

(France) AD 96-263-060(AB)R1 for Eurocopter France (ECF) Model AS 332C, L, and L1 helicopters, and AD 96-262-004(AB)R1 for ECF Model AS 332L2 helicopters, both dated November 5, 1997.

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**Henry A. Armstrong,**

*Manager, Rotorcraft Directorate, Aircraft Certification Service.*

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## DEPARTMENT OF LABOR

### Occupational Safety and Health Administration

#### 29 CFR Part 1910

[Docket No. S-022]

RIN 1218-AB55

#### Dipping And Coating Operations (Dip Tanks)

**AGENCY:** Occupational Safety and Health Administration (OSHA), Labor.

**ACTION:** Proposed rule.

**SUMMARY:** OSHA's rules for dipping and coating operations are designed to protect employees from the fire, explosion, and other hazards associated with these operations. OSHA is proposing to revise these rules, which are codified at §§ 1910.108 and 1910.94(d) of part 1910. This revision will achieve three purposes: it will rewrite these rules in plain language, consolidate them in several new sequential sections in subpart H of part 1910, and update them to increase the compliance options available to employers. OSHA believes that the proposed revisions will enhance employee protection by making the sections more understandable to employers and employees and providing additional compliance flexibility to employers. These revisions will not increase the burden imposed on employers by the rules. When the rulemaking is completed, OSHA will codify the revisions as § 1910.121 through 1910.125.

OSHA is presenting two alternative versions of the proposed plain language sections. The first version is organized in the traditional OSHA regulatory format, while the second version uses a question-and-answer format. OSHA invites comments on the substance of the proposed changes and on the alternative formats.

**DATES:** Written comments and requests for a hearing on this proposal must be postmarked by June 8, 1998.

**ADDRESSES:** Comments and requests for hearings must be submitted in quadruplicate or one (1) original (hardcopy) and one (1) diskette (5¼- or 3½-inch) in WordPerfect 5.0, 5.1, 6.0, or 6.1, or ASCII to: Docket Office, Docket No. S-022, Room N-2625, Occupational Safety and Health Administration, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210; telephone: (202) 219-7894. Any information not contained on the diskettes (e.g., studies, articles) must be submitted in quadruplicate with the original. Written comments of 10 pages or less may be transmitted by facsimile (fax) to the Docket Office at (202) 219-5046, provided an original and three (3) copies are sent to the Docket Office before the end of the 60-day comment period.

For an electronic copy of this **Federal Register** notice, contact the Labor News Bulletin Board at (202) 219-4748, or access OSHA's web page on the Internet at <http://www.OSHA.gov>. For news releases, fact sheets, and other short documents, contact the OSHA fax number at (900) 555-3400; the cost is \$1.50 per minute.

**FOR FURTHER INFORMATION CONTACT:** Technical inquiries should be directed to Mr. Terence Smith, Office of Fire Protection Engineering and System Safety Standards, Room N-3609, Occupational Safety and Health Administration, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210; telephone: (202) 219-7216; fax: (202) 219-7477.

Requests for interviews and other press inquiries should be directed to Ms. Bonnie Friedman, Office of Information and Consumer Affairs, Room N-3647, Occupational Safety and Health Administration, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210; telephone: (202) 219-8148.

#### SUPPLEMENTARY INFORMATION:

##### I. Background

In 1971, OSHA used section 6(a) of the Occupational Safety and Health Act of 1970 ("the Act") (29 U.S.C. 655(a)) to adopt hundreds of national consensus standards and established Federal standards as occupational safety and health standards. Over the ensuing 27 years, OSHA became aware that some of these standards are wordy, difficult to understand, repetitive, and internally inconsistent. OSHA has also received a number of complaints that these standards were rigid and difficult to follow.

In May 1995, President Clinton asked all Federal regulatory agencies to review

their regulations to determine if the regulations were inconsistent, duplicative, outdated, or in need of being rewritten in plain language. In response, OSHA conducted a line-by-line review of its standards, and committed the Agency to eliminating those standards found to be unnecessary, duplicative, and/or inconsistent and to rewriting those standards found to be complex and outdated.

In revising its rules on dipping and coating operations, OSHA's primary goal is to make them more understandable to the regulated community. The proposed revisions involve reorganizing the text, removing internally inconsistent provisions, eliminating duplicative requirements, and simplifying the overly technical language and requirements of the existing dip tank requirements, which are codified at §§ 1910.108 and 1910.94(d). OSHA also is proposing to update the current standards by revising several provisions of these standards to conform to National Fire Protection Association (NFPA) standard 34-1995; the updated requirements would replace existing provisions that were drawn from the 1966 version of the NFPA standard. For each of these proposed revisions, OSHA explains why it believes the updated requirements would provide equivalent protection to employees with no additional regulatory burden to employers.

In making these revisions, OSHA has rewritten the requirements in simple, straightforward, easy-to-understand terms. The proposed sections are performance-oriented and shorter than the existing standards. The number of subparagraphs and cross-references to other OSHA standards or to national consensus standards has been reduced. Both of the plain language versions of the proposed sections include a detailed table of contents that is intended to make the subsequent sections easier to use.

Both of the proposed plain language revisions would leave unchanged the regulatory obligations placed on employers and the safety and health protections provided to employees. OSHA believes, moreover, that the performance-oriented language of the proposed sections would facilitate compliance because it would make more compliance options available to employers than is the case with the current standards.

The proposed rules would not require employers to make technological changes and, therefore, would not impose increased costs on employers. In fact, the proposed sections may decrease

employer costs because they would permit greater compliance flexibility. Accordingly, OSHA has made a preliminary determination that no economic or regulatory flexibility analysis of the proposed sections is necessary, and certifies that the proposed sections would not have a significant impact on a substantial number of small entities.

## II. The Need to Redraft OSHA's Regulations in Plain Language

Almost immediately after OSHA adopted the national consensus standards and established Federal standards under section 6(a) of the Act, many of these standards were criticized for being difficult for employers and employees to understand. The Clinton Administration's initiative to reinvent government, spearheaded by Vice President Gore, has focused renewed attention on the difficulty many employers and employees have in understanding Federal regulatory requirements, including OSHA's rules. Responding to this initiative, the Department of Labor has developed a complete regulatory reform strategy to use plain language to make rules "user friendly." The present proposal, which offers two plain language versions of the regulatory text, is one of several standards that have been identified by OSHA as part of its regulatory reform strategy.

## III. Revising the Dipping and Coating Standards

### *Introduction—OSHA's Goals in Revising the Standards*

OSHA hopes to achieve the following three goals in this proposal:

- To rewrite these rules in plain language so that they will be easily understood by employers and employees;
- To consolidate the rules applying to dipping and coating operations into several new sequential sections in subpart H of part 1910; and
- To update the rules to increase their compliance flexibility and performance orientation.

OSHA believes that the proposal would achieve these goals without decreasing the employee protections provided by the existing rules or increasing the burden imposed on employers whose work operations involve dipping and coating. In the following paragraphs, OSHA describes how each of these goals would be served by proposed §§ 1910.121 through 1910.125 of part 1910.

### *Plain Language Revision*

This proposal is primarily a plain language revision of OSHA's standards for dipping and coating operations. In developing the proposal, the Agency has been careful to ensure that the revisions would not weaken the protections afforded to employees under current §§ 1910.108 and 1910.94(d) were not weakened in the revision process. Employers who are in compliance with current §§ 1910.108 and 1910.94(d) would continue to be in compliance with the new sections after they become effective.

The proposed revisions would delete various details and specifications from the existing rules that OSHA believes do not contribute to employee protection. For example, paragraph (c)(1) of current § 1910.108 requires that dip tanks be constructed of substantial materials, and that their supports consist of heavy metal, reinforced concrete, or masonry. The proposed rule, at paragraph (a)(1) of § 1910.123, would replace that provision with a simple requirement that dip tanks be able to withstand any expected load.

OSHA has organized proposed §§ 1910.121 through 1910.125 in a logical and understandable manner using the following principles:

- General provisions should appear before specific provisions or exceptions;
- Important provisions should appear before less important provisions;
- Frequently used provisions should appear before less frequently used provisions;
- Substantive requirements should appear before procedural requirements;
- Permanent provisions should appear before temporary, transitional, or "grandfather" provisions; and
- "Housekeeping" provisions and appendices should be placed at the end of the requirements.

The proposed revision consists of five separate sections, §§ 1910.121 through 1910.125. The first section, proposed § 1910.121, contains a table of contents for the substantive requirements contained in the other four sections. The other four sections are described as follows:

- Proposed § 1910.122, entitled "Dipping and coating operations (dip tanks); Coverage," describes what is covered and not covered by the proposed sections, and defines the significant terms used in the revision.
- Proposed § 1910.123, entitled "General requirements for dipping and coating operations," specifies, in a logical order, the requirements that would apply to all dipping and coating operations. This section begins with

construction and ventilation requirements, followed by provisions for entry in dip tanks, training, personal protective equipment, hygiene facilities, and physical examination and first aid; it concludes with cleaning, maintenance, and inspection provisions.

- Proposed § 1910.124, entitled "Additional requirements for dipping and coating operations that use flammable or combustible liquids," contains provisions for preventing fires or explosions when using flammable or combustible liquids, including additional requirements for construction (including overflow piping), shutting down operations under specific hazardous conditions, controlling ignition sources, providing fire protection, and preventing liquids from overheating.

- Proposed § 1910.125, entitled "Additional requirements for special dipping and coating applications," specifies additional requirements for operations that involve: Hardening or tempering tanks; flow coating; roll coating; roll spreading; or roll impregnating with flammable or combustible liquids; vapor degreasing tanks; cyanide tanks; spray cleaning and degreasing tanks; and electrostatic paint detearing.

The proposed reorganization will eliminate the need for employers and employees to look to two separate subparts of part 1910 for dipping and coating requirements. In addition, consolidating and reorganizing the current standards have substantially reduced their combined length. Further reduction was achieved by eliminating a number of requirements from the current standards that are adequately regulated by other OSHA standards. For example, paragraphs (g)(2) to (g)(5) of current § 1910.108 regulate fire-extinguishing systems that use, respectively, water-spray, foam, carbon dioxide, or dry chemicals as the extinguishing agents. These provisions have been replaced by a single sentence in paragraph (e)(2) of proposed § 1910.124; the proposed requirement specifies that a vapor area be protected by an automatic fire-extinguishing system that complies with the requirements of subpart L of part 1910.

The Agency believes that the proposal will increase the "user friendliness" of the requirements and make them easier to interpret. OSHA has also reduced the number of paragraph and subparagraph levels in each section to make the proposed requirements easier than the existing requirements to locate and follow. In addition, OSHA has placed general requirements in proposed § 1910.123; the general requirements are

followed by more specific requirements, which are located in proposed §§ 1910.124 and 1910.125. Further, each major provision of the proposal is preceded by a heading that explains what information can be found in that

provision. These headings are also found in the table of contents in proposed § 1910.121 to help readers locate relevant regulatory provisions.

The chart below gives some examples comparing the text used in several

provisions of current § 1910.108 with the corresponding plain language provisions in the proposed sections (traditional format version).

Current section 1910.108	Proposed plain language revision (traditional format version)
1910.108(b)(2) Ventilation combined with drying. When a required ventilating system serves associated drying operations utilizing a heating system which may be a source of ignition, means shall be provided for pre-ventilation before the heating system can be started; the failure of any ventilating fan shall automatically shut down the heating system; and the installation shall otherwise conform to the Standard for Ovens and Furnaces (NFPA No. 86A-1969).	1910.124(d) Ignition sources must be controlled. * * * * * (4) When a heating system that may be an ignition source is used in a drying operation: (i) The heating system must be installed in accordance with NFPA 86A-1969, Standard for Ovens and Furnaces, which is incorporated by reference in section 1910.6; (ii) Adequate mechanical ventilation must be operating before and during the drying operation; and (iii) The heating system must shut down automatically when any ventilating fan fails to maintain adequate ventilation.
1910.108(c)(6) Conveyor systems. Dip tanks utilizing a conveyor system shall be so arranged that in the event of fire, the conveyor system shall automatically cease motion and required bottom drains shall open. Conveyor systems shall automatically cease motion unless required ventilation is in full operation. See also paragraph (b)(1) of this section.	1910.124(c) Conveyor systems must shut down automatically. A conveyor system used with a dip tank must shut down automatically when: (1) There is a fire; (2) There is a failure of any fan used to maintain adequate ventilation; or (3) The rate of ventilation drops below the level required to meet the requirements in paragraph (b) of section 1910.123.
1910.108(d) Liquids used in dip tanks, storage and handling. The storage of flammable and combustible liquids in connection with dipping operations shall conform to the requirements of sec. 1910.106, where applicable. Where portable containers are used for the replenishment of flammable and combustible liquids, provision shall be made so that both the container and tank shall be positively grounded and electrically bonded to prevent static electric sparks.	1910.124(d) Ignition sources must be controlled. * * * * * (3) When a portable container is used to add a liquid to a dip tank, the container and tank must be electrically bonded to each other, and positively grounded, to prevent static electrical sparks or arcs.
1910.108(e) Electrical and other sources of ignition. (1) Vapor areas. (i) There shall be no open flames, spark producing devices, or heated surfaces having a temperature sufficient to ignite vapors in any vapor area. Except as specifically permitted in paragraph (h)(3) of this section, relating to electrostatic apparatus, electrical wiring and equipment in any vapor area (as defined in paragraph (a)(2) of this section) shall be explosion proof type according to the requirements of subpart S of this part for Class I, Group D locations and shall otherwise conform to subpart S of this part.	1910.124(d) Ignition sources must be controlled. (1) A vapor area, and areas within 20 feet (6.1 m) of the vapor area not separated from it by tight partitions, must be free of open flames, spark-producing devices, or surfaces hot enough to ignite vapors. (2) Electrical wiring or equipment in a vapor area, and areas adjacent to it, must comply with the applicable requirements of subpart S of this part for hazardous (classified) locations.
1910.108(f)(2) Waste cans. When waste or rags are used in connection with dipping operations, approved metal waste cans shall be provided and all impregnated rags or waste deposited therein immediately after use. The contents of waste cans shall be properly disposed of at least once daily at the end of each shift.	1910.124(d) Ignition sources must be controlled. * * * * * (6) Rags or other material contaminated with liquids from dipping and coating operations must be placed in an approved waste can immediately after use, and the contents of the waste can must be properly disposed of at the end of each shift.
1910.108(h)(2)(iii) Paint shall be supplied by direct low-pressure pumping arranged to automatically shut down by means of approved heat actuated devices, in the case of fire, or paint may be supplied by a gravity tank not exceeding 10 gallons in capacity.	1910.125(b) Additional requirements for flow coating. (1) Paint must be supplied to the process by: (i) A direct low-pressure pumping system that automatically shuts down by means of an approved heat-actuated device in the case of fire; or (ii) A gravity tank not exceeding 10 gallons (38 L) in capacity.

