the employee.
After thoroughly considering these factors, the Agency has concluded that full rulemaking, with an opportunity for full public participation, can better explore the solution to these problems and will result in a more effective final standard that achieves our mutual goal of protecting worker health.

In summary, OSHA concludes that the data support initiation of Section 6(b) rulemaking, but do not call for the issuance of an emergency temporary standard. In addition, we feel that our program as outlined above will further reduce risk and provide protection for workers. Therefore, we are denying your petition for an ETS. While OSHA is undertaking Section 6(b) rulemaking, it will be enforcing existing regulations and providing information and guidance to both employers and employees concerning the hazards and some appropriate protective measures.

As OSHA begins the development of a proposed rule for occupational exposure to hepatitis B and AIDS, we look forward to continued cooperation with your organization. Any additional data, comments or other assistance that you provide to us will be placed in the docket and will be considered as part of this rulemaking effort.
RECORD ID 1979

STANDARD NUMBER 1910.132
INFORMATION DATE 860821

ABSTRACT This interpretation letter addresses OSHA's policies and procedures concerning the use of personal protective equipment (PPE). Information on OSHA's policy on the use of personal protective equipment (PPE) may be found in some pertinent sections from the OSHA Field Operations Manual (FOM), 1910, Subpart I (Personal Protective Equipment) of the General Industry Standards and an OSHA pamphlet entitled "Personal Protective Equipment".

(NOTE: 1910 Subpart I has not been amended since issuance.)

INTERPRETATION 29 CFR 1910.132
AUG 21, 1986

MEMORANDUM
SUBJECT: OSHA's Policies and Procedures Concerning the Use of Personal Protective Equipment

In response to your request regarding OSHA's policy on the use of personal protective equipment (PPE) in lieu of engineering controls, I have attached some pertinent sections from the OSHA Field Operations Manual (FOM), a copy of Subpart I (Personal Protective Equipment) of the General Industry Standards and an OSHA pamphlet entitled "Personal Protective Equipment" which you may find useful.

The FOM is an OSHA inspections guidance manual that Compliance Safety and Health Officers (CSHO's) use when conducting inspections. It contains OSHA policies and procedures which affect the field. Those policies and procedures have been reviewed and evaluated for feasibility of field implementation and formulated into field instruction directives to ensure effective and consistent operations across regional lines.

While the FOM is an internal OSHA document, and as such may be changed with relative ease, the policies and procedures contained in the FOM are based, in large part, on the information gathered and the legal issues resolved during the standards setting process.

To further assist you, the following is a brief summary of the most relevant portions of the attached material from the FOM:

OSHA recognizes three primary means of controlling workplace exposures -- engineering controls, administrative controls and work practice controls. Wherever such controls are either unfeasible, or until such time as they can be fully and properly implemented, personal protective equipment (PPE) must be used to reduce exposures to the lowest levels practicable (see the General Industry Standards, 29 CFR Part 1910, Subpart I). Wherever the normal control methodology is feasible but remains insufficient to reduce exposure, these controls must be used in conjunction with PPE to reduce exposures as much as possible (see page III-67, section E.6.e). An important distinction is made on page III-65, where it is noted that administrative controls (i.e., procedures which limit exposure by means of altered work schedules or practices) do not include the use of PPE (see section E.6.b.). The employer must institute further engineering or administrative controls, as these become feasible, if it is likely that their use will lower exposures with PPE (see page III-68, section E.6.b.(2), and page IV-35, sections C.5.d. and e.). The intent here is to ultimately completely obviate the need for PPE.

In general, OSHA encourages the use of engineering controls (to the extent feasible) as the most effective means of employee protection. Administrative controls are viewed as the next best control technology (see page III-69, section E.8.c(1)). Under certain rare circumstances PPE may be used as an interim abatement measure, but only with the approval of the National Office (see page III-69,
section E.8.a.(1)). One of the conditions of such use of PPE is the availability of adequate personal protective devices.

In addition, interim protection via appropriate PPE may, in some cases, be permitted in conjunction with short-range administrative controls to allow the employer to provide prompt temporary protection until the long-range engineering and/or administrative controls can be implemented (see page III-69, section E.8.b.(1)). Where it can be adequately documented that no feasible engineering or administrative controls are available, full abatement with PPE may be permitted (see page III-71, section E.8.c.(7)).

The hierarchy of controls described in the FOM is a well-established, long-term OSHA policy based on good industrial hygiene practice. A statement to this effect can generally be found in the preamble to any of the OSHA rules developed and promulgated in strict compliance with the Administrative Procedures Act. The OSHA Solicitor's Office may be a useful contact for additional information on the legal issues involved.
MEMORANDUM
May 10, 1985

SUBJECT: OSHA Pesticide Jurisdiction

This is to request clarification of OSHA's jurisdiction or responsibilities with respect to pesticides application and/or treatment when such pesticides do not contain arsenic. Also, is there a distinction with respect to jurisdiction contingent upon whether we are dealing with pesticide treatment after infestation or initial application of a pesticide to preclude infestation?

The enclosed memorandum from our (City) Area Office posed related questions which we have decided deserve your attention.

Enclosure:

May 10, 1985

MEMORANDUM
SUBJECT: OSHA-EPA Jurisdiction in the Application of Pesticides
Recently, in response to a complaint, I conducted an inspection of (wood preserving company). There was a two man crew engaged in the treatment of utility poles wherein several holes are drilled into the base of the pole and the employee pours chloropicrin into the hole. The chemical protects the pole against insect infestation. The company was cited for a serious violation of 29 CFR 1910.132(a) for not ensuring that gloves were worn by the employee handling the chloropicrin. The company has contested, stating that EPA has sole jurisdiction.

Mr. B contacted the national office in this regard, and was told that EPA has jurisdiction over the application of pesticides. I am also aware of OSHA Directive CPL 2-2.22 which states that arsenic containing pesticides and wood preservatives are not within the scope of 29 CFR 1910.1018.

I contacted Mr. F, Environmental Protection Specialist with the (city) EPA office to find out what is being done in (state). He explained that the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) gives EPA jurisdiction over the application of pesticides, however there are limitations as to their enforcement of worker safety and health. Essentially, EPA enforces that the applicator follows label directions. Often, the label will not be specific as to the safety and health provisions necessary to protect the worker. He said he would prefer it if OSHA had jurisdiction because EPA does not have "that good of a grip" on worker safety and health.

This could have wide-spread consequences in our activities as there have been several occasions where I have cited companies, primarily grain and bean elevators, warehouses and seed treatment plants for deficiencies in the protection of employees engaged in the application of pesticides. None have contested, so a question as to our authority has not arisen until this time.

We need clarification as to where OSHA's duty lies in ensuring worker safety and health in the application of pesticides.

May 3, 1985

Thank you for your letter of April 12, 1985, regarding the chemical, N- (or 1-) methyl-4-phenylpyridinium chloride (MPP salt).

As you may know the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requires the Environmental Protection Agency (EPA) to register all pesticides to be marketed in the United States, based upon data adequate to demonstrate that their use will not result in unreasonable adverse effects on people or the environment.

You are concerned that MPP salt may cause adverse health effects and believe that paraquat, an herbicide, may have wastes or be contaminated with MPP salt or closely related compounds. Since MPP has never been registered by EPA, we have no data on it. Paraquat, on the other hand, is a registered pesticide which has undergone a thorough review by the Agency. However, we have no indication that MPP salt is present in the formulation. If you have some evidence to the contrary and can provide us with scientific references, we would appreciate receiving them.

You also refer, in your letter to the (state) Commissioner of Health, to the possible exposure of workers to MPP salt. Exposure of workers to hazardous substances in the manufacturing process comes under the jurisdiction of the Occupational Safety and Health Administration (OSHA). You may wish to correspond directly with OSHA regarding your concerns.

April 12, 1985

Enclosed is some information on a developmental herbicide distributed some years ago by (chemical company). The active ingredient, MPP salt, was recently reported as a bioconversion product of a contaminant found in a synthetic substitute used by heroin abusers, who developed an irreversible Parkinson's disease-like condition. The most recent work seems to indicate that MPP may be the active compound causing this condition.

In addition to the problem outlined in the letter to the Commissioner of Health in (state), paraquat, a major herbicide in very large use, might have wastes, or be contaminated itself, with traces of MPP or very closely related compounds. Consequently, I bring these two problems to your attention to get prompt action to investigate both (chemical company) and oil company for possible health effects in workers and the plants' wastes sites for possible exposures to others.
April 12, 1985

I have enclosed information to indicate that a very toxic chemical, N(or 1-)-methyl-4-phenylpyridinium chloride (MPP salt) was in all probability made in your State by (chemical company). The enclosed Science reports indicate that this compound is involved in causing a disease which is very similar to if not identical to Parkinson's. While this chemical never became a commercial herbicide, developmental quantities were prepared by (chemical company) and distributed so that some got to (state). Consequently, some production wastes and probably left-over product were disposed possibly in a manner causing exposures to people. Therefore, I advise your department to initiate an investigation to find how the wastes of this chemical were disposed in order to remove them if necessary from any site where human exposures might still be occurring. If they are found to have gotten spread on soil, they probably are permanently bound and not hazardous.

Also I suggest workers, who were involved in making the chemical and the formulated product at the plant, ought to have careful health examinations for Parkinson's disease symptoms. The company may still have data from its toxicity studies that can show if oral or dermal exposures in test animals causes effects similar to those found when MPP precursor was injected. I will appreciate hearing from your department especially if some indications of symptomatology show up in workers. Action by your State will be needed before much consideration by E.P.A. or other Federal agencies will be taken with this old compound that never became commercial.
STANDARD NUMBER 1910.132(a)
INFORMATION DATE 910307

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ABSTRACT The U.S. Army Dental Activity Command violated 29 CFR 1910.132(a), Requirements for Personal Protective Equipment, which requires an employer to ensure the adequacy of personal protective equipment, including its proper maintenance and sanitation. The Command permitted its Dental Health Care Workers to launder their potentially contaminated garments at home. The OSHA standard does not permit the Army to differentiate among patients of unknown infectious status and thereby apply fewer precautions in certain cases.

INTERPRETATION 29 CFR 1910.132(a)
MAR 7 1991

Dear Mr. G:

The enclosed correspondence relates to a Notice of Failure to Abate which was issued to the U.S. Army Dental Activity Command at (City, State) This correspondence was forwarded to us by the Occupational Safety and Health Administration (OSHA) (City) Regional Office.

The Notice was issued to the Command for allowing its Dental Health Care Workers (DHCWs) to launder their potentially contaminated garments at home. According to 29 CFR Part 1910.132 (a), Requirements for Personal Protective Equipment, an employer "shall be responsible to assure (the) adequacy, including proper maintenance and sanitation of such (protective) equipment." OSHA interprets this regulation to mean that the personal protective equipment is to be kept under the employer's control. The Command's practice of allowing the DHCWs to launder their garments at home constitutes a violation of this OSHA standard.

OSHA does not agree with Colonel C's statement in his letter of May 15, 1990 (copy enclosed), that "clothing worn during the treatment of known disease carriers is handled in a prudent manner." Based on the application of "universal precautions," it is unacceptable for the Department of the Army to believe that it can differentiate among patients of unknown infectious status and thereby apply fewer precautions in certain cases.

The possible risk to DHCWs and their families, as well as others who might be exposed to the potentially contaminated garments is of great concern to OSHA. Please advise OSHA within 60 days from the date of this letter when we can expect this hazard to be abated.
This interpretation letter states that the use of "Sankey Toe Caps" instead of safety shoes is acceptable. The use of "safety shoe substitutes" in lieu of safety shoes meets the intent of the standard for providing, using, and maintaining personal protective equipment.

(NOTE: This standard has not been amended since issuance.)

SUBJECT: Request for Interpretation-(company) 29 CFR 1910.132(a) Protective Equipment

This is in response to Mr. L's letter dated March 23, 1976, which requests clarification on the use of "safety shoe substitutes", in lieu of safety shoes.

A review of the OSHA standards 29 CFR 1910.132(a) and 29 CFR 1910.136 has been made. If safety shoes are provided, they must meet the requirement as indicated in 29 CFR 1910.136, which is ANSI Z41.1-1967.

If "safety shoe substitutes" are provided in lieu of safety shoes, the employer has met the intent of the standard and is providing foot protection. As indicated in 29 CFR 1910.132(a) personal protective equipment shall be provided, used, and maintained. The standard does not require specific use of safety shoes as foot protections.

It is suggested, however, that every effort be made to encourage both the employer and the employee to develop a safety shoe program which requires safety shoes as they provide a more reliable protection.
Since it is impossible for OSHA to generalize as to what minimum precautions must be provided during this or other EPA over-water activities, each worksite circumstance must be evaluated separately. Obviously, consideration will also be given in such situations to protect the employees from suspect contaminants under all potential exposure. It is further noted that a prudent employer in assessing a situation will provide precautionary measures, as necessary, beyond those specifically required by OSHA or other standards when a hazard justifies more extensive safeguards.
ABSTRACT
This interpretation addresses the hazards requiring foot protection and the criteria for protective footwear. OSHA's standards requiring foot protection (1910.132(a) and 1910.136) do not address a worker's occupation, but rather addresses the hazard. Foot protection need not be worn unless it is determined that a foot hazard exists in the form of objects likely to be dropped or likely to fall on the worker's foot. The design of safety shoes is covered under 1910.136.

(NOTE: These standards have not been amended since issuance.)

INTERPRETATION 29 CFR 1910.132(a); 1910.136

October 4, 1984

This is in response to your letter of September 10, concerning the Occupational Safety and Health Administration's (OSHA) requirements for safety shoes.

Enclosed are copies of the appropriate sections of the Occupational Safety and Health Standards for General Industry. Section 1910.132, page 270, and Section 1910.136, page 276, are the regulations dealing with foot protection. As you will note, the requirement to wear foot protection (Section 1910.132(a)) does not address a worker's occupation, but rather addresses the hazard. The activities and environment of the worker must be evaluated to determine if there is a foot hazard in the form of objects likely to be dropped or likely to fall on his or her feet. If this hazard is present, then foot protection must be worn.

Section 1910.136 addresses the design of safety shoes and requires them to meet American National Standard for Men's Safety-Toe Footwear, Z41.1-1967. This standard requires that the safety shoes meet a compression test and an impact test. It does not specify the means by which to reinforce the shoe to pass the test. Steel toe boxes are the prevalent means used, however, fiberglass has been used in some cases. The best method to determine if the requirement has been met is to look for a marking in the show "ANSI Z41.1." As a matter of information, OSHA does accept protective footwear designed and marked in accordance with later editions of the ANSI Z41.1 standard.
This interpretation letter provides clarification for the use of gloves around rotating equipment.

Unless gloves create a greater hazard by their use, it is not a violation to use gloves while operating rotating equipment.

INTERPRETATION 29 CFR 1910.132 (a)

This interpretation is in response to your letter dated August 20, 1993, asking if it is a violation for a machinist to wear gloves while operating rotating equipment.

29 CFR 1910.132 (a) (Personal Protective Equipment; General requirements) requires that "personal protective equipment for eyes, face, head, and extremities . . . shall be provided, used, and maintained in a sanitary and reliable condition wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact."

Unless the use of gloves create a greater hazard to the operator, it is not a violation to use them while operating rotating equipment. Management is responsible for evaluating each situation to ensure that such work practices do not increase the hazard for employees.

However, it is our recommendation that gloves not be worn when employees must work in proximity to rotating parts or equipment.
ABSTRACT The Personal Protective equipment standard, 29 CFR 1910.132 requires employers to protect employees exposed to sun radiation as a result and nature of the job against overexposure to the sun's radiation. Any effective form of protection such as sunscreen, wide-brim hats and long-sleeve clothing may be used.

INTERPRETATION 29 CFR 1910.132 (a)

June 2, 1992

Dear Mr. G:

This is in response to your letter of February 5, to Mr. R. T. T., Assistant Regional Administrator, Seattle Regional Office, the Occupational Safety and Health Administration (OSHA), concerning rule 29 CFR 1910.132(a) pertaining to personal protective equipment. You are requesting clarification as to whether the rule requires employers to provide sunscreen for protection to employees exposed to sun radiation as a result and nature of the job.

The rule does require employers to protect such employees against overexposure to the sun's radiation. It does not necessarily require employers to use sunscreen to protect their employees, however. Any other effective form of protection such as wide-brim hats and long-sleeve clothing may be used. On the other hand, sunscreen must by used if a situation should exist where it is the only effective means of protection.

We appreciate the opportunity to clarify this matter for you.

SOURCE LETTER

February 5, 1992

Dear Mr. T,

Pursuant to our meeting at your office on February 4, 1992, I am sending this letter to request a clarification and opinion on 1910-132 General requirements under Subpart I - Personal Protective Equipment of OSHA's rules and regulations.

Specifically, does this rule require employers provide employees who are exposed to the environment as a result and nature of the job sunscreen as part of the protective equipment.

Further, please find attached information provided by The American Academy of Dermatology on the issue of skin cancer.

Thank you for your assistance. Should you have any questions or comments, feel free to call me at (206) 621-8324. Please send any correspondence to me at 1120 Spring, #1302, Seattle, WA 98104.

I look forward to hearing from you.

Vol. 1-426.2
This memorandum addresses the wearing of contact lenses while welding. The wearing of contact lenses during welding is acceptable if the eye protection parameters described in 1910.252(b)(2) are followed. Normal eye protection must be worn in accordance with ANSI Z87.1-1968.

(NOTE: The standard has not been amended since issuance.)

INTERPRETATION
29 CFR 1910.133(a)(3); 1910.252(b)(2)

October 22, 1982

MEMORANDUM

SUBJECT: Wearing of Contact Lens While Welding

REFERENCE: Region Memorandum dated September 27, 1982.

The OSHA policy regarding the wearing of contact lens in industry is consistent with the attached position set forth by the National Society for the Prevention of Blindness (Secretariat for the ANSI Z87.1 - Committee).

If properly protected in accordance with the OSHA Standards applicable to eye protection (ANSI Z87.1-1968) during the welding operation the use of contact lenses is acceptable. The exception to this would be where the welding process may produce gas or vapors that could be harmful to employees wearing contact lenses.
OSHA Instruction CPL 2-2.29

October 27, 1980

Subject: 29 CFR 1910.134(e)(5)--Respirator Fit-Testing

A. Purpose. This instruction provides guidance regarding enforcement policy for the respirator fit-testing requirement under 29 CFR 1910.134(e)(5).

B. Scope. This instruction applies OSHA-wide.

C. Action. OSHA Regional Administrators and Area Directors shall assure that violations resulting from use of improper fit-testing procedures are cited as set forth in F. of this instruction.

D. Federal Program Change. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this change is forwarded to each State designee.

2. Explain the technical content of the change to the State designee as requested.

3. Ensure that State designees are asked to acknowledge receipt of this Federal program change in writing, within 30 days of notification, to the Regional Administrator. This acknowledgment should include a description either of the State’s plan to implement the change or the reasons why the change should not apply to that State.

4. Review policies, instructions and guidelines issued by the State to determine that this change has been communicated to State program personnel. Routine monitoring activities (accompanied inspections and case file reviews) shall also be used to determine if this change has been implemented in actual performance.

E. Background.

1. 29 CFR 1910.34(e)(5) states, in part: “Training shall provide the men an opportunity to handle the respirator, have it fitted properly, test its face-piece-to-face seal, wear it in normal air for a long familiarity period, and, finally, to wear it in a test atmosphere.”

2. Because of a request for compliance procedures for this provision, litigation activities, and other considerations, it is necessary to clearly establish enforcement policy on the respirator fit-testing issue.

F. Enforcement Policy. When issuing citations for violations of 29 CFR 1910.134(e)(5), use the following guidelines:

1. Respirators must be fit-tested.

2. A “test atmosphere” must be applied to assess the quality of fit.

3. The fit-test must be applied to each and every employee required to wear a respirator.

4. The fit-testing requirement applies to all negative pressure respirators including SINGLE-USE RESPIRATORS.

5. The “test atmosphere” must be applied using recognized qualitative fit-testing procedures utilizing isoamyl acetate, irritant smoke, etc.; or quantitative fit testing using DOP, NaCl, etc.

6. Items F.1-5. above shall be part of the training required in 29 CFR 1910.134(b)(3), “The user shall be instructed and trained in the proper use of respirators and their limitations.”

7. Cite “serious” when F.1-5. above is not implemented, if the toxic substance is classified as “serious” in the Industrial Hygiene Field Operations Manual (IHFOM), Chapter II.
G. Inquiries. Inquiries concerning this instruction may be addressed to the U.S. Department of Labor, Occupational Safety and Health Administration, Division of Occupational Health Programming, Washington, D.C. 20210, Telephone: 202-523-8033.
ABSTRACT
This interpretation responds to a letter of April 1, 1991 concerning the fit testing of positive-pressure, face-fitting respirators. Presently, OSHA does not require employers to fit test positive-pressure, face-fitting respirators. Although fit-testing this type of respirator would be good practice, OSHA is unaware of any protocols that have been demonstrated to provide sufficiently reliable results. Any change in this OSHA position will depend on the outcome of public hearings on the proposed revision of standard 29 CFR 1910.134 for respiratory protection, which is still under preparation, but expected in Summer 1991.

INTERPRETATION
29 CFR 1910.134(e)(5)

APR 15, 1991

This is in response to your letter of April 1, concerning the fit testing of positive-pressure, face-fitting respirators.

You asked (1) whether the Occupational Safety and Health Administration (OSHA) requires employers to fit-test this type of respirator, (2) what method OSHA recommends, and (3) if OSHA intends in the near future to require the fit-testing of positive-pressure respiratory protective equipment.

Presently, OSHA is not requiring employers to fit-test positive-pressure, face-fitting respirators. Although it would be good practice to fit-test this type of respirator, we are unaware of any protocols that have been demonstrated to provide sufficiently reliable results.

We anticipate that any future change in our position on the fit-testing of positive-pressure respiratory protective equipment will depend on the outcome of public hearings on the proposed revision of standard 29 CFR 1910.134 for respiratory protection. The proposed revision of 29 CFR 1910.134 is still under preparation.

SOURCE LETTER
April 1, 1991

Dear Sirs:

Over the past several months we have received a number of questions regarding the necessity to fit test positive pressure, face-fitting, respirators. Many corporations are increasing their use of positive pressure respirators wherever appropriate to ensure the highest possible protection for their employees. All of these corporations have extensive fit-testing programs for negative-pressure, air-filtration respirators and would like to know what OSHA expects when positive-pressure respiratory protective equipment is used.

Therefore I would like to ask:

(1) Does OSHA now require that positive-pressure, face-fitting respiratory protective equipment be fit-tested?

(2) If OSHA requires, or encourages, the fit-testing of positive-pressure respiratory protective equipment, what method does it recommend, and where can a copy of it be obtained?

(3) Does OSHA intend in the near future to require the fit-testing of positive-pressure respiratory protective equipment?
The National Institute for Occupational Safety and Health (NIOSH) has been concerned about the potential hazard from the failure of the (company) high pressure hoop-wrapped aluminum cylinders for self-contained breathing apparatus and has sent out a user warning notice. There are about 17,000 (company) cylinders which have not been identified and sent back to the factory for retrofitting. Compliance and consultation personnel should inform employers who are SCBA users about the air cylinder problem during inspection and consultation activities. The cylinders carry an identification label as CTC/DOT-E-7235 4500 (company) or DOT-E-7235 4500 (company).

(Note: 1910.134 has not been amended since 1984.)

**INTERPRETATION**

29 CFR 1910.134(e)

JAN 22, 1986

MEMORANDUM FOR REGIONAL ADMINISTRATORS

ATTN: ARA's for Technical Support

SUBJECT: NIOSH User Warning Notice on (company) Air Cylinders for Self-Contained Breathing Apparatus (SCBA)

We have received a letter from Mr. M, Director of the Division of Safety Research of the National Institute for Occupational Safety and Health (NIOSH), concerning the failure of the (company) 4500 high pressure hoop-wrapped aluminum cylinders for self-contained breathing apparatus (letter attached).

The cylinder manufacturer has instituted a recall program to correct the cylinder rupture problem. NIOSH has also sent out a user warning notice to address the issue. At present, there are still about 17,000 (company) cylinders which have not been identified or sent back to the factory for refitting.

Since SCBA's are mainly used under conditions which are immediately dangerous to life or health, or for fire fighting, a sudden failure of these air cylinders could jeopardize the health and safety of the SCBA wearer. Please insure that our compliance and consultation personnel in your region are fully aware of the seriousness of this problem. They should inform employers who are SCBA users about the air cylinder problem during the inspection and consultation activities. These cylinders are charged to a pressure up to 4,500 psi, and carry an identification label as CTC/DOT-E-7234 4500 (company) or DOT-E-7234 4500 (company). Since SCBA manufacturers do not make their own cylinders, the (company) cylinder can be found on many different SCBA's equipped with high pressure air cylinders.

If the defective (company) cylinders have been identified, the employers should be advised to contact their SCBA's distributors.

(No date provided.)

Since the first rupture of a (company) 4500 psi hoop-wrapped aluminum cylinder occurred in 1983, the National Institute for Occupational Safety and Health (NIOSH) has been concerned over the potential hazard created by continued use of such cylinders with MSHA/NIOSH-approved self-contained breathing apparatus.

The manufacturer has, with the approval of the Department of Transportation (DOT), instituted a recall program for these cylinders, which involves installation of a steel neck ring. This neck ring should prevent ruptures from happening. However, in spite of intensive efforts by DOT, NIOSH, (company), and the several respirator manufacturers who incorporate the (company) cylinder in their MSHA/NIOSH-approved apparatus, there apparently are over 9,000 cylinders whose locations have not been identified and which...
remain unfitted with the required neck ring. Also, there are approximately 8,000 cylinders which have been located by (company) but have not been received by (company) for retrofitting.

NIOSH has issued several Respirator User Notices on this subject to approximately 9,000 organizations and persons who are users or are concerned with the use of respirators. NIOSH also sent one critical notice to all U.S. Fire Departments, using the U.S. Fire Administration mailing list. The several fire service organizations have passed this information on to their members, and the (association) (which fill cylinders for many fire departments) have been advised of the situation. Respirator manufacturers have advised purchasers of their apparatus, (company) has contacted cylinder hydro-test stations, and the Occupational Safety and Health News media has approved ample coverage of our combined efforts to reach all users of this equipment. These efforts, together with the official DOT notices, have not, as we indicated above, completed the task we originally undertook. Frankly, NIOSH is deeply concerned about the potential hazard presented to as many as 17,000 users of self-contained breathing apparatus which may incorporate (company) 4500 psi hoop-wrapped aluminum cylinders (DOT E 7235 4500) that are not equipped with neck rings.
Hypochlorite, aqueous iodine, and quaternary ammonia solution are recommended for cleaning and sanitizing respirator facepieces. A water temperature of 120° degrees Fahrenheit and an immersion time of two minutes is recommended.

(NOTE: 1910.134 has not been amended since 1984.)

We have received many inquiries concerning the need for guidelines on disinfecting of respirator facepieces which may be contaminated with human immuno deficiency virus (HIV) or hepatitis B virus (HBV). There are no OSHA guidelines for disinfecting respirator facepieces; however, the American National Standards Institute (ANSI) recommends three sanitizing solutions which have proven to be effective. These are hypochlorite, aqueous iodine, and quaternary ammonium solutions for cleaning and sanitizing respirator facepieces. ANSI gives a specific temperature (49° C or 120° F maximum) and an immersion time of 2 minutes for each sanitizing solution (see enclosed pages 36-37 from ANSI Z 88.2-1980).

During a telephone conversation with one of my staff, Dr. A of your office indicated that the above solutions were acceptable. Could you advise if the ANSI disinfecting procedure would be effective against HIV and HBV. Providing acceptable guidelines, for use of the above sanitizing solutions will be helpful to us.
STANDARD NUMBER  1910.134(a)(11)
INFORMATION DATE  870803

ABSTRACT  The (Company) supplied air respirator is not approved by MSHA and NIOSH. Users of this type of air supplied respirator will receive a citation from OSHA...

(NOTE: 1910.134 has not been amended since 1984.)


Aug 3, 1987

This is in response to your inquiry dated June 11, about a non-approved supplied air respirator, "(respirator)," made by (Company). I contacted the Testing and Certification Branch (TCB) of the National Institute for Occupational Safety and Health (NIOSH) and was informed that Mr. C, President of (company), contacted them six months ago regarding the procedure for certification but NIOSH has not officially received the "(respirator)" for testing.

The Occupational Safety and Health Administration (OSHA) only accepts respirators approved jointly by the Mine Safety and Health Administration (MSHA) and NIOSH. Since the "(respirator)" is a non-approved respirator, the users will receive citations from OSHA. The violation could be classified as "non-serious" or "serious" depending on the toxicity of the substance and the concentration to which the employee is being exposed. A "serious" citation may be issued if the non-approved respirator is used for protection against isocyanates because these compounds have a ceiling limit of 0.02 ppm and the performance of the respirator is not determined by the approving agencies.

Effective July 1, 1987, Federal OSHA resumed concurrent Federal jurisdiction of job safety and health regulations in (State) and we are performing inspections in that State. Only MSHA/NIOSH approved respirators are acceptable in (State) now.
In this interpretation letter, facts are reviewed which indicate that the powered air-purifying respirator is not suitable for protection against dust exposure during abrasive blasting operations in spite of the fact that the device has been certified by MSHA/NIOSH as an abrasive blasting respirator.

INTERPRETATION  29 CFR 1910.134(e); 1910.94(a)(5)(ii)(C); (a)(5)(iii)

Jan 21, 1987

MEMORANDUM.

SUBJECT: (company) Abrasive Blasting System

This is in response to your memorandum of November 28, 1986, concerning the acceptance of the (company) powered air-purifying respirator (PAPR) for abrasive blasting.

You indicated in your memo that the (state) Occupational Safety and Health Division (OSH) expressed concern about the acceptance of the (company) for protection against abrasives during blasting operations in spite of the fact that the device has been certified by MSHA/NIOSH as an abrasive blasting respirator (ABS). According to the testing methods prescribed in the MSHA/NIOSH respirator testing and certification regulations, 30 CFR 11, the only additional requirement for a respirator to be certified as an ABS is that the device must provide head and upper body protection against the impact of abrasives. The reason the NIOSH certified the PAPR's as ABA's is that the units met the same testing requirement for minimum air flow as continuous flow supplied air respirators (CFSAR) which are commonly certified as ABS's. Both the CFSAR and PAPR have assigned protection factors of 1,000 in OSHA health standards.

Recently, respirator performance studies conducted by NIOSH, Los Alamos and Lawrence Livermore National Laboratories as well as (chemical company) indicated that helmet type PAPR's like the (company) provide much less protection than that assigned by OSHA. As a matter of fact, (chemical company) has voluntarily downgraded the protection factor of their PAPR's such as the (respirator) to 25. It is doubtful whether the (respirator) could provide adequate protection for abrasive blasting workers at such a low level of performance when the worker's exposure to dust during the abrasive blasting operations may easily exceed the (chemical company) assigned PF.

We would like to offer these comments to the (chemical company) letter addressed to OSH dated September 24, 1986:

1. (chemical company) claims that the (respirator) delivers more air flow than that required by OSHA (this should be a 30 CFR 11 requirement since OSHA does not test or approve respirators). A recent Lawrence Livermore study on the performance of PAPR's found that the higher air flow rate of the (respirator) does not necessarily improve the protection provided by the respirator.

2. (chemical company) claims that the use of the PAPR abrasive blasting system offers mobility and reduces the possibility of tripping more than the conventional SAR abrasive blasting system. This may be true for most industrial operations. However, the worker already carries an air hose equipped with a nozzle for blasting. The additional airline for the SAR does not constitute any additional safety hazard if these two hoses are taped together.

3. (chemical company) claims that their PAPR received approval from MSHA/NIOSH for abrasive blasting in the 1970's. This does not mean that it is recommended by NIOSH for abrasive blasting. For example, NIOSH tests and approves disposable respirators for protection against asbestos dust if these respirators pass the certification tests specified in the 30 CFR 11. However, NIOSH does not recommend using such respirators for protection against asbestos. OSH should contact NIOSH for their opinion on this issue.
4. The (company) has design deficiencies. The configuration of the faceshield may contribute to a high leakage rate around the inlet covering. Furthermore, the blower motor is placed ahead of the filter element and malfunction could occur when the (respirator) is used in a dusty environment. The fragile high-efficiency filter is not enclosed in a housing to prevent breakage during handling. The dust/mist filter is the electrostatic type in which filter efficiency is reduced with increased dust loading. As OSH indicated, the air contaminants generated during blasting operations (such as lead from paint coatings) could be as high as 1,000 times the applicable OSHA PEL's. Any failure of the filter element for the (respirator) would expose the worker to high concentrations of toxic air contaminants.

In view of the above facts, it is apparent that the (company) PAPR is not suitable for protection against dust exposure during abrasive blasting operations. Since OSH could impose more stringent regulations than OSHA, there is no obvious conflict if OSH takes a stronger position on this issue.
ABSTRACT
The (respirator) selection Table E-4 in the construction standards lists five
types of respirators that are acceptable in IDLH atmospheres. Many air purifying respirators and SAR's
have Bureau of Mines (BM) approval for levels above IDLH concentrations. Bureau of Mines approvals for
certain types of respirators (i.e. air purifying and SAR) expired in 1980; NIOSH has extended these
approvals indefinitely. NIOSH will be contacted on the status of BM approvals. All BM approved canisters
are acceptable for escape use only.

(NOTE: 1910.134 has not been amended since 1984.)

INTERPRETATION
29 CFR 1910.134(c)
Jan 27, 1987

MEMORANDUM

SUBJECT: Respirator Selection Table E-4 in the Construction Standards.

The subject table lists five types of respirators that are acceptable for use in atmospheres which are
immediately dangerous to life or health (IDLH): the gas mask, the type B hose mask supplied air respirator
(SAR) equipped with a blower, the self-rescuer (mouth piece respirator), the self-contained breathing
apparatus (SCBA), and any type C SAR with a self-contained air supply or air storage receiver with alarm.
With the exception of the gas mask, these respirators are permissible under the American National
Standard Institute's standard for the Practice of Respiratory protection, ANSI Z88.2-1969, which was

Under many current OSHA health standards as well as the updated ANSI respiratory standard, ANSI
Z88.2-1980, only the positive pressure SCBA and the combination type C pressure demand SAR with a
self-contained air supply are acceptable for use under IDLH conditions. According to the use limitations
prescribed on the label, all supplied air respirators, demand SCBA and gas masks approved by
MSHA/NIOSH under the provisions of 30 CFR 11 can only be used under non IDLH conditions (refer to
NIOSH Certified Equipment List as October 1, 1985, copies have been distributed to all field offices.)

The approvals for many of the Bureau of Mines (BM) respirators such as air-purifying respirators and SAR's
expired in 1980. However, NIOSH has extended indefinitely the approvals of Bureau of Mines gas masks
which are acceptable for use at concentrations far above the respective IDLH concentrations for the toxic
substances for which the canisters are designed to provide protection. Some of the gas mask canisters
are approved for protection against many highly toxic substances such as hydrogen cyanide, hydrogen
sulfide, carbon monoxide and phosphine which have poor odor warning properties. NIOSH indicates that
they are not able to perform quality control audits to determine whether the BM approved canisters are still
meeting the performance criteria specified in the BM regulations. It would be potentially dangerous to
permit the use of these canisters under IDLH conditions.

We will contact NIOSH again on the status of BM approved gas mask canisters. In the meantime, the
Bureau of Mines approved canisters for protection against hydrogen cyanide, hydrogen sulfide, carbon
monoxide, phosphine or other toxic substances without adequate odor warning properties are acceptable
for escape only. All other Bureau of Mines approved canisters are unacceptable for use under IDLH
conditions.
ABSTRACT The employer is required to provide an appropriate respirator without cost and provide fitting instructions to employees.

INTERPRETATION 29 CFR 1910.134(e)(5)(i); (b)(11); (a)(2)

Jan 21, 1987

This is in response to your letter of December 17, 1986, concerning respiratory protective equipment.

The Occupational Safety and Health Administration (OSHA) does not approve respirators. However, we accept the use of respirators which are jointly approved by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH). The OSHA standard on respiratory protection, 29 CFR 1910.134, contains answers to your questions (copy enclosed). Your employer is required to supply the appropriate respirator to you without cost (29 CFR 1910.134(a)(2)) and employees must receive the fitting instructions from the employers (29 CFR 1910.134(e)(5)(i)).

Generally, fit testing is only required for negative-pressure respirators equipped with tight-fitting facepieces. Fit testing is not required for loose fitting respirators such as the supplied air suit and hood. Tight-fitting respirators shall not be worn when conditions prevent a good seal between the facepiece and the skin (29 CFR 1910.134(e)(5)(i)). Such conditions include beard growth, sideburns, temple pieces of glasses, or some facial abnormalities. If the conditions cannot be removed or corrected, the employer must supply a loose fitting respirator to the employee.
OSHA will accept eyeglass inserts or spectacle kits inside a respirator full facepiece if there is no interference with the facepiece seal, distortion of vision, damage to the lens of the facepiece, or physical harm to the wearer during use.

(Note: 1910.134 has not been amended since 1984.)

Interpretation 29 CFR 1910.134(e)

Apr 7, 1987

This is in response to your letter of March 6, regarding the use of eyeglass inserts or spectacle kits inside respirator full facepieces.

The Occupational Safety and Health Administration's (OSHA) position on the issue of using other than the manufacturer supplied spectacle kits or eyeglass inserts is that the National Institute for Occupational Safety and Health (NIOSH) does not perform tests to determine the acceptability of the kits or inserts. Other devices may provide a better fit than those provided by the respirator manufacturer, however, most manufacturers do not wish to make a request to NIOSH on accepting these devices.

OSHA will accept an eyeglass insert or spectacle kit if the device does not interfere with the facepiece seal and if it does not cause any distortion of vision, damage the lens of the facepiece, or cause any physical harm to the wearer during use. While we have not evaluated the lens overlay, if it meets the criteria stated above, the device may be acceptable for use with a full facepiece.
This interpretation letter provides clarification of a (chemical company) claim appearing in its sales literature indicating that their 8710 disposable respirator provides better protection than other respirators in its class. Limitations of the disposable respirators are outlined in studies made by NIOSH, Los Alamos National Laboratory, and the (chemical company).

(NOTE: 1910.134 has not been amended since 1984.)

**INTERPRETATION**

29 CFR 1910.134(c); (e)(2)

**Apr 7, 1987**

This is in response to your letter of February 17, and a (chemical company) Notice to Distributors (received at a later date) concerning a claim made by the (chemical company) on its Model 8710 disposable respirator.

The Occupational Safety and Health Administration (OSHA) does not endorse products or services. The (chemical company) claim appearing in its sales literature indicating that the 8710 disposable respirator provides better protection than the other respirators in its class is an excerpt of the preamble of the OSHA asbestos standard (copy enclosed). OSHA's statement is based on two studies conducted by the Los Alamos National Laboratory (LANL) and the (chemical company). To avoid further confusion on this issue, we would like to make the following clarifications:

1. The LANL study was conducted under the sponsorship of OSHA because there were no available data to indicate the efficiency of the commonly used negative-pressure air-purifying respirators for protection against asbestos dust. This study was conducted strictly on filter penetration without regard to facepiece fit which is a common problem for disposable respirators. Due to the time restraint, there were limited numbers of respirators selected for testing and a minimum replication of each experimental test condition. There were only two disposable respirators selected for this study, the AO 1050 and the (chemical company) 8710.

2. The (chemical company) study was a field study for the demolition of asbestos containing materials. Included in this study were three disposable respirators, AO 1050, (chemical company) 8710 and (chemical company) 9910; three elastomer facepiece respirators with fume and high-efficiency filters, company A, company B and company C; and one self-contained breathing apparatus (SCBA). OSHA did not conduct review of the (chemical company) study during the promulgation of the asbestos standards.

After a critical review of the data, we found that the study was conducted in a relatively clean environment with an average concentration of ambient asbestos fibers less than two fibers/cc. The fiber counts of the inmask samples were very low. In some samples, less than five fibers were found in 500 fields. the short sampling period, the error in counting, and the low environment concentrations may lead to high errors in calculating protection factors in this study. The location of the sampling probe on the respirator could also cause a significant error in the results. However, this issue was not addressed in the (chemical company) study. At a later date (chemical company) deleted the data for company D and company A from that study due to protests of these manufacturers about the error in interpretation of the data.

3. From a study conducted by NIOSH on the penetration of elastomeric and disposable air-purifying respirators against lead aerosols, the (chemical company) 8710 showed the highest penetration of the respirator filters tested.
OSHA has accepted the respirator 1 and the respirator 2 closed-circuit self-contained breathing apparatus (CCSBA) for fire fighting. NIOSH did not certify these devices as positive pressure rebreathers and only certifies the respirator 3 as a positive pressure rebreather. A study is being conducted by Lawrence Livermore National Laboratory on the potential safety hazard of a CCSBA in a fire environment.

(NOTE: 1910.134 has not been amended since 1984.)

Mar 24, 1987

This is in response to your letter of February 13, concerning the acceptance of a closed-circuit self-contained breathing apparatus (CCSCBA) for fire-fighting. Your concern is that there is an apparent contradiction between policies of the Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH).

In 1983, OSHA issued a memorandum which recognized two CCSCBA's manufactured by the (industry); namely, the (respirator) and the respirator 2, as positive pressure devices. OSHA accepted these devices for fire-fighting. However, NIOSH's position is that only the respirator 3 is certified as a positive pressure device with the following use limitation:

"Do not use this apparatus where there is direct exposure to open flames or in high radiant heat."

The reason for OSHA's acceptance of the (respirator) and respirator 2 for fire-fighting is that these rebreathers are positive pressure devices based on test results performed by the Lawrence Livermore and Los Alamos National Laboratories as well as NIOSH. Unfortunately, the respirator certification regulations, 30 CFR 11, did not recognize the positive pressure CCSCBA's before November 1985. Before that time, NIOSH could not certify these devices as positive pressure rebreathers. The (respirator) has a service life of one hour, however, the service life for NIOSH's certified one-hour open-circuit SCBA can only deliver 40 to 45 minutes. Long service life SCBA's are needed for certain fire situations such as in high rise buildings and inside long tunnels where the open-circuit devices would not provide a sufficient margin of safety.

NIOSH's concern is that an oxygen rebreather may become a potential fire hazard when it is used in direct exposure to flame or high radiant heat. Since only a very small amount of oxygen is leaked through the facepiece seal, this quantity may not be significant to present a hazard unless the facepiece is dislodged from the face of the wearer. In this case the wearer would be overcome by the large quantity of toxic substances in the combustion products. Oxygen rebreathers have been used by the Navy in submarines for years with no serious problems being reported.

The issue of safety of the CCSCBA's in a fire environment was a major issue of OSHA's rulemaking on fire brigades. There was insufficient information to demonstrate that a CCSCBA could become a potential safety hazard in the fire environment. OSHA recognized the lack of data in this area and has jointly funded a study with the (sta.'s).

Division of Occupational Safety and Health (OSHA) on this problem. The Lawrence Livermore National Laboratory (LLNL) is performing the study; the results will be available in the near future. As a part of this study, the LLNL sponsored a symposium on the role of closed-circuit breathing apparatus in structural firefighting in October 1984. Several speakers, who described their experience with the positive pressure CCSCBA's indicated that there were no serious incidents. The transcripts of their speeches are enclosed for your information.
We will review the LLNL data and restate our position on the acceptance of the positive-pressure closed-circuit self-contained breathing apparatus when the LLNL study becomes available. In the meantime, we maintain our position as stated in the 1983 memorandum.
Any (respirator) with a protection factor of 1,000 is acceptable for protection from exposure to Polychlorinated Biphenyls (PCB). Approved respirators would include: Self contained breathing apparatus (SCBA), continuous flow or pressure demand supplied air respirator (SAR), and powered air-purifying respirator (PAPR) equipped with high-efficiency particulate air (HEPA) filters or the combination of HEPA and organic vapor cartridges.

I would recommend the use of a half-mask PAPR equipped with a combination of HEPA filter and organic vapor cartridges for the PCB inventory or removal operation at this site because of cost, productivity, weight, and maneuverability. Use of a full facepiece does not give significantly higher protection than a half-mask for a positive-pressure respirator. Additionally, reduced peripheral vision may be expected from a full facepiece.

The performance of the tight fitting PAPR has been evaluated for OSHA by the Los Alamos and the Lawrence Livermore National Laboratories. Both studies were performed inside an environmental chamber under different stress conditions. The Los Alamos study was performed under extremes of temperature and humidity. In addition to PAPR's, SAR's, and negative-pressure half-mask and full facepiece air-purifying respirators were also selected for testing. The results indicated that the half-mask PAPR gave the same level of performance as the full facepiece pressure demand (PD) SAR under all testing conditions. NIOSH considers, in their intelligence bulletin for PCB's the PDSAR acceptable for protection against PCB's exposure. The performance of the negative-pressure air-purifying respirators degraded significantly under the combination of high temperature, humidity and workload.

The performance of both the tight fitting and the helmet type PAPR's was evaluated in the Lawrence Livermore study. The performance of each of the above was measured while the test subjects were working on a treadmill at up to 80 percent of their cardiac reserve capacity. The results indicated that the test aerosol penetration through the tight-fitting half-mask PAPR did not change with work rate.

Based on these two independent studies, I believe that any approved tight fitting PAPR would provide adequate protection to satisfy your needs. Since NIOSH recommends a protection factor of only 50 for the tight-fitting PAPR's in their Respirator Decision Logic, I would like to explain why low results were obtained in their study. The NIOSH study was conducted at a lead smelter where the performance of a tight-fitting PAPR and a half-mask air-purifying respirator was determined. The ambient concentration of lead was about ten times above the OSHA permissible exposure limit. NIOSH concluded that the PAPR did not provide 100 time more protection than the negative pressure respirator in spite of the fact that
both respirators were tested at the same workplace. I can provide you with information concerning the selection and use of the PAPR if you intend requiring the contractor to use this type of respirator.
Pressure-demand supplied air respirators are permitted for asbestos airborne concentrations up to 200 fibers per cubic centimeter -- 1000 times the current PEL. Continuous-flow supplied air respirators are permitted for asbestos concentrations up to 20 fibers per cubic centimeter or 100 times the current PEL.

To clarify the need for pressure-demand supplied air respirators, according to OSHA requirements (Federal Register of June 26, 1986) these respirators are permitted for asbestos airborne concentration up to 200 fibers per cubic centimeter. Continuous-flow supplied air respirators are permitted for asbestos concentration up to 20 fibers per cubic centimeter or 100 times the Permissible Exposure Limit.

Attached Memorandums:

Apr 2, 1985
Subject: Update of the Health Information Bulletin Concerning Portable Breathing Air Compressors

SOURCE LETTER
Jan 25, 1985
Subject: Health Hazard Information Bulletin Concerning Portable Breathing Air Compressors
(Manufacturers Advertisement)

OSHA Requires pressure-demand Respirators. NIOSH and EPA both recommend pressure-demand respirators.

For the first time, you can now use an air pump to power a pressure-demand respirator. You no longer need a big compressor. You can use a low cost, portable air pump to run a pressure-demand respirator which is approved by NIOSH.

You will benefit from lower costs and increased convenience while still complying with OSHA requirements and with the latest NIOSH and EPA recommendations.

Vol. 1-445
ASK FOR INFORMATION ON (company)'S LATEST RESPIRATORS.

SE  Pressure-Demand Airline with Escape Cartridges for $269.00;
SR  Pressure-Demand Airline with Escape Cartridges and Battery Pack for $275.00;

ASK FOR INFORMATION ON (company)'S LATEST AMBIENT AIR PUMP:

AS5...Five Outlets, 15 AMPS, Portable for $1695. This will power the (company) Pressure-Demand Respirators.
RECORD ID 1698

STANDARD NUMBER 1910.134(a)(2); 1910.1001(g)(2)(i); 1926.58(h)(2)(i); 1910.1200(e)(2)

INFORMATION DATE 1987

ABSTRACT The respirator standard applies only to the employer's own employees. The employers of contract workers and visitors must also comply with the standard on behalf of their employees. The host employer is responsible for making the hazards at the work site known to the visiting employer (1910.1200(e)(2)).

INTERPRETATION 29 CFR 1910.134(a)(2); 1910.1001(g)(2)(i); 1926 58(h)(2)(i); 1910.1200(e)(2)

May 5, 1988

Thank you for your letter of March 28, concerning compressed air pumps and respirators. I have reviewed those memos, but see no need for an update. I appreciate your literature, but, the Agency's policy is not to endorse products or services. The use of your pump is acceptable if it meets the requirements of 29 CFR 1910.134 for adequate air flow and air quality.

To clarify the need for pressure-demand supplied air respirators, according to OSHA requirements (Federal Register of June 26, 1986) these respirators are permitted for asbestos airborne concentration up to 200 fibers per cubic centimeter. Continuous-flow supplied air respirators are permitted for asbestos concentration up to 20 fibers per cubic centimeter or 100 times the Permissible Exposure Limit.

SEP 15, 1987

This is the follow up to our interim response to your letter of July 28, concerning the standard for respiratory protection, 29 CFR 1910.134.

For each employer, the standard applies only to the employer's own employees. When contract workers and individuals visiting your plant on business require respiratory protection while at your facility, their employers are the parties who must comply with the provisions of 29 CFR 1910.134. Companies must inform visiting employers of the precautions needed while in their facilities under paragraph 29 CFR 1910.1200(e)(2) of the Hazard Communication Standard. To facilitate compliance, good communication and cooperation between your company and their employers is advisable.

All provisions of 29 CFR 1910.134 apply to any employee in General Industry who may be required to wear a respirator for egress in an emergency.

It is left to licensed physicians to decide what medical procedures are appropriate for determining whether an employee is physically able to perform the work and use respirators.

The questionnaire for visitors you attached to your letter is not required by 29 CFR 1910.134. respirators are permitted for an asbestos concentration up to 20 fibers per cubic centimeter, 100 X the current PEL.

Apr 2, 1985

Subject: Update of the Health Information Bulletin Concerning Portable Breathing Air Compressors

SOURCE LETTER

Jan 25, 1985

Subject: Health Hazard Information Bulletin Concerning Portable Breathing Air Compressors
(Manufacturers Advertisement)

Important Notice for Asbestos Abatement Contractors Concerning Pressure-Demand Respirators

OSHA Requires pressure-demand Respirators. NIOSH and EPA both recommend pressure-demand respirators.

For the first time, you can now use an air pump to power a pressure-demand respirator. You no longer need a big compressor. You can use a low cost, portable air pump to run a pressure-demand respirator which is approved by NIOSH.

You will benefit from lower costs and increased convenience while still complying with OSHA requirements and with the latest NIOSH and EPA recommendations.

ASK FOR INFORMATION ON (company)'S LATEST RESPIRATORS.

SE ...Pressure-Demand Airline with Escape Cartridges for $269.00;

SR ...Pressure-Demand Airline with Escape Cartridges and Battery Pack for $275.00;

ASK FOR INFORMATION ON (company)'S LATEST AMBIENT AIR PUMP:

AS5...Five Outlets, 15 AMPS, Portable for $1695. This will power the (company) Pressure-Demand Respirators.
ABSTRACT A letter responding to a request for information on Hydro Carbide Tungsten, otherwise known as cemented tungsten carbide with cobalt binder. Information is also provided concerning the use of respiratory protective devices.

NOTE: The standard has not been amended since 1984.

INTERPRETATION 29 CFR 1910.134(a)(1); (e)(2); 1910.1000

Feb 11, 1987

Please accept my apologies for the delay in responding to your letter of December 4, 1986, in which you requested information on Hydro Carbide Tungsten, otherwise known as cemented tungsten carbide with cobalt binder.

