Note to Reviewer

This ICR is being submitted in association with a proposed rule related to cranes and derricks in railroad roadway construction work. The agency asks that OMB file comment on this request should any public comments address the information collections.

In short succession, OSHA is issuing two NPRMs revising the Cranes and Derricks in Construction Information Collection (OMB control number 1218-0261). These actions are: "Cranes and Derricks in Construction: Railroad Roadway Work" and "Cranes and Derricks in Construction: Operator Qualification." Due to the anticipated concurrent timing of the two NPRMs, the Agency will revise the Cranes and Derricks in Construction Information Collection (IC) to include the information collection requirements created by the Railroad Roadway Work NPRM.

OSHA will request a separate OMB control number for the Operator Qualification NPRM. While the Operator Qualification NPRM revises existing regulatory text in Subpart CC—Cranes and Derricks in Construction, that ICR will discuss the burden hours and costs for the proposed operator qualification changes as new information collection requirements associated with the operator qualification rulemaking (29 CFR 1926.1427).

When the Operator Qualification rule is finalized, OSHA will request approval to amend the Cranes and Derricks in Construction Information Collection (OMB control number 1218-0261) to incorporate that ICR analysis and discontinue the new OMB control number. The agency expects that request will be submitted as a non-material change, since the collections will be unchanged.

SUPPORTING STATEMENT FOR THE INFORMATION COLLECTION REQUIREMENTS FOR THE STANDARD ON CRANES AND DERRICKS IN CONSTRUCTION (29 CFR PART 1926, SUBPART CC)[1]

A. 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 objective of the Occupational Safety and Health Act of 1970 (i.e., "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

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

achieve this objective, the Act authorizes "the development and promulgation of occupational safety and health standards" (29 U.S.C. 651).

Section 6(b)(7) of the Act specifies that "[a]ny 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." This provision goes on to state that "[t]he 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 . . . as may be warranted by experience, information, or medical or technological developments acquired subsequent to the promulgation of the relevant standard" (29 U.S.C. 655).

With regard to recordkeeping, the Act specifies 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). 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. 657).

Under the authority granted by the Act, the Occupational Safety and Health Administration (i.e., "OSHA" or "the Agency") published at 29 CFR part 1926, subpart CC, a safety standard for the construction industry that regulates cranes and derricks (i.e., "the standard").

The Occupational Safety and Health Administration published its final rule for cranes and derricks in construction on August 9, 2010. The final rule set out new requirements to enhance worker safety around cranes and derricks. On October 7, 2010, the Association of American Railroads ("AAR") filed a petition for review in the United States Court of Appeals for the District of Columbia challenging certain requirements affecting railroad roadway work. Subsequently OSHA and AAR reached a settlement agreement under which OSHA agreed to undertake rulemaking to propose expanding several exemptions and to issue clarifications affecting work on or along railroad tracks. These exemptions and clarifications, which would not apply to bridge work, would exempt entirely one type of railroad equipment from OSHA's crane standard; would exempt railroad equipment operators from the certification requirements in the standard; and would include several provisions relating to safety devices, work-area controls, out-of-level work, dragging loads sideways, equipment modifications, and manufacturer requirements. OSHA believes this proposal, if promulgated, would maintain safety and health protections for workers while reducing employers' compliance burdens.

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.

The standard specifies a number of information collection requirements. Employers and employees use these information collection requirements to help ensure the safe operation of equipment covered by the standard. The following sections describe who uses the information collected under each requirement, as well as how they use it. In addition, the paperwork provisions of the standard specify requirements for developing and maintaining a number of records and other documents. The following discussion identifies the sections of the standard that have information collection requirements, and describes the content and purpose of these requirements in detail.

The requirements are listed below by section. The specific paragraphs requiring the information collection requirements are listed in brackets directly below the title for each section. The full text of those paragraphs is included, along with additional headings and paragraphs where necessary for context. The text of the paragraphs requiring information collections is double underlined. The text of other provisions provided for context is not underlined.

A. Scope (§ 1926.1400)
[§ 1926.1400(c)(4), (f)]
(c) * * *
§ 1926.1400(c)(4) Digger derricks when used for augering holes for poles carrying electric or telecommunication lines, placing and removing the poles, and for handling associated materials for installation on, or removal from, the poles, or when used for any other work subject to subpart V of this part. To be eligible for this exclusion, digger-derrick use in work subject to subpart V of this part must comply with all of the provisions of that subpart, and digger-derrick use in construction work for telecommunication service (as defined at § 1910.268(s)(40)) must comply with all of the provisions of § 1910.268.

Purpose: The paperwork burdens that apply to the information collections referenced in this section are included in the calculations for the applicable sections where the collection of information is actually required.

§ 1926.1400(f) --Where provisions of this standard direct an operator, crewmember, or other employee to take certain actions, the employer must establish, effectively communicate to the relevant persons, and enforce, work rules to ensure compliance with such provisions.

Purpose: The transfer of information specified in this paragraph ensures that work rules are effectively communicated to those who are responsible for implementing and complying with those rules. Paragraph 1926.1400(f) does not actually require a separate collection of information because the collection of information is actually required and accounted for in the applicable sections of subpart CC. Paragraph 1400(f) merely

identifies the employer as the entity with the ultimate responsibility for ensuring that the information is communicated, but the Agency is including paragraph 1400(f) in Item 2 to highlight the importance of this duty. The paperwork burdens that apply to the information collections referenced in this section are included in the calculations for the applicable sections where the collection of information is actually required.

B. Ground Conditions (§ 1926.1402)
[§ 1926.1402(c)(2)]

§ 1926.1402(c) -- The controlling entity shall:

* * *

(2) -- Inform the user of the equipment and the operator of the location of hazards beneath the equipment set-up area (such as voids, tanks, utilities) if those hazards are identified in documents (such as site drawings, as-built drawings, and soil analyses) that are in the possession of the controlling entity (whether at the site or off-site) or the hazards are otherwise known to that controlling entity.

Purpose: This exchange of information ensures that the equipment operator is informed of hidden hazards beneath the equipment in set-up area so that the operator, and any other user of equipment, can avoid the hazards or take precautions to prevent the equipment from being set up unsafely.

C. Assembly/Disassembly -- Selection of Manufacturer or Employer Procedures (§ 1926.1403)
[§ 1926.1403(b)]

§ 1926.1403 -- When assembling and disassembling equipment (or attachments), the employer shall comply with either:

* * *

§ 1926.1403(b) -- *Employer procedures for assembly and disassembly*. Employer procedures may be used only where the employer can demonstrate that the procedures used meet the requirements in § 1926.1406. NOTE: The employer must follow manufacturer procedures when an employer uses synthetic slings during assembly or disassembly rigging. (See § 1926.1404(r)).

Purpose: Requiring use of the procedures helps ensure that the employer and its employees use the correct information for safe assembly/disassembly of the equipment. OSHA considers this requirement to be a usual and customary practice of the industry. See, e.g., ANSI B.30.5-2000, section 5-3.1.3(k). However, OSHA also recognizes that there may be a small number of employers who operate older models of cranes that

would have to meet the requirements as a new work practice. OSHA is taking burden under Item 12 below for this small number of employers.

D. Assembly/Disassembly (A/D) - General Requirements (applies to all assembly and disassembly operations) (§ 1926.1404)
[§ 1926.1404(d)(1), (d)(2), (f)(2), (h)(4), (h)(6), (j), (k), and (m)(1)(i)]

§ 1926.1404(d) -- *Crew instructions*.
(1) Before commencing assembly/disassembly operations, the A/D director must ensure that the crew members understand all of the following:
(i) Their tasks.
(ii) The hazards associated with their tasks.
(iii) The hazardous positions/locations that they need to avoid.
(2) During assembly/disassembly operations, before a crew member takes on a different task, or when adding new personnel during the operations, the requirements in paragraphs (d)(1)(i) through (d)(1)(iii) of this section must be met.

Purpose: These communication requirements prevent struck-by and crushed-by injuries and fatalities during A/D operations by ensuring that crew members are warned of hazards associated that are identified prior to the commencement of A/D (paragraph (d)(1)) or that are identified during the A/D process (paragraph (d)(2)). OSHA considers this communication provision to be performance oriented and, therefore, is not taking burden for the requirement under Item 12 below.

§ 1926.1404(f)(2) -- *Exception*. Where the employer demonstrates that site constraints require one or more employees to be under the boom, jib, or other components when pins (or similar devices) are being removed, the A/D director must implement procedures that minimize the risk of unintended dangerous movement and minimize the duration and extent of exposure under the boom. (See Non-mandatory Appendix B of this subpart for an example.)

Purpose: The requirement prevents struck-by and crushed-by injuries and fatalities when pins are being removed during A/D operations. The use of these procedures is also an element in an effective training program as required by § 1926.21(b)(2). However, OSHA recognizes that there may be a small number of employers for whom developing an alternative A/D plan and exchanging this information with A/D employees would be done as a new work practice. OSHA is taking burden under Item 12 below for this small number of employers.

§ 1926.1404(h)(4) -- *Verifying assist crane loads*. When using an assist crane, the loads that will be imposed on the assist crane at each phase of assembly/disassembly must be verified in accordance with § 1926.1417(o)(3) before assembly/disassembly begins.

Purpose: The verification requirement ensures that the operator of the assist crane avoids loading the equipment beyond its rated capacity and creating an unsafe condition. OSHA believes this requirement is a usual and customary work practice in the industry

for several types of cranes, including assist cranes. See, e.g., ASME B30.3 (1996), Sec. 3-3.2.1 and ASME B30.5- 2000, section 5-3.2.1.1(c). Therefore, OSHA is not taking burden for the requirement under Item 12 below.

§ 1926.1404(h)(6) -- *Center of gravity.*

(i) The center of gravity of the load must be identified if that is necessary for the method used for maintaining stability.

(ii) Where there is insufficient information to accurately identify the center of gravity, measures designed to prevent unintended dangerous movement resulting from an inaccurate identification of the center of gravity must be used. (See Non-mandatory Appendix B of this subpart for an example.)

Purpose: This provision is necessary for the equipment operator to make determinations that would ensure crane stability during operations and, therefore, prevent crane collapse and unplanned movement of the load. However, OSHA considers acquiring this information to be a usual and customary rigging practice in the industry and is not taking burden for the requirement under Item 12 below.

§ 1926.1404(j) -- *Cantilevered boom sections*. Manufacturer limitations on the maximum amount of boom supported only by cantilevering shall not be exceeded. Where these are unavailable, a registered professional engineer familiar with the type of equipment involved must determine in writing this limitation, which must not be exceeded.

Purpose: OSHA requires that a registered professional engineer's calculated limitations be in writing so that these limits can be readily referenced when the boom is going to be supported by cantilevering alone. The requirement helps to ensure that the determination is made in accordance with professional engineering practices.

§ 1926.1404(k) -- *Weight of components.* The weight of each component must be readily available.

Purpose: The information requirement is necessary for the operator to accurately calculate the weight of the loads, and would prevent the equipment from being overloaded, resulting in possible crane collapse. It also would allow riggers to select appropriate rigging equipment. OSHA believes that manufacturers already provide this information for components, and have it readily available during hoisting operations (i.e., it is a usual and customary practice of the industry). Therefore, OSHA is not taking burden for the requirement under Item 12 below.

§ 1926.1404(m) -- *Components and configuration.*

(1) The selection of components, and configuration of the equipment, that affect the capacity or safe operation of the equipment must be in accordance with:

(i) *Manufacturer instructions, prohibitions, limitations, and specifications*. Where these are unavailable, a registered professional engineer familiar with the type of equipment involved must approve, in writing, the selection and configuration of components; or

(ii) Approved modifications that meet the requirements of § 1926.1434 (Equipment modifications).

Purpose: Improper selection or configuration of equipment can result in unplanned movement or collapse of the equipment. The requirement of an engineer's written approval in § 1926.1404(m)(1)(i) ensures that employees engaged in A/D operations can readily reference it to determine which components to select and how to configure them. As required by 1926.1404(m)(1)(ii), the selection of components and configurations must meet the requirements of § 1926.1434, which requires that modifications be approved by the manufacturer or a registered professional engineer. In each case, the engineer's approval helps to ensure that the selections of components are made in accordance with professional engineering practices. While OSHA is including a paperwork burden in Item 13 for § 1926.1404(m)(1)(i), the burden for compliance with § 1926.1404(m)(1)(ii) is included in the Item 13 burdens under § 1926.1434.

E. Assembly/Disassembly – employer procedures – general requirements (§ 1926.1406) [§ 1926.1406(b)]

§ 1926.1406(b) -- *Qualified person*. Employer procedures must be developed by a qualified person.

Purpose: Improper assembly or disassembly of equipment can result in unplanned movement or collapse of the equipment. The requirement ensures that employer-developed procedures that vary from the manufacturer procedures are adequate to prevent this hazard. A qualified person's experience and judgment is necessary because there are a number of complex factors that must be considered in the development of these procedures. OSHA believes that it is a usual and customary practice throughout most of the industry to have a qualified person develop alternative procedures, but there may be a small number of employers for whom using a qualified person to develop alternative procedures would be a new work practice. OSHA is taking burden under Item 12 below for this small number of employers.

F. Power line safety (up to 350 KV) – assembly and disassembly (§ 1926.1407)
[§ 1926.1407(a)(1), (b)(1), (b)(3)(i)(D), (c), (d), (e), (f), and (g)]

§ 1926.1407 -- *Power line safety (up to 350 kV) – assembly and disassembly*.
(a) Before assembling or disassembling equipment, the employer must determine if any part of the equipment, load line, or load (including rigging and lifting accessories) could

get, in the direction or area of assembly/disassembly. If so, the employer must meet the requirements in Option (1), Option (2), or Option (3) of this section, as follows:

(1) *Option (1) – Deenergize and ground*. Confirm from the utility owner/operator that the power line has been deenergized and visibly grounded at the worksite.

Purpose: This information is necessary to prevent electrocution from errors in de-energization or grounding. Because of the time and cost considerations in arranging for the utility owner/operator to deenergize and ground the line, OSHA expects that this option will be used very infrequently. However, OSHA is taking burden under Item 12 below for the small number of employers who may elect to proceed under this option.

§ 1926.1407(b) -- *Preventing encroachment/electrocution.* Where encroachment precautions are required under Option (2), or Option (3) of this section, all of the following requirements must be met:

(1) Conduct a planning meeting with the Assembly/Disassembly director (A/D director), operator, assembly/disassembly crew and the other workers who will be in the assembly/disassembly area to review the location of the power line(s) and the steps that will be implemented to prevent encroachment/electrocution.

Purpose: The information exchange ensures that the operator and other employees who will be in the vicinity of the crane or load are informed of where the power lines are and are made aware of the protective methods used to prevent encroachment and electrocution. OSHA considers this required exchange of information to be a usual and customary practice in the industry. See, e.g., ASME B30.5-2004, section 5-3.4.5.3(a).

§ 1926.1407(b)(3) -- At least one of the following additional measures must be in place :

(i) Use a dedicated spotter who is in continuous contact with the equipment operator. The dedicated spotter must:

* * *

(D) Give timely information to the operator so that the required clearance distance can be maintained.

Purpose: The standard requires that the operator receive the spotter's information in a timely manner or the operator may breach the minimum clearance distance, which could result in injury or electrocution. OSHA considers this requirement to be a usual and customary practice in the industry because it is specified by ASME standards as an alternative to deenergizing the power line in. See ASME B30.5-2004, section 5-3.4.5.3(d) (requirement of qualified signalperson whose "sole responsibility is to verify that the required clearance is maintained"). Therefore, OSHA is not taking burden for the requirement under Item 12 below.

§ 1926.1407(c) -- *Assembly/disassembly below power lines prohibited*. No part of a crane/derrick, load line, or load (including rigging and lifting accessories), whether partially or fully assembled, is allowed below a power line unless the employer has confirmed that the utility owner/operator has deenergized and (at the worksite) visibly grounded the power line.

Purpose: The required confirmation of de-energization and grounding ensures that employees will not be exposed to an electrocution hazard from an energized line.

§ 1926.1407(d) -- *Assembly/disassembly inside Table A clearance prohibited*. No part of a crane/derrick, load line, or load (including rigging and lifting accessories), whether partially or fully assembled, is allowed closer than the minimum approach distance under Table A (see § 1926.1408) to a power line unless the employer has confirmed that the utility owner/operator has deenergized and (at the worksite) visibly grounded the power line.

Purpose: The required confirmation of de-energization and grounding ensures that employees will not be exposed to an electrocution hazard from an energized line.

§1926.1407(e) -- *Voltage information*. Where Option (3) of this section is used, the utility owner/operator of the power lines must provide the requested voltage information within two working days of the employer's request.

Purpose: This requirement ensures that the employer proceeding under Option (3) receives the necessary voltage information in a timely manner to avoid electrocution hazards.

§ 1926.1407(f) -- *Power lines presumed energized*. The employer must assume that all power lines are energized unless the utility owner/operator confirms that the power line has been and continues to be deenergized and visibly grounded at the worksite.

Purpose: The required confirmation of de-energization and grounding ensures that employees will not be exposed to an electrocution hazard from an energized line.

§1926.1407(g) -- *Posting of electrocution warnings*. There must be at least one electrocution hazard warning conspicuously posted in the cab so that it is in view of the operator and (except for overhead gantry and tower cranes) at least two on the outside of the equipment.

Purpose: The requirement ensures that the operator and others who may be in the vicinity of the equipment are adequately warned of the potential for electrocution if any part of the machinery or load comes into contact with an energized power line. OSHA considers this required exchange of information to be a usual and customary practice in the industry. See, e.g., ASME B30.5-2004, section 5-3.4.5.2(d)(3) and (i).

G. Power line safety (up to 350 kV) - equipment operations (§ 1926.1408)

[§ 1926.1408(a)(2)(i), (b)(1), (b)(4)(ii)(D), (c), (d)(1), (e), (g), and Table A]

§ 1926.1408(a) -- *Hazard assessments and precautions inside the work zone.* Before beginning equipment operations, the employer must:

* * *

(2) Determine if any part of the equipment, load line or load (including rigging and lifting accessories), if operated up to the equipment's maximum working radius in the work zone, could get closer than 20 feet to a power line. If so, the employer must meet the requirements in Option (1), Option (2), or Option (3) of this section, as follows:

(i) *Option (1) – Deenergize and ground*. Confirm from the utility owner/operator that the power line has been deenergized and visibly grounded at the worksite.

Purpose: This information is necessary to prevent electrocution from errors in de-energization or grounding. Because of the time and cost considerations in arranging for the utility owner/operator to deenergize and ground the line, OSHA expects that this option will be used very infrequently. However, OSHA is taking burden under Item 12 below for the small number of employers who may elect to proceed under this option.

§ 1926.1408(b) -- *Preventing encroachment/electrocution*. Where encroachment precautions are required under Option (2) or Option (3) of this section, all of the following requirements must be met:

(1) Conduct a planning meeting with the operator and the other workers who will be in the area of the equipment or load to review the location of the power line(s), and the steps that will be implemented to prevent encroachment/electrocution.

Purpose: This information exchange ensures that the operator and other employees who will be in the vicinity of the crane or load are informed and aware of the protective methods used to prevent equipment from contacting energized power lines at the worksite. OSHA considers this required exchange of information to be a usual and customary practice in the industry, and is not taking any burden for it. See, e.g., ASME B30.5-2004; section 5-3.4.5.4(a).

§ 1926.1408(b)(4)(ii) -- A dedicated spotter who is in continuous contact with the operator. Where this measure is selected, the dedicated spotter must:

* * *

(D) -- Give timely information to the operator so that the required clearance distance can be maintained.

Purpose: The requirement ensures the safe operation of the equipment in the vicinity of an energized power line. A dedicated spotter must give timely information to the

operator so that the required clearance distance can be effectively maintained. OSHA considers this requirement to be a usual and customary practice in the industry because it is specified by ASME as an alternative to deenergizing the power line in. See ASME B30.5-2004, section 5-3.4.5.3(d) (requirement of qualified signalperson whose "sole responsibility is to verify that the required clearance is maintained.") Therefore, OSHA is not taking burden for the requirement under Item 12 below.

§ 1926.1408(c) -- *Voltage information*. Where Option (3) of this section is used, the utility owner/operator of the power lines must provide the requested voltage information within two working days of the employer's request.

Purpose: This requirement ensures that the employer proceeding under Option (3) receives the necessary voltage information in a timely manner to avoid electrocution hazards.

§ 1926.1408(d) -- *Operations below power lines*. (1) No part of the equipment, load line, or load (including rigging and lifting accessories) is allowed below a power line unless the employer has confirmed that the utility owner/operator has deenergized and (at the worksite) visibly grounded the power line, except where one of the exceptions in paragraph (d)(2) of this section applies.

Purpose: The required confirmation of de-energization and grounding ensures that employees will not be exposed to an electrocution hazard from an energized line.

§ 1926.1408(e) -- *Power lines presumed energized.* The employer must assume that all power lines are energized unless the utility owner/operator confirms that the power line has been and continues to be deenergized and visibly grounded at the worksite.

Purpose: The required confirmation of de-energization and grounding ensures that employees will not be exposed to an electrocution hazard from an energized line.

§ 1926.1408(g) -- *Training*.

(1) The employer must train each operator and crew member assigned to work with the equipment on all of the following:

(i) The procedures to be followed in the event of electrical contact with a power line. Such training must include:

(A) Information regarding the danger of electrocution from the operator simultaneously touching the equipment and the ground.

(B) The importance to the operator's safety of remaining inside the cab except where there is an imminent danger of fire, explosion, or other emergency that necessitates leaving the cab.

(C) The safest means of evacuating from equipment that may be energized.

(D) The danger of the potentially energized zone around the equipment (step potential).

(E) The need for crew in the area to avoid approaching or touching the equipment and the load.

(F) Safe clearance distance from power lines.

(ii) Power lines are presumed to be energized unless the utility owner/operator confirms that the power line has been and continues to be deenergized and visibly grounded at the worksite.

(iii) Power lines are presumed to be uninsulated unless the utility owner/operator or a registered engineer who is a qualified person with respect to electrical power transmission and distribution confirms that a line is insulated.

(iv) The limitations of an insulating link/device, proximity alarm, and range control (and similar) device, if used.

(v) The procedures to be followed to properly ground equipment and the limitations of grounding.

(2) Employees working as dedicated spotters must be trained to enable them to effectively perform their task, including training on the applicable requirements of this section.

(3) Training under this section must be administered in accordance with § 1926.1430(g).

Purpose: This provision requires that employees be informed of potential electrocution hazards and protective methods that the employer will use to prevent equipment from contacting energized power lines. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA is does not take burden for this activity under Item 12 of this Supporting Statement.

§1926.1408, Table A, minimum clearance distance that must be maintained for over 1,000 (nominal, kV, alternating current) -- as established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution.

Purpose: The requirement is necessary to ensure that minimum clearance distances for employees performing work in the vicinity of power lines of over 1000 kV are accurately determined only by qualified persons, thereby preventing employee electrocutions.

H. Power line safety (0ver 350 kV) (§ 1926.1409)
[All of § 1926.1409]

§ 1926.1409(a) The requirements of §§ 1926.1407 and 1408 apply to power lines over 350 kV, except that wherever the distance "20 feet" is specified, the distance "50 feet" shall be substituted.

Purpose: This provision serves the same purpose identified above for §§ 1926.1407 and 1408. Therefore, the paperwork burdens for this section will be included in the burdens calculated for § 1926.1407 and 1408.

§ 1926.1409(b) For power lines over 1000 kV, the minimum clearance distance must be established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution.

Purpose: The Agency believes the calculation of the minimum clearance distance by the employer is an appropriate substitute for the information from the utility owner/operator only where the calculation is made by a registered professional engineer. This information is necessary to make further determinations that could affect the safe operation of the equipment in the vicinity of energized power lines.

I. Power line safety (all voltages)- equipment operations closer than Table A zone (§ 1926.1410)

[§ 1926.1410(c)(1), (d) introductory text, (d)(2)(iv), (e), (f), (j), and (m)]

§1926.1410 -- Equipment operations in which any part of the equipment, load line or load (including rigging and lifting accessories) is closer than the minimum approach distance under Table A to an energized power line is prohibited, except where the employer demonstrates that the following requirements are met:

* * *

§ 1926.1410(c)(1) -- The power line owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution determines the minimum clearance distance that must be maintained to prevent electrical contact in light of the on-site conditions. The factors that must be considered in making this determination include, but are not limited to: conditions affecting atmospheric conductivity; time necessary to bring the equipment, load line, and load (including rigging and lifting accessories) to a complete stop; wind conditions; degree of sway in the power line; lighting conditions, and other conditions affecting the ability to prevent electrical contact.

Purpose: The Agency believes the methods of protection specified in § 1926.1410 are appropriate substitutes for the methods specified in § 1926.1408 only when the employer makes the required infeasibility determination. Therefore, obtaining the specified information is necessary to make further determinations that could affect the safe operation of the equipment in the vicinity of energized power lines.

§ 1926.1410(d) -- A planning meeting with the employer and utility owner/operator (or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution) is held to determine the procedures that will be followed to prevent electrical contact and electrocution. At a minimum these procedures must include:

* * *

(2) A dedicated spotter who is in continuous contact with the operator. The dedicated spotter must:

* * *

(iv) -- Give timely information to the operator so that the required clearance distance can be maintained.

Purpose: The meeting requirement in § 1926.1410(d) ensures that qualified persons contribute to planning procedures that address the safe operation of equipment in the vicinity of energized power lines (e.g., no closer than the minimum approach distances specified by Table A of this subpart). OSHA noted in the estimates of paperwork burden accompanying the proposed rule that although pre-shift meetings are usual and customary practices in the industry, it was not certain whether meetings with the utility owners/operators are usual and customary. Therefore, OSHA took burden for meetings with utility owners/operators under Item 12 in the proposal. Upon further review of the applicable consensus standards, the Agency determines that the involvement of a representative of the utility owner/operator is usual and customary in the industry. See, e.g., ASME B30.5-2004 5-3.4.5.3(a). However, the Agency recognizes that the involvement of a registered professional engineer in the planning meeting is not specifically addressed in the consensus standard and may not be usual and customary in the industry, so the Agency is taking burden under Item 13 below to address the possibility that an employer may elect that option.

The requirement in § 1926.1410(d)(2)(iv) ensures the safe operation of equipment being operated in the vicinity of an energized power line. A dedicated spotter must give timely information to the operator so that the required clearance distance can be effectively maintained. OSHA considers this required exchange of information to be a usual and customary practice in the industry. See, e.g., ASME B30.5-2004 section 5-3.4.5.3(d).

§ 1926.1410(e) -- The procedures developed to comply with paragraph (d) of this section are documented and immediately available on-site.

Purpose: The documentation requirement ensures that these procedures are available to be used as a reference when hoisting operations are conducted.

§ 1926.1410(f) -- The equipment user and utility owner/operator (or registered professional engineer) meet with the equipment operator and the other workers who will be in the area of the equipment or load to review the procedures that will be implemented to prevent breaching the minimum approach distance established in paragraph (c) of this section and prevent electrocution.

Purpose: The meeting requirement is necessary to helps ensure that the operator and their employees understand this critical information. OSHA recognizes that although pre-shift meetings with utility owners/operators are usual and customary practices in the industry, meetings involving both utility owners/operators and all "other worker who will be in the area" are not specifically addressed by consensus standards and therefore the utility representative's participation may not be usual and customary. Therefore, OSHA is taking burden for these meetings under Item 12 below. Moreover, the Agency is taking burden under Item 13 below to address the possibility that an employer may elect the involvement of a registered professional engineer in the planning meeting.

§ 1926.1410(j) -- If a problem occurs implementing the procedures being used to comply with paragraph (d) of this section, or indicating that those procedures are inadequate to prevent electrocution, the employer must safely stop operations and either develop new procedures to comply with paragraph (d) of this section or have the utility owner/operator deenergize and visibly ground or relocate the power line before resuming work.

Purpose: The requirement ensures that the employer communicates any modifications to safety procedures to employees who must work in the vicinity of operating equipment and energized power lines. OSHA recognizes that some employers will conduct these meetings as a new work practice and, therefore, is taking burden for these employers in Item 12 below.

§ 1926.1410(m) -- The employer must train each operator and crew member assigned to work with the equipment in accordance with § 1926.1408(g).

Purpose: This provision requires that operators and crew be informed of potential electrocution hazards and protective methods that the employer will use to prevent equipment from contacting energized power lines. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA is does not take burden for this activity under Item 12 of this Supporting Statement.

J. Power line safety - while traveling under or near power lines with no load. (§ 1926.1411)

[§ 1926.1411(b)(4)(iii) and Table T]

§ 1926.1411(b)(4) -- *Dedicated spotter*. If any part of the equipment while traveling will get closer than 20 feet to the power line, the employer must ensure that a dedicated spotter who is in continuous contact with the driver/operator is used. The dedicated spotter must:

* * *

(iii) -- Give timely information to the operator so that the required clearance distance can be maintained.

Purpose: The provision requires that the operator receive the spotter's information in a timely manner or the operator may breach the minimum clearance distance, resulting in injury or electrocution. OSHA considers this requirement to be a usual and customary practice in the industry as it is specified as an alternative to deenergizing the power line in ASME B30.5-2004 section 5-3.4.5(a)(4).

§ 1926.1411, Table T, minimum clearance distance that must be maintained for over 1,000 (nominal, kV, alternating current) -- as established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution)

Purpose: This information requirement is necessary to ensure that the minimum clearance distances for employees performing work in the vicinity of power lines of over 1000 kV are accurately determined only by qualified persons.

K. Inspections (§ 1926.1412)
[§ 1926.1412(a)(1)(i), (b)(1)(ii)(A), (c)(2)(i), (d)(2), (e)(3)(i) and (ii), (f)(5), (f)(6), (f)(7), (g)(3), (h), and (k)]

§ 1926.1412(a)(1) -- Equipment that has had modifications or additions which affect the safe operation of the equipment (such as modifications or additions involving a safety device or operational aid, critical part of a control system, power plant, braking system, load-sustaining structural components, load hook, or in-use operating mechanism) or capacity must be inspected by a qualified person after such modifications/additions have been completed, prior to initial use. The inspection must meet all of the following requirements:

§ 1926.1412(a)(1)(i) -- The inspection must assure that the modifications or additions have been done in accordance with the approval obtained pursuant to § 1926.1434 (Equipment modifications).

Purpose: The provision ensures that employers prevent unsafe modifications of the equipment by using the determinations made by a qualified person.

§ 1926.1412(b) -- *Repaired/adjusted equipment.*

(1) -- Equipment that has had a repair or adjustment that relates to safe operation (such as: a repair or adjustment to a safety device or operator aid, or to a critical part of a control system, power plant, braking system, load-sustaining structural components, load hook, or in-use operating mechanism), must be inspected by a qualified person after such

a repair or adjustment has been completed, prior to initial use. The inspection must meet all of the following requirements:

* * *

(i) The qualified person must determine if the repair/adjustment meets manufacturer equipment criteria (where applicable and available).

(ii) Where manufacturer equipment criteria are unavailable or inapplicable, the qualified person must:

(A) -- Determine if a registered professional engineer (RPE) is needed to develop criteria for the repair/adjustment. If an RPE is not needed, the employer must ensure that the criteria are developed by the qualified person. If an RPE is needed, the employer must ensure that they are developed by an RPE.

Purpose: The provision ensures that employers prevent unsafe repairs/adjustments of the equipment by using only the determinations made by a qualified person or, as determined by the qualified person, an RPE, when inapplicable or unavailable from the manufacturer.

§ 1926.1412(c)(2) -- Where manufacturer equipment criteria are unavailable, a qualified person shall:

(i) -- Determine if a registered professional engineer (RPE) familiar with the type of equipment involved is needed to develop criteria for the equipment configuration. If an RPE is not needed, the employer shall ensure that the criteria are developed by the qualified person. If an RPE is needed, the employer shall ensure that they are developed by an RPE.

Purpose: This information requirement ensures that the qualified person or RPE references appropriate criteria, when unavailable from the manufacturer, to make determinations regarding the safety of the equipment's configuration.

§ 1926.1412(d)(2) -- If any deficiency in paragraphs (d)(1)(i) through (xiii) of this section (or in additional inspection items required to be checked for specific types of equipment in accordance with other sections of this standard) is identified, an immediate determination must be made by the competent person as to whether the deficiency constitutes a safety hazard. If the deficiency is determined to constitute a safety hazard, the equipment must be taken out of service until it has been corrected. See § 1926.1417.

Purpose: The information exchange requirement in § 1926.1417(f) ensures that employees can identify unsafe components of the equipment because they are tagged as out of service. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry. See, e.g., ASME B30.5-2004 5-2.3.2(b). Therefore, OSHA is not taking burden for this paperwork requirement in Item 12 below.

§ 1926.1412(e)(1) -- Each month the equipment is in service it must be inspected in accordance with paragraph (d) (each shift) of this section.

* * *

§ 1926.1412(e)(3) -- *Documentation*.

(i) The following information must be documented and maintained by the employer that conducts the inspection:

(A) The items checked and the results of the inspection.

(B) The name and signature of the person who conducted the inspection and the date.

ii) This document must be retained for a minimum of three months.

Purpose: The documentation requirement ensures that the employer has a reliable inspection system in place. In addition, it notifies and/or reminds the individual conducting monthly inspections to check deficiencies identified in the annual/comprehensive inspection as needing follow-up monitoring (see paragraph (f)(6) of this section). Finally, the documentation serves as a reference for tracking changes in the condition of the equipment from month to month.

The three-month retention requirement in §1926.1412(e)(3)(ii) increases the likelihood that employers will implement systems for conducting and responding to inspections; failure to do so would be apparent if a record was not made and retained. Requiring the signature of the inspector would induce the inspector to ensure that the inspection was conducted correctly. In addition, this requirement creates a record that the employer will use to track developing problems so that they can be corrected in time to ensure continued safe operation of the equipment.

§ 1926.1412(f)(5) -- If the qualified person determines that a deficiency is a safety hazard, the equipment must be taken out of service until it has been corrected, except when temporary alternative measures are implemented as specified in § 1926.1416(d) or § 1926.1435(e). See § 1926.1417.

Purpose: The information exchange requirement in § 1926.1417(f) ensures that employees can identify unsafe components of the equipment because they are tagged as out of service. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry. See, e.g., ASME B30.5-2004 5-2.3.2(b). Therefore, OSHA is not taking burden for this paperwork requirement in Item 12 below.

§ 1926.1412(f)(6) -- If the qualified person determines that, though not presently a safety hazard, the deficiency needs to be monitored, the employer must ensure that the deficiency is checked in the monthly inspections.

Purpose: The documentation requirement that is implicated for future monitoring ensures that employers respond appropriately to deficiencies identified in annual/comprehensive inspections. The requirement also ensures that a deficiency that is not yet a safety hazard, but may develop into one, is monitored on a monthly basis so that developing hazards are communicated to appropriate personnel and corrected before endangering employees. The burden for the documentation required under this paragraph is taken under § 1926.1412(k).

§ 1926.1412(f)(7) -- *Documentation of annual/comprehensive inspection*. The following information must be documented, maintained, and retained for a minimum of 12 months, by the employer that conducts the inspection:

(i) The items checked and the results of the inspection.

(ii) The name and signature of the person who conducted the inspection and the date.

Purpose: The documentation requirement ensures that the employer has a reliable inspection system in place. Safety is also promoted by ensuring that a record of the items checked and the inspection results are maintained for at least 12 months so that the employer can track past deficiencies and potential hazards associated with the equipment. This information helps the qualified person assess the equipment in subsequent annual/comprehensive inspections.

§ 1926.1412(g) -- *Severe service*. Where the severity of use/conditions is such that there is a reasonable probability of damage or excessive wear (such as loading that may have exceeded rated capacity, shock loading that may have exceeded rated capacity, prolonged exposure to a corrosive atmosphere), the employer must stop using the equipment and a qualified person must:
(1) Inspect the equipment for structural damage to determine if the equipment can continue to be used safely.

(2) In light of the use/conditions determine whether any items/conditions listed in paragraph (f) of this section need to be inspected; if so, the qualified person must inspect those items/conditions.

(3) If a deficiency is found, the employer must follow the requirements in paragraphs (f)(4) through (6) of this section.

Purpose: The inspection and documentation requirements are necessary to help ensure that critical items and components of equipment used in severe service are effectively monitored to prevent failures.

§ 1926.1412(h) -- *Equipment not in regular use*. Equipment that has been idle for 3 months or more must be inspected by a qualified person in accordance with the requirements of paragraph (e) (Monthly) of this section before initial use.

Purpose: The inspection, and documentation required by § 1926.1412(e), are necessary to help identify and facilitate monitoring of problems with equipment that has not been in regular use. OSHA believes this provision helps protect employees from hazards that may occur when worn or damaged equipment is used without an effective inspection.

§ 1926.1412(k) -- All documents produced under this section must be available, during the applicable document retention period, to all persons who conduct inspections under this section.

Purpose: This documentation requirement ensures that employees who must perform required inspections have necessary maintenance history information available to them when determinations must be made regarding the safety of the equipment.

L. Wire Rope—Inspection (§ 1926.1413)
[§ 1926.1413(a)(4)(i)(A), (a)(4)(ii)(A), (a)(4)(ii)(B), (a)(4)(iii)(A), (a)(4)(iv), (b)(1), (b)(4), (c)(1), (c)(3)(i)(A), (c)(3)(ii), (c)(4), and (e)]

§ 1926.1413(a) -- *Shift inspection*.

* * *

(2)(ii) -- Category II. Apparent deficiencies in this category are:

(A) Visible broken wires, as follows:

(1) In running wire ropes: six randomly distributed broken wires in one rope lay or three broken wires in one strand in one rope lay, where a rope lay is the length along the rope in which one strand makes a complete revolution around the rope.

(2) In rotation resistant ropes: two randomly distributed broken wires in six rope diameters or four randomly distributed broken wires in 30 rope diameters.

(3) In pendants or standing wire ropes: more than two broken wires in one rope lay located in rope beyond end connections and/or more than one broken wire in a rope lay located at an end connection.

(B) A diameter reduction of more than 5% from nominal diameter.

* * * * *

(4) *Removal from service*.