#### Proposed Question-and-Answer Version

The question-and-answer version of proposed §§ 1910.121 through 1910.125 differs significantly from the traditional format version. The question-and-answer version is intended to resemble a conversation that could occur between an employer/employee and an OSHA representative. Each question pertains to a specific provision of the proposed sections, and is followed by an answer that states the applicable requirement. For example, the question may be, "What are the requirements for the construction of a dip tank?" This

question, which is the topic of paragraph (a) of proposed § 1910.123, is followed by an answer that consists of a description of the requirements for dip tank construction.

#### Consistency with Recent Consensus Standards

OSHA's effort to redraft the requirements for dipping and coating operations in plain language includes a review of the relevant OSHA interpretations of the current rule to determine what each provision has meant in practice. The Agency also has examined existing training materials

and national consensus standards on dipping and coating operations, including NFPA 34-1995 ("Standard for Dipping and Coating Processes Using Flammable or Combustible Liquids"). This analysis has enabled OSHA to reorganize the existing rules and eliminate duplicative or unnecessary provisions without diminishing the employee safety and health protections provided by the existing rules.

The original OSHA standards for dipping and coating operations that were adopted in 1971 under section 6(a) of the Act were based on the existing national consensus standards, NFPA

34-1966, "Standard for Dip Tanks Containing Flammable or Combustible Liquids," and ANSI Z9.1-1969, "Safety Code for Ventilation and Operation of Open-Surface Tanks." These consensus standards have been updated several times by NFPA and ANSI since 1971. Although the proposed rule is primarily a plain language revision, OSHA has reviewed carefully the most recent NFPA 34, "Standard for Dipping and Coating Processes Using Flammable or Combustible Liquids," 1995 edition, to determine whether some updated provisions should be incorporated at this time.

OSHA has included in this proposal several provisions from NFPA 34-1995 that would provide additional compliance flexibility to employers and make the proposed sections more performance oriented compared to the existing standards, without in any way reducing employee protection. For example, paragraph (c)(2)(i) of current § 1910.108 specifies that overflow pipes from dip tanks lead to a safe location outside buildings. Consistent with Section 3-5.1 of NFPA 34-1995, paragraph (b)(1) of proposed § 1910.124 would require that pipes discharge to a "safe location," but does not identify where the "safe location" must be. In the plain language rewrite, an employer would be free to choose an interior location as the discharge point for the overflow pipe when a safe location, as might be provided by a salvage tank, is available. In situations where a safe interior location is available, the employer would no longer need to install overflow pipes over the distances often involved to reach an outside discharge point. The proposed rule would thus provide greater compliance flexibility and reduce costs for some employers.

Another example is paragraph (c)(7) of current § 1910.108, which requires that dip tank liquids not be heated to a temperature more than 50 °F below the flashpoint of the liquid. This provision is intended to assure that the liquid does not get so hot as to ignite. Section 3-9.2 of NFPA 34-1995 seeks to achieve the same purpose by prohibiting dip tank liquids from being heated above the liquid's boiling point or to within 100 °F of the liquid's autoignition temperature. OSHA is proposing to adopt the NFPA 34-1995 provision in paragraph (f) of proposed § 1910.124 because the proposed revision fully addresses the flammability hazard, provides a reasonable method of determining a safe temperature, is consistent with industry practice and with OSHA's application of the current standard, and is less restrictive than the

existing requirement (i.e., it allows higher temperatures in some cases).

Rewriting specification-based standards such as OSHA's existing rules for dipping and coating operations offers the opportunity to use more performance-oriented language than the current standards, and to do so in a way that allows OSHA to maintain the current level of employee safety and health protection without increasing employer obligations. For example, in current § 1910.94, paragraph (d)(3) contains a general requirement that ventilation systems reduce air contaminants to the degree that a hazard to employees no longer exists, while paragraph (d)(4) provides several columns of specifications for ventilation system design and rates of exhaust. These requirements seek to protect employees against fire and explosion hazards that can result from the accumulation of flammable vapors and from dangerous levels of toxic air contaminants. In the proposal, the general requirement has been replaced by two sentences in paragraph (b)(1) of § 1910.123, which set forth performance-oriented requirements. The first sentence requires ventilation adequate to prevent the vapor concentration from exceeding 25% of the lower flammable limit (LFL) of any flammable material. The second sentence requires the employer to ensure that engineering controls, such as ventilation, reduce employee exposures to toxic air contaminants below the applicable permissible exposure limits specified in subpart Z of part 1910. The new language is being proposed because it gives improved guidance to employers as to what constitutes a hazard to employees in this situation.

OSHA believes the 25% LFL criterion provides improved guidance to employers because the criterion is recognized by NFPA 34-1995 as the level that must not be exceeded when controlling fire and explosion hazards in vapor areas, and is consistent with other existing OSHA standards (e.g., § 1910.146, the standard for permit-required confined spaces). The second sentence in paragraph (b)(1) of proposed § 1910.123 would replace the requirement in paragraph (d)(2)(iii) of current § 1910.94 which states that "[t]he toxic hazard is determined from the concentration \* \* \* below which ill effects are unlikely to occur to the exposed worker" and, in the next sentence, that "(t)he concentrations shall be those in § 1910.1000." Subpart Z of part 1910 contains permissible exposure limits for toxic air contaminants and requires employers to

reduce employee exposures to those limits. Restating the subpart Z requirement in the proposal gives employers better notice than the current standard of their existing obligations, and will assure that employees receive the protection required by existing OSHA standards.

The detailed specifications and general requirements for mechanical ventilation in paragraphs (d)(1)(ii), (d)(2), (d)(4), and (d)(7)(i) through (d)(7)(iv) of current § 1910.94, and paragraph (b)(1) of current § 1910.108, would be replaced by paragraph (b)(3) of proposed § 1910.123. Employers would have several options in complying with the proposed requirement. One option would be to conform to the older consensus standards (i.e., ANSI Z9.1-1971 and NFPA 34-1966) that served as the source documents for current §§ 1910.94(d) and 1910.108. This option assures that systems designed to meet the existing requirements also would comply with the proposed requirements. In addition, the proposal would allow employers who are installing or upgrading ventilation systems to conform to the specifications provided in the following reference documents: ANSI Z9.2-1979, NFPA 34-1995, or the Industrial Ventilation Manual published by ACGIH-1995. OSHA has evaluated these reference documents and has determined that they provide protection equivalent to the specifications in the current OSHA standards. Hence, paragraph (b)(3) of proposed § 1910.123 would give employers flexibility in designing ventilation systems without reducing the level of employee protection.

#### *Major Issues for Public Comment*

The proposed revisions to the current standards that regulate dipping and coating operations differ from other Agency rulemakings because the proposal, with limited exceptions, revises only the writing style and organization of the current standards. In the past, OSHA has dispensed with public notice and comment when a proposed rule contains only minor or non-controversial revisions. For this revision, however, OSHA has decided to notify the public of the proposal and seek comments regarding the Agency's plain language versions of its existing rules for dipping and coating operations.

OSHA especially welcomes public comments on the following three issues:

- Does each plain language version of the proposed sections provide employee protection that is at least as effective as the protection provided by the current standards (i.e., §§ 1910.94(d) and

1910.108) without imposing additional regulatory burdens on employers?

- Which of the two plain language versions (traditional format or question-and-answer) is preferred, and the reason(s) why?

- Are there outdated provisions in the proposed sections, and how should these provisions be revised to bring them up to date? Comments on this issue may be used by the Agency either to improve the final rule or to develop standard-setting priorities for further action.

#### *Significant Proposed Changes to the Current Rules*

Many of the proposed revisions to the dipping and coating standards are intended to reconcile conflicting or differing provisions in the existing standards, to eliminate unnecessary requirements that do not promote employee safety, or to state requirements in performance-oriented language. OSHA invites public comment on whether these revisions are appropriate. These revisions are discussed further in the following paragraphs.

1. In current § 1910.94, the second sentence of paragraph (d)(7)(iii) requires that traps or other devices be provided to insure that condensate in exhaust ducts does not drain back into any tank. This requirement is not included in the proposal because OSHA believes that its purpose is to protect material in the dip tanks from contamination, not to protect employees.

2. Paragraph (d)(8)(i) of current § 1910.94 contains detailed requirements for measuring and recording airflow before and during dip tank operations. The proposal, in paragraph (j)(1)(i) of § 1910.123, requires the employer to inspect ventilating systems at least quarterly, and to check and maintain air-flow rates. OSHA believes that the proposal would provide equivalent protection using performance-oriented language. In addition, the first sentence in paragraph (d)(8)(i) of current § 1910.94 is covered by paragraphs (b) and (c) of proposed § 1910.123. The requirement in the second sentence of the current rule, to use specific means for measuring air flow, is replaced by performance-oriented language in paragraph (c)(3)(iii) of proposed § 1910.123 that permits the use of other equally effective devices. In the third sentence of the current rule, the requirement to record specific air measurements is not in the proposal because OSHA believes that recording the hood static pressure is not necessary to maintain proper air-flow rates. The last sentence in this paragraph of

current § 1910.94(d), which refers to a 1960 consensus standard, is replaced by updated references in paragraph (b)(3) of proposed § 1910.123.

3. Paragraph (d)(8)(ii) of current § 1910.94 permits recirculation of exhaust air when contaminants have been removed, while paragraph (b)(1) of current § 1910.108 states that exhaust air must be "(moved) to a safe outside location." To resolve this conflict between the existing standards, paragraph (c) of proposed § 1910.123 would permit recirculation of exhaust air only under specified conditions, which are based on recommendations in NFPA 34–1995. The safeguards of the current standards are, therefore, provided in the proposal in updated form without reducing employee protections or increasing the burden on employers. In addition, the first sentence in paragraph (d)(8)(ii) of current § 1910.94 has not been included in the proposal because the requirement that "[t]he exhaust system shall discharge to the outer air in such a manner that the possibility of its effluent entering any building is at a minimum" has been subsumed by the specifications in paragraph (c) of proposed § 1910.123. The last sentence in paragraph (d)(8)(iii) of current § 1910.108 has not been restated in the proposal because it is covered by paragraph (c)(2) of proposed § 1910.123.

4. Several provisions in paragraph (d)(9) of current § 1910.94 specify that various types of personal protective equipment must be worn by employees who work near dip tanks to protect them from eye or skin contact with corrosive liquids. Some of these current provisions require that personal protective equipment be "provided" to employees; for example, paragraph (d)(9)(iii) of the current standard requires that employees who handle wet parts "shall be provided with gloves" that are impervious to the liquid. Others of these current provisions state explicitly that employers must require employees to use the equipment; paragraph (d)(9)(v) of the current standard, for example, specifies that when liquids could splash out of a dip tank, the employees "shall be required to wear either tight-fitting chemical goggles or an effective face shield."

In the proposal, paragraph (f) of § 1910.123 states explicitly, for each specified type of personal protective equipment, that employers must both provide and require employees to use the equipment. OSHA's interpretation, which has been upheld by the courts, is that the current standard requires employers to ensure that employees use the personal protective equipment; this

interpretation applies even though this requirement is not stated explicitly in several provisions of the current standard. OSHA believes that providing such equipment without requiring its use would not serve the current standard's protective purpose. In addition, OSHA's general standard for personal protective equipment, paragraph (a) of § 1910.132, explicitly requires that personal protective equipment be both "provided" and "used" whenever necessary to protect employees against chemical and other hazards. The proposal's explicit requirement that employers ensure that employees use the personal protective equipment that has been provided to them does not, therefore, add to the obligation that employers already have under § 1910.132(a).