In your letter you specifically asked for "...all research material that went into the issuance of the warning that this product has the potential for causing transient or permanent respiratory diseases including occupational asthma and interstitial fibrosis." The Occupational Safety and Health Administration (OSHA) has not issued any such warning, and does not currently regulate tungsten carbide, per se. Cemented tungsten carbide, or "hard metal," is actually a mixture of tungsten carbide, cobalt, and sometimes other metals, such as titanium, or vanadium, and metal oxides or carbides. Hard metal generally consists of about 80 percent tungsten carbide, with the cobalt content ranging from 10 - 25 percent. When the cobalt content of hard metal is greater than two percent, the National Institute for Occupational Safety and Health (NIOSH) recommended that such mixtures be subject to the OSHA standard for occupational exposure to cobalt of 0.1 milligrams of cobalt (metal fume and dust) per cubic meter of air (0.1 mg/m3) as averaged over a workshift of up to 10 hours is a 40 hour work week. This NIOSH recommendation is based on their finding that for mixtures containing in excess of two percent cobalt, the contribution of the cobalt to the overall potential health hazard is greater than that of tungsten carbide and all other components.

Because I believe that the source of the "warning" to which you have referred may be the information provided under the heading "Health Hazard Data - Effects of Overexposure," as it appears on the Company's Material Safety Data Sheet (MSDS) which you sent me, I suggest that you contact them with your request.

I have enclosed the following information on this substance which I think may be of use to you:

- An MSDS on Tungsten Carbide (cemented with cobalt binder) prepared by the Genius Publishing Corporation;

- A research paper (referenced is section 6 of the Genius Publishing Corporation MSDS) entitled "Case Reports: Cobalt Lung in Diamond Polishers" by N. Demedts, et al., published in the American Review of Respiratory Disease in 1984;

- A research paper entitled "Respiratory Disease in Tungsten Carbide Production Workers" by Dr. Nancy L. Springs, et al., published in CHEST in 1984; and


In addition, NIOSH published two documents of relevance to your request that may be helpful to you. They are the NIOSH "Criteria for a Recommended Standard for Occupational Exposure to Tungsten and Cemented
In your letter you also asked for any additional information we might have concerning the use of respiratory protective devices. I have enclosed a copy of the OSHA General Industry standard for respiratory protection, 29 R 1910.134, which delineates per requirements for the occupational use of respirators. I have also enclosed copies of two documents published by the American National Standards Institute (ANSI, a private group that published voluntary consensus standards which do not hold the force of law) that you may find useful. They are ANSI Standard %88.2-1980, "American National Standard Practices for Respiratory Protection," and ANSI Standard 88.6 - 1984, "American National Standard Practices for Respiratory Protection." In addition, a good source for basic information on respiratory protective devices is the publication entitled "A Guide to Industrial Respiratory Protection" by John A. Pritchard, developed under contract at the Los Alamos Scientific Laboratory of the University of California. This document is available for a small fee from the National Technical Information Service (NTIS) and carries the document number U.S.G.P.O. 1977-777-018/32.
OSHA has been advised that corporation is promoting the use of half-mask air purifying respirators for protection from isocyanates. Air purifying respirators may not be used as a means of protecting employees overexposed to isocyanates. The company is requested to withdraw the policy immediately.

(NOTE: This standard has not been amended since 1984.)

FEB 20, 1987

It has come to the attention of the Occupational Safety and Health Administration (OSHA) that you are promoting some models of your half-mask, air purifying respirators for use in airborne concentrations of isocyanates reaching as high as 40 mg/M3. That level is 200 times the OSHA permissible exposure limit of 0.2 mg/M3 for methylene bisphenyl isocyanate and more than 285 times the OSHA permissible exposure limit of 0.14 mg/M3 for toluene-2-4-diisocyanate.

Air purifying respirators may not be used as a means of protecting employees overexposed to isocyanates. To follow such a practice is a violation of 29 CFR 1910.134 (b)(11) of the standard for respiratory protection, which reads:

Approved or accepted respirators shall be used when they are available. The respirators furnished shall provide adequate respiratory protection against the particular hazard for which it is designed in accordance with the standards established by competent authorities.

The National Institute for Occupational Safety and Health (NIOSH) is vested with the legal authority for approving respiratory protection devices that NIOSH will approve for protection against isocyanates.

We presume that your company's policy of promoting its air purifying respirators for protection against overexposure to isocyanates is due merely to misinterpreting OSHA regulation, your company will immediately withdraw the policy.

SOURCE LETTER

August 13, 1986

Thank you for the very constructive comments about our paint spray respirator advertising in your letter of July 29, 1986. The advertisement which caused your dismay did not mention the warning sheet which is included with every paint spray respirator which we manufacture. A copy of this warning is enclosed.

As you can see our warning prohibits use of the respirator by any previously sensitized person and it also limits use of the respirators to situations which are unlikely to cause sensitizations. (According to Upjohn "At concentrations between 0 and 0.02 parts per million, there is little danger of any reaction to the isocyanates.")

If you would like a copy of the quoted document we will be happy to supply it.

1. The only serious hazard involves previously sensitized persons. We prohibit use of our respirator by such persons. Such persons are also not adequately protected by supplied air respirators.

2. Initiation of sensitization is thought to be impossible if the painter wears a good respirator. (The scientific literature shows no evidence of a wearer of an approved paint-spray respirators.)
3. Most OSHA offices allow use of air-purifying respirators for protection against isocyanate containing paints. As long as OSHA allows this usage it will continue.

4. Huge numbers of painters use no respirator at all when spraying isocyanate containing paints and would benefit tremendously from use of an air-purifying respirator.

5. Supplied-air respirators are much more awkward to use and the resulting slowing of the painters activity is a costly problem for painters.

6. Corporation has tested its paint spray respirator against Imron paint and could detect no penetration of isocyanate after the standard NIOSH PLE respirator test.
This interpretation letter states that employees with beards cannot wear respirators in IDLH atmospheres. There appear to be no respirators on the market at this time that are not based on the principle of forming a face seal for assuring protection and that are approved for IDLH conditions.

29 CFR 1910.134(e)

JUN 1, 1987

This is in response to your letter of April 6 concerning respiratory protection.

It is my understanding that some of your company’s employees with beards may enter oxygen deficient atmospheres on occasion, which is a condition immediately dangerous to life and health (IDLH). You attempted to find respiratory for these employees to use that are not based on the principle of forming a face seal for assuring protection, but were unable to find any respirators of such nature that are approved for IDLH conditions.

We have checked on the availability of such respirators, also, and unfortunately, it appears to be the case that none are on the market at this time. Accordingly, for employees with beards who must enter areas where IDLH conditions exist, there presently is no option to shaving hair underlying the sealing edges of their respirator.
STANDARD NUMBER 1

910.134(b)(11); (e)(2)

ABSTRACT

This interpretation letter applies to the 3M 8500 disposable respirator; it is not approved by MSHA/NIOSH because it does not meet the minimum performance requirements established in 30 CFR 11.

(NOTE: This standard was last amended in 1984.)

INTERPRETATION 29 CFR 1910.134(b)(11); (e)(2)

18 JUN, 1987

This is in response to your inquiry of April 2, concerning the chemical company model 8500 respirator.

Under the Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1910.134 concerning respiratory protection, only respirators approved jointly by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH) under the provision of 30 CFR 11 are acceptable for protection against air contaminants. The chemical company 8500 disposable respirator is not approved by MSHA/NIOSH because it does not meet the minimum performance requirements.

NIOSH performs all certification testing for respirators submitted by individuals. OSHA does not perform any type of respirator testing.

We are enclosing a copy of excerpts of 30 CFR 11 dealing with testing of particulate respirators (Subpart K). You may obtain a complete copy of the 30 CFR 11 from NIOSH at the following address:

NIOSH
944 Chestnut Ridge Road
Morgantown, West Virginia 26505
U.S.A.

We are unable to comment on the chemical company statement that the 8500 respirator is defined by OSHA regulation since your enclosure is missing. We will provide you with a response if you would kindly send us another copy.
Frequent inspections are necessary to insure that emergency use respirators will function when needed (1910.134(f)(2)(i)). The instructions on emergency use self-contained breathing apparatus (ESCBA) provided by company indicated that the pressure gauge of the device should be checked at least once a month and the apparatus should be operated every six months to insure that it functions correctly.

This is in response to your letter dated June 30, concerning alternative inspection and maintenance schedule for emergency use self-contained breathing apparatus (ESCBA) manufactured by the company.

The Occupational Safety and Health Administration's (OSHA) regulations on respiratory protective devices specify that all emergency respirators shall be inspected routinely before and after each use. A respirator that is not routinely used but is kept ready for emergency use shall be inspected after each use and at least monthly to assure that it is in satisfactory working condition, 29 CFR 1910.134(f)(2)(i).

Your letter indicated that these regulations do not address specifically to ESCBA's since they do not have regulators or warning devices. However, frequent inspections are necessary to insure that the emergency use respirators will function when needed. The instructions on ESCBA provided by company indicated that the pressure gauge of the device should be checked at least once a month and the apparatus should be operated every six months to insure that it functions correctly. Your proposed inspection procedures indicated that the function of the control valve and the air flow rate would be checked only once a year which is less than that recommended by the manufacturer.

Also, your letter indicated that your proposed procedure incorporates the experience and data accumulated in providing for these units over the past year. We would appreciate it if you would submit information and data to us that goes back further than the past year so we can make a proper evaluation of your request.
As you indicated at our meeting, the association required analytical methods for air contaminants are not intended to incorporate the state-of-the-art technology in instrumentation because the elimination of any currently listed analytical method may subject association to potential litigation by the user of the methods. This issue is specifically related to the use of gas detector tubes to determine the levels of air contaminants.

After discussing the detector tube problem with our air sampling expert, it was recommended that detector tubes should not be used due to poor accuracy. The detector certification program conducted by the National Institute for Occupational Safety and Health requires that all tubes must meet an accuracy requirement of +25% at 95% confidence level. However, none of the carbon monoxide tubes could meet the requirement. The closest obtainable accuracy level was +50%. It is not clear whether this magnitude of error is acceptable. I believe association should make a decision on this issue.

The ACGIH book on Air Sampling Instruments has a very good chapter on the use of gas detector tubes. It concludes that "Use of indicating tubes for analysis of toxic gas and vapor concentrations in air is a very rapid, convenient and inexpensive technique which can be performed by semi-skilled operators. These tubes are in various stages of development, and highly variable results have been obtained. Accuracy is dependent upon a high degree of skill in the manufacturer of the tubes. At present, results may be regarded as only range-finding and approximate in nature. The best accuracy which can be expected from indicator tube systems of the best types is of the order of plus or minus 25%. Since many of the tubes are far from specific, an accurate knowledge of the possible interferences depends upon the volume sampled in an irregular way. In order to avoid dangerously misleading results, the operation and interpretation should be under the supervision of a skilled industrial hygienist. A copy of this chapter is enclosed for your reference.

During our discussion, we agreed on several changes on the limits of contaminants in Grade D air. The dew point of air for use in self-contained breathing apparatus (SCBA) would be no higher than -50°F. A limit for nitrogen oxides would be set for compressed air. I would appreciate receiving a copy of that report for review. There would not be a discernible amount of oil and water in the air. Since we had such a lengthy discussion on other issues, we skipped any discussion on the limit of carbon monoxide (CO) in breathing air. The Canadian standard sets a 5 parts per million (ppm) limit for CO. The U.S. Coast Guard specifies Grade E air which has a CO limit of 10 ppm. The proposed convention standard on compressed air for medical use has set a limit of 10 ppm for CO. The current Grade D air sets a CO limit of 20 ppm. It appears that there is a trend to lower the CO content in the air. Would it be logical to reduce the CO limit of Grade D air to 10 ppm so that all breathing air consumed in the United States would have the same legal requirement for CO?
A procedure for the use of gas detector tubes is enclosed as promised at our meeting. Please understand, we did not change our position to discourage the use of detector tubes for monitoring contaminants in breathing air.

PROCEDURES FOR USING GAS DETECTOR TUBES

1. Pump Calibration: Detector tubes shall only be used with the hand pump supplied by the tube manufacturer. The pump shall be tested for leakage daily or prior to each use in accordance with the manufacturer's instructions to minimize the reading error due to air leak.

   Calibrate the detector tube pump for proper volume measurement at least quarterly with a bubble meter (100 c.c. volume) as follows:
   
   a. Connect the detector tube pump directly to the bubble meter with suitable adapter such as a detector tube.
   
   b. Wet the Inside of the 100 c.c. bubble meter with a soap solution.
   
   c. For volume calibration, experiment to get the soap bubble on the zero ml mark of the burst.

   (1) Pull the pump handle all the way our for full-pump stroke note where the soap bubble stops. It should be between the 90 c.c. and 105 c.c. marks. Allow 4 minutes for the pump to draw the full amount of air.
   
   (2) Also check the volume for 50 c.c. (1/2 pump stroke) and 25 c.c. (1/4 pump stroke) if pertinent.
   
   (3) If the error in volume measurement is in excess of 5%. The pump is not acceptable for use.

2. Concentration Calibration: A statistically significant number of detector tubes from the same lot will be selected for concentration calibration to determine the acceptability of the lot. The detector tubes must be calibrated against a known concentration of the contaminant to be generated in a dynamic chamber. The accuracy of the concentration shall not exceeded ±10%.

   Methods for generating low concentrations of gases or vapors are listed in the following references:
   
   

   Sufficient numbers of tubes must be tested at the acceptable limit of the air contaminant. The acceptable accuracy is X % at a confidence level of 95% (X is to be set by the CGA).

3. All detector tubes must be stored in a refrigerator and equilibrate to ambient temperature before use. Tubes shall be discarded after the expiration date.
RECORD ID 1799

STANDARD NUMBER 1910.134(e)(5)(i); 1910.1043(f)(2)(i)
INFORMATION DATE 860417

ABSTRACT Chemical company claims that OSHA's prohibition on the use of disposable respirators at concentrations up to 10 times the PEL versus OSHA's statement of 5 times the PEL for cotton dust would cause chemical company to suffer an irrecoverable lose of sales, close to $10 million annually. The respirator selection table permits only respirators which can pass the qualitative fit tests. The disposable dust/mist respirators cannot be fit tested by either of the fit testing methods recommended in the ANSI Z88.2-1980 standard.

(NOTE: 1910.134 was last amended in 1984; 1910.1043 was last amended in 1969.)


APR 17, 1986

The chemical company requested from the Occupational Safety and Health Administration (OSHA) as administrative stay and reconsideration of a portion of the respirator selection table for the recently promulgated cotton dust standard (copy enclosed). chemical company's main objection is that the cotton dust standard permits the use of disposable dust/mist respirators up to a maximum use limit of five (5) times the permissible exposure limit (PEL) for cotton dust. chemical company claims that OSHA's prohibition of the use of disposable respirators at concentrations up to 10 times the PEL for cotton dust would cause chemical company to suffer as unrecoverable lose of sales, close to $10 million annually.

One of the arguments which chemical company presented on the request is that the American National Standards Institute Z88.2 subcommittee on the Practice of Respiratory Protection spent considerable time on the review and discussion of the classification of disposable respirators when the 1980 version of ANSI Z88.2 respiratory protection standard was being developed (page 18 of the request). I was a member of the ANSI Z88.2 subcommittee, and I cannot remember that there was considerable time spent discussing the classification of disposable respirators. My recollection is that the respirator selection table accepts only respirators which can pass the qualitative fit tests. The disposable dust/mist respirators cannot be fit tested by either of the fit testing methods recommended in the ANSI Z88.2-1980 standard (such as the quantitative fit test, or the qualitative fit test using isoamyl acetate or irritant smoke). The qualitative fit testing method using sodium saccharin as the testing agent, developed by chemical company for use exclusively with the disposable respirators, was not available before the standard was published. Since none of the disposable respirators could pass the fit tests recommended in the standard, the issue of the disposable respirator was merely discussed at the meeting and was not addressed in the standard.

Since you were the chairman of the ANSI Z88.2 subcommittee, I would appreciate it if you would comment upon the statement made by the chemical company Company concerning how detailed the discussion was of the issue of disposable dust/mist respirators protection factors during the subcommittee meetings.

Vol. 1-458
Safety Company B requests OSHA to issue a field directive clarifying the status of the safety Company B 1030 half-mask HEPA disposable respirator for protection against asbestos. The revised asbestos standards prohibit the use of all disposable respirators without exception. OSHA will not reconsider the respirator provisions of the asbestos standards at this time. However, a proper definitional category for half-mask HEPA disposable respirators should be considered in proposed revisions to 1910.134.

(NOTE: 1910.134 was last amended in 1984. 1910.1001(g), Table 1 was last amended in 1987.)

This is in response to your letter of October 10, concerning your Model 1030 disposable half-mask air-purifying respirator equipped with a high-efficiency particulate air (HEPA) filter element. Safety Company B is requesting the Occupational Safety and Health Administration (OSHA) to issue a field directive clarifying the status of the safety Company B's 1030 for protection against asbestos. Your reasons for this request are that, although the safety Company B's 1030 (mask) is disposable, it has many of the same features as do standard elastomeric half-mask respirators.

The revised asbestos standards, based upon the rulemaking record for those standards, prohibit the use of all disposable respirators without exception. Most of the information you recently sent regarding (Company's) 1030 was not brought to our attention during the asbestos rulemaking and, therefore, was not evaluated in reaching our decisions for the asbestos standards. We do not think it is appropriate at this time to reconsider the respirator provisions of the asbestos standards. However, we do believe the use of and proper definitional category for half-mask HEPA disposable respirators such as Company's 1030 should be considered in the context of our proposed revisions to the general respirator standard, 29 CFR 1910.134. In revising that standard, we intend to consider new technology and evaluate the need to conform to the respirator provisions in each of the specific toxic substance standards to the revised general respirator standard. We believe it would be appropriate during that rulemaking to evaluate newly developed respirators such as Company's 1030, both for general use and for use under specific toxic substance standards, such as the asbestos standards.

We would urge you to submit data and other relevant evidence regarding Company's 1030 during the respirator rulemaking.
RECORD ID 2037

STANDARD NUMBER 1910.134(a)
INFORMATION DATE 820722

ABSTRACT This letter restates OSHA policy regarding application of engineering or administrative controls first to control or prevent atmospheric contamination if the PEL is exceeded. If such actions are not sufficient to reduce the contamination to permissible levels, respirators are required.

INTERPRETATION 29 CFR 1910.134(a)

July 22, 1982

Your letter of June 8, 1982, to Congressman X concerning your objection to wearing full-face respirators at the chemical corporation was forwarded to this office for direct response.

Under the Occupational Safety and Health Act of 1970, States may assume responsibility for their own occupational safety and health programs, subject to monitoring by the U.S. Department of Labor. The state has the responsibility for enforcing OSHA standards under Section 18(b) of the Act. The designated agent for enforcement is the Commissioner of the state Department of Labor. We have checked with state concerning corporation and the State advised that they have no record of corporation requesting an exemption to the wearing of full-face respirators by its employees. There is also no record of Federal OSHA have received such a request.

The OSHA standard does not require the use of respirators when the permissible exposure limit (PEL) for the air contaminant involved is not exceeded. If this PEL is exceeded, OSHA would first require administrative or engineering controls to eliminate any overexposures to employees. It is not clear from your letter what your exposure is, or if your exposure exceeds any PEL in your workplace, and, if so, if engineering or administrative controls have been considered. Since we do not have this information, we cannot answer your question specifically.
ABSTRACT  29 CFR 1910.134 requires employers to prevent employee exposure to respiratory hazard through the use of engineering controls. Only when effective engineering controls are not feasible, or while they are being instituted are appropriate respirators permissible 1910.134 (a)(1).

(NOTE: 1910.134 was last amended in 1984.)

INTERPRETATION  29 CFR 1910.134(a)(1)

Sep 6, 1985

Thank you for your letter of July 29, on behalf of your constituent, Mr. H, regarding respirators. Your letter has been forwarded to this office for a reply.

As I understand your request, Mr. H asked for a determination of the Occupational Safety and Health Administration's (OSHA) policy concerning the use of engineering control vs. the use of respiratory protection with reference to OSHA's General Industry standard 29 CFR 1910.134 entitled, "Respiratory Protection."

In the case of this standard, 29 CFR 1910.134, employers are required to prevent employee exposure to respiratory hazards through the use of feasible engineering controls. Only when effective engineering controls are not feasible, or while they are being instituted are appropriate respirators permissible. Twenty-five States and jurisdictions operate their own occupational safety and health programs subject to Federal monitoring. These States are required to adopt and enforce standards at least as effective as the Federal standards, and most adopt standards identical to the Federal. If your constituent has any specific information about State non-enforcement of standards, please ask him to contact OSHA, and we will investigate his allegations.

SOURCE LETTER

July 29, 1985

Mr. H has requested my assistance in finding out why respirators are still being used as a primary control method when there is technology available that would better protect the worker.

As you know, O.S.H.A. Title 29, 1910.134 ensures that improved technology such as Dust Extraction sanding equipment shall be used in place of respirator-type protections. I have enclosed the information we have received.
ABSTRACT  
A clarification is given on a January 25, 1985 Bulletin concerning portable breathing air compressors. A backup respirator would not be required for a combination of a supplied air respirator and a portable air compressor, provided the device is not used in IDLH concentrations, and the escape distance is less than 300 feet.

INTERPRETATION  

Apr. 2, 1985

SUBJECT: Update of the Health Information Bulletin Concerning Portable Breathing Air Compressors

My memorandum dated January 25, 1985, concerned the use of portable air compressors to supply breathing air to certain continuous flow supplied air respirators (SAR). It was indicated that the respirator wearer must carry an additional air-purifying respirator (with appropriate sorbent or filter) for quick donning and escape from the contaminated atmosphere in the event of a compressor or SAR failure. We have received numerous requests for clarification of this issue.

The major question concerns the situation in which the combination of a SAR and a portable air compressor is used in an atmosphere which is not immediately dangerous to life or health (IDLH). Why should a backup respirator be required? Usually an IDLH concentration is established for a gas or vapor. However, very few IDLH concentrations have been established for particulates.

Since the continuous flow supplied air respirators are permissible at levels up to 1,000 times the OSHA permissible exposure limit (PEL) for contaminants without IDLH values, the wearer may be overexposed in the event of the SAR failure if the time to escape to an uncontaminated area is prolonged. However, it should be noted that these portable air compressors must draw air from an uncontaminated source, with a limit on length of airline of 300 feet, as prescribed in 30 CFR 11. In this case the wearer could escape to an uncontaminated area in a very short time.

In view of the above, a backup respirator would not be required for a combination of the SAR and the portable air compressor provided the device is not used in IDLH concentrations and the escape distance is less than 300 feet.
Use of a negative pressure paint spray respirator for protection against paint sprays containing isocyanates is a violation of OSHA standards. This provision of the OSHA standard is based on the poor warning signs of exposure to isocyanates and concern with leakage around the facepiece seal.

May 6, 1982

This is in response to your letter of April 8, 1982, concerning respiratory protection against isocyanate containing paint sprays.

We understand that chemical company has not submitted the 8709 or the equivalent valveless Models 8711 or 6984 to NIOSH for testing and approval. However, NIOSH has conducted tests on the 8711 and 8709 respirators and the results indicate that these respirators fail to meet the performance criteria as paint spray respirators.

Our major concern with the use of negative-pressure air purifying respirators for protection against isocyanate containing paints is not that the sorbent may be ineffective, but rather the leakage around the facepiece seal. Since the isocyanates have poor odor warning properties, workers could be constantly exposed to isocyanates which they cannot detect by the odor. The odor would indicate a leak in the face seal or a breakthrough in the sorbent.

Early last year, we were informed by the chemical Company D that they were working to solve the odor warning problems of isocyanates, but we have not received a report from them yet. Since the isocyanates are a potent irritant and sensitizer, the negative-pressure respirators do not provide adequate protection because of possible cartridge breakthrough and an inability to assure efficient enough face sealing.

Thus it is a violation of our standards to use a negative pressure paint spray respirator, whether approved or not, for protection against paint sprays containing isocyanates.
This interpretation letter addresses the use of Bureau of Mines approved gas mask canisters. The Bureau of Mines approved gas mask canisters for protection against hydrogen sulfide, hydrogen cyanide and phosphine may not provide adequate margin of safety to the respirator wearers. Their use for other than emergency escape is not acceptable.

(Note: This standard was last modified in 1984.)

**INTERPRETATION**

29 CFR 1910.134(e)(2); 1910.1000

Nov 15, 1985

**SUBJECT:** Use of Bureau of Mines Approved Gas Mask Canisters

We have received several inquiries concerning the use of Bureau of Mines approved gas mask canisters. These canisters were approved under the Bureau of Mines Schedule 14F for protection against many highly toxic substances such as hydrogen sulfide, hydrogen cyanide and phosphine. All these canisters were approved for concentrations far above their respective immediately dangerous to life or health (IDLH) values and none of these compounds has adequate odor warning properties for the respirator wearer to detect excessive facepiece leakage or sorbent breakthrough.

Although the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH) have extended the expiration date for the Bureau of Mines approved gas mask canisters, NIOSH indicated that they could not conduct quality control testing on these canisters to assure that the performance meets the certification requirements.

In view of the above facts, it is concluded that the Bureau of Mines approved gas mask canisters for protection against hydrogen sulfide, hydrogen cyanide and phosphine may not provide adequate margin of safety to the respirator wearers. Their use for other than emergency escape is not acceptable.
RECORD ID 2488

STANDARD NUMBER 1910.134(b)(11); (f)(2)(ii)
INFORMATION DATE 860422

ABSTRACT Fiber-glass wrapped aluminum cylinders for various brands of self-contained breathing apparatus (SCBA) may, upon aging, develop neck cracks and may leak breathing gas during storage and use. The cylinders were manufactured under DOT exemptions DOT-E 7235 and DOT-E 8059. SCBA's with fiber-glass wrapped aluminum cylinders should have the air pressure inspected weekly for stored units and daily for SCBA's used daily.

(NOTE: This standard was last modified in 1984.)

INTERPRETATION 29 CFR 1910.134(b)(11); (f)(2)(ii)
April 22, 1986

SUBJECT: Alert on respirator manufacturer SCBA's

NIOSH recently published a notice stating that some composite cylinders made by respirator manufacturer may leak breathing air during storage and use. Your office has been shipped one or more (company) SCBA's with one or more of these respirator manufacturer cylinders.

Please read the attached NIOSH "Respirator User's Notice" and follow their instructions. Air cylinders that are suspected of leaking should be tagged and returned to the Cincinnati Laboratory. You will be notified if additional action is required.

January 17, 1986

RESPIRATOR USERS NOTICE

Inspection of Certain Aluminum Cylinders for Breathing-gas Pressure

The light weight and high charging pressure of aluminum cylinders have resulted in their widespread acceptance and use with self-contained breathing apparatus (SCBA). The National Institute for Occupational Safety and Health (NIOSH) estimates that more than half of the SCBA of 30- and 60-minute duration in regular use today are equipped with aluminum cylinders.

Since first receiving reports of defective fiber-glass wrapped aluminum cylinders in 1983, NIOSH has advised users of potential hazards associated with use of certain fiber-glass wrapped aluminum cylinders. At this time, NIOSH believes there is sufficient evidence to warrant issuance of this NOTICE regarding inspection of fiber-glass wrapped aluminum cylinders.

The presently available evidence indicates that fiber-glass wrapped aluminum cylinders manufactured under Department of Transportation (DOT) exceptions DOT-E 8059 (including 2216 and 4500 psi) may, upon aging, develop neck cracks and may leak breathing gas during storage and use. This may result in significant loss of breathing gas from an unattended cylinder. If undetected, this loss of breathing gas could be dangerous to the user.

Based on this, NIOSH recommends that where SCBA are equipped with fiber-glass wrapped aluminum cylinders, inspection for cylinder pressure should be made at least weekly, for stored units. When used on a daily basis, in fire fighting, cylinder pressure should be checked daily and immediately before use.

If a leak is suspected, the cylinder and cylinder valve should be tested as prescribed in American National Standard, Z88.5-1918, Practices for Respiratory Protection for the Fire Service, Section 6.2.4.2.
Leaks in cylinders should be reported to the SCBA manufacturer who will, in turn report them to the cylinder manufacturer. The numbers and charging pressures of leaking cylinders should also be reported to DOT.

Aluminum cylinders used with SCBA, with exemption numbers other than DOT-E 7235 and DOT-E 8059 are not covered in this notice. Self-contained self rescuers used in mines are also not included.

REMINDER

January 17, 1986

Manufacturers of MSHA/NIOSH-approved SCBA Incorporating DOT-E 7235 4500 Fiber-glass Wrapped Aluminum Cylinders

The following manufacturers incorporate DOT-E 7235 4500 cylinders in their MSHA/NIOSH-approved SCBA:

- Bendix
- Clifton Precision
- Draeger
- Siebe Gorman
- Scott
- U.S.D. (SurvivAir)

DOT-E 7235 4500 cylinders must be retrofitted by respirator manufacturer (Telephone: 714684-5100) with steel neck rings, to prevent explosive rupture. DOT regulations prohibit charging of any DOT-E 7235 4500 cylinder that has not been fitted with a steel neck ring. Any apparatus utilizing a DOT-E 7235 4500 cylinder without a neck ring, is considered unapproved by MSHA/NIOSH.
ABSTRACT  Respiratory protective devices used for fumigants such as hydrogen phosphide must comply with 29 CFR 1910.134 and EPA requirements concerning respiratory protection during fumigation. To prevent abuse OSHA prohibits routine use of Bureau of Mines approved canisters. Due to olfactory fatigue, workers who wear gas masks with phosphine canisters may not be able to sense the odor in the case of facepiece leakage or sorbent breakthrough.

(NOTE: This standard was last modified in 1984.)

INTERPRETATION 29 CFR 1910.134(c); (e); (e)(2); 1910.1000

APR 7, 1986

This is in response to your letter dated March 4, addressed to Mr. M concerning the use of the Bureau of Mines approved respirator canister for protection against phosphine.

The respirator approval program administered by the U.S. Bureau of Mines in the sixties was a voluntary program (the Bureau is not a regulatory agency). With the passage of the Occupational Safety and Health act of 1970, the Occupational Safety and Health Administration (OSHA) was charged with the responsibility for protecting workers. Section 6(c)(7) of the Act authorized OSHA to specify suitable protective equipment. OSHA has accepted respirators approved jointly by the Mine Safety and Health (NIOSH) under the provisions of 30 CFR 11. In 1972 the Bureau terminated its approval program for respirators.

The health standards promulgated by OSHA tables which specify the maximum use limit for each type of respirator based on workplace exposures and the hazard potential of the toxic substances. The full facepieces respirator has an assigned maximum use limit of 50 times the OSHA permissible exposure limit (IDLH). The latter requirement is based on the recommended standard for "Practice of Respiratory Protection" (ANSI Z88.2-1969) published by the American National Standards Institute.

OSHA prohibits routine use of the Bureau of Mines approved canisters to prevent abuse. Phosphine canisters shall not be used at concentrations above 50 times the PEL which is 15 parts of phosphine per million parts of air (ppm). Supplied air respirators shall not be used above 200 ppm of phosphine.

However, the maximum use concentration of phosphine, as specified by the Bureau of Mines, is 5,000 ppm which is much higher than the IDLH concentration of phosphine.

A major problem associated with odor warning properties is olfactory fatigue. Upon repeated exposure to an odorous material, an individual could be acclimatized to the odor and may not smell the odor. Hydrogen sulfide is a very good example. The publication you sent entitled "The Odor Threshold of Phosphine: written by Ekkahard Luck did not address this problem. The Luck paper indicates that the odor threshold of phosphine has been reported to be between 0.02 to 3 ppm, which is a very wide range. The odor threshold data we have are higher than the PEL of 0.3 ppm where the use of air-purifying respirators are discouraged.

The Luck study was conducted in a very large chamber (28.2 cubic meters). In a chamber of that size, it is very difficult to maintain an accurate and uniform concentration of less than 1 ppm. There are no details on how concentrations of phosphine were validated in the chamber nor is there any information on the sensitivity, accuracy and precision of the analytical method used for phosphine. Further, the odor threshold study reported about half of the 10 test subjects could detect the odor based only on a single measurement. A majority of workers who wear gas masks with phosphine canisters may not be able to sense the odor in case of facepiece leakage or sorbent breakthrough. This situation could be potentially hazardous when the gas mask is used in an atmosphere containing phosphine.
MSHA/NIOSH issued an approval for a canister for protection against phosphine to the Mine Safety Appliance (safety company) Company in 1979. The approval number is TC-140-98. Since there is an approved canister available, there should be no impact on your operation.

Use of any respiratory protective device must comply with OSHA's regulation for respiratory protection, 29 CFR 1910.134. Since the Environmental Protection Agency (EPA) has jurisdiction over the use of fumigants, you should also comply with EPA's requirements concerning respiratory protection during fumigation.

SOURCE LETTER

March 4, 1986

We recently received your 15 November 1984 memorandum dealing with the use of Bureau of Mines approved gas mask canisters. The memorandum is very timely since there is presently a great deal of confusion on this subject among members of the pesticide industry, agriculture, manufacturers of safety equipment, the Environmental Protection Agency and perhaps even OSHA. I have some comments regarding the ruling in your memorandum for which we urgently request your consideration. However, regardless of the outcome of this, industry sorely needs a clear and concise statement of OSHA's rulings or recommendations on proper respiratory protection.

My company is the leading producer of hydrogen phosphide (phosphine, PH3) fumigants which are used for the protection of stored agricultural commodities such as grain, rice, tobacco, processed foods, animal feeds, etc. This is no doubt the major use of hydrogen phosphide in this country although some smaller amounts are used in the electronic industry for doping of components. Gas mask canisters, specific for phosphine, are widely used by fumigators applying our products as well as those of our competitors and so your comments on this subject are of vital concern to us.

Canisters are routinely used by fumigators while applying our products or, more frequently, during re-entry into partially aerated structures to remove spent product. We generally recommend use of phosphine canisters when the short term exposure limit (1 ppm PH3) or the time weighted average (0.3 ppm PH3) is likely to be exceeded. We recommend use of some type of approved, supplied air respirator at hydrogen phosphide levels above the IDLH (200 ppm PH3).

If I interpret your memorandum correctly, you have ruled out the use of phosphine canisters except in emergency situations, such as spills or other types of accident, and then only for escape. If this is true, we urgently request that you reconsider your ruling or at least delay its implementation until NIOSH is able to conduct tests on these canisters. This ruling will adversely affect our customers who now will be forced to use the bulkier and more expensive supplied air respirators, and it will also impact upon our operations here in Virginia where we manufacture and distribute metal phosphide fumigants. Do doubt prohibition of working with gas mask canisters will result in decreased use of any respiratory protection.

We have in our company the technology to assist NIOSH in performing these tests and will be pleased to assist them in any way possible. We will be glad to visit the NIOSH laboratory in West Virginia if this would be of value to them.

Quite frankly, we fail to see the scientific evidence or cause for alarm that sparked this ruling on hydrogen phosphide canisters. It is inconceivable to me that a canister once approved for use at 5000 ppm PH3 (0.5%) is now considered unsatisfactory at 200 ppm. The statement in your memorandum regarding inadequate odor warning properties of hydrogen phosphide is not true as pertains to gases liberated by metal phosphide fumigants. We are aware of contradictory literature reports on the threshold of detectability of phosphine odor. I have enclosed a reprint which should resolve this question.
That the cartridge

JAN 10, 1990.

INTERPRETATION 29 CFR 1910.134(b)(8); (c); (e)(2); 1910.1000

NOTE: This standard was last modified in 1984.)

INTERNATIONAL ROSE

STANDARD NUMBER 1910.134(b)(8); (c); (e)(2); 1910.1000

INFORMATION DATE 900110

ABSTRACT This interpretation letter provides clarification on issues related to the use of air-purifying respirators in the dry cleaning industry for protecting employees from perchloroethylene. Issues addressed are cartridge replacement program, intervals between cartridge changes, filter breakthrough, and respirator protection factors.

SUBJECT: Use of Air-Purifying Respirators In Dangerous Concentrations Of Gases Or Vapors

This is in response to your memorandum of September 27, 1989, commenting on the letter dated August 23, 1989, from Acting Assistant Secretary M to Mr S, Counsel for institute.

The letter relates that if appropriate procedures are followed, it is acceptable to use air-purifying respirators in the dry cleaning industry for protecting employees from perchloroethylene. The letter then identifies the procedures that must be followed. I will repeat each of them receiving your comments, repeat your comments, and then provide some clarification.

Procedure: The respirator cartridge must be changed periodically to assure that its capacity has not been exceeded.

Your comment: This is difficult to do because concentrations of the chemicals change.

Clarification: Employers must choose intervals between changing cartridges that are short enough so that the cartridge capacity will not be exceeded at the highest air contaminant concentration that occurs. For example, if airborne perchloroethylene concentrations range from 25 to 250 ppm, the employer must choose an interval between changing cartridges that is based on a perchloroethylene concentration of 250 ppm.

Procedure: The filter must be changed immediately if there is evidence of filter breakthrough because the employee detects the odor of perchloroethylene while wearing the respirator.

Your comment: The exposure limit is 25 ppm. The odor threshold is 5 to 75 ppm. Therefore, for some individuals when they notice an odor, they may already be exposed to three times the permissible exposure limit.

Clarification: Periodic changing of respirator cartridges is the basic means of protecting employees. Therefore, filter breakthrough should not occur. However, in an accidental case where it happens, it is important to stress the need for immediate remedial action. Moreover, the permissible exposure limit concentration is an 8-hour time-weighted average value. Therefore, if an employee's odor threshold for perchloroethylene were only 75 ppm, in order for the employee to become overexposed to perchloroethylene before being able to sense that it had broken through the cartridge, more than two hours and forty minutes of time would have to elapse prior to the concentration inside the respirator increasing to 75 ppm.
Procedure: The employer must abide by appropriate respirator protection factors.

Your comment: Unless air samples are taken frequently, the employer does not know the concentration and would not know how much of a protection factor is needed.

Clarification: Your comment applies for any type respirator. One way to reduce the required frequency of sampling is to provide respirators with protection factors high enough for all occasions. For the majority of dry cleaning establishments, there are indications that a protection factor of 10 is high enough for all perchloroethylene exposure situations. Of course, each dry cleaning establishment must make its own determination whether respirators with a protection factor of 10 are adequate for all exposure situations.

Where an inspection reveals inadequacies in the employer's cartridge replacement program or in determining the efficacy of a 1910.134 (b), (c), (e), and (h) shall be considered.
**ABSTRACT**

This interpretation addresses provisions of standard 29 CFR 1910.134 for respiratory protection that apply when respiratory protection is not required but employees wear respirators on their own accord. The only provisions of 1910.134 that apply are those that would prevent the respirator itself from presenting an adverse health condition. Paragraph 1910.134 (b)(10), which requires employers to determine whether employees are physically able to perform the work, and 1910.134 (b)(5) and (6), requiring regular cleaning and disinfecting of respirators and storage of them in a clean and sanitary location, would apply. These provisions apply regardless of whether the employee purchases the respirator or the employer provides it.

(NOTE: This standard was last modified in 1984.)

**INTERPRETATION**

29 CFR 1910.134(a)(2)

APR 11, 1990

This is in response to your letter of February 26, to Mr. S regarding respiratory protection.

You inquired whether any provisions of standard 29 CFR 1910.134 for respiratory protection apply in situations where respiratory protection is not required but employees wear respirators on their own accord. The only provisions of 29 CFR 1910.134 that apply are those that would prevent the respirator itself from presenting an adverse health condition. This is so regardless of whether the employee purchases the respirator or the employer provides it.

Paragraph 29 CFR 1910.134 (b)(10), which requires employers to determine whether employees are physically able to perform the work and use the respirators, would certainly apply. Paragraphs 29 CFR 1910.134 (b)(5) and (6), requiring regular cleaning and disinfecting of respirators and storage of them in a clean and sanitary location, would apply if failure to comply with the paragraphs could result in an ingestion hazard or dermatitis caused by a dirty respirator.

I have not necessarily identified all the requirements of 29 CFR 1910.134 that could apply. The main point is, if the respirator itself could present an adverse health condition if a requirement is not observed, then the requirement applies.

**SOURCE LETTER**

February 26, 1990

29 CFR 1910.134 (Respiratory Protection) sets forth highly detailed requirements which must be satisfied for the compliant operation of a respiratory protection program for employees whose exposure to "breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors" exceeds permissible exposure levels. The company respectfully requests a determination of the applicability of 29 CFR 1910.134 to the situations which are described below.

Situation One: An employee has been assigned to a task where it has been determined that there is no need for respiratory protection for the employee. After explaining to the employee that the atmospheric concentration of air contaminants does not warrant the issuance of respiratory protection, the employee persists in a request to be issued a disposable respirator which has been approved for dusts and mists. Subsequently, although not required based on the airborne concentration of air contaminants, a disposable dust and mist respirator is issued to the employee for his own peace of mind.

Please advise us as to whether any aspect of the respiratory protection program under 29 CFR 1910.134 is required under the circumstances described above.
Situation Two: An employee has been assigned to perform a job where it has been determined that there is no need for respiratory protection for the employee. The employee takes it upon himself to obtain a respirator by himself and at his own expense. The employee obtained respirator may lack recognition by Federal Regulatory Agencies as a respiratory protective device. Management identifies the fact that the employee is using a “respirator” which has not been provided through car company's respiratory protection coordinator. The employee is notified that respiratory protection is not required for the assigned job but elects to continue to use the self purchased device.

Please advise us as to whether any aspect of the respiratory protection program under 29 CFR 1910.134 is required under the circumstances described above.

Please let us know as soon as possible, which, if any, requirements of 29 CFR 1910.134 must be complied with under the circumstances described above, where respirators are used by employees, but are not required. Since we sincerely desire to provide car company employees with a safe and healthful workplace, please advise us of OSHA’s position on the situations described above.
OSHA has reexamined its position on the number of standby persons required when open hatch gauging of sour crude oil storage tanks is performed in atmospheres immediately dangerous to life and health (IDLH) and when self-contained breathing apparatus is used for protection. OSHA has concluded that for each gauging operation one standby person with suitable rescue equipment is adequate.

(NOTE: This standard was last modified in 1984.)

The gauging operations would require one standby person with the appropriate rescue equipment.

I am sure you can appreciate the financial impact to a corporation if Mr. S's interpretation is the requirement.

Corporation respectfully requests a formal interpretation of the existing respirator rule as applied to open hatch gauging of sour crude oil storage tanks.
ABSTRACT
Section 1910.134 (e)(5)(ii), in part, reads, "... Wearing of contact lenses with a respirator in contaminated atmospheres shall not be allowed...." The uncertainty of reasons prompted funding of the research project conducted by Lawrence Livermore National Laboratories (LLNL). Recommendations contained in the LLNL report lead OSHA to believe that the prohibition against wearing contacts while using a full-facepiece respirator should be revoked or withdrawn. Wearers of corrective lenses would have the option of wearing either contacts or eyeglasses with their full face-piece respirators. OSHA staff wishes to further investigate the issue of non-gas permeable hard contact lenses before completely suspending the prohibition.

(NO: This standard was last modified in 1984.)

INTERPRETATION
29 CFR 1910.134(e)(5)(ii)

FEB 8, 1988

SUBJECT: Contact Lenses Used With Respirators (29 CFR 1910.34(e)(5)(ii))

Section 1910.134 (e)(5)(ii), in part, reads, "... Wearing of contact lenses in contaminated atmospheres with a respirator shall not be allowed...." This wording was adopted in 1971 into OSHA's standards without change from the American National Standard "Practices for Respiratory Protection," ANSI Z88.2-1969, in accordance with Section 6(a) of the Occupational Safety and Health Act of 1970. The current ANSI Z88.2-1980 standard also includes this restriction on the wearing of contact lenses.

OSHA has frequently been asked why the prohibition on contact lenses is included in our requirements and, as a result, the matter has been investigated, including the funding of a research project on the wearing of contact lenses by fire fighters using full facepiece respirators. Current members of the ANSI Z88.2 Committee have suggested hypothetical scenarios which they believe would have supported the prohibition. However, actual incidents resulting in employee exposure to inhalation hazards or to eye hazards which were aggravated by the use of contact lenses were not forthcoming from the ANSI Committee members contacted. The uncertainty of reasons for the prohibition on contact lens use prompted funding of the research project conducted by Lawrence Livermore National Laboratories (LLNL). A copy of the final LLNL report is attached for your information.

Recommendations contained in the LLNL report read, "Based on a numerical analysis of the responses to the questionnaire, our follow-up interviews with those indicating the worst problems, and reading the 829 comments on positive or negative experiences with contacts, we believe the prohibition against wearing contacts while using a full-facepiece respirator should be revoked or withdrawn. Wearers of corrective lenses would have the option of wearing either contacts or eyeglasses with their full face-piece respirators. One must keep in mind, however, that some people do not adapt well to contacts.

If the person cannot comfortably wear contacts in everyday, non-work situations, then he will probably not adapt well to using them with a full-facepiece respirator. Also, a person's facial shape and eyeglass prescription may be such that he cannot obtain and retain a proper alignment of his eyeglasses inside the full-facepiece. In this case, he would have to wear contacts, or no corrective lenses at all.... Considering the severe conditions under which fire fighters must work, we believe it is unlikely that the working conditions of any other SCBA users would preclude the similar use of contact lenses. This would also include negative-pressure air-purifying respirators." Other reports and articles (list attached) have been reviewed which further support that the prohibition in the current standards is unwarranted.

Although, the LLNL report deals specifically with fire fighters and full-facepiece SCBA's, OSHA knows of no reason why other work situations and types of respirators would present greater hazards relevant to wearing contact lenses. Therefore, this memorandum applies to all respirator use in all workplaces unless specific information should become available which indicates a hazard which has not been considered.
Even though much of the material mentioned above applies to all types of contact lenses, OSHA staff wishes to further investigate the issue of non gas permeable hard contact lenses before completely suspending the prohibition, since the original prohibition in ANSI Z87.1 was adopted when the use of this type of hard lens was prevalent.

In consideration of the results of our investigation, and in accordance with the Agency's intent to modify the rule, an interim enforcement policy is appropriate. Accordingly, this memorandum modifies current enforcement procedures as follows:

1. Violations of the respirator standard involving the use of gas permeable and soft contact lenses shall continue to be documented in the case file and recorded as de minimis; citations shall no be issued.

2. Evidence indicating any negative effect associated with the use of contact lenses with respirators should be provided to this office. Benefits associated with the use of contact lenses with respirators would also be useful to this office.

The issue with non gas permeable hard contact lenses will be resolved in the revision effort for 1910.134 which is now underway.

Attachments:


2. Nilsson, Sven Erik G., et al,
   (b) "The Use of Contact Lenses in Wet or Damp Environments, ACTA Ophthalmologica, Vol. 58, 1980:
   (c) "Contact Lenses and Mechanical Trauma to the Eye," ACTA Ophthalmologica, Vol. 59, 1981;
   (d) "Contact Lens Wear in an Environmental Contaminated with Metal Particles," ACTA Ophthalmologica, Vol. 61, 1983.


ABSTRACT The relevant rule concerning pulmonary function tests for employees who must wear respirators is 29 CFR 1910.134(b)(10). The rule requires employers to determine, through the services of a physician, the state of health required for an employee to be physically able to perform the assigned work and wear a respirator. This rule does not provide any procedures for determining whether employees are physically able to perform the work and use respiratory equipment, and does not require employees to take medical examinations. The rule advises against, but does not prohibit, assigning employees to tasks requiring the use of respirators unless it has been determined that the employees are physically able to perform the assigned work and wear a respirator. Although 1910.134 does not prohibit employers from assigning tasks requiring the use of respirators to employees who are physically unable to perform the work and use the equipment, Section 5(a)(1) of the Occupational Safety and Health Act of 1970 may prohibit them from doing so.

INTERPRETATION 29 CFR 1910.134(b)(10)

SEP 6 1991

Dear Mr. H:

This is in response to your letter of July 25, concerning pulmonary function tests for employees who must wear respirators. As you indicated in your letter, the relevant rule is 29 CFR 1910.134(b)(10) in the standard for respiratory protection.

The facts about 29 CFR 1910.134(b)(10) are as follows:

1. It does not provide any procedures for determining whether employees are physically able to perform the work and use respiratory equipment. It was left to the physician to select appropriate procedures due to the great variability in situations.

2. It does not require employees to take medical examinations.

3. It advises employers against but not prohibit them from assigning employees to tasks requiring the use of respirators unless it has been determined that they are physically able to perform the assigned work and wear a respirator.

4. It requires employers to determine through the services of a physician the state of health an employee must possess in order to be physically able to perform the assigned work and wear a respirator.

Although, 29 CFR 1910.134(b)(10) does not prohibit employers from assigning tasks requiring the use of respirators to employees who are physically unable to perform the work and use the equipment, Section 5(a)(1) of the Occupation Safety and Health Act of 1970 (the Act) may prohibit them from doing so. Section 5(a)(1) requires:

Each employer shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees.

For example, an employer retains a physician to obtain a medical determination of the state of health employees must possess in order to be physically able to perform certain work and wear a certain type of respirator. The physician determines that the life of employees with emphysema would be endangered. The employer knows an employee has emphysema, but still assigns the employee to such work where such respirators are provided and required to be worn. By doing this, the employer may violate section 5(a)(1) of the Act.
We appreciate the opportunity to clarify this matter for you.

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SOURCE LETTER

July 25, 1991

Re: Medical Examinations - Respirators

Please advise me of OSHA's status concerning Pulmonary Function Tests as a requirement for the use of respirators. Referencing the enclosed OSHA Technical Note 14 (from Company's safety directory) it states that the employee has the right to refuse a medical examination. THE CFR 1910.134(b)(10) states employees must be physically able to be required to wear a respirator.

Please reply to this inquiry soon as possible, as I'm in the process of scheduling these pulmonary function tests in a union shop.

Attachment:

From OSHA Publication #2095 (Issued 1974)

Before being assigned to a task requiring use of a respirator, an employee must have a medical examination. The breathing resistance created by a respirator could cause employees with certain lung deficiencies to suffer a heart attack. (OSHA Technical Note 14, issued March 15, 1979, states that an employee has the right to refuse this medical examination. The employer is responsible for making the examination available and for providing and insuring the use of respirators where they are necessary. An employee who waives the exam must wear a respirator if the job requires it.)
OSHA Instruction CPL 2-2.54

February 10, 1992
Office of Science and Technology Assessment

SUBJECT: Respiratory Protection Program Manual

A. PURPOSE. This instruction sets forth accepted practices for respirator users, provides information and guidance on the proper selection, use, and care of respirators, and contains requirements for establishing an OSHA respirator program.

B. SCOPE. This instruction applies to all OSHA employees who need to wear a respirator to perform her/his duties.

C. IMPLEMENTATION. Detailed instructions for implementing the above requirements are prescribed in the following chapters.

D. BACKGROUND.

1. Occupational Safety and Health Administration (OSHA) Compliance Safety and Health Officers (CSHO's) as well as other Agency personnel may be exposed to a variety of respiratory hazards while conducting safety and health compliance inspections, consultation or monitoring visits.

2. The human respiratory system can be protected by avoiding or minimizing exposure to harmful substances; however, in some cases this may not be possible and an appropriate respirator shall be required. Certain respirators can reduce/remove many contaminants from an atmosphere. When concentrations of these contaminants are too high to be reduced/removed or when oxygen levels are too low, other respirators are available which can supply breathing quality air to the wearer. Therefore, proper selection of the appropriate respirator for the conditions at hand is mandatory.

E. FEDERAL PROGRAM CHANGE. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this instruction is forwarded to each State designee using a format consistent with the Plan Change Two-Way Memorandum in Appendix P, OSHA Instruction STP 2.22A, CH-2.

2. Explain the technical content of this instruction to the State designee upon request.

3. Ensure that State designees acknowledge receipt of this Federal program change in writing to the Regional Administrator as soon as the State’s intention is known, but not later than 70 calendar days after the date of issuance (10 days for mailing and 60 days for response). This acknowledgement should include an indication of the State’s intention either to follow the respiratory program requirements in the following chapters of this instruction or to develop alternative “at least as effective” requirements. If the State adopts alternative requirements, ensure that it submits a plan supplement within six months, in accordance with OSHA Instruction STP 2.22A CH-3, as appropriate, following the established schedule that is agreed upon by the State and Regional Administrator to submit non-Field Operations Manual/Technical Manual Federal Program Changes.