(i) If a deficiency in Category I (see paragraph (a)(2)(i) of this section) is identified, an immediate determination must be made by the competent person as to whether the deficiency constitutes a safety hazard. If the deficiency is determined to constitute a

safety hazard, operations involving use of the wire rope in question must be prohibited until:

(A) The wire rope is replaced (see § 1926.1417), or

* * *

(ii) If a deficiency in Category II (see paragraph (a)(2)(ii) of this section) is identified, operations involving use of the wire rope in question must be prohibited until:

(A) The employer complies with the wire rope manufacturer's established criterion for removal from service or a different criterion that the wire rope manufacturer has approved in writing for that specific wire rope (see § 1926.1417),

(B) The wire rope is replaced (see § 1926.1417), or

* * *

(iv) Where a wire rope is required to be removed from service under this section, either the equipment (as a whole) or the hoist with that wire rope must be tagged-out, in accordance with § 1926.1417(f)(1), until the wire rope is repaired or replaced.

Purpose: This section compliance option is designed to allow the employer to utilize the manufacturer's expertise to determine wire rope removal criteria. The documentation requirement in § 1926.1413(a)(4)(ii)(A) provides a reference for employees who must make determinations about the safety of damaged wire rope to prevent crushed-by and struck-by hazards resulting from equipment failure or falling loads. The provisions of § 1926.1413(a)(4)(i)(A), (a)(4)(ii)(B), and (a)(4)(iv), which trigger the information exchange requirement in § 1926.1417(f), ensures that employees can identify unsafe components of the equipment because they are tagged as out of service. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry. See, e.g., ASME B30.5-2004 5-2.3.2(b). Therefore, OSHA is taking burden for the documentation requirement in § 1926.1413(a)(4)(ii)(A), but is not taking burden for the paperwork requirements of the other provisions, in Item 12 below.

Note: Proposed paragraph 1926.1413(a)(4)(v) was re-designated as § 1926.1413(a)(4)(iv) in the final rule. Proposed paragraph 1926.1413(a)(4)(iii)(F) was not included in the final rule.

§ 1926.1413(b)(1) -- Each month an inspection must be conducted in accordance with paragraph (a) (shift inspection) of this section.

Purpose: The inspection requirement applies the removal of service and tag-out requirements of paragraph (a) to the monthly inspections in paragraph (b). Tagging out equipment that is not functioning properly ensures that employees can identify unsafe components of the equipment to avoid unsafe operation. OSHA considers this tag-out

requirement to be a usual and customary work practice in the industry. See, e.g., ASME B30.5-2004 5-2.3.2(b). Therefore, OSHA is taking burden for the documentation requirement in § 1926.1413(a)(4)(ii)(A), but is not taking burden for the paperwork requirements of the other provisions, in Item 12 below.

§ 1926.1413(b)(4) -- The inspection must be documented according to § 1926.1412(e)(3) (monthly inspection documentation).

Purpose: The documentation requirement serves to notify and/or remind the individual conducting the monthly wire rope inspection to check deficiencies that were identified in the annual/comprehensive wire rope inspection as needing follow-up monitoring (see § 1926.1413(c)(3)(ii)). The documentation allows employers to track changes in the condition of the damaged wire rope from month to month. OSHA concludes that, by documenting this information with other monthly-inspection information, the employer facilitates the tracking of wire rope damage.

Note: Proposed 1926.1413(b)(3) was redesignated as 1926.1413(b)(4) in the final rule.

§ 1926.1413(c) -- *Annual/comprehensive*.

(1) At least every 12 months, wire ropes in use on equipment must be inspected by a qualified person in accordance with paragraph (a) of this section (shift inspection).

* * *

(3) If a deficiency is identified, an immediate determination must be made by the qualified person as to whether the deficiency constitutes a safety hazard.

(i) If the deficiency is determined to constitute a safety hazard, operations involving use of the wire rope in question must be prohibited until:

(A) The wire rope is replaced (see § 1926.1417), or

* * *

(ii) If the qualified person determines that, though not presently a safety hazard, the deficiency needs to be monitored, the employer must ensure that the deficiency is checked in the monthly inspections.

* * *

(4) -- The inspection shall be documented according to § 1926.1412(f)(7) (annual/comprehensive inspection documentation).

Purpose: The inspection requirement in § 1926.1413(c)(1) applies the removal of service and tag-out requirements of paragraph (a) to the monthly inspections in paragraph (c). The information collection in § 1926.1413(c)(3)(i)(A) is also a tag-out requirement.

Tagging out equipment that is not functioning properly ensures that employees can identify unsafe components of the equipment. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry. See, e.g., ASME B30.5-2004 5-2.3.2(b). Therefore, OSHA is not taking burden for the paperwork requirements of § 1926.1413(c)(1) or (c)(3)(i)(A) in Item 12 below.
The information exchange requirement in § 1926.1413(c)(3)(ii) ensures that employers maintain a record of deficiencies identified in the annual/comprehensive inspection as a reference for employees who must make determinations about wire rope damage. The documentation can be used on a monthly basis to track developing problems so that they can be corrected in time to ensure continued safe operation of the equipment. OSHA is including the burden associated with this documentation requirement as part of the Item 12 calculations for the monthly inspection documentation required by § 1926.1413(b)(4).

The documentation required in § 1926.1413(c)(4) is necessary to ensure that the crane operator has a reference to confirm that the required annual/comprehensive wire-rope inspection was completed. The results of this annual inspection are accessible for at least twelve months to help employers and wire-rope inspectors monitor and prevent potential equipment failures.

§ 1926.1413(e) -- <u>All documents produced under this section must be available, during the applicable document retention period, to all persons who conduct inspections under this section.</u>

Purpose: This documentation requirement ensures that employees who must perform required inspection have wire rope-maintenance history available to them when determinations must be made regarding the safety of the equipment.

M. Wire Rope – Selection and installation criteria (§ 1926.1414)
[§ 1926.1414(e)(2)(iii), (e)(3)(i), and (e)(3)(iii)]

Note: The content of § 1926.1414(c)(2)(iii), (c)(3)(i), and (c)(3)(iii) was included in the final rule as § 1926.1414(e)(2)(iii), (e)(3)(i), and (e)(3)(iii).

§ 1926.1414(e) -- *Rotation resistant ropes*.

§ 1926.1414(e)(2) -- *Requirements.*

* * *

<u>(iii) Type I must have an operating design factor of no less than 5, except where the wire rope manufacturer and the equipment manufacturer approves the design factor, in writing.</u>

Purpose: The requirement ensures that the technical expertise of manufacturers is utilized when determinations are made about minimum safety factors for wire rope.

Employers must reference these safety factors to determine if a wire rope can be used safely under different lift conditions.

§1926.1414(e)(3)(i) -- A qualified person must inspect the rope in accordance with § 1926.1413(a). The rope must be used only if the qualified person determines that there are no deficiencies constituting a hazard. In making this determination, more than one broken wire in any one rope lay must be considered a hazard.

Purpose: The requirement that a qualified person conduct an inspection under paragraph 1413(a), which must be documented pursuant to §1926.1414(e)(3)(iii), ensures that using a damaged wire rope will not result in a safety hazard.

§1926.1414(e)(3)(iii) -- Each lift made under § 1926.1414(e)(3) must be recorded in the monthly and annual inspection documents. Such prior uses must be considered by the qualified person in determining whether to use the rope again.

Purpose: Documenting each lift completed with a damaged wire rope as required by this provision allows the qualified person to assess deterioration of the wire rope over time based on how the rope is used. This assessment enables the employer to identify lifts that may increase the rate of deterioration and, by avoiding these lifts, improve wire-rope safety.

N. Safety Devices (§ 1926.1415)
[§ 1926.1415(a)(1)(ii), (a)(7)(ii), and (b)]

§1926.1415(a)(1)(ii) -- If a built-in crane level indicator is not working properly, it must be tagged-out or removed. If a removable crane level indicator is not working properly, it must be removed.

Purpose: Tagging-out a deficient crane-level indicator is essential to communicate to the operator that the level is not working, and to prevent the operation of the equipment under unsafe conditions. If a malfunctioning crane-level indicator is not tagged-out, the operator may rely on it and set up the equipment in an unsafe manner, causing the equipment to tip over. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry. See, e.g., ASME B30.5-2004 5-2.3.2(b). Therefore, OSHA is not taking burden for this paperwork requirement in Item 12 below.

§ 1926.1415(a)(7)(ii) -- If a built-in horn is not working properly, it must be tagged-out or removed. If a removable horn is not working properly, it must be removed.

Purpose: Tagging-out a deficient horn is essential to communicate to the operator that the horn is not working before the horn is needed to signal employees or warn them of hazards. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry because tagging-out malfunctioning construction equipment is specified by § 1926.20(b)(3). Therefore, OSHA is not taking burden for this paperwork requirement in Item 12 below.

§ 1926.1415(b) -- *Proper operation required*. Operations must not begin unless all of the devices listed in this section are in proper working order. If a device stops working properly during operations, the operator must safely stop operations. If any of the devices listed in this section are not in proper working order, the equipment must be taken out of service and operations must not resume until the device is again working properly. See § 1926.1417 (Operation). Alternative measures are not permitted to be used.

Purpose: The proper operation of the safety devices is crucial for the safe operation of the equipment. This provision ensures that the equipment will be tagged out of service if any of these devices are not functioning properly. The information exchange requirement in § 1926.1417(f) ensures that employees can identify unsafe components of the equipment because they are tagged as out of service. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry. See, e.g., ASME B30.5-2004 5-2.3.2(b). Therefore, OSHA is not taking burden for this paperwork requirement in Item 12 below.

O. Operational Aids (§ 1926.1416)
[§ 1926.1416(d) introductory text, (e) introductory text, (e)(4)(i), and (e)(4)(ii)]

§ 1926.1416(d) -- *Category I operational aids and alternative measures*. Operational aids listed in this paragraph that are not working properly must be repaired no later than 7 calendar days after the deficiency occurs. *Exception:* If the employer documents that it has ordered the necessary parts within 7 calendar days of the occurrence of the deficiency, the repair must be completed within 7 calendar days of receipt of the parts. See § 1926.1417(j) for additional requirements.

Purpose: This provision serves as an administrative control to ensure that employers order replacements for, and replace in a timely manner, defective operational aids on equipment that remains in service. OSHA concludes that employers in the industry, as a usual and customary practice, maintain for accounting purposes purchasing orders and receipts for parts, and that they will use these documents to meet this requirement. Therefore, OSHA is not taking a paperwork burden for this requirement.

§ 1926.1416(e) -- *Category II operational aids and alternative measures*. Operational aids listed in this paragraph that are not working properly must be repaired no later than 30 calendar days after the deficiency occurs. *Exception:* If the employer documents that it has ordered the necessary parts within 7 calendar days of the occurrence of the deficiency, and the part is not received in time to complete the repair in 30 calendar days, the repair must be completed within 7 calendar days of receipt of the parts. See § 1926.1417(j) for additional requirements.

Purpose: This provision serves as an administrative control to ensure that employers order replacements for, and replace in a timely manner, defective operational aids on equipment that remains in service. OSHA concludes that employers in the industry, as a

usual and customary practice, maintain for accounting purposes purchasing orders and receipts for parts, and that they will use these documents to meet this requirement. Therefore, OSHA is not taking a paperwork burden for this requirement.

§ 1926.1416(e)(4) -- Load weighing and similar devices.

(i) Equipment (other than derricks and articulating cranes) manufactured after March 29, 2003 with a rated capacity over 6,000 pounds must have at least one of the following: load weighing device, load moment (or rated capacity) indicator, or load moment (or rated capacity) limiter. *Temporary alternative measures*: The weight of the load must be determined from a source recognized by the industry (such as the load's manufacturer) or by a calculation method recognized by the industry (such as calculating a steel beam from measured dimensions and a known per foot weight). This information must be provided to the operator prior to the lift.

(ii) Articulating cranes manufactured after February 7, 2012must have at least one of the following: automatic overload prevention device, load weighing device, load moment (or rated capacity) indicator, or load moment (rated capacity) limiter. *Temporary alternative measures*: The weight of the load must be determined from a source recognized by the industry (such as the load's manufacturer) or by a calculation method recognized by the industry (such as calculating a steel beam from measured dimensions and a known per foot weight). This information must be provided to the operator prior to the lift.

Purpose: Providing the required information to the operator, prior to the lift, is essential to the safe handling of the load and operation of the equipment. OSHA is not taking a paperwork burden for this provision because the Agency considers it to be a usual and customary practice in the industry. See, e.g, ASME B30.3-2004 section 3-3.2.1(a)(1)-(3) and (b)(2); ASME B30.4-2003 section 4-3.2.1(a)(1) through (a)(3); ASME B30.5-2004 section 3.2.1.1(a), (b), and (c) and section 3.2.1.2; ASME B30.6-2003, Sec. 3.3.1(b) and section 3-3.2.1(a) through (b)(2); and ASME B30.8-2004 section 8-3.2.1(a) and (b).

P. Operation (§ 1926.1417)
[§ 1926.1417(b)(1), (b)(2), (b)(3), (c)(1), (e)(1)(iv), (f)(1), (j), and (o)(3)(i)]

§ 1926.1417(b) -- *Unavailable operation procedures*.

(1) Where the manufacturer procedures are unavailable, the employer must develop and ensure compliance with all procedures necessary for the safe operation of the equipment and attachments.

(2) Procedures for the operational controls must be developed by a qualified person.

(3) Procedures related to the capacity of the equipment must be developed and signed by a registered professional engineer familiar with the equipment.

Purpose: When the manufacturer's procedures are unavailable, these information requirements ensure that: the employer develops procedures for equipment operation; a qualified person (with respect to the equipment involved) develops procedures for operational controls, and a RPE develops procedures related to the capacity of the equipment. Proper procedures are critical to the safe operation of the equipment. The employer's procedures will provide an appropriate substitute for the manufacturer's procedures only when they are developed by a person with the specified expertise. The signature requirement induces the developer of the procedures to ensure that the procedures are developed correctly. The documentation requirements ensure that modifications/additions to the equipment do not adversely affect safety.

§ 1926.1417(c)(1) -- The procedures applicable to the operation of the equipment, including rated capacities (load charts), recommended operating speeds, special hazard warnings, instructions, and operator's manual, must be readily available in the cab at all times for use by the operator.

Purpose: To operate the crane safely, the operator needs the required information immediately available. For example, the equipment's capacity varies with factors such as boom length, radius, and boom angle. By providing the operator with information to make accurate determinations regarding safety, this provision facilitates the operator in preventing the operation of the crane beyond its capacity and recommended operating speed. The required information also increases operator awareness of special hazards related to a specific piece of equipment. OSHA considers the information requirements to be usual and customary practices in the industry. See, e.g., ANSI B30.5 (2004) Sec 5-1.1.3 (load charts) and Sec 5-1.1.3 & 5-2.1 (Load Rating Chart and Ops Manual). Therefore, OSHA is not taking a paperwork burden for the requirement in Item 12 below.

§ 1926.1417(e)(1) -- The operator must not leave the controls while the load is suspended, except where all of the following are met:

* * *

(iv) -- Barricades or caution lines, and notices, are erected to prevent all employees from entering the fall zone. No employees, including those listed in §§ 1926.1425(b)(1) through (3), § 1926.1425(d) or § 1926.1425(e), are permitted in the fall zone.

Purpose: This information-exchange requirement ensures that employees are made aware (through the use of a barricade or caution lines, and notices) that the area under which the load will be suspended must be avoided to protect them from the hazard of a falling load. Although holding a load while equipment is unattended is not explicitly addressed in subpart N of 29 CFR part 1926, OSHA considers barricading hazardous areas around the equipment a usual and customary practice in the industry, similar to barricades required under § 1926.550(a)(9) for pinch points. Also, using barricades under these specified conditions is allowed as an option under ASME B30.5- 2000 section 5-3.2.1.3 to a provision prohibiting employers from holding the load during a lift.

Accordingly, OSHA is not taking a paperwork burden for this requirement in Item 12 below.

§ 1926.1417(f)(1) -- *Tagging out of service equipment/functions*. Where the employer has taken the equipment out of service, a tag must be placed in the cab stating that the equipment is out of service and is not to be used. Where the employer has taken a function(s) out of service, a tag must be placed in a conspicuous position stating that the function is out of service and is not to be used.

Purpose: This tagging-out requirement is needed to prevent operation of equipment under unsafe conditions. OSHA is not taking a paperwork burden for this provision because tagging out malfunctioning equipment is a usual and customary practice in the industry. See, e.g., ASME B30.5-2004, section 5-2.3.2(b).

§ 1926.1417(j) -- If adjustments or repairs are necessary:

(1) The operator must, in writing, promptly inform the person designated by the employer to receive such information and, where there are successive shifts, to the next operator; and

(2) The employer must notify all affected employees, at the beginning of each shift, of the necessary adjustments or repairs and all alternative measures.

Purpose: This documentation requirement provides a record for the operators on the next shift, and individuals designated to receive the information, to reference regarding the need for repairs/adjustments of the equipment. This requirement helps the employer schedule necessary servicing of the equipment, thereby preventing accidents caused by equipment malfunctions. OSHA considers the information-exchange requirement to be a usual and customary practice in the industry. See, e.g., ASME B30.5-2000, section 5-3.1.3(i). However, OSHA recognizes that there may be employers will, as a new work practice, have this information documented and inform affected employees of necessary adjustments or repairs and all alternative measures. OSHA is taking burden under Item 12 below for this small number of employers

§ 1926.1417(o)(3) *Load weight*. The operator must verify that the load is within the rated capacity of the equipment by at least one of the following methods:

* * *

(i) -- The weight of the load must be determined from a source recognized by the industry (such as the load's manufacturer), or by a calculation method recognized by the industry (such as calculating a steel beam from measured dimensions and a known per foot weight), or by other equally reliable means. In addition, when requested by the operator, this information must be provided to the operator prior to the lift; or

Purpose: Requiring the operator to determine this information is essential to the safe handling of the load and operation of the equipment. However, OSHA is not taking a paperwork burden for this provision because the Agency considers it to be a usual and customary practice in the industry. See, e.g., ASME B30.5- 2000, section 5-3.2.1.1(c).

Q. Signals, Voice – additional requirements (§ 1926.1421)
[§ 1926.1419(c)(2) and (j)]

§ 1926.1419(c)(2) -- *Non-standard hand signals*. When using non-standard hand signals, the signal person, operator, and lift director (where there is one) must contact each other prior to the operation and agree on the non-standard hand signals that will be used.

Purpose: This requirement ensures that all persons use the same non-standard hand signals to avoid miscommunication that could result in unsafe operation of equipment. OSHA notes that the nature of non-standard signals necessitates some planning and agreement, and the Agency believes it is a usual and customary practice in the industry to make such determinations prior to the use of non-standard hand signals. Therefore, OSHA is not taking any paperwork burden for this information exchange in Item 12 below.

§ 1926.1419(j) -- Anyone who becomes aware of a safety problem must alert the operator or signal person by giving the stop or emergency stop signal. (NOTE: § 1926.1417(y) requires the operator to obey a stop or emergency stop signal).

Purpose: This provision ensures that workers will alert the operator to unsafe operations so that the operator can cease operation and avoid the hazard. The Agency believes this is a usual and customary safety practice in the industry, and therefore is not taking any paperwork burden under Item 12 below.

R. Signals – voice signals – additional requirements (1926.1421)
[§ 1926.1421(a)]

§ 1926.1421(a) -- Prior to beginning operations, the operator, signal person and lift director (if there is one), must contact each other and agree on the voice signals that will be used. Once the voice signals are agreed upon, these workers need not meet again to discuss voice signals unless another worker is added or substituted, there is confusion about the voice signals, or a voice signal is to be changed.

Purpose: The required pre-lift communication to discuss voice signals ensures that the individuals necessary for the lift understand the voice signals and avoid miscommunications. Any miscommunication related to the use of voice signals could lead to unsafe operation of the equipment. OSHA considers this information-exchange requirement to be a usual and customary practice in the industry as indicated by a similar

requirement in ASME B30.5-2004 5-3.3.5. Therefore, OSHA is not taking a paperwork burden for this requirement.

S. Signals – Hand Signal Chart (§ 1926.1422)
[Entire § 1926.1422]

§ 1926.1422 -- Hand signal charts must be either posted on the equipment or conspicuously posted in the vicinity of the hoisting operations.
Purpose: This exchange-of-information requirement enables employees to refer to an established reference for hand signals when a question arises about what hand signal is appropriate or when they are unsure of what a hand signal means. Therefore, the signal chart aides the employer in preventing hand-signal-related miscommunications and the resulting unsafe conditions that may occur during equipment operations. OSHA is not taking a paperwork burden for this requirement because it considers it to be a usual and customary practice in the industry as indicated by a similar requirement in section 5-3.3.2 of ASME B30.5-2004.

T. Fall Protection (§ 1926.1423)
[§ 1926.1423(j)(2) and (k)]

§ 1926.1423(j) -- Anchoring to the load line. A personal fall arrest system is permitted to be anchored to the crane/derrick's hook (or other part of the load line) where all of the following requirements are met:

(1) A qualified person has determined that the set-up and rated capacity of the crane/derrick (including the hook, load line and rigging) meets or exceeds the requirements in § 1926.502(d)(15).

(2) The equipment operator shall be at the work site and informed that the equipment is being used for this purpose.

Purpose: When a fall-arrest system is anchored to the load line, the information-exchange requirement in § 1926.1423(j)(2) ensures that the operator is aware that an employee will be connected to the load line of the equipment and that the operator will be available to make any adjustments necessary for safety, such as moving the boom or load line to appropriately position the anchorage point.

Note: Proposed § 1926.1423(h)(2) was re-designated as § 1926.1423(j)(2) in the final rule. The determination in § 1926.1423(j)(2) does not constitute a collection of information because the person making the determination is not required to do so in writing or otherwise share information about that determination.

§ 1926.1423(k) -- *Training*. The employer must train each employee who may be exposed to fall hazards while on, or hoisted by, equipment covered by this subpart on all of the following:

(1) the requirements in this subpart that address fall protection.

(2) the applicable requirements in §§ 1926.500 and 1926.502.

Purpose: This training is essential to avoid fall injuries by ensuring that workers are instructed in the proper use of the fall protection system. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA is does not take burden for this activity under Item 12 of this Supporting Statement.

U. Work Area Control (§ 1926.1424)

[§ 1926.1424(a)(2)(i), (a)(2)(ii), and (a)(3)]

§ 1926.1424(a)(2)(i) -- Train each employee assigned to work on or near the equipment ("authorized personnel") in how to recognize struck-by and pinch/crush hazard areas posed by the rotating superstructure.

Purpose: This exchange of information ensures that employees are made aware that they must avoid these hazardous areas. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA is does not take burden for this activity under Item 12 of this Supporting Statement.

§ 1926.1424(a)(2)(ii) -- Erect and maintain control lines, warning lines, railings or similar barriers to mark the boundaries of the hazard areas. *Exception:* When the employer can demonstrate that it is neither feasible to erect such barriers on the ground nor on the equipment, the hazard areas must be clearly marked by a combination of warning signs (such as "Danger – Swing/Crush Zone") and high visibility markings on the equipment that identify the hazard areas. In addition, the employer must train each employee to understand what these markings signify.

Purpose: Although OSHA considers barricading hazardous areas around the equipment a usual and customary practice in the industry, posting the required signs is not. The posting requirement notifies employers in the vicinity of the equipment about the hazardous swing radius areas they must recognize and avoid. Accordingly, OSHA is not taking a paperwork burden for the barricading requirement, but is taking a burden for the sign-posting requirement.

§ 1926.1424(a)(3) -- *Protecting employees in the hazard area*.
(i) Before an employee goes to a location in the hazard area that is out of view of the operator, the employee (or someone instructed by the employee) must ensure that the operator is informed that he/she is going to that location.

(ii) Where the operator knows that an employee went to a location covered by paragraph (a)(1) of this section, the operator must not rotate the superstructure until the operator is informed in accordance with a pre-arranged system of communication that the employee is in a safe position.

Purpose: These requirements prevent stuck-by and crushed-by injuries from equipment operation when workers are out of the view of the operator. OSHA expects that this communication is likely to be only a few words and may be usual and customary for most worksites, but is taking a burden for the requirements under Item 12 below to avoid any potential underinclusion.

V. Operator Qualification and Certification (§ 1926.1427)
[§ 1926.1427(a) (introductory text), (a)(2), (b), (c)(1)(ii), (c)(2)(i), (c)(3), (c)(4), (c)(5)(ii), (c)(5)(iii), (c)(5)(iv), (c)(6)(ii), (e)(1), (f)(1), (f)(3)(iv), (f)(4)(ii), (h)(1), (h)(2), and (k)(2)(ii)]

§ 1926.1427(a) -- The employer must ensure that, prior to operating any equipment covered under subpart CC, the person is operating the equipment during a training period in accordance with paragraph (f) of this section, or the operator is qualified or certified to operate the equipment in accordance with the following:

Purpose: Compliance with this certification requirement ensures that the equipment will be operated only by qualified persons, thereby reducing the likelihood of injuries from improperly operated equipment.

§ 1926.1427(a)(2) -- Where paragraph (a)(1) of this section is not applicable, the certification or qualification must comply with one of the options in paragraphs (b) through (d) of this section.

***Purpose*:** Compliance with this certification requirement ensures that the equipment will be operated by qualified persons, thereby reducing the likelihood of injuries from improperly operated equipment.

§ 1926.1427(b) -- Option 1: Certification by an accredited crane operator testing organization.

(1) For a testing organization to be considered accredited to certify operators under this subpart, it must:

(i) Be accredited by a nationally recognized accrediting agency based on that agency's determination that industry recognized criteria for written testing materials, practical examinations, test administration, grading, facilities/equipment and personnel have been met.

(ii) Administer written and practical tests that:

(A) Assess the operator applicant regarding, at a minimum, the knowledge and skills listed in paragraphs (j)(1) and (2) of this section.

(B) Provide different levels of certification based on equipment capacity and type.

(iii) Have procedures for operators to re-apply and be re-tested in the event an operator applicant fails a test or is decertified.

(iv) Have testing procedures for re-certification designed to ensure that the operator continues to meet the technical knowledge and skills requirements in paragraphs (j)(1) and (2) of this section.
(v) Have its accreditation reviewed by the nationally recognized accrediting agency at least every three years.

(2) An operator will be deemed qualified to operate a particular piece of equipment if the operator is certified under paragraph (b) of this section for that type and capacity of equipment or for higher-capacity equipment of that type. If no accredited testing agency offers certification examinations for a particular type and/or capacity of equipment, an operator will be deemed qualified to operate that equipment if the operator has been certified for the type/capacity that is most similar to that equipment and for which a certification examination is available. The operator's certificate must state the type/capacity of equipment for which the operator is certified.

* * *

(4) A certification issued under this paragraph is valid for 5 years.

Purpose: The Agency views operator certification validated by an independent entity as a critical step in ensuring that operators are qualified to operate cranes safely, thereby reducing the likelihood of injuries from improperly operated equipment. The requirements in § 1926.1427(b)(1) ensure that the tests and the administration of the employer's testing procedures meet nationally-recognized test administration standards. While the administration of the certification examination is not itself a collection of information pursuant to 5 CFR 1320.3(h)(7), OSHA assumes that this determination will be documented, which does result in a collection of information. The requirement in § 1926.1427(b)(2) regarding the wording of the certificate will facilitate employers' compliance with the requirements of § 1926.1427. By referring to the operator's certificate, the employer will be able to ensure that operators are only permitted to operator cranes that they have demonstrated they can operate safely.

All paperwork burdens for this provision are taken under § 1926.1427(a), so the Agency is not taking any separate burden for § 1926.1427(b).

§ 1926.1427(c) -- *Option (2)*: *Qualification by an audited employer program*. The employer's qualification of its employee shall meet the following requirements:

(1) The written and practical tests shall be either:

* * *

(ii) Approved by an auditor in accordance with the following requirements:

(A) The auditor is certified to evaluate such tests by an accredited crane operator testing organization (see paragraph (b) of this section).

(B) The auditor is not an employee of the employer.

(C) The approval must be based on the auditor's determination that the written and practical tests meet nationally recognized test development criteria and are valid and reliable in assessing the operator applicants regarding, at a minimum, the knowledge and skills listed in paragraphs (j)(1) and (2) of this section.
(D) The audit must be conducted in accordance with nationally recognized auditing standards.

(2) *Administration of tests*.

(i) The written and practical tests must be administered under circumstances approved by the auditor as meeting nationally recognized test administration standards.

* * *

(3) The employer program must be audited within 3 months of the beginning of the program and at least every 3 years thereafter.

(4) The employer program must have testing procedures for re-qualification designed to ensure that the operator continues to meet the technical knowledge and skills requirements in paragraphs (j)(1) and (2) of this section. The re-qualification procedures must be audited in accordance with paragraphs (c)(1) and (2) of this section.

(5) *Deficiencies*. If the auditor determines that there is a significant deficiency ("deficiency") in the program, the employer must ensure that:

* * *

(ii) The program is audited again within 180 days of the confirmation that the deficiency was corrected.

(iii) The auditor files a documented report of the deficiency to the appropriate Regional Office of the Occupational Safety and Health Administration within 15 days of the auditor's determination that there is a deficiency.

(iv) Records of the audits of the employer's program are maintained by the auditor for three years and are made available by the auditor to the Secretary of Labor or the Secretary's designated representative upon request.

(6) A qualification under this paragraph is:

* * *

(ii) Valid for 5 years.

* * * * *

Purpose: The testing requirements in paragraphs (c)(1)(ii) and (c)(2)(i) of this section help ensure that operators are capable of operating the equipment safely. The paragraphs require an auditor to determine that the tests and the administration of the employer's testing procedures meet nationally-recognized test administration standards. OSHA assumes that most auditors will document this determination.

Paragraph (c)(3) of this section requires an audited employer program to be audited within three months of the beginning of the program and every three years thereafter. OSHA assumes that most auditors will document the result of these audits.

Paragraph (c)(4) of this section requires the employer program to have testing procedures for re-qualification designed to ensure operators still meet the knowledge and skill requirements of paragraphs (j)(1) and (j)(2) of this section. These re-qualification procedures must be audited in accordance with paragraphs (c)(1) and (c)(2) of this section. OSHA assumes that most auditors will document the result of these audits.

The exchange of information required in paragraph (c)(5)(ii) of this section ensures that the minimum qualifications specified by § 1926.1427(j) are being adequately and consistently tested. OSHA assumes that most auditors will document the results of this re-audit.

The documentation required in paragraphs (c)(5)(iii) and (c)(5)(iv) of this section requires the filing and maintenance of reports to facilitate enforcement of the Option 2 requirements.

Paragraph (c)(6)(ii) of this section requires that an employer-audited program certification is only valid for five years. The purpose of this requirement is to periodically test the abilities of an operator to ensure they retain the knowledge and skill required to operate a crane.

§ 1926.1427(e)(1) -- For purposes of this section, a government licensing department/office that issues operator licenses for operating equipment covered by this standard is considered a government accredited crane operator testing organization if the criteria in paragraph (e)(2) of this section are met.

Purpose: The documentation requirements for government licensing and auditing are used by employers as an administrative control for ensuring that equipment operators

meet the government licensing criteria. Similar to paragraphs (b) and (d) of this section, OSHA believes that, as a practical matter, most employers will choose to maintain file copies of each operator's license as a matter of administrative expediency. Therefore, OSHA assumes that a copy of this license would be retained and maintained by the employer. The burden for this retention and maintenance is taken under § 1926.1427(a). The Agency is not taking any separate burden for § 1926.1427(e)(1).

§ 1926.1427(f)(1) -- The employer must provide each operator-in-training with sufficient training prior to operating the equipment to enable the operator-in-training to operate the equipment safely under limitations established by this section (including continuous monitoring) and any additional limitations established by the employer.

Purpose: This provision requires that employees be informed of the proper operation of the hazards and protective methods that the employer will use to prevent equipment from contacting energized power lines. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA is does not take burden for this activity under Item 12 of this Supporting Statement.

§ 1926.1427(f)(3) -- *Trainer*. While operating the equipment, the operator-in-training must be continuously monitored by an individual ("operator's trainer") who meets all of the following requirements:

* * *

(iv) For equipment other than tower cranes: The operator's trainer and the operator-in-training must be in direct line of sight of each other. In addition, they must communicate verbally or by hand signals. For tower cranes: The operator's trainer and the operator-in-training must be in direct communication with each other.

Purpose: This provision requires an operator-in-training operating equipment other than a tower crane and their trainer to be in each other's direct line of sight. It also requires that they communicate verbally or by hand signals. For tower cranes, the operator-in-training and the operator must be in direct communication with each other. OSHA considers this regulation to be a collection of information, but considers this a usual and customary work practice for the industry. Therefore, OSHA is not taking burden for this paperwork requirement in Item 12 below.

§ 1926.1427(f)(4) -- *Continuous monitoring*. The operator-in-training must be monitored by the operator's trainer at all times, except for short breaks where all of the following are met:

* * *

(ii) Immediately prior to the break the operator's trainer informs the operator-in-training of the specific tasks that the operator-in-training is to perform and limitations to which he/she must adhere during the operator trainer's break.

Purpose: This provision ensures that operators-in-training will not operate the crane to perform tasks beyond that trainee's level of skill while the trainer is on break. This restriction reduces the likelihood of injury resulting from the operation of the crane by the trainee. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA is does not take burden for this activity under Item 12 of this Supporting Statement.

§ 1926.1427(h) -- *Language and Literacy Requirements*.

(1) Tests under this section may be administered verbally, with answers given verbally, where the operator candidate:
(i) Passes a written demonstration of literacy relevant to the work.

(ii) Demonstrates the ability to use the type of written manufacturer procedures applicable to the class/type of equipment for which the candidate is seeking certification.

(2) Tests under this section may be administered in any language the operator candidate understands, and the operator's certificate must note the language in which the test was given. The operator is qualified under paragraph (b)(2) of this section to operate equipment that is furnished with materials required by this subpart that are written in the language of the certification. The operator may only operate equipment furnished with such materials.

Purpose: This written-literacy requirement in paragraph § 1926.1427(h)(1) will be an essential administrative means for ensuring that operators have sufficient literacy to read and comprehend written materials that relate to critical aspects of operation, such as load charts and manufacturer's manuals. The requirement in § 1926.1427(h)(2) will facilitate employers' compliance with the requirements of § 1926.1427 and ensure that an operator does not operate a crane without access to the essential manuals, warnings, and other material presented in a language that he or she can understand. By referring to the operator's certificate, the employer will be able to ensure that crane contains materials in the appropriate language.

The Agency notes that the testing entity is likely to retain the documentation of the results of the two parts of the literacy test. The agency is taking a small burden for this documentation to address certification offered under Option 2 (employer certification) because in that situation the employer will be the testing organization. However, the Agency is not taking a burden for other certification where the testing will be performed by a third party. In addition, the Agency considers the few specific words required to be included in the certificate (language in which operator was tested) to be a *de minimis* burden and is not calculating it separately in Item 12.

Moreover, the Agency does not consider the test itself to be either a collection of information or a burden because aptitude tests are expressly exempted under the applicable regulations. See 5 CFR 1320.3(h)(7) (General exemption from the definition

of "information" for "examinations designed to test the aptitude, abilities, or knowledge of the persons tested and the collection of information for identification or classification in connection with such examinations.")

§ 1926.1427(k)(2)(ii) -- Where an employee assigned to operate machinery does not have the required knowledge or ability to operate the equipment safely, the employer must train that employee prior to operating the equipment. The employer must ensure that each operator is evaluated to confirm that he/she understands the information provided in the training.

Purpose: This provision, which applies during the phase-in period (which was originally four years, but which OSHA has extended until November 10, 2018 (82 FR 51997; November 9, 2017)), requires training and evaluation of operator candidates to ensure that employees are not permitted to operate cranes without proper training. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA does not take burden for this activity under Item 12 of this Supporting Statement.

W. Signal Person Qualifications (§ 1926.1428)
[§ 1926.1428(a)(1), (a)(2), (a)(3), and (b)]

§ 1926.1428(a)(1) -- *Option (1) – Third party qualified evaluator*. The signal person has documentation from a third party qualified evaluator (see Qualified Evaluator (third party), § 1926.1401 for definition) showing that the signal person meets the Qualification Requirements (see paragraph (c) of this section).

Purpose: Compliance with this documentation requirement ensures that the signals for the operator will only be made by qualified persons, thereby reducing the likelihood of injuries from miscommunication about signal. OSHA is taking burden in Item 12 below for the documentation of the result of the assessment, but is not treating the test itself as a collection of information or a burden. See 5 CFR 1320.3(h)(7) (General exemption from the definition of "information" for "examinations designed to test the aptitude, abilities, or knowledge of the persons tested and the collection of information for identification or classification in connection with such examinations.")

Note: OSHA believes that this requirement will be a condition of employment, and, therefore, is not taking a paperwork burden for it. However, OSHA believes that employers will retain the signal person documentation because they are required to provide this information under § 1926.1428(a)(3). OSHA considers the retrieval of this information to be a paperwork burden.

§ 1926.1428(a)(2) -- Option (2) – *Employer's qualified evaluator*. The employer's qualified (see Qualified Evaluator (not a third party), § 1926.1401 for definition) evaluator assesses the individual and determines that the individual meets the Qualification Requirements (see paragraph (c) of this section) and provides documentation of that determination. An assessment by an employer's qualified

evaluator under this option is not portable – other employers are not permitted to use it to meet the requirements of this section.

Purpose: Compliance with this documentation requirement will serve as an administrative tool for ensuring that the employee is adequately trained and evaluated. OSHA is taking burden in Item 12 below for the documentation of the result of the assessment, but is not treating the test itself as a collection of information or a burden. See 5 CFR 1320.3(h)(7) (General exemption from the definition of "information" for "examinations designed to test the aptitude, abilities, or knowledge of the persons tested and the collection of information for identification or classification in connection with such examinations.")

§ 1926.1428(a)(3) -- The employer must make the documentation for whichever option is used available at the site while the signal person is employed by the employer. The documentation must specify each type of signaling (e.g. hand signals, radio signals, etc.) for which the signal person meets the requirements of paragraph (c) of this section.