5. Paragraph (d)(9)(ix) of current § 1910.94 specifies that one wash basin with hot water be provided for every 10 employees. The proposal, in paragraph (g)(3) of § 1910.123, requires washing facilities for all employees but does not specify the ratio of wash basins to employees. The proposal thus takes a performance-oriented approach to allow for differing workplace needs.

6. Current § 1910.108, paragraph (a)(2), defines a vapor area as any area containing dangerous quantities of flammable vapors in the vicinity of dip tanks, while paragraph (b)(1) of existing § 1910.108 requires that a properly designed ventilation system be used to limit vapor areas to the smallest practical area. In a vapor area, several provisions of existing § 1910.108 require that employees be protected against the associated fire and explosion hazards; for example, paragraph (e)(2) prohibits open flames and spark-producing devices, and specifies that explosion-proof electrical equipment be used, within 20 feet of a vapor area. Similar requirements are found in paragraphs (e)(1)(i) and (e)(1)(ii) of the current rule.

Paragraph (d)(3) of current § 1910.94 is a generic, performance-oriented provision that requires employers to provide ventilation sufficient to eliminate any hazard to employees, including flammable and explosive hazards. OSHA interprets this provision to mean that the concentration of flammable vapors must be reduced below 25% of the lower flammable limit (LFL), and has incorporated that interpretation in paragraph (b)(1) of proposed § 1910.123. The proposed requirement will prevent the accumulation of dangerous quantities of flammable vapors in the vicinity of a dip tank; consequently, a vapor area, as that term is currently specified in

paragraph (a)(2) of current § 1910.108, should never exist.

Despite the protection afforded by paragraph (b)(1) of proposed § 1910.123, a ventilation system may fail temporarily, resulting in an accumulation of flammable vapors that exceeds the concentration allowed by the current standard. Even when ventilation is normally sufficient to prevent the accumulation of dangerous concentrations of vapors, the prohibition on ignition sources within 20 feet of a vapor area specified in paragraph (e)(2) of current § 1910.108, as well as similar provisions in paragraphs (e)(1)(i) and (e)(1)(ii), is needed to protect against fires and explosions that could result from the ignition of flammable liquids or vapors under these conditions.

To reconcile the requirements in the current standards, and to assure the same level of employee protection provided by these standards, OSHA has revised the definition of vapor area in paragraph (d) of proposed § 1910.122 by eliminating the phrase "dangerous concentrations of flammable vapors." In the proposal, a vapor area is defined as "any space containing dipping or coating operations, its drain boards, and associated drying or conveying equipment."

All requirements of existing § 1910.108 that apply to vapor areas would continue to apply to vapor areas as defined in paragraph (d) of proposed § 1910.122. These requirements include paragraphs (e)(1)(i), (e)(1)(ii), and (e)(2) of current § 1910.108, discussed earlier, which are restated in paragraphs (d)(1) and (d)(2) of proposed § 1910.124, and paragraphs (f)(1) and (g)(2) of current § 1910.108, which are incorporated into paragraphs (d)(5) and (e)(3) of proposed § 1910.124. Paragraph (f)(1) of the current section requires that "areas in the vicinity of dip tanks" be kept as clear of combustible stock as practical and be kept entirely free of combustible debris, while paragraph (g)(2) specifies that automatic water spray-extinguishing systems "be arranged to protect tanks, drain boards, and stock over drain boards." In the proposal, paragraphs (d)(5) and (e)(3) of § 1910.124 state explicitly that the requirements apply to vapor areas, thus describing the area subject to the requirements more clearly and consistently than the current standard.

7. In current § 1910.108, paragraph (c)(1) specifies that dip tanks holding flammable or combustible liquids "be constructed of substantial noncombustible material." OSHA, however, believes that the requirement should apply to all dip tanks; the

current provision, therefore, has been revised slightly to expand its scope to all dip tanks and restated in paragraph (a) of proposed § 1910.123. OSHA believes that employers currently are following this requirement for all dip tanks, and, therefore, that this proposed revision to the existing rule will not impose an additional burden on employers.

8. Paragraph (c)(2)(ii) of current § 1910.108 requires that overflow pipes be of sufficient capacity, at least 3 inches in diameter, and increase in size depending on the surface area of the liquid and the length and pitch of the pipe. The first and second, but not the third, of these requirements are included in paragraph (b)(2) of proposed § 1910.124. OSHA believes that the proposed language, by requiring overflow pipes to be of "sufficient capacity," makes it unnecessary to specify further the characteristics of overflow pipes.

9. The proposal does not include the requirements in paragraphs (c)(3) and (c)(4) of current § 1910.108 that specific dip tanks be provided with bottom drains and salvage tanks to drain and collect the liquid in case of fire. OSHA believes that these requirements relate primarily to property protection rather than employee protection (i.e., bottom drains and salvage tanks are used to save the liquid for possible reuse). Moreover, bottom drains may actually increase the surface area of a fire by increasing the potential for fire on the vertical walls of the tank, thereby increasing the hazard to employees.

10. Paragraph (d) of current § 1910.108 provides that, when portable containers are used to replenish flammable or combustible liquids, both the container and the tank must be positively grounded and electrically bonded to prevent static electric sparks. In the proposal, paragraph (d)(3) of § 1910.124 clarifies the current provision by requiring that the container and tank be electrically bonded to each other. Once they are bonded electrically, it is sufficient to ground one of them to prevent static electrical sparks or arcs.

11. In current § 1910.108, paragraph (e)(2) prohibits open flames or spark-producing devices near vapor areas but provides an exception "as specifically permitted in NFPA Standard No. 86A-1969, Ovens and Furnaces, paragraph 200-7." This exception is not included in paragraph (d)(1) of proposed § 1910.124 because the NFPA standard used as a reference does not provide adequate information to make it useful and the exception has not been continued in the most recent NFPA standard (i.e., NFPA 34-1995). Also

consistent with NFPA 34-1995 (see paragraph 4-1.2), paragraph (d)(1) of proposed § 1910.124 adds "surfaces hot enough to ignite vapors" to the list of ignition sources that are prohibited near vapor areas.

12. Current § 1910.108, paragraph (f)(2), requires that waste cans be emptied "at least once daily at the end of each shift." OSHA interprets this phrase to mean "at least once daily or at the end of each shift, whichever is more frequent." OSHA believes that paragraph (d)(6) of proposed § 1910.124, which requires that waste cans be emptied "at the end of each shift," would remove the ambiguity from the current standard.

13. Paragraph (d)(8) of existing § 1910.94 and paragraph (f)(3) of current § 1910.108 require inspections of dip tanks and related equipment. OSHA has reconciled and consolidated these requirements in paragraph (j) of proposed § 1910.123. For example, paragraph (d)(8) of current § 1910.94 requires quarterly inspections of specific equipment, while paragraph (f)(3) of existing § 1910.108 specifies that periodic inspections be conducted. Proposed § 1910.123, paragraph (j)(1), calls for inspecting ventilating equipment "at least quarterly," and dipping and coating equipment "periodically." OSHA believes that this requirement is appropriate and consistent with the intent of both existing standards.

14. Paragraph (f)(4) of current § 1910.108 requires that "No Smoking" signs in large letters on contrasting color background shall be conspicuously posted" near dip tanks. Paragraph (d)(7) of proposed § 1910.124 uses similar performance-oriented language, requiring that such signs be "readily visible." In addition, proposed § 1910.124, paragraph (d)(7), explicitly prohibits smoking in a vapor area. While not stated explicitly, the current standard's requirement that "No Smoking" signs be posted near dip tanks indicates that smoking is prohibited in that area. Paragraph (e)(1)(i) of existing § 1910.108 specifically prohibits open flames and hot surfaces in a vapor area. In this context, OSHA considers smoking materials to be open flames and hot surfaces, and, therefore, subject to the prohibition specified by the existing standard. To state the current standard's prohibition on smoking more clearly in the proposal, OSHA is including this prohibition in the same provision that requires "No Smoking" signs (i.e., paragraph (d)(6) of proposed § 1910.124).

15. Paragraphs (g)(2), (g)(4), and (g)(5) of current § 1910.108 require that the specified fire-extinguishing systems be arranged to protect the tanks, drain boards, and stock over drain boards. Proposed § 1910.124, paragraph (e)(3), states that "[a] vapor area must be protected by an automatic fire-extinguishing system that conforms to subpart L of this part." Since the definition of vapor area in paragraph (d) of proposed § 1910.122 is broad enough to include the tanks, drain boards, and stock over drain boards that are located in the vapor area, OSHA concludes that paragraph (e)(3) of proposed § 1910.124 is equivalent to the current standard.

16. Paragraph (g)(6)(iii) of existing § 1910.108 requires that covers on dip tanks be supported by chains or wire rope under conditions in which burning a cord used for this purpose would interfere with operation of the cover. This requirement is not specifically included in proposed § 1910.124, paragraph (e)(4), because OSHA believes that paragraph (e)(4)(i) of proposed § 1910.124, which requires that covers be activated by an approved automatic device, makes such a requirement unnecessary.

17. In current § 1910.108, paragraph (h)(1)(iii) requires that hardening and tempering tanks be designed so that the maximum workload is incapable of raising the temperature of the cooling medium to within 50 °F below its flashpoint, or be equipped with a circulating cooling system that accomplishes the same result. Paragraph (a)(5) of proposed § 1910.125, in contrast, requires the use of a circulating cooling system "when the liquid temperature can exceed the alarm set point"; the alarm set point must be at the temperature that is 50 °F (10 °C) below the liquid's flashpoint according to proposed § 1910.125, paragraph (a)(4)(i). The proposed provision would not require a circulating cooling system or any other protective device when the

tank design prevents the liquid's temperature from reaching 50 °F (10 °C) below the flashpoint.

18. Paragraphs (h)(1)(vi) and (h)(1)(vii) of existing § 1910.108 contain requirements for handling oil in hardening and tempering tanks. In the proposal, paragraphs (a)(5) and (a)(6) of § 1910.125 restate the current requirements but replace the term "oil" with "liquid." While OSHA believes that oil is the only liquid currently used in hardening and tempering tanks, the revised terminology will permit the Agency to extend these requirements to other flammable or combustible liquids that may be used in the future under the conditions specified in these paragraphs.

19. With regard to flow-coating operations, paragraph (h)(2)(i) of existing § 1910.108 states that "[e]xcept as modified by this paragraph, all of the preceding standards for dip tanks apply." The introduction to proposed § 1910.125 restates this existing requirement in plain language and broadens its application to all special dipping and coating operations. OSHA believes that the proposed language would serve only to remind employers of their existing obligations, and, therefore, imposes no additional obligation on them.

20. Paragraph (h)(2)(iv) of current § 1910.108 specifies that the area of the sump, and any areas on which paint flows, are to be included within the area of the dip tank; consequently, these areas would be covered by the scope of the current standard. OSHA has not included a corresponding provision in the proposal because, in paragraph (d) of proposed § 1910.122, the definition of vapor area is broad enough to include the sump and related areas. The proposal, therefore, assures that all requirements now applicable to these areas would continue to apply.

21. Existing § 1910.108, paragraph (h)(3), contains provisions for

electrostatic equipment used in paint-detecting operations. OSHA has restated these provisions in paragraph (g) of proposed § 1910.125. The Agency, however, believes that this type of equipment is no longer manufactured or used, and, therefore, questions whether any current need exists for proposed requirements; consequently, OSHA requests comments from the regulated community on the continuing need for these provisions.

22. Paragraph (h)(4) of current § 1910.108 includes requirements to prevent sparking of static electricity for operations involving roll coating, roll spreading, or roll impregnating that use Class I or Class II liquids; Class I liquids have flashpoints up to 100 °F (37.8 °C) and Class II liquids have flashpoints between 100 °F and 140 °F (37.8 °C and 60 °C). Proposed § 1910.125, paragraph (c), would require spark-prevention measures when flammable or combustible liquids with flashpoints below 140 °F (60 °C) are used in these operations. By specifying a flashpoint below 140 °F (60 °C), the proposed paragraph includes both Class I and Class II liquids addressed in paragraph (h)(4) of current § 1910.108.

#### *Tables Comparing the Proposed and Existing Sections*

For convenience, OSHA is providing tables that show the paragraph designations of the existing rules and the comparable provisions of the proposed sections. Table I covers the requirements of current § 1910.94, and Table II covers the provisions in current § 1910.108. Table III lists the provisions of proposed sections 1910.122 through 1910.125 and the sources for each provision in existing §§ 1910.94(d) and 1910.108. For these tables, the headings in the paragraph designations of the proposed rule refer to the traditional text version.