4. Inform each State designee that this instruction provides specific methods and guidelines for implementation of a respiratory program for Safety and Health Compliance Officers and sets out the requirements for a minimum acceptable respiratory protection program for the Agency. To ensure that State Compliance Officers are provided the minimum protection prescribed in 29 CFR 1910.134, each state must either follow the respiratory program requirements prescribed in following chapters of this instruction or develop alternative requirements which are as effective.
5. Review policies, instructions and guidelines issued by the State to determine if this change has been communicated to State personnel.
This interpretation letter clarifies the appropriate standards and requirements for employee respirator selection.

OSHA has several standards and CPLs that deal with respirator selection and use. It is management's responsibility to ensure that a proper respirator fit is obtained.

This interpretation is in response to your letter dated August 24, 1993, requesting clarification for respirator selection and size.

29 CFR 1910.134 (Respiratory Protection) requires that fit tests for respirators be performed for employees who wear negative pressure, air-purifying respirators. OSHA also states that fit testing must be repeated whenever respirator design or facial changes occur that could affect the proper fit of the respirator. OSHA has several standards that require respirators to be fit tested semi-annually, such as the standards for asbestos, arsenic, lead, and acrylonitrile. Other standards require annual fit testing, such as those for benzene and formaldehyde.

OSHA CPLs [2-2.29 (Respirator Fit-Testing) and 2-2.54 (Respiratory Protection Program Manual)] explain respiratory protection and selections. There are also consensus standards that OSHA uses as guidance [for example, American National Standards Institute (ANSI) Z88.2 (Respiratory Protection)] that explain respiratory protection and selections.

In answer to your question, OSHA has several standards and CPLs that deal with respirator selection and use. It is management's responsibility to ensure that a proper respirator fit is obtained.
This interpretation concerns the proper protocol for testing cylinders containing purchased breathing air.

OSHA Standard 1910.134 does not specifically address this issue; however, it is covered in ANSI Standard Z88.2-1992, Respiratory Protection.

This interpretation is in response to your inquiry of November 5, 1993, concerning the requirements for periodic air analysis for breathing air cylinders.

The Occupational Safety and Health Administration (OSHA) does not cover this issue in its standard on respiratory protection, 1910.134. However, since your supplier provides both compressed breathing air and other compressed gases as part of its business, management should take a conservative approach in assuring employee safety, and follow the requirements of the American National Standards Institute (ANSI) Z88.2-1992, Respiratory Protection.

It is the Department of Energy's position that this approach will afford the proper protection for employees when using bottled breathing air.
An interpretation concerning disposable respirators 29 CFR 1910.134, apply to disposable respirators to the same extent they apply to conventional, negative-pressure, air-purifying respirators with replaceable filters and elastomeric facepieces.

INTERPRETATION

29 CFR 1910.134 (b)(3), (e)(5)(i), (a)(1)

March 05, 1992

Dear Mr. H:

This is in response to your letter of October 18, 1991, concerning disposable respirators. Please accept our apology for the delay of this response.

The regulatory requirements in the standard for respiratory protection, 29 CFR 1910.134, apply to disposable respirators to the same extent they apply to conventional, negative-pressure, air-purifying respirators with replaceable filters and elastomeric facepieces,

You requested the Occupational Safety and Health Administration's (OSHA)'s position as to the requirements when a respirator is worn only in environments that are known to be below the established Permissible exposure limit (PEL). Our position is presented at C.4.a.(2) and (3) in Chapter IV of the Field Operations Manual. In general, an employer is responsible for the establishment and maintenance of a respiratory protection program whenever an employee is provided respiratory protection. This applies regardless of the employee's level of exposure to an airborne contaminant. In the situation you describe, use of a respirator for low-level, short-term, or nuisance applications (i.e., for exposures below the PEL), a de minimis violation would be recorded, unless there was a hazard associated with the use of the respirator. A de minimis violation is documented in the case file, but the employer is not issued a citation.

Sections 29 CFR 1910.134(b) and (e) lists those elements required to be included in a respiratory protection program and it includes those items you have listed. You noted that the ability of the wearer to perform a positive and/or negative pressure fit check on a fabric facepiece in a meaningful fashion is rather suspect and that this fact has raised questions about the acceptability of disposable respirators, Standard 29 CFR 1910.134 does not state a requirement to perform a positive and/or negative pressure fit check. According to 29 CFR 1910.134(e)(5)(ii), "To assure proper protection, the facepiece fit shall be checked by the wearer each time he puts on the respirator.

This may be done by following the manufacturer's facepiece fitting instructions." Thus if the manufacturer has an effective method for checking the face fit of a disposable respirator, then use of the respirator is acceptable.

We appreciate the opportunity to clarify this matter for you.
Respirator fit testing must be repeated whenever respirator design or facial changes occur that could affect the proper fit of the respirator. OSHA standards for asbestos, arsenic, lead, and acrylonitrile require that respirators be fit tested at least semi-annually, and the standards for benzene and formaldehyde require that respirators be fit tested at least annually.

October 20, 1992
Dear Mr. W:

This is in response to your letter of August 20, concerning the Occupational Safety and Health (OSHA) regulation for respiratory protection, 29 CFR 1910.134.

You ask how often the fit test indicated at 29 CFR 1910.134 (e)(5)(i) must be provided for employees who wear a negative-pressure, air-purifying respirator. Fit testing must be repeated whenever respirator design or facial changes occur that could affect the proper fit of the respirator.

Please bear in mind that the OSHA standards for asbestos, arsenic, lead, and acrylonitrile require that respirators be fit tested at least semi-annually, and the standards for benzene and formaldehyde require that respirators be fit tested at least annually.

We appreciate the opportunity to clarify this better for you.

SOURCE LETTER
August 20, 1992
Dear Ms. C.,

I am writing this letter to obtain OSHA's official position regarding respirator fit testing and 29 CFR 1910.134. My question is:

How often must an employer fit test employees who wear negative-pressure air-purifying respirators?

I cannot locate any guidance on this subject in 29 CFR 1910.134. A reference is made to using ANSI Z88.2-1969 for guidance on respirator selection, but there is nothing there either. ANSI Z88.2-1980 and the yet to be released ANSI Z88.2-1991 standards do require annual fit testing, however, my understanding is that only the 1969 version is pertinent to 29 CFR 1910.134.

The question has been brought up because all OSHA regulations requiring respirator fit testing that have been promulgated since 29 CFR 1910.134 require re-testing every year (6 months for 29 CFR 1910.1001). It's readily apparent that OSHA believes annual fit testing is a prudent practice. It seems logical that fit testing should be required at some regular interval for those employees who must comply with 29 CFR 1910.134 also.
The scope of the Hazard Communication standard, 1926.59 includes inert gases. Inert gas is normally present in the workplace in compressed gas cylinders and is covered by virtue of being a compressed gas. Toxicity has been established in inert gases and the manufacturer, importer, and/or distributor has the duty of performing a complete hazard determination.

Inert gas is normally present in the workplace in compressed gas cylinders and is covered by virtue of being a compressed gas. Such cylinders must be carefully handled as the compressed gases present certain physical hazards - particularly in the event of an emergency, such as a fire. In construction the most frequent documented origin of a fire in a burning and cutting operation is when molten slag burns through the welding hose, causing free flowing fuel gas to ignite and potentially spread to other volatile gas cylinders. Furthermore, the sudden release of pressure from a compressed gas bottle can convert a cylinder into an uncontrollable rocket.

It is the responsibility of the manufacturer to perform the hazard determination of a substance. Substances such as methane and ethane, are pharmacologically "inert," belonging to a group of gases called simple asphyxiants. These gases can be tolerated at high concentrations in the air without producing systemic effects. At high concentrations, however, these substances dilute or exclude oxygen from the air however, toxicity results from oxygen deprivation or asphyxia. Furthermore, a simple asphyxiant such as methane is odorless with its chief danger being an explosion hazard.

Accordingly, toxicity has been established in inert gases and the manufacturer, importer, and/or distributor has the duty of performing a complete hazard determination.

We hope this information is helpful. If you have any further questions please feel free to contact us at (202) 219-8036.
Source Letter

January 19, 1993

Dear S:

This letter is to inquire about the scope of the Hazard Communication Standard 1926.59. In reference to this standard, I question whether an inert gas, which is only a simple asphyxiant, is covered by the standard.

The standard defines a Hazardous Chemical as one which is a physical or health hazard. Since an inert gas poses no physical hazard, unless compressed, the only way it could be covered by the standard is to be a health hazard. The standard defines a health hazard as chemicals in categories such as carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes. Since an inert gas which is a simple asphyxiant does not fall into any of these categories, it would appear that it does not meet the definition of a health hazard.

From the explanation above, it appears inert gases are not covered by the standard. Is this a defect in the standard?

I would appreciate being informed of the position OSHA takes regarding this matter as soon as possible.
ABSTRACT In environments that do not exceed any OSHA PEL or STEL standards for dust or other air contaminants, the Respiratory Protection Standard, 29 CFR 1910.134, program requirements apply if the respirator itself could present an adverse health hazard if a specific requirement of the standard is not observed. Only respirators worn to comply with OSHA standards must have MSHA/NIOSH approval. When a respirator is not required by OSHA, then OSHA does not regulate the face seal of the respirator or the type of respirator that is provided.

INTERPRETATION 29 CFR 1910.134 (a)(1), (b), (b)(11), (c), (e)(5), (e)(5)(i)

March 4, 1993

Dear Mr. W:

Thank you for your letter dated November 17, 1992, requesting clarification of the requirements of the Respiratory Protection Standard, 29 CFR 1910.134, as it applies to non-NIOSH approved dust masks for comfort use in environments that do not exceed any OSHA PEL or STEL standards for dust or other air contaminants.

1. Is an employer responsible for implementing the program requirements of 29 CFR 1910.134 when providing associates (employees) to wear a non-NIOSH approved single-use comfort mask for dusts and mists?

Only respirators worn to comply with OSHA standards must have MSHA/NIOSH approval. An unapproved respirator cannot be worn if an overexposure to an OSHA regulated substance is possible.

Although OSHA requires the use of respirators only for compliance with OSHA exposure limits and respiratory protection requirements (when engineering controls are not feasible or in the interim while implementing engineering controls), we do encourage appropriate voluntary use of respirators and other personal protective equipment at other times. However, OSHA discourages the use by employees of any unapproved respiratory protection device.

OSHA's policy is that if the respirator itself could present an adverse health condition if a specific requirement of the respiratory protection standard is not observed, then the requirement applies. Examples may include a dirty respirator that is causing dermatitis, a worker's health being jeopardized by wearing a respirator due to an inadequately evaluated medical condition, or a significant ingestion hazard created by an improperly cleaned respirator. This is so regardless of whether the employee purchases the respirator or the employer provides it.

Failure to establish and maintain a respiratory protection program would be recorded as a de minimis violation, unless there was a hazard associated with the use of the respirator. A de minimis violation is documented in the inspectors' case file, but the employer is not issued a citation.

OSHA's position on the use of respirators in concentrations below the PEL is presented in the Field Operations Manual, chapter IV, section C.4.a.(2) and (3) (copy enclosed).

2. Is an employer responsible for implementing the program requirements of 29 CFR 1910.134 when allowing associates to provide their own non-NIOSH approved single-use comfort mask for dusts and mists?
See paragraph 4 of question #1 response.

3. Is an employer responsible for implementing the program requirements of 29 CFR 1910.134 for intermittent use (once per month frequency or rarer) of the single-use comfort mask for dusts and mists?

The employer is responsible for implementing the program requirements of 29 CFR 1910.134 regardless of the frequency of use, if the respirator itself could present an adverse health condition if a specific requirement of the respiratory protection standard is not observed.

4. If the answer to any of the above is yes, then how would one meet the requirement for fit-test for face-piece-to-face sealing in 29 CFR 1910.134 (e)(5)? As this type of dust mask are not NIOSH approved or designed by the manufacturer for providing a tight fit, this section would need to be waived.

When a respirator is not required by OSHA, then OSHA does not regulate the face seal of the respirator or the type of respirator that is provided. The face seal prohibition only applies to personal respiratory protection devices of a design relying on the principle of forming a face seal to perform at maximum effectiveness.

Paragraph (e)(5)(i) requires employers to provide respirator wearers with fitting instructions including demonstrations and practice in how the respirator should be worn, how to adjust it, and how to determine if it fits properly, wearing it in normal air for a long familiarity period and wearing it in a test atmosphere. Employees must be made aware that certain conditions such as growth of a beard, sideburns, a skull cap that projects under the facepiece, temple pieces on glasses and absence of one or more dentures can affect the fit of a facepiece. In addition, the wearer should follow the manufacturer's facepiece fitting instructions.
SOURCE LETTER

November 17, 1992

Dear Ms M:

This correspondence is seeking guidance regarding the scope and application of 29CFR 1910.134 as it is to be applied for non-NIOSH approved dust masks for comfort use (e.g. 3M Brand Comfort Mask—advertisement enclosed). This request is a follow-up to a November 3, 1992 conversation between Ms I. C. and Mr. J. O., Loss Prevention Manager in our Catalog Division. Several of our facilities have contacted OSHA area offices and have received varying responses as to the application of 1910.134 towards these comfort use types of masks.

The following requests are specifically regarding comfort use masks, such as the 3M Brand Comfort Mask, which are not marketed as single-use respirators. Also, the environments to which our associate would be exposed do not exceed any PEL or STEL standards for dust or other air contaminates. Any respirator (non-NIOSH or NIOSH approved) use would be subject to the requirements of the standard.

Please respond specifically to the following:

1. Is an employer responsible for implementing the program requirements of 29CFR 1910.134 when providing associates (employees) to wear a non-NIOSH approved single-use comfort mask for dusts and mists?

2. Is an employer responsible for implementing the program requirements of 29CFR 1910.134 when allowing associates to provide their own non-NIOSH approved single-use comfort mask for dusts and mists?

3. Is an employer responsible for implementing the program requirements of 29CFR 1910.134 for intermittent use (once per month frequency or rarer) of the single-use comfort mask for dusts and mists?

4. If the answer to any of the above is yes, then how would one meet the requirement for fit-test for face-piece-to-face sealing in 29CFR 1910.134(e)(5)? As this type of dust mask are not NIOSH approved or designed by the manufacturer for providing a tight fit, this section would need to be waived.

Please accept our gratitude for your attention to these matters. Please call if you have any questions.
April 14, 1993

Dear Mr. E:

This is in response to your request for an interpretation of the Occupational Safety and Health Administration (OSHA) Respiratory Protection Standard, 29 CFR 1910.134, as it relates to oil fields. Your specific questions concerned respiratory protection for employee exposures to hydrogen sulfide (H(2)S) released from tank hatches. We will answer your questions in the order presented in your correspondence.

1. If periodic testing for hydrogen sulfide in the atmosphere at crude oil/production water storage tank thief hatches does not indicate the presence of hydrogen sulfide (H(2)S), is respiratory protection required to be worn by employees engaged in tank gauging activities or other operations such as the opening of covers, valves, etc. at those tanks?

2. If periodic testing for hydrogen sulfide in the atmosphere at crude oil/production water storage tank thief hatches indicates hydrogen sulfide in concentration less than the permissible exposure limit (PEL), is respiratory protection required to be worn by employees engaged in tank gauging activities at those tanks?

Response to Questions 1 and 2

According to 29 CFR 1910.1000, Air Contaminants, respiratory protection would be required to be provided to employees, if periodic testing indicates employee exposures to H(2)S at concentrations above the permissible exposure limits (PEL). As indicated in Table Z-2 of the standard, the PEL for H(2)S is a ceiling standard of 20 ppm. A maximum peak exposure of 50 ppm is permissible for 10 minutes but only if no other measurable exposure occurs during the workshift. The employer would be responsible for performing an exposure determination for all types of employee activity. This determination could be based on results of periodic testing, if that data accurately characterizes employee exposure.

However, where the gauging of sour crude oil tanks is concerned, air monitoring must be performed prior to each gauging operation, unless the weight percentage of H(2)S in the liquid crude is low enough that there is no potential for exposure above the PEL. If air monitoring is not performed prior to gauging and there is a significant or unknown concentration of H(2)S present in the crude oil, then the atmosphere surrounding the hatch opening must be assumed to be immediately dangerous to life and health (IDLH), so that self contained breathing apparatus (SCBA) or air-line with escape provision is required while the gauging is performed, and the other requirements of 29 CFR 1910.134(e)(3) must be met. This determination was made by the Agency in 1989 as the result of

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reported fatalities during tank gauging operations and subsequent inspections.

3. If periodic testing is not acceptable, must an employee who has an H(2)S monitor, which will trigger a warning alarm, on his/her person wear respiratory protection while engaged in activities as described in Items 1 and 2.

4. Is periodic testing required? If so, what is the acceptable time frame for such testing (i.e., daily, weekly, monthly, etc.)?

Response to Questions 3 and 4

Since OSHA has no specific monitoring requirements for H(2)S, the employer is responsible for determining what type and frequency of monitoring is appropriate to determine employee exposures, based on the nature of the hazard. As noted above, the employee would not be required to wear respiratory protection unless his or her exposure exceeded the PEL or unless there was the potential for an emergency. There is no specific requirement that respirators be worn while monitors are in use, or vice versa. It is the employer's responsibility to determine what engineering controls, work practices and protective equipment are appropriate to comply with the standard. See also answer to Question 1 and 2 above for specific requirements for tank gauging.

5. If respiratory protection is required to be worn while an employee is engaged in those activities as described in Items 1 and 2, must the employee have an H(2)S monitor on his/her person while at the tank site?

Response to Question 5

As noted above, an employee would only be required to wear a respirator when the activities caused an employee to be exposed above the PEL. If an employee were wearing a respirator, then, in accordance with 29 CFR 1910.134(b)(8), appropriate surveillance of work area conditions must be conducted. An H(2)S monitor can be used for this purpose, but the employer may determine whether other measures may be appropriate. Please note that if the employee is wearing the respirator in a dangerous atmosphere, then the requirements of 29 CFR 1910.134(e)(3) must be met, including communications capability and an appropriately equipped standby person (or persons). This requirement cannot be net solely by use of a monitor or warning alarm.

Please note that, if there is a potential for an uncontrolled release of H(2)S, the situation could represent an emergency. Such an emergency release would be covered under 29 CFR 1910.120, the Hazardous Waste and Emergency Response (HAZWOPER) standard, unless it were an incidental release, as defined in the standard, 29 CFR 1910.120(a)(3), where there is no potential safety or health hazard. Paragraph (q) of 29 CFR 1910.120 covers emergency responses regardless of location. If sections of the oil field were considered treatment, storage and disposal facilities or hazardous waste clean-up operations, other sections of 29 CFR 1910.120 would also apply.

The HAZWOPER standard directs employers to develop an emergency response plan which includes appropriate safety and health measures, such as monitors, alarms and a written personal protective equipment (PPE) program. Since respirators may be needed during an emergency response to an uncontrolled release of H(2)S, the written PPE program developed in compliance with HAZWOPER must address the selection, limitations, maintenance, storage, training, fitting, and donning and doffing procedures for respirators in addition to other PPE. In addition, all the requirements of CFR 1910.134, including paragraph (e) must be met when employees are required to use respirators to meet HAZWOPER requirements.

The complete answer to the several questions which you raise would depend on whether the potential for H(2)S exposure represented an emergency and what would constitute an appropriate emergency response plan to address that exposure. These are determinations which must be made by the employer, based on the actual worksite conditions. We are enclosing information on the HAZWOPER standard which you may find useful.
We hope this information is responsive to your concerns. Thank you for your interest in worker safety and health.

SOURCE LETTER

December 16, 1992

Dear Mr. S:

The Oilfield Conference of the North Dakota Motor Carriers Association request an interpretation of 29 CFR 1910.134, Respiratory Protection, as related to oilfield activities.

Specific areas of concern are as follows:

1. If periodic testing for hydrogen sulfide in the atmosphere at crude oil/production water storage tank thief hatches does not indicate the presence of hydrogen sulfide (H(2)S), is respiratory protection required to be worn by employees engaged in tank gauging activities or other operations such as the opening of covers, valves, etc. at those tanks?

2. If periodic testing for hydrogen sulfide in the atmosphere at crude oil/production water storage tank thief hatches indicates hydrogen sulfide in concentration less than the permissible exposure limit, is respiratory protection required to be worn by employees engaged in tank gauging activities at those tanks?

3. If periodic testing is not acceptable, must an employee who has an H(2)S monitor, which will trigger a wanting alarm, on his/her person wear respiratory protection while engaged in activities as described in Items 1 and 2.

4. Is periodic testing required? If so, what is the acceptable time frame for such testing (i.e. daily, weekly, monthly, etc.)?

5. If respiratory protection is required to be worn while an employee is engaged in those activities as described in Items 1 and 2, must the employee have an H(2)S monitor on his/her person while at the tank site?
Dear Mr. N:

Thank you for your letter dated October 20, 1992, requesting clarification of the requirements of the Respiratory Protection standard (29 CFR 1910.134), as it pertains to single-use dust masks used at the employee's discretion, and only in concentrations below the permissible exposure limit.

The answers to your questions are as follows:

1. What is OSHA's definition of a "single-use dust mask"? How does this definition agree/disagree with OSHA's definition of a "respirator"?

OSHA considers a respirator to be a device designed to protect the wearer from inhalation of harmful substances. Respirators fall into the following three general classifications, according to mode of operation: (1) atmosphere-supplying respirators (2) air-purifying respirators and (3) combination atmosphere-supplying and air-purifying respirators.

Air-purifying respirators include the following three types of respirators: (1) gas and vapor respirators (2) particulate (aerosols including dust, fog, fume, mist, smoke, and spray) and (3) combination gas, vapor, and particulate. Specifically, single-use dust masks are considered to be air-purifying particulate respirators.

2. What is OSHA's position on the use of single-use dust masks in concentrations below the PEL? How does this position agree/disagree with OSHA's position on the use of respirators in concentrations at or above the PEL?

OSHA's policy is that if the respirator itself could present an adverse health condition if a specific requirement of the respiratory protection standard is not observed, then the requirement applies. Examples may include a dirty respirator that is causing dermatitis, a worker's health being jeopardized by wearing a respirator due to an inadequately evaluated medical condition, or a significant ingestion hazard created by an improperly cleaned respirator. This is so regardless of whether the employee purchases the respirator or the employer provides it.

Failure to establish and maintain a respiratory protection program would be recorded as a de minimis violation, unless there was a hazard associated with the use of the respirator. A de minimis violation is documented in the compliance officer's case file, but the employer is not issued a citation.

OSHA's position on the use of respirators in concentrations below OSHA's exposure limits is
presented in the Field Operations Manual, chapter IV, section C.4.a.(2) and (3) [copy enclosed].

For respirator use in concentrations above OSHA exposure limits, compliance with the Respiratory Protection Standard, 29 CFR 1910.134, and/or respiratory protection requirements of other applicable substance specific standards is required.

3. What is OSHA's compliance/enforcement policy and procedures regarding the use of single-use dust masks in the workplace? How do these agree/disagree with OSHA's compliance/enforcement policy and procedures regarding respirator usage?

See response to question #2.

4. It is widely recognized throughout the safety and health professions that single-use dust masks cannot consistently achieve and maintain an effective facepiece-to-face seal, and cannot be adequately fit-tested. How, then, can single-use dust masks be incorporated into an employer's respiratory protection program and effectively comply with the requirements of 29 CFR 1910.134?

When a respirator is not required by OSHA, then OSHA does not regulate the type of respirator that is provided or the face seal of the respirator. The face seal prohibition only applies to personal respiratory protection devices of a design relying on the principle of forming a face to facepiece seal to perform at maximum effectiveness.

Paragraph (e)(5)(I) requires employers to provide respirator wearers with fitting instructions including demonstrations and practice in how the respirator should be worn, how to adjust it, and how to determine if it fits properly, wearing the respirator in normal air for a long familiarity period, and wearing the respirator in a test atmosphere. Employees must be made aware that certain conditions such as growth of a beard, sideburns, a skull cap that projects under the facepiece, temple pieces on glasses and absence of one or more dentures can affect the fit of a facepiece. In addition, the wearer should follow the manufacturer's facepiece fitting instructions.

5. What is OSHA's position on the use of non-approved "comfort masks" in the workplace for exposures below the PEL? Above the PEL? Champion's respiratory protection program specifies that only appropriate NIOSH/OSHA approved respiratory protection devices are to be used; however, our manufacturing locations receive many sales pitches from vendors for these non-approved "comfort masks".

Only respirators worn to comply with OSHA standards must have OSHA/NIOSH approval. An unapproved respirator cannot be worn if an overexposure is possible.

6. What are OSHA's recommendations/guidelines on the appropriate way(s) to accommodate employee's expressed desire to wear respiratory protection for "comfort" purposes in concentrations below the PEL?

Although OSHA requires the use of respirators only for compliance with permissible exposure limits (PEL's) and respiratory protection requirements of substance specific standards, the voluntary use of respirators and other personal protective equipment at other times may further enhance worker safety and health. However, OSHA discourages the use by employees of any unapproved respiratory protection device.

SOURCE LETTER

October 20, 1992

Dear Mr. C:

This letter will initiate a formal request for clarification of the requirements of the Respiratory Protection Standard (29 CFR 1910.134), as it pertains to single-use dust masks used at the employee's discretion,
and only in concentrations below the permissible exposure limit.

At many of Champion's locations, industrial hygiene monitoring has documented that exposures to dusts and particulates are well below the OSHA PEL's; however, many workers elect to wear single-use dust masks in these areas, for "comfort" purposes. Champion's current respiratory protection guidelines specify that all respirators must be NIOSH/MSHA approved and that each location's respiratory protection program require training, fit-testing, and medical examination for each designated respirator user in compliance with 1910.134.

Complying with the requirements of 1910.134 for fit-testing and medical examination for workers electing to wear single-use dust masks in concentrations below the PEL, has proven inordinately difficult, in that employees themselves are actively resistant to wearing more effective respiratory protection devices in concentrations below the PEL. Our inquiries to various OSHA area offices and state plan offices throughout the country have obtained inconsistent and widely divergent responses on the proper use and management of single-use dust masks, and on OSHA's enforcement policy and procedures. Our telephone conversation with Mr. J. S. in the Health Standards office in Washington, served only to magnify the confused state of affairs regarding single-use dust masks, and the lack of a clear, consistent policy on this issue.

Thus, in order to administer Champion's respiratory protection program in the most safe and healthful manner, we are requesting OSHA's clarification and guidance on this matter. Specifically:

1. What is OSHA's definition of a "single-use dust mask"? How does this definition agree/disagree with OSHA's definition of a "respirator"?

2. What is OSHA's position on the use of single-use dust masks in concentrations below the PEL? How does this position agree/disagree with OSHA's position on the use of respirators in concentrations at or above the PEL?

3. What are OSHA's compliance/enforcement policy and procedures regarding the use of single-use dust masks in the workplace? How do these agree/disagree with OSHA's compliance/enforcement policy and procedures regarding respirator usage?

4. It is widely recognized throughout the safety and health professions that single-use dust masks cannot consistently achieve and maintain an effective facepiece-to-face seal, and cannot be adequately fit-tested. How, then, can single-use dust masks be incorporated into an employer's respiratory protection program and effectively comply with the requirements of 1910.134?

5. What is OSHA's position on the use of non-approved "comfort masks" in the workplace for exposures below the PEL? Above the PEL? Champion's respiratory protection program specifies that only appropriate NIOSH/MSHA approved respiratory protection devices are to be used; however, our manufacturing locations receive many sales pitches from vendors for these non-approved "comfort masks."

6. What are OSHA's recommendations/guidelines on the appropriate way(s) to accommodate employee's expressed desire to wear respiratory protection for "comfort" purposes in concentrations below the PEL?

Your clarification and guidance on the issue of single-use dust masks in compliance with the requirements of 1910.134, and your answers to the above listed questions, will serve to enhance the quality of Champion's respiratory protection program(s) and to enhance the safety and health of Champion employees.

We shall be awaiting your response.

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Either safety shoes or metal toe protectors which meet ANSI standards comply with OSHA regulations 1910.136 and 1910.132.

(NOTE: This standard has not been amended since issuance.)

29 CFR 1910.136; 1910.132(a)

August 9, 1983

The Occupational Safety and Health Act, Section 19 says in part that, "the head of each agency shall (after consultation with representatives of the employees thereof)...acquire, maintain, and require the use of safety equipment, personal protective equipment, and devices reasonably necessary to protect employees."

The correspondence enclosed in your letter indicates that both the Department of the Army and the employee representatives are in agreement that foot protection is necessary and desirable. The difference between the parties is in the methods to be used in implementing the policy, i.e., safety shoes or metal toe protectors.

The OSHA standard on foot protection Part 29 CFR 1910.136 indicates that safety-toe footwear shall meet the requirements and specification in American National Standard Institute (ANSI) for Men's Safety-Toe Footwear Z41.1-1967 (copy enclosed). The use of either safety shoes or metal toe protectors which meet the above ANSI standard complies with OSHA regulations.

As acknowledged in the Department of Army's letter June 29, 1983, there are occasions and situations where the metal toe protectors are a greater hazard than the hazard they are designed to alleviate. With this in mind, a member of the OSHA Area Office in (City, State), will be providing on-site consultation as part of our new program to assist Federal agencies in their Occupational Safety and Health Programs. The address and telephone numbers are:

U.S. Department of Labor, OSHA
Federal Office Building, Room 406
310 New Bern Avenue
Raleigh, North Carolina 27601
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DOE Interpretations Guide to OSH Standards

July 1, 1992
OSHA has no specific standards addressing safety precautions for security guards. The sanitation standard, 1910.141, states that employers must provide in all places of employment the number of toilets specified in Table J for each sex (see (c)(1)) and must provide drinking water (see (b)(1)).

(NOTE: This standard was last amended in 1978.)

The Occupational Safety and Health Administration (OSHA) has no specific standards for security guards. Our standard for sanitation, 29 CFR 1910.141 (copy enclosed), does require employers to provide adequate toilet facilities and drinking water, with which Mr. B expressed concern. We do not, however, have a specific standard regarding hot or cold temperatures at work.

Many of Mr. B's concerns relate to protection from possible personal assault, over which OSHA has no statutory authority; these would be matters to be dealt with in the employer's arrangements with him, in light of any local regulations that may apply.

We are informed that the Wage and Hour Division of the Employment Standards Administration will answer your letter on Mr. B's concerns with labor practices and working conditions that do not involve safety or health hazards.
RECORD ID 1458

STANDARD NUMBER 1910.141(c); (c)(1); (c)(2)
INFORMATION DATE 830705

ABSTRACT Reasonable judgment is needed in evaluating the proximity of required sanitary facilities; there are no specific distance or location requirements.

(NOTE: This standard was last amended in 1978.)

INTERPRETATION 29 CFR 1910.141(c); (c)(1); (c)(2)

July 5, 1983

This is in response to your letter of May 11, 1983, to the Secretary of Labor, requesting a clarification of 29 CFR 1910.141(c).

There are no specific distance or location requirements for toilet facilities in 29 CFR 1910.141(c). An employer is, however, expected to use reasonable judgment in evaluating the proximity of sanitary facilities to employees. If an employer provides the required toilet facilities to all employees in the same building and provides unobstructed free access to them, it appears the intent of the standard would be met; however, one floor serving 20 floors does not appear reasonable or appropriate.

This interpretation is based on the Federal standard for sanitation. The (State), however, administers its own program of workplace safety and health standards under the authority of Section 18 of the Occupational Safety and Health Act. The (State) program generally adopts standards identical to the equivalent Federal standards.
RECORD ID 1212

STANDARD NUMBER 1910.142(a)
INFORMATION DATE 810723

ABSTRACT The standard cited applies to all job related housing for workers not at a permanent location such as migrant workers and workers at remote locations such as oil rig workers.

INTERPRETATION 29 CFR 1910.142(a)

July 23, 1981

MEMORANDUM

SUBJECT: Request for Clarification of the Applicability of 29 CFR 1910.142

RE: Your memorandum dated July 6, 1981

OSHA Standard 29 CFR 1910.142 applies to job related housing that is provided by the employer on a temporary basis for workers not at a permanent location. This kind of housing is most commonly used in agriculture where migrant laborers from other geographical areas move temporarily into employer provided housing at crop harvesting time. However, there is no language in 1910.142 to restrict the application of this standard to migrant housing. Similar housing for the use of other kinds of workers would be subject to the same standard and should meet the same specifications. For example, housing supplied for workers in remote or unsettled areas where labor is needed on a temporary basis, as in oil drilling, would also be subject to 1910.142.
ABSTRACT  This interpretation letter addresses, 1910.142(f)(3), adequate supply of hot water in temporary labor camps. The word “adequate” means that a sufficient capacity of hot water is available based upon the number of actual camp occupants. The minimum acceptable hot water generating and storage equipment necessary at a temporary labor camp may be determined from the data and analytical procedure published by the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) Handbook-1987, Chapter 54. Temporary labor camps are required to provide, as a minimum, 35 gallons of hot water per occupant. The minimum gallons per hour (gph) recovery capacity of the hot water heater or coil is equal to 2.625 times the number of persons served by the system. The minimum gallons of hot water storage capacity is equal to 3.28 times the number of persons served by the system.

INTERPRETATION  29 CFR 1910.142; 1910.142(c)(2); (f); (f)(3)

November 14 1988

MEMORANDUM


In response to your memorandum of September 15, 1988, same subject, the Occupational Safety and Health Administration 29 CFR 1910.142(f)(3) in terms similar to your Atlanta Regional Office. The word “adequate” means that a sufficient capacity of hot water is available based upon the number of actual camp occupants.

In instances where the OSHA standard is performance oriented, the specifications necessary for compliance must be sought from local codes or from industry consensus standards. The minimum acceptable hot water generating and storage equipment necessary at a temporary labor camp may be determined from the data and analytical procedure published by the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) Handbook-1987, Chapter 54. Chapter 54 of that publication addresses “Service Water Heating”.

Under the OSHA standard at 29 CFR 1910.(c)(1) and (2), temporary labor camps are required to provide, as a minimum, 35 gallons of water per occupant. Using that basic information and the 1987 ASHRAE Handbook, Chapter 54, our engineering staff have identified the minimum acceptable hot water system to satisfy the requirement of 29 CFR 1910.142(f)(3). This system is less stringent than that identified as the Military Barracks chart, and it is not that the current Corps of Engineers Guide Specifications 15-400 do not include the chart. Where local codes do not specify more stringent requirements, the minimum hot water system recovery and storage capacities required to meet the OSHA standard at 29 CFR 1910.142 are:

1. The minimum gallons per hour (gph) recovery capacity of the hot water heater or coil is equal to 2.625 times the number of persons served by the system, eg:
   (2.625 x no. of persons = ___ gph heater cap req'd.)

2. The minimum gallons of hot water storage capacity is equal to 3.28 times the number of persons served by the system, eg: (3.28 x no. persons = ___ gallons tank cap. req'd.)

Hot water system requirements must be evaluated on the basis of the number of persons served by each system installed. Instantaneous type water heaters need not be equipped with a hot water tank but must, as a minimum, provide the gallons per hour delivery capacity as determined from the above equation. It is recommended that the minimum system recovery rate be 10 to 15 percent greater that the calculated values to allow for heat losses.
This interpretation provides clarification of the Occupational Safety and Health Administration (OSHA) requirement under 29 CFR 1910.145(f)(6) which delineates the use of caution tags, and the DOE guidelines for the use of caution tags under the DOE Order 5480.19.

A direct comparison of 29 CFR 1910.145(f)(6) with DOE Order 5480.19 (Chapter IX, Section 9 -- Caution Tags) can be misleading when the paragraphs are analyzed out of context. 29 CFR 1910.145 specifies when and how to use accident prevention signs and tags. By contrast, the purpose of DOE Order 5480.19, Chapter IX, is to provide a method for controlling equipment status by tagging and locking components to protect personnel from injury, protect equipment from damage, maintain operability of plant systems, and maintain the integrity of the physical boundaries of plant systems. The DOE Order 5480.19, Chapter IX, paragraph B further states, "A Tagout program includes the placement of a Tagout device on an energy-isolating device, in accordance with an established procedure, to indicate that the energy-operating device and the equipment being controlled may not be operated until the Tagout device is removed." Corresponding OSHA requirements for lockout/tagout are described under 29 CFR 1910.147 -- The control of hazardous energy (lockout/tagout).

In complying with the OSHA regulations, it is necessary to consider the scope and application of the regulation and other possible qualifying paragraphs as well as the particular paragraph of concern.

29 CFR 1910.145(f)(1) states "Scope and application. (i) This paragraph (f) applies to all accident prevention tags used to identify hazardous conditions and provide a message to employees with respect to hazardous conditions as set forth in paragraph (f)(3) of this section, or to meet the specific tagging requirements of other OSHA standards." This establishes the tags' purpose to be identifying hazardous conditions and providing a message to employees.

29 CFR 1910.145(f)(3) states "Use. Tags shall be used as a means to prevent accidental injury or illness to employees who are exposed to hazardous or potentially hazardous conditions, equipment or operations which are out of the ordinary, unexpected or not readily apparent. Tags shall be used until such time as the identified hazard is eliminated or the hazardous operation is completed. Tags need not be used where signs, guarding, or other positive means of protection are being used."

29 CFR 1910.145(f)(6) states "Caution tags. Caution tags shall be used in minor hazard situations where a non-immediate or potential hazard or unsafe practice presents a lesser threat of employee injury." It discriminates the use of a caution tag from the use of danger, warning, biological hazard, and other tags. Therefore, to use a caution tag as described in 29 CFR 1910.145(f)(6), one must also conform with 29 CFR 1910.145(f)(1) and 29 CFR 1910.145(f)(3). A caution tag is not a substitute for protective lockout/tagout. It is only informational, and as such, the guidelines under 29 CFR 1910.145 and the DOE
Order 5480.19 are in harmony when the situation requires the use of a barrier to assure personnel protection.

DOE Order 5480.19 (Chapter IX - Lockouts and Tagouts, Section 9 -- Caution tags) states that "Caution tags should not be used for personnel protection (i.e., caution tags should not be used where it is appropriate to use a Lockout or Tagout device). Administration of caution tags could, however, be accomplished as part of the Lockout/Tagout program or it could be covered separately. The use of caution tags should be restricted to those situations in which a component or system is functional, but when some precaution or item(s) of information is necessary prior to operation." Caution tags primarily are meant to protect deficient equipment from further damage, and tags are removed after the deficiency is corrected. The cautionary instructions on such tags generally prompt additional operator actions for enhanced personal safety.

Moreover, in Section 9b, the DOE Order 5480.19 states that "... The supervisor or manager should ensure that issuing a caution tag is necessary and that the tag is not being used in place of more appropriate administrative action (such as temporary procedure change, placing an operator aide, use of the work control system, or issuance of a safety Lockout or Tagout)."

DOE Order 5480.19, Chapter IX, paragraph B, states that the tagout program should be consistent with the requirements of 29 CFR 1910. Therefore, in answering your question with regard to the use of caution tags, it is the position of DOE that contractors shall comply with the requirements of the DOE Order 5480.19, which is consistent with and inclusive of the requirements of 29 CFR 1910.
OSHA Instruction STD 1-7.2

October 30, 1978

OSHA PROGRAM DIRECTIVE #100-66 (Revision #1)


Reference: American Society of Agricultural Engineers Emblem for Identifying Slow-moving Vehicles, ASAE S276.3, June, 1976

1. Purpose. The purpose of this directive is to delete the last sentence of paragraph 3.a., "There is a difference of 2 inches in the width of the emblem."


3. Background:

   a. In June 1976, ASAE S276.2 (approved as ANSI B114.1-1971) was revised to ASAE S276.3. The performance and test requirements of the revised standard do improve the durability and fluorescence of the emblem. The major difference in the revised standard is that the addition of the manufacturer's name and address must be permanently marked on the face of the emblem, either lower center, or lower right-hand corner. Markings may state that the emblem meets the requirements of ASAE S276.3. Total area used for markings will not exceed a 2-inch square. Trademarks, symbols, or other types of promotional communications are prohibited. Markings on portable emblems may be located on the reverse side of the backing material.

   b. OSHA has received and forwarded to the Director of Safety Standards Programs multiple requests for the adoption of the revised standard.

4. Action. All new emblems will be manufactured to the revised standard. Therefore, emblems meeting the requirements of 29 CFR 1910.145(d)(10) will not be available. Until such time as the referenced standard is revised, emblems meeting the requirements of the revised standard, ASAE S276.3, will be considered de minimis and no citation shall be issued to employers utilizing them.

5. Effective Date. This directive is effective immediately and will remain in effect until canceled or superseded by standards changes.
This interpretation letter addresses 29 CFR 1910.145(f), Biological Hazard Tags, as it applies to blood borne disease and hospital operating room waste. Drops of blood on a cotton ball, small gauze, or bandage may be placed in regular trash. However, any visible amount of blood, wet or dry, in excess of this amount must be treated as infectious, bagged, tagged, and labeled as "Biohazard". Blood in clear bags must be incinerated before disposal.

(NOTE: The interpretation letter focuses on hospital operating rooms, while the issue Biological Hazard Tags has broad application. The standard was last amended in 1986.)

Question 1:
How much blood would be necessary to be considered infectious and would it have to be wet to be considered infectious?

Answer:
Any visible amount of blood would be considered infectious; indeed, 20 ml of blood would be considered to be a large amount and thus should be considered infectious. Bags containing this amount of blood should be properly tagged (i.e., "Biohazard") or placed in red bags to denote infectious waste.

However, until OSHA's standard is promulgated, OSHA will accept the Centers for Disease Control (CDC) interpretation that drops of blood on a cotton ball, bandage or small gauze need not be considered infectious and can be placed in the regular trash.

Blood does not have to be wet to be considered infectious for the HBV and/or HIV.

Question 2:
Does the blood have to be only "visible" or does it have to exceed a certain quantity?

Answer:
Blood does not have to exceed a certain amount to be considered infectious, any amount of "visible" blood should be treated as infectious.
Question 3:

Would the waste containing blood normally found in the operating and dialysis rooms be considered as infectious waste?

Answer:

Yes, waste containing blood normally found in the operating and dialysis rooms is considered to be infectious. Statistical data indicates that both of these areas are high risk areas.

Question 4:

Should we allow the use of clear bags for disposing potentially infectious waste instead of "red bags" or bags marked with biological hazard tags if the hospital staff are trained to treat all hospital trash as potentially infectious waste?

Answer:

Yes, until there is a permanent standard for occupational exposure to blood borne diseases clear bags can be used instead of red bags or bags marked with biological hazard sign. Under universal precautions, some institutions are taking more precautionary measures by considering all waste as infectious, therefore, there is no need to use a color scheme (i.e., red bags) to denote infectious waste. However, under this system all waste will have to be treated as infectious waste.

In cases where the institution is using both clear and red bags to denote infectious waste, the clear bag shall be tagged "Biohazard" and incinerated before disposal. All employees working in the area where both bags are used shall be properly trained about tags and precautions to be used in handling contaminated infectious waste. Failure to properly train shall be cited under 29 CFR 1910.145(f).
OSHA Instruction STP 2-1.130

November 10, 1986
Office of State Programs

SUBJECT: Health and Safety Standards; Accident Prevention Tags, Final Rule

A. PURPOSE. This instruction describes a Federal Program change to the Regions and State designees.

B. SCOPE. This instruction applies OSHA-wide.

C. FEDERAL PROGRAM CHANGE. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this instruction is forwarded to each State designee.

2. Provide a copy of the Federal Register notice to the State designee upon request.

3. Explain the technical content of the Federal Register notice at 51 FR 33251, September 19, 1986, Health and Safety Standards; Accident Prevention Tags, to the State designee upon request.

4. Ensure that each State designee acknowledges receipt of this instruction in writing, within 30 days of notification, to the Regional Administrator. The acknowledgment should include (a) the State's plan to adopt and implement the standard change, (b) the State's plan to develop an alternate change, which is as effective, or (c) The reasons why no change is necessary to maintain a program which is as effective.

5. Inform each State designee that the State must amend the State's standard to ensure that it remains at least as effective as the amended 29 CFR 1910.145(f) and submit a plan supplement within 6 months of the date of Federal publication.

D. DIFFERENT STATE STANDARDS. Section 18(c)(2) of the OSH Act requires that State standards be "at least as effective" as the Federal and, when applicable to products used or distributed in interstate commerce, be required by compelling local conditions and not unduly burden interstate commerce. In addition to the "at least as effective" criterion, this "product clause test" will be applied to State standards with substantively different requirements from the comparable Federal standards, as discussed in OSHA Instruction STP 2-1.117.

F. BACKGROUND.


2. The standards address the temporary marking of workplace hazards, to establish performance criteria for tag design and construction.

3. The amended standard allows employers to use pictographs, words or a combination of both in addition to the signal word or words currently used, provides that the signal word or words of all accident prevention tags be capable of being read at a distance of five feet (1.5m) and requires the employer to use, as a minimum, a two-tier hazard classification system with the signal words "Danger" or "Caution" on accident prevention tags. This amendment also regulates the design and the application of the biological hazard tag.

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OSHA Instruction STP 2-1.130 (cont.)

4. The amended standard will provide the employer with more flexibility in the use of accident prevention tags as temporary hazard identification devices in the workplace, while maintaining the protection covered by the current requirements. Employers will be able to use a wide variety of "major messages" on their accident prevention tags to improve safety through greater employee awareness of hazards in the workplace.

5. Under 29 CFR 1953.23(a) and (b), States are provided up to 6 months from publication in the Federal Register for adoption of parallel State standards and amendments.
OSHA Instruction STP 2-1.170A

AUGUST 30, 1993
Office of State Programs

SUBJECT: Permit-Required Confined Spaces for General Industry; Final Rule

A. PURPOSE. This instruction describes a Federal Program Change to the Regions and State designees.

B. SCOPE. This instruction applies OSHA-wide.

C. REFERENCE. OSHA Instruction STP 2-1.117, August 31, 1984, State Standards.

D. CANCELLATION. OSHA Instruction STP 2-1.170, March 22, 1993, Permit-Required Confined Spaces for General Industry; Final Rule, is canceled.

E. FEDERAL PROGRAM CHANGE. This instruction describes a Federal Program Change which affects State programs. Each Regional Administrator shall:

1. Ensure that this amended instruction is forwarded to each State designee.

2. Provide a copy of the Federal Register notice to the State designee upon request.

3. Explain the technical content of the Federal Register notice at 58 FR 4462, January 14, 1993, Permit-Required Confined Spaces for General Industry; Final Rule, and the Federal Register notice at 58 FR 34844, June 29, 1993, Permit-Required Confined Spaces for General Industry; Corrections, to the State designees upon request.

4. Inform each State designee that under 29 CFR 153.23(a) and (b), the State must, within six months of the date of the Federal Register publications listed in item 3 above, amend its final rule or adopt the final rule to ensure that the State standard is at least as effective as the Final Rule for Permit-Required Confined Spaces for General Industry, 29 CFR 1910. The State must submit a plan supplement to the Regional Administrator within 30 days of State promulgation.

5. Ensure that each State designee acknowledges receipt of this instruction in writing, within 30 days of notification, to the Regional Administrator. The acknowledgment should include (a) the State's plan to adopt and implement the standard change, (b) the State's plan to develop an alternative change, which is as effective, or (c) the reasons why no change is necessary to maintain a program which is as effective as the Federal program.

6. Inform State designees with existing confined spaces standards that they can choose to submit their standards now in comparison document format, with their justification for why any different provisions are at least as effective, and let OSHA review the standard before they make any revisions. This will allow a State to avoid conducting two separate rulemaking processes in order to make any changes that may be needed.

F. DIFFERENT STATE STANDARDS. Section 18(c) of the Act requires that State standards be "at least as effective" as the Federal and, when applicable to products used or distributed in interstate commerce, the standards must be required by compelling local conditions and not unduly burden interstate commerce. In addition to the "at least as effective" criterion, this "product clause test" will be applied to State standards with substantively different requirements from the comparable Federal standard, as described in STP 2-1.117. A State standard expanded in scope from the Federal is considered to be a substantively different standard.

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G. INTERIM ENFORCEMENT. Under 29 CFR 1953.23(a) and (b), State plan States are provided up to six months from publication of the Federal standard in the Federal Register to promulgate an identical or "at least as effective" standard. During the interim period prior to adoption, the State should make every effort to enforce the substantive provisions of the new or revised Federal standard through existing State standards, a general duty clause, or other enforcement mechanism. Federal enforcement assistance will be provided, as necessary, in States without final approval (18(e) determination), and technical assistance in 18(e) final approval States.

H. EFFECTIVE DATE. The final rule became effective on April 15, 1993, and the corrections became effective on June 29, 1993. The effective date for an identical or different State standard or amendment may be no later than the date of State promulgation or the Federal effective date, whichever is later.

I. EXPLANATION.

1. On January 14, 1993, OSHA issued a new standard regulating occupational exposure to Permit-required confined spaces in general industry, 29 CFR 1910.146. The basis for this action is a determination by the Assistant Secretary that the existing standards do not adequately protect workers in confined spaces from atmospheric, mechanical and other hazards. The Assistant Secretary has also determined that the ongoing need for monitoring, testing and communication at workplaces which contain entry permit confined spaces can be satisfied only through the implementation of a comprehensive confined space entry program.

2. The new standard establishes safety requirements, including a permit system, for entry into those confined spaces, designated as Permit-required confined spaces (permit spaces), which pose special dangers for entrants because their configurations are conducive to the creation of serious hazards, such as toxic, explosive or asphyxiating atmospheres. If an employer determines that the workplace contains a permit-required confined space, he or she must develop and implement a written permit space entry program and train employees, if employees will enter the permit space. If employees will not enter any permit spaces, the employer must institute measures to preclude inadvertent entry by employees.

3. On June 29, 1993, OSHA issued corrections to the Permit-Required Confined Spaces for General Industry; Final Rule. In addition to fixing typographical errors, the corrections make changes to clearly express OSHA's intent regarding certain provisions of the standard.

4. Under 29 CFR 1953.23 (a) and (b), State plan States are provided up to six months from the publication in the Federal Register of an OSHA Standard for adoption of parallel State standards and amendments. States should promulgate their equivalent of this Standard by July 14, 1993, and their equivalent of this amendment by December 29, 1993.
ABSTRACT
Under the confined space standard employee exposure information pertaining to pre-entry air monitoring is required to be recorded on the permit for the duration of the entry, and cancelled permits must be retained for one year. The definition of continuous monitoring means without interruption, which is possible only with real-time instruments. Colorimetric tubes do not normally satisfy the requirements for continuous monitoring. Lastly, with respect to confined spaces, OSHA does not make a distinction between types of sewers (sanitary vs. process), even though the conditions within them could be different.

INTERPRETATION
This interpretation letter addresses the following questions:

1. OSHA defines the types of pre-entry air monitoring to be performed under the new confined space standard, 29 CFR 1910.146, but doesn't clearly indicate how the results should be recorded or how long the pre-entry air monitoring records should be kept. What is required to be recorded under this standard?

Answer: Pre-entry air monitoring results, including the names or initials of the testers and an indication of when the tests were performed, are required to be recorded on the permit for the duration of the entry. Cancelled entry permits must be retained for one year in accordance with the requirements of 29 CFR 1910.146(e)(6).

2. What is the definition of continuous monitoring under the standard? Will periodic testing using colorimetric devices such as the Draeger tubes suffice?

Answer: Atmospheric testing is required for two distinct purposes: evaluation of the hazards of the permit space and verification that acceptable entry conditions for entry into that space exist. The atmosphere of a confined space should be analyzed using equipment that has sufficient sensitivity and specificity to identify and evaluate any hazardous atmospheres that may exist or arise, so that appropriate permit entry procedures can be developed and acceptable entry conditions stipulated for that space. Results of testing (i.e., actual concentration, etc.) should be recorded on the permit in the space provided adjacent to the stipulated acceptable entry condition.

