

PAPERWORK REDUCTION ACT SUBMISSION

Please read the instructions before completing this form. For additional forms or assistance in completing this form, contact your agency's Paperwork Clearance Officer. Send two copies of this form the collection instrument to be reviewed, the Supporting Statement, and any additional documentation to: Office of Information and Regulatory Affairs, Office of Management and Budget, Docket Library, Room 101022, 725 17th Street, NW, Washington, DC 20503.

<p>1. Agency/Subagency originating request</p> <p style="text-align: center;">Department of Labor Occupational Safety and Health Administration</p>	<p>2. OMB control number</p> <p>a. 1218 - 0242 b. <input type="checkbox"/> None _____ (new)</p>																																		
<p>3. Type of information collection (<i>check one</i>)</p> <p>a. <input type="checkbox"/> New Collection</p> <p>b. <input type="checkbox"/> Revision of a currently approved collection</p> <p>c. <input checked="" type="checkbox"/> Extension of a currently approved collection</p> <p>d. <input type="checkbox"/> Reinstatement, without change, of a previously approved collection for which approval has expired</p> <p>e. <input type="checkbox"/> Reinstatement, with change, of a previously approved collection for which approval has expired</p> <p>f. <input type="checkbox"/> Existing collection in use without an OMB control number</p> <p><i>For b-f, note item A2 of Supporting Statement instructions</i></p>	<p>4. Type of review requested (<i>check one</i>)</p> <p>a. <input checked="" type="checkbox"/> Regular</p> <p>b. <input type="checkbox"/> Emergency - Approval requested by: ___/___/___</p> <p>c. <input type="checkbox"/> Delegated</p> <p>5. Small entities Will this information collection have a significant economic impact on a substantial number of small entities? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <hr/> <p>6. Requested expiration date</p> <p>a. <input checked="" type="checkbox"/> Three years from approval date?</p> <p>b. <input type="checkbox"/> Other Specify: ___ / ___ (month/ year)</p>																																		
<p>7. POWERED INDUSTRIAL TRUCKS (29 CFR 1910.178)</p>																																			
<p>8. Agency form number(s) (if applicable) : None</p>																																			
<p>9. Keywords:</p>																																			
<p>10. Abstract: The Standard contains several information collection requirements addressing truck design, construction, and modification, as well as certification of training and evaluation for truck operators.</p>																																			
<p>11. Affected public (<i>Mark primary with "P" and all others that apply with "X"</i>)</p> <p>a. <input type="checkbox"/> Individuals or households</p> <p>b. <input checked="" type="checkbox"/> Business or other for-profit</p> <p>c. <input type="checkbox"/> Not-for-profit institutions</p> <p>d. <input type="checkbox"/> Farms</p> <p>e. <input type="checkbox"/> Federal Government</p> <p>f. <input type="checkbox"/> State, Local or Tribal Government</p>	<p>12. Obligation to respond (<i>Mark primary with "P" and all others that apply with "X"</i>)</p> <p>a. <input type="checkbox"/> Voluntary</p> <p>b. <input type="checkbox"/> Require to obtain or retain benefits</p> <p>c. <input checked="" type="checkbox"/> Mandatory</p>																																		
<p>13. Annual reporting and recordkeeping hour burden</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:70%;">a. Number of respondents</td> <td style="text-align: right;">1,134,699</td> </tr> <tr> <td>b. Total annual responses</td> <td style="text-align: right;">2,411,515</td> </tr> <tr> <td> 1. Percentages of these responses collected electronically</td> <td style="text-align: right;">0%</td> </tr> <tr> <td>c. Total annual hours requested</td> <td style="text-align: right;">848,539</td> </tr> <tr> <td>d. Current OMB inventory</td> <td style="text-align: right;">773,205</td> </tr> <tr> <td>e. Difference</td> <td style="text-align: right;">75,334</td> </tr> <tr> <td>f. Explanation of difference</td> <td> </td> </tr> <tr> <td> 1. Program change</td> <td> </td> </tr> <tr> <td> 2. Adjustments</td> <td style="text-align: right;">75,334</td> </tr> </table>	a. Number of respondents	1,134,699	b. Total annual responses	2,411,515	1. Percentages of these responses collected electronically	0%	c. Total annual hours requested	848,539	d. Current OMB inventory	773,205	e. Difference	75,334	f. Explanation of difference		1. Program change		2. Adjustments	75,334	<p>14. Annual reporting and recordkeeping cost burden (in dollars)</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:70%;">a. Total annualized capital/startup costs</td> <td style="text-align: right;">0</td> </tr> <tr> <td>b. Total annual costs (O&M)</td> <td style="text-align: right;">238,245</td> </tr> <tr> <td>c. Total annualized cost requested</td> <td style="text-align: right;">238,245</td> </tr> <tr> <td>d. Current OMB inventory</td> <td style="text-align: right;">238,245</td> </tr> <tr> <td>e. Difference</td> <td style="text-align: right;">0</td> </tr> <tr> <td>f. Explanation of difference</td> <td> </td> </tr> <tr> <td> 1. Program change</td> <td> </td> </tr> <tr> <td> 2. Adjustment</td> <td style="text-align: right;">0</td> </tr> </table>	a. Total annualized capital/startup costs	0	b. Total annual costs (O&M)	238,245	c. Total annualized cost requested	238,245	d. Current OMB inventory	238,245	e. Difference	0	f. Explanation of difference		1. Program change		2. Adjustment	0
a. Number of respondents	1,134,699																																		
b. Total annual responses	2,411,515																																		
1. Percentages of these responses collected electronically	0%																																		
c. Total annual hours requested	848,539																																		
d. Current OMB inventory	773,205																																		
e. Difference	75,334																																		
f. Explanation of difference																																			
1. Program change																																			
2. Adjustments	75,334																																		
a. Total annualized capital/startup costs	0																																		
b. Total annual costs (O&M)	238,245																																		
c. Total annualized cost requested	238,245																																		
d. Current OMB inventory	238,245																																		
e. Difference	0																																		
f. Explanation of difference																																			
1. Program change																																			
2. Adjustment	0																																		
<p>15. Purpose of information collection (<i>Mark primary with "P" and all others that apply with "X"</i>)</p> <p>a. <input type="checkbox"/> Application for benefits</p> <p>b. <input type="checkbox"/> Program evaluation</p> <p>c. <input type="checkbox"/> General purpose statistics</p> <p>d. <input type="checkbox"/> Audit</p> <p>e. <input type="checkbox"/> Program planning or management</p> <p>f. <input type="checkbox"/> Research</p> <p>g. <input checked="" type="checkbox"/> Regulatory or compliance</p>	<p>16. Frequency of recordkeeping or reporting (<i>check all that apply</i>)</p> <p>a. <input checked="" type="checkbox"/> Recordkeeping</p> <p>b. <input checked="" type="checkbox"/> Third party disclosure</p> <p>c. <input type="checkbox"/> Reporting</p> <table style="width:100%;"> <tr> <td>1. <input checked="" type="checkbox"/> On occasion</td> <td>2. <input type="checkbox"/> Weekly</td> <td>3. <input type="checkbox"/> Monthly</td> </tr> <tr> <td>4. <input type="checkbox"/> Quarterly</td> <td>5. <input type="checkbox"/> Semi-annually</td> <td>6. <input checked="" type="checkbox"/> Annually</td> </tr> <tr> <td>7. <input type="checkbox"/> Biennially</td> <td>8. <input checked="" type="checkbox"/> Other (describe) <u>Initially, Triennially</u></td> <td> </td> </tr> </table>	1. <input checked="" type="checkbox"/> On occasion	2. <input type="checkbox"/> Weekly	3. <input type="checkbox"/> Monthly	4. <input type="checkbox"/> Quarterly	5. <input type="checkbox"/> Semi-annually	6. <input checked="" type="checkbox"/> Annually	7. <input type="checkbox"/> Biennially	8. <input checked="" type="checkbox"/> Other (describe) <u>Initially, Triennially</u>																										
1. <input checked="" type="checkbox"/> On occasion	2. <input type="checkbox"/> Weekly	3. <input type="checkbox"/> Monthly																																	
4. <input type="checkbox"/> Quarterly	5. <input type="checkbox"/> Semi-annually	6. <input checked="" type="checkbox"/> Annually																																	
7. <input type="checkbox"/> Biennially	8. <input checked="" type="checkbox"/> Other (describe) <u>Initially, Triennially</u>																																		
<p>17. Statistical methods</p> <p>Does this information collection employ statistical methods?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>18. Agency contact (person who can best answer questions regarding the content of this submission)</p> <p>Name: Theda Kenney</p> <p>Phone: (202) 693-2222</p>																																		

19. Certification for Paperwork Reduction Act Submissions

On behalf of this Federal agency, I certify that the collection of information encompassed by this request complies with 5 CFR 1320.9.

NOTE: The text of 5 CFR 1320.9, and the related provisions of 5 CFR 1320.8 (b)(3), appear at the end of the instructions. *The certification is to be made with reference to those regulatory provisions as set forth in the instructions.*

The following is a summary of the topics, regarding the proposed collections of information, that the certification covers:

- (a) Is necessary for proper performance of the agency's functions and has practical utility;
- (b) It avoids unnecessary duplication;
- (c) It reduces burden on small entities;
- (d) It uses plain, coherent and unambiguous terminology that is understandable to respondents;
- (e) Its implementation will be consistent and compatible with current reporting and recordkeeping practices;
- (f) It indicates the retention periods for recordkeeping requirements;
- (g) It informs respondents of the information called for under 5 CFR 1320.8 (b)(3)
- (h) Why the information is being collected;
 - (ii) Use of information;
 - (iii) Burden estimate;
 - (iv) Nature of response (voluntary, required for a benefit, or mandatory);
 - (v) Nature and extent of confidentiality; and
 - (vi) Need to display currently valid OMB control number;
- (h) It was developed by an office that has planned and allocated resources for the efficient and effective management and use of the information to be collected (see note in Item 19 of the Instructions);
- (i) It uses effective and efficient statistical survey methodology; and,
- (j) It makes appropriate use of information technology.

If you are unable to certify compliance with any of these provisions, identify the item below and explain the reason in Item 18 of the Supporting Statement.

Agency Clearance Officer	Date
Todd R. Owen, OSHA Clearance Officer	
Signature of Senior Departmental Official or Designee	Date
Departmental Clearance Officer	

**SUPPORTING STATEMENT FOR THE
INFORMATION COLLECTION REQUIREMENTS OF THE
STANDARD ON POWERED INDUSTRIAL TRUCKS (29 CFR 1910.178)¹
OFFICE OF MANAGEMENT AND BUDGET (OMB)
CONTROL NO. 1218-0242 (January 2008)**

JUSTIFICATION

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.

The main purpose of the Occupational Safety and Health Act (“the OSH Act” or “the Act”) is to “assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources” (29 U.S.C. 651). To achieve this objective, the OSH Act specifically authorizes “the development and promulgation of occupational safety and health standards” (29 U.S.C. 651). The Act states further that “[t]he Secretary . . . shall prescribe such rules and regulations as [he/she] may deem necessary to carry out [his/her] responsibilities under this Act, including rules and regulations dealing with the inspection of an employer’s establishment” (29 U.S.C. 651).

The Act authorizes the Occupational Safety and Health Administration (“OSHA” or “the Agency”) to issue standards that “prescribe the use of labels or other appropriate forms of warning as are necessary to insure that employees are apprized of all hazards to which they are exposed . . .” (29 U.S.C. 655). Additionally, the OSH Act mandates that “[e]ach employer shall make, keep and preserve, and make available to the Secretary . . . such records . . . as the Secretary . . . may prescribe by regulation as necessary or appropriate for the enforcement of this Act . . .” (29 U.S.C. 657).