TABLE I

Current section 1910.94(d)	Proposed sections 1910.122 through 1910.125
(d) Open surface tanks-(1) General. (i) Application .....	122(a), (b).
(d)(1)(ii) Exhaust system construction .....	123(b)(3).
(d)(2)(i)-(vii) Classification of open-surface tank operations .....	Covered by standards referenced in 123(b)(3).
(d)(3) Ventilation .....	123(b)(1).
(d)(4)(i)-(v) Control requirements .....	Covered by standards referenced in 123(b)(3).
(d)(5) Spray cleaning and degreasing .....	125(f).
(d)(6) Control means other than ventilation .....	123(b)(2).
(d)(7)(i),(ii) System design .....	123(b)(3).
(d)(7)(iii) Protect against exhaust system fire .....	123(b)(5).
(d)(7)(iv) Exhaust system meets consensus standards .....	123(b)(3).
(d)(8) Operation. (i) Maintain airflow .....	123(c)(3), 123(j)(1)(i).
(d)(8)(ii),(iii) Exhaust discharge; makeup air .....	123(c).

TABLE I—Continued

Current section 1910.94(d)	Proposed sections 1910.122 through 1910.125
(d)(9) Personal protection. (i) Training .....	123(e).
(d)(9)(ii) Protective shoes .....	123(f)(1).
(d)(9)(iii) Protective gloves .....	123(f)(2).
(d)(9)(iv) Protective garments .....	123(f)(3).
(d)(9)(v) Protective goggles .....	123(f)(4).
(d)(9)(vi) Respirators .....	123(f)(5).
(d)(9)(vii) Emergency showers .....	123(g)(2).
(d)(9)(viii) Physician authorization, examination .....	123(h)(1), (2), (3).
(d)(9)(ix) Washing facilities .....	123(g)(3).
(d)(9)(x) Locker space .....	123(g)(1).
(d)(9)(xi) First aid .....	123(h)(3).
(d)(10) Special precautions for cyanide .....	125(e).
(d)(11) Inspection, maintenance, and installation. (i) Floors .....	Covered by section 1910.22(a).
(d)(11)(ii) Tank cleaning .....	123(i)(3).
(d)(11)(iii) Test tanks before entering .....	123(d).
(d)(11)(iv),(v) Entering tank .....	Covered by section 1910.146.
(d)(11)(vi) Welding operations .....	123(j)(2), (3), (4).
(d)(12) Vapor degreasing tanks. (i) Vapor control .....	125(d)(1).
(d)(12)(ii) Keep gas vapors away from heating units .....	125(d)(2), (3).
(d)(12)(iii) Do not create excessive vapors .....	125(d)(2), (3).
(d)(12)(iv) Tanks have cleanout doors .....	125(d)(5).
(d)(13) Scope. (i) Coverage .....	122(a), (b), (c).
(d)(13)(ii) Molten materials operations defined .....	122(c)(1).
(d)(13)(iii) Surface coating operations defined .....	122(c)(2).

TABLE II

Current section 1910.108	Proposed sections 1910.122 through 1910.125
(a) Definitions applicable to this section-(1) Dip tank .....	122(d).
(a)(2) Vapor area .....	122(d).
(a)(3) Approved .....	122(d).
(a)(4) Lister .....	Deleted; unnecessary.
(b) Ventilation-(1) Vapor area ventilation .....	123(b)(1), 123(b)(3), 123(b)(4).
(b)(2) Ventilation combined with drying .....	124(d)(4).
(c) Construction of dip tanks-(1) General .....	123(a), 124(a).
(c)(2) Overflow pipes. (i) Tank capacity .....	124(b)(1).
(c)(2)(ii) Overflow pipe capacity .....	124(b)(2).
(c)(2)(iii), (iv) Overflow pipe cleaning and location .....	124(b)(3), (4).
(c)(3)(i)-(iii) Bottom drains .....	Deleted; property protection.
(c)(4) Salvage tanks .....	Deleted; property protection.
(c)(5) Automatic extinguishing facilities .....	124(e)(1), (3), (4).
(c)(6) Conveyor systems .....	124(c).
(c)(7) Heating dip tank liquids .....	124(f).
(d) Liquids used in dip tanks, storage and handling .....	124(d)(3).
(e) Electrical and other sources of ignition-(1) Vapor areas. (i) No open flames, explosion proof equipment .....	124(d)(1), (2).
(e)(1)(ii) Electrical equipment in vapor areas .....	124(d)(2).
(e)(2) Adjacent areas .....	124(d)(1), (2).
(f) Operations and maintenance-(1) General .....	124(d)(5).
(f)(2) Waste cans .....	124(d)(6).
(f)(3) Inspection of dip tanks .....	123(j)(1).
(f)(4) Warning signs .....	124(d)(7).
(g) Extinguishment-(1) Extinguishers .....	124(e)(2).
(g)(2) Automatic water spray extinguishing systems .....	124(e)(3).
(g)(3) Automatic foam extinguishing systems .....	124(b)(5), (6), 124(e)(3).
(g)(4) Automatic carbon dioxide systems .....	124(e)(3).
(g)(5) Dry chemical extinguishing systems .....	124(e)(3).
(g)(6) Dip tank covers. (i) Automatically activated .....	124(e)(4)(i), (ii).
(g)(6)(ii)-(iv) Construction and use of covers .....	124(e)(4)(iii), (iv).
(h) Special dip tank applications-(1) Hardening and tempering tanks. (i) Location .....	125(a)(1).
(h)(1)(ii) Noncombustible hood and vent .....	125(a)(2), (3).
(h)(1)(iii) Temperature of cooling medium .....	125(a)(5).
(h)(1)(iv) High temperature limit switch .....	125(a)(4).
(h)(1)(v) Automatic extinguishing facilities .....	124(e)(1)(ii), 124(e)(3).



TABLE II—Continued

Current section 1910.108	Proposed sections 1910.122 through 1910.125
(h)(1)(vi) No pressurized air .....	125(a)(6).
(h)(1)(vii) Bottom drain .....	125(a)(5).
(h)(2) Flow coat; general. (i) All above apply .....	125.
(h)(2)(ii) Strong and rigid piping .....	123(b)(2).
(h)(2)(iii) Paint pumped at low pressure .....	125(b)(1).
(h)(2)(iv) Area of dip tank. ....	Covered by section 1910.122(d).
(h)(3) Electrostatic apparatus .....	125(g).
(h)(4) Roll coating .....	125(c).

TABLE III

Proposed sections 1910.122 through 1910.125 (proposed section 1910.121 contains a table of contents for proposed sections 1910.122 through 1910.125)	Current sections 1910.94(d) and 1910.108 (or applicable NFPA standards)
1910.122 Dipping and coating operations (dip tanks); Coverage:	
(a) Dipping and coating operations are covered .....	1910.94(d)(1)(i), 1910.94(d)(13)(i)
(b) Examples of covered operations .....	Same as above.
(c) Certain dipping and coating operations are not covered .....	1910.94(d)(13)(i)–(iii).
(1) Molten materials .....	1910.94(d)(13)(ii).
(2) Spray applications .....	1910.94(d)(13)(iii).
(d) Definitions that apply to dipping and coating operations .....	1910.108(a).
“Approved” .....	1910.108(a)(3).
“Autoignition temperature” .....	NFPA 325–1994.
“Combustible liquid” .....	1910.1200(c).
“Dip tank” .....	1910.108(a)(1).
“Flammable liquid” .....	1910.1200(c).
“Flashpoint” .....	1910.1200(c).
“Lower flammable limit” .....	NFPA 325–1994.
“Vapor area” .....	1910.108(a)(2).
1910.123 General requirements for dipping and coating operations:	
(a) Dip tanks must be constructed safely .....	1910.108(c)(1).
(b) Adequate ventilation must be provided:	
(1) Prevent hazardous concentrations .....	1910.94(d)(3), 1910.108(b)(1).
(2) Tank cover .....	1910.94(d)(6).
(3) Mechanical ventilation design .....	1910.94(d)(1)(ii), 1910.94(d)(2), 1910.94(d)(4), 1910.94(d)(7)(i)–(iv), 1910.108(b)(1).
(4) Direction of airflow .....	1910.108(b)(1).
(5) Independent exhaust system .....	1910.94(d)(7)(iii).
(c) Air must exhaust safely .....	1910.94(d)(8)(ii), (iii); NFPA 34–1995.
(d) Entry into a dip tank is limited .....	1910.94(d)(11)(iii)–(v).
(e) Training must be provided .....	1910.94(d)(9)(i).
(f) Personal protective equipment must be used:	
(1) Footwear .....	1910.94(d)(9)(ii).
(2) Gloves .....	1910.94(d)(9)(iii).
(3) Garments .....	1910.94(d)(9)(iv).
(4) Goggles .....	1910.94(d)(9)(v).
(5) Respirators .....	1910.94(d)(9)(vi).
(g) Hygiene facilities must be provided:	
(1) Locker space .....	1910.94(d)(9)(x).
(2) Emergency shower and eye wash .....	1910.94(d)(9)(vii).
(3) Washing facilities .....	1910.94(d)(9)(ix).
(h) Physical examination and first aid must be provided:	
(1) Physician’s approval .....	1910.94(d)(9)(viii).
(2) Treatment by properly designated person .....	1910.94(d)(9)(viii).
(3) Periodic examination .....	1910.94(d)(9)(viii).
(4) First aid .....	1910.94(d)(9)(xi).
(i) Dipping and coating operations must be cleaned safely:	
(1) Drain dip tank and open cleanout doors .....	1910.94(d)(11)(ii).
(2) Ventilate vapor pockets in tank or pit .....	1910.94(d)(11)(ii).
(j) Dipping and coating operations must be inspected and maintained.	
(1) Inspect and correct deficiencies .....	1910.94(d)(8)(i), 1910.108(f)(3).

TABLE III—Continued

Proposed sections 1910.122 through 1910.125 (proposed section 1910.121 contains a table of contents for proposed sections 1910.122 through 1910.125)	Current sections 1910.94(d) and 1910.108 (or applicable NFPA standards)
(2) Prevent employee exposure to the release of toxic metals .....	1910.94(d)(11)(vi).
(3) Use local ventilation near a vapor area .....	1910.94(d)(11)(vi).
(4) Remove solvents and vapors .....	1910.94(d)(11)(vi).
1910.124 Additional requirements for dipping and coating operations that use flammable or combustible liquids:	
(a) Noncombustible construction is required .....	1910.108(c)(1).
(b) Overflow piping must be provided	
(1) When overflow pipes are required .....	1910.108(c)(2)(i).
(2) Size of overflow pipe .....	1910.108(c)(2)(ii).
(3) Overflow piping must permit access for inspection and cleaning .....	1910.108(c)(2)(iii).
(4) Location of the overflow connection .....	1910.108(c)(2)(iv).
(5) Overflow pipe design .....	1910.108(g)(3).
(6) Overflow pipe screen .....	1910.108(g)(3).
(c) Conveyor systems must shut down automatically:	
(1) Fire .....	1910.108(c)(6).
(2) Ventilation failure .....	1910.108(b)(1).
(3) Ventilation rate drops .....	1910.108(c)(6).
(d) Ignition sources must be controlled:	
(1) No open flames near vapor areas .....	1910.108(e)(1)(i), 1910.108(e)(2).
(2) Electrical wiring .....	1910.108(e)(1)(i), (ii).
(3) Prevent static electric sparks or arcs .....	1910.108(d).
(4) Heating system in a drying operation .....	1910.108(b)(2).
(5) Combustible debris and stock .....	1910.108(f)(1).
(6) Approved waste can .....	1910.108(f)(2).
(7) No smoking .....	1910.108(f)(4).
(e) Fire protection must be provided:	
(1) Application .....	1910.108(c)(5), 1910.108(h)(1)(v).
(2) Manual fire extinguishers .....	1910.108(g)(1).
(3) Automatic fire-extinguishing system .....	1910.108(c)(5), 1910.108(g)(2)–(5).
(4) Automatic closing cover .....	1910.108(g)(6).
(f) Liquids must not be overheated .....	1910.108(c)(7).
1910.125 Additional requirements for special dipping and coating operations:	
(a) Additional requirements for hardening or tempering tanks:	
(1) Location .....	1910.108(h)(1)(i).
(2) Noncombustible hood and vent .....	1910.108(h)(1)(ii).
(3) Vent ducts treated as flues .....	1910.108(h)(1)(ii).
(4) Alarm and shut-down device .....	1910.108(h)(1)(iv).
(5) Circulating cooling system .....	1910.108(h)(1)(iii), (vii)
(6) Air pressure for filling and agitating .....	1910.108(h)(1)(vi).
(b) Additional requirements for flow coating	1910.108(h)(2).
(c) Additional requirements for roll coating, roll spreading, or roll impregnating a flammable or combustible liquid with a flashpoint below 140 °F (60 °C):	
(1) Bonding and grounding parts, and installing static collectors .....	1910.108(h)(4)(ii).
(2) Maintain a conductive atmosphere .....	1910.108(h)(4)(ii).
(d) Additional requirements for vapor degreasing tanks:	
(1) Keep vapor level below the top of the tank .....	1910.94(d)(12)(i).
(2) Prevent solvent fumes from entering air-fuel mixture .....	1910.94(d)(12)(ii).
(3) Flues and draft diverters .....	1910.94(d)(12)(ii).
(4) Temperature of the heating element .....	1910.94(d)(12)(iii).
(5) Cleanout and sludge doors .....	1910.94(d)(12)(iv).
(e) Additional requirements for cyanide tanks:	1910.94(d)(10).
(f) Additional requirements for spray cleaning and degreasing tanks:	
(1) Spraying must be enclosed .....	1910.94(d)(5).
(2) Mechanical ventilation .....	1910.94(d)(5).
(g) Additional requirements for electrostatic paint detearing:	
(1) Approved electrostatic equipment .....	1910.108(h)(3)(ii).
(2) Electrodes .....	1910.108(h)(3)(iv), (xi).
(3) Goods being painted .....	1910.108(h)(3)(vii), (viii).
(4) Maintain the safe distance .....	1910.108(h)(3)(vi).
(5) Display the safe distance on a sign .....	1910.108(h)(3)(vi).
(6) Automatic controls .....	1910.108(h)(3)(ix).
(7) Fences, rails, and guards .....	1910.108(h)(3)(x).
(8) Fire protection .....	1910.108(h)(3)(xiii).
(9) Drip plates and screens .....	1910.108(h)(3)(xiv).

