

Interoffice
Communication

TO: Distribution

FROM: T. G. Grumbles

DATE: April 27, 1990

SUBJ: HAZWOPER ISSUES

TGG: JCL: ERT: MJH: AJO: RF

XF: _____

VISTA

Attached is the long awaited final rule corrections document for HAZWOPER. Multiple corrections are listed in this ruling, however, I believe the most significant is the "Notes and Exceptions" section, found in the middle column of Page 14073. However, all of the listed corrections should be reviewed to determine impact at individual locations.

Based on the information received at the OSHA/CMA seminars and internal discussions, the following comments are offered.

1. The scope of training and timing of the training required should be considered as being part of your new employee orientation. The 24-hour training requirements are probably a major part of the content of your safety and health orientations, and the training is required prior to the employee going to work.
2. For CTIRP designated responders, the training requirements are far in excess of the minimum 24 hours due to the additional need to demonstrate skills and competency in multiple areas required for at-the-scene, offensive and "administrative" actions.
3. OSHA has indicated they will have a problem counting the hours of training for enforcement but generally will look to documentation of content and employee attendance combined with employee interviews to determine if the training was effective.

I've also attached an article and a summary table on training and a letter from OSHA answering multiple questions on interpretation of the standard.



T. G. Grumbles

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Attachment

Distribution: SAFETY DIRECTORS

Bruce Trego-Aber, Bill Jones-Balt, Harry Peirce-Blane, Kathy Perez-Hmd, K. L. Fogg-LCCP, R. V. Gantz-LCLAB, G. M. Shirley-LCVCM, J. D. Harris-Okc, R. B. Martin-Austin, D. A. Barclay, J. R. Drumwright