Purpose: OSHA expects that employers will maintain file copies of the training documentation required in § 1926.1428(a)(1) and (a)(2) to ensure that their employees have received the required training. The document-availability requirement in § 1926.1428(a)(3) ensures that the signal person is properly trained while employed by the employer, and that the information about the signal person's qualifications is available to the operator so that the operator will know the signal person's skills prior to the commencement of operation. This is particularly important to avoid miscommunication where the signal person and operator are not employed by the same employer and have not worked together before. OSHA assumes that employers will retain the document once it receives the documentation required under § 1926.1428(a)(2). The Agency is taking the burden for that documentation in Item 12 under § 1926.1428(a)(1) and (a)(2) and is therefore not including any separate burden for § 1926.1428(a)(3).

Note: In the paperwork package that accompanied the proposed rule, the Agency treated § 1926.1428(a)(1) as both a collection of information and a paperwork burden because it required the signal person to possess documentation of qualifications. The Agency has now concluded that the signal person's possession of documentation is a condition of employment that does not constitute a collection of information nor a paperwork burden.

§ 1926.1428(b) -- If subsequent actions by the signal person indicate that the individual may not meet the Qualification Requirements (see paragraph (c) of this section), the employer must not allow the individual to continue working as a signal person until re-training is provided and a re-assessment is made in accordance with paragraph (a) of this section that confirms that the individual meets the Qualification Requirements.

Purpose: OSHA believes that it is necessary to retrain a signal person who indicates that he or she does not possess the requisite qualifications for that job. This requirement will prevent miscommunication and the potential for resulting injury.

X. Training (§ 1926.1430)

[§ 1926.1430(a), (b), (c)(1), (c)(4), (d), (e), (f), (g)(1), and (g)(2)]

§1926.1430(a) -- *Overhead power lines*. The employer must train each employee specified in § 1926.1408(g) and § 1926.1410(m) in the topics listed in § 1926.1408(g).

Purpose: These training requirements for operators, crew, and dedicated spotters will ensure that these employees recognize the identified hazards and understand how to avoid them or protect themselves. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA is does not take burden for this activity under Item 12 of this Supporting Statement.

§1926.1430(b) -- *Signal persons*. The employer must train each employee who will be assigned to work as a signal persons who does not meet the requirements of § 1926.1428(c) in the areas addressed in that paragraph.

Purpose: Under § 1926.1428(c)(5), employees must demonstrate that they meet the requirements of § 1926.1428(c)(1) through (c)(4) through a verbal or written test, and through a practical test. This training requirement will ensure that signal persons understand how their duties affect the safe operation of the equipment, and that they can perform those duties safely. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA is does not take burden for this activity under Item 12 of this Supporting Statement.

§1926.1430(c)(1) -- *Operators-in-Training for equipment where certification or qualification is required by this subpart*. The employer must train each operator-in-training in the areas addressed in § 1926.1427(j). The employer must provide re-training if the operator-in-training does not pass a qualification or certification test.

Purpose: Paragraph 1427(f) requires the employer to determine through written and practical tests[2] that an operator-in-training has the knowledge and skills needed to safely operate equipment. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA is does not take burden for this activity under Item 12 of this Supporting Statement.

§ 1926.1430(c)(4) -- The employer must train each operator of the equipment covered by this subpart in the following practices:

(i) On friction equipment, whenever moving a boom off a support, first raise the boom a short distance (sufficient to take the load of the boom) to determine if the boom hoist brake needs to be adjusted. On other types of equipment with a boom, the same practice is applicable, except that typically there is no means of adjusting the brake; if the brake

2OSHA does not consider this an information collection burden as it is usual and customary to instruct employees on work area hazards, and is currently required under 1926.21(b)(2).

does not hold, a repair is necessary. *See § 1926.1417(f) and (j) for additional requirements*.

(ii) Where available, the manufacturer's emergency procedures for halting unintended equipment movement.

Purpose: These training requirements for operators and crew will ensure that these employees are aware of the hazards from unintended boom movement and understand how to avoid it. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA is does not take burden for this activity under Item 12 of this Supporting Statement. The information exchange requirement in § 1926.1417(f) ensures that employees can identify unsafe components of the equipment because they are tagged as out of service. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry. See, e.g., ASME B30.5-2004 5-2.3.2(b). Therefore, OSHA is not taking burden for this paperwork requirement in Item 12 below.

§ 1926.1430(d) -- *Competent persons and qualified persons*. The employer must train each competent person and each qualified person regarding the requirements of this subpart applicable to their respective roles.

Purpose: These training requirements for these employees will ensure that they possess the necessary skills to fulfill their roles and to recognize the identified hazards and understand how to avoid them or protect themselves. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA is does not take burden for this activity under Item 12 of this Supporting Statement.

§ 1926.1430(e) -- *Crush/pinch points*. The employer must train each employee who works with the equipment to keep clear of holes, and crush/pinch points and the hazards addressed in § 1926.1424 (Work area control).

Purpose: These training requirements will ensure that these employees recognize the identified hazards and understand how to avoid them or protect themselves. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA is does not take burden for this activity under Item 12 of this Supporting Statement.

§ 1926.1430(f) -- *Tag-out*. The employer must train each operator and each additional employee authorized to start/energize equipment or operate equipment controls (such as maintenance and repair employees), in the tag-out and start-up procedures in §§ 1926.1417(f) and (g).

Purpose: The tag-out requirement in § 1926.1417(f) prevent injury from the inadvertent use of equipment that is not functioning properly. This training requirement ensures that tagging out is performed properly and on all occasions for which it is required. The start-

up procedures prevent injuries from unexpected movement of the equipment affecting employees performing maintenance on the equipment, or otherwise on or near the equipment, particularly when they are out of view of the operator. These training requirements for operators and other employees will ensure that these employees recognize the identified start-up hazards and the procedures that must be followed to avoid injury. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA is does not take burden for this activity under Item 12 of this Supporting Statement.

§ 1926.1430(g)(1) -- The employer must evaluate each employee required to be trained under this subpart to confirm that the employee understands the information provided in the training.

Purpose: This evaluation requirement will ensure that all employees trained under this section comprehend the information provided. The information required to be conveyed through training is only an effective means of preventing injury if the information is understood by the trainees. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA is does not take burden for this activity under Item 12 of this Supporting Statement.

§ 1926.1430(g)(2) -- The employer must provide refresher training in relevant topics for each employee when, based on the conduct of the employee or an evaluation of the employee's knowledge, there is an indication that retraining is necessary.

Purpose: This refresher training requirement ensures that employees will be retrained when their conduct indicates it is necessary. This requirement will prevent injuries from the failure of the employee to follow procedures on which they were trained but are no longer sufficiently familiar. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA is does not take burden for this activity under Item 12 of this Supporting Statement.

Y. Hoisting Personnel (§ 1926.1431)
[§ 1926.1431(d)(5)(vii), (e)(12), (h)(6), (j)(3), (m), (o)(3)(i), (p)(4)(i), (r)(3)(i), and (s)(3)(i)]

§ 1926.1431(d)(5)(vii) -- *Proper operation required*. Personnel hoisting operations must not begin unless the devices listed in this section are in proper working order. If a device stops working properly during such operations, the operator must safely stop operations. Personnel hoisting operations must not resume until the device is again working properly. Alternative measures are not permitted. (See § 1926.1417 for tag-out and related requirements.)

Purpose: This provision ensures that equipment that is not functioning properly will be tagged out of service until the problem is remedied. This will avoid injury that could result from use of deficient equipment. The information exchange requirement in § 1926.1417(f) ensures that employees can identify unsafe components of the equipment

because they are tagged as out of service. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry. See, e.g., ASME B30.5-2004 5-2.3.2(b). Therefore, OSHA is not taking burden for this paperwork requirement in Item 12 below.

§1926.1431(e)(12) -- The weight of the platform and its rated capacity must be conspicuously posted on the platform with a plate or other permanent marking.

Purpose: This information requirement will ensure that the employer has adequate information regarding the capacity of the personnel platform to prevent equipment failures that could result from overloading the personnel platform. OSHA considers the posting requirement to be a usual and customary practice in the industry. See, e.g., ASME B30.23-2005, section 23-1.1.1(b)(7). Therefore, OSHA is not taking a paperwork burden for this requirement.

§ 1926.1431(h)(6) -- Any condition found during the trial lift and subsequent inspection(s) that fails to meet a requirement of this standard or otherwise creates a safety hazard must be corrected before hoisting personnel. (See § 1926.1417 for tag-out and related requirements.)

Purpose: This provision ensures that equipment that is not functioning properly will be tagged out of service until the problem is remedied. This will avoid injury that could result from use of deficient equipment. The information exchange requirement in § 1926.1417(f) ensures that employees can identify unsafe components of the equipment because they are tagged as out of service. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry. See, e.g., ASME B30.5-2004 5-2.3.2(b). Therefore, OSHA is not taking burden for this paperwork requirement in Item 12 below.

§ 1926.1431(j)(3) -- After proof testing, a competent person must inspect the platform and rigging to determine if the test has been passed. If any deficiencies are found that pose a safety hazard, the platform and rigging must not be used to hoist personnel unless the deficiencies are corrected, the test is repeated, and a competent person determines that the test has been passed. (See § 1926.1417 for tag-out and related requirements.)

Purpose: This provision ensures that equipment with a deficiency that poses a safety hazard will be tagged out of service until all of the requirements of the paragraph are met. This will avoid injury that could result from use of deficient equipment. The information exchange requirement in § 1926.1417(f) ensures that employees can identify unsafe components of the equipment because they are tagged as out of service. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry. See, e.g., ASME B30.5-2004 5-2.3.2(b). Therefore, OSHA is not taking burden for this paperwork requirement in Item 12 below.

§ 1926.1431(m) -- *Pre-lift meeting*. A pre-lift meeting must be:

(1) Held to review the applicable requirements of this section and the procedures that will be followed.

(2) Attended by the equipment operator, signal person (if used for the lift), employees to be hoisted, and the person responsible for the task to be performed.

(3) Held prior to the trial lift at each new work location, and must be repeated for any employees newly assigned to the operation.

Purpose: OSHA recognizes that there is heightened danger when using a crane or other equipment to hoist personnel. The required pre-lift communication ensures that the operator, signal person, and person being lifted, and other personnel involved in the lift understand their roles and the procedures and hazards applicable to the lift. Any miscommunication or departure from the procedure during the lift could lead to unsafe operation of the equipment and injury to the personnel being hoisted, or to others. Additional meetings at each new work location ensure that the procedures and hazards specific to that worksite are addressed. OSHA considers this information-exchange requirement to be a usual and customary practice in the industry. See, e.g., ASME B30.23-2005, section 23-1.1.1(b)(7). Therefore, OSHA is not taking a paperwork burden for this requirement.

§ 1926.1431(o) -- *Hoisting personnel in drill shafts*. When hoisting employees into and out of drill shafts that are up to and including 8 feet in diameter, all of the following requirements must be met:

* * *

(3) If using a boatswain's chair:

(i) The following paragraphs of this section apply: (a), (c), (d)(1), (d)(3), (d)(4), (e)(1), (e)(2), (e)(3), (f)(1), (f)(2)(i), (f)(3)(i), (g), (h), (k)(1), (k)(6), (k)(8), (k)(9), (k)(11)(i), (m), (n). Where the terms "personnel platform" or "platform" are used in these paragraphs, substitute them with "boatswain's chair."

Purpose: OSHA recognizes that there is a heightened danger when hoisting personnel in drill shafts. The pre-lift meeting requirement (required by referenced § 1926.1431(m)(1)) facilitate communication among employees regarding the safe operation of the personnel-hoisting equipment during the performance of drilling operations.

§1926.1431(p)(4) -- If using a boatswain's chair:

(i) The following paragraphs of this section apply: (a), (c), (d)(1), (d)(3), (d)(4), (e)(1), (e)(2), (e)(3), (f)(1), (f)(2)(i), (f)(3)(i), (g), (h), (j), (k)(1), (k)(6), (k)(8), (k)(9), (k)(11)(i), (m), and (n). Where the terms "personnel platform" or "platform" are used in these paragraphs, substitute them with "boatswains chair."

Purpose: The pre-lift meeting requirement (required by referenced § 1926.1431(m)(1)) facilitate communication among employees regarding the safe operation of the personnel-hoisting equipment when boatswain's chairs will be used.

§ 1926.1431(r) -- *Hoisting personnel for marine transfer*. When hoisting employees solely for transfer to or from a marine worksite, the following requirements must be met:

* * *

(3) If using a marine hoisted personnel transfer device:

(i) The following paragraphs of this section apply: (a), (c)(2), (d)(1), (d)(3), (d)(4), (e)(1) through (5), (e)(12), (f)(1), (g), (h), (j), (k)(1), (k)(8), (k)(9), (k)(10)(ii), (k)(11)(i), (k)(12), (m), and (n). Where the terms "personnel platform" or "platform" are used in these paragraphs, substitute them with "marine-hoisted personnel transfer device."

Purpose: The pre-lift meeting requirement (required by referenced § 1926.1431(m)(1)) facilitate communication among employees regarding the safe operation of the personnel-hoisting equipment when marine-hoisting personnel-transfer devices will be used.

§ 1926.1431(s) -- *Hoisting personnel for storage-tank (steel or concrete), shaft and chimney operations*. When hoisting an employee in storage tank (steel or concrete), shaft and chimney operations, the following requirements must be met:

* * *

(3) If using a boatswain's chair:

(i) The following paragraphs of this section apply: (a), (c), (d)(1), (d)(3), (d)(4), (e)(1), (e)(2), (e)(3), (f)(1), (f)(2)(i), (f)(3)(i), (g), (h), (k)(1), (k)(6), (k)(8), (k)(9), (k)(11)(i), (m), (n). Where the terms "personnel platform" or "platform" are used in these paragraphs, substitute them with "boatswains chair."

Purpose: OSHA recognizes that there is a heightened danger when hoisting personnel in storage tanks, shafts, and chimneys. The tag-out requirements in § 1926.1431(h)(6) and (j)(3) ensure that employees will not use deficient equipment. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry. See, e.g., ASME B30.5-2004 5-2.3.2(b). The pre-lift meeting requirement (required by referenced § 1926.1431(m)(1)) facilitates communication among employees regarding the safe operation of the personnel-hoisting equipment when boatswain's chairs will be used.

Z. Multiple Lifts (§ 1926.1432)
[§ 1926.1432(a) and (b)(2)]

§ 1926.1432(a) -- *Plan development*. Before beginning a crane/derrick operation in which more than one crane/derrick will be supporting the load, the operation must be planned. The planning must meet the following requirements:

(1) The plan must be developed by a qualified person.

(2) The plan must be designed to ensure that the requirements of this subpart are met.

(3) Where the qualified person determines that engineering expertise is needed for the planning, the employer must ensure that it is provided.

Purpose: The exchange of information ensures that the hazards involved with a multiple lift are identified in, and eliminated according to, a plan developed by a qualified person. These hazards include, but are not limited to, load slipping and unintended load shifting. Such hazards can be minimized by a plan that addresses elements such as the capacity of the cranes/derricks relative to load distribution (throughout the lift), load rigging, load travel (from start to finish), and communication. OSHA considers this requirement to be a usual and customary practice in the industry. See, e.g., ASME B30.5 (2004) 5-3.2.1.5(k). Accordingly, OSHA is not taking a paperwork burden for this requirement.

§ 1926.1432(b)(2) -- The lift director must review the plan in a meeting with all workers who will be involved with the operation.

Purpose: The exchange-of-information requirement will typically involve the signal person, rigging crew, crane operator, and sometimes laborers, who would meet to ensure that everyone understands the plan and how the operation will be conducted. This meeting is important for employees to understand how the plan will work, including their responsibilities and the responsibilities of others, which will help ensure that the diverse elements of the operation are coordinated.

AA. Design, Construction and Testing (§ 1926.1433)
[§ 1926.1433(d)(1)(ii), (d)(5), and (e)]

§ 1926.1433(d) -- All equipment covered by this subpart must meet the following requirements:

(1) *Rated capacity and related information*. The information available in the cab (see § 1926.1417(c)) regarding "rated capacity" and related information must include, at a minimum, the following information:

* * *

(ii) A work area chart for which capacities are listed in the load chart. (Note: an example of this type of chart is in ASME B30.5-2004, section 5-1.1.3, Figure 11).

Purpose: This exchange of information is necessary to ensure that equipment operators have immediate access in the cab to information that they need to make determinations that could affect the safe operation of the equipment. OSHA considers this requirement to be a usual and customary practice in the industry. See, e.g., ASME B30.5 (2004) 5-3.2.1.5(k). Consequently, OSHA is not taking a paperwork burden for this requirement.

§ 1926.1433(d)(3) -- Hook and ball assemblies and load blocks must be marked with their rated capacity and weight.

Purpose: Compliance with this labeling requirement provides the operator with information about load ratings of the equipment when determinations must be made that affect the safe operation of the equipment. OSHA considers this requirement to be a usual and customary practice in the industry. See, e.g., ASME B30.5-2004; section 5-1.1.3(b)(4). Therefore, the Agency is not taking a paperwork burden for that requirement in Item 12 below.

§ 1926.1433(d)(5) -- *Posted warnings*. Posted warnings required by this subpart as well as those originally supplied with the equipment by the manufacturer shall be maintained in legible condition.

Purpose: These postings requirements require employers to warn employees that they must avoid or protect themselves from the specified hazardous conditions. OSHA considers this requirement to be a usual and customary practice in the industry. See, e.g., ASME B30.5-2004; section 5-1.1.3(b)(4). Therefore, OSHA is not taking a paperwork burden for this requirement.

§ 1926.1433(e) -- The employer's obligations under paragraphs (a) through (c) and (d)(7) through (13) of this section are met where the equipment has not changed (except in accordance with § 1926.1434 (Equipment modifications)) and it can refer to documentation from the manufacturer showing that the equipment has been designed, constructed and tested in accordance with those paragraphs.

Purpose: This provision is provided as an alternative to the general design and testing requirements in § 1926.1433. Manufacturer design, testing, and construction must be documented to serve as an acceptable substitute for the general design, construction, and testing requirements because the documentation would induce the inspector to ensure that the design, construction, and testing was conducted correctly. In addition, this requirement creates a record that the employer will use to track developing problems so that they can be corrected in time to ensure continued safe operation of the equipment. Because it is usual and customary in the industry to retain manufacturer documentation, OSHA is taking a small paperwork burden only for the cost of retrieving the document.

BB. Equipment Modifications (§ 1926.1434)
[§ 1926.1434(a)(1)(i), (a)(1)(ii), (a)(2)(i), (a)(3), (a)(4), (a)(5), and (b)]

§ 1926.1434(a)(1) -- *Manufacturer review and approval*.

(i) The manufacturer approves the modifications/additions in writing.

(ii) The load charts, procedures, instruction manuals and instruction plates/tags/decals are modified as necessary to accord with the modification/addition.

Purpose: The approval requirement under paragraph (a)(1)(i) of this section, which addresses modifications or additions that may affect the capacity or safe operation of the equipment, is necessary to ensure that modifications/additions will not result in an unsafe condition. The approval must be in writing, and will be used as an administrative tool to ensure that an RPE approved the modifications/additions in accordance with professional engineering practices. Similarly, the requirement in paragraph (a)(1)(ii) of this section to modify load charts and other crucial data to accord with the modification/addition will provide accurate information about the equipment to the operator so that the equipment can be operated within its lifting capacity.

§ 1926.1434(a)(2) -- *Manufacturer refusal to review request.* The manufacturer is provided a detailed description of the proposed modification/addition, is asked to approve the modification/ addition, but it declines to review the technical merits of the proposal or fails, within 30 days, to acknowledge the request or initiate the review, and all of the following are met:

(i) A registered professional engineer who is a qualified person with respect to the equipment involved:

(A) Approves the modification/addition and specifies the equipment configurations to which that approval applies, and

(B) Modifies load charts, procedures, instruction manuals and instruction plates/tags/decals as necessary to accord with the modification/addition.

Purpose: This approval requirement ensures that, in the event that a manufacturer refuses to review a modification/addition request, only an RPE will make determinations regarding proposed modifications/additions that may affect safe operation of the equipment. The determination of an RPE is necessary to ensure that modifications or additions that may affect the capacity or safe operation of the equipment will not result in an unsafe condition. Similarly, the requirement to modify load charts and other crucial data to accord with the modification/addition would provide the operator with accurate information about the equipment so that the equipment can be operated within its lifting capacity.

§1926.1434(a)(3) -- *Unavailable manufacturer*. The manufacturer is unavailable and the requirements of paragraphs (a)(2)(i) and (2)(ii) of this section are met.

Purpose: The approval requirements are needed for the same reasons explained above for § 1926.1434(a)(2).

§ 1926.1434(a)(4) -- Manufacturer does not complete the review within 120 days of the request. The manufacturer is provided a detailed description of the proposed modification/addition, is asked to approve the modification/ addition, agrees to review the technical merits of the proposal, but fails to complete the review of the proposal within 120 days of the date it was provided the detailed description of the proposed modification/addition, and the requirements of paragraphs (a)(2)(i) and (ii) of this section are met.

Purpose: This approval requirement ensures that, in the event that a manufacturer fails to review a modification/addition request, only an RPE will make determinations regarding proposed modifications/additions that may affect safe operation of the equipment. The approval requirements are needed for the same reasons explained above for § 1926.1434(a)(2).

§ 1926.1434(a)(5) -- *Multiple manufacturers of equipment designed for use on marine work sites*. The equipment is designed for marine work sites, contains major structural components from more than one manufacturer, and the requirements of paragraphs (a)(2)(i) and (ii) of this section are met.

Purpose: The approval requirement in paragraphs (a)(2)(i) and (a)(2)(ii) of this section ensures that modifications to this specialized equipment are approved by an RPE. The approval requirements are needed for the same reasons explained above for § 1926.1434(a)(2).

§1926.1434(b) -- Modifications or additions which affect the capacity or safe operation of the equipment are prohibited where the manufacturer, after a review of the technical safety merits of the proposed modification/addition, rejects the proposal and explains the reasons for the rejection in a written response. If the manufacturer rejects the proposal but does not explain the reasons for the rejection in writing, the employer may treat this as a manufacturer refusal to review the request under paragraph (a)(2) of this section.

Purpose: The approval requirements are needed for the same reasons explained above for § 1926.1434(a)(2). However, the Agency is not taking a separate paperwork burden if the manufacturer fails to respond in writing because the effect is that the employer must proceed as if under § 1926.1434(a)(2), and the burden is taken under that paragraph. Similarly, the manufacturer's explanation of why it rejected the employer's proposed modification/addition provides the employer with an administrative tool to verify that the manufacturer reviewed the technical merits of the request, and possibly to submit a revised modification/addition request that would address the employer's concerns. Requiring employers to obtain this information from the manufacturer ensure that employers have this information available when making further determinations that affect the safe operation of the equipment. However, OSHA does not consider the retention of this rejection document to be a burden on the employer because the document likely would be generated and maintained on file by the manufacturer rather than the employer

(i.e., the document would confirm the information provided to the employer by the manufacturer). Therefore, OSHA is not taking a paperwork burden for the retention of this rejection document.

CC. Tower Cranes (§ 1926.1435)
[§ 1926.1435(b)(3), (b)(7)(ii), (c), (d)(3), (e)(5) introductory text, (e)(5)(v), (e)(6) introductory text, (e)(6)(ii), (e)(6)(iii), (e)(6)(iv), (e)(6)(vi), (f)(3)(i), and (f)(3)(ii)]

§ 1926.1435(b)(3) -- *Foundations and structural supports*. Tower crane foundations and structural supports (including both the portions of the structure used for support and the means of attachment) must be designed by the manufacturer or a registered professional engineer.

Purpose: This design requirement ensures that the foundation and structural supports of a tower crane, which are critical to the safe operation of the equipment, will be made by a person with sufficient knowledge and expertise so that the operation of the equipment will not result in an unsafe condition.

§ 1926.1435(b)(7) -- *Climbing procedure.* Prior to, and during, all climbing procedures (including inside climbing and top climbing), the employer must:

* * *

(ii) Have a registered professional engineer verify that the host structure is strong enough to sustain the forces imposed through the braces, brace anchorages and supporting floors.

Purpose: The strength of the structure is a critical factor in the safe operation of the equipment, and the verification is needed to ensure that a weakness in the structure does not result in an unsafe condition. Because this provision requires only the verification of the strength of a structure, and does not per se require additional calculations by the RPE, the Agency did not note a collection of information for this provision in the paperwork package submitted with the proposed rule. Nevertheless, the Agency is considering this provision a collection of information in the final rule to ensure that it is not underinclusive. OSHA is also taking a small burden under Item 13 to encompass the instances in which an RPE may need to make additional determinations in order to verify the strength of the structure.

§ 1926.1435(c) -- *Signs*. The size and location of signs installed on tower cranes must be in accordance with manufacturer specifications. Where these are unavailable, a registered professional engineer familiar with the type of equipment involved must approve in writing the size and location of any signs.

Purpose: OSHA regulates this provision because wind pushing against a sign can significantly increase the horizontal force exerted on a crane, thereby reducing the crane's capacity and/or compromising its stability. To operate cranes safely under windy conditions, employers must develop information about the effects of wind on a crane's

lifting capacity in accordance with this provision when this information is not available from the manufacturer. OSHA requires that the registered professional engineer's approval be in writing and in accordance with professional engineering practices so that the size and location criteria can be readily referenced when the crane is being erected, operated, and dismantled.

§ 1926.1435(d)(3) -- *Proper operation required*. Operations must not begin unless the devices listed in this section are in proper working order. If a device stops working properly during operations, the operator must safely stop operations. The equipment must be taken out of service, and operations must not resume until the device is again working properly. See § 1926.1417(f). Alternative measures are not permitted to be used.

Purpose: This provision ensures that equipment that is not functioning properly will be tagged out of service until the problem is remedied. This will avoid injury that could result from use of deficient equipment. The information exchange requirement in § 1926.1417(f) ensures that employees can identify unsafe components of the equipment because they are tagged as out of service. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry because tagging-out malfunctioning construction equipment is specified by § 1926.20(b)(3). See, e.g., ASME B30.5-2004 5-2.3.2(b). Therefore, OSHA is not taking burden for this paperwork requirement in Item 12 below.

§1926.1435(e)(5) -- *Category I operational aids and alternative measures.* Operational aids listed in this paragraph that are not working properly must be repaired no later than 7 calendar days after the deficiency occurs. *Exception:* If the employer documents that it has ordered the necessary parts within 7 calendar days of the occurrence of the deficiency, the repair must be completed within 7 calendar days of receipt of the parts.

Purpose: This documentation requirement serves as an administrative control to ensure that a defective Category I operational aid on equipment that remains in service has been ordered and will be replaced in a timely manner. OSHA believes that employers maintain purchasing orders and receipts for parts as a usual and customary accounting practice in the industry and will use these documents to meet this requirement. Therefore, OSHA is not taking a paperwork burden for this requirement.

§1926.1435(e)(5)(v) -- *Load moment limiting device*. The tower crane must have a device that prevents moment overloading. *Temporary alternative measures:* A radius indicating device must be used (if the tower crane is not equipped with a radius indicating device, the radius must be measured to ensure the load is within the rated capacity of the crane). In addition, the weight of the load must be determined from a source recognized by the industry (such as the load's manufacturer), or by a calculation method recognized by the industry (such as calculating a steel beam from measured dimensions and a known per foot weight), or by other equally reliable means. This information must be provided to the operator prior to the lift.

Purpose: When chosen as a specified compliance alternative, obtaining the required information, prior to the lift, is essential to the safe handling of the load and operation of the equipment. OSHA is not taking a paperwork burden for this requirement because it considers the requirement to be a usual and customary practice in the industry as indicated by a similar requirement in ASME B30.5- 2000, section 5-3.2.1.1(c).

§1926.1435(e)(6) -- *Category II operational aids and alternative measures.* Operational aids listed in this paragraph that are not working properly must be repaired no later than 30 calendar days after the deficiency occurs. *Exception***:** If the employer documents that it has ordered the necessary parts within 7 calendar days of the occurrence of the deficiency, and the part is not received in time to complete the repair in 30 calendar days, the repair must be completed within 7 calendar days of receipt of the parts.

Purpose: This documentation requirement is an administrative control to ensure that a defective Category II operational aid on equipment that remains in service has been ordered and will be replaced in a timely manner. OSHA believes that employers maintain purchasing orders and receipts for parts as a usual and customary accounting practice of the industry and would use these documents to meet this requirement. Therefore, OSHA is not taking a paperwork burden for this requirement.

§1926.1435(e)(6)(ii) -- *Trolley travel deceleration device.* The trolley speed must be automatically reduced prior to the trolley reaching the end limit in both directions. *Temporary alternative measure:* The employer must post a notice in the cab of the crane notifying the operator that the trolley travel deceleration device is malfunctioning and instructing the operator to take special care to reduce the trolley speed when approaching the trolley end limits.

Purpose: This provision ensures that equipment that is not functioning properly will be tagged out of service until the problem is remedied. This will avoid injury that could result from use of deficient equipment. The requirement of a notice in the cab ensures that employees can identify unsafe components of the equipment because they are tagged as out of service. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry. See, e.g., ASME B30.5-2004 5-2.3.2(b). Therefore, OSHA is not taking burden for this paperwork requirement in Item 12 below.

§1926.1435(e)(6)(iii) -- *Boom hoist deceleration device.* The boom speed must be automatically reduced prior to the boom reaching the minimum or maximum radius limit. *Temporary alternative measure*: The employer must post a notice in the cab of the crane notifying the operator that the boom hoist deceleration device is malfunctioning and instructing the operator to take special care to reduce the boom speed when approaching the minimum or maximum radius limits.

Purpose: This provision ensures that equipment that is not functioning properly will be tagged out of service until the problem is remedied. This will avoid injury that could result from use of deficient equipment. The requirement of a notice in the cab ensures

that employees can identify unsafe components of the equipment because they are tagged as out of service. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry. See, e.g., ASME B30.5-2004 5-2.3.2(b). Therefore, OSHA is not taking burden for this paperwork requirement in Item 12 below.

§1926.1435(e)(6)(vi) -- *Load hoist deceleration device*. The load speed must be automatically reduced prior to the hoist reaching the upper limit. *Temporary alternative measure*: The employer must post a notice in the cab of the crane notifying the operator that the load hoist deceleration device is malfunctioning and instructing the operator to take special care to reduce the load speed when approaching the upper limits.

Purpose: This provision ensures that equipment that is not functioning properly will be tagged out of service until the problem is remedied. This will avoid injury that could result from use of deficient equipment. The requirement of a notice in the cab ensures that employees can identify unsafe components of the equipment because they are tagged as out of service. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry. See, e.g., ASME B30.5-2004 5-2.3.2(b). Therefore, OSHA is not taking burden for this paperwork requirement in Item 12 below.

§1926.1435(e)(6)(vi) -- *Load indicating device.* Cranes manufactured after [INSERT DATE 1 YEAR AND 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] must have a device that displays the magnitude of the load on the hook. Displays that are part of load moment limiting devices that display the load on the hook meet this requirement. *Temporary alternative measures:* The weight of the load must be determined from a source recognized by the industry (such as the load's manufacturer), or by a calculation method recognized by the industry (such as calculating a steel beam from measured dimensions and a known per foot weight), or by other equally reliable means. This information must be provided to the operator prior to the lift.

Purpose: When chosen as a specified compliance alternative, obtaining the required information, prior to the lift, is essential to the safe handling of the load and operation of the equipment. OSHA is not taking a paperwork burden for this requirement because it considers the requirement to be a usual and customary practice in the industry as indicated by a similar requirement in ASME B30.5- 2000, section 5-3.2.1.1(c).

§1926.1435(f)(3) -- *Post-erection inspection*. In addition to the requirements in § 1926.1412(c), the following requirements shall be met:

(i) A load test using certified weights, or scaled weights using a certified scale with a current certificate of calibration, shall be conducted after each erection.

(ii) The load test must be conducted in accordance with the manufacturer's instructions when available. Where these instructions are unavailable, the test must be conducted in accordance with written load test procedures developed by a registered professional engineer familiar with the type of equipment involved.

Purpose: The calibration requirement in paragraph 1926.1435(f)(3)(i) ensures that the employers provide the equipment necessary to conduct an accurate load test. OSHA believes that to meet this calibration requirement, employers are most likely to test weights on the same calibrated scales that are used to verify loads that are to be handled. See, e.g., ANSI B30.3-1996, section 3-1.1.2(g). Therefore, OSHA considers the requirement to be a usual and customary practice in the industry and is not taking a paperwork burden for it.

Compliance with the documentation requirement in paragraph 1926.1435(f)(3)(ii) would ensure that, in the absence of manufacturer's instructions, effective load testing procedures will be developed by an RPE. These instructions would help the employer discover, prior to placing the crane into operation, any significant equipment deficiencies or errors made during erection of the equipment. Having the required information available to the employer would prevent inaccurate testing of the equipment that could contribute to equipment failure. OSHA considers this load-testing requirement to be a usual and customary work practice in the industry because manufacturers provide load-testing instructions with the equipment, but is taking a paperwork burden for this requirement to account for the small number of instances where the manufacturer's instructions for testing are not available.

DD. Derricks (§ 1926.1436)
[§ 1926.1436(b)(3), (c)(2)(i), (c)(2)(ii), (c)(2)(iii), (d)(1), (f)(3)(i), (f)(3)(ii), (g)(1)(ii), (g)(2), (g)(3), (g)(4), (h), and (q)]

§ 1926.1436(b)(3) -- *Load chart location*.

(i) *Permanent installations*. For permanently installed derricks with fixed lengths of boom, guy, and mast, a load chart shall be posted where it is visible to personnel responsible for the operation of the equipment.

(ii) *Non-permanent installations*. For derricks that are not permanently installed, the load chart shall be readily available at the job site to personnel responsible for the operation of the equipment.

Purposes: This load-chart information requirement is needed by the personnel responsible for the operation of the equipment to calculate the parameters of a safe lift. OSHA is not taking a paperwork burden for this information requirement because it considers the requirement to be a usual and customary practice in the industry as indicated by similar provision in ANSI B30.6-1969, section 6-1.1.2(a).

§ 1926.1436(c)(2) -- *Guy derricks*.

(i) -- The minimum number of guys shall be 6, with equal spacing, except where a qualified person or derrick manufacturer approves variations from these requirements and revises the rated capacity to compensate for such variations.

(ii) Guy derricks must not be used unless the employer has the following guy information from the manufacturer or a qualified person, when not available from the manufacturer:

(A) The number of guys.

(B) The spacing around the mast.

(C) The size, grade, and construction of rope to be used for each guy.

(iii) For guy derricks manufactured after December 18, 1970, in addition to the information required in paragraph (c)(2)(ii) of this section, the employer must have the following guy information from the manufacturer or a qualified person, when not available from the manufacturer:

(A) The amount of initial sag or tension.

(B) The amount of tension in guy line rope at anchor.

Purpose: These information requirements ensure that the employer has the necessary information to construct, maintain, and operate the guy derricks safely. OSHA considers this requirement to be a usual and customary practice in the industry as indicated by a similar provision in ASME B30.6-2003, section 6-1.2.2. Therefore, OSHA is not taking a paperwork burden for this requirement.

§ 1926.1436(d)(1) -- Load anchoring data developed by the manufacturer or a qualified person must be used.

Purpose: These information requirements ensure that the employer has the necessary information to anchor guy and stiffleg derricks safely. OSHA is not taking a paperwork burden for this requirement because it considers the requirement to be a usual and customary practice in the industry as indicated by a similar provision in ASME B30.6-2003, section 6-1.4.3.

§ 1926.1436(f)(3)(i) -- Derricks manufactured more than one year after [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] with a maximum rated capacity over 6,000 pounds must have at least one of the following: load weighing device, load moment indicator, rated capacity indicator, or rated capacity limiter. *Temporary alternative measures*: The weight of the load must be determined from a source recognized by the industry (such as the load's manufacturer), or by a calculation method recognized by the industry (such as calculating a steel beam from measured dimensions and a known per foot weight), or by other equally reliable means. This information must be provided to the operator prior to the lift. See § 1926.1417(j) for additional requirements.

Purpose: When chosen as a specified compliance alternative, obtaining the required information, prior to the lift, is essential to the safe handling of the load and operation of the equipment. OSHA considers this requirement to be a usual and customary practice in the industry as indicated by a similar requirement in ASME B30.6-2003, section 6-3.3.1(b). Therefore, OSHA is not taking a paperwork burden for this requirement.

§ 1926.1436(f)(3)(ii) -- A load weight/capacity device that is not working properly must be repaired no later than 30 days after the deficiency occurs. *Exception:* If the employer documents that it has ordered the necessary parts within 7 days of the occurrence of the deficiency, and the part is not received in time to complete the repair in 30 days, the repair must be completed within 7 days of receipt of the parts.

Purpose: This documentation requirement is an administrative control to ensure that a defective operational aid on equipment that remains in service has been ordered and will be replaced in a timely manner. OSHA believes that employers maintain purchasing orders and receipts for parts as a usual and customary accounting practice of the industry and would use these documents to meet this requirement. Therefore, OSHA is not taking a paperwork burden for this requirement.

§ 1926.1436(g)(1) -- *Anchorages.*

* * *

(ii) If using a rock or hairpin anchorage, the qualified person must determine if any special testing of the anchorage is needed. If so, it must be tested accordingly.

Purpose: Compliance with this information requirement will help the employer ensure that the derrick would not collapse due to insufficient anchoring, thereby endangering employees in the vicinity of the derrick. The provisions in paragraph (g)(1) of this section are similar to the requirements specified by ANSI B30.6-1969; the provisions also are similar to requirements in ASME B30.6-2003, section 6-2.2.1(b). For this reason, OSHA considers compliance with this information requirement to be a usual and customary practice in the industry, and is not taking a paperwork burden for it.

§ 1926.1436(g)(2) -- *Functional test*. Prior to initial use, new or reinstalled derricks must be tested by a competent person with no hook load to verify proper operation. This test must include:

(i) Lifting and lowering the hook(s) through the full range of hook travel.

(ii) Raising and lowering the boom through the full range of boom travel.

(iii) Swinging in each direction through the full range of swing.