#### IV. Legal Considerations

Because this proposal is a plain language redrafting of existing Agency rules, OSHA does not believe that it is necessary to determine significant risk or the extent to which the proposed sections would reduce that risk. In *Industrial Union Department, AFL-CIO v. American Petroleum Institute*, 448 U.S. 607 (1980), the Supreme Court ruled that, before OSHA can increase the protection afforded by an existing standard, the Agency must find that the hazard being regulated poses a significant risk to employees and that a new, more protective, standard is "reasonably necessary and appropriate" to reduce that risk. The sections being proposed by OSHA to replace the Agency's existing standards regulating dipping and coating operations neither increase nor decrease the protection afforded to employees, nor do they increase employers' compliance burdens. Therefore, no finding of significant risk is necessary.

The Agency believes, however, that improved employee protection is likely to result from implementation of the proposed sections because employers and employees who clearly understand what a rule requires are more likely to comply with that rule. In addition, because the proposed sections are more performance oriented than the existing OSHA requirements, employers will find it easier to comply with the new sections.

#### V. Economic Analysis

The proposed sections are not significant rules under Executive Order 12866 or major rules under the Unfunded Mandates Reform Act or section 801 of the Small Business Regulatory Enforcement Fairness Act (SBREFA) because they impose no additional costs on any private or public sector entity and do not meet any of the other criteria for significant or major rules specified by the Executive Order or the other statutes. Because the proposed sections do not impose any additional costs on employers whose operations involve dipping and coating, no economic or regulatory flexibility analysis of the proposal is required.

#### VI. Regulatory Flexibility Certification

In accordance with the Regulatory Flexibility Act, 5 U.S.C. 601 *et seq.* (as amended), OSHA has examined the regulatory requirements of the proposed sections to determine if they would have a significant economic impact on a substantial number of small entities. As indicated elsewhere in this preamble, the proposed sections will

not increase employers' compliance costs, and may even reduce the regulatory burden on all affected employers, both large and small. Accordingly, the Agency certifies that the proposed sections will not have a significant economic impact on a substantial number of small entities.

#### VII. Environmental Impact Assessment

The proposed sections have been reviewed in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 *et seq.*), the regulations of the Council on Environmental Quality (40 U.S.C. part 1500), and the Department of Labor's NEPA procedures (29 CFR part 11). As noted earlier in this preamble, the proposed sections impose the same requirements on employers as the standards they replace; consequently, the proposed sections will have no additional impact on the environment, including no impact on the release of materials that contaminate natural resources or the environment, beyond the impact imposed by OSHA's current standards regulating dipping and coating operations.

#### VIII. Paperwork Reduction Act

There is a collection of information in proposed 1910.125(g)(5) (existing 1910.108(h)(3)(vi)). This provision requires the employer to determine how far away employees should remain when electrostatic paint detearing equipment is being used. This distance is called the "safe distance." The employer must conspicuously display this "safe distance" on a sign located near the equipment. OSHA does not believe that the existing rule or the proposed requirement impose a burden on the employer to collect or display the information because OSHA believes the information has already been determined and displayed on the few, about 12, pieces of equipment in use today. Newer technology appears to have eliminated the need to manufacture or use electrostatic paint detearing equipment and OSHA is soliciting comment on the need to retain this provision. (See #21 under Significant Proposed Changes to the Current Rule). Under the Paperwork Reduction Act, OSHA is required to solicit public comment on the practical utility (need) for the information collection and the burden hour estimate (zero) associated with that collection.

The Department of Labor, as part of its continuing effort to reduce paperwork and respond burden, conducts a preclearance consultation program to provide the general public and Federal

agencies with an opportunity to comment on proposed and/or continuing collection of information in accordance with the Paperwork Reduction Act of 1995 (PRA95)(44 U.S.C. 3506(c)(2)(A)). This program helps to ensure that requested data can be provided in the desired format, reporting burden (time and financial resources) is minimized, collection instruments are clearly understood, and the impact of collection requirements on respondents can be properly assessed. Therefore, OSHA is soliciting comments on the collection of information provision in proposed 1910.125(g)(5) (existing 1910.108(h)(3)(vi)). Written comments should:

- Evaluate whether the proposed collection of information is necessary for the proper performance of the function of the Agency, including whether the information will have practical utility;
- Evaluate the accuracy of the Agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
- Enhance the quality, utility, and clarity of the information to be collected; and
- Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g. permitting electronic submissions of responses.

Comments on the collections of information should be sent to the OMB Desk Officer for OSHA at Room 10235, 726 Jackson Place, NW, Washington, DC 20503. Commenters are encouraged to send a copy of their comments on the collection of information to OSHA along with their other comments. The supporting statements for the collection of information requirements are available in both OSHA and OMB Docket Offices.

The collection of information requirement discussed above has been submitted to OMB for approval as required under 44 U.S.C. 3507(d) of the Paperwork Reduction Act of 1995. At this time OMB has not approved this collection of information.

#### IX. Unfunded Mandates

The proposed sections were reviewed by OSHA in accordance with the Unfunded Mandates Reform Act of 1995, 2 U.S.C. 1501 *et seq.*, and Executive Order 12875. As discussed above in Section IV of this preamble ("Legal Considerations"), OSHA has

made a preliminary determination that the proposal imposes no new regulatory burdens on any employer, either public or private. The scope and content of the proposed sections remain the same as those of the current standards and have not been expanded to include additional employers. Consequently, compliance with the proposed sections will require no additional expenditures by either public or private employers. In sum, the proposed sections do not mandate that State, local, and tribal governments adopt new, unfunded regulatory obligations.

#### X. Federalism

The proposed revision to the current standards regulating dipping and coating operations has been reviewed for Federalism issues, and the Agency certifies that the proposed sections have been assessed in accordance with the principles, criteria, and requirements set forth in sections 2 through 5 of Executive Order 12612.

Executive Order 12612 requires that Federal agencies, to the extent possible, refrain from limiting State policy options, consult with States prior to taking actions that restrict State policy options, and take such actions only when clear constitutional authority exists and the problem is of national scope. The Executive Order provides for preemption of State law only when Congress has expressed an intent that a Federal agency do so. Any such preemption must be limited to the extent possible.

With respect to States that do not have occupational safety and health plans approved by OSHA under section 18 of the Act (29 U.S.C. 667), OSHA finds that the proposed sections conform to the preemption provisions of the Act. Under these provisions, OSHA is authorized to preempt State promulgation and enforcement of requirements dealing with occupational safety and health issues covered by OSHA standards unless the State has an OSHA-approved State occupational safety and health plan. (See *Gade v. National Solid Wastes Management Association*, 112 S.Ct. 2374 (1992).) States without such programs are, by 29 U.S.C. 667, prohibited from issuing citations for violations of requirements covered by OSHA standards. The proposed sections do not expand this limitation.

Regarding States that have OSHA-approved occupational safety and health plans ("State-plan states"), OSHA finds that the proposed sections comply with Executive Order 12612 because the proposed sections address a problem that is national in scope, and Section

18(c)(2) of the Act (29 U.S.C. 667(c)(2)) requires State-plan States to adopt the OSHA sections, or develop alternative sections that are at least as effective as the OSHA sections. Having already adopted the current standards regulating dipping and coating operations (or having developed alternative standards acceptable to OSHA), State-plan States are not obligated to adopt the final sections that result from this rulemaking; they may, however, choose to adopt the final sections, and OSHA encourages them to do so.

#### XI. State Plan States

OSHA encourages the 25 States and Territories with their own OSHA-approved occupational safety and health plans to revise their existing standards regulating dipping and coating operations when OSHA publishes the final sections that result from this rulemaking. These States are: Alaska, Arizona, California, Connecticut (State and local government employees only), Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Mexico, New York (State and local government employees only), North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virginia, Virgin Islands, Washington, and Wyoming.

#### XII. List of Subjects in 29 CFR 1910

Coating, Combustible liquid, Dipping, Dip tanks, Fire protection, Flammable liquid, Occupational safety and health, Ventilation.

#### XIII. Authority

This document was prepared under the direction of Charles N. Jeffress, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, 200 Constitution Avenue, NW, Washington, DC 20210. The proposed sections are issued under the authority of sections 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Secretary of Labor's Order No 6-96 (62 FR 111); and 29 CFR part 1911.

Signed at Washington, DC, this 2nd day of April, 1998.

**Charles N. Jeffress,**

*Assistant Secretary of Labor.*

OSHA proposes to amend 29 CFR part 1910 as follows:

### PART 1910—OCCUPATIONAL SAFETY AND HEALTH STANDARDS

#### Subpart G—Occupational Health and Environmental Control

1. The authority citation for subpart G of part 1910 would be revised to read as follows:

**Authority:** Secs. 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Secretary of Labor's Order Nos. 12-71 (36 FR 8754), 8-76 (41 FR 25059), 9-83 (48 FR 35736), 1-90 (55 FR 9033), or 6-96 (62 FR 111), as applicable; and 29 CFR part 1911.

#### § 1910.94 [Amended]

2. Paragraph (d) of § 1910.94 would be removed.

#### Subpart H—Hazardous Materials

1. The authority citation for subpart H of 29 CFR part 1910 would be revised to read as follows:

**Authority:** Sec. 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Secretary of Labor's Order No. 12-71 (36 FR 8754), 8-76 (41 FR 25059), 9-83 (48 FR 35736), 1-90 (55 FR 9033), or 6-96 (62 FR 111), as applicable.

Sections 1910.103, 1910.106 through 1910.111, and 1910.119 through 1910.125 also issued under 29 CFR part 1911.

Section 1910.119 also issued under section 304, Clean Air Act Amendments of 1990 (Pub.L. 101-549), reprinted at 29 U.S.C. 655 Note.

Section 1910.120 also issued under section 126, Superfund Amendments and Reauthorization Act of 1986 as amended (29 U.S.C. 655 Note), and 5 U.S.C. 553.

#### § 1910.108 [Reserved]

2. Section 1910.108 would be removed and reserved.

3. A center heading and §§ 1910.121 through 1910.125 would be added. Two alternative versions of these sections are provided below. The first alternative, referred to as the "traditional format" version, reads as follows:

#### Dipping and Coating Operations (Dip Tanks)

##### § 1910.121 Table of Contents

The following is a listing of the sections and paragraphs contained in §§ 1910.122 through 1910.125.

##### § 1910.122 Dipping and coating operations (dip tanks); Coverage.

(a) Dipping and coating operations are covered.

(b) Examples of covered operations.

(c) Certain dipping and coating operations are not covered.

(d) Definitions that apply to dipping and coating operations.

"Approved"

“Autoignition temperature”  
 “Combustible liquid”  
 “Dip tank”  
 “Flammable liquid”  
 “Flashpoint”  
 “Lower flammable limit”  
 “Vapor area”

**§ 1910.123 General requirements for dipping and coating operations.**

- (a) Dip tanks must be constructed safely.
- (b) Adequate ventilation must be provided.
- (c) Air must exhaust safely.
- (d) Entry into a dip tank is limited.
- (e) Training must be provided.
- (f) Personal protective equipment must be used.
- (g) Hygiene facilities must be provided.
- (h) Physical examination and first aid must be provided.
- (i) Dipping and coating operations must be cleaned safely.
- (j) Dipping and coating operations must be inspected and maintained.

**§ 1910.124 Additional requirements for dipping and coating operations that use flammable or combustible liquids.**

- (a) Noncombustible construction is required.
- (b) Overflow piping must be provided.
- (c) Conveyor systems must shut down automatically.
- (d) Ignition sources must be controlled.
- (e) Fire protection must be provided.
- (f) Liquids must not be overheated.

**§ 1910.125 Additional requirements for special dipping and coating applications.**

- (a) Additional requirements for hardening or tempering tanks.
- (b) Additional requirements for flow coating.
- (c) Additional requirements for roll coating, roll spreading, or roll impregnating a flammable liquid or combustible liquid with a flashpoint below 140°F (60°C).
- (d) Additional requirements for vapor degreasing tanks.
- (e) Additional requirements for cyanide tanks.
- (f) Additional requirements for spray cleaning and degreasing tanks.
- (g) Additional requirements for electrostatic paint detearing.