Under the authority granted by the OSH Act, the Agency published a standard regulating powered industrial trucks (29 CFR 1910.178; “the Standard”). The Standard contains several information collection requirements addressing truck design, construction, and modification, as well as certification of training and evaluation for truck operators. Items 2 and 12 below describe in detail the specific information collection requirements of the Standard.

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the Agency has made of the information received from the current collection.

Paragraph (a)(4) of the Standard requires that employers obtain the manufacturer’s written approval before modifying a truck in a manner that affects its capacity and safe operation; if the

¹The purpose of this Supporting Statement is to analyze and describe the burden hours and costs associated with provisions of this standard that contain paperwork requirements; this Supporting Statement does not provide information or guidance on how to comply with, or how to enforce, the standards.

manufacturer grants such approval, the employer must revise capacity, operation, and maintenance instruction plates, tags, and decals accordingly. For front-end attachments not installed by the manufacturer, paragraph (a)(5) mandates that employers provide a marker on the trucks that identifies the attachment, as well as the weight of both the truck and the attachment when the attachment is at maximum elevation with a laterally centered load. Paragraph (a)(6) specifies that employers must ensure that the markers required by paragraphs (a)(3) through (a)(5) remain affixed to trucks and are legible.

Paragraphs (l)(1) through (l)(6) of the Standard contain the paperwork requirements necessary to certify the training provided to powered industrial truck operators. Accordingly, these paragraphs specify the following requirements for employers:

- Paragraph (l)(1)--Ensure that trainees successfully complete the training and evaluation requirements of paragraph (l) prior to operating a truck without direct supervision.
- Paragraph (l)(2)--Allow trainees to operate a truck only under the direct supervision of an individual with the knowledge, training, and experience to train operators and to evaluate their performance, and under conditions that do not endanger other employees. The training program must consist of formal instruction, practical training, and evaluation of the trainee's performance in the workplace.
- Paragraph (l)(3)--Provide the trainees with initial training on each of 22 specified topics, except on topics that the employer demonstrates do not apply to the safe operation of the truck(s) in the employer's workplace.
- Paragraphs (l)(4)(i) and (l)(4)(ii)--Administer refresher training and evaluation on relevant topics to operators found by observation or formal evaluation to have operated a truck unsafely, been involved in an accident or near-miss incident, or been assigned to operate another type of truck, or if the employer identifies a workplace condition that could affect safe truck operation.
- Paragraph (l)(4)(iii)--Evaluate each operator's performance at least once every three years.
- Paragraph (l)(5)--Train re-hires only in specific topics that they performed unsuccessfully during an evaluation and that are appropriate to the employer's truck(s) and workplace conditions.
- Paragraph (l)(6)--Certify that each operator meets the training and evaluation requirements specified by paragraph (l). This certification must include the operator's name, the training date, the evaluation date, and the identity of the individual(s) who performed the training and evaluation.

Requiring labels (markings) of modified equipment notifies employees of the conditions under which they can safely operate powered industrial trucks, thereby preventing such hazards as fires and explosions caused by poorly designed electrical systems, rollovers/tipovers that result from exceeding a truck's stability characteristics, and falling loads that occur when loads exceed the lifting capacities of attachments. Certification of training and evaluation provides a means of informing employers that their employees received the training, and demonstrated the performance necessary to operate a truck within its capacity and control limitations. Therefore, by ensuring that employees operate only trucks that are in proper working order, and do so safely, employers prevent possible severe injury or death of truck operators and other employees who are in the vicinity of the trucks. Finally, these paperwork requirements are the most efficient means for an OSHA compliance officer to determine that an employer properly notified employees regarding the design and construction of, and modifications made to, the trucks they are operating, and that an employer provided them with the required training.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.

Employers may use improved information technology, including electronic recording, when establishing or maintaining records.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purpose(s) described in 2 above.

The information collection requirements in the Standard are specific to each employer and employee involved, and no other source or agency duplicates the requirements or can make the required information available to OSHA (i.e., the required information is available only from, or applies only to, the employers covered by the Standard).

5. If the collection of information impacts small businesses or other small entities (Item 5 of OMB Form 83-1), describe the methods used to reduce the burden.

The information collection requirements specified by the Standard do not have a significant impact on a substantial number of small entities.

6. Describe the consequence to Federal program or policy activities if the collection is or is not conducted less frequently, and any technical or legal obstacles to reducing the burden.

The Agency believes that the information collection frequencies required by the Standard are the minimum frequencies necessary to fulfill its mandate "to assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources" as specified by the OSH Act at 29 U.S.C. 651. Accordingly, if employers do not perform the required information collections, or delay in providing this information, employees may be at risk of serious injuries or death while operating powered industrial trucks.

7. Explain any special circumstances that would cause an information collection to be conducted in a manner:

- **Requiring respondents to report information to the Agency more often than quarterly;**
- **Requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;**
- **Requiring respondents to submit more than an original and two copies of any document;**
- **Requiring respondents to retain records, other than health, medical, government contract, grant-in aid, or tax records for more than three years;**
- **In connection with a statistical survey that is not designed to produce valid and reliable results that can be generalized to the universe of study;**
- **Requiring the use of statistical data classification that has not been reviewed and approved by OMB;**
- **That includes a pledge of confidentiality that is not supported by authority established in statute or regulation that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or**
- **Requiring respondents to submit proprietary trade secret, or other confidential information unless the Agency can prove that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.**

No special circumstances exist that require employers to collect information using the procedures specified by this item. The requirements of the Standard are within the guidelines set forth in 5 CFR 1320.5.

8. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the Agency's notice, required by 5 CFR 1320.8(d), soliciting comments on the information collection before submission to OMB. Summarize public comments received in response to that notice and describe actions taken by the Agency in response to those comments specifically address comments received on cost and hour burdens.

As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3506(c)(2)(A)), OSHA will publish a notice in the *Federal Register* requesting public comment on its proposed extension of the information collection requirements contained in the Standard on Powered Industrial Trucks (29 CFR 1910.178). This notice is part of a preclearance consultation program to provide those interested parties the opportunity to comment on OSHA's request for an extension by the Office of Management and Budget (OMB) of a previous approval of the information collection requirements found in the Standard. The Agency will address any comments received in response to this request for comment.

9. Explain any decision to provide any payments or gift to respondents, other than reenumeration of contractors or grantees.

The Agency will not provide payments or gifts to the respondents.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or Agency policy.

No such assurance is necessary because the paperwork requirements specified by the Standard do not involve confidential information.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the Agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.

None of the information collection provisions of the Standard ask for sensitive information.

12. Provide estimates of the hour burden of the collection of information. The statement should:

- **Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices.**
- **If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens in Item 13 of OMB Form 83-I.**
- **Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage-rate categories.**

Burden Hour and Cost Determinations

In 1998, OSHA published a final rule in which it revised the operator-training requirements specified by paragraph (l) of the Standard (see 63 FR 66238). As part of this rulemaking, the Agency performed a Final Economic Analysis (FEA) (see 63 FR 66262). Using data from the FEA for the burden hour and cost estimates described below, OSHA finds that the Standard applies to employers using an estimated 1,134,699 powered industrial trucks operated by about 1,702,048 employees.² There are approximately 4.8 million establishments in NAICS codes where such trucks are used; however, the actual number of establishments using such trucks is

²Source: County Business Patterns Survey, U.S. Census Bureau, 2005. This value reflects the overall 10.5% increase in employment across all industries from 1997 to 2005 (1,540,315 x 1.105). Additionally, the FEA estimated that each powered industrial truck was used by an average 1.5 operators; to determine the current number of powered industrial trucks in use, OSHA divided the estimated number of employees covered by the Standard by 1.5 (i.e., 1,702,048 ÷ 1.5).

substantially smaller.³ In addition, the Agency uses the following wage rates in determining the cost of the information collection requirements specified by the Standard.

Supervisory Manufacturing Worker (Supervisor):	\$30.82 ⁴
Manufacturing Worker:	\$24.68 ⁵
Clerical/Secretary:	\$21.44 ⁶

(A) Notification of Truck Modifications (§ 1910.178(a)(4))

Based on a public comment received on a previous ICR,⁷ most of the truck modifications involve attachments covered by paragraph (a)(5) of the Standard. OSHA assumes that each year, employers obtain manufacturers' written approval to modify 0.2 percent of the powered industrial trucks in a manner that affects their capacity and safe operation. For the purpose of estimating the paperwork burden for this provision, OSHA estimates that the time involved in seeking approval is the only collection of information (paperwork) burden involved with this provision since the burden to affix new data plates or markings would be a usual and customary practice by the firm that undertakes the modification or addition. OSHA estimates the approval process takes approximately one hour. Accordingly, the annual burden hours and cost of this paperwork requirement are:

Burden hours: 1,134,699 trucks x .002 x 1 hour = 2,269 hours
Cost: 2,269 hours x \$24.68 = \$55,999

(B) Notification of Front-End Attachments (§ 1910.178(a)(5))

OSHA has no information regarding the number of powered industrial trucks that have front-end attachments installed by employers. Based on the previous public comment received, OSHA believes that few, if any, employers have trucks that require modification to the nameplates and markings provided by the manufacturer with the original truck. OSHA estimates that 0.1 percent

³The previous ICR estimated that there were approximately 4.4 million establishments in SIC codes where such trucks are used, compared to 6.9 million total establishments found in the 1997 County Business Patterns survey. This ratio was applied to data obtained from the 2005 County Business Patterns Survey.

⁴Source: Employer Costs for Employee Compensation, Supplementary Table 2. U.S. Department of Labor, Bureau of Labor Statistics, September 2007. Class – All workers in manufacturing. Wage rate includes benefits of 29.4 percent.

⁵Source: Employer Costs for Employee Compensation, Supplementary Table 2. U.S. Department of Labor, Bureau of Labor Statistics, September 2007. Class – Production, transportation, and material moving – Production. Wage rate includes benefits of 29.4 percent.

⁶Source: Employer Costs for Employee Compensation. U.S. Department of Labor, Bureau of Labor Statistics, September 2007. Class – Office and administrative support. Wage rate includes benefits of 29.4 percent.

⁷See ICR-1218-0242(2001), Ex. 2-1.

of all trucks in use are subject to the provision in (a)(5) of the Standard, and that a manufacturing worker takes 30 minutes (.50 hour) to obtain the new information, prepare, and attach the data plate. Accordingly, the annual burden hours and cost of this paperwork requirement are:

Burden hours: $1,134,699 \text{ trucks} \times .001 \times .50 \text{ hour} = 567 \text{ hours}$
Cost: $567 \text{ hours} \times \$24.68 = \$13,994$

(C) Inspection of Markers (§ 1910.178(a)(6))

Employers incur a burden to obtain the information to replace data plates or approval markings required by paragraphs (a)(3) through (a)(5) of the Standard, if, for example, the original labels/markings are destroyed or otherwise become illegible. Based on a public comment received on a previous ICR, OSHA estimates that about 20 percent (226,940) of all trucks fall into the category of an “approved” truck and of those trucks, perhaps 1 percent require a new data plate or marking for the reasons described above. OSHA estimates that a manufacturing worker takes 5 minutes (.08 hour) to affix the new plates/markings. Accordingly, the annual burden hours and cost of this paperwork requirement are:

Burden hours: $226,940 \text{ trucks} \times .01 \times .08 \text{ hour} = 182 \text{ hours}$
Cost: $182 \text{ hours} \times \$24.68 = \$4,492$

(D) Operator Training (§ 1910.178(l)(1) through (l)(3), (l)(4)(i), (l)(4)(ii), and (l)(5))

The Agency concludes that operators who require training consist of new hires, rehires (i.e., received previous operator training from the same or a different employer), and other operators who need refresher training. The following sections describe the burden hour and cost determinations for each type of training.

