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29 CFR Parts 1910, 1915, 1917 et al.
Employer Payment for Personal Protective Equipment; Final Rule

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Parts 1910, 1915, 1917, 1918 and 1926

[Dockets S–042 (OSHA docket office) and OSHA–S042–2006–0667 (regulations.gov)]

[RIN No. 1218–AB77]

Employer Payment for Personal Protective Equipment

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

ACTION: Final Rule.

SUMMARY: Many Occupational Safety and Health Administration (OSHA) health, safety, maritime, and construction standards require employers to provide their employees with protective equipment, including personal protective equipment (PPE), when such equipment is necessary to protect employees from job-related injuries, illnesses, and fatalities. These requirements address PPE of many kinds: hard hats, gloves, goggles, safety shoes, safety glasses, welding helmets and goggles, faceshields, chemical protective equipment, fall protection equipment, and so forth. The provisions in OSHA standards that require PPE generally state that the employer is to provide such PPE. However, some of these provisions do not specify that the employer is to provide such PPE at no cost to the employee. In this rulemaking, OSHA is requiring employers to pay for the PPE provided, with exceptions for specific items. The rule does not require employers to provide PPE where none has been required before. Instead, the rule merely stipulates that the employer must pay for required PPE, except in the limited cases specified in the standard.

DATES: This final rule becomes effective on February 13, 2008. The final rule must be implemented by May 15, 2008.

ADDRESSES: In accordance with 28 U.S.C. 2112(a), the Agency designates the Associate Solicitor of Labor for Occupational Safety and Health, Office of the Solicitor of Labor, Room S–4004, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210, to receive petitions for review of the final rule.

FOR FURTHER INFORMATION CONTACT: Mr. Kevin Ropp, OSHA Office of Communications, Room N–3647, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210. Telephone: (202) 693–1999.

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I. Introduction

In 1999, OSHA issued a proposal to require employers to pay for all protective equipment, including personal protective equipment (PPE), with explicit exceptions for certain safety shoes, prescription safety eyewear, and logging boots (64 FR 15402). The proposal cited two primary reasons for requiring employers to pay for PPE. First, OSHA preliminarily concluded that the Occupational Safety and Health Act of 1970 (OSH Act, or the Act) implicitly requires employers to pay for PPE that is necessary to protect the safety and health of employees. Second, OSHA preliminarily concluded that an across-the-board employer-payment requirement would result in safety benefits by reducing the misuse or non-use of PPE (64 FR 15406–07). Following an initial notice and comment period, an informal rulemaking hearing, a second notice and comment period on specific issues, and careful Agency deliberation, OSHA finds that its preliminary conclusions are appropriate and is therefore issuing this final standard requiring employers to pay for PPE, with limited exceptions.

II. Background

Employees often need to wear protective equipment, including personal protective equipment (PPE), to be protected from injury, illness, and death caused by exposure to workplace hazards. PPE includes many different types of protective equipment that an employee uses or wears, such as fall arrest systems, safety-toe shoes, and protective gloves. Many OSHA standards require employers to provide PPE to their employees or to ensure the use of PPE. Some standards indicate in broad performance terms when PPE is to be used, and what is to be used (See, *e.g.,* 29 CFR 1910.132). Other provisions are very specific, such as 29 CFR 1910.266(d)(1)(iv), which requires that chain saw operators be provided with protective leggings during specific operations, and 29 CFR 1910.1027(g)(1), which requires respiratory protection for employees exposed to cadmium above a certain permissible exposure limit (PEL).

Some OSHA standards specifically require the employer to pay for PPE. However, most are silent with regard to whether the employer is obligated to pay. OSHA's health standards issued after 1978 have made it clear both in the regulatory text and in the preamble that the employer is responsible for providing necessary PPE at no cost to the employee (See, *e.g.,* OSHA's inorganic arsenic standard, 29 CFR 1910.1018(j)(1) and 43 FR 19584). In addition, the regulatory text and preamble discussion for some safety standards have also been clear that the employer must both provide and pay for PPE (See, *e.g.,* the logging standard, 29 CFR 1910.266(d)(1)(iii) and (iv) and 59 FR 51701).

For most PPE provisions in OSHA's standards, however, the regulatory text does not explicitly address the issue of payment for personal protective equipment. For example, 29 CFR 1910.132(a) is the general provision requiring employers to provide PPE when necessary to protect employees. This provision states that the PPE must be provided, used, and maintained in a sanitary and reliable condition. It does not state that the employer must pay for it or that it must be provided at no cost to employees. The provisions that are silent on whether the employer must pay have been subject to varying interpretation and application by employers, OSHA, the Occupational Safety and Health Review Commission (Review Commission), and the courts.

In 1994, OSHA established a nationwide policy on the issue of payment for required PPE in a memorandum to its field staff dated October 18, 1994, ''Employer Obligation to Pay for Personal Protective Equipment.'' OSHA stated that for all PPE standards the employer must both provide, and pay for, the required PPE, except in limited situations. The memorandum stated that where PPE is very personal in nature and used by the employee off the job, such as is often the case with steel-toe safety shoes (but not metatarsal foot protection), the issue of

payment may be left to labor-management negotiations.

However, the Review Commission declined to accept the interpretation embodied in the 1994 memorandum as it applied to 29 CFR 1910.132(a). In *Secretary of Labor* v. *Union Tank Car Co.*, 18 O.S.H. Cas. (BNA) 1067 (Rev. Comm. 1997), an employer was issued a citation for failing to pay for metatarsal foot protection and welding gloves. The Review Commission vacated the citation, finding that the Secretary had failed to adequately explain the policy outlined in the 1994 memorandum in light of several earlier letters of interpretation from OSHA that it read as inconsistent with that policy. In response to the *Union Tank* decision, OSHA issued the proposed standard on March 31, 1999 (64 FR 15402–15441).

III. The Proposed Rule

The proposed rule would have established a uniform requirement that employers pay for all types of PPE required under OSHA standards, except for certain safety-toe shoes and boots, prescription safety eyewear, and logging boots. The proposal cited two main justifications for requiring employers to pay for PPE. First, OSHA preliminarily concluded that the OSH Act requires employers to pay for PPE that is necessary for employees to perform their jobs safely. Second, OSHA preliminarily concluded that the proposed rule would enhance compliance with existing PPE requirements in several practical ways, thereby significantly reducing the risk of non-use or misuse of PPE (64 FR 15406–07).

A. Preliminary Statutory Analysis

OSHA advanced three main justifications for preliminarily interpreting the OSH Act to require employers to pay for virtually all PPE. As a threshold matter, OSHA cited the statute and legislative history that Congress intended that employers bear general financial responsibility for the means necessary to make workplaces safe (64 FR 15404). The Agency believed that this intent was evidenced by the fact that the statute makes employers solely responsible for compliance with safety and health standards. The employer's legal responsibility to ensure compliance implies an obligation to pay for the means necessary to that end (Id.). OSHA also relied upon statements in the legislative history demonstrating that lawmakers expected employers to bear the costs of complying with OSHA standards (Id.).

OSHA further preliminarily concluded that requiring employers to pay for PPE was a logical extension of the undisputed principle that employers must pay for engineering controls. The proposal noted that most standards require employers to install engineering controls, such as ventilation devices, and to implement administrative measures, such as establishing specific regulated areas or danger zones, as the primary means for reducing employee exposure to hazardous conditions. Since the Agency viewed PPE as another type of hazard control measure used to protect employees, there was no basis to distinguish PPE from other hazard controls such as engineering controls and administrative controls for purposes of cost allocation (64 FR 15408). OSHA also indicated that requiring employers generally to pay for PPE would be consistent with the Agency's approach of including explicit requirements in many health standards that PPE must be provided at no charge to employees.

B. Safety and Health Benefits

Although OSHA proposed the PPE payment rule primarily to clarify employers' obligations under its standards that require employers to provide PPE, the Agency also believed that the revised rules would improve protections for employees who must wear PPE. OSHA cited a number of reasons underlying this belief in the preamble to the proposed rule. First, the Agency believed that employers were more knowledgeable about hazards existing in the workplace, and were therefore in the best position to identify and select the correct equipment and maintain it properly (Id. at 15409). Second, the Agency believed that employer payment for PPE would reduce the risk of employees not using or misusing PPE by ensuring that employers maintain central control over the selection, issuance, and use of PPE (Id.). Third, OSHA believed that employees would be more likely to cooperate in achieving full compliance with existing standards if protective equipment was provided at no charge (Id.). In the Agency's opinion, all of these considerations together would serve to increase the use and effectiveness of PPE, and thus reduce the incidence of injuries and illnesses that are caused by non-use or misuse of PPE.

C. Proposed Exceptions

OSHA proposed to require the employer to pay for all PPE required by OSHA standards, with explicit exceptions for certain safety-toe protective footwear and prescription safety eyewear. Safety-toe protective footwear and prescription safety glasses were excepted from the employer payment requirement, in large part because these items were considered to be very personal in nature and were often worn off the jobsite. The proposal would have allowed the exceptions if they met the following conditions: (1) The employer permits such footwear or eyewear to be worn off the jobsite; (2) the footwear or eyewear is not used at work in a manner that renders it unsafe for use off the job-site; and (3) such footwear or eyewear is not designed for special use on the job. In addition, under the proposed revision, the employer would not have to pay for logging boots required by 29 CFR 1910.266(d)(1)(v) (Id. at 15403).

The limited exceptions to the general payment rule recognized that there are certain types of PPE that fall outside the scope of the general statutory requirement for employers to pay for the means of compliance with OSHA standards. While safety-toe protective shoes and boots, prescription safety eyewear, and logging boots are necessary to protect employees, the Agency considered other factors in deciding to exempt this equipment from the employer payment requirement, including that the equipment is very personal, is often used outside the workplace, and that it is taken by employees from jobsite to jobsite and employer to employer. The Agency stated that there is ''little statutory justification'' for requiring employers to pay for this type of PPE (Id. at 15407).

The proposal asked for comment on the exceptions to the general employer payment requirement. One alternative on which public input was specifically requested would have excepted any type of PPE that the employer could demonstrate was personal in nature and customarily used off the job (Id. at 15416). OSHA also sought comment on whether there were other specific types of PPE besides safety-toe shoes and boots and prescription safety eyewear that should be excepted, or whether employers should pay for all PPE including safety-toe shoes and boots and prescription safety eyewear (*Id.*). Finally, the proposal sought comment on whether the exceptions were appropriate in high-turnover industries like construction and whether unique issues in the maritime industry should affect the issue of who pays for PPE (*Id.*).

On July 8, 2004, OSHA published a notice to re-open the record on another category of PPE—tools of the trade—that some commenters suggested should be exempted from an employer payment requirement (69 FR 41221–41225). Specifically, OSHA asked a number of

questions and solicited comment on whether and how a final rule should address situations where PPE has been customarily provided by employees.

The comments received by the Agency during this limited re-opening are included in the discussion of the rulemaking record below.[1]

IV. Rationale for Requiring PPE Payment and Description of the Final Rule

A. Rationale for Requiring PPE Payment

In this final rule, OSHA is requiring employers to pay for the PPE used to comply with OSHA standards, with a few exceptions. OSHA is promulgating the final rule for three primary reasons. First, the rule effectuates the underlying requirement in the OSH Act that employers pay for the means necessary to create a safe and healthful work environment. This includes paying for the requirements in OSHA's safety and health standards. Second, the rule will reduce work-related injuries and illnesses. It is thus a legitimate exercise of OSHA's rulemaking authority to promulgate ancillary provisions in its standards that are reasonably related to the purposes of the underlying standards. Third, the rule will create a clear policy across OSHA's standards, thus reducing confusion among employers and employees concerning the PPE that employers must provide at no cost to employees.

1. The OSH Act Requires Employer Payment for PPE

OSHA is requiring employers to pay for PPE used to comply with OSHA standards in order to effectuate the underlying cost allocation scheme in the OSH Act. The OSH Act requires employers to pay for the means necessary to create a safe and healthful work environment. Congress placed this obligation squarely on employers, believing such costs to be appropriate in order to protect the health and safety of employees. This final rule does no more than clarify that under the OSH Act employers are responsible for providing at no cost to their employees the PPE required by OSHA standards to protect employees from workplace injury and death.

This policy is consistent with OSHA's past practice in numerous rulemakings. Since 1978, OSHA has promulgated nearly twenty safety and health standards that explicitly require employers to furnish PPE at no cost. For example, the standards for logging (§ 1910.266), noise (§ 1910.95), lead (§ 1910.1025), asbestos (§ 1910.1001) and bloodborne pathogens (§ 1910.1030) require employers to provide employees with PPE at no cost to employees. In litigation following the issuance of some of these standards, the courts and the Review Commission have upheld OSHA's legal authority to require employers to pay for PPE.

2. The Rule Will Result in Safety Benefits

Separate from effectuating the statutory cost allocation scheme, this rule will also help prevent injuries and illnesses. OSHA has carefully reviewed the rulemaking record and finds that requiring employers to pay for PPE will result in significant safety benefits. As such, it is a legitimate exercise of OSHA's statutory authority to promulgate these ancillary provisions in its standards to reduce the risk of injury and death.

There are three main reasons why the final rule will result in safety benefits:

- When employees are required to pay for their own PPE, many are likely to avoid PPE costs and thus fail to provide themselves with adequate protection. OSHA also believes that employees will be more inclined to use PPE if it is provided to them at no cost.
- Employer payment for PPE will clearly shift overall responsibility for PPE to employers. When employers take full responsibility for providing PPE to their employees and paying for it, they are more likely to make sure that the PPE is correct for the job, that it is in good condition, and that the employee is protected.
- An employer payment rule will encourage employees to participate whole-heartedly in an employer's safety and health program and employer payment for PPE will improve the safety culture at the worksite.

OSHA's conclusions regarding the safety benefits of the employer payment rule are supported by the numbers of independent occupational safety and health experts in the record who stated that employer payment for PPE will result in safer working conditions. Independent safety groups that supported the rule and agreed with OSHA's analysis that it will result in safety benefits include: The American College of Occupational and Environmental Medicine (ACOEM); the American Association of Occupational Health Nurses (AAOHN); and the American Society of Safety Engineers (ASSE). The National Institute for Occupational Safety and Health (NIOSH), the federal agency with expert responsibility for occupational safety and health research created by Congress in the OSH Act, also strongly supported OSHA's conclusions that an employer payment rule would result in significant safety benefits.

3. Clarity in PPE Payment Policy

Another benefit of the final PPE payment rule is clarity in OSHA's policy. While it is true that most employers pay for most PPE most of the time, the practices for providing PPE are quite diverse. Many employers pay for some items and not for others, either as a matter of collective bargaining or long standing tradition. In some cases, costs are shared between employees and employers. In other workplaces, the employer pays for more expensive or technologically advanced PPE while requiring employees to pay for more common items. However, in some workplaces exactly the opposite is true.

Collective bargaining agreements often contain pages of text describing PPE provisions, including lists of the items employers will pay for and those that will be the responsibility of employees. Even these have little or no consistency. For example, Ms. Nowell of the United Food and Commercial Workers Union (UFCW) pointed to differences in PPE payment practices across food processing establishments:

> Our contracts show differences across industries, as well as across companies. We have also found differences between union plants and those that are non-union. Non-union workers [are] paying for more of their PPE.
>
> This variation has led to disparate treatment of workers who do the same jobs, sometimes for the same company, but at different locations. * * * One of the most inconsistent items, both as to their requirement and the issue of who pays, is rubber boots, often steel toed, for production workers. The floors in poultry and meat plants and other food processing as well * * * are wet, often from standing water, and slippery from fat and product that invariably covers the floors (Tr. 184–186).

Improved clarity in OSHA's standards, as well as a more consistent approach from company to company, will have benefits for both employers and employees. The record shows that PPE provision has been a contentious issue, and that employers and employees are spending an inordinate amount of time and effort discussing, negotiating, and generally working out who is to pay for PPE. The rulemaking will put some of that discussion to rest by providing clear requirements. As noted by ASSE ''[a] key issue for ASSE members in improving the efficiency/effectiveness of safety and health programs is consistency'' (Ex. 12: 110).

For these reasons, OSHA is promulgating this final rule requiring, with limited exceptions, employer

[1] Comments received in response to the re-opening are indicated as Exhibits ''45: X'' or ''46: X.'' All other citations refer to comments and testimony in response to the proposal.

payment for PPE used to comply with OSHA standards. (See Section XIV, ''Legal Authority,'' for a more detailed discussion of the justification for the final rule.)

B. Description of the Final Rule

This rule does not set forth new requirements regarding the PPE that must be provided and the circumstances in which it must be provided. The rule merely requires employers to pay for the PPE that is used to comply with the Parts amended. The rule generally requires employers to pay for PPE, and sets forth specific exceptions where employers are not required to pay for such equipment. The final rule includes the exceptions in the proposed rule, which have been clarified and simplified; clarifications of OSHA's intent in the proposed rule regarding everyday clothing and weather-related clothing; and clarifications regarding employee-owned PPE and replacement PPE that were raised by various commenters. While these clarifications have added several paragraphs to the regulatory text, the final rule provides employees no less protection than that provided by the proposal.

The first paragraph in the final rule contains the general requirement that employers must pay for the protective equipment, including personal protective equipment that is used to comply with the amended OSHA standards. (See 29 CFR 1910.132(h)(1); 1915.152(f)(1); 1917.96; 1918.106; 1926.95(d)(1)) The provisions that follow the first paragraph modify this general requirement for employer payment and include the limited exceptions to the employer-payment rule. Employers are responsible for paying for the minimum level of PPE required by the standards. If an employer decides to use upgraded PPE to meet the requirements, the employer must pay for that PPE. If an employer provides PPE at no cost, an employee asks to use different PPE, and the employer decides to allow him or her to do so, then the employer is not required to pay for the item.

The first exception addresses non-specialty safety-toe protective footwear and non-specialty prescription safety eyewear. (See 29 CFR 1910.132(h)(2); 1915.152(f)(2); 1917.96(a); 1918.106(a); 1926.95(d)(2)) The regulatory text makes clear that employers are not required to pay for ordinary safety-toe footwear and ordinary prescription safety eyewear, so long as the employer allows the employee to wear these items off the job-site.

The second exception relates to metatarsal protection. (See 29 CFR 1910.132(h)(2); 1915.152(f)(2); 1917.96(a); 1918.106(a); 1926.95(d)(2)) The final rule clarifies that an employer is not required to pay for shoes with integrated metatarsal protection as long as the employer provides and pays for metatarsal guards that attach to the shoes.

A third exception to the final rule is located only in the general industry standard (at 29 CFR 1910.132(h)(4)(i)) and exempts logging boots from the employer payment requirement. The logging standard does not require employers to pay for the logging boots required by 1910.266(d)(1)(v), but leaves the responsibility for payment open to employer and employee negotiation. The final rule makes clear that logging boots will continue to be excepted from the employer payment rule.

The fourth exception to employer payment in the final rule relates to everyday clothing. (See 29 CFR 1910.132(h)(4)(ii); 1915.152(f)(4)(i); 1917.96(d)(1); 1918.106(d)(1); 1926.95(d)(4)(i)) The final rule recognizes that there are certain circumstances where long-sleeve shirts, long pants, street shoes, normal work boots, and other similar types of clothing could serve as PPE. However, where this is the case, the final rule excepts this everyday clothing from the employer payment rule. Similarly, employers are not required to pay for ordinary clothing used solely for protection from weather, such as winter coats, jackets, gloves, and parkas (See 29 CFR 1910.132(h)(4)(iii); 1915.152(f)(4)(ii); 1917.96(d)(2); 1918.106(d)(2); 1926.95(d)(4)(ii)). In the rare case that ordinary weather gear is not sufficient to protect the employee, and special equipment or extraordinary clothing is needed to protect the employee from unusually severe weather conditions, the employer is required to pay for such protection. OSHA also notes that clothing used in artificially-controlled environments with extreme hot or cold temperatures, such as freezers, are not considered part of the weather gear exception.

The final rule clarifies the issue of who pays for replacement PPE. The final rule requires that the employer pay for the replacement of PPE used to comply with OSHA standards. (See 29 CFR 1910.132(h)(5); 1915.152(f)(5); 1917.96(e); 1918.106(e); 1926.95(d)(5)) However, in the limited circumstances in which an employee has lost or intentionally damaged the PPE issued to him or her, an employer is not required to pay for its replacement and may require the employee to pay for such replacement.

The final rule also clearly addresses the use of employee-owned PPE. (See 29 CFR 1910.132(h)(6); 1915.152(f)(6); 1917.96(f); 1918.106(f); 1926.95(d)(6)) The rule acknowledges that employees may wish to use PPE they own, and if their employer allows them to do so, the employer will not need to reimburse the employees for the PPE. However, the regulatory text also makes clear that employers cannot require employees to provide their own PPE or to pay for their own PPE. The employee's use of PPE they own must be completely voluntary.

The final provision in the rule provides an enforcement deadline of six months from the date of publication to allow employers time to change their existing PPE payment policies to accommodate the final rule. (See 29 CFR 1910.132(h)(7); 1915.152(f)(7); 1917.96(f); 1918.106(f); 1926.95(d)(7)) A note to the final standard also clarifies that when the provisions of another OSHA standard specify whether or not the employer must pay for specific equipment, the payment provisions of that standard will prevail.

Sections V through XI below further describe the final rule and discuss the comments received during the rulemaking process:

- Section V describes the PPE required to be paid for by employers, and the exceptions to the payment requirement. It also explains the final rule's treatment of replacement PPE.
- Section VI discusses the exception from employer payment when an employee owns appropriate PPE and asks to use it in place of the equipment the employer provides.
- Section VII discusses the industries affected by the final rule and how employer payment applies to different employment situations.
- Section VIII describes acceptable means for employers and employees to comply with the final rule and discusses various payment mechanisms employers and employees have created to effectuate payment for PPE.
- Sections IX through XI explain the effective date of the final rule, the effect of the rule on collective bargaining agreements, and how employer payment provisions in other standards affect the provisions in the final rule.

V. PPE for Which Employer Payment Is Required

In this section, OSHA will address several key issues, including the personal protective equipment that employers are required to provide at no cost to their employees and the protective equipment that is exempted. OSHA wishes to emphasize that this

rulemaking does not change existing OSHA requirements as to the types of PPE that must be provided. Instead, the rule merely stipulates that the employer must pay for PPE that is required by OSHA standards, with the exceptions listed.

The items excepted from payment by this rule are:

- Non-specialty safety-toe protective footwear (including steel-toe shoes or steel-toe boots) and non-specialty prescription safety eyewear, that is allowed by the employer to be worn off the job-site;
- Shoes or boots with built-in metatarsal protection that the employee has requested to use instead of the employer-provided detachable metatarsal guards;
- Logging boots required by 1910.266(d)(1)(v);
- Everyday work clothing; or
- Ordinary clothing, skin creams, or other items used solely for protection from the weather.

This section is particularly important because commenters to the rulemaking record identified a number of items that they thought would be subject to the rule and asked the Agency to clarify whether the final rule would cover the items. Some of these items are: gloves (see, *e.g.,* Exs. 12: 7, 17, 19, 55, 68, 111, 129, 149, 163, 171, 217, 235), metatarsal shoes (see, *e.g.,* Exs. 12: 149, 235) , sunglasses (see, *e.g.,* Exs. 12: 129, 222), goggles (see, *e.g.,* Exs. 12: 111, 163), flame retardant clothing (see, *e.g.,* Exs. 12: 16, 132, 133, 183, 206, 221, 46: 46), personal apparel (see, *e.g.,* Exs. 12: 10, 16, 28), standard work apparel (see, *e.g.,* Exs. 12: 55, 129), long-sleeve shirts (see, *e.g.,* Exs. 12: 210, 222), long pants (see, *e.g.,* Exs. 12: 117, 222), jeans (see, *e.g.,* Ex. 12: 10), cotton coveralls (see, *e.g.,* Ex. 12: 210), cold weather gear (see, *e.g.,* Exs. 12: 129, 210), non safety-toe work boots (see, *e.g.,* Ex. 12: 10), hard hats (see, *e.g.,* Exs. 12: 29, 55, 68, 91, 112), aprons (see, *e.g.,* Exs. 12: 111, 163), rain suits (see, *e.g.,* Exs. 12: 55, 91, 210), back belts (see, *e.g.,* Ex. 12: 111, 163), coveralls (see, *e.g.,* Ex. 12: 111, 129, 163), tool belts (see, *e.g.,* Ex. 12: 129), and face masks in areas where respirators are not required (see, *e.g.,* Ex. 12: 109).

While OSHA believes it is setting forth a clear requirement in this final rule—that employers pay for PPE required by OSHA standards except for the exceptions listed in the standard—OSHA understands the request by commenters to provide guidance on the applicability of the standard to certain pieces of equipment. OSHA does that in this section. The section is divided into three discussions. First, the Agency discusses those items that are not PPE or are not required by OSHA standards and thus not covered by the final rule. Second, the Agency addresses the exceptions to the general employer payment requirement in the final rule. And third, OSHA describes other items the Agency determined needed more extensive discussion, based on the comments to the record.

A. Items That Are Not Considered To Be PPE or Are Not Required by OSHA Standards

The final rule clarifies that an employer's obligation to pay for PPE is limited to PPE that is used to comply with the OSHA standards amended by this rule, except for the specific listed exceptions. Thus, if a particular item is not PPE or is not required by OSHA standards, it is not covered by the final rule.

Many commenters sought clarification as to whether certain items were PPE and would therefore need to be paid for by employers. These items included coveralls (See, *e.g.,* Exs. 12: 111, 163, 206; 45: 28); aprons (See, *e.g.,* Exs. 12: 111, 163, 206); uniforms (See, *e.g.,* Exs. 12: 19, 55. 91); overalls (See, *e.g.,* Ex. 45: 28); standard work clothing (See, *e.g.,* Exs. 45: 28, 48; 12: 55, 91; 46: 44); and everyday work gloves (See, *e.g.,* Exs. 12: 6, 7, 22, 55, 68, 91, 109, 111, 129, 163, 171, 172, 173, 189, 206, 212, 221, 222; 45: 13, 28). In a representative comment, Rowan Companies, Inc. remarked that the standard should not be ''[a]n ''open checkbook'' to force employers to provide for common and routine items not necessary for personal protection.'' This commenter added:

> [o]ther items could be considered personal protective equipment by those wishing to unfairly benefit from this rulemaking * * * by using overly broad interpretations of the proposed wording, items such as cotton work gloves, rubber boots, rain suits, and uniforms could be labeled personal protective equipment (Ex. 12: 55).

A number of electrical contractors raised the issue of tools required for performing electrical work under the National Fire Protection Association's NFPA 70E (Standard for Electrical Safety in the Workplace) voluntary consensus standard, which requires certain tools to be voltage rated (See, *e.g.,* Exs. 41: 1; 45: 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, 19, 20, 22, 23, 24, 29, 31, 38, 41, 44, 45, 46, 47; 46: 21, 22, 23, 24, 26, 29, 38, 40). Several electric utility firms noted that ''[s]ome equipment can be considered to be personal tools, or it may be used for convenience or cleanliness versus protection from hazards * * *'' (See, *e.g.,* Exs. 12: 107, 114, 150, 201, 206). Dow was concerned that the rule could be interpreted to mean that employers would be required to pay for ''[e]ven the most basic work clothes, hats, ear muffs, sunglasses, long sleeve shirts, pants, socks, etc.'' (Ex. 12: 129).

Under the final rule, employers are not required to pay for items that are not PPE. This includes some of the items identified by commenters above. Uniforms, caps, or other clothing worn solely to identify a person as an employee would not be considered to be PPE because such items are not being worn for protection from a workplace hazard. Similarly, items worn to keep employees clean for purposes unrelated to safety or health are not considered to be PPE. Thus, items such as denim coveralls, aprons or other apparel, when worn solely to prevent clothing and/or skin from becoming soiled (unrelated to safety or health), are not considered to be PPE and employer payment is not required by this rule.

The same is true for items worn for product or consumer safety or patient safety and health rather than employee safety and health. Several hearing participants in the food industry mentioned use of hair nets and beard nets in their discussion of PPE worn in food processing plants (Tr. 186–187, 190). To the extent that these items are not used to comply with machine guarding requirements, but are worn solely to protect the food product from contamination, this rule does not require employer payment. Similarly, plastic or rubber gloves worn by food service employees solely to prevent food contamination during meal preparation, and surgical masks worn by healthcare personnel solely to prevent transmitting organisms to patients are not covered by this rule. Of course, cut-proof gloves used to prevent lacerations will be covered by the rule, and employer payment is required.

Ordinary hand tools are also not PPE. While some specific and specialized tools have protective characteristics, such as electrically insulated ''hot sticks'' used by electric utility employees to handle live power lines, these tools are not considered to be PPE. They are more properly viewed as engineering controls that isolate the employee from the hazard—similar to safe medical devices (*e.g.,* self-sheathing needles) required under OSHA's Bloodborne Pathogens (BBP) standard—and thus would not be covered by this final rule. (As an engineering control method, however, employers must pay for this equipment.)

Numerous commenters noted that many types of equipment or clothing could be considered PPE and that the

proposed rule might then require employers to pay for those items. More specifically, Organization Resource Counselors, Inc. (ORC) stated:

> Many companies have long-standing general safety rules or policies requiring workers to wear types of work clothing or use items which are not specifically regulated by other OSHA standards, but which may help workers to avoid workplace injury. Examples are long sleeved shirts, long-legged pants, and simple work gloves (fabric or leather). All of these will help prevent abrasions to skin, but are not specified in any OSHA standard, are not currently viewed as PPE * * * Similarly, coats, hats, and gloves worn by employees working outdoors have an employee health enhancement aspect in that they protect against exposure to the elements * * * (Ex. 12: 222).

In a similar discussion, Bell Atlantic commented: ''Bell Atlantic requires its technicians to wear long sleeve shirts and long pants when climbing utility poles; this PPE protects the employee's skin from abrasion, irritation, splinters, etc. This clothing is personal in nature and it is worn off the job; we do not specify what types of long sleeve shirts and long pants must be worn'' (Ex. 12: 117). The National Arborist Association (NAA) also was concerned that the proposed rule would potentially:

> [y]ield absurd results such as shifting to employers the cost of purely personal clothing items which are required to be worn on the job for a protective function, but which are uniquely personal to the employee and are ubiquitously worn as much off the job as on the job—such items as required blue jeans rather than shorts to protect legs from being scratched from branches; tighter-fitting tee shirts or pants to prevent clothes from inadvertently becoming caught in a chain saw being used to cut a branch, or sturdy work boots required to be worn to provide ankle support and sole protection on rough terrain (Ex. 12: 10 pp. 2–3).

In response to each of these concerns, OSHA has included language in the standard to explicitly exclude normal work clothing from the employer payment requirement. OSHA believes that this reflects the original intent of the proposal (See Section B below). Thus, if the protective equipment is used to comply with an OSHA standard, and is not exempted from payment by this standard, the employer must provide it at no cost to his or her employees. Otherwise, the employer is not required to pay for it. For example, hearing protectors are required to be provided in general industry and construction under the provisions § 1910.95 and § 1926.101, respectively. Therefore, employers are required to pay for hearing protection.

On the other hand, dust masks and respirators that an employer allows employees to use under the voluntary use provisions of the § 1910.134 respiratory protection standard are not required to comply with an OSHA standard. Because of this, employer payment is not required.

The NAA also raised the question of whether Section 5(a)(1) of the OSH Act would require the provision of PPE that would be subject to an employer payment requirement (Ex. 12: 10, p. 11).[2] OSHA's PPE standards at § 1910.132, § 1915.152, § 1917.95, § 1918.105, and § 1926.95, already require employers to determine the PPE necessary for their work settings. OSHA is not aware of PPE that would protect against hazards subject to enforcement under the general duty clause that would not also be identified by such a determination. If there are any such hazards, then the PPE payment provisions of this standard would not apply since the provisions apply only to equipment used to comply with the Parts of OSHA's standards that this rule amends, not with section 5(a)(1) of the OSH Act.

Although employer payment is not required when an item of PPE is not used to comply with an OSHA standard, OSHA encourages employers to pay for this PPE, given the safety benefits OSHA finds will accrue when employers are responsible for providing and paying for PPE.

B. Exceptions

1. Safety-Toe Protective Footwear and Non-Specialty Prescription Safety Eyewear

The proposed rule included exemptions for safety-toe protective footwear, often called steel-toe shoes, and prescription safety eyewear. The proposal would have placed conditions on these exemptions: (1) The employer permits such footwear or eyewear to be worn off the jobsite; (2) the footwear or eyewear is not used at work in a manner that renders it unsafe for use off the jobsite; and (3) such footwear or eyewear is not designed for special use on the job (64 FR 15415). The final rule contains a similar condition; employers are not required to pay for these items when they are permitted to be worn off the jobsite.

In the proposed rule, the Agency reasoned that safety-toe protective footwear should be exempted because it was sized to fit a particular employee and is not generally worn by other employees due to size and hygienic concerns; was often worn away from the jobsite; was readily available in appropriate styles; and was customarily paid for by employees in some industries (Id. at 15415). OSHA also noted that the 1994 policy memorandum exempted safety shoes from the employer payment requirement (Id.). The Agency proposed to exempt prescription safety eyewear because it also was very personal in nature, could generally be used by only one employee, and was commonly used away from work (Id.).

Many commenters supported the proposed exceptions for safety-toe protective footwear and non-specialty prescription safety eyewear (See, *e.g.,* Exs. 12: 4, 7, 9, 28, 111, 113, 117, 163, 184, 201). In a representative comment, BP-Amoco stated:

> BP-Amoco concurs with OSHA's approach to this topic in the proposed rule. These two items are different than other types of personal protective equipment in that they are individually fitted and the styling of these items is important to many employees. Therefore, eyewear and safety shoes should be excluded from a general requirement for employers to pay for personal protective equipment. We further agree that the three conditions associated with this exception are appropriate and should be retained without modification in the final rule (Ex. 12: 28).

The Voluntary Protection Program Participants Association (VPPPA) added:

> As OSHA has proposed, it is reasonable for employees to pay for PPE that is used off the job as well as on (i.e. PPE that satisfies the proposed standard's 3 conditions) and it should be left to the employees and employer to reach an agreement for the purchase of this kind of PPE. Some facilities may decide it is in their best interest—for employee morale or other reasons—to pay for this equipment, but the decision should be voluntary (Ex. 12: 113).

Other commenters strongly objected to any exceptions, and urged OSHA to require employers to pay for all types of PPE. Several stated that PPE is part of the hierarchy of controls, and while OSHA would not ask an employee to pay for a ventilation system, neither should it expect the employee to pay for any PPE (See, *e.g.,* Exs. 12: 19, 12: 100, 22A, 23, 25, 26A, 37, 100; Tr. 173–174, Tr. 241, Tr. 320, Tr. 366, Tr. 463–464).

Some commenters expressed the opinion that the ''personal'' nature of certain types of PPE was not an appropriate basis for exempting the PPE from an employer payment requirement (Exs. 19, 23, 24A, 24B; Tr. 278, Tr. 337, Tr. 342).

In addition, there were a number of comments challenging the basis for

[2] Section 5(a)(1) is the general duty clause of the Act, which requires employers to ''furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees'' (29 U.S.C. 654).

exempting safety-toe protective footwear and prescription safety eyewear because employees can and do use them off the job site (see, *e.g.,* Exs. 22, 24B, 24C; Tr. 198–199, Tr. 264, Tr. 274, Tr. 280, Tr. 356–358, Tr. 372–373). NIOSH, ISEA, and the United Auto Workers (UAW) argued that off-the-job use of PPE should not relieve employers of their obligation to pay for PPE and that employers should, in fact, encourage the use of PPE off the jobsite to promote safe behaviors of their employees (Exs. 12: 130, 230, 23; Tr. 72–73, Tr. 450, Tr. 598).

After careful consideration of the comments, OSHA has decided to retain the exceptions for non-specialty safety-toe protective footwear and non-specialty prescription safety eyewear in the final PPE payment standard. The Agency believes that these two items have unique characteristics that continue to warrant exemption from employer payment.

OSHA believes employers should not have to pay for non-specialty prescription safety eyewear for several reasons. Prescription safety eyewear is designed for the use of a single individual. Some of the employees who require such correction wear contact lenses, thus allowing them to wear non-prescription safety eyewear. Additionally, employers would rarely, if ever, be required under an OSHA standard to provide non-specialty prescription safety eyewear to their employees. The eye protection standards for each affected industry (§ 1910.133, § 1915.153, § 1917.91, § 1918.101, and § 1926.102) allow the employer the option of providing either appropriate prescription safety eyewear or alternate protection that can fit over an employee's regular prescription glasses, such as goggles or a face shield. Each standard specifies that the alternate protection must not disturb the adjustment or positioning of the spectacles. This requirement ensures that an employee's vision is not altered by the safety device, which could create an additional safety concern. While it is true that non-specialty prescription safety eyewear may be less cumbersome than items worn over eyeglasses, because non-specialty prescription safety eyewear is not the only PPE option for achieving adequate eye protection, and is designed for the use of a single individual, employers should not be required to pay for this protection. Therefore, OSHA is retaining the exemption for non-specialty prescription safety eyewear in the final standard. (Prescription inserts for full-facepiece respirators and diving helmets are discussed later.)

Unlike non-specialty prescription safety eyewear, the use of safety-toe protective footwear is clearly required by OSHA standards when employees are exposed to hazards that could result in foot injuries. However, OSHA has historically taken the position that safety-toe protective footwear has certain attributes that make it unreasonable to require employers to pay for it in all circumstances, as further discussed in Section XIV, ''Legal Authority''. Safety footwear selection is governed by a proper and comfortable fit. It cannot be easily transferred from one employee to the next. Unlike other types of safety equipment, the range of sizes of footwear needed to fit most employees would not normally be kept in stock by an employer and it would not be reasonable to expect employers to stock the array and variety of safety-toe footwear necessary to properly and comfortably fit most individuals.

Furthermore, most employees wearing safety-toe protective footwear spend the majority of their time working on their feet, and thus such footwear is particularly difficult to sanitize and reissue to another employee. Other factors indicate as well that employers should not be required to pay for safety-toe protective footwear in all circumstances. Employees who work in non-specialty safety-toe protective footwear often wear it to and from work, just as employees who wear dress shoes or other non-safety-toe shoes do. In contrast, employees who wear specialized footwear such as boots incorporating metatarsal protection are likely to store this type of safety footwear at work, or carry it back and forth between work and home instead of wearing it. As explained in detail in the Legal Authority section, OSHA does not believe that Congress intended for employers to have to pay for shoes of this type.

For all of these reasons, OSHA has decided to continue to exempt non-specialty safety shoes from the employer payment requirement. OSHA, however, also wants to make clear that this exemption applies only to non-specialty safety-toe shoes and boots, and not other types of specialty protective footwear. Any safety footwear that has additional protection or is more specialized, such as shoes with non-slip soles used when stripping floors, or steel-toe rubber boots, is subject to the employer payment requirements of this standard. Put simply, the exempted footwear provides the protection of an ordinary safety-toe shoe or boot, while footwear with additional safety attributes beyond this (*e.g.,* shoes and boots with special soles) fall under the employer payment requirement. (OSHA also notes that normal work boots are exempted from employer payment under a different provision of the final rule, discussed later in this section.)

Finally, the rule essentially retains the conditions for the exceptions contained in the proposal, although OSHA has tried to simplify them in the regulatory text. The rule states that the employer is not required to pay for non-specialty safety-toe protective footwear (including steel-toe shoes or steel-toe boots) [3] and non-specialty prescription eyewear, provided that the employer permits such items to be worn off the jobsite. The term ''non-specialty'' is used to indicate that the footwear and eyewear being exempted is not of a type designed for special use on the job (*e.g.,* rubber steel-toe shoes). This is consistent with the condition in the proposed rule that the equipment not be ''designed for special use on the job.'' The final rule also incorporates the condition from the proposed rule that requires the employer to pay for PPE that is not permitted to be used off the job.

The proposed regulatory text also contained an employer payment condition for footwear or eyewear based on whether its use at work renders it unsafe for use off the jobsite. The Agency is concerned that this condition could be construed as creating a general requirement that contaminated equipment remain on-site. While this is a prudent practice in many instances, and a requirement in some substance-specific standards, making this a general requirement under the Parts amended by this rule is outside the scope of this rulemaking. OSHA also believes that an explicit condition for contaminated equipment is unnecessary. The final rule, like the proposal, requires employer payment if the employer does not permit the employee to take that equipment off the jobsite for any reason. Reasons for not permitting removal from the jobsite can include a requirement in an OSHA standard that such equipment not be taken off site because it is contaminated or an employer policy that contaminated equipment remain in a special area at the worksite. Because of this, OSHA does not believe it is necessary to include a separate condition related to contaminated PPE in the final rule.

[3] The parenthetical phrase ''including steel toe shoes or steel-toe boots'' is included since this terminology is commonly used in reference to non-specialty safety-toe protective footwear.

2. Everyday Work Clothing and Weather-Related Items

In the regulatory text of the final rule, OSHA is also specifically exempting everyday work clothing and ordinary clothing/items used solely for protection from the weather. OSHA did not intend to cover these items in the proposed rule. A number of commenters to the rulemaking record, however, questioned whether these items would be covered and requested that OSHA clarify its position (See, *e.g.,* Exs. 45: 28, 48; 46: 44; 12: 16, 55, 129). OSHA has determined that additional clarity was needed in the regulatory text regarding payment for everyday clothing and ordinary clothing used solely for protection from weather and has therefore made these exceptions explicit in the final regulatory text.

As explained in the Legal Authority section, OSHA does not believe that Congress intended for employers to have to pay for everyday clothing and ordinary clothing used solely for protection from the weather. While serving a protective function in certain circumstances, employees must wear such clothing to work regardless of the hazards found. OSHA is exercising its discretion through this rulemaking to exempt jeans, long sleeve shirts, winter coats, etc., from the employer payment requirement. As stated, this is consistent with OSHA's intent in the proposal and is also supported by the rulemaking record. A number of commenters stated that OSHA should exempt these items from the employer payment requirement (See, *e.g.,* Exs. 12: 10, 16, 28, 55, 117, 129, 210, 222).

Thus, OSHA is not requiring employers to pay for everyday clothing even though they may require their employees to use such everyday clothing items such as long pants or long-sleeve shirts, and even though they may have some protective value. Similarly, employees who work outdoors (*e.g.,* construction work) will normally have weather-related gear to protect themselves from the elements. This gear is also exempt from the employer payment requirement.

3. Logging Boots and Items in Other OSHA Standards

Under the final rule, the employer would not have to pay for logging boots required in 29 CFR 1910.266(d)(1)(v) (61 FR 15403). In the final logging standard, OSHA concluded that logging boots should be exempt from an employer payment. The final standard recognizes this exemption, as did the proposed rule. While some commenters suggested the exception should be eliminated, citing the same reasons given above for eliminating the exception for non-specialty safety-toe protective footwear, the submitted information has not convinced the Agency that employer payment for logging boots is necessary. This is particularly true given the extensive rulemaking record developed in support of the exemption during the rulemaking for the logging standard.

In addition to the provisions of the final rule clarifying the PPE that is not subject to the employer payment requirement, OSHA has added a regulatory note to each of the affected standards to make it clear that when the provisions of another OSHA standard specify whether or not the employer must pay for specific equipment, the payment provisions of that standard shall prevail. This approach provides for Agency determinations in future rulemakings that certain PPE should be specifically included or excluded from the PPE payment rule.

Table V–1 provides examples of PPE and other items that an employer is not required to pay for under the specific exceptions included in the standard. This table is intended to assist in identifying items exempt from the employer payment requirement. However, it should not be construed to be an all-inclusive list.

TABLE V–1.—EXAMPLES OF PPE AND OTHER ITEMS EXEMPTED FROM THE EMPLOYER PAYMENT REQUIREMENTS

Non-specialty safety-toe protective footwear (*e.g.,* steel-toe shoes/boots).
Non-specialty prescription safety eyewear.
Sunglasses/sunscreen.
Sturdy work shoes.
Lineman's boots.
Ordinary cold weather gear (coats, parkas, cold weather gloves, winter boots).
Logging boots required under § 1910.266(d)(1)(v).
Ordinary rain gear.
Back belts.
Long sleeve shirts.
Long pants.
Dust mask/respirators used under the voluntary use provisions in § 1910.134.

C. Other Items Raised in the Rulemaking Record

If a particular item of PPE is used to comply with OSHA standards, and does not fall under the PPE standard's exceptions, then this PPE standard requires the employer to provide the item to his or her employees at no cost to the employees. OSHA solicited comment on several items in the preamble to the proposed standard, and commenters raised issues with several other items. The following discussion deals with each of these items, including prescription eyewear inserts in respirators, uniquely personalized components of personal protective equipment, welding PPE, metatarsal foot protection, equipment used by electric utility employees, and fabric or leather work gloves.

1. Prescription Eyewear Inserts in Respirators

Issue eight of the preamble to the proposed PPE payment standard asked for comment on specialized respirator inserts, as follows:

> Full-facepiece respirators present a unique problem for employees who need prescription glasses. The temples of the prescription glasses break the face-to-face piece seal and greatly reduce the protection afforded by the respirator. Special glasses and mounts inside the facepiece of the respirator are sometimes used to provide an adequate seal. Because of this special situation, OSHA believes that it is appropriate for the employer to provide and pay for the special-use prescription glasses used inside the respirator facepiece. Is it common industry practice for employers to pay for these special glasses? What is the typical cost for providing ''insert-type'' prescription glasses inside full-facepiece respirators? (64 FR 15416).

OSHA received no substantive adverse comment on employer payment for this equipment. Commenters offered a number of observations and recommendations, however, including that the employer should pay for all components needed to ensure the effectiveness of the PPE (Ex. 12: 134, 190, 218), the eyewear is part of the respirator (12: 134, 218), and the employer should pay for lenses and hardware, but the employee should pay for the doctor's exam (Ex. 12: 51). The ISEA noted that full-facepiece respirator inserts:

> [s]hould be supplied and paid for by the employer * * * A full-facepiece respirator insert costs roughly $50–$100, depending on the prescription (single, bifocal, etc.), the material (polycarbonate, etc.), and the fitting-delivery system used (Ex. 12: 230).

Additional comment on respirator inserts was provided by the ASSE, which stated that: ''[m]ost prescription safety eyewear will fit into a full-face respirator with the appropriate mounts. We are aware of some circumstances when an additional specific frame had to be ordered to work with such a facemask. Most of our members commented that from their experience, most employers would pay for the additional product in such a situation'' (Ex. 12: 110). Blais Consulting offered a somewhat different view, stating that:

Full face respirators do present a problem with spectacles as the temples frequently will break the face-to-face piece seal and greatly reduce the protection afforded by the respirator. * * * I concur with OSHA that it is appropriate for the employer to provide and pay for the special-use prescription glasses to use inside the respirator face piece as the spectacle must be worn to fulfill the requirements for the 29 CFR 1910.134 Respiratory Protection Standard and is not of a street-wear type spectacle (Ex. 12: 233).

Dow noted that:

[w]here full face respirators are required to be worn on the job, it is reasonable for the employer to pay for prescription glasses to be worn. OSHA allows the use of contact lenses when a full face respirator is worn. Dow does not believe that this regulation should be construed to require the employer provide contact lenses for employees who also happen to wear respirators on the job (Ex. 12: 129).

Corrective eyewear is necessary for the employee to see clearly in order to safely perform his or her job, yet not all employees who require vision correction and use full facepiece respirators wear contact lenses. A major concern with a full facepiece respirator is that the seal between the employee's face and the respirator must not leak. If it does, then the respirator will not provide the intended protection. Therefore, items that pass under the seal, such as the temple pieces of prescription glasses, break the face to facepiece seal. If the employee's prescription glasses cannot be fitted into the respirator without compromising the seal, then there is no alternative. Special lenses will be needed to protect the employee, and they must be provided at no cost to that employee. OSHA has determined that when special-use prescription lenses must be used or mounted inside the respirator facepiece, employers must pay for the lenses / inserts.

2. Components of Personal Protective Equipment

Issue ten of the preamble to the proposed PPE payment standard asked for comment on PPE components, such as shoe inserts, head coverings used under welding helmets and custom prescription lens inserts worn under a welding helmet or a diving helmet (64 FR 15416).

A number of commenters supported employer payment for components in some circumstances. Various commenters suggested that employers should pay because the only function of the component is to protect the employee from workplace hazards (See, *e.g.,* Exs. 12: 190, 218). The ISEA remarked that:

[e]mployers have an obligation to properly protect employees from all occupational hazards. If uniquely personalized components of PPE are protective in nature-such as winter liners for hardhats-then employers should pay for them. Employers should pay for custom prescription lens inserts used under a welding helmet because safety glasses should be worn when welding. It is not functional to wear street prescription glasses, a protective goggle and a welding helmet. All equipment necessary for employees to adequately perform their jobs should be paid for by the employer (Ex. 12: 230).

The UFCW raised the issue of shoe inserts, remarking that:

Shoe inserts, as personal protective equipment, are a control method for alleviating the hazard of standing for prolonged periods of time on hard surfaces. The United Auto Workers, through workplace surveys, has recently documented the need for shoe inserts for their members who work in the ''big three'' auto plants and stand all day. In fact, collective bargaining agreement language requires that the employer provide inserts, free of charge, to workers who need them.

Anti-fatigue mats are common in retail food stores, and in some manufacturing plants. These are provided by the employer to address this hazard, an acknowledgment on the part of the employer that this hazard does exist. As anti-fatigue mats are provided at no cost to provide some support and relief of the lower extremities and lower back, so should shoe inserts. In fact, shoe inserts can be used where anti-fatigue mats cannot, such as in locations in meat and poultry plants where they are impractical or a sanitation problem. Shoe inserts are also more practical for jobs which may require some walking or moving from one location to another, as the mats are stationary and do not move with the worker (Ex. 41).

Others stated that the employer should pay up to the basic cost of the minimum PPE (See, *e.g.,* Ex. 12: 228); the employer should pay if it is PPE (See, *e.g.,* Ex. 12: 32); and the employer should pay ''[i]f it cannot stand on its own use'' (Ex. 12: 52).

Still other commenters raised items or situations where they believed the employee, not the employer, should pay for the equipment. The reasons behind these comments include: The employee should pay if the item is personal in nature, such as shoe inserts (Ex. 12: 3); the employee should pay because this equipment is too personal (Ex. 12: 19); and employers should not be required to pay for equipment that is personal in nature and goes beyond what is required for employee safety (Ex. 12: 65). Douglas Battery remarked that:

In a related issue, employers should have the option of electing not to provide or reimburse employees for PPE which is personal in nature. An example of ancillary ''equipment'' which is personal in nature, but not required for safety, would include custom insoles for safety shoes which are not required in writing by a physician as a ''reasonable accommodation'' to performing the assigned job (Ex. 12: 3).

The question of when to require employer payment for PPE components and inserts is not easy to resolve due to their wide variety. However, the comments of ORC suggest a reasonable solution to the problem. ORC commented:

The employer should be required to provide and pay for PPE that is adequate to protect an employee from the workplace hazards identified. If a personalized component is necessary in order for the PPE to provide adequate protection, it is not something that is typically worn or used off the worksite and meets the criteria proposed [by ORC] for exception of personal items, it should be the employer's responsibility to provide it and pay for it. However, if the protection afforded by the PPE is not compromised by not providing the personalized component, the employer should be under no obligation to pay for the personalized component (Ex. 12: 222).

OSHA has decided to adopt the basic approach put forward by ORC. If the component is needed for the PPE to adequately protect the employee from the workplace hazard the PPE is designed to address, the employer must pay for it, provided the PPE does not fall within one of the exceptions listed in the final rule. For example, if prescription lenses are needed so an employee can wear a diving helmet to do his or her job, then the prescription lenses must be provided at no cost by the employer. This approach is the same as that taken in the standard for prescription lens inserts for full facepiece respirators.

However, if the component is not needed for the PPE to provide adequate protection, then the employer would not be required to pay for the component. For example, employers would not be required to pay for shoe inserts to prevent fatigue because the inserts are not needed for the PPE to perform as designed. In addition, if the PPE in which the component is placed is otherwise exempted from the final rule, the employer is not required to pay for the component. Thus, employers would not be required to pay for cold weather inserts worn under raincoats, because raincoats are otherwise exempt from employer payment.

OSHA also notes that if the component is needed for the PPE to fit the employee properly, then the employer is required to provide the item at no cost to the employee. The various general PPE standards require the employer to provide properly fitting PPE, and if it does not fit properly it will

not have the protective value it was designed to provide. Therefore, payment for items needed to make PPE fit properly is required.

Finally, although it may seem self-evident, personalized components or add-ons that do not affect safety are not covered by the final standard. For example, items chosen for aesthetic features (*e.g.,* logos, color, style) that have no additional safety purpose do not fall under the employer payment requirements.

3. Metatarsal Protection

While the non-specialized safety-toe protective footwear that is exempted from the PPE payment requirements contains a protective device for the toes, metatarsal protection is designed to protect the top of the foot from the toes to the ankle over the instep of the foot. This protection is required by the OSHA standards when there is a potential for injury to that part of the foot from impact or compression hazards that could occur, for example, from handling heavy pipes, or similar activities where loads could drop on or roll over an employee's feet. Metatarsal protection is available both as an integrated part of the footwear, and as a guard that can be attached to a shoe or boot to provide protection.

OSHA did not exempt metatarsal protection from the employer payment requirement in the proposed rule. In its introductory remarks at the informal public hearing, OSHA explained that ''* * * the proposed exception would not apply to metatarsal protection, metatarsal guards or protective footwear that incorporates metatarsal protection, or special cut-resistant footwear because these kinds of footwear are not generally used off the worksite and employers often reissue metatarsal guards and cut-resistant footwear to subsequent employees'' (Tr. 19–20).

A number of commenters suggested that metatarsal shoes should be exempted from the employer payment requirement (See, *e.g.,* Exs. 12: 66, 149, 155, 222, 235). Caterpillar, Inc. offered several reasons why metatarsal shoes should be exempted, stating:

> Virtually all metatarsal shoes with integral guards are personal in nature and belong to an individual employee. * * * OSHA states a belief that there is little statutory justification for requiring employers to pay for personal protective equipment if it is used away from the workplace and if three proposed conditions are met. The third condition contains an assumption that if 'the footwear has built-in metatarsal guards as well as safety-toes, it could not be worn off-site', which is not a valid assumption. Employees do wear their metatarsal shoes off-site (Ex. 12: 66).

The Specialty Steel Industry of North America (SSINA) remarked:

> SSINA member companies are committed to employee safety and health, and provide and pay for all types of personal protective equipment (''PPE''). Although SSINA supports the proposed rule in general, the association is concerned about the absence of a provision allowing payment terms for metatarsal shoes to be negotiated through collective bargaining agreements. Because of the importance of these shoes to specialty steel workers, the payment terms for this type of protective footwear are generally specified in collective bargaining agreements negotiated with labor unions. SSINA believes that the proposed PPE rule prohibits this process (12: 1498).