**§ 1910.122 Dipping and coating operations (dip tanks); Coverage.**

(a) *Dipping and coating operations are covered.*

This rule applies to any operation where an object is dipped in or held above a dip tank containing a liquid other than water, or is roll- or flow-coated with such a liquid, to:

- (i) Clean it;
  - (ii) Alter its surface;
  - (iii) Change its character; or
  - (iv) Add a coating or finish to it.
- (2) This rule also applies to any draining or drying operation associated with dipping or coating.
- (b) *Examples of covered operations.*  
 Examples of operations covered by this rule include: Paint dipping;

electroplating; pickling; quenching; tanning; degreasing; stripping; cleaning; and roll, flow, and curtain coating.

(c) *Certain dipping and coating operations are not covered.* This rule does not apply:

(1) To dipping and coating operations that use a molten material such as a metal, alloy, or salt; or

(2) When an object is coated using a surface-coating operation covered by § 1910.107, Spray applications.

(d) *Definitions that apply to dipping and coating operations.*

*Approved* means the equipment is listed or approved by a nationally recognized testing laboratory as defined by § 1910.7.

*Autoignition temperature* means the minimum temperature required to cause self-sustained combustion, independent of the heating or heated element.

*Combustible liquid* means a liquid having a flash point of 100°F (37.8°C) or above.

*Dip tank* means a tank, vat, or container that holds liquids used for dipping or coating operations. In dipping or coating operations, an object may be immersed totally or partially in a dip tank, or held in the vapor above the dip tank.

*Flammable liquid* means a liquid having a flashpoint below 100°F (37.8°C).

*Flashpoint* means the minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite when tested in accordance with the definition of “flashpoint” in paragraph (c) of § 1910.1200.

*Lower flammable limit* means the lowest concentration of a material that will propagate a flame. The lower flammable limit (LFL) is usually expressed as a percent by volume of the material in air (or other oxidant).

*Vapor area* means any space containing dipping or coating operations, its drain boards, and associated drying or conveying equipment.

**§ 1910.123 General requirements for dipping and coating operations.**

Employers must comply with each of the requirements below.

(a) *Dip tanks must be constructed safely.* A dip tank, including its drain boards, must be able to withstand any expected load.

(b) *Adequate ventilation must be provided.* (1) An employer must provide ventilation to prevent vapor and mist in a vapor area from reaching a concentration greater than 25% of the lower flammable limit for the substance. When subpart Z of this part establishes a permissible exposure limit for a

chemical used in a dip tank, employers must control employee exposures in accordance with that subpart.

(2) A tank cover or material that floats on dipping and coating liquids, such as foam or beads, may be used as an alternative or supplement to ventilation provided they effectively reduce the concentrations of hazardous materials in the vicinity of the employee below the limits set in paragraph (b)(1) of this section.

(3) Mechanical ventilation, when used, must conform to one or more of the following:

(i) ANSI Z9.2-1979, Fundamentals Governing the Design and Operation of Local Exhaust Systems;

(ii) NFPA 34-1995, Standard for Dipping and Coating Processes Using Flammable or Combustible Liquids;

(iii) The Industrial Ventilation Manual published by ACGIH-1995; or

(iv) ANSI Z9.1-1971, Practices for Ventilation and Operation of Open-Surface Tanks, and NFPA 34-1966, Standard for Dip Tanks Containing Flammable or Combustible Liquids.

(4) Mechanical ventilation, when used, must draw the flow of air into a hood or exhaust duct.

(5) Each dip tank must have an independent exhaust system unless the combination of the substances being removed will not cause a fire, explosion, or hazardous chemical reaction in the duct system.

(c) *Air must exhaust safely.* (1) Exhaust air must not be recirculated into the workplace unless:

(i) Recirculated air does not create a health hazard to employees; and

(ii) Vapors in the exhaust air do not exceed 25% of their lower flammable limit.

(2) Exhaust air from an operation using flammable or combustible liquids may be recirculated only when the following additional requirements are met:

(i) The recirculated air is free of solid particulates;

(ii) Approved equipment monitors the vapor concentration in exhaust air; and

(iii) An audible alarm must be sounded and the dipping or coating operations must shut down automatically when a vapor concentration greater than 25% of the lower flammable limit is detected in the exhaust system.

(3) When exhaust hoods are used:

(i) The volume of outside air provided to work areas having exhaust hoods must be between 90 and 110 percent of the exhaust volume;

(ii) The outside air supply to such areas must not damage the exhaust hood; and

(iii) The air-flow rate of the make-up air must be measured when an exhaust hood is installed.

(d) *Entry into a dip tank is limited.*

Entry into a dip tank must be done in accordance with § 1910.146.

(e) *Training must be provided.* An employer must instruct all employees who work in or near a vapor area about:

(1) The hazards of their jobs;

(2) Appropriate first aid procedures; and

(3) Necessary personal protective equipment.

(f) *Personal protective equipment must be used.* When liquids used in a dipping and coating operation may contact employees, an employer must provide, and require employees to use:

(1) Protective footwear for any employee whose feet may become wet to keep their feet dry.

(2) Gloves for any employee whose hands may become wet to keep their hands dry.

(3) Protective garments for any employee whose clothing may become wet to keep their skin dry.

(4) Tight-fitting chemical goggles or an effective face shield when a liquid could splash into an employee's eyes; and

(5) Respirators when it is necessary to protect the health of the employee against exposure to an excessive concentration of a toxic chemical or oxygen deficiency. Respirator selection and use must conform with § 1910.134 and the appropriate requirements of subpart Z of this part.

(g) *Hygiene facilities must be provided.* (1) Locker space or equivalent clothing storage facilities must be provided to prevent contamination of street clothing.

(2) An emergency shower and eye wash must be located near dipping and coating operations that use liquids that may burn, irritate, or otherwise harm an employee's skin. A water hose at least 4 feet (1.22 m) long and not smaller than 3/4 of an inch (18 mm), with a quick-opening valve, may be substituted for an emergency shower and eye wash.

(3) Washing facilities must be provided for all employees required to use or handle any liquids that may burn, irritate, or otherwise harm their skin. (See paragraph (d) of § 1910.141.)

(h) *Physical examination and first aid must be provided.* (1) A physician's approval to work in a vapor area must be obtained for an employee with sores, burns, or other skin lesions requiring medical treatment.

(2) Any small skin abrasions, cuts, rashes, or open sores that are found or reported must be treated by a properly designated person so that the chances of exposures to the chemicals are removed.

(3) The nostrils and other parts of an employee's body that are exposed to chromic acids must be examined periodically for skin ulcers.

(4) Appropriate first aid supplies must be located near dipping and coating operations.

(i) *Dipping and coating operations must be cleaned safely.* Before the interior of a dip tank is cleaned:

(1) The contents of a dip tank must be drained and the cleanout doors opened before the interior is cleaned; and

(2) All pockets in tanks or pits where hazardous vapors may collect must be ventilated and cleared of such vapors.

(j) *Dipping and coating operations must be inspected and maintained.* (1) An employer must inspect equipment and promptly correct any deficiencies, including the following:

(i) The ventilation system must be inspected at least quarterly, and after a prolonged shutdown, to check hoods and duct work for corrosion or damage, and to check air-flow rates to ensure that proper rates are maintained; and

(ii) All dipping and coating equipment, including covers, drains, overflow piping, and electrical and fire-extinguishing systems, must be inspected periodically.

(2) Maintenance work requiring welding, burning, or open flame done near a vapor area or under conditions in which toxic metals are released must be done with local mechanical-exhaust ventilation, or with respirators that are selected and used in accordance with § 1910.134, to prevent a health hazard to employees.

(3) Maintenance work requiring welding, burning, or open flame near a vapor area must be done under local mechanical-exhaust ventilation.

(4) A dip tank must be thoroughly cleaned of solvents and vapors before it is exposed to welding, burning, or open flame.

**§ 1910.124 Additional requirements for dipping and coating operations that use flammable or combustible liquids.**

An employer using flammable or combustible liquids in dipping and coating operations must comply with the requirements in this section, in addition to the requirements of §§ 1910.122, 1910.123, and 1910.125.

(a) *Noncombustible construction is required.* A dip tank must be constructed of noncombustible material.

(b) *Overflow piping must be provided.*

(1) A dip tank with a capacity greater than 150 gallons (568 L) or a liquid surface area greater than 10 feet<sup>2</sup> (.95 m<sup>2</sup>) must have properly trapped overflow piping discharging to a safe location.

(2) Overflow pipes must be at least 3 inches (7.6 cm) in diameter and of sufficient capacity to prevent the dip tank from overflowing when liquids are added to the tank.

(3) Piping connections on drains and overflow pipes must be constructed so as to permit ready access for inspecting and cleaning the interior of the pipe.

(4) The bottom of the overflow connection must be at least 6 inches (15.2 cm) below the top of the dip tank.

(5) The overflow pipe must be arranged to prevent fire-extinguishing foam from floating away and clogging the overflow pipe by:

(i) Extending the overflow pipe through the dip tank wall and terminating the pipe at an L-joint pointing downward; or

(ii) Providing the overflow pipe with a removable screen of 1/4-inch (6.4 mm) mesh and having an area at least twice the cross-sectional area of the overflow pipe.

(6) The screen on an overflow pipe must be inspected and cleaned periodically to prevent it from clogging.

(c) *Conveyor systems must shut down automatically.* A conveyor system used with a dip tank must shut down automatically when:

(1) There is a fire;

(2) There is a failure of any fan used to maintain adequate ventilation; or

(3) The rate of ventilation drops below the level required to meet the requirements in paragraph (b) of § 1910.123.

(d) *Ignition sources must be controlled.* (1) A vapor area, and areas within 20 feet (6.1 m) of the vapor area not separated from it by tight partitions, must be free of open flames, spark-producing devices, or surfaces hot enough to ignite vapors.

(2) Electrical wiring or equipment in a vapor area, and areas adjacent to it, must conform with the applicable requirements of subpart S of this part for hazardous (classified) locations.

(3) When a portable container is used to add a liquid to a dip tank, the container and tank must be electrically bonded to each other, and positively grounded, to prevent static electrical sparks or arcs.

(4) When a heating system that may be an ignition source is used in a drying operation:

(i) The heating system must be installed in accordance with NFPA 86A-1969, Standard for Ovens and Furnaces, which is incorporated by reference in § 1910.6;

(ii) Adequate mechanical ventilation must be operating before and during the drying operation; and

(iii) The heating system must shut down automatically when any

ventilating fan fails to maintain adequate ventilation.

(5) A vapor area must be free of combustible debris and as clear of combustible stock as practical.

(6) Rags or other material contaminated with liquids from dipping and coating operations must be placed in an approved waste can immediately after use, and the contents of the waste can must be properly disposed of at the end of each shift.

(7) Smoking is prohibited in a vapor area. A readily visible "No Smoking" sign must be posted near each dip tank.

(e) *Fire protection must be provided.*

(1) This paragraph (e) applies to:

(i) A dip tank with a capacity of at least 150 gallons (568 L) or having a liquid surface area of at least 4 feet<sup>2</sup> (.38 m<sup>2</sup>); and

(ii) A hardening or tempering tank with a capacity of at least 500 gallons (1893 L) or having a liquid surface area of at least 25 feet<sup>2</sup> (2.37 m<sup>2</sup>).

(2) Vapor areas must be provided with manual fire extinguishers suitable for flammable and combustible liquid fires, and the manual fire extinguishers must conform to the requirements of § 1910.157.

(3) A vapor area must be protected by an automatic fire-extinguishing system that conforms with subpart L of this part.

(4) An automatic closing cover may be used instead of an automatic fire-extinguishing system when it is:

(i) Activated by an approved automatic device;

(ii) Capable of manual operation;

(iii) Noncombustible or of tin-clad type with enclosing metal applied with locked joints; and

(iv) Kept closed when the dip tank is not in use.

(f) *Liquids must not be overheated.* A liquid in a dip tank must not be heated:

(1) Above the liquid's boiling point; or

(2) To a temperature within 100 °F (37.8 °C) of the liquid's autoignition temperature.

#### **§ 1910.125 Additional requirements for special dipping and coating operations.**

Employers must comply as appropriate with each of the requirements of this section in addition to the requirements for dipping and coating operations specified in §§ 1910.122 through 1910.124.

(a) *Additional requirements for hardening or tempering tanks.*

**Note to paragraph (a) of § 1910.125:** The requirements specified in paragraph (d)(1) of § 1910.124 do not apply to hardening or tempering tanks.

(1) Tanks must be located as far as practicable from furnaces and be placed on noncombustible flooring.

(2) Tanks must have a noncombustible hood and vent or other equivalent device for venting to the outside.

(3) For this purpose, vent ducts must be treated as flues and kept well away from combustible roofs and other materials.

(4) Tanks must have a device that:

(i) Sounds an alarm when the liquid temperature reaches within 50 °F (10 °C) of its flashpoint (alarm set point); and

(ii) When practical from an operating standpoint, shuts down the conveying equipment that supplies work to the dip tank.

(5) A circulating cooling system or similar equipment must be used when the liquid temperature can exceed the alarm set point. A bottom drain may be used in the circulating cooling system when the drain valve operates automatically with an approved heat-actuated device or manually from a safe location.

(6) Air under pressure must not be used to fill or agitate the liquid in the tank.