Continuous monitoring means without interruption, which is possible only with real-time instruments. Colorimetric tubes do not satisfy requirements for continuous monitoring. However, in some cases, the use of a real-time instrument is not feasible (due to constraints of specificity, sensitivity, or accuracy), and a colorimetric tube is the best alternative. If colorimetric tubes are necessary, they must be used in a manner and frequency specified by a qualified health and safety professional.

3. OSHA addresses sewers separately in the standard, dedicating an appendix (E) to sewer system entry, but mentions only sanitary sewers, not process sewers. There is a major difference between the two. Does OSHA make any distinction between them?

Answer: Although sewers have hazards similar to those of other confined spaces, sewer entry differs in three vital respects from other permit entries. First, the space (a section of a continuous system) can rarely be completely isolated for entry. Second, because isolation is not complete, the atmosphere may suddenly and unpredictably become lethally hazardous (toxic, flammable, or...
explosive) from causes beyond the control of the entrant or employer. Third, experienced sewer workers are especially knowledgeable in entry and work in their permit spaces because of their frequent entries. Unlike other employments where permit space entry is a rare and exceptional event, sewer workers' usual work environment is a permit space.

OSHA does not make a distinction between types of sewers even though the conditions could be different.
This interpretation addresses a question concerning the acceptability of disregarding the ANSI confined space standards since a confined space OSHA standard is in effect.

It is the opinion of the DOE that it is not acceptable to ignore any DOE mandatory standard. Each contractor at a DOE facility must follow the OSHA confined space standard, which is contained in 29 CFR 1910.146, and apply, as appropriate any additional requirements from DOE-adopted consensus standards such as ANSI Z117.1.

**INTERPRETATION**

29 CFR 1910.146

This interpretation is in response to your letter of August 5, 1993, asking if it is acceptable to ignore ANSI Z117.1-1977 (Safety Requirements for Confined Spaces) if the facility is following OSHA confined space regulation. In your request you identified two specific questions.

**Question 1:**

The new 1910.146 OSHA standard gives the impression that ANSI Z117.1-1977 is not followed. Is this acceptable for DOE adoption?

**Answer:**

The body of your letter correctly indicates that "...DOE does specifically reference the ANSI standard, Z117.1-1977, in the 5480.4 Order as a mandatory ES&H requirement for confined space." DOE 5480.4 also specifies that 29 CFR 1910 and 29 CFR 1926, in their entirety, are mandatory standards. Therefore, 29 CFR 1910.146 and ANSI Z117.1-1977 apply to DOE facilities. In instances of standard overlap, such as this, 5480.4 directs that "...where both DOE and non-DOE ES&H standards are applicable and mandatory and there are conflicts between such standards, the ES&H standards providing greater protection shall govern. Similarly, where there are conflicts between the mandatory ES&H standards of this Order, or between those of this Order and other DOE Orders or requirements, the mandatory ES&H standards or requirements providing the greater protection shall govern."

We advise you to thoroughly review your confined space operations and the requirements of both 29 CFR 1910.146 and ANSI Z117.1-1977 in order to determine which practices and procedures will "...provide the greater protection." This is fully consistent with OSHA and DOE policies to provide "...employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm ..."

**Question 2:**

How does the ANSI Z117.1-1977 standard affect DOE operations?

**Answer:**

The scope of the confined space standard, 29 CFR 1910.146 is limited to general industry operations involving "permit-required confined spaces." The standard defines a permit-required confined space to mean a "...confined space that has one or more of the following characteristics:

1. Contains or has a potential to contain a hazardous atmosphere;
2. Contains a material that has the potential for engulfing an entrant;
3. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or
4. Contains any other recognized serious safety or health hazard.*

Any work being performed in a confined space not meeting the requirements of a "permit-required confined space," described above, or does not fall within the scope of 29 CFR 1910.146 (i.e. construction), would still be subject, at minimum, to the requirements of ANSI Z117.1-1977, as mandated by DOE Order 5480.4.
This interpretation letter addresses a question concerning whether OSHA has eliminated the designation, and thus requirements, for "non-permit" confined spaces.

The new confined space standard (29 CFR 1910.146) still contains provisions for a non-permitted confined space.

**INTERPRETATION** 29 CFR 1910.146 (c)(1)

This interpretation is in response to your letter dated August 9, 1993, requesting clarification of OSHA's new confined space standard, specifically, will it eliminate (any) requirements for non-permit required confined spaces?

OSHA requires in 29 CFR 1910.146 (c) (Permit Required Confined Space) that, when there are changes in the use or configuration of a non-permit confined space that might increase the hazards to entrants, the employer shall reevaluate that space and, if necessary, reclassify it as a permit-required confined space. OSHA also requires that "if the permit space poses no actual or potential atmospheric hazards and if all hazards within the space are eliminated without entry into the space, the permit space may be reclassified as a non-permit confined space for as long as the non-atmospheric hazards remain eliminated."

Therefore, any potential confined space will have to be evaluated initially, and any non-permitted confined space will have to be evaluated as necessary to determine if there are conditions that may require upgrading to a permitted confined space.

In answer to your question, OSHA has not eliminated non-permitted confined spaces.
OSHA Instruction STD 1-7.3
SEP 11, 1990

SUBJECT: 29 CFR 1910.147, the Control of Hazardous Energy (Lockout/Tagout)--Inspection Procedures and Interpretive Guidance

A. Purpose. This instruction establishes policies and provides clarification to ensure uniform enforcement of the Lockout/Tagout Standards.

B. Scope. This instruction applies OSHA-wide.

C. References.


D. Effective Date of Requirements. All requirements of 29 CFR 1910.147 have an effective date of January 2, 1990. The information collection requirements contained in this section have been approved by the Office of Management and Budget (OMB) and listed under OMB control number 1218-0150, as announced at Federal Register, Volume 54, No. 199, October 17, 1989.

E. Action. Regional Administrators and Area Directors shall ensure that the guidelines and interpretive guidance in this instruction are followed and that compliance officers are familiar with the contents of the standard.

F. Federal Program Change. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this change is forwarded to each State designee.

2. Explain the technical content of this change to the State designee as requested.

3. Ensure that State designees acknowledge receipt of this Federal program change in writing, within 30 days of notification, to the Regional Administrator. This acknowledgment should include the State's intention to follow the inspection guidelines described in this instruction, or a description of the State's alternative guidelines which are "at least as effective" as the Federal guidelines.

   a. If a State intends to follow the revised inspection guidelines described in this instruction, the State must submit either a revised version of this instruction, adapted as appropriate to reference State law, regulations and administrative structure, or a cover sheet describing how references in this instruction correspond to the State's structure. The State's acknowledgment letter may fulfill the plan supplement requirement if the appropriate documentation is provided.

   b. Any alternative State inspection guidelines must be submitted as a State plan supplement within 6 months. If the State adopts an alternative to Federal guidelines, the State's submission must identify and provide a rationale for all substantial differences from Federal guidelines in order for OSHA to judge whether a different State guideline is as effective as a comparable Federal guideline.

4. After Regional review of the State plan supplement and resolution of any comments thereon, forward the State submission to the National Office in accordance with established procedures. The Regional Administrator shall provide a judgment on the relative effectiveness of each substantial difference in the State plan change and an overall assessment thereof with a recommendation for approval or disapproval by the Assistant Secretary.
OSHA Instruction STD 1-7.3 (cont.)

5. Review policies, instructions and guidelines issued by the State to determine that this change has been communicated to State personnel.

G. Background. The Standard for Control of Hazardous Energy (Lockout/Tagout), 29 CFR 1910.147, was promulgated on September 1, 1989, at Federal Register, Volume 54, No. 169 (pages 36644-36698), and was effective on January 2, 1990, as announced at Federal Register, Volume 54, No. 213, November 6, 1989 (page 46610). Previously existing section 29 CFR 1910.147 was redesignated as 29 CFR 1910.150, Sources of Standards.

1. Since the inception of its enforcement program, OSHA has relied on the “General Duty Clause” (Section 5(a)(1) of the OSH Act) to ensure that employers safeguarded their maintenance and service employees through the use of lockout/tagout from the hazards involving the unintentional release of hazardous energy. Such violations reached a level so significant that the development and promulgation of a lockout/tagout standard was required.

2. The new rule addresses practices and procedures that are necessary to disable machinery or equipment and to prevent the release of potentially hazardous energy while maintenance and servicing activities are being performed.

3. The lockout/tagout provisions of this standard are for the protection of general industry workers while performing servicing and maintenance functions and augment the safeguards specified at Subparts O, S, and other applicable portions of 29 CFR 1910.

H. Inspection Guidelines. The standard incorporates performance requirements which allow employers flexibility in developing lockout/tagout programs suitable for their particular facilities.

1. The compliance officer shall determine whether servicing and maintenance operations are performed by the employees. If so, the compliance officer shall further determine whether the servicing and maintenance operations are covered by 29 CFR 1910.147 or by the requirements or employee safeguarding specified by other standards as discussed in I.1.

2. Evaluations of compliance with 29 CFR 1910.147 shall be conducted during all general industry inspections within the scope of the standard in accordance with the FOM, Chapter III, D.7. and 8., Additional Information to Supplement Records Review. The review of records shall include special attention to injuries related to maintenance and servicing operations.

3. The compliance officer shall evaluate the employer's compliance with the specific requirements of the standard. The following guidance provides a general framework to assist the compliance officer during inspections:

a. Ask the employer for any hazard analysis or other basis on which the program related to the standard was developed. Although this is not a specific requirement of the standard, such information, when provided, will aid in determining the adequacy of the program. It should be noted that the absence of a hazard analysis does not indicate non-compliance with the standard.

b. Ask the employer for the documentation including: procedures for the control of hazardous energy including shutdown, equipment isolation, lockout/tagout application, release of stored energy, verification of isolation; certification of periodic inspections; and certification of training. The documented procedure must identify the specific types of energy to be controlled and, in instances where a common procedure is to be used, the specific equipment covered by the common procedure must be identified at least by type and location. The identification of the energy to be controlled may be by magnitude and type of energy. Note the exception to documentation requirements at paragraph 1910.147(c)(4)(i), “Note”. The employer need not document the required procedure for a particular machine or equipment when all eight(8) elements listed in the "Note" exist.
c. Evaluate the employer's training programs for "authorized", "affected", and "other" employees. Interview a representative sampling of selected employees as a part of this evaluation (29 CFR 1910.147 (c)(7)(i)).

(1) Verify that the training of authorized employees includes:
   (a) Recognition of hazardous energy;
   (b) Type and magnitude of energy found in the workplace;
   (c) The means and methods of isolating and/or controlling energy; and
   (d) The means of verification of effective energy control, and the purpose of the procedures to be used.

(2) Verify that affected employees have been instructed in the purpose and use of the energy control procedures.

(3) Verify that all other employees who may be affected by the energy control procedures are instructed about the procedure and the prohibition relating to attempts to restart or reenergize such machines or equipment.

(4) When the employer's procedures permit the use of tagout, the training of authorized, affected, and other employees shall include the provisions of 29 CFR 1910.147(c)(7)(ii) and (d)(4)(iii).

d. Evaluate the employer's manner of enforcing the program (29 CFR 1910.147 (c)(4)(ii)).

4. In the event that deficiencies are identified by following the guidelines in H.3. of this instruction, the compliance officer shall evaluate the employer's compliance with specific requirements of the standard, with particular attention to the interpretive guidance provided in section I. and to the following:

a. Evaluate compliance with the requirements for periodic inspection of procedures.

b. Ensure that the person performing the periodic inspection is an authorized employee other than the one(s) utilizing the procedure being inspected.

c. Evaluate compliance with retraining requirements which result from the periodic inspection of procedures and practices, or from changes in equipment/processes.

d. Evaluate the employer's procedures for assessment, and correction of deviations of inadequacies identified during periodic inspections of the energy control procedure.

e. Identify the procedures for release from lockout/tagout, including:
   (1) Replacement of safeguards, machine or equipment inspection, and removal of non-essential tools and equipment;
   (2) Safe positioning of employees;
   (3) Removal of lockout/tagout device(s); and
   (4) Notification of affected employees that servicing and maintenance is completed.

f. Ensure that when group lockout or tagout is used, it affords a level of protection equivalent to individual lockout or tagout as amplified in I.7. through I.9. of this instruction.
OSHA Instruction STD 1-7.3 (cont.)

5. The lockout/tagout standard is a performance standard; therefore, additional guidance is provided in Appendix C of this instruction to assist in effective implementation by employers and for uniform enforcement by OSHA field staff.

I. Interpretive Guidance. The following guidance relative to specific provisions of 29 CFR 1910.147 is provided to assist compliance officers in conducting inspections where the standard may be applicable:


   a. The standard as specified in 29 CFR 1910.147(b), applies to any source of mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

      (1) The standard applies to piping systems, and requires, at 29 CFR 1910.147(d)(5), that all potentially hazardous stored or residual energy be relieved, disconnected, restrained, and otherwise rendered safe. If there is a possibility of reaccumulation of stored energy to a hazardous level, continued monitoring shall be performed while a potential hazard exists.

      (2) The standard also applies to high intensity electromagnetic fields regulated at 29 CFR 1910.97, nonionizing radiation. Such electromagnetic devices shall be deenergized and held off whenever workers are present within a high intensity ambient field.

      (3) Servicing/maintenance of fire alarm and extinguishing systems and their components, upon which other employees are dependent for fire safety, are not required to meet the requirements of this standard if the workers performing servicing maintenance upon fire extinguishing systems are protected from hazards related to the unexpected release of hazardous energy by appropriate alternative measures (See 29 CFR 1910. Subpart L.)

   b. The standard does not apply to servicing and maintenance when employees are not exposed to the unexpected released of hazardous energy.

   c. Safeguarding workers from the hazards of contacting electrically live parts (exposure to electric current) continues to be regulated at Subpart S.

   d. Servicing and maintenance functions conducted during normal production operations are not regulated at 29 CFR 1910.147 if the safeguarding provisions of Subpart O or other applicable portions of 29 CFR 1910 prevent worker exposure to hazards created by the unexpected energization or start-up of the machine or equipment. However, lockout/tagout procedures are required if the production safeguards are rendered ineffective while an employee is exposed to hazardous portions of the machines or equipment.

   e. Generally, activities such as lubrication, cleaning or unjamming, servicing of machines or equipment, and making adjustments or tool changes, where the employee may be exposed to the UNEXPECTED energization or start-up of the equipment or release of hazardous energy, are covered by this standard. However, minor tool changes and adjustments, and other minor servicing activities, which take place during normal production operations, are not covered by this standard if they are routine, repetitive, and integral to the use of equipment for production, and if work is performed using alternative protective measures which provide effective employee protection. Thus, lockout or tagout is not required by this standard if the alternative protective measures enable the servicing employee to clean or unjam, or otherwise service the machine without being exposed to unexpected energization or activation of the equipment, or the release of stored energy.

   NOTE: Appendix C, section A, provides further guidance in this area.

   f. The exclusion of plug and cord connected electric equipment, at 29 CFR 1910.147(a)(2)(iii)(A), applies only when the equipment is unplugged and the plug is under the exclusive control of the employee performing the servicing and or maintenance.
OSHA Instruction STD 1-7.3 (cont.)

(1) The plug is under the exclusive control of the employee if it is physically in the possession of the employee, or in arm's reach and in line of sight of the employee, or if the employee has affixed a lockout/tagout device on the plug.

(2) The company lockout/tagout procedures required by the standard at 29 CFR 1910.147(c)(4) shall specify the acceptable procedure for handling cord and plug connected equipment.

2. Procedures.

a. The employer must develop and document procedures and techniques to be used for the control of hazardous energy. The standard, at 29 CFR 1910.147(c)(4)(i) "Note," identifies eight (8) conditions that must exist in order to excuse the employer's obligation to maintain a written procedure for a specific machine or piece of equipment.

b. 29 CFR 1910.147(d)(3) and (d)(5) provide that energy isolation be a mandatory part of employer's control procedure where either a lockout system or a tagout system is used.

c. Similar machines and/or equipment (such as those using the same type and magnitude of energy and the same or similar types of controls) can be covered with a single written procedure.

3. Lockout vs Tagout.

a. OSHA has determined that lockout is a surer means of ensuring deenergization of equipment than tagout, and that it is the preferred method.

b. 29 CFR 1910.147(c)(3)(ii) provides that: When using a tagout program in those instances where the equipment is capable of being locked out, the employer shall demonstrate that the tagout program will provide a level of safety equivalent to the obtained when using a lockout program. Additional means beyond those necessary for lockout are required. (Additional means include: additional safety measures such as the removal of an isolating circuit element, blocking of a controlling switch, opening of an extra disconnecting device, or the removal of a valve handle to reduce the likelihood of inadvertent energization.)

c. 29 CFR 1910.147(c)(4)(ii) provides that: Where lockout/tagout programs are used, the employer is required to implement an effective means of enforcing the program.

d. 29 CFR 1910.147(c)(7)(i)(A-F) provide that: Additional training of authorized, affected and other employees is required when tagout programs are used.

e. 29 CFR 1910.147(c)(5)(ii)(A) requires that lockout and tagout devices be capable of withstanding the environment to which they are exposed. Devices which are not exposed to harsh environments need not be capable of withstanding such exposure.

f. 29 CFR 1910.147(c)(5)(ii)(C) requires that tagout devices having reusable, non-locking, easily detachable means of attachment (such as string, cord, or adhesive) are not permitted.

4. Employees and Training.

a. The standard recognized three types of employees: (1)"authorized" and (2)"affected", defined in 1910.147 (b), and (3)"other", defined in 1910.147(c)(7)(i)(C). Different levels of training are required based upon the respective roles of employees in the control of energy and the knowledge which they must possess to accomplish their tasks safely and to ensure the safety of fellow workers as related to the lockout/tagout procedures (1910.147(c)(7)(i)).
b. Employees who exclusively perform functions related to normal production operations, and who perform servicing and/or maintenance under the protection of normal machine safeguarding, need only be trained as "affected" (rather than "authorized") employees even if lockout procedures are used. (See, 1.1.d. and 1.1.e. of this instruction.)

c. The employer's training program must cover, at a minimum, the following three areas: energy control program, elements of energy control procedures relevant to employee duties, and the pertinent requirements of the standard (1910.147(c)(7) and (d) through (i)).

d. The employer must provide:

(1) Effective initial training;

(2) Effective retraining as needed; and

(3) Certification of training. The certification shall contain each employee's name and dates of training (1910.147(c)(7)(iv)).

e. Retraining of authorized and affected employees is required:

(1) Whenever there is a change in employee job assignments;

(2) Whenever a new hazard is introduced due to a change in machines, equipment or process;

(3) Whenever there is a change in the energy control procedures; or

(4) Whenever a periodic inspection by the employer reveals inadequacies in the company procedures or in the knowledge of the employees.

5. Periodic Inspection by the Employer

a. At least annually, the employer shall ensure that an authorized employee other than the one(s) utilizing the energy control procedure being inspected, is required to inspect and verify the effectiveness of the company energy control procedures. These inspections shall at least provide for a demonstration of the procedures and may be implemented through random audits and planned visual observations. These inspections are intended to ensure that the energy control procedures are being properly implemented and to provide an essential check on the continued utilization of the procedures (29 CFR 1910.147(c)(6)(i)).

(1) When lockout is used, the employer's inspection shall include a review of the responsibilities of each authorized employee implementing the procedure with that employee. Group meetings between the authorized employee who is performing the inspection and all authorized employees who implement the procedure would constitute compliance with this requirement.

(2) When lockout is used, the employer shall conduct this review with each affected and authorized employee.

(3) Energy control procedures used less frequently than once a year need be inspected only when used.

b. The periodic inspection must provide for and ensure effective correction of identified deficiencies (29 CFR 1910.147(c)(6)(i)(B)).

c. The employer is required to certify that the prescribed periodic inspections have been performed (29 CFR 1910.147(c)(6)(ii)).
6. Equipment Testing or Positioning. Under 29 CFR 1910.147(f)(1), OSHA allows the temporary removal of lockout or tagout devices and the reenergization of the machine or equipment ONLY during the limited time necessary for the testing or positioning of machines, equipment or components. After the completion of the temporary reenergization, the authorized employees shall again deenergize the equipment and resume lockout/tagout procedures.

7. Group Lockout/Tagout. Group lockout/tagout procedures shall be tailored to the specific industrial operation and may be unique in the manner that employee protection from the release of hazardous energy is achieved. Irrespective of the situation, the requirements of this generic standard specify that each employee performing maintenance or servicing activities shall be in control of hazardous energy during his/her period of exposure.

a. Group operations normally require that a lockout/tagout program be implemented which ensures that each authorized employee is protected from the unexpected release of hazardous energy by his/her personal lockout/tagout device(s). No employee may affix the personal lockout/tagout device of another employee. Various group lockout/tagout procedures discussed in Appendix C provide for each authorized employee's use of his/her personal lockout/tagout device(s).

b. One of the most difficult problems addressed by the standard involves the servicing and maintenance of complex equipment. Such equipment is frequently used in the petrochemical and chemical industries. Acceptable group lockout/tagout procedures for complex equipment are discussed further at Appendix C.

8. Compliance with Group Lockout/Tagout. These operations shall, at a minimum, provide for the following:

a. Before the machine or equipment is shut down, each authorized employee who is to be involved during the servicing/maintenance operation shall be made aware by the employer of the type, magnitude, and hazards related to the energy to be controlled and of the method or means to control the energy. In the event that the machine or equipment is already shut down, the authorized employee shall be made aware of these elements before beginning his/her work (29 CFR 1910.147(d)(1)). Verification shall be performed as noted at I.8.f. of this instruction.

b. An orderly shutdown of the machine or equipment shall be conducted which conforms to the documented company procedure and which will not create hazards (29 CFR 1910.147(d)(2)).

c. All energy isolating devices needed to isolate the machine or equipment shall be effectively positioned and/or installed (29 CFR 1910.147 (d)(3)).

d. The authorized employee(s) performing the servicing or maintenance (following the company procedure) shall personally affix a lock or tag upon each energy isolating device (29 CFR 1910.147(d)(4)(i)). The company procedure must ensure that no employee affixes a personal lockout/tagout device for another employee.

(1) A single lock upon each energy isolating device, together with the use of a lockbox for retention of the keys and to which each authorized employee affixes his/her personal lock or tag, also satisfies the requirement (29 CFR 1910.147(f)(3)(i)).

(2) Locks shall be affixed in a manner that will hold the energy isolating device in a safe (off) position (29 CFR 1910.147(d)(4)(ii)).

(3) Tagout devices, where used, shall be affixed at the same location as would a lock if such fittings are provided, or shall be affixed in a manner that will clearly indicate that movement of the isolating device is prohibited (29 CFR 1910.147(d)(4)(iii)).
e. Following the application of locks or tags, all potentially hazardous stored energy or residual energy shall be relieved, disconnected, restrained, and otherwise rendered safe (29 CFR 1910.147(d)(5)(i)).

(1) Verification of energy isolation shall be monitored as frequently as necessary if there is a possibility of reaccumulation of stored energy (29 CFR 1910.147(d)(5)(ii)).

(2) Monitoring may be accomplished, for example, by observation or with the aid of a monitoring device which will sound an alarm if a hazardous energy level is being approached.

f. Authorized employees shall verify that isolation and deenergization have been effectively accomplished before starting servicing/maintenance work. Verification is also necessary by each group of workers before starting work at shift changes.

g. Release from lockout/tagout shall be accomplished in compliance with the requirements at 29 CFR 1910.147(e).

(1) The machine or equipment area shall be cleared of nonessential items to prevent malfunctions which could result in employee injuries 29 CFR 1910.147(e)(1)).

(2) The authorized employees shall remove their respective locks or tags from the energy isolating devices or from the group lock-box(s) following the procedure established by the company (29 CFR 1910.147(e)(3)).

(3) In all instances, the company procedure must provide a system which identifies each authorized employee involved in the servicing/maintenance operation.

(4) Before reenergization, all employees in the machine or equipment area shall be safely positioned or moved from the area, and the affected employees shall be notified that the lockout/tagout devices have been removed (29 CFR 1910.147(e)(2)).

h. During all group lockout/tagout operations where the release of hazardous energy is possible, each authorized employee performing servicing or maintenance shall be protected by his/her personal lockout or tagout device and by the company procedure. As described at Appendix C, B.1.e., a master tag is a personal tagout device on each employee personally signs on and signs off on it and if the tag clearly identifies each authorized employee who is being protected by it.

9. Compliance of Outside Personnel. Outside servicing and maintenance personnel (contractors, etc.) engaged in activities regulated under 29 CFR 1910.147 are subject to the requirements of that standard.

a. The CSHO shall verify that the outside employer and the on-site employer have exchanged information regarding the lockout/tagout energy control procedures used by each employer's workers (29 CFR 1910.147(f)(2)(i)).

b. The CSHO shall verify that the on-site employer has effectively informed his/her personnel of the restrictions and prohibitions associated with the outside employer's energy control procedures (29 CFR 1910.147(f)(2)(ii)).

c. When an outside employer is engaged in servicing and maintenance activities within an on-site employer's facility and if that contractor's activities are subject to the requirements of 29 CFR 1910.147, the CSHO shall coordinate with the Area Director to obtain permission to initiate an independent inspection of the outside contractor's activities.

10. Appendix B contains an example of a functional flow diagram to implement safe lockout/tagout procedures. This flow diagram is presented solely as an aid and does not constitute the exclusive or definitive means of complying with the standard in any particular situation.
OSHA Instruction STD 1-7.3 (cont.)

J. Classification of Violations.

1. A deficiency in the employer's energy control program and/or procedure that could contribute to a potential exposure capable of producing serious physical harm or death shall be cited as a serious violation.

2. The failure to train "authorized", "affected", and "other" employees as required for their respective classifications should normally be cited as a serious violation.

3. Paperwork deficiencies in lockout/tagout programs where effective lockout/tagout work procedures are in place shall be cited as other-than-serious.

K. Evaluation. In keeping with agency policy, each Region shall evaluate the effectiveness of the guidance in this instruction annually. Each Regional Administrator shall submit a written evaluation report to the Directorate of Compliance Programs within 30 days of the close of the fiscal year.
Appendix A

The following listing indicates a number of OSHA standards which currently impose lockout/tagout related requirements. The list does not necessarily include all lockout/tagout related OSHA 29 CFR 1910 standards.

Powered Industrial Trucks
1910.178(q)(4)

Overhead and Gantry Cranes
1910.179(g)(5)(i), (ii), (iii)
1910.179(1)(2)(i)(c), (d)

Derricks
1910.181(i)(2)(i)(c), (d)

Woodworking Machinery
1910.213(a)(10)
1910.213(b)(5)

Mechanical Power Presses
1910.217(b)(8)(i)
1910.217(d)(9)(iv)

Forging Machines
1910.218(a)(3)(iii), (iv)
1910.218(d)(2)
1910.218(e)(1)(ii), (iii)
1910.218(f)(1)(i), (ii), (iii)
1910.218(f)(2)(i), (ii)
1910.218(h)(2), (5)
1910.218(i)(1), (2)
1910.218(j)(1)

Welding, Cutting and Brazing
1910.252(c)(1)(i)

Pulp, Paper and Paperboard Mills
1910.261(b)(4)
1910.261(f)(6)(i)
1910.261(g)(15)(i)
1910.261(g)(19)(iii)
1910.261(j)(4)(iii)
1910.261(j)(5)(iii)
1910.261(k)(2)(ii)
OSHA Instruction STD 1-7.3 (cont.)

Textiles
1910.262(c)(1)
1910.262(n)(2)
1910.262(p)(1)
1910.262(q)(2)

Bakery Equipment

Sawmills
1910.265(c)(12)(v), 1910.265(c)(13), 1910.265(c)(26)(v)

Grain Handling
1910.272(e)(1)(ii)*
1910.272(g)(1)(ii)
1910.272(l)(4)

Electrical

Appendix B
(Appendix B was unreadable and was not reproduced for this guide.)

Appendix C
This appendix provide guidelines to assist the compliance officer during evaluations of employer operations.


1. Safeguarding of servicing and maintenance workers can be ensured either by:
   a. Effective machine safeguarding in compliance with Subpart O, or
   b. Compliance with 29 CFR 1910.147 in situations where the normal production operations safeguards are rendered ineffective or do not protect the servicing/maintenance worker.

2. Activities which are routine, repetitive, and integral to the use of equipment for production are not covered by this standard if alternative measures provide effective worker protection from hazards associated with unexpected energization. Compliance with the machine guarding requirements of Subpart O is an example of such alternative measures. In addition, supplemental personal protective equipment may be necessary during a servicing or maintenance operation when a toxic substance is to be isolated. Under such circumstances, the requirements of applicable standards, such as 29 CFR 1910.134 and Subpart Z, also must be met.
OSHA Instruction STD 1-7.3 (cont.)

3. An employer who requires employees to perform routine maintenance and/or servicing while a machine or process is operating in the production mode, must provide employee safeguarding under the applicable requirements of Subpart O (Ref. 29 CFR 1910.212(a)(1)). Operations such as lubricating, draining sumps, servicing of filters, and inspection for leaks and/or mechanical malfunction are examples of routine operations which can be accomplished with effective production-mode safeguards. However, the replacement of machine or process equipment components such as valves, gauges, linkages, support structure, etc., is not considered to be normal routine maintenance function which can safely be accomplished during machine or process equipment operation. Such maintenance requires energy isolation and should be evaluated by OSHA field staff. They also may be an appropriate subject of a variance request.

4. Several alternative means of safeguarding the hazardous portions of machines and equipment are presented by the national consensus standard, ANSI B11.19-1990. Although that standard is not all inclusive, it describes effective safeguarding alternatives for the protection of employees. The safeguards described include: interlocked barrier guards, presence sensing devices and various devices under the exclusive control of the employee. Such devices or guards, properly applied, may be used in clearing minor jams and performing other minor servicing functions which occur during normal production operations and which meet the criteria described in paragraph A.2. of this appendix.

B. Group Lockout/Tagout. The group lockout/tagout procedures described in this instruction at paragraph 1.8. require each authorized employee to be in control of potentially hazardous energy release during their servicing/maintenance work assignments. Under most circumstances, where servicing/maintenance is to be conducted during only one shift by an individual or a small number of persons working together, the installation of each individual's lockout/tagout device upon each energy isolating device would not be a burdensome procedure. However, when many energy sources or many persons are involved, and/or the procedure is to extend over more than one shift, (possibly several days, or weeks) consideration must be given to the implementation of a lockout/tagout procedure that will ensure the safety of the employees involved and will provide for each individual's control of the energy hazards. The following procedures are presented as examples to illustrate the implementation of a group lockout/tagout procedure involving many energy isolating devices and/or many servicing/maintenance personnel. They illustrate several alternatives for having authorized employees affix personal lockout/tagout devices in a group lockout/tagout setting. These examples are not intended to represent the only acceptable procedures for conducting group operations.

1. Definitions. Various terms used in the examples are defined below.

a. PRIMARY AUTHORIZED EMPLOYEE is the authorized employee who exercises overall responsibility for adherence to the company lockout/tagout procedure. (See 29 CFR 1910.147(f)(3)(ii)(A).)

b. PRINCIPAL AUTHORIZED EMPLOYEE is an authorized employee who oversees or leads a group of servicing/maintenance workers (e.g., plumbers, carpenters, electricians, metal workers, mechanics).

c. JOB-LOCK is a device used to ensure the continuity of energy isolation during a multi-shift operation. It is placed upon a lock-box. A key to the job-lock is controlled by each assigned primary authorized employee from each shift.

d. JOB-TAG with TAB is a special tag for tagout of energy isolating devices during group lockout/tagout procedures. The tab of the tag is removed for insertion into the lock-box. The company procedure would require that the tagout job-tag cannot be removed until the tab is rejoined to it.

e. MASTER LOCKBOX is the lockbox into which all keys and tabs from the lockout or tagout devices securing the machine or equipment are inserted and which would be secured by a "job-lock" during multi-shift operations.
f. SATELLITE LOCKBOX is a secondary lockbox or lock-boxes to which each authorized employee affixes his/her personal lock or tag.

g. MASTER TAG is a document used as an administrative control and accountability device. This device is normally controlled by the operations department personnel and is a personal tagout device if each employee personally signs on and signs off on it and if the tag clearly identifies each authorized employee who is being protected by it.

h. WORK PERMIT is a control document which authorizes specific tasks and procedures to be accomplished.

2. Organization. A group lockout/tagout procedure might provide the following basic organizational structure:

a. A primary authorized employee would be designated. This employee would exercise primary responsibility for implementation and coordination of the lockout/tagout of hazardous energy sources, for the equipment to be serviced.

b. The primary authorized employee would coordinate with equipment operators before and after completion of servicing and maintenance operations which require lockout/tagout.

c. A verification system would be implemented to ensure the continued isolation and deenergization of hazardous energy sources during maintenance and servicing operations.

d. Each authorized employee would be assured of his/her right to verify individually that the hazardous energy has been isolated and/or deenergized.

e. When more than one crew, craft, department, etc., is involved, each separate group of servicing/maintenance personnel would be accounted for by a principal authorized employee from each group. Each principal employee is responsible to the primary authorized employee for maintaining accountability of each worker in that specific group in conformance with the company procedure. No person may sign on or sign off for another person, or attach or remove another person's lockout/tagout device, unless the provisions of the exception to 29 CFR 1910.147(e)(3) are met.

3. Examples of Procedures for Group Lockout/Tagout. Examples are presented for the various methods of lockout/tagout using lockbox procedures. An example of an applicable method for complex process equipment is also presented.

a. The following procedures address circumstances ranging from a small group of servicing/maintenance employees during a one-shift operation to a comprehensive operation involving many over a longer period.

(1) Type A. Each authorized employee places his/her personal lock or tag upon each energy isolating device and removes it upon departure from that assignment. Each authorized employee verifies or observes the deenergization of the equipment.

(2) Type B. Under a lockbox procedure, a lock or job-tag with tab is placed upon each energy isolation device after deenergization. The key(s) and removed tab(s) are then placed into a lockbox. Each authorized employee assigned to the job then affixes his/her personal lock or tag to the lockbox. As a member of a group, each assigned authorized employee verifies that all hazardous energy has been rendered safe. The lockout/tagout devices cannot be removed or the energy isolating device turned on until the appropriate key or tag is matched to its lock or tag.

(3) Type C. After each energy isolating device is locked/tagged out and the keys/tabs placed into a master lockbox, each servicing/maintenance group "principal"authorized employee places his/her personal lock or tag upon the master lockbox. Then each principal authorized employee inserts his/her key into a satellite lockbox to which each
authorized employee in that specific group affixes his/her personal lock or tag. As a member of a group, each assigned authorized employee verifies that all hazardous energy has been rendered safe. Only after the servicing/maintenance functions of the specific subgroup have been concluded and the personal locks or tags of the respective employees have been removed from the satellite lockbox can the principal authorized employee remove his/her lock from the master lockbox.

(4) Type D. During operations to be conducted over more than one shift (or even many days or weeks) a system such as described here might be used. Single locks/tags are affixed upon a lockbox by each authorized employee as described at Type B or Type C above. The master lockbox is first secured with a job-lock before subsequent locks by the principal authorized employees are put in place on the master lockbox. The job-lock may have multiple keys if they are in the sole possession of the various primary authorized employees (one on each shift). As a member of a group, each assigned authorized employee verifies that all hazardous energy has been rendered safe. In this manner, the security provisions of the energy control system are maintained across shift changes while permitting reenergization of the equipment at any appropriate time or shift.

b. Normal group lockout/tagout procedures require the affixing of individual lockout/tagout devices by each authorized employee to a group lockout device, as discussed in paragraph B.3.a. of this appendix. However, in the servicing and maintenance of sophisticated and complex equipment, such as process equipment in petroleum refining, petroleum production, and chemical production, there may be a need for adaptation and modification of normal group lockout/tagout procedures in order to ensure the safety of the employees performing the servicing and maintenance. To provide greater worker safety through implementation of a more feasible system, and to accommodate the special constraints of the standard's requirement for ensuring employees a level of protection equivalent to that provided by the use of a personal lockout or tagout device, an alternative procedure may be implemented if the company documentation justifies it. Lockout/tagout, blanking, blocking, etc., is often supplemented in these situations by the use of work permits and a system of continuous worker accountability. In evaluating whether the equipment being serviced or maintained is so complex as to necessitate a departure from the normal group lockout/tagout procedures (discussed in paragraph B.3.a.), to the use of an alternative procedure as set forth below, the following (often occurring simultaneously) are some of those which must be evaluated: physical size and extent of the equipment being serviced/maintained; the relative inaccessibility of the energy isolating devices; the number of employees performing the servicing/maintenance; the number of energy isolating devices to be locked/tagged out; and the interdependence and interrelationship of the components in the system or between different systems.

(1) Once the equipment is shut down and the hazardous energy has been controlled, maintenance/servicing personnel, together with operations personnel, must verify that the isolation of the equipment is effective. The workers may walk through the affected work area to verify isolation. If there is a potential for the release or reaccumulation of hazardous energy, verification of isolation must be continued. The servicing/maintenance workers may further verify the effectiveness of the isolation by the procedures that are used in doing the work (e.g., using a bleeder valve to verify depressurization, flange-breaking techniques, etc.). Throughout the maintenance and/or servicing activity, operations personnel normally maintain control of the equipment. The use of the work permit or "master tag" system (with each employee personally signing on and signing off the job to ensure continual employee accountability and control), combined with verification of hazardous energy control, work procedures, and walk-through, is an acceptable approach to compliance with the group lockout/tagout and shift transfer provisions of the standard. (Note, B.1.g. of this appendix.)
(2) Specific issues related to the control of hazardous energy in complex process equipment are described below in a typical situation which could be found at any facility. This discussion is intended only as an example and is not anticipated to reflect operations at any specific facility.

(a) Complex process equipment which is scheduled for servicing/maintenance operations is generally identified by plant supervision. Plant supervision would issue specific work orders regarding the operations to be performed.

(b) In most instances where complex process equipment is to be serviced or maintained, the process equipment operators can be expected to conduct the shutdown procedure. This is generally due to their in-depth knowledge of the equipment and the need to conduct the shut-down procedure in a safe, economic and specific sequence.

(c) The operations personnel will normally prepare the equipment for lockout/tagout as they proceed and will identify the locations for blanks, blocks, etc., by placing "operations locks and/or tags" on the equipment. The operations personnel can be expected to isolate the hazardous energy, and drain and flush fluids from the process equipment following a standard procedure or a specific work permit procedure.

(d) Upon completion of shutdown, the operations personnel would review the intended job with the servicing and maintenance crew(s) and would ensure their full comprehension of the energy controls necessary to conduct the servicing or maintenance safely. During or immediately after the review of the job, the servicing and maintenance crews would install locks, tags and/or special isolating devices at previously identified equipment locations following the specified work permit procedure.

(e) Line openings necessary for the isolation of the equipment would normally be permitted only by specific work permits issued by operations personnel. (Such line openings should be monitored by operations personnel as an added safety measure.)

(f) All of the previous steps should have been documented by a master system of accountability and retained at the primary equipment control station for the duration of the job. The master system of accountability may manifest itself as a Master Tag which is subsequently signed by all of the maintenance/servicing workers if they fully comprehend the details of the job and the energy isolation devices actuated or put in place. This signing by the respective workers further verifies that energy isolation training relative to this operation has been conducted.

(g) After the system has been rendered safe, the authorized employees verify energy controls as described in B.3.b.(1) of this appendix.

(h) Specific work functions are controlled by work permits which are issued for each shift. Each day each authorized employee assigned must sign in on the work permit at the time of arrival to the job and sign out at departure. Signature, date, and time for sign-in and sign-out would be recorded and retained by the applicable crew supervisor who upon completion of the permit requirements would return the permit to the operations supervisor. Work permits could extend beyond a single shift and may subsequently be the responsibility of several supervisors.
OSHA Instruction STD 1-7.3 (cont.)

(l) Upon completion of the tasks required by the work permit, the authorized employees' names can be signed off the Master Tag by their supervisor once all employees have signed off the work permit. The work permit is then attached to the Master Tag. (Accountability of exposed workers is maintained.)

(j) As the work is completed by the various crews, the work permits and the accountability of personnel are reconciled jointly by the primary authorized employee and the operations supervisor.

(k) During the progress of the work, inspection audits are conducted.

(l) Upon completion of all work, the equipment is returned to the operations personnel after the maintenance and servicing crews have removed their locks, tags, and/or special isolating devices following the company procedure.

(m) At this time all authorized employees who were assigned to the tasks are again accounted for and verified to be clear from the equipment area.

(n) After the completion of the servicing/maintenance work, operations personnel remove the tags originally placed to identify energy isolation.

(o) Operations personnel then begin check-out, verification and testing of the equipment prior to being returned to production service.

C. It should be noted that the purpose of the lockout/tagout standard is to reduce the likelihood of worker injuries and fatalities during servicing/maintenance operations. Therefore, when compliance officers inspect workplaces, they should evaluate the potential for employee exposure to the unexpected release of hazardous energy during servicing/maintenance operations. When a hazard is noted, the various requirements of the standard should be applied in a manner which will result in abatement of the hazardous circumstance.
OSHA Instruction STP 2-1.158A

January 7, 1991
Office of State Programs

Subject: Control of Hazardous Energy Sources (Lockout/Tagout): Final Rule, and Corrections and Technical Amendments

A. Purpose. This instruction describes a Federal Program Change to the Regions and State designees.

B. Scope. This instruction applies OSHA-wide.

C. Reference. OSHA Instruction STP 2-1.117, August 31, 1984, State Standards.

D. Cancellation. OSHA Instruction STP 2-1.158, January 23, 1990, Control of Hazardous Energy Sources (Lockout/Tagout): Final Rule, is cancelled.

E. Federal Program Change. This instruction describes a Federal Program Change which affects State programs. Each Regional Administrator shall:

1. Ensure that this instruction is forwarded to each State designee.

2. Provide copies of the Federal Register notices to the State designee upon request.

3. Explain the technical content of the Federal Register Notice at 54 FR 36644, September 1, 1989, Control of Hazardous Energy Sources (Lockout/Tagout), Final Rule; and the Federal Register Notice at 55 FR 38677, September 20, 1990, Corrections and Technical Amendments, to the designee upon request.

4. Ensure that each State designee acknowledges receipt of this instruction in writing, within 30 days of notification, to the Regional Administrator. The acknowledgment should include (a) the State's plan to adopt and implement the standard change, (b) the State's plan to develop an alternative change, which is as effective, or (c) the reasons why no change is necessary to maintain a program which is as effective as the Federal program.

5. Inform each State designee that the State must, within six months of the date of each Federal Register publication, promulgate a standard that is at least as effective as 29 CFR 1910.147. The State must submit a plan supplement to the Regional Administrator within 30 days of State promulgation.

F. Different Standards. Section 18(c)(2) of the OSH Act requires that State standards be "at least as effective" as the Federal and, when applicable to products used or distributed in interstate commerce, the standards must be required by compelling local conditions and not unduly burden interstate commerce. In addition to the "at least as effective" criterion, this "product clause test" will be applied to State standards with substantially different requirements from the comparable Federal standard, as described in STP 2-1.117. A State standard expanded in scope from the Federal is considered to be a substantively different standard.

G. Interim Enforcement. Under 29 CFR 1953.23(a) and (b), State plan States are provided up to six months from publication of the Federal standard in the Federal Register to promulgate an identical or "at least as effective" as standard. If a State, for whatever reason, is unable to promulgate a standard in a timely manner (six months for a permanent standard, 30 days for an emergency temporary standard) the State shall be expected to provide assurance that it will enforce the substantive provisions of the new or revised Federal standard through such means as use of its general duty clause or equivalent, temporary adoption of an identical standard, or an alternative, specified enforcement mechanism.

H. Effective Date. On October 17, 1989, an announcement was published in the Federal Register of the approval by the Office of Management and Budget of the recordkeeping requirements. The final rule was effective on January 2, 1990, as extended by the Federal Register published on November 6, 1989.
OSHA Instruction STP 2-1-158A (cont.)

NOTE: January 2, 1990 was the effective date of the entire standard. Corrections and technical amendments to the final rule were effective immediately when published in the Federal Register on September 20, 1990.

I. Explanation.

1. On September 1, 1989, OSHA issued a final rule detailing safety requirements for control of hazardous energy (lockout/tagout) as a new 1910.147. On September 20, 1990, at 55 FR 38677, OSHA issued amendments to correct typographical errors, include some information inadvertently omitted, and to correct some inconsistencies in the preamble and regulatory text. This standard addresses practices and procedures that are necessary to disable machines and equipment and to prevent the release of potentially hazardous energy while maintenance and servicing activities are being performed.

2. The standard requires that lockout be utilized for equipment which has a lockout capability except when the employer can demonstrate that utilization of tagout provides full employee protection. When using tagout, full employee protection is taking any other measures in addition to the isolation of the machine or equipment and the placement of the tag in order to enhance the tagout. Such additional measures may include shutting down a second energy isolating device or removing a valve handle. In addition, the standard also supplements and supports the existing lockout related provisions contained elsewhere in the general industry standards by requiring the utilization of a complete energy control program consisting of written procedures, documented training, and periodic inspections. This standard applies for general industry employment under 29 CFR 1910, but does not cover maritime, agriculture, or construction. The standard also does not cover oil and gas well drilling, generation, transmission and distribution of electric power utilities, and electrical work on electric conductors and equipment. These will be subjects of separate rulemaking efforts.

3. The standard contains definitive criteria for establishing an effective program for locking out or tagging out energy isolating devices, training employees, and conducting periodic inspections. This rule, 1910.147, is being placed in Subpart J of Part 1910. The present 1910.147 is redesignated as 1910.150.

4. Under 29 CFR 1953.23(a) and (b), States are provided up to six months from publication in the Federal Register for adoption of parallel State standards and amendments.
An interpretation letter regarding the use of work permits for compliance with aspects of the lockout/tagout standard requirements. 1910.147 (c)(4)(i) requires that employers document the procedure in isolation of hazardous energy of equipment during servicing or maintenance. The company procedures must specify that the employees are required to perform their work in accordance with the terms and limitations of the work permit. A company procedure which mandates that "generic" procedures are to be augmented with specific operational procedures as part of a required work permit system provides for compliance with the standard.

This is in response to your letter of January 31, concerning the use of work permits for compliance with aspects of the lockout/tagout standard requirements.

As you are aware, 29 CFR 1910.147(c)(4)(i) requires that employers document the procedure by which the hazardous energy of equipment is isolated during servicing/maintenance operations.

During the meetings on the lockout/tagout regulations, discussions were conducted concerning the use of a "generic" procedure for the various types of energy which would be encountered at a facility. The generic procedure would have to be included as a component of the company's lockout/tagout procedure and would additionally require that the company procedure clearly enunciate the further specific requirements for servicing and maintenance "work authorization permits". The company procedure would have to specify that the work permit identify the equipment to be serviced, the types and unique energy characteristics to be encountered, methods for safe work, and the process or procedures to be used to accomplish the task.

It was recognized during the earlier discussions that the comprehensive use of a work permit system would be more efficient and relevant to the tasks than would be a "cookbook" type procedure which might not fully account for a specific situation as it had occurred. It was recognized that at the time of servicing and maintenance the operations engineers and personnel are in the logical position to identify the tasks and the energy related hazards which would be encountered during maintenance operations and could best document a safe procedure for the tasks. The company procedure must, however, specify that the employees are required to perform their work in accordance with the terms and limitations of the work permit.

It should be noted that the effective use of a work permit system is compatible primarily with an industrial operation where sufficient engineering and administrative support is available. A company procedure which mandates that "generic" procedures are to be augmented with specific operational procedures as part of a required work permit system provides for compliance with the standard.
An interpretation responding to a letter that requested an opinion from OSHA on a (Brand Name) safety product line. Based on the information given to OSHA it was difficult to make a thorough evaluation and they cannot determine if an employer using it would be in compliance with 1910.147. It was noted that the tags do not specifically indicate the individual authorized employee who is putting the devices in use. The standard requires that lockout and tagout devices shall indicate the identity of the authorized user. The use of this product may result in exposure to live electrical parts by utilizing employees. If this product does in fact accommodate the above requirements, then the products may be acceptable under the related OSHA standards. OSHA does not endorse products.

INTERPRETATION

29 CFR 1910.147(c)(5)(ii)(D)

APR 4, 1991

This is in response to your letter of February 11, in which you enclosed material. You requested an opinion regarding compliance with the Occupational Safety and Health Administration (OSHA) standard entitled the Control of Hazardous Energy Sources (Lockout/Tagout) (29 CFR 1910.147).

A review of the brochure and your explanation of the products was made. Based on the amount of information supplied to us, it was difficult to make a thorough evaluation, and because of that we cannot determine if an employer using your products would be in compliance with all the provisions of the standard.

It was noted that the tags in your brochure, although they contain signature lines, do not specifically indicate the individual authorized employee who is putting the devices in use. The standard requires that lockout devices and tagout devices shall indicate the identity of the authorized employee applying the device(s). An authorized employee is a person who locks or implements a tagout system procedure on machines or equipment to perform the servicing or maintenance on that machine or equipment.

In addition, the use of your products may result in exposure to live electrical parts by utilizing employees. The electrical power must be shut off to the four smaller fuse holders displayed in your brochure before your devices are installed. For this reason, we recommend you take into consideration the requirements of the Electrical Safety Related Work practices standards 1910.331 through .399 (copy enclosed).

If your products do in fact accommodate the above requirements, then the products may be acceptable under the related OSHA standards. Due to constraints placed on OSHA we can neither endorse nor approve products in advance that are to be used in industry, since through improper installation or misuse, the products may not protect employees as intended.
ABSTRACT 29 CFR 1910.134 (a)(2) does apply to respirators provided for emergency use. Emergency type respirators must be in the vicinity for immediate use only where there is the possibility of a situation immediately dangerous to life or health (IDLH).

INTERPRETATION 29 CFR 1910.134(a); (e)(3)(ii)

December 22, 1983

This is in response to your inquiry of December 6, 1983, regarding whether the Occupational Safety and Health Administration (OSHA) standard 29 CFR 1910.134 paragraph (a)(2) applies to respirators provided for emergency use.

29 CFR 1910.134 (a)(2) does apply to respirators provided for emergency use. Emergency type respirators must be in the vicinity for immediate use where there is the possibility of a situation immediately Dangerous to Life or Health (IDLH). If there are no potential IDLH situations present then the emergency type respirators you refer to, such as a self contained breathing apparatus, are not required at all. 29 CFR 1910.134 (a)(2) also applies to respirators used for other purposes (e.g., when there is no immediate threat to life or health).

In addition, 29 CFR 1910.134 (b)(1), the requirements for a minimal acceptable respirator program, also must be complied with for all respirators and situations where a respirator is required.
ABSTRACT  Requirements of 29 CFR 1910.134 (b)(10), Assigning Respirators, does not apply to respirators for emergency use only.

INTERPRETATION  29 CFR 1910.134(b)

February 27, 1983

This is in response to your inquiry to former Assistant Secretary E concerning a previous letter sent to you by the Agency dated November 3, 1980. You wish to know whether the previous letter was indicating that the requirements of 29 CFR 1910.134 (b)(10) are applicable in situations where employees would only have to wear respirators in the event of an accident or failure of engineering controls.

Such an implication was not intended by the previous letter. 29 CFR 1910.134 (b)(10) would not be applicable for an employee where there is no need whatsoever for employees to wear respirators. If respirators need to be available for potential use by employees (e.g., in case of accident or emergency), then these employees must be offered medical examinations pursuant to 29 CFR 1910.134 (b)(10).
RECORD ID 1788

STANDARD NUMBER 1910.134(b)(10)
INFORMATION DATE 860814

ABSTRACT An employer is permitted to engage an employee's personal physician to carry out a respirator medical surveillance program. If the employer does not engage any physician to carry out the program, and the employee must go to a personal physician and pay for medical surveillance without reimbursement, then the employer is in violation of 1910.134 (b)(10).

(NOTE: This standard was last amended in 1984.)

INTERPRETATION 29 CFR 1910.134(b)(10)

AUG 14, 1986

This is in response to your letter of June 19 to the Occupational Safety and Health Administration's (OSHA) (City) Area Office, inquiring about provision (b)(10) in Respiratory Protection Standard, 29 CFR 1910.134. Your letter was referred to the OSHA National Office because the issues involved have national impact.