Consolidated Edison Company of New York, Inc. asked OSHA to clarify in the final rule that employers are not required to pay for shoes with metatarsal protection if the employer offers, free of charge, foot guards to be worn over regular safety footwear (Ex. 12: 155).

In the final standard, OSHA has decided not to exempt metatarsal protection from the PPE payment provisions. OSHA disagrees with those commenters who suggested that metatarsal protection is ubiquitous and is frequently worn by employees away from the worksite. Several hearing participants testified that this footwear is not normally worn off site (Tr. 203; 349; 390–391). Specifically, Jacqueline Nowell of the UFCW referenced a court decision requiring the employer to pay for metatarsal support boots. The judge based his finding on testimony that ''99 percent of the employees use their boots exclusively for work'' (Tr. 203). When asked about his experiences with employees wearing shoes with metatarsal guards off site, William Kojola of the AFL–CIO testified, ''I'm not aware of any, in my own experience aware of any circumstance where a worker would actually use that piece of equipment offsite'' (Tr. 349). Mr. Kajola continued that this was his experience regardless of whether the guard was built into the footwear or put on as a separate piece. After considering the comments, OSHA remains convinced that metatarsal protection is a specialized form of foot protection. In addition, OSHA has historically not exempted metatarsal protection from an employer payment requirement.

In the final standard, however, OSHA is making clear that employers may provide metatarsal guards to their employees to protect against hazards and are not required to provide metatarsal protection that is integrated in the shoe. The United Steelworkers Union recommended that removable metatarsal guards be banned, asserting that ''The removable metatarsal guard does not provide the needed protection that is provided by the built-in metatarsal guard that was designed for the specific shoe that it was attached to.'' (Tr. 378–379).

While OSHA appreciates the comment from the USWU, this rulemaking is limited to issues of PPE payment, and not the adequacy of certain types of PPE. OSHA's long-standing policy is that when conditions at the workplace require metatarsal protection, adequate protection can be achieved through the proper use of metatarsal guards. If the employer requires employees to wear metatarsal shoes or boots, the employer is required to pay for them. However, the final standard stipulates that when the employer provides metatarsal guards and allows the employee, at his or her request, to use shoes or boots with built-in metatarsal protection, the employer is not required to pay for the metatarsal shoes or boots. In this circumstance, the final standard does not prohibit employers from contributing to the cost of metatarsal shoes or boots should they choose to do so. Some employers currently offer their employees a choice between using a metatarsal guard provided and paid for by the employer or a metatarsal shoe or boot with some portion of the cost of the shoe or boot paid for by the employer, essentially establishing an allowance system. This practice is not prohibited by the rule, as described in the Acceptable Methods of Payment section below.

4. Welding Leathers

Issue six of the preamble to the proposed PPE payment standard requested comment on PPE employers provide to welders to protect them from welding hazards, such as molten metal. Specifically, the Agency asked: ''The proposal covers protective equipment and personal protective equipment used in welding, including protective gloves. Does welding PPE create any unique problems on the PPE payment issue? Does the employee usually pay for welding PPE?'' (64 FR 15416).

A number of commenters, many from the shipyard industry, recommended that OSHA exempt welding PPE from the employer payment requirement (See, *e.g.*, Exs. 7, 29, 32, 39, 65, 112, 228; 45: 52; 46: 32) indicating that it has been customary for welders in some industries to provide their own PPE. For example, a representative from the Shipbuilders Council of America (SCA) stated that:

> Tools of the trade for welding operations, such as face shields/goggles, fire resistant

shirts/jackets, sleeves and leather gloves have predominantly been provided by the employee because of the equipment's personal nature. The industry considers these to be tools of the trade because it is neither feasible for a different employee to wear the welders' gloves and leathers each day for hygienic reasons, nor is it feasible that upon resigning from the position that an employee will leave the leathers behind to be worn by another individual (Ex. 46: 32).

Other commenters stated that an exception for welding PPE was not needed (Ex. 12: 9, 17, 32, 134, 172, 190, 191, 218, 233; 45: 27). Shell Offshore, Inc. stated that ''* * * [a] problem could result if employees were expected to pay for welding PPE. The problem being that by requiring employees to pay for PPE may discourage use of PPE, or result in use of ineffective PPE'' (Ex. 12: 9). The International Union of Operating Engineers (IUOE) remarked that they ''* * * do not believe that there are unique problems relating to welding PPE. Workers do not generally pay for welding PPE. All welding PPE should be supplied by employers'' (12: 134). The National Association of Home Builders (NAHB) stated that ''Employers customarily pay for the PPE that is required for welding, including gloves, aprons, and face shields'' (Ex. 12: 212). Testimony of members of the Maritime Advisory Committee for Occupational Safety and Health (MACOSH) also indicated that other maritime employers provide and pay for welding PPE; consequently, MACOSH declined to make a recommendation to OSHA on whether such PPE should be exempted from a payment requirement (69 FR 41223).

OSHA has decided not to exempt welding equipment from the employer payment provisions of the final standard. All of the equipment mentioned is clearly PPE, and the comments are inconsistent as to whether or not this equipment has any special qualities that would warrant an exception. The most common concern is that welders in some industries have customarily supplied their own personal protective equipment. OSHA has determined that this is not an adequate basis to exempt PPE. To the extent that these individuals are independent contractors and not employees covered by the OSH Act, the standard does not apply to them. Further, as noted in the employee-owned PPE section of this preamble, employers may allow employees to bring PPE they already own to work, and are not required to reimburse the employee for that PPE. Thus, if a welder voluntarily brings his or her own PPE to the worksite, and the employer ensures that it is appropriate for the work to be performed, then the employer is not required to provide the PPE at no cost to that employee.

5. Non-Specialty Fabric or Leather Work Gloves

Many commenters stated that non-specialty fabric or leather work gloves should be excepted from the employer payment requirement (See, *e.g.*, Exs. 12: 6, 7, 17, 19, 29, 55, 68, 91, 109, 111, 112, 129, 163, 171, 172, 183, 217, 221, 222). Southwestern Bell (Ex. 12: 6) agreed that more specialized gloves should be provided and paid for by the employer, but stated that ''[w]e feel that everyday work gloves made of fabric and/or leather do meet those conditions because they can be worn off the job; they are not used in a manner that renders them unsafe for work off the job; and they are not designed for special use. Thus, we consider them to be personal in nature'' (Ex. 12: 6). The NAHB added that ''Many types of gloves can be used for personal use. Unless it's a very special glove, such as welding or wire-mesh gloves, these should be considered as an exception'' (Ex. 12: 212).

The Stevedoring Services of America (SSA) and the National Maritime Safety Association (NMSA) remarked that regular work gloves meet the intent of the proposed exemptions because they are purchased by size, are available in a variety of styles and are frequently worn off the job (Exs. 12: 17, 172). They also commented that most regular work gloves cannot be cleaned and sterilized and therefore cannot be worn by more than one employee (Id.). Specifically they stated that ''[r]egular work gloves, like safety shoes, certainly meet the intent of the Secretary's interpretation'' and continued with the reasoning that:

1. Regular work gloves are purchased by size.
2. Regular work gloves are available in a variety of styles.
3. Regular work gloves are frequently worn off the job.
4. It is not feasible that each day an employee wears regular work gloves that have been worn by another employee.
5. It is not feasible that upon resigning from a position that an employee leave regular work gloves behind for another employee to wear.
6. It is almost impossible to clean and sterilize most regular work gloves that have been previously worn.
7. The cost of issuing regular work gloves on a daily basis to thousands of dock workers nationwide would be extremely expensive to the employer (Id.).

The American Trucking Association recommended that OSHA exempt from employer payment non-specialty gloves that meet the same three conditions as those proposed for safety-toe shoes. The recommendation is based on the fact that such PPE is also often allowed to be used off-site by employees (Ex. 12: 171).

In the final standard, OSHA is requiring employer payment for work gloves when they are used for protection against workplace hazards. Thus, when used as PPE—to protect employees from such hazards as lacerations, abrasions, and chemicals—employers must provide them at no cost. This is consistent with the position OSHA has taken in the past with this important form of protection.

Furthermore, OSHA does not believe that gloves are similar to the other exempted items in the standard. Gloves may be distinguished from general work shoes and boots. Gloves are normally manufactured in only a few sizes. While gloves worn for a long period by one employee may become soiled, abraded, and so forth, they generally are not considered to be as highly personal in nature or in the same manner as footwear. Wear patterns of footwear differ between individuals resulting in a fit that may not conform to another individual's foot or gait. Gloves, however, can normally be worn by another employee. Finally, as opposed to work boots and shoes, many forms of gloves can be laundered and sanitized and used by more than one employee.

6. Electrical PPE

Table 1 of the preamble to the proposal listed a number of PPE items required by OSHA standards, including flame resistant jackets and pants (64 FR 15408). As a result, several comments were received regarding the issue of prohibited clothing in OSHA's power generation and transmission standard at § 1910.269(l)(6). That standard specifically requires the employer to ensure that each employee who is exposed to the hazards of flames or electric arcs does not wear clothing that, when exposed to flames or electric arcs, could increase the extent of injury that would be sustained by the employee. It further notes that clothing made from acetate, nylon, polyester, or rayon is prohibited unless the employer can demonstrate that the fabric has been treated to withstand the conditions that may be encountered or that the clothing is worn in a manner that eliminates the hazard. One method of meeting the requirements of § 1910.269, but not the only method, is for employers to require their employees to wear flame resistant clothing (FR clothing). This clothing is specifically designed to protect employees exposed to various levels of

heat energy from sustaining severe burn injuries in areas covered by the clothing.

A number of comments were received from electric utility employers, who stated that FR clothing is not PPE (See, *e.g.*, Exs. 12: 107, 114, 133, 150, 183, 201, 206, 221), that OSHA should exclude FR clothing from employer payment requirements (See, *e.g.*, Exs. 12: 16, 133), and that requiring employers to pay for FR clothing would conflict with previous interpretations by OSHA (See, *e.g.*, Exs. 12: 114, 133, 150, 206, 221). In a representative comment, the Edison Electric Institute (EEI) remarked:

> EEI is also concerned that compliance officers may inadvertently classify the apparel/clothing requirement under § 1910.269(l)(6) of the Electric Power Generation, Transmission and Distribution standard as personal protective equipment. Classification of apparel/clothing as PPE would be inconsistent with OSHA's current position stated in two interpretation letters. * * * In both of these interpretation letters it is stated that the apparel standard is not a PPE requirement. * * * EEI requests that OSHA state in the preamble of the final standard that the apparel/clothing required under § 1910.269(l)(6) of the Electric Power Generation, Transmission and Distribution standard is not personal protective equipment. This statement would avoid disagreements of interpretations after the rule is finalized (Ex. 12: 150).

Duke Energy suggested that OSHA ''[c]learly specify that flame retardant apparel is not considered personal protective equipment'' (Ex. 12: 133).

OSHA's existing clothing requirement in § 1910.269 does not require employers to protect employees from electric arcs through the use of flame-resistant clothing. It simply requires that an employee's clothing do no greater harm. The use of certain heavy-weight natural fiber materials, such as cotton, is allowed where the employer can assure that the clothing will not contribute to injury to the employee. Thus, the clothing requirement in § 1910.269 does not mandate employers provide any particular type of PPE to their employees and the payment requirement in this final rule would not apply to clothing permitted by § 1910.269.

It should be noted that the issue of whether FR clothing should be required by § 1910.269 is currently being considered by the Agency in a separate rulemaking to revise the electric power generation, transmission and distribution standard (70 FR 34822–34980, June 15, 2005). The preamble discussion for the proposed § 1910.269 revision included a full discussion of FR clothing in the electric utility industry and asked for specific public comment on this issue (70 FR 34866–34870). If OSHA determines in that rulemaking that FR clothing is required, it will then become subject to the PPE payment provisions of this rule, unless the final § 1910.269 and Part 1926 Subpart V standards specifically exempt FR clothing from employer payment.

Several electrical contracting and power companies also recommended exemptions for certain pole climbing equipment (See, *e.g.*, 12: 16, 38, 144, 161, 183, 206, 221; 46: 49). For example, the National Electrical Contractors Association (NECA) commented that

> [b]ody belts and straps for climbing poles and towers, climbing hooks, flame resistant clothing, and personal apparel of all description and usages should also be exempted from the final rule for the contracting electric power industry. These vary in design and material, have always been very much subject to personal preference and are not universally transferable from employee to employee'' (Ex. 12: 16).

In response to OSHA's request for comment on how a general requirement for employer payment for PPE should address the types of PPE that are typically supplied by the employee, taken from job site to job site or from employer to employer, (69 FR 41221 (July 8, 2004)), a number of electrical contractors submitted identical comments suggesting that several types of electrical safety equipment should be exempted from employer payment (See, *e.g.*, Exs. 45: 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, 19, 20, 22, 23, 24, 29, 31, 37, 38, 41, 44, 45, 46, 47; 46: 21, 22, 23, 24, 25, 26, 27, 28, 29). They remarked that employers in general should pay for PPE used by their employees, but recommended OSHA provide exemptions for the following items:

> 1. Protective clothing as listed in NFPA 70E Table 130.7 (C)(10) for all Hazard/Risk Categories #2 and lower.
> 2. Protective equipment as listed in NFPA 70E Table 130.7 C (10) for all Hazard/Risk Categories #2 and lower. (Except for the equipment listed in FR Protective equipment subpart ''e'').
> 3. Voltage rated gloves required for work in NFPA 70E Hazard/Risk Categories #2 and lower.
> 4. Tools the employee is required to purchase, by an agreement between the employer and the employee, that are required by NFPA 70E, Hazard/Risk Categories #2 and lower, to be voltage rated.

This particular equipment was included in a table in the National Fire Protection Association (NFPA) 70E Electrical Safety Code. Table 130.7(C)(9)(a) of the Electrical Safety Code lists equipment that is to be used when working on various types of electrical systems, which are classified into four hazard/risk classes. OSHA wants to make clear that this equipment would only be covered by the final rule in those instances where it is required by OSHA standards.

The first item noted by these commenters is fire retardant clothing, as discussed above. The second item includes a variety of PPE, including hard hats, safety glasses or goggles, arc-rated face shields, hearing protection, leather gloves, and leather work shoes. Within the second item, except for leather work shoes, these items are required by § 1910.335 and other OSHA standards (depending on the exposures encountered) and are subject to the PPE payment provisions. Item three includes voltage rated gloves used to handle electrically charged lines. This is clearly a specialized item that employees are not required to purchase. As required by § 1910.137, employers must inspect and test the gloves at regular intervals to ensure their continued integrity, and they are so critical to the protection of employees performing this work that leather gloves are worn over them to prevent abrasions and holes that could compromise their integrity. Therefore, employers are required to provide them at no cost to their employees. The fourth item includes insulated hand tools such as pliers, screwdrivers, diagonal cutters and wire strippers. As discussed previously, the Agency has concluded that electrically insulated tools, while not considered to be PPE for the purpose of this standard, are a protective control measure and the employer must pay for them.

Table V–2 provides examples of PPE items that an employer is required to provide at no cost to employees under the final PPE payment standard. As with Table V–1, this table is not an exhaustive list of PPE that employers must provide to their employees at no cost.

TABLE V–2.—EXAMPLES OF PPE FOR WHICH EMPLOYER PAYMENT IS REQUIRED

[If used to comply with an OSHA standard]

Metatarsal foot protection.
Special boots for longshoremen working logs.
Rubber boots with steel toes.
Shoe covers—toe caps and metatarsal guards.
Non-prescription eye protection.
Prescription eyewear inserts/lenses for full face respirators.
Prescription eyewear inserts/lenses for welding and diving helmets.
Goggles.
Face shields.
Laser safety goggles.
Fire fighting PPE (helmet, gloves, boots, proximity suits, full gear).

TABLE V–2.—EXAMPLES OF PPE FOR WHICH EMPLOYER PAYMENT IS REQUIRED—Continued

[If used to comply with an OSHA standard]

Hard hat.
Hearing protection.
Welding PPE.
Items used in medical/laboratory settings to protect from exposure to infectious agents (Aprons, lab coats, goggles, disposable gloves, shoe covers, etc).
Non-specialty gloves: • Payment is required if they are PPE, i.e. for protection from dermatitis, severe cuts/abrasions. • Payment is not required if they are only for keeping clean or for cold weather (with no safety or health consideration).
Rubber sleeves.
Aluminized gloves.
Chemical resistant gloves/aprons/clothing.
Barrier creams (unless used solely for weather-related protection).
Rubber insulating gloves.
Mesh cut proof gloves, mesh or leather aprons.
SCBA, atmosphere-supplying respirators (escape only).
Respiratory protection.
Fall protection.
Ladder safety device belts.
Climbing ensembles used by linemen (*e.g.,* belts and climbing hooks).
Window cleaners safety straps.
Personal flotation devices (life jacket).
Encapsulating chemical protective suits.
Reflective work vests.
Bump caps.

D. Replacement PPE

Replacing PPE that is no longer functional is crucial to employee safety and health. OSHA finds that timely replacement of PPE is more likely to occur when the employer is responsible for bearing the cost. OSHA is requiring employers to not only pay for the initial issuance of PPE, but also its replacement, except when the employee has lost or intentionally damaged the PPE.

In the proposed rule, OSHA did not include language in the regulatory text setting forth an employer's obligation to pay for replacement PPE. However, in the preamble to the proposal OSHA stated:

> OSHA intends to require employers to pay for the initial issue of PPE and for replacement PPE that must be replaced due to normal wear and tear or occasional loss. Only in the rare case involving an employee who regularly fails to bring employer-supplied PPE to the job-site, or who regularly loses the equipment, would the employer be permitted to require the employee to pay for replacement PPE (64 FR 15414).

OSHA also noted that if an employee misuses or damages the PPE, the employer may ask the employee to pay for replacement:

> The proposed requirement would also make the employer responsible to provide, and pay for, replacement PPE when the original PPE wears out from normal wear and tear or in the event of occasional loss or accidental damage by the employee. However, if an employee regularly and with unreasonable frequency loses or damages the PPE, the employer may request that the employee pay for the replacement PPE (64 FR 15415).

In these discussions, OSHA attempted to set the parameters for when the employer would be responsible for paying for replacement PPE (*e.g.,* when the PPE wears out from ''normal wear and tear,'' ''occasional loss,'' etc.) and when the employer may request that the employee pay for the replacement (*e.g.,* ''[r]egularly and with unreasonable frequency loses or damages the PPE''). This position was also consistent with the past positions OSHA has taken on the issue of employer payment for replacement PPE. For example, OSHA determined that the employer must bear the cost of replacing worn out hearing protectors required under the occupational noise exposure standard, 29 CFR 1910.95, but stated its belief that employers should not have to pay for an unlimited supply of protectors or bear the expense in cases where an employee has been irresponsible (46 FR 4078, 4153–4154 (Jan. 16, 1981)).

While many commenters supported a general requirement that employers pay for replacement PPE (See, *e.g.*, Exs. 12: 9, 51, 110, 113, 116, 134, 141, 152, 188, 190, 222, 230, 233; Tr. 326, 376, 600, 631), there were two major issues raised by commenters regarding OSHA's position in the proposal. First, a substantial number of comments in the rulemaking record suggested that the proposed rule did not clearly set forth an employer's obligation to pay for replacement PPE. Many commenters urged the Agency to more clearly define those instances where an employer must pay for replacement PPE and those instances where it would be appropriate for employees to pay for the PPE. Several commenters suggested OSHA include specific regulatory language to address replacement PPE to clarify these issues, rather than simply dealing with the issue in the preamble (See, *e.g.,* Exs. 12: 3, 58, 188, 212; 46: 43). Second, commenters were concerned that OSHA's rule would prevent them from enforcing legitimate workplace rules regarding employee misuse and damage to PPE. OSHA addresses these issues below. OSHA also addresses comments in the record questioning acceptable replacement schedules and allowances.

1. Clarity

Several commenters raised issues about the clarity of OSHA's position in the proposed rule on replacement PPE. The majority of the comments on the issue of employer payment for replacement PPE asked OSHA to clarify its statements in the proposal as to when employers would and would not be required to pay for replacement PPE. The comments received included a number from employers who expressed concern that they would be paying for an endless stream of PPE. These commenters noted the uncertainty of determining the meaning of ''normal wear and tear'' and ''occasional loss'' in the context of the wide variety of PPE that is required and used in various industries.

A number of commenters suggested that OSHA should strictly define ''regular loss'' or ''occasional loss'' that were used in the preamble to the proposal, in the final rule by specifying it as two, three, or four occurrences (See, *e.g.,* Exs. 12: 14, 17, 41, 62, 87, 121, 143, 167, 168, 212, 242). BP-Amoco recommended that ''The particulars of any case of occasional loss or damage are going to be unique to each case, and the resolution of who should be responsible to pay is best left up to the contractual agreement or grievance procedures in place between the employer and employee group. For OSHA to attempt to regulate this issue would require OSHA to define what is occasional loss and when employee conduct becomes negligent—something that is not possible or desirable'' (Ex. 12: 28).

The Screenprinting & Graphic Imaging Association International (SGIA) also questioned the meaning of the term ''lost'':

> For example, an employee is wearing a pair of gloves while out on the loading dock as a shipment of ink is delivered. As the employee reaches for the load coming from the truck, one glove is pulled from the employee's hand, falls to ground and is blown away by the wind and cannot be found. In this instance, the PPE was not damaged, did not show normal wear and tear, yet requires replacement. The employee was not negligent, but the PPE is lost, and the employer should be responsible to pay for the replacement. If the same employee, however, were to have placed the gloves down on a table, walked off, then came back to find them missing, this can be seen as neglect and the employee pays for the replacement. Although these two examples are open for discussion, it shows that each worksite needs to make specific policies for what will constitute a lost item, and how to safe guard against abuse and negligence (Ex. 12–116, p. 2).

Other commenters expressed concern about the proposed language addressing the duty to replace PPE that has been lost or damaged beyond ''normal wear and tear.'' For example, ORC, Inc. recommended that:

> How an employer deals with replacement of PPE that is lost or damaged by employees beyond what would be expected through normal wear and tear, should be left to the employer's discretion'' (Ex. 12: 222).

In a comment that was echoed by approximately 60 associations of home builders, the Ohio Home Builders Association stated that:

> The proposed revision to the PPE standard does not allow employers much flexibility in how they manage safety and health on their jobsites. OSHA would require each employer to pay for all PPE used by employees with very few exceptions. Only in the rare case involving an employee who regularly fails to bring employer-supplied PPE to the job-site, or who regularly loses the equipment, would the employer be permitted to require the employee to pay for replacement PPE. How are we to define ''regularly'' in these scenarios? (Ex. 12–34).

Furthermore, a large number of commenters recommended OSHA include regulatory language in the final rule to clearly articulate when an employer could require the employee to replace the PPE at his or her own cost (See, *e.g.,* Exs. 12: 3, 21, 51, 58, 68, 79, 99, 101, 217; 46: 43).

OSHA has carefully considered these comments and has made changes to the approach in the proposed rule. First, OSHA has added new regulatory text to address specifically an employer's obligation to pay for replacement PPE. OSHA believes that because the issue of replacement PPE was not included in the regulatory text of the proposed rule, there was confusion amongst employers as to their precise obligations. By including replacement language in the regulatory text, OSHA believes that the rule will be clearer for employers and employees.

Second, in formulating the regulatory text, OSHA determined that using ''normal wear and tear'' as a benchmark was unhelpful, given the wide variety of PPE covered by the rule and the wide variety of uses for the PPE. OSHA was concerned that relying on ''normal wear and tear'' could result in employers not providing required replacement PPE at no cost to employees. Furthermore, OSHA determined that the term ''occasional loss'' was vague and could be subject to varying interpretations. OSHA thus determined that the rule would not rely on these terms, but would specify when employers are not required to bear the cost of replacement PPE. Thus, the rule requires employers to pay for replacement PPE, following the criteria in OSHA's existing standards governing when PPE must be replaced, except when the employee loses or intentionally damages the PPE.

By excepting employer payment for all ''lost'' PPE, OSHA hopes to avoid the confusion caused by using the terms ''occasional loss'' in the proposal. ''Occasional loss'' lacks reasonable precision given the universe of circumstances in which a wide variety of PPE may be lost either at work or off of the worksite. For these reasons, this rule does not require employers to bear the cost of replacing PPE that the employee has lost, even if it is a single instance. In addition, the PPE may be considered ''lost'' if the employee comes to work without the PPE that has been issued to him or her.

The employer is free to develop and implement workplace rules to ensure that employees have and use the PPE the employer has provided at no cost. For example, an employer may require employees to keep their PPE in a secured locker, or turn in the PPE at the end of the shift. Alternatively, employers may enter an agreement with the employee allowing the employee to take the PPE that the employer has provided at no cost to the employee off of the job site to use at home or for other employers. The agreement may stipulate that the employee is responsible for any loss of the PPE while it is off of the job site. The rule does not prohibit an employer from exercising his or her discretion to charge an employee for replacement PPE when the employee fails to bring the PPE back to the workplace.

Furthermore, by setting forth in the regulatory text that employers can ask employees to pay for replacement PPE needed as a result of an employee intentionally damaging PPE, OSHA is addressing the concerns of many commenters that the proposed rule would have required employers to pay for replacement PPE damaged due to employee misconduct (See, *e.g.,* Exs. 12: 21, 44, 58, 68, 79, 101, 152, 154, 165, 172, 182, 203, 210, 212, 228; Tr. 154, 549; 46: 23). OSHA wants to make clear, however, that the exception only applies when the damage was intentional. Accidental damage of the PPE by the employee does not qualify for the exception.

Finally, OSHA emphasizes that the final rule only requires the employer to pay for PPE that is used to comply with the Parts that the rule amends. Employers are not required to pay to replace PPE that is not used to comply with those Parts. Therefore, if the employer is not required to pay for the initial issue of PPE, the employer is not required to pay for the replacement of that PPE. However, if the working conditions have changed such that the PPE the employee had provided at his or her cost is now required under OSHA requirements, then the employer is required to pay for the replacement PPE it will have its employees use to comply with those requirements. When the PPE the employee already owns is adequate in these circumstances, the employee volunteers to use the PPE, and the employer allows the employee to use it in place of the PPE the employer must now provide, then the employer is not required to reimburse the employee. This is the same exception provided in the regulatory provision addressing employee-owned PPE. Similarly, as far as PPE that an employee has provided at his or her own cost, once that PPE is no longer adequate, the employer must pay for PPE that is required to comply with the rule, unless the employee voluntarily decides to provide and pay for his or her own replacement PPE (which may occur if the employee wants personalized or upgraded PPE). As with PPE owned by a newly hired employee, the employer is prohibited from requiring employees to provide their own PPE. The same replacement issues may arise if an employee no longer volunteers his or her own PPE for workplace use, and the same policies apply.

2. Disciplinary Policies

Commenters were also concerned that OSHA's rule would prevent them from effectuating their reasonable disciplinary policies and infringe upon legitimate management practices to enforce safety and health rules at the worksite. Some commenters argued that without employer disciplinary programs, abuse would occur (See, *e.g.,* Ex 12: 49), and stated that there were no provisions that would allow employers to enforce employee accountability (See, *e.g.,* Exs. 12: 31, 34, 68, 95, 167, 172, 212). As ORC, Inc. stated:

> How the employer chooses to deal with situations where an employee has lost or caused damage to required PPE should remain the decision of the employer. The situation is analogous to that confronting an employer when an employee fails to follow other safety and health requirements. There are a number of ways to deal with the problem, depending on the particular workplace, circumstances surrounding the particular incident, and the particular employee involved. It is up to the employer to determine what works best in his or her establishment (Ex. 12:222).

OSHA does not believe this rule would have that effect and certainly did

not intend this rule to have that effect. Therefore, OSHA wishes to emphasize that the rule does not prohibit employers from fairly and uniformly enforcing work rules within the context of a system of reasonable and appropriate disciplinary measures to ensure compliance with this rule. OSHA recommends that employers use employee disciplinary programs as part of their overall effort to comply with OSHA standards and establish effective workplace safety and health programs. This is therefore also the case when employers are providing PPE to their employees to protect them from workplace injury and illness. As the Society of Human Resource Management (SHRM) stated: ''An employer has both the right and the obligation (under the OSH Act) to use disciplinary procedures to ensure compliance with safety and health requirements'' (Ex. 46: 43, p. 9).

One aspect of ''reasonable and appropriate'' disciplinary measures is whether they are proportionate to the employee offense. For example, docking an employee's pay $100 for losing a $10 reflective vest would not be allowed as, the penalty is unreasonably disproportionate to the cost of the PPE. Likewise, requiring an employee to repay the full cost of a lost PPE item within days of its expected replacement date is not a fair policy and would not be allowed. Disciplinary systems must be implemented consistently for all employees, regardless of rank or role. Disciplinary systems that circumvent the PPE payment requirements and shift payment to employees when the PPE is not lost or intentionally damaged will be considered a violation of the standard. Finally, employers must take precautions to assure that disciplinary systems are not administered in a manner that infringes upon an employee's rights under the OSH Act.

The use of disciplinary systems is also recognized by employees as a valid means for dealing with PPE loss and abuse issues. In discussing situations where employers require that employees pay for lost equipment, Jacqueline Nowell, representing the UFCW, stated that management has full run of the plant and is permitted and capable of coming up with disciplinary policies (Tr. 216). Similarly, George Macaluso of the Laborer's Health and Safety Fund stated ''If an employer has a problem with a particular worker repeatedly losing or damaging equipment, that's a management or disciplinary issue, not a matter under OSHA's jurisdiction'' (Tr. 274). Further, Robert Krul of the Building Construction Trade Department's (BCTD) Safety and Health Committee, in discussing equipment abuse by employees, stated that management ''[e]ven has the right under our collective bargaining agreements in the management's rights clause to instill reasonable and fair rules, regulations, and disciplines on a job site that govern use of such equipment.'' Mr. Krul related an incident involving the blatant abuse of fall protection equipment:

> Now there is the odd case of, you know, somebody used as it was in the case of Roberts Roofing where an employee was seen using a safety harness to tow a pick up truck. Well, good Lord. I mean, you're the owner of the company and you see somebody abusing a piece of safety equipment like that. I'd either fire the guy or make sure he got his first notice of disciplinary action. What difference does it make if it's PPE or if it's one of his expensive tools on the job? If it's abuse of company property, it's abuse of company property. And that goes to the heart of reasonable, fair discipline, rules and regulations (Tr. 315–316).

OSHA has always encouraged employers to exercise control over the conditions at their workplace. OSHA also notes, as discussed in the preamble to the bloodborne pathogens standard, that disciplinary programs are not the only alternative employers can use to encourage employees to follow their PPE policies. Positive reinforcement approaches, the individual employee's performance evaluation, or increased education efforts, can also be used by employers to improve compliance and reduce employee misconduct (56 FR 64129).

OSHA sets forth much of its policy for evaluating the effectiveness of employers' safety and health programs in its Voluntary Protection Programs, or VPP. In 1989, OSHA issued voluntary guidelines for safety and health programs. In several sections of the **Federal Register** notice (54 FR 3904–3916) announcing the guidelines, OSHA stressed the need for effective, fair disciplinary programs. For example, OSHA stated that:

> When safe work procedures are the means of protection, ensuring that they are followed becomes critical. Ensuring safe work practices involves discipline in both a positive sense and a corrective sense. Every component of effective safety and health management is designed to create a disciplined environment in which all personnel act on the basis that worker safety and health protection is a fundamental value of the organization. Such an environment depends on the credibility of management's involvement in safety and health matters, inclusion of employees in decisions which affect their safety and health, rigorous worksite analysis to identify hazards and potential hazards, stringent prevention and control measures, and thorough training. In such an environment, all personnel will understand the hazards to which they are exposed, why the hazards pose a threat, and how to protect themselves and others from the hazards. Training for the purpose is reinforced by encouragement of attempts to work safely and by positive recognition of safe behavior.
>
> If, in such a context, an employee, supervisor, or manager fails to follow a safe procedure, it is advisable not only to stop the unsafe action but also to determine whether some condition of the work has made it difficult to follow the procedure or whether some management system has failed to communicate the danger of the action and the means for avoiding it. If the unsafe action was not based on an external condition or a lack of understanding, or if, after such external condition or lack of understanding has been corrected, the person repeats the action, it is essential that corrective discipline be applied. To allow an unsafe action to continue not only continues to endanger the actor and perhaps others; it also undermines the positive discipline of the entire safety and health program. To be effective, corrective discipline must be applied consistently to all, regardless of role or rank; but it must be applied.

In 2000, OSHA issued revisions to the Voluntary Protection Programs (64 FR 45649–45663), which included the following element of an effective safety and health program:

> c. Hazard Prevention and Control. Site hazards identified during the hazard analysis process must be eliminated or controlled by developing and implementing the systems discussed at (2) below and by using the hierarchy provided at (3) below.
>
> (1) The hazard controls a site chooses to use must be:
>
> (a) Understood and followed by all affected parties;
>
> (b) Appropriate to the hazards of the site;
>
> (c) Equitably enforced through a clearly communicated written disciplinary system that includes procedures for disciplinary action or reorientation of managers, supervisors, and non-supervisory employees who break or disregard safety rules, safe work practices, proper materials handling, or emergency procedures * * * [sections (2) and (3) include information on hazard control systems and the hierarchy of controls].

Further, the VPP policies and procedures manual (CSP 03–01–002 03/25/2003) advises the OSHA team reviewing a VPP applicant's safety and health program that:

> A documented disciplinary system must be in place. The system must include enforcement of appropriate action for violations of the safety and health policies, procedures, and rules. The disciplinary policy must be clearly communicated and equitably enforced to employees and management. The disciplinary system for safety and health can be a sub-part of an all-encompassing disciplinary system.

Thus, employers that do not have reasonable and appropriate safety and

health disciplinary systems are denied entry into the VPP program. As these longstanding policies display, OSHA not only allows employers to have disciplinary programs, the Agency encourages employers to have such programs and to manage them in a manner that supports occupational safety and health objectives.

OSHA has emphasized through its enforcement policies that employers must exercise control over the working conditions at their workplace. OSHA's Field Inspection Reference Manual (FIRM) CPL 2.103 (Sept. 26, 1994) is OSHA's primary reference document identifying the Agency's field office inspection responsibilities. It provides OSHA's field staff, including Compliance Safety and Health Officers (CSHOs) with direction on the Agency's inspection procedures, documentation requirements, citation policies, abatement verification procedures, and other procedures and policies needed to implement an effective and consistent national enforcement policy while providing needed latitude for local conditions.

The FIRM specifically recognizes the role of disciplinary programs that employers use to ensure that their employees follow adequate workplace safety and health rules. These programs may be used to establish the unpreventable employee misconduct defense to a citation issued against the employer for conditions violative of the OSH Act (CPL 2.103 section 7 ch. III C.8.c.1.).

The Firm explains that ''unpreventable employee misconduct'' is an ''affirmative defense,'' which is defined as ''any matter which, if established by the employer, will excuse the employer from a violation which has otherwise been proved by the CSHO.'' In other words, if the employer can prove each and every element of an affirmative defense to OSHA, the Agency may decide that a citation is not warranted. The elements of this defense, as set forth by the Review Commission and the courts, are that the condition that violated an OSHA standard was also a violation of the employer's own work rule, that the violation would not have occurred if the employee had obeyed the employer's work rule, that the employer's work rule was effectively communicated to the employee, and the employer's work rule was uniformly enforced by the employer. OSHA believes that an important aspect of exercising control over the workplace is the effective training and supervision of employees.

3. Replacement Schedules and Allowances

Several commenters raised issues related to regular replacement schedules and allowances used to replace PPE (See, *e.g.,* Exs. 12: 153, 188; 46: 43). The SHRM recommended that employers be allowed to set a pre-determined service life for PPE, and limit replacement of PPE to situations that involve normal wear and tear through a pre-determined length of time, stating that:

> Employers that provide PPE should be able to develop rules that take into account the service life of the PPE. Employers should not be required to pay for PPE and all replacements, regardless of whether service life has been met. Misuse and neglect will greatly shorten the service life of any PPE. Employers often pay for PPE and HR [human resources] professionals should be allowed to require employees to pay for their own replacement if such a replacement is needed prior to expiration of the equipment's service life. The purpose of such an approach would be to provide an incentive for employees to take better care of their equipment (Ex. 46: 43, p. 10).

In a similar comment, the Sheet Metal and Air Conditioning Contractors National Association suggested inserting language requiring employees to pay for replacement PPE if it has been lost or damaged ''[b]efore it has been used for its minimum anticipated use period, as determined by the employer and/or manufacturer * * *'' (Tr. 92–93). The ISEA stated that:

> It is important that any item of PPE be replaced immediately when an inspection reveals that it is damaged or no longer meets its intended use. Manufacturers provide guidelines to assist in making this determination. Employers should pay for these replacements under the same terms as they provide initial issue of PPE. Some companies provide an annual PPE benefit to employees based on expected use of PPE under normal conditions. If this amount is exceeded, employees would have to pay for replacement only if it is their fault for it being lost or damaged. The employer can, of course, pay more than this annual amount when circumstances warrant. Such a system would eliminate abuse of the program (Ex. 12: 230).

OSHA does not object to allowances as a means of paying for PPE, as long as the allowance policy assures that employees receive replacement PPE at no cost as required by the final rule. As several commenters noted, this is a common practice, and it appears that in many cases it is an effective and convenient method for providing PPE at no cost to employees.

Allowance systems are based on the expected service life of the PPE. The Screenprinting and Graphics Imaging Association (SGIA) noted several factors involved in service life estimation, stating that:

> Each worksite and employer would need to include in their PPE assessment, when and how PPE will be replaced. The employer needs to find what factors are and/or will be present at the worksite to cause the normal wear and tear and/or immediate damage to the PPE specified. Anything outside the guidelines of the established factors should require the employee to incur the replacement costs. However, a periodic evaluation of the PPE specified, the PPE assessment, and the factors regarding replacement, need to be performed in order to ensure that a reasonable and appropriate system is always in place (Ex. 11: 116).

OSHA believes that the expected service life for any PPE depends on several factors, and the manufacturer's recommendation is only one factor. OSHA believes other factors, such as the working conditions under which the PPE is used, the probability of workplace incidents damaging the PPE or making it otherwise unable to protect the employee, misuse, and any other conditions relevant to the worksite and the use of the PPE are highly relevant. OSHA does not object to employers considering expected service life in an allowance system. However, such systems must ensure that replacement PPE is provided at no cost to employees. In addition, these employers must have systems in place to deal with situations where PPE is damaged at work (*e.g.,* accidents) or lasts for a period shorter than the expected service life due to conditions other than loss or intentional damage.

Additionally, the Agency wants to be clear that the rule would not require that the employer provide and pay for replacement PPE whenever requested by an employee, as was the concern of one commenter (Ex. 46: 43, p. 8). If an employee requests replacement PPE, the employer should evaluate the PPE in question to determine if, in its present condition, the PPE provides the protection it was designed to provide. Employees can be charged for replacement PPE, but only when the PPE is lost or intentionally damaged by the employee.

OSHA notes that some employers currently convey ownership of PPE to employees, thus allowing employees to control the use of the PPE both on and off the job. OSHA's PPE rules require employers to ''provide'' PPE to their employees. OSHA does not require employers to transfer ownership and control over PPE to employees. Employers are free to choose that option and others if they so desire. For example, as pointed out by various commenters, the employer is free to

prohibit employees from taking employer-owned PPE away from the workplace and can elect to keep the PPE in question at the establishment with the use of lockers or other storage mechanisms (Tr. 203, 274, 312–313, 337). The employer may also retain ownership of the PPE and still allow employees to remove it from the workplace.

In summary, OSHA is requiring employers to pay for the initial issuance of PPE, as well as its replacement, except when the employee has lost or intentionally damaged the PPE. Adding regulatory text addressing the issue of payment for replacement PPE makes an employer's obligations clear. The rule does not prohibit the employer from using policies, such as allowances, to fulfill their obligations under the rule, so long as the policies assure that employees receive replacement PPE at no cost as required by the final rule. Neither does the rule prevent employers from fairly and uniformly enforcing work rules to ensure compliance with this rule. OSHA emphasizes the need for effective, fair disciplinary programs, as seen in its Voluntary Protection Programs. OSHA also believes that the rule is consistent with the duty that employers have with regard to working conditions because it reserves to them the right to control the use and maintenance of the PPE that is used at their workplace.

VI. Employee-Owned PPE

The final PPE rule addresses employee-owned PPE in the workplace and states that, where an employee provides adequate protective equipment he or she owns, the employer may allow the employee to use it and is not required to reimburse the employee for it. This is included in the regulatory text at § 1910.132(h)(6) for general industry, § 1915.152(f)(6) for shipyard employment, § 1917.96(f) for longshoring, § 1918.106(f) for marine terminals, and § 1926.95(d)(6) for construction. The final rule also makes clear that employers shall not require employees to provide or pay for their own PPE, unless specifically excepted by the other provisions of the rule. This will prevent employers from avoiding their obligations under the standard by requiring their employees to purchase PPE as a condition of employment or placement.

This provision was not specifically included in the proposed rule. However, OSHA never intended in the proposed rule to prevent employees from voluntarily using PPE they own, so long as the PPE is adequate to protect them from hazards. Furthermore, OSHA did not intend for employers to have to reimburse employees for equipment that they voluntarily bring to the worksite and wish to use. A number of commenters to the proposal questioned OSHA's position regarding equipment owned by employees. This addition to the final rule is a reaction to these comments and clearly sets forth an employer's obligations with respect to employee-owned PPE. OSHA explains this provision and addresses relevant comments below.

A. Employer Responsibility To Ensure ''Adequate Protective Equipment''

It is important at the outset to set forth an employer's existing obligations under OSHA standards with respect to employee-owned PPE. OSHA's current general industry standard states, ''[w]here employees provide their own protective equipment, the employer shall be responsible to assure its adequacy, including proper maintenance, and sanitation of such equipment'' (29 CFR § 1910.132(b)). The construction standards contain similar language in § 1926.95(b). These provisions ensure that all PPE used by employees has been evaluated and is adequate to protect the employee from hazards in the workplace. OSHA will not allow employers to escape their ongoing responsibility to assure that PPE used at their workplace is adequate simply because an employee may own the protective equipment. If that were permitted, employees would receive less effective PPE protection.

To recognize an employer's fundamental obligation to ensure that PPE used is adequate to protect affected employees, the final PPE payment rule refers to the employee providing his or her own ''adequate protective equipment.'' OSHA has included this phrase to ensure that employee-owned PPE is used only where the PPE is adequate to protect the employee from hazards in the particular workplace where it is being used. Furthermore, references to §§ 1910.132(b) and 1926.95(b) remain in the general industry and construction standards to ensure that when employers allow employees to use personally-owned PPE at work, the employer evaluates the PPE to make sure that it is adequate to protect employees, that it is properly maintained, and that it is kept in sanitary condition.[4] While the maritime standards in Parts 1915, 1917, and 1918 do not contain explicit language concerning employee-owned PPE as in §§ 1910.132(b) and 1926.95(b), the final PPE payment rule contains the phrase ''adequate protective equipment'' as a pre-requisite to use of the employee-owned PPE in the affected maritime workplaces. It is the Agency's position that when allowing the use of employee-owned PPE in the maritime setting, the employer is still obligated to ensure that the PPE used is appropriate and adequately protective of employees. These obligations are inherent in the requirement that the employer ''provide'' PPE. Several of the PPE provisions in the maritime standards also specifically require that employers ensure the use of ''appropriate'' PPE. (See, *e.g.,* 29 CFR 1915.152(a) (''The employer shall provide and shall ensure that each affected employee uses the appropriate personal protective equipment * * *.''))

B. Employees Who Already Own PPE

The most common situation where employers may encounter employee-owned PPE is when newly hired employees report to the worksite with their own PPE. The employee may have been given the PPE by a former employer, may have purchased the PPE for a prior job or because of a personal preference for certain features or aesthetics, may have obtained the PPE from a friend or relative who no longer needed it, may have obtained PPE while in an educational program, or from some other source. This occurs in many industries but seems to be found more frequently in workplaces that use short-term labor.

OSHA recognizes that employees who change employers frequently may want to carry their PPE from job to job. Underlying reasons for this can include that the employee will be familiar with the PPE, will have ''broken it in,'' and especially if the employee purchased the PPE, will have the equipment that he or she prefers and finds the most comfortable and aesthetically pleasing. This practice is common in the construction, marine terminal, and shipyard industries, as well as workplaces employing individuals from temporary help services. (Application of the standard in these industries is addressed in more detail in the following section.)

As discussed previously and noted by many commenters, in some trades, industries, and/or geographic locations, PPE for employees who frequently change jobs can take on some of the qualities of a ''tool of the trade.'' In other words, the PPE is an item that the employee traditionally keeps with his or

[4] Use of the word ''sanitary'' does not indicate that the Agency expects PPE to be maintained at a level approaching ''hospital clean.'' ''Sanitary condition'' simply means that the PPE must be kept at a level of cleanliness such that it does not present a health hazard to the employee who is using it.

her tool box. This may be because the PPE is used while performing some type of specialized work, such as welding or electrical work, or because it is a tradition in the industry, such as in home building. OSHA has not included an exception to the payment requirement for tools of the trade because, among other things, of the difficulty of defining, with adequate precision, when an item of PPE is or is not a tool of the trade. However, because the rule does not require employers to reimburse employees for PPE they already own, it recognizes that some employees may wish to own their tools of the trade and bring that equipment to the worksite.

OSHA has further emphasized in the regulatory text that employees are under no obligation to provide their own PPE by stating that the employer shall not require an employee to provide or pay for his or her own PPE, unless the PPE is specifically excepted in the final rule. These provisions address the concern that employers not circumvent their obligations to pay for PPE by making employee ownership of the equipment a condition of employment or continuing employment or a condition for placement in a job. OSHA recognizes that in certain emergency situations, such as response to a natural disaster, where immediate action is required, it may be necessary for employers to hire or select employees already in possession of the appropriate PPE. As a general matter, however, employers must not engage in this practice. Taking PPE-ownership into consideration during hiring or selection circumvents the intent of the PPE standard and constitutes a violation of the standard.

C. Employer Ownership and Control Over PPE

When employers purchase PPE, they often retain ownership. In this situation, they ''provide'' the PPE to the employee without conveying ownership to the employee. This is similar to ''providing'' an employee a tool to use, a lift truck to drive, or a company automobile.

In some workplaces that follow this approach, the PPE is kept in on-site lockers or other storage facilities to prevent employees from using the PPE off the job, to avoid loss or damage to the PPE, to prevent contaminants from leaving the workplace on or in equipment, or simply as a convenience. In other workplaces, the employer purchases the PPE, retains ownership of the equipment, but allows (or even requires) the employee to remove the PPE from the worksite and return with it when it is next needed to protect against a hazard. In either case, when the employer retains ownership of the PPE, the employer has the right to control the use of the PPE, just as he or she would control any other equipment, tools, parts, or facilities that he or she owns.

Some commenters to the rulemaking questioned whether employers had the right to recover PPE once the employee no longer works for the providing employer. The NAHB asserted that ''[i]f an employer issues equipment that they have paid for, then they should expect to get it back; if not, the employer must be permitted to charge for the equipment'' (Ex 12: 68). A number of commenters asked if they could require employees to provide a deposit that would be returned when the employee returned the PPE (See, *e.g.,* Exs. 12: 12, 44, 68, 140, 153, 154, 165, 203). The Associated Building and Contractors, Inc. (ABC) stated that:

> [t]here are cases of the short-term employee, i.e., the person who is hired, given $150.00 plus in safety apparel, then decides construction is not for him or her and leaves the next day. For this reason, the employer should be allowed to require a deposit from short-term and temporary employees, to be refunded when the equipment is returned in satisfactory condition (Ex. 12: 153).

William McGill of the International Brotherhood of Electrical Workers described one such deposit system during his testimony. His bargaining unit reached an agreement with the company in which the employees put down a security deposit for their hard hats, and when they leave the company, the deposit is refunded when the hard hat is returned (Tr. 588–590).

After considering these comments, OSHA recognizes the concern of employers and addresses it as follows. If the employer retains ownership of the PPE, then the employer may require the employee to return the PPE upon termination of employment. If the employee does not return the employer's equipment, nothing in the final rule prevents the employer from requiring the employee to pay for it or take reasonable steps to retrieve the PPE, in a manner that does not conflict with federal, state or local laws concerning such actions. In these situations, OSHA notes that the employer is not allowed to charge the employee for wear and tear to the equipment that is related to the work performed or workplace conditions. As suggested by National Tank Truck Carriers, Inc., a written agreement, for example, between the employer and employee on the matter may be an effective method of ensuring that the employer's expectations of the employee are clear and unambiguous (Ex. 12: 12). Another acceptable alternative is a deposit system that provides an incentive for employees to return the equipment. However, the Agency cautions that the deposit system must not be administered in a fashion that circumvents the rule and results in an employee involuntarily paying for his or her PPE.

In some situations, an employer may prohibit an employee from using PPE that the employer has paid for while working for another employer or for personal purposes. Conversely, an employer may allow an employee to use employer-owned PPE while working for another employer or for personal purposes. Since the employer has retained ownership of the PPE, he or she can stipulate where it is used. OSHA does not object to either of the aforementioned practices.

The VPPPA noted that their member firms promote off-the-job safety by encouraging employees to use PPE while performing personal tasks, when the PPE is suitable for such use and the employer has given permission (Ex. 12: 113). OSHA recognizes the benefit of the policy articulated by VPPPA. If employees utilize PPE consistently at work and at home, its use is likely to become more natural, or ''second nature'' to the employee, and PPE compliance at work may be improved. Another means of improving compliance is for employers to develop clear policies for PPE, i.e., specific procedures for use, maintenance, storage, and so forth. The employer should communicate these policies clearly to employees, ensuring that they are understood and followed. A reasonable approach to conveying this information would be to include training material covering these topics when conducting the mandatory PPE training.

While OSHA anticipates that most PPE will be purchased by and remain the property of the employer, OSHA foresees some employers conveying ownership of the PPE to their employees. Many commenters argued that employees take better care of PPE that they actually own (*See, e.g.*, Exs. 12: 112, 154, Tr. 547, 679). While employers are required to pay for PPE, OSHA does not object to employers transferring ownership of the equipment to employees.

D. Upgraded and Personalized PPE

In some workplaces, an employer may allow an employee to ''upgrade'' or personalize their PPE, thereby obtaining PPE beyond what the employer is required to purchase. Issue seven of the proposal addressed this situation, *i.e.*,

an employee who prefers more costly PPE than that provided by the employer. The proposal asked, ''If an employee wants to use more costly PPE because of individual preference, should that employee be responsible for any difference in cost? Is there evidence that such ''individualized'' PPE has caused safety problems in the past?'' (64 FR 15416).

OSHA received many comments on this issue. Several commenters stated that if an employee wants more expensive equipment, they should pay for the difference in costs (*See, e.g.*, Exs. 12: 17, 50, 52, 68, 99, 107, 145, 152, 172, 188, 201, 217, 228, 230). Some commenters argued that if employees want more costly PPE than that which the employer is providing, they should be responsible for the entire cost of the PPE (*See, e.g.*, Exs. 12: 65, 79, 107, 110, 114, 150). Other commenters argued that employers should pay for PPE which the employee prefers, so employees will have PPE that fits better, is more comfortable, and is more likely to be used (*See, e.g.*, Ex. 12: 134, 218). Some thought that the purchase of upgraded or more costly PPE should be at the discretion of the employer (*See, e.g.*, Exs. 12: 3, 114, 183), or alternatively that employees may upgrade their PPE, but the employer need not allow the use of that PPE at the workplace (Ex. 12: 183). Some argued that individual preference does not justify an OSHA rulemaking effort but is better left to employer and employee mutual agreement (*See, e.g.*, Exs. 12: 144, 190). The International Brotherhood of Teamsters (IBT) suggested that:

> A worker's request for more expensive PPE, to replace an ill-fitting PPE or one made of material that a worker may be allergic to, should be judged on safety and health grounds, not on an aesthetic basis. To the extent that an employee's preference is consistent with these OSHA requirements, the employer should accommodate any added cost. Outside this domain, the matter of payment for more costly PPE of employee's choice should rest on union agreements (Ex. 12: 190).

The American Association of Airport Executives recommended that ''[a]n employer should not be responsible for the additional cost resulting from an employee's preference for a costly, but no more effective PPE product. If employees want more expensive PPE, they should either pay for it or obtain it through collective bargaining'' (Ex. 12: 217).

OSHA agrees that it needs to clearly set forth an employer's obligation with respect to upgraded or personalized PPE. First, the language that OSHA has included in the final standard to address PPE owned by employees applies equally to upgraded or personalized PPE purchased by employees. When an employee owns a certain type of upgraded PPE and wishes to use it on the jobsite rather than using the PPE provided by the employer, the employer is not required to reimburse the employee for that PPE, pursuant to the employee-owned exception discussed above.

Second, OSHA clarifies that an employer is not required to pay for upgraded or personalized PPE requested by an employee, provided the employer provides adequate ''basic'' PPE to the employee. Under the current standards, employers must provide PPE that protects against hazards in the workplace. Allowing the use of other PPE that the employee may prefer or that provides features beyond those necessary for employee protection from workplace hazards remains at the discretion of the employer. If an employee requests some specialized PPE in place of the PPE provided by the employer,[5] the employer may allow the employee to acquire and use the PPE, but the employer is not required to pay for it. If the employer allows upgrades or personalized PPE, he or she is still required to evaluate the PPE to make sure that it is adequate to protect the employees from the hazards in the particular workplace, is properly maintained, and is kept in a sanitary condition. As stated by the SGIA:

> Allowing employees to provide their own PPE can be an acceptable practice as long as the employees are provided the PPE assessment for their workplace and the minimum guidelines for the selection of the PPE * * * A potential problem arises when no standards are set and no system is in place accounting for employee vs. employer PPE, in that reimbursement claims for PPE often lead to disputes between employee and employer (Ex. 12: 116).

SGIA's comment raises an important point about setting standards. Employers are encouraged to set specific policies for PPE upgrades and employee-preferred PPE and to communicate these policies clearly to employees, in order to minimize disputes.

Third, if an employer uses an allowance system to provide and pay for PPE, he or she is only required to provide to the employee the amount of money required to purchase ''basic'' PPE that protects against hazards in the workplace. If the employer allows employees to take the allowance and use it toward the purchase of acceptable, but upgraded or personalized PPE, that is permissible under the final rule. In this instance, OSHA stresses that the employer is only responsible for the cost of the ''basic'' PPE.