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DEPARTMENT OF LABOR

Occupational Safety and Health
Administration

29 CFR Part 1910

RIN 1218-AB13

**Hazardous Waste Operations and
Emergency Response****AGENCY:** Occupational Safety and
Health Administration; Labor.**ACTION:** Final rule; corrections.**SUMMARY:** This notice makes corrections
to the preamble and final rule on
Hazardous Waste Operations and
Emergency Response issued by OSHA
on March 8, 1989, at 54 FR 9294-9336.**EFFECTIVE DATE:** April 13, 1990.**FOR FURTHER INFORMATION CONTACT:**
Mr. James Foster, Occupational Safety
and Health Administration, Office of
Information and Consumer Affairs,
Room N-3647, U.S. Department of Labor,
200 Constitution Avenue NW.,
Washington, DC 20210, Telephone: (202)
523-8148.**SUPPLEMENTARY INFORMATION:** This
document contains corrections to the
preamble to the final rule on Hazardous
Waste Operations and Emergency
Response and to the final standard, 29
CFR 1910.120 as amended effective
March 8, 1990, which were published in
the Federal Register on March 8, 1989, at
54 FR 9294-9336.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. This document corrects
these errors and makes clearer certain
areas in both the standard and the
preamble.The attempt is made to correct all
errors in the standard. However,
generally this document does not correct
typographical or grammatical errors in
the preamble unless a correction is
needed to clarify meaning. The
following paragraphs explain several of
the corrections.The definition of "hazardous
substance" includes "any biological
agent and other disease-causing agent
as defined in section 101(33) of
CERCLA". That cross reference is
inconvenient and is grammatically
confusing because section 101(33)
includes extraneous language.
Accordingly OSHA is correcting the
standard by directly including the
relevant language of section 101(33)
rather than incorporating it by reference
making clear that OSHA just coverspersons. (It should be noted that OSHA
specifically decided that petroleum
products and gasses are covered by 29
CFR 1910.120. See 54 FR 9301-2.)Paragraph (f)(3)(i)(D) makes clear
OSHA's intent that medical surveillance
be provided to employees who develop
signs or symptoms due to possible over
exposure from hazardous substances
whether the employee is engaged in
hazardous waste operations or
emergency response. Paragraph (f)(2)(iii)
is slightly ambiguous in this regard and
is being corrected to be fully consistent
with paragraph (f)(3)(i)(D) and state
clearly that both hazardous waste
operation and emergency response
employees are to receive medical
surveillance in these situations.The exception subparagraph of
paragraph (a)(2)(iii) and the introductory
language of paragraph (p) are clarified.
Any treatment, storage and disposal
(TSD) operation must comply with all
the requirements of paragraph (p) if it is
required to have an EPA or authorized
state permit or interim status (see 42
U.S.C. 6925(e)), and if it is regulated by
EPA under 40 CFR parts 264 and 265 or
by a state that has been authorized by
EPA.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 40 CFR
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 those
wastes 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).Excepted employers who are required
by EPA or state regulations to have their
employees engage in emergency
response, or who direct their employees
to engage in emergency response are
covered by paragraph (p)(8). Excepted
employers who are not required to have
their employees engage in emergency
response, who do not direct their
employees to do so, and who meet the
requirements of (p)(8)(i) are also exempt
from the balance of (p)(8). In general
employers who qualify as conditionally
exempt small quantity generators under
40 CFR 261.5 will be in the last category.
If a generator qualifies for exemption
under 40 CFR 262.34, EPA or state
regulations usually require the generator
to have its employees engage in
emergency response.However, the regulatory language
explaining this result was not as clear as
it could have been because the language
used did not track EPA language as
closely as intended. OSHA hoped "to
assure consistency and compatibility
between this rule and the rules and
regulations of the EPA and DOT." (52 FR
29624; August 10, 1987.) OSHA has
received many requests for clarification.
This is a complex area and consistency
is likely to lead both to better
understanding and consequently better
compliance with the regulations.Accordingly the language has been
changed in format to a lengthened
"Notes and Exceptions" that explains
which employers are covered by
paragraph (p), which are exempted and
which are required to meet emergency
response requirements. See correction
13 below. OSHA believes that this
"Notes and Exceptions" will be clearer
because it more closely follows the
organization of EPA regulations.
Employers already know whether they
are permitted or have interim status and
should already know whether they are
required to follow the cited EPA or
parallel state regulations. The new
language does not change any
substantive requirements. This "Notes
and Exceptions" provision does include
an interpretation which OSHA has
already stated, that employers covered
by the emergency response provisions of
paragraph (p)(8) may follow the more
stringent requirements of paragraph (q)
and be deemed to have complied with
paragraph (p)(8). Employers who have
some employees covered by (p)(8) and
some employees covered by (q) may
find it administratively convenient to
have both sets of employees simply
meet the requirements of paragraph (q).In several provisions covering
emergency response evacuation the term
"workplace" has been corrected to
"danger area". When an emergency
occurs it is not always necessary to
evacuate the entire workplace. It is
necessary to evacuate the danger area.Correction 4 has been made because
the omitted paragraph had incorrectly
indicated that the final rule had first
added a provision when that provision
had indeed been included in the
proposal.Some information was omitted from
the non-mandatory appendices. This
material is inserted because it may be
useful to the public, but it is not
mandatory. Correction 34 adds certain
references to Appendix C which may be
useful for developing training materials.
Correction 36 adds to Appendix C
information on new technologies

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available to control hazardous waste spills.

Accordingly the final rule document published March 8, 1989 at 54 FR 9294-9336, Federal Register Document No. 89-4992, and 29 CFR 1910.120 as amended effective March 6, 1990 are corrected as follows:

Preamble

1. On page 9305, column 3, lines 24 and 25 are corrected to read, "established in paragraphs (f)(2)(iii), (f)(3)(i)(D) and (f)(3)(ii) of the final rule."

1.A. On page 9306, column 2, fifth full paragraph, line 4 is corrected to read "protocols. Eastman, Kodak (10-38)".

2. On page 9306, column 3, first full paragraph, lines 2 and 3 are corrected to read "argument can be addressed by citing to recommended criteria for medical" and lines 21-23 are corrected to read "Guide manual cited in Appendix D also provides guidance. OSHA believes that the language of that chapter will".

3. On page 9307, column 2, lines 21 to 27 are corrected to read "exposure".

4. On page 9308, column 2, under the heading "Paragraph (p)—Certain operations . . .", the second full paragraph is omitted.