Employers must engage a physician to determine the health and physical conditions necessary for an employee in order to be physically able to perform the work at hand while wearing a respirator. Employers must also engage a physician for making medical determination and the evaluation outlined in provision (b)(10) available to employees.

It would be acceptable for the employer to engage an employee's personal physician to carry out part or all of the above surveillance program. If the employer does not engage any physician to carry out the program, however, and the employee must go to a personal physician at his/her own cost for medical surveillance, then the employer is in violation of (b)(10).

SOURCE LETTER

June 19, 1986
Re: OSHA Reg. 1910.134 (b)(10)

We are writing this request for an evaluation of an OSHA Regulation as legal counsel for railroad.

OSHA Regulation 1910.134 (b)(10) pertains to medical examinations which are to be conducted prior to assigning a respirator to an employee. In Subsection (a) of that Regulation, OSHA requires that respirators be used to control certain occupational diseases caused by the breathing of contaminated air. Subsection (b)(10) states that a person should not be assigned a respirator unless it has been determined that he is physically able to perform the work and use the equipment. The section further states that the local physician shall determine what health and physical conditions are pertinent.

Pursuant to this Regulation, railroad has been conducting medical examinations of the employees to whom it is assigning respirators. These examinations were challenged in the city area by attorneys representing these employees in lawsuits against the railroad for the alleged incidence of asbestosis.

The attorneys representing the employees have suggested that the employee obtain his own medical examination and a release from his own doctor to satisfy the OSHA requirement. railroad is concerned that this may not be satisfactory under OSHA Regulations and that an examination by its own doctor may be required. The Regulation also requires that the respirator user's medical status be reviewed periodically. Again, can this periodic review be done by the employee's own doctor or would OSHA require that it be done by an railroad doctor?
If OSHA Regulations will be satisfied by an examination conducted by the employee’s own doctor, what verification of report from that doctor would be required in order to satisfy the OSHA Regulation?
Medical criteria generally appropriate for testing individual workers' ability to wear respirators are not clearly outlined in 1910.134 (b)(10). There are specific standards that, however, have established criteria for medical exams for persons wearing respirators i.e., 1910.1001, 1926.58, 1970.1025, 1910.1028, and 1910.1048.

This is in response to your letter regarding medical tests for the use of respirators. We had the opportunity to discuss this with Mr. B of your staff when he visited with us on the subject of benzene recently, and I am certain he discussed this with you. The Director of the Office of Occupational Medicine, Dr. Y, considers that the following medical criteria are generally appropriate for testing individual worker's ability to wear a respirator:

1. A history and physical examination performed by a physician or by a qualified health professional under the supervision of a physician.

2. Pulmonary function test including at least a Forced Vital Capacity (FVC) and Forced Expiratory Volume - 1 second (FEV1).

3. A chest X-ray.

However, no final decision can be made with regard to the criteria until a standard has been promulgated. An Advance Notice of Proposed Rulemaking (ANPR) was published on May 14, 1982. Responses have been received and the Director of Health Standards is in the process of reviewing the responses. If you have any information or suggestions about appropriate medical examinations for the respirator protection program that have not already been submitted, please send them to the Director of Health Standards, Dr. V.

With regard to the "New Directions" program, we will do everything possible to assist grantees who request funding for a sixth developmental year but each application will have to be considered on a case-by-case basis. Each applicant should submit a sixth year proposal and include in the proposal or in an accompanying letter, any information that would help us make a determination.
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

ABSTRACT
NIOSH distributed a "Respirator Information Notice on Chemical Cartridge Respirators." It stated that since OSHA has revised the permissible exposure limits (PEL) for toxic air contaminants listed in Table Z of 1910.1000, NIOSH has decided to eliminate the maximum use concentration (MUC) labeling requirement for all approved chemical cartridges under the provision of 30 CFR 11.150 (copies attached). The NIOSH notice has also eliminated the labeling requirements on cartridges for protection against exposure to organic vapors.

(NOTE: This standard was last amended in 1984.)

GUIDELINES ON THE USE OF CHEMICAL CARTRIDGES FOR PROTECTION AGAINST ORGANIC VAPOR EXPOSURE

1. Use Limitation:
Use of the cartridges is limited to the lowest of the three air contaminant concentrations determined by the following:
   a. Immediately dangerous to life or health (IDLH) concentration.
   b. 1,000 parts per million (ppm).
   c. The maximum use limit (MUL) which is 10 times the OSHA permissible exposure limit (PEL).

2. These organic vapor cartridges are approved for respiratory protection against organic vapors with definite odor warning properties, meaning that the air contaminant must have a distinctive odor at concentrations at or below the permissible exposure limit established by OSHA for the air contaminant, and the odor warning properties are not affected by olfactory fatigue.
3. The use of chemical cartridges for protection against an air contaminant without definite odor warning properties is acceptable only when the use is permitted in specific OSHA health standards (such as acrylonitrile), when the cartridge has an approved end-of-service-life indicator (such as mercury), or when the cartridge breakthrough time is available based on the following test conditions:

   a. Challenge concentration: 10 times the PEL.
   b. Air Flow: 32 liters per minute continuously.
   c. Relative humidity: 85 to 90%.
   d. Temperature: 20 to 25 degree Celsius.

The breakthrough time should be calculated as the mean of at least three samples at a 95% confidence level. Unless the cartridge desorption information indicates that there is no significant desorption from overnight storage, the cartridge should be replaced at the beginning of each shift or prior to the experimental breakthrough time, whichever comes first.

4. Many respirator manufacturers have a list of air contaminants for which the use of chemical cartridges for respiratory protection is not recommended regardless of concentration and time of exposure. Some examples are:

   Acrolein, aniline, arsenic, bromine, carbon disulfide, carbon monoxide, dimethyl aniline, dimethyl sulfate, hydrogen cyanide, hydrogen fluoride, hydrogen selenide, hydrogen sulfide, methanol, methyl bromide, methyl chloride, isocyanates (MDI, TDI, etc.), nickel carbonyl, nitrobenzene, nitrogen oxides, nitroglycerine, nitromethane, ozone, phosphene, phosgene, phosphine, phosphorous trichloride, stibine, and vinyl chloride.

The manufacturer's recommendation should be closely followed for chemical cartridge selection. Since the above list is not complete, consult with the respirator manufacturer for additional information.

**RESPIRATOR INFORMATION NOTICE ON CHEMICAL CARTRIDGE RESPIRATORS**

February 26, 1990

In 1972, the National Institute for Occupational Safety and Health (NIOSH) and the Bureau of Mines (BOM) initiated the respirator certification program conducted under Part 11 of Title 30 Code of Federal Regulations (30 CFR Part 11). Currently, NIOSH and the Mine Safety and Health Administration (MSHA) jointly certify respirators that meet the requirements of 30 CFR Part 11. These regulations provide a description of chemical cartridge respirators that include maximum use concentrations (MUC's) for certified cartridges (Section 11.150). These maximum use concentrations are based on the acceptable exposure limits at the time 30 CFR Part 11 was promulgated. They were calculated by multiplying the assigned protection factor of 10 for half mask chemical cartridge respirators by the exposure limit accepted in 1972 for each specific contaminant. Although not specifically required in 30 CFR Part 11, NIOSH has included these maximum use concentrations on all chemical cartridge approval labels.

OSHA recently revised the permissible exposure limits (PEL's) for 212 substances and established permissible exposure limits for an additional 164 substances (Air Contaminants Standard, 29 CFR 1910.1000). The revised permissible exposure limits affect the maximum use concentrations for three of the substances listed in 30 CFR Part 11 (ammonia, chlorine, and sulfur dioxide). Compliance with the new permissible exposure limits became mandatory on September 1, 1989. Other regulatory agencies have established exposure limits that vary from the new OSHA permissible exposure limits. Future standards may further revise acceptable exposure limits. Thus, NIOSH has decided to eliminate maximum use concentrations from chemical cartridge approval letters and labels. NIOSH has sent a letter to all manufacturers of MSHA/NIOSH-certified chemical cartridge respirators requesting a modification to approval labels and user instructions. However, respirator and cartridge labels and instructions with the old maximum use concentrations are already in use. Therefore, NIOSH is advising that all users of chemical cartridge respirators of the change in maximum use concentrations.
The following table lists substances for which OSHA does not have specific substance standards and for which NIOSH has specifically certified chemical cartridges. This table only applies to respirator users who are covered by OSHA regulations.

<table>
<thead>
<tr>
<th>Type of chemical cartridge respirator</th>
<th>Maximum Use Concentration (parts per million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia</td>
<td>300</td>
</tr>
<tr>
<td>Chlorine</td>
<td>10</td>
</tr>
<tr>
<td>Hydrogen chloride</td>
<td>50</td>
</tr>
<tr>
<td>Methyl amine</td>
<td>100</td>
</tr>
<tr>
<td>Organic Vapor</td>
<td>1,000(^2)</td>
</tr>
<tr>
<td>Sulfur dioxide</td>
<td>50</td>
</tr>
<tr>
<td>Vinyl Chloride</td>
<td>10</td>
</tr>
</tbody>
</table>

NOTE: Chemical cartridge respirators for respiratory protection against gases or vapors, which are not specifically listed with their maximum use concentration except pesticides, may be approved if the applicant submits a request for such approval in writing, to the Institute. MSHA and the Institute shall consider each such application and accept or reject the application after a review of the effect on the wearer's health and safety and in the light of any field experience in use of chemical cartridge respirators as protection against such hazards.

\(^1\) Not for use against gases or vapors with poor warning properties (except where MSHA or Occupational Safety and Health Administration standards may permit such use for a specific gas or vapor) or those which generate high heats of reaction with sorbent material in the cartridge.

\(^2\) Maximum use concentrations are lower for organic vapors which produce atmospheres immediately hazardous to life or health at concentrations equal to or lower than this concentration.
The Assistant Secretary has asked me to respond to your letter dated January 30, 1979, concerning your request for a variance from Section 1910.134 (d) Respiratory Protection - Air Quality, of the Occupational Safety and Health Standards.

You advised Mr. K of my staff during your telephone conversation on February 27, 1979, that the work area and those issues in your application related to the air-quality in a containment facility which may be characterized as primarily radiological in nature. Additionally, you advised Mr. K that the facility is subject to regulations issued by the Nuclear Regulatory Commission (NRC). This issue, therefore, is not within the authority of the Occupational Safety and Health Administration (OSHA).

Section 4(b)(1) of the Williams-Steiger Occupational Safety and Health Act of 1970 states that: "Nothing in this Act shall apply to working conditions of employees with respect to which other Federal agencies, and State agencies acting under section 274 of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2021), exercise statutory authority to prescribe or enforce standards or regulations affecting occupational safety or health." The purpose of this provision of the Act is to avoid unnecessary duplication of effort by the Federal agencies. Therefore, any standards promulgated under the Williams-Steiger Act may not be applied to specific working conditions with respect to which another Federal agency has exercised its statutory authority by issuing standards affecting occupational safety and health.

The OSHA standard in question, 1910.134 (d), may not be applied if the working conditions to which this standard relates is subject to regulations issued by the NRC. The regulations promulgated by NRC in 10 CFR 20.103(c)(3) relate to protection against radiation, which includes the use of personal protective equipment. The authority of the NRC to regulate safety and health is limited to the regulation of safety and health conditions involving the processing and use of source by-product, and special nuclear material. These regulations are designed to eliminate radiological hazards, although these regulations may involve non-radiological hazards.

Therefore, because the hazardous working conditions in a containment facility may be characterized as primarily radiological in nature, the NRC regulations will generally be applicable to those working conditions, and Section 4(b)(1) will preclude the application of OSHA standards. Even in the case of using the compressed oxygen in air supplied respirators, the hazard involved and the possibility of a fire in a containment facility are so closely related to the integrity of the nuclear reactor itself, that this hazard must be characterized as radiological when it may occur in a containment facility. For this reason, the NRC regulations relating to the nuclear containment facility should be applied and will be considered an exercise of the NRC's statutory authority to regulate radiological safety and health which precludes the application of OSHA standard 1910.134 (d).

No further action will be taken on your request for a variance.
 RECORD ID 1253

STANDARD NUMBER 1910.134(d)(2)
INFORMATION DATE 811015

ABSTRACT The (Company) air purifying color change unit for breathing air supplied by lubricated oil compressors is not an acceptable substitute for frequent CO testing and/or alarm.

(NOTE: This standard has not been amended since 1984).

INTERPRETATION 29 CFR 1910.134(d)(2)

October 15, 1981

SUBJECT: (Company) Air Purifiers

This is in response to your memorandum of September 4, 1981, concerning the possible use of the color change feature of company air purifying units to ensure that carbon monoxide concentrations stay within the OSHA air quality requirement for breathing air supplied by oil-lubricated compressors.

The legal procedures for ensuring that the carbon monoxide concentration in breathing air supplied by oil-lubricated compressors stays within the OSHA specification are contained in 29 CFR 1910.134(d)(2)(ii), which reads, in part, as follows:

If only a high-temperature alarm is used, the air from the compressor shall be frequently tested for carbon monoxide to insure that it meets the specifications in paragraph (d)(1) of this section.

OSHA interprets this provision to entail a requirement to measure the concentration of carbon monoxide in the air. The company air purifying units to which you refer in your memorandum do not perform this function.

An employer who wants to use the color change feature of the company air purifying units instead of frequently testing the air, would have to apply for and obtain a permanent variance from the Office of Variance Determination in the Directorate of Technical Support.
ABSTRACT

A clarification is provided for safety standby devices and alarms required under 29 CFR 1910.134 (d)(2)(ii). For non-oil and oil lubricated compressors, alarms to indicate compressor failure and overheating must be installed in the air delivery system. For oil lubricated compressors, a carbon monoxide alarm fulfills the requirement for an alarm to indicate compressor overheating.

(NOTE: Some of the sections of the standard referenced in the interpretation letter have changed since the issuance of the interpretation letter.)

INTERPRETATION

Mar 10, 1978

This is in response to your letter asking for clarification of the safety standby devices and alarms required under 29 CFR 1910.134 (d)(2)(ii). Please accept my apology for the delay.

Both a non-oil and an oil lubricated compressor, where used to supply air for breathing, must have a receiver of sufficient capacity to enable the respirator wearer to escape from a contaminated atmosphere in event of compressor failure. Both also must have alarms to indicate compressor failure and overheating installed in the air delivery system.

With respect to oil lubricated compressors, a carbon monoxide alarm fulfills the requirement for an alarm to indicate compressor overheating since its triggering indicates overheating (except where the source of carbon monoxide is external to the compressor) as well as excessive carbon monoxide. Accordingly, either a high-temperature alarm or a carbon monoxide alarm is used, the air from the compressor shall be frequently tested for carbon monoxide to insure that it meets the specifications in 29 CFR 1910.1034(d)(1).

SOURCE LETTER

November 18, 1977

I am writing to request an interpretation of the Occupational Safety and Health Act, Section 1910.134 (d) Air Quality (2)(ii). This request is being directed to you as there appears to be some confusion in the interpretation of this particular paragraph in the various area offices we have contacted. This particular paragraph also appears to differ from the Industrial Hygiene Manual, Chapter XII, "OSHA Standard Method for Determination of Respiratory Protective Program Acceptability" Part L2D, which was recently distributed.

The first three sentences of this paragraph appear to contradict the last two sentences. In the first three sentences, it is indicated that with any compressor for supplying air for breathing purposes, alarms to indicate compressor failure and overheating are necessary. In the last two sentences, it indicates that a high temperature or carbon monoxide alarm or both are needed on an oil lubricated compressor. The last sentence further gives the impression that if a carbon monoxide alarm is installed on an oil lubricated compressor, a high temperature alarm is not needed. Section L of the Industrial Hygiene Manual, Chapter XII, indicates that a carbon monoxide alarm is needed on an oil lubricated compressor although the last sentence of this paragraph states "If only a high temperature alarm is used, the air from the compressor shall be frequently tested for carbon monoxide...", which indicates that a carbon monoxide alarm is not necessary on an oil lubricated compressor if a high temperature alarm is installed and the air is tested frequently for carbon monoxide.
A clarification is provided for 29 CFR 1910.134 (d)(2)(ii). The standard requires a dual alarm system with one alarm triggered for air compressor failure and the other for overheating.


Apr 21, 1983

This is in response to your letter to Dr. D of my staff, requesting an interpretation of the respiratory protection standard at 29 CFR 1910.134 (d)(2)(ii), which requires alarms for compressor failure and overheating. Please accept my apology for the delay in our reply.

The standard that you cited requires a dual alarm system. This requirement can be met by either:

1. Compressors which have a single alarm system that is dual-functioning, in that the alarm is triggered directly upon failure (shut-off) of the compressor, or when the compressor is automatically shut off due to overheating, both of which would be signalling a pressure drop in the air line; or

2. Compressors with two alarms, one triggered by compressor failure and the other by overheating.

In this case, the dual-functioning alarm system meets the requirement of the standard cited above. Alarms must be placed so as to alert users of the air supply in locations relative to the outlets provided for coupling with the respirators' air hoses.

The Cal/OSHA standard at 5144(e)(3) calls for "necessary and standby devices," which would include an alarm for compressor overheating for so-called "oil less compressors," while it specifies that alarms for oil-lubricated compressors be activated by either an excess in carbon monoxide or a high temperature. This standard is operationally equivalent to the Federal OSHA standard.

As you know, state and 23 other States administer their own safety and health programs, under the authority of Section 18 of the Occupational Safety and Health Act, with standards that are "at least as effective" as the Federal OSHA standards but may differ in some respects.

SourcE LETTER

Dec. 20, 1982

Per our phone conversation, I am requesting an interpretation of the respiratory protection standard 1910.134 section (d)(2)(ii) which appears to require alarms for compressor failure and overheating in non-lubricated type systems. It is unclear as to whether the standard requires 2 alarms or whether 1 alarm is adequate as long as it indicates compressor failure and the respirator wearer has sufficient time to escape from the work area.

Some compressor systems are designed so that when the compressor overheats it shuts off the motor, in turn causing a loss in pressure. The loss in pressure triggers the alarm system. For this type of compressor design, a high temperature alarm and a compressor failure alarm are one in the same. I also understand that other types of compressors may require multiple alarms dependent upon the mechanics of the system. Therefore, the types of alarms needed should depend on the design of the compressor system.
The Cal-OSHA standard 5144(e)(3), requires only alarms to indicate compressor failure omitting the requirement for high temperature alarms in non-lubricated systems. Since state standards have to be at least as effective as federal standards, it appears that the Federal interpretation of (d)(a)(ii) is performance oriented. The design of the compressor system dictates the failure alarm system.
STANDARD NUMBER 1910.134(d)(3)  
INFORMATION DATE 860424  

ABSTRACT  The OSHA respiratory protection standard states that "line couplings shall be incompatible with outlets for other gas systems to prevent inadvertent service of air line respirators with non-respirable gases or oxygen," 1910.134 (d)(3). The intent of this standard is to prevent the inhalation of gases other than for breathing air.

(NOTE: This standard has not been amended since 1984.)

INTERPRETATION 29 CFR 1910.134(d)(3)

APR 24, 1986  

This is in response to your letter of March 12, concerning air line couplings used in a supplied air respirator (SAR) system.

The Occupational Safety and Health Administration (OSHA) respiratory protection standard states that "Air line couplings shall be incompatible with outlets for other gas systems to prevent inadvertent service of air line respirators with non-respirable gases or oxygen," 29 CFR 1910.134 (d)(3). The intent of this standard is to prevent the inhalation of gases other than breathing air by the SAR wearer. If there is a likelihood that the breathing air may be contaminated or replaced with toxic gases, a separate air line for transporting breathing air is required.

There would be a violation of the standard if the breathing air and other toxic gases are transported through with the same system. Disc Location: Bynum #13

Vol. 1-489
ABSTRACT
29 CFR 1910.134 (d)(2)(ii) does not specify a particular type of high heat temperature alarm that must be used on oil lubricated compressors providing grade D breathing air for respirators. Grade D breathing air must have less than 20 ppm carbon monoxide. For paint materials containing TDI and MDI, only positive pressure supplied air respirators are acceptable. A full facepiece is required if eye irritation is experienced by the respirator user.

(NOTE: This standard has not been amended since 1984.)

INTERPRETATION
29 CFR 1910.134(c); (d)(2)(ii); (e)(2); 1910.1000
MAR 3, 1986

This is in response to your letter of January 24, requesting clarification concerning carbon monoxide from oil-lubricated compressors normally found in automobile paint and body shops.

I will answer your questions in the order that you presented them in your inquiry to me.

1. What type of high heat temperature alarms are recommended?

   29 CFR 1910.134 (d)(2)(ii) does not state a specific type of high heat temperature alarm that must be used. Contact the manufacturer(s) for recommendations on these compressors.

   Is a snap disc high heat temperature sensor switch, activating a horn or light, sufficient?

   Since 29 CFR 1910.134 (d) does not state a specific type, an alarm system that meets manufacturers recommendations and meets our requirements in 29 CFR 1910.134 (d) would be acceptable.

   What is the DB requirement on such a horn?

   OSHA does not have a specific dB requirement for such a horn alarm; however, the horn alarm must be loud enough to be heard by the employees using the compressor. The horn alarm also must meet the noise requirements of 29 CFR 1910.95, Table 0-16: Permissible Noise Exposures.

B. Where would a high heat sensor be mounted? Would more than one be required?

   OSHA does not specify where these high heat sensors should be mounted and if more than one would be required. Contact the manufacturer(s) for recommendations on mounting and additional heat sensors.

2. Would an oil-lubricated compressor, used for the breathing air source, be approved by OSHA following these parameters?

   A. Two snap disc heat sensing switches mounted on the compressor cylinder head activating an alarm horn.

   OSHA standard 29 CFR 1910.134 (d)(2)(ii) does not state where to place these switches or how many should be used as mentioned in 1.B., above. Contact the manufacturer(s) of these compressors for this information.
B. An in-line air filtration system that removes oil, water, particulates and objectionable tastes and odors to meet Grade D air quality requirements (does not remove carbon monoxide).

This in-line air filtration system does not meet Grade air quality if more than 20 ppm of carbon monoxide is present; however, this filtration system can be used to remove the other substances, tastes and odors.

C. Initial weekly system checks for carbon monoxide, and monthly checks thereafter using the stain tube method for detecting carbon monoxide in the system (0-20 ppm CO).

Because the length of stain tubes are no longer certified by NIOSH, they may be used only as a screening device.

D. Using a carbon monoxide color-change dot mounted inside a full face air-supplied respirator for visual check for CO detection in high concentration. The color dot...

The carbon monoxide color-change dot should not be used alone but only as a screening device.

E. Would OSHA recommend the use of a synthetic oil be used in the compressor rather than hydrocarbon type oils?

If there is no chance for carbon monoxide production from oil breakdown and it satisfies the manufacturer’s requirements, synthetic oils can be used.

We also need clarification concerning proper respirator recommendations for paint spray products...

Due to extreme toxicity and lack of odor warning properties, only positive-pressure supplied air respirators are acceptable. Full facepiece is required if eye irritation is experienced by the respirator wearer.

Since no negative pressure respirator (air-purifying respirator) is recommended for use with isocyanates would a powered air system such as shown in the sample be approved? (See enclosed #3.)

Powered air purified respirators could not be used for protection against isocyanates.

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SOURCE LETTER
January 24, 1986

Thank you for your response concerning the use of portable breathing air compressors as OSHA 29 CFR 1910.134. (Copy enclosed #1).

Would you please clarify the following questions concerning carbon monoxide monitoring of oil-lubricated compressors normally found in automobile paint and body shops.


A) What type is recommended? Is a snap disc high heat temperature sensor switch, activating a horn or light, sufficient? What is the DB requirement on such a horn?

B) Where would a high heat sensor be mounted? Would more than one be required?

2) OSHA 29 CFR 1910.134 calls for frequent testing for carbon monoxide if only a high temp alarm is used. Would an oil-lubricated compressor, used for the breathing air source, be approved by OSHA following these parameters:

A) Two snap disc heat sensing switches mounted on the compressor cylinder head activating an alarm horn.
B) An in-line air filtration system that removes oil, water, particulates and objectionable tastes and odors to meet grade D air quality requirements (Does not remove carbon monoxide).

C) Initial weekly system checks for carbon monoxide, and monthly checks thereafter using the stain tube method for detecting carbon monoxide in system (0-20ppm CO).

D) Using a carbon monoxide color-change dot mounted inside a full face air supplied respirator for visual check for CO detection in high concentrations. The color dot would be for back-up only to protect user in situations where the ambient air near the compressor intake may become contaminated by CO gas, i.e., a car is left running near the compressor. The dot is effective in ranges above 35 ppm CO.

E) Would OSHA recommend the use of a synthetic oil be used in the compressor rather than the hydrocarbon type oils?

We also need clarification concerning proper respirator recommendations for paint-spray products, typically used in isocyanates (TDI and MDI specifically). We interpret from the NIOSH publications (copies enclosed #2), that only Supplied Air Respirators, full face, may be used. Is this the OSHA regulation? Are half-mask Supplied Air Respirators approved for isocyanates? If so, what type of eye protection is required?

Since no negative pressure respirator (air purifying respirator) is recommended for use with isocyanates, would a powered air system such as shown in sample be approved? (See enclosed #3).
ABSTRACT
This interpretation letter addresses acceptable respirators for exposure to ethylene oxide. The required respirators for protection against ethylene oxide (EtO) are prescribed in section (g), Table 1 of the OSHA ethylene oxide standard, Federal Register, June 22, 1984, p. 25798. With the exception of the canisters, all other respirators are available at many safety equipment suppliers.

INTERPRETATION
29 CFR 1910.134(c); (e)(2); 1910.1047(g)(2)

Nov 13, 1984

Mr. T has asked me to respond to your letter of October 29, concerning respiratory protection from ethylene oxide.

The required respirators for protection against the ethylene oxide (EtO) are prescribed in Table 1 of the Occupational Safety and Health Administration (OSHA) ethylene oxide standard, Federal Register, June 22, 1984, p. 25798 (enclosed). With the exception of the canisters, all other respirators such as the positive-pressure supplied air respirators and positive-pressure self-contained breathing apparatus are available at many safety equipment suppliers. I do not believe that you will have any difficulty in locating a supplier in (city). However the Testing and Certification Branch (TCB) of the National Institute for Occupational Safety and Health (NIOSH) has prepared a list of respiratory manufacturers and you may wish to contact them at the following address for further information:

Use of respirators must be in accordance with the requirements set forth in the EtO standard as well as the OSHA standard on respiratory protection, 29 CFR 1910.134. A copy is enclosed for your reference.

SOURCE LETTER
Oct 29, 1984

I would like your help and assistance on the following:

PUBLICATION: Federal Register, Volume 49 No. 122
DATE: Friday June 22, 1984
SUBJECT: Rules and Regulations 29 CFR Part 1910 Ethylene Oxide
REFERENCE: Page 25797, Column 3

(2) Respirator Selection

(ii) The employer shall select respirators from among those jointly approved as being acceptable for protection against ETO by the Mine Safety and Health Administration (MSHA) and by the National Institute for Occupational Safety and Health (NIOSH) under provisions of 30 CFR Part II.

I have been unable to locate any vendors or manufacturers of safety equipment that presently manufacture or are aware of respirators that protect against, or deter inhalation of ethylene oxide.

Would you please supply me with any literature you may have on this type respirator. If you have the names of respirator manufacturers supplying this necessary equipment, I would appreciate that list also.
This interpretation letter is a response to a request made of NIOSH concerning clarification of testing requirements for MSHA-NIOSH approval of powered air-purifying respirators for abrasive blasting. In 1910.94(a)(1) the respirator specified for abrasive blasting is a continuous flow, air line respirator, not a PAPR. In (5)(iii), accommodations are made for particulate type respirators, but not for blasting operations. In a separate issue, answers are provided on beards and respirator wear as outlined in 29 CFR 1910.134(e)(5)(i).

July 13, 1983

We are providing answers to the questions on beards and respirator wear which you asked in your letter of June 20, 1983.

a. Yes, any facial hair growth between the facepiece sealing surface and the skin that prevents a good sealing surface is a violation of 29 CFR 1910.134(e)(5)(i).

b. The OSHA standard is a minimum standard. Any employer can set more stringent requirements than OSHA's. If the bearded employee is exposed to a toxic material in excess of the Air Force standard but within the OSHA standard, the respirator should not be worn until the interfering hair is removed because the Air Force standard would have been violated even if the OSHA standard were not.

c. Yes, the situation described in your section C is still a violation of 1910.134(e)(5)(i). The question is not whether he can pass the test everyday. Since the density and texture of the beard is not uniform around the face, and because the density and bulk of beard is not the same over time, consistent fit test results cannot be obtained. Quantitative fit testing (QNFT) is the only available method which can accurately measure the fit testing result of a respirator. It is a time consuming process. The equipment is rather expensive and needs trained personnel to operate it. For these reasons, the QNFT is generally conducted only annually. It is unreasonable to require the employer to conduct QNFT everyday to determine whether a satisfactory fit can be obtained from a bearded individual. Qualitative fit testing would yield less reliable results.

d. OSHA's position is that any hair growth in the face sealing area is unacceptable. Depending on the growth, density and texture of beard, some bearded individuals cannot achieve a satisfactory seal even at the end of the shift.

e. The language on beards and respirator wearing is adequate in 1910.134(e)(5)(i). The third sentence in this paragraph only provides a partial list of the conditions that prevent a good face seal. The second sentence clearly prohibits respirator use when any such condition is present. Since the Air Force can adopt a standard which is more stringent than ours, you may consider adopting the current American National Standard Practices for Respiratory Protection, ANSI Z88.2, 1980 (enclosed).
This interpretation letter addresses provisions at 1910.134(e)(3)(ii) regarding open hatch gauging of sour crude oil storage tanks. The provisions of 1910.134(e)(3)(ii) apply when a self-contained breathing apparatus is used in open hatch gauging of sour crude oil tanks and known or potential concentrations of hydrogen sulfide at the hatch can reach or exceed IDLH levels. Under these circumstances, two or more standby persons must be present and equipped with the appropriate rescue equipment.

29 CFR 1910.134; 1910.134(e)(3)(ii); 1910.1000

Apr 18, 1989

This is in response to your letter of February 2, addressed to the former Assistant Secretary which requests an interpretation of 29 CFR 1910.134(e)(3)(i)-(iii) with regard to open hatch gauging of sour crude oil storage tanks. Specifically, your question is whether 29 CFR 1910.134(e)(3)(i) or (e)(3)(ii) applies to open hatch gauging of sour crude oil tanks.

When self-contained breathing apparatus is used in the open hatch gauging of sour crude oil tanks, 29 CFR 1910.134(e)(3)(ii) applies whenever known or potential concentrations of hydrogen sulfide ($H_2S$) at the hatch can reach or exceed levels which are immediately dangerous to life or health (IDLH). Under these circumstances, two or more standby persons must be present and equipped with the appropriate rescue equipment.

SOURCE LETTER

February 2, 1989

Re: Request for Interpretation of 29 C.F.R. 1910.134(e)(3)(i)-(iii) As Applied to Open Hatch Gauging of Sour Crude Oil Storage-Tanks

This firm represents (refining company), an independent refiner/marketer, with its principal offices in (city), (state). (refining company), and its affiliate, (oil transport company), request an interpretation of OSHA's standard for the use of respirators, 29 C.F.R. 1910.134(e)(3)(i)-(iii), as applied to open hatch gauging of sour crude oil storage tanks.

We are aware of two OSHA interpretations arguably applicable to open hatch gauging of such tanks issued by the Chicago and Dallas Regional Offices of OSHA, which, in our view, are in conflict.

1) NOTE: The two interpretations are

(1) an October 25, 1988 letter from Mr. P for Mr. C, OSHA Regional Administrator, Chicago, Illinois, to Mr. W, Chief, Division of Occupational Health, (state) Department of Public Health (the "Chicago Interpretation"); and

(2) an April 9, 1981 letter from Mr. S, OSHA Regional Administrator, Dallas, Texas to Mr. K, Area Director, OSHA Albuquerque Office (the "Dallas Interpretation").

Copies of the two interpretations are attached as Exhibits A and B. Enclosed also as Exhibit C is a copy of an April 2, 1981 inquiry from Mr. C, Industrial Hygienist, to Mr K, Area Director, which apparently prompted Exhibit B.

Our principal concern is with the Chicago Regional Office's interpretation ("the Chicago Interpretation"), which asserts that 29 C.F.R. 1910.134(e)(3)(ii) requires that "two or more" standby persons, and "in some cases a team", must be present when an individual equipped with self-contained breathing apparatus ("SCBA") is gauging sour crude oil storage tanks. (oil refining company) submits that any requirement...
that more than one standby person be present during open hatch gauging is (1) unnecessary, (2) would be extremely costly, and (3) cannot possibly be justified on the basis of past experience. Moreover, (oil refining company) submits that the Chicago Regional Office has applied the wrong provision to open hatch gauging of sour crude oil storage tanks. The proper provision is 29 C.F.R. 1910.134(e)(3)(ii), which is applicable to "areas where the wearer, with the failure of the respirator, could be overcome," and not subsection (ii), which applies to respirator use in "atmospheres immediately dangerous to life or health". In addition, a requirement that more than one additional standby person be present is contrary to, and inconsistent with, the underlying policy of the July 23, 1985; February 2, 1987 and June 16, 1988 pre-proposal drafts of a proposed revised respirator rule. Finally, such a requirement would inevitably compel a number of small producers to discontinue operations at marginally productive stripper wells producing sour crude.

I. The Origins of the Chicago Interpretation

The Chicago Interpretation arose out of (oil transport company)'s appeal of an August 10, 1988 Citation by the (state) Department of Public Health's Division of Occupational Health ("DPH-DOH") for allegedly violating DPH Rule 3302, which is identical to 29 C.F.R. 1910.134(e)(3)(i)-(iii).

2) NOTE: Attached as Exhibit D are copies of the August 10, 1988 MDPH-DOH Citation of (oil transport company) and an accompanying letter from Mr. B, DPH, setting out certain inspection findings. Attached as Exhibit E is a copy of DPH Rule 3302.

In approximately March 1988, an employee of an oil producer from which (oil transport company) purchases crude in Michigan, was overcome by hydrogen sulfide vapors escaping from a sour crude oil storage tank hatch and died. The (oil producer) employee was found by a (oil transport company) gauger, which led to an investigation of both companies' efforts to comply with DPH Rule 3302.

Since the (oil producer) employee was not wearing any SCBA at the time he was overcome, the relief ordered is entirely extraneous to the tragedy it is presumably intended to prevent. Indeed, the most salient point to emerge from the incident, namely, that the decedent was not wearing any SCBA, appears to have been lost in the regulatory controversy. Nonetheless, as a result of the Citation, DPH-DOH ordered that (oil transport company) cease open hatch gauging of storage tanks containing sour crude unless its "gaugers"-i.e., the individuals responsible for measuring the level of crude in the tank, taking small samples of oil for testing, and checking the oil's temperature, are equipped with SCBA and are accompanied by more than one standby person. After (oil transport company) appealed, the DPH-DOH wrote the OSHA Chicago Regional Office seeking an interpretation of 29 C.F.R. 1910.134(e)(3)(ii).

3) NOTE: It is (oil refining company)'s position that although (state) is free to promulgate more stringent standards than the federal government, it is not free to impose an interpretation on Rule 3302 which is different than that of the identical federal standard from which Rule 3302 was adopted. While the State disagrees, both parties nevertheless concur that a federal interpretation of 29 C.F.R. 1910.134(e)(3)(i)-(iii) is relevant to the merits of the relief ordered.

We think it is important that you understand the context in which the Chicago Interpretation arose. In short, we question whether the Chicago Interpretation is the result of a full and complete consideration of the merits of the applicability of the respirator rule to open hatch gauging of sour crude oil tanks and all of the ramifications thereof. Instead, Total suspects that this request, in effect, simply sought confirmation of DPH-DOH's interpretations of both the federal and (state) standards.

II. The Presence Of Two Or More Standby Persons During Open Hatch Gauging Is Unnecessary

A. Total Is Unaware Of Any Instance In Which An Individual Wearing Positive Pressure SCBA While Engaged In Open Hatch Gauging Has Been Overcome.

According to the petroleum institute, there are approximately 417,000 crude oil and produced water production storage tanks in the United States.

4) NOTE: "Produced water" is a byproduct of certain oil wells. It is essentially water which has been unavoidably pumped from the well along with the crude oil. As such, it will share some of the characteristics of the oil with which it was mixed, i.e., produced water from sour crude oil wells may generate hydrogen sulfide gas.
Obviously, a significant proportion of these tanks contain sour crude oil. The oil producer, i.e., the entity selling crude oil to purchasers such as (oil transport company), employs a "pumper" who must routinely gauge the tanks to determine when they contain sufficient crude to call the purchaser and arrange for delivery. The purchaser's "gauger" gauges the tank just before taking delivery. Gauging is the process, previously described, whereby an individual opens a hatch at the top of the tank, measures the level of oil therein, takes small samples of the oil to ascertain whether the purchaser's specifications are met, and checks the oil's temperature. Thus, both the producer's "pumpers" and the purchaser's "gaugers" perform essentially the same operations at such storage tanks. Since hydrogen sulfide vapors may emanate from the hatch, (oil refining company) believes that pumpers and gaugers must be trained in the proper use of positive pressure SCBA, and must use such equipment when gauging wells where the wearer could be overcome. In addition, (oil refining company) believes it is good practice to stand upwind of the open tank hatch while gauging such tanks. (oil refining company) is unaware of any instances where fatalities or serious injuries have occurred where the above procedures have been followed. In addition, enclosed are copies of affidavits, Exhibits F and G, from two experts, Mr. K and Mr. K, with extensive experience in the petroleum industry, who are similarly unaware of any such instances. K affidavit, No. 9; KI affidavit, No. 9. Mr. K was the Supervisor of Health and Safety for oil company for nearly 10 years and has over 35 years experience in the petroleum industry in various safety related capacities. K affidavit, Nos. 3-5. Mr. KI was the Corporate Director for Safety for oil company C for 15 years and has approximately 40 years of experience in the industry, including positions with oil company S and oil company C. K affidavit, Nos. 3-5. Both Mr. K and Mr. KI agree that any requirement calling for more than one standby person for open hatch gauging is unwarranted and lacks merit. K affidavit, No. 11; KI affidavit, No. 11. Indeed, we doubt that any safety professionals with experience in the petroleum industry believe that a need for more than one properly trained and equipped standby person exists. Since the Chicago Interpretation suggests that the basis for requiring more than one standby person, we are at a loss to understand the rationale for such a requirement. If the rationale is based on the theoretical possibility that the first standby person might also be overcome, it would appear to apply equally to a second, third and fourth standby person. In our view, sound safety regulatory policy must be based on empirical evidence and not hypothetical possibilities.


Many sour crude leases are in remote geographic locations, and it is not uncommon for gaugers to drive in excess of 100 miles daily to perform their duties. The application of the Chicago Interpretation throughout the United States would compel producers and purchasers to bear the additional cost of transporting unnecessary backup personnel to remote locations throughout the United States. Total submits that the increase in safety theoretically achieved by requiring more than one additional standby person cannot possibly be cost justified. Mr. K, for example, suggests that such a requirement is comparable to requiring that all two lane highways be made one way or be replaced with freeways. K affidavit, No. 11. While such a requirement would undeniably reduce the risk of head on collisions, the increased protection would simply not be worth the astronomical cost involved in such a measure.

III. The Chicago Interpretation Has Applied The Wrong Rule To Open Hatch Gauging Of Sour Crude Oil Storage Tanks.


Total submits that both the OSHA Chicago Regional Office and the DPH-DOH have failed to appreciate the differences between open hatch gauging and situations where an employee must actually enter a confined spaces where hydrogen sulfide is present, e.g., where the storage tank has a floating roof or when cleaning the interior of storage tanks.

5) NOTE: There are a number of fatalities reported in Selected Occupational Fatalities Related To Toxic And Asphyxiating Atmospheres In Confined Work Spaces As Found In Reports Of OSHA Fatality/Catastrophe Investigations, July 1985, where employees -- again without wearing any SCBA -- descended into the interiors of storage tanks or, in one instance, into the floating roof of a storage tank.

In such situations, a worker is likely to encounter atmospheres immediately dangerous to life or health ("IDLH"), the hazard addressed by 1910.134 (e)(3)(i). Rescue operations may well require the presence of two standby personnel with SCBA to haul an employee overcome with fumes out of the confined space.
to safety. In contrast, the pumper or gauger in open hatch-gauging operations is already standing in open air, upwind of the breathing space above the open hatch, where any hydrogen sulfide vapors emanating from the tank will dissipate quickly. In such a situation, the rescue operation will consist of assisting the pumper or gauger in moving a few feet further upwind and away from the area adjacent to the breathing space above the open hatch. In other words, even if the positive pressure SCBA fails, the pumper or gauger engaged in open hatch gauging is not necessarily in an IDLH atmosphere.

Thus, the subsection applicable to open hatch gauging is 29 C.F.R. 1919.134 (e)(3)(ii), which provides in relevant part:

In areas where the wearer, with failure of the respirator, could be overcome by a toxic or oxygen-deficient atmosphere, at least one additional man shall be present.

The DPH-DOH, and, at its request, the Chicago Regional Office, have incorrectly applied subsection (ii), on the mistaken assumption that the area upwind of the breathing space is necessarily an IDLH atmosphere.


The misapplication of 29 C.F.R. 1910.134(e)(3)(ii) to open hatch gauging of sour crude oil storage tanks underscores the need for the contemplated revision of the respirator rule. The present respirator use rule, 29 C.F.R. 1910.134(e)(3)(i)-(iii), is confusing, contradictory and, for all practical purposes, unintelligible. The reason for such unintelligibility lies in the present rule's genesis. The three subsections, (i) through (iii), were selected from various portions of ANSI Standard Z88.2. Instead of adopting ANSI Standard Z88.2's provisions on the use of respirators in toto, however, OSHA elected to choose portions thereof -- cafeteria style -- not only from the provisions relating to respirator use, but also from those relating to respirator selection. Subsection (i) of the OSHA rule was taken from ANSI Standard Z88.2, 7.3, relating to respirator use, which provides in relevant part:

In areas where the wearer, with failure of the respirator, could be overcome by a toxic or oxygen-deficient atmosphere, at least one additional man shall be present.

Subsections (ii) and (iii), however, were taken -- word for word -- from ANSI Standard Z88.2, 6.3.2.1 and 6.3.2.2 respectively, both of which relate to the selection of respirators. The end result is an amalgamation of provisions, which, in our view, were commingled incorrectly and promulgated improperly under 6(a) of the Occupational Safety and Health Act of 1970, 29 U.S.C. 655(a). Thus, the language of subsection (ii) is being used for a purpose, i.e., respirator use, for which it was never intended. Given its dubious genesis, the misapplication of subsection (ii) should come as no surprise.


Fortunately, OSHA is apparently about to correct the deficiencies in the language of the present standard with a revised respirator rule. The July 20, 1985 pre-proposal draft of the revised rule regarding the use of respirators in IDLH atmospheres, 29 C.F.R. 1910.134(g)(2), provides, in relevant part, as follows:

These procedures shall include the following provisions:

(ii) When employees wear a respirator in IDLH atmospheres where the employee could be overcome if the respirator fails, the employer shall ensure that one additional person is in communication with the employee(s) in the IDLH atmosphere, and able to provide effective emergency assistance; . . . (emphasis ours)

July 20, 1985 Pre-Proposal Draft at p. 188.

Although refined somewhat, the February 11, 1987 and June 14, 1988 pre-proposal draft revisions contain essentially the same requirement:

(ii) When an employee(s) wears a respirator in IDLH, unknown or potentially IDLH atmospheres where the employee(s) could be overcome if the respiratory protection fails, the employer shall
ensure that at least one additional person located outside the IDLH atmosphere is in communication with the employee(s) in the IDLH atmosphere, and able to provide effective emergency assistance; (emphasis ours)

June 14, 1988 Pre-proposal Draft at p. 312.

We note that the summary preceding the text of the July 20, 1985 pre-proposal draft explains the above requirement as follows:

The second IDLH provision requires a "buddy" system where employees are required to work in IDLH atmospheres, that is, there must be an additional person present, in communication with the worker(s) in the IDLH area but located where he or she will be unaffected by an exposure incident and thus would be able to provide or call for emergency assistance if necessary. . . . The provisions are essentially the same as those that are in OSHA's current standards. (emphasis ours)

July 20, 1985 Pre-Proposal Draft at pp. 144-45.

Thus, (oil refining company) submits that the Chicago Interpretation is clearly contrary to, and inconsistent with, not only the text of the July 20, 1985; February 11, 1987 and June 14, 1988 pre-proposal drafts, but also with the July 20, 1985 draft's statement of what the existing rule requires.

CONCLUSION:

In light of the above, (oil refining company) respectfully requests that OSHA issue a formal interpretation of the existing respirator rule as applied to open hatch gauging of sour crude oil storage tanks or, in the alternative, that the Chicago Interpretation be rescinded.
ABSTRACT

This interpretation letter addresses a request for expedited approval to issue a citation under 1910.134(e)(3)(i) for maritime, shipbuilding operations. Shipyard is in violation of standards relating to hazards from conducting spray painting in a confined space during shipbuilding. Based on review of the facts and discussing this situation with SOL's Counsel for Trial and OSHRC Litigation, citing this shipbuilding employer for an alleged violation of 29 CFR 1910.134(e)(3)(i) can not be recommended. The application of 29 CFR 1915.35, .36 and .94 in this situation addresses these same hazards more specifically when they occur in a shipyard. Also 5(a)(1) should be considered.

INTERPRETATION

29 CFR 1910.134(e)(3)(i); 1915.35(a)(1)(i); 1915.36(a)(2); (a)(6); 1915.94; 1926.103(b)(2)

APR 30, 1990

MEMORANDUM

SUBJECT: Request for Expedited Approval to Issue a Citation Under 1910.134(e)(3)(i) for Maritime, Shipbuilding Operations


Per phone discussions conducted during April 18 through April 20, between Mr. B and Mr. J ((city) Area Office) the following principal facts pertain to this subject citation:

1. An employee working alone was conducting spray painting operations within confined spaces during the construction of a new vessel (Shipbuilding).

2. Entry into each confined space involved consisted of one entry way with limited and difficult access and egress.

3. Per the Material Safety Data Sheets provided by the employer, the flash point of the paint being used was 99 degrees Fahrenheit. Therefore, the paint used is considered a flammable liquid.

4. The employee was wearing a respirator of the cartridge and filter type.

5. The employee was not assigned a designated tender.

6. No fire equipment was stationed or immediately available for use outside the confined spaces.

7. No rescue equipment was available at the confined spaces during the spray painting operations.

8. No means for extracting the employee from the confined space were considered or available.

9. The paint being sprayed was determined to have been mixed with toxic solvents.

10. No competent person was assigned to monitor atmospheric conditions within the space.

After reviewing the facts and discussing this situation with SOL's Counsel for Trial and OSHRC Litigation, citing this shipbuilding employer for an alleged violation of 29 CFR subsection 1910.134(e)(3)(i) can not be recommended. A research of all existing OSHA records pertaining to this specific general industry standard and the current shipyard standards related to the type of hazards involved, indicates that the application of 1910.134(e)(3)(i) in this situation would be highly questionable in light of the fact that a more specific standard addresses these same hazards when they occur in a shipyard (i.e., 29 CFR subsection

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It is recognized that the requirements for having an additional worker available for emergencies is not as strict under this more specific standard. However, citing this more general standard would be contrary to the requirements that specific standards prevail over any applicable general standard covering the same hazardous situation. However, we can recommend that the following standards be cited with respect to this situation which involves: working in a confined space, with limited and difficult access, in a potentially flammable atmosphere, on a new construction vessel:

-- 29 CFR 1915.35(a) (1) (i); "In confined spaces, employees continuously exposed to such spraying shall be protected by air line respirators in accordance with the requirements of 1915.152(a)."

-- 29 CFR 1915.36(a) (2); "Ventilation shall be provided in sufficient quantities to keep the concentration of vapors below ten (10) percent of their lower explosive limit. Frequent tests shall be made by a competent person to ascertain the concentration."

-- 29 CFR 1915.36(a) (6); "Suitable fire extinguishing equipment shall be immediately available in the work area and shall be maintained in a state of readiness for immediate use."

-- 29 CFR 1915.94; "When an employee is working alone in an isolated location, frequent checks shall be made to ensure the safety of the employee."

-- 29 CFR 1910.134 (e) (1); "Standard procedures shall be developed for respirator use. These should include all information and guidance necessary for their proper selection, use, and care. Possible emergency and routine uses of respirator should be anticipated and planned for." (Note: Should also consider citing 5(a)(1) in the alternative)
This interpretation letter addresses "Test atmosphere" fit-testing for positive pressure respirators. Evaluating the fit of a respirator in a test atmosphere is not required for positive pressure respirators.

March 3, 1981

This is in response to your inquiry regarding a clarification of the need for fit-testing supplied-air respirators of the continuous flow-type.

We agree that continuous positive pressure will cause air to escape from the mask, rather than inwards into the mask, except for uncontrollable factors or negligence during use. Therefore, OSHA is taking the position that not all respirators must be fit-tested in a test atmosphere.

Fit-testing with a test atmosphere is only required for negative pressure respirators as follows:

- Demand supplied air respirators.
- Self-contained breathing apparatus (SCBA) operated in the demand mode.
- Negative pressure air purifying respirators.

Those respirators that operate in the positive pressure mode, such as supplied air, continuous flow respirators or powered air-purifying respirators, do not need to be fit-tested with a test atmosphere.

Since the instruction CPL 2-2.29 was not intended to introduce new fit-testing procedures for respirators, including positive pressure supplied-air respirators, we cannot suggest one now. However, it may be useful to you to obtain for further information the following references:


You may also wish to consult the American National Standards Institute (ANSI) Practice for Respiratory Protection Z88.2-1969. The 1980 edition has just been made available for further guidance on proper use and fitting of respirators.
This interpretation letter addresses frequency of test atmosphere fittings. Test atmosphere fit testing is not required each time the respirator is worn, nor is the frequency specified. However, a check of proper respirator fit to the face shall be performed each time the respirator is used. The cotton dust standard 1910.1043(f)(4)(i) outlines specifics for respirator use.

INTERPRETATION

29 CFR 1910.134(e)(5); 1910.1043(f)(4)(i)

March 9, 1981

MEMORANDUM

SUBJECT: Requirements for Wearing Respirators in a Test Atmosphere (29 CFR 1910.134(e)(5))

This responds to your memorandum dated January 27, 1981.

A test atmosphere fit-test is not required before each respirator usage. 29 CFR 1910.134(e)(5)(i) and (ii) do not indicate the frequency with which each respirator must be fit-tested.

With a test atmosphere periodic re-fitting qualitatively will be necessary because of changes in respirator fit which may be caused by changes in the features of the person's face or by a change of type of respirator. However, a positive-negative pressure test (or manufacturer's facepiece instructions) is necessary each time the respirator is used (29 CFR 1910.134(e)(5)(ii)).

Please note that 29 CFR 1910.1043(f)(4)(i) (cotton dust) also says that the employer shall assure that the respirator used by each employee exhibits minimum facepiece leakage and that the respirator is fitted properly, although this provision does not mention frequency. Good industrial hygiene practice would be to fit-test with a test atmosphere at least annually.
INTERPRETATION 29 CFR 1910.134(e)(5)

February 4, 1981

This is in response to your inquiry regarding OSHA Instruction CPL 2-2.29 on respirator fit-testing, and whether there are frequency of fit-testing requirements for respirators in a "test atmosphere."

Question (1) - Is "test atmosphere" fit-testing required before each respirator use?

A test atmosphere fit-test is not required before each respirator usage. A positive negative fit-test (or manufacturer's facepiece instructions) is necessary each time the respirator is used (29 CFR 1910.134(e)(5)(i)). Some specific standards that do indicate frequency in fit-testing are those for lead, arsenic, coke ovens, and acrylonitrile, but this is not indicated in 29 CFR 1910.134(e)(5)(i) and (ii).