Another issue related to upgrading and personalizing PPE is allowing employees to choose PPE from an array of equipment. The VPPPA suggested that OSHA require employers to provide an adequate selection of appropriate PPE, so each employee will find equipment that is comfortable, functional, and sized appropriately (Ex. 12: 113). While ORC agreed that the arrangements for paying for more expensive PPE should remain the decision of the employer, they also noted that ''[e]xperienced employers are * * * aware that, where possible, it is desirable to offer employees an opportunity to select from an array of equally-effective PPE types. This not only helps to ensure that an employee is issued PPE that is both effective and comfortable, but encourages acceptance and use of the PPE by that employee'' (Ex. 12: 222). Corrado & Sons, Inc. noted that they have a safety committee which allows the employees to select PPE that is the safest and most comfortable to use (Ex. 12: 48).

OSHA agrees that providing a selection of PPE is a good practice which may improve employee acceptance and use of the equipment. Employers are encouraged to consider offering a selection of PPE to their employees as a ''best practice'' that will help to improve the effectiveness of their safety and health programs. In fact, OSHA's respirator and noise standards require employers to provide a selection of equipment from which employees may choose (See § 1910.95(i)(3) and § 1910.134(d)(1)(iv)). Most of OSHA's standards, however, do not contain this type of requirement. Instead, most OSHA standards generally require that the PPE fit the employee properly (See, *e.g.,* § 1910.132(d)(iii), § 1915.152(b)(3), and § 1926.102(a)(6)(iii)).

OSHA is not requiring employers to provide a selection of PPE from which employees may choose their equipment beyond the existing requirements in the respirator and noise standards, because that action is beyond the scope of this rulemaking. Where an employer is not required to offer a selection of equipment, the PPE provided must nonetheless be properly suited to protect against the hazards of the workplace and must fit the employee.

[5] OSHA does not require employers to keep records of employees' requests to use their own PPE. OSHA believes that if information about such requests is needed by the Agency, its inspectors can gather such information through interviews and other standard investigative procedures.

Ill-fitting PPE may not serve its intended purpose and could put the employee at risk of injury, illness, or death. Accordingly, employers are urged to review the PPE manufacturer's instructions, which often provide additional information regarding appropriate selection and fit of PPE.

Some commenters noted that they were not aware of any problems with substandard PPE or safety problems from individualized PPE (See, *e.g.,* Exs. 12: 9, 17, 52, 68, 233). Other commenters worried that allowing employees to select their own upgraded or personalized PPE could cause problems (See, *e.g.,* Exs. 12: 32, 113, 116; Tr. 593, Tr. 178, Tr. 371). The AAOHN observed that:

> Allowing individual preference for PPE could create safety problems if the minimal requirements for PPE are not clearly stated. One [AAOHN] member reported a situation where a manufacturing facility allowed individual preference for safety eyewear and found that 70 percent of the female employees wore glasses without safety lenses. At a very minimum any PPE to be used must be approved by the employer. More significantly, allowing individual preference for PPE may pose administrative and enforcement problems for employers. Allowing individual preference for PPE may make training and compliance more complicated for employers (Ex. 12: 32).

Similarly, the VPPPA noted that employee-owned equipment can be less protective, noting that ''PPE selection can be a very technical task. Safety and health staff often review extensive data and varieties of equipment options before making their selection. In certain cases, employees may waive functionality in lieu of cost, comfort and style. PPE selection must begin with the hazard assessment and the resulting data used to identify the PPE best designed for worker protection'' (Ex. 12: 113).

It is the Agency's position that upgraded and personalized PPE will not provide less protection as long as employers meet their obligation to perform a hazard assessment and ensure the PPE's adequacy, including proper maintenance, and sanitation of such equipment. To facilitate the selection of appropriate PPE, employers are encouraged to set clear guidelines and policies regarding PPE and to communicate these standards to employees.

VII. Industries and Employees Affected by the Standard

The final rule incorporates PPE payment provisions into the OSHA standards applicable to general industry (29 CFR part 1910), construction (29 CFR part 1926), shipyards (29 CFR part 1915), longshoring (29 CFR part 1917), and marine terminals (29 CFR part 1918).[6]

OSHA's proposal included specific questions about how to apply the PPE payment standards in these industries (61 FR 15416). Many commenters raised additional questions about how the standard would apply to independent contractors, subcontractors, and employees obtained through temporary help services. Caterpillar Inc. commented that ''Employment relationships are becoming more complex, and OSHA must recognize the variety of relationships which are now common in industry'' (Ex. 12: 66, p. 4). ORC commented:

> ''[e]mployers are more likely to provide protective equipment, including personal protective equipment, for any employee with whom they have a traditional employment relationship. The issue of responsibility for payment becomes more problematic, however, when contract work, temporary employees, and clothing that is subject to both work and personal use are involved (Ex. 12: 222, p. 2).

OSHA agrees with commenters that a number of nontraditional employment relationships exist in today's workplaces. This section will address these relationships and the more common employment scenarios raised by commenters. However, OSHA wishes to emphasize the fundamental application of the final rule: It applies in the industries above to any employer with an employee regardless of whether the employee is full-time, part-time, temporary, short-term, or working under any other type of arrangement that results in an employer-employee relationship under the OSH Act.

A. OSH Act Definition of Employee

Implementing the PPE payment requirements, as with any of OSHA's regulations and standards, begins with the identification of an employer and an employee as defined by the OSH Act.[7] Whether an employer-employee relationship exists under the Act is determined in accordance with established common law principles of agency. It is important to note that the employer-employee relationship for purposes of complying with this final rule is to be analyzed no differently than it is for any other OSHA standard.

The criteria for determining the existence of an employer-employee relationship in common law are discussed in *Nationwide Mutual Insurance Company* v. *Darden*, 503 U.S. 318, 112 S. Ct. 1344, 117 L. Ed. 2d 581 (1992) and *Community for Creative Non-Violence* v. *Reid*, 490 U.S. 730, 109 S. Ct. 2166 (1989). The cases held that the following criteria are to be considered in determining whether there is an employer-employee relationship.

1. The right to control the manner and means by which work is accomplished.
2. The level of skill required to perform effectively.
3. Source of required instruments and tools.
4. Location of work.
5. Duration of relationship between parties.
6. The right of the employer to assign new projects to the individual.
7. The extent of the individual's control over when and how long to work.
8. Method of payment.
9. The individual's role in hiring and paying assistants.
10. Whether work is the regular business of the employer.
11. Whether the employer is in business.
12. The provision of employee benefits.
13. The tax treatment of the individual.

The nature and degree of control asserted by the hiring party over the means and methods of how the work is to be performed remains a principal guidepost. *Clackamas Gastroenterology Assocs. P.C.* v. *Wells*, 123 S. Ct. 1673, 1679 (2003). OSHA instructs its safety and health inspectors ''Whether or not exposed persons are employees of an employer depends on several factors, the most important of which is who controls the manner in which the employees perform their assigned work. The question of who pays these employees may not be the determining factor.'' (OSHA Field Inspection Reference Manual CPL 2.103, Section 7—Chapter III. Inspection Documentation).[8]

[6] Some employees in agriculture are covered by two general industry standards, the logging standard (29 CFR 1910.226) and the cadmium standare (29 CFR 1910.1027), which specifically require employers to pay for required PPE. (the Logging boots specified in § 1910.266(d) (l)(v), are exempted from the requirements of this standard). The PPE requirements in these two standards will continue to apply in agriculture.

[7] The statute defines ''employee'' as ''an employee of an employer who is employed in a business of his employer which affects interstate commerce'' (29 U.S.C. 652(6)). The term ''employer'' means ''a person engaged in a business affecting interstate commerce who has employees'' (29 U.S.C. 652(5)). The term ''person'' includes ''one or more individuals, partnerships, associations, corporations, business trusts, legal representatives, or any organized group of persons'' (29 U.S.C. 652 (4)).

[8] The preamble to the 29 CFR Part 1904 injury and illness recording and reporting regulation

Continued

Thus, employers must examine whether the employment relationships they have make them ''employers'' of ''employees'' under the Act. If they are, they must ensure that PPE is provided to their employees at no cost, unless specifically excepted in the final rule.

B. Self-Employed Independent Contractors

A truly self-employed ''independent contractor,'' is not an ''employee'' under the OSH Act and is not provided the protections of the OSH Act, and is not covered by the OSHA standards. Therefore, an employer who has contracted with that individual for services is not required to pay for that individual's PPE. Other individuals, who are not considered to be employees under the OSH Act are unpaid volunteers, sole proprietors, partners, family members of farm employers, and domestic employees in a residential setting. (See 29 CFR 1975.4(b)(2) and § 1975.6 for a discussion of the latter two categories.) As is the case with independent contractors, no employment relationship exists between these individuals and the hiring party, and consequently, no PPE payment obligation arises.

However, a self-employed independent contractor may become an employee of the hiring party, even if only temporarily. The label assigned to an employee is immaterial if it does not reflect the realities of the relationship. For example, an employment contract that labels a hired employee as an independent contractor will not necessarily control if in fact the hiring employer exercises day-to-day supervision over that employee, including directing the worker as to the manner in which the details of the work are to be performed, when it is to be performed, and so forth. Thus, depending on the nature and degree of control asserted over the means and methods of how the work is to be performed, the hiring employer may be responsible for compliance with OSHA standards, including providing PPE to that individual at no cost.

C. Temporary Help Services and Subcontractors

Several commenters asked OSHA to clarify application of the PPE payment requirements to temporary help services (See, *e.g.,* Exs. 12: 66, 104, 145, 164) and subcontractors (See, *e.g.,* Exs. 12: 3, 9, 15, 28, 58, 66, 129, 222).

With respect to temporary help services, some commenters stated that ''using firms'' should not pay for required PPE. Caterpillar, Inc. stated that:

> [T]emporary workers, who are supervised by Caterpillar supervisors, often perform production, maintenance and service operations. The fact that we supervise these temporary employees makes them Caterpillar employees by OSHA definitions and enforcement policy. We expect temporary employees to provide their own common forms of PPE. We may also expect temporary employees to provide specialized equipment unique to an unusual job. Caterpillar may occasionally provide specialized PPE for specific tasks and any specialized PPE we provide would be recovered when the temporary employees move to another job. Complicating this issue is the fact that temporary employees often have employment relationships with two or more entities. Our temporary employees often have a relationship with their employment agency or parent firm which may provide insurance coverage, workers compensation benefits, training, and basic personal protective equipment. * * * OSHA must exclude temporary employees from the coverage of the proposed standard, or require that their current employer only assure that PPE is utilized and allow industry practice to determine who purchases PPE (Ex. 12: 66).

Those entities that provide temporary employees, however, such as the National Association of Temporary and Staffing Services (NATSS), argued that the firm obtaining employees from a temporary help service (the utilizing employer) should pay for PPE, stating that:

> Although temporary staffing firms are employers of the workers that they send on assignment to a customer's worksite, under long-standing OSHA policy the primary responsibility for providing and paying for PPE for such workers falls on the entity that directs and controls the workers on the worksite on a daily basis. In most cases, it is the customer that utilizes the workers and directs and supervises them on a day-to-day basis. Accordingly, in most temporary help arrangements, the responsibility for providing and paying for PPE for the temporary workers should rest with the staffing firm's customer. Requiring the ''utilizing employer'' to pay for PPE for the workers over whom it exercises day-to-day control is both in accordance with long-standing OSHA policy and makes sense from a practical, administrative perspective (Ex. 12: 104).

NATSS also pointed out that the utilizing employer principle is recognized as state law in California and North Carolina, that OSHA's injury and illness recordkeeping regulations require the employer exercising day-to-day supervision over employees to record their injuries and illnesses, and that OSHA issued a letter of interpretation in 1985 that made the utilizing employer generally responsible for PPE. The NATSS further argued that the utilizing employer is in the best position to know what hazards are present at the worksite and what safety equipment is needed (Ex. 12: 104).

The process used to determine which entity is the employer of the employee is similar to the process used to determine if an individual is an employee or an independent contractor. If the utilizing employer (the employer that hires the temporary help service) controls the manner in which the employees perform their assigned work, then he or she will usually be responsible under the standard for providing PPE at no cost. Conversely, if the employer providing the labor controls the work of the employee, independent of the utilizing employer, that entity will likely be the employer responsible for providing PPE at no cost. It may even be possible that both employers will be the ''employers'' of the employees, and that both will have a shared responsibility for providing PPE at no cost. This principle is seen in the context of the OSHA bloodborne pathogens standard with respect to which a host employer and an employer supplying employees to the host employer can have shared responsibilities (See CPL 2–2.69 (Nov. 27, 2001) at X1.B). Even when this is the case, each employer must ensure that employee protection does not ''slip through the cracks''.

The labor-providing firm and the utilizing firm are free to agree how to coordinate the provision of PPE at no cost through private arrangements, for example, by contract. However, employers may not escape their ultimate responsibilities under the Act by requiring another party to perform them. If they do so and those duties are neglected, ultimately the responsibility remains with the employer of the employees. In other words, employers must ensure that their employees are provided PPE at no cost, whether they provide it themselves or have another entity do so. When the employers accomplish this goal and ensure the employees receive the PPE at no cost, there is no violation of the standard.

With respect to subcontractors, many commenters requested OSHA to make clear that host employers/general contractors on multi-employer worksites

issued in 2001 addressed a number of these issues (66 FR 5916 6135). To ensure accurate recording and reporting, OSHA directed, that the employer record on the OSHA 300 Log the recordable injuries and illnesses of all employees on their payroll, whether they are hourly, salary, part-time, seasonal or migrant employees. OSHA also directed the employer to record the recordable injuries and illnesses that occur to employees who are not on their payroll if the employer supervises these employees on a day-to-day basis. Thus if an employer obtains employees from a temporary help service, employee leasing service, or personnel supply service, the employer must record these injuries and illnesses if the employer supervises these employees on a day-to-day basis.

are not responsible for the payment of PPE for the employees of subcontractors. In its submission, the Society of the Plastics Industry recommended that:

> OSHA should clarify that contractors are responsible for the initial purchase and necessary replacement of their own employees' equipment. For example, if the employee of a contractor arrives at the host employer's site without the required PPE or is not using appropriate PPE for the current task, the rule should specify that the host employer is not responsible for providing and paying for the contractor employee's PPE and therefore cannot be cited for failing to do so. The final rule or preamble to the final rule should clarify this allocation of responsibilities (Ex. 12: 58).

The Dow Chemical Company added that ''[t]he issue of who provides and pays for such equipment should remain a contractual issue between the host and contract employer. OSHA should have no role in those negotiations'' (Ex. 12: 129). ORC noted that:

> Host employers have responsibility for ensuring that contractors are informed of hazards present at the worksite and for making a determination that the contractors they hire are aware of the applicable safety and health requirements (including the use of appropriate PPE) for the work they are to perform. A host employer has an obligation not to contract with companies or individuals who clearly do not understand or intend to comply with safety requirements. And a host employer has an obligation to halt a contractor's work if the host employer is aware that it is not being performed in a safe manner (Ex. 12: 222, pp. 3, 4).

OSHA appreciates these comments and is making it clear that, as a general matter, host employers/general contractors are not responsible for payment of PPE for the employees of subcontractors at multi-employer worksites.

OSHA recognizes that under its multi-employer enforcement policy, certain employers on multi-employer worksites have obligations to protect the employees of others (See OSHA Directive No. CPL 2–00.124 (Dec. 10, 1999)). This has been a longstanding OSHA enforcement policy, which flows directly from the OSH Act's requirements that employers are responsible for creating safe and healthful places of employment. Notwithstanding this, OSHA finds here that, a host employer/general contractor is not required to pay for the PPE of a subcontractor's employees. However, when a host employer/general contractor establishes an employment relationship with an employee, the host employer/general contractor must provide the PPE to the employee at no cost. The obligation to pay for PPE is dependent on the employer/employee relationship, as described above.

Finally, OSHA stresses effective communication and coordination between the utilizing, or host firm, and the contractor or temporary help service. Many employers already share information about these matters to help each other with their own respective safety and health responsibilities. Caroline Sherman of Arrow Temporary Services, Inc., testified that training responsibility was often shared—her company would provide general safety and health training (e.g, proper use of safety equipment) and the utilizing employer would provide site specific training (Tr. 558–559).

In this final rule, OSHA is not specifying how employers should coordinate their obligations under the rule. However, the Agency encourages employing entities, including host employers, contractors, and temporary help services to communicate and coordinate their workplace safety and health activities.

D. Part-Time and Short-Term Employees

Many commenters raised concerns related to part-time and short-term employees (See, *e.g.,* Exs. 12: 3, 18, 46: 6, 11, 16, 26, 32, 44; 46: 21, 25, 29, 37, 38, 50; 47: 1; Tr. 687–688). Short-term employees were characterized as temporary employees, piece workers, seasonal employees, hiring hall employees, labor pool employees, and transient employees. In a representative comment, SHRM stated that:

> Even in those cases where an ''employer pays'' approach is shown to be appropriate for full-time employees, SHRM does not believe that would be a reasonable mandate to extend to part-time employees, temporary employees and temporary workers provided by a staffing service. * * * HR professionals need greater flexibility to set and administer their PPE payment policies as to part-time employees and temporary workers. Part-time employees are more likely to work at several different worksites in a given week, and temporary employees are more likely to work at several different worksites within a given month or year. The proposed rule would impose an unfair burden upon one employer to pay for PPE that an employee may be using at other employers' worksites at different times within the week or year. SHRM therefore proposes that required PPE, which is personal in nature and used by temporary or otherwise non-permanent employees, should be exempt from the PPE employer pay rule (46: 43).

The Shipyard Council of America (SCA) noted that ''[w]orkers in the shipyard industry are transient and turnover rates are exceptionally high. Often employees fail to return the employer's equipment upon leaving and take the equipment to another worksite, thereby placing an undue economic burden on shipyard employers'' (Ex. 46: 32). In a combined comment, the United States Maritime Alliance Limited (USMX) and the Carriers Container Council, Inc. (CCC) stated that ''In the marine cargo handling industry [marine terminals and longshoring], labor pools are often utilized to assign labor to a certain workplace. It is not uncommon for a single employee to work at a different employer's facility from day to day or even shift to shift. As such, the proposed rule raises significant questions concerning compliance and enforcement within the marine cargo handling industry.'' The NAHB remarked that:

> It is common knowledge that the residential construction industry, and in fact the construction industry as a whole, is facing an increasing shortage of qualified labor. To alleviate such shortages some areas in the country utilize ''piece workers'' to fill the gap. In the areas where piece workers are used, how will this rule be enforced? * * * Such companies typically process 15–50 workers in a single week and many of these quit or are terminated after a short time. It is not uncommon for some workers to be terminated in a matter of hours (Ex. 12: 68).

The PPE payment provisions apply to all employers under the Act, including those with short-term employees, whether referred to as temporary employees, piece workers, seasonal employees, hiring hall employees, labor pool employees, or transient employees.[9] As discussed above, if an employer-employee relationship is established, then the employer must provide PPE to the employee at no cost. As discussed earlier, if the individual is not an employee and is actually a self-employed independent contractor, then the OSH Act does not apply, and the PPE payment rule also does not apply.

An issue relevant to part-time and short-term employment is the issue of employee-owned PPE. The final rule provides that where an employee provides appropriate protective equipment he or she owns, the employer may allow the employee to use it and is not required to reimburse the employee for it. This provision is included in the regulatory text at § 1910.132(h)(6) for general industry, § 1915.152(f)(6) for shipyard employment, § 1917.96(e) for longshoring, § 1918.106(e) for marine

[9] For example, OSHA's injury and illness recordkeeping regulation makes clear that ''All individuals who are 'employees' under the OSH Act are counted in the total; the count includes all full time, part-time, temporary, and seasonal employees'' (66 FR 5938).

terminals, and § 1926.95(d)(6) for construction. The final rule also makes clear that employers shall not require employees to provide or pay for their own PPE, unless specifically exempted. Employers cannot avoid their obligations under the standard by requiring their employees to purchase PPE as a condition of employment or placement. OSHA never intended in the proposed rule to prevent employees from voluntarily using PPE they already own, however, so long as the PPE was adequate to protect them from hazards. Furthermore, OSHA did not intend for employers to have to reimburse employees for equipment that they voluntarily bring to the worksite and wish to use. OSHA believes that allowing employees to use equipment they own, as OSHA has always intended, will alleviate some of the concerns raised by commenters regarding part-time and short-term employment. Employers who employ short-term and part-time employees may also require employees to return employer-owned PPE at the end of the day or when they terminate employment, and may use a deposit system or other mechanism to help ensure that their employees return the PPE.

E. Longshoring and Marine Terminals

Longshoring and marine terminal employers and employees are covered by the OSHA standards at 29 CFR Parts 1917 and 1918. These two standards work together to regulate safety and health conditions applying to a single industry—the loading and unloading of ships at the Nation's ports. The marine terminal standards at Part 1917 apply to onshore working conditions and the longshoring standards at Part 1918 apply to working conditions onboard vessels such as container ships or barges.

The proposal noted that the nature of the industry creates employer-employee relationships unique to each port. At some ports, employees are hired for one job through a labor pool. At another port, one employee may work for five different employers in the same week. The specific questions OSHA asked were: ''How do these factors affect the issue of who is required to pay for PPE? Does the employer customarily pay for PPE in the maritime industry? Are there any other issues unique to the maritime industry that OSHA should consider in this rulemaking?'' (64 FR 15416).

A number of longshoring and marine terminal interests commented on the proposed standard (See, *e.g.,* Exs. 12: 14, 17, 172, 173; 13: 7; 45: 35, 40; 46: 4). The most common concern among the marine terminal commenters was that the use of labor pools and union hiring halls in the longshoring industry creates special circumstances that would make the PPE payment standard unworkable (Ex. 12: 14, 172, 173; 13: 7). The Pacific Maritime Association (PMA) noted that marine cargo handling employers hire labor on a daily, as needed, basis, through one or more union locals or dispatch halls operated jointly by PMA and the ILWU (International Longshore and Warehouse Union). As a result, much of an employer's workforce changes from shift to shift. The PMA pointed out that the proposed rule could require an employer to provide and pay for PPE for each employee on its dock. The PMA also noted the administrative difficulties in determining whether an employee or another employer paid for the PPE. The PMA also noted that the role of an employer association in providing PPE was unclear (Ex. 12: 173).

The South Carolina Stevedores Association remarked that ''Employers in the Port of Charleston would be forced to maintain equipment inventories and administer recordkeeping programs on a daily basis to comply with this proposed rule for a workforce of over one thousand employees'' (Ex. 12: 14). The NMSA added:

> A literal reading of the proposed rule would indicate that the current employer must be the one who paid for the PPE. Thus, if on Monday an employee works for employer A, and on Tuesday the employee works for employer B, employer B must have paid for the PPE the employee is using on Tuesday. If the employee shows up at workplace B with PPE paid for by employer A, employer B would be in violation of federal law. This makes absolutely no sense and is simply unenforceable. In other words, it is not feasible (Ex. 12: 172, p. 9).

As an initial matter, OSHA notes that the marine cargo handling industry is not unique in its use of union hiring halls and labor pools, and that other industries also use these methods to hire employees, including construction and shipyards. The fact that employees are obtained from a hiring hall does not change an employer's obligations under the OSH Act.[10] Like many others, commenters in the longshoring industry assumed that the rule would have banned employee-owned PPE. As explained in the section on employee-owned PPE, an employer can allow the use of PPE that the employee provides when he or she arrives at work. Thus, if a port association purchases and provides the PPE to employees, OSHA does not object. Of course, the employer must ensure that the type of and condition of the PPE is adequate to protect the employee against the hazards present in the workplace. The point of this PPE payment standard is to ensure that the PPE used to comply with OSHA standards is provided by the employer at no cost to employees.

As the International Union of Operating Engineers (IOUE) noted:

> Workers in these industries should have no less protection because of the nature of the employer-employee relationship in the ports. It is the IUOE's experience that its members have no desire to collect closets full of safety-toe footwear and dresser drawers full of protective prescription eyewear. Employers may inquire if workers already have suitable steel toe footwear and prescription eyewear. If so, most workers will gladly use it as they change employers. If the worker does not have the PPE, then the employer should pay for it. Over time the cost of paying for PPE should even out for port employers (Ex. 12: 134).

OSHA has included marine terminal and longshore employers and employees in the final PPE payment standard. OSHA is confident that the industry will solve the hiring hall employment problem with this OSHA standard, just as it has for all other OSHA standards that apply to the industry. For example, the employers in the industry may work with their port associations and the hiring halls that provide labor to coordinate the provision of PPE. OSHA notes that it already has standards that require employer payment for certain types of PPE. There is no evidence in the record that employers in the marine cargo handling industry, or other hiring hall industries, have difficulty applying these standards to their employment situation.

USMX and the CCC argued that OSHA should have consulted with the Agency's Maritime Advisory Committee for Occupational Safety and Health (MACOSH) before issuing the proposed rule (Ex. 13: 7). OSHA notes that under section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333, of 1973, commonly known as the Construction Safety Act) and OSHA's own regulations at 29 CFR Part 1912,

[10] For example, OSHA's compliance directive CPL 02–01–028—CPL 2–1.28A—Compliance Assistance for the Powered Industrial Truck Operator Training Standards explains that ''Each employer for whom an employee works is responsible for ensuring that the employee has been trained in accordance with the standard. In hiring hall situations, the training under § 1910.178(l)(3)(i), truck-related topics, may be conducted by a labor union, joint labor/management training organization, an association of employers, or another third-party trainer as long as the person(s) conducting the training have the knowledge, training, and experience to properly conduct the training''.

the Agency is required to consult with the Advisory Committee on Construction Safety and Health (ACCSH) regarding the setting of construction standards. However, unlike ACCSH, there is no requirement for OSHA to consult with MACOSH prior to issuing a proposed regulation or standard affecting the maritime sectors. While the Agency may seek the advice of MACOSH on a rulemaking during the pre-proposal stage, and often does so, there is no requirement to that effect. Furthermore, maritime interests had numerous opportunities to comment on the rule during the extensive rulemaking process used by the Agency.

USMX and CCC also argued that longshore employees are well compensated and can afford their own PPE. The relative pay of longshore employees compared to employees in other sectors is immaterial to the OSHA regulations and standards. Each employee is entitled to the protections afforded under the Act, including by this standard. It is therefore the duty of the employer to provide PPE at no cost to their employees regardless of the employees' pay level or employment benefits.

F. Shipyards

Shipyard employers and employees are covered by the OSHA standards at 29 CFR Part 1915. Shipyards engage in several industrial activities, including ship building, ship repair, barge cleaning, and ship breaking. To the extent that the Part 1915 standards do not cover a specific safety or health hazard, the Part 1910 general industry standards apply. (See CPL 02–00–142, Shipyard Employment ''Tool Bag'' Directive for further details.) In the preamble to a 1996 rulemaking revising the Shipyard PPE standards, OSHA reiterated the 1994 policy requiring payment for PPE unless it was personal in nature and used off the job (61 FR26327). The Agency subsequently included the shipyard standards in the 1999 proposal to revise its PPE standards for all industries (64 FR15402). Several shipyard interests commented on the proposed PPE payment standard (See, *e.g.,* Exs. 7; 12: 29, 65, 112, 210; 13: 6, 21; 35).

Despite the 1996 preamble discussion, the PPE payment practices reported by these commenters varied widely. For example, Newport News Shipyard reported that it pays for all PPE required by the final standard, and asked only for clarification of items for which employer payment is not required (Ex. 12: 210). (See Section V for a discussion the PPE for which employer payment is required.). Other shipyards reported a variety of PPE payment practices. Avondale Shipyards Division reported that they pay for most PPE but require employees to pay for certain welding PPE, safety-toe shoes, and safety glasses (Ex. 12: 112). Ingalls Shipbuilding had the same policy, but also required employees to pay for their own hard hats (Ex. 12: 29). The Shipbuilders Council of America (SCA) polled 50 shipyard companies and reported a variety of payment practices for 13 types of PPE. Employer payment practices ranged from 5 percent for safety shoes to 100 percent for fall protection and chemical protective equipment. These employers also reported various policies that required their employees to pay for some equipment and share costs with the employer for other types of PPE (Ex. 12: 65).

Many of these shipyard commenters believed employees should pay for their own welding PPE, and especially welding leathers. This issue is discussed in more detail in section V ''PPE for which employer payment is required''. Others argued the shipyard workforce has frequent employee turnover and that PPE carried from job to job should be exempted. As noted earlier, the Agency sees no reason to provide less protection for short-term employees. The shipyard industry's turnover rates do not appear to be significantly higher than the rates for construction and marine terminals (See the economic analysis for a comparison of turnover rates). Furthermore, the Agency has not received any comments that would warrant an exception for an entire industry. After careful consideration, OSHA has promulgated the same final rule for shipyards that it is issuing for other industries.

G. Construction

Construction employers are covered by the OSHA standards at 29 CFR Part 1926. The 1999 proposal covered the construction industry, just as it covered other industries. In fact, OSHA noted in the proposal that:

> OSHA realizes that there is frequent turnover in the construction industry, where employees frequently move from job-site to job-site. This is an important factor because an employer with a high turnover workplace would have to buy PPE for more employees if the PPE was of the type that could only be used by one employee. OSHA requests comment on whether its proposed exceptions for safety-toe footwear and prescription safety eyewear are appropriate in the construction industry. Are there any other approaches to handle the turnover situation that would be protective of construction workers? Are there any other issues unique to the construction industry that should be considered in this rulemaking? (64 FR 15416).

In response to the proposal, OSHA received more comments from the construction industry than any other industry sector. Construction interests accounted for nearly half of the 350 comments received by the Agency.[11] The commenters noted that ''The issue of who pays for PPE has long been a contentious one in the construction industry'' and noted five major reasons for their opposition to the rulemaking, several of which were also articulated by commenters outside of the construction industry. First, these commenters asserted that the proposed rule is beyond OSHA's statutory authority. The Legal Authority section of this preamble explains that OSHA is well within its statutory mandate to issue this rule.

Second, the commenters argued that the proposed rule would limit employers' flexibility in managing safety and health at their workplaces. The standard does not limit employers in implementing and managing their safety and health programs, an activity OSHA encourages. Commenting employers in OSHA's Voluntary Protection Programs (VPP), all of whom have implemented OSHA-approved safety and health management systems, unanimously supported employer payment for PPE, and did not suggest any negative effects on their safety and health management systems (See, *e.g.,* Exs. 12: 113, 210).

Third, the commenters argued that the proposed rule would give employees the freedom to be irresponsible with company-owned PPE, and urged OSHA to specify when an employer can charge an employee for lost PPE. Employers have a number of means available to address circumstances where employees do not follow company rules or are irresponsible with company equipment. Two such means are increased education efforts and disciplinary systems. With respect to the latter, OSHA expects employers to fairly enforce reasonable and appropriate disciplinary systems as part of their

[11] More than 125 companies engaged in residential home building and associated subcontractors submitted nearly identical letters, which will be referenced as ''Form Letter A'' (See, *e.g.,* Exs. 12–22; 23, 24, 25, 26, 27, 30, 33, 34, 35, 36, 37, 39, 40, 41, 46, 47, 54, 56, 57, 59, 60, 61, 62, 63, 64, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 80, 81, 82, 83, 84, 85, 86, 87, 88, 90, 92, 93, 94, 96, 97, 98, 103, 115, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 132, 136, 137, 138, 139, 140, 142, 143, 147, 148, 156, 157, 158, 159, 160, 162, 166, 168, 170, 174, 175, 176, 177, 178, 179, 180, 185, 186, 192, 193, 194, 195, 196, 197, 198, 199, 200, 202, 205, 208, 212, 213, 215, 216, 219, 223, 224, 225, 226, 227, 231, 232, 234, 236, 237, 238, 239, 240, 241, 242).

overall effort to comply with OSHA standards and establish effective workplace safety and health programs. Nothing in this rule prevents employers from implementing these disciplinary systems. The Replacement PPE section of this preamble provides a discussion of this topic.

Fourth, these commenters, along with many others, (See. *e.g.,* Exs. 12: 18, Form letter B [12]) argued that employee payment for PPE will ensure that the PPE is maintained in good working order. Commenters also noted that employers would be inclined to purchase PPE that is less expensive (and perhaps less safe) than that purchased by employees, or that employees would be inclined to purchase less expensive PPE that would not meet the minimum PPE standards established by the American National Standards Institute (ANSI) (Ex. 12: 134, 218). The Agency addresses this issue in Section XIV, Legal Authority.

Fifth, and last, the commenters asserted that employers would need to keep receipts to prove payment to an OSHA inspector or Compliance Safety and Health Officer (CSHO). Employers in all industries, including construction, typically keep receipts and other transaction records as part of their accounting systems to comply with standard accounting practices and various business regulations. For example, such receipts could be needed to prepare the employer's income tax forms. Notwithstanding this usual practice, nothing in the final rule requires employers to keep receipts to prove that they paid for PPE. Generally, PPE payment practices can be determined through management and employee interviews.

Similar to the home builders, a group of about 30 electrical contractors submitted nearly identical comments (Form Letter B). These contractors, which included the National Electrical Contractors Association (NECA), urged the Agency to exempt certain items of electrical PPE from the payment requirements because they viewed them as tools of the electrical trade. After considering the comments provided, OSHA has rejected the ''tools of the trade'' concept and employers will generally be required to provide most of these items at no cost to employees. These comments are discussed in Section V, ''PPE for which payment is required,'' and Section VII, ''Other alternatives considered during the rulemaking process.''

Similar to comments from the maritime and longshoring sectors, a number of construction-related commenters noted the transient nature of construction work and the high turnover rates in the industry. Many of them argued that the short-term employment nature of the industry should influence OSHA's decisions in the final standard (See, *e.g.,* Exs. 12: 102, 153, 207, 229; 45: 28; form letter A; form letter B). The Betco Scaffold Company remarked that:

> The services provided by the scaffolding industry in support of both industry and construction is of short job duration and for the greatest extent provided by temporary employees who travel from job to job. There is a high turnover rate and employees systematically walk off jobs abruptly and without notice, taking with them their tools and any and all PPE. There is seldom a tool room or construction shack on site due to the short duration of the jobs. Equipment losses and non-recovery of employer furnished PPE will amount to an economic burden that cannot be recovered (Ex. 12: 18).

Other commenters argued that the transient nature of the industry should not result in reduced protection (See, *e.g.,* Exs. 12: 234, 218) or that OSHA should make the rule fair for all employees (See, *e.g.,* Exs. 12: 134, 190). In a typical comment, the IUOE remarked that:

> [w]orker turnover should not be a consideration in determining whether a construction employer should be required to pay for PPE. Construction workers should not receive less protection than other industries where turnover may be less. If all construction employers are required to pay for all PPE, contractors may pass on the costs to construction owners in their contract price. This will level the playing field for bidders on construction work (Ex. 12: 234).

There is no logical basis for providing different protections for different classes of employees, as described by these commenters, and any such differentiation is not supported by the OSH Act or case law. Consequently, the Agency does not consider employee turnover as a reasonable basis for excluding the construction industry (or any other industry) from the PPE payment standard.

Several commenters noted that employers may be compelled to incur the cost of purchasing specific brands or styles of PPE due to employee preference, even though such PPE does not provide additional protection (Ex. 12: 21, 79, 99). OSHA emphasizes that employers are not required to purchase all of the PPE requested by their employees but rather are responsible for ensuring that adequate PPE is used to comply with OSHA standards, and that the PPE used to comply with OSHA standards is provided at no cost to their employees. Section VI ''Employee-owned PPE'' addresses employee-upgraded PPE.

Finally, OSHA notes that several construction commenters supported the PPE payment proposal (See, *e.g.,* Exs. 12: 99, 134, 153, 190). For example, Associated Builders and Contractors, Inc., a national association representing 24,000 construction and construction-related firms in 79 chapters across the United States primarily performing work in industrial and commercial construction initially opposed the proposed standard (Ex. 12: 153). However, in an August 23, 2004 comment, the trade association noted that ''ABC, with the guidance of its Safety, Environmental, and Health Committee, has decided to support the requirement that employers pay for PPE with some exceptions'' (Ex. 46: 41). Those exceptions were that safety-toe protective footwear and prescription safety eyewear should be the responsibility of employees, that employers should not have to replace PPE damaged due to employee misconduct, and that employers should be compensated by employees for PPE removed from the jobsite without the employer's permission. These issues are discussed in the preamble section dealing with PPE for which payment is required, and the replacement PPE section.

VIII. Acceptable Methods of Payment

Under the final rule, an employer may utilize any method of payment, as long as it results in PPE being provided to that employer's employees at no cost. Many methods are available, and employers are free to choose a single payment method for all types of PPE, or different payment methods for different types of PPE. From its review of the comments, OSHA has identified four methods that employers currently use to provide PPE at no cost to their employees: (1) Employer purchase and distribution, (2) allowances, (3) vouchers, and (4) employer reimbursement to employees. As explained below, in general these methods are acceptable, and employers may choose these options or develop other methods. At bottom, however, OSHA believes that PPE use and effectiveness improves when employers exercise greater control over the purchasing process.

A. Employer Purchase and Distribution

On this record, the method that appears to be the most effective way for

[12] Approximately 30 electrical contractors submitted identical comments, which will be referenced as ''Form Letter B'' (See, *e.g.,* Exs. 45: 6 7, 8, 9, 10, 11, 12, 14, 15, 16, 19, 20, 22, 23, 24, 29, 31, 38, 41, 44, 45, 46, 47; 46: 21, 22, 23, 24, 25, 29, 38; 47: 1).

employers to provide PPE to their employees is for employers to purchase the PPE themselves, keep a ready supply of PPE, and distribute the PPE directly to their employees. This method ensures that the PPE meets the specifications the employer has set through the hazard assessment/PPE selection process. It also provides the simplest means of ensuring the quality of the equipment and minimizes the need to individually assess each employee's choice of PPE.

There are many additional advantages to be gained through this approach. By maintaining a PPE inventory, the employer can provide immediate replacements for PPE that may become deficient due to wear and tear or accidental damage. OSHA's standards require the employee to be protected when exposed to a hazard. If replacement PPE is not readily available to replace deficient PPE, the employee may not be able to complete his or her shift, resulting in lost productivity for the employer. The employer may also purchase the equipment in bulk. This would produce a cost savings to the employer through bulk purchase discounts as well as standardized equipment that would be easier to repair and maintain.

B. Allowances

A number of commenters raised the issue of using employee allowances to procure PPE (See, *e.g.,* Exs. 12: 153, 188; 46: 43). In an allowance system, an employer gives an employee a certain amount of money to use to purchase specific PPE. OSHA does not object to allowances as a means of paying for PPE, as long as the allowance policy ensures that employees receive appropriate PPE at no cost.

As several commenters noted, an allowance system is a common practice and it appears that in many cases it is an effective and convenient method for providing PPE to employees at no cost. On the other hand, an allowance system may create the need for the employer to put in place a more rigorous method to ensure that the PPE is adequate for the job. While the employer can take several steps to guide employees in their purchase, such as giving employees a list of approved vendors or PPE specifications, the employer may need to follow up with employees and inspect the PPE.

C. Vouchers

Another system employers currently use to purchase PPE is a voucher system. In this system, an employer typically has an arrangement with a local retailer or distributor of PPE whereby the retailer or distributor will accept a voucher from the employer for a particular type of PPE in lieu of direct payment. The retailer or distributor then directly bills the employer for the PPE after processing the voucher. Some employers find this system administratively convenient; it also avoids having to pay money to an employee before the purchase is made in the form of an allowance.

D. Employee Purchase With Employer Reimbursement

Some employers may decide to use an employee reimbursement method for providing PPE. Under this type of system, the employer requires the employee to purchase the PPE and then reimburses the employee for the cost of the purchase. This method has most of the same advantages and disadvantages as allowances and vouchers. The difference is that the employee is provided the funds after the PPE is purchased, instead of before.

Some commenters raised an issue that applies to allowances, vouchers, and reimbursement. These commenters asked whether or not an employer would be required to reimburse an employee for time and travel expenses to shop for PPE to ensure that PPE was provided at no cost. The SHRM remarked:

> SHRM's understanding is that OSHA never contemplated that the employer payment obligation would extend beyond the purchase price of the PPE to include the time the employee would spend acquiring the PPE. * * * For example, it would be fairly common for an employee to travel to an employer-designated shoe store where the employer has an account. The employee would have the ability to review available shoe models, select the model and size that best meets the employee's needs (up to a specified allowance with the employee paying for any amount in excess of the allowance), and possibly get some personalized fitting. * * * Payment of compensation for the time spent shoe shopping would be an unreasonable burden, would likely exceed the cost of the PPE, and would be fraught with the potential for abuse and make it difficult to administer (Ex. 46: 43).

OSHA does not intend the rule to cover time and travel expenses an employee might incur while shopping for PPE during non-work hours. OSHA recognizes that this position differs from the position the Agency has consistently taken with respect to employee time and travel expenses for medical services in several other standards (See, *e.g.,* lead standard at § 1910.1025(j)(1)(iii) and bloodborne pathogens standard at § 1910.1030(f)(1)(ii)). These standards also use the terms ''at no cost'' and OSHA has interpreted them as requiring employer payment for the time and travel costs an employee incurs for receiving required medical services during non-work hours. See *Phelps Dodge Corp.* v. *Occupational Safety and Health Review Comm.,* 725 F.2d 1237 (9th Cir. 1984). The underlying reason for OSHA's position was that the time and travel needed to obtain the required medical services could be so great that if employees were not compensated for it, they would delay visiting a health care provider (HCP), resulting in delayed diagnosis and treatment. Even worse, they might opt not to participate in the employer's medical surveillance program at all. As described below, OSHA believes that time and travel required to purchase PPE is much less than that required for medical services. Because of this, OSHA does not believe that requiring employees to shop for PPE on their own outside of work would serve as a disincentive to acquiring the PPE.

First, the amount of time required to visit an HCP, wait to see the HCP, get any required tests taken, and consult the HCP about the results is much longer than the time needed to purchase PPE. OSHA has found with respect to medical screening and surveillance that the amount of time required to obtain services is quite long in certain circumstances and if employers did not pay for the time and travel involved, employees might forego the examinations. See *e.g., Phelps Dodge,* 725 F.2d at 1238 (actual time required for medical examinations, including transportation and waiting was ''an hour or more''). Furthermore, employees on occasion need to make multiple trips to an HCP. While employers are often required to offer medical surveillance to employees, employee participation in medical surveillance programs is sometimes not required by OSHA standards, and employees may decline to participate. As such, the time spent to participate may act as a disincentive to employees if they were not compensated for time and travel. These considerations do not apply to shopping for PPE.

Second, unlike medical services where the employee would almost certainly have to travel in person to the HCP, there are many options available for employees to acquire PPE on their own and some of these involve no travel. There are many retail locations that sell PPE, and in many cases the employee may already be going to the retail location for personal shopping. In addition, there are numerous catalogue and internet retailers available for employees to shop for equipment.

OSHA does not believe that the extra time needed to acquire PPE outside of work hours would serve as a significant disincentive to employees getting the PPE.

For these reasons, employers are not required to reimburse employees for time spent shopping for PPE or for travel expenses related to PPE shopping.

IX. Effective Dates

Each of the PPE payment standards includes an effective date paragraph to establish the dates when employers will be fully responsible for meeting the PPE payment requirements. (See § 1910.132(h)(7), § 1915.152(f)(7), § 1917.96(f), § 1918.106(f), and § 1926.95(d)(7)) Each affected standard will become effective on February 13, 2008. This date is 90 days from the date of publication in the **Federal Register**. The Agency sets the effective date to allow sufficient time for employers to obtain the standard, read and understand its requirements, and undertake the necessary planning and preparation for compliance. The 90-day effective date has been established to comply with section 6(b)(4) of the OSH Act, which provides that the effective date for a standard may be delayed for up to 90 days from the date of publication in the **Federal Register**.

Despite the 90-day effective date, OSHA is extending the compliance deadlines for the final standard so employers will be given six months to fully comply with the new requirements. By extending the deadline to comply with the PPE payment provisions, OSHA will minimize the impact of the rule on existing collective bargaining agreements, and give businesses (including small businesses) needed time to implement the requirements.

A number of commenters remarked that existing collective bargaining agreements containing PPE provisions would be affected by the final standard (See, *e.g.,* Exs. 12: 14, 16, 17, 21, 43, 65, 66, 79, 117, 172, 173, 183, 188, 189). Several argued that the final rule would have a negative effect on employers that have existing collective bargaining agreements (See, *e.g.,* Exs. 12: 14, 16, 17, 65, 79, 173, 183, 188, 189). The Association of Electric Cooperatives noted that,

> OSHA should keep in mind that payment arrangements for PPE are frequently part of the employers' negotiations with the labor union. As such, when stating the effective date of the rule, consideration should be made to current union contracts. The Association recommends that the effective date of the rule allow for current labor contracts to run their course. Employer's payment of PPE, in most cases, will take effect at the signing of the next contract (Ex. 12: 183).

OSHA has not implemented a compliance deadline that would allow all collective bargaining agreements to expire and be renegotiated before the rule takes effect. This would take several years and would result in undue delay of the safety and health benefits that the Agency expects will result from the rule. The six-month compliance deadline will allow sufficient time for some collective bargaining agreements to expire and will provide a reasonable interval for employers and unions to work out the specific methods by which PPE will be provided to employees at no cost.

The six-month compliance date will also give businesses time to establish systems for effectuating employer payment. As discussed above, employers may utilize a number of different methods to ensure that PPE is provided at no cost to employees. Allowing a six-month compliance deadline will give employers time to determine what method is best for their business and implement the method before the rule takes effect.

The six-month compliance deadline will also help minimize the burden on small businesses. Some commenters urged OSHA to consider the special needs of small business entities when considering the effective date of the standard (See, *e.g.,* Exs. 12: 3, 68, 145). Douglas Battery suggested the ''[e]stablishment of a size threshold (or other measure) at which the cost of providing PPE becomes a shared responsibility between employers and employees for some specified period'' (Ex. 12: 3).

OSHA has not implemented a phased-in approach as recommended by Douglas Battery because doing so would be overly complex, cumbersome, and delay the benefits of the final rule. However, the Agency believes that the six-month compliance deadline will give the large number of small businesses covered by the standard sufficient time to work with PPE suppliers to obtain needed equipment and negotiate bulk discount prices. In some cases, very small employers may choose to join together and coordinate their PPE acquisition efforts through a local trade association or co-op to obtain bulk discounts on equipment. The extended compliance deadline will provide time to set up such arrangements.

X. Effect on Existing Union Contracts

Many collective bargaining agreements contain language specifying that employers will provide certain PPE to employees at no cost and some specify certain PPE that employees will be responsible for providing (and paying for) themselves. The final standard could have an impact on these agreements. OSHA has carefully considered the impact of the final rule on collective bargaining agreements and has determined that workplaces with collective bargaining agreements should be treated no differently in the final rule than workplaces without collective bargaining agreements. However, to reduce impacts on existing collective bargaining agreements, OSHA is establishing a six-month compliance deadline for the final rule. This will allow some existing collective bargaining agreements to expire or provide employers and employees time to renegotiate agreements to conform to the final rule.

Many stakeholders commented on the extent to which an employer payment for PPE rule would impact existing collective bargaining agreements. Some union commenters stated that an employer payment rule would affect collective bargaining agreements in the same way as other OSHA safety and health standards and that OSHA should not make any exceptions from the rule for workplaces governed by collective bargaining agreements (See, *e.g.,* Exs. 12: 14, 16, 17, 21, 65, 79, 99, 167, 173, 183, 188, 189).

One commenter noted that most collective bargaining agreements contain language requiring employers to pay for all required PPE (Ex. 12: 105). Some commenters supported the rule on the basis that it would create a level playing field for union and non-union employees (Ex. 12: 110) by ensuring that in both cases employees are provided PPE ''at no cost'' and ensure that more employees, including non-union employees, would be afforded the same protections (Ex. 12: 113).

Some commenters, on the other hand, asserted that the rule inappropriately interferes with existing collective bargaining agreements because PPE payment is a traditional and mandatory subject of collective bargaining under federal law, and thus violates the policies of federal labor legislation governing employer and employee negotiation over workplace conditions (See *e.g.,* 12: 43, 173, 189). Caterpillar, Inc., remarked that ''Payment sharing procedures that have been developed through years of collective bargaining will be unjustly modified by this proposal'' (12: 66).

OSHA finds that the final rule does not inappropriately interfere with collective bargaining agreements. The

impact of OSHA standards on collective bargaining has been discussed by OSHA in past rules. OSHA has consistently stated that the duty to bargain with unions over safety and health matters does not excuse employers from complying with OSHA standards. This principle has been upheld by the courts (See, *e.g.,* Forging Industries at 1451–1452). In *United Steelworkers of America* v. *Marshall*, 647 F.2d 1189, 1236 (D.C.Cir.1980) the court observed:

> In passing a massive worker health and safety statute, Congress certainly knew it was laying a basis for agency regulations that would replace or obviate worker safety provisions of many collective bargaining agreements. Congress may well have viewed collective bargaining agreements along with state worker's compensation laws as part of the status quo that had failed to provide workers sufficient protection (Id. at 1236).

OSHA sees no distinction between this rule and other OSHA standards placing obligations on employers. In fact, in numerous past rulemakings OSHA has required employers to provide PPE ''at no cost''; none of these rules has been overturned because they inappropriately interfered with collective bargaining. Compliance with the rule does not conflict with employers'' obligations to bargain over mandatory subjects of bargaining under the National Labor Relations Act (NLRA).

Additionally, the rule does not foreclose bargaining about discretionary aspects of the standard such as the means by which the employer will provide the PPE to employees so that it results in no cost to the employees, payment arrangements for equipment that is not covered by the final rule, and so forth. As courts have found, to the extent the employer has discretion in the means by which it achieves compliance, and the means involve a mandatory subject of bargaining, the employer is not only free to bargain but would be required to bargain with the union regarding the means of compliance. *United Steelworkers,* 647 F.2d at 1236 (''[w]hen an issue related to earnings protection not wholly covered by OSHA regulation arises between labor and management, it will remain a mandatory subject of collective bargaining''); see *Watsonville Newspapers,* LLC, 327 N.L.R.B. No. 160, slip op. 2–3 (Mar. 24, 1999); Dickerson-Chapman, Inc., 313 N.L.R.B. 907, 942 (1994) (although employer must comply with OSH Act standard requiring daily inspections of open excavations by a ''competent person,'' employer must bargain with union about who would be so designated); *Hanes Corp.,* 260 N.L.R.B. 557, 561–562 & n.12 (1982) (where OSHA standard required use of respirators but gave employer discretion with respect to choice of respirator, employer could require use of respirator without bargaining, but could not unilaterally determine which approved respirator would be used).

OSHA has repeatedly emphasized the importance of involving employee representatives in all aspects of workplace safety and health. The Agency believes that employers and unions have been able to meet both their responsibilities under OSHA's standards and their duty to bargain under the NLRA. This has been the case with other OSHA rules, and the Agency believes that employers and employees will be able to do the same under the PPE payment standards.

One commenter remarked that ''[t]here is no evidence that the collective bargaining process is broken'' (12: 189) while another observed that relying on collective bargaining for the payment of PPE is an ''inadequate solution'' (Ex. 12: 100). OSHA notes that many employees are not represented by unions, so relying on collective bargaining as an alternative to the final rule would not be effective. It also would be impractical to create an exception for workplaces covered by collective bargaining agreements, because doing so would result in unequal protection for employees depending on whether a collective bargaining agreement is in place or not. An exception would also be a cumbersome and unduly complex provision to enforce.

While OSHA does not believe there is a need or sound rationale for providing an exception to employers whose employees are represented under a collective bargaining agreement, the Agency does not want to cause undue disruption to existing collective bargaining agreements. Therefore, as explained in the Effective Dates section of this preamble, the Agency has extended the compliance deadline for the standard by six months. This will allow some collective bargaining agreements to expire. In these cases employers and unions can renegotiate the contract to reflect the new realities imposed by the rule. In other cases, the six-month compliance deadline allows employers, employees, and employee representatives to either conduct mid-term bargaining or otherwise come to an agreement concerning their methods for implementing the final rule.

XI. Effect on Other OSHA Standards

As noted above, many of OSHA's existing standards specify whether or not the employer is required to provide required PPE at no cost to employees. Other standards are silent on the issue of payment. OSHA is setting forth clearly in a note to the final rule that when an employer payment provision in another OSHA standard specifies whether or not the employer must pay for specific equipment, the payment provision of the other standard shall prevail over the provision in this final rule.

This rule is meant to apply to all OSHA standards requiring PPE. This includes the general employer payment requirement included in the final rule, in addition to the exceptions given. For other standards that already require employers to provide a certain type of PPE at no cost, this final rule ''amends'' those standards to include the exceptions for employee-owned PPE, replacement PPE, etc. Thus, this final rule must be read in concert with the other standards that require employer payment for PPE. It is only in those instances where another standard specifically addresses an aspect of PPE payment that is also specifically addressed in this final rule, that the provisions of the other standard govern.

For example, if an OSHA health standard states only that employers must provide PPE ''at no cost'' to employees, and includes no exceptions to that requirement, the exceptions in this final rule would apply to employers and employees performing work covered by that standard. Conversely, if another OSHA standard includes ''at no cost'' language and specifically requires employers to pay for all replacement PPE—regardless of whether the PPE was lost or intentionally damaged—that other OSHA standard would govern an employer's obligation with respect to replacement PPE, as opposed to this final rule.

A question naturally arises regarding future rulemakings and how PPE payment will be addressed when a rulemaking has PPE requirements. Generally, OSHA intends that future rules with PPE requirements will require employers to provide the PPE at no cost to employees (with exceptions) in accord with its findings in this rule. However, it is difficult, if not impossible, to predict all the PPE issues and arguments that may arise in future rulemakings, and the specific PPE payment requirements that may be appropriate for those rules. It is entirely possible that some item for which payment is required under § 1910.132(h) would be determined as exempted from payment, and similarly, an item exempted from payment under § 1910.132(h) could be subject to

employer payment under some future standard.

By adding a note in the regulatory text of the various standards, however, if OSHA decides to take a different position on PPE payment in a future rulemaking, it will not need to make a parallel change to the regulatory language of the relevant PPE payment standard (general industry, construction, shipyard, marine terminals, or longshore) set forth in this final rule. OSHA believes that this approach is more flexible and will be clearer to the regulated public.

In the preamble to the proposed rule, OSHA listed many of the OSHA standards that include provisions requiring the use of PPE. For ease, OSHA is providing a similar list below. Some of these standards specifically include ''at no cost'' language and some do not. Employers need to carefully review their obligations under the standards that apply to them.