5. On page 9309, column 1, line 42 is corrected to read "Paragraph (q)—Emergency response to".

6. On page 9311, column 1, the heading at lines 51 to 54 is corrected to read "III. Summary of the Final Regulatory Impact and Regulatory Flexibility Analysis and Environmental Impact Assessment".

7. On page 9311, column 2, first full paragraph, line 2 is corrected to read "requirements, OSHA has prepared a final".

8. On page 9311, column 2, third full paragraph, lines 12 to 14 are corrected to read, "follows: about 50 contractors that perform hazardous waste site cleanups; about 100 engineering or technical".

9. On page 9311, column 3, line 10 is corrected to read "manufacturers that use in-house".

10. On page 9311, column 3, third full paragraph, lines 1 and 2 are corrected to read "This standard will protect 1.758 million employees, police officers and firefighters from" and lines 6 and 7 are corrected to read "in Chapter 3 of the Final Regulatory Impact Analysis (RIA). The RIA indicates that".

11. On page 9312, column 1, in lines 4 and 13 the initials "FRA" are corrected to read "RIA".

12. On page 9312, column 1, fifth full paragraph, certain cost estimates are corrected as follows:

(a) On line 4, "\$153.422 million" is corrected to read "\$157.915 million" and

"\$27.966 million" is corrected to read "\$28.435 million";

(b) Line 7 is corrected by adding an omitted estimate after the comma to read "\$5.841 million will be spent by contractors on privately-initiated hazardous waste site cleanups,";

(c) On line 14, "\$29.17 million" is corrected to read "\$33.156 million"; and

(d) On line 18, "\$92.978 million" is corrected to read "\$97.466 million".

Regulatory Text

§ 1910.120 (Corrected)

The following corrections are made to 29 CFR 1910.120 which was amended effective March 6, 1990:

13. Paragraph (a)(2)(ii) is corrected by revising the "Exceptions" subparagraph to read as follows:

Notes and Exceptions: (A) All provisions of paragraph (p) of this section cover any treatment, storage or disposal (TSD) operation 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 or disposal, any emergency response operations in that area shall comply with paragraph (p)(8) of this section. In other areas not used primarily 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.

14. Paragraph (a)(3), definition of "Hazardous substance", subparagraph (B) is corrected by revising it to read as follows: (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;

15. In paragraph (a)(3), definition of "Post emergency response", the reference to "paragraph (g)(11) is corrected by revising it to read "paragraph (q)(11)".

16. In paragraph (e)(3)(iv), the reference to "paragraphs (a)(3)(ii) and (a)(3)(iii)" is corrected by revising it to read "paragraphs (e)(3)(ii) and (e)(3)(iii)".

17. In paragraph (e)(9), the clause reading "However, certified employees new to a site shall receive" is corrected by revising it to read "However, certified employees or employees with equivalent training new to a site shall receive".

18. Paragraph (f)(2)(iii) is corrected by revising it to read "All employees who are injured, become ill or develop signs or symptoms due to possible overexposure involving hazardous substances or health hazards from an emergency response or hazardous waste operation; and".

19. In paragraph (g)(1)(ii), the first clause which reads "Whenever engineering controls and work practices are not feasible, PPE shall be used" is corrected by revising it to read "Whenever engineering controls and work practices are not feasible or not required, any reasonable combination of engineering controls, work practices and PPE shall be used".

20. In paragraph (h)(1)(i), the last clause which reads "which exceed permissible exposure limits or published exposure levels for hazardous substances" is corrected by revising it to read "which exceed permissible exposure limits, or published exposure levels if there are no permissible exposure limits, for hazardous substances".

21. In paragraph (i)(1)(i), the first clause which reads "An emergency response plan shall be developed and implemented by all employers within the scope of this section" is corrected by revising it to read "An emergency response plan shall be developed and implemented by all employers within the scope of paragraphs (a)(1) (i)-(ii) of this section".

22. In paragraph (l)(1)(ii), the word "workplace" is corrected by revising it to read "danger area".

23. The introduction to paragraph (p) is corrected by revising it to read

"Employers conducting operations at treatment, storage and disposal (TSD) facilities specified in paragraph (a)(1)(iv) of this section shall provide and implement the programs specified in this paragraph. See the "Notes and Exceptions" to paragraph (a)(2)(iii) of this section for employers not covered.)".