(b) *Additional requirements for flow coating.* (1) Paint must be supplied to the process by:

(i) A direct low-pressure pumping system that automatically shuts down by means of an approved heat-actuated device in the case of fire; or

(ii) A gravity tank not exceeding 10 gallons (38 L) in capacity.

(2) All piping must be:

(i) Erected in a strong fashion; and

(ii) Rigidly supported.

(c) *Additional requirements for roll coating, roll spreading, or roll impregnating a flammable or combustible liquid with a flashpoint below 140 °F (60 °C).* Sparking of static electricity must be prevented by:

(1) Bonding and grounding all metallic equipment parts (including rotating parts) and installing static collectors; or

(2) Maintaining a conductive atmosphere (such as a high relative humidity) in the vapor area.

(d) *Additional requirements for vapor degreasing tanks.* (1) In a degreasing tank equipped with a condenser or vapor-level thermostat, the condenser or thermostat must keep the vapor level below the top of the dip tank by at least 36 inches (91 cm) or one-half the dip tank width, whichever is shorter.

(2) When fuel gas is used to heat the liquid in a vapor degreasing tank, solvent fumes or vapors must be prevented from entering the air-fuel mixture by making the combustion chamber air tight, except for the flue opening.

#### **Note to paragraph (d)(2) of § 1910.125:**

Special attention must be paid to making the combustion chamber air-tight when chlorinated- or fluorinated-hydrocarbon solvents are used.

(3) The flue must be made of corrosion-resistant material and extend to the outer air, and a draft diverter must be installed when mechanical exhaust is used on the flue.

(4) The surface temperature of a heating element must not cause a solvent or a mixture to decompose or be converted into any excess quantity of vapor.

(5) Tanks with a vapor area larger than 4 feet<sup>2</sup> (.38 m<sup>2</sup>) used for solvent cleaning or vapor degreasing must have cleanout or sludge doors located near the bottom of each tank. The doors must prevent leakage of liquid when closed.

(e) *Additional requirements for cyanide tanks.* Tanks must be constructed with a dike or other method to prevent cyanide from mixing with an acid when a dip tank fails.

(f) *Additional requirements for spray cleaning and degreasing tanks.* Airborne spraying to disperse a liquid above any open-surface tank must be controlled as follows:

(1) Spraying must be enclosed to the extent feasible; and

(2) Mechanical ventilation must provide enough inward air velocity to prevent the spray from leaving the vapor area.

(g) *Additional requirements for electrostatic paint detearing.* (1) Electrostatic equipment used for paint-detearing operations must be approved.

(2) The electrodes used in such equipment must be:

(i) Constructed in a substantial manner;

(ii) Rigidly supported in permanent locations; and

(iii) Insulated effectively from ground using insulators that are nonporous, noncombustible, and kept clean and dry.

(3) Goods being paint deteared using electrostatic equipment must be:

(i) Supported on conveyors; and

(ii) Manipulated by means other than by hand.

(4) The distance between goods being paint deteared and the electrodes or conductors of the electrostatic equipment must be maintained at twice the sparking distance or greater; this distance is referred to as the "safe distance."

**Note to paragraph (g)(4) of § 1910.125:** The safe distance must be maintained for goods that are supported on conveyors during the paint-detearing operation.

(5) The safe distance must be displayed conspicuously on a suitable

sign located near the electrostatic equipment.

(6) Electrostatic equipment used in paint-detearing operations must have automatic controls that immediately disconnect the power supply to the high-voltage transformer and signal the operator when:

(i) Failure occurs in ventilating equipment or conveyors used in paint-detearing operations;

(ii) A ground or imminent ground occurs at any point on the high-voltage system; or

(iii) The safe distance is not maintained.

(7) Fences, rails, or guards must be used that:

(i) Safely isolate paint-detearing operations from plant storage and personnel;

(ii) Are constructed of conducting material; and

(iii) Are adequately grounded.

(8) To protect paint-detearing operations from fire:

(i) Automatic sprinklers must be used when available; and

(ii) When such sprinklers are not available, automatic fire-extinguishing systems must be used that conform to subpart L of this part.

(9) Removable drip plates and screens must be:

(i) Used to collect paint deposits; and

(ii) Cleaned in a safe location.

The second alternative, referred to as the question-and-answer version, reads as follows:

#### Dipping and Coating Operations (Dip Tanks)

##### § 1910.121 Table of Contents.

The following is a listing of the sections and paragraphs contained in §§ 1910.122 through 1910.125.

##### § 1910.122 Dipping and Coating Operations (Dip Tanks): What is covered by this rule?

(a) Which dipping and coating operations are covered?

(b) What are examples of covered operations?

(c) Which dipping and coating operations are not covered?

(d) Which definitions apply to dipping and coating operations?

"Approved"

"Autoignition temperature"

"Combustible liquid"

"Dip tank"

"Flammable liquid"

"Flashpoint"

"Lower flammable limit"

"Vapor area"

##### § 1910.123 What are the general requirements for dipping and coating operations?

(a) What are the requirements for construction of dip tanks?

(b) What are the requirements for adequate ventilation?

(c) What are the requirements for recirculating exhaust air?

(d) What are the requirements for entry into a dip tank?

(e) What are the requirements for training employees?

(f) What personal protective equipment must be used?

(g) What hygiene facilities must be provided?

(h) What physical examinations and first aid must be provided?

(i) What are the requirements for cleaning dipping and coating operations safely?

(j) What are the requirements for inspecting and maintaining dipping and coating operations?

##### § 1910.124 What are the additional requirements for dipping and coating operations that use flammable or combustible liquids?

(a) What type of construction materials must be used?

(b) When is overflow piping required?

(c) When is a conveyor system required to shut down automatically?

(d) What are the requirements for the control of ignition sources?

(e) What fire protection must be provided?

(f) To what temperature may liquids in a dip tank be heated?

##### § 1910.125 What are the additional requirements for special dipping and coating applications?

(a) What additional requirements apply to hardening or tempering tanks?

(b) What additional requirements apply to flow coating?

(c) What additional requirements apply to roll coating, roll spreading, or roll impregnating a flammable or combustible liquid with a flashpoint below 140°F (60°C)?

(d) What additional requirements apply to vapor degreasing tanks?

(e) What additional requirements apply to cyanide tanks?

(f) What additional requirements apply to spray cleaning and degreasing tanks?

(g) What additional requirements apply to electrostatic paint detearing?

##### § 1910.122 Dipping and coating operations (dip tanks): What is covered by this rule?

(a) *Which dipping and coating operations are covered?* (1) This rule applies to any operation where an object is dipped in or held above a dip tank containing a liquid other than water, or the vapor of such a liquid, to:

(i) Clean it;

(ii) Alter its surface;

(iii) Change its character; or

(iv) Add a coating or finish to it.

(2) This rule also applies to any draining or drying operation associated with dipping or coating.

(b) *What are examples of covered operations?* Examples of operations covered by this rule include: Paint dipping; electroplating; pickling;

quenching; tanning; degreasing; stripping; cleaning; and roll, flow, and curtain coating.

(c) *Which dipping and coating operations are not covered?* This rule does not apply:

(1) To dipping and coating operations that use a molten material such as a metal, alloy, or salt; or

(2) When an object is coated using a surface-coating operation covered by section 1910.107, Spray applications.

(d) *Which definitions apply to dipping and coating operations?* "Approved" means the equipment is listed or approved by a nationally recognized testing laboratory as defined by § 1910.7.

*Autoignition temperature* means the minimum temperature required to cause self-sustained combustion, independent of the heating or heated element.

*Combustible liquid* means a liquid having a flash point of 100°F (37.8°C) or above.

*Dip tank* means a tank, vat, or container that holds liquids used for dipping or coating operations. In dipping or coating operations, an object may be immersed totally or partially in a dip tank, or held in the vapor above the dip tank.

*Flammable liquid* means a liquid having a flashpoint below 100°F (37.8°C).

*Flashpoint* means the minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite when tested in accordance with the definition of "flashpoint" in paragraph (c) of § 1910.1200.

*Lower flammable limit* means the lowest concentration of a material that will propagate a flame. The lower flammable limit (LFL) is usually expressed as a percent by volume of the material in air (or other oxidant).

*Vapor area* means any space containing dipping or coating operations, its drain boards, and associated drying or conveying equipment.

##### 1910.123 What are the general requirements for dipping and coating operations?

(a) *What are the requirements for construction of dip tanks?* An employer must ensure that a dip tank, including its drain boards, is able to withstand any expected load.

(b) *What are the requirements for adequate ventilation?*

(1) An employer must provide ventilation to prevent vapor and mist in a vapor area from reaching a concentration that is greater than 25% of the lower flammable limit for the substance. When subpart Z of this part



establishes a permissible exposure limit for a chemical used in a dip tank, an employer must control worker exposures in accordance with that subpart. A tank cover or material that floats on dipping and coating liquids, such as foam or beads, may be used as an alternative or supplement to ventilation, provided they effectively reduce the concentrations of hazardous materials in the vicinity of the employee below the limits set in paragraph (b)(1) of this section. Mechanical ventilation, when used, must conform to one or more of the following:

(i) ANSI Z9.2-1979, Fundamentals Governing the Design and Operation of Local Exhaust Systems;

(ii) NFPA 34-1995, Standard for Dipping and Coating Processes Using Flammable or Combustible Liquids;

(iii) The Industrial Ventilation Manual published by ACGIH-1995; or

(iv) ANSI Z9.1-1971, Practices for Ventilation and Operation of Open-surface Tanks, and NFPA 34-1966, Standard for Dip Tanks Containing Flammable or Combustible Liquids.

(2) Mechanical ventilation, when used, must draw the flow of air into a hood or exhaust duct. Each dip tank must have an independent exhaust system unless the combination of the substances being removed will not cause a fire, explosion, or hazardous chemical reaction in the duct system.

(c) *What are the requirements for recirculating exhaust air?*

(1) An employer must ensure that exhaust air is not recirculated into the workplace unless it does not create a health hazard to employees and vapors in the exhaust air do not exceed 25% of their lower flammable limit. Exhaust air from an operation using flammable or combustible liquids may be recirculated only when the following additional requirements are met:

(i) The recirculated air is free of solid particulates;

(ii) Approved equipment monitors the vapor concentration in exhaust air; and

(iii) An audible alarm must be sounded and the dipping and coating operations must shut down automatically when a vapor concentration greater than 25% of its lower flammable limit is detected in the exhaust system.

(2) When exhaust hoods are used, the volume of outside air provided to work areas having exhaust hoods must be between 90 and 110 percent of the exhaust volume, the outside air supply to such areas must not damage the exhaust hood, and the air-flow rate of the make-up air must be measured when an exhaust hood is installed.

(d) *What are the requirements for entry into a dip tank?* An employer must ensure that entry into a dip tank is done in accordance with § 1910.146.

(e) *What are the requirements for training employees?* An employer must instruct all employees who work in or near a vapor area about:

(1) The hazards of their jobs;

(2) Appropriate first aid procedures; and

(3) Necessary personal protective equipment.

(f) *What personal protective equipment must be used?* When liquids used in a dipping or coating operation may contact employees, an employer must provide, and require employees to use:

(1) Protective footwear for any employee whose feet may become wet to keep their feet dry;

(2) Gloves for any employee whose hands may become wet to keep their hands dry;

(3) Protective garments for any employee whose clothing may become wet to keep their skin dry;

(4) Tight-fitting chemical goggles or an effective face shield when a liquid could splash into an employee's eyes; and

(5) Respirators when it is necessary to protect the health of the employee against exposure to an excessive concentration of a toxic chemical or oxygen deficiency. Respirator selection and use must comply with § 1910.134 and the appropriate requirements of subpart Z of this part.

(g) *What hygiene facilities must be provided?* Locker space or equivalent clothing storage facilities must be provided by the employer to prevent contamination of street clothing. An employer must provide an emergency shower and eye wash located near dipping and coating operations that use liquids that may burn, irritate, or otherwise harm the employee's skin. An employer may provide a water hose at least 4 feet (1.22 m) long and not smaller than 3/4 of an inch (18 mm), with a quick-opening valve, as a substitute for an emergency shower and eye wash. Also, an employer must provide washing facilities for all employees required to use or handle any liquids that may burn, irritate, or otherwise harm their skin. (See paragraph (d) of § 1910.141.)

(h) *What physical examinations and first aid must be provided?* An employer must obtain a physician's approval before an employee with sores, burns, or other skin lesions requiring medical treatment may work in a vapor area. Any small skin abrasions, cuts, rashes, or open sores that are found or reported

must be treated by a properly designated person so that the chances of exposures to the chemicals are removed. An employer must provide periodic examination of the nostrils and other parts of an employee's body that are exposed to chromic acids to detect skin ulcers. Appropriate first aid supplies must be located near dipping and coating operations.

(i) *What are the requirements for cleaning dipping and coating operations safely?*

An employer must ensure that, before the interior of a dip tank is cleaned, the contents of the dip tank are drained and the cleanout doors are opened. Also, all pockets in tanks or pits where hazardous vapors may collect must be ventilated and cleared of such vapors.