TABLE XI–1.—OSHA STANDARDS THAT REQUIRE PPE

29 CFR 1910, General Industry	
1910.28	Safety requirements for scaffolds.
1910.66	Powered platforms for building maintenance.
1910.67	Vehicle-mounted elevating and rotating work platforms.
1910.94	Ventilation.
1910.95	Occupational noise exposure.
1910.119	Process safety management of highly hazardous chemicals.
1910.120	Hazardous waste operations and emergency response.
1910.132	General requirements (personal protective equipment).
1910.133	Eye and face protection.
1910.134	Respiratory protection.
1910.135	Occupational Head protection.
1910.136	Occupational foot protection.
1910.137	Electrical protective equipment.
1910.138	Hand protection.
1910.146	Permit-required confined spaces.
1910.156	Fire brigades.
1910.157	Portable fire extinguishers.
1910.160	Fixed extinguishing systems, general.
1910.183	Helicopters.
1910.218	Forging machines.
1910.242	Hand and portable powered tools and equipment, general.
1910.243	Guarding of portable power tools.
1910.252	General requirements (welding, cutting and brazing).
1910.261	Pulp, paper, and paperboard mills.
1910.262	Textiles.
1910.265	Sawmills.
1910.266	Logging operations.
1910.268	Telecommunications.
1910.269	Electric power generation, transmission and distribution.
1910.272	Grain handling facilities.
1910.333	Selection and use of work practices.
1910.335	Safeguards for personnel protection.
1910.1000	Air contaminants.
1910.1001	Asbestos.
1910.1003	13 carcinogens, etc.
1910.1017	Vinyl chloride.
1910.1018	Inorganic Arsenic.
1910.1025	Lead.
1910.1026	Chromium (VI).
1910.1027	Cadmium.
1910.1028	Benzene.
1910.1029	Coke oven emissions.
1910.1030	Bloodborne pathogens.
1910.1043	Cotton dust.
1910.1044	1,2-dibromo-3-chloropropane.
1910.1045	Acrylonitrile.
1910.1047	Ethylene oxide.
1910.1048	Formaldehyde.
1910.1050	Methylenedianiline.
1910.1051	1,3-Butadiene.
1910.1052	Methylene chloride.
1910.1096	Ionizing radiation.
1910.1450	Occupational exposure to chemicals in laboratories.
29 CFR 1915, Shipyards	
1915.12	Precautions and the order of testing before entering confined and enclosed spaces and other dangerous atmospheres.
1915.13	Cleaning and other cold work.
1915.32	Toxic cleaning solvents.
1915.33	Chemical paint and preservative removers.
1915.34	Mechanical paint removers.

TABLE XI–1.—OSHA STANDARDS THAT REQUIRE PPE—Continued

1915.35	Painting.
1915.51	Ventilation and protection in welding, cutting and heating.
1915.53	Welding, cutting and heating in way of preservative coatings.
1915.73	Guarding of deck openings and edges.
1915.77	Working surfaces.
1915.135	Powder actuated fastening tools.
1915.153	Eye and face protection.
1915.152	General requirements.
1915.154	Respiratory Protection.
1915.155	Head protection.
1915.156	Foot protection.
1915.157	Hand and body protection.
1915.158	Lifesaving equipment.
1915.159	Personal fall arrest systems (PFAS).
1915.160	Positioning device systems.
1915.504	Fire watches.
1915.505	Fire response.
1915.1001	Asbestos.
1915.1026	Chromium (VI).
29 CFR 1917, Marine Terminals	
1917.22	Hazardous cargo.
1917.23	Hazardous atmospheres and substances.
1917.25	Fumigants, pesticides, insecticides and hazardous waste.
1917.26	First aid and lifesaving facilities.
1917.49	Spouts, chutes, hoppers, bins, and associated equipment.
1917.73	Terminal facilities handling menhaden and similar species of fish.
1917.91	Eye and face protection.
1917.92	Respiratory protection.
1917.93	Head protection.
1917.94	Foot protection.
1917.95	Other protective measures.
1917.118	Fixed ladders.
1917.126	River banks.
1917.152	Welding, cutting and heating (hot work).
1917.154	Compressed air.
29 CFR 1918, Safety and Health Regulations for Longshoring	
1918.85	Containerized cargo operations.
1918.88	Log operations.
1918.93	Hazardous atmospheres and substances.
1918.94	Ventilation and atmospheric conditions.
1918.101	Eye and face protection.
1918.102	Respiratory protection.
1918.103	Head protection.
1918.104	Foot protection.
1918.105	Other protective measures.
29 CFR 1926, Safety and Health Regulations for Construction	
1926.28	Personal protective equipment.
1926.52	Occupational noise exposure.
1926.55	Gases, vapors, fumes, dusts, and mists.
1926.57	Ventilation.
1926.60	Methylenedianiline.
1926.62	Lead.
1926.64	Process safety management of highly hazardous chemicals.
1926.65	Hazardous waste operations and emergency response.
1926.95	Criteria for personal protective equipment.
1926.96	Occupational foot protection.
1926.100	Head protection.
1926.101	Hearing protection.
1926.102	Eye and face protection.
1926.103	Respiratory protection.
1926.104	Safety belts, lifelines and lanyards.
1926.105	Safety nets.
1926.106	Working over or near water.
1926.250	General requirements for storage.
1926.300	General requirements (Hand and power tools).
1926.302	Power-operated hand tools.
1926.304	Woodworking tools.
1926.353	Ventilation and protection in welding, cutting and heating.
1926.354	Welding, cutting and heating in way of preservative coatings.

TABLE XI–1.—OSHA STANDARDS THAT REQUIRE PPE—Continued

1926.416	General requirements (Electrical).
1926.451	General requirements (Scaffolds).
1926.453	Aerial lifts.
1926.501	Duty to have fall protection.
1926.502	Fall protection systems criteria and practices.
1926.550	Cranes and derricks.
1926.551	Helicopters.
1926.605	Marine operations and equipment.
1926.701	General requirements (Concrete and masonry construction).
1926.760	Fall protection (Steel erection).
1926.800	Underground construction.
1926.951	Tools and protective equipment.
1926.955	Overhead lines.
1926.959	Lineman's body belts, safety straps, and lanyards.
1926.1053	Ladders.
1926.1101	Asbestos.
1926.1126	Chrome (IV).
1926.1127	Cadmium.

XII. Miscellaneous Issues

The vast majority of the comments received from various parties during the rulemaking process have been answered in other sections of the preamble relating to the specific PPE payment issues raised. However, some commenters raised a number of issues that do not deal directly with PPE payment, but rather with aspects of rulemaking procedure, OSHA's underlying analysis supporting the rulemaking, or other issues related to PPE use. OSHA addresses those comments below.

A. Procedural Issues

In developing this final rule, OSHA compiled an extensive rulemaking record. It received hundreds of comments on the proposal published in 1999, conducted four days of hearings, and gave interested parties four months to file post-hearing comments and briefs. Subsequently, on July 8, 2004, OSHA published a notice to re-open the record. The Agency solicited comment on how the final rule should address PPE that is customarily provided by employees (69 FR 41221). OSHA received over 100 comments on this issue. OSHA carefully reviewed and analyzed the comments and information provided in developing the final rule.

Despite this, some commenters questioned a few aspects of the procedures OSHA used in developing the proposed rule, as well as the quality of the information and data relied on by the Agency. OSHA addresses these comments below.

1. Expert Panel

In 1998, OSHA sponsored an expert panel of representatives from industry, labor, insurance companies, and safety equipment manufacturers and distributors to gather information about patterns of PPE use and payment. Based on the information provided by the panel and OSHA's enforcement experience, the Agency provided quantitative estimates of the difference in PPE usage when employers purchase the PPE versus when employees purchase.

A few commenters raised concerns about OSHA's reliance on the information provided by the panel of experts (See Exs. 12: 173, 188, 189). The Pacific Maritime Association (PMA) and United Parcel Service (UPS) both argued that the panel's activities were conducted in violation of the Federal Advisory Committee Act (''FACA''), 5 U.S.C. app. section 1 *et seq.* (Ex. 12: 173, 189). These comments stated that the panel ''[p]rovided information and discussed employer payment of personal-PE, which * * * falls within FACA's coverage of a '[p]anel * * * established or utilized by one or more agencies, in the interest of obtaining advice or recommendations * * *' ,, (Ex. 12: 173, 189). Pursuant to FACA, notice of advisory committee meetings is to be published in the **Federal Register**, and such meetings are to be made open to the public (5 U.S.C. app. section 10(a)).

These commenters misunderstand the scope of FACA's coverage and the role played by the expert panel in the rulemaking process. FACA does not apply to the expert panel described above. As explained in the regulations issued by the General Services Administration (GSA) to administer FACA, the statute does not apply to ''[a]ny group that meets with a Federal official(s) where advice is sought from the attendees on an individual basis and not from the group as a whole'' (41 CFR 102–3.40(e). Also excluded from FACA is ''[a]ny group that meets with a Federal official(s) for the purpose of exchanging facts or information'' (41 CFR 102.3.40(f)).

In *Public Citizen* v. *U.S. Dept. of Justice*, the Supreme Court examined the reach of FACA and concluded that the statute's definition of ''advisory committee'' ''[a]ppears too sweeping to be read without qualification'' (*Public Citizen* v. *U.S. Dept. of Justice,* 491 U.S. 440, 465 (1989). The Court further emphasized that ''[w]here the literal reading of a statutory term would 'compel an odd result,' * * *we must search for other evidence * * * to lend the term its proper scope'' (*Public Citizen,* 491 U.S. at 454). The Court of Appeals for the DC Circuit provided additional guidance for determining whether a panel constitutes a FACA advisory committee.

> The point, it seems to us, is that a group is a FACA advisory committee when it is asked to render advice or recommendations, as a group, and not as a collection of individuals * * * [C]ommittees bestow * * *various benefits only insofar as their members act as a group. The whole, in other words, must be greater than the sum of the parts. Thus, an important factor in determining the presence of an advisory committee becomes the formality and structure of the group (*Ass'n of Am. Physicians and Surgeons, Inc.* v. *Clinton,* 997 F.2d 898, 913–14 (DC Cir. 1993).

OSHA assembled the expert panel for the purpose of gathering data, anecdotal evidence, and other information from each expert, which the Agency considered in drafting this rule. The panel was comprised of representatives from labor unions, employer associations, safety equipment distributors and manufacturers, and insurance companies. OSHA provided a questionnaire to the panel members so the Agency could learn each expert's opinions on various issues related to

PPE usage.[13] OSHA did not seek a consensus answer to each question but rather assessed each expert's individual response to the questions. The Agency was interested in the range of experiences the different sectors had had with PPE. Furthermore, OSHA did not seek policy advice or recommendations from the panel but simply information to be used in developing the PPE payment rule.

As indicated by the Court of Appeals for the DC Circuit, it is also important to consider the formality and structure of the panel when determining whether or not the panel is a FACA advisory committee (*Ass'n of Am. Physicians and Surgeons, Inc.,* 997 F.2d at 913–14). Here, the members of the expert panel did not meet. To supplement the individual responses of the panel members, six of the eight members participated in one conference call with OSHA officials to discuss issues related to PPE usage, including the different estimates regarding levels of PPE provision by employers. No other meetings were held. Had OSHA sought advice or recommendations from the group as a whole, the Agency would have arranged for longer and more frequent discussions among panel members, enabling the panel to reach agreement and provide consensus-based advice. OSHA, instead, was seeking data and general information about PPE from the representatives of the different sectors, which the Agency weighed in drafting this rule.

The same commenters raised an additional issue related to the transparency of the rulemaking process. The commenters stated that OSHA relied on information and estimates provided by one member of the expert panel who was not identified by name in the report on patterns of PPE usage (Ex. 12: 189). OSHA disagrees that it did not provide the public sufficient information to comment on the benefits estimates in the proposed rule.

Pursuant to the request in the questionnaire submitted to the panelists, Dr. Jeffrey Stull provided estimates of the incidence of non-use or misuse of PPE under different payment schemes (See Patterns of PPE Provision Final Report). He estimated a 40 percent incidence rate of non-use or misuse of employee-purchased PPE and a 15 to 20 percent incidence rate of non-use or misuse of employer-purchased PPE. As explained in the proposal, OSHA adopted these estimates because they were consistent with information provided by the other panelists as well as the Agency's own enforcement experience.

During the public hearing held on August 10, 1999, OSHA's opening statement set forth the Agency's belief that the PPE Payment rule would prevent thousands of injuries each year that result from misuse or nonuse of PPE when employees must purchase the PPE for themselves (Tr. 15). Additionally, in the statement, OSHA specifically requested comments on the safety advantages associated with employer-purchased PPE.

> We would also very much like your comments on the results of the PPE survey, which are in the Docket, and we would like to know whether you have evidence, either in qualitative or quantitative terms, showing that employee-owned PPE is less protective than employer-provided PPE. Are there, for example, particular instances where employees have jeopardized their safety and health to avoid the financial loss they would experience if they had to pay for their own PPE? Is there evidence to suggest that employees take better care of PPE that they themselves must purchase? Alternatively, is there evidence that employees neglect to take care of PPE paid for by their employers? (Tr. 23).

Following this statement, OSHA took questions from the public. During this questioning period, none of the attendees posed questions or expressed concerns about OSHA's estimates of the safety advantages of employer-purchased PPE.

During this same hearing, Dr. Stull testified as OSHA's designated PPE expert. In accordance with the hearing procedures published in the **Federal Register**, Rescheduling of Informal Public Hearing, 64 FR 27941 (May 24, 1999), on July 15, 1999, OSHA provided notice to the Docket Office of Dr. Stull's intent to appear as OSHA's expert witness along with his curriculum vitae (Ex. 13: 16). On July 23, 1999, the full text of Dr. Stull's testimony was submitted to the Docket Office for review by the public (Ex. 13: 16–1).

After his prepared testimony, Dr. Stull also took questions. A representative of the AFL–CIO asked for specific data regarding the frequency of use of PPE off of the jobsite (Tr. 73). Subsequently, an attorney from the Office of the Solicitor asked Dr. Stull about the safety advantage of requiring the employer to pay for PPE (Tr. 80). Even though Dr. Stull was asked specifically to discuss data on PPE use and then to address the benefits of employer-purchased PPE, none of the attendees—including those commenters above that questioned OSHA's benefits estimate—took the opportunity to ask the witness about data related to the safety benefit of employer-purchased PPE.

In short, OSHA provided ample opportunity for the public to pose questions to the Agency's representatives as well as the Agency's designated PPE expert about the specific figures used in its benefits analysis, but none did so. Furthermore, no commenters offered alternative point estimates of the safety benefits of employer payment for PPE. The rulemaking process and OSHA's analyses were transparent. The public was not deprived of the opportunity to comment or question the Agency's benefits analysis.

2. Data Quality

The Society for Human Resource Management (SHRM) expressed concern about the quality of the data that OSHA relied on in performing the benefits estimate in the proposal, stating ''SHRM questions whether the proposed * * * rule will significantly advance workplace safety since it is not shown to be based upon sound scientific studies nor is it established that the data was gathered pursuant to the Data Quality Act requirements'' (46: 43).

The Department of Labor's ''Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by the Department of Labor'' (Guidelines) (Available at *DOL.gov* at *http://www.dol.gov/cio/programs/InfoGuidelines/InfoQualityGuidelines.pdf*) establish Departmental guidance for ensuring that the quality of information disseminated by the Department meets the standards of quality, including objectivity, utility, and integrity. The Guidelines also contain specific principles for agencies to follow when analyzing safety and health risks. While much of the information used in the final rule was developed prior to publication of the guidelines, the information was gathered using techniques that meet the guidelines.

Contrary to the suggestion of SHRM, the information presented to support the safety benefits of the final rule fully complies with the Guidelines. The benefits analysis in the final rule is based on the best available evidence. In addition to the expert panel described above, in 1999, OSHA engaged Eastern Research Group (ERG) to perform a large-scale telephone survey to collect industry-specific data describing PPE usage patterns and the extent to which employers pay for OSHA-required PPE. The results were published in the PPE Cost Survey report on June 23, 1999 and made available in the Docket Office (Ex.

[13] The responses are summarized in the main text of the Patterns of PPE Provision Final Report, and the complete set of responses from each expert is provided in Appendix A of the Report (Ex. 1).

14). OSHA subsequently published a **Federal Register** notice asking the public to comment on the survey results (64 FR 33810–33813, June 24, 1999).

ERG obtained complete responses from 3,722 respondents. Three basic types of information were collected about eight categories of PPE: (1) If the PPE is used at the respondent's establishment; (2) how many employees use the PPE; and (3) who pays for the PPE (Ex. 12: 14). The survey data provide industry-specific estimates of the numbers of employees and establishments currently using each PPE type. The data also provide industry-specific estimates of the numbers of employees and establishments at which employers pay the full cost of the equipment, the numbers at which employees pay for the equipment, and the numbers at which employers and employees share the costs of PPE.

OSHA relied heavily on this data, as well as the extensive record that was compiled during the rulemaking and updated Bureau of Labor Statistics data, to develop the final rule and to determine the costs, benefits, and economic impacts of the rule. This is precisely the type of information the Guidelines require agencies to utilize when evaluating risks. The Guidelines specifically require agencies to use ''[d]ata collected by accepted methods or best available methods'' when analyzing safety and health risks. Accepted methods include the ''[t]estimony of experts'' and ''relevant analyses'' of pertinent information or data (Guidelines, p. 16). OSHA is confident that it has relied on the best available information in developing this rule and that the information presented complies with the Guidelines.

B. Turning in Old Equipment

A few commenters raised the issue of ''exchange systems,'' where an employee is required to turn in PPE that is no longer functional when the employer provides replacement PPE (See, *e.g.,* Exs. 12: 65, 167, 183). The SCA commented that:

> Many shipyards require employees to turn in their non-serviceable PPE upon receiving new equipment. Employer review of used PPE has proven to reduce injury at shipyards by providing employers insight into how equipment is used by examining what parts of the equipment are worn. This practice allows employers to identify poor technique and institute engineering controls that can reduce the incidence of injury. SCA recommends that the rule protect the employer's right to continue this practice (Ex. 12: 65).

OSHA does not prohibit SCA's practice and OSHA does not object to employers requiring employees to turn in employer-owned, worn-out PPE when issuing replacement PPE. Analyzing the PPE to look for wear patterns or other characteristics that can help implement improved engineering controls or obtain more suitable PPE would be a useful method for improving an employer's safety and health program. However, the Agency notes that these types of exchange programs need to be set up so that employees are not denied needed replacement PPE. For example, if an employee's PPE is damaged due to events occurring at work, the employer cannot deny replacement by establishing a work rule that turned-in equipment must be in serviceable condition. Such a policy would subvert the final employer payment rule and the underlying PPE requirements.

C. Guidance To Assist Employers With PPE Issues

The SGIA raised the issue of employers who have questions about OSHA's PPE requirements, suggesting that:

> OSHA needs to provide guidance and other training aids to assist employers in the proper selection, care and use of PPE. The vast majority of printers are very small businesses. In fact 80% having less than 20 employees, and do not possess the resources to undertake a proper evaluation themselves or hire an outside consultant to do it for them. OSHA needs to provide basic and useful information on this subject (Ex. 12: 116).

OSHA agrees that training aids are needed to help employers, and most especially smaller employers, with a variety of PPE issues, and the Agency has various resources and materials available to help provide PPE information. OSHA has two Internet topics pages devoted to PPE, one for construction and another for general industry employers (look for ''personal protective equipment'' under the alphabetic index at *http://www.osha.gov*). These include several resources, including the OSHA PPE standards, electronic aids called e-tools that will help employers with selection and other PPE issues, and links to other PPE resources on the Internet. OSHA also provides Publication 3151—Personal Protective Equipment to employers and employees free of charge. The publication discusses PPE hazard assessment and selection, employee training, and various types of PPE that may be needed to protect employees. Additionally, PPE is mentioned in many of OSHA's hazard specific publications, such as those dealing with bloodborne pathogens and chemical hazards.

While OSHA has provided the public with a variety of resources to help them with PPE selection, training, and use, the Agency will continue to look for ways to assist employers and employees with PPE issues. The Agency will continue to provide information on the Internet, and welcomes any specific suggestions on products or training aids that would assist employers and employees with PPE issues. However, the ultimate responsibility for ensuring the PPE is adequate rests with the employer.

D. Transmission of Disease Through Shared Equipment

The Framing Contractors Association expressed a concern about PPE that is shared among various employees and the potential for contaminants or infectious disease to be passed from one employee to the next. Their specific comment was ''We are also concerned that if equipment is shared or reused by another person, there could be a potential for the transfer of some diseases or possible contagious infections caused by the poor hygienic conditions of sweat bands in the hard hats or contaminates on eye glasses'' (Ex. 12: 207).

This is a long standing concern that occurs when PPE is used by more than one employee. That is why OSHA's standards require PPE to be kept in a sanitary condition. The standards do not prohibit the use of shared PPE; therefore it is critical that employers ensure that PPE is sanitized before it is provided to another employee.

E. Taking Home Contaminants on Clothing

The Building and Construction Trades Department noted that an employee's family can be exposed to dangerous materials when an employee takes them home on his or her PPE, noting:

> [b]ecause employers, employees, and OSHA do not always recognize the inherent hazards present in construction work, construction workers routinely expose their families unknowingly to contaminants from the job. Sometimes, these contaminants cause adverse health effects to their families * * * If employers provide and control the use of PPE effectively, these hazards could be significantly reduced or eliminated (Ex. 12: 218).

OSHA agrees that employees and their families can be exposed to hazardous substances inadvertently removed from the worksite on an employee's PPE and many of OSHA's substance specific standards require employers to prevent such contamination by controlling workplace clothing, providing showers, and

separate dressing areas. However, there is not a comprehensive requirement for employers to control all hazardous substances in this manner. The Agency recommends that employers take every effort to limit the spread of chemical contaminants through these and other mechanisms.

XIII. Other Alternatives Considered During the Rulemaking Process

During the development of the final standard, OSHA considered four alternatives: (1) An exception for PPE that is personal in nature and customarily worn off the job; (2) an exception for PPE used as a tool of the trade; (3) requiring payment for all PPE without exception; and (4) exempting high-turnover industries. For the reasons discussed below, OSHA rejected these alternative approaches.

A. Requiring Employers To Pay for All PPE Except PPE the Employer Demonstrated Was Personal in Nature and Customarily Worn Off the Job

The proposed rule specifically requested comment on alternative regulatory text that would have required employers to pay for all PPE except equipment that the employer demonstrated was personal in nature and customarily used off the job (64 FR 15416). A few commenters reacted favorably to this performance language alternative[14]. The National Rural Electric Cooperative Association supported the alternative approach, stating that ''[c]learly, any attempt to list all PPE available for exception on a personalized, off-the-job rationale is doomed to failure * * * [A]ny clarification of the general rule should be by way of restating clearly the general rule and the traditional exception available for all PPE that is personal and able to be used off the job'' (Ex. 12: 221). Another commenter echoed this opinion, stating that ''OSHA may be starting down a slippery slope by excluding certain items considered personal in nature and not others. There are numerous types of PPE including gloves, clothing, hearing protection devices, footwear other than safety-toe footwear, which can be considered personal in nature'' (Ex. 12: 134). Finally, the ASSE stated that ''[i]f the Agency becomes involved in trying to prescribe individual rules for PPE such as [for] welders, lumber industry workers, etc. * * * [we] foresee the agency eventually being in the quagmire of PPE deviations, exceptions, and directives'' (Ex. 12: 110).

A representative of the UAW testified in opposition to the performance oriented approach:

> The notion that certain PPE items are personal in nature and customarily used off the job is vague, overbroad, ambiguous, hard to define, and will generate major difficulties in compliance and enforcement. Molded earplugs, for example, are more personal than shoes and may also be worn to the employee's benefit off the job. * * * The UAW believes the alternative regulatory text on exceptions is worse than the proposed text. * * * However, if the agency insists on exceptions in the final rule, we would prefer the proposed language which would very specifically identify the excepted PPE rather than the alternative text (Tr. 242–244).

This view was shared by others as well (See, *e.g.,* Exs. 12: 230, 24A, 24B; Tr. 281–282, Tr. 344). In its written comments, ISEA stated that the proposed alternative would be ''difficult to define and interpret,'' and that exempting PPE that is personal in nature is ''oxymoronic'' given that PPE must fit the individual employee in order to be effective against hazards (Ex. 12: 230).

OSHA agrees with these commenters that the proposed alternative performance language is too vague. It provides insufficient guidance to employers and employees as to what PPE the employer should pay for in a particular circumstance. Furthermore, it would be difficult for compliance officers attempting to enforce the rule, since they would have no clear basis for evaluating the employer's determination that the exception was met in a given case. OSHA is concerned that the vagueness of the alternative text would result in less protection for employees. Without clearly specifying the parties'' responsibilities, safety precautions may not be taken.

In contrast, the final rule sets forth clearly the PPE for which the employer is not required to pay. These exceptions are supported by the rulemaking record. Employers and employees will clearly understand the PPE that must be paid for by employers and the PPE for which employers and employees may negotiate payment. As discussed above, OSHA believes this clarity will result in even greater benefits for employers and employees.

B. Adding an Exception for PPE Meeting Criteria Reflecting Its Use as a Tool of the Trade

OSHA also considered adding a specific exemption from the employer payment rule for PPE considered ''tools of the trade,'' where the employer could demonstrate that (1) the PPE could only be used by one employee for reasons of customized fit or hygiene, and (2) it is customary in the industry for employees to select and pay for the PPE. In response to OSHA's 1999 proposal, several commenters argued that employers should not be required to pay for PPE items that employees now customarily purchase themselves and take with them from job to job.

After reviewing these comments, OSHA determined that more information was needed on the nature and extent of such customary practices to fully evaluate the impact of a final rule on various industries. OSHA reopened the rulemaking record on July 8, 2004 and solicited comment on whether and how a final rule should address situations where PPE has been customarily provided by employees (69 FR 41221). The Agency received nearly 100 written comments in response to the notice to reopen the record. OSHA received a variety of opinions on tools of the trade, however most stakeholders considered the idea of exempting certain tools of the trade from an employer payment requirement as problematic.

Commenters representing labor interests generally opposed providing an exception from the employer payment requirement for tools of the trade. To the extent that any particular tool of the trade is PPE, these commenters stated that employers should be responsible for providing and paying for such equipment. They also cautioned that any effort to classify PPE as tools of the trade was inappropriate and would lead to confusion (Exs. 45: 1, 18, 21, 25, 32, 53). James August of AFSCME wrote:

> Further discussion on the issue of tools of the trade will cloud rather than clarify the issues of what constitutes PPE and employers' duty to provide safe working conditions. The term tools of the trade is inappropriate for OSHA to use in the context of a rule requiring employers to pay for most PPE. Tools of the trade means equipment that is used to perform a specific job or task. Personal protective equipment, by contrast, is not used to accomplish a task, but rather to protect the worker from the hazards that are associated with the job (Ex. 45: 1).

ISEA expressed a similar view, stating that ''[a] tool enables a worker to perform a task. PPE protects the worker by using the tool'' (Ex. 46: 31).

[14] With a performance-oriented approach, the Agency identifies a goal to be achieved but does not specify the means by which it must be achieved, in order to provide employers flexibility. See, *e.g., Secretary of Labor* v. *Pike Elec.,* No. O.S.H.R.C. 06–0166, 2007 WL 962965, at *10 (O.S.H.R.C. Feb. 5, 2007) (''The Secretary promulgated § 1910.269(n)(3) as a performance standard, in which she specifies the hazard to be protected against while giving the employer some leeway in achieving the desired result.'')

Some employer representatives commented with similar views. These representatives stated that what is considered a tool of the trade varies greatly by industry and even within an industry. Therefore, OSHA would have a difficult time specifically identifying, in a single rule, all of the different types of PPE that fall into this category (Exs. 45: 3, 17; 46: 1, 3, 9, 13). Many employer representatives, however, believed that some PPE should be excluded from an employer payment requirement if the PPE meets certain criteria, including some criteria that are typically used to describe tools of the trade. For example, ORC stated:

> ORC views the criteria that ''the PPE is expected to be used by only one employee for reasons of hygiene or personal fit'' as reasonable. ORC also views the concept of working for multiple employers as reasonable. Equipment that must be fitted to an individual worker or which becomes, through use, unsuitable for use by another worker for hygienic reasons, coupled with a worker's employment by, and frequent movement between, several different employers, are criteria which argue against the general requirement that each employer has an absolute responsibility to provide and pay for all PPE (Ex. 46: 47).

ORC recommended that OSHA include a general exemption for PPE meeting these criteria, but that OSHA not include an exemption based on customary industry practice, as that would compromise the clarity of the rule.

Two other representatives described common practices in their industries with respect to payment for PPE. The International Association of Drilling Contractors stated that employees in the oil and gas well industry provide their own hard hats, safety boots, gloves, coveralls (work clothes), general-use work gloves, winter protection for cold weather and rain gear, including rubber boots, for wet weather (Ex. 46: 30). A written submission from the Tree Care Industry Association stated that ''[i]t is a longstanding practice for the employee to show up for work in boots and other work attire that he or she has paid for'' (Ex. 46: 44). The commenters also explained that employees frequently move to perform work for multiple employers.

Two representatives of electric utilities stated that it was common practice for employers to require employees to provide climbing equipment including lineman's belts, leather work gloves, gaffs, hooks, and boots (Exs. 45: 37, 42). Several other general industry employers stated that it was customary for employees to provide certain types of PPE and supported an exemption from employer payment for those items (Exs. 45: 28, 30, 52; 46: 5, 12). A submission from a large telecommunications company argued that while ''personal'' items such as gloves, work clothes, and footwear should be exempt from a payment requirement, all other PPE, including climbing equipment, should be paid for by the employer (Ex. 45: 13).

OSHA also received many comments from representatives of the construction industry who supported an exemption for PPE considered to be tools of the trade. However, these comments indicate that the kinds of PPE regarded as tools of the trade vary considerably among different segments of the construction industry. One contractor who builds concrete shells for high-rise structures stated that employees hired as carpenters are required to have their own 4-point harness system, 2-legged lanyards, and positioning chains or devices (Ex. 45: 5). A representative from the NAHB wrote:

> There are several articles of PPE that are considered ''tools of the trade'' in residential construction. These include: hard hats, safety glasses, work boots/shoes, and general duty gloves. There are several reasons why these articles of PPE are thought to be tools of the trade and should be excluded. First, it is customary for workers to bring these items to the job-they are normally supplied (and paid for) by workers and are carried with them from job to job or from employer to employer. Workers are typically required to supply their own tools and equipment for the job they are performing and PPE is considered just another tool in their toolbox (Ex. 45: 26).

According to a representative of the Independent Electrical Contractors, Inc., practices vary among establishments engaged in electrical construction, with some employers paying for PPE while others require employees to provide hard hats, safety glasses, gloves, boots, and appropriate clothing (Ex. 45: 36).

Several representatives of the maritime industry supported an exemption for welders'' PPE, indicating that it is customary in the industry for welders to provide their own PPE. A representative from the SCA stated:

> SCA believes that safety equipment considered to be tools of the trade should be excluded from the employer requirement for payment. SCA members consider Personal Protective Equipment (PPE) and tools of the trade to be two separate categories of equipment. PPE is safety equipment provided by the employer that generally can be sanitized and reissued. A tool of the trade is viewed as a piece of safety equipment that is highly personal in nature and generally can not be used by another employee * * * Tools of the trade for welding operations, such as face shields/goggles, fire resistant shirts/jackets, sleeves and leather gloves have predominantly been provided by the employee because of the equipment's personal nature. The industry considers these to be tools of the trade because it is neither feasible for a different employee to wear the welders'' gloves and leathers each day for hygienic reasons, nor is it feasible that upon resigning from the position that an employee will leave the leathers behind to be worn by another individual. (Ex. 46: 32).

A submission from Northrop Grumman Ship Systems (NGSS) reflected a similar view. With respect to welding leathers, welding jackets, welding sleeves and gloves and welding shields, NGSS stated:

> [t]his equipment presents classic examples of ''tools of the trade,'' which employees traditionally bring with them to the job and take with them when they leave it. There is good reason for this as these items absorb perspiration and come into direct contact with the employee's skin. As such, this equipment would be unsuitable for reissue to another employee.
>
> Similarly, other items such as hardhats and safety glasses are individual and personal in nature since they must be adjusted to conform to the employee's physical dimensions. They, too, must be sanitized and repaired prior to reissue. With approximately 20,000 employees, NGSS would incur exorbitant expenses. Moreover, the traditionally high turnover rate intrinsic to shipbuilding aggravates this problem (Ex. 46–39).

OSHA believes that a PPE payment rule exempting equipment meeting the criteria described above would fail to clearly indicate to employers and employees when PPE had to be paid for by employers, and would likely result in the Agency having to render numerous interpretations of the rule as it applied to specific situations. For example, while there was some agreement in the record that certain climbing gear and welding equipment were considered tools of the trade in some industries, the record reflects considerable disagreement as to the other types of PPE that are considered tools of the trade.

The record also shows that PPE considered tools of the trade in one industry may not be considered tools of the trade in another industry. Therefore, while welding equipment may be considered tools of the trade in parts of the maritime industry, they may not be considered tools of the trade in general industry (*e.g.,* manufacturing plants). There is also evidence in the record that even within the same industry, there is disagreement as to what is considered a tool of the trade. Employers would have great difficulty determining whether a particular type of PPE is considered a tool of the trade and whether they would be responsible for paying for it.

It would also be difficult for OSHA to verify the types of PPE that are customarily provided and paid for by employees in a given industry. These differences in the way that certain PPE is treated in specific industries makes this alternative impractical. Accordingly, OSHA believes that this alternative is too vague and would create confusion among employers and employees.

C. Requiring Payment for All PPE Without Exception

OSHA considered requiring employers to pay for all PPE, without any exceptions. Many commenters supported this alternative (See, *e.g.*, Exs. 12: 100, 19, 22A, 25, 26A, 37; Tr. 173–174, Tr. 241, Tr. 320, Tr. 366, Tr. 463–464). They argued that PPE is part of the hierarchy of controls. Therefore, just as OSHA would not ask an employee to pay for engineering or administrative controls, the Agency should not expect employees to pay for any PPE. For example, the AFSCME strongly objected to any exceptions, stating:

> According to OSHA's own reasoning, there is no rational basis for distinguishing the use of PPE from other types of controls, and the responsibility of paying for the protection should, in each case, rest with the employer. Safety-toe protective footwear and safety eyewear are clearly forms of PPE. Therefore, employers should be required to pay for safety-toe footwear and safety eyewear. Employers should be required to pay for such protective foot and eyewear regardless of whether such footwear is worn off the job-site (Ex. 12: 100).

During the public hearing, Jackie Nowell, Director of the Occupational Safety and Health Department of the UFCW testified:

> OSHA standards are not ambiguous about who pays for engineering or administrative controls, and we don't believe they are ambiguous about the payment for PPE. The OSH Act requires employers to provide a safe and healthy workplace for American workers.
>
> Again, employers are mandated to control hazards through a hierarchy of controls, preferably engineering and administrative. And when those fail to abate or reduce the hazard, then the employer is allowed to utilize PPE, but also to pay for it (Tr. 173–174).

In their post-hearing comments, the United Automobile, Aerospace & Agricultural Implement Workers of America (UAW) also urged OSHA to eliminate the proposed exemptions. They argued:

> The UAW believes that the employer's responsibility to pay for necessary and required PPE is consistent with both OSHA law, logic and good safety practice * * * [M]any states already interpret their standards to require employers to pay for PPE * * * Treating PPE differently from other controls is illogical and violates the hierarchy of controls * * * OSHA's proposal to continue the exemption for shoes and glasses is a lost opportunity to correct a previous error, and restore a logical scheme for allocating costs of protection against hazards (Ex. 23).

A representative of the Teamsters stated, ''[w]e believe that all PPE required to protect employee health and safety should be paid for by the employer regardless of whether they are personal in nature and/or customarily used off the job'' (Tr. 342).

OSHA rejected this alternative for three main reasons. First, as explained in the Legal Authorities section, OSHA does not agree that the OSH Act can be read to require employers to pay for all PPE without exception. The Agency does not believe that Congress intended for employers to pay for the types of PPE exempted in the standard, such as everyday work clothing and weather-related equipment. Second, requiring employer payment for all PPE without exception would not be a cost effective means of protecting employees. The cost of requiring employers to pay for safety shoes, certain everyday clothing, weather-related protective gear, sunscreen, etc. would be quite high and OSHA believes unnecessary given existing practices in most industries. The Agency estimates that requiring employers to pay for protective safety-toe footwear would have added $220 million to the cost of the final rule. Finally, the PPE exempted in the final rule is the type of PPE OSHA has historically exempted from employer payment. OSHA sees no reason based on the rulemaking record here, to deviate from its longstanding position that certain PPE should be excluded from employer payment.

D. Exempting High-Turnover Industries From an Employer Payment Requirement

Finally, OSHA considered exempting high-turnover industries from the PPE payment requirement. The record shows that one common reason that employers do not pay for PPE is high turnover, such as in situations involving day labor, or job- or situation-contingent hiring. OSHA received many comments expressing concern about the costs to employers in high-turnover industries of the payment requirement.

According to the National Maritime Safety Association (NMSA) and the Pacific Maritime Association (PMA), an employer-payment requirement is impractical in a hiring hall industry because each employer's work force changes from day to day depending upon its manpower needs and the seniority, skills and personal preferences of available employees (Exs. 12–172, 12–173). The NMSA stated further that it was not possible to devise a system in which employer-purchased PPE could be distributed to employees at the beginning of a work-shift, collected at the end of a work-shift, and sanitized and redistributed to different employees at the beginning of the next shift (Ex. 12: 172). The NMSA asserted that employers would have no choice but to issue new PPE to employees every day at substantial expense and with no additional safety benefit (Id.).

The United States Maritime Alliance Limited (USMX) argued that a generic PPE payment requirement would be difficult for the maritime industry given many employees work for multiple employers:

> [I]n the marine cargo handling industry, labor pools are often utilized to assign labor to a certain workplace. It is not uncommon for a single employee to work at a different employer's facility from day to day or even shift to shift. As such, any standard that requires action, such as payment for PPE on an ''employer'' creates significant confusion in an industry where a single employee may have several employers. That is one reason why local port management associations are often involved in providing such equipment (Ex. 45: 40).

The NAHB made a similar argument on behalf of its members. The NAHB stated that some firms process 15 to 50 employees a week and that many of them quit or are terminated in a matter of hours. Providing new PPE to each new employee at a cost of $15 per person would be burdensome, the NAHB argued, and would not lead to greater use of the equipment (Ex. 12: 68). A representative of the oil and gas drilling industry reported that the industry traditionally has a high turnover rate, with one firm reporting an average turnover of almost 50 percent (Ex. 12: 9). A firm in this industry maintained that the cost of providing three to four pairs of cotton gloves per week to its 4,300 well-servicing employees would cost $804,960 annually and would have a significant economic impact (Ex. 12: 19).

OSHA analyzed this alternative and determined that it was not appropriate to deny the benefits of the final rule to certain employees simply because they worked in industries with ''high turnover.'' The OSH Act does not contemplate exempting employers from their obligations to protect employees for that reason alone. This is particularly true when there is no evidence that the final rule will create

feasibility problems in any of the industries affected.

Furthermore, such an exemption would be impractical. The rulemaking record did not provide enough information for OSHA to specifically identify high turnover industries for purposes of the exemption. In particular, turnover depends greatly on size of employer, occupation, and geographic area. Thus, for some large employers in a particular industry, turnover may be low; however, for smaller employers in the same industry there may be extremely high turnover. Furthermore, in the same industry, there might be significant differences in turnover depending upon particular jobs. So, welders in the construction industry may experience great turnover, but crane operators may not. Finally, in some areas of the country, there is high turnover in a particular industry, but only moderate turnover in the same industry in another area of the country. These real differences in turnover rates make it difficult for OSHA to specifically exempt certain industries from an employer payment requirement.

OSHA was also unable to identify a rate that it could consider ''high turnover'' for purposes of the exemption. Turnover rates vary greatly; they can be as low as 5–10 percent or as high as 200 percent a year. The Agency was not able to identify an appropriate cut-off point for high turnover that could be used as a basis for exempting industries from an employer payment requirement. Furthermore, turnover rates fluctuate yearly. Thus, in one year an industry might have a 50 percent turnover rate, but a 25 percent rate in the following year. The Agency was unable to devise alternative language that could account for these fluctuations while providing employers with sufficient notice of their compliance obligations. For all of these reasons, OSHA rejected this alternative.

XIV. Legal Authority

A. Introduction

This rule is limited to addressing who must pay for the PPE that is already required by existing PPE standards. The rule does not require any new type of PPE to be purchased. Nor does the rule impose any new requirements for PPE use.

The final rule is justified on two different bases. First, the rule is interpretive in that it clarifies and implements a pre-existing employer payment requirement implicit in the statutory scheme and the language of OSHA's PPE standards. Part B of this section discusses these implicit statutory and regulatory payment schemes. Second, the rule is an ancillary provision further reducing the risks addressed by the existing PPE standards. To be justified as an ancillary provision, the rule need only be reasonably related to the PPE standards' remedial purpose. Part C of this section discusses the final rule's health and safety benefits.

B. The Final Rule Codifies an Employer Payment Requirement Implicit in the OSH Act and the Wording of the Existing PPE Standards

1. An Employer Payment Requirement Is Derived From the Statutory Framework

In the Agency's view, the final rule does no more than clarify a requirement legally implicit under the Act. The Act makes employers solely responsible for the means necessary to achieve safe and healthful workplaces. This includes financial responsibility. Employers are therefore responsible for providing at no cost to their employees the personal protective equipment that is required because of workplace hazards.

The language of the Act and its framework are indicia of this requirement. At section 2(b) (29 U.S.C. 651(b)), Congress declared its purpose and policy to ''[a]ssure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources.'' To that end, Congress authorized the Agency to issue safety and health standards and required each employer to comply with the standards (29 U.S.C. 654(a)(2)).

The Act defines an occupational safety and health standard as one which ''[r]equires * * * the adoption or use of one or more practices, means, methods, operations, or processes, reasonably necessary or appropriate to provide safe or healthful places of employment'' (29 U.S.C. 652(8)). Congress gave to OSHA broad discretion to set standards to prevent occupational injury and illness and to charge to employers the cost of reasonably necessary requirements. *United Steelworkers* v. *Marshall*, 647 F.2d 1189, 1230–31 (DC Cir. 1980), cert. denied, 453 U.S. 913(1981) (Lead).

In addition to the statute's requirement that employers comply with standards, sections 9, 10 and 17 of the Act (29 U.S.C. 658, 659, 666) set out a detailed scheme of enforcement solely against employers. *Atlantic and Gulf Stevedores, Inc.* v. *OSHRC*, 534 F.2d 541, 553 (3d. Cir. 1976). Sections 9(a) and 10(a) (29 U.S.C. 658(a), 659(a)) provide for the issuance of citations and notifications of proposed penalties only to employers. Section 10(a) (29 U.S.C. 659(a)) refers only to an employer's opportunity to contest a citation and notification of a proposed penalty. Section 17 (29 U.S.C. 666) provides for the assessment of civil monetary penalties only against employers. OSHA's enforcement authority against employers—not employees—underscores Congress's intent to hold employers responsible for creating safe and healthful working conditions.

This statutory scheme is further supported by the OSH Act's variance provisions, which provide that employers—but not employees—may apply to OSHA for a temporary or permanent variance from compliance with OSHA standards. Temporary variances allow employers additional time to come into compliance with a standard when the employer demonstrates that it cannot do so by the effective date due to the unavailability of professional or technical personnel or materials or because of necessary construction or alteration of facilities (29 U.S.C. 655(b)(6)). Permanent variances provide employers with alternative means to protect their employees in lieu of specific OSHA standards, provided these alternative measures are as protective as the measures set forth in the relevant standards (29 U.S.C. 655(d)). These provisions recognize that employers are responsible for complying with, and paying for compliance with, OSHA standards and provide them flexibility in achieving this compliance.

The Supreme Court confirmed that Congress intended employers to pay for compliance with safety and health standards. In reviewing OSHA's cotton dust standard, the Court interpreted the legislative history as showing that Congress was aware of the Act's potential to impose substantial costs on employers but believed such costs to be appropriate when necessary to create a safe and healthful working environment (*American Textile Mfrs. Inst., Inc.* v. *Donovan*, 452 U.S. 490, 519–522, 101 S. Ct. 2478, 2495–96, 69 L.Ed.2d 185 (1981) (*Cotton Dust*). See also *Forging Industry Ass'n.* v. *Secretary of Labor*, 773 F.2d 1436, 1451 (4th Cir. 1985) (Noise); Lead 647 F.2d at 1230–31).

Several statements by members of Congress demonstrate that employers would be expected to bear the costs of compliance with OSHA standards. Senator Yarborough stated that ''[w]e know the costs [of complying with the Act] would be put into consumer goods but that is the price we should pay for the 80 million workers in America.'' (S. Rep. No. 91–1282, 91st Cong., 2d Sess. (1970); H.R. Rep. No. 91–1291, 91st

Cong., 2d Sess. (1970), reprinted in Senate Committee on Labor and Public Welfare, Legislative History of the Occupational Safety and Health Act of 1970, (Committee Print 1971) at 444. Senator Cranston stated:

> (T)he vitality of the Nation's economy will be enhanced by the greater productivity realized through saved lives and useful years of labor. When one man is injured or disabled by an industrial accident or disease, it is he and his family who suffer the most immediate and personal loss. However, that tragic loss also affects each of us. As a result of occupational accidents and disease, over $1.5 billion in wages is lost each year (1970 dollars), and the annual loss to the gross national product is estimated to be over $8 billion. Vast resources that could be available for productive use are siphoned off to pay workmen's compensation and medical expenses * * *. Only through a comprehensive approach can we hope to effect a significant reduction in these job death and casualty figures (Id. at 518–19).

Senator Eagleton stated it even more clearly: ''The costs that will be incurred by employers in meeting the standards of health and safety to be established under this bill are, in my view, reasonable and necessary costs of doing business'' (116 Cong. Rec., at 41764, Leg. Hist. 1150–1151).

Furthermore, Congress considered uniform enforcement against employers crucial because it would reduce or eliminate the disadvantage that a conscientious employer might experience where inter-industry or intra-industry competition is present. ''[M]any employers—particularly smaller ones—simply cannot make the necessary investment in health and safety, and survive competitively, unless all are compelled to do so'' (Leg. Hist. at 144, 854, 1188, 1201).

Nothing in the legislative history suggests that Congress intended that compliance costs should be borne by employees. Congress sought to maintain the standard of living of working men and women and did not contemplate that employees' pay and benefits would be sacrificed to achieve safe and healthful workplaces. For example, the Senate report notes that employers are bound by the ''general and common duty to bring no adverse effects to the life and health of their employees throughout the course of their employment. Employers have primary control of the work environment and should ensure that it is safe and healthful'' (Leg. Hist. at 149).

Therefore, as seen in the statutory text and legislative history, Congress conclusively determined that OSHA regulation is necessary to protect employees from occupational hazards and that employers should be required to reduce or eliminate significant workplace health and safety threats. This includes a concomitant financial responsibility to pay for the measures necessary to that end. Congress plainly viewed the costs of compliance with the Act as a type of ordinary business expense that employers would be expected to bear in order to reduce employee exposure to safety and health hazards (*Cotton Dust*, 452 U.S. 490, 519–521 (1980)).

PPE is a means to ensure the safety and health of employees, just as engineering, administrative, and work practice controls are. There is no principled distinction between these other control methods and PPE for purposes of cost allocation (See *UAW* v. *Pendergrass*, 878 F.2d 389, 400 (D.C. Cir. 1989)). For example, in the Cancer Policy rulemaking in 1980, OSHA found no distinction, for payment purposes, between engineering controls and personal protective equipment necessary to protect employees from exposure to carcinogenic substances:

> The requirement that employers pay for protective equipment is a logical corollary of the accepted proposition that the employer must pay for engineering and work practice controls. There is no rational basis for distinguishing the use of personal protective equipment [from other controls]. The goal in each case is employee protection; consequently the responsibility of paying for the protection should, in each case, rest on the employee (45 FR 5261, Jan. 22, 1980).

Many commenters to the rulemaking agreed that the OSH Act requires employer payment for PPE. The ASSE agreed that the OSH Act's mandate requiring employers to provide a safe and healthful workplace for their employees ''[i]ncludes the financial obligation of employers to provide controls to address hazards that could cause injury or physical harm to their employees. The majority of ASSE members reviewing this proposal generally agreed that most PPE is covered under the Act'' (Ex. 12: 110).

AFSCME stated that it ''wholeheartedly concurs'' with OSHA's rationale that ''[t]he requirement that employers pay for PPE is a logical corollary of the accepted proposition that the employer must pay for engineering and work practice controls'' (Ex. 12: 100).

The International Brotherhood of Teamsters stated that ''[r]equiring employers to provide personal protective equipment at no cost to employees will only clarify the OSH Act's implicit legal requirements and its legislative history, as discussed in the preamble. The OSH Act clearly charges employers with the responsibility for achieving safe and healthful workplaces'' (Ex. 12: 190).

The AFL–CIO commented that ''[t]he language, intent and legislative history of the Act all support the principle that employers are required to provide and pay for the measures necessary to protect workers by controlling hazards which pose a risk of injury, illness, or death to their employees'' (Ex. 12: 19–1). Therefore, the AFL–CIO supports a rule that ''codifies an employer's responsibility to pay for personal protective equipment'' (Id.).

Some commenters, however, disagreed that the OSH Act sets forth requirements on cost allocation. As a matter of statutory construction, some commenters suggested that the only place Congress set forth requirements related to costs was in section 6(b)(7) for medical examinations. Section 6(b)(7) provides that ''[a]ny such standard shall prescribe the type and frequency of medical examinations or other tests which shall be made available, by the employer or at his cost'' (29 U.S.C. 655(b)(7)). OSHA disagrees with these commenters.

These comments, taken to their logical extreme, suggest that employers would pay for nothing under the Act except medical examinations or other tests. That means that employees could be asked to pay for everything else—their own training, engineering controls, air sampling, the setting up of regulated areas, housekeeping measures, recordkeeping, and all other protective measures—required under the Act and OSHA standards. Such a reading of the Act would be contrary to the purpose and legislative history of the Act placing responsibility for compliance with employers, as discussed above. The argument was in fact rejected in *Lead*, 647 F.2d at 1232:

> Th[e] maxim (expressio unius est exclusio alterius) [''the expression of one is the exclusion of another''] is increasingly considered unreliable * * * for it stands on the faulty premise that all possible alternative or supplemental provisions were necessarily considered and rejected by the legislative draftsmen. Thus it is incorrect to say that because Congress expressly required that standards prescribing the type and frequency of medical examinations or other tests shall be made available, by the employer or at his cost, that Congress prohibited OSHA from using its broad rulemaking authority to require employer payment for other employee rights, where it determines, after rulemaking, that such rights are necessary to enable the agency effectively to carry out its responsibilities.

Some commenters claimed that there are fundamental distinctions between engineering controls and PPE that warrant different cost treatment under

the Act. UPS argued that the primary difference between engineering changes and PPE is ''[c]lear and simple: employers own the equipment they make engineering changes to—it is part of their facility—but by definition [PPE] typically is owned by employees: that is why it is personal'' (Ex. 12: 189, p. 19). The SHRM stated that PPE, unlike engineering or work practice controls, ''[i]s in the personal care of the employee, and the employee plays a direct role in the selection, use, sizing, adjusting, care, storage, and control of [the] PPE.'' SHRM also stated that ''[t]he employee is generally in a far better position than the employer to ensure that personally-assigned PPE is properly maintained, used, and stored'' (Ex. 46: 43, p. 19–20).

OSHA is not convinced by these arguments. As an initial matter, OSHA disagrees that by definition PPE is typically ''owned'' by the employee. In fact, the record in this rulemaking suggests the opposite. With a few exceptions—safety-toe shoes and everyday clothing—employers typically provide the PPE to their employees and expect the employees to return the PPE at the end of the day or at the completion of their work for the employer. The record does not support UPS's position that employees typically ''own'' such PPE as protective eye wear, chemical protective gloves, harnesses, lanyards, ladder safety device belts, rubber gloves and sleeves, logging chaps, supplied air respirators, encapsulating chemical protective suits, life preservers and life jackets, retrieval systems, and the like. OSHA is also not swayed by SHRM's arguments that employees are in a better position to maintain, use, and store PPE. In fact, the existing PPE standards place on employers the responsibility for ensuring proper fit, use, and maintenance of PPE.

The crux of OSHA's position is that PPE is an important control measure required by OSHA standards. While PPE is considered the last line of defense and OSHA has stated a preference for engineering, work practice, and administrative controls, it is still an important type of protection utilized by millions of employees every day. Simply because PPE is not a part of or attached to an employer's facility does not mean that it provides a different protective function. Like other control measures, it protects employees from safety and health hazards in the worksite and should not be treated categorically differently for payment purposes than other control measures.

Other commenters contended that OSHA's interpretation of the Act ignores the many references to employee responsibilities in the statute (Exs. 12: 189; 46: 43) In particular, these commenters cited the language of section 5(b) of the Act, which requires that each ''[e]mployee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct'' (29 U.S.C. 654(b)).

There is no doubt that Congress expected employees to comply with safety and health standards. It is also true that Congress believed that employee cooperation in safety and health was critical to ensuring safe and healthful workplaces. What Congress did not intend, however, was for employees to bear the cost of ensuring that their workplaces were safe and healthy. That is why section 5(b) of the Act focuses on an employee's ''own actions and conduct.'' It is also why Congress made it clear that the ''[e]mployee-duty provided in section 5(b) [does not] diminish in any way the employer's compliance responsibilities or his responsibility to assure compliance by his own employees. 'Final responsibility for compliance with the requirements of this act remains with the employer' '' (S. Rep. No. 91–1282, U.S. Cod Cong. & Admin. News 1970, p. 5187).

The role of employers and employees under the OSH Act was specifically addressed by the Third Circuit in *Atlantic & Gulf Stevedores, Inc.* v. *OSHRC*, 534 F.2d 541 (3d. Cir. 1976). In holding that Congress did not confer power on OSHA to sanction employees for violations of the Act, the court set forth clearly that employers are ultimately responsible for ensuring that their workplaces are safe and healthy. Employers thus cannot shift financial responsibility for ensuring safe and healthful workplaces to their employees.

Finally, and more fundamentally, some commenters suggested that this rule was purely an economic rule and that the OSH Act does not give OSHA authority to resolve economic issues. UPS and PMA both asserted that ''OSHA's health and safety mandate does not permit it to invade collective bargaining with this purely economic rule'' (Exs. 12: 173, 189). The SCA had concerns about OSHA's ''[a]ttempt to regulate wages * * * which is not part of OSHA's mandate and accordingly, should not be subject to OSHA regulation'' (Ex. 12: 65). The NMSA stated that ''OSHA simply has no jurisdiction over employee compensation'' (Ex. 12: 172).

These commenters misunderstand this rule and the requirements of the OSH Act. The issue is not whether a particular requirement deals with economics in some way, the proper test is whether the requirement will help reduce significant risk of injury and death, thereby protecting the safety and health of employees. In fact, Congress confirmed this by specifying that employers must bear the costs of complying with OSHA standards. As explained more fully below, this rule is directly related to protecting the safety and health of employees and will result in substantial safety benefits.