24. In paragraph (p)(7)(i), the first sentence is corrected by revising it to read "The employer shall develop and implement a training program, which is part of the employer's safety and health program, for employees exposed to health hazards or hazardous substances at TSD operations to enable the employees to perform their assigned duties and functions in a safe and healthful manner so as not endanger themselves or other employees."

25. In paragraph (q)(1), the word "workplace" in the third sentence is corrected by revising it to read "danger area".

26. Paragraph (q)(3)(iii) is corrected by deleting the last two words, "or site".

27. In paragraph (q)(3)(viii), the third to the last word "an" is corrected by revising it to read "the".

28. In paragraph (q)(6)(i), the word "materials" in subparagraphs (A), (B), (C) and (D) of that paragraph is corrected by revising it to read "substances".

29. In paragraph (q)(7), the name "U. S. Fire Academy" is corrected by revising it to read "U.S. National Fire Academy".

Appendices to § 1910.120 [Corrected]

The following corrections are made to the Appendices to 29 CFR 1910.120 which were amended effective March 6, 1990:

30. In Appendix A, paragraph B. 4.1, is corrected by revising it to read "A supply of concentrated aqueous ammonium hydroxide (58% by weight).".

31. In Appendix A, paragraph B. 5.2, the number "50 ppm" is corrected by revising it to read "35 ppm as a 15 minute STEL".

32. In Appendix B, the third paragraph of the introductory material, the last clause which reads "or the exposure after breakthrough may not pose a hazardous level" is corrected by being deleted.

33. In Appendix B, part B, section IV the second citation following the second paragraph of the Note is corrected by revising it to read "NFPA 1992—Standard on Liquid Splash-Protective Suits for Hazardous Chemical Emergencies (EPA Level B Protective Clothing)".

34. Appendix C is corrected by adding at the end of section 2, "Training", a new paragraph to read as follows:

There are two National Fire Protection Association standards, NFPA 472—"Standard for Professional Competence of Responders to Hazardous Material Incidents" and NFPA 471—"Recommended Practice for Responding to Hazardous Material Incidents", which are excellent resource documents to aid fire departments and other emergency response organizations in developing their training program materials. NFPA 472 provides guidance on the skills and knowledge needed for first responder awareness level, first responder operations level, hazmat technicians, and hazmat specialist. It also offers guidance for the officer corp who will be in charge of hazardous substance incidents.

35. In Appendix C, section 3, the cross reference to "Appendix F" is corrected by revising it to read "Appendix D".

36. Appendix C is corrected by adding at its end a section 9 to read as follows:

9. New Technology and Spill Containment Programs. Where hazardous substances may be released by spilling from a container that will expose employees to the hazards of the materials, the employer will need to implement a program to contain and control the spilled material. Diking and ditching, as well as use of absorbents like diatomaceous earth, are traditional techniques which have proven to be effective over the years. However, in recent years new products have come into the marketplace, the use of which complement and increase the effectiveness of these traditional methods. These new products also provide emergency responders and others with additional tools or agents to use to reduce the hazards of spilled materials.

These agents can be rapidly applied over a large area and can be uniformly applied or otherwise can be used to build a small dam, thus improving the workers' ability to control spilled material. These application techniques enhance the intimate contact between the agent and the spilled material allowing for the quickest effect by the agent or quickest control of the spilled material. Agents are available to solidify liquid spilled materials, to suppress vapor generation from spilled materials, and to do both. Some special agents, which when applied as recommended by the manufacturer, will react in a controlled manner with the spilled material to neutralize acids or caustics, or greatly reduce the level of hazard of the spilled material.

There are several modern methods and devices for use by emergency response personnel or others involved with spill control efforts to safely apply spill control agents to control spilled material hazards. These include portable pressurized applicators similar to hand-held portable fire extinguishing devices, and nozzle and hose systems similar to portable fire fighting foam systems which allow the operator to apply the agent without having to come into contact with the spilled material. The operator is able to apply the agent to the spilled material from a remote position.