(iv) Actuating the anti two-block and boom hoist limit devices (if provided).

(v) Actuating locking, limiting and indicating devices (if provided).

Purpose: The functional test required by paragraph (g)(2) of this section will identify potential equipment deficiencies or hazards prior to its use. OSHA considers this requirement to be a usual and customary practice in the industry as indicated by a similar provision in ANSI B30.6-1969, section 6-2.2.1(a). Therefore, OSHA is not taking a paperwork burden for this requirement.

§1926.1436(g)(3) -- *Load test*. Prior to initial use, new or reinstalled derricks must be load tested by a competent person. The test load must meet the following requirements:

(i) Test loads must be at least 100% and no more than 110% of the rated capacity, unless otherwise recommended by the manufacturer or qualified person, but in no event must the test load be less than the maximum anticipated load.

(ii) The test must consist of:

(A) Hoisting the test load a few inches and holding to verify that the load is supported by the derrick and held by the hoist brake(s).

(B) Swinging the derrick, if applicable, the full range of its swing, at the maximum allowable working radius for the test load.

(C) Booming the derrick up and down within the allowable working radius for the test load.

(D) Lowering, stopping and holding the load with the brake(s).

(iii) The derrick must not be used unless the competent person determines that the test has been passed.

Purpose: The load test required by paragraph (g)(3) of this section will identify potential equipment deficiencies or hazards while hoisting a test load prior to the equipment's use. OSHA is not taking a paperwork burden for this requirement because it considers the requirement to be a usual and customary practice in the industry as indicated by a similar requirement in ASME B30.6-2003 section 6-2.2.2. Although the test must be documented in accordance with § 1926.1436(g)(4), the burden for that documentation is taken under paragraph (g)(4).

§ 1926.1436(g)(4) -- *Documentation*. Tests conducted under this paragraph must be documented. The document must contain the date, test results and the name of the tester. The document must be retained until the derrick is re-tested or dismantled, whichever occurs first. All such documents must be available, during the applicable document retention period, to all persons who conduct inspections in accordance with § 1926.1412.

Purpose: These functional- and load-test documentation requirements will help the employer identify defects in the derrick prior to use, which prevent failures of the equipment. Having a documented record of this testing information serves as an administrative tool to confirm that the testing has been conducted and provides a historical reference document for the equipment.

§ 1926.1436(h) -- *Load testing repaired or modified derricks*. Derricks that have had repairs, modifications or additions affecting the derrick's capacity or safe operation must be evaluated by a qualified person to determine if a load test is necessary. If it is, load testing must be conducted and documented in accordance with paragraph (g) of this section.

Purpose: Where a load test is required, the documentation of the load test (required by paragraph (g)(4)) is needed for the same reasons explained above for § 1926.1436(g)(4), and the burden for that documentation is taken under that paragraph. The determination of whether a load test is necessary ensures that a qualified person will identify potential hazards resulting from the repairs, modifications, or additions that could result in the unsafe operation of the derrick. OSHA considers this requirement to be a usual and customary practice in the industry as indicated by a similar requirement in ASME B30.6-2003, section 6-2.2.2(b). Therefore, OSHA is not taking a paperwork burden for this requirement.

§ 1926.1436(q) -- *Qualification and Training*. The employer must train each operator of a derrick on the safe operation of equipment the individual will operate. Section 1926.1427 of this subpart (Operator qualification and certification) does not apply.

Purpose: This exchange of information ensures that employees are made aware of the proper procedures and hazards associated with the operation of a derrick so that the operators will operate the equipment safely. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA is does not take burden for this activity under Item 12 of this Supporting Statement.

EE. Floating Cranes & Land Cranes on Barges (§ 1926.1437)
[§ 1926.1437(c)(2)(ii), (g), (h)(6), (m)(4), (n)(2), (n)(3)(i), (n)(3)(ii), (n)(5)(v), and (n)(6)(i)]

§1926.1437(c)(2)(ii) -- Clearly mark the hazard areas by a combination of warning signs (such as, "Danger – Swing/Crush Zone") and high visibility markings on the equipment that identify the hazard areas. In addition, the employer must train each employee to understand what these markings signify.

Purpose: Although OSHA considers barricading hazardous areas around the equipment to be a usual and customary practice in the industry, posting signs is not such a usual and customary practice. The posting requirement notifies employees in the vicinity of the equipment about the hazardous swing radius areas they must recognize and avoid.

OSHA is taking a paperwork burden for the posting requirement, but not for any barricading that may accompany the postings.

The training requirement is an exchange of information that ensures that employees understand the marking and hazard instructions they convey. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA is does not take burden for this activity under Item 12 of this Supporting Statement.

§ 1926.1437(g) -- Accessibility of procedures applicable to equipment operation. If the crane/derrick has a cab, the requirements of § 1926.1417(c) apply. If the crane/derrick does not have a cab, the employer must ensure that:

(1) Rated capacities (load charts) are posted at the operator's station. If the operator's station is moveable (such as with pendant-controlled equipment), the load charts are posted on the equipment.

(2) Procedures applicable to the operation of the equipment (other than load charts), recommended operating speeds, special hazard warnings, instructions and operators manual, must be readily available on board the vessel/flotation device.

Purpose: This requirement ensures that equipment operators have immediate access in the cab to information that is needed to make determinations that could affect the safe operation of the equipment. OSHA considers this requirement to be a usual and customary practice in the industry as indicated by a similar provision in ASME B30.5-2000, section 5-1.1.3(a). Therefore, OSHA is not taking a paperwork burden for this requirement.

§1926.1437(h)(6) -- *Documentation*. The monthly and annual inspections required in paragraphs (h)(2) and (h)(4) of this section are documented in accordance with §§ 1926.1412 (e)(3) and 1926.1412(f)(7), respectively, and that the four-year inspection required in paragraph (h)(5) of this section is documented in accordance with § 1926.1412(f)(7), except that the documentation for that inspection must be retained for a minimum of 4 years. All such documents must be made available, during the applicable document retention period, to all persons who conduct inspections in accordance with § 1926.1412.

Purpose: Requiring the documentation specified in paragraph (h)(6) of this section provides employers with an administrative tool with which to monitor the condition of specified pieces of equipment during inspections. More specifically, employers will be able to track any deterioration of the equipment that could compromise the safety of equipment operations.

The inspections required by § 1926.1437 are usual and customary in the industry. See, e.g., ASME B30.8-1999, sections 8-2.1.1 (describing "frequent" and "periodic" inspections as monthly and annual, respectively), 8-2.1.2 (requirements for "frequent"

inspections), 8-2.1.3 (requirements for "periodic" inspections), and 8-2.1.3(b)(2) (inspection of compartments). OSHA is therefore not taking burden in Items 12 or 13 for the act of conducting the inspection. However, OSHA is taking burden in Item 12 for the time spent documenting the inspection and making that documentation available. With respect to the four-year inspection, OSHA is taking additional burden in Items 12 and 13 because the standard specifies that this inspection must be conducted by a person with specific qualifications not similarly specified in the applicable ASME standards.

§ 1926.1437(m)(4) -- If the equipment is employer-made, it must not be used unless the employer has documents demonstrating that the load charts and applicable parameters for use meet the requirements of paragraphs (m)(1) through (3) of this section. Such documents must be signed by a registered professional engineer who is a qualified person with respect to the design of this type of equipment (including the means of flotation).
Purpose: When equipment is employer-made, this documentation requirement serves as an administrative tool for employers to confirm that an RPE has evaluated the equipment's design, thereby preventing the use of unsafe equipment. Requiring the signature of the inspector would induce the engineer to ensure that the load charts and applicable parameters are calculated correctly.

§ 1926.1437(n) -- *Land cranes/derricks*. For land cranes/derricks used on barges, pontoons, vessels or other means of flotation, the employer must ensure that:

* * *

(2) The rated capacity modification required in paragraph (n)(1) of this section is performed by the equipment manufacturer, or a qualified person who has expertise with respect to both land crane/derrick capacity and the stability of vessels/flotation devices.

(3) For list and trim.

(i) The maximum allowable list and the maximum allowable trim for the barge, pontoon, vessel or other means of flotation must not exceed the amount necessary to ensure that the conditions in paragraph (n)(4) of this section are met. In addition, the maximum allowable list and the maximum allowable trim does not exceed the least of the following: 5 degrees, the amount specified by the crane/derrick manufacturer, or, when, an amount is not so specified, the amount specified by the qualified person.

(ii) The maximum allowable list and the maximum allowable trim for the land crane/derrick does not exceed the amount specified by the crane/derrick manufacturer, or, when, an amount is not so specified, the amount specified by the qualified person.

Purpose: The requirements in § 1926.1437(n)(2) provides the operator with information that will enable the operator to avoid maritime conditions that adversely affect the safe operation of the equipment.

The requirement in § 1926.1437(n)(3) provides employers with information that accurately portrays the decreased capacity of land cranes and derricks when attached to flotation devices and barges. A qualified person is needed to make the required modifications of rated capacities to ensure that this complex, technical task accounts correctly for both the land crane/derrick capacity and the stability of vessels/flotation devices. OSHA considers this requirement to be a usual and customary practice of the industry as indicated by a similar requirement in ASME B30.8-2004, sections 8-1.2 and 8-1.3. Therefore, OSHA is not taking a paperwork burden for this requirement.

Note: In the paperwork assessment accompanying the proposed rule, the Agency treated proposed § 1926.1437(n)(1) as requiring the collection of information. In this final paperwork assessment, however, the Agency concludes that the requirement to reduce the load capacity is not a collection of information, and the relevant information collection is in § 1926.1437(n)(2).
§ 1926.1437(n)(5) -- Physical attachment, corralling, rails system and centerline cable system meet the requirements in Option (1), Option (2), Option (3), or Option (4) of this section, and that whichever option is used also meets the requirements of paragraph (n)(5)(v) of this section.

* * *

(v) The systems/means used to comply with Option (1), Option (2), Option (3), or Option (4) of this section are designed by a marine engineer, registered professional engineer familiar with floating crane/derrick design, or qualified person familiar with floating crane/derrick design.

Purpose: The proper selection and design of the devices identified in this provision is important to prevent unplanned movement, tipover, or collapse of the equipment. The requirement that the devices be designed by the specified engineer or qualified person ensures that the designer will have sufficient knowledge and experience to account for numerous factors that, if not addressed, could result in the unsafe operation of the equipment.

§ 1926.1437(n)(6) -- *Exception*. For mobile auxiliary cranes used on the deck of a floating crane/derrick, the requirement specified by paragraph (n)(5) of this section to use Option (1), Option (2), Option (3), or Option (4) does not apply when the employer demonstrates implementation of a plan and procedures that meet the following requirements:

(i) A marine engineer or registered professional engineer familiar with floating crane/derrick design develops and signs a written plan for the use of the mobile auxiliary crane.

Purpose: The information required by paragraph (n)(6)(i) of this section needs to be developed to ensure that the system is designed correctly. System failure could result in unplanned movement of the crane/derrick, with consequent injury to employees. This

documentation requirement also serves as a reference for employees who must know and understand the parameters under which the mobile crane can be operated safely. The signature requirement in paragraph (n)(6)(i) induces the engineer to ensure that the plane is developed correctly.

Note: The information requirements in paragraph (n)(6) of the final rule were included in the proposed rule as § 1926.1437(n)(5)(vi).

FF. Overhead and Gantry Cranes (§ 1926.1438)
[§ 1926.1438(b)(2)(i) and (b)(2)(ii)(A)]

§ 1926.1438(b) -- *Overhead and gantry cranes that are not permanently installed in a facility*.

* * *

(2) -- The following requirements apply to equipment identified in paragraph (b)(1) of this section:

(i) -- Sections 1926.1400 through 1926.1414; §§ 1926.1417 through 1926.1425; § 1926.1426(d), §§ 1926.1427 through 1926.1434; § 1926.1437, § 1926.1439, and § 1926.1441.

(ii) The following portions of § 1910.179:

(A) Paragraphs (b)(5),(6),(7); (e)(1),(3),(5),(6); (f)(1),(4); (g); (h)(1),(3); (k); and (n) of § 1910.179.

Purpose: There are a number of information exchange requirements included in the sections cited in 1926.1438(b)(2)(i). Each of them is identified above (except for § 1926.1441, which is discussed below), and the purposes of the collections are set forth in relation to those sections. The paperwork burdens for those requirements, where applicable, are taken under the appropriate sections.

Paragraph § 1926.1438(b)(2)(ii)(A), which also applies to fixed overhead and gantry cranes covered by subpart CC, requires compliance with several requirements of § 1910.179. One of these provisions made mandatory by § 1926.1438(b)(2)(ii)(A), § 1910.179(b)(5), requires that the rated load of the crane be plainly marked on each side of the crane, and if the crane has more than one hoisting unit, each hoist shall have its rated load marked on it or its load block, and this marking shall be clearly legible from the ground floor. These 29 CFR part 1910 requirements were selected because each requirement is a safety requirement that applies to this type of crane regardless of whether it is used in construction or general industry. Compliance with this labeling requirement provides the operator with information about load ratings of the equipment when determinations must be made that affect the safe operation of the overhead and gantry crane. OSHA considers this requirement to be a usual and customary practice in

the industry as indicated by a similar provision in AMSE B30.2-2001, section 2-1.1.1 and, therefore, is not taking a paperwork burden for that requirement in Item 12 below.

GG. Dedicated pile drivers (§ 1926.1439)
[§ 1926.1439(a)]

§ 1926.1439(a) -- The provisions of subpart CC apply to dedicated pile drivers, except as specified in this section.

Purpose: This paragraph requires general compliance with most requirements in subpart CC, including a number of information exchange requirements. Each of the requirements is identified above (except for § 1926.1441, which is discussed below) and the purposes of the collections are set forth in relation to those sections. The paperwork burdens for those requirements, where applicable, are taken under the appropriate sections.

HH. Sideboom Cranes (§ 1926.1440)
[§ 1926.1440(a)]

§ 1926.1440(a) -- The provisions of this standard apply, except § 1926.1402 (Ground conditions), § 1926.1415 (Safety devices), § 1926.1416 (Operational aids), and § 1926.1427 (Operator qualification and certification).

Purpose: Sideboom cranes are exempted from the requirements specified in §§ 1926.1402, 1926.1415, 1926.1416, and 1926.1427 because of the limited capacity and relative simplicity involved in the operation of sideboom cranes. This paragraph requires general compliance with most requirements in subpart CC, including a number of information exchange requirements. Each of the requirements is identified above (except for § 1926.1441, which is discussed below) and the purposes of the collections are set forth in relation to those sections. The paperwork burdens for those requirements, where applicable, are taken under the appropriate sections.

I I. Requirements for equipment with a manufacturer-rated hoisting/lifting capacity of 2000 pounds or less (§ 1926.1441)
[§ 1926.1441(a), (b)(2)(i)(A), (b)(2)(i)(B), 1441(c)(2)(i), (c)(2)(ii), (c)(2)(iii), (c)(3)(i), (c)(3)(ii), (c)(3)(iii), (e), and (f)]

§ 1926.1441(a) – The employer using this equipment must comply with the following provisions of this subpart: § 1926.1400 (Scope); § 1926.1401 (Definitions); § 1926.1402 (Ground conditions); § 1926.1403 (Assembly/disassembly—selection of manufacturer or employer procedures); § 1926.1406 (Assembly/disassembly—employer procedures); §§ 1926.1407 through 1926.1411 (Power line safety); § 1926.1412(c) (Post-assembly); §§ 1926.1413 through 1926.1414 (Wire rope); § 1926.1418 (Authority to stop operation); §§ 1926.1419 through 1926.1422 (Signals); § 1926.1423 (Fall protection); § 1926.1425 (Keeping clear of the load) (except for § 1926.1425(c)(3) (qualified rigger)); § 1926.1426 (Free fall and controlled load lowering); § 1926.1432 (Multiple crane/derrick lifts—supplemental requirements); § 1926.1434 (Equipment modifications); § 1926.1435

(Tower cranes); § 1926.1436 (Derricks); § 1926.1437 (Floating cranes/derricks and land cranes/derricks on barges); § 1926.1438 (Overhead & gantry cranes).

***Purpose*:** This paragraph requires general compliance with many of the requirements in subpart CC, including a number of information exchange requirements. Each of the requirements is identified above and the purposes of the collections are set forth in relation to those sections. The paperwork burdens for those requirements, where applicable, are taken under the appropriate sections.

§ 1926.1441(b)(2)(i) -- The selection of components, and the configuration of the equipment, that affect the capacity or safe operation of the equipment complies with either the:

(A) Manufacturer instructions, recommendations, limitations, and specifications. When these documents and information are unavailable, a registered professional engineer familiar with the type of equipment involved must approve, in writing, the selection and configuration of components; or

(B) Approved modifications that meet the requirements of section § 1926.1434 (Equipment modifications).

***Purpose*:** The written approval documentation required by paragraph (b)(2)(i)(A) serves as a reference for employees who must recognize and be protected from the hazards associated with the equipment's configuration. Obtaining an RPE's written approval ensures that any developed instructions, recommendations, limitations, and specifications have been evaluated and confirmed to be safe for application for the equipment. The paperwork burden for the RPE's written approval is taken under Item 13.

The written documentation required by § 1926.1434, as referenced in § 1926.1441(b)(2)(i)(B), serves as a reference for employees who must recognize and be protected from the hazards associated with the equipment's modified configuration as approved by a qualified person. The burden for this documentation is included in the burden for § 1926.1434 in Item 12, and OSHA therefore is not taking a separate burden for § 1926.1441(b)(2)(i)(B).

§ 1926.1441(c)(2) -- *Unavailable operation procedures.*

(i) When the manufacturer's procedures are unavailable, develop, and ensure compliance with, all procedures necessary for the safe operation of the equipment and attachments.

(ii) Ensure that procedures for the operational controls are developed by a qualified person.

(iii) Ensure that procedures related to the capacity of the equipment are developed and signed by a registered professional engineer familiar with the equipment.

Purpose: When a manufacturer's procedures are unavailable, the documentation requirement ensures that an RPE has developed safe operation procedures related to the equipment's capacity.

§ 1926.1441(c)(3)(i) -- The load chart is available to the operator at the control station;

Purpose: This information requirement ensures that the operator of the equipment will have the information necessary to calculate the parameters of a safe lift. This requirement becomes especially important on equipment with a hoisting/lifting capability of 2000 pounds or less because this capacity can be easily exceeded. OSHA considers this requirement to be a usual and customary practice in the industry as indicated by similar provisions in ASME B30.5-2000, section 5-1.1.3(a). Therefore, OSHA is not taking a paperwork burden for this requirement.

§ 1926.1441(c)(3)(ii) -- Procedures applicable to the operation of the equipment, recommended operating speeds, special hazard warnings, instructions, and operator's manual are readily available for use by the operator.

Purpose: The information requirement ensures that the information is immediately available to an operator so that he or she can use it to make timely determinations that affect the safe operation of the equipment. OSHA is not taking a paperwork burden for this requirement because it considers the requirement to be a usual and customary practice in the industry as indicated by similar requirements in ASME B30.5-2000, section 5-1.1.3(a).

§ 1926.1441(c)(3)(iii) – When rated capacities are available at the control station only in electronic form and a failure occurs that makes the rated capacities inaccessible, the operator immediately ceases operations or follows safe shut-down procedures until the rated capacities (in electronic or other form) are available.

Purpose: The availability of the rated capacities is crucial for the safe operation of the equipment because that information is used by the operator to make determinations about the safe operation of the equipment. This provision ensures that the equipment will be tagged out of service if this information is not available. The information exchange requirement in § 1926.1417(f) ensures that employees will not use the equipment once it is tagged as out of service. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry. OSHA considers this tag-out requirement to be a usual and customary work practice in the industry. See, e.g., ASME B30.5-2004 5-2.3.2(b). Therefore, OSHA is not taking burden for this paperwork requirement in Item 12 below.

§ 1926.1441(e) -- *Operator qualifications*. The employer shall ensure that, prior to operating the equipment, the operator is trained on the safe operation of the type of equipment the operator will be using.

Purpose: This training requirement ensures that operators receive training that would give them the ability to recognize and avoid unsafe conditions related to the operation of the equipment. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA is does not take burden for this activity under Item 12 of this Supporting Statement.

§ 1926.1441(f) -- *Signal person qualifications*. The employer shall ensure that signal persons are trained in the proper use of signals applicable to the use of the equipment.

Purpose: This training requirement ensures that the signal person recognizes and avoids hazards related to the operation of cranes, and understands how the performance of his or her duties affects the safety of equipment operations. This requirement also ensures that communication between the crane operator and the signal person is clear and effective, and will prevent crane accidents that could be caused by inadequately trained signal persons. The requirement that employers provide training to workers is not considered to be a collection of information. Therefore, OSHA is does not take burden for this activity under Item 12 of this Supporting Statement.

JJ. Limited Exceptions for Railroad Maintenance Machines (§ 1926.1442)
[§ 1926.1442(b)(1), (b)(2), (b)(6), (b)(7)]

§ 1926.1442(a) -- *Railroad roadway maintenance machines.* For bridge construction work, employers using equipment covered by this Subpart CC that meets the definition of "Roadway Maintenance Machine," as defined in 49 CFR 214.7, must comply with all of the requirements in this Subpart CC.

Purpose: Proposed § 1926.1442 sets out a series of exceptions and alternative methods of compliance for railroad employers using "roadway maintenance machines," a term of art in the railroad industry and defined by the Federal Railroad Administration at 49 CFR 214.7. Proposed § 1926.1442(a) explicitly excludes roadway maintenance machines engaged in bridge work from the limited exemptions in section 1926.1442. The use of cranes and derricks on roadways or bridges exposes workers to the same hazards as in other construction work, and Subpart CC addresses those hazards without exceptions. There is no additional collection of information because this provision merely clarifies that these cranes are merely subject to the other information collection requirements already listed in subpart CC. OSHA is listing this section here to note the limited scope of the exceptions and alternatives in section 1442.

§ 1926.1442(b) -- For construction work other than bridge construction, employers using equipment covered by Subpart CC that meets the definition of "Roadway Maintenance Machine" must comply with the requirements in Subpart CC, except as provided in paragraphs (1) through (7) of this section:

Purpose: Subpart CC would continue to apply to all railroad construction activities, including construction using roadway maintenance machines, unless one of the proposed exceptions found at § 1926.1442(b) applies (or one of the existing exceptions in other

sections applies). Proposed § 1926.1442(b) refers to the seven subparagraphs that lay out proposed exceptions.

§ 1926.1442(b)(1) -- *Operator certification and training*. The requirements in §§1427 (Operator qualification and certification) … do not apply.

Purpose: Previously the FRA issued a regulation with the effect of prohibiting OSHA, under section 4(b)(1) of the OSH Act, from enforcing its operator certification and training requirements in 1427 with respect to operators of roadway maintenance machines (including roadway maintenance machines used for bridge construction). The Agency is nevertheless including in § 1442(b)(1) an explicit exemption from § 1926.1427 for these operators. The purpose of including the exemption in OSHA's regulations is to provide clear notice to employers in the railroad industry who might not otherwise be aware of the preemptive effect of the FRA's rule establishing training requirements for operators of roadway maintenance machines equipped with cranes on OSHA's standard

The existing operator certification provisions of §§1427 remain unchanged from the previous ICR because these provisions are preempted by the FRA. (Training is not considered to be a collection of information.)

§ 1926.1442(b)(2) -- *Rail clamps, rail stops, and work-area controls*.

§ 1926.1442(b)(2)(i) -- The requirement for rail clamps in §1415(a)(6) does not apply; except § 1415(a)(6) applies when a manufacturer requires rail clamps, unless a registered professional engineer determines that rail clamps are not necessary;

Purpose: Proposed section 1926.1442(b)(2)(i) generally exempts railroad employers from the rail clamps required by existing § 1415(a)(6) unless the manufacturer requires the clamps. But even if the manufacturer requires such clamps, the proposal allows the employer to seek an exemption from the rail-clamp requirement by obtaining a registered professional engineer's determination that rail clamps are not necessary. Thus, an option for RPE approval could provide an alternative measure of safety while accommodating the unique aspects of railroad roadway operations. RPE approval is required, or allowed as an alternative, in a number of provisions of OSHA's cranes standard (see, e.g., §§ 1926.1404(j) and (m)(1)(i); 1417(b)(3); 1434(a)(2)(i); 1435(f)(3)(ii)).

§ 1926.1442(b)(2)(iii) -- The work-area controls specified by § l424(a)(2) do not apply when employers have implemented an on-track safety program that addresses work-area safety for the equipment, and the Federal Railroad Administration approved the on-track safety program in accordance with 49 CFR 214.307(b).

Purpose: Section 1926.1442(b)(2)(iii) provides that the work-area controls requirements specified by § l424(a)(2) do not apply when employers have implemented an on-track safety program that addresses work-area safety for the equipment, and the Federal Railroad Administration approved the on-track safety program in accordance with 49 CFR 214.307(b). The FRA therefore already has a mechanism by which it can ensure that

employers put in place sufficient protections to prevent the types of hazards that OSHA intended to prevent through its work-area control requirements. OSHA believes that, with respect to employers required to submit on-track safety programs with the FRA, the FRA's program preempts the work-area-control requirements in OSHA's crane standard based on the preemption provisions of 4(b)(1) of the OSH Act.

OSHA expects that it would be preempted from enforcing its 1926. l424(a)(2) requirements even if the employer failed to file or implement a program with the FRA because the FRA has exercised its jurisdiction with respect to those employers; therefore, the Agency had not included burden hours or costs for this activity in Items 12 or 13 of this Supporting Statement.

§ 1926.1442(b)(3) -- Out-of-level work. The restrictions on out-of-level work (including the requirements in §§1926.1402(b), 1926.1412(d)(l)(xi), and 1926.1415(a)(l)), and the requirements for crane-level indicators and inspections of those indicators, do not apply when the employer uses equipment purchased before November 8, 2010, or when:

§ 1926.1442(b)(3)(i) -- The manufacturer approves or modifies the equipment for out-of-level operation, or a registered professional engineer who is a qualified person with respect to the equipment involved approves such out-of-level work; and

§ 1926.1442(b)(3)(ii) -- The employer uses the equipment within limitations specified by the manufacturer or the registered professional engineer, or a qualified person modifies the load chart for such approved out-of-level work and the employer uses the equipment in accordance with that load chart.

Purpose: This proposed section would exempt roadway maintenance machines from existing restrictions on out-of-level work, including the requirements to comply with manufacturer out-of-level procedures in §§1926.1402(b) and inspection requirements in 1926.1412(d)(l)(xi). The proposed section would also exempt the machines from having the out-of-level indicators currently required by 1926.1415(a)(l)). The exceptions proposed in § 1926.1442(b)(3)(i) and (ii) would allow out-of-level operation under two conditions which contain information collection requirements: (i) either the manufacturer approves or modifies the equipment to allow out-of-level work, or a registered professional engineer qualified with respect to the particular equipment approves the out-of-level work for the equipment, and (ii) the employer abides by the limitations and other requirements specified by the manufacturer or the engineer, or the employer abides by a load chart modified by a qualified person for the approved out-of-level work. Given the many unique areas of railroad work, in some cases a manufacturer or engineer might not have accounted for a particular activity that would require an additional adjustment to the load chart. OSHA included the option of allowing a qualified person to make additional adjustments to the load chart so that the employer would not need to stop work and locate an RPE every time an additional adjustment is necessary.

§ 1926.1442(b)(6) -- *Manufacturer guidance for modifications covered by §1434.* The requirements to follow the manufacturer's guidance set forth in § 1434 do not apply when employers meet all of the following conditions:

§ 1926.1442(b)(6)(i) -- A registered professional engineer who is a qualified person with respect to the equipment:

§ 1926.1442(b)(6)(i)(A) -- Approves the procedure, modification, addition, or repair, and specifies the equipment configurations to which that approval applies; and

§ 1926.1442(b)(6)(i)(B) -- Modifies load charts, procedures, instruction manuals, and instruction plates, tags, and decals, as appropriate.

Purpose: The language of this exception was based on the existing provision in §1434(a)(2) allowing employers to modify equipment when a manufacturer refuses to review the request.

§ 1926.1442(b)(7) -- Other manufacturer guidance. The requirements to follow the manufacturer's guidance, instructions, procedures, prohibitions, limitations, or specifications, set forth in §§1404(j), (m), or (q); 1417(a), (r), (u), or (aa); 1433(d)(l)(i); or 1441 do not apply when:

(i) A registered professional engineer familiar with the type of equipment involved determines the appropriate limitations on the equipment in writing.

Purpose: Like the exemption in proposed § 1442(b)(6) above, this exemption is intended to preserve existing use practices in the railroad industry while relying on the expertise of an RPE familiar with the equipment to ensure the safety of the equipment for departures from manufacturer guidance. The exemption also provides employers a means to operate safely in cases where obtaining manufacturer's approval is impossible, such as when the manufacturer no longer exists. OSHA request comments on all of the proposed exemptions and their explanations.

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 would be able to use automated, electronic, mechanical, or other technological information-collection techniques, or other forms of information technology when establishing and retaining the required records. The Agency wrote the paperwork requirements of the Standard in performance-oriented language (i.e., in terms of what data to collect, not how to document the data).

However, several paragraphs of this standard will require employers to prepare written documents to: establish safe configurations of equipment and operation procedures; verify critical calculations that affect the safe operation of the equipment; document employee qualifications; warn employees of hazards; confirm the immediate ordering of operational aids, and the completion of required inspections. The following paragraphs of this standard have been identified for these purposes: 29 CFR 1926.1403(b), 29 CFR 1926.1404(j), 29 CFR 1926.1404(m)(1)(i), 29 CFR 1926.1404(m)(1)(ii), 29 CFR 1926.1406(b), 29 CFR 1926.1407(g), 29 CFR 1926.1409*, 29 CFR 1926.1410(d), 29 CFR 1926.1410(e), 29 CFR 1926.1410(f), 29 CFR 1926.1410(j), 29 CFR 1926.1411 Table T, 29 CFR 1926.1412(a)(1)(i), 29 CFR 1926.1412(a)(1)(ii)(A), 29 CFR 1926.1412(c)(2)(i), 29 CFR 1926.1412(e)(2)(i) , 29 CFR 1926.1412(e)(3)(i), 29 CFR 1926.1412(e)(3)(ii), 29 CFR 1926.1412(f)(6), 29 CFR 1926.1412(f)(7), 29 CFR 1926.1412(g)(3), 29 CFR 1926.1412(h), 29 CFR 1926.1413(b)(4), 29 CFR 1926.1413(c)(3)(ii), 29 CFR 1926.1413(c)(4), 29 CFR 1926.1414(e)(2)(iii), 29 CFR 1926.1414(e)(3)(iii), 29 CFR 1926.1417(b)(1), 29 CFR 1926.1417(b)(2), 29 CFR 1926.1417(b)(3), 29 CFR 1926.1417(j)(1), 29 CFR 1926.1424(a)(2)(ii), 29 CFR, 1926.1427(a)(1), 29 CFR 1926.1427(a)(2), 29 CFR 1926.1427(c)(6)(ii), 29 CFR 1926.1427(e)(1), 29 CFR 1926.1427(h)(1)(i), 29 CFR 1926.1427(h)(1)(ii), 29 CFR 1926.1428(a)(1), 29 CFR 1926.1428(a)(2), 29 CFR 1926.1428(a)(3), 29 CFR 1926.1428(b), 29 CFR 1926.1433(e), 29 CFR 1926.1434(a)(1)(i), 29 CFR 1926.1434(a)(1)(ii), 29 CFR 1926.1434(a)(2)(i), 29 CFR 1926.1435(b)(3), 29 CFR 1926.1435(b)(7)(ii), 29 CFR 1926.1435(c)(5), 29 CFR 1926.1435(f)(3)(ii), 29 CFR 1926.1436(g)(4), 29 CFR 1926.1437(c)(2)(ii), 29 CFR 1926.1437(h)(6), 29 CFR 1926.1437(m)(4), 29 CFR 1926.1437(n)(2), 29 CFR 1926.1437(n)(5)(v), 29 CFR 1926.1437(n)(6)(i), 29 CFR 1926.1441(b)(2)(i)(A), 29 CFR 1926.1441(b)(2)(i)(B), 29 CFR 1926.1441(c)(2)(i), 29 CFR 1926.1441(c)(2)(ii), 29 CFR 1926.1441(c)(2)(iii), 29 CFR 1926.1441(c)(3)(ii) and 29 CFR 1926.1442(b)(7)(i). Employers may prepare and maintain the written documents in electronic form, provided that where a signature is required such signature is captured in electronic form. Alternatively, employers may prepare a paper document and scan and maintain electronic copies of these documents.

* All 29 CFR 1926.1409 provisions are accounted with applicable provisions of 29 CFR 1926.1407 and 1926.1408.

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

The requirements to collect and retain information are specific to each piece of equipment and the conditions under which it is operated, and no other source or agency duplicates these requirements or can make the information available to OSHA (i.e., the information is available only from employers).

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

The information-collection requirements specified by the Standard would 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 not conducted or is conducted less frequently, as well as 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 that would be necessary to effectively regulate the equipment covered by this standard and, thereby, 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 in the Act at 29 U.S.C. 651. Accordingly, if employers do not perform the information collections, or delay in providing this information, employees may be subject to an increased risk of death and serious injury when working on or near cranes or derricks.

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 a statistical data classification that has not been reviewed and approved by OMB;**
- **that includes a pledge of confidentially that is not supported by authority established in statue 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 confidentially to the extent permitted by law.**

Employers are required to place a tag in the cab of equipment when it is removed from service because it is not functioning properly. The information exchange requirement in § 1926.1417(f) ensures that employees can identify unsafe components of the equipment, and thereby avoid unsafe operation of the equipment, because the equipment is tagged as out of service. This written exchange of information must be provided as soon as possible after malfunctioning equipment is taken out of service, and necessarily within 30 days, to avoid injury from the use of that equipment by employees who are not aware of the malfunction.

The 5-year time period for a valid third-party crane operator certification, as required by

1926.1427(b)(4), is a long-standing industry practice. The third-party certification organizations established this time period prior to the issuance of OSHA's Crane and Derricks in Construction Final Rule in 2010 (75 FR 47906). The time period was recommended by industry stakeholders during negotiated rulemaking. Likewise, the 5-year time period for a valid certification issued by an employer-audited program in § 1926.1427(c)(6)(ii) matches the time period for the third-party certification.

§1926.1437(h)(6) requires documentation of the four-year inspection of floating cranes and derricks, as required in paragraph (h)(5) of the same section, be retained for a minimum of 4 years. The time period was recommended by industry stakeholders during negotiated rulemaking. The preamble of the proposed rule states, "The committee chose a once-every-four-year time period for surveying the internal portion of a vessel/flotation device based on the comments of individuals from the marine construction industry that this frequency reflects the prevailing industry practice and provides adequate safety." The four year retention provision enables the employer to track changes in the condition of the vessel from the previous inspection, thereby correcting hazards in a timely manner.

No other special circumstances exist that would require employers to collect the information using the procedures specified by this Item. The requirements 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 prior to 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 burden.

Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every 3 years - even if the collection of information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.

In accordance with 5 CFR 1320.11, OSHA is submitting a proposed Information Collection Request (ICR) to the Office of Management and Budget (OMB) for the information collection requirements associated with the proposed rulemaking on 29 CFR 1926 Subpart CC, Cranes and Derricks in Construction, related to "Railroad Roadway Work." As noted in the Section IX. of the preamble, in addition to submitting comments directly to the Agency, members of the public who wish to comment on the Agency's information collection requirements in this proposal may send written comments to OMB. The agency will address any public comments about the information collections in the ICR associated with the Final Rule.

9. Explain any decision to provide any payments or gift to respondents, other than remuneration 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.

The agency offers no assurances of confidentiality in association with this information collection.

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 information collection requirements in the Standard require 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

For purposes of determining burden hours and costs in this ICR, the estimated number of crane operators and cranes used annually in construction are derived from estimates found in the Final Economic Analysis (FEA) for the 2010 cranes and derricks standard and subsequent rulemakings. The Agency estimates the number of crane operators is 117,130.[3] The estimated number of cranes used annually in construction is 115,829.[4]

3 Source: 79 FR 57793 and 82 FR 51993.

4 In previous ICRs, the Agency had estimated 111,991 cranes used annually in construction, excluding digger derricks. Upon further careful review of previous economic analyses for the rulemakings associated with the Standard, the Agency is adjusting this ICR estimate. Specifically, the adjusted estimate of 115,829 cranes used annually in construction is based on the Agency's previous estimate that there were 122,901 cranes covered by the 2010 rule (see: 75 FR 48108) and 7,072 cranes removed from that total because they are expected to be covered by the digger derrick exemption for electric power work conducted under subpart V of 29 CFR 1926 (see 1926.1400(c)(4)). The number of estimated digger derricks was calculated as follows: 8,320 cranes used for electric power work typically subject to subpart V (2,650 cranes from

In addition, OSHA conservatively estimated in the FEA for the 2010 cranes and derricks standard that each derrick performed at least 5 jobs annually. Applying this 5-to-1 ratio to the digger derricks results in a total estimate of 35,360 jobs exempted from coverage under the cranes and derricks standard. OSHA subtracts these 35,360 jobs from the total number of annual jobs (1,146,703), for a revised total of 1,111,343 jobs.

Railroad Roadway Work

The Cranes and Derricks: Railroad Roadway Work Preliminary Economic Analysis ("PEA") associated with this rulemaking estimates a total number of 10,561 machines that would be in scope and 840 railroad respondents affected by the rulemaking. This ICR estimates costs affecting railroads by taking the railroad crane to other crane ratio, 10,561/115,829, which is approximately 9% and then adding 1. This 1.09% "railroad crane markup" will be applied as adjustments to existing equations from the ICR affecting railroads, to reflect new railroad respondents.