These comments also do not consider the approximately 20 general industry safety and health standards OSHA has issued requiring employers to pay for PPE. Many of these standards have been challenged and upheld by the courts. For example, in *Noise*, 773 F.2d at 1451–1452, the court upheld the requirement in the hearing conservation standard that employers must pay for hearing protectors, finding that the requirement was reasonably related to the standard's purpose of reducing the risk associated with occupational noise exposure. No court has struck down OSHA's standards requiring employers to pay for PPE because they were outside of the Agency's statutory mandate.

a. Exceptions

As set forth in more detail in section V, the final rule contains certain exceptions to the general rule that employers must pay for required PPE. These exceptions include certain safety-toe protective footwear and prescription safety eyewear, logging boots, and everyday clothing such as long pants, long sleeve shirts, and normal work boots. Including these exceptions to the final rule is consistent with the OSH Act and its cost allocation scheme.

As stated above, the Agency agrees with the general principle that employers' legal responsibility for compliance with OSHA standards implies a concomitant financial responsibility to pay for the measures necessary to that end. OSHA also concludes that this requirement applies to most types of PPE. PPE cannot be categorically segregated from other types of control measures for payment purposes. This is one of the fundamental underpinnings of the final rule. OSHA has concluded that a general employer payment requirement will effectuate the OSH Act's implicit cost-allocation scheme and reduce the risk of injuries, illnesses, and fatalities.

However, acceptance of these principles does not mean that the OSH

Act prohibits exceptions to the employer-payment rule. There are certain narrow circumstances where OSHA believes that Congress did not intend for employers to have to pay for PPE. And Congress expected OSHA to make reasonable judgments as to the types of PPE that fit in this category. OSHA has recognized these situations in the past and the record in this rulemaking supports these determinations.

In its earliest interpretation of the issue in the *Budd* case, the Agency stressed that safety-toe shoes have certain special characteristics that separate it from most PPE for purposes of cost allocation. In her brief in Budd, the Secretary stated that:

> [b]y tradition, in this country shoes are considered unique items of a personal nature. Safety shoes are purchased by size, are available in a variety of styles, and are frequently worn off the job, both for formal and casual wear. Furthermore, it is neither feasible for a different employee to wear the shoes each day nor feasible that upon resigning from the position an employee will leave the shoes behind to be worn by another individual.

In the safety standard on logging operations, OSHA determined that logging employers should pay for protective equipment for the head, eyes, face, hands, and legs, but should not be required to pay for logging boots. OSHA excepted logging boots from among the types of equipment that employers must purchase for several reasons. The Agency found that logging boots, unlike other types of personal protective equipment, are not reusable. OSHA also noted that logging boots are readily portable, and unlike head and leg protection, are sized to fit a particular employee. Finally, the Agency noted that there was evidence in the record that employees use their logging boots away from work.

In the 1994 memorandum ''Employer Obligation To Pay for Personal Protective Equipment'' OSHA also stated its policy that ''[w]here equipment is very personal in nature and is usable by workers off the job, the matter of payment may be left to labor-management negotiations.'' The memorandum also gave examples of this type of equipment, including safety shoes, non-specialty safety glasses, and cold-weather outerwear.

OSHA does not believe that Congress intended for employers to have to pay for the types of PPE excepted in the final rule. This list includes non-specialty safety-toe shoes and boots, everyday clothing, cold weather gear, and normal work boots. While serving a protective function in certain circumstances, this equipment has either been historically exempted by OSHA from employer payment (*e.g.,* safety-toe shoes), the item is often used off the job, or is equipment that employees must wear to work regardless of the hazards found. For example, an employee who works at a computer terminal may have to wear a pair of long pants to work (due to a company policy), even though wearing long pants is not required for safety reasons. But, a tree trimmer may have to wear long pants to work to provide protection from tree branches and limbs, etc. In both instances, the employee has to wear long pants to work. However, with respect to the tree trimmer, the long pants also serve a protective function. In the Agency's view, Congress simply did not intend for employers to have to pay for this type of equipment, even though it admittedly serves a protective function in certain circumstances. Congress intended the Agency through its rulemaking function and in its standard-setting discretion to identify those narrow circumstances where payment can be left to negotiation between the employer and employee. These circumstances include such considerations as whether the items are normally used off the job or are items employees must wear to work regardless of the hazards found.

OSHA's position in this final rule is also consistent with its past interpretations of the issue, as detailed above. Since OSHA's earliest interpretations on employer payment for PPE, it has made clear that there are some exceptions to the employer payment rule. The principle of employer payment cannot be stretched so far that it applies to all protective equipment, in all circumstances, at all times.

2. An Employer Payment Requirement Is Implicit in the Wording of Existing Standards

The requirement that employers pay for the means necessary to achieve compliance is implicit in the statute itself, and therefore, is properly an implied term of every occupational safety or health standard. Properly viewed, this final rule clarifies an employer payment requirement that had previously been implicit in those standards.

In the proposed rule, the Agency set forth in detail its interpretive history on the issue of employer payment for PPE. It also discussed the holding in the *Budd* decision and why, in OSHA's view *Secretary of Labor* v. *Union Tank Car Co.* (18 O.S.H. Cas. (BNA) 1067 (Rev. Comm.) 1997) was wrongly decided. OSHA received only a few comments on this discussion; these comments asserted that the *Union Tank* decision was correct in not reading the term ''provide'' as requiring employer payment. OSHA continues to agree with the discussion in the proposal and incorporates it in this final rule. Nevertheless, OSHA reiterates here the main parts of the discussion because it further supports OSHA's interpretation of the OSH Act as requiring employers to pay for virtually all PPE.

From 1974 through October 1994, OSHA made a variety of statements on the question of employer payment for PPE. The most authoritative statements of the Agency's position are contained in OSHA's safety and health standards promulgated through notice and comment. Since 1978, OSHA has promulgated many safety and health standards explicitly requiring employers to furnish PPE at no cost.[15] In these rulemakings, OSHA concluded that this explicit requirement effectuates the cost allocation scheme of the OSH Act.

In 1978, OSHA promulgated a standard to protect employees from cotton dust. That rule required employers to pay for respirators when necessary to protect employees from exposure to this hazardous substance (43 FR 27350, 27387 (June 23, 1978)). The Agency noted that the language requiring employers to provide respirators ''[a]t no cost to the employee * * * makes explicit the position which has long been implicit in all OSHA health standard proceedings under section 6(b) of the Act'' (Id). (internal quotations omitted) The Agency expressed a similar view in the preambles for the 1,2-Dibromo-3-chloropropane (DBCP) standard (43 FR 11514, 11523 (March 17, 1978)), the lead standard (43 FR 52952, 52994 (Nov. 14, 1978)), the inorganic arsenic standard (43 FR 19584, 19619 (May 5, 1978)), the benzene standard, (43 FR

[15] See 29 CFR 1910.95(i)(1), (i)(3) (hearing conservation); 29 CFR 1910.1001(g)(1), (g)(2)(i), (h)(1) (asbestos); 29 CFR 1910.1018(h)(1), (h)(2)(i), (j)(1) (inorganic arsenic); 29 CFR 1910.1025(f)(1), (g)(1) (lead); 29 CFR 1910.1027(g)(1), (i)(1) (cadmium); 29 CFR 1910.1028(g)(1), (g)(2)(i), (h) (benzene); 29 CFR 1910.1030(d)(3)(i), (d)(3)(ii) (bloodborne pathogens); 29 CFR 1910.1043(f)(1), (f)(3) (cotton dust); 29 CFR 1910.1044(h)(1), (h)(2), (h)(3)(i), (j)(1) (1,2-dibromo-3-chloropropane); 29 CFR 1910.1045(h)(2)(i), (j)(1) (acrylonitrile); 29 CFR 1910.1047(g)(2)(i), (g)(4) (ethylene oxide); 29 CFR 1910.1048(g)(1), (h) (formaldehyde); 29 CFR 1910.1050(h)(2)(i), (i)(1) (4,4, methylenedianiline); 29 CFR 1910.1051(h)(1), (i) (1,3-butadiene); 29 CFR 1910.1052 (g)(1), (h)(1) (methylene chloride); 29 CFR 1910.146(d)(4)(iv) (confined spaces); 29 CFR 1910.156(e)(1)(i) (fire brigades); 29 CFR 1910.266(d)(1)(iii), (d)(1)(iv), (d)(1)(vi), (d)(1)(vii) (logging); 29 CFR 1910.134(c)(4) (respiratory protection standard); 71 FR 10100 (Feb. 24, 2006) (hexavalent chromium).

5918, 5953 (Feb. 10, 1978)), the ethylene oxide standard, (49 FR 25734, 25782 (June 22, 1984)), and the asbestos standard, (51 FR 22612, 22697 (June 20, 1986)).

In other official agency actions during this same period, OSHA interpreted and enforced its standards to require employers to pay for personal protective equipment, carving out an exception limited to uniquely personal items like safety shoes. In 1979, OSHA issued an Interpretive Instruction clarifying that 29 CFR 1910.1029(h)(1), which used the language ''shall provide,'' required employers to furnish personal protective equipment for coke oven employees at no charge. OSHA Instruction STD 1–6.4 (March 12, 1979). See also *Erie Coke Corp.,* 15 O.S.H. Cas. (BNA) at 1563 (citing this provision). A July 17, 1990, Agency memorandum stated that although section 1910.132(a) does not specifically allocate the costs of personal protective equipment to employers, ''[i]t is our position that the employer is obligated to pay for PPE which is not worn off the worksite. This includes welding gloves, but not safety shoes * * *'' In September 1990, OSHA issued a citation to a meatpacking firm alleging that it violated section 1910.132(a) by charging its employees for repair or replacement of steel mesh gloves and plastic wrist bands used for protection against knife cuts. The citation was not contested, and thus became a final order of the Commission by operation of law (29 U.S.C. 659(a)).

On October 18, 1994, OSHA issued a memorandum to its regional administrators and heads of directorates setting forth a national policy with respect to PPE payment. The interpretation outlined in this memorandum required employers to pay for all personal protective equipment that is necessary for the employee to do his or her job safely and in compliance with OSHA standards, except for equipment that is personal in nature and normally used away from the worksite such as steel-toe safety shoes. Before the 1994 memorandum was issued, OSHA concedes that some Agency officials had provided responses to written requests for information on 29 CFR 1910.132(a) suggesting among other things that the provision was ambiguous on the subject of employer payment and best resolved through collective bargaining, or that the Review Commission's decision in *Budd* foreclosed an interpretation requiring employer payment. The 1994 memorandum, however, was a definitive statement on the issue of employer payment for PPE and reflected the Agency's position on the issue as seen in its most authoritative statements made since 1974. OSHA subsequently issued a national compliance directive, STD 1–6.6, incorporating this interpretation and stating that violations of the policy would be cited.

Despite this history, the Review Commission in *Union Tank* rejected the claim that 29 CFR 1910.132(a) could require employer payment for PPE. In March 1996, OSHA issued a citation alleging that the Union Tank Car Company violated 29 CFR 1910.132(a) by requiring employees to pay for metatarsal safety shoes and welding gloves. Upon review, the Review Commission issued a decision vacating the citation (18 O.S.H. Cas. (BNA) at 1067–8). Citing its earlier decision in *Budd,* the Review Commission concluded that 1910.132(a) could not be interpreted to require employers to pay for personal protective equipment (Id. at 1068). The Review Commission believed that the Secretary's position on the issue was contrary to previous statements on employer payment for PPE and thus, was a departure that was not thoroughly explained.

The Review Commission's holding in *Union Tank* and its interpretation of 29 CFR 1910.132(a) misstates OSHA's historic position on payment for personal protective equipment. Moreover, while two commenters to the rulemaking record argued that *Union Tank* was correctly decided (Exs. 12: 173, 189), OSHA believes the case was wrongly decided. As described above, OSHA's official interpretations from 1974 onward consistently favored employer payment for PPE. This view was expressed in a variety of official agency actions, including rulemaking proceedings under the Act, agency memorandums and directives, and citations. This historic position belies the Review Commission's finding that the 1994 memorandum and STD 1–6.6 announced a wholly new national policy.

The Review Commission's mischaracterization of OSHA's historic view also stems in part from its erroneous reading of *Budd* and the Secretary's position in that case. In *Budd,* the respondent's employees were working without safety-toe shoes (1 O.S.H. Cas. (BNA) at 1549). The Secretary issued a citation alleging a violation of 29 CFR 1910.132(a) for the employer's failure to provide such shoes (Id). Prior to the hearing, the employer moved to withdraw its notice of contest on the understanding that its obligation to provide safety shoes did not include the requirement to pay for them (Id). The Secretary agreed that the employer was not required to pay for the shoes because of their special characteristics as uniquely personal; however, the union representing the employees objected on the ground that the standard required employer payment (Id). Reviewing this motion to withdraw the citation, the Review Commission held that § 1910.132(a) did not require the employer to pay for such shoes, with each Commissioner expressing a distinct reason for such. In *Union Tank,* the Review Commission erroneously characterized this holding as interpreting ''provide'' as used in § 1910.132(a) as foreclosing employer payment (18 O.S.H. Cas. (BNA) at 1067–8). The Commission also described the Secretary as having acquiesced to this holding, rendering its later position in the 1994 memorandum historically ''unsupported'' ''[a]fter twenty years of uninterrupted acquiescence in the interpretation the Review Commission announced in *Budd*'' (Id. at 1069).

OSHA believes that the Review Commission in *Union Tank* was, however, incorrect on both points. First, *Budd* did not broadly hold that ''provide'' in § 1910.132(a) can never be interpreted to mean ''pay for.'' Although the Review Commission in *Budd* did agree that § 1910.132(a) did not require the employer to pay for safety shoes, the Review Commission did not announce a majority opinion extending this conclusion beyond safety shoes. Only one Commissioner, Van Namee, opined that § 1910.132(a) broadly foreclosed employer payment for all protective equipment (1 O.S.H. Cas. (BNA) at 1549–50). The remaining Commissioners wrote separate opinions, one limiting his holding to the particular facts of the case and the particular context of safety shoes (Commissioner Cleary Id. at 1552–3) and one concurring without stating a rationale (Commissioner Moran, Id. at 1553–4). Because these two other Commissioners filed separate opinions announcing distinct rationales, Van Namee's view of ''provide'' as universally foreclosing employer payment is not the Commission's official holding (See *Atlantic Gulf & Stevedores* v. *OSHRC,* 534 F.2d at 546). Claims to the contrary, made by both the UPS and the PMA in comments to the proposed rule (Exs. 12: 189, 179), ignore the limitations of the Review Commission's decision.

The Secretary's position in *Budd* was similarly limited to the particulars of safety shoes and did not, as the Review Commission in *Union Tank* suggested, adopt a broader interpretation foreclosing all employer payment for protective equipment. In her Brief in *Budd,* the Secretary conceded that

employers should not be required to pay for safety shoes. The Secretary, however, stressed the special characteristics of safety shoes, including their uniquely personal nature and their potential use outside the employment site (Brief of the Secretary, served January 10, 1973, at 8). The Secretary did not, however, extend this rationale beyond safety shoes to foreclose all employer payment for protective equipment. Rather, the Secretary emphasized that an interpretation requiring employers generally to provide personal protective equipment free of charge would be consistent with the statutory scheme. She also noted that the Act's legislative history demonstrated Congress's intent to place the costs of achieving safe and healthful workplaces upon employers (Id. at 10). The Secretary concluded: ''Personal protective equipment cannot be segregated from equipment necessary to provide proper working conditions and therefore the purchase of such equipment by the employer was contemplated by the Act in cases where a standard might require it'' (Id. at 10–11).

Thus contrary to the Review Commission's suggestion in *Union Tank,* the Secretary has never, in *Budd* or elsewhere, characterized ''provide'' as used in 29 CFR § 1910.132(a) as foreclosing employer payment. If anything, the Secretary's position in *Budd* recognized a general rule of employer payment limited only where equipment, like safety shoes, are uniquely personal. This position, like the position taken in *Union Tank* and articulated in this final rule, is consistent with OSHA's historic approach to 29 CFR § 1910.132(a) and employer payment for PPE generally. It is further evidence of the Agency's longstanding position that the OSH Act requires employers to pay for PPE.

C. The Final Rule Is an Ancillary Provision Reasonably Related to the Purposes of the Underlying PPE Standards

Separate from making the basic cost allocation scheme of the OSH Act explicit in the PPE standards, the final rule is justified as a legitimate exercise of OSHA's rulemaking authority to promulgate provisions in its standards to help reduce significant risk. The existing PPE standards reflect a determination that the use of PPE is necessary to reduce a significant risk of injury and death. Once OSHA has determined that a significant risk of material impairment of health or well being is present, and will be reduced by a standard, the Agency is free to develop specific requirements that are reasonably related to the Act's and the standard's remedial purpose. This final rule is placing ancillary provisions in the existing standards requiring PPE use. Thus, OSHA must demonstrate only that requiring employees to pay for PPE is reasonably related to the remedial purpose of the PPE standards and will help reduce significant risk. OSHA finds that the final rule meets this test.

Requiring employers to pay for PPE used to comply with OSHA's standards is a classic ancillary requirement. It helps to ensure that the PPE is used properly by employees to protect them from injury and death. OSHA has included employer payment provisions as ancillary provisions in numerous past rules, as described above. In those rulemakings, the requirement was promulgated at the same time as the other provisions of the standard to help reduce significant risk. In this rule, of course, OSHA is adding the explicit employer payment requirement in a separate rulemaking action. However, by doing so, OSHA does not change the fundamental nature of the requirement. At bottom, this final rule adds an ancillary provision to certain PPE standards to help reduce a significant risk of injury.

After a thorough review of the rulemaking record, OSHA concludes that requiring employer payment for most types of PPE increases the effectiveness of the existing PPE standards in several ways: (1) The requirement encourages a greater degree of usage of PPE by eliminating a financial disincentive to such use; (2) it increases the degree of employer control over PPE selection and maintenance, thereby increasing the effectiveness of the employer's safety program; and (3) the requirement indirectly fosters a greater degree of employee cooperation in employer safety programs by demonstrating the employer's financial commitment to safety.

First, the reason employer payment will result in improved safety is primarily a matter of economics, and how employees' and employers' behavior regarding PPE is affected by their financial situations. In the proposed rule, OSHA cited enforcement cases that documented instances where financial considerations played an important role in employee use of damaged and unsafe PPE (Id. at 15407). For example, in *Ormet Primary Aluminum Corp.,* OSHRC Docket No. 96–0470, an employee testified that he continued to wear safety boots, even though the protective steel toes were exposed and posed an electrocution hazard, because he could not afford a new pair. The employee also testified that some employees put a cement-like substance over the steel toes of their boots when the leather covering wore away, but that this practice was hazardous because the substance was flammable (Id). OSHA also referred to the *Union Tank* case, in which the employee representative presented an affidavit that some employees taped or wrapped wire around their damaged metatarsal safety boots in order to avoid having to pay up to $130 per pair to replace them (Id).

The rulemaking record also strongly supports OSHA's position. As several commenters noted, when lower-wage employees are required to provide their own PPE, they are likely to avoid PPE costs and thus fail to provide themselves with adequate protection. David Daniels of the United Steelworkers of America noted that ''The welders have to purchase their leathers, gloves and metatarsal boots. The welders will take their leathers when the top of the sleeves are burnt with holes in them and turn the leathers over which exposes the bottom of the employee's arm to heat, hot metal or open flame'' (Tr. 375). Similarly, John Molovich, also with the United Steelworkers of America stated that:

> Workers in some cases do not earn sufficient wages to pay for all the things that are necessary to support themselves and their families. As a result, some things are either overlooked or eliminated, and in many cases it would be the PPE they use at work. Even if they do purchase the PPE, it is usually the cheapest and in most cases the most ineffective. This is merely human nature (Tr. 370).

In response to OSHA's reopening of the record on tools of the trade, AFSCME stated:

> Failure to require employers to pay for PPE would also cause an unreasonable burden on lower paid workers. Workers at risk would be asked to choose between paying for their PPE and providing basic needs for their families * * *. The likelihood that worker protection would be diminished would be even greater for employees whose language and literacy levels may present barriers to the appropriate selection and use of PPE (Ex. 45: 1).

Some commenters provided specific examples of instances where having employees pay for PPE could contribute to an increased risk of injury. Jackie Nowell of the UFCW testified that:

> [W]hen workers are given the choice between a full week's pay and a new metal glove [to reduce risk of injury from sharp cutting tools] they'll choose the paycheck. The gloves get holes in them and the workers sew them together rather than spend $65 for a new one (Tr. 184–185).

The evidence suggests that lower wage employees are less likely to purchase adequate PPE and replace it when necessary, and are more likely to make cosmetic repairs, hide defects, purchase used PPE aged beyond its service life, or fail to keep the PPE in proper working order. After carefully reviewing the rulemaking record, OSHA is convinced that allowing employers to charge employees for PPE will result in greater use of unsafe PPE.

OSHA also believes that employees will be more inclined to use PPE if it is provided to them at no cost. As with any product, when PPE is available at lower cost, the employee will be inclined to use it more readily. One could argue that since it is the employee's safety that is at stake, the employee will be more inclined to purchase the best PPE available on the market. Unfortunately, as evidence in the record suggests, when employees pay for their own PPE, some number of them will not take this course, and as a result their safety will be compromised (Tr. 104–105, 178, 184–185, 323, 370, 375; Ex. 19, 22A, 23, 23A, 25, 30, 43, 45; 13, 21, 36, 46: 1, 13, 45).

Employers'' natural economic behavior of reducing costs could also result in some safety and health disincentives. The BCTD and the AFL–CIO suggested that allowing employees to pay for PPE provides an economic disincentive for employers to invest in engineering controls, thus increasing risk to employees (Ex. 45: 21; Tr. 322–323). If employers ignore the hierarchy of controls because they can shift the cost of workplace safety to their employees, they may be choosing less effective methods of mitigating hazards. By eliminating this incentive, employers may be more inclined to implement more effective engineering, administrative, and work practice controls, leading to improved safety and fewer injuries and illnesses. This final rule eliminates any economic incentives that employers may have to avoid more protective control measures.

Second, OSHA believes that safety benefits will be realized by the final rule because it will clearly shift overall responsibility for PPE to employers. In past rulemakings, OSHA has concluded that requiring employers to pay for PPE will result in benefits because it will clearly make employers responsible for the control of the PPE (See 43 FR 19619 (May 5, 1978) (inorganic arsenic preamble); 46 FR 4153 (hearing conservation preamble)). Recently, OSHA promulgated a standard to protect employees against exposures to hexavalent chromium (71 FR 10100 (Feb. 28, 2006)). In the final rule, OSHA required employers to pay for needed protective equipment. The Agency stated that employer payment was necessary because ''[t]he employer is generally in the best position to select and obtain the proper type of protective clothing and equipment for protection from Cr(VI)'' (71 FR 10355). In addition, OSHA concluded that ''[b]y providing and owning this protective clothing and equipment, the employer will maintain control over the inventory of these items, conduct periodic inspections, and, when necessary, repair or replace it to maintain its effectiveness'' (Id).

From the comments in this rulemaking, it is apparent that some employers have shifted some PPE responsibility to their employees along with the responsibility to pay for the equipment. Some went so far as to suggest that employees have a better idea of the PPE required for the work and should rightfully be selecting their own PPE. SHRM stated that the employee ''[p]lays a direct role in the selection, use, sizing, adjusting, care, storage, and control of [the] PPE'' and that ''[t]he employee is generally in a far better position than the employer to ensure that personally-assigned PPE is properly maintained, used, and stored'' (Ex. 46: 43, pp. 19–20).

OSHA believes that employees can provide any number of useful suggestions about employers' PPE programs, including selection, use, and care of PPE. However, outside of a few specialized fields, a newly hired employee is not in a position to know the types of hazards they will face, and the types of PPE they will need for protection from those hazards. The employer who controls the workplace is much more aware of the hazards encountered in that workplace and the protective measures that are needed (Exs. 23, 46–13, 46–33; Tr. 104–105). This is the rationale underlying the OSHA standards that require employers to perform a hazard assessment to determine the types of PPE that are needed (See, *e.g.,* § 1910.132(d) and § 1915.152(b)).

When employers take full responsibility for providing PPE to their employees and paying for it, they are more likely to make sure that the PPE is correct for the job, that it is in good condition, and that the employee is protected. As ASSE stated:

> Employers correctly understand that their investment in proper PPE is an economic investment in productivity as well as a means of ensuring that workers go home safe and healthy each day. And to drive home that investment, they have recognized that their own involvement in PPE provides the best opportunity to ensure proper and effective use of PPE on their job sites. Recognizing their responsibility for identifying hazards, they provide the follow-through necessary to address those hazards (Ex. 46–33).

UPS argued that employer payment would have no effect on PPE selection because employers could select the correct PPE, purchase it, and then charge employees for the items. It also argued that employers could instruct employees to purchase a particular make, model, or design of equipment from a particular location and require them to present the equipment for verification before beginning work (See, *e.g.,* Ex. 189, p. 17).

OSHA agrees that employers could take these actions and some employers use one or both of these practices now. However, OSHA does not believe this practice is the norm; there are not likely to be very many employers that use complex administrative systems to assure that the PPE is appropriate when employees pay for the items. Additionally, under these systems, employees continue to have an incentive to underreport deficient or worn out PPE that needs to be replaced to perform its protective function. OSHA believes that these types of systems do not improve safety culture at the worksite, or encourage employees to participate whole-heartedly in an employer's safety and health program.

Therefore, OSHA believes that the scenario described by UPS is administratively cumbersome for employers, is not widely practiced, and does not provide a workable solution to the overall policy problem of PPE non-use or misuse. Systems of this type, sometimes called ''company stores'' are also likely to be criticized by those who believe the employer is making money from administration of the system. As the ISEA inquired, ''Should OSHA decide that employers can require that employees pay for their PPE, ISEA asks OSHA to explain the mechanism it would establish to ensure that employers do not overcharge employees'' (Ex. 46:31). Therefore, these commenters advance no sufficient alternative and their reasoning is not sufficient to convince the Agency that the PPE payment rule is not needed.

Third, employees may be less likely −++''+−++to participate whole-heartedly in an employer's safety and health program when they must pay for their own PPE, and employer payment for PPE may improve safety culture at the worksite. In past rulemakings, this finding has been key to OSHA's conclusions that employer payment will result in safety benefits. In requiring employers to pay for hearing protectors

as part of the hearing conservation standard, for example, OSHA relied upon the testimony of the director of the Safety and Health Department of the International Brotherhood of Teamsters:

> [an] employer's attempt to require its employees to purchase their own personal ear protective devices would cause resentment among the workers and clearly demonstrate to them the lack of commitment on the part of their employer in preventing hearing loss. Such a requirement would discourage the use of ear protective devices and would create an adversarial atmosphere in regard to the hearing conservation program (46 FR 4153).

OSHA found that the need to ensure voluntary cooperation by employees was also an important reason to require employers to pay for other protections in standards, including medical examinations and medical removal protection (MRP). In promulgating the lead standard, OSHA relied upon extensive evidence that employees' fears of adverse economic consequences from participation in a medical surveillance program could seriously undermine efforts to improve employee health (43 FR 54442–54449 (Nov. 21, 1978)). OSHA cited data from numerous sources to show that employees' concerns about the possible loss of income would make them reluctant to participate meaningfully in any program that could lead to job transfer or removal (Id). OSHA promulgated the lead standard's MRP provision ''[s]pecifically to minimize the adverse impact of this factor on the level and quality of worker participation in the medical surveillance program'' (Id. at 54449).

The record in this rulemaking also supports this position. The ISEA summed up the views of many commenters when it remarked:

> A systematic PPE program, driven by management through the organization, is an important factor in creating a positive safety culture. Employers who provide and pay for PPE recognize that they are not simply incurring a cost for equipment, but rather making an investment by valuing their employees and avoiding the high direct and indirect costs of injury, illness and death (Ex. 12:30).

Finally, OSHA is persuaded by the overwhelming consensus of prominent occupational safety and health organizations that employer payment for PPE will result in safer working conditions. OSHA carefully examined the hundreds of comments to the rulemaking record that weighed in on whether an employer payment requirement would result in safety benefits. In doing so, OSHA identified the independent safety and health organizations that commented in the record. Unlike the majority of commenters, these organizations do not have a financial stake in the outcome of the rulemaking, and they do not stand to gain or lose economically whether employers or employees pay for PPE. Their sole interest in the rulemaking lies in whether or not it will advance the interests of occupational safety and health, and protect employees from workplace injury, illness and death. It is thus appropriate for OSHA to put particular weight on the comments of these organizations.

The National Institute for Occupational Safety and Health (NIOSH) remarked that it has consistently recommended that employers pay for all PPE required for the work setting, and shared OSHA's views that:

- ''[e]mployees may compromise their safety and health by avoiding or delaying the purchase, maintenance, or replacement of PPE if that must be done at the employee's expense'';
- ''when employers do not pay for and provide PPE, it may not be worn or may be worn improperly, and it may not be cared for and replaced appropriately''; and
- ''when employers do not pay for and provide PPE, incorrect or poor quality PPE may be selected and worn by the employee'' (Ex. 12: 130).

The American College of Occupational and Environmental Medicine (ACOEM), representing 7,000 occupational physicians, supported employer payment for PPE, stating that: ''It is important that employers be responsible for ensuring that the personal protective equipment selected for use at their facilities is appropriate and maintained in proper working order. We do not believe that this can be achieved if employers are not directly involved in the purchase and maintenance of that equipment'' (Ex. 12: 248).

The comments of the Mount Sinai Irving J. Selikoff Center for Occupational and Environmental Medicine were based on experience with the 7,000 employees per year they treat for occupationally related disease and illness. They argued that employees cannot know the site-specific safety and health issues before they start employment, which could lead employees to have equipment that is incompatible with the job site; that if employees purchase their own PPE, employer supervision of PPE maintenance becomes more complex, which can lead to less safety; that employees who pay for their own PPE are less likely to bring up exposure concerns [with their employers]; and that employer safety education is more complicated when employees pay for their own PPE. They also argued that:

> Lower income, non-English speaking, and immigrant workers are most likely to be vulnerable to a shift in responsibility of purchase. We know, from advising our patients about PPE, that money is an issue for procurement and appropriate use. The purchase of a pair of prescription safety glasses or shoes can represent a notable burden to workers, whereas it represents operating costs for employers. In an attempt to economize, lower quality equipment is purchased, and equipment is not updated as it should be (Ex. 46: 35).

The American Association of Occupational Health Nurses (AAOHN), representing 12,000 occupational health nurses in a wide variety of industrial sectors supported the rule, noting that allowing employees to choose their own PPE may pose administrative and enforcement problems for employers. AAOHN also reported a situation where a manufacturing facility allowed individual preference and selection for safety eyewear and found that 70 percent of the female employees were using glasses without safety lenses (Ex. 12: 32).

In its 1999 comments, the American Society of Safety Engineers (ASSE), representing about 30,000 safety and health professionals, noted that most employers already pay for PPE during the course of their normal business operations, and that:

> [m]any organizations benefit from the policy of paying for personal protective equipment. The alternative for these organizations could be the use of substandard equipment by employees, inconsistent levels of employee protection, increased numbers of injuries, illnesses and fatalities, and employers having to expend resources on litigation to defend themselves.

ASSE also related several instances where employees were providing their own eye protection, and failed to select eyewear meeting the OSHA standards, resulting in OSHA citations. The employers had mistakenly assumed that the employees were selecting the right equipment (Ex. 12: 110).

In its 2004 comments on tools of the trade, ASSE reaffirmed its 1999 arguments supporting PPE payment by employers and provided a list of quotes from several of their member safety engineers that supplement the views of OSHA's expert panel. Some of those comments are:

- It is just good business to provide [and pay for] equipment so that we control quality and type so that injuries are prevented. I'm sure we save far more in the long run by preventing injuries than we spend on PPE;

- I have found that the PPE purchased by the employee to be old and worn out;
- Employees generally should not be allowed to bring safety equipment on the jobsite * * * this insures that the equipment is in good condition and can be utilized; and
- Where people provide their own tools, let alone PPE, there has been a resistance to keeping current with the best equipment and practices. As an example, I have seen people with sentimental value assigned to their hard hats that no longer meet manufacturers' specifications (Ex. 46: 33).

There are also large numbers of comments from employers who recognize the value of PPE payment, and supported some form of PPE payment requirement (See, *e.g.,* Exs. 12: 2, 4, 6, 9, 10, 12, 21, 58, 101, 105, 113, 117, 134, 149, 184, 190, 210, 218, 230, 247). Of particular interest are the comments of the Voluntary Protection Programs Participants' Association (VPPPA), whose members have all implemented OSHA approved safety and health management systems. More than 1,500 workplaces have successfully completed OSHA's Voluntary Protection Program (VPP) evaluation and audits, and have workplace injury and illness rates that are below the average for their industry. VPPPA, as well as VPP companies that commented on the proposed rule, supported employer payment for PPE (See, *e.g.,* Ex. 12: 113). VPPPA remarked that:

> We commend OSHA for promptly moving forward in clarifying the law regarding employer payment for PPE. The Secretary of Labor v. Union Tank Car decision had little effect on our association's members, who continue to believe that paying for their employees' PPE is the most sound strategy for promoting a safe and healthy workplace. We expect that with promulgation of this rule, more workplaces will reach this conclusion and maximize protection for their employees (Ex. 12: 113).

For these reasons, OSHA rejects the comments of some who argued that the proposed rule would have no direct impact on safety and health (see, *e.g.,* Exs. 12: 14, 17, 22, 29, 31, 36, 41, 47, 55, 65, 73, 82, 90, 91, 120, 121, 140, 172, 194, 216, 225, 241) and that there was no proof of safety and health benefits (see, *e.g.,* Ex. 12: 173, 189). The rulemaking record, examined as a whole, leads OSHA to the opposite conclusion. There are significant safety and health benefits of employer payment for PPE.

Some commenters argued that OSHA's estimate of the quantitative benefits was unreliable because it did not factor in the different types of jobs and PPE involved with the rule. The American Iron and Steel Institute (AISI) found to be problematic the Agency's quantitative estimate of the incidence of PPE non-use or misuse when employees must pay for PPE as compared to employers paying for PPE. AISI argued that the estimate assumes that the training and behavior of employers and employees across all industries is the same, regardless of the nature of the hazard, the level at which employees are compensated, or whether there is a collective bargaining agreement which addresses the purchase of PPE (Ex. 12: 188). OSHA agrees with AISI that different employers and employees have different behaviors regarding PPE. Therefore, the final rule may result in more safety and health benefits (and more costs) for some employers, while it impacts other employers less. However, as described above, the Agency believes that the overall impact of the rule will result in fewer occupational injuries and illnesses because it will improve the use of PPE in the workplace.

Further, OSHA wants to emphasize that the quantitative benefits estimate in the final rule is not based solely on the opinion of one expert. OSHA has estimated the benefits of the final rule based on three different assumptions. Even under the most conservative assumption—that employer payment for PPE will result in a 2.25 percent decrease in the misuse or nonuse of PPE—the final rule will prevent approximately 2,700 injuries per year across all industries affected, a substantial number of injuries avoided. (For a complete discussion of OSHA's benefits analysis, see section XV below.)

Finally, some commenters argued that there was contrary evidence to OSHA's conclusion that employer payment for PPE would result in benefits—namely state injury data in states with employer payment for PPE requirements. Two commenters raised the concept that, if PPE payment was effective at reducing workplace injuries and illnesses, an analysis of individual state occupational injury and illness rates should indicate a lower rate for those states that require PPE payment. They argued that the State of Minnesota, which has had a state law requiring employers to pay for all PPE, has injury and illness rates that are above those for the United States as a whole, and that if PPE reduced workplace injuries and illnesses, Minnesota should show a lower rate (Exs. 12: 173, 189).

OSHA rejects this analysis for three reasons. First, the effect of PPE payment on the injury and illness rates may not be large enough to affect the rates, given that they are only reported at a general level. The Bureau of Labor Statistics (BLS) reported over 4,200,000 workplace injuries and illnesses for 2005, with a rate of 4.6 cases per 100 full-time employees. Using these statistics, it would require a change of over 91,000 injuries and illnesses to move the U.S. rates by one tenth of a point, the most detailed estimate published by the BLS. If the entire estimated benefit of 21,789 averted injuries and illnesses occurred within one year, it would not be sufficient to change the U.S. rate by even one tenth of an injury or illness per 100 full-time employees. Therefore, while the effect of the rule on occupational safety and health is expected to be substantial, it is unlikely to dramatically affect the national statistics. The effect on state-specific statistics is similar, so it is not surprising that a pattern of lower rates is not readily apparent in the states that require PPE payment.

Second, the states that require payment typically do so because the requirement is set forth in their enabling legislation. Because injury rates are not available for this time period it is not possible to perform a meaningful before and after analysis to determine observable effects due to PPE payment. Third, occupational injury and illness rates are affected by a large number of factors, many of which may not yet be identified, and there is considerable uncertainty concerning how they work in combination to affect overall rates. For example, the BLS rates are affected by the mix of industries within a state, weather conditions, large scale events (e.g. natural disasters), technology advances, work-practice customs, workers' compensation insurance programs, workforce characteristics, and economic factors, such as changes in employment and productivity. Of course, OSHA recognizes that its policies also affect those rates, that changes in standards, new enforcement policies, and publicized OSHA enforcement cases have influence over workplace safety and health. Given the complex nature of state-specific injury and illness rates, it is difficult, if not impossible, to discern the effect of PPE payment policies on state-specific rates. Therefore, OSHA does not find the state plan argument to be persuasive. As noted in the benefits section below, the agency considered a wide range of injury reductions when assessing the effects of the standard. The Agency is confident, for all the reasons outlined, that this rulemaking will result in an overall reduction in injury rates and net benefits to society.

For all of the reasons discussed above, and after careful review of all comments, the Agency concludes that the final rule will help reduce the risk

associated with the underlying PPE standards.

1. Significant Risk

Some commenters argued that OSHA must find a significant risk from employers not paying for PPE and find that this rule would substantially reduce that risk (See, *e.g.,* Exs. 12: 173, 188, 189). AISI challenged OSHA's arguments for requiring payment, asserting that the Agency had not clearly identified a significant risk of harm, that the Agency did not establish the ability of the PPE payment standard to reduce the risk, and did not establish that the requirements are cost effective (Ex. 12: 188, pp. 7, 8). UPS made the same arguments, adding that ''OSHA has failed to even identify the existence of a significant risk of material impairment resulting from an employee paying for his own PPE'' (Ex. 12: 189, p. 5).[16] The PMA added that OSHA is required to make a threshold finding:

> [t]hat significant risks are present and can be eliminated or lessened by a change in practices before it can promulgate a standard under 29 U.S.C. 651(b). Specifically, OSHA must determine that significant risks of material impairment are present and can be eliminated or meaningfully lessened by a change in practices or equipment. For a health standard, this requires a significant risk of material impairment of health or functional capacity and a probability of significant benefit from a rule which would guard against such risk (Ex. 12: 173, pp. 13, 14).

These commenters' misunderstand the legal underpinnings of this rule. In promulgating the underlying standards that require PPE, the Agency met its significant risk burden. As explained above, this is an ancillary provision that will help effectuate the use of PPE. And OSHA finds that it has clearly met the test that the proposed revisions to the existing PPE standards are reasonably related to their purpose of preventing injury by requiring the provision and use of adequate personal protective equipment.

If employees are exposed to hazards not addressed by engineering, work practice, or administrative controls, and they are not provided with appropriate PPE, they may be injured, killed, or overexposed to dangerous chemicals, noise, or radiation. The risk is caused by failure of employers to provide their employees with appropriate PPE to guard against the workplace hazard, and the failure of both employers and employees to properly and consistently use appropriate PPE. The PPE payment provisions use payment practices to help reduce that risk.

Employee injuries related to lack of appropriate PPE are common. OSHA has investigated hundreds, if not thousands, of accidents where lack of PPE contributed to workplace injury, overexposure to chemicals, and death. The following summaries from OSHA's publicly available Integrated Management Information System (IMIS) accident investigations database provide just a few examples of the type of accidents where properly worn PPE may have allowed an employee to survive an accident, avoid injury or chemical exposure, or lessen the extent of injuries resulting from an accident.

- In 2000, an employee dipping metal parts into a molten salt mixture was splashed with molten salt, resulting in second degree burns on both his arms and face. The employee was not wearing appropriate PPE to protect his arms, nor a face shield, even though the supervisor working next to him was properly equipped with PPE.
- In 2000, a construction employee was using a hammer to break up tile during a dismantling operation. A piece of the tile flew back and struck his left eye, resulting in permanent blindness.
- In 1999, an employee was working in the pouring area of a foundry without PPE, skimming hot molten metal into a sand mold. The mold broke and splashed molten metal onto the floor, where it ran into his boot. He received third degree burns to half of his foot and was hospitalized.
- In 1999, a warehouse employee was struck on the head by a supporting bar that fell from above, receiving a head laceration that required hospitalization. The employee was not wearing any form of head protection.
- In 1999, an employee building a cinder block wall was making a masonry line with a thread when the thread broke and struck him in the face, resulting in hospitalization to treat the complete loss of one eye and multiple fractures to his nose and face. The employee was not wearing any eye or face protection.
- In 1998, an employee trimming trees was removing tree limbs from the ground, when a limb fell 30 feet and struck him in the head, resulting in his death. The employee was not wearing a hard hat.
- In 1997, an employee was installing television cable from an aerial lift, wearing a baseball cap but not an insulating hard hat. The employee contacted an overhead power line with his head and was electrocuted.
- In 1996, an employee's foot was run over by a cart, resulting in a compound fracture of the foot. He was wearing tennis shoes instead of safety toe shoes.
- In 1996, an employee was transferring a corrosive substance between storage tanks without eye protection. A small splash of the liquid struck him in the face and eyes, resulting in hospitalization.
- In 1995, an employee working for a building maintenance service was cleaning a glass window without fall protection when he fell 70 feet and died.
- In 1995, an employee was using a gas cutting torch to cut the metal shell of a rail tank car without welding PPE. The heat and flame of the torch set his work uniform on fire, resulting in burn injures that required six days of hospital treatment.
- In 1995, a shipyard employee was attaching a 300 pound steel plate to a flange while not wearing protective footwear. The plate fell and struck his feet, resulting in partial amputation of his toes.

Further, OSHA commonly finds PPE problems during its inspections. In 2006 the Agency issued over 13,000 PPE violations, nearly 8,000 of them serious in nature.

Finally, even if OSHA needed to find in this rule that employee payment for PPE is a significant risk and requiring employers to pay for PPE would substantially reduce that risk—which OSHA does not need to demonstrate—OSHA's estimate of injuries avoided meets that test. As set forth in detail in the benefits analysis, a conservative estimate of the beneficial impacts of the rule show that once promulgated, it will prevent approximately 2,700 injuries per year. This is a significant reduction in injuries by any measure and is based on the most conservative assumption with respect to the benefits of the final rule. (The highest estimate of the benefits of the final rule is that it will prevent 21,798 injuries per year.)

One commenter disagreed with OSHA's position taken in the proposal—and in the final rule—that the Agency need not make a significant risk finding for each provision in a standard. The AISI stated that OSHA's position is ''[i]nconsistent with the Constitutional principles under which Congress delegated rule making authority to the agency, and contrary to the requirements of Sections 6(b) and 3(8) of the OSH Act as defined by the United

[16] UPS also argued that the rule must meet the test for a safety standard and therefore, that OSHA must demonstrate a cost-benefit rationale for the rule. UPS misstates the legal test for safety standards. In *UAW* v. *OSHA*, 37 F.3d 665, 668 (D.C. Cir. 1994) (Lockout/Tagout II), OSHA declined to adopt a cost-benefit test for safety standards and the court accepted OSHA's position. Nevertheless, OSHA has analyzed the costs and benefits of the rule. This analysis is contained in Section XV, Final Economic Analysis.

States Supreme Court in the *Benzene* and *Cotton Dust* decisions'' (Ex. 12: 188, p. 10).

AISI's interpretation of the OSH Act's requirements for promulgating standards is incorrect. As the Supreme Court has stated and as discussed above, before promulgating a standard, OSHA must demonstrate that significant risk exists and that the standard will substantially reduce that risk. This requirement applies to the standard as a whole. OSHA is not required to make a provision-by-provision significant risk finding, which would be an impossible burden to meet. There are sometimes over a hundred different provisions in OSHA standards that operate together to reduce the significant risk faced by employees at the worksite. These provisions include exposure monitoring, medical surveillance, respiratory protection, protective clothing, training, hazard communication, information sharing, and so on. OSHA has never in the past, nor is it required to, make a significant risk finding for each of these provisions. In fact, this issue was squarely addressed in the review of OSHA's hearing conservation standard, where the Fourth Circuit stated that the appropriate test was whether the individual requirements of the standard were reasonably related to the purposes of the enabling legislation (*Noise,* 773 F.2d at 1447).

2. Cost Effectiveness

OSHA concludes that the final standard is also cost effective. A standard is cost effective if the protective measures it requires are the least costly of the available alternatives that achieve the same level of protection (*Cotton Dust,* 452 U.S. at 514 n.32). Cost effectiveness is one of the criteria that all OSHA standards must meet. The OSH Act does not support a requirement that imposes greater costs than available alternatives without any safety benefit. For employer payment to be more cost-effective, it must provide the same or better level of safety at a lower cost than permitting employers and employees to determine who pays for PPE. After carefully reviewing the rulemaking record, OSHA has concluded that this final rule is the most cost-effective of the available alternatives.

OSHA considered the effect on safety of permitting employees to pay for PPE in comparison to imposing an employer payment requirement, with limited exceptions. (OSHA considered four specific alternatives to the final rule, which are discussed in more detail in the Alternatives Section above.) While there are many reasons why employer payment for PPE will increase safety and OSHA finds these reasons compelling, some commenters suggested reasons why employee payment may have some safety advantages in certain circumstances.

A few commenters argued that safety would be enhanced when employees pay for PPE because they would be able to select PPE that is comfortable for them and they would take better care of its condition (see, *e.g.,* Exs. 12: 31, 48, 68, 140, 165, 203; 45: 5, 6; 46: 4, 17, 32, 42). For example, a representative of HBC Barge stated in a written comment that: ''By having the employee pay for PPE that is classified as 'tools of the trade' the effect on workplace safety and health can only be positive. Ownership of equipment on the average will bring a pride in maintaining their equipment in proper working order'' (Ex. 46: 4). A representative of the National Rural Electric Cooperative Association commented that:

> If employees pay for their own tools-of-the-trade PPE there is a greater likelihood of accurate fitting to the individual and a greater likelihood that individual preferences will be met. As a result, employees are more likely to wear PPE that they provide themselves. The more that workers wear appropriate PPE, the safer is the workplace (Ex. 46: 42).

The National Electrical Contractors Association (NECA) stated that employees who work on construction sites were in the best position to provide certain personal protective equipment and tools, and suggested that safety could be compromised in some situations where employers provide the equipment to be shared by employees:

> Certain Lineman's tools have long been considered 'tools of the trade.' Lineman's belts must be measured and sized to fit the individual employee. Exchanging such belts with other employees would cause belts to have wider or smaller loops, which could lead to dropped tools. For fall protection, Lineman's hook gaffs are sharpened to the 'taste' of the lineman, hooks are individually adjusted to the lineman's calf length and preference, and hook pads are broken in to fit the individual for fatigue and stress reduction. Constantly transferring hooks, belts, and safeties would cause a disconcerting concern for linemen (Ex. 12: 16).

NECA also commented that flame-resistant clothing is best purchased by the employee, in part because the employee can better ensure daily care, proper fit, and adequate laundering of the clothing, which ''[i]s vital to the longevity of the clothing and health of employees * * * '' (Ex. 12: 16).

These and other commenters stated that employees who regularly carry the same PPE from job to job may have greater familiarity with their PPE than employees who are provided new PPE each time they work for a new employer. This consistency may also assure employees that the PPE they will be using is best fitted and suited to their own needs. Given this, these commenters suggest that it may be more cost-effective for employees in some industries with high turnover rates to supply basic PPE such as hardhats, safety glasses, and gloves that can be carried easily from establishment to establishment.

OSHA does not agree with commenters that employee payment will result in greater safety benefits than the final rule. As discussed in detail above, OSHA finds that the final rule will result in significant benefits for employees and will reduce the risk underlying the existing PPE standards. Employers are in the best position to know and address the hazards in their workplaces, and payment for PPE will provide an incentive to better understand those hazards and take appropriate measures to ensure PPE is used by their employees. The rulemaking record strongly supports OSHA's finding of safety benefits from the final rule.

The commenters who suggested greater safety benefits under an employee payment scenario seem to base their suggestion on the fact that since PPE is ''personal,'' if employees select and purchase it, it will be more suited to their tastes and they will wear it more often. While it is true that PPE is more effective when it is suited to the size and fit of the employee, OSHA does not believe that this is relevant to the question of whether employers or employees should pay for the PPE. The employer is responsible under existing OSHA standards to ensure that the right PPE is used in the workplace and that it fits the employee; OSHA has found, on the basis of this rulemaking record, that an employer payment requirement will help ensure that employers carry out this responsibility. OSHA does not believe that having employees pay for the PPE will result in improved employee use of the equipment.

In addition, OSHA has crafted the final rule in a cost effective manner. It recognizes the safety benefits of employer payment for most types of PPE, but exempts certain PPE from the general payment requirement. Much of the exempted PPE can be used off of the job and is the kind of PPE that employees may take with them from job to job or employer to employer. The final rule also specifically recognizes that OSHA standards allow for

employees to bring on the worksite and use PPE that they already own. Thus, the final rule addresses much of the cost-effectiveness concerns raised by commenters for certain PPE in high-turnover industries.

OSHA also believes that employer payment for PPE will result in PPE purchases that are on the whole less costly than if employees paid for the PPE. Employers can frequently utilize bulk purchase discounts, which means that the same amount of PPE will be provided at a lower cost, or more PPE will be provided for the same cost. Requiring individual employees to purchase individual pieces of equipment is not an efficient way to provide this critical protection.

Finally, according to OSHA's survey data, the vast majority of employers, found in all industries, are already paying for all of their employees' PPE. OSHA does not believe this would be the case if employer payment was not cost effective. This demonstrates that most employers have made a business decision that paying for PPE is a cost effective method of providing protection for their employees.

XV. Final Economic and Regulatory Flexibility Analysis

A. Introduction

OSHA has prepared this Final Economic Analysis to examine the feasibility of the rule on Employer Payment for Personal Protective Equipment and to meet the requirements of Executive Order 12866 and the Regulatory Flexibility Act (as amended). The rule will clarify that, with certain exceptions, employers are required to pay for protective equipment, including personal protective equipment (PPE), whenever OSHA standards mandate that employers provide such equipment to their employees. The employer is not required to pay for non-specialty safety-toe protective footwear (including steel-toe shoes or steel-toe boots) and non-specialty prescription safety eyewear, provided that the employer permits such items to be worn off the job-site. The employer is also not required to pay for the logging boots required by 29 CFR 1910.266(d)(1)(v); everyday clothing, such as long-sleeve shirts, long pants, street shoes, and normal work boots; or ordinary clothing, skin creams, or other items, used solely for protection from weather, such as winter coats, jackets, gloves, parkas, rubber boots, hats, raincoats, ordinary sunglasses, and sunscreen.

OSHA's requirements for PPE appear in many health, safety, shipyard employment, marine terminal, longshoring (referred to as maritime standards), and construction standards. In some cases, the standard is explicit in stating that employers are to provide the PPE at no cost to the employee (see, for example, OSHA's substance-specific health standards, which are codified in Subpart Z of 29 CFR 1910.1000). In other cases, however, such as in paragraph (a) of 29 CFR 1910.132 and paragraph (a) of 29 CFR 1926.28, who is required to pay for the PPE is not expressly specified. (For a complete list of OSHA's PPE requirements, see the Summary and Explanation section, above.)

This rule will apply to general industry, construction, and maritime workplaces covered by the PPE provisions in existing OSHA standards. The rule will clarify OSHA's position that, with the exceptions noted, employers must provide required PPE to their employees at no cost to those employees. The kinds of PPE addressed by this rule include nonprescription eye and face protection; hard hats; metatarsal protection; gloves and protective clothing; fall protection and welding equipment; and hearing protection. (A more detailed list of the kinds of PPE covered appears in the Summary and Explanation section, above.)

B. Need for the Rule and Market Failure

The justification for imposing appropriate occupational safety and health standards generally, and for adopting this change to the PPE standards in particular, is that without these requirements, fatality and injury risks to employees would remain unacceptably high. OSHA has determined that this rule meets the standards for regulation established by Congress through the passage of the Occupational Safety and Health Act. In addition, risks would be too high in terms of imposing large net costs (both pecuniary and non-pecuniary) on society, producing an inefficient allocation of resources, and reducing overall social welfare.

OSHA has found that in this case, market incentives alone are unable to allocate sufficient resources to provide for social welfare enhancing improvements in safety and health. By itself, however, the existence of constraints which prevent optimal efficiency would not necessarily justify regulatory intervention because regulations themselves may introduce costs, rigidities, and distortions. However, in this case the negative consequences of not regulating are outweighed by the net benefits of regulation. The sources of market failure could include the existence of externalities, the high cost of or lack of necessary information, including large uncertainties that are costly to remedy.

Measures for improving occupational safety and health involve significant externalities. The consequences of an injury or fatality usually extend beyond the affected employee and employer. A substantial part of the emotional and financial costs associated with an injury or fatality is often borne by third parties that are not compensated for their costs, including other workers, families and friends. Thus, a substantial part of the benefits associated with improvements in safety and health is externalized. As a result, even a mutually agreeable arrangement between employers and employees could represent a socially undesirable outcome.

A second market failure concerns the cost of and lack of necessary and sufficient information. The risks of injuries or fatalities specific to a particular job at a particular firm for a future time period are difficult to know or predict. The compilation of more detailed and current information on employer- and job-specific risks could provide improvement, but at immense cost, difficulty, and controversy. For example, such risk estimates would have to take into account the presence or absence of any number of combinations of controls or procedures in the context of innumerable different circumstances. Without adequate information regarding occupational risks and how they may be affected by innumerable diverse factors, employer and employee negotiations regarding pay and working conditions may not adequately reflect the nature of such risks. Typically, the employee will be at a disadvantage in assessing and controlling these risks, especially with regard to employer- and worksite-specific considerations; in addition, employers are not always fully aware of the nature of risks, the full costs associated with an injury incident, the extent to which they can be reduced, and the methods and resources that can achieve reductions in risk.

A third source of market failure involves the high costs and uncertainties associated with attempts at restitution. The costly nature of the legal system, together with the uncertainties associated with the outcome of cases, limits the prospect for tort liability to create the proper incentives. Problems with tort liability laws have been recognized for decades and were partially addressed through the establishment of no-fault workers' compensation programs in every state.