(j) *What are the requirements for inspecting and maintaining dipping and coating operations?*

(1) An employer must inspect equipment and promptly correct any deficiencies. An employer must inspect the ventilation system at least quarterly, and after a prolonged shutdown, to check the hoods and duct work for corrosion or damage, and check air-flow rates to ensure that proper rates are maintained. An employer must inspect periodically all dipping and coating equipment, including covers, drains, overflow piping, and electrical and fire-extinguishing systems.

(2) An employer must ensure that maintenance work requiring welding, burning, or open flame done near a vapor area or under conditions in which toxic metals are released, is done with local mechanical-exhaust ventilation or with respirators that are selected and used in accordance with § 1910.134, to prevent a health hazard to employees. A dip tank must be thoroughly cleaned of solvents and vapors before it is exposed to welding, burning, or open flame.

#### **§ 1910.124 What are the additional requirements for dipping and coating operations that use flammable or combustible liquids?**

An employer using flammable or combustible liquids in dipping and coating operations must comply with the requirements in this section, in addition to the requirements of §§ 1910.122, 1910.123, and 1910.125.

(a) *What type of construction materials must be used?* An employer must ensure that a dip tank using flammable or combustible liquids is constructed of noncombustible material.

(b) *When is overflow piping required?*

(1) An employer must provide a dip tank with a capacity greater than 150 gallons (568 L) or a liquid surface area greater than 10 feet<sup>2</sup> (.95 m<sup>2</sup>) with

properly trapped overflow piping discharging to a safe location. Overflow pipes must be at least 3 inches (7.6 cm) in diameter and of sufficient capacity to prevent the dip tank from overflowing when liquids are added to the tank.

(2) Piping connections on drains and overflow pipes must be constructed so as to permit ready access for inspecting and cleaning of the interior of the pipe. The bottom of the overflow connection must be at least 6 inches (15.2 cm) below the top of the dip tank. The overflow pipe must be arranged to prevent fire-extinguishing foam from floating away and clogging the overflow pipe, either by extending the overflow pipe through the dip tank wall and terminating the pipe at an L-joint pointing downward, or by providing the overflow pipe with a removable screen of 1/4 inch (6.4 mm) mesh which has an area at least twice the cross-sectional area of the overflow pipe. The screen on an overflow pipe must be inspected and cleaned periodically to prevent it from clogging.

(c) *When is a conveyor system required to shut down automatically?* An employer must ensure that a conveyor system used with a dip tank shuts down automatically when:

- (1) There is a fire;
- (2) There is a failure of any fan used to maintain adequate ventilation; or
- (3) The rate of ventilation drops below the level required to meet the requirements in paragraph (b) of § 1910.123.

(d) *What are the requirements for the control of ignition sources?*

(1) An employer must ensure that a vapor area, and areas within 20 feet (6.1 m) of the vapor area not separated from it by tight partitions, are free of open flames, spark-producing devices, or surfaces hot enough to ignite vapors. Electrical wiring or equipment in a vapor area, and areas adjacent to it, must conform with the applicable requirements of subpart S of this part for hazardous (classified) locations. When a portable container is used to add a liquid to a dip tank, the container and tank must be electrically bonded to each other, and positively grounded, to prevent static electrical sparks or arcs.

(2) When a heating system that may be an ignition source is used in a drying operation, the heating system must be installed in accordance with NFPA 86A-1969, Standard for Ovens and Furnaces (which is incorporated by reference in § 1910.6), adequate mechanical ventilation must be operating before and during the drying operation, and the heating system must shut down automatically when any

ventilating fan fails to maintain adequate ventilation.

(3) An employer must ensure that a vapor area is free of combustible debris and as clear of combustible stock as practical. Rags or other material contaminated with liquids from dipping and coating operations must be placed in an approved waste can immediately after use, and the contents of the waste can must be properly disposed of at the end of each shift.

(4) An employer must prohibit smoking in a vapor area. A readily visible "No Smoking" sign must be posted near each dip tank.

(e) *What fire protection must be provided?*

(1) An employer must provide the fire protection required by this paragraph (e) for a dip tank with a capacity of at least 150 gallons (568 L) or having a liquid surface area of at least 4 feet<sup>2</sup> (.38 m<sup>2</sup>), and a hardening or tempering tank with a capacity of at least 500 gallons (1893 L) or having a liquid surface area of at least 25 feet<sup>2</sup> (2.37 m<sup>2</sup>).

(2) An employer must ensure that a vapor area is provided with manual fire extinguishers suitable for flammable and combustible liquid fires, and the manual fire extinguishers must conform to the requirements of § 1910.157. A vapor area must also be protected by an automatic fire-extinguishing system that conforms with subpart L of this part. An automatic closing cover may be used instead of an automatic fire-extinguishing system, when it is:

- (i) Activated by an approved automatic device;
- (ii) Capable of manual operation;
- (iii) Noncombustible or of tin-clad type with enclosing metal applied with locked joints; and
- (iv) Kept closed when the dip tank is not in use.

(f) *To what temperature may liquids in a dip tank be heated?* An employer must ensure that a liquid in a dip tank is not heated above the liquid's boiling point or to a temperature within 100°F (37.8°C) of the liquid's autoignition temperature.

**§ 1910.125 What are the additional requirements for special dipping and coating applications?**

An employer must comply as appropriate with each of the requirements of this section in addition to the requirements for dipping and coating operations in §§ 1910.122 through 1910.124.

(a) *What additional requirements apply to hardening or tempering tanks?* While the following requirements apply to hardening or tempering tanks, the requirements in the first sentence of paragraph (d)(1) of § 1910.124 do not.

(1) An employer must ensure that hardening or tempering tanks are located as far as practicable from furnaces and are placed on noncombustible flooring. Tanks must have a noncombustible hood and vent or other equivalent device for venting to the outside. For this purpose, vent ducts must be treated as flues and kept away from combustible roofs and other materials.

(2) Tanks must have a device that sounds an alarm when the liquid temperature reaches within 50°F (10°C) of its flashpoint (alarm set point), and that shuts down the conveying equipment that supplies work to the dip tank when practical from an operating standpoint. A circulating cooling system or similar equipment must be used when the liquid temperature can exceed the alarm set point. A bottom drain may be used in the circulating cooling system when the drain valve operates automatically with an approved heat-actuated device or manually from a safe location. Air under pressure must not be used to fill or agitate the liquid in the tank.

(b) *What additional requirements apply to flow coating?* An employer must ensure that paint is supplied to the process by either a direct low-pressure pumping system that automatically shuts down by means of an approved heat-actuated device in the case of fire, or a gravity tank not exceeding 10 gallons (38 L) in capacity. All piping must be erected in a strong fashion and rigidly supported.

(c) *What additional requirements apply to roll coating, roll spreading, or roll impregnating a flammable or combustible liquid with a flashpoint below 140°F (60°C)?* An employer must ensure that sparking of static electricity is prevented by bonding and grounding all metallic equipment parts (including rotating parts) and installing static collectors, or by maintaining a conductive atmosphere (such as a high relative humidity) in the vapor area.

(d) *What additional requirements apply to vapor degreasing tanks?*

(1) An employer must ensure that, in a degreasing tank equipped with a condenser or vapor-level thermostat, the condenser or thermostat keeps the vapor level below the top of the dip tank by at least 36 inches (91 cm) or one-half the dip tank width, whichever is shorter. When fuel gas is used to heat the liquid in a vapor degreasing tank, solvent fumes or vapors must be prevented from entering the air-fuel mixture by making the combustion chamber airtight, except for the flue opening. Special attention must be paid to making the combustion chamber airtight when chlorinated- or

fluorinated-hydrocarbon solvents are used. The flue must be made of corrosion-resistant material and extend to the outer air, and a draft diverter must be installed when mechanical exhaust is used on the flue.

(2) The surface temperature of a heating element must not cause a solvent or a mixture to decompose or be converted into any excess quantity of vapor. Tanks with a vapor area larger than 4 feet<sup>2</sup> (.38 m<sup>2</sup>) used for solvent cleaning or vapor degreasing must have cleanout or sludge doors located near the bottom of each tank. The doors must prevent leakage of liquid when closed.

(e) *What additional requirements apply to cyanide tanks?* An employer must ensure that tanks are constructed with a dike or other method to prevent cyanide from mixing with an acid when a dip tank fails.

(f) *What additional requirements apply to spray cleaning and degreasing tanks?* An employer must ensure that airborne spraying used to disperse a liquid above any open-surface tank is controlled by enclosing the spraying to the extent feasible, and by using mechanical ventilation that provides enough inward air velocity to prevent the spray from leaving the vapor area.

(g) *What additional requirements apply to electrostatic paint detearing?*

(1) An employer must ensure that electrostatic equipment used for paint-detearing operations is approved. The electrodes used in such equipment must be constructed in a substantial manner, rigidly supported in permanent locations, and insulated effectively from ground using insulators that are nonporous, noncombustible, and kept clean and dry.

(2) Goods being paint deteared using electrostatic equipment must be supported on conveyors and manipulated by means other than by hand. The distance between goods being paint deteared and the electrodes or conductors of the electrostatic equipment must be maintained at twice the sparking distance or greater; this distance is referred to as the "safe distance." The safe distance must be maintained for goods that are supported on conveyors during the paint-detearing operation. The safe distance must be displayed conspicuously on a suitable sign located near the electrostatic equipment.

(3) Electrostatic equipment used in paint-detearing operations must have automatic controls that immediately disconnect the power supply to the high-voltage transformer and signal the operator when failure occurs in ventilating equipment or conveyors used in paint-detearing operations, a

ground or imminent ground occurs at any point on the high-voltage system, or the safe distance is not maintained.

(4) Fences, rails, or guards must be used that safely isolate paint-detearing operations from plant storage and personnel, are constructed of conducting material, and are adequately grounded.

(5) To protect paint-detearing operations from fire, automatic sprinklers must be used when available. When such sprinklers are not available, automatic fire-extinguishing systems must be used that conform to subpart L of this part.

(6) Removable drip plates and screens must be used to collect paint deposits, and must be cleaned in a safe location.

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## GENERAL SERVICES ADMINISTRATION

### 41 CFR Parts 301-3 and 301-10

RIN 3090-AG73

### Federal Travel Regulation; Use of Commercial Transportation, Fly America Act

**AGENCY:** Office of Governmentwide Policy, GSA.

**ACTION:** Proposed rule.

**SUMMARY:** This rule proposes to amend the Federal Travel Regulation (FTR) provisions pertaining to use of U.S. flag air carriers under the provisions of the "Fly America Act." This rule will reduce the connecting time for use of a U.S. flag air carrier at an overseas interchange point, incorporate Comptroller General Decision, B-240956, dated September 25, 1991, requiring use of a code share air carrier service, and remove the waiting time requirement at gateway airports in the United States and gateway airports abroad when determining the availability or reasonable availability of a U.S. flag air carrier.

**DATES:** Comments must be received on or before May 7, 1998.

**ADDRESSES:** Send comments to the General Services Administration, Office of Governmentwide Policy, Office of Transportation and Personal Property, Travel and Transportation Management Policy Division (MTT), 1800 F Street, NW, Washington, DC 20405-0001. Telefax 202-501-0349. E-mail: [umeki.thorne@gsa.gov](mailto:umeki.thorne@gsa.gov).

#### FOR FURTHER INFORMATION CONTACT:

*Technical Information:* Umeki Thorne, telephone (202) 501-1538.

*FTR "plain language" format:* Internet GSA, [fttravel.chat@gsa.gov](mailto:fttravel.chat@gsa.gov).

#### SUPPLEMENTARY INFORMATION:

Subsection 127(d) of the General Accounting Office Act of 1996 (Pub. L. 104-316) amended 49 U.S.C. 40118 to require that the Administrator of General Services issue regulations under which agencies may permit payment for transportation on a foreign air carrier when such transportation is determined necessary. This regulation implements the Administrator's authority under the statute, identifying when a U.S. flag air carrier is deemed unavailable (for transportation between a point in the United States and a point outside the United States) or reasonably unavailable (for transportation between two points outside the United States). The regulation states that an agency may determine that transportation on a foreign air carrier is necessary as a result of a medical necessity or a security threat and states that where the costs of transportation are reimbursed by a third party, such as a foreign government, international agency, or other organization, the requirement in 49 U.S.C. 40118 to use a U.S. flag air carrier does not apply. This proposed rule is written in the "plain language" style of regulation writing as a continuation of the GSA's effort to make the FTR easier to understand and use.

*What is the "plain language" style of regulation writing?*

The "plain language" style of regulation writing is a new, simpler to read and understand, question and answer regulatory format. Questions are in the first person, and answers are in the second person. GSA uses a "we" question when referring to an agency, and an "I" question when referring to the employee.

*What are the significant changes proposed?*

There are significant changes in the proposed rule as compared to the Fly America Act provisions currently contained in FTR § 301-3.6. The proposed rule would:

(a) Reduce connecting time at an interchange point for the use of U.S. flag air carrier service from 6 hours to 4 hours.

(b) Implement language from Comptroller General Decision, B-240956, dated September 25, 1991, stating that all airline tickets issued under a code share arrangement must be issued on U.S. flag air carrier ticket stock.

(c) Implement a new method for calculation of an employee's liability for disallowance of expenditures for unauthorized transportation on a foreign air carrier.