OSHA will not, however, apply this railroad crane markup where the record indicates that the equipment and practices used in the railroad industry would not be affected by particular provisions of the standard. For example, the Association of American Railroads (AAR) indicated that the railroad industry uses its own equipment for constructing and maintaining track. AAR provided a list of typical equipment used for this purpose, including the all-terrain swing loader crane, tie crane, rail-mounted crane, rough-terrain hydraulic crane, material delivery and distribution truck crane, and the articulated truck crane (the most common form of equipment used by the industry) (see *Crane Applications in Railway Maintenance*, Docket No.: OSHA-2015-0012-0007). The record does not indicate that the railroads typically use equipment such as tower cranes, derricks, cranes on barges, or floating cranes and derricks, or engage in activities such as hoisting personnel during pile driving operations, for marine transfers, or into tanks, shafts or chimneys. Furthermore, as noted in the preamble explanation for the limited scope of the proposed railroad exceptions, the traditional construction activities related to railroads, such as building a platform, station, or bridge support, are contracted out to traditional construction firms accounted for in other industry NAICS codes groupings and already addressed in the 2010 FEA and in this ICR (see NPRM discussion of the scope of proposed § 1926.1442).

OSHA is not including a railroad markup for § 1926.1402, which requires controlling contractors to disclose known but hidden ground condition hazards. First, OSHA expressly excepted all railroad equipment operating on rail from this requirement (see § 1926.1402(f)). Second, railroads are different than most construction employers

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NAIC 221110, Electric Power Generation, and 5,670 cranes from NAIC 221120, Electric Power Transmission Control and Distribution; source 2010 FEA, Table B-11 (75 FR 48107)). In the digger derrick exemption rulemaking, OSHA determined that of the cranes used for electric power work, 85% were digger derricks and the remaining 15% were other forms of equipment covered by the standard (source 2013 FEA (78 FR 32114)). Therefore, the calculation for the total number of cranes used annually construction is: 122,901 – (.85 *8,320) =115,829.

because they operate on ground that they typically own. According to AAR, even when one employer owns track that another employer leases, the owner typically handles construction work on its track. In the rare instances where an employer that does not own the track handles track construction, Federal Railroad Administration (FRA) regulations govern the maintenance of the track bed and AAR informed OSHA that it is usual and customary for the owner to identify and address known ground hazards through regular inspections, or at least pass along that information to any contractors. For construction activity outside of the track bed, such as the construction of a station house, AAR indicated that railroads would contract with a traditional construction firm such that the cost and burden for the traditional construction employers is already captured in this ICR analysis.

OSHA did not include a railroad markup under § 1926.1404(j) or (m) for RPE assessments required during assembly/disassembly operations where manufacturer information is missing. In most cases the railroad equipment will be run along the railroad tracks and will not need to be disassembled, moved, and then reassembled like many construction cranes. Moreover, OSHA expects that railroad employers who do need to make modifications to equipment without manufacturer guidance would comply with proposed § 1926.1442(b)(7), which allows an alternative to § 1926.1404(j) or (m). OSHA includes the burden and costs for those employers under proposed § 1926.1442(b)(7).

Similarly, OSHA did not include a railroad markup for modification as required by § 1926.1434 because proposed § 1926.1442(b)(6) allows an alternative to § 1926.1434 (modifications absent manufacturer approval) for railroad employers. OSHA includes the burden and costs for railroad modifications under proposed § 1926.1442(b)(6).

OSHA is not including any markup for any of the costs or burdens associated with operator certification under § 1926.1427 because, as explained in Item 2 above and in the preamble of the NPRM, the FRA has acted to preempt the application of OSHA's operator training and certification requirements pursuant to section 4(b)(1) of the OSH Act.

Wage Rates

In determining the wage rates for the various occupations that perform the paperwork requirements, the Agency relied on the rates used in the PEA and in previous rulemakings, updated with 2016 data. The estimated wages are based on the level of expertise and authority of the individuals when designated to perform duties required by the standard. Wage rates are from the 2016 Occupational Employment Statistics of the BLS Standard Occupational Codes (SOC) are given for each case, multiplied by the same GDP deflator used in the PEA (1.030960822) to adjust the wage rates to 2017 dollars. Wages include fringe benefits, calculated from the Employer Costs for Employee Compensation database of the BLS. For the construction industry, series

CMU2032300000000P, this gives a fringe benefit markup of 1.43. The estimated wage rates are listed as follows:

- Qualified Person (SOC 47-1011): $48.23
- Operator (SOC 53-7021): $39.26
- A/D Director (SOC 53-7021): $39.26
- Professional Engineer (SOC 17-2199): $70.34
- Shift Director (SOC 53-7021): $39.26
. Auditor (SOC 47-4011): $43.41
- Signal Person (SOC 47-4099): $28.69
  Spotter (SOC 47-3019): $22.29
- Qualified Rigger (SOC 49-9096): $34.75
- Competent Person (SOC 47-4099): $28.69
- Gen. Constr. Employee (SOC 47-3019): $22.29
- Clerical Employee (SOC 43-4071): $22.16

OSHA notes that AAR provided alternative estimates of professional engineer wages and the amount of time that it would take the engineers to perform their tasks. In response to questions from OSHA, AAR stated that it had "obtained professional engineer rates from firms that perform crane structural analysis" and that the rates were more than double OSHA's estimate (their quoted rate for a "project engineer" was $135 per hour) (see *AAR Response- Settlement Economic Questions*, Docket No.: 2015-0012-0006). Absent additional information about the source of the quotes, OSHA is hesitant to make such a significant departure from the national OES data that OSHA traditionally relies on for this type of analysis. For the purpose of this analysis OSHA is trying to identify an average wage, so OSHA typically relies on the BLS data over individual quotes because it reflects a national average and avoids regional wage biases. In some cases there will be a clear reason to depart from the average to account for differences in a particular industry, but here even if there was an indication that RPE wages for work in the railroad industry was significantly higher than for work in other industries OSHA would still prefer the national averages because the railroad costs are determined through a markup that is integrated into cross-industry analysis.

1) 29 CFR 1926.1402(c)(2)

OSHA estimated that equipment covered by this subpart is used to perform 1,500 jobs per year and it is assumed that at least one set-up occurs for each of these jobs. OSHA estimates that a large percentage of these jobs will be performed using equipment.

OSHA construction staff believes it is a usual and customary practice for operators, especially of equipment rental employers, to get information from the controlling employer at the worksite regarding known hazards beneath equipment set up areas. Therefore, OSHA construction staff estimates that for employers on 1,500 jobs, mostly when non rental equipment is used, this required information exchange will be performed as a work practice that is new to the employer. Typically, OSHA would estimate that

obtaining and providing this information would take employers about 10 minutes (.08 hour) if the information is available on site. However, if the required information is kept off site, it is anticipated that the controlling employer would most likely access this information, by phone, facsimile, computer but in a few instances, there would be a need to go off site. Therefore, OSHA construction staff estimate that it would take a controlling employer, most likely a shift director, 30 minutes (.5 hour) to obtain and provide the required information regarding the location of known hazards beneath the equipment set-up area to equipment users and operators. The estimated annual burden hours and cost for this paragraph is:

Burden hours: 1,500 (jobs- info exchange as a new practice) x .5 hour (time for exchange of info.) = 750 hours per year

Cost: 750 hours x $ 39.26 per hour (wage- shift director) = $ 29,445 per year

2) 29 CFR 1926.1403(b) and 1926.1406(b)

OSHA believes that for most equipment used to perform construction activities, it is a usual and customary practice for the owners and manufacturers to provide procedures for the A/D of their equipment. Therefore, OSHA construction staff estimates that 10 employers of primarily older models of equipment may own or use equipment that does not have the required documentation. These employers will use a qualified person, most likely an A/D director with the knowledge to develop such procedures, who will take 1.5 hours to develop and document, and 1 minute (.02 hour) to maintain, procedures for safely performing A/D operations. The yearly burden hours and cost of this provision is estimated to be:

Burden hours: 10 (equip. without A/D procedures) x 1.52 hours (to develop, document, and maintain) x 1.09% railroad crane markup = 17 hours per year

Cost: 17 hours per year x $ 39.26 per hour (wage - A/D director) = $ 667 per year

3) 29 CFR 1926.1404(f)(2)

OSHA construction staff estimates that 50 A/D jobsites per year will be configured such that it would be necessary for an employee to be under the boom, jib, or other components when pins (or similar devices) are being removed during A/D operations. It is estimated that it would take an A/D director one half hour (.5 hour) to determine alternatives to the A/D plan that would minimize the duration and exposure of employees to the hazard of unintended, dangerous movements of the equipment. OSHA staff also estimates that employers would most likely communicate information about this plan to its employees in a 10 minutes (.17 hour) meeting before A/D operations are performed.

Burden hours: 50 (jobs where employees are under boom) x [.5 hour (determination) + .17 hour (meeting)] x 1.09% railroad crane markup = 37 hours

Cost: 37 hours x $ 39.26 per hour (wage of A/D director) = $ 1,453 per year

4) 29 CFR 1926.1404(j)

This provision requires that written approval (from a registered engineer who is familiar with the equipment) must be obtained when information is not available for the employer to reference and ensure that the manufacturers' limitations have not been exceeded regarding the maximum length of boom that may be supported by only cantilevering during A/D operations. OSHA construction staff estimates that 20% of the 1,111,343 hoisting jobs performed in construction will require A/D. It is further estimated that equipment in only 20% of these jobs will need the boom supported by only cantilevering during A/D work. OSHA construction staff estimates that 1% of the equipment used on these jobs, primarily older equipment models, will not have information available from the manufacturer regarding cantilevered boom support. The burden for developing and documenting the required information is addressed in Item 13. The burden taken here is for the employer's clerical staff to maintain the documentation produced by the RPE. The yearly burden hours and cost of maintaining the documentation required by this paragraph are estimated to be:

Burden hours: 1,111,343 (hoisting jobs) x .20 (A/D jobs) x .20 (% with cantilevered boom support) x .01 (equipment w/o man. specs) x .02 hours (maintain documentation) = 9 hours per year

Cost: 9 hours per year x $ 22.16 per hour (wage-clerical) = $199 per year

5) 29 CFR 1926.1404(m)(1)(i); cost for 29 CFR 1926.1404(m)(1)(ii) taken under 29 CFR 1926.1434

This provision requires that written approval (from a registered engineer who is familiar with the equipment) must be obtained when selection of components and configurations of the equipment that affect the capacity are not in accordance with the manufacturer's specifications. OSHA construction staff estimates that 20% of the 1,111,343 hoisting jobs performed in construction will require A/D. OSHA construction staff further estimates that, primarily for older equipment, employers will exercise this option during 1% of these jobs when the manufacturer specifications are not available. The burden for developing and documenting the required information is addressed in Item 13. The burden taken here is for the employer's clerical staff to maintain the documentation produced by the RPE. The yearly burden hours and cost of maintaining the documentation required by this paragraph are estimated to be:

Burden hours: 1,111,343 (total jobs) x .20 (A/D jobs) x .01 (equip. w/o man. specs) x .02 hours (to maintain documents) = 44 hours

Cost: 44 hours x $ 22.16 per hour (wage- clerical) = $ 975 per year

6) 29 CFR 1926.1406(b)

(See calculations of burdens/costs for 29 CFR 1926.1403(b))

7) 29 CFR 1926.1407(a)(1)(i), (a)(3)(i), (c), (d), (e), (f), and 29 CFR 1926.1409.

When equipment will be used in the vicinity of power lines, employers may have to contact the utility owner to use Table A and meet the requirements of several provisions of this standard. OSHA concludes that these employers will contact the utility owner in a phone call/fax or a series of phone calls/faxes to: confirm that the power lines are deenergized and grounded; confirm whether or not it is infeasible to deenergize and ground the power lines; or to confirm the voltage of the power line. Therefore, the burdens and costs for several provisions of this standard with these requirements are all calculated under this provision.

OSHA estimates that 20% of the 1,111,343 hoisting jobs per year will be performed near at least one power line. In addition, OSHA construction staff estimates that on 20 % of these jobs, A/D will be performed. For these A/D jobs, OSHA construction staff estimates that the employer, most likely the A/D director, would take a total of 15 minutes (.25 hours) to make calls to the utility to: confirm that the power lines are deenergize and grounded; confirm whether or not it is infeasible to deenergize and ground the power lines; or to confirm the voltage of the power line. The Agency estimates it will take an electric utility representative, with a wage rate equal to that of a competent person, 30 minutes (.50 hour) to respond to these requests. The estimated annual burden hours and cost of this paragraph are:

Burden hours: 1,111,343 (total hoisting jobs) x .20 (jobs close to power lines) x .20 (A/D jobs) x 1.09% railroad crane markup = 48,455 jobs

A/D Director hours: 48,455 (jobs) x .25 hours (for A/D director to make calls) = 12,114 hours

Utility Representative hours: 48,455(jobs) x .50 hours (for utility, competent person to respond) = 24,228 hours per year

Cost:

A/D Director cost: 12,114 hours x $ 39.26 (wage – A/D Director) = $ 475,596

Utility Representative cost: 24,228 (hours for utility company to respond) x $ 70.34 (wage– equivalent to professional engineer) = $1,704,127

Total burden hours: 36,342 hours per year
Total cost: $2,179,723 per year

8) 29 CFR 1926.1407(c)

(See calculations of burdens/costs for 29 CFR 1926.1407(a)(1)(i))

9) 29 CFR 1926.1407(d)

(See calculations of burdens/costs for 29 CFR 1926.1407(a)(1)(i))

10) 29 CFR 1926.1407(e)

(See calculations of burdens/costs for 29 CFR 1926.1407(a)(1)(i))

11) 29 CFR 1926.1407(f)

(See calculations of burdens/costs for 29 CFR 1926.1407(a)(1)(i))

12) 29 CFR 1926.1407(g) and 1926.1409

This provision also applies to power lines that are above 350 kV in accordance with section 1926.1409. This paragraph requires that at least one electrocution hazard warning must be posted in the cab and two more must be posted outside of the equipment at these jobsites. The Agency assumes that signs would last five years (i.e., an average annual replacement rate of 20%), and that it would take a general construction employee 10 minutes (.17 hour) to fabricate and post a sign. OSHA estimates the annual burden hours and cost for this requirement are:

Burden hours: 115,829 (# equipment) x .20 (annual replacement rate) x .17 hour (posting) x 1.09% railroad crane markup = 4,293 hours per year

Cost: 4,293 hours per year x $ 22.29 per hour (wage- construction employee) = $95,690 per year

13) 29 CFR 1926.1408(a)(2)(i), (iii)(A), (c), (d)(1), (e), 29 CFR 1926.1409, 29 CFR 1926.1410(c)(1), and (j) (<u>For all **non A/D** work around Power lines (all voltages and operations closer than Table A))</u>

When equipment will be used in the vicinity of power lines, employers may have to contact the utility owner to use Table A and meet the requirements of several provisions of this standard. OSHA concludes that these employers will contact the utility owner in a phone call/fax or a series of phone calls/faxes to: confirm that the power lines are deenergized and grounded; confirm whether or not it is infeasible to deenergize and ground the power lines; or to confirm the voltage of the power line. Therefore, the burdens and costs for several provisions of this standard with these requirements are all calculated under this provision.

OSHA estimates that 20% of the 1,111,343 hoisting jobs per year will be performed near at least one power line. In addition, OSHA construction staff estimates that on 20 % of these jobs, A/D will be performed. Those burdens are accounted in the calculations for 29 CFR 1926.1407(a). For the remaining 80% (non A/D jobs), OSHA construction staff

estimates that it will take 15 minutes (.25 hour) for the employer, most likely the shift director, to make calls the utility to: confirm that the power lines are deenergized and grounded; confirm whether or not it is infeasible to deenergize and ground the power lines; or to confirm the voltage of the power lines. The Agency estimates it will take an electric utility representative, equal to the wage rate of a competent person, 30 minutes (.50 hour) to respond to these requests. The estimated annual burden hours and cost of this proposed paragraph are:

Burden hours: 1,111,343 (total hoisting jobs) x 20% (jobs close to power lines) x .80% (non A/D jobs) x 1.09% railroad crane markup = 193,818 jobs

Shift Director hours: 193,818 (jobs) x .25 hours (for shift director to make calls) = 48,455 hours

Utility Representative hours: 193,818 (jobs) x .50 hours (for utility, competent person to respond) = 96,909 hours per year

Cost:
Shift Director cost: 48,455 hours x $ 39.26 per hour (wage- shift director) = $1,902,343 per year

Utility Representative cost: 96,909 hours x $ 70.34 (wage - equivalent to professional engineer)) = $6,816,579 per year

Total burden hours: 387,636 hours
Total cost: $ 8,718,922 per year

14) 29 CFR 1926.1408(c)

(See calculations of burdens/costs for 29 CFR 1926.1408(a)(2)(i))

15) 29 CFR 1926.1408(d)(1)

(See calculations of burdens/costs for 29 CFR 1926.1408(a)(2)(i))

16) 29 CFR 1926.1408(e)

(See calculations of burdens/costs for 29 CFR 1926.1408(a)(2)(i))

17) 29 CFR 1926.1409

(See calculations of burdens/costs for 1926.1407 and 1408 provisions)

18) 29 CFR 1926.1410(e)

During this meeting the participants would discuss these procedures as required in 29 CFR 1926.1410(d), which is a usual and customary practice in the industry. See, e.g., ASME B30.5-2004 5-3.4.5.3(a). In addition, the employer must document the procedures and make them immediately available as required by 29 CFR 1926.1410(e). OSHA estimates it takes the shift director 30 minutes (.5 hour) to document the plan. The Agency further estimates that it would take an employer 2 minutes (.03 hour) to make the plans immediately available on site. OSHA estimates the annual burden hours and cost for this requirement are:

Burden hours: 1,111,343 (total hoisting jobs) x .20 (jobs in proximity to power lines) x .15 (closer than Table A) x .53 hour (to document and make plan available) x 1.09% railroad crane markup = 19,261 hours

Cost: 19,261 hours per year x $ 39.26 (wage- shift director) =$756,187 per year

19) 29 CFR 1926.1410(f)

OSHA estimates that 20% of the 1,111,343 hoisting jobs per year will be performed near at least one power line. OSHA construction staff estimates that 15% of those jobs will be performed closer to the power line than Table A allows. Employers, most likely the shift director, and the utility operator on these jobs are required by this standard to conduct a meeting that will allow the equipment operator and other employees who will be in the area of the equipment or load to review the hoisting procedures documented in accordance with paragraph (e) of this section. The Agency believes that for most of the participants, this meeting is a usual and customary practice in the industry. See, e.g., ASME B30.5-2004 5-3.4.5.3(a). However, the participation of the utility representative may not be usual and customary, so OSHA is calculating the burden for the participation of the utility representative. The Agency believes it would take the utility representative 15 minutes (.25 hour) to plan and participate in this required meeting. OSHA estimates the annual burden hours and cost for this requirement are:

Burden hours: 1,111,343 (total hoisting jobs) x .20 (jobs in proximity to power lines) x .15 (closer than Table A) x .25 hour (plan/participate meeting) x 1.09% railroad crane markup = 9,085 hours per year.

Cost: 9,085 hours per year x $ 70.34 (utility rep at wage equivalent to professional engineer) = $639,039 per year

20) 29 CFR 1926.1410(j)

OSHA estimates that 20% of the 1,111,343 hoisting jobs per year will be performed near at least one power line. OSHA construction staff estimates that 15% of those jobs will be performed closer to the power line than Table A allows. OSHA construction staff estimates that 1% of the procedures developed for these scenarios in accordance with paragraph (d) of this section will have deficiencies. There is no burden for the employer's

time to develop a new plan because it is a usual and customary practice in the industry. See, e.g., ASME B30.5-2004 5-3.4.5.3(a). OSHA construction staff estimates that in these scenarios, the employer will need to document and make available the revised procedures to comply with paragraph (e) of this section. It is estimated that it would take the employer 30 minutes (.5 hour) to document the revised plans and 2 minutes (.03 hour) make the plans available. In addition, utility representatives will need to participate in a meeting to review the revised plans in accordance with paragraph (f) of this section. OSHA estimates that it would take the utility representative 15 minutes (.25 hours) to plan and participate in the meeting. OSHA estimates the annual burden hours and cost for 29 CFR 1926.1410(j) are:

Burden hours for shift director: 1,111,343 (total hoisting jobs) x .20 (jobs in proximity to power lines) x .15 (closer than Table A) x .01 (plans needing revisions) x .53 hours (to document and maintain) x 1.09% railroad crane markup = 193 hours per year

Burden hours for utility representative: 1,111,343 (total hoisting jobs) x .20 (jobs in proximity to power lines) x .15 (closer than Table A) x .01 (plans needing revisions) x .25 hours (utility rep to plan and participate) x 1.09% railroad crane markup = 91 hours per year

Cost: 193 hours per year x $39.26 (shift director)) + (91 hours per year x $ 70.34 per hour (utility representative at wage equivalent to professional engineer) = $13,978 per year

21) 29 CFR 1926.1412(a)(1)(i)

Of the 115,829 cranes in use per year as estimates, OSHA construction staff estimates that 1% of this equipment will be modified.[5] In these scenarios, a qualified person must inspect such modifications to ensure the modifications were completed in accordance with section 29 CFR 1926.1434, Equipment Modifications. OSHA construction staff estimates that it would take a qualified person 20 minutes (.33 hour) to obtain the modification approval document and confirm through inspection that the equipment modification meets the conditions specified on the approval document. OSHA estimates that the annual burden hours and cost of this provision are:

Burden hours: 115,829 (equip. per year) x .01 (modified equipment) x .33 hour (obtain) x 1.09% railroad crane markup = 417 hours per year

Cost: 417 hours per year x $ 48.23 per hour (wage of qualified person) = $20,112 per year

22) 29 CFR 1926.1412(b)(1)(ii)(A)

5 Although OSHA expects that most modifications to railroad equipment will be accounted for in the separate burden and cost calculations for the railroad exceptions in 29 CFR 1926.1442, OSHA is also factoring in the railroad crane markup in this estimate to account for any other modifications not related to out-of-level work or changes to the load chart.

OSHA estimates that 1,111,343 hoisting jobs will be performed per year in the construction industry. OSHA construction staff estimates that on 70% of these jobs, pieces of equipment will be used on which repairs/adjustments have been made that will affect the safe operation of the equipment. OSHA construction staff also estimates that the manufacturer's equipment criteria will not be available for .05% of those jobs using repaired/adjusted pieces of equipment. Under these scenarios, a qualified person must determine if he or she must develop criteria or if an RPE is needed to do so. Although it is not explicitly required by this provision, the Agency assumes that 70% of the qualified persons will opt to develop and document the criteria and 30% will opt to consult a registered professional engineer. Although not explicitly required, OSHA estimates that 80% of those qualified persons will document the developed criteria. OSHA construction staff estimates that it would take a qualified person, on average 1.5 hours to develop and document, 1 minute (.02 hour) to maintain, and 5 minutes (.08 hour) to make available the required information. The employer is required to make this documentation available to all inspectors in accordance with 29 CFR 1926.1412(k). The yearly burden hours and cost of this paragraph are estimated to be:

***A. Development and Documentation**:*

Burden hours: 1,111,343 (total hoisting jobs) x .70 (repairs/adjustments made affecting safe operation of equipment) x .005 (equipment w/o mfr criteria) x .70 (done by qualified person) x .80 (will document) x 1.5 hour x 1.09% railroad crane markup = 3,561 hours per year

Cost: 3,561 hours per year x $ 48.23 per hour (qualified person) = $171,747 per year

***B. Maintaining and Making Available**:*

Although some of the documentation required by this section would be produced by the employer, and some by an RPE hired by the employer (see Item 13), in all cases the Agency assumes that the employer's clerical staff would maintain and make available these records. The yearly burden hours and cost of this clerical activity are estimated to be:

Burden hours: 1,111,343 (total hoisting jobs) x .70 (repairs/adjustments made affecting safe operation of equipment) x .005 (equipment w/o mfr criteria) x .80 (will document) x .10 hour (maintain and make available) x 1.09% railroad crane markup = 339 hours per year

Cost: 339 hours x $22.16 per hour (wage – clerical) = $ 7,512

Total burden hours: 5,766
Total cost: $179,259

23) 29 CFR 1926.1412(c)(2)(i)

OSHA construction staff estimates that 20% of the 1,111,343 hoisting jobs performed in construction will require A/D. OSHA construction staff estimates that on .5% of these A/D jobs, equipment will be used for which the manufacturer's recommended configurations will not be available. Under these scenarios, a qualified person must determine if he or she must develop criteria that establishes safe configurations of the equipment or if there is a need for an RPE to make such determinations. Although it is not explicitly required by this provision, OSHA estimates that 70% of the qualified persons will opt to develop the criteria and the other 30% would utilize an RPE. Of the 70% of qualified persons that will develop their own criteria, OSHA estimates that 80% of those qualified persons will document the information. OSHA construction staff estimates that it would take a qualified person 1.5 hours to develop and document, 1 minute (.02 hour) to maintain, and 5, minutes (.08 hour) to make available the required information. The yearly burden hours and cost of this paragraph are estimated to be:

***A. Development and Documentation**:*

Burden hours: 1,111,343 (total hoisting jobs) x .20 (A/D jobs) x .005 (equip. w/o mfr. criteria) x .70 (done by qualified person) x .80 (will document) x 1.5 hours x 1.09% railroad crane markup = 1,017 hours per year

Cost: 1,017 hours per year x $ 48.23 per hour (qualified person) = $ 49,098 per year

***B. Maintaining and Making Available**:*

Although some of the documentation required by this section would be produced by the employer, and some by an RPE hired by the employer (see Item 13), in all cases the Agency assumes that the employer's clerical staff would maintain and make available these records. The yearly burden hours and cost of this clerical activity are estimated to be:

Burden hours: 1,111,343 (total hoisting jobs) x .20 (A/D jobs) x .005 (equip. w/o mfr. criteria) x .80 (will document) x .10 hours to maintain and make available x 1.09% railroad crane markup = 97 hours per year

Cost: 97 hours x $ 22.16 per hour (wage – clerical) = $ 2,150

Total burden hours: 1,115

Total cost: $51,248

24) 29 CFR 1926.1412(e)(3)(i), (e)(3)(ii), (f)(6), (g)(3), (h), 1926.1413(b)(4) and (c)(3)(ii), and 1926.1437(h)

Paragraph (e)(3)(i) of this section requires documentation of monthly inspections (12 per year) for the 115,829 pieces of hoisting equipment used in the construction per year as OSHA estimates. The employer must then maintain these monthly inspections for 3 months in accordance with paragraph (e)(3)(ii) of this section. The employer must also

meet the requirements of this provision in accordance with paragraph (h) of this section when the equipment has been idle for three months or more. Similarly, a documentation of monthly inspections of wire rope (1926.1413(b)(4)) used with the equipment is required. Subsequently, any deficiencies found during specified inspections must be tracked on the monthly inspection records in accordance with 29 CFR 1926.1412(f)(6), (g)(3) and 1926.1413(c)(3)(ii). Therefore all of these identified documentation and maintenance burdens will be taken under this provision since it is assumed one document will be used for these purposes.

OSHA estimates that a large percentage of these jobs will be performed using rented equipment for which the documentation and maintenance of monthly inspection records is done as a usual and customary business practice. Therefore, OSHA construction staff estimates that for 4,500 cranes, mostly non rental equipment, employers would document, sign, maintain, and make available this collection of information for three or four months as a new work practice. In most cases, the documentation of this inspection will be a checklist form on which the inspector will write comments about his or her observations and sign. OSHA construction staff estimates that it would take a competent person an average of 15 minutes (.25 hour) to document/sign/maintain and 5 minutes (.08

hour) to make available this form. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 4,500 (cranes- documentation of inspections as a new work practice) x 12 (monthly inspections per year) x [.25 hour (documentation/maintenance) + .08 hour (make available)] x 1.09% railroad crane markup = 19,424 hours per year

> **Cost**: 19,424 hours per year x $ 28.69 per hour (wage- competent person) = $557,275 per year

25) 29 CFR 1926.1412(f)(6)

Burden hours/costs for 29 CFR 1926.1412(f)(6) are accounted in calculations for 29 CFR 1926.1412(e)(3). (See calculations of burdens/costs for 29 CFR 1926.1412(e)(3)).

26) 29 CFR 1926.1412(f)(7), 1926.1413(c)(4), and 1926.1437(h)

Paragraph (f)(7) of this section requires documentation of annual inspections for the pieces of hoisting equipment used in the construction. Additional information taken in this provision includes documentation for the annual inspections of wire rope (1926.1413(c)(4)), and annual (1926.1437(h)(4)) and quadrennial (1926.1437(h)(5)) inspections of external vessel/flotation devices used with the equipment. All of these burdens will also be taken under this provision.

Paragraph 1926.550(a)(6) required the employer to maintain records of annual inspections. In addition, sections 5-2.1.5 of ASME B30.5-2000 and 3-2.1.4 of ANSI

B30.3-2004 require the employer to sign documentation of the periodic (monthly to annually) inspection of critical parts of the equipment. OSHA concludes that these consensus standard requirements are an indication that the documentation of inspections for hoisting equipment is a standard industry practice. OSHA also estimates that a large percentage of the 115,829 cranes and derricks used in the construction industry are rented and the documentation and maintenance of the annual/comprehensive inspection records is done as a usual and customary business practice. Therefore, OSHA construction staff estimates that for 7,500 cranes, mostly non rental equipment, employers will document and maintain this required inspection as a new work practice. Subsequently, the FEA estimates that it would take a qualified person an average of 15 minutes (.25 hour) to prepare/sign/maintain documentation of the completion of the annual/comprehensive inspection as required by § 1926.1412(f) and §1926.1437(h). It is estimated that it would take this employee 5 minutes (.08 hour) to make this document available during the performance of other inspections required by this section. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 7,500 (equip- doc/main as a new practice) x [.25 hour (doc/main) +.08 hour (make available)] x 1.09% railroad crane markup =2,698 hours per year

> **Cost**: 2,698 hours x $ 48.23 per hour (wage- qualified person) = $ 130,125 per year

27) 29 CFR 1926.1412(g)(3)

Burdens/costs for this provision taken in calculations for 29 CFR 1926.1412(e)(3). (See section 1926.1412(e)(3) for accounting of burden hours)

28) 29 CFR 1926.1412(h)

Burden taken in calculations for 29 CFR 1926.1412(e)(3). (See section 1926.1412(e)(3) for accounting of burden hours)

29) 29 CFR 1926.1412(k)

Burdens taken in requirements of 29 CFR 1926.1412 for which documentation burdens are calculated when documents must be made available. (See calculations in section 1926.1412 for accounting of burden hours)

30) 29 CFR 1926.1413(a)(4)(ii)(A)

OSHA believes that number of shifts per hoisting job in construction is too variable to try to estimate how many occur in the industry per year. However, OSHA estimates that 1,111,343 hoisting jobs will be performed in the construction industry per year. OSHA construction staff estimates that during shift inspections on 1% of these jobs, Category II wire rope deficiencies will be discovered that will require the employer to make an

assessment of continued safe operations of equipment if the damaged wire rope continues to be used. Furthermore, OSHA construction staff estimates that during the inspection of 75% of these hoisting jobs, the employer will opt to simply remove the damaged rope from service. The remaining 25% of the employers will opt to obtain written approval from the manufacturer for different criteria which would allow the rope to remain in service. The burden for reviewing and documenting a response from the manufacturer is addressed in Item 13. The burden taken here is for the employer's clerical staff to maintain (.02 hours) and make available (.08 hours) the documentation produced by the manufacturer's qualified person. The yearly burden hours and cost of maintaining the documentation required by this paragraph are estimated to be:

Burden hours: 1,111,343 (jobs per year) x .01 (insp. w/ Cat II damaged wire rope) x .25 (employers. who opt to get approval) x .10 hours (maintain and make available) x 1.09% railroad crane markup = 303 hours per year

Cost: 303 hours per year x $ 22.16 per hour (wage- clerical) = $ 6,714 per year

31) 29 CFR 1926.1413(b)(4)

Burden hours/costs are accounted as part of monthly inspection documentation required by section 1926.1412(e)(3). (See section 1926.1412(e)(3) for accounting of burden hours)

32) 29 CFR 1926.1413(c)(3)(ii)

Burdens/costs for this provision taken in calculations for 29 CFR 1926.1412(e)(3). (See section 1926.1412(e)(3) for accounting of burden hours)

33) 29 CFR 1926.1413(c)(4)

Burden hours/costs are accounted as part of monthly inspection documentation required by section 1926.1412(f)(7). (See section 1926.1412(f)(7) for accounting of burden hours)

34) 29 CFR 1926.1413(e)

Burdens taken in requirements of 29 CFR 1926.1412 for which documentation burdens are calculated. (See calculations in section 1926.1412 for accounting of burden hours)

35) 29 CFR 1926.1414(e)(2)(iii)

OSHA construction staff estimates that on 500 hoisting jobs performed in construction, Type I rotation-resistant wire rope that has a design factor of less than 5 will be used. Of those hoisting jobs, OSHA construction staff estimates that employers on only 10 % of those jobs would request manufacturer's approval to perform duty cycle or repetitive loads. This estimate was made because it is assumed that 90% of the employers would merely opt to get a more appropriate grade of wire rope for the job. Subsequently, OSHA

construction staff believes it would take employers, most likely a competent person, 30 minutes (.5 hour) to generate a request that obtains written approval (from both the equipment and wire rope manufacturers) to use the Type I rotation-resistant wire rope under prescribed worksite conditions; and 1 minute (.02) to maintain the written approval. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 500 (jobs/Type I rope used) x .10 (jobs w/approval requests) x .52 hour document/maintain) x 1.09% railroad crane markup = 28 hours per year

Cost: 28 hours per year x $ 28.69 (wage- competent person) = $ 803 per year

However, OSHA construction staff estimates that 150 hoisting jobs will be performed annually using Type II and III rotation-resistant wire rope with a design factor of less than 5. Subsequently, it would take, most likely a competent person, 10 minutes (.17 hours) to document, on the documentation required for the monthly and annual inspections, the hoisting jobs performed with this rope. The yearly burden hours and cost of this proposed paragraph are estimated to be:

Burden hours: 150 (jobs/Type II and III rope used) x .17 hour (documentation) x 1.09% railroad crane markup = 28 hours per year

Cost: 28 hours per year x $ 28.69 (wage- competent person) = $ 803 per year

37) 29 CFR 1926.1417(b)(1) and 1417(b)(2)

OSHA construction staff estimates that the manufacturer's operating procedures will not be available for 350 pieces of equipment used to perform construction activities, primarily older models. It is estimated that 30% of this equipment is owned by employers with the required qualified person on staff. Subsequently, OSHA construction staff estimates that, under this scenario, it will take a qualified person 1 hour to develop/document, 1 minute (.02 hour) to maintain, and 5 minutes (.08 hour) to make available procedures that are necessary for the safe operation of the equipment and attachments.
Burden hours: 350 (equip. w/o mfrs. Procedures) x .30 (QP employed on staff) x 1.10 hours (develop/document/maintain/make available) x 1.09% railroad crane markup = 126 hours per year

Cost: 126 hours per year x $ 48.23 per hour (wage - employer/qualified person) = $ 6,077 per year

38) 29 CFR 1926.1417(b)(3)

OSHA construction staff estimates that for 350 pieces of equipment used to perform construction activities, primarily older models, the manufacturer's procedures related to the capacity of the equipment will not be available. In addition, it is estimated that 5% of this equipment will be owned by employers who employ a registered professional

engineer on staff. OSHA construction staff assumes a registered professional engineer will take 5 minutes (.08 hour) to develop these procedures, and clerical staff .02 hours to maintain the documentation of those procedures. The yearly burden hours and cost of this paragraph are estimated to be:

A. Burden for development and documentation

Burden hours: 350 (equip. w/o mfrs. procedures) x .05 (% with RPE on staff) x .08 hour (develop/document procedures) x 1.09% railroad crane markup = 2 hour per year

Cost: 2 hour per year x $ 70.34 (wage – RPE) = $ 141 per year

B. Burden for maintenance

Although some of the documentation required by this section would be produced by the employer, and some by an RPE contracted by the employer (see Item 13), in all cases the Agency assumes that the employer's clerical staff would maintain these records. The yearly burden hours and cost of this clerical activity are estimated to be:

Burden hours: 350 (equip. w/o mfrs. procedures) x .02 hour (maintain documentation) x 1.09% railroad crane markup = 8 hours per year

Cost: 8 hours per year x $ 22.16 (wage – clerical) = $ 177 per year

Total burden hours: 10
Total cost: $ 318

39) 29 CFR 1926.1417(j)(1)

OSHA estimates that 1,111,343 hoisting jobs will be performed per year in the construction industry. OSHA also estimates that it is a usual and customary practice for operators on 90% of these jobs to inform a person designated to receive such information when the equipment needs adjustments or repairs (a large percentage will be required to do this pursuant to rental contract). Therefore, OSHA estimates that operators on only 10% of the jobs performed annually will provide this information in writing to the next operator or designated person as new work practice. Subsequently, OSHA estimates that it would take an operator 10 minutes (.17 hour) to document that a repair or adjustment of the equipment is needed. The yearly burden hours and cost of this proposed paragraph are estimated to be:

Burden hours: 1,111,343 (total jobs) x .10 (new work practice) x .17 hour (document) x 1.09% railroad crane markup = 20,593 hours per year

Cost: 20,593 hours per year x $ 39.26 per hour (wage - operator) = $ 808,481 per year

40) 29 CFR 1926.1417(j)(2)

OSHA estimates that 1,111,343 hoisting jobs will be performed per year in the construction industry. OSHA also estimates that a large percentage of this equipment will be rented by employers and most will provide this information to the rental companies by contract. OSHA construction staff does not anticipate that most owners, especially renters of equipment, would allow equipment to continue to operate when repairs or adjustments are needed and will use alternative procedures. OSHA is convinced that most equipment will be taken out of service, repaired, or adjusted. However, OSHA acknowledges that owners of primarily older models of equipment are most likely to implement alternative procedures and continue to operate the equipment because replacement parts may be unavailable during the performance of a job. Therefore, OSHA construction staff estimates that employers on 1,500 jobs annually will need to notify employees affected by the use of alternative procedures and repairs or adjustments. Subsequently, OSHA construction staff estimates that it would take the employer, most likely a shift director, 5 minutes (.08 hour) to relay information about the status of the equipment to at least the next operator (already taken in calculation for 29 CFR 1926.1417(j)(1)), and mostly likely a signal person and an average crew of 5 construction employees. The yearly burden hours and cost of this proposed paragraph are estimated to be:

Burden hours: 1,500 (alternative procedures) x .08 hour (information exchange) x 1.09% railroad crane markup = 131 hours per year

Cost: 131 hours per year x $ 28.69 per hour (wage - signal person) = $ 3,758 per year

41) 29 CFR 1926.1423(j)(2)

OSHA estimates that 1,111,343 hoisting jobs will be performed in the construction industry per year. OSHA construction staff estimates that the hoist lines of equipment on 1500 of these jobs will be used to anchor fall protection systems. Subsequently, OSHA estimates that it would take the employer, most likely the shift director, 1 minute (.02 hour) to inform the operator that a fall protection system has been anchored to the load line of the equipment. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 1,500 (fall protection jobs) x .02 hour (information exchange) x 1.09% railroad crane markup = 33 hours per year

Cost: 33 hours per year x $ 39.26 per hour (wage - shift director) = $ 1,296 per year

42) 29 CFR 1926.1424(a)(2)(ii)

OSHA estimates that 1,111,343 hoisting jobs will be performed in the construction industry per year. OSHA construction staff estimates that hoisting equipment used on 60% of these jobs will have rotating superstructures that must be barricaded in

accordance with this provision. OSHA is convinced that demarcation of hazardous areas within the swing radius of the equipment's superstructure is a usual and customary work practice of the industry. However, in addition to the requirement to barricade this hazardous area, paragraph 1926.1424(a)(2)(ii) specifies that a sign must also be posted. OSHA construction staff estimates that employers on 40% of these hoisting jobs, as a new work practice, will post a sign to identify these hazardous areas around the equipment as required. In light of this assertion, it is further estimated that it would take a general construction employee 10 minutes (.17 hour) to fabricate and post the required sign for the barricaded area.