Initial Training (§ 1910.178(l)(1) through (l)(3))

As determined in the FEA, the annual turnover rate among operators is 15 percent, resulting in 255,307 new hires each year that require initial training. OSHA estimates that performing initial training takes a supervisor six hours and 10 minutes (6.17 hours), including one hour (1.00 hour) to prepare the training materials and five hours and 10 minutes (5.17 hours) to deliver the training; the Agency assumes that supervisors can deliver this training to groups consisting of eight trainees, for a total of 31,913 groups (i.e., $255,307 \text{ trainees} \div 8 \text{ trainees per group}$). Therefore, the estimated annual burden hours and cost of this requirement are:

Burden hours: $31,913 \text{ groups} \times 6.17 \text{ hours per group} = 196,903 \text{ hours}$
Cost: $196,903 \times \$30.82 = \$6,068,551$

Refresher Training (§ 1910.178(l)(4)(i) and (l)(4)(ii))

According to the FEA, about 5 percent (85,102) of the trainees are operators who need refresher training, require refresher training because they operated a truck unsafely, had an accident or near-miss incident, or must operate another type of truck, or the employer identified a workplace condition that could affect safe truck operation. The FEA data show that a supervisor requires two hours and 10 minutes (2.17 hours) to train these operators, including 30 minutes (.50 hour) to prepare the training materials and one hour and 40 minutes (1.67 hour) to deliver the training. Thus, the total estimated burden hours and cost for these requirements are:

Burden hours: 85,102 employees x 2.17 hours per employee = 184,671 hours
Cost: 184,671 hours x \$30.82 = \$5,691,560

Training New Hires Who Have Had Previous Training (Rehires) (§ 1910.178(l)(5))

The FEA determined that 15 percent (255,307) of the trainees are rehires who must receive an evaluation, followed by training on topics they performed unsuccessfully. Similar to refresher training, the FEA estimated a supervisor requires two hours and 10 minutes (2.17 hours) to train rehires, which includes 30 minutes (.50 hour) to prepare the training materials and one hour and 40 minutes (1.67 hour) to deliver the training to groups of eight trainees (for a total of 31,913 groups). Accordingly, the yearly estimated burden hours and cost resulting from this requirement are:

Burden hours: 31,913 groups x 2.17 hours per group = 69,251 hours
Cost: 69,251 hours x \$30.82 = \$2,134,316

(E) Operator Evaluation (§ 1910.178(l)(4)(iii) and (l)(5))

Triennial Evaluation (§ 1910.178(l)(4)(iii))

Based on data from the FEA, OSHA determined that supervisors evaluate one-third (567,349) of the operators each year, and that each evaluation takes 30 minutes (.50 hour) to perform. Therefore, the yearly burden hour and cost estimates for conducting these evaluations are:

Burden hours: 567,349 employees x .50 hour to perform evaluation =
283,675 hours
Cost: 283,675 hours x \$30.82 = \$8,742,864

Evaluating Rehires (§ 1910.178(l)(5))

OSHA estimates that a supervisor requires 10 minutes (.17 hour) each to evaluate the 255,307 rehires.⁸ Accordingly, the annual estimated burden hours and cost for this requirement are:

⁸Several factors expedite this evaluation compared to a triennial evaluation; first, the rehires may have recent training certification records available for review and, second, a short interview is often sufficient to

Burden hours: 255,307 rehires x .17 hour = 43,402 hours
Cost: 43,402 hours x \$30.82 = \$1,337,650

Certification Records of Evaluations and Training (§ 1910.178(l)(6))

(a) Initial Training (§ 1910.178(l)(1) through (l)(3))

OSHA estimates that a secretary takes three minutes (.05 hour) to develop and maintain each initial training certification record. The annual estimated burden hours and cost for this requirement are:

Burden hours: 255,307 employees x .05 hour = 12,765 hours
Cost: 12,761 x \$21.44 = \$273,682

(b) Refresher Training (§ 1910.178(l)(4)(i) and (l)(4)(ii))

OSHA estimates that a secretary takes three minutes (.05 hour) to develop and maintain each refresher training certification record. The annual estimated burden hours and cost for this requirement are:

Burden hours: 85,102 employees x .05 hour = 4,255 hours
Cost: 4,254 x \$21.44 = \$91,227

(c) Rehires (§ 1910.178(l)(5))

OSHA estimates that a secretary takes three minutes (.05 hour) to develop and maintain each certification record for rehires after training. The annual estimated burden hours and cost for this requirement are:

Burden hours: 255,307 employees x .05 hour = 12,765 hours
Cost: 12,765 x \$21.44 = \$273,682

(d) Triennial Evaluation (§ 1910.178(l)(4)(iii))

OSHA estimates that a secretary takes three minutes (.05 hour) to develop and maintain a certification record for each employee's triennial evaluation. The annual estimated burden hours and cost for this requirement are:

Burden hours: 567,349 employees x .05 hour = 28,368 hours
Cost: 28,368 hours x \$21.44 = \$608,210

(e) Evaluating Rehires (§ 1910.178(l)(5))

determine which topics require additional training.

OSHA estimates that a secretary takes three minutes (.05 hour) to develop and maintain a certification record for each rehired employee's evaluation. The annual estimated burden hours and cost for this requirement are:

Burden hours: 255,307 rehires x .05 hour = 12,765 hours
Cost: 12,765 hours x \$21.44 = \$273,682

(F) Disclosure of Evaluation and Training Certification Records

OSHA estimates that it may conduct approximately 15,881 inspections during the time period covered by this ICR.⁹ OSHA estimates that it will take a supervisor 10 minutes (.17 hour) to disclose evaluation and training certification records (because of the number of certifications records involved).

Burden hours: 15,886 inspections x .17 hour = 2,701 hours
Cost: 2,701 hours x \$30.82 = \$83,245

13. Provide an estimate of the total annual cost burden to respondents or recordkeepers resulting from the collection of information. (Do not include the cost of any hour burden shown in Items 12 and 14.)

- **The cost estimate should be split into two components: (a) a total capital and start-up cost component annualized over its expected useful life); and (b) a total operation and maintenance and purchase of service component. The estimates should take into account costs associated with generating, maintaining, and disclosing or providing the information. Include descriptions of methods used to estimate major cost factors including system and technology acquisition, expected useful life of capital equipment, the discount rate(s), and the time period over which costs will be incurred. Capital and start-up costs include, among other items, preparations for collecting information such as purchasing computers and software; monitoring, sampling, drilling and testing equipment; and record storage facilities.**
- **If cost estimates are expected to vary widely, agencies should present ranges of cost burdens and explain the reasons for the variance. The cost of purchasing or contracting out information collection services should be a part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondent (fewer than 10), utilize the 60-day pre-OMB submission public comment process and use existing economic or regulatory impact analysis associated with the rulemaking containing the information collection, as appropriate.**
- **Generally, estimates should not include purchases of equipment or services, or portions thereof, made: (1) prior to October 1, 1995, (2) to achieve regulatory compliance with requirements not associated with the information collection, (3) for reasons other than to provide information or keep records for the government, or (4) as part of customary and usual business or private practices.**

⁹The Agency estimated the number of inspections by determining the inspection rate (1.4 percent) for all establishments under the jurisdiction of the OSH Act (including both Federal OSHA and approved state-plan agencies) and then multiplying the total number of trucks covered by the Standard by this percentage (i.e., 1,134,699 trucks x 1.4 percent = 15,886 inspections).

Employers incur costs to obtain the new data plates and “approval” markings from the manufacturer and testing laboratory. Based on previous comments, the cost figures ranged from free to \$150 for the data plate, and \$30 for markings from the testing lab. The Agency does not believe these costs have increased dramatically, and is retaining them in this ICR. OSHA is using an average cost of \$75 for the data plates and \$30 for the approval markings, or \$105 for both. As noted in item 12 (A), OSHA estimates that approximately 2,269 trucks may require a new plate or marking.

Cost: 2,269 trucks x \$105 = \$238,245

14. Provide estimates of the annualized cost to the Federal Government. Also, provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff), any other expense that would not have been incurred without this collection of information. Agencies also may aggregate cost estimates from Items 12, 13, and 14 into a single table.

OSHA estimates that a compliance officer (GS-12, step 5), at an hourly wage rate of \$37.89, spends about five minutes (.08 hour) during an inspection reviewing training certificates and other paperwork requirements specified by the Standard. The Agency determines that its compliance officers will conduct 13,986 inspections during each year covered by this ICR.⁸ OSHA considers other expenses, such as equipment, overhead, and support staff salaries, as normal operating expenses that would occur without the collection of information requirements specified by the Standard. Therefore, the annual total cost of these paperwork requirements to the Federal government is:

Cost: 13,986 inspections x .08 hour x \$37.89 = \$42,394

15. Explain the reasons for any program changes or adjustments reported in Items 13 or 14 of the OMB Form 83-1.

OSHA is proposing to increase the existing burden hour estimate of the collection of information requirements specified by the Standard. In this regard, the Agency is proposing to increase the current burden hour estimate from 773,205 hours to 848,539 hours, a total increase of 75,534 hours. The adjustment increase is due to updated data indicating a rise in the number of powered industrial trucks from 999,000 to 1,134,699 and the number of operators from 1,540,315 to 1,702,048. There is no change in the cost burden under Item 13. Table 1 below describes each of the proposed burden hour adjustments.

16. For collections of information whose results will be published, outline plans for tabulation, and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the

⁵The Agency estimated the number of inspections by determining the inspection rate (1.4 percent) for all powered industrial trucks under the jurisdiction of the OSH Act (including both Federal OSHA and approved state-plan agencies) and then multiplying the total number of trucks covered by the Standard (i.e., 999,000 by this percentage (i.e., 999,000 trucks x 1.4 percent = 13,986 inspections).

entire project, including beginning and ending dates of the collection information, completion of report, publication dates, and other actions.

OSHA will not publish the information collected under the Standard.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be appropriate.

No forms are available for the Agency to display the expiration date.

18. Explain each exception to the certification statement identified in Item 19 per "Certification for Paperwork Reduction Act Submission," of OMB Form 83-I.

OSHA is not requesting an exception to the certification statement in Item 19.

Table 1

Proposed Burden Hour Adjustments

Information Collection Requirement	Current Burden Hours	Proposed Burden Hours	Adjustment (Hours)	Cost Under Item 12	Responses	Explanation of Adjustment
(A) Notification of Truck Modifications (§ 1910.178(a)(4))	1,998	2,269	271	\$55,999	2,269	The adjustment increase is due to updated data indicating a rise in the number of powered industrial trucks from 999,000 to 1,134,699.
(B) Notification of Front-End Attachments (§ 1910.178(a)(5))	500	567	67	\$13,994	1,135	The adjustment increase is due to updated data indicating a rise in the number of powered industrial trucks.
(C) Inspection of Data Plates or Markers (§ 1910.178(a)(6))	160	182	22	\$4,492	2,269	The adjustment increase is due to updated data indicating a rise in the number of powered industrial trucks.
(D) Operator Training (§ 1910.178(l)(1) through (l)(3), (l)(4)(i), (l)(4)(ii), and (l)(5))	0	0	0	0	0	The adjustment increase is due to updated data indicating a rise in the number of powered industrial truck operators from 1,540,315 to 1,702,048.
<i>Initial Training (§ 1910.178 (l)(1) through (l)(3))</i>	178,196	190,903	12,707	\$6,068,551	31,913	
<i>Refresher Training (§ 1910.178 (l)(4)(i) and (l)(4)(ii))</i>	167,125	184,671	17,546	\$5,691,560	85,102	
<i>Training New Hires Who Have Had Previous Training (Rehires) (§ 1910.178(1)(5))</i>	62,672	69,251	6,579	\$2,134,316	31,913	
(E) Operator Evaluation (§ 1910.178(l)(4)(iii), (l)(5), and (l)(6))	0	0	0	0	0	The adjustment increase is due to updated data indicating a rise in the number of powered industrial truck operators.
<i>Triennial Evaluation (§ 1910.178(1)(4)(iii))</i>	256,719	283,675	26,956	\$8,742,864	567,349	
<i>Evaluating Rehires (§ 1910.178(1)(5))</i>	39,278	43,402	4,124	\$1,337,650	255,307	
Certification Records of Evaluations and Training	0	0	0	0	0	The adjustment increase is due to updated data indicating a rise in the

Information Collection Requirement	Current Burden Hours	Proposed Burden Hours	Adjustment (Hours)	Cost Under Item 12	Responses	Explanation of Adjustment
(§ 1910.178(1)(6))						number of powered industrial truck operators.
(a) Initial Training (§§ 1910.178(1)(1)-(1)(3))	11,552	12,765	1,213	\$273,682	255,307	
(b) Refresher Training (§§ 1(4)(i) & 1(4)(ii))	3,851	4,255	404	\$91,227	85,102	
(c) Rehires (§ 1910.178(1)(5))	11,552	12,765	1,213	\$273,682	255,307	
(d) Triennial Evaluation (§ 1910.178(1)(4)(iii))	25,672	28,368	2,696	\$608,210	567,349	
(e) Evaluating Rehires (§ 1910.178(1)(5))	11,552	12,765	1,213	\$273,682	255,307	
(F) Disclosure of Evaluation and Training Certification Records	2,378	2,701	323	\$83,245	15,886	The adjustment increase is due to updated data indicating a rise in the number of establishments.
TOTALS	773,205	848,539	75,334	\$25,653,154	2,411,515	

SEC. 2. Congressional Findings and Purpose

29 USC 651

(a) The Congress finds that personal injuries and illnesses arising out of work situations impose a substantial burden upon, and are a hindrance to, interstate commerce in terms of lost production, wage loss, medical expenses, and disability compensation payments.