Question (2) - Is "test atmosphere" fit-testing required at each issuance of a new respirator even though previous fit-testing of an identical respirator was found to be adequate?

A test atmosphere fit-test at each issuance of a new respirator is not necessary when a previous fit-test of an identical respirator showed the fit-testing to be adequate. Nevertheless, good industrial hygiene practice would warrant that when an employee changes to another respirator of the same type but different manufacturer, a fit-test should be performed at its initial use.

Question (3) - Is "test atmosphere" fit-testing required on a periodic basis (i.e., monthly, semi-annually, annually)?

29 CFR 1910.134(e)(5)(i) and (ii) does not indicate that each respirator must be fit-tested before each usage. A test atmosphere fit-test is not required on a specific periodic basis (e.g., monthly, semi-annually, annually) unless specified in a particular standard as mentioned above. Fit testing with a test atmosphere must be performed periodically so as to ensure that the respirator fits properly. This will be necessary because of changing conditions (e.g., face changes).

Furthermore, OSHA Instruction CPL 2-2.29 has not intended to introduce new fit-testing procedures as part of 29 CFR 1910.134(e)(5) for the employer to follow; however, please follow the manufacturer's facepiece fitting instructions, when appropriate.

You may if you so desire obtain for further information the following references:


You also may wish to consult the American National Standards Institute (ANSI) Practices for Respiratory Protection Z88.2-1969. The 1980 edition has just been made available for further guidance on proper use and fitting of respirators.
The use of a rubber skin diving hood under a respirator, for an employee with a beard is unacceptable under 1910.134(e)(5)(i).

February 25, 1982

This is in response to your letter of October 1, 1981, regarding previous correspondence on the possible use of a rubber skin diving hood under a respirator to provide an adequate face seal in cases where employees have beards or other facial hair.

The proposal for the use of a device that would effectuate a respirator face seal over a beard or other growth of hair appears to be in conflict with the provision of OSHA's respiratory protection standard, 29 CFR 1910.134(e)(5)(i), which states in part:

"Respirators shall not be worn when conditions prevent a good face seal. Such conditions may be a growth of beard, sideburns, a skull cap that projects under the facepiece,...." For example, the mere covering of excessive facial hair with such a rubber hood might alter the natural facial contours, which could significantly obstruct the conformity of the facepiece to the geometry of the face.

At this time, no evidence has been presented to demonstrate that an adequate quantitative fit test could be obtained by this modification. Therefore, OSHA would consider it an unacceptable practice for respirator usage in hazardous atmospheres, unless it were validated by evidence of an effective face seal in quantitative fit tests and the effectiveness in actual usage. Moreover, there are serious concerns about potential leakage of the system, the porosity of the rubber skin diving hoods, and problems with employee acceptance related to the comfort of the system.

A number of questions were posed in the previous response to your inquiry. These were framed to elaborate on the industrial hygiene aspects necessary in the determination of protection for the worker.
This is in response to your letter of July 1, 1983, concerning the facial hair and the wearing of the positive-pressure self-contained breathing apparatus (PPSCBA) under emergency conditions. We are providing the following answers to your questions:

1. The policy proposed by the Union does not meet the requirement of 29 CFR 1910.134(e)(5)(i).

2. The statement on the prohibition of facial hair prescribed in the ANSI Z88.2-1980 is the reaffirmation and expanded scope of the same policy as appeared in the ANSI Z88.2-1968 which has been adopted as the current OSHA 29 CFR 1910.134.

3. The policy proposed by your Union has no scientific or technical support. The issue here is not whether a wearer could pass the quantitative fit test on a given day, but whether he can pass the test everyday. Since the PPSCBA is used in unknown concentrations for unspecified lengths of time, maximum protection must be achieved when the SCBA's are worn. This means that no measurable leakage should be detected in the most sensitive range of a quantitative fit test instrument. Since the density and texture of the beard is not uniform around the face, and the density and the bulk of the beard is not uniform over time, consistently high quantitative fit testing results cannot be achieved on the same individual. The beard growth can significantly reduce the service life of the air cylinder on the SCBA which could restrict the performance in the emergency operation. The SCBA wearer can "overbreath" when moderately heavy to heavy workloads are performed. If there is a leak caused by the beard, the air contaminant, e.g., hydrogen sulfide could be pulled inside the facepiece. Furthermore, the beard can interfere with the sealing of the exhalation valve and shortening the service life of air supply.

4. We have not conducted any studies on this subject. However, both the Los Alamos and the Lawrence Livermore National Laboratories have conducted respirator research on the issue of facial hair. You may contact Mr. D of Los Alamos and Mr. H of Lawrence Livermore for information. We are enclosing two respirator research papers on facial hair and a notice issued by the fire fighters union which contains two Supreme Court decisions on facial hair.
This interpretation letter states that wearing any type or model powered air-purifying respirator PAPR with hair growth at the face seal may affect the seal and is a violation of 1910.134(e)(5)(i). Under 1910.1025(f)(2)(ii) (lead standard) and 1910.1001(g)(2)(ii) (asbestos standard), PAPR's must be provided to employees who choose to wear them as a matter of preference to wearing another type of respirator.

INTERPRETATION
29 CFR 1910.134(e)(5)(i); 1910.1001; 1910.1025(f)(2)(ii); 1926.58
JUN 1, 1987

This is in response to your letter of April 6 concerning powered, air-purifying respirators (PAPR's).

As you are aware, provision 29 CFR 1910.134(e)(5)(i) states that, "respirators shall not be worn when conditions prevent a good face seal." The Occupational Safety and Health Administration (OSHA) interprets this prohibition to apply to any personal respiratory protection device of a design relying on the principle of forming a face seal to perform at maximum effectiveness.

It is OSHA's understanding that the loose-fitting, helmet type PAPR's with shrouds and/or seals you discuss in your letter do rely on the principle of forming a face seal to perform at maximum effectiveness. Therefore, the prohibition we quoted applies to them. This means that an employer who uses them for protecting employees having hair growth where the face seal must form violates 29 CFR 1910.134(e)(5)(i).

Regarding your other inquiry, provision 29 CFR 1910.1025(f)(2)(ii) in the standard for inorganic lead and provision 29 CFR 1910.1001(g)(2)(ii) in the standard for asbestos, tremolite, anthophylite, and actinolite, both require employers to provide PAPR's to employees who simply choose to wear them as a matter of preference to wearing another type of respirator. This requirement holds any time the respirator will provide adequate protection to the employees.

SOURCE LETTER
April 6, 1987

I am writing to request your consideration of an issue of concern over the acceptability of the use of loose-fitting respiratory protection devices by individuals with beards.

For your review, I have enclosed copies of the following correspondence related to this issue:

1) letter from RACAL to OSHA dated 2/15/85
2) letter from OSHA to RACAL dated 3/7/85
3) letter from DBA to OSHA dated 2/24/87
4) letter from OSHA to DBA dated 3/20/87

Given these records, there is still a very real concern over the acceptable, safe use of the RACAL type device, which incorporates a "loose sealing" mechanism, such as the Tyvek shroud or rubber side seals, with facial hair.

There is a significant lack of data on the variability in protection afforded with these devices worn on bearded individuals, and the data that does exist was generated by fit test measuring techniques that are severely inaccurate for continuous flow type respirators. Unfortunately, I cannot offer a solution to this dilemma. However, I am extremely concerned that due to this lack of data and technology, a position of little or no conservatism may be taken by OSHA and other enforcement agencies and consensus

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standards such as ANSI Z88.2, which is currently being rewritten, which would unduly subject bearded wearers of these types of devices to significant hazard.

Compounding the concern over their use by bearded individuals for a wide range of airborne toxic substances in the workplace is the fact that two substance specific regulations, 29 CFR 1910.1025(f)(2)(ii) - the Lead standard, and 29 CFR 1910.1001(g)(2)(ii) - the Asbestos Standard, now seemingly require employers to "provide powered, air purifying respirators in lieu of any negative pressure respirator...."

These specific requirements, more so with the Asbestos Standard because of its widespread ramifications, have caused health and safety conscious employers and professionals to be placed in a very difficult position. When a bearded individual, perhaps with union support, insists on this "right" to a PAPR because he finds it more comfortable and desirable and allows him to keep his beard, many employers feel compelled to provide a device with an unknown risk associated with it.

There are basically three designs of PAPR's available:

1) tight-fitting facepiece models from (company) and RACAL,
2) loose-fitting helmet models from RACAL and chemical company, and
3) a loose-fitting hooded model from (company).

With type 1 models there is no question that facial hair is not permissible. With type 3 models there is no question that facial hair of any style is permissible. But with type 2 there certainly is question raised when an individual has facial hair (possibly ranging in growth from one day to several years) that comes between the anti-aspiration device (Tyvek shroud, rubber side seals, etc.) and the normal contact point on the wearer's face. It is noteworthy here to consider that (chemical company) has voluntarily lowered the protection factor rating on its helmet (type 2) PAPR to 25.

I ask that you consider this concern and advise of OSHA's enforcement policy specific to the issue of the permissibility of bearded individuals to use the loose-fitting, helmet type PAPR with shrouds and/or seals.

I am also encountering varying interpretations of the requirements in 29 CFR 1910.1001(g)(2)(ii) and 29 CFR 1910.1025(f)(2)(ii) that require the employer to provide the user with a powered air purifying respirator on request. Does this mean that an employee may for no reason request the PAPR or that the request must be supported by medical evidence of the inability of the requester to wear negative pressure devices.
ABSTRACT
A response to a letter protesting a company respirator program prohibiting beards. Beards are prohibited for respirators which require a face seal. Respirators that do not require a face seal are unaffected by beards.

INTERPRETATION
29 CFR 1910.134(e)(5)(i)

NOV 18, 1987

This is in response to your correspondence of July 27, on behalf of your constituent, Mr. L of (city), (state), who is employed at (company)'s (city) refinery.

Mr. L wrote you protesting a company respirator program policy which would mean that none of the men at the plant could wear a beard. He believes that the Occupational Safety and Health Administration (OSHA) required the company to adopt this policy which in his opinion is a violation of the personal freedom of the plant employees.

Provision 29 CFR 1910.134(e)(5)(i) in the standard for respiratory protection states that, "Respirators shall not be worn when conditions prevent a good face seal." This prohibition applies to any personal respiratory protection device of a design relying on the principle of forming a face seal to perform at maximum effectiveness.

Hair growing on the face at points where the seal with respirator is to occur is a condition preventing a good face seal. Therefore, employers may not use a respiratory protection device of the type described above for protecting employees having hair growth where the face seal must form.

There are respirators of designs that are not based on the principle of forming a face seal for assuring protection and hence are unaffected by beards. Perhaps the possibility of using this type of respirator for protecting employees with beards can be explored with the company.
This interpretation letter addresses the fit testing of supplied air particulate filter respirators. A particulate filter provided for Type C Supplied Air respirators is an added feature that is not required by any standard issued by OSHA. Because the air purifying mode of these respirators will be used for escape only, fit testing to establish the protection they afford in the air purifying mode is not necessary. But according to 1910.134(e)(5), fit testing to establish the protection they afford in the supplied mode is necessary.

INTERPRETATION
29 CFR 1910.134(e)(5)(i)

MAR 24, 1987

This is in response to your letter of February 11, concerning the fit testing of respirators.

Generally, 29 CFR 1910.134(e)(5) in the standard for respiratory protection is the provision establishing which respirators must be fit tested. The provision requires that all types of respirators be fit tested.

The particulate filter that you provide for your Type C Supplied Air respirators known as models 6373, 6473, 6573, 6673AL and 6773AL is an added feature that is not required by any standard issued by the Occupational Safety and Health Administration (OSHA). Since the air purifying mode of these respirators will be used for escape only, fit testing to establish the protection they afford in the air purifying mode is not necessary. But according to 29 CFR 1910.134(e)(5), fit testing to establish the protection they afford in the supplied mode is necessary.

SOURCE LETTER
February 11, 1987

It has come to our attention that there seems to be some confusion regarding Continuous Flow or Pressure Demand Airlines with HEPA egress respirators and the need to do facefit testing.

(company) has been granted NIOSH/MSHA approval for the Combination Type C Supplied Air and Particulate Filter Respirators known as 6373, 6473, 6573, 6673AL. As you can see from the enclosed NIOSH approval labels, these respirators are not approved for "routine use" in the air purifying mode.

According to ANSI Z88.2-1980, Table 5, no respirator fitting test is required for any supplied air continuous respirator. These respirators have been classed under schedule 19C by NIOSH. Combination SAR/APR respirators, regardless of the air purifying mode of the HEPA, are given a 21C classification because, as NIOSH has stated, "that combination respirators will be classified according to the lowest level of protection that they provide".

(Company) believes that any supplied air continues flow respirator equipped with an emergency escape high-efficiency filter does not need to be face-fit tested. Let me state a few reasons for this belief:

1. Powered Air Purifying Respirators (Class 21C/23C are not required to have face-fit tests performed on them due to the positive pressure operation of the respirator (ANSI Z88.2, Table 5).

2. PAPR's (Powered Air Purifying) do not have any other escape provisions other than the filter or cartridge itself. Escape is performed in the negative pressure mode.

3. When SAR/HEPA respirators are used and the air-purifying mode is used for escape, the HEPA filter must be replaced before returning to the SAR mode.
4. As per NIOSH CFR 30, Part 11 and ANSI Z88.2 Table 4, supplied air respirators are limited to use in atmospheres from which the wearer can escape unharmed without the aid of the respirator. Wilson believes that an escape filter on a SAR provides the wearer the needed protection he deserves. Technically, the wearer of a SAR, if the airline mode fails, is required to simply leave the work area and go to an uncontaminated area. Having an emergency escape filter greater reduces this unnecessary exposure.

5. If a face-fit test is performed on these respirators in the negative pressure mode, the results could be very misleading. Example - a worker is tested qualitatively wearing a full facepiece equipped with high efficiency escape filter. The protection factor assigned is 100. Does this mean he is limited to wearing the SAR to 100 X the PEL? Or does this mean he can only use the negative pressure mode up to 100 times the PEL? Supplied Air respirators are limited to non-IDLH atmospheres. Does having "extra protection" warrant lowering the protection factor?

(Company) requests that OSHA state via letter, their official stand on face-fit testing of Combination SAR/APR respirators when the air purifying mode is used only for escape. Mr. W feels that fit testing is not necessary on these respirators so long as the filter is used for escape. Furthermore, if OSHA's opinion is that fit testing is necessary, then (company) strongly urges OSHA to require PAPR's to be face-fit tested also. Again, escaping after a failed battery on a PAPR is no different than escaping with a SAR/HEPA.
This interpretation letter addresses fit testing for Type C supplied air respirators. An acceptable fit testing approach for Type C supplied air respirators is to perform qualitative fit testing with the air supply turned off. If Type C supplied air respirators maintain a constant positive pressure inside the face piece during use, they do not have to be fit tested when used for protection against asbestos and inorganic lead aerosols. The asbestos standards and the lead standard contain fit testing provisions superseding the provisions in 29 CFR 1910.134(e)(5) which requires fit testing of negative pressure respirators only.

This responds to your telephone call with a member of my staff requesting additional information to that provided in my letter dated March 24.

First, we affirm that the information in my March 24 letter and that which follows in this letter applies to respirator models 6693 and 6793 as well as the other models you listed in your letter of February 11, 1987. ANSI Z88.2-1980 is not incorporated into the respiratory protection standard of the Occupational Safety and Health Administration (OSHA). Accordingly, the information contained therein on respirator fit testing is not part of OSHA's requirements.

An acceptable fit testing approach for Type C supplied air respirators is to perform qualitative fit testing with the air supply turned off. If a respirator passes this test it may be concluded that it is providing the wearer the conventionally ascribed level of protection.

If your Type C supplied air respirators maintain a constant positive pressure inside the face piece during use, they do not have to be fit tested when used for protection against asbestos and inorganic lead aerosols. The asbestos standards, 29 CFR 1910.1001 and 29 CFR 1926.58, and the lead standard, 29 CFR 1910.1025, contain fit testing provisions superseding the provisions in 29 CFR 1910.134(e)(5) which requires fit testing of negative pressure respirators only.
ABSTRACT

This interpretation letter addresses the acceptability of the TSI Portacount portable fit testing device for quantitative fit testing (QNFT) of respirators. Several OSHA standards specifically require the use of aerosol-generation, dilution, and measurement systems that utilize photometer technology. The (fit testing device) considered here uses condensation nuclei counting technology. Lawrence Livermore National Laboratory has evaluated the (fit testing device) and OSHA feels that the device is acceptable to use for respirator fit testing based on the evaluation. Use of the device for respirator fit testing would be considered a de minimis violation under specified conditions.

INTERPRETATION

29 CFR 1910.134(e)(5)

Nov 8, 1988

MEMORANDUM FOR: REGIONAL ADMINISTRATORS

SUBJECT: Fit Testing Device

Several letters of interpretation and memoranda concerning the acceptability of the Portable Fit Testing Device for quantitative fit testing (QNFT) of respirators have recently been distributed to your attention (see attached). This is to clarify the Agency's compliance policy on the use of this equipment by employers if encountered during the course of an OSHA inspection.

Several OSHA standards specifically require the use of aerosol-generation, dilution and measurement systems that utilize photometer technology which measures the mass of particles leaked through the facepiece (OSHA uses the fit testing device B units to quantitatively fit test our own employees). The (fit testing device) is an instrument that compares ambient air particulate matter concentration inside and outside a respirator facepiece, utilizing condensation nuclei counting technology. As such, the two instruments represent entirely different measuring techniques. Therefore, until such time as a change or correction to the standards that require a specific QNFT protocol to be followed can be made and published, any use of the (fit testing device) for QNFT under a standard that specifies the aerosol generation system is, technically, a violation of that standard.

Recently, however, the Directorate of Technical Support has contracted with the Lawrence Livermore National Laboratory to evaluate the performance of the (fit testing device). Attached as "Attachment A" to this memo is a statement from Technical Support that discusses OSHA's evaluation of the (fit testing device) unit's performance and provides additional technical information on its use and limitations. Based on this evaluation, the Agency feels that the (fit testing device) unit is acceptable to use for respirator fit testing measurements. The use of this type of device instead of the specific instrumentation mandated in currently existing fit test protocols therefore poses no direct or immediate relationship to employee safety or health. Thus, if an employer is utilizing the (fit testing device) unit to fit test respirators that are approved for use when fit factors of less than 1,000 are required and the one-minute in-mask sampling correction has been made, a de minimis violation of the applicable standard would exist.

Additional questions concerning compliance issues may be addressed to the Office of Health Compliance Assistance, (FTS). Technical equipment questions and information on respirator testing devices should be addressed to the Directorate of Technical Support.

(fit testing device) Technical Considerations

The respirator quantitative fit testing requirements of several OSHA health standards such as asbestos and benzene have specific requirements for instrumentation. They require the use of an aerosol generation, dilution and measurement system which utilizes photometer technology with testing aerosols like corn oil or sodium chloride. The photometer measures the mass of aerosols during the test. The (fit
testing device) is basically a continuous flow condensation nuclei counter which counts the particles present at a given time.

Due to the difference in the method of measurement, the (fit testing device)(which counts the number of particles) tends to give lower fit factors during a low leak situation than the fit testing device B unit, since the amount of particles leaked through the respirator is larger than the mass of particles leaked through. Furthermore, since the (fit testing device) utilizes the ambient aerosol as the challenge agent, two questions remain unanswered: what is the effect of variation in the ambient concentration of aerosols on the fit factor obtained, and, what is the minimum ambient concentration necessary to obtain an acceptable facepiece fit?

Since there is no existing performance standard for the respirator QNFT equipment, OSHA requested that the Lawrence Livermore National Laboratory (LLNL) conduct studies to determine whether the (fit testing device) is acceptable for use in conducting respirator QNFT. LLNL utilized oil mist as a testing aerosol with two other types of QNFT equipment, one a photometer, and the other a full-size condensation nuclei counter. Data from these tests were compared to results achieved utilizing the (fit testing device) equipment.

The preliminary test results indicated that the (fit testing device) has good stability. However, it consistently gave lower fit factors at low leakage rates compared to the oil mist generating equipment, which uses oil mist as a testing aerosol. There was good agreement on the fit factors of 1,000 or less, LLNL recommended that the (fit testing device) be used when fit factors of 1,000 or less are needed, provided that there are at least 10,000 articles present in the ambient air.

Another problem involves the calculation of fit factors. The (fit testing device) uses a computer to calculate the fit factors automatically. The user cannot alter the computer program which controls the time the instrument samples the air inside and outside the mask during the required exercise protocols found in OSHA QNFT procedures. The (fit testing device) instruction book indicates that the in-mask sampling time for each exercise is only 10 seconds, which is much less than the minimum one minute time as required for most exercises by OSHA protocols. OSHA has contacted the (fit testing device) company and they have agreed to modify the computer program (in all new devices, and will retrofit all currently existing devices) so that all (fit testing device)s will have a minimum in-mask sampling time of one minute, and therefore meet OSHA standards' protocols for sampling time during required exercises to determine respirator fit.

SOURCE LETTERS

July 21, 1988

Thank you for your letter of May 2 concerning the (fit testing device) Respirator Fit Test System. As you stated in your letter, the (fit testing device) does not meet certain requirement prescribed in the OSHA standard for asbestos and benzene. When the original quantitative fit testing protocol was developed, it was based on the photometer technology. Because the Occupational Safety and Health Administration (OSHA) wants to encourage quantitative fit testing, use of the (fit testing device) is permitted.

However, an inadequate in-mask sample time has recently been noted in the (company) protocol, as addressed in the enclosed memorandum. This memorandum was issued to the field concerning automated respirator quantitative fit testing (QNFT) equipment, such as the (fit testing device). A one minute minimum in-mask sample time is required under the asbestos, formaldehyde, and benzene standards. Notice of this requirement has been sent to (company) and other interested parties.

The requirement for three fit tests for successful completion of a QNFT in the Benzene standard originates from the American National Standards Institute Practice of Respiratory Protection (ANSI Z88.2-1980). I would appreciate any information that would support your position that only a single quantitative fit test is sufficient. The minimum acceptable fit factor of 10 for the Benzene standard was incorrect. The minimum fit factor should be 100 which was derived by multiplying the assigned protection factor of 10 by a safety factor of 10. This error will be corrected.

The specified times for replacing NEPA filters and organic vapor cartridges that are used in QNFT were based upon field experience without any significant evidence presented to the contrary during the benzene rulemaking. Replacing a defective cartridge can be less expensive than repeating the test.
July 8, 1988

MEMORANDUM

SUBJECT: Automated Respirator Fit Testing Equipment

There are several manufacturers of respiratory fit testing equipment offering computer-controlled quantitative fit testing (QNFT) devices. The computer controls the fit testing and calculates fit factors automatically. Most of the exercises are programmed for a fixed time interval which include the time for collecting ambient and in-mask samples and for purging the probe lines in between samples.

A closer examination of these exercise programs found that most of these programs have inadequate time (10 to 30 seconds) for collecting in-mask samples. The OSHA standards for asbestos, benzene and formaldehyde require a one minute sampling time for most exercises. Any shorter time may prevent the collection of a representative sample. In order to meet this sampling time requirement, the exercise program should be changed to increase the in-mask sampling time to one minute or to repeat the exercise until the total in-mask sampling time reaches one minute. For example, if a 40 second sampling cycle includes only a 10 second in-mask sample, 6 (six) cycles would be required to meet the requirement of the standard.

Several equipment manufacturers indicated they would modify their sampling program to include one minute in-mask sampling time minimum. This modification would not add any cost to the user who already purchased the QNFT equipment. Users of automated respirator fit testing equipment which cannot meet the one minute in-mask sampling time minimum will be cited and given a three month abatement time.

MAY 18, 1988

MEMORANDUM FOR: REGIONAL ADMINISTRATORS

ATTN: ARA's FOR TECHNICAL SUPPORT

SUBJECT: (fit testing device)

The Lawrence Livermore National Laboratory (LLNL) is under contract with the Agency to determine the performance of a new respirator quantitative fit testing (QNFT) equipment based on the condensation nuclei counting principle. The instrument is the (fit testing device). The purpose of the study is two fold, does (fit testing device) meet the needs of the field as simple to use QNFT equipment and also whether the (fit testing device) meets the requirements prescribed in the OSHA asbestos standards and the proposed revision of the respiratory protection standard.

Since the key question of this study is to determine the equivalency between the test results obtained from the (fit testing device) and the conventional QNFT equipment using a photometer as a leak detector, LLNL used a photometer which is more sensitive and stable than the fit testing device B unit which we provided for field offices. For comparison purposes, LLNL also used a standard size (company) condensation nuclei counter (CNC). The (fit testing device) is a miniaturized version of the CNC.

The first of a series of tests was to determine the stability and reproducibility of the (fit testing device) under controlled leak situations. In order to simulate the human breathing pattern, the tests were performed on a breathing machine with a cyclic flow pattern. The results of the one hour test indicated that the (fit testing device) is stable and gives fairly reproducible results under various leak conditions. The second series of tests was the comparison of fit factors as measured by the (fit testing device), Photometer, and the CNC. The tests were performed with the breathing machine inside a test chamber with an aerosol concentration of about 25 milligrams per cubic meter. The results are presented in the following table:
<table>
<thead>
<tr>
<th>Leak Condition</th>
<th>Fit Factors Photometer</th>
<th>Fit Factors (fit testing device)</th>
<th>Fit Factors CNC</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.01%</td>
<td>13000</td>
<td>5500</td>
<td>9400</td>
</tr>
<tr>
<td></td>
<td>11000</td>
<td>3800</td>
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<tr>
<td></td>
<td>11400</td>
<td>4500</td>
<td>8000</td>
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<tr>
<td>0.05%</td>
<td>3100</td>
<td>5500</td>
<td>9400</td>
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<tr>
<td></td>
<td>2200</td>
<td>1300</td>
<td>8000</td>
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<tr>
<td></td>
<td>2800</td>
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<td>1300</td>
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<td>790</td>
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<td>1000</td>
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<td></td>
<td>860</td>
<td>630</td>
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<td>220</td>
<td>250</td>
</tr>
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<td></td>
<td>230</td>
<td>210</td>
<td>240</td>
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<tr>
<td>1.0%</td>
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<td>90</td>
<td>110</td>
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<td>8</td>
<td>9</td>
<td>6</td>
</tr>
</tbody>
</table>

The test results indicated that fit factors obtained from the (fit testing device) are consistently lower than those from the photometer especially at lower leak conditions. A possible explanation is that the (fit testing device) counted all particles which penetrated through the facepiece and the Photometer measured the mass of aerosols which penetrated through the facepiece. Since only small particles could leak through the facepiece, the overall mass ratio is lower than the count ratio as far as fit factor calculation is concerned.

There are several questions associated with the use of (fit testing device):

1. **Effect of particles generated from human breathing.**

   Since particles could be generated during breathing, it may affect the results of fit factors obtained by the (fit testing device). Therefore, when the (fit testing device) is used for achieving high fit factors (5,000 or more), this error could affect the selection of a full facepiece respirator or other respirator commonly used in industry such as supplied air respirators and self-contained breathing apparatus.

2. **The effect of particle size and concentration.**

   (Company), manufacturer of the (fit testing device), claims that the (fit testing device) can be used under ambient conditions without a test chamber. There is some concern whether reproducible results could be obtained under any ambient conditions without respect to particle size and concentration.

3. **Sampling strategy.**

   The exercise regimen of the standard quantitative fit testing method requires a sampling time from one to two minutes for each exercise and only the peak penetration during inhalation is used to calculate fit factors. Sampling time of the (fit testing device) has been programmed and is non-adjustable. A sampling cycle for the (fit testing device) lasts about 50 seconds which includes purging the sampling lines, and collecting ambient and inmask samples. However, the actual inmask sampling time is only 10 seconds, and it cannot be programmed to count peak...
penetration. These two areas could lead to error when compared to the results obtained by (fit testing device) and the photometer.

4. Comparative testing with human test subjects

Currently, all respirator selection tables in OSHA health standards are based on QNFT performed with photometers. Since the (fit testing device) does not measure the same parameter as the photometer, it is necessary to obtain comparative fit testing data between these two types of instruments to determine its equivalency. Human test subjects with respirators providing a wide range of facepiece leakages will be used for testing.

Only question three concerning the instruments sampling cycle must be resolved prior to limited OSHA n-house use of the device. The remaining concerns, if significant, are predicted to lower protection factors affording a higher level of respirator protection for our compliance officers. The LLNL is continuing this study to determine the long term stability of the (fit testing device), and the fit factor comparison at much lower concentrations (about 5 mg/m3) or less. We will report to you as soon as we receive the test results.

The American National Standard Institute (ANSI) standard on respiratory protection, ANSI Z-88.2-1980 requires the test subject to perform six exercises at two minute intervals for a QNFT. The QNFT requirements as prescribed in the OSHA health standards require the test subject to perform nine exercises at one minute intervals. Only the average of the peak penetrations which occurred during inhalation are used to calculate fit factors.

The sampling time for the (fit testing device) is programmed and cannot be altered. The sampling cycle for each exercise involves purging the sampling lines for 4 seconds, collecting an ambient sample for 5 seconds, purging the lines for 11 seconds, sampling inmask for 10 seconds, purging the lines for 4 seconds and collecting an ambient sample for 5 seconds. The total time for each sampling cycle is 39 seconds. The (fit testing device) counts the total particles which penetrated through the facepiece at both inhalation and exhalation and cannot differentiate particles leaked through the facepiece during inhalation only.

In order for the (fit testing device) to meet the requirement for a one minute minimum inmask sampling time, at least six sampling cycles are needed. This approach would increase the sampling time considerably to more than a half-hour per QNFT. Such long testing time may not be acceptable. An alternative is that (company) change the ROM chip which governs sampling time to a chip with user selectable variable sampling periods. From our recent contact with (company), they indicated they may have difficulty in providing a variable sampling scheme. However, they indicated that they could modify the sampling cycle to increase the inmask sampling time to one minute.

Since the (fit testing device) is not on the GSA schedule, even if it is found to be acceptable for use, the Agency cannot provide the field with a quantity of the instrument without a lengthy bidding process. In the meantime, the company B equipment is still the choice of performing QNFT. At our request, the OSHA Training Institute has offered a training course on the use and maintenance of the company B QNFT equipment. The first course was offered last year. We encourage your sending additional equipment operators to attend this course. In addition, the Institute has prepared a videotape which covers the basics of operation, maintenance and trouble shooting of the QNFT equipment. You may contact the Institute for additional copies of the tape.

October 2, 1987

This is in response to your letter of June 10 concerning the acceptability of using the (company) (fit testing device) Respirator Fit Tester to do respirator fit testing required by the Occupational Safety and Health Administration (OSHA).

OSHA has promulgated a mandatory protocol for the quantitative fit testing of respirators for use in environments contaminated with asbestos, tremolite, anthophylite, or actinolite aerosols. This mandatory protocol appears under the heading "Quantitative Fit Test Procedures" in appendix C to standard 29 CFR 1910.1001 pertaining to general industry and also appears under the same heading in appendix C to standard 29 CFR 1928.58 pertaining to construction work.

Instrumentation is covered at 3.a. There it is stated that, "Corn oil, sodium chloride or other appropriate aerosol generation, dilution, and measurement systems shall be used for quantitative fit test." Thus,
technically, the quantitative fit testing of respirators for use in environments contaminated with asbestos, tremolite, anthophylite, or actinolite may not be done with the (company) (fit testing device) Respirator Fit Tester since it is not an aerosol generation, dilution, and measurement system, but rather an instrument that compares ambient air particulate matter concentrations inside and outside a respirator facepiece.

Presently, OSHA does not know whether the (company) (fit testing device) Respirator Fit Tester determines fit factors as accurately as does the aerosol generation, dilution, and measurement system. It an employer (1) establishes that it does; (2) applies it to the fit testing of respirators used in environments contaminated with asbestos, tremolite, anthophylite, or actinolite; (3) gets inspected by OSHA and OSHA finds no flaws in the employer's evaluation of the instrument's accuracy, then OSHA will treat the employer's act as a de minimis violation of a requirement of a standard.

De minimis violations are violations which have no direct or immediate relationship to employee safety or health. Whenever de minimis conditions are found during an inspection, they are documented in the same way as any other violation but are not included on the citation.

OSHA has no mandatory protocol for quantitative fit testing of respirators used in other contaminated environments. Therefore, if employers know the accuracy of fit factors measured with the (company) (fit testing device) Respirator Fit Tester and correctly account for the errors of the measurements, there are no restrictions whatsoever to applying the instrument for quantitative fit testing of respirators for use in other environments.
ABSTRACT
The (Company) Model 401 Air Mask (30 minute, positive pressure, self contained breathing apparatus) is a type of respirator mask that must form a seal with the wearer's skin. Thick growth of hair where the mask edges meet the skin prevent the formation of a seal and is a violation of 29 CFR 1910.134(e)(5)(i). In a chemical plant where the potential for accidental release of a toxic chemical warrants providing respirators for emergency use for the entire workforce, none of the employees may have thick hair growth at points where the facepiece seal forms.

INTERPRETATION
29 CFR 1910.134(e)(5)(i)
AUG 18, 1986
This is in response to your letter of May 5 regarding respiratory protection.

We will begin by answering your second question and then will answer the remainder of your questions in the order that you asked them.

The (company) Model 401 Air Mask(TM) is a type of respirator mask that must form a seal with the wearer's skin in order to function at maximum effectiveness. Thick growths of hair where the mask edges meet the skin prevent the formation of a seal. Therefore, employers may not use this particular mask to protect employees who have thick hair growth at points where the seal with the skin is supposed to form. To do so would be a violation of 29 CFR 1910.134(e)(5)(i).

We can envision a chemical plant where the potential for accidental release of a toxic chemical is such as to warrant the providing of respirators for emergency use for the entire workforce. If that were the case and the employer chose to provide (company) Model 401 Air Masks for the employees, then as stated above, none of the employees may have thick hair growth at points where the seal with their skin is supposed to form.

In answer to all three parts of your third question, any time an employee is in a situation requiring respiratory protection and the respirator worn by the employee will not form a seal at some point where it is designed to do so the employer is put in the position of being in violation of 29 CFR 1910.134(e)(5)(i).

The amount and frequency of training to provide individuals assigned to conduct emergency rescue operations is whatever is necessary in order that the individuals attain and retain the ability to perform the associated duties and functions satisfactorily.

SOURCE LETTER
(No date provided.)

The company that we work for is about to implement a policy on beards and respirator wear, per the Code of Federal Regulations, Title 29, Chapter XVII, part 1910.134(e)(5)(i). Our companies' position, based on their interpretation, is that every individual who is physically able and not confined to the office buildings, must be clean shaven to enter any portion of our chemical plant. This requirement applies even if specific job requirements do not include work activities in which respirator wear is mandatory. The clean shaven position is taken on the belief that any employee who enters the plant would be obligated both morally and as a condition of employment, to perform heroics if stumbling upon a felled employee, by donning a (company)-401-AIR MASK, (30 minute, positive pressure, self contained breathing apparatus). In order to be prepared, and to comply with OSHA Regulations, they have therefore concluded that everyone must be clean shaven. We believe that this scenario is not only a statistical improbability (although it could happen), respirators have never been used for this kind of activity in the plants' 25 years of existence, but also clearly beyond the scope, spirit and intent, of 29 CFR 1910.134(e)(5)(i).
Given this limited background information, would you please answer the following questions for us, so that we are clear on the philosophy and intent of the OSHA Regulations.

1. Is there any necessity for all personnel at a chemical facility, who would not need to wear a respirator in the course of his normal duties, e.g. clerks, accountants, secretaries, engineers, etc., to be clean shaven?

2. Does the code apply to positive pressure, SCBA, type (company)-401-AIR MASK with a 30 minute tank?

3. a. Would a bearded clerk, who stumbled upon a felled employee, be in violation, if he performed heroics to save this employee by donning the positive pressure gear described above?
   b. Would the same employee be in violation if he has received company sponsored training of SCBA usage?
   c. Would the employee be in violation if he had previous experience in usage from an outside source? (such as volunteer fire fighting experience or a former place of employment)

4. What are your views concerning the proper amount, and type of training needed to prepare individuals for emergency rescue operations, and at what frequency should it be conducted?

While we realize there are gray issues, and some of these questions might seem trite or obvious, it is important that we do not interpret the guidelines and regulations in such a manner that they become onerous to all employees, but protect those for whom we believe the code was designed. We have intentionally not included our company’s name. This was not done out of fear of retribution. We simply do not want to cause any undo alarm, because we believe our company is an extremely safe and environmentally sound place to work. It’s just that they appear to have gone a little too far with this particular policy. That is why we desire to become more informed as individuals, so that we can make a better assessment of the facts based on your knowledge and expertise.
It does not matter if hair is allowed to grow on other areas of the face if it does not protrude under the respirator seal. Accordingly, mustaches, sideburns and small goatees that are trimmed so that no hair underlies the seal of the respirator present no hazard and do not violate 29 CFR 1910.134(e)(5)(i).

OSHA requires respirators to be used when they are necessary to protect employees against overexposure to air contaminants. When administrative or engineering controls have not kept workplace exposure to a specific air contaminant within agency-established permissible limits, then appropriate respirators must be worn by exposed employees. The standard only applies to those employees of a refinery or chemical plant who need the protection of a tight-fitting facepiece respirator, either routinely or in emergencies, because of such overexposure. It is not clear from Mr. Anthophyllite letter whether he is exposed to a specific contaminant above its permissible exposure limit.

Moreover, some types of respirators do not require a face seal, and thus usually can be worn by bearded employees. Specifically, these are positive pressure respirators of the hooded, helmet and half-mask types that can be used with a continuous-flow or pressure-demand, supplied-air respirator, where facial hair and beards will have less effect on the fit. For emergency use, there is an escape hood with a continuous flow of air and a fifteen-minute service life. Respirators of this type that have been approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration are available on the market.

It should be emphasized that all respirators must be properly fitted, regardless of which type is worn or whether or not the wearer has facial hair. Positive pressure-type respirators such as those described above have large leakage paths which can cause aspiration of the outside atmosphere. On self-contained breathing apparatus the high leakage will markedly reduce the service life of the tank. In addition, recent research reported at the American Industrial Hygiene Conference in June 1982 demonstrated that modest facial hair growth can have a significant adverse impact on the protection of a positive pressure system.
It should be pointed out that OSHA's standard for respiratory protection is not new, but was drawn from a privately developed national consensus standard written by the American National Standards Institute in 1969. This standard was based on a great deal of industry and research experience with respirators. Recently (as announced in the May 14, 1982, Federal Register), OSHA has proposed possible revisions of its respirator standards, and is soliciting comments and data from the public in this process. Reports of this action may have prompted Mr. M's concern. It is not anticipated at this time, however, that there will be a change in our respirator standards regarding beards.
ABSTRACT
It is not permissible for individual workers to sign a release so that they can have a beard while wearing a respirator. However, respirators that do not require facepiece-to-face seals can be used by people with beards.

INTERPRETATION
29 CFR 1910.134(e)(5)(i)

January 18, 1984

Thank you for your letter of November 17, 1983, on behalf of your constituent, Mr. A, regarding shaving beards to wear respiratory protection equipment.

The Occupational Safety and Health Administration (OSHA) has a standard on respiratory protection which employers are required to follow when their employees must wear respirators (29 CFR 1910.134). This standard states in part: "Respirators shall not be worn when conditions prevent a good face seal. Such conditions may be a growth of beard...."

Mr. A's employer is apparently complying with this standard as required. It is not permissible to negotiate individual exemptions from such requirements by signing a release as suggested. There are certain types of respirators, however, which do not require a facepiece-to-face seal to function properly, for example, a supplied-air hood. Perhaps Mr. A can discuss with his employer whether or not such an alternative would be appropriate or feasible in his work situation. If not, however, and if Mr. A's job requires wearing a respirator which seals the facepiece to the face, no facial hair which interferes with that seal is permitted.
RECORD ID 2204

STANDARD NUMBER 1910.134(e)(5)(i)
INFORMATION DATE 841011

ABSTRACT The OSHA Respirator Standard, 29 CFR 1910.134(e)(5)(i) does not ban facial hair for those persons wearing respirators. However, when a respirator must be worn to protect employees from airborne contaminants, it has to fit correctly, and this will require the wearer’s face to be clean-shaven where the respirator seals against it. An employer would be in violation if a bearded employee (with beard growth at the face seal) wore a SCBA under a true emergency situation.

INTERPRETATION 29 CFR 1910.134(e)(5)(i)

OCT 11, 1984

This is in response to your letter of September 29, 1984 concerning facial hair and the wearing of respirators. We are providing the following answers to your questions.

1. A copy of the pertinent section of the respirator standard that applies, 29 CFR 1910.134(e)(5)(i), is enclosed. It states that respirators shall not be worn when conditions prevent a good face seal. Such conditions may be a growth of beard, sideburns, a skull cap that projects under the facepiece, or temple pieces on glasses. This regulation does not ban facial hair on respirator users, per se, from the workplace.

However, when a respirator must be worn to protect employees from airborne contaminants, it has to fit correctly, and this will require the wearer’s face to be clean-shaven where the respirator seals against it.

OSHA requires respirators to be used when they are necessary to protect employees against overexposure to air contaminants. When administrative or engineering controls have not kept workplace exposure to air, contaminants within OSHA’s established permissible limits, then appropriate respirators must be worn by the exposed employees. The standard (1910.134(e)(5)(i)) only applies to those employees who need the protection of a tight-fitting facepiece respirator, either routinely or in emergencies, because of such overexposure.

It does not matter if hair is allowed to grow on other areas of the face if it does not protrude under the respirator seal. Accordingly, mustaches, sideburns, and small goatees that are trimmed so that no hair underlies the seal of the respirator present no hazard and do not violate 1910.134(e)(5)(i).

2. The use of a self-contained breathing apparatus (SCBA), such as the (company), is not acceptable for bearded employees under emergency conditions. Since the SCBA is used in unknown concentrations for unspecified lengths of time, maximum protection must be achieved when the SCBA’s are worn. The beard growth can significantly reduce the service life of the air cylinder on the SCBA which could restrict the performance in the emergency operation. The SCBA wearer can “overbreathe” when moderately heavy to heavy workloads are performed. If there is a leak caused by the beard, the air contaminant could be pulled inside the facepiece. Furthermore, the beard can interfere with the sealing of the exhalation valve and shortening the service life of the air supply. For emergency use, there is an escape hood with a continuous flow of air and a fifteen-minute service life which usually can be worn by bearded employees. Respirators of this type that have been approved by the National Institute for Occupational Safety and Health are available on the market.

3. The employer would be in violation of 1910.134(e)(5)(i) if a bearded employee wore a SCBA under a true emergency situation.
SOURCE LETTER
SEP 29, 1984

(Utility company) recently enacted a new respiratory protection program for its' employees. This new policy required (utility company) employees to be clean shaven in accordance with OSHA regulation 1910.134(e)(5)(i). The problem is that most employees affected by this new rule never have the need to use a respirator, nor do they carry one with them.

Enclosed please find a copy of the letter, which was sent to the union by (utility company), outlining this new policy. Also included is a letter handed to all employees at the (utility company) Generating Station.

Concerning the above-mentioned, could you please clarify OSHA's position in regard to these questions?

1. Must an employee be clean shaven for the possibility that he might have to wear a respirator, although he never has to wear one while performing his job under normal conditions.

2. At my work location, an electric generating station, there are approximately twenty company breathing apparatuses. They are placed at strategic locations throughout the station for use in case of an emergency. Would OSHA consider these to be adequate protection for a bearded employee?

3. Would a bearded employee wearing a company breathing apparatus type respirator be in violation of OSHA regulation?
RECORD ID  2227

STANDARD NUMBER  1910.134(e)(5)(i)
INFORMATION DATE  810308

ABSTRACT  This interpretation letter provides clarification of the requirement for fit-testing supplied air respirators of the continuous flow type. Respirators that operate in the positive pressure mode, such as supplied air, continuous flow respirators, or powered air-purifying respirators, do not need to be fit-tested with a test atmosphere.

(NOTE: This standard was last amended in 1984.)

INTERPRETATION  29 CFR 1910.134(e)(5)(i)

Mar 9, 1981.

This is in response to your inquiry regarding a clarification of the need for fit-testing supplied-air respirators of the continuous flow-type.

We agree that continuous positive pressure will cause air to escape from the mask, rather than inwards into the mask, except for uncontrollable factors or negligence during use. Therefore, OSHA is taking the position that not all respirators must be fit-tested in a test atmosphere.

Fit-testing with a test atmosphere is only required for negative pressure respirators as follows:

- Demand supplied air respirators.
- Self-contained breathing apparatus (SCBA) operated in the demand mode.
- Negative pressure air purifying respirators.

Those respirators that operate in the positive pressure mode, such as supplied air, continuous flow respirators or powered air-purifying respirators, do not need to be fit-tested with a test atmosphere.

Since the instruction CPL 2-2.29 was not intended to introduce new fit-testing procedures for respirators, including positive pressure supplied-air respirators, we cannot suggest one now. However, it may be useful to you to obtain for further information the following references:


You may also wish to consult the American National Standards Institute (ANSI) Practices for Respiratory Protection Z 88.2-1969. The 1980 edition has just been made available for further guidance on proper use and fitting of respirators.
I recently had the pleasure of speaking with Mr. I regarding OSHA Instruction CPL 2-2.29, Subject 29 CFR 1910.134(e)(5)- Respirator Fit Testing. He informed me that one of the intents of the Instruction was to ensure that the respirator fitting requirement was applied to all respirators, including single use types. This substantiated my interpretation. However, I would like to have, if possible, a clarification of the need for fit testing supplied-air respirators of the continuous-flow type. These respirators provide a continuous positive pressure within the facepiece and any leakage would occur as breathing-air escaping from within the mask rather than a leakage inward.

Fit testing of supplied-air, continuous-flow respirators has caused us considerable difficulty. Irritant smoke tubes have been tried by passing the tube around the area of facepiece-to-face contact. The result has been that irritant smoke was blown into the face of the person administering the test. Quantitative fit testing has also not been successful.

We presently fit test all respirators. However, the fit testing of the supplied-air, continuous-flow respirators does not appear to be feasible.
RECORD ID 3050

STANDARD NUMBER 1910.134(e)(5)(i)
INFORMATION DATE 900215

ABSTRACT  An employer using a self-contained breathing apparatus (SCBA) and having beard growth at points where the face piece is designed to seal with the face, is violating 1910.134(e)(5)(i). This condition is a violation regardless of what fit test measurement can be obtained. If the beard is styled so no hair underlies the points where the SCBA face piece is designed to seal against the face, then the employer may use the SCBA for protection.

INTERPRETATION 29 CFR 1910.134(e)(5)(i)
FEB 15, 1990

This is in response to your letter of December 29, 1989, to requesting a clarification of 29 CFR 1910.134(e)(5)(i) with respect to regulating the use of self-contained breathing apparatus (SCBA) for protecting employees with beards.

As you related, 29 CFR 1910.134(e)(5)(i) contains the statement, "Respirators shall not be worn when conditions prevent a good face seal." This prohibition applies to any negative or positive pressure personal respiratory protection device of a design relying on the principle of forming a face seal to perform at maximum effectiveness.

A beard growing on the face at points where the seal with the respirator is to occur is a condition that has been shown to prevent a good face seal. Thus an employer using a SCBA to protect an employee with a growth of beard at points where the SCBA face piece is designed to seal with the face, is violating 29 CFR 1910.134(e)(5)(i). This is so regardless of what fit test measurement can be obtained. If the beard is styled so no hair underlies the points where the SCBA face piece is designed to seal with the face, then the employer may use the SCBA to protect the employee.

SOURCE LETTER

December 29, 1989

We have received a number of inquiries regarding the use of Self-contained Breathing Apparatus and facial hair. As you are well aware, 29 CFR 1910.134(e)(5)(i) prohibits the use of respirators when conditions prevent a good face seal. The paragraph goes on to state that "such conditions may be a growth of beard". Since the permissive word "may" is utilized in this section we are concerned whether or not there is, in OSHA's view, an outright prohibition against the wearing of a beard. If OSHA believes that the standard does not outright prohibit beards, we would then request OSHA's interpretation of what a good face seal is and how and when it should be measured to ensure compliance with these regulations.
ABSTRACT
This interpretation letter addresses respiratory protection requirements for airborne silica. OSHA interprets 29 CFR 1910.134(e) to require employers to test the fit of any air-purifying negative pressure respirator they provide their employees. If the concentration of the air contaminant is not greater than ten times the PEL, either a qualitative or a quantitative procedure may be used for fit testing of the respirator. If the air contaminant concentration is greater than ten times the PEL, a quantitative procedure must be used. Employees with beards may be provided with helmet style powered, air-purifying respirators (PAPR).

INTERPRETATION
29 CFR 1910.134(e)(5)(i); 1910.1000
APR 20, 1990

This is in response to your letter regarding respiratory protection for airborne silica.

The Occupational Safety and Health Administration (OSHA) interprets 29 CFR 1910.134(e). In its standard for respiratory protection, to require employers to test the fit of any air-purifying negative pressure respirator they provide their employees. Although fit testing protocols are not included in 29 CFR 1910.134, many of the OSHA health standards for specific toxic substances do contain specific fit testing procedures. Your employer is permitted to follow appropriate protocols from these standards as a guide to proper fit testing. If the concentration of the air contaminant is no greater than ten times the permissible exposure limit (PEL), then either a qualitative or a quantitative procedure may be used to test the fit of the respirator. If the air contaminant concentration is greater than ten times the PEL a quantitative procedure must be used. Because the equipment costs are lower, many employers choose to use the qualitative procedure when it is allowed.

OSHA has issued an isoamyl acetate protocol, a saccharin solution aerosol protocol, and an irritant fume protocol for qualitatively testing how well respirators fit. But before employers may use one of these procedures, they must follow a detailed respirator selection procedure designed to assure a high probability that each employee about to receive the test first dons an adequately fitting respirator. Moreover, the test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface, such as stubble beard growth, beard, or long sideburns which cross the respirator sealing surface.

The qualitative means of testing the fit of a respirator relies on the ability of the person wearing the respirator to sense the presence of a challenge agent. A challenge agent is released into the air outside the respirator. If the person wearing the respirator can sense the agent inside the respirator, then the respirator fails the qualitative fit test. If the wearer of the respirator cannot sense any challenge agent inside the respirator, then the respirator passes the qualitative fit test. Since the test will not work unless the person wearing the respirator is able to sense the challenge agent, the person's ability to sense the challenge agent must first be checked. The saccharin solution aerosol protocol requires that the person's saccharin taste threshold be determined because taste is the means of sensing the presence of airborne saccharin. The threshold is determined with the respirator removed. In order to detect the airborne aerosol, a person must breathe through the mouth with it held wide open and the tongue extended. Only a dilute solution of the fit test solution shall be used and the person whose taste threshold is being determined shall not be subjected to more of the dilute solution than is dispensed by 30 squeezes of the nebulizer bulb.

Stannic oxychloride, the challenge agent in irritant fume, is detected by the sense of smell. The irritant fume protocol states that the test subject shall be allowed to smell a weak concentration of the irritant smoke before the respirator is donned to become familiar with its characteristic odor.

While it is true that both sodium saccharin and stannic oxychloride are potentially hazardous substances, the only qualitative fit testing protocols that are currently well established are the two based on these.
challenge agents and the one based on isoamyl acetate. Moreover, with respect in particular to the toxic substances for which these protocols specifically apply, OSHA believes that the increased incidence of overexposure to toxic substances in the workplace that would occur in the absence of respirator fit testing presents a greater health risk for employees than does the small exposure to sodium saccharin or stannic oxchloride provided by the qualitative fit testing protocols. To provide you more information on OSHA’s protocols for fit testing respirators, I have enclosed a copy of the procedures that must be followed when fit testing respirators for use for protecting employees from formaldehyde, OSHA standard 29 CFR 1910.1048.