However, even the workers' compensation systems do not adequately correct the market failures because insurance rates are frequently not employer-specific, coverage and compensation are only partial, and the outcome still leaves injury and fatality rates above levels achievable through cost-effective regulatory requirements.

This rule is a response to these market failures. When it promulgated the OSH Act, Congress noted the failure of the market to prevent a significant number of occupational injuries and fatalities. Congress concluded that promulgation of the OSH Act was necessary to create a safe and healthful working environment. As stated by Senator Cranston:

> [T]he vitality of the Nation's economy will be enhanced by the greater productivity realized through saved lives and useful years of labor. When one man is injured or disabled by an industrial accident or disease, it is he and his family who suffer the most immediate and personal loss. However, that tragic loss also affects each of us. As a result of occupational accidents and disease, over $1.5 billion in wages is lost each year (1970 dollars), and the annual loss to the gross national product is estimated to be over $8 billion. Vast resources that could be available for productive use are siphoned off to pay workmen's compensation and medical expenses * * *. Only through a comprehensive approach can we hope to effect a significant reduction in these job death and casualty figures (Id. at 518–19).

As explained in detail above, Congress established that employers should bear the cost of creating a safe and healthful workplace, and thus directed them to comply with health and safety standards promulgated by OSHA. This rule is consistent with the OSH Act to the extent this rule simply clarifies Congress's determinations that employers must bear the cost of compliance with OSHA standards.

OSHA has also determined that the rule is necessary to further reduce the significant risk associated with OSHA's standards requiring the use of PPE. It has become clear that employees frequently fail to perceive the risk of having worn out PPE. Furthermore, the workers' compensation system, aside from raising the cost of restitution, has introduced distortions into the market. Workers' compensation premiums are frequently not experience-rated; many employers are thus given limited incentive to reduce injuries—they end up paying the same amount into the system regardless of the level of safety at the workplace.

In most OSHA rulemakings, the cost of providing safety falls squarely on the shoulders of the employer, although in efficient markets, the cost of rulemaking may be passed on, to an extent, to other market participants such as employees and consumers. Regardless, our research has shown that often employers pay for PPE. However, OSHA has also found in this analysis that requiring all employers to pay for all PPE, with few exceptions, leads to a better regulatory outcome. For example, with workers' compensation benefits paid to the employee remaining fixed under state law, the employee's incentive to acquire proper PPE or replace it in a timely manner may be less than the total costs associated with a possible accident as a result of the assurances provided by the workers' compensation system. The risky and tragic results of this market distortion are written about extensively in the Legal Authority section of the preamble. One way to correct this is to require that employers pay for PPE.

The PPE payment rule will improve efficiency and social welfare by producing net benefits in conjunction with correcting the deleterious outcomes resulting from the market failures associated with the protection of occupational safety and health.

C. Nonregulatory Alternatives

Market failures in general can often be addressed through approaches other than regulation, and OSHA considered the potential for such approaches for the market failures in the market for occupational safety and health. For example, additional and more readily available information regarding occupational risks and practical solutions relevant for particular workplaces could help raise awareness. Efforts to provide direct assistance for reducing risks could be expanded.

As a practical matter, however, frequently regulation is required to facilitate the transmission of information. As outlined in the Legal Authority section, one goal of the rule is to clarify the responsibility for providing PPE. In the absence of clear lines of responsibility stretching back to the employer, there is often a failure to provide the information. On another level, the failure of the employer to pay for the PPE is interpreted by the employee as a sign the employer is not serious about the importance of safety and health.

OSHA intends to continue to strive to address occupational hazards through these alternatives to regulation where appropriate. However, due to the nature of the market failures as described above, these measures by themselves would not sufficiently reduce risks. As outlined in the Legal Authority section, not only is there a significant risk existing to employees from the lack of adequate PPE, but the OSH Act implicitly requires employers to pay for it. OSHA concludes that for the hazards requiring PPE, a mandatory standard clearly setting forth an employer's obligation to pay for PPE is necessary, just as it is for engineering and work practice controls.

D. Industry Profile

The rule is concerned only with who pays for OSHA-required PPE; that is, it will not require employers to provide PPE where none has been required before. Instead, the rule merely stipulates that required PPE be paid for by the employer. If all employers are in full compliance with requirements that PPE be provided, then PPE is already being paid for by either the employer or the employee, and the rule will shift the cost of that portion of the PPE currently being paid for by the employee to the employer. (See the Legal Authority section of the preamble, above, for details of OSHA's interpretation of this issue.) Such a shift in who pays the costs will represent a transfer within the economy and not a net cost to the economy. However, to the extent that a change in payment results in more or better PPE being used, then this rule will lead to costs and benefits to the economy. OSHA believes that this rule will result in improved PPE use and, thus, will lead to both social costs and benefits. This issue is discussed in more detail below.

To determine the extent of current PPE usage, the potential magnitude of any shift in costs, and possible social costs, OSHA has developed a profile of industry PPE use and payment patterns.[17] Most employers are already paying for the PPE they provide to their employees to comply with OSHA standards. The most recent study of collective bargaining agreements showed that 55 percent of contracts mentioning safety equipment stipulate that employers are to pay for PPE, while only 11 percent of such agreements require the employee to pay for any PPE[18] (BNA, 1995). Employers currently pay for PPE for a variety of reasons: Because of labor-management agreements; for workers' compensation purposes; because if employers pay for the PPE, they know what kinds of PPE their employees are using and they can

[17] This rulemaking primarily affects non-State Plan States, as the majority of employees in State Plan States are already covered by requirements equal to or greater than this final rule. Approximately 59 percent of U.S. private sector workers work in states not covered by OSHA State Plans for the private sector [BLS, 2004], and are thus affected by this rule.

[18] This figure includes payment for all types of safety shoes.

ensure that it is replaced when needed; and because they can require standardized procedures for cleaning, storing, and maintaining it. Employers can control what PPE is used and how it is used, and thus can have greater assurance that they are in fact in compliance with OSHA's standards, and can ensure they will minimize any liabilities associated with accidents preventable by proper PPE use. Other reasons why employers prefer to pay for PPE, according to the expert panel convened by OSHA to obtain information on PPE patterns of use and payment for the proposed rule, are:

- The employer has experience with injuries that could have been prevented by PPE use;
- The employer has received input from his/her insurance carrier;
- The employer is concerned about the likelihood of an OSHA inspection (Ex. 1).

E. Data on PPE Usage Patterns

The data relied on to develop this industry profile come from a large-scale nationwide telephone survey of 3,722 employers conducted for OSHA by Eastern Research Group (ERG) in 1999 (Ex. 14). The survey collected information on the extent to which employers currently pay for their employees' PPE in the general industry, construction, and maritime sectors. Three basic types of information were collected about eight categories of PPE: (1) Is the PPE used at the respondent's establishment?; (2) How many employees use the PPE?; and (3) Who pays for the PPE? The survey report describes the sample design, disposition, and weighting of the responses. This survey constitutes the best available evidence regarding PPE usage patterns.

OSHA did not rely on this survey in formulating its industry profile for the proposed rule because the survey was completed after the proposed rule was published. However, OSHA made the survey available in its public docket when it was completed in June 1999, and provided the public an opportunity to comment on its design and methodology (64 FR 33810). Some stakeholders commented on the survey and OSHA has carefully considered those comments. OSHA also thoroughly reviewed the results and the methodology of the survey in preparing this final rule and made some adjustments to it.

In particular, OSHA made two adjustments to the results of the survey to better reflect PPE usage patterns. First, the Agency realized that retaining the weights for numbers of employees assigned from the original Dun's database identifiers was resulting in misleading information in some cases. OSHA has therefore reweighted the survey responses for numbers of employees based on actual information from the survey (ERG, 2007). Second, in order to benchmark the data to recent Census figures, ERG converted the original Standard Industrial Classification (SIC)-based results to a North American Industrial Classification System (NAICS)-based industry profile. In most industries, the two-digit SICs mapped directly into their three-digit NAICS counterpart. Some industries (*e.g.,* maritime) mapped directly at a greater level of detail. In other industries, it was necessary to consolidate a few two-digit SICs into a single three-digit NAICS code.[19]

Table XV–1 shows OSHA's estimate, based on the survey, of the extent of PPE use in the non-State Plan State workplaces covered by the rule. A total of 24.9 million employees are estimated to wear one or more kinds of PPE in workplaces within OSHA non-State Plan States. Non-prescription safety glasses are worn by approximately 11.3 million employees, while 9.2 million employees wear gloves for abrasion protection, 6.5 million wear safety goggles, 5.8 million wear gloves for chemical protection, and 5.7 million wear hardhats. Industries with the largest number of PPE-wearing employees include administrative and support services (NAICS 561), with 1.9 million such employees; specialty trade contractors (NAICS 238), with 1.8 million such employees; and professional, scientific and technical services (NAICS 541), with 1.7 million employees. There are also four other industries with more than one million PPE-wearing employees each: wholesale merchants—durable goods (NAICS 423), ambulatory health care services (NAICS 621), hospitals (NAICS 622), and food services and drinking places (NAICS 722). In many cases, much of the PPE needed is concentrated in particular items, such as gloves.

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[19] For example, SICs 75 (Auto Repair) and 76 (Miscellaneous Repair Services) were consolidated into NAICS 811, Repair and Maintenance.

Table XV-1A

PPE Use Profile - Non State Plan States

NAICS	Industry	Total Establishments - Non State Plan States	Establishments with PPE - Non State Plan States	Total Number of Employees	Employees using PPE (any type) [a]	Number of Employees Using Personal Protective Equipment: Non-Prescription Safety Glasses	Safety Goggles	Chemical Splash Goggles	Face Shields	Hard Hats	Metatarsal Protection	Chemical Protective Footwear
113	Forestry and Logging	6,413	5,868	38,900	32,743	26,261	9,257	4,283	1,750	13,716	4,468	775
211	Oil and Gas Extraction	6,286	4,054	69,039	50,036	28,202	13,526	9,763	7,163	31,978	2,766	6,538
221	Utilities	10,840	6,602	402,740	163,495	98,004	56,851	28,682	15,786	108,326	23,861	9,498
236	Construction of Buildings	106,437	91,962	875,585	679,563	407,649	372,859	199,075	43,029	536,870	42,212	53,779
237	Heavy and Civil Engineering Construction	25,477	23,388	543,974	431,421	289,948	228,037	119,584	113,122	380,524	54,859	6,502
238	Specialty Trade Contractors	229,061	211,881	2,277,779	1,841,388	1,223,427	884,056	438,219	205,131	1,416,431	127,961	89,991
311	Food Manufacturing	12,554	10,206	886,609	501,827	356,018	186,055	40,548	22,955	70,424	25,689	8,172
312	Beverage and Tobacco Product Manufacturing	1,171	975	76,090	43,067	33,020	21,004	4,511	2,330	5,286	2,006	820
313	Textile Mills	1,312	1,076	95,130	53,844	40,819	22,549	4,806	2,649	6,862	2,617	804
314	Textile Product Mills	3,447	2,827	106,847	60,476	45,847	25,326	5,398	2,975	7,707	2,939	903
315	Apparel Manufacturing	3,044	2,426	127,809	72,341	52,668	28,178	6,876	3,368	9,544	3,647	1,443
316	Leather and Allied Product Manufacturing	706	565	29,458	16,673	11,536	5,741	1,305	724	2,452	883	280
321	Wood Product Manufacturing	8,513	6,657	280,928	159,007	112,467	63,680	18,860	7,405	20,569	8,080	4,887
322	Paper Manufacturing	2,699	2,275	290,958	174,283	126,956	65,800	20,722	28,585	54,512	10,382	15,026
323	Printing and Related Support Activities	17,018	13,325	406,489	230,076	156,313	85,643	23,865	10,339	32,178	12,028	6,475
324	Petroleum and Coal Products Manufacturing	1,354	991	73,738	49,458	37,092	19,933	10,697	16,809	29,244	4,013	11,234
325	Chemical Manufacturing	6,824	5,227	516,469	346,408	263,221	142,480	75,640	121,977	211,641	28,336	80,536
326	Plastics and Rubber Products Manufacturing	7,365	6,047	508,788	287,978	210,908	107,935	23,556	13,197	38,932	14,603	4,175
327	Nonmetallic Mineral Product Manufacturing	8,747	8,747	279,006	233,306	168,755	52,155	48,270	18,360	126,769	82,451	4,315
331	Primary Metal Manufacturing	2,833	2,833	268,857	224,820	158,789	44,170	37,159	17,157	111,401	83,941	4,612
332	Fabricated Metal Product Manufacturing	29,510	27,474	922,242	531,202	435,533	80,555	82,577	12,310	17,280	16,437	2,237
333	Machinery Manufacturing	13,453	12,377	656,137	377,928	299,952	54,952	54,185	7,544	13,188	12,964	1,789
334	Computer and Electronic Product Manufacturing	12,524	5,836	554,700	319,501	244,583	32,780	33,501	5,901	9,522	11,064	1,548
335	Electrical Equipment, Appliance, and Component Manufacturing	3,040	2,845	273,444	157,501	120,829	15,849	16,423	2,942	4,577	5,391	750
336	Transportation Equipment Manufacturing, Except Shipbuilding	6,356	5,968	836,015	489,094	363,644	43,558	40,970	9,973	14,914	17,929	2,830
336611	Ship Building and Repairing	334	334	52,456	39,851	36,157	7,387	8,171	2,180	37,015	7,537	253
337	Furniture and Related Product Manufacturing	9,835	7,838	272,552	154,266	115,460	64,812	15,668	7,530	19,468	7,554	3,117
339	Miscellaneous Manufacturing	28,842	13,267	416,899	240,130	189,121	33,891	32,829	4,773	8,476	8,327	1,175
423	Merchant Wholesalers, Durable Goods	120,222	68,286	1,960,281	1,048,486	438,679	200,609	240,329	98,101	305,607	71,158	64,476
424	Merchant Wholesalers, Nondurable Goods	60,488	34,720	1,419,695	759,345	331,603	130,282	169,349	71,849	206,906	50,444	50,327
441	Motor Vehicle and Parts Dealers	66,173	52,674	1,139,898	559,236	286,542	162,699	107,956	44,093	58,158	13,791	14,327
442	Furniture and Home Furnishings Stores	31,554	14,136	337,149	100,651	18,002	22,059	5,128	831	8,236	64	1,561
443	Electronics and Appliance Stores	23,498	10,527	256,737	76,645	13,708	16,798	3,905	633	6,272	48	1,189
444	Building Material and Garden Equipment and Supplies Dealers	43,865	20,529	714,172	213,205	37,251	37,885	10,898	2,388	18,536	199	3,018
445	Food and Beverage Stores	69,458	33,896	1,752,844	523,284	87,311	68,014	26,385	7,493	47,662	665	6,483
446	Health and Personal Care Stores	41,191	18,454	652,560	194,812	34,560	41,582	9,945	1,574	15,915	120	3,014
447	Gasoline Stations	62,961	50,117	549,719	269,693	138,186	78,462	52,062	21,264	28,047	6,651	6,909
448	Clothing and Clothing Accessories Stores	70,868	31,891	934,102	278,862	50,354	61,439	14,519	2,186	23,058	164	4,441
451	Sporting Goods, Hobby, Book, and Music Stores	29,097	13,035	353,592	105,559	18,727	22,531	5,389	853	8,623	65	1,633
452	General Merchandise Stores	23,529	13,294	1,549,261	462,508	73,151	42,379	22,466	7,675	42,698	700	4,941
453	Miscellaneous Store Retailers	62,142	27,840	472,909	141,180	25,046	30,134	7,207	1,141	11,533	87	2,184
454	Nonstore Retailers	24,523	10,986	327,217	97,686	17,330	20,851	4,987	789	7,980	60	1,511
481	Air Transportation	2,823	1,680	297,133	118,853	36,339	31,773	17,656	7,540	13,060	10,264	4,429
482	Rail Transportation	NA	NA	182,182	23,161	17,108	14,890	10,588	6,083	11,264	5,629	4,960
483	Water Transportation	1,019	570	49,022	19,609	5,035	5,476	2,704	788	4,830	2,909	502
484	Truck Transportation	60,431	34,083	846,906	338,762	82,608	88,324	42,346	12,858	73,305	49,119	7,874
485	Transit and Ground Passenger Transportation	7,405	4,354	271,870	108,748	22,702	22,899	11,148	3,208	23,386	17,558	1,950
486	Pipeline Transportation	1,862	1,117	32,255	13,094	6,882	5,437	2,475	1,341	8,645	1,193	878
487	Scenic and Sightseeing Transportation	1,134	667	8,811	3,525	736	742	361	104	758	569	63

Table XV-1A

PPE Use Profile - Non State Plan States

NAICS	Industry	Total Establistments - Non State Plan States	Establishments with PPE - Non State Plan States	Total Number of Employees	Employees using PPE (any type) [a]	Number of Employees Using Personal Protective Equipment						
						Non-Prescription Safety Glasses	Safety Goggles	Chemical Splash Goggles	Face Shields	Hard Hats	Metatarsal Protection	Chemical Protective Footwear
488	Support Activities for Transportation, Except Longshoring	17,209	9,482	287,429	114,971	27,327	36,809	15,713	2,856	37,282	19,821	1,971
488320	Marine Cargo Handling (Longshoring)	304	255	29,182	23,082	19,257	13,390	7,962	2,838	22,624	535	8,433
491	Postal Service	NA	NA	796,199	163,630	126,668	106,017	77,765	48,896	74,195	37,390	39,458
492	Couriers and Messengers	6,626	3,737	341,952	136,780	33,354	35,662	17,098	5,192	29,598	19,833	3,179
493	Warehousing and Storage	6,465	3,646	334,770	133,908	32,654	34,913	16,739	5,083	28,976	19,416	3,112
511	Publishing Industries (except Internet)	14,617	11,445	606,838	343,475	233,357	127,854	35,628	15,435	48,037	17,956	9,666
515	Broadcasting (except Internet)	5,133	3,111	180,355	73,216	40,771	25,796	12,323	6,955	47,187	9,524	4,138
517	Telecommunications	25,019	15,162	851,856	345,816	192,572	121,841	58,206	32,850	222,873	44,982	19,545
541	Professional, Scientific, and Technical Services	382,430	136,528	4,266,085	1,745,844	419,799	254,920	125,159	222,827	362,621	112,951	33,023
561	Administrative and Support Services	162,938	93,344	5,221,213	1,912,340	469,751	299,794	115,495	50,916	139,747	31,783	14,931
562	Waste Management and Remediation Services	9,498	5,784	200,540	81,411	48,800	28,308	14,282	7,861	53,940	11,881	4,729
621	Ambulatory Health Care Services	241,989	184,880	3,280,819	1,503,287	640,546	422,653	318,243	209,280	43,042	675	3,320
622	Hospitals	4,087	3,122	3,358,307	1,538,792	655,675	432,635	325,760	214,222	44,058	690	3,399
623	Nursing and Residential Care Facilities	32,186	24,590	1,842,428	844,209	359,715	237,351	178,718	117,526	24,171	379	1,865
721	Accommodation	30,063	14,190	951,703	299,353	54,588	42,582	15,676	6,983	11,598	2,861	2,329
722	Food Services and Drinking Places	252,027	130,046	5,188,460	1,548,935	260,590	224,520	77,145	20,426	137,039	1,770	19,771
811	Repair and Maintenance	225,650	88,737	758,887	372,312	212,992	119,362	78,954	31,598	51,921	10,285	10,468
812	Personal and Laundry Services	99,253	45,160	809,579	254,649	74,296	42,508	24,439	8,714	14,877	1,345	2,437
	Total	2,885,732	1,699,945	55,554,552	24,854,597	11,297,750	6,481,200	3,689,247	2,011,216	5,658,075	1,200,478	696,905

[a] Figure is an estimate of the total number of PPE users in affected establishments, not the total number of PPE items in use. Figures will therefore not necessarily sum across.

Source: OSHA Office of Regulatory Analysis, based on 1999 Nationwide PPE Survey.

Table XV-1B

PPE Use Profile - Non State Plan States

NAICS	Industry	Number of Employees Using Personal Protective Equipment								
		Gloves for Abrasion Protection	Gloves for Chemical Protection	Splash Aprons	Chemical Protective Clothing	Fall Protection	Welding Helmets	Welding Goggles	Welding Protective Clothing	Hearing Protection
113	Forestry and Logging	14,258	5,519	1,471	943	6,253	1,051	621	80	NA
211	Oil and Gas Extraction	21,474	9,964	7,644	4,217	16,155	1,620	1,472	67	NA
221	Utilities	76,385	29,253	17,157	16,686	68,935	6,030	5,396	2,239	NA
236	Construction of Buildings	406,920	57,397	15,143	21,164	336,305	47,060	33,489	4,248	533,624
237	Heavy and Civil Engineering Construction	254,299	105,982	37,484	83,232	148,091	66,623	38,440	10,055	305,524
238	Specialty Trade Contractors	1,090,199	334,446	41,486	146,771	751,610	155,638	137,778	55,400	999,068
311	Food Manufacturing	188,727	150,779	73,262	20,630	35,081	22,046	15,824	5,335	NA
312	Beverage and Tobacco Product Manufacturing	18,584	17,719	9,053	3,325	4,389	2,164	1,487	526	NA
313	Textile Mills	20,703	19,327	8,822	2,257	4,181	2,451	1,682	621	NA
314	Textile Product Mills	23,253	21,707	9,908	2,536	4,696	2,753	1,889	698	NA
315	Apparel Manufacturing	27,637	23,875	10,046	2,540	5,307	3,455	2,365	1,052	NA
316	Leather and Allied Product Manufacturing	6,037	4,658	2,138	533	1,043	719	518	185	NA
321	Wood Product Manufacturing	65,259	53,720	20,359	6,613	13,331	8,825	5,913	3,335	NA
322	Paper Manufacturing	69,846	58,651	27,302	17,670	23,285	9,237	7,113	2,624	NA
323	Printing and Related Support Activities	92,672	68,837	29,693	10,467	17,924	11,940	8,368	3,959	NA
324	Petroleum and Coal Products Manufacturing	25,577	21,214	11,426	11,107	12,976	3,776	3,007	1,157	NA
325	Chemical Manufacturing	183,289	150,754	82,468	78,421	94,075	26,725	21,925	8,246	NA
326	Plastics and Rubber Products Manufacturing	104,655	91,421	40,087	8,488	18,930	12,514	8,710	3,251	NA
327	Nonmetallic Mineral Product Manufacturing	136,067	20,237	6,574	7,799	23,679	19,411	14,279	2,730	NA
331	Primary Metal Manufacturing	121,083	14,217	6,304	8,339	23,493	15,728	12,426	2,193	NA
332	Fabricated Metal Product Manufacturing	182,146	82,053	66,331	50,401	21,217	56,398	14,327	3,144	NA
333	Machinery Manufacturing	125,241	55,664	40,546	31,063	16,313	39,348	10,645	2,181	NA
334	Computer and Electronic Product Manufacturing	90,248	44,387	30,481	25,081	12,581	24,787	6,021	1,434	NA
335	Electrical Equipment, Appliance, and Component Manufacturing	44,255	21,914	15,280	12,589	6,104	12,056	2,857	693	NA
336	Transportation Equipment Manufacturing, Except Shipbuilding	123,272	71,661	38,968	40,079	19,659	31,757	8,906	2,091	NA
336611	Ship Building and Repairing	27,277	6,926	2,062	2,725	19,940	9,299	16,648	27,811	NA
337	Furniture and Related Product Manufacturing	60,847	55,797	23,678	6,409	12,568	7,604	5,123	2,352	NA
339	Miscellaneous Manufacturing	77,920	35,135	24,904	19,297	10,331	23,879	6,562	1,388	NA
423	Merchant Wholesalers, Durable Goods	399,872	121,876	28,035	66,530	228,733	87,832	42,998	36,806	NA
424	Merchant Wholesalers, Nondurable Goods	294,662	90,367	21,224	48,891	143,617	65,798	33,773	29,382	NA
441	Motor Vehicle and Parts Dealers	238,699	239,924	73,104	14,329	42,674	79,555	58,270	9,415	NA
442	Furniture and Home Furnishings Stores	42,970	24,953	7,905	596	14,768	222	1,603	665	NA
443	Electronics and Appliance Stores	32,721	19,002	6,020	454	11,245	169	1,221	507	NA
444	Building Material and Garden Equipment and Supplies Dealers	91,324	49,148	15,376	1,408	24,988	623	3,497	964	NA
445	Food and Beverage Stores	219,446	111,261	34,914	5,060	44,259	1,947	8,725	1,240	NA
446	Health and Personal Care Stores	81,479	48,733	15,887	1,618	27,840	429	3,113	1,246	NA
447	Gasoline Stations	115,113	115,704	35,254	6,910	20,579	38,366	28,101	4,540	NA

Table XV-1B

PPE Use Profile - Non State Plan States

		Number of Employees Using Personal Protective Equipment								
NAICS	Industry	Gloves for Abrasion Protection	Gloves for Chemical Protection	Splash Aprons	Chemical Protective Clothing	Fall Protection	Welding Helmets	Welding Goggles	Welding Protective Clothing	Hearing Protection
448	Clothing and Clothing Accessories Stores	118,024	70,634	23,089	2,082	41,189	602	4,533	1,850	NA
451	Sporting Goods, Hobby, Book, and Music Stores	44,150	26,406	8,608	877	15,085	232	1,687	675	NA
452	General Merchandise Stores	189,712	90,716	28,012	5,482	26,689	1,967	7,604	308	NA
453	Miscellaneous Store Retailers	59,047	35,317	11,513	1,172	20,176	311	2,256	903	NA
454	Nonstore Retailers	40,856	24,437	7,966	811	13,960	215	1,561	625	NA
481	Air Transportation	46,894	9,621	11,057	11,596	11,370	5,030	4,454	610	NA
482	Rail Transportation	23,161	7,482	6,817	7,262	6,951	2,577	2,180	171	NA
483	Water Transportation	8,421	1,139	1,403	1,285	1,764	1,390	1,186	94	NA
484	Truck Transportation	136,562	18,139	22,338	20,929	28,483	23,619	20,205	1,835	NA
485	Transit and Ground Passenger Transportation	41,946	4,865	5,190	4,586	6,849	7,941	6,595	686	NA
486	Pipeline Transportation	7,070	2,499	1,204	1,289	4,949	533	464	442	NA
487	Scenic and Sightseeing Transportation	1,359	158	168	149	222	257	214	22	NA
488	Support Activities for Transportation, Except Longshoring	51,633	4,720	7,356	5,945	11,365	9,934	8,595	467	NA
488320	Marine Cargo Handling (Longshoring)	10,245	2,283	709	633	4,529	912	751	15	NA
491	Postal Service	163,630	58,350	52,114	57,267	53,119	17,134	14,535	1,186	NA
492	Couriers and Messengers	55,139	7,324	9,019	8,450	11,500	9,536	8,158	741	NA
493	Warehousing and Storage	53,981	7,170	8,830	8,273	11,259	9,336	7,987	725	NA
511	Publishing Industries (except Internet)	138,348	102,765	44,328	15,626	26,758	17,824	12,492	5,910	NA
515	Broadcasting (except Internet)	34,664	12,977	7,124	7,479	29,739	2,623	2,310	1,230	NA
517	Telecommunications	163,728	61,295	33,646	35,327	140,462	12,389	10,912	5,807	NA
541	Professional, Scientific, and Technical Services	441,610	224,833	100,736	50,201	99,059	37,202	37,635	0	NA
561	Administrative and Support Services	273,851	361,196	77,243	12,887	76,805	13,259	15,837	5,208	NA
562	Waste Management and Remediation Services	38,035	14,566	8,543	8,309	34,326	3,003	2,687	1,115	NA
621	Ambulatory Health Care Services	377,623	599,758	432,092	311,343	50,018	2,924	3,607	455	NA
622	Hospitals	386,542	613,923	442,297	318,697	51,200	2,994	3,692	465	NA
623	Nursing and Residential Care Facilities	212,064	336,809	242,652	174,843	28,089	1,642	2,026	255	NA
721	Accommodation	31,064	57,995	11,933	1,041	9,161	1,317	2,448	710	NA
722	Food Services and Drinking Places	656,214	334,314	102,663	12,014	145,227	5,232	25,228	4,618	NA
811	Repair and Maintenance	179,596	175,783	49,415	12,338	35,050	61,137	42,857	7,744	NA
812	Personal and Laundry Services	32,527	78,841	23,453	2,895	14,420	2,042	2,437	1,319	NA
	Total	9,212,112	5,800,496	2,719,315	1,888,269	3,296,929	1,154,956	832,228	280,049	1,838,215

Source: OSHA Office of Regulatory Analysis, based on 1999 Nationwide PPE Survey

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Table XV–2 lists the rate of employer payment for various PPE item categories, as indicated in OSHA's 1999 survey. For nearly all industries, payment rates are very high—in excess of 90 percent. The largest exception to this pattern is marine cargo handling (NAICS 48832), averaging 78 percent for all items covered by this rulemaking. For most PPE items, rates of employer payment are very high—ranging between 96 percent for welding protective gear to almost 99 percent for eye and face protection. The primary exception to this pattern is foot protection (including metatarsal protection and chemical protective footwear, but not safety-toe shoes), for which the employer payment rate (including some sharing) is between 50 percent and 55 percent.[20] For all items except footwear, employers pay an average of 96.5 percent of the cost. For the items covered by this final rule, including metatarsal guards, weighted by the total societal cost (both the employee and employer share) of the various items, employers are currently paying approximately 95 percent of the costs of PPE.

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[20] Most items are either paid for by the employer or employee. However, some establishments, particularly for footwear, have established a variety of shared payment systems. In these systems, employers typically pay approximately 50 percent of the shared cost.

Table XV-2

Estimated Percentage of PPE Cost Currently Borne by Employers

NAICS	Industry	Eye and Face Protection [a]	Head Protection [b]	Foot Protection [c]	Metatarsal Protection	Chemical Protective Footwear	Gloves and Chemical Protection [d]	Fall Protection [e]	Welding Protection[f]	Hearing Protection [g]	All PPE	All PPE Except Footwear
113	Forestry and Logging	100.0%	100.0%	25.6%	6.7%	62 9%	96.9%	100%	100.0%	NA	94.1%	97 8%
211	Oil and Gas Extraction	100.0%	92.4%	73 0%	69 1%	73.5%	89 5%	100%	100.0%	NA	92.8%	94.5%
221	Utilities	100.0%	100 0%	79 9%	85.2%	75 3%	97 9%	100%	100.0%	NA	97.7%	98.6%
236	Construction of Buildings	92.8%	95 4%	25.0%	29.2%	23.9%	82.5%	100%	100.0%	98.9%	91.3%	94.0%
237	Heavy and Civil Engineering Construction	100.0%	99.0%	34 7%	12.9%	98.0%	94 6%	100%	98.8%	99.2%	96.3%	97.5%
238	Specialty Trade Contractors	96.8%	95.2%	32.2%	15.2%	40.5%	88.4%	100%	98 9%	99.7%	93.2%	95 0%
311	Food Manufacturing	100 0%	99.2%	69.4%	45.8%	94.8%	96.5%	100%	100.0%	NA	96.8%	97 5%
312	Beverage and Tobacco Product Manufacturing	100.0%	99.9%	71.5%	48.7%	90.6%	95.8%	100%	100.0%	NA	96.5%	97.0%
313	Textile Mills	100 0%	99.5%	69.5%	47.3%	94.4%	97.1%	100%	100.0%	NA	97.3%	97.9%
314	Textile Product Mills	100 0%	99.5%	69.5%	47.3%	94.4%	97.1%	100%	100.0%	NA	97.3%	97 9%
315	Apparel Manufacturing	100.0%	98.2%	72.4%	43.0%	97.9%	96.3%	100%	100.0%	NA	96.7%	97 3%
316	Leather and Allied Product Manufacturing	100.0%	98.7%	69.6%	44.5%	97.0%	96.5%	100%	100.0%	NA	96.7%	97.5%
321	Wood Product Manufacturing	100 0%	96.2%	76.9%	37.3%	99.4%	94.5%	100%	100.0%	NA	95.4%	96.0%
322	Paper Manufacturing	100.0%	99.8%	91.3%	66.8%	97.1%	99.1%	100%	100.0%	NA	98.4%	98.8%
323	Printing and Related Support Activities	100.0%	96.9%	74 5%	37.5%	98 2%	94.3%	100%	100 0%	NA	95.2%	95.9%
324	Petroleum and Coal Products Manufacturing	100 0%	100 0%	94.1%	93.9%	94.2%	100.0%	100%	100.0%	NA	99.0%	99 4%
325	Chemical Manufacturing	100.0%	100 0%	94.9%	94.1%	94.9%	100 0%	100%	100 0%	NA	99.0%	99.4%
326	Plastics and Rubber Products Manufacturing	100.0%	99.0%	69.2%	46.2%	96.9%	97.3%	100%	100 0%	NA	97.4%	98.1%
327	Nonmetallic Mineral Product Manufacturing	99 8%	95.8%	81.3%	79.1%	96.0%	90.3%	94%	99.6%	NA	92.5%	93 7%
331	Primary Metal Manufacturing	99 9%	96.3%	84.2%	83.3%	90.0%	93.7%	95%	98.8%	NA	94.4%	95.7%
332	Fabricated Metal Product Manufacturing	99.7%	100.0%	81 9%	74.8%	100.0%	98.4%	100%	92.5%	NA	97 5%	97.7%
333	Machinery Manufacturing	99.8%	100.0%	71 8%	60.4%	100.0%	97.9%	100%	90.4%	NA	96.5%	96.9%
334	Computer and Electronic Product Manufacturing	99.8%	100.0%	63.2%	48.2%	100 0%	99.2%	100%	95.6%	NA	96.7%	97.3%
335	Electrical Equipment, Appliance, and Component Manufacturing	99.8%	100.0%	63.6%	48.8%	100 0%	99 3%	100%	96.3%	NA	96.9%	97.4%
336	Transportation Equipment Manufacturing, Except Shipbuilding	99.4%	99.3%	55.9%	35 7%	100.0%	99.6%	100%	95.1%	NA	95.2%	96.0%
336611	Ship Building and Repairing	100 0%	72.9%	35 9%	39.3%	1 5%	77.9%	100%	88.8%	NA	87.4%	88.3%
337	Furniture and Related Product Manufacturing	100.0%	98 4%	72.6%	43.3%	97.1%	96.4%	100%	100.0%	NA	96.7%	97.3%
339	Miscellaneous Manufacturing	99.8%	100.0%	71.2%	59.4%	100.0%	98.1%	100%	91.0%	NA	96.5%	96.9%
423	Merchant Wholesalers, Durable Goods	98.7%	100.0%	34.5%	70.8%	20 7%	88.8%	73%	94.8%	NA	82.4%	85.3%
424	Merchant Wholesalers, Nondurable Goods	97 0%	100.0%	32.6%	67.3%	20.7%	91.5%	78%	94.7%	NA	84.8%	88.3%
441	Motor Vehicle and Parts Dealers	95.0%	95.1%	32 7%	63 8%	22 3%	95.5%	100%	88.0%	NA	93.5%	94 8%
442	Furniture and Home Furnishings Stores	100 0%	100.0%	0 7%	50.0%	0.0%	100.0%	100%	100.0%	NA	98.6%	100.0%
443	Electronics and Appliance Stores	100.0%	100.0%	0 7%	50 0%	0.0%	100.0%	100%	100.0%	NA	98.6%	100 0%
444	Building Material and Garden Equipment and Supplies Dealers	100.0%	100 0%	1 1%	50.0%	0.0%	100.0%	100%	100.0%	NA	98.6%	100.0%
445	Food and Beverage Stores	100.0%	100.0%	1.7%	50.0%	0.0%	100.0%	100%	100 0%	NA	98.7%	100.0%
446	Health and Personal Care Stores	100.0%	100 0%	0 7%	50.0%	0.0%	100.0%	100%	100.0%	NA	98.6%	100.0%
447	Gasoline Stations	95 0%	95 1%	32.7%	63.8%	22 3%	95.5%	100%	88 0%	NA	93.5%	94.8%
448	Clothing and Clothing Accessories Stores	100.0%	100 0%	0 6%	50 0%	0.0%	100 0%	100%	100 0%	NA	98.6%	100.0%
451	Sporting Goods, Hobby, Book, and Music Stores	100.0%	100.0%	0.7%	50 0%	0 0%	100.0%	100%	100.0%	NA	98.6%	100.0%
452	General Merchandise Stores	100.0%	100.0%	2 3%	50 0%	0.0%	100 0%	100%	100.0%	NA	98 7%	100.0%
453	Miscellaneous Store Retailers	100.0%	100.0%	0.7%	50.0%	0.0%	100.0%	100%	100.0%	NA	98.6%	100.0%
454	Nonstore Retailers	100 0%	100.0%	0 7%	50.0%	0.0%	100.0%	100%	100.0%	NA	98.6%	100 0%
481	Air Transportation	100.0%	100.0%	22.1%	49 9%	0.0%	99 5%	100%	100.0%	NA	95.0%	99 7%
482	Rail Transportation	100 0%	100.0%	88.0%	57.3%	100 0%	100.0%	100%	100.0%	NA	99.0%	100 0%
483	Water Transportation	100.0%	100 0%	34.3%	51.5%	0.0%	99.1%	100%	100.0%	NA	94.7%	99.5%
484	Truck Transportation	100 0%	100.0%	35.1%	51.5%	0.0%	99.1%	100%	100 0%	NA	94.7%	99 5%
485	Transit and Ground Passenger Transportation	100.0%	100.0%	39.6%	52 4%	0.0%	98.5%	100%	100.0%	NA	94.0%	99.1%
486	Pipeline Transportation	100.0%	100.0%	79.2%	76 7%	80.3%	95.7%	100%	100 0%	NA	95.9%	96 8%
487	Scenic and Sightseeing Transportation	100 0%	100.0%	39.6%	52.4%	0.0%	98.5%	100%	100.0%	NA	94.0%	99 1%

Table XV-2

Estimated Percentage of PPE Cost Currently Borne by Employers

NAICS	Industry	Eye and Face Protection [a]	Head Protection [b]	Foot Protection [c]	Metatarsal Protection	Chemical Protective Footwear	Gloves and Chemical Protection [d]	Fall Protection [e]	Welding Protection[f]	Hearing Protection [g]	All PPE	All PPE Except Footwear
488	Support Activities for Transportation, Except Longshoring	100 0%	100.0%	39.7%	51.2%	0.0%	99.3%	100%	100.0%	NA	95.2%	99.6%
488320	Marine Cargo Handling (Longshoring)	99.5%	98.5%	7.9%	20.7%	7.6%	86.7%	100%	97.6%	NA	77 8%	94.7%
491	Postal Service	100.0%	100 0%	75.4%	0.0%	100.0%	100.0%	100%	100.0%	NA	97 9%	100.0%
492	Couriers and Messengers	100.0%	100 0%	35 1%	51.5%	0.0%	99.1%	100%	100.0%	NA	94 7%	99.5%
493	Warehousing and Storage	100.0%	100.0%	35.1%	51.5%	0.0%	99.1%	100%	100.0%	NA	94.7%	99 5%
511	Publishing Industries (except Internet)	100 0%	96.9%	74 5%	37.5%	98.2%	94.3%	100%	100.0%	NA	95.2%	95.9%
515	Broadcasting (except Internet)	100.0%	100.0%	76.9%	81.7%	73.1%	97.5%	100%	100.0%	NA	97.3%	98.3%
517	Telecommunications	100.0%	100.0%	76.9%	81.7%	73 1%	97 5%	100%	100.0%	NA	97.3%	98.3%
541	Professional, Scientific, and Technical Services	97.9%	100 0%	74.5%	55.5%	96 8%	98.9%	100%	100.0%	NA	97.6%	98.9%
561	Administrative and Support Services	99.6%	100.0%	53.1%	10.4%	84.4%	95.8%	100%	100.0%	NA	95 9%	96 8%
562	Waste Management and Remediation Services	100.0%	100.0%	79.9%	85 2%	75.3%	97.9%	100%	100.0%	NA	97.7%	98 6%
621	Ambulatory Health Care Services	100.0%	100.0%	96.7%	50.0%	100.0%	97.7%	100%	100.0%	NA	98.1%	98.1%
622	Hospitals	100.0%	100.0%	96.7%	50.0%	100.0%	97.7%	100%	100.0%	NA	98.1%	98.1%
623	Nursing and Residential Care Facilities	100.0%	100.0%	96.7%	50.0%	100.0%	97.7%	100%	100.0%	NA	98.1%	98.1%
721	Accommodation	99.5%	100.0%	64 9%	0.0%	92.4%	96.2%	100%	100.0%	NA	96.5%	97.1%
722	Food Services and Drinking Places	100.0%	100.0%	1 5%	50.0%	0.0%	100.0%	100%	100.0%	NA	98.7%	100.0%
811	Repair and Maintenance	95.1%	95.0%	40.7%	78.4%	28.0%	96.3%	100%	85.8%	NA	94.0%	95.1%
812	Personal and Laundry Services	98 4%	100.0%	83.9%	0 0%	99.8%	91.9%	100%	100.0%	NA	93.7%	93 9%
	All Industries	98 7%	97.7%	53 9%	51 9%	55.1%	96.2%	97%	96.1%	NA	95.2%	96 5%

[a] Nonprescription eyewear, safety goggles, chemical splash goggles, and faceshields
[b] Hardhats.
[c] Metatarsal protection and chemical protective footwear.
[d] Gloves for abrasion and chemical protection, splash aprons, and chemical protective clothing.
[e] Body harnesses, body belts, and lanyards.
[f] Welding goggles, helmets, and protective clothing.
[g] Ear muffs and inserts.

Sources OSHA Nationwide Telephone Survey, 1999 [Ex]; OSHA Office of Regulatory Analysis

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A few comments (Ex. 12: 173, 189) suggested that OSHA should compare survey response rates to make sure there is no bias. It was suggested that given that employers were aware OSHA was conducting a survey of employer payment for PPE, they tried to avoid participating in the survey, despite the assurance of confidentiality. It was further asserted that ''a substantial percentage of the 'not available' category consists of employers who, if contacted, would have explicitly refused to participate'' (Ex. 12: 173, 189). Presumably, these employers would avoid participation or refuse to participate because they do not currently pay for their employee's PPE. This, in turn, could have inflated the survey's findings of the percentage of employers paying for PPE.

OSHA disagrees with these comments and believes that survey bias did not have a significant impact on the data used. First, most of the establishments listed as ''non-completes'' were not refusals.[21] Of the 53 percent of non-completed phone calls, 37.5 percent were not available; only 14.9 percent refused to participate. Many simply could not be reached given the time allotted for the survey. As described by ERG (Ex. 14, pp. 66–67):

> [a]mong the 2,963 not-available respondents, 1,862 (62.8 percent) were called fewer than six times. This group of potential respondents was drawn almost entirely as part of the supplemental sample, and, as noted, interviewers stopped calling them when simple targets were achieved near the end of the survey. For stratum-one, not-available respondents, fully 68 percent (1,407 out of 2,065) were part of this supplemental sample group that was called fewer than six times. If calling had continued so that each of these numbers had been called at least six times, the response rate would have been significantly higher. Doing so, however, would have resulted in oversampling the stratum one respondents. The response rate for stratum-one establishments in the primary sample was 52.6 percent; by comparison, the response rate for stratum-one establishments in the entire sample was 34.7 percent.[22]

Comments speculating that employers were attempting to avoid mentioning that they do not pay for PPE and thus did not respond (Ex. 12: 173, 189) also suggested that the survey was more likely to be avoided by large employers:

> Knowledgeable employers, especially large employers who employ the bulk of the workforce, are aware of OSHA's demands that employers should purchase personal-PE * * *. Accordingly, employers who do not pay for personal-PE would be less likely to respond to a survey about payment for personal-PE for fear of adverse action by OSHA. This fear is the most obvious potential bias to the survey, yet ERG made no attempt to test it.

In fact, the survey results showed just the opposite pattern. Larger employers (strata 2 and 3) generally showed higher rates of response to the survey than smaller employers (stratum 1) (61.7 percent and 58 percent for strata 2 and 3, as opposed to 34.7 percent complete responses for stratum 1) (Ex. 14, Table 13). This stands in stark contrast with the refusal rate for the survey, which was fairly constant between 14.6 and 15.5 percent across the three strata. The lower response rate for stratum 1 employers was entirely due to the ''not available'' segment. Smaller employers are less likely to maintain a daytime office staff, thus making it more difficult to reach them to conduct a survey. This may be particularly true for the construction industry, which accounted for nearly half of the total called sample; fully one-third of the entire called sample were construction employers with fewer than 20 employees (Ex. 14, p. 66, Table 12). In short, the pattern of nonreponse is consistent with a simple inability to reach people on the phone, not a refusal to participate for fear of an adverse action from OSHA.

Second, the response rate is not unusually low for surveys conducted in the last decade. It is well documented that the public at large, and probably employers in particular, are suffering from an element of ''survey fatigue'', given the large number of survey requests over the phone and on the Internet—people are simply less likely to agree to do any particular survey, unless there is direct payoff. In addition, individuals and employers are more likely to ''hide'' behind voice mail and answering machines than they were a few decades ago (Curtain, *et al*, 2005). Thus, it would be improper to assume that the failure to participate represents a response to this particular survey.

Third, an analysis of the response rate of small establishments in the survey suggests that many of the very small establishments OSHA did not reach simply were not under OSHA jurisdiction by virtue of being self-employed:

> [t]he average size of not-available establishments, as reported by D&B, was compared to that of establishments that completed the survey. For stratum-one respondents, the average D&B–reported employment size of not-available establishments was 3.9, compared to 5.6 for those who completed the survey. The relatively small size of the not-available establishments, however, is misleading because respondents for some of these (especially those for whom D&B reported a single employee) would have indicated, if they had been reached, that they were self-employed; their establishments, therefore, would have been judged out-of-scope. Among successfully contacted respondents with five or fewer employees (as reported by D&B), 56.3 percent reported they were self-employed. If the not-available respondents in stratum one were as likely to be self-employed as those successfully contacted, the average reported employment, adjusted for the projected number of screen-outs at each employment level, would be 5.3. This is very close to the average employment for stratum-one respondents who completed the survey (Ex. 14, pp. 67–69).

A potential source of bias not discussed in comments was the possibility that the nonresponders skewed the sample in favor of employers who used PPE (as opposed to those employers who paid for PPE). It may be that a disproportionate percentage of people who either declined to be interviewed directly, or simply did not return phone calls did so because they considered the survey inapplicable to their workplace because they do not use PPE. In that case, the sample ended up with a disproportionate number of PPE users.

In any case, the estimated number of PPE–using establishments approximately doubled between the analysis in the proposed rule and the analysis here, after incorporating the results of the 1999 survey. In fact, the estimated costs in this final analysis are higher than they were for the proposed rule in large part due to significantly greater reported use of PPE in certain items than indicated in the previous OSHA telephone survey on PPE in 1989. For example, the proposed rule, based on the 1989 survey data found 10.6 million employees using chemical and non-chemically protective gloves (64 FR 15417). The 1999 survey found a combined total approximately 50 percent higher. Much of this increase may have been related to the effectiveness of the 1994 PPE rulemaking at increasing the use of the PPE. At the same time, employers may not have bothered to participate in the survey because they simply did not use PPE, thus skewing upward the numbers of employers using PPE. OSHA has no specific information that this occurred;

[21] The ''non-completes'' were divided primarily between ''refusals'' and ''not available''. ''Refusal'' is a term of art with regard to surveys which denotes respondents who tell the questioner explicitly that they do not wish to participate in the survey. ''Not available'' describes the group of those who could not be reached; most ''non-completes'' were ''not available'', as opposed to ''refusals''.

[22] As discussed in the ERG report [Ex. 14], the survey targeted three employment size establishment strata, Stratum 1 (1–19 employees), Stratum 2 (20–499 employees), and Stratum 3 (500 or more employees), to ensure that each size group was adequately represented in the sample.

if it did, however, then the cost to employers (and society) would be less than estimated in this analysis. The Agency does not believe the costs are overestimated in this regard, but acknowledges that there are several different potential, and at least partially offsetting, sources of bias in the survey results.

OSHA recognizes that the existence of non-responses is a source of uncertainty with regard to the costs and benefits of the standard. The Agency has performed a sensitivity analysis to probe the effects of underestimating the extent to which employees currently pay for PPE.

Finally, it should be noted that absent vastly greater resources and a substantially greater level of intrusion on employers, it would be impossible, even on a subsample of the survey responders, to verify whether or not the behavior of non-responders is significantly different than responders. Given that many employers could not be reached by phone, it ultimately might be necessary to send someone in person to interview the non-responders. OSHA is limited in its resources and would be unable to perform this type of analysis. On balance, OSHA is confident that the results of this survey represent the best available evidence on the profile of payment patterns for PPE in industry.

F. Technological Feasibility

This rule does not change any PPE requirements, but affects only the issue of who pays for PPE required by OSHA standards. These PPE requirements have already been found to be technologically feasible in other rulemakings. Personal protective equipment is widely manufactured, distributed, and used in workplaces in all of the industries covered by OSHA standards. The rule thus raises no issues of technological feasibility.

G. Benefits of the Final Rule

OSHA concludes in this final rule that when employers do not provide and pay for PPE, it is often not worn, is worn improperly, or is not cared for and replaced appropriately. (See the Legal Authority section for OSHA's analysis of this issue.) When employees are required to pay for their own PPE, they are likely to minimize PPE costs and thus fail to purchase proper personal protective equipment. Further down the wage scale, these problems can be expected to worsen, and employees will be less likely to purchase adequate PPE and replace it when necessary, and are more likely to make cosmetic repairs, hide defects, or purchase used PPE aged beyond its service life.

Thus, at least two problems can occur when employers fail to pay for PPE: Either the PPE is not worn in cases where it is needed to protect against injury or illness, or the PPE that is worn is inadequate. The consequences of these failures are the same: Employees are exposed to chemical, physical, or safety hazards in the workplace, which, in turn, result in injuries, illnesses, and death.

In the proposed rule, OSHA estimated the quantitative differences in the misuse or nonuse of PPE when employers pay for PPE versus when employees pay for PPE. OSHA preliminarily determined that the rate of nonuse or misuse of PPE would be approximately 40 percent for employee purchased PPE verses 15 to 20 percent for employer purchased PPE. This quantitative estimate was provided by one member of OSHA's expert panel, but was consistent with the statements of other panelists, as well as with OSHA's enforcement and regulatory experience. Most panel members indicated that if the employer did not pay for PPE, the PPE was typically not fully provided, in some cases falling short by a wide margin. While commenters disagreed on whether the underlying premise behind employer payment for PPE was correct, there were no alternative point estimates provided (other than stating there was no difference between the two) to the aforementioned estimates. Thus, in this final rule, OSHA is continuing to use the point estimates given in the proposal as a basis for the benefits in the final rule. (However, as explained below, OSHA has also conducted a sensitivity analysis to evaluate concerns by commenters that OSHA's benefits estimate in the proposal was too high.)

1. Benefits From Injuries Prevented

To estimate the benefits of the final rule OSHA calculated the total number of injuries prevented annually by requiring employers to pay for PPE by body part. OSHA used the point estimates above and the steps which are illustrated in Table XV–3.

OSHA determined the number of injuries judged to be preventable by multiplying the total number of injuries [23] by body part (derived from 2005 lost work day data and shown in column A) [24] by the preventability factors OSHA developed in 1994 for the types of PPE examined (column B) (59 FR 16352).[25] In the 1994 analysis, most injuries were not considered preventable by PPE. For example, sprains and strains (nature) and injuries caused by overexertion (circumstance), were not considered to be preventable by PPE. On the whole, approximately one-third of injuries in general industry were considered preventable with PPE. However, within this group, it was apparent that PPE could be particularly effective in protecting certain body parts (*e.g.,* eye injuries were estimated to be 95 percent PPE–preventable; foot and toe, 75 percent; face and ear, 68 percent; and hand and finger, 63 percent). These estimates were based on a careful review of the descriptions of the accidents. Over 90 percent of these injuries were incurred by production employees in the subset of high-hazard industries selected for study in the PPE survey. This analysis did not cover the construction sector. OSHA assumes that the same preventability factors by body part would apply in construction as in the general industry and maritime sectors (see column B). The full analysis of the injuries judged to be preventable through the proper use of PPE is presented in detail in the Regulatory Impact Assessment of the 1994 rulemaking (Docket S060, Ex. 56).

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[23] This analysis does not examine the impact of the rule on occupational illnesses, such as contact dermatitis prevented by chemically protective PPE, but OSHA is confident the rule will produce additional benefits not accounted for here.

[24] OSHA extrapolated total injuries by body part from the number of detailed lost workday cases with days away work [BLS, 2006b] by multiplying by the overall ratio of total recordable cases [BLS, 2006a] to cases with days away from work. Body parts not included in this analysis: Trunk (*e.g.,* back & shoulder); wrist and other upper extremities except hand and finger; knee and other lower extremities except foot and toe; body systems, multiple body parts; and ''other body parts''. Together these excluded cases account for about 75% of LWD injuries.

[25] To calculate the preventability factors, OSHA reviewed 1,170 OSHA Form 200s describing almost 64,000 injuries. The profile of injuries, as defined by body part, very closely tracked those in BLS's injury data base [OSHA 1994, pp. V–11–13]. Information on the nature of the injury and the circumstances surrounding the accident was used to determine the extent to which PPE would have prevented the injury.

Table XV-3

Injuries Judged to Be Preventable if Employers Are Required to Pay for PPE Now Being Paid for by Employees

Body Part	Total Injuries by Body Part [a]	Preventable Injuries based on Preventabillity Factors		Total Preventable Injuries (Includes Both Employer Paid and Employee Paid PPE Users)		Total Injuries Preventable Among Employees Paying for PPE		Injuries Judged to Be Prevented by Requiring Employer Payment for PPE	
Gen. Ind. & Maritime	A	B[b]	C	D[c]	E	F[d]	G	H[e]	I
Eye	94,729	95.0%	89,993	48.9%	44,036	2.3%	1,033	56.3%	581
Face and ear	51,491	68.0%	35,014	59.1%	20,686	1.3% #	266	56.3%	149
Head and neck	135,662	45.0%	61,048	59.1%	36,066	2.8% #	1,002	56.3%	563
Hand and finger	451,894	63.0%	284,693	59.1%	168,191	10.2% #	17,087	56.3%	9,611
Foot and toe	160,823	75.0%	120,617	12.5%	15,056	72.3% #	10,879	56.3%	6,120
Subtotal	894,599		591,365		284,034		30,267		17,025
Construction									
Eye	16,876	95.0%	16,032	48.9%	7,845	7.2%	566	56.3%	318
Face and ear	8,398	68.0%	5,711	59.1%	3,374	8.8%	297	56.3%	167
Head and neck	14,869	45.0%	6,691	59.1%	3,953	8.9%	353	56.3%	198
Hand and finger	60,400	63.0%	38,052	59.1%	22,480	29.1%	6,553	56.3%	3,686
Foot and toe	22,686	75.0%	17,015	12.5%	2,124	33.8%	717	56.3%	403
Subtotal	123,229		83,500		39,776		8,485		4,773
Total	1,017,828		674,865		323,810		38,752		21,798

Source: OSHA Office of Regulatory Analysis.