OSHA notes that under the proposed railroad exceptions railroad employers would not be required to comply with this provision if they have implemented an on-track safety program that addresses work-area safety for the equipment, and the Federal Railroad Administration (FRA) approved the on-track safety program in accordance with 49 CFR 214.307(b). Given these FRA requirements, OSHA expects all railroad employers to comply with the FRA's requirements.

The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 1,111,343 (hoisting jobs) x .60 (w/rotating superstructures) x .40 (new employer practice) x .17 hours (sign fabrication/posting) = 45,343 hours per year

> **Cost**: 45,343 hours per year x $ 22.29 per hour (wage- construction employee) = $1,010,695 per year

43) 29 CFR 1926.1424(a)(3)(i) and (ii)

OSHA estimates that 1,111,343 hoisting jobs are performed in construction. OSHA estimates that 40% of this equipment is big enough or so configured such that there are blind spots where an employee could be positioned out of the sight of the operator and injured when equipment is moved during these hoisting operations. On these jobs, OSHA construction staff also estimates that at least one crew member would have to inform the operator that he or she is going to be moving to a one of the hazardous locations. In addition, OSHA construction staff estimates that the operator might have to be informed twice on average by a construction employee during the duration of the hoisting job. Subsequently, it is estimated that it would take those construction employees 30 seconds (.008 hour) to inform the operator of his or her movement to a hazardous location outside of the view of the operator. The Agency determines that the yearly burden hours and cost of these proposed provisions to be:

Burden hours: 1,111,343 (hoisting jobs per year) x .40 (equip. w/ blind spots) x 2 (information exchanges per job) x .008 hours (time per info confirmation) x 1.09% railroad crane markup = 7,753 hours per year

> **Cost**: 7,753 hours per year x $ 22.29 (wage - general construction employee) = $172,814 per year

44) 29 CFR 1926.1427(a), (a)(2), (c)(6)(ii), (e)(1), and (e)(3)(ii)[6]

OSHA estimates that a minimum of 117,130 operators per year will use equipment covered by this standard to perform construction work per year. For the purposes of this burden calculation, OSHA initially assumed that all of the 117,130 operators would be certified within the 4 year period leading up to the original effective date of this requirement (November 10, 2014). OSHA estimated that 60% of these operators (70,278) were already certified. For the purposes of this calculation, OSHA further estimated that the remaining 40% of operators lacking certification (46,852) would be certified at a rate of 25% in each year of the four year period before the effective date of § 1926.1427, for a total of 11,713 certified per year.[7] However, the effective date of this provision has subsequently been extended by four years, to November 10, 2018 (see 82 FR 51986). OSHA will continue with assuming the same annual rate of certification (11,713 per year), although this may somewhat overestimate the total burden hours as this rate of burden hours has been already applied each year since the standard was published. Additionally, OSHA construction staff expects that many employers currently maintain documentation of employee certification, but OSHA is nevertheless taking the burden for reviewing information on the certificate (including information required by §1926.1427(b)(2) and (h)(2)), filing, and maintaining documents of all certificates or other proof of qualification. It is estimated that it would take a construction clerical employee 3 minutes (.05 hour) to review, file and maintain a copy of each operator's certification document of one of the four methods available. Certification is valid for five years, so the annual recertification rate is 20%. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: [70,278(operators already certified) + 11,713 (operators certified per year)] x .05 hour (wage - clerical) x .20 (annual recertification rate) = 820 hours per year

Cost: 820 hours per year x $ 22.16 per hour (wage of clerical employee) = $ 18,171 per year

45) 29 CFR 1926.1427(b)(2)
Burden taken in calculations for 29 CFR 1926.1427(a).

46) 29 CFR 1926.1427(e)(1)

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6 Equations related to 29 CFR 1926.1427 would be superseded by the equations in the pending ICR for the Cranes and Derricks in Construction: Operator Qualification NPRM; see "Note to Reviewer" at the beginning of this Supporting Statement.

7 OSHA recognizes that not all of the 40% of the operators who are not currently certified will need to be certified because some will only operate types of equipment that are exempted from the requirements of § 1926.1427. However, rather than developing an estimate of the number of operators who will not be certified, OSHA is taking the conservative approach of assuming that all operators will eventually be certified or qualified in accordance with the requirements of this section.

Similar to paragraphs (b) and (d) of this section OSHA believes that, as a practical matter, most employers will choose to file copies of each operator's license as a matter of administrative expediency. Therefore, OSHA assumes that a copy of this license would be maintained by the employer and burden is accounted for under 29 CFR 1926.1427(a).

47) 29 CFR 1926.1427(h)(1)(i), (ii)

If testing candidates opt to have the tests required under this section administered to them verbally, this provision requires the candidate to pass a written demonstration of literacy. OSHA estimates that a minimum of 117,130 operators per year will use equipment covered by this standard to perform construction work per year. OSHA estimates that 60% of these operators (70,278) are already certified. For the purposes of this calculation, OSHA initially assumed that all of the 117,130 operators would be certified within the four-year period leading up to the original effective date of this requirement (November 10, 2014) at a rate of 25% per year, for a total of 11,713 certified for year.[8] However, the effective date for this provision has subsequently been extended by three years, to November 10, 2017. OSHA will continue with assuming the same annual rate of certification (11,713 per year), although this may somewhat overestimate the total burden hours as this rate of burden hours has been already applied each year since the standard was published. Of the 11,713 operators tested each year, 10% will opt to take the test verbally. Therefore, OSHA construction staff assumes that it would take the testing entity, most likely a qualified person, 10 minutes (.17 hour) to generate and one minute (.02 hour) to maintain documentation of a demonstration of literacy. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 11,713 (operators tested each year) x .10 (% of operators who opt for verbal test) x .19 hour (.17 hour to generate and .02 hour to maintain certificate) = 223 hours per year

> **Cost:** 223 hours per year x $ 48.23 per hour (wage- qualified person) = $ 10,755 per year

48) 29 CFR 1926.1427(h)(2)

Burden taken in calculations for 29 CFR 1926.1427(a).

49) 29 CFR 1926.1428(a)(1), (a)(2), and (a)(3)

OSHA construction staff estimates that, due to the size and types of loads, size and types of hoisting equipment used, and configurations of job sites, 30% of the jobs performed would not need a signal person when hoisting jobs are performed. Therefore, it is

8OSHA recognizes that not all of the 40% of the operators who are not currently certified will need to be certified because some will only operate types of equipment that are exempted from the requirements of § 1926.1427. However, rather than developing an estimate of the number of operators who will not be certified, OSHA is taking the conservative approach of assuming that all operators will eventually be certified or qualified in accordance with the requirements of this section.

estimated that at least one signal person would be needed for only the remaining 70% of the hoisting jobs performed. It is estimated that it would take a construction clerical employee 5 minutes (.08 hour) to file/maintain, and 2 minutes (.03 hour) to make available, in accordance with 1926.1428(a)(3), a copy of each signal person's documentation of one of the two certification options allowed by this section. OSHA assumes that either the person will require the signal person to carry a copy of their certification or the employer will keep it on site. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 1,111,343 (total jobs) x .7 (jobs w/ signal person) x [.08 hour (file/maintain) + .03 hour (make available)] x 1.09% railroad crane markup = 93,275 hours per year

Cost: 93,275 hours per year x $ 22.16 per hour (wage - clerical employee) = $2,066,974 per year

50) 29 CFR 1926.1428(a)(3)

Burdens taken 29 CFR 1926.1428(a)(1) and (2).

51) 29 CFR 1926.1428(b)

With regard to the qualification of signal people, OSHA construction staff estimates that 2 % of the signal persons would need to be re-qualified each year. It is estimated that it would take a construction clerical employee 5 minutes (.08 hour) to file/maintain, and 2 minutes (.03 hour) to make available, in accordance with 1926.1428(a)(3), a copy of each signal person's documentation of one of the two certification options allowed by this section. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 1,111,343 (total jobs) x .7 (jobs w/ signal person) x .02 (% of re-qualification) x .11 (.08 hour (file/maintain) + .03 hour (make available)) x 1.09% railroad crane markup =1,866 hours per year

Cost: 1,866 hours per year x $22.16 per hour (wage - clerical employee) = $41,351per year

52) 29 CFR 1926.1431(o)(3)(i)

Because a pre-lift meeting when personnel is hoisted using a platform is addressed in consensus standards referenced by this rule, OSHA believes the meeting is a usual and customary work practice of the industry. Likewise, the pre-lift meeting that is required by paragraph 29 CFR 1926.1431(m)(1) is also considered by OSHA as a usual and customary work practice of the industry whenever personnel are hoisted. The only difference with this requirement is that the personnel will be hoisted on a boatswain's chair instead of on a personnel platform. However, the hoisting of personnel with a boatswain's chair itself, as addressed by paragraph (o)(3) of this section, is not addressed

in any consensus standards referenced by OSHA for the application of this standard. Therefore the pre-lift meeting referenced by this provision and required by provision 29 CFR 1926.1431(m)(1) still may be new to a small percentage of employers who would choose this option for hoisting personnel in drill shafts. In light of these assumptions, OSHA estimates of the 1,111,343 hoisting jobs that will be performed in the construction industry per year, on 100 of these jobs, the equipment will be used to hoist personnel in a drilling shaft with a boatswain's chair. Subsequently, OSHA construction staff estimates that it will take an employer, most likely the lift director (at wage rate of shift director), 30 minutes (.5 hour) to plan and conduct this meeting prior to each trial lift and any time employees are newly assigned to the hoisting operation. The estimated annual burden hours and cost of this paragraph are:

Burden hours: 100 (hoisting/drilling jobs) x .5 hour (plan and conduct meeting) = 50 hours per year

Cost: 50 hours per year x $ 39.26 per hour (wage rate of shift director) = $ 1,963 per year

53) 29 CFR 1926.1431(p)(4)(i)

Similar to the rationale described for paragraph (o)(3) of this section, the hoisting of personnel with a boatswain's chair as addressed by paragraph (p)(4) of this section is not addressed in any consensus standards referenced by this standard. Therefore, even though OSHA concludes that pre-lift meetings are usual and customary practice whenever personnel are lifted, the pre-lift meeting referenced by this provision and required by provision 29 CFR 1926.1431(m)(1) still may be new to a small percentage of employers who would choose this option for hoisting personnel during the performance of pile driving operations. In light of these assumptions, OSHA estimates of the 1,111,343 hoisting jobs that will be performed in the construction industry per year, on 500 of these jobs, the equipment would be used to hoist personnel with a boatswain's chair for pile driving operations. Subsequently, OSHA construction staff estimates that it will take an employer, most likely the lift director (at wage rate of shift director -- $39.26), 30 minutes (.5 hour) to plan and conduct this meeting prior to each trial lift and any time employees are newly assigned to the hoisting operation. The estimated annual burden hours and cost of this paragraph are:

Burden hours: 500 (hoisting/pile driving jobs) x .5 hour (plan/conduct meeting) = 250 hours per year

Cost: 250 hours per year x $ 39.26 per hour (wage - shift director) = $ 9,815 per year

54) 29 CFR 1926.1431(r)(3)(i)

Similar to the rationale described for paragraph (o)(3) of this section, the hoisting of personnel with a boatswain's chair as addressed by paragraph (r)(3) of this section is not addressed in any consensus standards referenced by this standard. Therefore, even

though OSHA concludes that pre-lift meetings are usual and customary practice whenever personnel are lifted, the pre-lift meeting referenced by this provision and required by provision 29 CFR 1926.1431(m)(1) still may be new to a small percentage of employers who would choose this option for hoisting personnel for the purpose of marine transfer. OSHA estimates that 500 of the 1,111,343 hoisting jobs would be personnel hoisting jobs that involve hoisting personnel with a marine-hoisted transfer device. Subsequently, OSHA construction staff estimates that it will take an employer, most likely the shift director, 30 minutes (.5 hour) to plan and conduct this meeting prior to each trial lift and any time employees are newly assigned to the hoisting operation. The estimated annual burden hours and cost of this paragraph are:

Burden hours: 500 (marine-hoisted transfer device jobs) x .5 hour (plan/conduct meeting) = 250 hours per year

Cost: 250 hours per year x $39.26 per hour (wage - A/D director) = $ 9,815 per year

55) 29 CFR 1926.1431(s)(3)(i)

Similar to the rationale described for other paragraphs of this section, the hoisting of personnel with a boatswain's chair as addressed by 29 CFR 1926.1431(s)(3)(i) is not addressed in any consensus standards referenced by this standard. OSHA still concludes that pre-lift meetings are usual and customary practice whenever personnel are lifted. However, the pre-lift meeting referenced by this provision and required by provision 29 CFR 1926.1431(m)(1) still may be new to a small percentage of employers who would choose this option for hoisting personnel for the purpose of shaft, chimney, and steel or concrete tank work. OSHA estimates that on 1,000 of the 1,111,343 hoisting jobs that will be performed in the construction industry per year, the equipment will be used to hoist personnel into tanks, shafts, and chimneys using a boatswain's chair. Subsequently, OSHA construction staff estimates that it will take an employer, most likely the shift director, 30 minutes (.5 hour) to plan and conduct this meeting prior to each trial lift and any time employees are newly assigned to the hoisting operation. The estimated annual burden hours and cost of this paragraph are:

Burden hours: 1,000 (tank, shaft, & chimney jobs) x .5 hour (plan and conduct meeting) = 500 hours per year

Cost: 500 hours per year x $ 39.26 per hour (wage -shift director) = $ 19,630 per year

56) 29 CFR 1926.1433(e)

Of the 115,829 cranes in use per year, OSHA construction staff estimates that employers of 50 pieces of this equipment will need to retrieve this required documentation as proof that the equipment meets the construction and design requirements of this subpart. In these scenarios, OSHA construction staff estimates that it would take a competent person

5 minutes (.08 hour) to make this information available. OSHA estimates that the annual burden hours and cost of this proposed provision are:

Burden hours: 50 (equip. w/o design/construct docs) x .08 hour (make available doc) x 1.09% railroad crane markup = 4 hours per year

Cost: 4 hours per year x $ 28.69 (wage - competent person) = $115

57) 29 CFR 1926.1434(a)(1)(i), (a)(1)(ii) and 1926.1441(b)(2)(i)(B)

This provision also applies to modifications made in accordance with section 1926.1441(b)(2)(i)(B). Of the cranes in use per year, OSHA construction staff estimates that 1 % of this equipment will be modified. In these scenarios, the manufacturer, most likely a qualified person, must approve such modifications submitted by the employer to ensure that the modifications will not compromise the safe operation of the equipment. OSHA construction staff estimates that it would take a qualified person 1.5 hours to document and submit the required request. It is also assumed that the employer would also submit proposed modifications of the load charts, procedures and other necessary information that are required in accordance with paragraph (a)(1)(ii) of this section. OSHA did not include railroad employers in these calculations because it expects the railroad employers to take the steps OSHA specifies to be eligible for the exceptions in 1926.1442. The burdens and costs for those exceptions are described in that section of Item 12, below. OSHA estimates that the annual burden hours and cost of this provision are:

A. Submission of Modification Request for Manufacturer Approval:

Burden hours: 115,829 (equip. per year) x .01 (modified equipment) x 1.5 hours (time to document and submit modifications of equipment/tags/charts/procedures) = 1,895 hours per year
Cost: 1,895 hours per year x $48.23 per hour (wage of qualified person- employer) = $91,348 per year

B. Maintaining and Making Available Record of Manufacturer's Approval:

OSHA estimates that approximately 25% of the submissions will be approved in writing by the manufacturer. The employer must maintain the record of this approval and make it available pursuant to § 1926.1412(k). OSHA estimates that clerical staff would take 1 minute to maintain (.02 hours), and 5 minutes (.08 hours) to make available, the record of the manufacturer's approval. OSHA estimates that the annual burden hours and cost of maintaining and making this approval record available are:

Burden hours: 115,829 (equip. per year) x .01 (modified equipment) x .25 (% approved by manufacturer) x .10 hours (maintain and make available) = 32 hours per year
Cost: 32 hours per year x $22.16 per hour (wage - clerical) = $ 709 per year

Total burden hours: 1,927
Total cost: $92,057

58) 29 CFR 1926.1434(a)(1)(ii)

Burdens taken with requirement in 29 CFR 1926.1434(a)(1)(i). (See calculations for section 1926.1434(a)(1)(i) for accounting of burden hours)

59) 29 CFR 1926.1434(a)(2)(i), (a)(3), (a)(4), (a)(5), (b) and 1926.1441(b)(2)(i)(B)

This provision also applies to modifications made in accordance with section 1926.1441(b)(2)(i)(B). Of the 115,829 cranes in use per year, OSHA construction staff estimates that 1 % of this equipment will be modified in a manner that will affect the safe operation of the equipment, thus requiring the employer to send a modification proposal to the manufacturer. Of this 1 %, OSHA construction staff estimates that 45 % of the proposals will be approved by the manufacturer or rejected with explanation, and the other 55 % of proposals will be ignored by the manufacturer or rejected without explanation. For this latter 55 %, which requires an RPE to review and approve the modification, OSHA construction staff estimates that 15 % percent of employers who own this equipment would have a registered professional engineer (RPE) on staff that is qualified to perform the review. In addition, it is estimated that it would take an RPE 1 hour to review the modification request, 30 minutes (.5 hour) to modify load charts, procedures, instruction manuals, and instruction plates/tags/decals and 30 minutes (.5 hour) to document the modification approval. OSHA estimates that the annual burden hours and cost of this provision are:

A. Development and Documentation:

Burden hours: 115,829 (equip. per year) x .01 (modified equipment) x .55 (% manufacturer refuses to review or rejects without explanation) x .15 (RPE on staff) x 2 (1 hour (review) + .5 hour (doc) + .5 hour (time to modify tags/charts/procedures)) = 208 hours per year

Cost: 208 hours per year x $ 70.34 per hour (wage - RPE) = $ 14,631 per year

B. Maintaining and Making Available:

Although some of the documentation required by this section would be produced by the employer, and some by an RPE hired by the employer (see Item 13), in all cases the Agency assumes that the employer's clerical staff would maintain and make available these records in accordance with § 1926.1412(k). The yearly burden hours and cost of this clerical activity are estimated to be:

Burden hours: 115,829 (equip. per year) x .01 (modified equipment) x .55 (% manufacturer refuses to review or rejects without explanation) x .10 (maintain and make available) = 69 hours per year

Cost: 69 hours per year x $22.16 per hour (wage - clerical) = $1,529 per year

Total burden hours: 277
Total cost: $16,160

60) 29 CFR 1926.1434(a)(3), (a)(4), and (a)(5)

Burdens taken with documentation requirement in 29 CFR 1926.1434(a)(1)(i) and (a)(2)(i). (See calculations for section 1926.1434(a)(1)(i) and (a)(2)(i) for accounting of burden hours)

61) 29 CFR 1926.1435(b)(3)

OSHA construction staff estimates that 2 percent of the cranes used in construction annually are tower cranes. The burden for developing and documenting the required information is addressed in Item 13. The burden taken here is for the employer's clerical staff to maintain the documentation produced by the RPE. The yearly burden hours and cost of maintaining the documentation required by this paragraph are estimated to be:

Burden hours: 115,829 (equip. per year) x .02 (tower cranes) x .02 hours (maintain documentation) = 51 hours per year

Cost: 51 hours per year x $22.16 per hour (wage- clerical) = $1,130 per year

62) 29 CFR 1926.1435(b)(7)(ii)

OSHA construction staff estimates that 2 % of the 115,829 cranes used in construction annually are tower cranes. The burden for developing and documenting the required information is addressed in Item 13. The burden taken here is for the employer's clerical staff to maintain the documentation produced by the RPE. The yearly burden hours and cost of maintaining the documentation required by this paragraph are estimated to be:

Burden hours: 115,829 (equip. per year) x .02 (tower cranes) x .02 hours (maintain documentation) = 51 hours per year

Cost: 51 hours per year x $ 22.16 per hour (wage- clerical) = $1,130 per year

63) 29 CFR 1926.1435(f)(3)(ii)

Of the 115,829 cranes in use per year, OSHA construction staff estimates that 2 % of this equipment will be tower cranes. Furthermore it is estimated that 1 % of the equipment, generally older models, will not have the manufacturer's recommendations and specifications available. The burden for developing and documenting the required information is addressed in Item 13. The burden taken here is for the employer's clerical staff to maintain (.02 hours) and make available (.08 hours) the documentation produced

by the RPE in accordance with § 1926.1412(k). The yearly burden hours and cost of maintaining and making the documentation available are estimated to be:

Burden hours: 115,829 (hoisting equip) x .02 (tower cranes) x .01(w/o man. specs) x .10 hours (maintain and make available) = 3 hours per year

Cost: 3 hours per year x $ 22.16 per hour (wage- clerical) = $66

64) 29 CFR 1926.1436(g)(4)

OSHA estimates that 115,829 pieces of hoisting equipment will be used in the construction industry per year and that .5 % of this equipment will be derricks which are not permanently installed. OSHA construction staff estimates that about 80 % of these derricks per year will either be newly installed or need to be repositioned which both require testing as specified by paragraph (g) of this section. Subsequently, OSHA construction staff estimates that it will take a competent person 10 minutes (.17 hour) to document the results of this testing and 1 minute (.02 hour) to maintain this record. OSHA estimates the annual burden hours and cost for this requirement are:

Burden hours: 115,829 (equip per year) x .005 (not permanently installed) x .80 (new or relocated derricks) x .19 hour (document and maintain testing results) = 85 hours per year

Cost: 85 hours per year x $ 28.69 (wage - competent person) = $ 2,439 per year

65) 29 CFR 1926.1437(c)(2)(ii)

OSHA estimates that 1,111,343 hoisting jobs will be performed in the construction industry per year. OSHA construction staff estimates that 2,500 jobs will be performed using floating cranes and land cranes/derricks on barges. OSHA construction staff estimates that hoisting equipment used on 80 % of these jobs will have rotating superstructures that must be barricaded in accordance with this provision. OSHA is convinced that demarcation of hazardous areas within the swing radius of the equipment's superstructure is a usual and customary work practice of the industry. However, in addition to the requirement to barricade this hazardous area, 29 CFR 1926.1437(c)(2)(ii) specifies that a sign must also be posted. OSHA construction staff estimates that employers on 40 % of these hoisting jobs, as a new work practice, will post a sign to identify these hazardous areas around the equipment as required. In light of this assertion, it is further estimated that it would take a general construction employee 10 minutes (.17 hours) to fabricate and post the required sign for the barricaded area. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 2,500 (floating equip. jobs) x .80 (w/rotating superstructures) x .40 (new practice) x .17 hours (sign fabrication/posting) = 136 hours per year

Cost: 136 hours per year x $22.29 per hour (wage- construction employee) = $3,031 per year

66) 29 CFR 1926.1437(h)(6)

Burden hours/costs for documentation of crane inspections required by paragraphs (h)(2), (h)(4) of this section are accounted under 29 CFR 1926.1412(e)(3) and (f)(7).
Of the 115,829 cranes in use per year, OSHA construction staff estimates that 200 are floating cranes. The inspections required by § 1926.1437 are usual and customary in the industry. See, e.g., ASME B30.8-1999, sections 8-2.1.1 (describing "frequent" and "periodic" inspections as monthly and annual, respectively), 8-2.1.2 (requirements for "frequent" inspections), 8-2.1.3 (requirements for "periodic" inspections), and 8-2.1.3(b) (2) (inspection of compartments). For each inspection, OSHA estimates that it will take the appropriate person 15 minutes (.25 hours) to document, maintain, and make the inspection record available. The monthly inspection must be conducted by a competent person, the annual inspection must be conducted by a qualified person, and the four-year inspection must be conducted by a marine engineer, marine architect, licensed surveyor, or other qualified person who has expertise with respect to vessels/flotation device. For purposes of this calculation, OSHA assumes that the four-year inspection will be conducted by a person with the wage rate equivalent to that of a professional engineer, and that 30% of the employers will have such a person on staff. OSHA assumes that, in accordance with § 1926.1437(h), within the first year following the effective date of this rule, the employer will conduct 12 monthly inspections, 1 annual inspection, and 1 four-year inspection. The yearly burden hours and cost of this paragraph are estimated to be:

Monthly inspections:

Burden hours: 200 floating cranes x 12 inspections x .25 hour (documentation/maintenance/make available) = 600 hours

Cost: 600 hours per year x $ 28.69 per hour (wage- competent person) = $17,214

Annual inspections:

Burden hours: 200 floating cranes x .25 hour (documentation/maintenance/make available) = 50 hours

Cost: 50 hours per year x $48.23 per hour (wage- qualified person) = $2,412

Four-Year inspections:

A. Development and Documentation of Four-year Inspections:

Burden hours: 200 floating cranes x .30 (% with appropriately qualified person on staff) x .15 hour (develop/document) = 9 hours

Cost: 9 hours per year x $ 70.34 per hour (wage- professional engineer) = $ 633 per year

B. Four Year Inspections - Maintaining and Making Available:

Although in some cases inspections will be performed and documented by a person on the employer's staff, and in other cases the employer will hire an appropriate person to perform and document the inspection (see Item 13), in all cases the Agency assumes that the employer's clerical staff would maintain (.02 hours) and make available (.08 hours) these records. The yearly burden hours and cost of this clerical activity are estimated to be:

Burden hours: 200 floating cranes x .10 hour (maintenance/make available) = 20 hours

Cost: 20 hours per year x $22.16 per hour (wage- clerical) = $ 443 per year

Total burden hours: 679
Total cost: $20,702

67) CFR 1926.1437(m)(4)

The Agency estimates that 115,829 pieces of hoisting equipment will be used in the construction industry per year and OSHA construction staff estimates that 200 are floating cranes. OSHA estimates that 5 % of these floating cranes/derricks will utilize employer-made equipment. The burden for developing and documenting the required information is addressed in Item 13. The burden taken here is for the employer's clerical staff to maintain the documentation produced by the RPE. The yearly burden hours and cost of maintaining the documentation required by this paragraph are estimated to be:

Burden hours: 200 (equip. per year) x .05 (w/ employer-made equipment) x .02 hours (maintain) = 1 hour per year

Cost: 1 hours per year x $ 22.16 per hour (wage- clerical) = $ 22 (rounded) per year

68) 29 CFR 1926.1437(n)(2)

Paragraph (n)(2) allows the option of getting the rated capacity of the equipment reduced by the equipment manufacturer or a qualified person to account for the maritime conditions listed in paragraph (n)(1) of this section. Subsequently, OSHA construction staff estimates that on 1,000 of the 1,111,343 hoisting jobs that will be performed in the construction industry per year, land cranes/derricks on barges pontoons, vessels, or other means of floatation will be used. In addition, OSHA construction staff estimates that only 5 % of these jobs will be performed using land cranes and derricks that will be removed from the flotation devices and reinstalled for particular hoisting jobs. Most will remain secured to the flotation device and be used throughout the year without a need to be rated by a qualified person again.

Since the employer has an option to use a qualified person (who is familiar with floating crane/derrick designs) to determine the required ratings, OSHA construction staff

estimates that 25 % of the employers would utilize this option. The other 75 % of the employers would likely use the other option, which allows the employer to consult the manufacturer for these calculations. OSHA construction staff estimates that the employer's qualified person, would take 1.5 hours to develop and document such determinations. The yearly burden hours and cost of this paragraph are estimated to be:

***A. Development and Documentation**:*

Burden hours: 1,000 (hoisting-jobs floating cranes/derricks) x .05 (removed and reinstalled equip) x .25 (w/ qualified person on staff) x 1.5 hour (develop and document) = 19 hours per year

Cost: 19 hours per year x $ 48.23 per hour (wage - qualified person) = $ 916 per year

***B. Maintaining Documentation**:*

Although some of the documentation required by this section would be produced by the employer, and some by a manufacturer's RPE (see Item 13), in all cases the Agency assumes that the employer's clerical staff would maintain these records. The yearly burden hours and cost of this clerical activity are estimated to be:

Burden hours: 1,000 (hoisting-jobs floating cranes/derricks) x .05 (removed and reinstalled equip) x .02 hour (maintain documentation) = 1 hour per year

Cost: 1 hours per year x $ 22.16 per hour (wage - clerical) = $ 22 per year

Total burden hours: 20
Total cost: $ 910

69) 29 CFR 1926.1437(n)(3)(i) and (ii)

Burden hours/costs for 29 CFR 1926.1437(n)(3) are accounted as part of the documentation required by section 1926.1437(n)(2). (See calculations for 29 CFR 1926.1437(n)(2) for an accounting of these burdens)

70) 29 CFR 1926.1437(n)(5)(v)

Paragraph (n)(2) allows the option of getting the rated capacity of the equipment reduced by the equipment manufacturer or a qualified person to account for the maritime conditions listed in paragraph (n)(1) of this section. Subsequently, OSHA construction staff estimates that on 1,000 of the 1,111,343 hoisting jobs that will be performed in the construction industry per year, land cranes/derricks on barges pontoons, vessels, or other means of floatation will be used. In addition, OSHA construction staff estimates that only 5 % of these jobs will be performed using land cranes and derricks that will be removed from the flotation devices and reinstalled for particular hoisting jobs. Most will

remain secured to the flotation device and be used throughout the year without a need to be rated by a qualified person again.

For the jobs where the cranes and derricks are removed from the flotation devices, OSHA estimates that it will take a marine engineer, or a qualified person who is familiar with floating crane/derrick designs, with a wage rate equivalent to that of a professional engineer 1.5 hours to develop and document information which confirms the safety of the equipment's mounting design. OSHA estimates that 30% of the employers will have such a person on staff. The yearly burden hours and cost of this paragraph are estimated to be:

***A. Development and Documentation**:*

Burden hours: 1,000 (hoisting jobs- floating cranes/derricks) x .05 (removed and reinstalled equip) x .30 (% with appropriately qualified person on staff) x 1.5 hour (develop and document) = 23 hours per year

Cost: 23 hours per year x $ 70.34 per hour (wage- professional engineer) = $ 1,618 per year

***B. Maintaining Documentation**:*

Although some of the documentation required by this section would be produced by a person on the employer's staff, and some a marine engineer or other appropriately qualified person hired by the employer (see Item 13), in all cases the Agency assumes that the employer's clerical staff would maintain these records (.02 hours). The yearly burden hours and cost of this clerical activity are estimated to be:

Burden hours: 1,000 (hoisting jobs- floating cranes/derricks) x .05 (removed and reinstalled equip) x .02 hour (maintain documentation) = 1 hour per year

Cost: 1 hours per year x $ 22.16 per hour (wage- clerical) = $ 22 per year

Total burden hours: 24
Total cost: $ 1,640

71) 29 CFR 1926.1437(n)(6)(i)

Of the 115,829 cranes in use per year, OSHA construction staff estimates that 200 are floating cranes. OSHA estimates that for 25 % of the floating equipment used in the industry, land cranes/derricks will be mounted on a flotation device/vessel and used to hoist loads. Subsequently, OSHA construction staff estimates that for 20 % of this equipment, mobile auxiliary cranes (two cranes/derricks on the flotation device/vessel) will need to be mounted to a floatation device/vessel to perform the construction hoisting job. For these jobs, OSHA estimates that it will take a marine engineer, or a qualified person who is familiar with floating crane/derrick designs, with a wage rate equivalent to that of a professional engineer, 1.5 hours to develop and document information which

confirms the safety of the equipment's mounting design. OSHA estimates that 30 % of the employers will have such a person on staff. The yearly burden hours and cost of this paragraph are estimated to be:

A. Development and Documentation:

Burden hours: 200 (floating cranes/derrick) x .25 (land crane/derrick) x .20 (mobile auxiliary cranes jobs) x .30 (% with appropriately qualified person on staff) x 1.5 hour (develop and document) = 5 hours per year

Cost: 5 hours per year x $70.34 per hour (wage- professional engineer) = $ 352 per year

B. Maintaining Documentation:

Although some of the documentation required by this section would be produced by a person on the employer's staff, and some a marine engineer or other appropriately qualified person hired by the employer (see Item 13), in all cases the Agency assumes that the employer's clerical staff would maintain these records (.02 hours). The yearly burden hours and cost of this clerical activity are estimated to be:

Burden hours: 200 (floating cranes/derrick) x .25 (land crane/derrick) x .20 (mobile auxiliary cranes jobs) x .02 hour (maintain documentation) = 1 hour per year

Cost: 1 hour per year x $22.16 per hour (wage- clerical) = $ 22 per year

Total burden hours: 6 per year
Total cost: $ 374 per year

72) 29 CFR 1926.1438(b)(2)(i)

Burden hours/costs for 29 CFR 1926.1438(b)(2)(i) are accounted as part of the documentation required by applicable requirements of this final rule except: 1926.1415, 1416, 1426(a)-(c), 1435, 1436, 1438, and 1440. (See calculations for applicable requirements for an accounting of these burdens)

73) 29 CFR 1926.1440(a)

Burden hours/costs are accounted as part of the documentation required by all other sections of this standard except: 1926.1402, 1926.1415, 1926.1416, and 1926.1427.

74) 29 CFR 1926.1441(b)(2)(i)(B)

Burden hours/costs are accounted as part of the documentation required for modifications under section 1926.1434(a)(1)(i) and (a)(2)(i).

75) 29 CFR 1926.1441(c)(2)(i)

OSHA estimates that 115,829 pieces of hoisting equipment will be used in the construction industry per year. In the NPRM, OSHA construction staff estimated that 40% of this equipment would be rated at 2,000 lbs or less in capacity. In light of hearing testimony and comments, OSHA believes that this percentage may be an overestimate, but in the absence of additional information about the actual number of cranes rated at this capacity, OSHA is continuing to include that percentage for the purposes of this calculation to ensure that it does not underestimate the number of equipment with procedures that are unavailable. OSHA construction staff estimates that 1 % of this equipment will not have the required procedures readily available. For this equipment, OSHA construction staff estimates that it will take an employer, most likely a shift director or qualified person, 10 minutes (.17 hour) to obtain operational procedures developed by the qualified person specified in paragraph 1926.1441(c)(2)(ii) of this section and ensure compliance with these procedures. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 115,829 (equip. per year) x .40 (equip- 2,000 lbs or less) x .01 (equip w/o procedures available) x .17 hour (procedures) x 1.09% railroad crane markup = 94 hours

Cost: 94 hours x $48.23 per hour (wage - qualified person) = $4,534 per year

76) 29 CFR 1926.1441(c)(2)(ii)

OSHA construction staff estimates that 350 pieces of equipment used to perform construction activities, primarily older models, will not have the manufacturer's equipment operational controls procedures available for reference. In addition, it is estimated that 30% of this equipment will be owned by employers who employ a person on staff qualified to develop procedures for operational controls in accordance with this provision. For this equipment, OSHA estimates that it will take a qualified person 1 hour to develop procedures for the operational controls and clerical staff 1 minute to maintain (.02 hours), and 5 minutes (.08 hours) to make available, these procedures. The yearly burden hours and cost of this paragraph are estimated to be:

***A. Development and Documentation**:*

Burden hours: 350 (equip w/o procedures) x .30 (QP on staff) x 1 hour (procedures development and documentation) x 1.09% railroad crane markup = 114 hours

Cost: 114 hours x $ 48.23 per hour (wage- qualified person) = $5,498 per year

***B. Maintaining and Making Available**:*

Although some of the documentation required by this section would be produced by the employer, and some by a qualified person hired by the employer (see Item 13), in all cases the Agency assumes that the employer's clerical staff would maintain and make

available these records. The yearly burden hours and cost of this clerical activity are estimated to be:

Burden hours: 350 (equip. w/o mfrs. procedures) x .10 hour (maintain and make available) x 1.09% railroad crane markup = 38 hours

Cost: 38 hours per year x $ 22.16 per hour (wage- clerical) = $ 842 per year

Total burden hours: 152 per year
Total cost: $6,340 per year

77) 29 CFR 1926.1441(c)(2)(iii)

OSHA construction staff estimates that for 350 pieces of equipment used to perform construction activities, primarily older models, will not have the manufacturer's equipment rated capacities available for reference. In addition, it is estimated that 5 % of this equipment will be owned by employers who employ a registered professional engineer on staff. For this equipment, OSHA estimates that it will take a qualified person 1 hour to develop rated capacities and clerical staff 1 minute to maintain (.02 hours), and 5 minutes (.08 hours) to make available, these ratings. The yearly burden hours and cost of this paragraph are estimated to be:

***A. Development and Documentation**:*

Burden hours: 350 (equip. w/o mfrs. rated capacities) x .05 (RPE on staff) x 1 hour (develop/document/maintain) x 1.09% railroad crane markup = 19 hours

Cost: 19 hours per year x $ 70.34 per hour (wage- registered professional engineer) = $1,336 per year

***B. Maintaining and Making Available**:*

Although some of the documentation required by this section would be produced by the employer, and some by an RPE hired by the employer (see Item 13), in all cases the Agency assumes that the employer's clerical staff would maintain and make available these records. The yearly burden hours and cost of this clerical activity are estimated to be:

Burden hours: 350 (equip. w/o mfrs. rated capacities) x .10 hour (maintain and make available) x 1.09% railroad crane markup = 38 hours

Cost: 38 hours per year x $22.16 per hour (wage- clerical) = $ 842 per year

Total burden hours: 57 hours per year
Total cost: $ 2,178 per year

78) 29 CFR 1926.1441(c)(3)(ii)

OSHA estimates that 115,829 pieces of hoisting equipment will be used in the construction industry per year. In the NPRM, OSHA construction staff estimated that 40 % of this equipment would be rated at 2,000 lbs or less in capacity. In light of hearing testimony and comments, OSHA believes that this percentage may be an overestimate, but in the absence of additional information about the actual number of cranes rated at this capacity, OSHA is continuing to include that percentage for the purposes of this calculation to ensure that it does not underestimate the number of equipment with procedures that are unavailable. OSHA construction staff estimates that 1 % of this equipment will not have the required procedures readily available. Subsequently, OSHA construction staff assumes that it would take the employer, most likely a director, about 15 minutes (.25 hour) to obtain and make this information available to the operator. OSHA estimates the annual burden hours and cost for this requirement are:

Burden hours: 115,829 (equip. per year) x .40 (equip- 2,000 lbs or less) x .01 (equip w/o procedures readily available) x .25 hour (obtaining/making information available) x 1.09% railroad crane markup = 138 hours per year

Cost: 138 hours x $ 39.26 per hour (wage -A/D director) = $ 5,418 per year

79) 29 CFR 1926.1442(b)(2)(i)

Proposed section 1926.1442(b)(2)(i) excepts railroad equipment from the requirement in § 1926.1415(a)(6) for rail clamps when the manufacturer does not require them. When the manufacturer does require the clamps, the proposal allows the employer to seek an exemption by obtaining a registered professional engineer's determination that rail clamps are not necessary.