The solidification of liquids provides for rapid containment and isolation of hazardous substance spills. By directing the agent at run-off points or at the edges of the spill, the reactant solid will automatically create a barrier to slow or stop the spread of the material. Clean-up of hazardous substances is greatly improved when solidifying agents, acid or caustic neutralizers, or activated carbon adsorbents are used. Properly applied, these agents can totally solidify liquid hazardous substances or neutralize or absorb them, which results in materials which are less hazardous and easier to handle, transport, and dispose of. The concept of spill treatment, to create less hazardous substances, will improve the safety and level of protection of employees working at spill clean-up operations or emergency response operations to spills of hazardous substances.

The use of vapor suppression agents for volatile hazardous substances, such as flammable liquids and those substances which present an inhalation hazard, is important for protecting workers. The rapid and uniform distribution of the agent over the surface of the spilled material can provide quick vapor knockdown. There are temporary and long-term foam-type agents which are effective on vapors and dusts, and activated carbon adsorption agents which are effective for vapor control and soaking-up of the liquid. The proper use of hose lines or hand-held portable pressurized applicators provides good mobility and permits the worker to deliver the agent from a safe distance without having to step into the untreated spilled material. Some of these systems can be recharged in the field to provide coverage of larger spill areas than the design limits of a single charged applicator unit. Some of the more effective agents can solidify the liquid flammable hazardous substances and at the same time elevate the flashpoint above 140 °F so the resulting substance may be handled as a nonhazardous waste material if it meets the U.S. Environmental Protection Agency's 40 CFR part 261 requirements (See particularly § 261.21).

All workers performing hazardous substance spill control work are expected to wear the proper protective clothing and equipment for the materials present and to follow the employer's established standard operating procedures for spill control. All involved workers need to be trained in the established operating procedures; in the use and care of spill control equipment; and in the associated hazards and control of such hazards of spill containment work.

These new tools and agents are the things that employers will want to evaluate as part of their new technology program. The treatment of spills of hazardous substances or wastes at an emergency incident as part of the immediate spill containment and control efforts is sometimes acceptable to EPA and a permit exception is described in 40 CFR 264.1(g)(8) and 265.1(c)(11).

37. Appendix D, Reference 18, the organization name is corrected by revising it to read "National Fire

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Protection Association, Batterymarch
Park,".

Signed at Washington, DC, this 28th day of
March 1990.