(b) The Congress declares it to be its purpose and policy, through the exercise of its powers to regulate commerce among the several States and with foreign nations and to provide for the general welfare, to assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources --

(1) by encouraging employers and employees in their efforts to reduce the number of occupational safety and health hazards at their places of employment, and to stimulate employers and employees to institute new and to perfect existing programs for providing safe and healthful working conditions; (2) by providing that employers and employees have separate but dependent responsibilities and rights with respect to achieving safe and healthful working conditions;

(3) by authorizing the Secretary of Labor to set mandatory occupational safety and health standards applicable to businesses affecting interstate commerce, and by creating an Occupational Safety and Health Review Commission for carrying out adjudicatory functions under the Act;

(4) by building upon advances already made through employer and employee initiative for providing safe and healthful working conditions;

(5) by providing for research in the field of occupational safety and health, including the psychological factors involved, and by developing innovative methods, techniques, and approaches for dealing with occupational safety and health problems;

(6) by exploring ways to discover latent diseases, establishing causal connections between diseases and work in environmental conditions, and conducting other research relating to health problems, in recognition of the fact that occupational health standards present problems often different from those involved in occupational safety;

(7) by providing medical criteria which will assure insofar as practicable that no employee will suffer diminished health, functional capacity, or life expectancy as a result of his work experience;

(8) by providing for training programs to increase the number and competence of personnel engaged in the field of occupational safety and health; affecting the OSH Act since its passage in 1970 through January 1, 2004.

(9) by providing for the development and promulgation of occupational safety and health standards;

(10) by providing an effective enforcement program which shall include a prohibition against giving advance notice of any inspection and sanctions for any individual violating this prohibition;

(11) by encouraging the States to assume the fullest responsibility for the administration and enforcement of their occupational safety and health laws by providing grants to the States to assist in identifying their needs and responsibilities in the area of occupational safety and health, to develop plans in accordance with the provisions of this Act, to improve the administration and enforcement of State occupational safety and health laws, and to conduct experimental and demonstration projects in connection therewith;

(12) by providing for appropriate reporting procedures with respect to occupational safety and health which procedures will help achieve the objectives of this Act and accurately describe the nature of the occupational safety and health problem;

(13) by encouraging joint labor-management efforts to reduce injuries and disease arising out of employment.

6. Occupational Safety and Health Standards

29 USC 655:

(a) Without regard to chapter 5 of title 5, United States Code, or to the other subsections of this section, the Secretary shall, as soon as practicable during the period beginning with the effective date of this Act and ending two years after such date, by rule promulgate as an occupational safety or health standard any national consensus standard, and any established Federal standard, unless he determines that the promulgation of such a standard would not result in improved safety or health for specifically designated employees. In the event of conflict among any such standards, the Secretary shall promulgate the standard which assures the greatest protection of the safety or health of the affected employees.

(b) The Secretary may by rule promulgate, modify, or revoke any occupational safety or health standard in the following manner:

(1) Whenever the Secretary, upon the basis of information submitted to him in writing by an interested person, a representative of any organization of employers or employees, a nationally recognized standards-producing organization, the Secretary of Health and Human Services, the National Institute for Occupational Safety and Health, or a State or political subdivision, or on the basis of information developed by the Secretary or otherwise available to him, determines that a rule should be promulgated in order to serve the objectives of this Act, the Secretary may request the recommendations of an advisory committee appointed under section 7 of this Act. The Secretary shall provide such an advisory committee with any proposals of his own or of the Secretary of Health and Human Services, together with all pertinent factual information developed by the Secretary or the Secretary of Health and Human Services, or otherwise available, including the results of research, demonstrations, and experiments. An advisory committee shall submit to the Secretary its recommendations regarding the rule to be promulgated within ninety days from the date of its appointment or within such longer or shorter period as may be prescribed by the Secretary, but in no event for a period which is longer than two hundred and seventy days.

(2) The Secretary shall publish a proposed rule promulgating, modifying, or revoking an occupational safety or health standard in the Federal Register and shall afford interested persons a period of thirty days after publication to submit written data or comments. Where an advisory committee is appointed and the Secretary determines that a rule should be issued, he shall publish the proposed rule within sixty days after the submission of the advisory committee's recommendations or the expiration of the period prescribed by the Secretary for such submission.

(3) On or before the last day of the period provided for the submission of written data or comments under paragraph (2), any interested person may file with the Secretary written objections to the proposed rule, stating the grounds therefore and requesting a public hearing on such objections. Within thirty days after the last day for filing such objections, the Secretary shall publish in the Federal Register a notice specifying the occupational safety or health standard to which objections have been filed and a hearing requested, and specifying a time and place for such hearing.

(4) Within sixty days after the expiration of the period provided for the submission of written data or comments under paragraph (2), or within sixty days after the completion of any hearing held under paragraph (3), the Secretary shall issue a rule promulgating, modifying, or revoking an occupational safety or health standard or make a determination that a rule should not be issued. Such a rule may contain a provision delaying its effective date for such period (not in excess of ninety days) as the Secretary determines may be necessary to insure that affected employers and employees will be informed of the existence of the standard and of its terms and that employers affected are given an opportunity to familiarize themselves and their employees with the existence of the requirements of the standard.

(5) The Secretary, in promulgating standards dealing with toxic materials or harmful physical agents under this subsection, shall set the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity even if such employee has regular exposure to the hazard dealt with by such standard for the period of his working life. Development of standards under this subsection shall be based upon research, demonstrations, experiments, and such other information as may be appropriate. In addition to the attainment of the highest degree of health and safety protection for the employee, other considerations shall be the latest available scientific data in the field, the feasibility of the standards, and experience gained under this and other health and safety laws. Whenever practicable, the standard promulgated shall be expressed in terms of objective criteria and of the performance desired.

(6) (A) Any employer may apply to the Secretary for a temporary order granting a variance from a standard or any provision thereof promulgated under this section. Such temporary order shall be granted only if the employer files an application which meets the requirements of clause (B) and establishes

that --

(i) he is unable to comply with a standard by its effective date because of unavailability of professional or technical personnel or of materials and equipment needed to come into compliance with the standard or because necessary construction or alteration of facilities cannot be completed by the effective date,

(ii) he is taking all available steps to safeguard his employees against the hazards covered by the standard, and

(iii) he has an effective program for coming into compliance with the standard as quickly as practicable.

Any temporary order issued under this paragraph shall prescribe the practices, means, methods, operations, and processes which the employer must adopt and use while the order is in effect and state in detail his program for coming into compliance with the standard. Such a temporary order may be granted only after notice to employees and an opportunity for a hearing: *Provided*, That the Secretary may issue one interim order to be effective until a decision is made on the basis of the hearing. No temporary order may be in effect for longer than the period needed by the employer to achieve

compliance with the standard or one year, whichever is shorter, except that such an order may be renewed not more than twice (I) so long as the requirements of this paragraph are met and (II) if an application for renewal is filed at least 90 days prior to the expiration date of the order. No interim renewal of an order may remain in effect for longer than 180 days.

(B) An application for temporary order under this paragraph (6) shall contain:

(i) a specification of the standard or portion thereof from which the employer seeks a variance,

(ii) a representation by the employer, supported by representations from qualified persons having firsthand knowledge of the facts represented, that he is unable to comply with the standard or portion thereof and a detailed statement of the reasons therefor,

(iii) a statement of the steps he has taken and will take (with specific dates) to protect employees against the hazard covered by the standard,

(iv) a statement of when he expects to be able to comply with the standard and what steps he has taken and what steps he will take (with dates specified) to come into compliance with the standard, and

(v) a certification that he has informed his employees of the application by giving a copy thereof to their authorized representative, posting a statement giving a summary of the application and specifying where a copy may be examined at the place or places where notices to employees are normally posted, and by other appropriate means.

A description of how employees have been informed shall be contained in the certification. The information to employees shall also inform them of their right to petition the Secretary for a hearing.

(C) The Secretary is authorized to grant a variance from any standard or portion thereof whenever he determines, or the Secretary of Health and Human Services certifies, that such variance is necessary to permit an employer to participate in an experiment approved by him or the Secretary of Health and Human Services designed to demonstrate or validate new and improved techniques to safeguard the health or safety of workers.

(7) Any standard promulgated under this subsection shall prescribe the use of labels or other appropriate forms of warning as are necessary to insure that employees are apprised of all hazards to which they are exposed, relevant symptoms and appropriate emergency treatment, and proper conditions and precautions of safe use or exposure. Where appropriate, such standard shall also prescribe suitable protective equipment and control or technological procedures to be used in connection with such hazards and shall provide for monitoring or measuring employee exposure at such locations and intervals, and in such manner as may be necessary for the protection of employees. In addition, where appropriate, any 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, to employees exposed to such hazards in order to most effectively determine whether the health of such employees is adversely affected by such exposure. In the event such medical examinations are in the nature of research, as determined by the Secretary of

Health and Human Services, such examinations may be furnished at the expense of the Secretary of Health and Human Services. The results of such examinations or tests shall be furnished only to the Secretary or the Secretary of Health and Human Services, and, at the request of the employee, to his physician. The Secretary, in consultation with the Secretary of Health and Human Services, may by rule promulgated pursuant to section 553 of title 5, United States Code, make appropriate modifications in the foregoing requirements relating to the use of labels or other forms of warning, monitoring or measuring, and medical examinations, as may be warranted by experience, information, or medical or technological developments acquired subsequent to the promulgation of the relevant standard.

(8) Whenever a rule promulgated by the Secretary differs substantially from an existing national consensus standard, the Secretary shall, at the same time, publish in the Federal Register a statement of the reasons why the rule as adopted will better effectuate the purposes of this Act than the national consensus standard.

(c) (1) The Secretary shall provide, without regard to the requirements of chapter 5, title 5, United States Code, for an emergency temporary standard to take immediate effect upon publication in the Federal Register if he determines

--

(A) that employees are exposed to grave danger from exposure to substances or agents determined to be toxic or physically harmful or from new hazards, and

(B) that such emergency standard is necessary to protect employees from such danger.

(2) Such standard shall be effective until superseded by a standard promulgated in accordance with the procedures prescribed in paragraph (3) of this subsection.