Based on information provided by AAR, the PEA indicates that there are 8,517 rail clamps required for equipment subject to the Standard that are not already installed by the manufacturer, and none of these rail clamps are required by the manufacturer. The PEA also estimates 624 replacement clamps annually (10% of the 6,236 replacement clamps). The Agency estimates, that all equipment will require some analysis by a registered professional engineer ((8,517+624 = 9,141 clamps) to fall within the exemption. OSHA assumes a registered professional engineer will take 5 minutes (.08 hour) to make the determination, and that 15% of the employers will have an RPE on staff (see Item 13 for employers without an RPE on staff). The yearly burden hours and cost of this paragraph are estimated to be:

A. Burden for development and documentation

Burden hours: 9,141 clamps x .15 (% with RPE on staff) x .08 hour (determination) = 731 hours per year

Cost: 731 hours per year x $ 70.34 (wage – RPE) = $51,419 per year

B. Burden for maintenance

Although not explicitly required, the Agency assumes that some documentation will be maintained by the employer, and some by an RPE contracted by the employer (see Item 13), in all cases the Agency assumes that the employer's clerical staff would maintain these records. The yearly burden hours and cost of this clerical activity are estimated to be:

Burden hours: 9,141 x .05 (% with RPE on staff) x .02 hour (maintain documentation) = 183 hour per year

Cost: 183 hour per year x $ 22.16 (wage – clerical) = $4,055 per year

Total burden hours: 914
Total cost: $55,474

80) 29 CFR 1926.1442(b)(3)(i)

The restrictions on out-of-level work and the requirements for crane-level indicators and inspections of those indicators, do not apply in certain circumstances, including when the employer purchased the equipment before November 8, 2010, the manufacturer approves or modifies the equipment for out-of-level operation, or a registered professional engineer who is a qualified person with respect to the equipment involved approves such out-of-level work. The PEA does not estimate these types of costs. For PRA purposes only, the Agency assumes that 1% of the 10,561 railroad cranes were purchased after November 8, 2010 and have out-of-level work equipment requiring manufacturer approval for modification.

A. Submission of Modification Request for Manufacturer Approval:

Burden hours: 10,561(out-of-level work equipment - railroads) x .01 (modified equipment purchased after November 8, 2010) x 1.5 hours (time to document and submit modifications of equipment) = 159 hours per year

Cost: 159 hours per year x $48.23 per hour (wage of qualified person- employer) = $7,669 per year

B. Maintaining and Making Available Record of Manufacturer's Approval:

OSHA estimates that approximately 25% of the submissions will be approved in writing by the manufacturer. Although not explicitly required, the Agency assumes the employer would maintain the record of this approval and make it available pursuant to § 1926.1412(k). OSHA estimates that clerical staff would take 1 minute to maintain (.02 hours), and 5 minutes (.08 hours) to make available, the record of the manufacturer's

approval. OSHA estimates that the annual burden hours and cost of maintaining and making this approval record available are:

Burden hours: 10,561(out-of-level work equipment - railroads) x .01 (modified equipment purchased after November 8, 2010) x .25 (% approved by manufacturer) x .10 hours (maintain and make available) = 3 hours per year

Cost: 3 hours per year x $22.16 per hour (wage - clerical) = $ 66 per year

C. RPE Approval – Development and Documentation:

Of the estimated 10,561 railroad cranes potentially used in out-of-level work, OSHA estimates that 1 % of this equipment was purchased after November 8, 2010, and will be modified in a manner that will affect the safe operation of the equipment, thus requiring the employer to send a modification proposal to the manufacturer. Of this 1 %, OSHA estimates that 45 % of the proposals will be approved by the manufacturer or rejected with explanation, and the other 55 % of proposals will be ignored by the manufacturer or rejected without explanation. For this latter 55 %, which requires an RPE to review and approve the modification, OSHA estimates that 15 % percent of employers who own this equipment would have a registered professional engineer (RPE) on staff that is qualified to perform the review. In similar provisions where RPE approval is required for modifications, such as OSHA estimated that it would take an RPE 1 hour to review the modification request, 30 minutes (.5 hour) to modify load charts, procedures, instruction manuals, and instruction plates/tags/decals and 30 minutes (.5 hour) to document the modification approval.

AAR suggested that such an estimate would not be appropriate for RPE work in railroad industry, saying that is “unrealistic to expect that a professional engineer unfamiliar with a specific crane modification could somehow gather/review the pertinent information and render a sealed document within 2 hours. At a minimum, it would likely require 8 hours per review (longer for the more involved applications)” (see AAR Response- Settlement Economic Questions, Docket No.: 2015-0012-0006). OSHA acknowledges that railroad employers without an RPE on staff might need longer to familiarize themselves with type of equipment and modifications needed for the railroad industry, so OSHA is increasing the number of hours of review required for this provision under Item 13 to account for review by an RPE not on staff. OSHA expects railroad employers with an RPE on staff, however, to be more familiar with the type of modifications required for railroad equipment just as an RPE working in other industries would be expected to develop some expertise in modifying other cranes. Therefore OSHA estimates that the annual burden hours and cost of this provision are:

Burden hours: 10,561(equip. per year) x .01 (modified equipment) x .55 (% manufacturer refuses to review or rejects without explanation) x .15 (RPE on staff) x 2 (1 hour (review) + .5 hour (doc) + .5 hour (time to modify tags/charts/procedures)) = 18 hours per year

Cost: 18 hours per year x $ 70.34 per hour (wage - RPE) = $ 1,266 per year

D. Maintaining and Making Available:

Although some of the documentation required by this section would be produced by the employer, and some by an RPE hired by the employer (see Item 13), in all cases the Agency assumes that the employer's clerical staff would maintain and make available these records in accordance with § 1926.1412(k). The yearly burden hours and cost of this clerical activity are estimated to be:

Burden hours: 10,561(equip. per year) x .01 (modified equipment) x .55 (% manufacturer refuses to review or rejects without explanation) x .10 (maintain and make available) = 1 hours per year

Cost: 1 hours per year x $22.16 per hour (wage - clerical) = $22 per year

Total burden hours: 181
Total cost: $9,023

81) 29 CFR 1926.1442 (b)(3)(ii)

The restrictions on out-of-level work and the requirements for crane-level indicators and inspections of those indicators do not apply in certain circumstances, including when a qualified person modifies the load chart for approved out-of-level work and the employer uses the equipment in accordance with that load chart. The PEA does not estimate these types of costs; however, for PRA purposes the Agency estimates a small burden hour estimate and cost associated with this provision.

A. Development and Documentation - Modification of Load Chart by Qualified Person:

Of the estimated 10,561 railroad cranes potentially used in out-of-level work, OSHA estimates that 1 % of this equipment will be purchased after November 8, 2010, and modified in a manner that will affect the safe operation of the equipment, thus requiring the employer to send a modification proposal to the manufacturer. Of this 1 %, OSHA construction staff estimates that 45 % of the proposals will be approved by the manufacturer or rejected with explanation, and the other 55 % of proposals will be ignored by the manufacturer or rejected without explanation. For this latter 55 %, which requires an RPE to review and approve the modification, OSHA construction staff estimates that 15 % percent of employers who own this equipment would have a registered professional engineer (RPE) on staff that is qualified to perform the review. Also, OSHA construction staff estimates that 15% of employers who own this equipment would have a qualified person modify the load chart. It is estimated that it would take a qualified person 1 hour to review the modification request, 30 minutes (.5 hour) to

modify load charts and 30 minutes (.5 hour) to document the modification approval. OSHA estimates that the annual burden hours and cost of this provision are:

Burden hours: 10,561(equip. per year) x .01 (modified equipment) x .15 (qualified person modifies load chart) x 2 (1 hour (review) + .5 hour (doc) + .5 hour (time to modify load chart)) = 32 hours per year

Cost: 32 hours per year x $ 48.23 per hour (wage – qualified person) = $1,543 per year

B. Maintaining and Making Available:

Although not explicitly required, the Agency assumes that the employer's clerical staff would maintain and make available a record related to 29 CFR 1926.1442 (b)(3)(ii) in accordance with § 1926.1412(k). The yearly burden hours and cost of this clerical activity are estimated to be:

Burden hours: 10,561(equip. per year) x .01 (modified equipment) x .15 (qualified person modifies load chart) x .10 (maintain and make available) = 2 hours per year

Cost: 2 hours per year x $22.16 per hour (wage - clerical) = $44 per year

Total burden hours: 34
Total cost: $1,587

82) 29 CFR 1926.1442 (b)(6), (b)(6)(i)(A) and (b)(6)(i)(B)

The requirements to follow the manufacturer's guidance set forth in § 1434 do not apply when employers meet all of the following conditions: a registered professional engineer who is a qualified person with respect to the equipment: approves the procedure, modification, addition, or repair, and specifies the equipment configurations to which that approval applies; and modifies load charts, procedures, instruction manuals, and instruction plates, tags, and decals, as appropriate. The PEA does not estimate these types of costs; however, the Agency includes a small burden hour estimate and cost associated with this provision for PRA purposes. The estimates that follow are for modifications other than those necessary for out-of-level work, which are addressed in 29 CFR 1926.1442(b)(3).

A. RPE Approval – Development and Documentation:

Of the estimated 10,561 railroad cranes, OSHA construction staff estimates that 1 % of this equipment will be modified in a manner that will affect the safe operation of the equipment, thus requiring the employer to send a modification proposal to the manufacturer as set forth in § 1434. OSHA estimates that 15 % percent of employers who own this equipment would have a registered professional engineer (RPE) on staff that is qualified to perform the review and approval instead of following the manufacturer's guidance. In addition, it is estimated that it would take an RPE 1 hour to

review the modification request, 30 minutes (.5 hour) to modify load charts, procedures, instruction manuals, and instruction plates/tags/decals and 30 minutes (.5 hour) to document the modification approval. OSHA estimates that the annual burden hours and cost of this provision are:

Burden hours: 10,561(equip. per year) x .01 (modified equipment) x .15 (RPE on staff) x 2 (1 hour (review) + .5 hour (doc) + .5 hour (time to modify tags/charts/procedures)) = 32 hours per year

Cost: 32 hours per year x $ 70.34 per hour (wage - RPE) = $2,251 per year

B. Maintaining and Making Available:

Although some of the documentation required by this section would be produced by the employer, and some by an RPE hired by the employer (see Item 13), in all cases the Agency assumes that the employer's clerical staff would maintain and make available these records in accordance with § 1926.1412(k). The yearly burden hours and cost of this clerical activity are estimated to be:

Burden hours: 10,561(equip. per year) x .01 (modified equipment) x .10 (maintain and make available) = 11 hours per year

Cost: 11 hours per year x $22.16 per hour (wage - clerical) = $244 per year

Total burden hours: 43
Total cost: $2,495

83) 29 CFR 1926.1442 (b)(7) and (b)(7)(i)

The requirements to follow the manufacturer's guidance, instructions, procedures, prohibitions, limitations, or specifications, set forth in §§1404(j), (m), or (q); 1417(a), (r), (u), or (aa); 1433(d)(l)(i); or 1441, do not apply when a registered professional engineer familiar with the type of equipment involved determines the appropriate limitations on the equipment in writing. The PEA does not estimate these types of costs; however, the Agency includes a small burden hour estimate and cost associated with this provision for PRA purposes. Again, these burdens and costs are for modifications not covered by the previous exceptions.

A. RPE Approval – Development and Documentation:

Of the estimated 10,561 railroad cranes, OSHA estimates that employers will seek an engineer determination about the appropriate equipment limitations for 1 % of equipment. OSHA construction staff estimates that 15 % percent of employers who own this equipment would have a registered professional engineer (RPE) on staff that is qualified to perform the review. In addition, it is estimated that it would take an RPE 1 hour to review the appropriate limitations request, 30 minutes (.5 hour) to determine the

appropriate limitations on the equipment and 30 minutes (.5 hour) to document the determination. OSHA estimates that the annual burden hours and cost of this provision are:

Burden hours: 10,561(equip. per year) x .01 (modified equipment needing limitation determination) x .15 (RPE on staff) x 2 (1 hour (review) + .5 hour (doc) + .5 hour (time to determine appropriate limitations)) = 32 hours per year

Cost: 32 hours per year x $ 70.34 per hour (wage - RPE) = $ 2,251 per year

B. Maintaining and Making Available:

The engineer determination on the appropriate limitations must be in writing. The yearly burden hours and cost to maintain and make available these records are clerical activity estimated to be:

Burden hours: 10,561(equip. per year) x .01 (modified equipment needing limitation determination) x .15 (RPE on staff) x 2 (1 hour (review) + .5 hour (doc) + .5 hour (time to modify tags/charts/procedures)) = 2 hours per year

Cost: 2 hours per year x $ 22.16 per hour (wage - clerical) = $44 per year

Table A-12 - Summary of Estimated Annualized Respondent Hour and Cost Burden

Information Collection Requirement(s)	Type of Respon-dent	Number of Respon-dents	Number of Respons es per Respon-dent	Total Number of Responses	Average Burden per Response (In Hrs.)	Total Burden Hours (rounded)	Avg. Hourly Wage Rate	Total Burden Costs (rounded)
(A) 29 CFR 1926.1402(c)(2)	Shift Director (Employer)	1,500	1	1,500	0.5	750	$39.26	$29,445
(B) 29 CFR 1926.1403(b) and 1926.1406(b)	A/D Director (Employer)	11	1	11	1.52	17	$39.26	$667
(C) 29 CFR 1926.1404(f)(2)	A/D Director (Employer)	55	1	55	0.67	37	$39.26	$1,453
(D) 29 CFR 1926.1404(j)	Clerical (Employer)	445	1	445	0.02	9	$22.16	$199
(E) 29 CFR 1926.1404(m)(1)(i)	Clerical (Employer)	2,223	1	2,223	0.02	44	$22.16	$975
(F) 29 CFR 1926.1407(a)(1)(i), (a)(3)(i), (c), (d), (e), (f), and 29 CFR 1926.1409				0				$0
	A/D Director (Employer)	48,455	1	48,455	0.25	12,114	$39.26	$475,596
	Utility Represen-tative (Employer)	48,455	1	48,455	0.5	24,227	$70.34	$1,704,127
(H) 29 CFR 1926.1407(g) and 1926.1409	Construction Employee (Employer)	25,251	1	126,254	0.17	21,463	$22.29	$478,410
(I) 29 CFR 1926.1408(a)(2)(i), (iii)(A), (c), (d)(1), (e), 29 CFR 1926.1409, 29 CFR 1926.1410(c)(1) and (j)								
	Shift Director (Employer)	193,818	1	193,818	0.25	48,455	$39.26	$1,902,343
	Utility Represen-tative	193,818	1	193,818	0.5	96,909	$70.34	$6,816,579
(J) 29 CFR 1926.1410(e)	Shift Director (Employer)	36,341	1	36,341	0.53	19,261	$39.26	$756,187
(K) 29 CFR 1926.1410(f)	Utility Representati ve (at wage equivalent to professional engineer) (Employer)	36,341	1	36,341	0.25	9,085	$70.34	$639,039

(L) 29 CFR 1926.1410(j)								
	Shift Director (Employer)	363	1	363	0.53	193	$39.26	$7,577
	Utility Represen-tative (Employer)	363	1	363	0.25	91	$70.34	$6,401
(M) 29 CFR 1926.1412(a)(1)(i)	Qualified Person (Employer)	1,263	1	1,263	0.33	417	$48.23	$20,112
(N) 29 CFR 1926.1412(b)(1)(ii)(A)								
Development and Documentation	Qualified Person (Employer)	2,374	1	2,374	1.5	3,561	$48.23	$171,747
Maintaining and Making Available	Clerical (Employer)	3,392	1	3,392	0.1	339	$22.16	$7,512
(O) 29 CFR 1926.1412(c)(2)(i)								
Development and Documentation	Qualified Person (Employer)	678	1	678	1.5	1,018	$48.23	$49,098
Maintaining and Making Available	Clerical (Employer)	969	1	969	0.1	97	$22.16	$2,150
(P) 29 CFR 1926.1412(e)(3)(i), (e)(3)(ii), (f)(6), (g)(3), (h), 1926.1413(b)(4) and (c)(3)(ii)	Competent Person (Employer)	4,905	12	58,860	0.33	19,424	$28.69	$557,275
(Q) 29 CFR 1926.1412(f)(7), 1926.1413(c)(4) and 1926.1437(h)	Qualified Person (Employer)	8,175	1	8,175	0.33	2,698	$48.23	$130,125
(R)29 CFR 1926.1413(a)(4)(ii)(A)	Clerical (Employer)	3,028	1	3,028	0.1	303	$22.16	$6,714
(S) 29 CFR 1926.1414(e)(2)(iii)								
	Competent Person (Employer)	55	1	55	0.52	28	$28.69	$803
	Competent Person (Employer)	164	1	164	0.17	28	$28.69	$803
(T) 29 CFR 1926.1417(b)(1) and (b)(2)	Qualified Person (Employer)	114	1	114	1.1	126	$48.23	$6,077
(U) 29 CFR 1926.1417(b)(3)DD								
Development and Documentation	Registered Professional Engineer (Employer)	19	1	19	0.08	2	$70.34	$141
Maintaining and Making Available	Clerical (Employer)	382	1	382	0.02	8	$22.16	$177

(V)29 CFR 1926.1417(j) (1)	Operator (Employer)	121,136	1	121,136	0.17	20,593	$39.26	$808,481
(W) 29 CFR 1926.1417(j) (2)	Signal Person (Employer)	1,635	1	1,635	0.08	131	$28.69	$3,758
(X) 29 CFR 1926.1423(j)(2)	Shift Director (Employer)	1,635	1	1,635	0.02	33	$39.26	$1,296
(Y) 29 CFR 1926.1424(a)(2) (ii)	Construction Employee (Employer)	266,722	1	266,722	0.17	45,343	$22.29	$1,010,695
(Z) 29 CFR 1926.1424(a)(3) (i) and ii)	Construction Employee (Employer)	484,546	2	969,091	0.008	7,753	$22.29	$172,814
(AA) 29 CFR 1926.1427(a) and (e)(1)	Clerical (Employer)	16,398	1	16,398	0.05	820	$22.16	$18,171
(BB) 29 CFR 1926.1427(h) (1)(i) and (ii)	Clerical (Employer)	1,171	1	1,171.30	0.19	223	$48.23	$10,755
(CC) 29 CFR 1926.1428(a) (1)(2)(3)	Clerical (Employer)	847,955	1	847,955	0.11	93,275	$22.16	$2,066,974
(DD) 29 CFR 1926.1428(b)	Clerical (Employer)	16,959	1	16,959	0.11	1,866	$22.16	$41,351
(EE) 29 CFR 1926.1431(o) (3)(i)	Shift Director (Employer)	100	1	100	0.5	50	$39.26	$1,963
(FF) 29 CFR 1926.1431(p) (4)(i)	Shift Director (Employer)	500	1	500	0.5	250	$39.26	$9,815
(GG) 29 CFR 1926.1431 (r) (3)(i)	A/D Director (Employer)	500	1	500	0.5	250	$39.26	$9,815
(HH) 29 CFR 1926.1431(s) (3)((i)	Shift Director (Employer)	1,000	1	1,000	0.5	500	$39.26	$19,630
(II) 29 CFR 1926.1433(e)	Competent Person (Employer)	55	1	55	0.08	4	$28.69	$115
(JJ) 29 CFR 1926.1434(a) (1)(i), (a)(1)(ii) and 1926.1441(b)(2)(i)								
Submission of Modification Request for Manufacturer Approval	Qualified Person (Employer)	1,263	1	1,263	1.5	1,894	$48.23	$91,348
Maintaining and Making Available	Clerical (Employer)	316	1	316	0.1	32	$22.16	$709
(KK) 29 CFR 1926.1434(a) (2)(i), (a)(3), (a)(4), (a)(5), (b) and 1926.1441(b)(2)(i) (B)								
Development and Documentation	Registered Professional Engineer (Employer)	104	1	104.16	2	208	$70.34	$14,631

Maintaining and Making Available	Clerical (Employer)	694	1	694	0.1	69	$22.16	$1,529
(LL) 29 CFR 1926.1435(b)(3)	Clerical (Employer)	2,525	1	2,525	0.02	51	$22.16	$1,130
(MM) 29 CFR 1926.1435(b)(7)(ii)	Clerical (Employer)	2,525	1	2,525	0.02	51	$22.16	$1,130
(NN) 29 CFR 1926.1435(f)(3)(ii)	Clerical (Employer)	25	1	25	0.1	3	$22.16	$66
(OO) 29 CFR 1926.1436(g)(4)	Competent Person (Employer)	448	1	448	0.19	85	$28.69	$2,439
(PP) 29 CFR 1926.1437(c)(2)(ii))	Construction Employee (Employer)	800	1	800	0.17	136	$22.29	$3,031
(QQ) 29 CFR 1926.1437(h)(6)								
Monthly Inspections	Competent Person (Employer)	200	12	2,400	0.25	600	$28.69	$17,214
Annual Inspections	Qualified Person (Employer)	200	1	200	0.25	50	$48.23	$2,412
Four-year Inspections: Development and Documentation	Registered Professional Engineer (Employer)	60	1	60	0.15	9	$70.34	$633
Four Year Inspections: Maintaining and Making Available	Clerical (Employer)	200	1	200	0.1	20	$22.16	$443
(RR) 29 CFR 1926.1437(m)(4)	Clerical (Employer)	10	1	10	0.02	1	$22.16	$22
(SS) 29 CFR 1926.1437(n)(2)								
Development and Documentation	Qualified Person (Employer)	13	1	13	1.5	19	$48.23	$916
Maintaining and Making Available	Clerical (Employer)	50	1	50	0.02	1	$22.16	$22
(TT) 29 CFR 1926.1437(n)(5)(v)								
Development and Documentation	Registered Professional Engineer (Employer)	15	1	15	1.5	23	$70.34	$1,618
Maintaining and Making Available	Clerical (Employer)	50	1	50	0.02	1	$22.16	$22
(UU) 29 CFR 1926.1437(n)(6)(i)								
Development and Documentation	Registered Professional Engineer (Employer)	3	1	3	1.5	5	$70.34	$352
Maintaining and Making Available	Clerical (Employer)	10	1	10	0.02	1	$22.16	$22

(VV) 29 CFR 1926.1441(c)(2)(i)	Qualified Person (Employer)	550	1	550	0.17	94	$48.23	$4,534
(WW) 29 CFR 1926.1441(c)(2)(ii)								
Development and Documentation	Qualified Person (Employer)	114	1	114	1	114	$48.23	$5,498
Maintaining and Making Available	Clerical (Employer)	382	1	382	0.1	38	$22.16	$842
(XX) 29 CFR 1926.1441(c)(2)(iii)								
Development and Documentation	Registered Professional Engineer (Employer)	19	1	19	1	19	$70.34	$1,336
Maintaining and Making Available	Clerical (Employer)	382	1	382	0.1	38	$22.16	$842
(YY) 29 CFR 1926.1441(c)(3)(ii)								
	A/D Director (Employer)	550	1	550	0.25	138	$39.26	$5,418
NEW								
(ZZ) 29 CFR 1926.1442(b)(2)(i)								
	Registered Professional Engineer (Employer)	9,141	1	9,141	0.08	731	$70.34	$51,419
	Clerical (Employer)	9,141	1	9,141	0.02	183	$22.16	$4,055
(AAA) 29 CFR 1926.1442(b)(3)(i)								
	Qualified Person (Employer)	106	1	106	1.5	159	$48.23	$7,669
	Clerical (Employer)	27	1	27	0.1	3	$22.16	$66
	Registered Professional Engineer (Employer)	9	1	9	2	18	$70.34	$1,266
	Clerical (Employer)	9	1	9	0.1	1.00	$22.16	$22
(BBB) 29 CFR 1926.1442(b)(3)(ii)								
	Qualified Person (Employer)	16	1	16	2	32	$48.23	$1,543
	Clerical (Employer)	16	1	16	0.1	2	$22.16	$44

(CCC) 29 CFR 1926.1442(b)(6)(i)(A) and (B)								
	Registered Professional Engineer (Employer)	16	1	16	2	32	$70.34	$2,251
	Clerical (Employer)	106	1	106	0.1	11	$22.16	$244
(DDD) 29 CFR 1926.1442(b)(7)								
	Registered Professional Engineer (Employer)	16	1	16	2	32	$70.34	$2,251
	Clerical (Employer)	16	1	16	0.1	2	$22.16	$44
TOTAL	-	-	-	**3,045,098**	-	**436,701**	-	**$18,176,354**

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 collections 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.

For the same reasons noted in the introductory explanation of Item 12 above, OSHA is including in the calculations for Item 13 a railroad crane markup of 1.09 to account for the additional collections of information in the railroad industry that were not originally included in the ICR. Where OSHA has not included that markup in its Item 13 calculations, the same rationales stated in Item 12 apply.

1) 29 CFR 1926.1404(j)

This provision requires that written approval (from a registered engineer who is familiar with the equipment) must be obtained when information is not available for the employer to reference and ensure that the manufacturers' limitations have not been exceeded regarding the maximum length of boom that may be supported by only cantilevering during A/D operations. OSHA construction staff estimates that 20% of the 1,111,343 hoisting jobs performed in construction will require A/D. It is further estimated that equipment in only 20 % of these jobs will need the boom supported by only cantilevering during A/D work. OSHA construction staff estimates that 1% of the equipment used on these jobs, primarily older equipment models, will not have information available from the manufacturer regarding cantilevered boom support. Subsequently, OSHA construction staff estimates that it would take a registered engineer an average of 1.5 hours to develop and document the required information for employers who request this information (the burden for maintaining the information is taken in Item 12). The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 1,111,343 (total equipment) x .20 (A/D jobs) x .20 (cantilevered boom support) x .01 (equipment w/o man. specs) x 1.5 hour (to develop and document) x 1.09% railroad crane markup = 727 hours per year

Cost: 727 hours per year x $70.34 per hour (wage-registered engineer) = $51,137 per year

2) 29 CFR 1926.1404(m)(1)(i); cost for 29 CFR 1926.1404(m)(1)(ii) taken under 29 CFR 1926.1434

This provision requires that written approval (from a registered engineer who is familiar with the equipment) must be obtained when selection of components and configurations of the equipment that affect the capacity are not in accordance with the manufacturer's specifications. OSHA construction staff estimates that 20 % of the 1,111,343 hoisting jobs performed in construction will require A/D. OSHA construction staff further estimates that, primarily for older equipment, employers will exercise this option during 1 % of these jobs when the manufacturer specifications are not available. Subsequently, OSHA construction staff estimates that it would take a registered engineer an average of 1.5 hours to develop and document the required information for employers who exercise this option. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 1,111,343 (total jobs) x .20 (A/D jobs) x .01 (equip. w/o man. specs) x 1.5 hours (to develop and document) = 3,334 hours

Cost: 3,334 hours x $ 70.34 per hour (wage- registered engineer) = $234,514 per year

3) 29 CFR 1926.1408 Table A and 1926.1409(b)

This provision also applies to section 1926.1409 for work around power lines that are above 350 kV. OSHA estimates that 20 % of the estimated 1,111,343 hoisting jobs in construction will be performed near power lines. In addition, OSHA construction staff estimates that on 5 % of those jobs, cranes and derrick will be operated close to power lines that are over 1,000 KV. It is estimated that 90 % of the employers would call the utility for the information required by this provision. The other 10 % would opt to consult an RPE to calculate the minimum clearance distance applicable to 1,000KV power lines. Subsequently, OSHA estimates it would take an RPE 30 minutes (.5 hour) to make the determination required by Table A and to communicate this information to the employer.

Burden hours: 1,111,343 (hoisting jobs) x .20 (near power lines) x .10 (employers who consult RPE) x .05 (jobs performed near 1,000KV lines) x .5 hour (calculate and communicate) x 1.09% railroad crane markup = 606 hours per year

Cost: 606 hours per year x $70.34 per hour (wage- RPE) = $42,626 per year

4) 29 CFR 1926.1410(c)(1)

OSHA estimates that 20 % of the estimated 1,111,343 hoisting jobs in construction will be performed near power lines. In addition, OSHA construction staff estimates that on 5 % of those jobs, cranes and derrick will be operated closer to power lines than Table A allows. It is estimated that 90% of the employers would call the utility for the information required by this provision. The other 10 % would opt to use an RPE to calculate the minimum clearance distance applicable to the power lines. Subsequently, OSHA construction staff estimates that it would take an RPE 30 minutes (.5 hour) to make the determination required by Table A and to communicate this information to the employer.

Burden hours: 1,111,343 (hoisting jobs) x .20 (near power lines) x .10 (employers who consult RPE) x .05 (jobs performed inside of Table A) x .5 hour (calculate and communicate) x 1.09% railroad crane markup = 606 hours per year

Cost: 606 hours per year x $70.34 per hour (wage- RPE) = $42,626 per year

5) 29 CFR 1926.1410(d)

OSHA estimates that 20 % of the 1,111,343 hoisting jobs per year will be performed near at least one power line. OSHA construction staff estimates that 15 % of those jobs will be performed closer to the power line than Table A allows. Employers, most likely one shift director per one of these jobs, are required to have a planning meeting with the utility operator, or a registered professional engineer, to discuss the procedures necessary to avoid contact with the power lines in the vicinity of the work area. During this meeting the shift director would discuss these procedures as required in 29 CFR 1926.1410(d) and document and make them immediately available as required by 29 CFR 1926.1410(e).

While it is usual and customary for the shift director to plan the meeting and document the procedures with the utility owner/operator, it may not be usual and customary to do so with the RPE. Therefore for 1 % of those jobs performed closer to the power line than Table A allows, employers will opt to have a RPE rather than the utility owner/operator develop documentation and attend in the planning meeting. OSHA estimates an RPE will takes 30 minutes (.5 hour) to plan, and 15 minutes (.25 hour) to conduct/attend the planning meetings person with respect to electric power transmission and distribution. OSHA estimates the cost for this requirement is:

Burden hours: 1,111,343 (total hoisting jobs) x .20 (jobs in proximity to power lines) x .15 (closer than Table A) x .01 (% of employers choosing an RPE) x .75 hours (for RPE to plan and attend the meeting) x 1.09% railroad crane markup = 273 hours

Cost: 273 hours per year x $70.34 (wage-RPE) = $19,203 per year

6) 29 CFR 1926.1410(f)

OSHA estimates that 20 % of the 1,111,343 hoisting jobs per year will be performed near at least one power line. OSHA construction staff estimates that 15 % of those jobs will be performed closer to the power line than Table A allows. Employers, most likely the shift director, and the utility operator on these jobs are required by this standard to conduct a meeting that will allow the equipment operator and other employees who will be in the area of the equipment or load to review the hoisting procedures documented in accordance with paragraph (e) of this section. The Agency believes it would take the utility representative 20 minutes (.33 hour) to plan and 15 minutes (.25 hour) to assist in conducting the required meeting. OSHA estimates the annual burden hours and cost for this requirement are:

Burden hours: 1,111,343 (total hoisting jobs) x .20 (jobs in proximity to power lines) x .15 (closer than Table A) x .58 hours (.33 hour (plan) + .25 hour (conduct meeting)) x 1.09% railroad crane markup = 21,078 hours per year.

Cost: 21,078 hours per year x $28.69 (wage- utility operator who is a competent person) = $604,728 per year

7) 29 CFR 1926.1411 Table T

OSHA estimates that 20 % of the estimated 1,111,343 hoisting jobs in construction will be performed near power lines. In addition, OSHA construction staff estimates that on 5 % of those jobs, cranes and derrick will be operated close to power lines that are over 1000 KV, and the equipment will have to travel without a load in proximity of the power lines on 25 % of those jobs. It is estimated that 90 % of the employers would call the utility for clearance distances while the other 10 % would opt to use an RPE to calculate the minimum clearance distance applicable to these power lines. Subsequently, OSHA construction staff estimates that it would take an RPE 30 minutes (.5 hour) to make the determination required by Table A and to communicate this information to the employer.

Burden hours: 1,111,343 (hoisting jobs) x .20 (near power lines) x .25 (must travel without load) x .10 (employers who consult RPE) x .05 (jobs performed near 1,000KV lines) x .5 hour (calculate and communicate) x 1.09% railroad crane markup = 151 hours per year

Cost: 151 hours per year x $70.34 per hour (wage- RPE) = $10,621 per year

8) 29CFR 1926.1412(b)(1)(ii)(A)

OSHA estimates that 1,111,343 hoisting jobs will be performed per year in the construction industry. OSHA construction staff estimates that on 70 % of these jobs, pieces of equipment will be used on which repairs/adjustments have been made that will affect the safe operation of the equipment. OSHA construction staff also estimates that the manufacturer's equipment criteria will not be available for .05 % of those jobs using repaired/adjusted pieces of equipment. Under these scenarios, a qualified person must determine if he or she must develop criteria or if an RPE is needed to do so. Although it is not explicitly required by this provision, the Agency assumes that 70 % of the qualified persons will opt to develop the criteria and 30 % will opt to consult a registered professional engineer. Although not explicitly required, OSHA estimates that 80 % of those qualified persons will document the developed criteria. OSHA construction staff estimates that it would take a qualified person on average 1.5 hour to develop and document. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 1,111,343 (total hoisting jobs) x .70 (jobs that will affect pieces of equipment) x .005 (equipment w/o mfr criteria) x .30 (done by RPE) x 1.5 hours (time to develop and document) x 1.09% railroad crane markup = 1,908 hours per year

Cost: 1,908 hours per year x $70.34 per hour (wage - RPE) = $134,208 per year

9) 29 CFR 1926.1412(c)(2)(i)

OSHA construction staff estimates that 20% of the 1,111,343 hoisting jobs performed in construction will require A/D. OSHA construction staff estimates that on .05 % of these A/D jobs, equipment will be used for which the manufacturer's recommended configurations will not be available. Under these scenarios, a qualified person must determine if he or she must develop criteria that establishes safe configurations of the equipment or if there is a need for an RPE to make such determinations. Although it is not explicitly required by this provision, the Agency assumes that 70 % of the qualified persons will opt to develop the criteria themselves and the other 30 % would hire an RPE. OSHA construction staff estimates that it would take an RPE or qualified person 1 hour to develop and 30 minutes (.5 hour) to document/maintain the required information. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 1,111,343 (equip. per year) x .20 (A/D jobs) x .005 (equip. w/o mfr. criteria) x .30 (done by RPE) x 1.5 hour (develop and document) x 1.09% railroad crane markup = 545 hours per year

Cost: 545 hours per year x $70.34 per hour (wage- RPE) = $38,335 per year

10) 29CFR 1926.1413(a)(4)(ii)(A)

OSHA believes that number of shifts per hoisting job in construction is too variable to try to estimate how many occur in the industry per year. However, OSHA estimates that 1,111,343 hoisting jobs will be performed in the construction industry per year. OSHA construction staff estimates that during shift inspections on 1% of these jobs, Category II wire rope deficiencies will be discovered that will require the employer to make an assessment of continued safe operations of equipment if the damaged wire rope continues to be used. Furthermore, OSHA construction staff estimates that during the inspection of 75 % of these hoisting jobs, the employer will opt to simply remove the damaged rope from service. The remaining 25 % of the employers will opt to obtain written approval from the manufacturer for different criteria which would allow the rope to remain in service. Subsequently, OSHA construction staff estimates that it would take the manufacturer, most likely a qualified person, 1 hour to review and 30 minutes (.5 hours) to document a response. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 1,111,343 (jobs per year) x .01 (insp. w/ Cat II damaged wire rope) x .25 (employers. who opt to get approval) x 1.5 hours (1 hour (review) + .5 hour (document)) x 1.09% railroad crane markup = 4,543 hours per year

Cost: 4,543 hours per year x $48.23 per hour (wage-qualified person-mfr.) = $219,109 per year

11) 29 CFR 1926.1417(b)(1) and 1417(b)(2)

OSHA construction staff estimates that the manufacturer's operating procedures will not be available for 350 pieces of equipment used to perform construction activities, primarily older models. It is estimated that 70% of this equipment is owned by employers who do not employ the required qualified person. Subsequently, OSHA construction staff estimates that, under this scenario, it will take a qualified person 1 hour to develop/document, 1 minute (.02 hour) to maintain, and 5 minutes (.08 hour) to make available procedures that are necessary for the safe operation of the equipment and attachments.