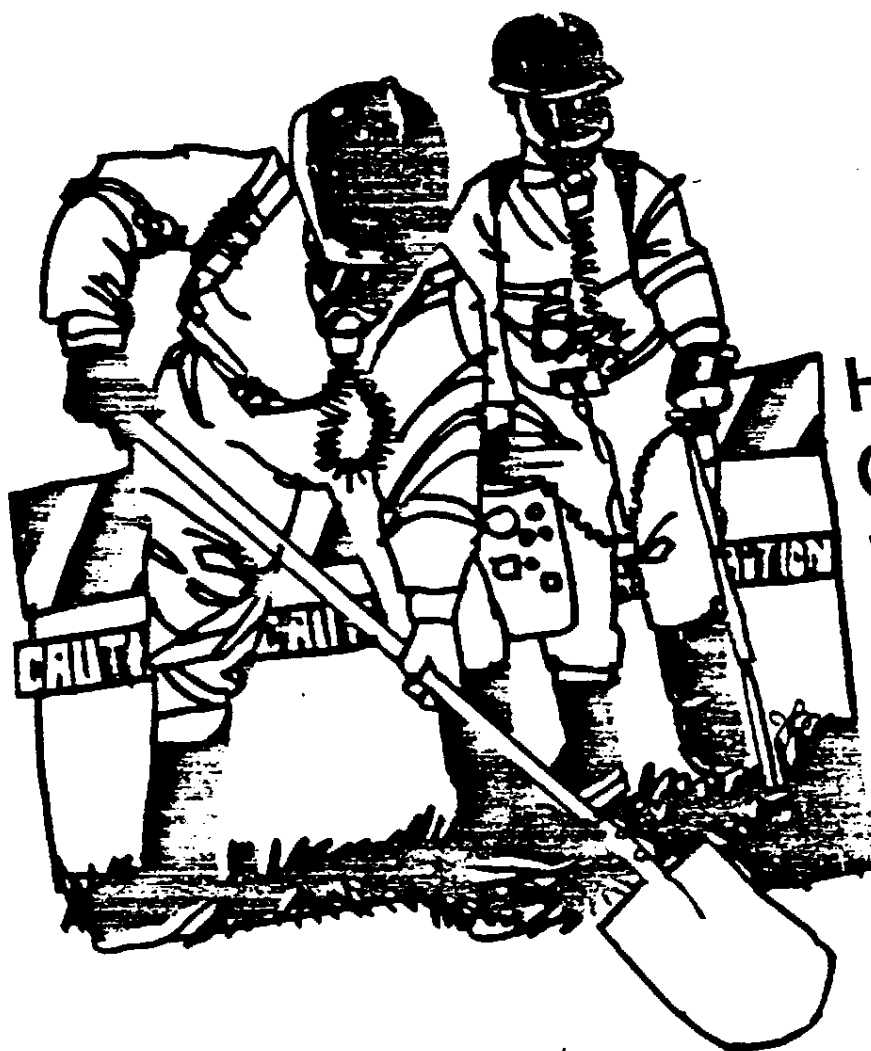
Gerard F. Scannell,

Assistant Secretary.

[FR Doc. 90-8117 Filed 4-12-90; 8:45 am]

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Hazardous Waste Operations and Emergency Response: A Closeup Look at Training

By T.H. Seymour, P.E.

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.

¹See *Federal Register* 51:4564, December 19, 1986.

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.

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Title I, Section 126 of SARA required OSHA to develop a standard that would set minimum safety and health requirements for (1) employers involved 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 offsite 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 onsite 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.

Workers who are onsite 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 offsite and then 8 hours of on-the-job training onsite by a trained and experienced supervisor.

Likewise, paragraph (e)(3)(iii) covers workers who will be onsite on a more regular basis, but who do not risk exposure above the PELs 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 offsite, 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 Standard³ as a model. OSHA's final rule also includes training criteria for the on-the-scene incident commander, specialist employees and skilled support

²Examples include the National Priority List of sites as well as those listed by other federal agencies and by state or local governments.

³See NFPA Publication No. 472-1989, *Standard for Professional Competence of Responders to Hazardous Materials Incidents* (Quincy, Massachusetts: NFPA, 1989).

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.

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.⁴

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 firefighting 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 compe-

⁴Section 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 worker[s]...controlled directly by State or local government" (40 CFR Part 311.2).

tency at the first-responder awareness level. The required training is to prepare these employees to perform diking, 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 or 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.

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 photoionization 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 onsite 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 requirement 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.

Thomas Seymour is Deputy Director of OSHA's Directorate of Safety Standards Programs.

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Table 1. Training Requirements

Hazardous Waste Clean-Up Sites	
Staff	
● Routine site employees	40 hours initial 24 hours field* 8 hours annual refresher
● Routine site employees (minimal exposure)	24 hours initial 8 hours field* 8 hours annual refresher
● Non-routine site employees	24 hours initial 8 hours field* 8 hours annual refresher
Supervisor/Managers of	
● Routine site employees	40 hours initial 24 hours field* 8 hours hazardous waste management 8 hours annual refresher
● Routine site employees (minimal exposure)	24 hours initial 8 hours field* 8 hours hazardous waste management 8 hours annual refresher
● Non-routine site employees	24 hours initial 8 hours field* 8 hours hazardous waste management 8 hours annual refresher
Note: See 29 CFR 1910.120 (e). *Refers to on-the-job training.	

Table 2. Treatment, Storage, and Disposal Sites

Staff	
● General permit site employees	24 hours initial or equivalent 8 hours annual refresher
● Emergency response personnel	Trained to a level of competency for assigned duties Annual refresher

Note: See CFR 1910.120 (p)(7) and (p)(8).