[a] OSHA extrapolated total injuries by relevant body part from the number of detailed lost workday cases with days away work [BLS, 2006b] by multiplying by the overall ratio of total recordable cases [BLS, 2006a] to cases with days away from work.
[b] Based on PPE preventability factors shown in OSHA, 1994 [64 FR 15421].
[c] Injuries are reduced by percentage of employees in State Plan States where employer-payment requirements are already in place. In the case of eye and foot and toe injuries, the adjustment factor is based on distribution of employees by State Plan State category and the fact that nonprescription safety glasses represent 82.9% of safety glass use and safety shoes with metatarsal guards account for 22.3% of safety shoe use.
[d] Percent of preventable injuries among employees paying for their own PPE = 0.4*Ep / (0.4*Ep + 0.175*En), where Ep equals the number of employees paying for their own PPE and En equals the number of employees with employer-paid PPE.
[e] Percent of injuries prevented by requiring employer PPE payment = (0.4 - 0.175)/(0.4) = 0.563 = 56.3%.

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Column C shows the number of preventable injuries based on the 1994 preventability factors and the 2005 data on total injuries. OSHA then reduced the numbers shown in column C by the percentage of employees in State Plan States where employer-payment requirements are already in place. (These reduction factors are shown in column D.) The resulting totals of preventable injuries, which includes both employee or employer paid PPE, are shown in Column E.

Next OSHA estimated the percentage of PPE-related injuries where employees paid for their own PPE. OSHA estimates that if employees are required to pay for their own PPE, this equipment will be lacking or inadequate 40 percent of the time, while if employers pay for PPE,

the equipment will be lacking or inadequate 17.5 percent of the time. Using these parameters, OSHA estimates that employees who pay for their own PPE are 2.3 times (0.4 divided by 0.175) as likely as employees whose PPE is paid for by their employers to suffer an injury that would otherwise be preventable by PPE use.

The number of such preventable injuries, however, depends on the percentage of employees that currently pay for their own PPE. The larger this percentage is, the greater of number of injuries are potentially preventable. Percentages of preventable injuries among employees paying for their own PPE were estimated by multiplying the number of employees paying for their own PPE by 0.4 and dividing this amount by the sum of the product of the number of employees paying for their own PPE and 0.4 and the product of the number of employees with employer-paid PPE and 0.175. The numerator of this ratio is the number of employees required to pay for their own PPE whose equipment will be lacking or inadequate, while the denominator is the total number of employees (both employee- and employer-paid PPE users) whose equipment will be lacking or inadequate. These percentages are shown in column F. Assuming injuries occur in proportion among employers, applying the resulting percentages to column E yields the total number of PPE related injuries where the employee is paying for PPE (shown in column G).

Once the number of preventable injuries among the employee-paying group is derived, it has to be recognized that not all of these will be preventable by switching payment systems. Requiring employer payment will reduce the injury rate to the level currently suffered by employees with employer-paid equipment. As outlined above, employees paying for their own equipment are 2.3 times (0.4/0.175) as likely to be injured as those with employer-paid equipment. The total number of injuries prevented by switching to employer payment equals: # of PPE-related injuries among the employee-paying group multiplied by

$$1-\frac{\text{percent of time PPE is not worn when employers pay}}{\text{percent of time PPE is not worn when employees pay}}$$

In terms of the specific numbers, this percentage reduction is calculated as 1-((0.175/0.4) , or 1-0.4375, or 56.3 percent, as shown in column H. Reducing the number of injuries in the employee-paying group (column G) by 56.3 percent results in the total number of injuries prevented by this rulemaking, as shown in column I.

As indicated in Table XV–3, this analysis indicates that the final rule would avert approximately 21,798 injuries annually.[26] OSHA provides a sensitivity analysis of this below, to reflect uncertainties in the strength of the employer payment effect.

While a number of commenters had concerns about the rule, there was general agreement on the value of PPE in preventing injuries (see, *e.g.*, Exs. 12: 2, 4, 6, 9, 10, 11, 13, 15, 20, 21, 32, 58, 66, 79, 100, 101, 105, 110, 113, 117, 130, 134, 149, 184, 190, 210, 218, 230, 233, 247, 248). One commenter questioned the underlying basis for OSHA's estimates in part because their experience has been that relatively few injuries are actually preventable by PPE.

> [w]e have approximately 50 accidents per year. I read every one of them. I would say in a given year there may be at most one or two accidents where the personal protective equipment was a factor in preventing or minimizing the injury. Remember, that is the barrier. That is the last resort is the personal protective equipment. As we all know, there should be other steps taken to prevent an injury before it gets to that point (Tr. 146).

OSHA disagrees with this commenter to the extent the commenter is suggesting that employer payment for PPE will not help prevent injuries. First, this represents one company's experience, which is not generalizable to the economy as a whole. OSHA's analysis of injuries allows for the fact that many injuries would not be preventable by PPE; this company may have an unusually large number of such cases. The commenter suggests, correctly, that engineering controls are the logical first line of defense against hazards. The company may have an excellent program in this regard. Second, the comment refers to cases where PPE is being worn and prevented accidents; it says nothing about any cases where PPE was not being worn and injuries resulted. A finding that suggests that PPE prevents only a few injuries is dramatically at odds with most of the rulemaking record both in this rulemaking and its predecessor in 1994. In both cases PPE was found to be of considerable value in reducing injuries.

Finally, it is worth noting the Agency is not claiming a dramatic percentage reduction in total injuries as a result of the rule, in part because most equipment is already paid for by most employers. A reduction of 1 or 2 cases out of 50 represents a relatively small number within one business unit, but extrapolated across the economy as a whole represents a large number of injuries prevented, resulting in a substantial net benefit for the nation as a whole.

2. Benefits From Prevented Fatalities

Although the primary benefits from this rule derive from the non-fatal injuries and associated costs that will be averted by requiring employers to assume the full costs of the covered types of PPE, some benefits are associated with the preventability of fatal injuries. Although most injuries preventable by appropriate PPE would not otherwise result in fatalities, certain fatal head injuries, particularly those classified as ''struck by'' or ''struck against'' injuries, would be prevented by PPE (i.e., hardhats). Recent data on occupational fatalities collected by the Bureau of Labor Statistics show that a yearly average of 112 such fatalities occurred in general industry and maritime, and 43 in construction during the period 2003 through 2005 (BLS, CFOI, 2004).

OSHA estimated the number of fatalities likely to be prevented by the rule by first considering the percentage of ''struck by'' and ''struck against'' fatalities that would be prevented if proper head PPE had been used. Many types (or ''events'') of fatal head injuries that would not be prevented by hardhats, such as those resulting from falls, some explosions, and most transportation-related accidents, have not been included in this analysis. In contrast, PPE should be relatively effective in preventing fatal ''struck by'' and ''struck against'' head injuries. Additional fatalities that would not be prevented include crushing accidents (force exceeds the protection of the head gear) and instances where the hazard could not be anticipated and the victim

[26] Within the 17,025 injuries estimated to be prevented in general industry and maritime, the Agency estimates 214 will be in maritime, the remainder in general industry.

could not reasonably be judged to be at risk and required to use PPE (passersby, for example.) For this analysis, OSHA estimates that 75 percent of fatal ''struck by'' and ''struck against'' injuries would otherwise be prevented by proper use of head protection.

Applying the 75 percent estimate described above to the total number of annual fatalities from the BLS data (112 in general industry and maritime, and 43 in construction) results in an estimated 84 fatalities in general industry and maritime and 32 fatalities in construction that would be preventable by wearing hardhats if all the fatalities occurred in industries within OSHA jurisdiction. However, approximately 59.1 percent of these preventable fatalities are estimated to occur in non State-Plan States.[27 28] Accordingly, the actual number of fatalities preventable by this rule is approximately 50 in general industry and maritime, and 19 in construction. In addition, only a subset of these preventable fatalities would be affected by switching payment systems, i.e. the subset where employees are currently paying for their own PPE. This is because the number of preventable fatalities affected by this rule depends on the percentage of employees that currently pay for their own PPE. The larger this percentage is, the greater the number of fatalities that are potentially preventable.

Data from OSHA's PPE payment survey suggest that about 1.2 percent of general industry and maritime employees and 4.1 percent of construction employees pay for their own head PPE. Combining these percentages with the point estimates for PPE nonuse/misuse discussed above (40 percent nonuse/misuse when employees pay for PPE versus 17.5 percent nonuse/misuse when employers pay for PPE), OSHA calculated the ratio of employee paid-PPE-related fatalities to all PPE related fatalities (i.e., the sum of the employee- and employer-paid PPE fatalities).

$$\frac{0.4\times E_p}{\left(0.4\times E_p\right)+\left(0.175\times E_n\right)} = \text{where Ep = \# employees paying PPE and En = \# employees with employer-paid PPE.}$$

Using the same methodology used for non-fatal injuries, the ratio for general industry is equal to (0.40*0.012)/(0.40*0.012 + 0.175*0.988) = 2.8 percent. For construction the ratio is equal to (0.40*0.041)/(0.40*0.041 + 0.175*0.959) = 8.9 percent.

In short, OSHA estimates that employees paying for their own PPE suffer 2.8 percent (1.4 fatalities annually) of the fatal ''struck by'' and ''stuck against'' head injuries in general industry and 8.9 percent (1.7 fatalities annually) of the fatal ''struck by'' and ''stuck against'' head injuries in construction. However, it is not the case that all of the employee-paying preventable fatalities (1.4 and 1.7 in general industry and construction respectively) will be prevented by switching payment systems because there is still a 17.5 percent nonuse/misuse rate among the employer-paying group. OSHA's estimate that requiring employer payment will reduce the rate of misuse or nonuse of PPE from 40 to 17.5 percent implies a resultant 56.3 percent reduction ((0.4–0.175)/0.40) in fatal head injuries among employees who pay for their own PPE. Thus OSHA estimates that 0.8 fatal head injuries (0.563 times 1.4) in general industry and 0.9 fatal head injuries (0.563 times 1.7) in construction will be prevented annually by this rule.

The Agency also believes that the final rule will achieve substantial benefits in the area of fall protection, particularly in construction. The rule will prevent a number of fatalities and severe injuries that are now occurring either because employee-provided PPE offers inadequate protection or because the employee arrives on site without the necessary PPE. For example, OSHA estimated in the Regulatory Impact Analysis for 29 CFR Part 1926 Subpart M that fall protection systems would prevent nearly 80 fatalities and 26,600 lost workday-injuries annually. To the extent that employers supply more effective harnesses and lanyards than those currently being provided by employees, or ensure that this equipment is available for use by the employee, this rule will prevent deaths and injuries caused by falls. However, at the current time, the Agency does not have sufficient detail on these accidents to quantify the benefits of this effect.

3. Uncertainties

As outlined elsewhere in this analysis, benefits associated with the rule are subject to uncertainty with respect to the number and types of accidents that will be avoided or mitigated by the use of PPE and cost and benefits estimates are further subject to uncertainty due to the survey's non-response levels. Further, this analysis assumes that the effect of the rule will be limited to situations where employees are now required to pay for their own PPE. This, however, while a simplifying assumption, may not be wholly accurate. As indicated in the Legal Authority section, there is evidence that employer payment for PPE is important to send a signal to employees on the importance of wearing PPE. The record is also clear that certain sectors, such as construction, have relatively high rates of employee turnover (BLS, 2004), and even where they are not so high, they do not remain static. If the rule has the effect of engendering a greater appreciation of the importance of wearing PPE, then this effect would logically extend into workplaces where employers pay for the equipment currently, through employee turnover as well as a general shift in norms of behavior in the industry. The analysis currently assumes that employees will fail to wear PPE 15–20 percent of the time even when the employer pays for PPE. Given that employers pay for most PPE items most of the time currently (typically greater than 95 percent of the time), if this percentage were to fall even a small amount as a result of this rulemaking, the benefits would be substantially greater than assumed in this analysis.

4. Willingness To Pay for Injuries and Fatalities Avoided

OSHA also performed an analysis of the value of injuries and fatalities avoided based on a willingness to pay approach. This approach employs the theory of compensating differentials in the labor market. A number of academic studies have drawn a correlation between higher risk on the job and higher wages, suggesting that employees demand monetary compensation in return for a greater risk of injury or fatality. OSHA has used this approach

[27–28] As indicated in Table XV–3, Census Bureau [Census, 2005a] data indicate non State-Plan States account for 59.1% of private sector employment.

in many recent proposed and final rules (See, *e.g.,* 71 FR 10099, 70 FR 34822).

In performing its willingness to pay analysis, OSHA uses an estimate of $50,000 per lost workday-injury avoided, based on two studies: Viscusi, 1993, and Viscusi & Aldy, 2003. In his 1993 paper (Viscusi, 1993, p. 1935), Viscusi reviewed the available literature and found the value of lost workday injuries to be: ''[i]n the area of $50,000, or at the high end of the range of estimates for the implicit value of injuries overall.'' His 2003 paper with Aldy broadly reaffirmed this, finding the literature to estimate the value in the $20,000-$70,000 range. While the literature covered many types of injuries, they focused primarily, particularly for many of the higher valuations, on lost workday injuries. The Agency has conservatively chosen to apply this value to only cases resulting in days away from work, even though there would be additional value attached to the larger class of injuries, especially cases resulting in restricted work. As shown in Table XV–4, the Agency estimates the value of injuries prevented using this approach to be $337 million per year.

By this methodology, a single fatality avoided is valued at $7 million [Viscusi 2003, p. 63]. As explained above, OSHA estimates that 1.7 fatalities may be prevented each year by this rule. Accordingly, this brings total the total monetized value of benefits to $349 million.

An alternate approach for valuing injuries is the direct cost approach, which OSHA used in the analysis for the proposal. A full discussion of this estimate is provided in an Appendix at the end of the Final Economic Analysis. Using a direct cost approach to monetize benefits for injuries avoided, and a willingness to pay approach to monetize fatalities avoided, OSHA estimates total benefits to be $228.3 million (See Table XV–14).

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Table XV-4

Injuries Judged to Be Preventable if Employers Are Required to Pay for PPE Now Being Paid for by Employees (Days Away From Work Cases Only)

Body Part	Total Injuries by Body Part [a]	Preventable Injuries based on Preventabillity Factors		Total Preventable Injuries (Includes both Employer Paid and Employee Paid PPE Users)		Total Injuries Preventable Among Employees Paying for PPE		Injuries Judged to Be Prevented by Requiring Employer Payment for PPE		Estimated WTP Value of Injuries Avoided
Gen. Ind. & Maritime	A	B[b]	C	D[c]	E	F[d]	G	H[e]	I	
Eye	27,462	95.0%	26,089	48.9%	12,766	2.3%	300	56.3%	168	$8,424,943
Face and ear	14,927	68.0%	10,150	59.1%	5,997	1.3%	77	56.3%	43	$2,166,408
Head and neck	39,328	45.0%	17,698	59.1%	10,455	2.8%	290	56.3%	163	$8,166,264
Hand and finger	131,002	63.0%	82,531	59.1%	48,758	10.2%	4,953	56.3%	2,786	$139,313,189
Foot and toe	46,622	75.0%	34,966	12.5%	4,365	72.3%	3,154	56.3%	1,774	$88,703,011
Subtotal	259,341		171,434		82,340		8,774		4,935	$246,773,815
Construction										
Eye	6,390	95.0%	6,071	48.9%	2,970	7 2%	214	56.3%	121	$6,028,697
Face and ear	3,180	68.0%	2,162	59.1%	1,277	8.8%	112	56.3%	63	$3,158,168
Head and neck	5,630	45.0%	2,534	59.1%	1,497	8.9%	134	56.3%	75	$3,755,778
Hand and finger	22,870	63.0%	14,408	59.1%	8,512	29.1%	2,481	56.3%	1,396	$69,780,230
Foot and toe	8,590	75.0%	6,443	12.5%	804	33.8%	272	56.3%	153	$7,638,495
Subtotal	46,660		31,617		15,061		3,213		1,807	$90,361,368
Total	306,001		203,051		97,401		11,987		6,743	$337,135,183

Source: OSHA Office of Regulatory Analysis.

[a] Bureau of Labor Statistics, Occupational Injuries and Illnesses - Characteristics Data (2005) [BLS, 2006b].
[b] Based on PPE preventability factors shown in OSHA, 1994 [64 FR 15421].
[c] Injuries are reduced by percentage of employees in State Plan States where employer-payment requirements are already in place. In the case of eye and foot and toe injuries, the adjustment factor is based on distribution of employees by State Plan State category and the fact that nonprescription safety glasses represent 82.9% of safety glass use and safety shoes with metatarsal guards account for 22.3% of safety shoe use.
[d] Percent of preventable injuries among employees paying for their own PPE = 0.4*Ep / (0.4*Ep + 0.175*En), where Ep equals the number of employees paying for their own PPE and En equals the number of employees with employer-paid PPE.
[e] Percent of injuries prevented by requiring employer PPE payment = (0.4 - 0.175)/(0.4) = 0.563 = 56.3%.

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H. Costs of Compliance to Employers

OSHA also used the survey results to estimate the costs to employers of compliance with the final rule. Based on the survey, OSHA estimated, by PPE type, the percentage of PPE users in non-State Plan States whose employers bear the full PPE costs and the percentage of PPE users in non-State Plan States whose employers pay some share of the PPE costs. The remaining employees are those who now pay for their own PPE. Under the final rule, employers will have to assume the PPE costs for these employees and, in addition, make up the share of PPE costs currently borne by employees who pay some portion of the equipment expense.

OSHA also determined unit cost estimates for PPE, based in part on assumptions used in the Preliminary Economic Analysis for the proposed rule (64 FR 15425), updated according to current price data obtained from safety equipment vendors. The unit costs represent annualized equipment costs, based on the prices and the estimated lifetimes of the PPE items, and are as follows:

- Based on prices from a current safety equipment catalog, hardhats costing $8.20, non-prescription safety glasses costing $6.20, and face shields costing $14.90 are all assumed to a have a useful life of one year.
- Chemical splash goggles costing $6.20 and safety goggles costing $4.65 are assumed to be replaced every six months with annualized costs of $13.05 and $9.79, respectively.
- Gloves for abrasion protection costing $8.30 are assumed to be replaced four times a year resulting in an annualized cost of $34.64 (Lab Safety, 2007).
- Welding helmets were assumed to have a life expectancy of 2 years and to cost $40.00; welding goggles were assumed to have a life expectancy of 1 year and to cost $13.62 (these assumptions yield a combined annualized welding unit cost of $36.69). According to OSHA's expert panel, welders need both helmets and goggles at different times of the year.
- Fall protection (body harness or belt, and lanyard) is assumed to have a life expectancy of 2 years, and to cost $93.90 (harnesses), $45.70 (belt), and $51.10 (lanyards), respectively, yielding a combined annualized fall protection unit cost of $80.20.
- Reusable chemical protective clothing is assumed to be replaced every 6 months and to cost $41.30, while chemical protective gloves costing $3.50 are assumed to be replaced every 10 working days (20 times a year), based on prices in the safety equipment catalog (Lab Safety, 2007).
- Paragraph (h)(3) of the revised rule requires employers to pay only for the cost of metatarsal guards, as opposed to the entire footwear item. The annualized cost of external metatarsal guards, assuming replacement every 2 years, is $15.49, based on a unit cost of $28 (Lab Safety Supply, 2007, Omark Safety Online, 2007, Working Person's Store, 2007, Grainger, 2007, Alpenco, 2007).

To derive the incremental cost to employers of compliance with the final rule, for each type of PPE, OSHA (a) multiplied the unit PPE cost by the number of employees in non-State Plan States who now pay for their equipment and (b) added to this, the unit PPE cost multiplied by 1 minus the percentage share of cost now paid by employers who share costs, multiplied by the number of employees in non-State Plan States who now pay some portion of the cost of their PPE.

Costs were adjusted for additional PPE expenditures resulting from employee turnover, based on turnover estimates prepared by the Bureau of Labor Statistics from their Job Openings and Labor Turnover Survey (JOLTS) (BLS, 2004). Two factors determine the impact of turnover on compliance costs. First, if the protective equipment is transferable to other employees and can be reused, turnover does not affect compliance costs. In this case, departing employees' equipment can be passed on to new employees. Second, for non-transferable PPE, the lifetime of the equipment determines the number of additional purchases required for new employees.[29] For example, turnover has less impact for PPE types with short lifetimes, because such equipment is regularly replaced even in the absence of employee turnover. To account for this, OSHA used a factor that was equal to the PPE lifetime (in fractions of a year) for PPE types with lifetimes less than one year and equal to 1 for PPE with lifetimes of one year or greater. For example, suppose that the turnover rate is 10 percent and the lifetime of the equipment is six months (0.5 years). If the hiring of new employees is spread out evenly over the year, half the new employees can be provided with equipment that would have been replaced even without employee turnover. In this case, the additional PPE required as a result of turnover would be 5 percent (10 percent times 0.5).

Table XV–5 presents compliance costs of the final rule to employers, by NAICS code. Table XV–6 summarizes the cost estimates by general category of PPE. Total compliance costs are estimated to be $85.7 million for all establishments. The cost of gloves for abrasion protection is estimated to be $27.8 million, or 32.5 percent of total costs. Chemical protective footwear is estimated to be $17.6 million, or 20.5 percent of total costs. Metatarsal guards for footwear are estimated to be $13.3 million, and gloves for chemical protection $10.2 million, at 15.5 percent and 11.8 percent of total costs respectively.

Several commenters stated that the cost analysis was unrealistic in assessing the costs in their industries. Representatives from the drilling industry (Ex. 12: 91) stated that the analysis failed to take into consideration the high rate of cotton glove usage in their industry, as they reported employees going through approximately one pair a day. OSHA questions whether the gloves described by the commenter constitute PPE; it is not clear for what safety or health purpose the gloves are being worn. If the gloves are being used for the purposes of abrasion protection, more durable and protective alternatives are available than cotton gloves. Regulatory analyses generally assume employers adopt the least-cost option, which may differ from the pattern of employee purchases; this applies to both the quantity (*e.g.,* bulk discounts) and quality of PPE purchased. This analysis assumes employers will use leather or Kevlar gloves for protection, a costlier (per unit), but more durable form of protection.

[29] This analysis assumes the following items are transferable: chemical splash goggles, faceshields, hardhats, metatarsal protection, splash aprons, chemical protective clothing, body harnesses, body belts, lanyards, welding helmets, welding goggles and ear muffs. Non-prescription safety glasses, safety goggles, chemical protective footwear, gloves for abrasive and chemical protection, protective welding clothing and ear inserts were assumed to be non-transferable.

Table XV-5

Cost Summary by PPE Category
All Establishments

NAICS	Industry	Eye and Face Protection	Hardhats	Foot Protection	Gloves and Protective Clothing	Fall Protection	Welding Equipment	Hearing Protection	Total
113	Forestry and Logging	$0	$0	$104,980	$32,272	$0	$0	NA	$137,252
211	Oil and Gas Extraction	$0	$21,363	$111,339	$221,454	$0	$0	NA	$354,156
221	Utilities	$0	$0	$202,653	$150,802	$0	$0	NA	$353,454
236	Construction of Buildings	$874,334	$215,217	$3,234,871	$4,062,288	$0	$0	$185,174	$8,571,884
237	Heavy and Civil Engineering Construction	$0	$32,024	$1,244,008	$1,509,751	$0	$34,634	$71,374	$2,891,791
238	Specialty Trade Contractors	$1,160,117	$594,285	$6,027,045	$9,970,821	$205,483	$119,950	$83,999	$18,161,701
311	Food Manufacturing	$0	$4,949	$301,199	$774,761	$0	$0	NA	$1,080,909
312	Beverage and Tobacco Product Manufacturing	$0	$49	$24,601	$104,340	$0	$0	NA	$128,991
313	Textile Mills	$0	$325	$30,007	$76,052	$0	$0	NA	$106,384
314	Textile Product Mills	$0	$365	$33,703	$85,419	$0	$0	NA	$119,487
315	Apparel Manufacturing	$0	$1,546	$43,290	$122,227	$0	$0	NA	$167,063
316	Leather and Allied Product Manufacturing	$0	$288	$10,280	$23,861	$0	$0	NA	$34,429
321	Wood Product Manufacturing	$0	$6,902	$103,796	$421,776	$0	$0	NA	$532,473
322	Paper Manufacturing	$0	$900	$91,414	$85,788	$0	$0	NA	$178,102
323	Printing and Related Support Activities	$0	$8,721	$156,967	$591,262	$0	$0	NA	$756,950
324	Petroleum and Coal Products Manufacturing	$0	$0	$38,753	$0	$0	$0	NA	$38,753
325	Chemical Manufacturing	$0	$0	$243,943	$0	$0	$0	NA	$243,943
326	Plastics and Rubber Products Manufacturing	$0	$3,325	$164,480	$335,897	$0	$0	NA	$503,702
327	Nonmetallic Mineral Product Manufacturing	$4,838	$46,405	$356,899	$731,597	$108,981	$3,333	NA	$1,252,053
331	Primary Metal Manufacturing	$3,755	$35,847	$306,772	$411,000	$82,175	$8,844	NA	$848,393
332	Fabricated Metal Product Manufacturing	$19,308	$0	$83,815	$301,811	$0	$129,157	NA	$534,091
333	Machinery Manufacturing	$10,787	$0	$103,703	$265,331	$0	$115,716	NA	$495,537
334	Computer and Electronic Product Manufacturing	$7,548	$0	$115,873	$77,203	$0	$32,989	NA	$233,612
335	Electrical Equipment, Appliance, and Component Manufacturing	$3,822	$0	$55,735	$31,833	$0	$13,486	NA	$104,875
336	Transportation Equipment Manufacturing, Except Shipbuilding	$27,123	$888	$233,059	$58,084	$0	$49,653	NA	$368,808
336611	Ship Building and Repairing	$0	$88,106	$105,404	$403,955	$0	$312,983	NA	$910,448
337	Furniture and Related Product Manufacturing	$0	$2,732	$91,366	$278,770	$0	$0	NA	$372,868
339	Miscellaneous Manufacturing	$6,619	$0	$68,252	$154,464	$0	$66,530	NA	$295,865
423	Merchant Wholesalers, Durable Goods	$171,980	$0	$3,068,615	$3,498,563	$4,189,342	$294,634	NA	$11,223,135
424	Merchant Wholesalers, Nondurable Goods	$274,039	$0	$2,400,319	$1,951,440	$2,231,584	$233,258	NA	$7,090,640
441	Motor Vehicle and Parts Dealers	$339,499	$25,191	$760,810	$1,419,636	$0	$564,164	NA	$3,109,301
442	Furniture and Home Furnishings Stores	$0	$0	$90,650	$0	$0	$0	NA	$90,650
443	Electronics and Appliance Stores	$0	$0	$69,029	$0	$0	$0	NA	$69,029
444	Building Material and Garden Equipment and Supplies Dealers	$0	$0	$176,143	$0	$0	$0	NA	$176,143
445	Food and Beverage Stores	$0	$0	$381,288	$0	$0	$0	NA	$381,288
446	Health and Personal Care Stores	$0	$0	$174,957	$0	$0	$0	NA	$174,957
447	Gasoline Stations	$163,724	$12,148	$366,903	$684,624	$0	$272,070	NA	$1,499,470
448	Clothing and Clothing Accessories Stores	$0	$0	$257,647	$0	$0	$0	NA	$257,647
451	Sporting Goods, Hobby, Book, and Music Stores	$0	$0	$94,801	$0	$0	$0	NA	$94,801
452	General Merchandise Stores	$0	$0	$292,923	$0	$0	$0	NA	$292,923
453	Miscellaneous Store Retailers	$0	$0	$126,791	$0	$0	$0	NA	$126,791
454	Nonstore Retailers	$0	$0	$87,730	$0	$0	$0	NA	$87,730
481	Air Transportation	$0	$0	$349,639	$19,408	$0	$0	NA	$369,047
482	Rail Transportation	$0	$0	$51,839	$0	$0	$0	NA	$51,839
483	Water Transportation	$0	$0	$57,448	$4,981	$0	$0	NA	$62,430
484	Truck Transportation	$0	$0	$938,381	$80,832	$0	$0	NA	$1,019,213
485	Transit and Ground Passenger Transportation	$0	$0	$285,437	$39,023	$0	$0	NA	$324,461
486	Pipeline Transportation	$0	$0	$15,309	$26,523	$0	$0	NA	$41,832
487	Scenic and Sightseeing Transportation	$0	$0	$9,251	$1,265	$0	$0	NA	$10,516
488	Support Activities for Transportation, Except Longshoring	$0	$0	$314,736	$22,486	$0	$0	NA	$337,222
488320	Marine Cargo Handling (Longshoring)	$2,453	$2,951	$429,075	$86,307	$0	$765	NA	$521,551

Table XV-5

Cost Summary by PPE Category
All Establishments

NAICS	Industry	Eye and Face Protection	Hardhats	Foot Protection	Gloves and Protective Clothing	Fall Protection	Welding Equipment	Hearing Protection	Total
491	Postal Service	$0	$0	$806,599	$0	$0	$0	NA	$806,599
492	Couriers and Messengers	$0	$0	$378,886	$32,637	$0	$0	NA	$411,524
493	Warehousing and Storage	$0	$0	$370,929	$31,952	$0	$0	NA	$402,881
511	Publishing Industries (except Internet)	$0	$13,019	$226,867	$874,967	$0	$0	NA	$1,114,854
515	Broadcasting (except Internet)	$0	$0	$90,405	$77,975	$0	$0	NA	$168,380
517	Telecommunications	$0	$0	$427,005	$368,293	$0	$0	NA	$795,298
541	Professional, Scientific, and Technical Services	$311,842	$0	$1,285,365	$477,729	$0	$0	NA	$2,074,936
561	Administrative and Support Services	$56,121	$0	$829,444	$1,702,031	$0	$0	NA	$2,587,595
562	Waste Management and Remediation Services	$0	$0	$110,602	$78,184	$0	$0	NA	$188,786
621	Ambulatory Health Care Services	$0	$0	$6,894	$2,187,274	$0	$0	NA	$2,194,168
622	Hospitals	$0	$0	$7,057	$2,238,934	$0	$0	NA	$2,245,991
623	Nursing and Residential Care Facilities	$0	$0	$3,872	$1,228,320	$0	$0	NA	$1,232,191
721	Accommodation	$10,213	$0	$89,449	$233,263	$0	$0	NA	$332,925
722	Food Services and Drinking Places	$0	$0	$1,256,499	$0	$0	$0	NA	$1,256,499
811	Repair and Maintenance	$231,684	$22,875	$457,762	$856,307	$0	$475,823	NA	$2,044,452
812	Personal and Laundry Services	$31,734	$0	$29,695	$626,079	$0	$0	NA	$687,507
	Total	$3,711,539	$1,140,422	$30,865,261	$40,131,852	$6,817,564	$2,727,990	$340,548	$85,735,176

Source: OSHA Office of Regulatory Analysis

Table XV-6

Cost to Employers of PPE Payment Standard by Type of PPE
All Establishments

PPE Category	Annualized Cost ($millions)
Non-Prescription Safety Glasses	$1.7
Safety Goggles	$0.9
Chemical Splash Goggles	$0.3
Face Shields	$0.8
Hardhats	$1.1
Metatarsal Protection	$13.3
Chemical Protective Footwear	$17.6
Gloves for Abrasion Protection	$27.8
Gloves for Chemical Protection	$10.2
Splash Aprons	$0.7
Chemical Protective Clothing	$1.5
Fall Protection	$6.8
Welding Protective Equipment	$2.7
Hearing Protection (Construction Industry	$0.3
Total - All PPE Types	$85.7

Source: OSHA Office of Regulatory Analysis

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In a separate but related issue, this same commenter indicated that, from talking with their members, they thought OSHA's survey had underestimated the share of PPE which employees were paying for. OSHA recognizes that such results are inevitable in relying upon a sample. There will be instances where certain costs are underestimated. Likewise, there will be situations where costs are overestimated. These will tend to offset each other so that there is no systemic bias. For example, based heavily on one survey response, the analysis suggests that employers in wholesale trade are expected to have particularly heavy costs for certain PPE items, notably fall protection. However, in OSHA's professional judgment, uses of these PPE items in this sector are not as high as the survey would suggest. Nonetheless, it would be inconsistent and potentially in error to project a final estimate of costs to the economy without taking into account the full pattern of behavior indicated by the survey.

There may be instances where this analysis either fails to consider certain specialized PPE or PPE use patterns in particular industries that are more expensive than calculated. Alternately,

there will be instances where the analysis has overestimated the cost of PPE for various industries. However, as indicated later in this analysis, given the very limited costs of PPE as a percentage of revenue and profits, its comparatively ''level'' distribution as a per employee cost (i.e., costs as function of the size of employment), as well as the established patterns of employee payment currently for most types of PPE in most industries, cost estimates for particular industries would generally need to be off by well over an order of magnitude before these would begin to raise issues of economic feasibility.

It should also be noted that since this analysis is accepting the survey results at face value, there has been no attempt to correct for situations where OSHA already requires payment for PPE, *e.g.,* the bloodborne pathogens standard and numerous single substance standards. To the extent that employers are not adhering to existing requirements in this regard, these costs are overstated in this rulemaking.

Finally, this analysis makes no attempt to estimate to what extent employees will continue to voluntarily bring their own PPE into the workplace. Rather, this analysis assumes employers will pay 100 percent of the cost of the PPE covered by this rulemaking currently paid for by employees. To the extent employees choose to bring their own PPE into the workplace after the rule is issued, costs will be overstated.

I. Economic Feasibility and RFA Certification

A standard is economically feasible if it does not threaten massive dislocation to or imperil the existence of an industry. See *United Steelworkers of America,* 647 F.2d at 1265. That a standard is financially burdensome or threatens the survival of some companies in an industry is not sufficient to render it infeasible (Id. at 1265). The cost of compliance with an OSHA standard must be analyzed ''in relation to the financial health and profitability of the industry and the likely effect of such costs on unit consumer prices.'' (Id.) [The] practical question is whether the standard threatens the competitive stability of an industry, or whether any intra-industry or inter-industry discrimination in the standard might wreck such stability or lead to undue concentration (Id.) (citing *Industrial Union Dept., AFL–CIO* v. *Hodgson,* 499 F.2d 467 (DC Cir. 1974)). The courts have further observed that granting companies reasonable time to comply may enhance economic feasibility (Id.).

To assess the potential economic impacts of the final rule, OSHA compared the anticipated costs of achieving compliance against revenues and profits of PPE-using establishments in non-State Plan states. Per-establishment average costs were calculated by dividing total compliance costs for each industry by the number of affected establishments. OSHA then compared baseline financial data (from the U.S. Internal Revenue Service, Corporation Source Book, 2004) with total annualized costs of compliance to compute compliance costs as a percentage of revenues and profits. This impact assessment is presented in Table XV–7.

This table is considered a screening analysis because it measures costs as a percentage of pre-tax profits and sales but does not predict impacts on pre-tax profits and sales. This screening analysis is used to determine whether the compliance costs potentially associated with the standard would lead to significant impacts on establishments in the affected industries. The actual impact of the standard on the profits and revenues of establishments in a given industry will depend on the price elasticity of demand for the services sold by establishments in that industry.

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Table XV-7

Cost of the Final PPE Standard as a Percent of Revenues and Profits of Affected Establishments

NAICS	Industry	Number of Affected Establishments	Annual Compliance Cost	Average Cost per Establishment	Average Sales	Pre-Tax Profit Rate	Average Pre-Tax Profit	Costs as a % of Sales	Costs as a % of Profits
113	Forestry and Logging	5,868	$137,252	$23	$1,005,573	4.2%	$42,307	0.002%	0 06%
211	Oil and Gas Extraction	4,054	$354,156	$87	$22,361,933	12 1%	$2,714,551	0.000%	0.00%
221	Utilities	6,602	$353,454	$54	$23,973,182	3 2%	$772,865	0.000%	0.01%
236	Construction of Buildings	91,962	$8,571,884	$93	$2,399,671	4 7%	$112,219	0 004%	0.08%
237	Heavy and Civil Engineering Construction	23,388	$2,891,791	$124	$3,840,250	2 8%	$109,226	0.003%	0 11%
238	Specialty Trade Contractors	211,881	$18,161,701	$86	$1,077,013	3.9%	$41,674	0 008%	0 21%
311	Food Manufacturing	10,206	$1,080,909	$106	$18,268,501	4.7%	$855,536	0.001%	0 01%
312	Beverage and Tobacco Product Manufacturing	975	$128,991	$132	$32,390,819	10.2%	$3,313,667	0.000%	0 00%
313	Textile Mills	1,076	$106,384	$99	$10,739,134	4 2%	$452,364	0.001%	0 02%
314	Textile Product Mills	2,827	$119,487	$42	$4,720,007	6.2%	$293,619	0.001%	0 01%
315	Apparel Manufacturing	2,426	$167,063	$69	$3,280,877	5.2%	$169,915	0.002%	0 04%
316	Leather and Allied Product Manufacturing	565	$34,429	$61	$4,959,106	6.0%	$299,967	0.001%	0 02%
321	Wood Product Manufacturing	6,657	$532,473	$80	$5,703,772	3.7%	$213,101	0.001%	0.04%
322	Paper Manufacturing	2,275	$178,102	$78	$28,249,016	3.5%	$986,834	0.000%	0.01%
323	Printing and Related Support Activities	13,325	$756,950	$57	$2,629,127	4.0%	$104,999	0.002%	0.05%
324	Petroleum and Coal Products Manufacturing	991	$38,753	$39	$106,190,876	6.4%	$6,766,437	0 000%	0 00%
325	Chemical Manufacturing	5,227	$243,943	$47	$36,834,936	9.2%	$3,391,484	0 000%	0.00%
326	Plastics and Rubber Products Manufacturing	6,047	$503,702	$83	$11,777,378	3.3%	$389,895	0 001%	0.02%
327	Nonmetallic Mineral Product Manufacturing	8,747	$1,252,053	$143	$5,976,098	4 1%	$245,996	0.002%	0.06%
331	Primary Metal Manufacturing	2,833	$848,393	$299	$25,538,856	3 6%	$931,152	0 001%	0.03%
332	Fabricated Metal Product Manufacturing	27,474	$534,091	$19	$4,258,734	5 1%	$218,203	0 000%	0.01%
333	Machinery Manufacturing	12,377	$495,537	$40	$9,361,378	3.3%	$307,805	0 000%	0.01%
334	Computer and Electronic Product Manufacturing	5,836	$233,612	$40	$23,277,453	4.9%	$1,149,915	0.000%	0 00%
335	Electrical Equipment, Appliance, and Component Manufacturing	2,845	$104,875	$37	$16,279,903	4.4%	$723,845	0 000%	0.01%
336	Transportation Equipment Manufacturing, Except Shipbuilding	5,968	$368,808	$62	$50,020,205	2.0%	$981,599	0.000%	0.01%
336611	Ship Building and Repairing	334	$910,448	$2,726	$21,297,500	5 4%	$1,154,661	0.013%	0.24%
337	Furniture and Related Product Manufacturing	7,838	$372,868	$48	$3,465,070	4 0%	$138,778	0.001%	0.03%
339	Miscellaneous Manufacturing	13,267	$295,865	$22	$4,228,414	6.9%	$289,772	0.001%	0.01%
423	Merchant Wholesalers, Durable Goods	68,286	$11,223,135	$164	$10,022,837	2.7%	$269,954	0 002%	0.06%
424	Merchant Wholesalers, Nondurable Goods	34,720	$7,090,640	$204	$16,785,204	2 8%	$468,503	0 001%	0.04%
441	Motor Vehicle and Parts Dealers	52,674	$3,109,301	$59	$6,638,715	1 4%	$92,882	0 001%	0 06%
442	Furniture and Home Furnishings Stores	14,136	$90,650	$6	$1,560,965	3.6%	$56,581	0 000%	0.01%
443	Electronics and Appliance Stores	10,527	$69,029	$7	$1,780,973	3.4%	$60,339	0.000%	0.01%
444	Building Material and Garden Equipment and Supplies Dealers	20,529	$176,143	$9	$3,201,366	5 5%	$174,630	0.000%	0.00%
445	Food and Beverage Stores	33,896	$381,288	$11	$3,142,551	1 7%	$52,971	0.000%	0.02%
446	Health and Personal Care Stores	18,454	$174,957	$9	$2,419,698	2 7%	$65,792	0.000%	0.01%
447	Gasoline Stations	50,117	$1,499,470	$30	$2,143,691	0 9%	$19,518	0.001%	0.15%
448	Clothing and Clothing Accessories Stores	31,891	$257,647	$8	$1,228,894	5.0%	$61,861	0 001%	0.01%
451	Sporting Goods, Hobby, Book, and Music Stores	13,035	$94,801	$7	$1,249,339	2.9%	$36,401	0.001%	0.02%
452	General Merchandise Stores	13,294	$292,923	$22	$10,929,045	4 1%	$446,310	0 000%	0 00%
453	Miscellaneous Store Retailers	27,840	$126,791	$5	$765,225	3 5%	$26,474	0 001%	0.02%
454	Nonstore Retailers	10,986	$87,730	$8	$3,497,998	3.8%	$131,710	0.000%	0.01%

Table XV-7

Cost of the Final PPE Standard as a Percent of Revenues and Profits of Affected Establishments

NAICS	Industry	Number of Affected Establishments	Annual Compliance Cost	Average Cost per Establishment	Average Sales	Pre-Tax Profit Rate	Average Pre-Tax Profit	Costs as a % of Sales	Costs as a % of Profits
481	Air Transportation	1,680	$369,047	$220	$17,038,405	1.0%	$162,777	0.001%	0.13%
482	Rail Transportation	3,165	$51,839	$16	NA	3.0%	NA	NA	NA
483	Water Transportation	570	$62,430	$110	$13,420,894	5.1%	$681,697	0.001%	0.02%
484	Truck Transportation	34,083	$1,019,213	$30	$1,649,334	2.5%	$40,769	0.002%	0.07%
485	Transit and Ground Passenger Transportation	4,354	$324,461	$75	$1,154,418	2.1%	$24,706	0.006%	0.30%
486	Pipeline Transportation	1,117	$41,832	$37	$13,278,252	17.1%	$2,264,907	0.000%	0.00%
487	Scenic and Sightseeing Transportation	667	$10,516	$16	$833,175	4.5%	$37,288	0.002%	0.04%
488	Support Activities for Transportation, Except Longshoring	9,482	$337,222	$36	$1,821,786	3.0%	$54,471	0.002%	0.07%
488320	Marine Cargo Handling (Longshoring)	255	$521,551	$2,045	$12,254,954	3.0%	$366,423	0.017%	0.56%
491	Postal Service	32,875	$806,599	$25	NA	NA	NA	NA	NA
492	Couriers and Messengers	3,737	$411,524	$110	$4,129,863	3.0%	$123,483	0.003%	0.09%
493	Warehousing and Storage	3,646	$402,881	$110	$5,685,200	3.9%	$223,283	0.002%	0.05%
511	Publishing Industries (except Internet)	11,445	$1,114,854	$97	$8,000,475	11.8%	$942,153	0.001%	0.01%
515	Broadcasting (except Internet)	3,111	$168,380	$54	$10,878,489	5.5%	$599,857	0.000%	0.01%
517	Telecommunications	15,162	$795,298	$52	$7,987,007	3.3%	$261,588	0.001%	0.02%
541	Professional, Scientific, and Technical Services	136,528	$2,074,936	$15	$1,357,718	6.4%	$87,535	0.001%	0.02%
561	Administrative and Support Services	93,344	$2,587,595	$28	$1,320,756	4.0%	$52,808	0.002%	0.05%
562	Waste Management and Remediation Services	5,784	$188,786	$33	$2,904,678	4.1%	$119,867	0.001%	0.03%
621	Ambulatory Health Care Services	184,880	$2,194,168	$12	$1,129,609	5.3%	$60,066	0.001%	0.02%
622	Hospitals	3,122	$2,245,991	$719	$77,389,822	4.4%	$3,427,341	0.001%	0.02%
623	Nursing and Residential Care Facilities	24,590	$1,232,191	$50	$1,939,554	4.4%	$85,896	0.003%	0.06%
721	Accommodation	14,190	$332,925	$23	$2,283,632	4.4%	$99,629	0.001%	0.02%
722	Food Services and Drinking Places	130,046	$1,256,499	$10	$680,572	4.3%	$29,024	0.001%	0.03%
811	Repair and Maintenance	88,737	$2,044,452	$23	$571,334	4.0%	$22,900	0.004%	0.10%
812	Personal and Laundry Services	45,160	$687,507	$15	$373,170	5.3%	$19,882	0.004%	0.08%
	Total	1,735,985	$85,735,176	$49	$3,544,194	4.2%	$147,246	0.001%	0.03%

Source: OSHA Office of Regulatory Analysis.

Note: Profit rates estimated as the average ratio of net income to total receipts over the years 2002 to 2004 as reported for 2003 by the US Internal Revenue Service, Corporation Source Book, 2004. <<http://www.irs.gov/taxstats/bustaxstats/article/0,,id=149687,00.html>> Data not available at dissagregated levels for all industries and profit rates at more highly aggregated levels are used for such industries. The profit rate for NAICS code 48 (Transportation and Warehousing) is used for NAICS code 492 (Couriers and Messengers).

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Price elasticity refers to the relationship between the price charged for a service and the demand for that service; that is, the more elastic the relationship, the less able an establishment is to pass the costs of compliance through to its customers in the form of a price increase and the more it will have to absorb the costs of compliance from its profits. When demand is inelastic, establishments can recover all the costs of compliance simply by raising the prices they charge for that service; under this scenario, profits are untouched. On the other hand, when demand is elastic, establishments cannot recover all the costs simply by passing the cost increase through in the form of a price increase; instead, they must absorb some of the increase from their profits. In general, ''when an industry is subject to a higher cost, it does not simply swallow it, it raises its price and reduces its output, and in this way shifts a part of the cost to its consumers and a part to its suppliers,'' (*ADA* v. *Secretary of Labor*, 984 F.2d 823, 829 (7th Cir. 1993)).

Specifically, if demand is completely inelastic (i.e., price elasticity is 0), then the impact of compliance costs that amount to 1 percent of revenues would be a 1 percent increase in the price of the product or service, with no decline in demand or in profits. Such a situation would be most likely when there are few, if any, substitutes for the product or service offered by the affected sector or if the products or services of the affected sector account only for a small portion of the income of its consumers. If the demand is perfectly elastic (i.e., the price elasticity is infinitely large), then no increase in price is possible, and before-tax profits would be reduced by an amount equal to the costs of compliance (minus any savings resulting from improved employee health and reduced insurance costs). Under this scenario, if the costs of compliance represent a large percentage of the sector's profits, some establishments might be forced to close. This scenario is highly unlikely to occur, however, because it can only arise when there are other goods and services that are, in the eye of the consumer, perfect substitutes for the goods and services the affected establishments produce or provide.

A common intermediate case would be a price elasticity of one. In this situation, if the costs of compliance amount to 1 percent of revenues, then production would decline by 1 percent and prices would rise by 1 percent. The sector would remain in business and maintain approximately the same profit rate as before but would produce 1 percent less of its services. Consumers would effectively absorb the costs through a combination of increased prices and reduced consumption; this, as the court described in *ADA* v. *Secretary of Labor*, is the more typical case.

As indicated in Table XV–7, the screening analysis indicates the highest revenue and profit impacts are for NAICS 48832, Marine Cargo Handling (0.017 percent of sales and 0.56 percent of profits); NAICS 336611, Ship Building and Repairing (0.013 percent of sales and 0.24 percent of profits); NAICS 238, Specialty Trade Contractors (0.008 percent of sales and .21 percent of profits); and NAICS 485, Transit and Ground Passenger Transportation (0.006 percent of sales and 0.3 percent of profits). Over the entire set of affected industries, the average impact on sales is 0.001 percent and the average impact on profits is 0.03 percent.

Costs of this magnitude do not threaten the financial health of even the most marginal firm. Since most employers in most industries already pay for PPE, the major competitive effect of the rule is to limit any small short-term competitive advantage a few firms gain by not paying for PPE, i.e., by requiring their employees to pay for PPE that other employers in their industry pay for. As shown elsewhere, many firms already pay for PPE because it proves cost-effective. Many firms will find that, when benefits as well as costs are considered, the costs of PPE are more than offset by these benefits.

It should be noted that these impacts could be nine times higher without reaching the level of 5 percent of profits or 1 percent of revenues in any industry. Thus, in spite of uncertainties about costs, this rule does not come close to a level threatening the economic viability of any affected industry. For all the aforementioned reasons, the Agency concludes the final rule is economically feasible.

OSHA also assessed the economic impact of the rule on small firms within each affected industry. Impacts on two size categories of small firms were estimated: Firms with fewer than 500 employees, and firms with fewer than 20 employees. In using 500 employees and 20 employees to characterize firms for this screening analysis for impacts, OSHA is not proposing definitions of small business that are different from those established by the Small Business Administration (SBA) in its ''Table of Size Standards''. The SBA size definitions are NAICS-code specific, and are generally expressed either in terms of number of employees or as annual receipts. Instead, OSHA is using 500 employees and 20 employees as a simple method of screening for significant impacts across the large number of industries potentially affected by the rule. Because the survey used the 500- and 20-employee levels, it is appropriate to retain these levels in the final rule. This approach also avoids the interpolation that would be necessary because the underlying industry profile data do not correspond with the NAICS-specific size categories established by the SBA. (OSHA notes that, for almost all of the industries affected by this rulemaking, the SBA size definitions fall within the 20- to 500-employee range.) OSHA believes that this screening approach will capture any significant impacts on small firms in affected industries.

As a conservative approach, in order to analyze the impact on firms with fewer than 500 employees, OSHA divided the total annual cost in each NAICS for establishments with fewer than 500 employees by the total number of firms with fewer than 500 employees in that NAICS. This approach tends to overstate the impact because some of the costs will be for establishments with fewer than 500 employees that are part of firms with more than 500 employees. These calculated costs per firm with fewer than 500 employees were then compared to average sales per firm with fewer than 500 employees and average pre-tax profits per firm with fewer than 500 employees. The same methodology was used to analyze the impact on firms with fewer than 20 employees.

The results of these analyses are shown in Tables XV–8 and XV–9, which demonstrate that the annualized costs of compliance do not exceed 0.035 percent of sales or 0.65 percent of profits for small firms in any industry, whether defined as fewer than 500 employees or as fewer than 20 employees. It should be noted that these impacts could be 8 times higher without reaching the level of 5 percent of profits or 1 percent of revenues that OSHA uses to determine if a Regulatory Flexibility Act (5 U.S.C. 605) Analysis (RFA) is necessary. Thus, in spite of uncertainties about costs, it is very unlikely that this rule would even rise to the level of needing more detailed analysis beyond this screening analysis. Based on these analyses, in accordance with the Regulatory Flexibility Act (5 U.S.C. 605), OSHA certifies that the rule will not have a significant impact on a substantial number of small entities.

Because for most industries statistically meaningful survey data are available largely only at the three-digit North American Industrial Classification System level, OSHA has conducted this analysis of economic impacts primarily at the 3-digit level. OSHA believes that this level of analysis adequately captures meaningful variations in economic impacts. Further, the costs are so low that even if a sub-industry has substantially higher costs as a percentage of sales or profits, the financial health of that sub-industry would not be in any danger.