(3) Upon publication of such standard in the Federal Register the Secretary shall commence a proceeding in accordance with section 6 (b) of this Act, and the standard as published shall also serve as a proposed rule for the proceeding. The Secretary shall promulgate a standard under this paragraph no later than six months after publication of the emergency standard as provided in paragraph (2) of this subsection.

(d) Any affected employer may apply to the Secretary for a rule or order for a variance from a standard promulgated under this section. Affected employees shall be given notice of each such application and an opportunity to participate in a hearing. The Secretary shall issue such rule or order if he determines on the record, after opportunity for an inspection where appropriate and a hearing, that the proponent of the variance has demonstrated by a preponderance of the evidence that the conditions, practices, means, methods, operations, or processes used or proposed to be used by an employer will provide employment and places of employment to his employees which are as safe and healthful as those which would prevail if he complied with the standard. The rule or order so issued shall prescribe the conditions the employer must maintain, and the practices, means, methods, operations, and

processes which he must adopt and utilize to the extent they differ from the standard in question. Such a rule or order may be modified or revoked upon application by an employer, employees, or by the Secretary on his own motion, in the manner prescribed for its issuance under this subsection at any time after six months from its issuance.

(e) Whenever the Secretary promulgates any standard, makes any rule, order, or decision, grants any exemption or extension of time, or compromises, mitigates, or settles any penalty assessed under this Act, he shall include a statement of the reasons for such action, which shall be published in the Federal Register.

(f) Any person who may be adversely affected by a standard issued under this section may at any time prior to the sixtieth day after such standard is promulgated file a petition challenging the validity of such standard with the United States court of appeals for the circuit wherein such person resides or has his principal place of business, for a judicial review of such standard. A copy of the petition shall be forthwith transmitted by the clerk of the court to the Secretary. The filing of such petition shall not, unless otherwise ordered by the court, operate as a stay of the standard. The determinations of the Secretary shall be conclusive if supported by substantial evidence in the record considered as a whole.

(g) In determining the priority for establishing standards under this section, the Secretary shall give due regard to the urgency of the need for mandatory safety and health standards for particular industries, trades, crafts, occupations, businesses, workplaces or work environments. The Secretary shall also give due regard to the recommendations of the Secretary of Health and Human Services regarding the need for mandatory standards in determining the priority for establishing such standards.

SEC. 8. Inspections, Investigations, and Recordkeeping

(a) In order to carry out the purposes of this Act, the Secretary, upon presenting appropriate credentials to the owner, operator, or agent in charge, is authorized -- 29 USC 657

(1) to enter without delay and at reasonable times any factory, plant, establishment, construction site, or other area, workplace or environment where work is performed by an employee of an employer; and

(2) to inspect and investigate during regular working hours and at other reasonable times, and within reasonable limits and in a reasonable manner, any such place of employment and all pertinent conditions, structures, machines, apparatus, devices, equipment, and materials therein, and to question privately any such employer, owner, operator, agent or employee.

(b) In making his inspections and investigations under this Act the Secretary may require the attendance and testimony of witnesses and the production of evidence under oath. Witnesses shall be paid the same fees and mileage that are paid witnesses in the courts of the United States. In case of a contumacy, failure, or refusal of any person to obey such an order, any district court of the United States or the United States courts of any territory or possession, within the jurisdiction of which such person is found, or resides or transacts business, upon the application by the Secretary, shall have jurisdiction to issue to such person an order requiring such person to appear to produce evidence if, as, and when so ordered, and to give testimony relating to the matter under investigation or in question, and any failure to obey such order of the court may be punished by said court as a contempt thereof.

(c) (1) Each employer shall make, keep and preserve, and make available to the Secretary or the Secretary of Health and Human Services, such records regarding his activities relating to this Act as the Secretary, in cooperation with the Secretary of Health and Human Services, may prescribe by regulation as necessary or appropriate for the enforcement of this Act or for developing information regarding the causes and prevention of occupational accidents and illnesses. In order to carry out the provisions of this paragraph such regulations may include provisions requiring employers to conduct periodic inspections. The Secretary shall also issue regulations requiring that employers, through posting of notices or other appropriate means, keep their employees informed of their protections and obligations under this Act, including the provisions of applicable standards.

(2) The Secretary, in cooperation with the Secretary of Health and Human Services, shall prescribe regulations requiring employers to maintain accurate records of, and to make periodic reports on, work-related deaths, injuries and illnesses other than minor injuries requiring only first aid treatment and which do not involve medical treatment, loss of consciousness, restriction of work or motion, or transfer to another job.

(3) The Secretary, in cooperation with the Secretary of Health and Human Services, shall issue regulations requiring employers to maintain accurate records of employee exposures to potentially toxic materials or harmful physical agents which are required to be monitored or measured under section 6. Such regulations shall provide employees or their representatives with an opportunity to observe such monitoring or measuring, and to have access to the records thereof. Such regulations shall also make appropriate provision for each employee or former employee to have access to such records as will indicate his own exposure to toxic materials or harmful physical agents. Each employer shall promptly notify any employee who has been or is being exposed to toxic materials or harmful physical agents in concentrations or at levels which exceed those prescribed by an applicable occupational safety and health standard promulgated under section 6, and shall inform any employee who is being thus exposed of the corrective action being taken.

(d) Any information obtained by the Secretary, the Secretary of Health and Human Services, or a State agency under this Act shall be obtained with a minimum burden upon employers, especially those operating small businesses. Unnecessary duplication of efforts in obtaining information shall be reduced to the maximum extent feasible.

(e) Subject to regulations issued by the Secretary, a representative of the employer and a representative authorized by his employees shall be given an opportunity to accompany the Secretary or his authorized representative during the physical inspection of any workplace under subsection (a) for the purpose of aiding such inspection. Where there is no authorized employee representative, the Secretary or his authorized representative shall consult with a reasonable number of employees concerning matters of health and safety in the workplace.

(f) (1) Any employees or representative of employees who believe that a violation of a safety or health standard exists that threatens physical harm, or that an imminent danger exists, may request an inspection by giving notice to the Secretary or his authorized representative of such violation or danger. Any such notice shall be reduced to writing, shall set forth with reasonable particularity the grounds for the notice, and shall be signed by the employees or representative of employees, and a copy shall be provided the employer or his agent no later than at the time of inspection, except that, upon the request of the person giving such notice, his name and the names of individual employees referred to therein shall not appear in such copy or on any record published, released, or made available pursuant to subsection (g) of this section. If upon receipt of such notification the Secretary determines there are reasonable grounds to believe that such violation or danger exists, he shall make a special inspection in accordance with the provisions of this section as soon as practicable, to determine if such violation or danger exists. If the Secretary determines there are no reasonable grounds to believe that a violation or danger exists he shall notify the employees or representative of the employees in writing of such determination.

(2) Prior to or during any inspection of a workplace, any employees

or representative of employees employed in such workplace may notify the Secretary or any representative of the Secretary responsible for conducting the inspection, in writing, of any violation of this Act which they have reason to believe exists in such workplace. The Secretary shall, by regulation, establish procedures for informal review of any refusal by a representative of the Secretary to issue a citation with respect to any such alleged violation and shall furnish the employees or representative of employees requesting such review a written statement of the reasons for the Secretary's final disposition of the case.

(g) (1) The Secretary and Secretary of Health and Human Services are authorized to compile, analyze, and publish, either in summary or detailed form, all reports or information obtained under this section.

(2) The Secretary and the Secretary of Health and Human Services shall each prescribe such rules and regulations as he may deem necessary to carry out their responsibilities under this Act, including rules and regulations dealing with the inspection of an employer's establishment.

(h) The Secretary shall not use the results of enforcement activities, such as the number of citations issued or penalties assessed, to evaluate employees directly involved in enforcement activities under this Act or to impose quotas or goals with regard to the results of such activities.

Pub. L. 105-198 added subsection (h).

§ 1910.178

29 CFR Ch. XVII (7-1-04 Edition)

Reprints of the charts are available through the Occupational Safety and Health Administration (OSHA) Area and Regional Offices. The address and telephone number of the nearest OSHA office can be obtained by looking in the local telephone directory under U.S. Government, U.S. Department of Labor, Occupational Safety and Health Administration. Single copies are available without charge.

Individuals, establishments and other organizations desiring single or multiple copies of these charts may order them from the OSHA Publications Office, U.S. Department of Labor, Room N-3101, Washington, DC 20210, Telephone (202) 219-4667.

[49 FR 4350, Feb. 3, 1984, as amended at 52 FR 36026, Sept. 25, 1987; 53 FR 34737, Sept. 8, 1988; 61 FR 9239, Mar. 7, 1996]

§ 1910.178 Powered industrial trucks.

(a) *General requirements.* (1) This section contains safety requirements relating to fire protection, design, maintenance, and use of fork trucks, tractors, platform lift trucks, motorized hand trucks, and other specialized industrial trucks powered by electric motors or internal combustion engines. This section does not apply to compressed air or nonflammable compressed gas-operated industrial trucks, nor to farm vehicles, nor to vehicles intended primarily for earth moving or over-the-road hauling.

(2) All new powered industrial trucks acquired and used by an employer after the effective date specified in paragraph (b) of § 1910.182 shall meet the design and construction requirements for powered industrial trucks established in the "American National Standard for Powered Industrial Trucks, Part II, ANSI B56.1-1969", which is incorporated by reference as specified in § 1910.6, except for vehicles intended primarily for earth moving or over-the-road hauling.

(3) Approved trucks shall bear a label or some other identifying mark indicating approval by the testing laboratory. See paragraph (a)(7) of this section and paragraph 405 of "American National Standard for Powered Industrial Trucks, Part II, ANSI B56.1-1969", which is incorporated by reference in paragraph (a)(2) of this section and which provides that if the powered industrial truck is accepted by a nationally recognized testing laboratory it should be so marked.

(4) Modifications and additions which affect capacity and safe operation shall not be performed by the customer or user without manufacturers prior written approval. Capacity, operation, and maintenance instruction plates, tags, or decals shall be changed accordingly.

(5) If the truck is equipped with front-end attachments other than factory installed attachments, the user shall request that the truck be marked to identify the attachments and show the approximate weight of the truck and attachment combination at maximum elevation with load laterally centered.

(6) The user shall see that all nameplates and markings are in place and are maintained in a legible condition.

(7) As used in this section, the term, *approved truck* or *approved industrial truck* means a truck that is listed or approved for fire safety purposes for the intended use by a nationally recognized testing laboratory, using nationally recognized testing standards. Refer to § 1910.155(c)(3)(iv)(A) for definition of listed, and to § 1910.7 for definition of nationally recognized testing laboratory.

(b) *Designations.* For the purpose of this standard there are eleven different designations of industrial trucks or tractors as follows: D, DS, DY, E, ES, EE, EX, G, GS, LP, and LPS.

(1) The D designated units are units similar to the G units except that they are diesel engine powered instead of gasoline engine powered.

(2) The DS designated units are diesel powered units that are provided with additional safeguards to the exhaust, fuel and electrical systems. They may be used in some locations where a D unit may not be considered suitable.

(3) The DY designated units are diesel powered units that have all the safeguards of the DS units and in addition do not have any electrical equipment including the ignition and are equipped with temperature limitation features.

(4) The E designated units are electrically powered units that have minimum acceptable safeguards against inherent fire hazards.

(5) The ES designated units are electrically powered units that, in addition to all of the requirements for the E

units, are provided with additional safeguards to the electrical system to prevent emission of hazardous sparks and to limit surface temperatures. They may be used in some locations where the use of an E unit may not be considered suitable.

(6) The EE designated units are electrically powered units that have, in addition to all of the requirements for the E and ES units, the electric motors and all other electrical equipment completely enclosed. In certain locations the EE unit may be used where the use of an E and ES unit may not be considered suitable.

(7) The EX designated units are electrically powered units that differ from the E, ES, or EE units in that the electrical fittings and equipment are so designed, constructed and assembled that the units may be used in certain atmospheres containing flammable vapors or dusts.