The respiratory protection standard states at 29 CFR 1910.134(e)(5)(i), "Respirators shall not be worn when conditions prevent a good face seal." This provision applies to both negative and positive pressure personal respiratory protection devices that are designed to provide a facepiece-to-face seal. A beard growing at points where the respirator sealing surface is designed to contact the skin has been shown to be a condition preventing a good face seal. Thus, if you have beard hair that would underlie the sealing surface of a respirator and your employer were to use the respirator to protect you from overexposure to airborne silica, then your employer would violate 29 CFR 1910.134(e)(5)(i). As you indicated, one means employers have of complying with the provision, other than requiring employees to shave, is to provide employees with respirators that are not designed to seal with the face at any points where the beard is growing.

OSHA requires employers to provide their employees respirators that are approved by the Mine Safety and Health Administration (MSHA) and by the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR Part 11. NIOSH informs us that they have no plans to withdraw approval of the helmet style powered, air-purifying respirators (PAPR). The helmet style PAPR is approved for use in higher airborne concentrations of silica than the approved protection levels of either the single-use or the disposable half-mask respirator.

The OSHA sampling and analytical method for airborne silica is being sent to you separately from the OSHA Salt Lake City Analytical Laboratory. As you requested, I have enclosed a copy of the current standard for respiratory protection.

SOURCE LETTER

Re: New Standard for airborne silica.

With the implementation of the new regulations my company fell out of compliance. In the scramble to correct this situation OSHA section 1910.134 dated Oct. 18, 1972 was put in effect. In the respirator test fitting process we were subjected to METAL CHLORIDE and or SODIUM SACCHARIN both approved by OSHA. I find it ironic the agency charged with protecting the health and safety of the American worker would approve such chemicals, particularly when it is sprayed directly in the face and eyes.

The Material Safety Data Sheet for sodium saccharin under ingestion states: Saccharin is listed by the national Toxicology Program as a substance that may reasonably be anticipated to be carcinogenic. (After the fitting a concentrated dose is sprayed in the mouth.)

METAL CHLORIDE, this stuff is a real winner! The Material Safety Data Sheet states, among other niceties, it is corrosive to all human tissue.

When I expressed my concerns to our safety department I was told such a small amount would never hurt me. Every time I hear this I think of the post-WW II practice of sending soldiers into nuclear test sights immediately following the blast. We know now just how safe those men were.

Another problem I have with our program is the ruling concerning facial hair. Many of us have had beards for years 18 years in my case. We were given two options, shave or we would not be allowed to work. While I fully understand the necessity of proper protection there must be a better type respirator and be able to keep the beard than the cheap negative pressure paper ones issued to us. I find bumping the mask and not very hard the seal breaks. At other times I think I have a good seal only to find dirt has leaked in around the nose. Maybe they work fine on test dummies with the so called average face but in the real work world all they do is give a false sense of security. Just what does an average face look like?
One alternative I suggested was what I call the air hat full face positive pressure respirators. Some of us offered to buy our own air hat. We were told these air hats are not as effective as the paper respirators. We have been told this type respirators will be outlawed soon. Is any of this true? What is OSHA's standing on this type respirator?

Also, please send the latest regulations governing respirators along with the proper test procedures used to test for silica.
This interpretation letter addresses quantitative fit testing of respirators with a system that uses naturally occurring particulates as the challenge agent. If the system is used for quantitative fit testing of respirators worn for protection from any substance other than asbestos, benzene, or formaldehyde, there is no existing OSHA regulation to violate. If the system is used for quantitative fit testing of respirators worn for protection from asbestos, benzene, or formaldehyde, its use will be a technical violation of an OSHA regulation. The standards for these substances require that aerosol generation, dilution, and measurement systems be used for quantitative fit testing of respirators.

(NOTE: This standard was last amended in 1984.)

This is in response to your letter of March 9, to the Regional Administrator of the (City) Regional Office of the Occupational Safety and Health Administration (OSHA), concerning your system for quantitative fit testing of respirators. Please accept my apology for the delay.

We understand that your system uses naturally occurring environmental particulate matter as the primary challenge agent. You relate that you control the particle count either by releasing carbon particles or generating a corn oil aerosol. This assures that a particle count greater than 10,000 is always maintained during testing. You measure fit factors with (company) (fit testing device) analyzers. It is your opinion that this system is far more accurate than most conventional units. You wish to know whether your firm and/or its clients will be subject to citation for using the system to conduct quantitative fit testing of respirators, and if so, what additional modification could be made to achieve acceptable compliance.

In general, we can state that your firm would not be subject to citation by OSHA should a fit testing rule be violated in the course of providing fit testing services for one of your clients. Any citation issued for exposure of employees to hazardous conditions would be issued to your client.

If you use your system for quantitative fit testing of respirators worn by employees for protection from any substance other than asbestos, benzene, or formaldehyde, there is no existing OSHA regulation to violate. However, if you use your system for quantitative fit testing of respirators worn by employees for protection from asbestos, benzene, or formaldehyde, your client will be in technical violation of an OSHA regulation. The standards for these substances require that aerosol generation, dilution, and measurement systems be used for quantitative fit testing of respirators. These systems generate particles of a specifically limited range of sizes to challenge the face to facepiece seal of a respirator. Your system deviates from these systems by primarily using naturally existing environmental particles to challenge the face to facepiece seal of a respirator. There does not appear to be any practical way to modify your system to conform with the systems required by the asbestos, benzene, or formaldehyde standards.

If your system measures respirator fit factors as accurately as the systems specified in the standards for asbestos, benzene, or formaldehyde, the violation for using your system will be classified as de minimis. De minimis violations are documented in the case file but no citations are issued. A copy of our memorandum of November 8, 1988, to OSHA Regional Administrators concerning the use of the (company) (fit testing device) fit testing device is attached for your information.
ABSTRACT

Air purifying respirators are permitted for use in situations normally considered inappropriate because the Permissible Exposure Limit (PEL) is below the perchloroethylene odor threshold level. The use of air purifying respirators is permitted when criteria for the cartridge schedule changes detailed in the letter are met, as well as all elements of the respiratory protection standard. The respiratory protection standard under 1910.134(b)(8) includes the requirement that an employer monitor the concentration of perchloroethylene in the work environment to ensure that the respirator in use is providing adequate employee protection. Representative air monitoring should be performed to assess the extent of employee exposure in non-routine working conditions. NIOSH respiratory criteria specify the use of half-mask cartridge respirators for up to ten times a PEL, and full face-piece respirators for up to 50 times a PEL. The letter specifically states a maximum exposure level of 250 ppm for a half-mask, air-purifying respirator. Therefore, OSHA may issue a citation for failure to provide adequate respiratory protection if half-mask respirators are used for exposures exceeding 250 ppm.

INTERPRETATION

29 CFR 1910.134(b)(8); (e)(2); 1910.1000

APR 24, 1991

MEMORANDUM

SUBJECT: Use of Air-Purifying Respirators for Perchloroethylene Exposures

This memo is to clarify the intent of the attached August 23, 1989, letter addressed to the International Fabricare Institute. The letter to Mr. S expressly allows the use of air purifying respirators in situations in which they would normally be considered inappropriate because of the fact that the Permissible Exposure Limit (PEL) is below the perchloroethylene odor threshold level. The use of air purifying respirators is permitted when criteria for the cartridge schedule changes detailed in the letter are met as well as all elements of the respiratory protection standard (29 CFR 1910.134).

The respiratory protection standard includes the requirement, listed under section 1910.134(b)(8), that the employer monitor the concentration of perchloroethylene in the work environment to assure that the respirator in use is providing adequate employee protection. Representative air monitoring should also assess the extent of employee exposure in non-routine working conditions.

The intent of the letter is consistent with NIOSH respiratory criteria which specify the use of half-mask cartridge respirators for up to ten times a PEL, and full face-piece respirators for up to 50 times a PEL. The letter specifically states that "the maximum exposure level [for a half-mask, air purifying respirator] may be used for is 250 ppm." "Above that level, only a full face-piece air purifying respirator, an air-supplied respirator, or a self-contained respirator will provide adequate protection." Accordingly, OSHA may issue a citation for failure to provide adequate respiratory protection if half-mask respirators are used for exposures exceeding 250 ppm.

SOURCE LETTER

AUG 23, 1989

Dear Mr. S:

In your letter of August 8, 1989, you have requested on behalf of the (Institute) certain clarifications from OSHA. In light of your request for the agency to respond as quickly as possible, I am directing this response to the matters (Institute) has indicated are of greatest urgency concerning the use of air-purifying respirators by the dry cleaning industry.

Vol. 1-533
OSHA issued its final Air Contaminants standard on January 19, 1989. See 54 Fed. Reg. 2332 et seq. That standard lowered the permissible exposure limit (PEL) for perchloroethylene (tetrachloroethylene), from 100 ppm to 25 ppm, on an eight-hour time-weighted average (TWA). Perchloroethylene is widely used in the dry cleaning industry. Some employees in the industry are currently exposed to levels that exceed the 25 ppm limit.

Until December 31, 1992, dry cleaning employers may achieve the lower exposure limit by any reasonable combination of engineering and work practice controls and personal protective equipment, including respiratory protection. Engineering or work practice controls may be used at any time to achieve compliance, and must be given priority over respiratory protection after December 31, 1992. In the meantime, the existing limits of 100 ppm 8 hour TWA, 200 ppm ceiling, and 300 ppm maximum peak must continue to be achieved by engineering controls whenever feasible. See 29 CFR 1910.1000 (Table Z-2); 54 Fed. Reg. 2948 (transitional limits).

OSHA has previously stated that air-purifying respirators may be used to comply with the 25 ppm PEL for perchloroethylene (see letter of July 17, 1989 to Mr. V, Jr., denying IFI's administrative stay request). This letter reiterates that statement, but provides additional information on the issue of the odor threshold for perchloroethylene and the need for a schedule to govern the changing of respirator filter cartridges.

In order to permit IFI to disseminate this information to its members and in the interest of achieving full compliance, I am hereby granting a temporary stay of the September 1, 1989 start-up date of the perchloroethylene standard as it applies to the dry cleaning industry. Accordingly, enforcement of the standard will not begin until October 1, 1989. This stay will be publicly announced in the Federal Register in the near future.

Air-purifying respirators are more convenient to use in some operations than air-supplied respirators. But because of the risk that respirator failure will go undetected, it is generally recommended that air-purifying respirators not be used when the exposure limit is below the odor threshold. By contrast, if the exposure limit is above the odor threshold, the employee will know that the respirator is not providing adequate protection, when he or she smells the substance.

However, an employee may safely use an air-purifying respirator below the odor threshold if the respirator's filter cartridge is regularly changed within its service life. Also, it is important to check proper face fit through appropriate fit testing.

Consequently, OSHA has on occasion authorized the use of air-purifying respirators when the exposure limit is below the odor threshold. In these circumstances, OSHA has required the changing of cartridges on a specified frequency. Of course, a proper respiratory protection program is also necessary. See, for example, the benzene standard, 29 C.F.R. 1910.1028(g)(4).

The sense of smell is not particularly reliable. There is substantial individual variability, and often sensitivity is lost through repeated exposures. While one study indicates that the odor threshold is 5 ppm for perchloroethylene, other evidence indicates the threshold is 45 ppm. Industry sources have also told OSHA that the odor threshold for acclimatized workers may be as high as 75 ppm. OSHA therefore must conservatively assume that the 25 ppm PEL for perchloroethylene is below the odor threshold for many workers.

Within this context and after consideration of your request, OSHA concludes that air-purifying respirators may be used for protection from perchloroethylene if appropriate procedures are followed. First, the respirator cartridge must be changed periodically to assure that its capacity has not been exhausted. Second, the filter must be changed immediately if there is evidence of filter breakthrough because the employee detects the odor of perchloroethylene while wearing the respirators. Third, respirator cartridges must be stored in a low humidity, perchloroethylene-free environment to remain effective. Fourth, the employer must abide by appropriate respirator protection factors. And fifth, the employer must follow the existing requirements of the respiratory protection program standard, 29 CFR 1910.134.

OSHA concludes that with these procedures, use of air-purifying respirators to safeguard workers from perchloroethylene is protective. Accordingly, the agency will, to the extent the use of respirators is permitted, accept the use of air-purifying respirators to achieve the new perchloroethylene standard when the above procedures are followed.

Secondly, IFI has requested that OSHA supply it with a schedule to govern the changing of filter cartridges. Since different cartridges have different capacities, the frequency with which a cartridge must
be changed varies by type of cartridge and exposure level. There are a number of formulas available in the published literature from which a trained industrial hygienist can compute these frequencies. See for example, Nelson & Correia, "Respirator Cartridge Efficiency Studies: VII. Summary and Conclusion," American Industrial Hygiene Assoc. Journal, September 1976, pp. 514-525.

OSHA will accept calculations properly done by a qualified person based on suitable publicly available data. Either IFI, individual employers, or the respirator cartridge manufacturers may have qualified persons do these calculations.

In response to IFI's further request that OSHA provide it with sample calculations, the following calculations are provided based on the Nelson formula, Equation 16, at p. 524 of the attached article, referenced above. Using this formula, based on assumptions of 90% humidity and rounding down to the nearest hour, the following cartridge-life estimates are obtained:

<table>
<thead>
<tr>
<th>MSA twin Organic Vapor cartridges - 52g carbon</th>
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</thead>
<tbody>
<tr>
<td>200 ppm 5 hours</td>
<td></td>
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<tr>
<td>100 ppm 8 hours</td>
<td></td>
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<tr>
<td>.50 ppm 13 hours</td>
<td></td>
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<tr>
<td>25 ppm 21 hours</td>
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</tbody>
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<table>
<thead>
<tr>
<th>AO R 51 twin Organic Vapor cartridges</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>200 ppm 7 hours</td>
<td></td>
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<tr>
<td>100 ppm 9 hours</td>
<td></td>
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<tr>
<td>50 ppm 19 hours</td>
<td></td>
</tr>
<tr>
<td>25 ppm 30 hours</td>
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</table>

Of course, other manufacturers also make appropriate respirator cartridges with different service lives. A qualified person can perform the calculations for other filters and other exposure levels. In so doing, however, it is important that the person use a formula that is suitably designed for this purpose and based on assumptions that are at least as protective as those in the Nelson formula relied on above.

It should be noted that a half-mask, air-purifying respirator may be used only up to a protection factor of 10. Consequently, the maximum exposure level it may be used for is 250 ppm. Above that level, only a full face-piece air-purifying respirator (with a much shorter filter life), an air-supplied respirator or a self-contained respirator will provide adequate protection.

Finally, OSHA cannot provide specific guidance on which work operations will require the use of such respirators to achieve the 25 ppm PEL. That will depend on the particular establishment, although, as a general matter, it is probably correct that the need in a well-run facility will be confined to such operations as the transfer of clothing, the replacement or handling of filters, and the cleaning or working on still facilities.

As you know, OSHA provides consultation services to small business at no charge either through the states or contractors. These services are available to advise individual dry cleaners on how to meet OSHA requirements. I also understand that IFI supplies consulting services to its members to identify situations where respirators are needed, measure exposure levels, and give guidance on lowering exposures.

I hope that this letter clarifies matters pertaining to the perchloroethylene standard and will be helpful to (Institute), its members and individual dry cleaners.
OSHA Instruction CPL 2-2.54

February 10, 1992
Office of Science and Technology Assessment

SUBJECT: Respiratory Protection Program Manual

A. PURPOSE. This instruction sets forth accepted practices for respirator users, provides information and guidance on the proper selection, use, and care of respirators, and contains requirements for establishing an OSHA respirator program.

B. SCOPE. This instruction applies to all OSHA employees who need to wear a respirator to perform her/his duties.

C. IMPLEMENTATION. Detailed instructions for implementing the above requirements are prescribed in the following chapters.

D. BACKGROUND.

1. Occupational Safety and Health Administration (OSHA) Compliance Safety and Health Officers (CSHO's) as well as other Agency personnel may be exposed to a variety of respiratory hazards while conducting safety and health compliance inspections, consultation or monitoring visits.

2. The human respiratory system can be protected by avoiding or minimizing exposure to harmful substances; however, in some cases this may not be possible and an appropriate respirator shall be required. Certain respirators can reduce/remove many contaminants from an atmosphere. When concentrations of these contaminants are too high to be reduced/removed or when oxygen levels are too low, other respirators are available which can supply breathing quality air to the wearer. Therefore, proper selection of the appropriate respirator for the conditions at hand is mandatory.

E. FEDERAL PROGRAM CHANGE. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this instruction is forwarded to each State designee using a format consistent with the Plan Change Two-Way Memorandum in Appendix P, OSHA Instruction STP 2.22A, CH-2.

2. Explain the technical content of this instruction to the State designee upon request.

3. Ensure that State designees acknowledge receipt of this Federal program change in writing to the Regional Administrator as soon as the State's intention is known, but not later than 70 calendar days after the date of issuance (10 days for mailing and 60 days for response). This acknowledgement should include an indication of the State's intention either to follow the respiratory program requirements in the following chapters of this instruction or to develop alternative "at least as effective" requirements. If the State adopts alternative requirements, ensure that it submits a plan supplement within six months, in accordance with OSHA Instruction STP 2.22A CH-3, as appropriate, following the established schedule that is agreed upon by the State and Regional Administrator to submit non-Field Operations Manual/Technical Manual Federal Program Changes.

4. Inform each State designee that this instruction provides specific methods and guidelines for implementation of a respiratory program for Safety and Health Compliance Officers and sets out the requirements for a minimum acceptable respiratory protection program for the Agency. To ensure that State Compliance Officers are provided the minimum protection prescribed in 29 CFR 1910.134, each state must either follow the respiratory program requirements prescribed in following chapters of this instruction or develop alternative requirements which are as effective.
5. Review policies, instructions and guidelines issued by the State to determine if this change has been communicated to State personnel.
OSHA Instruction STP 2-1.130

November 10, 1986
Office of State Programs

SUBJECT: Health and Safety Standards; Accident Prevention Tags, Final Rule

A. PURPOSE. This instruction describes a Federal Program change to the Regions and State designees.

B. SCOPE. This instruction applies OSHA-wide.

C. FEDERAL PROGRAM CHANGE. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this instruction is forwarded to each State designee.

2. Provide a copy of the Federal Register notice to the State designee upon request.

3. Explain the technical content of the Federal Register notice at 51 FR 33251, September 19, 1986, Health and Safety Standards; Accident Prevention Tags, to the State designee upon request.

4. Ensure that each State designee acknowledges receipt of this instruction in writing, within 30 days of notification, to the Regional Administrator. The acknowledgment should include (a) the State’s plan to adopt and implement the standard change, (b) the State’s plan to develop an alternate change, which is as effective, or (c) The reasons why no change is necessary to maintain a program which is as effective.

5. Inform each State designee that the State must amend the State’s standard to ensure that it remains at least as effective as the amended 29 CFR 1910.145(f) and submit a plan supplement within 6 months of the date of Federal publication.

D. DIFFERENT STATE STANDARDS. Section 18(c)(2) of the OSH Act requires that State standards be "at least as effective" as the Federal and, when applicable to products used or distributed in interstate commerce, be required by compelling local conditions and not unduly burden interstate commerce. In addition to the "at least as effective" criterion, this "product clause test" will be applied to State standards with substantially different requirements from the comparable Federal standards, as discussed in OSHA Instruction STP 2-1.117.

F. BACKGROUND.


2. The standards address the temporary marking of workplace hazards, to establish performance criteria for tag design and construction.

3. The amended standard allows employers to use pictographs, words or a combination of both in addition to the signal word or words currently used, provides that the signal word or words of all accident prevention tags be capable of being read at a distance of five feet (1.5m) and requires the employer to use, as a minimum, a two-tier hazard classification system with the signal words "Danger" or "Caution" on accident prevention tags. This amendment also regulates the design and the application of the biological hazard tag.

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4. The amended standard will provide the employer with more flexibility in the use of accident prevention tags as temporary hazard identification devices in the workplace, while maintaining the protection covered by the current requirements. Employers will be able to use a wide variety of "major messages" on their accident prevention tags to improve safety through greater employee awareness of hazards in the workplace.

5. Under 29 CFR 1953.23(a) and (b), States are provided up to 6 months from publication in the Federal Register for adoption of parallel State standards and amendments.
OSHA Instruction STP 2-1.170A

AUGUST 30, 1993
Office of State Programs

SUBJECT: Permit-Required Confined Spaces for General Industry; Final Rule

A. PURPOSE. This instruction describes a Federal Program Change to the Regions and State designees.

B. SCOPE. This instruction applies OSHA-wide.

C. REFERENCE. OSHA Instruction STP 2-1.117, August 31, 1984, State Standards.

D. CANCELLATION. OSHA Instruction STP 2-1.170, March 22, 1993, Permit-Required Confined Spaces for General Industry; Final Rule, is canceled.

E. FEDERAL PROGRAM CHANGE. This instruction describes a Federal Program Change which affects State programs. Each Regional Administrator shall:

1. Ensure that this amended instruction is forwarded to each State designee.

2. Provide a copy of the Federal Register notice to the State designee upon request.

3. Explain the technical content of the Federal Register notice at 58 FR 4462, January 14, 1993, Permit-Required Confined Spaces for General Industry; Final Rule, and the Federal Register notice at 58 FR 34844, June 29, 1993, Permit-Required Confined Spaces for General Industry; Corrections, to the State designees upon request.

4. Inform each State designee that under 29 CFR 153.23(a) and (b), the State must, within six months of the date of the Federal Register publications listed in item 3 above, amend its final rule or adopt the final rule to ensure that the State standard is at least as effective as the Final Rule for Permit-Required Confined Spaces for General Industry, 29 CFR 1910. The State must submit a plan supplement to the Regional Administrator within 30 days of State promulgation.

5. Ensure that each State designee acknowledges receipt of this instruction in writing, within 30 days of notification, to the Regional Administrator. The acknowledgment should include (a) the State's plan to adopt and implement the standard change, (b) the State's plan to develop an alternative change, which is as effective, or (c) the reasons why no change is necessary to maintain a program which is as effective as the Federal program.

6. Inform State designees with existing confined spaces standards that they can choose to submit their standards now in comparison document format, with their justification for why any different provisions are at least as effective, and let OSHA review the standard before they make any revisions. This will allow a State to avoid conducting two separate rulemaking processes in order to make any changes that may be needed.

F. DIFFERENT STATE STANDARDS. Section 18(c) of the Act requires that State standards be "at least as effective" as the Federal and, when applicable to products used or distributed in interstate commerce, the standards must be required by compelling local conditions and not unduly burden interstate commerce. In addition to the "at least as effective" criterion, this "product clause test" will be applied to State standards with substantively different requirements from the comparable Federal standard, as described in STP 2-1.117. A State standard expanded in scope from the Federal is considered to be a substantively different standard.
G. INTERIM ENFORCEMENT. Under 29 CFR 1953.23(a) and (b), State plan States are provided up to six months from publication of the Federal standard in the Federal Register to promulgate an identical or "at least as effective" standard. During the interim period prior to adoption, the State should make every effort to enforce the substantive provisions of the new or revised Federal standard through existing State standards, a general duty clause, or other enforcement mechanism. Federal enforcement assistance will be provided, as necessary, in States without final approval (18(e) determination), and technical assistance in 18(e) final approval States.

H. EFFECTIVE DATE. The final rule became effective on April 15, 1993, and the corrections became effective on June 29, 1993. The effective date for an identical or different State standard or amendment may be no later than the date of State promulgation or the Federal effective date, whichever is later.

I. EXPLANATION.

1. On January 14, 1993, OSHA issued a new standard regulating occupational exposure to Permit-required confined spaces in general industry, 29 CFR 1910.146. The basis for this action is a determination by the Assistant Secretary that the existing standards do not adequately protect workers in confined spaces from atmospheric, mechanical and other hazards. The Assistant Secretary has also determined that the ongoing need for monitoring, testing and communication at workplaces which contain entry permit confined spaces can be satisfied only through the implementation of a comprehensive confined space entry program.

2. The new standard establishes safety requirements, including a permit system, for entry into those confined spaces, designated as Permit-required confined spaces (permit spaces), which pose special dangers for entrants because their configurations are conducive to the creation of serious hazards, such as toxic, explosive or asphyxiating atmospheres. If an employer determines that the workplace contains a permit-required confined space, he or she must develop and implement a written permit space entry program and train employees, if employees will enter the permit space. If employees will not enter any permit spaces, the employer must institute measures to preclude inadvertent entry by employees.

3. On June 29, 1993, OSHA issued corrections to the Permit-Required Confined Spaces for General Industry; Final Rule. In addition to fixing typographical errors, the corrections make changes to clearly express OSHA's intent regarding certain provisions of the standard.

4. Under 29 CFR 1953.23 (a) and (b), State plan States are provided up to six months from the publication in the Federal Register of an OSHA Standard for adoption of parallel State standards and amendments. States should promulgate their equivalent of this Standard by July 14, 1993, and their equivalent of this amendment by December 29, 1993.
In the Lockout/Tagout standard, 1910.147, motor-controlled stop buttons or motor-controlled starter circuits were not intended to be included nor accepted as energy isolation devices. Thus, during the servicing and/or maintenance of equipment, such mechanisms will not be sufficient to provide the protection envisioned by the standard. However, for normal production operations, mechanisms that permit work to be performed using alternative measures that provide effective protection would be acceptable.

1. Question: It is recognized that a motor starter is a control circuit device. Did the writers of these standards intend that assured control of the motor starter in the "off" condition be accepted as an energy isolation device?

Answer: The intent of the standard was not to include motor starter circuits within the scope of the definition of energy isolation devices.

For further clarification, the definitions of certain terms that have application to the 1910.147 (Lockout/Tagout) standard can be found in the complementary electrical OSHA standard, Subpart S of 1910. Three appropriate definitions are as follows:

1910.399(a)(31) Controller. A device or group of devices that serves to govern, in some predetermined manner, the electric power delivered to the apparatus to which it is connected.

1910.399(a)(40) Disconnecting Means. A device, or group of devices, or other means by which the conductors of a circuit can be disconnected from their source of supply.

1910.399(a)(124) Isolating Switch. A switch intended for isolating an electric circuit from the source of power. It has no interrupting rating, and it is intended to be operated only after the circuit has been opened by some other means.

2. Question: It is our understanding that the electric motor, once it is stopped using the motor-controller "stop" button and is spun down to a full stop, cannot restart without being activated by the motor-controlled starter and its control circuit. It is further our belief that deactivation of the motor-starter device, using two independent keyed energy isolation devices properly wired and installed, can be effective in preventing the motor from starting and energization of its control circuit. Does the standard prohibit the use of this type of control circuit device as an energy isolation device for lockout purposes?

Answer: The intent of the standard was not to accept motor-controlled stop buttons or motor-controlled starter circuits as energy isolation devices. Thus during the servicing and/or maintenance of equipment, such mechanisms will not be sufficient to provide the protection envisioned by the standard. On the other hand, for normal production operations, such as during routine, repetitive package clearing operations on
conveyor belts, mechanisms that permit work to be performed by using alternative measures which provide effective protection would be acceptable. Further clarification on this issue is provided in OSHA Instruction STD 1-7.3, Appendix C, Paragraphs A.1. through 4. Also, please see the note under Paragraph 1910.147(a)(2)(ii)(B) of the Lockout/Tagout Standard.

It has been claimed in one of the OSHA Region (A) Area Office letters (to ARA-Technical Support thru Mr. C dated 12/10/90) that "...A diagram from the 1990 NEC Handbook, which tends to support the company's proposed application of control energy isolation, has been provided as Attachment B." We have not seen Attachment B. However, from our knowledge of the 1990 NEC Handbook, we are not familiar where this support is given. It might be that reference is being made to Article 430-111 of the NEC which states the conditions under which a switch or circuit breaker is permitted as both controller and disconnecting means. This requirement, taken from the 1990 NEC, is repeated here for convenience as follows:

430-111. Switch or Circuit Breaker as Both Controller and Disconnecting Means. A switch or circuit breaker complying with Section 430-83 shall be permitted to serve as both controller and disconnecting means if it opens all ungrounded conductors to the motor, if it is protected by an overcurrent device (which shall be permitted to be the branch-circuit fuses) that opens all ungrounded conductors to the switch or circuit breaker, and if it is of one of the types specified in (a), (b), (c) below:

(a) Air-Break Switch. An air-break switch, operable directly by applying the hand to a lever or handle.

(b) Inverse Time Circuit Breaker. An inverse time circuit breaker operable directly by applying the hand to a lever or handle.

(c) Oil Switch. An oil switch used on a circuit whose rating does not exceed 600 volts or 100 amperes, or by special permission on a circuit exceeding this capacity where under expert supervision.

The oil switch or circuit breaker specified above shall be permitted to be both power and manually operable.

The overcurrent device protecting the controller shall be permitted to be part of the controller assembly or shall be permitted to be separate.

An autotransformer-type controller shall be provided with a separate disconnecting means.

If this is the NEC Article referenced by the (City)Area Office as Attachment B, then it obviously can be seen that it is not applicable to the proposed UPS installation since neither the Air-Break Switch, the Inverse Time Circuit Breaker nor the Oil Switch, as specified in 430-111(a), (b) and (c), is used in the UPS design. It should be further noted that both the Air-Break Switch and the Circuit Breaker must be "operable directly by applying the hand to a lever or handle." And again the UPS method would not satisfy this requirement.

3. Question: It has been proposed, since the motor starter includes control circuit devices and is itself a control circuit device, that it would not be acceptable as an "Energy Isolation Device," per the 1910.147 standard. In the event of control circuit or motor starter failure it could cause the actual three-phase wires feeding power to the motor, coils, armature, and the motor starter circuit to become energized. Do you agree?

Answer: We agree.

The OSHA standard, 1910.147 (Lockout/Tagout), clearly stipulates that in order not to be covered by the standard while performing minor servicing activities during normal production operations, the work must be performed using alternative measures which provide effective protection (emphasis provided). To provide effective protection, the isolation from the source of power must be positive. A dependency on automatically controlled circuits to provide this isolation, even where all ungrounded conductors to the motor are opened, is not positive.
With the proposed UPS method of conveyor stoppage, one scenario may occur as follows:

An UPS package jams on the conveyor and other packages quickly begin to pile up. The attendant immediately actuates the stop button at one of the keyed lockout (field station) devices. The conveyor comes to a stop and the attendant climbs aboard the conveyor to free the jammed packages. Lacking the direct control of a manually operated switch or breaker to remove power by disconnecting all power conductors, motor stoppage becomes dependent on the proper functioning of the control circuits. In this case, we assume that the automatic control circuitry in the motor control center malfunctions such that only one phase of the three phase source to the motor is opened (not an uncommon occurrence especially where the overcurrent protection device opens the third phase (L3) without disturbing the motor starter circuit). Because of the additional load placed on the belt by the jammed packages, the motor, now only operating on two phases, has insufficient torque and stalls, and the belt stops. The attendant, believing that the conveyor has been safely stopped because the maintained stop button on the keyed lockout device was actuated, climbs upon the belt in order to free the jammed parcels. However, as the jam is removed, the resulting load on the conveyor motor is reduced and the belt starts again with sufficient startup torque from the two remaining phases which have not been disconnected. The attendant becomes unbalanced by the moving conveyor, slips and falls, and is injured.

Other scenarios can also be postulated as a result of the lack of effective (positive) energy isolation.

Wiring Considerations. In accordance with 29 CFR 1910, Subpart S, Electrical Standards, the UPS conveyor motor control installation must comply with the 1910.305(j)(4) requirements. The following table estimates UPS compliance based on the UPS submitted schematic diagram:

OSHA Standard UPS Compliance

1910.305(j)(4)(ii)(A) A disconnecting means shall be located in sight from the controller location (Refer to 1910.305(j)(4)(i) for definition of "In sight from.")

1910.305(j)(4)(ii)(C) If a motor and the driven machinery are not in sight from the controller location, the installation shall comply with one of the following conditions:

(1) The controller disconnecting means shall be capable of being locked in the open position.

(2) A manually operable switch that will not disconnect the motor from its source of supply shall be placed in sight from the motor location.

1910.305(j)(4)(ii)(D) This disconnecting means shall plainly indicate whether it is in the open (off) or closed (on) position.

1910.305(j)(4)(ii)(E) The disconnecting means shall be readily accessible. If more than one disconnect is provided for the same equipment, only one need be readily accessible.

(Attachments):

DATE: August 8, 1991

MEMORANDUM

SUBJECT: Interpretation of "Energy Isolation Device" Application Of 1910.147 To Conveyors

Enclosed is a recent interpretation from the National Office on the Lockout/Tagout Standard:

DATE: January 31, 1991

REGARDING INTERPRETATION OF "ENERGY ISOLATION DEVICES" IN ACCORDANCE WITH 1910.147

Vol. 1-568
In memos previously sent to the Regional Office on December 10, 1990 (copy attached, less original attachments), December 10, 1990 (copy attached), January 7, 1991, and January 24, 1991, the Cincinnati Area Office requested an official interpretation of the term "energy isolation devices" as applied under OSHA's lock out standard (1910.147). This request was in regard to a proposed abatement method submitted by United Parcel Service (UPS) for the de-energizing of conveyor belts to protect workers when they climb onto the conveyors to clear jams and/or locate missing parcels. Included in the information submitted was an electrical schematic of the locking device to be used.

In the memorandum from the regional Office which this office received on January 26, 1991 it appears that the response to our inquiry is that an energy isolating device is "designed to positively disconnect power..." and that the device in question is an acceptable device.

Despite your response, there are still unanswered questions in this matter. It appears from our discussion with the company and review of the information supplied that the locking switch involved is a switch on a control circuit which controls a motor starter. The lock out standard defines an energy isolation device as one which "physically prevents the transmission or release of energy." It also indicates that the term "does not include a push button, selector switch, and other control circuit type device."

We believe that the schematic submitted by UPS reflects that the keyed lockout switch is merely a selector switch which is a control circuit that stops the motor through a motor starter. In our view, this would not meet the "energy isolation device" definition based upon the switch being a control circuit device.

If this device would be considered an unacceptable control type circuit, then we would request some further clarification of the acceptability of devices. Specifically we would need additional information as to why this method does comply and what types of control circuit methods and devices would comply.

Our purpose in raising this issue was not simply based on a concern for this particular facility, but on the possible ramifications at UPS facilities throughout the United States. It is important to ensure that modifications instituted by UPS are consistent with agency policy and in accordance with the standard. Based upon the nationwide implications we recommend having this issue forwarded to the National Office for their review and response.

Finally, time is of the essence in this matter. As I have pointed out in my previous memos on this subject, the formal settlement of two contested cases with UPS rests in part on the agency's interpretation of "energy isolation devices." We would appreciate a thorough but expedient review of this information in order to conclude the case.

If any further information is needed regarding this matter, please contact our office.

Attachment:

December 14, 1990

MEMORANDUM

SUBJECT: United Parcel Service: Lock Out Proposal

As discussed between you and Mr. K, the correct interpretation of "Energy Isolation Devices" is: "A mechanism, tool, or other piece of equipment designed to positively disconnect the power capable of doing work. This mechanism will release energy only by the person who locked the energy, no one else."

The electrical schematic supplied to us with your second memorandum depicts this type of device; however it does not show that the lock out control is on the "off" position. As shown in the drawing now it is a close circuit "on position."

We have marked the schematic for your information.
This interpretation letter addresses the DOE-adopted Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1910.147(c)(6) concerning the number of inspections required for LOTO verification.

This interpretation is in response to a January 28, 1993, request from a DOE facility asking for clarification of the number of inspections required for Lockout/Tagout verification as required by 29 CFR 1910.147(c)(6). (Request No. 93-01-002)

The preamble to 29 CFR Part 1910.147 dated September 1, 1989, states "One method for meeting the performance requirements in this paragraph would be to use random audits and planned visual observations to determine the extent of employees compliance. Another would include modifying and adopting ordinary plant safety tours to suit this purpose."

OSHA's Instruction STD 1-7.3 dated September 11, 1990, states in section (I)(5)(a) "These inspections shall at least provide for a demonstration of the procedures and may be implemented through random audits and planned visual observations."

Furthermore, Appendix C of OSHA's Instruction CPL 2.85 dated January 8, 1990, states "The standard requires the employer to conduct a periodic inspection to ensure that the procedures and the requirements of the standard are being followed. This periodic inspection includes a review of each authorized employee's responsibilities under the energy control program. Some concern has been expressed that this requirement would be misconstrued to mean that the use of all procedures must be inspected at least annually and all authorized employees must review all procedures. The inspections and the reviews are intended to be a representative sample of compliance with the requirement of the standard and not a 100 percent inspection."

Thus, the requirements for periodic inspections of LOTO Energy Control Procedures as required by 29 CFR 1910.147(c)(6) would be fulfilled by a statistically valid random inspection of the LOTO procedures being performed during the year.
This interpretation letter addresses the applicability of the lock and tag requirements contained in the DOE-adopted Occupational Safety and Health Administration (OSHA) regulations 29 CFR 1926 and 29 CFR 1910, and their applicability to facilities where both construction and non-construction activities are occurring.

This interpretation is in response to a February 24, 1993, request from a DOE Site Office requesting clarification of the applicability of OSHA lock and tag requirements to mixed work activity sites. Specifically, the requestor wanted to know, "In a job involving construction and maintenance activities in an occupied building, what is the appropriate interface between the operations group and the construction activity? Which system for lockout/tagout for personnel protection should be used, 29 CFR 1910 or 29 CFR 1926?"

OSHA standard 29 CFR 1910.12 Part (a) states that the construction standard, 29 CFR 1926, applies to employers with employees "engaged in construction work." In addition, under 1910.147(a)(ii)(A), which deals with the control of hazardous energy, it is stated that the standard's requirements (i.e., 1910.147) do not cover either construction activities or electrical hazards. Electrical hazards are covered under either Subpart S of 29 CFR 1910 or Subpart K of 29 CFR 1926.

Additionally, 29 CFR 1910.147(f)(2)(i) states: "Whenever outside servicing personnel are to be engaged in activities..., the on-site employer and the outside employer shall inform each other of their respective lockout or tagout procedures."

Further, 29 CFR 1910.147(f)(2)(ii) states: "The on-site employer shall ensure that his/her personnel understand and comply with restrictions and prohibitions of the outside employer's energy control procedures."

The basic procedure for ensuring a satisfactory interface between the two standards is a formal understanding by the affected parties as to which activities are under the jurisdiction of on-site employees and which belong to the outside construction employees. In an ideal situation the construction zone would be under the complete and total control of the construction contractor, and on-site personnel would not be performing any activities or even allowed to enter this zone. Conversely, construction personnel would not be operating or working on site-controlled electrical equipment/systems outside of the designated construction zone. If a need arose for the deenergization of an electrical system/equipment that the construction personnel did not have direct control over, they would have to contact the appropriate on-site personnel for appropriate action.

Coordination and communication is the key to an affective interface between the operations and outside construction groups. Clear understanding of who controls what at the work site should be established before the construction activities commence. Rules and procedures should then be communicated to affected on-site employees, the construction personnel and their subcontractors. Also, on-site personnel need to be made aware that outside personnel are on their site, and that they need to check with the authorized cognizant construction personnel prior to activating electrical systems/equipment that construction personnel had deenergized.

As with any visitor, outside construction personnel must be informed of site-specific hazards, safety requirements and any special procedures, such as the site's lockout/tagout program. Another alternative would be to require, through contractual agreement, that construction personnel comply with the site's lockout/tagout program.
This interpretation letter addresses the lockout/tagout requirements contained in the DOE-adopted Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1910.147 and the requirement to have a written procedure for a program that has only one lockout device.

This interpretation is in response to a February 24, 1993, request from a DOE Site Office requesting clarification of the requirements dealing with lockout/tagout documentation. Specifically, the requestor wanted to know, "If only a single lock is required to deenergize a system, is a written lockout/tagout procedure required?"

OSHA standard 29 CFR 1910.147 deals with the control of hazardous energy through the use of a lockout/tagout (LOTO) program. Paragraph (c)(4)(i) of that standard, states that "[energy control] procedures shall be developed, documented and utilized for the control of potentially hazardous energy when employees are engaged in the activities covered by this section [see 1910.147 (a) for scope, application and purpose]."

Paragraph (c)(4)(i) further states that: "The employer need not document the required procedure for a particular machine or equipment, when all of the following elements exist: (1) The machine or equipment has no energy after shut down; (2) the machine or equipment has a single energy source; (3) the isolation and locking out...will completely deenergize and deactivate the machine or equipment; (4) the machine or equipment is isolated and locked out during servicing or maintenance; (5) a single lockout device will achieve a lockout condition; (6) the lockout device is under the exclusive control of the authorized employee; (7) the servicing or maintenance does not create hazards for other employees; and (8) the employer, in utilizing this exception, has had no accidents involving the unexpected activation or reenergization of the machine or equipment during servicing or maintenance."

OSHA standards 29 CFR 1910.301 through 1910.399 address electrical safety requirements that are necessary for safeguarding employees in the workplace. LOTO requirements designed to prevent electric shock are dealt with in 29 CFR 1910.333. Complying with the provisions of 29 CFR 1910.147 for lockout/tagout puts a facility in compliance with 1910.333 as long as two specific requirements contained in 1910.333 are met: 1) in the case of a tag-only procedure, it "...shall be supplemented by at least one additional safety measure that provides a level of safety equivalent to that obtained by a lock," and 2) for either a lock/tag or tag-only procedure, a "qualified person shall use test equipment to test the circuit elements and electrical parts...and shall verify that the circuit elements and equipment parts are deenergized."

Paragraph (b)(2)(i) of 29 CFR 1910.333 requires a written copy of the LO/TO procedures be maintained by the employer for employees.

Therefore, if the work falls under the scope of 1910.147 and all eight elements of paragraph (c)(4)(i) exist, a documented energy control procedure is not necessary. Otherwise, there must be a written LO/TO procedure for employees to follow.
This interpretation letter addresses the lockout/tagout requirements contained in the DOE adopted Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1910.147 with respect to tagout devices.

This interpretation is in response to a February 24, 1993, request from a DOE Site Office requesting clarification of the requirements dealing with lockout/tagout documentation. Specifically, the requestor wanted to know, "If tagout is used for personnel protection in situations where lockout is not feasible, what are the requirements for the tags?"

The requirements specified under OSHA standard part 29 CFR 1910 part (c)(3)(i) state: "When tagout devices are used on an energy isolating device which is not capable of being locked out, the tagout device shall be attached at the same location that the lockout device would have been attached, and the employer shall demonstrate that the tagout program will provide a level of safety equivalent to that obtained by using a lockout program."

Tagout devices are required under 29 CFR 1910.147 part (c)(5) to be, [Section] (ii), "...singly identified; the only device (s) used for controlling energy; not be used for other purposes," [Section] (A)(1)"...capable of withstanding the environment to which they are exposed," [Section] (A)(2)"...constructed and printed so that exposure will not cause the tag to deteriorate or the message to become illegible", [Section] (B) "...standardized within the facility in at least one of the following criteria: color; shape; or size in the case of tagout devices, print and format shall be standardized", and [Section] (C)(2)"...substantial enough to prevent inadvertent or accidental removal..."

OSHA Standards 29 CFR 1910.301 through 1910.399 address electrical safety requirements that are necessary for safeguarding employees in the workplace. Lockout/tagout requirements designed to prevent electric shock are dealt with in 29 CFR 1910.333. Complying with the provisions of 29 CFR 1910.147 puts a facility in compliance with 1910.333 as long as the tag only procedure, is "...supplemented by at least one additional safety measure that provides a level of safety equivalent to that obtained by a lock."

In conclusion, a tagout program under either 29 CFR 1910.147 and/or 29 CFR 1910.333 must provide a level of safety equivalent to that which would be obtained by the use of a lockout program. It is emphasized that a lock on the energy isolating device or electrical disconnecting means is the most reliable method of ensuring that deenergization of equipment or electrical circuits is maintained, and therefore is the preferred approach.
This interpretation letter addresses the applicability of the lock and tag requirements contained in the DOE-adopted Occupational Safety and Health Administration (OSHA) regulations 29 CFR 1926 and 29 CFR 1910, and the transition of a facility from construction to operational activities.

This interpretation is in response to a February 24, 1993, request from a DOE Site Office requesting clarification of the applicability of OSHA lock and tag requirements transitional site activities. Specifically the requestor wanted to know, "In a construction project, how does the turnover from construction contractors to the building's owners 'take place with respect to lockout/tagout?"  

OSHA standard 29 CFR 1910.12(a) it is stated that the construction standard, 29 CFR 1926, applies to employers with employees "engaged in construction work." OSHA standard 1910.147(a)(ii)(A), which deals with the control of hazardous energy, states that its requirements do not cover either construction activities or electrical hazards. Electrical hazards are covered by either Subpart S of 29 CFR or Subpart K of 29 CFR 1926.

Additionally, 29 CFR 1910.147(f)(2)(i) states: "Whenever outside servicing personnel are to be engaged in activities..., the on-site employer and the outside employer shall inform each other of their respective lockout or tagout procedures."

29 CFR 1910.147(f)(2)(ii) states: "The on-site employer shall ensure that his/her personnel understand and comply with restrictions and comply with restrictions and prohibitions of the outside employer's energy control procedures."

The turnover process should be a planned event preceding the time when construction personnel remove their locks and tags. Any remaining systems or equipment that still must be controlled would then be the responsibility of the facility operator. If there is to be overlap, or a lengthy turnover period, then a mutually agreed upon written protocol/interface would need to be established for handling this issue.

A clear understanding of exactly which activities are under the jurisdiction of the outside construction employees and which belong to on-site employees is crucial. Coordination and communication is the key to an appropriate interface between the operations and outside construction groups. At a minimum the outside construction personnel and the on-site employees must be aware of and comply with the restrictions of each others' respective lockout/tagout programs. From the beginning the optimum situation would be to have the outside construction contractor, through contractual agreements, follow and use the host site's lockout/tagout program.
This interpretation addresses the use of a human guard as part of a lockout/tagout program under 29 CFR 1910.147; and whether an electrical worker would be allowed to turn off the light switch to change the ballast or fluorescent light.

Site/facility lockout/tagout procedures can include provisions for using a human guard when lockout/tagout is not possible and the employer demonstrates that the tagout program will provide a level of safety equivalent to that obtained when a using a lockout program.

DOE concludes that the use of a light switch to disconnect power when changing a ballast would be permissible only if the use of other, more reliable means of disconnecting power would create a greater hazard. Turning off of the light switch would be permissible for replacement of fluorescent lights when the switch is under the exclusive control of the electrical worker.

This interpretation is in response to an October 21, 1993, request from a DOE facility asking the following questions:

Question 1:

Are there any interpretations that permit the use of a human guard to meet the employee protection requirement of 29 CFR 1910.147 (c)(3)?

Answer 1:

The requirement itself, 29 CFR 1910.147 (c)(3), deals with tagging in lieu of locks. Specifically, it states:

"Full employee protection. (i) When a tagout device is used on an energy isolating device which is capable of being locked out, the tagout device shall be attached at the same location that the lockout device would have been attached, and the employer shall demonstrate that the tagout program will provide a level of safety equivalent to that obtained by using a lockout program. (ii) In demonstrating that a level of safety is achieved in the tagout program which is equivalent to the level of safety obtained by using a lockout program, the employer shall demonstrate full compliance with all tagout-related provisions of this standard together with such additional elements as are necessary to provide the equivalent safety available from the use of a lockout device. Additional means to be considered as a part of the demonstration of full employee protection shall include the implementation of additional safety measures such as the removal of an isolating circuit element, blocking of a controlling switch, opening of an extra disconnecting device, or the removal of a valve handle to reduce the likelihood of inadvertent energization."

It is DOE's position that a human guard can be used in situations when lockout/tagout is not possible, as long as the above tagout requirements are satisfied and the "human guard" procedure is part of your written and approved lockout/tagout program.

Question 2:

Are there any interpretations that allow an electrical worker to turn off the light switch to change the ballast or fluorescent light?
Answer 2:

A light switch is not considered to be a "Disconnecting Means," which is defined in 29 CFR 1910.399 as a "device, or group of devices, or other means by which the conductors of a circuit can be disconnected from their source of supply." A light switch also is not an isolating switch, which is defined in 29 CFR 1910.399 as a "switch intended for isolating an electric circuit from the source of power. It has no interrupting rating, and it is intended to be operated only after the circuit has been opened by some other means." This does not physically prevent the transmission or release of energy and is not included as a means of disconnecting power (e.g., push buttons, selector switches, other control circuits type devices).

Using light switches to disconnect power to lights when changing a ballast presents a potential problem. This procedure breaches only one lead, and if the switch is wired incorrectly, may leave the ballast with a phase lead and ground. Thus, DOE concludes that the use of a light switch to disconnect power when changing a ballast would be permissible only if using other, more reliable means of disconnecting power would create a greater hazard (e.g., if shutting off all power in a building would cause a chemical process to go critical and explode). In such cases, when the light switch is used, the circuit must be treated as energized, and appropriate measures should be taken as described under 29 CFR 1910.333.

With regard to replacement of fluorescent lights, turning off of the light switch would be permissible when the worker is adjacent to and in view of the switch. In such situations, installation of a switch cover would not be necessary.
This interpretation concerns equipment having cord and plug connections and capacitors, and whether 29 CFR 1910.147 applies to this type of equipment. It also addresses whether built-in capacitor discharge devices meet the requirements of 29 CFR 1910.333 (b)(2)(ii)(C).

It is the Department of Energy's (DOE) position that, if the cord and plug are under the exclusive control of the employee authorized to do the work, then 29 CFR 1910.147 does not apply. However, in cases where there is a potential for electric shock or injury from direct or indirect electrical contact within the equipment, safety-related work practices described under 29 CFR 1910.333-1910.335 should be followed.

Further, built-in capacitor discharge devices must meet the requirements of 29 CFR 1910.333 (b)(2)(ii)(C). However, if there is a potential for hazard or injury due to stored energy release from equipment with capacitors, then 29 CFR 1910.147 would apply to such equipment.

This interpretation is in response to your letter of October 12, 1993, asking if the exemption under 29 CFR 1910.147 for cord and plug connected equipment applies to equipment with capacitors.

The requirement for controlling hazardous energy (lockout/tagout), 29 CFR 1910.147(a)(2)(iii)(A), states:

"This standard does not apply to the following: (A) Work on cord and plug connected electric equipment for which exposure to the hazards of unexpected energization or start up of the equipment is controlled by the unplugging of the equipment from the energy source and by the plug being under the exclusive control of the employee performing the servicing or maintenance."

Therefore, it is DOE's position that, if the cord and plug are under the exclusive control of the authorized employee doing the work, then 29 CFR 1910.147 normally does not apply.

However, the unplugging of equipment with capacitors that have the potential to store energy may not always provide adequate safety. If residual energy is not controlled, even though the equipment is unplugged, a hazard may still exist and therefore such equipment would still be subject to 29 CFR 1910.147. In addition, the equipment is to have a device that bleeds off the hazardous energy per 29 CFR 1910.305(j)(6). In cases where there is a potential for electric shock or injury from direct or indirect electrical contact within the equipment, safety-related work practices described under 29 CFR 1910.333-1910.335 should be followed.

Further, built-in capacitor discharge devices must meet the requirements of 29 CFR 1910.333(b)(2)(ii)(C). However, if there is a potential for hazard or injury due to stored energy release from equipment with capacitors, then 29 CFR 1910.147 would apply to such equipment.
ABSTRACT
This interpretation addresses six questions concerning assignment of responsibility for lockout/tagout control, based on the Occupational Safety and Health Administration (OSHA) standard 29 CFR 1910.147 (f)(3)(ii)(C).

INTERPRETATION

This interpretation is in response to your letter dated October 28, 1993, concerning the following questions about group lockout/tagout when more than one crew, craft, department, or work group is involved.

Question 1:
In a group lockout or tagout, does the responsibility of the authorized employee designated to coordinate affected work forces and ensure continuity of protection conflict with the definition of authorized employee provided in 29 CFR 1910.147 (b)?