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Table XV-8

Cost of the Final PPE Standard to Affected Enterprises with Fewer than 500 Employees as a Percent of Revenues and Profits

NAICS	Industry	Number of Affected Enterprises	Annual Compliance Cost	Average Cost per Enterprise	Average Sales	Pre-Tax Profit Rate	Average Pre-Tax Profit	Costs as a % of Sales	Costs as a % of Profits
113	Forestry and Logging	5,867	$76,390	$13	$878,634	4.2%	$36,966	0.001%	0.04%
211	Oil and Gas Extraction	4,048	$158,282	$39	$4,325,559	12.1%	$525,087	0.001%	0.01%
221	Utilities	6,526	$85,519	$13	$8,093,884	3.2%	$260,937	0.000%	0 01%
236	Construction of Buildings	91,903	$6,814,494	$74	$1,831,558	4.7%	$85,651	0.004%	0.09%
237	Heavy and Civil Engineering Construction	23,319	$1,821,520	$78	$2,829,551	2.8%	$80,479	0.003%	0.10%
238	Specialty Trade Contractors	211,787	$16,969,520	$80	$954,590	3.9%	$36,937	0.008%	0.22%
311	Food Manufacturing	9,901	$233,871	$24	$4,907,874	4.7%	$229,842	0.000%	0.01%
312	Beverage and Tobacco Product Manufacturing	941	$10,412	$11	$4,935,839	10.2%	$504,950	0.000%	0.00%
313	Textile Mills	1,051	$21,687	$21	$4,295,318	4.2%	$180,931	0.000%	0.01%
314	Textile Product Mills	2,784	$36,518	$13	$1,773,417	6.2%	$110,320	0.001%	0.01%
315	Apparel Manufacturing	2,406	$108,936	$45	$1,995,782	5.2%	$103,361	0.002%	0.04%
316	Leather and Allied Product Manufacturing	558	$16,525	$30	$2,714,432	6.0%	$164,191	0.001%	0.02%
321	Wood Product Manufacturing	6,627	$321,831	$49	$3,328,369	3.7%	$124,352	0.001%	0.04%
322	Paper Manufacturing	2,193	$46,334	$21	$8,528,603	3.5%	$297,933	0.000%	0.01%
323	Printing and Related Support Activities	13,265	$509,067	$38	$1,591,273	4.0%	$63,551	0.002%	0 06%
324	Petroleum and Coal Products Manufacturing	960	$10,949	$11	$12,906,826	6.4%	$822,417	0.000%	0.00%
325	Chemical Manufacturing	5,123	$83,965	$16	$8,177,829	9.2%	$752,953	0.000%	0.00%
326	Plastics and Rubber Products Manufacturing	5,954	$168,730	$28	$5,143,226	3.3%	$170,269	0.001%	0.02%
327	Nonmetallic Mineral Product Manufacturing	8,717	$708,900	$81	$3,037,685	4.1%	$125,041	0.003%	0.07%
331	Primary Metal Manufacturing	2,753	$410,936	$149	$7,277,430	3.6%	$265,337	0.002%	0.06%
332	Fabricated Metal Product Manufacturing	27,330	$369,641	$14	$2,500,476	5.1%	$128,116	0.001%	0.01%
333	Machinery Manufacturing	12,218	$280,229	$23	$3,658,214	3.3%	$120,283	0.001%	0.02%
334	Computer and Electronic Product Manufacturing	5,670	$71,955	$13	$5,100,513	4.9%	$251,967	0.000%	0.01%
335	Electrical Equipment, Appliance, and Component Manufacturing	2,761	$31,853	$12	$4,956,285	4.4%	$220,369	0.000%	0.01%
336	Transportation Equipment Manufacturing, Except Shipbuilding	5,729	$87,817	$15	$5,696,194	2.0%	$111,782	0.000%	0.01%
336611	Ship Building and Repairing	324	$124,380	$384	$3,994,240	5.4%	$216,551	0.010%	0.18%
337	Furniture and Related Product Manufacturing	7,776	$185,455	$24	$1,826,548	4.0%	$73,154	0.001%	0.03%
339	Miscellaneous Manufacturing	13,188	$194,889	$15	$1,991,906	6.9%	$136,505	0.001%	0.01%
423	Merchant Wholesalers, Durable Goods	68,224	$7,381,605	$108	$4,608,013	2.7%	$124,112	0.002%	0.09%
424	Merchant Wholesalers, Nondurable Goods	34,574	$4,223,646	$122	$7,283,267	2.8%	$203,288	0.002%	0.06%
441	Motor Vehicle and Parts Dealers	52,671	$2,430,154	$46	$6,631,399	1.4%	$92,780	0.001%	0.05%
442	Furniture and Home Furnishings Stores	14,134	$58,539	$4	$1,165,217	3.6%	$42,236	0.000%	0.01%
443	Electronics and Appliance Stores	10,525	$28,942	$3	$902,959	3.4%	$30,592	0.000%	0.01%
444	Building Material and Garden Equipment and Supplies Dealers	20,528	$98,387	$5	$1,951,142	5.5%	$106,432	0.000%	0.00%
445	Food and Beverage Stores	33,825	$134,360	$4	$1,169,933	1.7%	$19,720	0.000%	0.02%
446	Health and Personal Care Stores	18,452	$59,863	$3	$1,462,224	2.7%	$39,758	0.000%	0.01%
447	Gasoline Stations	50,117	$985,808	$20	$1,710,900	0.9%	$15,578	0.001%	0.13%
448	Clothing and Clothing Accessories Stores	31,886	$68,478	$2	$683,242	5.0%	$34,393	0.000%	0.01%
451	Sporting Goods, Hobby, Book, and Music Stores	13,033	$43,852	$3	$665,846	2.9%	$19,400	0.001%	0.02%
452	General Merchandise Stores	13,120	$8,850	$1	$765,821	4.1%	$31,274	0.000%	0.00%
453	Miscellaneous Store Retailers	27,838	$93,569	$3	$556,561	3.5%	$19,255	0.001%	0.02%
454	Nonstore Retailers	10,969	$57,175	$5	$1,623,386	3.8%	$61,126	0.000%	0.01%
481	Air Transportation	1,634	$25,122	$15	$2,875,941	1.0%	$27,475	0.001%	0.06%
483	Water Transportation	565	$15,675	$28	$4,964,009	5.1%	$252,140	0.001%	0.01%
484	Truck Transportation	34,009	$62,430	$2	$1,006,738	2.5%	$24,885	0.000%	0.01%
485	Transit and Ground Passenger Transportation	4,347	$213,357	$49	$763,429	2.1%	$16,338	0.006%	0 30%
486	Pipeline Transportation	1,113	$3,775	$3	$11,652,554	17.1%	$1,987,607	0.000%	0.00%

Table XV-8

Cost of the Final PPE Standard to Affected Enterprises with Fewer than 500 Employees as a Percent of Revenues and Profits

NAICS	Industry	Number of Affected Enterprises	Annual Compliance Cost	Average Cost per Enterprise	Average Sales	Pre-Tax Profit Rate	Average Pre-Tax Profit	Costs as a % of Sales	Costs as a % of Profits
487	Scenic and Sightseeing Transportation	667	$8,138	$12	$711,416	4.5%	$31,839	0.002%	0.04%
488	Support Activities for Transportation, Except Longshoring	9,469	$10,516	$1	$1,134,517	3.0%	$33,922	0.000%	0.00%
488320	Marine Cargo Handling (Longshoring)	247	$23,025	$93	$4,317,396	3.0%	$129,090	0.002%	0.07%
492	Couriers and Messengers	3,698	$24,606	$7	$739,893	3.0%	$22,123	0.001%	0.03%
493	Warehousing and Storage	3,590	$51,667	$14	$1,924,313	3.9%	$75,576	0.001%	0.02%
511	Publishing Industries (except Internet)	11,326	$117,568	$10	$2,233,975	11.8%	$263,078	0.000%	0.00%
515	Broadcasting (except Internet)	3,096	$71,654	$23	$4,263,639	5.5%	$235,104	0.001%	0.01%
517	Telecommunications	14,994	$78,342	$5	$2,836,095	3.3%	$92,887	0.000%	0.01%
541	Professional, Scientific, and Technical Services	135,989	$111,782	$1	$812,927	6.4%	$52,411	0.000%	0.00%
561	Administrative and Support Services	92,895	$546,004	$6	$705,173	4.0%	$28,195	0.000%	0.02%
562	Waste Management and Remediation Services	5,759	$140,768	$24	$1,457,912	4.1%	$60,163	0.003%	0.04%
621	Ambulatory Health Care Services	184,223	$8,221	$0	$874,636	5.3%	$46,508	0.000%	0.00%
622	Hospitals	2,018	$1,091	$1	$13,064,752	4.4%	$578,595	0.000%	0.00%
623	Nursing and Residential Care Facilities	24,471	$3,451	$0	$1,462,344	4.4%	$64,762	0.000%	0.00%
721	Accommodation	14,073	$73,581	$5	$923,380	4.4%	$40,285	0.000%	0.01%
722	Food Services and Drinking Places	130,020	$3,872	$0	$520,342	4.3%	$22,191	0.000%	0.00%
811	Repair and Maintenance	88,727	$269,714	$3	489025.4632	4.0%	$19,601	0.000%	0.02%
812	Personal and Laundry Services	45,153	$24,234	$1	$298,986	5.3%	$15,930	0.000%	0.00%
	Total	1,693,654	$47,522,424	$28	$1,722,987	5.4%	$93,843	0.002%	0.03%

Source: OSHA Office of Regulatory Analysis.

Note: Profit rates estimated as the average ratio of net income to total receipts over the years 2002 to 2004 as reported for 2003 by the US Internal Revenue Service, Corporation Source Book, 2004. <<http://www.irs.gov/taxstats/bustaxstats/article/0,,id=149687,00.html>> Data not available at dissagregated levels for all industries and profit rates at more highly aggregated levels are used for such industries. The profit rate for NAICS code 48 (Transportation and Warehousing) is used for NAICS code 492 (Couriers and Messengers).

Table XV-9

Cost of the Final PPE Standard to Affected Enterprises with Fewer than 20 Employees as a Percent of Revenues and Profits

NAICS	Industry	Number of Affected Enterprises	Annual Compliance Cost	Average Cost per Enterprise	Average Sales	Pre-Tax Profit Rate	Average Pre-Tax Profit	Costs as a % of Sales	Costs as a % of Profits
113	Forestry and Logging	5,492	$65,904	$12	$620,854	4.2%	$26,121	0.002%	0.05%
211	Oil and Gas Extraction	3,560	$36,720	$10	$1,466,795	12.1%	$178,057	0.001%	0.01%
221	Utilities	4,632	$27,418	$6	$1,743,811	3.2%	$56,218	0.000%	0.01%
236	Construction of Buildings	85,711	$4,208,335	$49	$937,766	4.7%	$43,854	0.005%	0.11%
237	Heavy and Civil Engineering Construction	18,706	$698,586	$37	$895,800	2.8%	$25,479	0.004%	0.15%
238	Specialty Trade Contractors	191,885	$6,348,800	$33	$473,096	3.9%	$18,306	0.007%	0.18%
311	Food Manufacturing	6,137	$176,200	$29	$948,240	4.7%	$44,407	0.003%	0.06%
312	Beverage and Tobacco Product Manufacturing	595	$6,616	$11	$972,802	10.2%	$99,520	0.001%	0.01%
313	Textile Mills	591	$14,239	$24	$1,031,710	4.2%	$43,459	0.002%	0.06%
314	Textile Product Mills	2,096	$29,451	$14	$629,738	6.2%	$39,174	0.002%	0.04%
315	Apparel Manufacturing	1,743	$91,259	$52	$487,343	5.2%	$25,239	0.011%	0.21%
316	Leather and Allied Product Manufacturing	395	$13,099	$33	$594,842	6.0%	$35,981	0.006%	0.09%
321	Wood Product Manufacturing	4,351	$235,255	$54	$849,548	3.7%	$31,740	0.006%	0.17%
322	Paper Manufacturing	687	$22,129	$32	$1,623,126	3.5%	$56,701	0.002%	0.06%
323	Printing and Related Support Activities	10,496	$461,922	$44	$513,248	4.0%	$20,498	0.009%	0.21%
324	Petroleum and Coal Products Manufacturing	612	$8,102	$13	$2,933,402	6.4%	$186,915	0.000%	0.01%
325	Chemical Manufacturing	2,477	$75,515	$30	$1,892,436	9.2%	$174,241	0.002%	0.02%
326	Plastics and Rubber Products Manufacturing	2,719	$115,425	$42	$1,087,752	3.3%	$36,011	0.004%	0.12%
327	Nonmetallic Mineral Product Manufacturing	5,998	$234,175	$39	$884,178	4.1%	$36,396	0.004%	0 11%
331	Primary Metal Manufacturing	1,368	$71,739	$52	$1,188,672	3.6%	$43,339	0.004%	0.12%
332	Fabricated Metal Product Manufacturing	18,666	$347,662	$19	$688,549	5.1%	$35,279	0.003%	0.05%
333	Machinery Manufacturing	7,684	$269,420	$35	$904,513	3.3%	$29,741	0.004%	0.12%
334	Computer and Electronic Product Manufacturing	3,311	$65,497	$20	$1,198,167	4.9%	$59,190	0.002%	0.03%
335	Electrical Equipment, Appliance, and Component Manufacturing	1,497	$28,402	$19	$1,155,603	4.4%	$51,381	0.002%	0.04%
336	Transportation Equipment Manufacturing, Except Shipbuilding	3,396	$78,596	$23	$1,185,120	2.0%	$23,257	0.002%	0.10%
336611	Ship Building and Repairing	201	$57,512	$286	$822,329	5.4%	$44,583	0.035%	0.64%
337	Furniture and Related Product Manufacturing	5,957	$159,628	$27	$516,205	4.0%	$20,674	0.005%	0.13%
339	Miscellaneous Manufacturing	10,387	$186,258	$18	$555,131	6.9%	$38,043	0.003%	0.05%
423	Merchant Wholesalers, Durable Goods	54,337	$4,181,996	$77	$2,187,586	2.7%	$58,920	0.004%	0.13%
424	Merchant Wholesalers, Nondurable Goods	26,685	$2,322,617	$87	$2,797,035	2.8%	$78,070	0.003%	0.11%
441	Motor Vehicle and Parts Dealers	42,341	$675,051	$16	$1,472,524	1.4%	$20,602	0.001%	0.08%
442	Furniture and Home Furnishings Stores	12,087	$39,031	$3	$731,834	3.6%	$26,527	0.000%	0.01%
443	Electronics and Appliance Stores	9,255	$21,855	$2	$615,204	3.4%	$20,843	0.000%	0.01%
444	Building Material and Garden Equipment and Supplies Dealers	16,031	$57,654	$4	$971,974	5.5%	$53,020	0.000%	0.01%
445	Food and Beverage Stores	23,330	$82,472	$4	$637,106	1.7%	$10,739	0.001%	0.03%
446	Health and Personal Care Stores	14,023	$41,694	$3	$1,108,089	2.7%	$30,129	0.000%	0.01%
447	Gasoline Stations	46,531	$552,494	$12	$1,285,874	0.9%	$11,708	0.001%	0.10%
448	Clothing and Clothing Accessories Stores	26,754	$49,583	$2	$491,050	5.0%	$24,719	0.000%	0.01%
451	Sporting Goods, Hobby, Book, and Music Stores	10,788	$30,864	$3	$460,473	2.9%	$13,416	0.001%	0.02%
452	General Merchandise Stores	6,836	$7,607	$1	$449,405	4.1%	$18,352	0.000%	0.01%
453	Miscellaneous Store Retailers	24,643	$71,566	$3	$424,394	3.5%	$14,683	0.001%	0.02%
454	Nonstore Retailers	9,469	$31,579	$3	$816,088	3.8%	$30,728	0.000%	0.01%
481	Air Transportation	1,107	$5,780	$5	$1,022,779	1.0%	$9,771	0.001%	0.05%
483	Water Transportation	409	$2,682	$7	$1,288,994	5.1%	$65,473	0.001%	0.01%
484	Truck Transportation	28,485	$57,448	$2	$461,400	2.5%	$11,405	0.000%	0.02%
485	Transit and Ground Passenger Transportation	2,931	$41,942	$14	$290,669	2.1%	$6,221	0.005%	0.23%
486	Pipeline Transportation	907	$762	$1	$6,477,844	17.1%	$1,104,943	0.000%	0.00%

Table XV-9

Cost of the Final PPE Standard to Affected Enterprises with Fewer than 20 Employees as a Percent of Revenues and Profits

NAICS	Industry	Number of Affected Enterprises	Annual Compliance Cost	Average Cost per Enterprise	Average Sales	Pre-Tax Profit Rate	Average Pre-Tax Profit	Costs as a % of Sales	Costs as a % of Profits
487	Scenic and Sightseeing Transportation	556	$3,013	$5	$330,185	4.5%	$14,777	0.002%	0.04%
488	Support Activities for Transportation, Except Longshoring	8,021	$9,251	$1	$625,223	3.0%	$18,694	0.000%	0.01%
488320	Marine Cargo Handling (Longshoring)	132	$1,850	$14	$1,009,221	3.0%	$30,176	0.001%	0.05%
492	Couriers and Messengers	2,655	$13,739	$5	$372,873	3.0%	$11,149	0.001%	0.05%
493	Warehousing and Storage	2,348	$9,780	$4	$783,528	3.9%	$30,773	0.001%	0.01%
511	Publishing Industries (except Internet)	8,480	$68,067	$8	$604,556	11.8%	$71,194	0.001%	0.01%
515	Broadcasting (except Internet)	2,113	$31,134	$15	$667,750	5.5%	$36,821	0.002%	0.04%
517	Telecommunications	11,854	$42,235	$4	$955,644	3.3%	$31,299	0.001%	0.01%
541	Professional, Scientific, and Technical Services	121,574	$111,782	$1	$420,232	6.4%	$27,093	0.000%	0.00%
561	Administrative and Support Services	78,758	$287,094	$4	$334,103	4.0%	$13,358	0.000%	0.03%
562	Waste Management and Remediation Services	4,472	$60,964	$14	$623,452	4.1%	$25,728	0.003%	0.05%
621	Ambulatory Health Care Services	162,210	$0	$0	$540,452	5.3%	$28,738	0.000%	0.00%
622	Hospitals	353	$0	$0	$1,420,752	4.4%	$62,920	0.000%	0.00%
623	Nursing and Residential Care Facilities	13,581	$0	$0	$311,136	4.4%	$13,779	0.000%	0.00%
721	Accommodation	10,263	$66,524	$6	$421,782	4.4%	$18,401	0.000%	0.04%
722	Food Services and Drinking Places	75,325	$0	$0	$262,489	4.3%	$11,194	0.000%	0.00%
811	Repair and Maintenance	84,192	$105,422	$1	369413.7776	4.0%	$14,807	0.000%	0.01%
812	Personal and Laundry Services	42,328	$0	$0	$210,323	5.3%	$11,206	0.000%	0.00%
	Total	1,387,516	$23,219,392	$17	$705,543	4.1%	$29,242	0.002%	0.06%

Source: OSHA Office of Regulatory Analysis.

Note: Profit rates estimated as the average ratio of net income to total receipts over the years 2002 to 2004 as reported for 2003 by the US Internal Revenue Service, Corporation Source Book, 2004. <<http://www.irs.gov/taxstats/bustaxstats/article/0,,id=149687,00.html>> Data not available at dissagregated levels for all industries and profit rates at more highly aggregated levels are used for such industries. The profit rate for NAICS code 48 (Transportation and Warehousing) is used for NAICS code 492 (Couriers and Messengers).

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J. Social Costs and Social Benefits

For the most part, the rule will simply shift the cost of purchasing PPE from employees to employers. However, the record demonstrates that employer payment will also result in more PPE used and improved PPE use at the workplace. This will lead to social costs and social benefits. For purposes of estimating the social costs, OSHA assumed, based largely on expert opinion as discussed above in the benefits analysis, that employees lack the proper PPE an average of 17.5 percent of the time when employers pay, and 40 percent of the time when employees pay. The social cost represents the cost of closing the gap between the two numbers; the remainder of the employers' cost is merely an economic transfer from the employee to employer. Thus, the social costs of requiring employer payment would represent the following portion of the total cost to employers: 1–((1–0.4)/(1–0.175)), where (1–0.4)/(1–0.175) represents the relative likelihood that employees are actually wearing the proper PPE. If the relative likelihood were 1 (the numerator and denominator equal), there would be no social cost. Calculated out, this becomes 1–(0.6/0.825), 1–0.727, or 27.3 percent. As indicated in Table XV–10 this suggests that about $23.4 million out of the total $85.7 million estimated costs to employers are social costs.

In the case of comparing social costs and social benefits, the magnitude of social costs and benefits are closely linked—the benefits of reducing the injuries are dependent upon the purchase and use of PPE. To assess the benefits of the final rule, OSHA estimated that PPE is misused or not used at all 40 percent of the time when employees pay and 17.5 percent of the time when employers pay. There is necessarily uncertainty in these estimates. Accordingly, OSHA has performed an analysis of the social costs and social benefits of the rule given different sets of assumptions, commonly referred to as a sensitivity analysis, in this case with respect to different rates of PPE misuse/nonuse. The Agency found that if the difference in PPE usage patterns between the employee- and employer-pay groups is much smaller than OSHA's assumption, the social benefits are still several times larger than the social costs.

If one assumed the gap between the two groups were only half of what was assumed in the benefits estimate based on direct cost (i.e., assume employees paying for their own PPE were lacking the proper PPE 28.75 percent of the time, and employees who had the PPE paid for by their employer were lacking it 17.5 percent of the time, meaning a difference of 11.25 percent, as opposed to 22.5 percent in main estimate), OSHA estimates total social costs of $11.7 million and total social benefits of $125.3 million, for a net benefit of $113.6 million. If the ''employer payment effect'' were only 10 percent of the main benefits estimate (i.e., assume employees paying for their own PPE were lacking the proper PPE 19.75 percent of the time, and employees who had the PPE paid for by their employer were lacking it 17.5 percent of the time), the social costs would be only $2.3 million; the remainder of the cost to employers would simply be a transfer. The estimated benefits would be $27.6 million, for a net benefit of $25.3 million.[30]

OSHA performed an analysis of these alternate assumptions incorporating the estimated value of willingness to pay for injuries avoided, estimated at approximately $50,000 per lost workday injury (Viscusi 1993, Viscusi & Aldy 2003). As shown in Table XV–11, OSHA estimates the net social benefits of the rule to be $334 million using the main benefits estimate, and $185 and $39 million using the alternate 50 percent and 10 percent assumptions on the ''employer payment effect''.

The Agency also examined the effect of doubling the estimated share of PPE employees currently pay for to examine the consequences of the survey underestimating the employees' share of payment. Both the costs of the standard to employers and the social costs would double—the estimated social costs would increase to $47 million. The estimated annual benefits of the standard would increase to 37,188 injuries and 3.4 fatalities prevented, producing an estimated social value of $609 million, and raising the net social benefit to $562 million. Therefore, the Agency concludes that if the survey did underestimate the current employee-paying share, the net benefits of the standard would be larger than OSHA's primary estimate.

As discussed previously, these sensitivity analyses of the net social benefits are intended to explore the implications of the uncertainties outlined previously in this analysis. Nonetheless, under any scenario, the rule will produce a high ratio of benefits to costs and positive net benefits; the primary uncertainty is the magnitude of the social costs and benefits.

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[30] Total social benefits include fatalities prevented, which are valued at $7 million per fatality avoided, using the willingness to pay approach [Viscusi, 2003, p. 763].

TABLE XV-10

ANNUAL SOCIAL COSTS, BENEFITS, SOCIAL AND NET BENEFITS OF PPE PAYMENT RULE BASED ON DIRECT COST OF INJURIES

Benefit Assumption*	Social Cost ($millions)	Injuries Avoided	Fatalities Avoided	Monetized Benefits** ($millions)	Net Benefits
Base (22.5%)	$23.4	21,798	1.7	$228.3	$204.9
50% of base (11.25%)	$11.7	12,019	0.9	$125.9	$114.2
10% of base (2.25%)	$2.3	2,662	0.2	$27.9	$25.6

*Assumed difference in usage of appropriate PPE, when employers pay, compared to employees.
Base assumption: 40% of employees are lacking appropriate PPE when employees pay vs. 17.5% when employers pay, or a difference of 22.5%. Alternate assumptions: 28.75% vs. 17.5%; 19.75% vs. 17.5%.
**Direct cost savings estimated at $9,928 per injury; willingness-to-pay benefit of $7 milliion per fatality avoided

TABLE XV-11

ANNUAL SOCIAL COSTS, BENEFITS, SOCIAL AND NET BENEFITS OF PPE PAYMENT RULE BASED ON WILLINGNESS TO PAY TO AVOID INJURIES

Benefit Assumption*	Social Cost ($millions)	Injuries Avoided	Fatalities Avoided	Monetized Benefits** ($millions)	Net Benefits
Base (22.5%)	$23.4	21,798	1.7	$349.0	$325.6
50% of base (11.25%)	$11.7	12,019	0.9	$192.3	$180.6
10% of base (2.25%)	$2.3	2,662	0.2	$42.5	$40.2

*Assumed difference in usage of appropriate PPE, when employers pay, compared to employees.
Base assumption: 40% of employees are lacking appropriate PPE when employees pay vs. 17.5% when employers pay, or a difference of 22.5%. Alternate assumptions: 28.75% vs. 17.5%; 19.75% vs. 17.5%.
**Willingess to pay to avoid injuries estimated at $50,000 per lost workday injury, $7 milliion per fatality avoided. The benefits are therefore based on a subset of all injuries: 6743, 3714 or 820 lost workday cases with days away from work in the respective scenarios.

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K. Direct Savings Resulting From the Reduction in Injuries Attributable to the Final Rule

This section evaluates the direct savings associated with the injuries prevented by the final rule. It should be noted that occupational injuries impose an enormous burden on society in addition to the direct outlays of money for medical expenses, lost wages and production, and other purely economic effects. This section of the analysis does not attempt to place a monetary value on the pain and suffering experienced by employees and their families, loss of esteem, disruption of family life, feelings of anger and helplessness and other effects. However, many of these considerations go into the monetary calculation of the social benefits of injury reduction used in the social costs and benefits above (see Section J). In

addition, there are some purely economic costs that have not been captured in this analysis, such as legal costs to employees and lost output at home.

Some aspects of the burden of occupational injuries can be quantified in monetary terms. These aspects of the problem of work-related injuries and illnesses can be measured by the losses experienced by employees and by the other costs that are externalized to the rest of society. One consequence of the failure of PPE programs to prevent job-related injuries is the growth of enormously expensive income maintenance programs such as workers' compensation and long-term disability programs. These costs impose a burden on society separate from and in addition to the human toll in pain and suffering caused by workplace-related injuries.

One measure of some of the losses associated with lost time due to work-related injuries is the lost output of the employee, measured by the value the market places on his or her time. This value is measured as the employee's total wage plus fringe benefits. Other costs include: (1) Medical expenses, (2) costs of workers' compensation insurance administration, and (3) indirect costs to employers (other than those for workers' compensation administration).

a. Lost Output

OSHA estimates the value of lost output by starting with workers' compensation indemnity payments and then adding other losses associated with work-related injuries. The Agency follows four steps to arrive at a value for lost output:

(1) Calculate PPE-related injury in terms of workers' compensation indemnity payments;

(2) Add the difference between the value of these indemnity payments and the employee's after-tax income, based on various studies comparing workers' compensation payments with after-tax income. This step estimates the magnitude of lost after-tax income;

(3) Add the estimated value of taxes, based on the typical value of taxes as a percentage of after-tax income. This step estimates the value of total income lost; and

(4) Add the value of fringe benefits, based on data on fringe benefits as a percentage of total income. This step estimates the total market value of the lost output.

In this approach, injuries are clearly undervalued, because OSHA assumes that the value associated with injuries is the same as the value of claims for workers' compensation. An analysis of 1993 workers' compensation claim data from the Argonaut Insurance Company, updated to reflect current dollars using a ratio of claims value to total injuries, shows that the weighted average claim value of the injuries shown in Table XV–3 is $3,833. Based on nationwide estimates from the U.S. Social Security Administration, an average of 53 percent of these payments are paid out for indemnity, and the remaining 47 percent are paid out for medical costs (NASI, 2006).

b. Indemnity/Lost Income

Workers' compensation indemnity payments typically take two forms: temporary total disability payments, which cover absences from work prior to the stabilization of the condition, and permanent disability payments, which compensate the employee for the long-term effects of a stabilized condition. On a nationwide basis, the National Academy of Social Insurance (NASI) estimates that permanent disability payments account for 79 percent of all indemnity payments. Considering all payments, those cases classified as permanent partial disability account for 67 percent of the total, while those classified as permanent total disability account for 12 percent of the total. The remaining indemnity payments are for temporary total disability cases and account for 21 percent of the total (NASI, 2006).

The extent to which income is replaced by each type of indemnity payment (i.e., temporary or permanent) differs. First, although rules vary by State, temporary disability income is designed in most States to replace two-thirds of the employee's before-tax income. However, most States place a maximum and minimum on the amount of money paid out to the employee, regardless of his/her actual former income. Studies by the Worker Compensation Research Institute (WCRI) show that temporary total disability payments replace between 80 to 100 percent of the after-tax income of the majority of employees (WCRI, 1993). From 3 to 44 percent of the employees receive less than 80 percent of their after-tax income, and from 0 to 16 percent receive more than 100 percent of their after-tax income. Unfortunately, WCRI does not provide estimates of average replacement rates as they vary significantly by State for a number of reasons, including policy differences, injury rates, employee demographics, and wage and price variations (NASI, 2006). However, based on these data, it seems reasonable to assume that, on average, employees receive no more than 90 percent of their after-tax income while on temporary disability.

On the other hand, data show that permanent partial disability payments replaced 75 percent of income lost in Wisconsin, 58 percent in Florida, and 45 percent in California [Berkowitz and Burton]. OSHA uses the simple average of these three—59 percent—to estimate the extent of after-tax income replacement for permanent partial disabilities.[31]

Based on these data and the NASI estimates of the distribution of payments by type, OSHA estimated after-tax income from the total indemnities paid for injuries preventable by the proposed rule by assuming payments for temporary disabilities account for 21 percent of all PPE-preventable indemnity payments and replace 90 percent of after-tax income and that payments for permanent disabilities account for 79 percent of PPE-preventable indemnity payments and replace approximately 60 percent of after-tax income.

c. Fringe Benefits

In addition to after-tax income loss, lost output includes the value of taxes that would have been paid by the injured employee and fringe benefits that would have been paid by the employee's employer. Total income-based taxes (individual Social Security payments, Federal income tax, and State income tax) paid were assumed to be 30 percent of total income.[32] Fringe benefits were estimated as 40.4 percent of before-tax income, based on the average fringe benefit data provided by BLS (BLS, 2005).

Tables XV–12 and XV–13 apply the estimation parameters developed above to calculate the total value of the lost output associated with temporary and permanent disabilities, respectively. As shown, the total value of the lost output associated with potentially avoidable approved workers' compensation claims for temporary total disability is estimated at $17.3 million, and that associated with permanent disabilities (partial and total) at $93.9 million a

[31] The use of a simple average rather than a population-weighted average results in a lower estimate of income loss and is thus a more conservative approach.

[32] A CBO (CBO, 2004) study estimated the current effective Federal tax rate, averaged over all income levels, at 21.6% (Table 2, p. 18). To this Social Security taxes and state and local income taxes must be added, so that the number 30% should be a conservative estimate in most cases.

year. By preventing injuries that lead to disability, the PPE payment rule will also prevent this lost output.

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Table XV-12

Annual Value of Lost Output Associated With Temporary Total Disabilities Resulting from PPE-Preventable Injuries

Type of Benefit	Injuries/Cost Prevented
Total Number of PPE-Preventable Cases Annually	21,798
Weighted Average Total Cost per Claim	$3,833
Indemnity Share of Payment (53% of Total Claim)	$2,035
Medical Share of Payment (47% of Total Claim)	$1,798
Value of Temporary Total Disability Indemnity Payments [a]	$9,317,009
Lost-After-Tax Income Above the Value of Indemnity Payments [b]	$724,656
Lost Value of Tax Payments [c]	$3,105,670
Lost Value of Fringe Benefits [d]	$4,182,302
TOTAL	$17,329,637

Source: OSHA Office of Regulatory Analysis.

[a] Number of cases * indemnity payments per case * 21 percent indemnity value share attributable to temporary total disability.
[b] Temporary total disability payments have been estimated to equal 90 percent of lost after-tax income.
[c] Taxes are estimated to equal 30 percent of before-tax income.
[d] Fringe benefits equal 40.4 percent of wage income. BLS, *Employer Cost for Employee Compensatio* n (4th quarter, 2004)

Table XV-13

Annual Value of Lost Output Associated With Permanent Partial Disabilities Resulting from PPE-Preventable Injuries

Type of Benefit	Injuries/Costs Prevented
Number of PPE-Preventable Injury Cases	21,798
Value of Indemnity Payments (Permanent Partial) [a]	$35,049,702
Lost-After-Tax Income Above the Value of Indemnity Payments [b]	$17,049,601
Lost Value of Tax Payments [c]	$17,821,882
Lost Value of Fringe Benefits [d]	$24,000,135
TOTAL	$93,921,320

Source: OSHA Office of Regulatory Analysis.

[a] Number of cases prevented * indemnity payments per claim * 79 percent value share attributable to permanent partial disability. Includes 12 percent of all cases classified as "total permanent disabilty".
[b] Permanent partial disability payments are estimated to equal 59 percent of the value of lost after-tax income.
[c] Taxes are estimated to be 30 percent of before tax income.
[d] Fringe benefits equal 40.4 percent of wage income. BLS, *Employer Cost for Employee Compensatio* n (4th quarter, 2004)

BILLING CODE 4510–26–C

d. Medical

Most elements of medical costs are included in the share of payments paid for medical costs, estimated to be 47 percent of the cost of the claims. However, medical costs do not include any first-aid costs incurred by the employer and, in some cases, costs for transportation to a medical facility. It should be noted that costs for treating injuries will remain relatively constant, regardless of who is actually paying for the medical care (i.e., the employer through workers' compensation, or a medical insurer). As presented in Table XV–14, OSHA estimates the medical costs of injuries preventable by the proposed standard to be $39.2 million a year.

e. Administrative Costs

The administrative costs of workers' compensation insurance include any funds spent directly on claims adjustment, as well as all other administrative costs incurred by the insurer in conjunction with experienced losses.

OSHA calculates the administrative costs of PPE-related injury claims based on the estimates of benefits and costs to employers for workers' compensation as provided by the National Academy of Social Insurance (NASI, 2006). Table XV–15 presents administrative costs as a percent of the value of claims, by type of insurer. Administrative costs for private carriers, State funds, and self-insured companies are estimated to be 71.8 percent, 73.5 percent, and 16.2 percent, respectively. To estimate the aggregate value of the administrative costs of insurance, these costs were weighted by the value of the benefit payments made by each type of insurer. The aggregate value of the administrative costs of workers' compensation insurance is estimated to be 58.1 percent of the value of claims. The total value of claims includes both the indemnity and medical portions of insurance company payments. As indicated in Table XV–14, the Agency estimates that the revisions to the PPE standard will save $48.5 million annually in administrative costs.

It should be noted that cases that fall outside the workers' compensation system will typically have administrative costs associated with them—indeed, to the extent they are borne by private medical insurers, they will carry relatively greater administrative expenses than the average estimated here.

Table XV-14

Annual Social Benefits Associated With The Reduction in Injuries as a Result of Employer Payment for PPE

Type of Benefit	Injuries/Costs Prevented
Lost Output Associated with Temporary Disabilities [a]	$17,329,637
Lost Output Associated with Permanent Disabilities [b]	$93,921,320
Medical Costs [c]	$39,190,595
Insurance Administrative Costs [d]	$48,546,795
Indirect Costs [e]	$17,379,920
TOTAL	$216,368,267

Source: OSHA Office of Regulatory Analysis.

[a] Derived from Table VI-12
[b] Derived from Table VI-13
[c] Calculated by multiplying the number of injuries by the value of medical payments presented in Table VI-4
[d] Calculated by multiplying the total value of claims times 58.1 percent.
[e] Calculated by multiplying the total value of workers' compensation medical and indemnity payments times 20.8 percent.

TABLE XV–15.—DERIVATION OF AVERAGE ADMINISTRATIVE COSTS AS A PERCENT OF THE VALUE OF CLAIMS, BY TYPE OF INSURANCE

[$ millions]

Type of insurance	Total cost	Benefits	Administrative cost	Ratio of administrative costs to benefits
Private	$48,695	$28,346	$20,349	71.8 percent.
State	$19,157	$11,044	$8,113	73.5 percent.
Self-Insured	$15,478	$13,321	$2,157	16.2 percent.
All Insurance	$83,330	$52,711	$30,619	58.1 percent.

Source: National Academy of Social Insurance, Workers Compensation: Benefits, Coverage, and Costs, 2004 (Washington, DC, 2006).

f. Indirect Costs

The term ''indirect costs'' describes the costs of work-related injuries that are borne directly by employers but are not included in workers' compensation claim costs. Such costs are best estimated by looking at the costs an employer actually incurs at the time a workers' compensation claim is filed. These costs include a number of different social costs, not included elsewhere in these calculations, such as loss of productivity measured by sick leave to employees for absences that are shorter than the workers' compensation waiting period, losses in production associated with the injured workers' departure and return to work, losses in the productivity of other employees, and a wide variety of administrative costs other than those borne directly by the workers' compensation insurer, *e.g.*, medical management costs for the injured employee. Based on a study (Hinze & Applegate) of indirect costs of injuries in the construction industry, OSHA estimates that indirect costs are 20.8 percent of the value of workers' compensation medical and indemnity payments. As indicated in Table XV–14, the Agency estimates that the PPE payment rule will save $17.4 million annually in these indirect costs.

Taken in its entirety, this final rule is estimated to save $216 million annually by avoiding preventable injuries. See Table XV–14. These cost savings do not include the economic value of the loss of leisure time. They do not account for

the burden of chores that are forced on other household members or hired out. The direct savings also do not include the value of preventing pain and suffering or loss of life.

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XVI. Environmental Impacts

OSHA has reviewed this rule in accordance with the National Environmental Policy Act (NEPA), (42 U.S.C. 4321 *et seq.*), the regulations of the Council on Environmental Quality (40 CFR Part 1500), and DOL's NEPA procedures (29 CFR Part II). As a result of this review, OSHA has determined that this action will have no significant impact on the external environment.

XVII. Federalism

OSHA has reviewed this final rule in accordance with the Executive Order on Federalism (Executive Order 13132, 64 FR 43255, August 10, 1999), which requires that federal agencies, to the extent possible, refrain from limiting State policy options, consult with States prior to taking any actions that would restrict State policy options, and take such actions only when there is clear constitutional authority and the presence of a problem of national scope. Executive Order 13132 provides for preemption of state law only if there is a clear congressional intent for the Agency to do so. Any such preemption is to be limited to the extent possible.

Section 18 of the OSH Act (29 U.S.C. 651 *et seq.*) expresses Congress' intent to preempt state laws where OSHA has promulgated occupational safety and health standards. Under the OSH Act, a state can avoid preemption on issues covered by federal standards only if it submits, and obtains federal approval of, a plan for the development of such standards and their enforcement (state plan state) (29 U.S.C. 667). Occupational safety and health standards developed by such state plan states must, among other things, be at least as effective in providing safe and healthful employment and places of employment as the federal standards. Subject to these requirements, state plan states are free to develop and enforce under state law their own requirements for safety and health standards.

This final rule complies with Executive Order 13132. As Congress has expressed a clear intent for OSHA standards to preempt state job safety and health rules in areas addressed by OSHA standards in states without OSHA-approved state plans, this rule limits state policy options in the same manner as all OSHA standards. In states with OSHA-approved state plans, this action does not significantly limit state policy options.

XVIII. Unfunded Mandates

This final rule has been reviewed in accordance with the Unfunded Mandates Reform Act of 1995 (UMRA) (2 U.S.C. 1501 *et seq.*) and Executive Order 12875. As discussed in the Final Economic Analysis, OSHA estimates that compliance with the rule will require expenditures of $85.7 million per year by affected employers.

Therefore, this rule is not a significant regulatory action within the meaning of Section 202 of UMRA (Pub. L. 104–4, 2 U.S.C. 1532). OSHA standards do not apply to State and local governments except in States that have voluntarily elected to adopt an OSHA State plan. Consequently, the rule does not meet the definition of a ''Federal intergovernmental mandate'' (Section 421(5) of UMRA) (2 U.S.C. 658).

In addition, the Agency has concluded that virtually all State Plan States, the only States in which this rule could have any effect on State and local government employers, already require that employers pay for all types of PPE that will be covered by this rule. Thus, this rule will not have a significant impact on employers who are State and local governments. In sum, this rule does not impose unfunded mandates within the meaning of UMRA.

XIX. OMB Review Under the Paperwork Reduction Act of 1995

The final PPE payment rule simply clarifies that employers must pay for PPE used to comply with OSHA standards, with a few limited exceptions. As such, the rule does not contain collection-of-information (paperwork) requirements that are subject to review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (PRA–95), 44 U.S.C. 3501 *et seq.*, and OMB's regulations at 5 CFR part 1320. PRA–95 defines ''collection of information'' as ''[t]he obtaining, causing to be obtained, soliciting, or requiring the disclosure to third parties or the public of facts or opinions by or for an agency regardless of form or format * * *.'' (44 U.S.C. 3502(3)(A)).

A number of commenters questioned whether they would be required to keep receipts to prove PPE purchases and, thus, whether the final rule contains paperwork requirements (See, *e.g.,* Exs. 12: 22, 31, 36, 44, 54, 56, 68, 72, 73, 78, 80, 95, 102, 115, 118, 127, 128, 136, 140, 157, 158, 165, 166, 176, 186, 194, 197, 202, 208, 212, 219, 224, 226, 232, 238, 241). In a representative comment, the NAHB asked:

> How will OSHA enforce this standard? When a compliance officer comes on to the jobsite and sees every employee wearing a hard hat and safety glasses, will he request to see a receipt from the employer for the purchase of the PPE? Will the employer then be cited if he does not have a receipt to prove that he did, in fact, pay for the PPE being used? (Ex. 12: 212).

The final standard does not require employers to maintain receipts or any other form of paperwork involving PPE payment, and OSHA will not cite an employer for failure to have such paperwork. The Agency understands that businesses commonly keep receipts to comply with standard accounting codes, for tax accounting purposes, and as a standard good business practice. However, an employer is not required to do so by this final rule.

In response to the comment from NAHB, in most instances, an OSHA inspector will interview employers and employees to determine if an employer is complying with the PPE payment rule. OSHA does not believe it will be difficult to ascertain whether an employer paid for a particular piece of PPE and employers will not need to justify their purchases with receipts. After publishing the final rule, OSHA will instruct its inspectors in the requirements of the final rule and that the final rule does not require employers to keep a record of receipts or otherwise document determinations made.

XX. State Plan Standards

When federal OSHA promulgates a new standard or more stringent amendment to an existing standard, the 26 states or U.S. territories with their own OSHA-approved occupational safety and health plans must revise their standards to reflect the new standard or amendment, or show OSHA why there is no need for action, *e.g.,* because an existing state standard covering this area is already ''at least as effective'' as the new federal standard or amendment (29 CFR 1953.5(a)). The state standard must be at least as effective as the final federal rule, must be applicable to both the private and public (state and local government employees) sectors, and must be completed within six months of the publication date of the final federal rule. When OSHA promulgates a new standard or amendment that does not impose additional or more stringent requirements than an existing standard, states are not required to revise their standards, although the Agency may encourage them to do so. These 26 states and territories are: Alaska, Arizona, California, Connecticut (plan covers only State and local government employees), Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Mexico, New Jersey (plan covers only State and local government employees), New York (plan covers only State and local government employees), North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virginia, Virgin Islands (plan covers only Territorial and local government employees), Washington, and Wyoming.

While this final rule does not change the types of PPE that are required, it imposes additional or more stringent PPE payment requirements on employers than existing OSHA standards. Therefore, the states will be required to revise their standards within six months of this **Federal Register** notice or show OSHA why their existing standard is already ''at least as effective'' as the new federal standard. Thirteen states require payment for most PPE through regulation or policy. In addition, three states (California, Minnesota, and Puerto Rico) currently require payment for all PPE. (In these states, the employer may be required to pay for the minimal PPE needed to do the job, but can require the employee to pay for equipment upgraded at the employee's request.)

OSHA received very few comments concerning implementation of the final rule in the state plan states. The State of Minnesota noted that it has required PPE payment by employers since 1973, without any exceptions, under Minnesota Statute § 182, subd. 10(a). Minnesota advocated federal adoption of the State's policy of requiring the employer to pay at least the minimum cost of all PPE needed for the job, including items of a personal nature that can be used off the job, *e.g.,* safety-toe footwear and prescription safety eyewear, without exception. The State expressed concern that employers in Minnesota would be confused if OSHA adopted a requirement different from the State's (Ex. 12: 20). It is the employer's responsibility to know and comply with the applicable occupational safety and health requirements, whether they are federal or OSHA-approved state plan requirements. States that choose to operate state programs are free to adopt more stringent standards but in doing so have a responsibility to communicate those requirements to employers in their state. A state plan state may always adopt standards identical to the federal if they wish to avoid such differences.

While each state plan is ultimately responsible for communicating its state-specific standards and policies to the employers and employees within the state, federal OSHA will continue to work with the state plans to make information about state-specific policies and regulations that differ from the federal, including PPE payment requirements, publicly available to employers and employees through Web postings and other outreach activities.

XXI. Authority and Signature

This document was prepared under the direction of Edwin G. Foulke, Jr.,

Assistant Secretary of Labor for Occupational Safety and Health, 200 Constitution Avenue, NW., Washington, DC 20210. This action is taken pursuant to sections 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657), the Longshore and Harbor Workers' Compensation Act (33 U.S.C. 941), the Contract Work Hours and Safety Standards Act (Construction Safety Act) (40 U.S.C. 333), and Secretary of Labor's Order No. 5–2007 (72 FR 31160), and 29 CFR part 1911.

List of Subjects

29 CFR Part 1910

Chemicals, Electric power, Fire prevention, Gases, Hazardous substances, Health facilities, Health professions, Laboratories, Logging, Occupational safety and health, Protective equipment, Radiation protection.

29 CFR Part 1915

Chemicals, Electric power, Fire prevention, Gases, Hazardous substances, Health facilities, Health professions, Laboratories, Longshore and harbor workers, Occupational safety and health, Protective equipment, Radiation protection.

29 CFR Part 1917

Chemicals, Electric power, Fire prevention, Gases, Hazardous substances, Health facilities, Health professions, Laboratories, Longshore and harbor workers, Occupational safety and health, Protective equipment, Radiation protection.

29 CFR Part 1918

Chemicals, Electric power, Fire prevention, Gases, Hazardous substances, Health facilities, Health professions, Laboratories, Longshore and harbor workers, Occupational safety and health, Protective equipment, Radiation protection.

29 CFR Part 1926

Chemicals, Construction industry, Electric power, Fire prevention, Gases, Hazardous substances, Health facilities, Health professions, Laboratories, Occupational safety and health, Protective equipment, Radiation protection.

Signed at Washington, DC this 2nd day of November, 2007.

Edwin G. Foulke, Jr.,

Assistant Secretary of Labor for Occupational Safety and Health.

■ Accordingly, the Occupational Safety and Health Administration amends parts 1910, 1915, 1917, 1918, and 1926 of Title 29 of the Code of Federal Regulations as follows:

XXII. Final Rule

General Industry

PART 1910—[AMENDED]

■ 1. The authority citation for subpart I of 29 CFR part 1910 is revised to read as follows:

Authority: Sections 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, and 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), 6–96 (62 FR 111), 3–2000 (65 FR 50017), 5–2002 (67 FR 65008), or 5–2007 (72 FR 31160), as applicable, and 29 CFR Part 1911.

■ 2. A new paragraph (h) is added to § 1910.132, to read as follows:

§ 1910.132 General requirements.

* * * * *

(h) *Payment for protective equipment.*

(1) Except as provided by paragraphs (h)(2) through (h)(6) of this section, the protective equipment, including personal protective equipment (PPE), used to comply with this part, shall be provided by the employer at no cost to employees.

(2) The employer is not required to pay for non-specialty safety-toe protective footwear (including steel-toe shoes or steel-toe boots) and non-specialty prescription safety eyewear, provided that the employer permits such items to be worn off the job-site.

(3) When the employer provides metatarsal guards and allows the employee, at his or her request, to use shoes or boots with built-in metatarsal protection, the employer is not required to reimburse the employee for the shoes or boots.

(4) The employer is not required to pay for:

(i) The logging boots required by 29 CFR 1910.266(d)(1)(v);

(ii) Everyday clothing, such as long-sleeve shirts, long pants, street shoes, and normal work boots; or

(iii) Ordinary clothing, skin creams, or other items, used solely for protection from weather, such as winter coats, jackets, gloves, parkas, rubber boots, hats, raincoats, ordinary sunglasses, and sunscreen.

(5) The employer must pay for replacement PPE, except when the employee has lost or intentionally damaged the PPE.

(6) Where an employee provides adequate protective equipment he or she owns pursuant to paragraph (b) of this section, the employer may allow the employee to use it and is not required to reimburse the employee for that equipment. The employer shall not require an employee to provide or pay for his or her own PPE, unless the PPE is excepted by paragraphs (h)(2) through (h)(5) of this section.

(7) This paragraph (h) shall become effective on February 13, 2008. Employers must implement the PPE payment requirements no later than May 15, 2008.

Note to § 1910.132(h): When the provisions of another OSHA standard specify whether or not the employer must pay for specific equipment, the payment provisions of that standard shall prevail.

PART 1915—[AMENDED]

■ 1. The authority citation for 29 CFR part 1915 is revised to read as follows:

Authority: Section 41, Longshore and Harbor Workers' Compensation Act (33 U.S.C. 941); 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. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 3–2000 (65 FR 50017), 5–2002 (67 FR 65008), or 5–2007 (72 FR 31160) as applicable; 29 CFR Part 1911.

■ 2. A new paragraph (f) is added to § 1915.152, to read as follows:

§ 1915.152 General requirements.

* * * * *

(f) Payment for protective equipment.

(1) Except as provided by paragraphs (f)(2) through (f)(6) of this section, the protective equipment, including personal protective equipment (PPE), used to comply with this part, shall be provided by the employer at no cost to employees.

(2) The employer is not required to pay for non-specialty safety-toe protective footwear (including steel-toe shoes or steel-toe boots) and non-specialty prescription safety eyewear, provided that the employer permits such items to be worn off the job-site.

(3) When the employer provides metatarsal guards and allows the employee, at his or her request, to use shoes or boots with built-in metatarsal protection, the employer is not required to reimburse the employee for the shoes or boots.

(4) The employer is not required to pay for:

(i) Everyday clothing, such as long-sleeve shirts, long pants, street shoes, and normal work boots; or

(ii) Ordinary clothing, skin creams, or other items, used solely for protection from weather, such as winter coats, jackets, gloves, parkas, rubber boots, hats, raincoats, ordinary sunglasses, and sunscreen.

(5) The employer must pay for replacement PPE, except when the

employee has lost or intentionally damaged the PPE.

(6) Where an employee provides appropriate protective equipment he or she owns, the employer may allow the employee to use it and is not required to reimburse the employee for that equipment. The employer shall not require an employee to provide or pay for his or her own PPE, unless the PPE is excepted by paragraphs (f)(2) through (f)(5) of this section.

(7) This paragraph (f) shall become effective on February 13, 2008. Employers must implement the PPE payment requirements no later than May 15, 2008.

Note to § 1915.152(f): When the provisions of another OSHA standard specify whether or not the employer must pay for specific equipment, the payment provisions of that standard shall prevail.

Longshoring

PART 1917—[AMENDED]

■ 1. The authority citation for 29 CFR part 1917 is revised to read as follows:

Authority: Section 41, Longshore and Harbor Workers' Compensation Act (33 U.S.C. 941); 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. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 3–2000 (65 FR 50017), 5–2002 (67 FR 65008), or 5–2007 (72 FR 31160) as applicable; 29 CFR Part 1911.

■ 2. A new § 1917.96 is added, to read as follows:

§ 1917.96 Payment for protective equipment.

(a) Except as provided by paragraphs (b) through (f) of this section, the protective equipment, including personal protective equipment (PPE), used to comply with this part, shall be provided by the employer at no cost to employees.

(b) The employer is not required to pay for non-specialty safety-toe protective footwear (including steel-toe shoes or steel-toe boots) and non-specialty prescription safety eyewear, provided that the employer permits such items to be worn off the job-site.

(c) When the employer provides metatarsal guards and allows the employee, at his or her request, to use shoes or boots with built-in metatarsal protection, the employer is not required to reimburse the employee for the shoes or boots.

(d) The employer is not required to pay for:

(1) Everyday clothing, such as long-sleeve shirts, long pants, street shoes, and normal work boots; or

(2) Ordinary clothing, skin creams, or other items, used solely for protection from weather, such as winter coats, jackets, gloves, parkas, rubber boots, hats, raincoats, ordinary sunglasses, and sunscreen.

(e) The employer must pay for replacement PPE, except when the employee has lost or intentionally damaged the PPE.

(f) Where an employee provides adequate protective equipment he or she owns, the employer may allow the employee to use it and is not required to reimburse the employee for that equipment. The employer shall not require an employee to provide or pay for his or her own PPE, unless the PPE is excepted by paragraphs (b) through (e) of this section.

(g) This section shall become effective on February 13, 2008. Employers must implement the PPE payment requirements no later than May 15, 2008.

Note to § 1917.96: When the provisions of another OSHA standard specify whether or not the employer must pay for specific equipment, the payment provisions of that standard shall prevail.

Marine Terminals

PART 1918—[AMENDED]

■ 1. The authority citation for 29 CFR part 1918 is revised to read as follows:

Authority: Section 41, Longshore and Harbor Workers' Compensation Act (33 U.S.C. 941); 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. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 3–2000 (65 FR 50017), 5–2002 (67 FR 65008), or 5–2007 (72 FR 31160) as applicable; 29 CFR Part 1911.

■ 2. A new § 1918.106 is added, to read as follows:

§ 1918.106 Payment for protective equipment.

(a) Except as provided by paragraphs (b) through (f) of this section, the protective equipment, including personal protective equipment (PPE), used to comply with this part, shall be provided by the employer at no cost to employees.

(b) The employer is not required to pay for non-specialty safety-toe protective footwear (including steel-toe shoes or steel-toe boots) and non-specialty prescription safety eyewear, provided that the employer permits such items to be worn off the job-site.

(c) When the employer provides metatarsal guards and allows the employee, at his or her request, to use shoes or boots with built-in metatarsal protection, the employer is not required to reimburse the employee for the shoes or boots.

(d) The employer is not required to pay for:

(1) Everyday clothing, such as long-sleeve shirts, long pants, street shoes, and normal work boots; or

(2) Ordinary clothing, skin creams, or other items, used solely for protection from weather, such as winter coats, jackets, gloves, parkas, rubber boots, hats, raincoats, ordinary sunglasses, and sunscreen.

(e) The employer must pay for replacement PPE, except when the employee has lost or intentionally damaged the PPE.

(f) Where an employee provides adequate protective equipment he or she owns, the employer may allow the employee to use it and is not required to reimburse the employee for that equipment. The employer shall not require an employee to provide or pay for his or her own PPE, unless the PPE is excepted by paragraphs (b) through (e).

(g) This section shall become effective on February 13, 2008. Employers must implement the PPE payment requirements no later than May 15, 2008.

Note to § 1918.106: When the provisions of another OSHA standard specify whether or not the employer must pay for specific equipment, the payment provisions of that standard shall prevail.

Construction

PART 1926—[AMENDED]

■ 1. The authority citation for subpart E of 29 CFR part 1926 is revised to read as follows:

Authority: Section. 107, Contract Work Hours and Safety Standards Act (Construction Safety Act) (40 U.S.C. 333); 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. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 5–2002 (67 FR 65008), or 5–2007 (72 FR 31160) as applicable; and 29 CFR Part 1911.

■ 2. A new paragraph (d) is added to § 1926.95, to read as follows:

§ 1926.95 Criteria for personal protective equipment.

* * * * *

(d) *Payment for protective equipment.* (1) Except as provided by paragraphs (d)(2) through (d)(6) of this section, the protective equipment, including personal protective equipment (PPE), used to comply with this part, shall be

provided by the employer at no cost to employees.

(2) The employer is not required to pay for non-specialty safety-toe protective footwear (including steel-toe shoes or steel-toe boots) and non-specialty prescription safety eyewear, provided that the employer permits such items to be worn off the job-site.

(3) When the employer provides metatarsal guards and allows the employee, at his or her request, to use shoes or boots with built-in metatarsal protection, the employer is not required to reimburse the employee for the shoes or boots.

(4) The employer is not required to pay for:

(i) Everyday clothing, such as long-sleeve shirts, long pants, street shoes, and normal work boots; or

(ii) Ordinary clothing, skin creams, or other items, used solely for protection from weather, such as winter coats, jackets, gloves, parkas, rubber boots, hats, raincoats, ordinary sunglasses, and sunscreen.

(5) The employer must pay for replacement PPE, except when the employee has lost or intentionally damaged the PPE.

(6) Where an employee provides adequate protective equipment he or she owns pursuant to paragraph (b) of this section, the employer may allow the employee to use it and is not required to reimburse the employee for that equipment. The employer shall not require an employee to provide or pay for his or her own PPE, unless the PPE is excepted by paragraphs (d)(2) through (d)(5) of this section.

(7) This section shall become effective on February 13, 2008. Employers must implement the PPE payment requirements no later than May 15, 2008.

Note to § 1926.95(d): When the provisions of another OSHA standard specify whether or not the employer must pay for specific equipment, the payment provisions of that standard shall prevail.

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