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Table 3. Training Requirements

Other Emergency Response Staff	
Level 1 - First responder	Sufficient training (awareness) level ¹ or proven experience in specific competencies Annual refresher
Level 2 - First responder	Level 1 competency and (operations level) ² 8 hours initial or proven experience in specific competencies Annual refresher
Level 3 - HAZMAT technician ³	24 hours of Level 2 and proven experience in specific competencies Annual refresher
Level 4 - HAZMAT specialist ⁴	24 hours of Level 3 and proven experience in specific competencies Annual refresher
Level 5 - On-the-scene incident commander ⁵	24 hours of Level 2 and additional competencies Annual refresher

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.

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HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE
FINAL STANDARD¹
29 CFR 1910.120

SUMMARY OF SCOPE AND APPLICATION

Covered Operations	Applicable Requirements
I. Clean-up at uncontrolled hazardous waste sites required by federal, state and local government II. Corrective actions at RCRA sites III. Voluntary clean-up at uncontrolled hazardous waste sites recognized by federal, state and local government ²	(b) Safety and Health Program (c) Site Characterization and Analysis (d) Site Control (e) Training (f) Medical Surveillance (g) Engineering Controls, Work Practices and Personal Protective Equipment (h) Monitoring (i) Informational Programs (j) Handling Drums and Containers (k) Decontamination (l) Emergency Response by Employees at Uncontrolled Hazardous Waste Sites (m) Illumination (n) Sanitation at Temporary Workplaces (o) New Technology Programs

¹ Published 6 March 89, 54 Fed. Reg. 9294. Effective date of standard is 6 March 1990.

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² Voluntary clean-up at sites **not** recognized as uncontrolled hazardous waste sites by any governmental body is **exempt** from HAZWOPER standard.

Covered Operations	Applicable Requirements
IV. Hazardous waste operations conducted at RCRA treatment, storage or disposal (TSD) facilities	(f) Medical Surveillance (j) ³ Handling Drums and Containers (k) Decontamination (o) New Technology Programs (P) ⁴ Certain Operations Conducted Under the Resource Conservation and Recovery Act
V. Emergency response operations at all other sites	(f) ⁵ Medical Surveillance (g) ⁶ Engineering Controls, Work Practices and Personal Protective Equipment (q) Emergency Response to Hazardous Substance Releases

³ Not all paragraph (j) is applicable. Only (j)(1)(ii)—(viii), (j)(1)(xi), (j)(3) and (j)(8) apply.

⁴ Exceptions exist from many paragraph (p) requirements for large quantity hazardous waste generators who store wastes less than 90 days and small quantity hazardous waste generators. If these two classes of generators have emergency response teams with responsibility **only** for one RCRA permitted facility, only paragraph (p)(8) applies. If these two classes do not have emergency response teams, **none** of the HAZWOPER Standard applies.

⁵ Periodic medical surveillance is only required for members of organized HAZMAT teams and "hazardous materials specialists". Special medical surveillance is required for any emergency response employee who exhibits signs of symptoms from exposure during an emergency response.

⁶ Not all paragraph (g) is applicable. Only personal protective equipment paragraphs (g)(3)—(5) apply.

JUL 28 1985

OSHA Interpretations - 1910.120

Richard F. Boggs, Ph.D
Vice President
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1910 Sunderland Place N.W.
Washington, D.C. 20036

Dear Dr. Boggs:

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 clean-up 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 hazard are not considered emergency

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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
- (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.

4. Safety and Health Plan for Multi-Employer Worksite.

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 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 a specialist employee under 29 CFR 1910.120 (q)(5) are not covered by 29 CFR 1910.120.

8. Marine Operations.

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 at other locations not aboard a vessel but within the territorial waters of the U.S. OSHA does not have jurisdiction over vessels outside the territorial waters.

9. 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?

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.

I hope these responses sufficiently address the concerns you raised. If I can be of further assistance, please feel free to contact me again or Ms. MaryAnn Garrahan of the Office of Health Compliance Assistance at (202) 523-8036.

Sincerely,

Patricia K. Clark, Acting Director
Directorate of Compliance Programs

HCA: MGarrahan/ld/N3463/523-8036/6-20-89
cc: Garrahan/Smith/Clark/Carey/All RA's/Plummer/
Bryant/OTI/OCIS/Hillenbrand/Policy/Chron/Subject/Seymour
M/R Informed Becky Daiss (ORC) on 7/3 of the reasons for the
delay in responding.

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