(8) The G designated units are gasoline powered units having minimum acceptable safeguards against inherent fire hazards.

(9) The GS designated units are gasoline powered units that are provided with additional safeguards to the exhaust, fuel, and electrical systems. They may be used in some locations where the use of a G unit may not be considered suitable.

(10) The LP designated unit is similar to the G unit except that liquefied petroleum gas is used for fuel instead of gasoline.

(11) The LPS designated units are liquefied petroleum gas powered units that are provided with additional safeguards to the exhaust, fuel, and electrical systems. They may be used in some locations where the use of an LP unit may not be considered suitable.

(12) The atmosphere or location shall have been classified as to whether it is hazardous or nonhazardous prior to the consideration of industrial trucks being used therein and the type of industrial truck required shall be as provided in paragraph (d) of this section for such location.

(c) *Designated locations.* (1) The industrial trucks specified under subparagraph (2) of this paragraph are the minimum types required but industrial

trucks having greater safeguards may be used if desired.

(2) For specific areas of use, see Table N-1 which tabulates the information contained in this section. References are to the corresponding classification as used in subpart S of this part.

(i) Power-operated industrial trucks shall not be used in atmospheres containing hazardous concentration of acetylene, butadiene, ethylene oxide, hydrogen (or gases or vapors equivalent in hazard to hydrogen, such as manufactured gas), propylene oxide, acetaldehyde, cyclopropane, diethyl ether, ethylene, isoprene, or unsymmetrical dimethyl hydrazine (UDMH).

(ii)(a) Power-operated industrial trucks shall not be used in atmospheres containing hazardous concentrations of metal dust, including aluminum, magnesium, and their commercial alloys, other metals of similarly hazardous characteristics, or in atmospheres containing carbon black, coal or coke dust except approved power-operated industrial trucks designated as EX may be used in such atmospheres.

(b) In atmospheres where dust of magnesium, aluminum or aluminum bronze may be present, fuses, switches, motor controllers, and circuit breakers of trucks shall have enclosures specifically approved for such locations.

(iii) Only approved power-operated industrial trucks designated as EX may be used in atmospheres containing acetone, acrylonitrile, alcohol, ammonia, benzene, benzol, butane, ethylene dichloride, gasoline, hexane, lacquer solvent vapors, naphtha, natural gas, propane, propylene, styrene, vinyl acetate, vinyl chloride, or xylenes in quantities sufficient to produce explosive or ignitable mixtures and where such concentrations of these gases or vapors exist continuously, intermittently or periodically under normal operating conditions or may exist frequently because of repair, maintenance operations, leakage, breakdown or faulty operation of equipment.

(iv) Power-operated industrial trucks designated as DY, EE, or EX may be used in locations where volatile flammable liquids or flammable gases are handled, processed or used, but in which the hazardous liquids, vapors or

§ 1910.178

29 CFR Ch. XVII (7-1-04 Edition)

gases will normally be confined within closed containers or closed systems from which they can escape only in case of accidental rupture or breakdown of such containers or systems, or in the case of abnormal operation of equipment; also in locations in which hazardous concentrations of gases or vapors are normally prevented by positive mechanical ventilation but which might become hazardous through fail-

ure or abnormal operation of the ventilating equipment; or in locations which are adjacent to Class I, Division 1 locations, and to which hazardous concentrations of gases or vapors might occasionally be communicated unless such communication is prevented by adequate positive-pressure ventilation from a source of clear air, and effective safeguards against ventilation failure are provided.

Authorized uses of trucks by types in groups of classes and divisions																	
Groups in classes	None	A	B	C	D	A	B	C	D	E	F	G	E	F	G	None	None
Type of truck authorized:																	
Diesel:																	
Type D	D**																
Type DS					DS										DS		DS
Type DY					DY										DY		DY
Electric:																	
Type E	E*																E
Type ES					ES										ES		ES
Type EE					EE										EE		EE
Type EX					EX										EX		EX
Gasoline:																	
Type G	G**																
Type GS					GS										GS		GS
LP—Gas:																	
Type LP	LP**																
Type LPS					LPS										LPS		LPS
Paragraph Ref. in No. 505.	210.211	201	209	203	204	209	209	203	204	202	202	205	209	209	206	207(a)	208 (a)
		(a)	(a)	(a)	(a), (b)	(a)	(a)	(a)	(a), (b)	(a)	(a)	(a)	(a)	(a)	(a), (b)	(a)	(b)

**Trucks conforming to these types may also be used—see subdivision (c)(2)(x) and (c)(2)(xii) of this section.

(v) In locations used for the storage of hazardous liquids in sealed containers or liquefied or compressed gases in containers, approved power-operated industrial trucks designated as DS, ES, GS, or LPS may be used. This classification includes locations where volatile flammable liquids or flammable gases or vapors are used, but which, would become hazardous only in case of an accident or of some unusual operating condition. The quantity of hazardous material that might escape in case of accident, the adequacy of ventilating equipment, the total area involved, and the record of the industry or business with respect to explosions or fires are all factors that should receive consideration in determining whether or not the DS or DY, ES, EE, GS, LPS designated truck possesses sufficient safeguards for the location. Piping without valves, checks, meters and similar devices would not ordinarily be deemed to introduce a hazardous condition even though used for hazardous liquids or gases. Locations used for the storage of hazardous liquids or of liquified or compressed gases in sealed containers would not normally be considered hazardous unless subject to other hazardous conditions also.

(vi)(a) Only approved power operated industrial trucks designated as EX shall be used in atmospheres in which combustible dust is or may be in suspension continuously, intermittently, or periodically under normal operating conditions, in quantities sufficient to produce explosive or ignitable mixtures, or where mechanical failure or abnormal operation of machinery or equipment might cause such mixtures to be produced.

(b) The EX classification usually includes the working areas of grain handling and storage plants, room containing grinders or pulverizers, cleaners, graders, scalpels, open conveyors or spouts, open bins or hoppers, mixers, or blenders, automatic or hopper scales, packing machinery, elevator heads and boots, stock distributors, dust and stock collectors (except all-metal collectors vented to the outside), and all similar dust producing machinery and equipment in grain processing plants, starch plants, sugar pulverizing

plants, malting plants, hay grinding plants, and other occupancies of similar nature; coal pulverizing plants (except where the pulverizing equipment is essentially dust tight); all working areas where metal dusts and powders are produced, processed, handled, packed, or stored (except in tight containers); and other similar locations where combustible dust may, under normal operating conditions, be present in the air in quantities sufficient to produce explosive or ignitable mixtures.

(vii) Only approved power-operated industrial trucks designated as DY, EE, or EX shall be used in atmospheres in which combustible dust will not normally be in suspension in the air or will not be likely to be thrown into suspension by the normal operation of equipment or apparatus in quantities sufficient to produce explosive or ignitable mixtures but where deposits or accumulations of such dust may be ignited by arcs or sparks originating in the truck.

(viii) Only approved power-operated industrial trucks designated as DY, EE, or EX shall be used in locations which are hazardous because of the presence of easily ignitable fibers or flyings but in which such fibers or flyings are not likely to be in suspension in the air in quantities sufficient to produce ignitable mixtures.

(ix) Only approved power-operated industrial trucks designated as DS, DY, ES, EE, EX, GS, or LPS shall be used in locations where easily ignitable fibers are stored or handled, including outside storage, but are not being processed or manufactured. Industrial trucks designated as E, which have been previously used in these locations may be continued in use.

(x) On piers and wharves handling general cargo, any approved power-operated industrial truck designated as Type D, E, G, or LP may be used, or trucks which conform to the requirements for these types may be used.

(xi) If storage warehouses and outside storage locations are hazardous only the approved power-operated industrial truck specified for such locations in this paragraph (c)(2) shall be used. If not classified as hazardous, any approved power-operated industrial truck

§ 1910.178

29 CFR Ch. XVII (7-1-04 Edition)

designated as Type D, E, G, or LP may be used, or trucks which conform to the requirements for these types may be used.

(xi) If general industrial or commercial properties are hazardous, only approved power-operated industrial trucks specified for such locations in this paragraph (c)(2) shall be used. If not classified as hazardous, any approved power-operated industrial truck designated as Type D, E, G, or LP may be used, or trucks which conform to the requirements of these types may be used.

(d) *Converted industrial trucks.* Power-operated industrial trucks that have been originally approved for the use of gasoline for fuel, when converted to the use of liquefied petroleum gas fuel in accordance with paragraph (q) of this section, may be used in those locations where G, GS or LP, and LPS designated trucks have been specified in the preceding paragraphs.

(e) *Safety guards.* (1) High Lift Rider trucks shall be fitted with an overhead guard manufactured in accordance with paragraph (a)(2) of this section, unless operating conditions do not permit.

(2) If the type of load presents a hazard, the user shall equip fork trucks with a vertical load backrest extension manufactured in accordance with paragraph (a)(2) of this section.

(f) *Fuel handling and storage.* (1) The storage and handling of liquid fuels such as gasoline and diesel fuel shall be in accordance with NFPA Flammable and Combustible Liquids Code (NFPA No. 30-1969), which is incorporated by reference as specified in §1910.6.

(2) The storage and handling of liquefied petroleum gas fuel shall be in accordance with NFPA Storage and Handling of Liquefied Petroleum Gases (NFPA No. 58-1969), which is incorporated by reference as specified in §1910.6.

(g) *Changing and charging storage batteries.* (1) Battery charging installations shall be located in areas designated for that purpose.

(2) Facilities shall be provided for flushing and neutralizing spilled electrolyte, for fire protection, for protecting charging apparatus from damage by trucks, and for adequate ven-

tilation for dispersal of fumes from gassing batteries.

(3) [Reserved]

(4) A conveyor, overhead hoist, or equivalent material handling equipment shall be provided for handling batteries.

(5) Reinstalled batteries shall be properly positioned and secured in the truck.

(6) A carboy tilter or siphon shall be provided for handling electrolyte.

(7) When charging batteries, acid shall be poured into water; water shall not be poured into acid.

(8) Trucks shall be properly positioned and brake applied before attempting to change or charge batteries.

(9) Care shall be taken to assure that vent caps are functioning. The battery (or compartment) cover(s) shall be open to dissipate heat.

(10) Smoking shall be prohibited in the charging area.

(11) Precautions shall be taken to prevent open flames, sparks, or electric arcs in battery charging areas.

(12) Tools and other metallic objects shall be kept away from the top of uncovered batteries.

(h) *Lighting for operating areas.*

(1) [Reserved]

(2) Where general lighting is less than 2 lumens per square foot, auxiliary directional lighting shall be provided on the truck.

(i) *Control of noxious gases and fumes.*

(1) Concentration levels of carbon monoxide gas created by powered industrial truck operations shall not exceed the levels specified in §1910.1000.

(j) *Dockboards (bridge plates).* See §1910.30(a).

(k) *Trucks and railroad cars.* (1) The brakes of highway trucks shall be set and wheel chocks placed under the rear wheels to prevent the trucks from rolling while they are boarded with powered industrial trucks.

(2) Wheel stops or other recognized positive protection shall be provided to prevent railroad cars from moving during loading or unloading operations.

(3) Fixed jacks may be necessary to support a semitrailer and prevent upending during the loading or unloading when the trailer is not coupled to a tractor.

(4) Positive protection shall be provided to prevent railroad cars from being moved while dockboards or bridge plates are in position.

(l) Operator training. (1) *Safe operation.* (i) The employer shall ensure that each powered industrial truck operator is competent to operate a powered industrial truck safely, as demonstrated by the successful completion of the training and evaluation specified in this paragraph (l).

(ii) Prior to permitting an employee to operate a powered industrial truck (except for training purposes), the employer shall ensure that each operator has successfully completed the training required by this paragraph (l), except as permitted by paragraph (l)(5).