Answer 1:
The definition for authorized employee in 29 CFR 1910.147 (b) does not conflict with the use of an authorized employee for group lockout/tagout under 29 CFR 1910.147 (f)(3). The difference is that group lockout/tagout uses a "primary" authorized employee and a "principal" authorized employee. The primary authorized employee would have primary responsibility for implementation and coordination of the lockout/tagout of hazardous energy sources for the equipment to be serviced. This person would also coordinate the lockout/tagout procedure with the equipment operators before and after the servicing/maintenance operation. Conversely, the principal authorized employee is responsible to the "primary" authorized employee for maintaining accountability of each worker within his or her group.

One must remember that the authorized employee under 29 CFR 1910.147 (b) still has the prerogative to independently verify that the hazardous energy has been isolated. In summary, the two uses of the term "authorized employee" do not conflict with each other.

Question 2:
Must the coordinator be one of the authorized employees who has been assigned primary responsibility for a set number of employees working under the protection of a group lockout/tagout?

Answer 2:
The coordinator (primary authorized employee) has the overall responsibility for ensuring that everyone adheres to the lockout/tagout procedure. The primary authorized employee can be operations personnel. Conversely, the principal authorized employee is the leader for the group performing the work.

Therefore, the primary authorized employee does not have to be the same person as the principal authorized employee.

Question 3:
Does the coordinator physically and personally lock out and/or tag out the equipment or machinery?
**Answer 3:**

The primary authorized employee is the person with the overall responsibility for group lockout/tagout. This employee is usually an operations person who normally prepares the equipment for lockout/tagout. Although this person coordinates the effort, he or she is by no means expected to be an expert in all areas of lockout/tagout. However, he or she must rely on the expertise of appropriate personnel to perform correct placement of lockout devices. The primary authorized employee must ensure that all hazardous energy is isolated before servicing or maintenance of the equipment.

**Question 4:**

Must the coordinator remain in the vicinity of the lockout or tagout device?

**Answer 4:**

The primary authorized employee is responsible for coordinating the lockout/tagout procedure. Some systems may require several locks and tags; therefore, this person could not physically be in more than one area at a time. However, the primary authorized employee is responsible for ensuring that the system being serviced and/or maintained has all hazardous energy locked out and is safe to conduct work.

**Question 5:**

Must the coordinating authorized employee personally remove his/her lock or tag at the completion of the task, or can another person be delegated?

**Answer 5:**

No person may sign on or sign off for another person. Furthermore, no person can attach or remove another person's lockout/tagout device, unless the exception provisions under 29 CFR 1910.147 (e)(3) are met.

**Question 6:**

On a multi-employer task, which employer determines who the coordinating authorized employee is?

**Answer 6:**

The primary employer responsible for the task usually coordinates this effort. However, it is the responsibility of all employers to ensure that all affected employees are aware of any other lockout/tagout systems in use.
ABSTRACT
An interpretation letter confirming to whom the lockout standards at 29 CFR 1910.147 are applicable. Employers, not those who design electrical products, are required by OSHA standards to use energy control devices which are designed to be lockable. Several exceptions, however do apply.

INTERPRETATION
29 CFR 1910.147 (a)(3)(i), (c)(1), (c)(2)(i), (c)(2)(ii), (c)(2)(iii)
June 24, 1992

Dear Mr. S:

Thank you for your letter of January 6, addressed to Mr. R. S. of my staff. In this letter, you enclosed an August 14, 1991 letter addressed to Mr. R. A. C., Director of Safety Standards Programs of the Occupational Safety and Health Administration (OSHA). In these letters, you requested written confirmation as to whom the lockout standards at 29 CFR 1910.147 are applicable. We apologize for the delay in responding.

Employers, not those who design electrical products, are required by OSHA standards to use energy control devices which are designed to be lockable, with the following exception: if an energy isolating device is not capable of being locked out, OSHA will allow employers to use a tagout program. When the employer has workplace machines or equipment which have energy control devices which have been designed to be lockable, the OSHA standards require the employer to use lockout unless the employer’s tagout program can be shown to provide “full employee protection”, that is, protection equivalent to lockout in the workplace.

The standard provides at 29 CFR 1910.147(c)(iii) that original and replacement machines or equipment installed in the workplace after January 2, 1990 shall be designed with lockout-capable energy isolating devices. Also, whenever major repair, renovation or modification of a workplace, machine or equipment is performed after January 2, 1990, the employer must install energy isolating devices for such machines or equipment, designed to accept a lockout device. As a matter of policy, OSHA currently enforces this provision of the standard by means of citing the employer.

We will provide copies of your letters and this response to all of our OSHA Field Offices. Also, we will add this correspondence to our interpretations data base for future access.

Thank you for your interest in occupational safety and health. If we may be of further assistance please let us know.

Vol. 1-570.11
OSHA Instruction CPL 2.2

OCT 30, 1978
OSHA PROGRAM DIRECTIVE #200-9

TO: Regional Administrators, National Office Directors, Area Office Directors and District Supervisors.

SUBJECT: American Red Cross Agreement

1. Purpose:

   To provide guidelines for National and Field Offices' personnel and staff regarding the American Red Cross Agreement.

2. Documentation Affected:

   This directive supplements the instructions in Chapter XIII and XVIII of the Compliance Operations Manual.

3. Agreement:

   A statement of understanding has been reached between the Secretary of Labor and the president of the American Red Cross regarding first-aid training requirements and courses. The agreement provides an immediate source of knowledgeable and qualified personnel and training capabilities in first aid through the American Red Cross.

   a. The Red Cross agrees to expand first-aid training resources and will adapt courses to meet the needs of different work environments.
   b. Red Cross Chapters, Divisions and Areas will assist in distributing information relating to first-aid training services available to employers and employees.
   c. Additionally, the Red Cross will designate liaison personnel to work with the National Office and Regional Administrators; and will provide the Occupational Safety and Health Administration (OSHA) with pertinent information on its training courses and related review material.

4. Action:

   a. Policy

      Persons who have a current training certificate in the American Red Cross Basic, Standard or Advanced First Aid Course shall be considered as adequately trained to render first aid in fulfilling the requirements of the Occupational Safety and Health Standards, Subpart K., Medical and First Aid (29 CFR 1910.151(b)). The American Red Cross Standard Course is the recommended MINIMUM level of first-aid training.

   b. National Offices and Regional Administrators shall:

      (1) Establish appropriate liaison with national, area, division, and chapter offices of the American Red Cross; and

      (2) Assure current and future State programs include appropriate recognition and implementation of this policy.

   c. First-aid courses by other organizations are recognized by OSHA if found satisfactory. Regional Administrators shall evaluate such courses.

5. Effective Date:

   This instruction is effective immediately and will be incorporated into the next scheduled revision of the Compliance Operations Manual.
OSHA Instruction CPL 2-2.53

JAN 7, 1991

SUBJECT: Guidelines for First Aid Training Programs

A. Purpose. Eight OSHA standards have first aid requirements. These guidelines provide institutions teaching first aid courses, and consumers of these courses, what OSHA considers basic and essential elements of a first aid program. These guidelines can also assist compliance officers evaluating individual plant first aid programs during the inspection process.

B. Scope. This instruction shall apply OSHA-wide.

C. Action. OSHA National Office Directors, Regional Administrators, and area Directors shall provide these guidelines to individuals inquiring about first aid programs. It must be clear OSHA does not teach or certify first aid training programs, instructors, or trainees.

D. Federal Program Change. This instruction describes a Federal program change which affects State Programs. Each Regional Administrator shall:

1. Ensure that a copy of this change is promptly forwarded to each State designee using a format consistent with the Plan Change Two-way Memorandum in Appendix P, OSHA Instruction STP 2.22A, Ch-2.

2. Explain the content of the change to the State designees as requested.

3. Advise the State designees that they may participate in the program as indicated in paragraphs A and C of the Instruction, but a plan supplement is not required.

4. Ensure that State designees are asked to acknowledge receipt of this Federal program change as soon as the State's intention is known, but no later than 70 calendar days after the date of issuance (10 days for mailing and 60 days for response).
GUIDELINES FOR BASIC FIRST AID TRAINING PROGRAMS

APPENDIX A

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OSHA Instruction CPL 2-2.53 (cont.)

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B. Site of Injury Training

   1) Head and Neck
   2) Eye
   3) Nose
   4) Mouth and Teeth
   5) Chest
   6) Abdomen
   7) Hand, Finger, & Foot

GUIDELINES FOR BASIC FIRST AID TRAINING PROGRAMS

I. OVERVIEW

OSHA does not teach first aid courses, or certify first aid training courses for instructors or trainees. The goals of these guidelines are to provide institutions teaching first aid courses, consumers of these courses, and OSHA personnel who review courses, the essential elements of what OSHA considers a basic first aid program.

II. INTRODUCTION

In the United States, injuries (all types) may represent the single most important public health problem. Moreover, estimates of work related injury fatalities may exceed 10,000 workers per year, while work related disabling injuries number approximately 1.8 million. Approximately 35 million lost work days occur each year due to nonfatal injuries. The direct and indirect costs of occupational injuries is estimated to be 47 billion dollars per year.

The outcome of occupational injuries depends not only on the severity of the injury, but also the rendering of first aid care. Prompt, properly administered first aid care can mean the difference between life and death, rapid vs prolonged recovery, temporary vs permanent disability.

Given the potential positive impact first aid care can provide, several OSHA standards have included first aid provisions (General Industry (CFR 1910.151), Construction (CFR 1926.50), Shipyard (CFR 1915.98), Longshoring (CFR 1918.96), Diving (CFR 1910.410), Hazardous Waste and Emergency Response (CFR 1910.120), Temporary Labor Camps (CFR 1910.142), and First Aid and Lifesaving Facilities (CFR 1917.26). Although these standards require first aid training, they do not specify what constitutes "adequate training."

In the United States first aid training is primarily received through the American Red Cross, the National Safety Council, and private institutions. The American Red Cross offers standard and advanced first aid courses throughout the United States via their local chapters. After completion of the course and successful passing of the written and practical tests, trainees receive two certificates; one in adult cardiopulmonary resuscitation (CPR) and the other in first aid. The National Safety Council provides educational materials to train individuals in basic first aid knowledge and skills. However, they do not conduct training courses or certify trainers or trainees. Private institutions also teach courses in basic first aid, but they do not certify their trainees.
III. GENERAL PROGRAM ELEMENTS

A. Teaching Methods

1. Trainees should develop "hands on" skills through the use of manikins and trainee partners during their training.

2. Trainees should be exposed to acute injury and illness settings as well as the appropriate response to those settings through the use of visual aids, such as video tape and slides.

3. Training should include a course workbook which discusses first aid principles and responses to settings that require interventions.

4. Training duration should allow enough time for particular emphasis on situations likely encountered in particular workplaces.

5. An emphasis on quick response to first aid situations should be incorporated throughout the program.

B. Principles of responding to a health emergency

The training program should include instruction in:

1. Injury and acute illness as a health problem.

2. Interactions with the local emergency medical services system. Trainees have the responsibility for maintaining a current list of emergency telephone numbers (police, fire, ambulance, poison control) easily accessible to all employees.

3. The principles of triage.

4. The legal aspects of providing first aid services.

C. Methods of surveying the scene and the victim(s)

The training program should include instruction in:

1. The assessment of scenes that require first aid services including:
   a. general scene safety.
   b. likely event sequence.
   c. rapid estimate of the number of persons injured.
   o identification of others able to help at the scene.

2. Performing a primary survey of each victim including airway, breathing, and circulation assessments as well as the presence of any bleeding.

3. The techniques and principles of taking a victim's history at the scene of an emergency.

4. Performing a secondary survey of the victim including assessments of vital signs, skin appearance, head and neck, eye, chest, abdomen, back, extremities, and medical alert symbols.
OSHA Instruction CPL 2-2.53 (cont.)

D. Basic Adult Cardiopulmonary Resuscitation (CPR)

1. Basic Adult CPR training should be included in the program. Retesting should occur every year. The training program should include instruction in:
   a. establishing and maintaining adult airway patency.
   b. performing adult breathing resuscitation.
   c. performing adult circulatory resuscitation.
   d. performing choking assessments and appropriate first aid interventions.
   e. resuscitating the drowning victim.

E. Basic First Aid Intervention

Trainees should receive instruction in the principles and performance of:

1. Bandaging of the head, chest, shoulder, arm, leg, wrist, elbow, foot, ankle, fingers, toes, and knee.
2. Splinting of the arm, elbow, clavicle, fingers hand, forearm, ribs, hip, femur, lower leg, ankle, knee, foot, and toes.
3. Moving and rescuing victims including one and two person lifts, ankle and shoulder pulls, and the blanket pull.

F. Universal Precautions

1. Trainees should be provided with adequate instruction on the need for and use of universal precautions. This should include:
   a. the meaning of universal precautions, which body fluids are considered potentially infectious, and which are regarded as hazardous.
   b. the value of universal precautions for infectious diseases such as AIDS and hepatitis B.
   c. a copy of the OSHA proposed Standard for occupational exposure to blood borne pathogens or information on how to obtain a copy.
   d. the necessity for keeping gloves and other protective equipment readily available and the appropriate use of them.
   e. the appropriate tagging and disposal of any sharp item or instrument requiring special disposal measures such as blood soaked material.
   f. the appropriate management of blood spills.

G. First Aid Supplies

The first aid provider should be responsible for the type, amount, and maintenance of first aid supplies needed for their particular plant. These supplies need to be stored in a convenient area available for emergency access.
H. Trainee Assessments

Assessment of successful completion of the first aid training program should include instructor observation of acquired skills and written performance assessments. First aid skills and knowledge should be reviewed every three years.

I. Program Update

The training program should be periodically reviewed with current first aid techniques and knowledge. Outdated material should be replaced or removed.

IV. Specific Program Elements

A. Type of Injury Training

1. Shock
   - Instruction in the principles and first aid intervention in:
     a. shock due to injury
     b. shock due to allergic reactions
     c. the appropriate assessment and first aid treatment of a victim who has fainted

2. Bleeding
   a. the types of bleeding including arterial, venous, capillary, external, and internal
   b. the principles and performance of bleeding control interventions including direct pressure, pressure points, elevation, and pressure bandaging.
   c. the assessment and approach to wounds including abrasions, incisions, lacerations, punctures, avulsions, amputations, and crush injuries.
   d. the principles of wound care including infection precautions, wounds requiring medical attention, and the need for tetanus prophylaxis.

3. Poisoning
   - Instruction in the principles and first aid intervention of:
     a. alkali, acid and systemic poisons. In addition, all trainees should know how and when to contact the local Poison Control Center
     b. inhaled poisons including carbon monoxide, carbon dioxide, smoke, and chemical fumes, vapors and gases as well as the importance of assessing the toxic potential of the environment to the rescuer and the need for respirators. Trainees should be instructed in the acute effect of chemicals utilized in their plants, the location of chemical inventories, material safety data sheets (MSDS's), chemical emergency information, and antidote supplies.
     c. topical poisons including poison ivy, poison sumac, poison oak, and insecticides
     d. drugs of abuse including alcohol, narcotics such as heroin and cocaine, tranquilizers, and amphetamines.
OSHA Instruction CPL 2-2.53 (cont.)

4. Burns

Instruction in the principles and first aid intervention of:

a. assessing the severity of the burn including first degree, second degree, and third degree burns.

b. differentiate between the types of third degree burns (thermal, electrical, and chemical) and their specific interventions. Particular attention should be focused upon chemical burns, and the use of specific chemicals in the workplace which may cause them.

5. Temperature Extremes

Instruction in the principles and first aid intervention of:

a. exposure to cold including frost bite and hypothermia.

b. exposure to heat including heat cramps, heat exhaustion, and heat stroke.

6. Musculoskeletal Injuries

The training program should include instruction in the principles and first aid intervention in:

a. open fractures, closed fractures, and splinting.

b. dislocations, especially the methods of joint dislocations of the upper extremity. The importance of differentiating dislocations from fractures.

c. joint sprains.

d. muscle strains, contusions, and cramps.

e. head, neck, back, and spinal injuries.

7. Bites and Stings

Instruction in the principles and first aid intervention in:

a. human and animal (especially dog and snake) bites.

b. bites and stings from insects (spiders, ticks, scorpions, hornets and wasps) Interventions should include responses to anaphylactic shock; other allergic manifestations; rabies and tetanus prophylaxis.

8. Medical Emergencies

Instruction in the principles and first aid intervention of:

a. heart attacks

b. strokes

c. asthma attacks

d. Diabetic emergencies including diabetic coma, insulin shock, hyperglycemia, and hypoglycemia.
e. Seizures including tonic-clonic and absence seizures. Importance of not putting gags in mouth.

f. Pregnancy including the appropriate care of any abdominal injury or vaginal bleeding.

9. Confined spaces

a. The danger of entering a confined space to administer first aid without having the appropriate respiratory protection. If first aid personnel will be required to assist evacuations from confined spaces additional training will be needed.

B. Site of Injury Training

Instruction in the principles and first aid intervention of injuries to the following sites:

1. Head and Neck
   a. Including skull fractures, concussions, and mental status assessments with particular attention to temporary loss of consciousness and the need for referral to a physician.
   b. Including the appropriate approach to the management of the individual who has suffered a potential neck injury or fracture.

2. Eye
   a. Foreign bodies, corneal abrasions and lacerations.
   b. Chemical burns and the importance of flushing out the eye.
   c. The importance of not applying antibiotics without physician supervision.

3. Nose
   a. Nose injuries and nose bleeds.

4. Mouth and Teeth
   a. Oral injuries, lip and tongue injuries, and broken and removed teeth. The importance of preventing inhalation of blood and teeth.

5. Chest
   a. Rib fractures, flail chest, and penetrating wounds.

6. Abdomen
   a. Blunt injuries, penetrating injuries, and protruding organs.

7. Hand, Finger, and Foot Injuries
   a. Finger/toe nail hematoma, lacerations, splinters, finger avulsion, ring removal, and foreign bodies.
   b. The importance of identifying amputation care hospitals in the area. When an amputation occurs, appropriate handling of amputated fingers, hands, and feet during the immediate transportation of the victim and body part to the hospital.

Vol. 1-579
OSHA Instruction STD 1-8.2

March 8, 1982

Subject: 29 CFR 1910.151(c), Medical Services and First Aid; 29 CFR 1926.50 and 51, Medical Services and First Aid, and Sanitation, Respectively; Applicable to Electric Storage Battery Charging and Maintenance Areas

A. Purpose. This instruction provides guidelines regarding eye wash and body flushing facilities required for immediate emergency use in electric storage battery charging and maintenance areas.

B. Scope. This instruction applies OSHA-wide.

C. Action. OSHA Regional Administrators/Area Directors shall ensure that OSHA field staff apply the requirements the subject standards to electric storage battery charging areas as set forth in E. of this instruction.

D. Federal Program Change. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this change is forwarded to each State designee.

2. Explain the technical content of the change to the State designee as requested.

3. Ensure that State designees are asked to acknowledge receipt of the Federal Program change in writing, within 30 days of notification, to the Regional Administrator. This acknowledgment should include a description either of the State's plan to implement the change or of the reasons why the change should not apply to that State.

4. Review policies, instructions and guidelines issued by the State to determine that this change has been communicated to State program personnel. Routine monitoring activities (accompanied inspections and case file reviews) shall also be used to determine if this change has been implemented in actual performance.

E. Guidelines. OSHA field staff will evaluate the potential circumstances for employee exposure to electrolyte(s) in electric storage battery handling, charging and maintenance areas.

1. The safety or health compliance officer shall document the following observations in the case file:

a. Employee use of personal protective equipment.

b. Type and chemical concentration of electrolyte(s).

c. Special guards and/or precautions intended to provide for employee protection from electrolyte exposure.

d. Based upon employee job functions, record the extent and type of probable employee exposure to electrolyte(s).

e. Note the availability and location of eye wash and body flushing equipment/facilities (An arrangement, which includes a hose equipped with a proper face and body wash nozzle, shall also be noted.)

2. The compliance officer and Area Director shall evaluate the data documented in E.1. Where potential employee exposure to hazardous storage battery electrolyte(s) exists, the circumstances and extent of exposure shall determine the application of the following alternatives:
OSHA Instruction STD 1-8.2 (cont.)

a. The use of effective personal protective equipment in combination with an eye wash and body flushing station in near proximity to the work area(s), shall be deemed to provide adequate minimum protection for employees.

b. In areas where the extent of possible exposure to electrolyte is small, (i.e., such as auto garages, service stations and in certain industrial and construction situations), a specially designated pressure controlled and identified water hose equipped with a proper face and body wash nozzle which will provide copious amounts of low velocity potable water, or an appropriate portable eye wash device containing not less than one gallon of potable water which is readily available and mounted for use, is considered to provide minimum employee protection when proper personal protective equipment is used.

c. In addition to emergency eye and/or face wash procedures, the employer shall ensure that adequate provisions have been established for the emergency care of employees exposed to eye or face contact with electrolytes.

d. At construction sites and in commercial and manufacturing facilities at locations where powered industrial trucks are parked for overnight storage and routine battery recharging only, no need for emergency facilities exists unless potential exposure to electrolyte is substantiated. Where exposure is possible (i.e., servicing batteries) the provisions of E.2.b and E.2.e. should be evaluated for applicability.

e. At construction sites and in commercial manufacturing facilities where batteries (such as industrial truck batteries) are serviced and handled, proper plumbed eye wash and body drenching equipment shall be available immediately adjacent to the work station(s) and within the work area regardless of the personal protective equipment required and used.

3. Where employee exposure to hazardous electric storage battery electrolyte(s) exists and minimum protection measures are not provided, citations shall be issued as appropriate for violations of:

a. 29 CFR 1910.151(b) or 29 CFR 1926.50(c), a person or persons adequately trained to render first aid shall be readily available in the absence of an infirmary, clinic, or hospital in near proximity to the workplace which is used for the treatment of all injured employees.

b. 29 CFR 1910.151(c) and as adopted by 29 CFR 1926.51, where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.

c. 29 CFR 1910.132(a) or 29 CFR 1926.28(a), personal protective equipment for eyes, face, head, and extremities, protective clothing and protective shields and barriers, shall be provided, used and maintained in a sanitary and reliable condition wherever it is necessary by reason of chemical hazards encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

F. Background. 29 CFR 1910.151 (c) . Medical Services and First Aid, needs clarification regarding its applicability to the hazards of electric storage battery charging areas and the potential exposure of employees to electrolyte(s). There is a clear need to identify the extent and suitability of minimum acceptable eye wash and body quick drenching facilities which are available to potentially exposed employees.

1. The extent of potential employee exposure varies with workplace situations such as:

a. Employee functions.

b. Type of electrolyte(s) and concentration.
c. Type and size of batteries.
d. Facility layout.
e. Personal protective equipment used.

2. The need for eye wash and body quick drenching equipment varies with the factors noted in F.1. Therefore, judicious enforcement of the standard should provide for an evaluation of the contributing factors relative to the potential hazardous exposure, and should permit appropriate minimum assurances for adequate first aid and subsequent treatment.

3. Various forms of eye wash equipment are available today. Many are of the portable or self contained wall mounted type which are limited in the quantity of water available for eye wash purposes, and usually do not provide for body drenching. This equipment may be used for compliance with 29 CFR 1910.151(c) only when it is not economically feasible to provide plumbed equipment and/or where the potential employee exposure to electrolyte(s) is determined to be slight.

4. Eye wash equipment should provide copious low velocity flow of portable water at a suitable temperature, generally between 60 degrees F and 105 degrees F.

Vol. 1-582
Guidelines For First Aid Training Programs

ABSTRACT
This interpretation applies to certification of first aid courses. First aid training will be evaluated by compliance officers in the context of specific workplace inspections. The Agency has ceased the evaluation of the first aid courses in its National Office. Workplace hazards should be evaluated by a competent professional and the first aid training provided to employees must be tailored to the specific needs of workplace conditions. A draft copy of the guidelines by which the adequacy of the first aid training will be evaluated is attached.

INTERPRETATION 29 CFR 1910.151(b)

MAR 14, 1990

This responds to your letter of February 12, regarding the request for certification of a first aid course.

Enclosed is a draft copy of the guidelines by which the adequacy of the first aid training will be evaluated by our compliance officers in the context of specific workplace inspections. The Agency has ceased the evaluation of the first aid courses in its National Office. Workplace hazards should be evaluated by a competent professional and the first aid training provided to employees must be tailored to the specific needs of the workplace conditions.

Thank you for your interest in occupational safety and health. If we may be of further assistance, please contact us.

Guidelines For First Aid Training Programs

I. BACKGROUND

OSHA has received numerous requests regarding the training of employees in first aid. These questions have focused on the minimum requirements of a first aid training program.

There are several OSHA Standards that refer to those individuals trained in first aid. General Industry Standard 1910.151(b) and Construction Standard 1926.50(c) refer to an individual "trained" in first aid procedures. Both Shipyard Standard 1915.98(a) and Longshoring Standard 1918.96(a) refer to a "qualified attendant." The Diving Standard 1919.410(a)(3) refers to the "American Red Cross Standard Course or equivalent" as fulfilling the required first aid training of dive team members.

The aforementioned standards fail to provide specific guidelines for the adequate evaluation of first aid training programs. The aim of this guideline is to provide the suggested elements in a first aid training program and the means to evaluate the adequacy of first aid training programs.

II. INTRODUCTION

Injuries may represent the single most important public health problem in the United States. Its cost, both personally and monetarily, is staggering. Estimates of injury fatalities exceed 140,000 people in the USA each year, while 1 in 3 people suffer from nonfatal injuries. The direct and indirect costs range from some 75-100 billion dollars per year. These statistics are emphasized here to appreciate the potential impact that trained first aid personnel may have on these outcomes.

Training of individuals in first aid in the United States is carried out through a variety of mechanisms. The American Red Cross, through its many local chapters, offers standard and Advanced First Aid courses. The National Safety Council, through Jones and Bartlett Publishers, provides educational materials to train individuals in basic first aid knowledge and skills. Private training programs also exist to train people in first aid. It is hoped that this guideline will help establish the essentials of training programs that should be considered in fulfilling OSHA First Aid requirements.
III. GENERAL COMPONENTS OF A FIRST AID TRAINING PROGRAM

A. Trainees should develop "hands on" skills through the use of manikins and trainee partners during their training.

B. Trainees should be exposed to acute injury and acute illness settings as well as the appropriate response to those settings through the use of visual aids, such as video tape and slides.

C. Training should include a course workbook which discusses first aid principles and first aid responses to settings that require first aid interventions.

D. Assessment of successful completion of the first aid training program should include instructor observed demonstration of acquired skills and written performance assessments.

E. Training duration should allow enough time for particular emphasis on first aid situations likely encountered in particular workplaces.

F. An emphasis on the response to first aid situations should be incorporated throughout the "book knowledge” acquisition process.

G. Basic Adult cardiopulmonary Resuscitation training should be included in the first aid training program.

H. Periodic review and demonstration of first aid skills and knowledge should be done at least as frequently as every three years.

I. Trainees should be provided with adequate instruction on the need for and use of Universal Precautions. This should include:
   1) the use of universal precautions for infectious diseases such as AIDS and hepatitis B.
   2) a copy of the OSHA standard for blood borne pathogens or information on how to obtain a copy.
   3) the meaning of universal precautions, which body fluid are considered potentially infectious, and which are regarded as hazardous.
   4) the necessity of keeping gloves readily available and the appropriate use of gloves and other protective equipment.
   5) the appropriate disposal of any sharp items or instruments or other items requiring special disposal measures such as blood stained material.
   6) the appropriate management of blood spills.

J. Trainees should receive instruction in the principles and performance of:
   1) bandaging of the head, chest, shoulder, arm, leg, wrist, elbow, foot, ankle, fingers, toes, and knee.
   2) splinting of the arm, elbow, clavicle, fingers, hand, forearm, ribs, hip, femur, lower leg, ankle, knee, foot, and toes.
   3) moving and rescuing victims including one and two person lifts, ankle and shoulder pulls, and the blanket pull.
IV. SPECIFIC COMPONENTS

A. Principles of responding to a health emergency

The training program should include instruction in:

1) injury and acute illness as a health problem.
2) interactions with the local emergency medical services system.
3) the principles of triage.
4) the legal aspects of providing first aid services.

B. Survey of the scene and the victim

The training program should include instruction in:

1) the assessment of scenes that require first aid services including general scene safety, likely event sequence, numbers of injured persons, and identification of others able to help at the scene.
2) performing a primary survey of the victim including airway, breathing, and circulation assessments as well as the presence of any bleeding.
3) the techniques and principles of taking a victim history at the scene of an emergency.
4) performing a secondary survey of the victim including assessments of vital signs, skin appearance, head and neck, eye, chest, abdomen, back, extremities, and medical alert symbols.

C. Resuscitation Skills for Aiding the Conscious and Unconscious Victim

The training program should include instruction in:

1) establishing and maintaining adult airway patency.
2) performing adult breathing resuscitation.
3) performing adult circulatory resuscitation.
4) performing choking assessments and appropriate first aid interventions.
5) assessment of the possibility of a heart attack in a victim and appropriate first aid interventions.
6) the principles of cardiac arrest and the appropriate first aid interventions including performance of cardiopulmonary resuscitation, including the use of face masks normally used by non-medical personnel.
7) Resuscitating the drowning victim.
D. Shock and Fainting

The training program should include instruction in the principles and first aid intervention in:

1) shock due to injury.
2) shock due to allergic reactions.
3) the appropriate assessment and first aid treatment of a victim who has fainted.

E. Bleeding and Wounds

The training program should include instruction in:

1) the types of bleeding including arterial, venous, capillary, external, and internal bleeding.
2) the principles and performance of bleeding control interventions including direct pressure, pressure points, elevation, and pressure bandaging.
3) the assessment and approach to wounds including abrasions, incisions, lacerations, punctures, avulsions, amputations, and crush injuries.
4) the principles of wound care including infection precautions, wounds requiring medical attention, and the need for tetanus injection.

F. Burns

The training program should include instruction in:

1) the principles of burn assessment and first care, including first degree, second degree, third degree, minor, moderate, and major burn assessments and first aid interventions.
2) the types of burns and the performance of appropriate first aid interventions for these burns. This should include the differentiation of thermal, electrical, and chemical burns and their specific interventions. Particular attention should be focused upon chemical burns and their first aid care.

G. Specific Injury Sites

The training program should include instruction in the principles and first aid intervention of injuries to the following sites:

1) Head and Neck
   a) including skull fractures, concussions, and mental status assessments with particular attention to temporary loss of consciousness and the need for referral to a physician.
   b) including the appropriate approach to the management of the individual who has suffered a potential neck injury or fracture.

2) Eye
   a) including foreign bodies, and corneal abrasions and lacerations.
   b) including chemical burns and the importance of flushing out the eye.
   c) including the importance of not applying antibiotics without physician supervision.

3) Nose
   a) including nose injuries and nose bleeds.
4) Mouth and Teeth
   a) including oral injuries, lip and tongue injuries, and broken and removed teeth.

5) Chest
   a) including rib fractures, flail chest, and penetrating wounds.

6) Abdomen
   a) including blunt injuries, penetrating injuries, and protruding organs.

7) Hand, Finger, and Foot Injuries
   a) including finger/toe nail hematoma, lacerations, splinters, finger avulsion, ring removal, and foreign bodies.
   b) including the appropriate handling of amputated fingers, hands, and feet and the need for immediate transfer to appropriate amputation care facilities.

8) Pregnancy
   a) including appropriate care for abdominal injury and vaginal bleeding of the pregnant individual.

9) Foreign Objects
   a) including the eyes, ears, nose, mouth, cheek, chest, and abdomen.

H. Musculoskeletal Injuries
   The training program should include instruction in the principles and first aid interventions of:
   1) fractures including open fractures, closed fractures, and the splint of fractures.
   2) dislocations, especially of the joints of the upper extremity.
   3) joint sprains.
   4) muscle strains, contusions, and cramps.
   5) the aforementioned musculoskeletal injury instructions should focus on the shoulder, wrist, hand, finger, arm, hip, leg, knee, ankle, and foot.
   6) head, neck, back, and spinal injuries.

I. Bites and Stings
   The training program should include instruction in the principles and first aid intervention of:
   1) bites including human bites, animal bites including rabies, and snake bites.
   2) insect bites and stings including spider bites, scorpion stings, tick bites, and hornet and wasp stings.
J. Poisoning

The training program should include instruction in the principles and first aid intervention of:

1) swallowed poisons including interaction with the local Poison Control Center.

2) inhaled poisons including carbon monoxide, carbon dioxide, smoke, and chemical fumes and gases as well as the importance of assessing the toxic potential of the environment to the rescuer and the need for respirators.

This should also include appropriate instruction in the principles of cyanide toxicity.

3) topical poisons including poison ivy, poison sumac, poison oak, and insecticides.

4) drugs of abuse including alcohol, narcotics, cocaine, tranquilizers, and amphetamines.

K. Temperature Extremes

The training program should include instruction in the principles and first aid intervention of:

1) exposure to cold including frost bite and hypothermia.

2) exposure to heat including heat cramps, heat exhaustion, and heat stroke.

L. Medical Emergencies

The training program should include instruction in the principles and first aid intervention of:

1) strokes.

2) diabetic emergencies including diabetic coma, insulin shock, and hypoglycemia.

3) asthma.

4) seizures including tonic-clonic and absence seizures.

M. Evaluation

The training program should have in place a mechanism to evaluate its effectiveness in successfully teaching trainees the course material, such as precourse and postcourse assessments of knowledge and skills.

N. Program Update

The training program must be periodically reviewed with current first aid techniques and knowledge incorporated, and out of date information and procedures deleted. Such a review and revision mechanism must be a part of any satisfactory first aid training program.
Dear O.S.H.A. Legal Department:

May we please have clarification on the following O.S.H.A. regulations:

Sec. 1910.151 (a)
"The employer shall ensure the ready availability of medical personnel for advice and consultation on matters of plant health."

Vol. 1-589
In a case where a hospital, infirmary or clinic is in near proximity to the workplace (across the street), and in the absence of a specific contractual agreement between the employer and the medical facility, does the fact that the medical facility is near-by constitute compliance with O.S.H.A. regulation 1910.151 (a), or is a specific agreement between the employer and the medical facility required in order to comply with this regulation?

Sec. 1910.151 (b)
"In the absence of an infirmary, clinic, or hospital in the near proximity to the workplace which is used for the treatment of all injured employees, a person or persons shall be adequately trained to render first-aid. First-aid supplies approved by the consulting physician shall be readily available."

In a case where a medical facility is near-by, does the fact that the medical facility is near-by constitute compliance with O.S.H.A. regulation 1910.151 (b), or is the employer still obligated to train a person or persons to render first-aid?

In a case where a medical facility is near-by, does the fact that the medical facility is near-by constitute compliance with O.S.H.A. regulation 1910.151(b), or is the employer still obligated to have first-aid supplies approved by the consulting physician readily available?

How much is the statutory fine for violation of O.S.H.A. regulations 1910.151(a) & (b)?
An interpretation letter regarding a review of the (company) first aid program for meeting the intent of the OSHA first aid training standards. It has been determined that the course does meet the intent of the first aid training standards 1910.151 (b), assuming the course is managed and conducted in the manner presented to the agency, including the administration of a written knowledge test, with passing grade.

This is in response to your letter of September 22, 1988, and acknowledges your discussions with members of our staff. You requested review of your first aid program as meeting the intent of the Occupational Safety and Health Administration (OSHA) first aid training standards, such as 29 CFR 1910.151 (b), but not including cardiopulmonary resuscitation (CPR) training required in 29 CFR 1910.410.

It has been determined that the course does meet the intent of the first aid training standards, assuming the course is managed and conducted in the manner presented to the agency, including the administration of a written knowledge test, with passing grade thereof. (The course conducted without the written knowledge test does not meet the intent of the standards.)
MEMORANDUM FOR: ALL REGIONAL ADMINISTRATORS

SUBJECT: New Edition - American Red Cross Standard First Aid Program

In support of the OSHA first aid training standards, in 1971 a formal agreement was signed by the American Red Cross (ARC) and the U.S. Department of Labor, indicating ARC's cooperation with OSHA to provide support to employers. This provided a nationally recognized program, uniform in content, administration, and which was monitored and recognized by the National Academy of Sciences.

In order for employers to be in compliance with the various OSHA first aid training requirements, such as 29 CFR 1910.151(b), the recommended minimum level of training has been the ARC Standard course, taught in multi-media form or otherwise, or the equivalent. Recently, ARC published and is distributing a new edition of the Standard First Aid Program, which replaces the multi-media program, and the other methods used to teach Standard first aid. These latter courses are still valid, but the teaching of the courses will be phased out by December 31, 1989, after the phasing in of the new program has been completed. (Certificates issued for these courses, however, will be valid for the period indicated on the certificate. See attached chart.)

The new program has been evaluated and a copy of the letter from Assistant Secretary Pendergrass to Mr. Richard Schubert, President of the ARC, is attached for information. The program serves as a nationally recognized program, and is considered the minimum level of training required to meet the standards. It also serves as the basis upon which other courses are considered, which includes an evaluation of the complete protocol necessary to develop, evaluate, manage and administer a first aid training program.

ARC has provided OSHA with a complete training package for the information of each OSHA Regional Office. It includes the participants workbook, the instructor's manual, a guide for training instructors, and the video tape. In addition, included are the administrative guidelines and a list of the ARC Operational Headquarters Offices which can be contacted for further information relative to any of the programs. It is recommended contact be maintained with these ARC Offices to expedite any answers to questions which may arise about the program.

As a reminder, proposed first aid courses submitted for determination of equivalency are reviewed at the National Office level. Attached is an outline of the minimum scope of material required with any submission. (Courses are no longer reviewed at the Regional level, as originally indicated in OSHA Instruction CPL 2.2.)

Regional Administrators are requested to provide a copy of this memorandum to State Designees and Consultation Program managers, to ensure they are aware of this new edition of the ARC program, and other information relative to first aid programs in support of the standards.

FEB 21, 1989
ABSTRACT  An interpretation letter concerning first aid supplies required by businesses. If there is an infirmary, clinic or hospital in the proximity of a retail store, no first aid supplies are required by the standard. If no infirmary, clinic or hospital is within the proximity of a store, a physician identified by the store owner shall determine the contents of a first-aid kit to meet the specific needs of each store.

INTERPRETATION  29 CFR 1910.151(b)

AUG 31, 1990

This letter is in response to your question about first aid supplies required by businesses in OSHA Standard 1910.151 (b).

If there is an infirmary, clinic or hospital in the proximity of a retail store, then no first aid supplies are required by the standard. On the other hand, if no infirmary, clinic or hospital is within the proximity of a store, then a physician identified by the store owner shall determine the contents of a first-aid kit to meet the specific needs of each store.
INTERPRETATION

29 CFR 1910.151(c)

August 16, 1976

This letter is in further reply to your letters of March 4, 1976 and December 31, 1975, concerning our regulation CFR 1910.151(c). I refer also to our phone conversation of March 24, 1976.

1. Battery charging areas are not specifically mentioned in CFR 1910.151(c) but are considered to be covered if the battery caps are removed and if electrolyte acid is added, removed, or spilled. If the battery is simply undergoing charge, it is not necessary to have quick drenching or flushing facilities for the eyes or skin.

2. In the strictest sense, quick drenching or flushing of the eyes can be done in some cases and in a limited and perhaps insufficient way with “neutralize” solution. You have agreed that such solution should be clean and should be changed at least weekly. May I suggest that where you use “neutralize” solution that you show the date it was last changed or replenished. The intent of our standard is to provide adequate first-aid for eye or skin splashes of harmful acids or alkalis. The water or solution should obviously be of adequate quantity, quality, and at an acceptable temperature. I would suggest that it should be between 105 degree F and 60 degree F. If only one water supply is available, then the “cold” water line is preferable to the “hot” (which might cause skin burns). This is not a requirement to temper cold water. It is a We do not dispute the doctor’s statements or findings on “neutralize.”

The way to accomplish your objective is to petition the Assistant Secretary of Labor to amend CFR 1910.151(c) and suggest wording as you would have the standard read. Remember, please, that the requirement must cover many types of worker exposures, not just in meat processing, as at company.

Portable eye washing stations are acceptable if the water or solution is clean and of adequate amount to neutralize or flush away the acid or alkali. A bottle of “neutralize” would not be acceptable in very hazardous exposures. The 15 minute flushing time is not now a requirement, but if you look at the labeling requirement in our proposed standard for ammonia (enclosed) you will see 15 minute flushing as a part of the labeling requirement. You may state your views on this matter as detailed in the proposal. There is no requirement for weekly or monthly changing of “neutralize”. The Communicable Disease Center of Health, Education, and Welfare has proposed weekly changes. This is acceptable to OSHA. The intent is that the solution be clean enough to use in the eye.

It would not be necessary to have an eye wash fountain or deluge shower for a janitor using “product” bowl cleaner or a general purpose cleaner. The regulation is meant to cover strong acids and alkalis. Detergents used on the “kill floors” would not require emergency eye wash fountains or emergency showers.

The five gallon stainless steel tank etc. you described in your letter of December 31, 1975, is acceptable to OSHA as meeting the requirements of CFR 1910.151(c), in your case.

We are still at a loss as to what you mean by “credit for using neutralize.” It will be acceptable in certain situations and in others such as open tanks of strong acid or alkali it would be insufficient. You have indicated that this has been your policy also. If by “credit” you mean that OSHA should consider “neutralize” as totally meeting the requirements of CFR 1910.151(c) in all cases, the answer is no. Our
requirement depends on the exposure and the strength of the hazardous chemical in each separate case.

You have indicated that this has been your policy also. If by "credit" you mean that OSHA should consider "neutralize" as totally meeting the requirements of CFR 1910.151(c) in all cases, the answer is no. Our requirement depends on the exposure and the strength of the hazardous chemical in each separate case.

I believe that this covers the issues in your inquiry. This letter is being sent to all OSHA offices for guidance. Please feel free to petition the Assistant Secretary of Labor to amend the standards, feel free to request a variance, or ask for clarification or an interpretation, at any time.
An interpretation letter regarding how OSHA does not mandate a fifteen (15) minute supply of fluid for eyewash facilities. The ANSI Z358.1-1981, Emergency Eyewash and Shower Equipment sets forth some guidelines that OSHA uses as guidance, but does mandate them.

Interpretation 29 CFR 1910.151(c)

September 14, 1984

This is in response to your letter of August 10, 1984, in which you request clarification of the Occupational Safety and Health Administration's (OSHA's) position relative to eyewash station requirements.

As you are aware, 29 CFR 1910.151 (copy enclosed) requires employers to provide for the ready availability of medical personnel for advice and consultation regarding matters of employee health. It further requires that first aid supplies be approved by the consulting physician and where employees are exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of eyes must be provided.

The OSHA standard regarding eyewash facilities, 29 CFR 1910.151(c), does not require a 156 minute continuous supply of fluid. Furthermore, OSHA Instruction STD 1-8.2 (copy enclosed) makes no reference to a 15 minute continuous supply of fluid.

The need for eyewash and body quick drenching equipment varies with the exposure to injurious corrosive materials in the specific workplace. This may or may not include a provision such as a 15 minute continuous supply of fluid. Enforcement of the OSHA standard provides for evaluation of the contributing factors relative to the potential hazardous exposure and permits appropriate minimum assurances for adequate first aid and subsequent treatment. Employers are encouraged to avail themselves of professional guidance when selecting suitable eye wash equipment.

The American National Standards Institute, Inc. (ANSI) at 1430 Broadway, New York, New York 10018, has published an industry consensus standard relative to eyewash facilities. ANSI Z358.1-1981, Emergency Eyewash and Shower Equipment, sets forth a minimum value of 0.4 gallons per minute continuous flow for 15 minutes. The ANSI standard is only one guideline used by OSHA compliance officers during determination of employer compliance with our standard; however, OSHA standards do not require such a flow and in certain conditions a lesser flow may be suitable and thus satisfy the requirements of 1910.151(c).
An interpretation letter regarding available Eyewash equipment is not an acceptable substitute for protective eyewear. Protective eyewear is not known to cause eye problems, irritation and headaches. Protective eyewear shall be in compliance with 1910.133.

INTERPRETATION 29 CFR 1910.151(c); 1910.133(a)(1)

August 6, 1982

This is in response to your letter of July 8, 1982, petitioning for a change in the Occupational Safety and Health Administration (OSHA) standards to permit the use of readily available eyewash equipment, in some situations, as a substitute for using protection, as well as your recommendations for expanded requirements covering the location and accessibility of eyewash equipment.

I would be interested in receiving copies of the research you mentioned which seemed to indicate that protective eyewear and face shields cause eye problems, irritation and headaches. My office is aware of isolated complaints, but does not have research material indicating this to be a problem. In fact, the research material which we possess indicates protective eyewear to have optical qualities of an acceptable level (see pages 124-177 of enclosed report). Additionally, overall optical characteristics of protective eyewear exceed those of prescription eyewear.

Regarding your suggestion of substituting portable eyewash equipment for eye protection, we do not view this as equivalent protection. The purpose of the protective eyewear is to prevent the accident, whereas the purpose of eyewash facilities is to minimize the injury should the first line of defense fail to do the job.
This interpretation addresses the required frequency for testing of showers and eyewash units.

DOE uses the Occupational Safety and Health Administration (OSHA) 29 CFR 1910.151(c) as its mandatory requirement and associated consensus standards such as the American National Standards Institute (ANSI) standard Z358.1-1990 "American National Standard for Emergency Eyewash and Shower Equipment." All safety showers and eyewash units that are installed and required shall be tested weekly.

This interpretation is in response to your inquiry of October 21, 1993, regarding the requirements for frequency of testing for showers and eyewash equipment, and the Department of Energy's (DOE) requirement to follow American National Standards Institute (ANSI) Standard Z358.1-1990.

Section 5.5.1 of ANSI Standard Z358.1-1990 states that "Plumbed eyewash units shall be activated weekly to flush the line and to verify proper operation. Self-contained units shall be inspected in accordance with the manufacturer's instructions".

DOE Environment, Safety and Health Bulletin DOE/EH-0010, Issue No. 15, dated May 1986, explains why weekly flushing is necessary. The following is an excerpt from an article entitled "Potentially Hazardous Amoebae Found in Eyewash Stations".

"Acanthamoebae, small amoebae capable of causing serious eye infections, were found in numerous portable and stationary eyewash stations at a DOE facility. Such infections can be particularly severe -- they have often caused the loss of the infected eye.

"Diagnosis has been difficult and often delayed: the organism cannot be identified on the usual corneal scrapings and smears; special culture plates are needed. Often Acanthamoeba is considered only after treatment for more common causes of infection has failed. Treatment, too, has been difficult because most antibiotics are ineffective against this amoeba".

"Acanthamoebae are able to survive conventional water plant treatment regimens. Therefore, extra precautions are needed to rid them from water used to flush traumatized eye tissue".

"There are still many important questions about their control remaining to be investigated: the optimal level of chlorination -- one that destroys the amoeba but not the equipment -- needs to be determined; the use of hydrogen peroxide instead of chlorine needs to be investigated; we need to learn how long the diminution of amoebae lasts after three-minute flushings and whether there is an accumulative effect; and whether there is a cumulative effect after one-minute flushings, which would make them more effective than we are now led to believe."

"Meanwhile, in light of the confirmation that eyewash stations filled with or connected to potable water supplies may be contaminated with Acanthamoeba, we recommend that eyewash stations be flushed weekly, preferably for three minutes."

In conclusion, DOE uses the ANSI standard as an adopted guideline; therefore, all safety showers and eyewash units that are installed must be tested weekly. Management should ensure that these tests are performed.
As indicated in the inquiry, the desire to minimize excessive waste water does not appear to warrant a deviation from weekly testing of showers and eyewash units. The only time a change might be considered would be for the purpose of minimizing hazard exposure to personnel conducting testing of showers and eyewash units located in contamination zones. For locked/secured areas and contamination zones, management should consider the options of either relocating showers and eyewash units to a safe and accessible area, or utilizing portable showers and eyewash units which could be brought into restricted areas when work is to be performed.
October 05, 1992

Dear Mr. J:


You specifically requested answers to the following questions:

1. Do employees need to be trained in first aid regardless of the meaning of "near proximity" in 1910.151, if welding is done at the facility?

Response: In areas where accidents resulting in suffocation, severe bleeding, or other life threatening injury or illness can be expected, a 3 to 4 minute response time, from time of injury to time of administering first aid, is required. In other circumstances, i.e., where a life-threatening injury is an unlikely outcome of an accident, a 15 minute response time is acceptable.

If an employer can take employees to an infirmary, clinic, or hospital, or if outside emergency assistance can arrive within the allotted times, the employer is not required to train employees in first aid.

2. If employees have been trained in first aid, do they need to be designated or assigned first aid duties?

Response: 1910.151(b) does not require the employer to assign employees first aid duties. However, in the absence of professional medical care in near proximity, it would be wise to assign employees with adequate training to such duties.

3. Does the Bloodborne Pathogens Standard apply to these individuals with first aid training?

Response: Employees who have occupational exposure to blood of other potentially infectious materials (OPIM) are covered by the Bloodborne Pathogens Standard. Occupational exposure is defined as reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or OPIM that may result from the performance of an employee's duties. The vaccination requirements, as well as all other provisions of the standard, apply to all employees who have occupational exposure. Employees who are designated to provide first aid as a primary or collateral duty are covered by the Bloodborne Pathogens Standard;
however, employees who perform unanticipated "good Samaritan acts" are excluded from coverage by the standard, since such an action does not constitute "occupational exposure."

We appreciate your interest in employee safety and health. If we can be of further assistance, please do not hesitate to contact us.
An interpretation letter stating that conditions in each workplace must be evaluated when a first aid program is developed to ensure that it is adequate to meet anticipated needs. In areas where accidents resulting in suffocation, severe bleeding or other life threatening injury or illness can be expected, a 3 to 4 minute response time is required. In other circumstances, a longer response time may be acceptable. If employees work in areas where emergency transportation is not available, the employer must make provisions for acceptable emergency transportation. Trained first aiders are required to be available for each shift and operation when other arrangements are not made for the provision of emergency medical service.

March 30, 1993

Dear Mr. M:

Thank you for your letter of December 3, 1992, requesting an interpretation of the Occupational Safety and Health Administration (OSHA) standards, 29 CFR 1910.151(a) and (b). Please accept our apologies for the delay in responding.

We note that you will share our interpretation with members of the Refractories Institute. They should be aware that we cannot provide a list of "exact requirements" which will apply in every workplace. Rather, conditions in each workplace must be evaluated when a first aid program is developed to ensure that it is adequate to meet anticipated needs. For example, the first aid program requirements for a workplace or industry with a history of burns or electrical shock injuries will differ from those for an office environment.

Where a medical facility is near the workplace, 29 CFR 1910.151(a) requires the employer to ensure the following:

1. In areas where accidents resulting in suffocation, severe bleeding or other life threatening injury or illness can be expected, a 3 to 4 minute response time is required. In other circumstances, i.e., where a life-threatening injury is an unlikely outcome of an accident, a longer response time, for example up to 15 minutes, may be acceptable.

2. If employees work in areas where emergency transportation is not available, the employer must make provisions for acceptable emergency transportation.

Where an employer complies with 29 CFR 1910.151(a), as stated above, but has areas where the eyes or body of a person may be exposed to injurious corrosive materials (as specified in 29 CFR 1910.151(c)), the employer must comply with 29 CFR 1910.151(b) to train a person or persons to render first aid.

Where an employer complies with 29 CFR 1910.151(a), and .151(c) as stated above, and requires employees to report to the medical facility for all injuries and illnesses requiring first aid, the employer is not obligated to have first aid supplies approved by the consulting physician readily available.

OSHA's interpretation for the phrase "in near proximity" as used in 29 CFR 1910.151(b) emphasizes the need for prompt assistance when an injury or illness occurs. The response time is the same as the response time required in 29 CFR 1910.151(a).
Trained first aiders are required to be available for each shift and operation when other arrangements are not made for the provision of emergency medical service, e.g., the use of a local hospital or clinic.

When the worksite is located in a rural area, or is some distance from the nearest hospital or clinic, the employer is required to provide an acceptable type of emergency transportation.

We appreciate your interest in employee safety and health. If we can be of further assistance please do not hesitate to contact us.
END

8/24/94

DATE

FILMED

hb/14/98