Burden hours: 350 (equip. w/o mfrs. Procedures) x .70 (QP not employed on staff) x 1.10 [1.02 hour (develop/document/maintain) + .08 hour (make available)] x 1.09% railroad crane markup = 294 hours per year

Cost: 294 hours per year x $48.23 per hour (wage - employer/qualified person) = $14,180 per year

12) 29 CFR 1926.1417(b)(3)

OSHA construction staff estimates that for 350 pieces of equipment used to perform construction activities, primarily older models, the manufacturer's procedures related to the capacity of the equipment will not be available. In addition, it is estimated that 95 % of this equipment will be owned by employers who do not employ a registered professional engineer on staff and will contract for this service. Under this scenario, OSHA construction staff estimates that it would take 1 hour for a registered professional engineer (RPE) who is familiar with the equipment to develop and document these procedures. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 350 (equip. w/o mfrs. procedures) x .95 (% contracted w/ RPE) x 1 hour (develop/document) x 1.09% railroad crane markup = 362 hours per year

Cost: 362 hours per year x $70.34 per hour wage (RPE) = $25,463 per year

13) 29 CFR 1926.1427(c)(1)(ii), (c)(3), and (c)(4)

OSHA construction staff estimates that no more than 10 employers will opt to get accredited and certify its own employees in accordance with Option 2 of this section. In addition, it is assumed that all of these employers will provide testing materials to an auditor for approval in accordance because it is believed that obtaining a test from accredited crane/derrick testing organizations would most likely not be cost effective for the employer or the accredited testing organization will not provide tests for employers. When employers choose to have their tests audited, it is estimated that it would take the auditor, most likely a qualified educator/manager, 2 hours to review and approve the test the employer would submit for approval. It is also very likely that the auditor will document this approval. This audit will occur every three years, so the annual audit rate is 33%. Because the audit of the re-qualification procedures required by 29 CFR 1926.1427(c)(4) would take place during the audit of the entire program, the burden hours and cost are captured in the following calculation. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 10 (number of Option 2 employers) x 2 hours (time to review/approve/document) x .33 (annual audit rate) = 6.6 hours per year

Cost: 6.6 hours per year x $43.41 (wage of qualified person- auditor) = $287 per year

14) 29 CFR 1926.1427(c)(2)(i), (c)(3), and (c)(4)

OSHA construction staff estimates that 10 employers or less will opt to get accredited and certify its own employees in accordance with Option 2 of this section. It is estimated that it would take an auditor, most likely a qualified educator/manager, 2 hours to review

and approve the testing circumstances in accordance with this paragraph. This audit will occur every three years, so the annual audit rate is 33%. Because the audit of the re-qualification procedures required by 29 CFR 1926.1427(c)(4) would take place during the audit of the entire program, the burden hours and cost are captured in the following calculation. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 10 (Option 2 employers) x 2 hour (time to review/approve) x .33 (annual audit rate) = 6.6 hours per year

Cost: 6.6 hours per year x $43.41 (wage of qualified person- auditor) = $287 per year

15) 29 CFR 1926.1427(c)(3), (c)(5)(ii), and (c)(5)(iv)

OSHA construction staff estimates that no more than 10 employers will opt to get accredited and certify its own employees in accordance with Option 2 of this section. It is estimated that it would take an auditor, most likely a qualified educator/manager, 30 minutes (.5 hour) to document the audit and maintain that record for three years and make it available to the Secretary of Labor upon request. This audit will occur every three years, so the annual audit rate is 33%. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 10 (Option 2 employers) x .5 hour (time to document/maintain/make available) x .33 (annual audit rate) = 1.65 hours per year

Cost: 1.65 hours per year x $43.41 (wage - qualified person, auditor) = $72 per year

16) 29 CFR 1926.1427(c)(5)(iii)

OSHA estimates that 1 of the 10 estimated Option 2 employers covered by this standard would fail the audit of its test and test administration required by this provision. Therefore it is estimated that it would take an auditor, 15 minutes (.25 hour) to file a report to an OSHA Regional Office regarding certification program deficiencies discovered during an audit. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 1 (employer whose program fails) x .25 hour (time to file documents with OSHA) = 1 hour per year

Cost: 1 hour per year x $43.41 per hour (wage- qualified person, auditor) = $ 43 per year

17) 29 CFR 1926.1434(a)(1)(i), (a)(1)(ii); 29 CFR 1926.1404 (m)(1)(ii) and 1926.1441(b)(2)(i)(B)

This provision also applies to modifications made in accordance with section 1926.1441(b)(2)(i)(B). Of the 115,829 cranes in use per year, OSHA construction staff

estimates that 1% of this equipment will be modified. In these scenarios, the manufacturer, most likely a qualified person, must approve such modifications submitted by the employer to ensure that the modifications will not compromise the safe operation of the equipment. OSHA construction staff estimates that it would take a qualified person 2 hour to review and 30 minutes (.5 hour) to document the modification request. It is also assumed that the employer would also calculate and document proposed modifications of the load charts, procedures and other necessary information that are required in accordance with paragraph (a)(1)(ii) of this section. OSHA estimates that the annual burden hours and cost of this provision are:

Burden hours: 115,829 (equip. per year) x .01 (modified equipment) x 2.5 hours (2 hours (review request and modifications of equipment/tags/charts/procedures) + .5 hour (document)) = 2,898 hours per year

Cost: 2,898 hours per year x $48.23 per hour (wage - qualified person- manufacturing) = $139,674 per year

18) 29 CFR 1926.1434(a)(1)(ii)

Burdens taken with requirement in 29 CFR 1926.1434(a)(1)(i). (See calculations for section 1926.1434(a)(1)(i) for accounting of burden hours)

19) 29 CFR 1926.1434(a)(2)(i), (a)(3), (a)(4), (a)(5), (b) and 1926.1441(b)(2)(i)(B)

This provision also applies to modifications made in accordance with section 1926.1441(b)(2)(i)(B). Of the 115,829 cranes in use per year, OSHA construction staff estimates that 1% of this equipment will be modified in a manner that will affect the safe operation of the equipment, thus requiring the employer to send a modification proposal to the manufacturer. Of this 1%, OSHA construction staff estimates that 45 % of the proposals will be approved by the manufacturer or rejected with explanation, and the other 55 % of proposals will be ignored by the manufacturer or rejected without explanation. For this latter 55%, which requires an RPE to review the modification, OSHA construction staff estimates that 85 % percent of employers who own this equipment would not have a registered professional engineer (RPE) on staff that is qualified to perform the review. In addition, it is estimated that it would take an RPE 1 hour to review the modification request, 30 minutes (.5 hour) to modify load charts, procedures, instruction manuals, and instruction plates/tags/decals and 30 minutes (.5 hour) to document the modification approval. OSHA estimates that the annual burden hours and cost of this provision are:

Burden hours: 115,829 (equip. per year) x .01 (modified equipment) x .55 (% manufacturer refuses to review or rejects without explanation) x .85 (RPE not on staff) x 2 (1 hour (review) + .5 hour (doc) + .5 hour (time to modify tags/charts/procedures)) = 1,083 hours per year

Cost: 1,083 hours per year x $70.34 per hour (wage - RPE) = $76,178 per year

20) 29 CFR 1926.1435(b)(3)

OSHA construction staff estimates that 2 percent of the 115,829 cranes used in construction annually are tower cranes. Furthermore, OSHA construction staff estimates that it would take an RPE 2.5 hours to engineer and document the design of a tower crane's foundation and structural support.

Burden hours: 115,829 (equip. per year) x .02 (tower cranes) x 2.5 hours (engineer and document) = 5,791 hours per year

Cost: 5,791 hours per year x $70.34 per hour (wage- RPE) = $407,339 per year

21) 29 CFR 1926.1435(b)(7)(ii)

OSHA construction staff estimates that 2 % of the 115,829 cranes used in construction annually are tower cranes. Furthermore, OSHA construction staff estimates that it would take an RPE 2 hours to calculate/verify and 30 minutes (.5 hours) to document that the host structure is strong enough to sustain the forces imposed through the braces, brace anchorages and supporting floors.

Burden hours: 115,829 (total equip.) x .02 (tower cranes) x 2.5 hours (verify and document) = 5,791 hours per year

Cost: 5,791 hours per year x $70.34 per hour (wage- RPE) = $407,339 per year

22) 29 CFR 1926.1435(c)(5)

Of the 115,829 cranes in use per year, OSHA construction staff estimates that 2% of this equipment will be tower cranes. Furthermore it is estimated that 1% of the equipment, generally older models, will not have the manufacturer's recommendations and specifications available. Subsequently, when the manufacturer's recommendations and specifications are not available, OSHA construction staff estimates that it will take a registered professional engineer, who is familiar with that type of equipment, 1 hour to approve the size and location of signs the employer may display on the equipment specified by the employer, and 30 minutes (.5 hours) to document that approval. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 115,829 (hoisting equip) x .02 (tower cranes) x .01(w/o man. specs) x 1.5 hours (1 hour (approve) + .5 hour (doc)) = 35 hours per year

Cost: 35 hours per year x $70.34 per hour (wage- RPE) = $2,462

23) 29 CFR 1926.1435(f)(3)(ii)

Of the 115,829 cranes in use per year, OSHA construction staff estimates that 2% of this equipment will be tower cranes. Furthermore it is estimated that 1% of the equipment, generally older models, will not have the manufacturer's recommendations and specifications available. Subsequently, when the manufacturer's recommendations and specifications are not available, OSHA construction staff estimates that it will take a registered professional engineer, who is familiar with that type of equipment, 2 hours to develop and 30 minutes (.5 hours) to document load test procedures that can be used safely by the employer. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 115,829 (hoisting equip) x .02 (tower cranes) x .01(w/o man. specs) x 2 hours (develop) + .5 hour (doc) = 58 hours per year

Cost: 58 hours per year x $70.34 per hour (wage- RPE) = $4,080

24) 29 CFR 1926.1437(h)(6)

Burden hours/costs for documentation of crane inspections required by paragraphs (h)(2), (h)(4) of this section are accounted under 29 CFR 1926.1412(e)(3) and (f)(7). The monthly and annual inspection requirements are addressed in Item 12. The four-year inspection required by this paragraph must be conducted by a marine engineer, marine architect, licensed surveyor, or other qualified person who has expertise with respect to vessels/flotation device. For purposes of this calculation, OSHA assumes that the four-year inspection will be conducted by a person with the wage rate equivalent to that of a professional engineer, and that 70% of the employers will not have such a person on staff. OSHA assumes that, in accordance with §1926.1437(h), within the first year following the effective date of this rule will conduct 1 four-year inspection. The yearly burden hours and cost of this paragraph are estimated to be:

Four-Year inspections:

Burden hours: 200 floating cranes x .70 (% appropriately qualified person not on staff) x .15 hour (develop/document) = 21 hours

Cost: 21 hours per year x $70.34 per hour (wage- professional engineer) = $1,477 year

25) 29 CFR 1926.1437(m)(4)

The Agency estimates that 115,829 pieces of hoisting equipment will be used in the construction industry per year and OSHA construction staff estimates that 200 are floating cranes. OSHA estimates that 5% of these floating cranes/derricks will utilize employer-made equipment. Subsequently, OSHA estimates that it will take a registered professional engineer 1 hour to calculate and .5 hour to document that the load charts and applicable parameters for use meet the requirements of paragraphs 29 CFR 1926.1437(m)(1) through (m)(3). The burden for maintaining this documentation is taken in Item 12.

The yearly burden hours and cost for developing and documenting employer-made equipment are estimated to be:

Burden hours: 200 (equip. per year) x .05 (w/ employer-made equipment) x 1.5 hours (calculate and document = 15 hours per year

Cost: 15 hours per year x $70.34 per hour (wage- registered professional engineer/qualified person) = $1,055 per year

26) 29 CFR 1926.1437(n)(2)

Paragraph (n)(2) allows the option of getting the rated capacity of the equipment reduced by the equipment manufacturer or a qualified person to account for the maritime conditions listed in paragraph (n)(1) of this section. Subsequently, OSHA construction staff estimates that on 1,000 of the 1,111,343 hoisting jobs that will be performed in the construction industry per year, land cranes/derricks on barges pontoons, vessels, or other means of floatation will be used. In addition, OSHA construction staff estimates that only 5% of these jobs will be performed using land cranes and derricks that will be removed from the flotation devices and reinstalled for particular hoisting jobs. Most will remain secured to the flotation device and be used throughout the year without a need to be rated by a qualified person again.

Since the employer has an option to use a qualified person (who is familiar with floating crane/derrick designs) to determine the required ratings, OSHA construction staff estimates that 70% of the employers would likely consult the manufacturer to make the required calculations. The other 30% of the employers would use a qualified person on its staff. OSHA construction staff estimates that the manufacturer's RPE would take 1 hour to calculate and 30 minutes (.5 hour) to document the required determinations. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 1,000 (hoisting-jobs floating cranes/derricks) x .05 (removed and reinstalled equip) x .70 (mfr. qualified person/RPE) x 1.5 hours (develop/document) = 53 hours per year

Cost: 53 hours per year x $70.34 per hour (wage- mfr. RPE) = $3,728 per year

27) 29 CFR 1926.1437(n)(3)

Burden hours/costs for 29 CFR 1926.1437(n)(3) are accounted as part of the documentation required by section 1926.1437(n)(2). (See calculations for 29 CFR 1926.1437(n)(2) for an accounting of these burdens)

28) 29 CFR 1926.1437(n)(5)(v)

Paragraph (n)(2) allows the option of getting the rated capacity of the equipment reduced by the equipment manufacturer or a qualified person to account for the maritime

conditions listed in paragraph (n)(1) of this section. Subsequently, OSHA construction staff estimates that on 1,000 of the 1,111,343 hoisting jobs that will be performed in the construction industry per year, land cranes/derricks on barges pontoons, vessels, or other means of floatation will be used. In addition, OSHA construction staff estimates that only 5% of these jobs will be performed using land cranes and derricks that will be removed from the flotation devices and reinstalled for particular hoisting jobs. Most will remain secured to the flotation device and be used throughout the year without a need to be rated by a qualified person again.

For the jobs where the cranes and derricks are removed from the flotation devices, OSHA estimates that it will take a marine engineer/registered professional engineer or a qualified person who is familiar with floating crane/derrick designs, 1 hour to develop and .5 hour to document information which confirms the safety of the equipment's mounting design. It is estimated that 70% of the employers for these jobs would opt to contract the services of a marine engineer, while the other 30% would use a staff employee who is a qualified person to make these determinations. The yearly burden hours and cost of this paragraph for a marine engineer are estimated to be:

Burden hours: 1,000 (hoisting jobs- floating cranes/derricks) x .05 (removed and reinstalled equip) x .70 (qualified person/RPE not on staff) x 1.5 hours (develop and document) = 53 hours per year

Cost: 53 hours per year x $70.34 per hour (wage- RPE) = $3,728 per year

29) 29 CFR 1926.1437(n)(6)(i)

Of the 115,829 cranes in use per year, OSHA construction staff estimates that 200 are floating cranes. OSHA estimates that for 25% of the floating equipment used in the industry, land cranes/derricks will be mounted on a flotation device/vessel and used to hoist loads. Subsequently, OSHA construction staff estimates that for 20% of this equipment, mobile auxiliary cranes (two cranes/derricks on the flotation device/vessel) will need to be mounted to a floatation device/vessel to perform the construction hoisting job. For these jobs, OSHA estimates that it will take a marine engineer/registered professional engineer, who is familiar with floating crane/derrick designs, 1 hour to develop and .5 hour to document a confirmation of the safety of the equipment attachment design. It is estimated that 70% of the employers for these jobs would opt to contract for the services of a marine engineer, while the other 30% would use an existing employee who is a qualified person to make these determinations. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 200 (floating cranes/derrick) x .25 (land crane/derrick) x .20 (mobile auxiliary cranes jobs) x .70 (contract marine engr./RPE) x 1.5 (calculate and document) = 11 hours per year

Cost: 11 hours per year x $70.34 per hour (wage- marine engineer/registered professional engineer) = $774 per year

30) 29 CFR 1926.1441(b)(2)(i)(A)

This provision requires that written approval (from a registered engineer who is familiar with the equipment) must be obtained when the manufacturer's specifications are not available regarding the selection of components and configurations of the equipment that affect its capacity or safe operation. OSHA construction staff estimates that, primarily for older equipment, employers will exercise this option during 100 of the hoisting jobs performed per year by cranes with a rated capacity of 2,000 pounds or less. Subsequently, OSHA construction staff estimates that it would take an average of 30 minutes (.5 hour) for a registered professional engineer to develop, and 15 min (.25) to document, the required information. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 100 (equip. w/o man. specs) x .75 hour (develop and document)] x 1.09% railroad crane markup = 82 hours

Cost: 82 hours x $70.34 per hour (wage- registered engineer) = $5,768 per year

31) 29 CFR 1926.1441(c)(2)(ii)

OSHA construction staff estimates that for 500 pieces of equipment used to perform construction activities, primarily older models, will not have the manufacturer's equipment operational controls procedures available for reference. In addition, it is estimated that 70% of this equipment will be owned by employers who do not employ a qualified person on staff to develop procedures for operational controls in accordance with this provision. For this equipment, OSHA estimates that it will take a qualified person 1 hour to develop and document procedures for the operational controls (see Item 12 for burden of maintaining and making available procedures). The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 500 (equip w/o procedures) x .70 (QP not on staff) x 1 hour (develop/document) x 1.09% railroad crane markup = 382 hours

Cost: 382 hours x $48.23 per hour (wage- qualified person) = $18,424 per year

32) 29 CFR 1926.1441(c)(2)(iii)

OSHA construction staff estimates that for 500 pieces of equipment used to perform construction activities, primarily older models, will not have the manufacturer's equipment rated capacities available for reference. In addition, it is estimated that 95 % of this equipment will be owned by employers who do not employ a registered professional engineer on staff. For these jobs, OSHA estimates that it will take a registered professional engineer, who is familiar with the equipment, 1 hour to develop/document procedures related to the capacity of the equipment. The yearly burden hours and cost of this paragraph are estimated to be:

Burden hours: 500 (equip. w/o mfrs. procedures) x .95 (RPE not on staff) x 1 hour (develop/document) x 1.09% railroad crane markup = 518 hours

Cost: 518 hours per year x $70.34 per hour (wage- registered professional engineer) = $36,436 per year

33) 29 CFR 1926.1442(b)(2)(i)

Proposed section 1926.1442(b)(2)(i) excepts the railroad equipment from the requirement in § 1415(a)(6) for rail clamps unless the manufacturer requires them. And even when the manufacturer does require the clamps, the proposal allows the employer to seek an exemption by obtaining a registered professional engineer's determination that rail clamps are not necessary.

Based on information provided by AAR, the PEA indicates that there are 8,517 rail clamps required for equipment subject to the Standard that are not already installed by the manufacturer, and none of these rail clamps are required by the manufacturer. The PEA also estimates 624 replacement clamps annually (10% of the 6,236 replacement clamps).The Agency estimates that all equipment (8,517+624 = 9,141 clamps) will require some analysis by a registered professional engineer to account for this provision. OSHA assumes a registered professional engineer will take 5 minutes (.08 hour) to make the determination, and that 85% of the employers will not have an RPE on staff. The yearly burden hours and cost of this paragraph are estimated to be:

> 9,141 x .85 (% with RPE not on staff) x .08 hour (determination) x $ 70.34 (wage – RPE not on staff) = $43,751 per year

34) 29 CFR 1926.1442(b)(3)(i)

The restrictions on out-of-level work and the requirements for crane-level indicators and inspections of those indicators, do not apply in certain circumstances, including when the employer purchased the equipment before November 8, 2010, the manufacturer approves or modifies the equipment for out-of-level operation, or a registered professional engineer who is a qualified person with respect to the equipment involved approves such out-of-level work. The PEA does not estimate these types of costs. For PRA purposes only, the Agency assumes that 1% of the 10,561 railroad cranes were purchased after November 8, 2010 and have out-of-level work equipment requiring manufacturer approval for modification.

RPE Approval – Development and Documentation:

OSHA estimates that of the 10,561 railroad cranes, 1 % were purchased after November 8, 2010 and will be modified in a manner that will affect the safe operation of the equipment, thus requiring the employer to send a modification proposal to the manufacturer. Of this 1 %, OSHA estimates that 45 % of the proposals will be approved

by the manufacturer or rejected with explanation, and the other 55 % of proposals will be ignored by the manufacturer or rejected without explanation. For this latter 55 %, which requires an RPE to review and approve the modification, OSHA estimates that 15 % percent of employers who own this equipment would have a registered professional engineer (RPE) on staff that is qualified to perform the review; the remaining 85% percent of employers who own this equipment would hire a registered professional engineer to do this work.

In its Item 12 discussion of this provision (see equation 80 C.), OSHA noted that AAR commented that RPEs unfamiliar with railroad equipment would require a longer period of time for review and documentation that the typical 2 hours allotted by OSHA. As noted there, OSHA acknowledges that some additional time might be appropriate for employers without an RPE on staff and is therefore increasing the number of hours required for review. AAR's unsupported estimate of 8 hours, however, seems excessive in that it does not account for increasing familiarity that the RPE would acquire after initial modifications. Part of the rationale for the proposed exemptions is that many of the modifications are routine (e.g., adding wheels so that equipment can operate on track), so there is likely to be less variety between modifications of different railroad cranes than between modifications of all other cranes in the construction universe. The additional time necessary for initial reviews by a contracted RPE must therefore be balanced against the shorter reviews that would occur when that RPE gains experience with the railroad industry.

OSHA therefore estimates that it would take an RPE 3 hours to review the modification request, 30 minutes (.5 hour) to modify load charts, procedures, instruction manuals, and instruction plates/tags/decals and 30 minutes (.5 hour) to document the modification approval. OSHA estimates that the annual burden hours and cost of this provision are:

Burden hours: 10,561(equip. per year) x .01 (modified equipment) x .55 (% manufacturer refuses to review or rejects without explanation) x .85 (RPE not on staff) x 4 hours (3 hours (review) + .5 hour (doc) + .5 hour (time to modify tags/charts/procedures)) = 196 hours per year

Cost: 196 hours per year x $ 70.34 per hour (wage - RPE) = $13,787 per year

35) 29 CFR 1926.1442 (b)(6) and (b)(6)(i)(A)

The requirements to follow the manufacturer's guidance set forth in § 1434 do not apply when employers obtain and follow the guidance of a registered professional engineer who is a qualified person with respect to the equipment. The exception applies if the engineer approves the procedure, modification, addition, or repair, and specifies the equipment configurations to which that approval applies; and modifies load charts, procedures, instruction manuals, and instruction plates, tags, and decals, as appropriate. The estimates that follow are for modifications other than those necessary for out-of-level work, which are addressed in 29 CFR 1926.1442(b)(3).

RPE Approval – Development and Documentation:

Of the estimated 10,561 railroad cranes, OSHA estimates that 1 % of this equipment will be modified in a manner that will affect the safe operation of the equipment, thus requiring the employer to send a modification proposal to the manufacturer as set forth in § 1434. OSHA construction staff estimates that 15 % percent of employers who own this equipment would have a registered professional engineer (RPE) on staff that is qualified to perform the review and approval instead of following the manufacturer's guidance; the remaining 85% of employers would hire a registered professional engineer to do this work. In addition, it is estimated that it would take an RPE 1 hour to review the modification request, 30 minutes (.5 hour) to modify load charts, procedures, instruction manuals, and instruction plates/tags/decals and 30 minutes (.5 hour) to document the modification approval. OSHA estimates that the annual burden hours and cost of this provision are:

Burden hours: 10,561 (equip. per year) x .01 (modified equipment) x .85 (RPE not on staff) x 2 (1 hour (review) + .5 hour (doc) + .5 hour (time to modify tags/charts/procedures)) = 49 hours per year

Cost: 49 hours per year x $ 70.34 per hour (wage - RPE) = $6,893 per year

36) 29 CFR 1926.1442 (b)(7) and (b)(7)(i)

The requirements to follow the manufacturer's guidance, instructions, procedures, prohibitions, limitations, or specifications, set forth in §§1404(j), (m), or (q); 1417(a), (r), (u), or (aa); 1433(d)(l)(i); or 1441, do not apply when a registered professional engineer familiar with the type of equipment involved determines the appropriate limitations on the equipment in writing. Again, these burdens and costs are for modifications not covered by the previous exceptions.

RPE Approval – Development and Documentation:

Of the estimated 10,561 railroad cranes, OSHA estimates that employers will seek an engineer determination about the appropriate equipment limitations for 1 % of equipment. OSHA construction staff estimates that 15 % percent of employers who own this equipment would have a registered professional engineer (RPE) on staff that is qualified to perform the review; the remaining 85% of employers who own this equipment would hire a registered professional engineer to perform this work. In addition, it is estimated that it would take an RPE 1 hour to review the appropriate limitations request, 30 minutes (.5 hour) to determine the appropriate limitations on the equipment and 30 minutes (.5 hour) to document the determination. OSHA estimates that the annual burden hours and cost of this provision are:

Burden hours: 10,561(equip. per year) x .01 (modified equipment needing limitation determination) x .85 (RPE not on staff) x 2 (1 hour (review) + .5 hour (doc) + .5 hour (time to determine appropriate limitations)) = 180 hours per year

Cost: 180 hours per year x $ 70.34 per hour (wage - RPE) = $12,661 per year

Table 1
Capital Costs

Information Collection Requirements Item 13	Approved Capital Costs Items	Requested Capital Costs Item 13	Capital Cost Adjustment	Capital Cost Program Change
EXISTING				
29 CFR 1926.1404(j)	**$44,422**	$51,137	$6,715	**$0**
29 CFR 1926.1404(m)(1)(i)	**$222,040**	$234,514	$12,474	**$0**
29 CFR 1926.1408 Table A and 1926,1409(b)	**$36,995**	$42,626	$5,631	**$0**
29 CFR 1926.1410(c)(1)	**$36,995**	$42,626	$5,631	**$0**
29 CFR 1926.1410(d)	**$16,675**	$19,203	$2,528	**$0**
29 CFR 1926.1410(f)	**$518,241**	$604,728	$86,487	**$0**
29 CFR 1926.1411 Table T	**$9,249**	$10,621	$1,372	**$0**
29 CFR 1926.1412(b)(1)(ii)(A)	**$116,590**	$134,209	$17,619	**$0**
29 CFR 1926.1412(c)(2)(i)	**$35,626**	$38,335	$2,709	**$0**
29 CFR 1926.1413(a)(4)(ii)(A)	**$188,983**	$219,109	$30,126	**$0**
29 CFR 1926.1417(b)(1) and (b)(2)	**$12,412**	$14,180	$1,768	**$0**
29 CFR 1926.1417(b)(3)	**$22,481**	$25,463	$2,982	**$0**
29 CFR 1926.1427(c)(1)(ii), (c)(3), and (c)(4)	**$273**	$287	$14	**$0**
29 CFR 1926.1427(c)(2)(i), (c)(3), and (c)(4)	**$273**	$287	$14	**$0**
29 CFR 1926.1427(c)(3), (c)(5)(ii) and (c)(5)(iv)	**$68**	$72	$4	**$0**
29 CFR 1926.1427(c)(5)(iii)	**$41**	$43	$2	**$0**
29 CFR 1926.1434(a)(1)(i), (a)(1)(ii), (a)(3), 1926.1404(m)(1)(ii), 1926.1441(b)(2)(i)(B)	**$128,716**	$139,674	$10,958	**$0**

29 CFR 1926.1434(a)(2)(i), (a)(3), (a)(4), (a)(5), (b), and 1926.1441(b)(2)(i)(B)	**$70,683**	$76,178	$5,495	**$0**
29 CFR 1926.1435(b)(3)	**$378,056**	$407,339	$29,283	**$0**
29 CFR 1926.1435(b)(7)(ii)	**$378,056**	$407,339	$29,283	**$0**
29 CFR 1926.1435(c)(5)	**$2,295**	$2,462	$167	**$0**
29 CFR 1926.1435(f)(3)(ii)	**$3,781**	$4,080	$299	**$0**
29 CFR 1926.1437(h)(6)	**$1,418**	$1,477	$59	**$0**
29 CFR 1926.1437(m)(4)	**$1,013**	$1,055	$42	**$0**
29 CFR 1926.1437(n)(2)	**$3,578**	$3,728	$150	**$0**
29 CFR 1926.1437(n)(5)(v)	**$3,578**	$3,728	$150	**$0**
29 CFR 1926.1437(n)(6)(i)	**$743**	$774	$31	**$0**
29 CFR 1926.1441(b)(2)(i)(A)	**$5,063**	$5,768	$705	**$0**
29 CFR 1926.1441(c)(2)(ii)	**$16,090**	$18,424	$2,334	**$0**
29 CFR 1926.1441(c)(2)(iii)	**$32,067**	$36,436	$4,369	**$0**
NEW				
29 CFR 1926.1442(b)(2)(i)	-	$43,751	$0	$43,751
29 CFR 1926.1442(b)(3)(i)	-	$13,787	$0	$13,787
29 CFR 1926.1442(b)(3)(ii)	-	$0	$0	$0
29 CFR 1926.1442(b)(6)(i)(A) and 29 CFR 1926.1442(b)(6)(i)(B)	-	$6,893	$0	$6,893
29 CFR 1926.1442(b)(7)	-	$12,661	$0	$12,661
Totals	**$2,286,501**	**$2,622,994**	**$259,401**	**$77,092**

14. Provide estimates of 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 may also aggregate cost estimates from Items 12, 13, and 14 in a single table.

The disclosure of records during an inspection is not subject to the PRA under 5 CFR 1320.4(a)(2). OSHA would only review records in the context of an open investigation of a particular employer to determine compliance with the Standard. Therefore, OSHA takes no burden or cost in this Supporting Statement for disclosing information during an inspection.

OSHA estimates that an administrative assistant (GS-7, step 6) with an hourly wage rate of $22.38 [9] and a fringe benefit rate of 34.4 percent[10], would spend about 15 minutes (.25 hour) filing and maintaining the documented report submitted by an operator certification/qualification program auditor. This report identifies deficiencies in an employer's operator certification/qualification program as required by paragraph 1926.1427(c)(5)(iii). The Agency estimates that OSHA Area Offices would receive about one of these reports each year. OSHA considers other expenses, such as equipment, overhead, and support staff salaries, to be normal operating expenses that would occur without the paperwork requirements specified by the Standard. Therefore, the total cost of these information collection requirements to the Federal government is:

Cost: 1 report x .25 hour x $22.38 /(1-.344) = $34.12 per year

15. Explain the reasons for any program changes or adjustments.

In Item 2, the Agency added several provisions of proposed 29 CFR 1926.1442 as new information collection requirements. As a result, the Agency requests a program change increase of 1,206 burden hours. For capital (operation and maintenance) costs, the Agency requests a program change increase of $77,092. The majority of these slight cost increases are estimates related to costs incurred by a subset of affected employers seeking to meet the requirements of the proposed exemptions by obtaining registered professional engineer determinations. The proposed exemptions do not generate costs savings in the existing ICR equations because the affected respondents were not previously represented in those equations.

In addition, the Agency requests an adjustment increase of 52,745 burden hours. This adjustment is associated with new respondents added into existing ICR burden hour calculations. Also, the adjustment relates to updates to the economic assumptions in the ICR estimating the total number of cranes affected by Subpart CC. For the same reasons, the Agency requests an adjustment increase of $259,401 in capital (operation and maintenance) costs.

9 Source: OPM SALARY TABLE 2016-RU (https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/16Tables/html/RUS_h.aspx).

10 Source: The overall rate is on the third page, in the table 'Calculation For FY 2017 Fringe Benefit Rates For Appropriated Funds', http://comptroller.defense.gov/Portals/45/documents/rates/fy2017/2017_d.pdf .

In total, combining both program changes and adjustments, the Agency requests an increase of 53,951 burden hours (from 382,750 to 436,701 hours) and $336,493 in capital (operation and maintenance) costs (from $2,286,501 to $2,622,994).

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 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 inappropriate.

There are no forms on which to display the expiration date.

18. Explain each exception to the certification statement.

OSHA is not seeking an exception to the certification statement.

B. COLLECTION OF INFORMATION EMPLOYING STATISTICAL METHODS

This Supporting Statement does not contain any information collection requirements that employ statistical methods.

Table 2
Burden Hours, Number of Responses, Annual Wage Costs for the Information Collection Requirements

Information Collection Requirement (Item 12)	Approved Burden Hours	Requested Burden Hours	Requested Adjustment	Requested Program Change	Number of Responses
29 CFR 1926.1402(c)(2)	750	750	0	0	1,500
29 CFR 1926.1403(b) and 1926.1406(b)	15	17	2	0	11
29 CFR 1926.1404(f)(2)	34	37	3	0	55
29 CFR 1926.1404(j)	9	9	0	0	445
29 CFR 1926.1404(m)(1)(i)	44	44	0	0	2,223
29 CFR 1926.1407(a)(1)(i), (a)(3)(i), (c), (d), (e), (f), and 1926.1409	32,886	36,341	3,455	0	96,909
29 CFR 1926.1407(g) and 1926.1409	3,808	21,463	17,655	0	126,254
29 CFR 1926.1408(a)(2)(i), (2)(iii)(A), (c), (d)(1), (e), and 1926.1409	131,544	145,364	13,820	0	387,636
29 CFR 1926.1410(e)	17,430	19,261	1,831	0	36,341
29 CFR 1926.1410(f)	8,222	9,085	863	0	36,341
29 CFR 1926.1410(j)	256	284	28	0	727
29 CFR 1926.1412(a)(1)(i)	370	417	47	0	1,263
29 CFR 1926.1412(b) (1)(ii)(A)	3,530	3,900	370	0	5,766
29 CFR 1926.1412(c)(2)(i)	1,009	1,115	106	0	1,647
29 CFR 1926.1412(e)(3)(i), (e)(2)(i) ,(e)(3)(ii), (f)(6), (g)(3),(h), 1926.1413(b)(4), (c)(3)(ii), and 1926.1437(h)	17,820	19,424	1,604	0	58,860
29 CFR 1926.1412(f)(7), 1926.1413(c)(4), and 1926.1437(h)	2,475	2,698	223	0	8,175
29 CFR 1926.1413(a)(4)(ii)(A)	274	303	29	0	3,028
29 CFR 1926.1414(e)(2)(iii)	26	28	2	0	55
29 CFR 1926.1414(e)(3)(iii)	26	28	2	0	164
29 CFR 1926.1417(b)(1) and (b)(2)	116	126	10	0	114
29 CFR 1926.1417(b)(3)	8	10	2	0	401
29 CFR 1926.1417(j)(1)	18,635	20,593	1,958	0	121,136

Information Collection Requirement (Item 12)	Approved Burden Hours	Requested Burden Hours	Requested Adjustment	Requested Program Ch...	Number of Responses
29 CFR 1926.1417(j)(2)	120	131	11	0	1,635
29 CFR 1926.1423(j)(2)	30	33	3	0	1,635
29 CFR 1926.1424(a)(2)(ii)	44,725	45,343	618	0	266,722
29 CFR 1926.1424(a)(3)(i) and (ii)	7,016	7,753	737	0	969,091
29 CFR 1926.1427(a), (a)(2), (c)(6)(ii), (e)(1), and (e)(3)(ii)	820	820	0	0	16,398
29 CFR 1926.1427(h)(1)(i) and (ii)	223	223	0	0	1,171
29 CFR 1926.1428(a)(1), (a)(2), and (a)(3)	84,408	93,275	8,867	0	847,955
29CFR 1926.1428(b)	1,688	1,866	178	0	16,959
29 CFR 1926.1431(o)(3)(i)	50	50	0	0	100
29 CFR 1926.1431(p)(4)(i)	250	250	0	0	500
29 CFR 1926.1431(r)(3)(i)	250	250	0	0	500
29 CFR 1926.1431(s)(3)(i)	500	500	0	0	1,000
29 CFR 1926.1433(e)	4	4	0	0	55
29 CFR 1926.1434(a)(1)(i), (a)(1)(ii), (a)(3), 1926.1404(m)(1)(ii), 1926.1441(b)(2)(i)(B)	1,708	1,926	218	0	1,578
29 CFR 1926.1434(a)(2)(i), (a)(3), (a)(4), (a)(5), (b), and 1926.1441(b)(2)(i)(B)	247	277	30	0	799
29 CFR 1926.1435(b)(3)	45	51	6	0	2,525
29 CFR 1926.1435(b)(7)(ii)	45	51	6	0	2,525
29 CFR 1926.1435(f)(3)(ii)	2	3	1	0	25
29 CFR 1926.1436(g)(4)	85	85	0	0	448
29 CFR 1926.1437(c)(2)(ii)	136	136	0	0	800
29 CFR 1926.1437(h)(6)	679	679	0	0	2,860
29 CFR 1926.1437(m)(4)	1	1	0	0	10
29 CFR 1926.1437(n)(2)	20	20	0	0	63
29 CFR 1926.1437(n)(5)(v)	24	24	0	0	65
29 CFR 1926.1437(n)(6)(i)	6	6	0	0	13
29 CFR 1926.1441(c)(2)(i)	76	94	18	0	550
29 CFR 1926.1441(c)(2)(ii)	140	152	12	0	496
29 CFR 1926.1441(c)(2)(iii)	53	57	4	0	401
29 CFR 1926.1441(c)(3)(ii)	112	138	26	0	550
NEW					
29 CFR 1926.1442(b)(2)(i)	0	914	0	914	18,282

Information Collection Requirement (Item 12)	Approved Burden Hours	Requested Burden Hours	Requested Adjustment	Requested Program Cl	Number of Responses
29 CFR 1926.1442(b)(3)(i)	0	181	0	181	151
29 CFR 1926.1442(b)(3)(ii)	0	34	0	34	32
29 CFR 1926.1442(b)(6)(i)(A) and 29 CFR 1926.1442(b)(6)(i)(B)	0	43	0	43	122
29 CFR 1926.1442(b)(7)	0	34	0	34	32
TOTAL	**382,750**	**436,701**	**52,745**	**1,206**	**3,045,098**