(2) *Training program implementation.*

(i) Trainees may operate a powered industrial truck only:

(A) Under the direct supervision of persons who have the knowledge, training, and experience to train operators and evaluate their competence; and

(B) Where such operation does not endanger the trainee or other employees.

(ii) Training shall consist of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning, video tape, written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace.

(iii) All operator training and evaluation shall be conducted by persons who have the knowledge, training, and experience to train powered industrial truck operators and evaluate their competence.

(3) *Training program content.* Powered industrial truck operators shall receive initial training in the following topics, except in topics which the employer can demonstrate are not applicable to safe operation of the truck in the employer's workplace.

(i) Truck-related topics:

(A) Operating instructions, warnings, and precautions for the types of truck the operator will be authorized to operate;

(B) Differences between the truck and the automobile;

(C) Truck controls and instrumentation: where they are located, what they do, and how they work;

(D) Engine or motor operation;

(E) Steering and maneuvering;

(F) Visibility (including restrictions due to loading);

(G) Fork and attachment adaptation, operation, and use limitations;

(H) Vehicle capacity;

(I) Vehicle stability;

(J) Any vehicle inspection and maintenance that the operator will be required to perform;

(K) Refueling and/or charging and recharging of batteries;

(L) Operating limitations;

(M) Any other operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate.

(ii) Workplace-related topics:

(A) Surface conditions where the vehicle will be operated;

(B) Composition of loads to be carried and load stability;

(C) Load manipulation, stacking, and unstacking;

(D) Pedestrian traffic in areas where the vehicle will be operated;

(E) Narrow aisles and other restricted places where the vehicle will be operated;

(F) Hazardous (classified) locations where the vehicle will be operated;

(G) Ramps and other sloped surfaces that could affect the vehicle's stability;

(H) Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust;

(I) Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation.

(iii) The requirements of this section.

(4) *Refresher training and evaluation.*

(i) Refresher training, including an evaluation of the effectiveness of that training, shall be conducted as required by paragraph (l)(4)(ii) to ensure that the operator has the knowledge and skills needed to operate the powered industrial truck safely.

§ 1910.178

29 CFR Ch. XVII (7-1-04 Edition)

(ii) Refresher training in relevant topics shall be provided to the operator when:

(A) The operator has been observed to operate the vehicle in an unsafe manner;

(B) The operator has been involved in an accident or near-miss incident;

(C) The operator has received an evaluation that reveals that the operator is not operating the truck safely;

(D) The operator is assigned to drive a different type of truck; or

(E) A condition in the workplace changes in a manner that could affect safe operation of the truck.

(iii) An evaluation of each powered industrial truck operator's performance shall be conducted at least once every three years.

(5) *Avoidance of duplicative training.* If an operator has previously received

training in a topic specified in paragraph (1)(3) of this section, and such training is appropriate to the truck and working conditions encountered, additional training in that topic is not required if the operator has been evaluated and found competent to operate the truck safely.

(6) *Certification.* The employer shall certify that each operator has been trained and evaluated as required by this paragraph (1). The certification shall include the name of the operator, the date of the training, the date of the evaluation, and the identity of the person(s) performing the training or evaluation.

(7) *Dates.* The employer shall ensure that operators of powered industrial trucks are trained, as appropriate, by the dates shown in the following table.

If the employee was hired:	The initial training and evaluation of that employee must be completed:
Before December 1, 1999	By December 1, 1999.
After December 1, 1999	Before the employee is assigned to operate a powered industrial truck.

(8) Appendix A to this section provides non-mandatory guidance to assist employers in implementing this paragraph (1). This appendix does not add to, alter, or reduce the requirements of this section.

(m) *Truck operations.* (1) Trucks shall not be driven up to anyone standing in front of a bench or other fixed object.

(2) No person shall be allowed to stand or pass under the elevated portion of any truck, whether loaded or empty.

(3) Unauthorized personnel shall not be permitted to ride on powered industrial trucks. A safe place to ride shall be provided where riding of trucks is authorized.

(4) The employer shall prohibit arms or legs from being placed between the uprights of the mast or outside the running lines of the truck.

(5)(i) When a powered industrial truck is left unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off, and brakes set. Wheels shall be blocked if the truck is parked on an incline.

(ii) A powered industrial truck is unattended when the operator is 25 ft. or

more away from the vehicle which remains in his view, or whenever the operator leaves the vehicle and it is not in his view.

(iii) When the operator of an industrial truck is dismounted and within 25 ft. of the truck still in his view, the load engaging means shall be fully lowered, controls neutralized, and the brakes set to prevent movement.

(6) A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, or platform or freight car. Trucks shall not be used for opening or closing freight doors.

(7) Brakes shall be set and wheel blocks shall be in place to prevent movement of trucks, trailers, or railroad cars while loading or unloading. Fixed jacks may be necessary to support a semitrailer during loading or unloading when the trailer is not coupled to a tractor. The flooring of trucks, trailers, and railroad cars shall be checked for breaks and weakness before they are driven onto.

(8) There shall be sufficient headroom under overhead installations, lights, pipes, sprinkler system, etc.

(9) An overhead guard shall be used as protection against falling objects. It should be noted that an overhead guard is intended to offer protection from the impact of small packages, boxes, bagged material, etc., representative of the job application, but not to withstand the impact of a falling capacity load.

(10) A load backrest extension shall be used whenever necessary to minimize the possibility of the load or part of it from falling rearward.

(11) Only approved industrial trucks shall be used in hazardous locations.

(12) [Reserved]

(i) Use of a safety platform firmly secured to the lifting carriage and/or forks.

(ii) Means shall be provided whereby personnel on the platform can shut off power to the truck.

(iii) Such protection from falling objects as indicated necessary by the operating conditions shall be provided.

(13) [Reserved]

(14) Fire aisles, access to stairways, and fire equipment shall be kept clear.

(n) *Traveling.* (1) All traffic regulations shall be observed, including authorized plant speed limits. A safe distance shall be maintained approximately three truck lengths from the truck ahead, and the truck shall be kept under control at all times.

(2) The right of way shall be yielded to ambulances, fire trucks, or other vehicles in emergency situations.

(3) Other trucks traveling in the same direction at intersections, blind spots, or other dangerous locations shall not be passed.

(4) The driver shall be required to slow down and sound the horn at cross aisles and other locations where vision is obstructed. If the load being carried obstructs forward view, the driver shall be required to travel with the load trailing.

(5) Railroad tracks shall be crossed diagonally wherever possible. Parking closer than 8 feet from the center of railroad tracks is prohibited.

(6) The driver shall be required to look in the direction of, and keep a clear view of the path of travel.

(7) Grades shall be ascended or descended slowly.

(i) When ascending or descending grades in excess of 10 percent, loaded trucks shall be driven with the load up-grade.

(ii) [Reserved]

(iii) On all grades the load and load engaging means shall be tilted back if applicable, and raised only as far as necessary to clear the road surface.

(8) Under all travel conditions the truck shall be operated at a speed that will permit it to be brought to a stop in a safe manner.

(9) Stunt driving and horseplay shall not be permitted.

(10) The driver shall be required to slow down for wet and slippery floors.

(11) Dockboard or bridgeplates, shall be properly secured before they are driven over. Dockboard or bridgeplates shall be driven over carefully and slowly and their rated capacity never exceeded.

(12) Elevators shall be approached slowly, and then entered squarely after the elevator car is properly leveled. Once on the elevator, the controls shall be neutralized, power shut off, and the brakes set.

(13) Motorized hand trucks must enter elevator or other confined areas with load end forward.

(14) Running over loose objects on the roadway surface shall be avoided.

(15) While negotiating turns, speed shall be reduced to a safe level by means of turning the hand steering wheel in a smooth, sweeping motion. Except when maneuvering at a very low speed, the hand steering wheel shall be turned at a moderate, even rate.

(o) *Loading.* (1) Only stable or safely arranged loads shall be handled. Caution shall be exercised when handling off-center loads which cannot be centered.

(2) Only loads within the rated capacity of the truck shall be handled.

(3) The long or high (including multiple-tiered) loads which may affect capacity shall be adjusted.

(4) Trucks equipped with attachments shall be operated as partially loaded trucks when not handling a load.

(5) A load engaging means shall be placed under the load as far as possible;

§ 1910.178

29 CFR Ch. XVII (7-1-04 Edition)

the mast shall be carefully tilted backward to stabilize the load.

(6) Extreme care shall be used when tilting the load forward or backward, particularly when high tiering. Tilting forward with load engaging means elevated shall be prohibited except to pick up a load. An elevated load shall not be tilted forward except when the load is in a deposit position over a rack or stack. When stacking or tiering, only enough backward tilt to stabilize the load shall be used.

(p) *Operation of the truck.* (1) If at any time a powered industrial truck is found to be in need of repair, defective, or in any way unsafe, the truck shall be taken out of service until it has been restored to safe operating condition.

(2) Fuel tanks shall not be filled while the engine is running. Spillage shall be avoided.

(3) Spillage of oil or fuel shall be carefully washed away or completely evaporated and the fuel tank cap replaced before restarting engine.

(4) No truck shall be operated with a leak in the fuel system until the leak has been corrected.

(5) Open flames shall not be used for checking electrolyte level in storage batteries or gasoline level in fuel tanks.

(q) *Maintenance of industrial trucks.* (1) Any power-operated industrial truck not in safe operating condition shall be removed from service. All repairs shall be made by authorized personnel.

(2) No repairs shall be made in Class I, II, and III locations.

(3) Those repairs to the fuel and ignition systems of industrial trucks which involve fire hazards shall be conducted only in locations designated for such repairs.

(4) Trucks in need of repairs to the electrical system shall have the battery disconnected prior to such repairs.

(5) All parts of any such industrial truck requiring replacement shall be replaced only by parts equivalent as to safety with those used in the original design.

(6) Industrial trucks shall not be altered so that the relative positions of the various parts are different from what they were when originally re-

ceived from the manufacturer, nor shall they be altered either by the addition of extra parts not provided by the manufacturer or by the elimination of any parts, except as provided in paragraph (q)(12) of this section. Additional counterweighting of fork trucks shall not be done unless approved by the truck manufacturer.

(7) Industrial trucks shall be examined before being placed in service, and shall not be placed in service if the examination shows any condition adversely affecting the safety of the vehicle. Such examination shall be made at least daily.

Where industrial trucks are used on a round-the-clock basis, they shall be examined after each shift. Defects when found shall be immediately reported and corrected.

(8) Water mufflers shall be filled daily or as frequently as is necessary to prevent depletion of the supply of water below 75 percent of the filled capacity. Vehicles with mufflers having screens or other parts that may become clogged shall not be operated while such screens or parts are clogged. Any vehicle that emits hazardous sparks or flames from the exhaust system shall immediately be removed from service, and not returned to service until the cause for the emission of such sparks and flames has been eliminated.

(9) When the temperature of any part of any truck is found to be in excess of its normal operating temperature, thus creating a hazardous condition, the vehicle shall be removed from service and not returned to service until the cause for such overheating has been eliminated.

(10) Industrial trucks shall be kept in a clean condition, free of lint, excess oil, and grease. Noncombustible agents should be used for cleaning trucks. Low flash point (below 100 °F.) solvents shall not be used. High flash point (at or above 100 °F.) solvents may be used. Precautions regarding toxicity, ventilation, and fire hazard shall be consonant with the agent or solvent used.

(11) [Reserved]

(12) Industrial trucks originally approved for the use of gasoline for fuel may be converted to liquefied petroleum gas fuel provided the complete

conversion results in a truck which embodies the features specified for LP or LPS designated trucks. Such conversion equipment shall be approved. The description of the component parts of this conversion system and the recommended method of installation on specific trucks are contained in the "Listed by Report."

APPENDIX A TO § 1910.178—STABILITY OF POWERED INDUSTRIAL TRUCKS (NON-MANDATORY APPENDIX TO PARAGRAPH (L) OF THIS SECTION)

A-1. *Definitions.*

The following definitions help to explain the principle of stability:

Center of gravity is the point on an object at which all of the object's weight is concentrated. For symmetrical loads, the center of gravity is at the middle of the load.

Counterweight is the weight that is built into the truck's basic structure and is used to offset the load's weight and to maximize the vehicle's resistance to tipping over.

Fulcrum is the truck's axis of rotation when it tips over.

Grade is the slope of a surface, which is usually measured as the number of feet of rise or fall over a hundred foot horizontal distance (the slope is expressed as a percent).

Lateral stability is a truck's resistance to overturning sideways.

Line of action is an imaginary vertical line through an object's center of gravity.

Load center is the horizontal distance from the load's edge (or the fork's or other attachment's vertical face) to the line of action through the load's center of gravity.

Longitudinal stability is the truck's resistance to overturning forward or rearward.

Moment is the product of the object's weight times the distance from a fixed point (usually the fulcrum). In the case of a powered industrial truck, the distance is measured from the point at which the truck will tip over to the object's line of action. The distance is always measured perpendicular to the line of action.

Track is the distance between the wheels on the same axle of the truck.

Wheelbase is the distance between the centerline of the vehicle's front and rear wheels.

A-2. *General.*

A-2.1. Determining the stability of a powered industrial truck is simple once a few basic principles are understood. There are many factors that contribute to a vehicle's stability: the vehicle's wheelbase, track, and height; the load's weight distribution; and the vehicle's counterweight location (if the vehicle is so equipped).

A-2.2. The "stability triangle," used in most stability discussions, demonstrates stability simply.

A-3. *Basic Principles.*

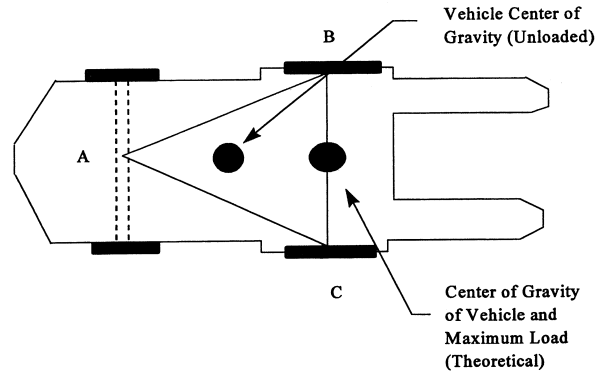
A-3.1. Whether an object is stable depends on the object's moment at one end of a system being greater than, equal to, or smaller than the object's moment at the system's other end. This principle can be seen in the way a see-saw or teeter-totter works: that is, if the product of the load and distance from the fulcrum (moment) is equal to the moment at the device's other end, the device is balanced and it will not move. However, if there is a greater moment at one end of the device, the device will try to move downward at the end with the greater moment.

A-3.2. The longitudinal stability of a counterbalanced powered industrial truck depends on the vehicle's moment and the load's moment. In other words, if the mathematic product of the load moment (the distance from the front wheels, the approximate point at which the vehicle would tip forward) to the load's center of gravity times the load's weight is less than the vehicle's moment, the system is balanced and will not tip forward. However, if the load's moment is greater than the vehicle's moment, the greater load-moment will force the truck to tip forward.

A-4. *The Stability Triangle.*

A-4.1. Almost all counterbalanced powered industrial trucks have a three-point suspension system, that is, the vehicle is supported at three points. This is true even if the vehicle has four wheels. The truck's steer axle is attached to the truck by a pivot pin in the axle's center. When the points are connected with imaginary lines, this three-point support forms a triangle called the stability triangle. Figure 1 depicts the stability triangle.

Figure 1.



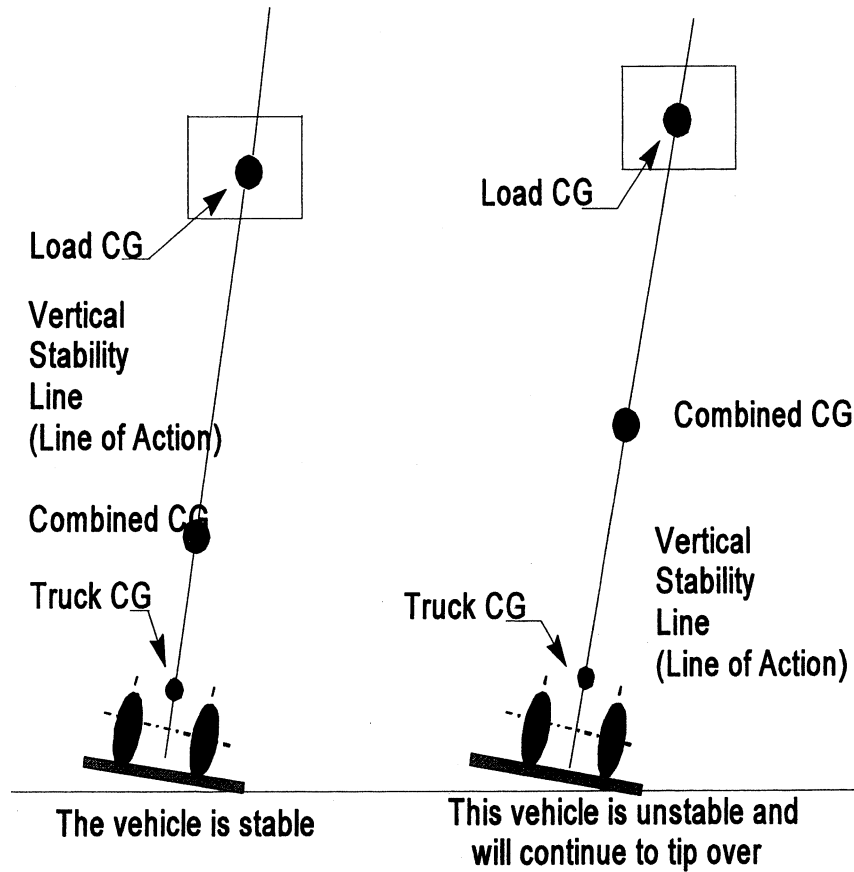
Notes:

1. When the vehicle is loaded, the combined center of gravity (CG) shifts toward line B-C. Theoretically the maximum load will result in the CG at the line B-C. In actual practice, the combined CG should never be at line B-C.
2. The addition of additional counterweight will cause the truck CG to shift toward point A and result in a truck that is less stable laterally.

A-4.2. When the vehicle's line of action, or load center, falls within the stability triangle, the vehicle is stable and will not tip over. However, when the vehicle's line of ac-

tion or the vehicle/load combination falls outside the stability triangle, the vehicle is unstable and may tip over. (See Figure 2.)

Figure 2.



A-5. Longitudinal Stability.

A-5.1. The axis of rotation when a truck tips forward is the front wheels' points of contact with the pavement. When a powered industrial truck tips forward, the truck will rotate about this line. When a truck is stable, the vehicle-moment must exceed the load-moment. As long as the vehicle-moment is equal to or exceeds the load-moment, the vehicle will not tip over. On the other hand, if the load moment slightly exceeds the vehicle-moment, the truck will begin to tip forward, thereby causing the rear to lose contact with the floor or ground and resulting in loss of steering control. If the load-moment greatly exceeds the vehicle moment, the truck will tip forward.

A-5.2. To determine the maximum safe load-moment, the truck manufacturer nor-

mally rates the truck at a maximum load at a given distance from the front face of the forks. The specified distance from the front face of the forks to the line of action of the load is commonly called the load center. Because larger trucks normally handle loads that are physically larger, these vehicles have greater load centers. Trucks with a capacity of 30,000 pounds or less are normally rated at a given load weight at a 24-inch load center. Trucks with a capacity greater than 30,000 pounds are normally rated at a given load weight at a 36- or 48-inch load center. To safely operate the vehicle, the operator should always check the data plate to determine the maximum allowable weight at the rated load center.

A-5.3. Although the true load-moment distance is measured from the front wheels, this

§ 1910.179

distance is greater than the distance from the front face of the forks. Calculating the maximum allowable load-moment using the load-center distance always provides a lower load-moment than the truck was designed to handle. When handling unusual loads, such as those that are larger than 48 inches long (the center of gravity is greater than 24 inches) or that have an offset center of gravity, etc., a maximum allowable load-moment should be calculated and used to determine whether a load can be safely handled. For example, if an operator is operating a 3000 pound capacity truck (with a 24-inch load center), the maximum allowable load-moment is 72,000 inch-pounds (3,000 times 24). If a load is 60 inches long (30-inch load center), then the maximum that this load can weigh is 2,400 pounds (72,000 divided by 30).

A-6. Lateral Stability.

A-6.1. The vehicle's lateral stability is determined by the line of action's position (a vertical line that passes through the combined vehicle's and load's center of gravity) relative to the stability triangle. When the vehicle is not loaded, the truck's center of gravity location is the only factor to be considered in determining the truck's stability. As long as the line of action of the combined vehicle's and load's center of gravity falls within the stability triangle, the truck is stable and will not tip over. However, if the line of action falls outside the stability triangle, the truck is not stable and may tip over. Refer to Figure 2.

A-6.2. Factors that affect the vehicle's lateral stability include the load's placement on the truck, the height of the load above the surface on which the vehicle is operating, and the vehicle's degree of lean.

A-7. Dynamic Stability.

A-7.1. Up to this point, the stability of a powered industrial truck has been discussed without considering the dynamic forces that result when the vehicle and load are put into motion. The weight's transfer and the resultant shift in the center of gravity due to the dynamic forces created when the machine is moving, braking, cornering, lifting, tilting, and lowering loads, etc., are important stability considerations.

A-7.2. When determining whether a load can be safely handled, the operator should exercise extra caution when handling loads that cause the vehicle to approach its maximum design characteristics. For example, if an operator must handle a maximum load, the load should be carried at the lowest position possible, the truck should be accelerated slowly and evenly, and the forks should be tilted forward cautiously. However, no

29 CFR Ch. XVII (7-1-04 Edition)

precise rules can be formulated to cover all of these eventualities.

[39 FR 23502, June 27, 1974, as amended at 40 FR 23073, May 28, 1975; 43 FR 49749, Oct. 24, 1978; 49 FR 5322, Feb. 10, 1984; 53 FR 12122, Apr. 12, 1988; 55 FR 32015, Aug 6, 1990; 61 FR 9239, Mar. 7, 1996; 63 FR 66270, Dec. 1, 1998; 68 FR 32638, June 2, 2003]

§ 1910.179 Overhead and gantry cranes.

(a) *Definitions applicable to this section.* (1) A *crane* is a machine for lifting and lowering a load and moving it horizontally, with the hoisting mechanism an integral part of the machine. Cranes whether fixed or mobile are driven manually or by power.

(2) An *automatic crane* is a crane which when activated operates through a preset cycle or cycles.

(3) A *cab-operated crane* is a crane controlled by an operator in a cab located on the bridge or trolley.

(4) *Cantilever gantry crane* means a gantry or semigantry crane in which the bridge girders or trusses extend transversely beyond the crane runway on one or both sides.

(5) *Floor-operated crane* means a crane which is pendant or nonconductive rope controlled by an operator on the floor or an independent platform.

(6) *Gantry crane* means a crane similar to an overhead crane except that the bridge for carrying the trolley or trolleys is rigidly supported on two or more legs running on fixed rails or other runway.

(7) *Hot metal handling crane* means an overhead crane used for transporting or pouring molten material.

(8) *Overhead crane* means a crane with a movable bridge carrying a movable or fixed hoisting mechanism and traveling on an overhead fixed runway structure.

(9) *Power-operated crane* means a crane whose mechanism is driven by electric, air, hydraulic, or internal combustion means.

(10) A *pulpit-operated crane* is a crane operated from a fixed operator station not attached to the crane.

(11) A *remote-operated crane* is a crane controlled by an operator not in a pulpit or in the cab attached to the crane, by any method other than pendant or rope control.